

OIL AND GRAND STRATEGY:
GREAT BRITAIN AND GERMANY, 1918-1941

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By

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Abstract

This study examines how oil shaped grand strategy in Great Britain and Germany between 1918 and 1941. The history of oil in the twentieth century is a chapter in the story of European decline. The emergence of oil accelerated Britain and Germany's decline as great powers capable of independently exerting their economic and military power. Having fought the First World War largely with oil from the United States, Britain was determined to avoid basing its energy security upon the goodwill of another great power. After 1918, London undertook a policy of developing alternative sources of oil under British control. In the future, Britain's key supplier would be the Middle East, already a region of vital importance to the British Empire. This quest for energy independence from the United States was a failure. The empire was bereft of oil, while Italian hostility threatened British transit through the Mediterranean. A shortage of tankers also forced Britain to import oil from U.S.-controlled sources in the Western Hemisphere, which depleted Britain's reserves of foreign exchange.

Germany could not import oil from overseas in wartime due to the threat of blockade, while accumulating large stockpiles was impossible because of its shortage of foreign exchange. The Third Reich based its oil supply on petroleum synthesized from coal, limited domestic crude oil production, and imports from Romania. By 1939, Berlin was confident that Germany had enough oil to fight a war first against the Allies and then the Soviet Union. Victory would allow the Third Reich to occupy the oilfields of the Caucasus and the Middle East, thereby creating the economic foundations for Germany to become a world power. This plan began to falter after the defeat of France, when Germany found itself responsible for meeting Europe's energy requirements while still at war with Britain. An escalating oil crisis in Axis Europe, a lack of strategic alternatives, and the imperatives of National Socialist ideology,

all compelled the Third Reich to invade the Soviet Union in June 1941 to seize enough resources to fight Britain and eventually the United States before the balance of power turned against Germany.

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I am a little embarrassed to see how little I have managed to accomplish in graduate school on my own. Every word that appears in this dissertation was only made possible through the labor, generosity, and patience of innumerable friends and colleagues – quite a compliment considering the length of the manuscript. If I appear modest, to paraphrase Winston Churchill, it is only because I’ve got a lot to be modest about.

An historian is only as good as his sources, and our access to said sources depends upon the good graces of unnamed, too-often forgotten archivists, who fulfill the thankless task of keeping records open and accessible to scholars. Accordingly, I would be committing an unpardonable sin if I did not first acknowledge the archivists of the following institutions, without whom this dissertation would have been shallow indeed: in the United States, the National Archives in College Park, MD, and Washington, DC, the Library of Congress, the Division of Manuscripts and Archives at the Yale University Library, and the Franklin Delano Roosevelt and Herbert Hoover presidential libraries; in the United Kingdom, the National Archives and the British Petroleum Archive; and in Germany, the Bundesarchiv, Berlin-Lichterfelde, the Bundesarchiv-Militärarchiv, the Politische Archiv des Auswärtigen Amtes, and the Archiv der Bundesanstalt für Geowissenschaften und Rohstoffe. I wish to make special reference to Amy Schmidt, who was my guide to the Military Records at College Park. The National Archives will not be same once archivists with her skill have been entirely replaced by digital finding aids.

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One final piece of administrative housekeeping: This dissertation is based entirely on declassified, publicly available records at government and private archives in the United States, Great Britain, and the Federal Republic of Germany. The views expressed herein are entirely my own and not necessarily those of the U.S. Government.

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Abbreviations and Acronyms

(Translations in Brackets)

AA: Auswärtiges Amt (German Foreign Office)

a.D.: außer Dienst (Retired)

ADM: Admiralty

AG: Aktiengesellschaft (Corporation)

AIOC: Anglo-Iranian Oil Company

AIR: Air Ministry

APOC: Anglo-Persian Oil Company

BA-B: Bundesarchiv, Berlin-Lichterfelde

BA-MA: Bundesarchiv-Militärarchiv, Freiburg

BAPCO: Bahrain Petroleum Company

BASF: Badische Anilin- und Soda-Fabrik

BGR: Archiv der Bundesanstalt für Geowissenschaften und Rohstoffe

BNA: British National Archives

BOD: British Oil Development Corporation

BOT: Board of Trade

BP: British Petroleum

BRABAG: Braunkohle-Benzin AG

BVJP: Beauftragter für den Vierjahresplan (Plenipotentiary for the Four-Year Plan)

CAB: Cabinet Office

CFP: Compagnie Française des Pétroles

CID: Committee of Imperial Defence

CO: Colonial Office

DGFP: Documents on German Foreign Policy

DEA: Deutsche Erdöl

DPAG: Deutsche Petroleum A.G.

EPU: Europäische Petroleum Union

FO: Foreign Office

F-T: Fischer-Tropsch Process

GmbH: Gesellschaft mit beschränkter Haftung (Limited Liability Company)

GPO: Government Printing Office

Gulf: Gulf Oil Company

HaPol: Handelspolitische Abteilung, Auswärtiges Amt (Commercial Policy Division)

HMSO: His/Her Majesty's Stationary Office

HWA: Heereswaffenamt (Army Ordinance Office)

IBC: International Bergin Company

ICI: Imperial Chemical Industries

IPC: Iraq Petroleum Company

IWM: Imperial War Museum

Jersey: Standard Oil Company of New Jersey

Konti: Kontinentale Öl AG

KOC: Kuwait Oil Company

LOC: Library of Congress

MGFA: Militärgeschichtliches Forschungsamt

MID: Military Intelligence Division

MUN: Ministry of Munitions

NARA: National Archives and Records Administration

NEDC: Near Eastern Development Corporation

NSDAP: Nationalsozialistische Deutsche Arbeiterpartei (National Socialist German Workers' Party)

OKH: Oberkommando des Heeres (Army High Command)

OKM: Oberkommando der Marine (Naval High Command)

OKW: Oberkommando der Wehrmacht (Armed Forces High Command)

PAAA: Politisches Archiv des Auswärtigen Amtes

PIPC: Petroleum Imperial Policy Committee

POWE: Ministry of Fuel and Power

PPR: Sub-Committee on Petroleum Products Reserves

PREM: Office of the Prime Minister

RAF: Royal Air Force

RArbM: Reichsarbeitsministerium (Reich Ministry of Labor)

RfB: Reichsstelle/Reichsamt für Bodenforschung (Reich Office for Soil Exploration)

RFM: Reichsfinanzministerium (Reich Ministry of Finance)

RG: Record Group

RKM: Reichskriegsministerium (Reich Ministry of War)

RLM: Reichsluftfahrtministerium (Reich Ministry of Aviation)

RM: Reichsmark

RUSI: Journal of the Royal United Service Institution

RVM: Reichsverkehrsministerium (Reich Ministry of Transportation)

RWA: Reichsstelle/Reichsamt für Wirtschaftsausbau (Reich Office for Economic Development)

RWehrM: Reichswehrministerium (Reich Ministry of Defense)

RWM: Reichswirtschaftsministerium (Reich Ministry of Economics)

RWP: Reichsamt für wehrwirtschaftliche Planung (Reich Office for Defense-Economy Planning)

Shell: Royal Dutch/Shell

SKL: Seekriegsleitung (Naval Warfare Command)

SOCAL: Standard Oil Company of California

T: Treasury

TBM: Technische Brigade Mineralöl (Technical Petroleum Brigade)

TPC: Turkish Petroleum Company

USSBS: United States Strategic Bombing Survey

VJP: Vierjahresplan (Four-Year Plan)

Vowi: Volkswirtschaftliche Abteilung (Economic Division, IG Farben)

WFO: Wirtschaftsführungstab Ost (Economic Command Staff)

WFSt: Wehrmachtsführungsstab (Armed Forces Operations Staff)

WiRüAmt: Wehrwirtschafts- und Rüstungsamt (Defense-Economy and Armaments Office)

WSO: Wirtschaftsstab Ost (Economic Staff, East)

WStb: Wehrwirtschaftsstab (Defense-Economy Staff)

WO: War Office

YUL: Yale University Library, Manuscripts and Archives

Introduction

Oil, Grand Strategy, and a World at War

The availability or lack of oil profoundly influenced international affairs throughout the twentieth century. Although most scholars understand that oil played a significant role in many of the great power contests of the last century, they do not always grasp the how and why. This is particularly the case when it comes to the two global conflicts of the first half of the twentieth century, the world wars, not to mention the volatile interwar period.¹ The evolution of oil from a purely commercial product into a strategic commodity began in 1912, when the Royal Navy shifted to burning oil rather than coal for fuel. Although the contribution of oil to the outcome of the First World War was marginal, after 1918, policymakers around the world understood that ample and secure supplies of oil were a necessary – if not sufficient – prerequisite for both economic prosperity and national security. During the Second World War, oil played a vital role not only by facilitating or hindering military operations, but also as an object of grand strategy. The increasing mechanization of warfare played to the strengths of the Allies, whose massive economic and industrial superiority over the Axis was complemented by ample and relatively secure supplies of oil. Control of major oil reserves, most notably those of the Middle East, also figured prominently in the war aims of both the Allied and Axis powers.

This study will demonstrate how oil shaped and constrained grand strategy – the long-term pursuit of national interests during both peace and war – in Great Britain and Germany after the First World War. Oil's significance to grand strategy reveals itself through the dynamic interaction between each nation's objectives on the one hand, and a variety of factors that determine access to oil on the other, including petroleum geology, geographical constraints, logistical exigencies, technological change, and financial limitations such as the availability of foreign exchange. Within the realm of international politics, the evolution of oil from an illuminant (to replace whale oil) into the premiere source of propulsion fuel (with the concomitant displacement of coal) accelerated and perhaps even precipitated Britain and Germany's decline as great powers capable of independently exerting their considerable economic and military

¹ See the appendix to this study for additional discussion of secondary sources.

strength.² Ironically, just as geography and geology had facilitated Europe's rise to global hegemony following the discovery of the New World, those two factors also conspired to place it at a tremendous disadvantage during the Age of Oil. The history of oil in the twentieth century is therefore also a chapter in the story of European decline.

In the age-old struggle waged by scholars over the role of structure vs. agency in history, this study comes down decisively on behalf of the former. If there is a strong whiff of economic and geographical determinism within the thesis, it seems justified when we are talking about the contest for possession of a natural resource that exists in finite quantities in only certain parts of the world. It is also difficult to overlook the fact that victory during both of the world wars came to the alliance that enjoyed a massive superiority in economic resources and materiel. Of course, no scholar can, as one historian concedes, "support the proposition that *only* natural resources structure the underlying competition among nations."³ Nonetheless, even allowing for various externalities, to paraphrase Abraham Lincoln, geological and geographical facts can be stubborn things. Geologically speaking, countries may or may not be favored with domestic sources of oil (the United States and the Russia/Soviet Union vs. Britain, Germany, and Japan). Those countries that lost out on the random allocation of natural petroleum reserves had no option but to import oil or produce synthetic alternatives for those purposes where no suitable substitute existed. Geography dictated whether the former could be done cheaply by water (Britain) or expensively by land (Germany) during periods of crisis, whereas the technological and economic obstacles to the latter – assuming that sufficient coal was ever available – were beyond the capacity of most nations to surmount.⁴

² Geopolitics is a notoriously slippery concept, but my definition is borrowed from David Haglund: "I use it in a restrictive sense that connotes a connection between geography, politics, and the question of access to needed raw materials." David Haglund, "'Gray Areas' and Raw Materials," *Inter-American Economic Affairs* 36: 3 (1982): 23-51 (quotation from pg. 24). Implicit within this understanding of international politics is the idea that "states are locked into an almost Darwinian struggle" for strategic, political, and economic supremacy. Ronald Hyam, *Britain's Declining Empire: The Road to Decolonisation, 1918-1968* (Cambridge: Cambridge University Press, 2006), 73.

³ Alfred Eckes, *The United States and the Global Struggle for Minerals* (Austin: University of Texas Press, 1979), ix. Emphasis in the original.

⁴ Although it was still a great power as of 1939 and possessed large domestic reserves of coal, France was incapable of adopting synthetic fuel as a major source of petroleum. For one thing, the production of synthetic fuel was tightly regulated by the holders of the most promising patents, who actively discouraged their use in France. Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell University Press, 1994), 227-252. Additionally, French coal production was insufficient to meet the additional demand – France already imported one-

The shift from coal to oil, which harmed Britain and Germany relative to the United States and Russia/Soviet Union, cannot be explained in purely geological terms, since it would have been preferable for the Europeans to continue relying on their substantial coal reserves. Technological change took matters out of their hands once soldiers and statesmen realized after 1918 that future wars would be fought largely by and sometimes even for oil.

It would be misleading, however, to dismiss the relevance of human agency, even if it played only a secondary role vis-à-vis the immutable facts of geography and geology, not to mention impersonal developments such as technological change. Britain and Germany occupied different roles within the international system: the former was a maritime power and the leading defender of the status quo, whereas the latter (with occasional intermissions) was a revisionist continental power that spent decades undermining first the Concert of Europe and then the Anglo-American world order by all manner of peaceful and violent methods. But the simple fact of their divergent outlooks concerning the post-1815 or post-1919 international settlements is less an explanation than an observation, for it tells us little about why policymakers made (or could not make) certain choices, and why those choices may or may not have proved wise in hindsight.

One plausible means by which to assess the role of individuals or groups of policymakers is through the prism of logistics. Among the themes that run throughout this study is that policymakers and planners had to grapple with the constraints imposed by logistics particularly in the case of oil, for the mere possession of an oilfield did not by itself translate into economic or military strength unless one also had the means of exploiting its stored energy. Logistics demanded that policymakers make hard choices about the allocation of scarce resources needed to acquire and maintain access to sources of oil, such as tankers and pipelines for Britain, or coal, steel, foreign exchange, and ultimately military force in the case of Germany. The decisions taken by policymakers were rarely made on the basis of “rational” economic factors such efficiency but rather were informed by wider geopolitical and ideological considerations.

third of its hard coal requirements (25,000,000 tons) by the mid-1930s. “Ölstrategie,” *Militär-Wochenblatt*, 121. Jahrgang, Nummer 27 (15 January 1937).

By logistics, I am referring to something more profound than the mere science of “supplying war” or one of the “forgotten dimensions of strategy” (alongside technological and social forces), both of which imply that logistics is concerned simply with equipping armies.⁵ A more sophisticated definition that conveys the interrelationship between logistics and policy is “the creation and sustained support of weapons and forces to be tactically employed to attain strategic objectives.”⁶ Yet even this description seems too narrow in scope by suggesting that logistics is but a creature of war. Even private companies must develop elaborate methods of supply chain management to further their commercial objectives. One of the reasons why the major oil companies vertically integrated their upstream (exploration and production) and downstream (refining, transportation, and retailing) operations in the nineteenth century was the desire to mitigate their logistical costs.⁷ We might therefore profit from a more expansive definition of logistics as the management of economic resources – human, capital, or material – in the service of wider strategic ambitions (since logistics, by its very nature, “must always accompany the strategic imagination”).⁸ Logistics thereby becomes an essential stage in the process of converting economic potential into strategic power.

Once we include the exigencies of logistics within our analytical framework, we recognize that although the inevitability of Europe’s economic and military decline was inescapable, the timing and manner of this decline was by no means preordained. Policymakers, by the choices they made about how to manage their existing resources or acquire new ones, determined the pace and costs (both economic and human) of decline, whether it was gradual and relatively bloodless (Britain) or abrupt and gruesome (Germany). Deterministic factors such as geology or geography alone cannot explain why National

⁵ Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 2004); and Michael Howard, “The Forgotten Dimensions of Strategy,” *Foreign Affairs* 57: 5 (1979): 975-979.

⁶ Scott Boorman, “Fundamentals of Strategy: The Legacy of Henry Eccles,” *Naval War College Review* 62: 2 (2009): 100.

⁷ One of the best short explanations of why the major oil companies adopted vertical integration remains: Edith Penrose, *The Large International Firm in Developing Countries: The International Petroleum Industry* (Cambridge: MIT Press), 150-172. The fundamental objective of such measures (whether pursued by private companies or even national governments through cartels such as the Organization of Petroleum Exporting Countries) is to regulate production and thereby control the price of oil. This is because in the oil industry, by contrast to other industries where output is manufactured rather than discovered, the price of oil (rather than demand, which tends to be fairly inelastic) has heretofore been the most important factor determining its supply.

⁸ Boorman, “Fundamentals of Strategy,” 96.

Socialist Germany opted for costly overland imports from within Europe and even more expensive synthetic alternatives instead of just importing oil cheaply from low-cost producers in the Western Hemisphere and the Middle East. By the same token, whereas geopolitics and ideology play an indispensable role in defining the “strategic imagination” of policymakers, neither is a sufficient explanation. Just as geopolitical imperatives drove Britain to import oil from the Middle East, and Germany oil from Romania, logistics determined the extent to which this was possible. By setting limits between what is practical as opposed to desirable, logistics serves as the final filter through which policies must be sifted before we can determine their success or failure.

Many historians have commented upon the role played by natural resources such as arable land and energy in facilitating Europe’s rise between the discovery of the New World – itself a product of Europe’s relative poverty at the time compared to other regional units within Eurasia – and the Industrial Revolution – which itself depended upon the presence of plentiful coal deposits within Europe.⁹ A number have expressed skepticism about the significance of raw materials in relation to other factors such as natural diversity, technological change, political-economic evolution, and sometimes even culture.¹⁰ “[Resource] endowment is not very helpful in explaining change,” one historian argues, for “Resources

⁹ Basically, over the course of three centuries, the land, agricultural produce (food, cotton, and tobacco, in particular), and precious metals of the New World allowed Europe to escape the environmental constraints imposed by its scarcity of arable land and develop a comparative advantage relative to the rest of Eurasia in terms of overseas trade. The specie of the New World also facilitated European trade with and political infiltration of South Asia and the Far East. By the nineteenth century, Europe’s peasantry could either be exported to the colonial periphery or integrated into the Continent’s burgeoning industrial labor force. This nascent proletariat was increasingly fed with calories produced in the New World, while the factories that employed them depended upon inputs imported initially from the New World (cotton) as well as indigenous sources of hydrocarbon energy (coal). The interaction of these factors exponentially increased Europe’s economic productivity compared to those societies lacking access to colonial “ghost acres” and still relying on organic sources of energy (human and animal labor). The most important recent study in this line of historical inquiry is Kenneth Pomeranz’s *Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000), 17-23 and 264-297 (esp. 274-285). Pomeranz’s thesis is ably summarized in: P.H.H. Vries, “Are Coal and Colonies Really Crucial? Kenneth Pomeranz and the Great Divergence,” *Journal of World History* 12: 2 (2001): 423-428.

¹⁰ For useful critiques of Pomeranz’s work and an introduction to the wider historiographical debate over Europe’s “rise” (which is really separate from the question of the “great divergence” between Europe and Asia), see: Vries, “Coal and Colonies,” 407-446 (esp. 428-438 for Britain); and Patrick O’Brien, “Ten Years of Debate on the Origins of the Great Divergence,” *Reviews in History*, <http://www.history.ac.uk/reviews/review/1008>.

are a function of the available technology and have no economic meaning until a technology has been invented to employ them.”¹¹

While this study is focused on analyzing only one of the many factors behind Europe’s decline rather than its rise, it may be observed that there is a tendency during considerations of the latter development to compartmentalize discussions of natural resources from those of geography. Europe was, it must be stressed, well-positioned geographically to exploit the resources of the New World, at least by comparison with India or China. Moreover, geography does not merely describe the space between lands, but also the features of those lands themselves, including their subsoil resources. In that sense, what was (or was not) under Europe mattered as much as Europe’s physical relationship to the rest of the world.

For that reason, any study of the ramifications of geography for great power relations must consider geography beyond the narrow confines of just being an “objective of policy, a prize in a conflict” or as a “theatre of military action” that may facilitate or hinder campaigning. For geography also refers to the environment of a particular space that is both complex in terms of the diversity of its contents (living or otherwise) and largely “persistent and unchanging” from the perspective of human beings, even if we cannot overlook the “restrictions and opportunities” presented by any particular environment.¹²

Regrettably, the role of natural resources (oil in particular) – which was a function of geography – as a casual factor behind Europe’s relative decline starting at the end of the nineteenth century has been overlooked by many scholars.¹³ Even revolutionary theorists of geopolitics such as Halford Mackinder

¹¹ E.L. Jones, *The European Miracle: Environments, Economies, and Geopolitics in the History of Europe and Asia* (New York: Cambridge University Press, 1987), xxvi. One cannot dispute this contention, except to say that natural resources can assume a transcendent importance once a society has become dependent upon their consumption, perhaps through the pervasive utilization of a particular form of technology (such as the internal combustion engine in the case of oil).

¹² Geoffrey Sloan, “Sir Halford J. Mackinder: The Heartland Theory Then and Now,” *Journal of Strategic Studies* 22: 2-3 (1999): 15-17.

¹³ One notable exception is Peter Huggill’s, “The American Challenge to British Hegemony, 1861-1947,” *Geographical Review* 99: 3 (2009): 403-425 (esp. 403-405 and 418-423), which challenges the “conventional” interpretation that the transition in global hegemony from Britain to the United States took place around 1945. Even though Britain and the United States never came to blows after 1815, the latter had been pursuing policies aimed at promoting a “hegemonic transition” since the U.S. Civil War. The struggle did not end with Britain’s political and strategic capitulation to the United States in the Western Hemisphere after 1895. If anything, it “intensified” throughout the 1920s and 1930s, particularly with regard to the control of global oil reserves. This was only natural in spite of the absence of any threat of war between the two countries: the control of oil in regions such as the

tended to focus their attention on technological developments – in his case, railroads and then automobiles and aircraft – whereas the question of raw materials (and fuel supplies in particular) was an afterthought.¹⁴

A broad comparative analysis that transcends a specific nation, region, or narrow time period can yield insights that inform our understanding of international history in the twentieth century. Beyond demonstrating the extent to which geopolitical or logistical constraints frustrated policymakers in both London and Berlin, this study broadens our understanding of the origins, conduct, and consequences of the Second World War, itself the culmination of a decades of military innovation and transformation under the pressure of both political and economic change – the French Revolution and the mobilization of the masses through appeals to nationalism in the case of the former, and the Industrial Revolution in the case of the latter.¹⁵ Although the First World War was won using weapons and tactics derived from the nineteenth century, the conflict did inaugurate a “military revolution” that spawned consequent “revolutions in military affairs” at the operational and tactical levels.¹⁶ A number of new weapons were either introduced during the war or, in the case of machine guns and barbed wire, first applied on a massive scale. Many, but not all, of these weapons required oil either directly (fuel and lubrication) or indirectly (derivatives from the petrochemical industry), including oil-fueled warships, submarines, aircraft, armored fighting vehicles, assault weapons, and mechanized transportation. Moreover, entirely new industries had to be built during and after the war to sustain armies using these weapons, most

Middle East was not merely a “Mackinderian” strategy for thwarting the growth of rivals, but also a prerequisite for economic growth and prosperity through the control of trade (the transportation sector being dependent on oil and natural gas as primary or secondary inputs) and “capital accumulation.” Although the premise of Hugill’s argument is sound, the execution is lacking. Beyond numerous factual errors and Hugill’s reliance on outdated secondary literature, the United States did not win the “oil war” simply because of the surge in post-WWI oil production in areas under U.S. control. Britain also had to lose the “oil war” once its own policy foundered in the 1930s. Hugill also overlooks the possibility that, after 1895, the real threat to U.S. pretensions of global hegemony was not a status quo power such as Britain, but a revisionist one such as Germany, which explicitly adopted an “American” vision of growth centered around landed expansion, population displacement or extermination, and forcible acquisition of natural resources.

¹⁴ Sloan, “Heartland Theory,” 18-27 and 31-36.

¹⁵ For the broad perspective, see: William McNeill, *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000* (Chicago: University of Chicago Press, 1982), 185-361.

¹⁶ For more on the concept of “military revolutions” vs. “revolutions in military affairs,” see: Williamson Murray and Macgregor Knox, “Thinking about Revolutions in Warfare,” in: *The Dynamics of Military Revolution, 1300-2050*, (New York: Cambridge University Press, 2001), 1-14.

notably the petrochemicals industry. Existing branches of industry were also affected either directly or indirectly, most notably agriculture, which was transformed by the application of hydrocarbon-based fertilizers and the introduction of oil-fueled equipment and distribution networks.

Even as the World War drew a close in November 1918, there was no mistaking the fact that the next war would be an oil war. “The struggle of world politics,” one leading German military journal declared in 1934, “is today more or less a struggle over oil.”¹⁷ The central role occupied by oil within international affairs between 1939 and 1945 was as inescapable to contemporaries as it was to later students of the oil industry.¹⁸ The Second World War was not simply “fought on oil,” one historian observes, but “indeed sometimes seemed fought *for* it.”¹⁹ Unfortunately, wider acceptance of this fact has proven elusive, for “strategic resources shaped the conduct and outcome of World War II in ways that political and military historians often neglect.”²⁰ Overlooking the material factors that provided the foundations for military power following the Industrial Revolution has contributed to the dissemination of some rather pernicious historical myths, the most obvious in the context of the Second World War being the idea that the Germany could have ever won the war on terms acceptable to its leadership.²¹

Recognizing the political and strategic significance of natural resources enriches our understanding of international affairs and grand strategy throughout the twentieth century by giving us a sense of what one historian calls the “dynamic interaction” between the various domestic and foreign policy considerations that underpin each nation’s conception of its “core values.”²² Another historian argues that “industrial and technological capability, foreign policy and defence policy in the traditional senses, and strategy in the

¹⁷ Obrstlt. a.D. Scholz Roesner, “Die Treibstoff-Frage in ihrer Bedeutung für die Landesverteidigung,” *Militär-Wochenblatt*, 118. Jahrgang, Nummer 44 (25 May 1934). See also: Verbandssyndikus Kurt Bronk, “Deutschlands Erdöl-Selbstversorgung, militärisch gesehen,” *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935): “And even today, all of European politics, even world politics for that matter, is geared decisively toward considerations of oil [Ölinteressen].”

¹⁸ “Kriegsfolgen in der Welterdölwirtschaft,” *Vierjahresplan*, 1942: III.

¹⁹ Carl Solberg, *Oil Power: The Rise and Imminent Fall of an American Empire* (New York: Mason/Charter, 1976), 131-132. Emphasis in the original.

²⁰ Eckes, *Global Struggle for Minerals*, 89.

²¹ For a thorough correction of this misconception, see: Alan Levine, “Was World War II a Near-run Thing?” *Journal of Strategic Studies* 8:1 (1985): 38-63.

²² Melvyn Leffler, “National Security,” *Journal of American History* 77: 1 (1990): 143-152.

traditional sense are all interlinked and interacting even in ‘peacetime’ [...].”²³ What better way is there to illuminate the connections between the national and the international, the military and the civilian, the political and the scientific, the public and private, than by considering the example of oil, which draws together the constituent elements of what we cumulatively understand as grand strategy.

Although the secondary literature on the subject of oil and grand strategy during the first half of the twentieth century is thin, one political scientist offers some useful observations about oil’s relationship to military and national strategy during and after the First World War that are worth repeating and elaborating upon here.²⁴ Oil revolutionized the “operational, logistical, and social dimensions of strategy on the battlefield,” by making possible the introduction of mechanized warfare and subsequent development of combined arms on the one hand, while requiring the development of sophisticated industries capable of producing oil, refining it into specialty petroleum products, and distributing it around the world on the other hand. Although oil was not as important to the civilian sector prior to 1945 as it was to the military (especially in Western Europe, where the shift from coal to oil as the primary source of energy did not begin until the 1950s), policymakers could not afford to squeeze civilian demand too much, lest it lead to a collapse of economic productivity and morale on the home front.²⁵

The introduction of oil-fueled weapons also forced countries to adjust their “individual national force structures, military plans, and grand strategies” to accommodate oil’s burgeoning significance. In 1911 and 1912, when the U.S. and British navies laid down their first exclusively oil-burning battleships, oil’s superiority over coal in combat had yet to be established. Supplies of oil at the time were more concentrated than those of coal: before the First World War, oil production was limited to a relatively small number of locations. The bulk of global output came from just two nations, the United States and Russia, plus much smaller centers of production in Austrian Galicia, Burma, the East Indies, Mexico, and

²³ Correlli Barnett, *Strategy and Society: The Spencer Wilkinson Memorial Lecture, 1974* (Manchester: Manchester University Press, 1975), 6.

²⁴ David Deese, “Oil, War, and Grand Strategy,” *Orbis* 25: 3 (1981): 525-555.

²⁵ For Europe’s postwar shift from coal to oil, see: Raymond Stokes, “Oil as a Primary Source of Energy,” in: *1956: European and Global Perspectives*, ed. Carole Fink, Frank Hadler, and Tomasz Schramm (Leipzig: Leipziger Universitätsverlag, 2006), 245-264.

Romania. The primitive state of petroleum geology also contributed to recurring fears of the imminent exhaustion of the world's oilfields, including those of the United States.²⁶

In view of such considerations, there was no pressing reason for the German High Seas Fleet to follow the Royal Navy in converting to oil. Moreover, no other part of any nation's armed forces underwent any significant modification prior to August 1914, so it was easy to believe that oil (leaving aside derivatives such as industrial lubricants) would fill only a niche role for those countries that already enjoyed guaranteed access to a product still available only in relatively small quantities and from few sources. After 1918, however, the great powers had no option but to abandon the use of coal in warships, establish air forces, and mechanize at least a portion of their armies. Like many other revolutionary advances in military technology, the use of oil-fueled weapons by some armies eventually meant that every other army had to adopt such weapons or perish.

Finally, and from our perspective most importantly, "[the] global balance of power began to reflect the distribution of indigenous oil resources, access to foreign oil... and competition and potential conflicts over oil-bearing territory." Besides benefiting oil-rich powers such as the United States and later the Soviet Union, oil elevated areas of previously marginal strategic consequence to being among the most important assets in the economic arsenals of the great powers during both the Second World War and the Cold War. Other areas that had long been the object of great power competition, such as the new nations of the Middle East, which acquired a tremendous significance either as oil-producing states or, almost as important, oil-transit states, either for ships or pipelines.²⁷

Oil may not have been the dominant factor driving grand strategy during the twentieth century, but its indispensability to modern life allows us to see how international affairs tend to be denominated by oil. By denominated, I mean that oil was among the mediums by which nations both defined and pursued

²⁶ For a contemporaneous example of such thinking, see: U.S. Senate, *Petroleum Resources of the United States: An Article on the Exhaustion of the Petroleum Resources of the United States, Showing the Present and Future Supply and Demand, Also the Production of the Principal Oil Fields of the United States*, 64th Congress, 1st Session, Document No. 363 (Washington, DC: U.S. GPO, 1916).

²⁷ Deese, "Oil, War, and Grand Strategy," 526-528.

their national interests in peace and war.²⁸ In doing so, it effectively obliterated the unnatural distinction between geopolitics and strategy, on the one hand, and economic and commercial considerations, on the other.²⁹ Whether or not policymakers privileged *raison d'état* over commerce in the formulation and execution of government policy, the control of oil could never be far from their minds because it was a necessary prerequisite to both national and economic security.

Oil also affords us one lens by which to distinguish between what was merely desirable as opposed to actually feasible in terms of policy. As one recent history of the Eastern Front observes, at the start of the “watershed year” of 1942, “as Nazi planners worked furiously to realize the economic and racial goals associated with *Lebensraum*... the operational war plans for 1942 revolved around the necessity of securing oil resources, without which the grand Nazi schemes would be mere chimeras.”³⁰ Even the absence of oil in the documentary record is not necessarily the evidence of its absence. As one historian surmises in the context of post-WWI British planning, oil did not actually have to be the topic of discussion for it to occupy a central role: “Oil was not mentioned because it was always in mind.”³¹

On a very tangible level, the possession of abundant and secure supplies of oil allowed the Allies to exploit their overwhelming materiel superiority during the Second World War. The Allies’ quantitative edge did not count for much against the Axis’ qualitative advantage during the war’s early stages, but it did give the Allies the ability to absorb their early defeats, learn from their mistakes, and eventually attain

²⁸ I am grateful to Michael Dennis for sharing this insight with me.

²⁹ See Ronald Hyam’s critique of “economic imperialism” as an analytical tool for understanding the history of the British Empire in his *Understanding the British Empire* (Cambridge: Cambridge University Press, 2010), 71-97. Hyam offers instead a defense of geopolitics, considerations of which he argues were “dominant” at the “high politics” level of imperial decision-making,” whereas economic factors assumed a “secondary” importance due to the “limited, parochial, and selfish” perspective of economic actors, as opposed to government officials “preoccupied with their global perspective” (pg. 78). Whatever the merits of this conceptual framework for understanding nineteenth-century imperial history, it seems inadequate for the post-1918 period by overlooking the extent to which geopolitics and economics were not only mutually reinforcing, but virtually the same thing.

³⁰ Stephen Fritz, *Ostkrieg: Hitler’s War of Extermination in the East* (Lexington: University Press of Kentucky, 2011), 230-239 (quotation from pg. 236). Fritz’s work – a synthesis of the recent English- and German-language secondary literature – is an excellent example of how prosaic concerns such as energy security and logistics are finally working their way into the broader historical narrative of twentieth-century international history. Although Fritz stresses the interrelationship between economics and racial politics within the National Socialist worldview, his treatment of oil oscillates between abstraction and short-term considerations such as operational logistics. The reader therefore has no clear understanding of how German planners actually understood their country’s petroleum position, and how they sought to redress it beyond physically occupying the Caucasus.

³¹ Helmut Mejer, *Imperial Quest for Oil: Iraq, 1910-1928* (London: Ithaca Press, 1976), 165-166.

qualitative parity with, or even superiority over, the Axis.³² Oil was the critical ingredient in this formulation: without it, the Allies' overwhelming economic advantage could not have been translated into fighting power. Conversely, the Axis consciously fought their wars in large part to acquire this same missing ingredient that would give their fantastical ambitions the aura of plausibility (albeit laboring against geographical obstacles that would have frustrated the easy exploitation of foreign oilfields, whether in the East Indies, the Caucasus, or the Middle East).

Accounts of the Second World War that do not include the resource disparity between the major combatants among the most decisive factors contributing to the victory of the Allies are incomplete and even misleading. As Winston Churchill remarked, after Pearl Harbor, the victory of the Grand Alliance depended "merely [upon] the proper application of overwhelming force."³³ The Second World War was in no way a contest of equals and attempts to argue otherwise are usually based on a disingenuous reading of sources or unreliable interlocutors such as the surviving German generals who blamed Adolf Hitler for Germany's "lost victories."³⁴ Contemporaries such as Franklin Roosevelt understood that the Anglo-American-Soviet alliance – if it held together – had all of the "necessary elements" to guarantee victory:

³² This argument was first put forward in the immediate aftermath of the war: Raymond Goldsmith, "The Power of Victory: Munitions Output in World War II," *Military Affairs* 10: 1 (1946): 69-80. Although he does not mention oil, I am indebted to Mark Harrison for first making this case in terms of the Allies financial and industrial superiority: Mark Harrison, "The Economics of World War II: An Overview," in: *The Economics of World War II: Six Great Powers in International Comparison*, ed. Mark Harrison (Cambridge: Cambridge University Press, 1998), 1-42. Harrison also provided a good overview of the immediate postwar literature on the wartime productivity of the major belligerents during the Second World War in: "Resource Mobilization for World War II: the U.S.A., U.K., U.S.S.R., and Germany, 1938-1945," *Economic History Review*, 2nd Series, 41: 2 (1988): 171-192.

³³ Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987), 347-357 (quotation from pg. 347). Kennedy's excellent summary of how the Allies' massive economic superiority (combined with occasional Axis strategic blunders) sealed the outcome of the war is marred only by his oversight of the disparity in oil supplies between the belligerents. For a more detailed military history of how the Allies (often inelegantly) used their materiel superiority to batter the Axis into submission through a form of attrition not dissimilar to that of the First World War, see: John Ellis, *Brute Force: Allied Strategy and Tactics in the Second World War* (London: Deutsch, 1990).

³⁴ The term "lost victories" comes from Erich von Manstein's memoirs, but the worst historical offender is: B.H. Liddel Hart, *The Other Side of the Hill: Germany's Generals, Their Rise and Fall, with Their Own Account of Military Events, 1939-1945* (London: Cassell, 1973).

“The ingredient of Anglo-American superiority in the realm of air, sea, and science, added to the twin inexhaustibles [*sic*] of Soviet manpower and American productivity, would finally crush the Axis.”³⁵

Historians have to varying degrees begun to embrace the idea that a German victory against a global coalition in the Second World War on terms acceptable to the Third Reich was impossible because of Germany’s inherent materiel and raw materials disadvantages as a small, relatively poor nation (compared to the United States and Britain) lying exposed at the center of a region bereft of adequate supplies of natural resources and food.³⁶ This argument is compelling on the level of both military and economic history, but it is only tenable because oil, like economic, financial, and military power, was also not distributed equally between the warring combatants. Although the Allies enjoyed superiority across the economic spectrum, nowhere was the difference as wide as “in relation to energy supplies, the most basic driver of modern urban and industrial society. Whereas the Anglo-American alliance was energy rich, Germany and its Western European *Grossraum* were starved of food, coal and oil.”³⁷

³⁵ Calvin L. Christman, “Franklin D. Roosevelt and the Craft of Strategic Assessment,” in: *Calculations: Net Assessment and the Coming of World War II*, ed. Alan Millet and Williamson Murray (New York: Free Press, 1992), 216-257 (quotation from pg. 257).

³⁶ For a stark description of Germany’s economic backwardness before the Third Reich relative to not just the United States but also Britain, see: Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 135-145. For a thorough inventory of Britain economic, technological, and economic advantages vis-à-vis the Third Reich in 1940 even after the collapse of France, see: David Edgerton, *Britain’s War Machine: Weapons, Resources, and Experts in the Second World War* (New York: Oxford University Press, 2011), 11-78. The best short strategic appraisal of Germany’s prospects during the war is Levine, “Near-run Thing?” Although based on by now outdated English-language secondary sources, Levine’s overall argument is still largely sound. Bernd Wegner picked up on Levine’s argument and refined it considerably in his contribution to the German official history of the conflict, which focused on German grand strategy between the failure of Operation Barbarossa and the defeat at Stalingrad: Militärgeschichtliches Forschungsamt, *The Global War: Widening of the Conflict into a World War and the Shift of the Initiative, 1941-1943*, vol. 6 of *Germany and the Second World War* (Oxford: Oxford University Press, 2001), 110-144, 843-1215. Wegner’s conclusions (pgs. 1206-1215) were published separately as: “The Road to Defeat: The German Campaigns in Russia, 1941-43,” *Journal of Strategic Studies* 13: 1 (1990): 105-127. Tooze’s *Wages of Destruction*, 396-512, develops the Levine/Wegner thesis further on the economic side.

³⁷ Tooze, *Wages of Destruction*, 411-412 and 666. Europe’s relative poverty in terms of agricultural output had been a source for concern within the Reich since the start of industrialization in the 1870s. Generations of agronomists had tried to deal with the financial, geopolitical, and sociological (racial) dilemmas imposed by Europeans’ changing diets (toward higher consumption of meat and fat). Lizzie Collingham, *The Taste of War: World War Two and the Battle for Food* (London: Allen Lane, 2011), 18-32 and 353-358.

The idea (or perhaps ideal) of grand strategy has a long and distinguished intellectual pedigree.³⁸ Grand strategy is an attempt by governments to impose their will upon the international system and must by its very nature transcend purely military considerations.³⁹ Adopting such an expansive vision of the objectives of national policy requires a “total strategy,” which one historian defines “as the management of various components of power – social, political, military and economic – in order to secure, in society’s given world environment, that society’s survival and prosperity.”⁴⁰ By the 1930s, policymakers in London had failed to recognize “the intimate connection which exists, and ought to be perceived to exist, between strategic obligations, strategies and resources; between strategy in the classical military meaning, finance and technology; between all of them and foreign policy.” By contrast, Communists possessed a national strategy that transcended purely military factors (unlike their Anglo-American counterparts) and took into account the “social context of strategy,” which gave them a “*total* view of human struggle, and hence of strategy.” Such a broad conception of national strategy had to be flexible enough to accommodate itself to changes in the international environment, which at times might reduce the value of military strength relative to economic and industrial might. The aforementioned historian was

³⁸ There is a vast literature on the concept of grand strategy. For a brief introduction to the topic, see: Paul Kennedy, “Grand Strategy in War and Peace: Toward a Broader Definition,” in: *Grand Strategies in War and Peace*, ed. Paul Kennedy (New Haven: Yale University Press, 1991), 1-7. For an application of the concept to the history of Middle Eastern oil prepared for the benefit of U.S. Central Command, see: Ian Lesser, *Oil, the Persian Gulf, and Grand Strategy* (Santa Monica: Rand Corporation, 1991). Lesser stresses that “grand strategy is to a remarkable extent the history of [both] resource access and denial,” and there is a vast, untapped body of primary sources detailing how the Allies sought to deny the Axis access to oil during the Second World War. Unfortunately, there was no space to incorporate this fascinating subject into this study. Finally, in a revisionist examination of British war aims during the First World War, Brock Millman offers an alternative conception of grand strategy as “a political-military amalgam which seeks to qualify how war aims will be achieved with the means at hand” – in other words, he stresses the instrumentalist nature of grand strategy, which is perhaps a more practical way of using the concept than assuming it defines both the objectives and the means of national policy. Brock Millman, “A Counsel of Despair: British Strategy and War Aims, 1917-1918,” *Journal of Contemporary History* 36: 2 (2001): 241-242.

³⁹ Boorman, “Fundamentals of Strategy,” 100.

⁴⁰ Barnett, *Strategy and Society*, 8; and Corelli Barnett, *The Collapse of British Power* (London: Eyre Methuen, 1972), xi. Even cultural factors could not be overlooked if they served, for instance, to degrade a nation’s economic strength. Barnett’s excoriation of the classically educated British Establishment’s indifference to or even contempt of scientific education is drawn from C.P. Snow’s *The Two Cultures and the Scientific Revolution: The Rede Lecture, 1959* (New York: Cambridge University Press), 1-42 (esp. 23-29).

therefore impressed by the possibility that, in the wake of the oil crisis of 1973, “the possession of oil wells confers greater weight in international affairs today than the possession of armed forces [...]”⁴¹

Close scrutiny of oil’s role in international affairs raises the question of whether grand strategy is even possible. This concept, even under its own terms of reference, has a number of drawbacks, such as encouraging historians to misinterpret policymakers’ actions as the product of design rather than of contingent or structural factors.⁴² It is also suffused with an implicit faith in the existence of certain state-centered norms governing international politics, including a belief in the existence of a truly “free market” that is regulated by governments, government accountability, and “the sovereign power of nations to maximize their strategic capabilities.”⁴³ There is also the danger of mistaking policies derived from policymakers’ subjective worldviews as the product of a dispassionate and systematic appraisal of a country’s relative position within the international system.

By its very nature, grand strategy must be intergenerational and grounded in certain enduring (not to mention plausible) assumptions about a nation, its means, and its place within the international system. The key elements here are intergenerational consistency and stability. In the case of the former, is it fair to speak of a “grand strategy” that is limited to a small group of policymakers (perhaps even just one) at a discrete moment in time? Strategy only becomes “grand” if it transcends the brilliance of an individual by

⁴¹ Barnett, *Strategy and Society*, *passim* (quotations from pgs. 7-8, 4, 5, and 8). Emphasis in the original. Unfortunately, Barnett (like far too many students of grand strategy) did not always practice what he preached. Perhaps because it was published a year before the Arab oil embargo, his magisterial *The Collapse of British Power* lacks awareness of the symbiotic relationship between oil and finance, and their significance to British policy. Closer study of such factors might have led him to question his withering criticism, to name but two examples, of Britain’s decision in 1921 to forego its 1902 alliance with Japan in favor of closer relations with the United States (with whom it was, along with France, then dividing up the oil reserves of Iraq) or to expand rather than retrench British obligations in the Middle East after 1918, even if the means to defend its new empire between Suez and India were lacking. Barnett can only lament Britain’s “improvident” reliance on oil imports during and after the World War, and although he acknowledges Britain’s strategic commitments in the Middle East far outweighed the benefits “until the coming of the age of petroleum”, he still writes off the British presence in the region after 1918 as “a classic, and gigantic, example of strategic over-extension.” *Collapse of British Power*, 82 and 77.

⁴² Williamson Murray put it best in a discussion of German grand strategy between 1933 and 1939: “The late 1930s suggest that statesmen and military leaders do indeed ‘see through a glass darkly,’ and that interrelationships among strategy, national security policy, diplomacy, and political goals are often disorderly and chaotic. Any attempt to assign neat theoretical explanations to such processes, can only be made at the expense of historical reality.” *German Military Effectiveness* (Baltimore: Nautical & Aviation Pub. Co. of America, 1992), 225.

⁴³ Nowell, *World Oil Cartel*, 300-301.

achieving a degree of institutional and intellectual permanence.⁴⁴ But the centrality of hydrocarbons to economic and military power starting in the nineteenth century made a mockery of any policy that did not acknowledge the capricious realities of the world's unequal distribution of coal and oil. This raises the question of how policymakers can even begin to formulate a grand strategy to guide their nation's path for decades to come when the very basis of economic and military power in the Hydrocarbon Age depends upon secure supplies of a commodity that is rarely produced in large quantities within those countries that are also the greatest consumers of it. After the First World War, policymakers in London and Berlin constantly had to reassess their assumptions and policies based upon erratic swings in the rate of oil discoveries and production that owed more to geology than any grand strategy.⁴⁵ The fact that the rate of oil consumption increased geometrically – from 200,000,000 barrels to more than 1,000,000,000 barrels between 1908 and 1929 – posed an additional burden, because it forced oil-consuming nations to acquire ever larger volumes of oil over time even when they tried to curtail consumption.⁴⁶

To further complicate matters, “perceptions of what constitutes a *vital* resource have evolved with changes in military and civilian technology.”⁴⁷ The very idea that a nation's security and prosperity depends upon access to energy is a legacy of the Industrial Revolution, which still deserves the distinction of being “by far the biggest transformation in society since the discovery of agriculture,” not the least

⁴⁴ This is the central insight of Henry Kissinger's still useful: “The White Revolutionary: Reflections on Bismarck,” *Daedalus* 97: 3 (1968): 888-924 (esp. 921-922).

⁴⁵ Taken to its extreme, such an argument renders differences between nations' political and economic systems insignificant: Europe's dependence on imports of most raw materials “essential to a modern industry society... was a matter of geography and nothing to do with politics. It would be the same whether Europe was a group of democracies or a single totalitarian unit.” Walter Levy, “The Paradox of Oil and War,” *Fortune* (September 1941): 69ff; American Heritage Center (University of Wyoming), Papers of Walter Levy (hereafter cited as: Levy Papers), Box 1; reprinted in: Walter Levy, *Oil Strategy and Politics, 1941-1981* (Boulder: Westview Press, 1982), 9-23 (quotation from pg. 9).

⁴⁶ Of course, production has historically been able to keep up with increased consumption. During the first forty-one years of its existence (1859 to 1900), the U.S. oil industry produced 1,000,000,000 barrels of oil. Producing the second billion barrels took only eight years, however, and the seventh billion just nineteen months. Anthony Stranges, “Friedrich Bergius and the Rise of the German Synthetic Fuel Industry,” *Isis* 75: 4 (1984): 650-651. Between 1918 and 1944, accumulative U.S. production rose seven-fold, from 4,252,644,000 barrels to 28,100,904,000 barrels, while global production (including the United States) increased from 6,990,481,000 barrels to 43,969,052,000 barrels. Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 12.

⁴⁷ Lesser, *Persian Gulf*, 5-6. Emphasis in the original. See also: Gordon Martel, “The Meaning of Power: Rethinking the Decline and Fall of Great Britain,” *International History Review* 13: 4 (1991): 678-679.

because it began the process of breaking mankind's reliance upon organic forms of energy (human and animal labor).⁴⁸ But the consequences for grand strategy were never static since, to borrow an analogy from Darwinian evolution, those powers that adapted too well to the previous regime of energy consumption would find themselves at a major disadvantage when alternatives emerged, as was the case with Britain and coal (and perhaps the United States and oil in the future).

Again, one should not presuppose that the transition from one form of energy to another is simply the product of market factors or efficiency.⁴⁹ While it may be granted that, in a "free market," coal's eclipse by oil was inevitable due to the latter's superiority as a source of propulsion fuel, major industries such as coal "do not operate in free markets because they have the political power to change those markets," as adduced by the fact that oil did not displace coal as the primary source of energy in Western Europe until well after the Second World War. During the nineteenth century, coal had little to fear from oil, since the two commodities served different purposes: the former as a source of propulsion, the latter as a source of heat, illumination, and lubrication. While the coal industry became complacent, the oil industry moved aggressively into the transportation sector once it perceived the existential threat posed by electrification, which would wipe out the market for kerosene. By the time oil's superiority as a source of propulsion fuel became clear around the First World War, the "nationally fragmented coal industries" had to compete with international "fully developed corporations rather than weak entrants" they could strangle at birth. The firms comprising the coal industry concluded that they themselves had to enter the oil industry if they were to survive, but the only option left open to them – producing petroleum synthetically – was closed off by the "hydrocarbon cartel" formed between the major oil and chemical companies (the Standard Oil

⁴⁸ Snow, *Two Cultures*, 24.

⁴⁹ Bruce Podobnik argues that energy shifts are the product of "geopolitical rivalry, "corporate competition," and "social conflict," and that their interaction during periods of crisis leads to "hegemonic shifts," such as the one between Britain and the United States that mirrored the shift from coal to oil. Podobnik also "emphasizes the central role of human institutions and conflicts" in contrast to the "resource determinism" of earlier analysts. Podobnik, *Global Energy Shifts: Fostering Sustainability in a Turbulent Age* (Philadelphia: Temple University Press, 2006), 1-17. The argument is compelling on the level of corporate competition, but unconvincing within the realm of military strategy – oil's superiority over coal on the battlefield was not a result of the former being "aggressively marketed." The weapons systems of the twentieth century are unimaginable without the use of petroleum, which meant that nations either had to acquire crude oil or produce petroleum synthetically. Countries that chose the latter option like Germany (or Apartheid South Africa) did so purely out of political necessity.

Company of New Jersey – Jersey – and IG Farben), which controlled the major patents for the synthetic production of petroleum. As a consequence, the coal industry either withered or (as was the case in Germany after 1934) lost its independence when it was forcibly integrated into the ascendant “hydrocarbon cartel.”⁵⁰

The examples of Britain and Germany are particularly instructive. Each power occupied a different position within the international system, both in terms of the overall balance of power and the international oil industry, which makes them ideal for the purposes of comparative history.⁵¹ Britain was the home of two major oil companies: the Anglo-Persian Oil Company (Anglo-Iranian Oil Company after 1935) and Royal Dutch/Shell (Shell). (The British Government held a 51% stake in the former since 1914, whereas the latter had been 60% Dutch-owned since 1907 but was effectively British in terms of its commercial and financial operations since the First World War.⁵²) These companies boasted of prolific oil concessions in Latin America, the Middle East, and East Asia, as well as developed marketing and transportation networks.⁵³ As of 1927, Shell was the largest oil company in the world: it produced 50% more oil than either of its next two competitors, Jersey and Gulf Oil, and had more tankers than both of

⁵⁰ Nowell, *World Oil Cartel*, 224-236 (quotations from pgs. 224-225). Podobnik, *Global Energy Shifts*, 38-91, is also informative on the shift from coal to oil, but he places the emphasis for the transition almost exclusively on the development of the internal combustion engine and makes no reference to the challenge posed by electrification. See also: Martin Melosi, *Coping with Abundance: Energy and Environment in Industrial America* (Philadelphia: Temple University Press, 1985), 50 and 138-159. The domestic political consequences of the hydrocarbon revolution in the developed world are provocatively synthesized in: Timothy Mitchell, “Carbon Democracy,” *Economy and Society* 38: 3 (2009): 399-432.

⁵¹ An excellent overview of the state of the international oil industry in the 1920s and 1930s, which highlights predominance exercised by the U.S. and British major oil companies, may be found in: Helmut Mejcher, “The International Petroleum Cartel (1928), Arab and Turkish Oil Aspirations and German Oil Policy towards the Middle East on the Eve of the Second World War,” in: *Oil, the Middle East, North Africa and the Industrial States*, ed. Klaus Jürgen Gantzel and Helmut Mejcher (Paderborn: F. Schöningh, 1984), 27-59.

⁵² Shell Transport and Trading Co., “Memorandum: Shell/Royal Dutch Group,” 16 January 1940, British National Archives, CAB 63/117.

⁵³ There is no clear distinction between “major” and “independent” oil companies. The latter are vertically integrated firms with their own oilfields, transportation infrastructure, refineries, and marketing networks. Independent companies usually focus on one or more of the various aspects of production, but sometimes they too can be vertically integrated. Within this study, the term “major” has been applied only to those companies later known as the “Seven Sisters”: the Standard Oil Company of New Jersey (Jersey), the Standard Oil Company of New York, the Standard Oil Company of California, the Texas Company, Gulf Oil, Royal Dutch/Shell (Shell), and the Anglo-Iranian Oil Company. David Painter, “Oil,” in: vol. 3 of *Encyclopedia of American Foreign Relations*, ed. Alexander DeConde, Richard Dean Burns, and Fredrik Logevall (New York: Scribner, 2002), 2.

those companies combined.⁵⁴ In fact, until after the Second World War, British firms (including Shell) firms produced more oil outside of the United States than did U.S. oil companies: as of 1939, the former accounted for 795,300 barrels per day (35.7% of global production beyond the United States) vs. 554,800 barrels per day (24.9%) for the latter.⁵⁵ Even if Britain had to import virtually all of the oil it consumed, no country was better-equipped to secure such large quantities from abroad, and on paper its supply position appeared enviable. What worried policymakers in London was not whether they would be able to import oil, but from where and on what terms.

Even after its defeat in 1918, Germany possessed immense latent economic and military strength. It was, however, only a modest producer and consumer of petroleum even after the rise of the Third Reich. Germany nonetheless posed the greatest threat to Anglo-American domination of the international oil industry through its ability to strike at two of the world's centers of oil production: the Caucasus and the Middle East.⁵⁶ The acquisition of foreign oilfields was an explicit German war aim between 1940 and 1942. Had these aims been fulfilled, the oil of the Caucasus and Middle East, as well as synthetic gasoline produced within Europe, would have formed the resource basis for Germany to challenge Anglo-American global hegemony. Not for nothing did a recent history of the Eastern Front conclude that, "in many respects, World War II can be seen above all as a war for oil, with those lacking it (Germany, Italy, Japan) seeking to defeat those who controlled it (Great Britain, the United States, and Russia)."⁵⁷

⁵⁴ 314,200 barrels per day vs. 214,700 and 212,500 barrels per day, respectively, and 156 tankers vs. 123 tankers. Thanks to astute acquisitions in Venezuela, the Jersey caught up with Shell in 1935 at 560,000 barrels per day. Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 1 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 224-225, 437. See also: Jonathan Brown and Peter Linder, "Oil," in: *The Second Conquest of Latin America: Coffee, Henequen, and Oil During the Export Boom, 1850-1930*, ed. Steven Topik and Allen Wells (Austin: University of Texas Press, 1998), 146.

⁵⁵ Mira Wilkins, *The Maturing of Multinational Enterprise: American Business Abroad from 1914-1970* (Cambridge: Harvard University Press, 1974), 241.

⁵⁶ The scale of German ambitions are sketched out in a key document produced in the autumn of 1940 by one of the most important officials responsible for petroleum policy in the Third Reich, reproduced with extensive commentary in: Titus Kockel, "Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940: E. R. Fischer (Reichswirtschaftsministerium, II Min. Öl), 'Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,' September 1940," *Jahrbuch für Wirtschaftsgeschichte* 2003/1: 175-208.

⁵⁷ Fritz, *Ostkrieg*, xxii.

Examining the entire interwar period and carrying the story into the Second World War also allows us to see how oil's political, economic, and strategic significance evolved over time. Britain attempted to pursue a foreign oil policy after 1918 independent of and, to some extent, in competition with the United States. The limitations of this policy compelled Britain first to accept cooperation with, and later outright dependence upon, the United States well before 1939. Thanks to oil, Great Britain effectively became a colony (or strategic outpost) of the United States not as a result of the military catastrophes of 1942 in Southeast Asia (Singapore) and North Africa (Tobruk), as one recent revisionist study argues, but before the Second World War even began.⁵⁸ Germany's decision to pursue a crash-program of synthetic fuel production and gradually cut itself off from the international oil market in the interest of constructing an autarkic "Greater Economic Area" (Großraumwirtschaft) did not happen overnight. The first steps toward achieving independence from oil imports had been taken during the Weimar Republic for entirely political and economic considerations, whereas after 1933, the rationale shifted toward securing resources to wage a genocidal war of conquest.

In essence, this work is a story of two abortive attempts for energy independence.⁵⁹ Oil played a central role in Britain and Germany's shared desire after 1918 to escape economic dependence upon the United States and perhaps even to challenge the North American colossus for global leadership. The failure to achieve energy independence also determines the end of this story: 1939 (Britain) and 1941 (Germany). The Second World War was far from over when Operation Barbarossa stalled outside of Moscow and had yet to reach its bloody crescendo in either Europe or East Asia. But the possibility that either Britain or Germany could acquire and develop alternative sources of oil that would allow them to

⁵⁸ Edgerton, *Britain's War Machine*, 4-5, 76-78, and 84-85.

⁵⁹ Throughout this study, I have used the term "energy independence" rather than "oil independence" because the former is more familiar to contemporary readers. The meaning of the concept is elusive: it can refer to anything from self-sufficiency in oil production to eliminating imports from one particular supplier such as a specific region, country, or even oil company. Not surprisingly, both nations covered by this study had different conceptions of energy independence. Britain's idea of energy independence after 1918 was no longer importing oil produced or controlled by another great power (particularly the United States). By contrast, Germany's program for achieving energy independence was more complex: before 1933, the Third Reich wished to limit overseas imports, either through greater synthetic production or overland imports from Romania. After 1940, Germany would make its new empire energy independent by, on the one hand, forcibly acquiring the oilfields of the Soviet Union, and on the other, evicting hostile foreign interests from the Middle Eastern oil industry. Ownership of the oilfields within the enlarged Reich and its sphere of influence would thereafter pass into the hands of Axis or pro-Axis oil companies.

reassert their autonomy as great powers had vanished. After 1941, the intervention and assistance of the great powers on the periphery of the European international system would become decisive, both in terms of the final defeat of the Axis and in the shaping of the postwar world.

Ironically, both countries came close to achieving limited energy independence: by the late-1930s, the Middle East appeared capable of soon ending Britain's need to import oil from nations not under British control, whereas the Third Reich went to war in 1939 self-sufficient in terms of gasoline consumption and needed only one neighboring supplier (Romania) to cover its requirements of heavier petroleum products such as fuel oil and diesel fuel. But energy independence – either from foreign suppliers in the case of Britain or from overseas imports in the case of Germany – was (and is) not synonymous with energy security: the ability to draw from secure supplies during periods of crisis. The oil of the Middle East was unavailable to British forces west of Suez after 1940 because of the logistical difficulties entailed by rerouting supplies around the Cape of Good Hope instead of through the Mediterranean. Synthetic fuel allowed Germany to wage war but not to win it. Germany's economically illiterate generals scoffed at economic advisers who urged the conquest of the Caucasus by pointing out that Germany “managed to carry on the war until 1945 without ever securing the Caucasus oil.”⁶⁰ But at no point after the failures of 1941/42 did Germany ever possess the opportunity to end the war on favorable terms. Rather, Axis Europe had to spend the rest of the conflict laboring under a constant shortage of energy, which constrained economic productivity and reduced military effectiveness. The Allied bombing campaign against Germany's synthetic fuel plants after May 1944 also revealed that independence from overseas imports had not guaranteed the Third Reich energy security.

By exploring an overlooked factor behind the eclipse of Europe, we can also gain additional insights into the rise of the United States to global hegemony – as well as the consequent shift from a multipolar to a unipolar world – a development that was and continues to be inexorably tied to oil. Oil supercharged the ascent of the United States, whose economic superiority was already manifest by the end of the nineteenth century. This superiority would have eventually climaxed with the United States'

⁶⁰ Liddel Hart, *Other Side of the Hill*, 305-306.

eclipse of Europe in the absence of any world wars, but the rise of oil as the means and object of great power competition did more than just enfeeble Britain and shackle it to the United States. It also afforded the latter the opportunity and means to prevent two of the period's rising powers, Germany or Japan, from ever following in the United States' footsteps by mimicking the nineteenth-century model of U.S. economic development through landed expansion, closed markets, and defense-in-depth.

This study is divided into seven chapters. The first three examine Britain's failed attempt to achieve energy independence from the United States after the First World War. The superficial majesty of the British Empire in 1918 masked serious weaknesses and strategic liabilities, not the least of which was the fact that the empire accounted for only a small fraction of world oil production before 1945. Those few parts of the formal and informal empire that did show some promise, such as Bahrain, Iran, Iraq, and Kuwait, were not reliable sources of supply in wartime due to their unfavorable geographic position. In wartime, supplies from the Persian Gulf were only useful for supplying British forces east of Suez; in the West, safe passage through the Mediterranean could not be guaranteed in the event that Italy joined the Axis. Consequently, in spite of a concerted policy after 1918 to increase the amount of oil owned and produced by British companies within the British Empire and its Middle Eastern client-states, by the eve of the Second World War, Britain remained dependent upon the oil reserves of the Western Hemisphere, access to which was contingent upon the goodwill and generosity of the United States.

Although the academic literature on the fall of the British Empire is immense, many imperial historians have yet to consider methodically the role of oil as an objective of British petroleum policy after 1918, or how the search for oil influenced British policy in regions such as the Middle East.⁶¹ Consequently, oil's significance as a casual factor behind Britain's gradual eclipse by and subordination

⁶¹ One esteemed historian of Britain and decolonization managed to write an entire article on Britain's "undeclared empire" in the Middle East between the world wars with only a single (erroneous) reference to oil, which he claims was "strategically significant" by 1939 – precisely the time when it was no longer vital. John Darwin, "An Undeclared Empire: The British in the Middle East, 1918-39," in: *The Statecraft of British Imperialism: Essays in Honor of Wm. Roger Louis*, ed. Robert King and Robin Kilson (London: Frank Cass, 1999), 174. Even if we concede that the expansion of the British presence in the Middle East after the First World War aimed primarily at securing air and sea access to India in order to mobilize its resources as well as those of the white dominions, these were not the only considerations at play.

to the United States before 1945 has been all but ignored. Vital questions about the strategic viability of the empire have not only gone unanswered, they have yet to be asked in the first place.⁶²

The last four chapters consider how policymakers in the Third Reich reconciled Germany's tenuous oil supply position with their plans for war, conquest, and racial extermination.⁶³ Irrespective of its barbarity, the Third Reich built upon the existing foundation of scientific research excellence in Germany, and the National Socialists made massive investments toward expanding Germany's existing synthetic fuel industry.⁶⁴ Policymakers, businessmen, soldiers, and bureaucrats in the Third Reich all placed enormous faith in Germany's "creative genius" to overcome its crippling shortages of raw materials through technology.⁶⁵ By a process of strategic alchemy, German scientific skill would transform Germany's abundant supplies of coal into black gold. Although synthetic fuel production and imports from Romania left Germany with little margin for error, Hitler had not pursued rearmament with the intention of constructing armed forces prepared for any military eventuality. Pursuing rearmament in both breadth and depth was impossible without absorbing the economic assets of the western half of the Eurasian landmass. Time was also not on Germany's side, for its initial advantage in terms of military preparedness as well as tactical and operational virtuosity were wasting assets. What mattered was not

⁶² John Gallagher acknowledges that "by the nineteen-thirties oil was an important national interest," while conceding that the subject of Middle Eastern oil, although "deeply interesting," was also "under studied." John Gallagher, *The Decline, Revival and Fall of the British Empire* (Cambridge: Cambridge University Press, 1982), 123-126 (quotation from pg. 125). That may have been the case in Gallagher's time, but several works on British oil policy before and after the First World War appeared shortly thereafter. They appear to have made little impression upon the field of imperial history. Recent surveys of imperial history after 1918 make only the most cursory mention of oil. One notable exception is Steven Galpern's *Money, Oil, and Empire in the Middle East: Sterling and Postwar Imperialism, 1944-1971* (Cambridge: Cambridge University Press, 2009), but even this study is more concerned about explaining how London sought to use oil to give the empire a new lease of life after the Second World War. The role of oil in putting Britain in that predicament to begin with remains neglected.

⁶³ Due to the dearth of German military records prior to 1933, and the absence of any compelling strategic need for petroleum when Germany was still hobbled by the restrictions of Versailles, it is difficult to construct a detailed assessment of oil and German grand strategy before the Third Reich.

⁶⁴ I am sensitive to Ian Kershaw's perceptive observation that "the Hitler regime was inimical to a rational order of government administration. Its hallmark was *systemlessness*, administrative and governmental disorder, the erosion of clear patterns of government, however despotic." Ian Kershaw, "'Working Towards the Führer.' Reflections on the Nature of the Hitler Dictatorship," *Contemporary European History* 2: 2 (1993): 103-118 (quotation from pg. 109). Emphasis in the original. I would add one caveat in the case of oil: one does not fill gasoline tanks by a "triumph of will" alone. Even ruthless paladins such as Hermann Göring deferred to the counsel and managerial competence of scientific and corporate elites on petroleum policy.

⁶⁵ "Ölstrategie," *Militär-Wochenblatt*, 121. Jahrgang, Nummer 27 (15 January 1937).

whether Germany was absolutely ready for war, only that it was relatively better prepared than its enemies.⁶⁶

By the autumn of 1939, there was a consensus within German military and political leadership circles that the Third Reich's petroleum position was, given certain preconditions (such as secure access to Romanian exports and unimpaired domestic crude and synthetic production), adequate to fight a war against both Britain and France that would create the material conditions for Germany first to destroy the Soviet Union and then to challenge the United States for global hegemony.⁶⁷ That these assumptions turned out to be unrealistic over time matters less than the fact that Germany's leadership and knowledgeable outside observers believed them to be valid.⁶⁸

⁶⁶ This is a central element of Williamson Murray's assessment of National Socialist grand strategy before the war: *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton, Princeton University Press, 1984), 3-49 (esp. 48-49).

⁶⁷ During the early stages of the war, there was no shortage of warnings that the Allies should not expect the German war machine to collapse due to a lack of oil. The noted petroleum economist Walter Levy stressed this point in both lectures and articles. See: Walter Levy, "Oil in this War's Strategy," undated speech (sometime between the fall of France and the start of Operation Barbarossa); and Walter Levy, "Petroleum's Part in Axis Strategy," *World Petroleum* 12: 7 (July 1941), 39-43; both in: Levy Papers, Box 1.

⁶⁸ Levy was particularly impressed by what he perceived as the thoroughness of Germany's prewar preparations: "With the advent of the Hitler regime in January, 1933, Germany prepared for war. Nothing was left undone to create the best possible conditions for waging war; mistakes of the past were studied and studied again, and a comprehensive plan for every field of economic and military life was drawn upon to cover any possible emergency." Walter Levy, "Oil and War," 09 May (or 05 September) 1941, unpublished manuscript, National Archives and Records Administration, Record Group 169: Records of the Foreign Economic Administration, Entry 360, Box 2191. Levy was a German Jew who fled the country in 1933 and ended up serving as the wartime expert on the German oil industry for the Organization of Strategic Services. Following the war, Levy handled petroleum affairs for the European Cooperation Agency before becoming one of the world's leading petroleum economists and a consultant to numerous governments and private companies. Wolfgang Saxon, "Walter James Levy, 86, Oil Consultant, Dies," *New York Times*, December 15, 1997, <http://www.nytimes.com/1997/12/15/business/walter-james-levy-86-oil-consultant-dies.html>.

A Note on Measurements and Translations

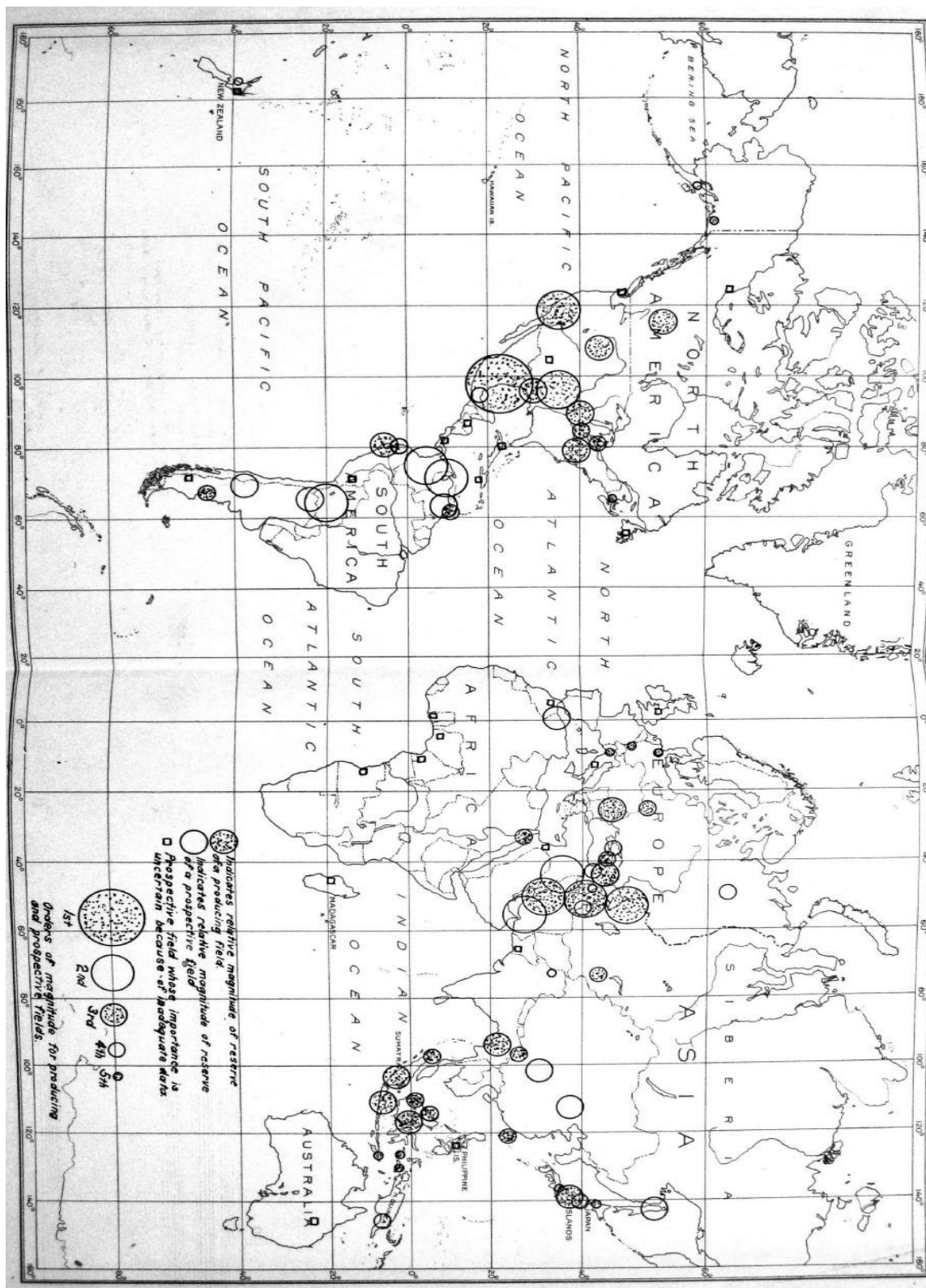
The specific chemical properties of various kinds of crude oil affect the volume of space it occupies. One ton of oil can fill between six to eight barrels depending upon its gravity and viscosity. For the sake of clarity, throughout this study, one ton of oil equals seven barrels of oil, and vice versa. Americans usually enumerate oil in barrels, while the British prefer metric tons. Unfortunately, most primary sources do not specify whether they are referring to “long” or “short” tons (2,240 lb vs. 2,000 lb). The oil industry conducts business in “long” tons, and I have assumed that my sources do as well unless otherwise indicated.⁶⁹

After 1918, Germans usually used the term “Mineralöl” when referring to petroleum products either refined from crude oil or produced synthetically from coal. Either “Erdöl” or “Rohöl” was used when referring to crude oil, and “Treibstoff” or “Kraftstoff” in the case of “motor fuel.”⁷⁰ For the sake of clarity, except in the case of the phrase “oil crisis,” whenever I use the term “oil” in chapters four through seven, I am referring only to crude oil, whereas the term “petroleum” refers to both natural and synthetic petroleum. Additionally, I have translated “Verarbeitung” as “refining” even though the literal translation is “processing,” since the former is more familiar to English-speaking readers, and because German documents of the period rarely used the terms “Raffination” or “Veredelung,” both of which also translate as “refining.”

Finally, Germans used a variety of terms when referring to the geographic area stretching from Egypt to Afghanistan, and from the Caucasus to Aden, the most common being “Naher Osten,” “Orient,” “Vorderasien,” or “Vorder Orient,” and occasionally “Mittler Osten.” For the sake of clarity, I shall use the term “Middle East” except with direct quotations, although in the case of the latter I have rendered “Vorderasien” as the “Near East” because it seems more appropriate than the literal translation (“Near Asia”).

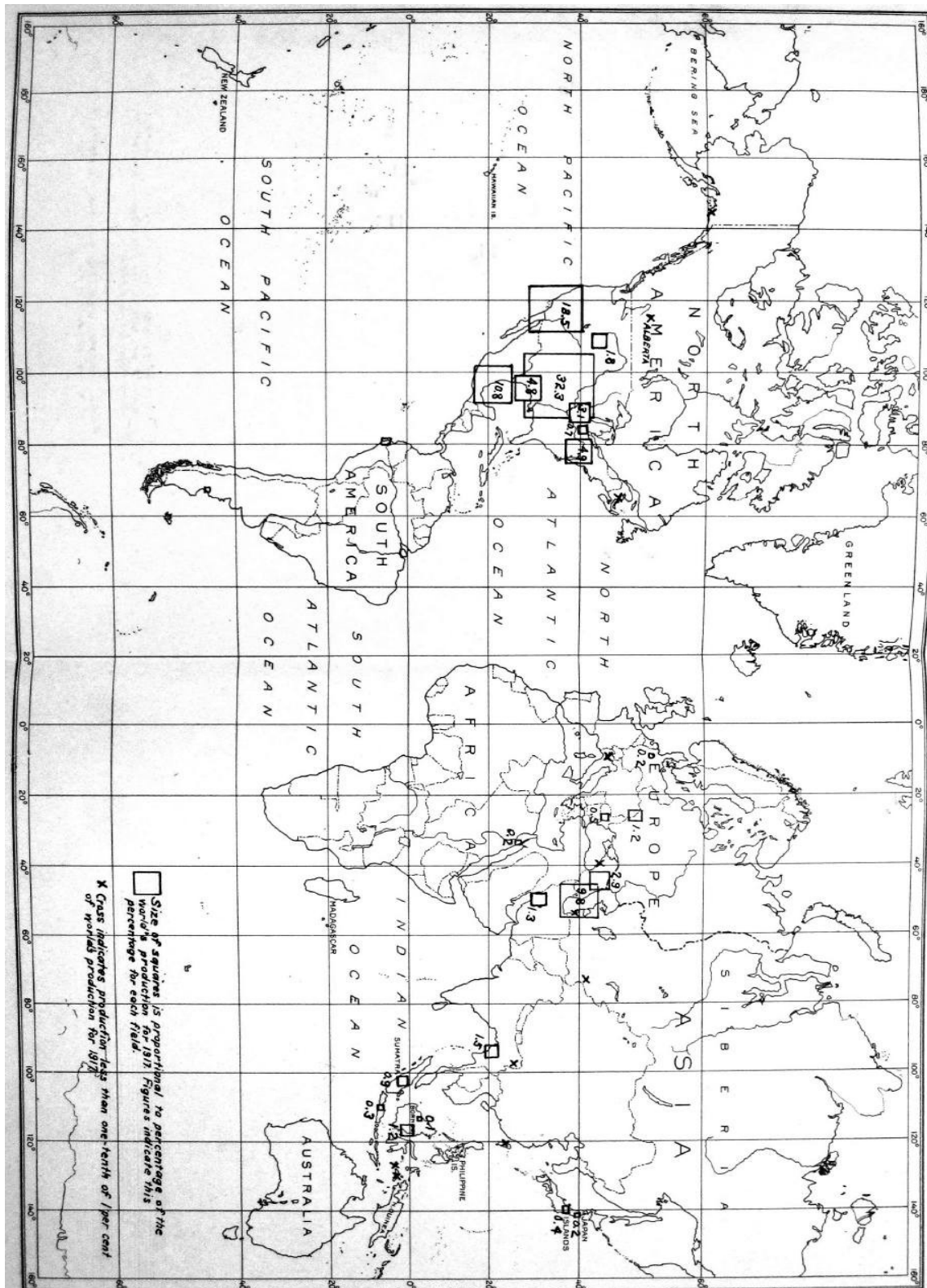
⁶⁹ J.H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, vol. 2 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1994), 56-57.

⁷⁰ Dietrich Eichholtz, *Deutsche Ölpolitik im Zeitalter der Weltkriege: Studien und Dokumente* (Leipzig: Leipziger Universitätsverlag, 2011), 189-190.



Map 1: Proven and Probable World Oil Reserves, no date (circa 1921)

Source: National Archives and Records Administration (NARA), Record Group 107: Records of the Office of the Secretary of War (RG 107), Entry 191, Office of the Assistant Secretary for War (OASW), Planning Branch, Box 100.



Map 2: Regional Shares of World Oil Production, no date (circa 1921)
 Source: NARA, RG 107, Entry 191, OASW, Planning Branch, Box 100.

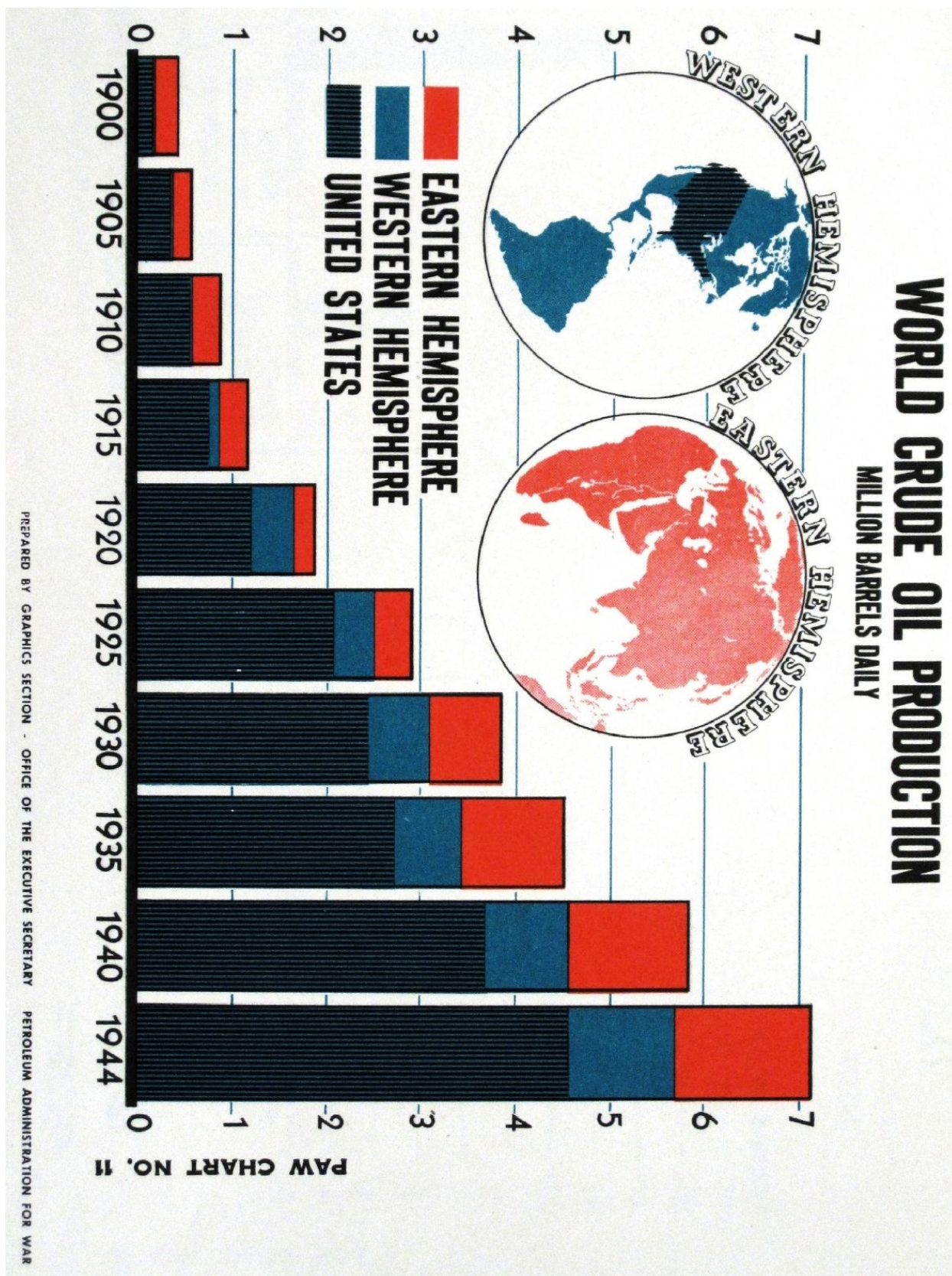


Illustration 1: Petroleum Administration for War (PAW), "World Crude Oil Production," 22 February 1945
 Source: Library of Congress (LOC), Harold L. Ickes Papers, Box 221.

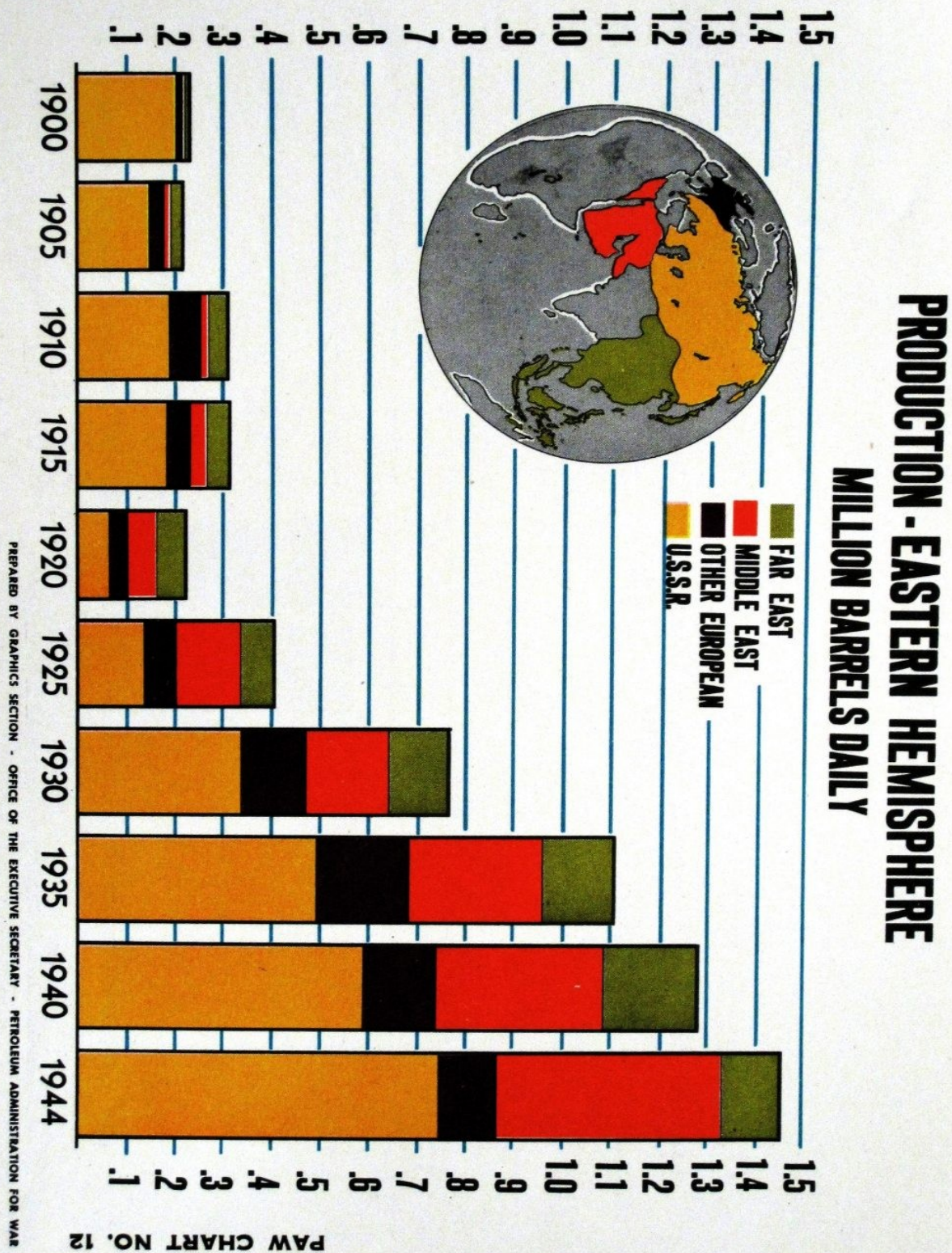


Illustration 2: PAW, "Production – Eastern Hemisphere," 22 February 1945
Source: LOC, Harold L. Ickes Papers, Box 221.

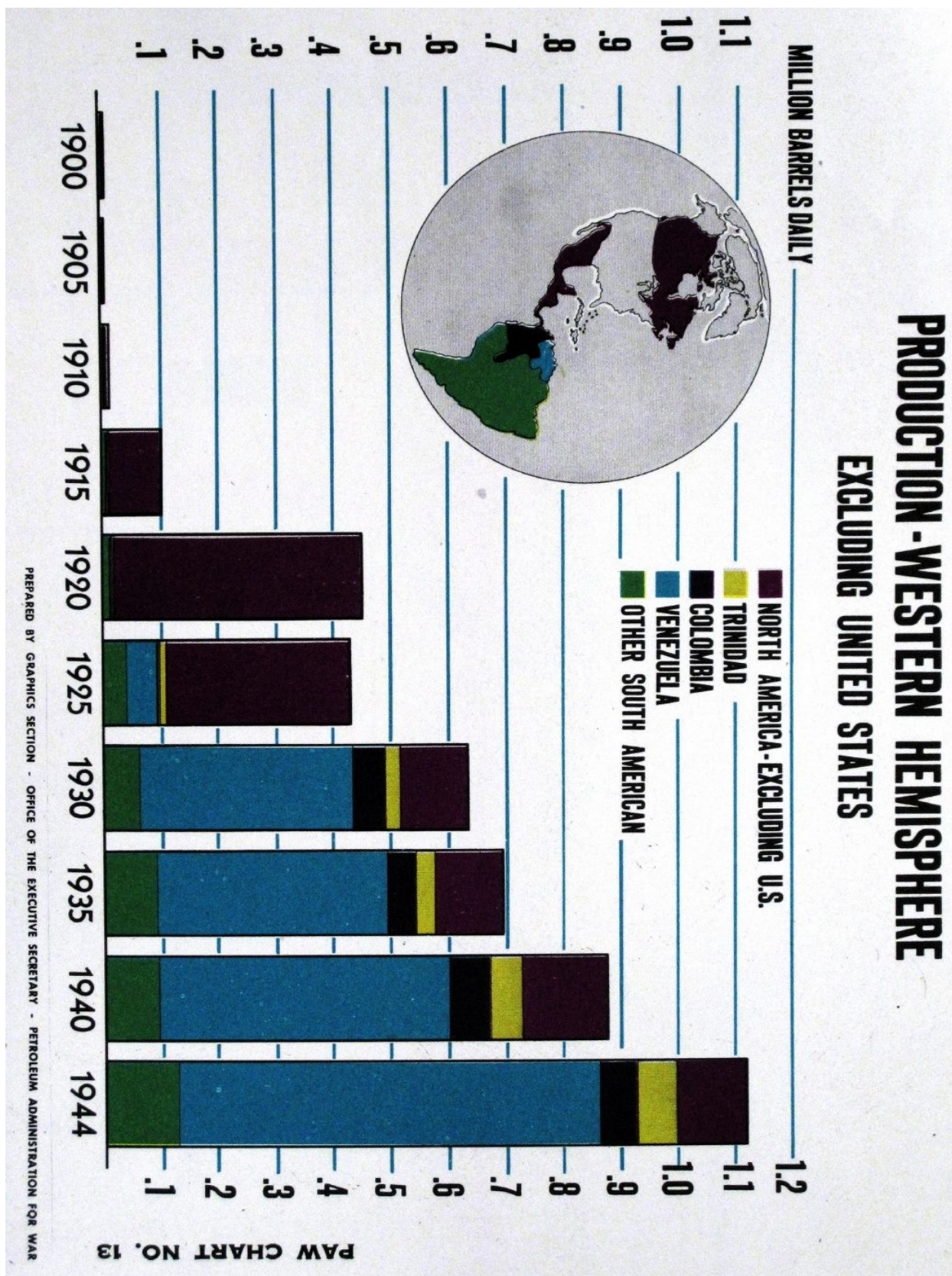


Illustration 3: PAW, "Production – Western Hemisphere," 22 February 1945
 Source: LOC, Harold L. Ickes Papers, Box 221.

Chapter I

The Allure of Energy Independence: Britain, 1918-1921

Great Britain fought the First World War largely with oil imports from the United States, which was a painful reversal of fortune for a nation that had enjoyed energy independence during the Age of Coal. Since domestic oil production was miniscule, with little likelihood of any change in the near future, Britain had no choice but to import oil.¹ But even if imports were indispensable, Britain could still try to avoid relying upon sources of oil controlled by rival powers. The most important question after 1918 was whether Britain could acquire control of supplies of foreign oil on its own terms and maintain access to them without recourse to the military and economic power of the United States or any other great power. In order to escape reliance exports from the United States or countries dominated by U.S. oil companies (Mexico), Britain had not only to develop new sources of supply under British control, but also to find alternative, British suppliers that could replace the major U.S. oil companies.²

The two purely British oil companies, the Anglo-Persian Oil Company (APOC, or the Anglo-Iranian Oil Company, AIOC, after 1935) and the Burmah Oil Company (Burmah), lacked the means to challenge the U.S. major oil companies. That left Royal Dutch/Shell (Shell), a partnership between the Royal Dutch Petroleum Company and the Shell Transport and Trading Company. Due to its unfavorable financial position, Shell consented to a 60/40 division of shares with Royal Dutch when the two companies formed the Shell Group in 1907.³ Starting in 1916, the British Government made several efforts to broker a reorganization that would place most of the group's subsidiaries under the control of British nationals. As far as new supplies of oil were concerned, Britain was already well-positioned in the world's key export market after the First World War, Latin America, where British firms had long been active within existing

¹ All primary sources cited in this chapter are from the British National Archives (BNA), unless otherwise indicated.

² Nor did London try to hide its intentions: as early as 1923, journalists understood that Britain's post-1919 oil policy revolved around "guaranteeing security of supply by the maximum amount of British control," partially through "anglicising" Royal Dutch/Shell (Shell). E.H. Davenport and Sidney Russell Cooke, *Oil Trusts and Anglo-American Relations* (London: Macmillan and Co., 1923), 38-47 (quotation from pg. 47). See also: B.W. Patch, "Oil in World Politics," 24 December 1935, *Editorial Research Reports: 1935*, vol. 2 (Washington, DC: CQ Press).

³ The two companies did not formally merge until 2005. The Shell Oil Company – Shell's U.S. subsidiary (established in 1912 as the American Gasoline Company) – was effectively independent until 1984/85, when its parent company and majority shareholder, Royal Dutch, purchased all outstanding shares.

(Mexico) or soon-to-be major (Venezuela) producers. But the Western Hemisphere was no longer an ideal supplier: besides the fact that production in key nations such as Mexico was in jeopardy (first by revolution and later geological problems), Britain had gradually begun ceding political hegemony in the hemisphere to the United States after 1895, a process that gathered steam after 1914 as Britain ran down its considerable economic investments in Latin America to fund its war effort.

The obvious place to look for oil free from foreign control was within the empire and its protectorates, where Britain could monopolize production by excluding foreign firms. The British believed that the road to energy independence from the United States ran through the Middle East, particularly Persia (Iran after 1935) and Mesopotamia (Iraq after 1920).⁴ Already the dominant power in the region before 1914, the withdrawal of Russia after 1917 seemed to presage British hegemony in Persia, while London secured control of Mesopotamia before the First World War ended largely because of its expected (but still unproven) oil wealth. Expanding production in both Iran and Iraq depended upon finding ways to get the oil to consumers cheaply, since oil shipped from the Persian Gulf was farther away from Britain than oil from the Gulf of Mexico. The most effective means of getting Middle Eastern oil to Europe was through pipelines that would link the oilfields of both Iran and Iraq to the Mediterranean. The question of pipelines and transit rights was therefore a source of contention throughout the interwar period. If all went according to plan, Britain would no longer be dependent upon the United States (whose oilfields appeared to be in decline in the aftermath of the First World War and whose voracious internal consumption would gradually erode any export surplus even if production continued to rise) and U.S. oil companies. Instead, Britain would have at its disposal the services of at least one major oil company that could challenge the U.S. oil companies for commercial supremacy. Most

⁴ One recent history of British oil policy contends that London did not pursue a coherent oil policy between 1918 and 1939 and was “broadly neutral” concerning British oil interests in the Middle East. Charles More, *Black Gold: Britain and Oil in the Twentieth Century* (London: Continuum, 2009), 25 and 32. More overlooks the possibility that disagreements over the methods of British oil strategy should not imply the absence of such a strategy. The fact that official documents from the 1930s did not constantly refer to the objectives laid down at the end of the First World War also does not signify that these aims had been abandoned. Likewise, London would not have had to compensate for the possible closure of the Mediterranean following the break with Italy in 1936 were it not for the fact that the government had spent years seeking energy independence from the United States in the Middle East.

importantly, British oil companies would be supplied largely from oilfields in a region under British political, military, and economic control. For a country that lived and died on its access to imports, this was as close to energy independence as Britain was ever going to get.⁵

⁵ See the appendix to this study for additional discussion of secondary sources.

Prologue: The APOC Share Purchase and the Origins of British Oil Policy, 1912-1914

The British Government's direct involvement within the affairs of the oil industry started with the "landmark" decision to purchase a 51% stake in APOC in 1914 in order to safeguard the fuel supply of the Royal Navy.⁶ The impetus for the acquisition of shares actually came from APOC.⁷ London had come to the rescue of the original holder of the Persian concession, William Knox D'Arcy's First Exploitation Company, in 1905.⁸ The signing of the D'Arcy Concession in 1901 had come in the midst of an intense period of Anglo-Russian competition for influence in Persia. Russia was Persia's largest trading partnership after 1910 and had a large market for its kerosene there. St. Petersburg therefore could not afford to be indifferent to the development of an alternative source of production. The D'Arcy Concession, while excluding the northern provinces of Persia bordering Russia, also compelled Tehran to reject Russian efforts to construct a pipeline across Persia to market their petroleum in the Indian Ocean area and beyond.⁹ In order to prevent the cash-starved D'Arcy from selling part of his original concession either to the Russians or the French Rothschilds, the Foreign Office and the Admiralty (over the objections of the Viceroy, Lord Curzon) arranged for financing through the Burmah Oil Company.¹⁰

Burmah's leadership was wary of taking over the D'Arcy Concession for they had no market for Persian oil in the Eastern Hemisphere. Besides, Article 9 of the D'Arcy Concession stipulated that a new

⁶ Geoffrey Jones, *State and the Emergence of the British Oil Industry* (London: Macmillan, 1981), 9.

⁷ The Anglo-Persian Oil Company (APOC) was not alone in this regard: before the war, it was usually the oil companies themselves that pressed for government participation and not the other way around (Shell in 1902 and again in 1911, Mexican Eagle in 1913, and, of course, APOC in 1912-1914). They did so probably knowing full well that government participation would ensure numerous commercial benefits with only nominal political control: "Indeed, if this had not been the case, and if the oil companies had not been quite convinced that government 'control' would consequently never become nationalization, they would never have pursued their assault on laissez-faire." Geoffrey Jones, "British Government and the Oil Companies, 1912-1924: The Search for an Oil Policy," *Historical Journal* (1977): 647-654 (quotation from pg. 654).

⁸ A summary of APOC's operations in Persia/Iran as well as the history of Iranian oil industry may be found in Ronald Ferrier's "The Iranian Oil Industry," in: *From Nadir Shah to the Islamic Republic*, ed. Peter Avery, Gavin Hambly, and Charles Melville, vol. 7 of *The Cambridge History of Iran* (Cambridge: Cambridge University Press, 2008), 639-701 (esp. 639-657). It is not a substitute for contribution to the official history of BP: *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982), which does however, have a distinctly pro-company bias.

⁹ The D'Arcy Concession is reprinted in: Ferrier, *History of BP*, 640-643.

¹⁰ The Foreign Office was certainly concerned about the Russian threat, but the most likely suitors were the Rothschilds, whom D'Arcy approached in 1904. Ferrier, *History of BP*, 59-62; and T.A.B. Corley, *A History of the Burmah Oil Company, 1886-1924* (New York: Heinemann, 1983), 98-101.

company would have to be founded if oil was discovered in Persia. Rather than risk losing the concession on a legal technicality, Burmah chose to remain in the shadows as a shareholder in APOC.¹¹ This led to the creation of the Concessions Syndicate Ltd, subsequently reorganized as APOC in 1909, with Burmah temporarily serving as the largest shareholder.¹² Two leading historians of British imperialism describe London's brokering of the partnership between D'Arcy and Burmah (which they misdated as occurring in 1908) as a key departure "from mid-nineteenth-century principles of non-intervention." The degree to which "economic resources were entwined with strategic priorities" necessitated that the government undertake a more energetic defense of British private interests "in areas of political sensitivity."¹³

Although APOC had discovered oil in 1908, the company's commercial position remained dire. Its major refinery Abadan was in shambles, and the company was hemorrhaging money and in danger of being absorbed by Shell, with whom it had been compelled to sign a marketing agreement in 1912.¹⁴ APOC's leadership (much to the chagrin of the company's major shareholder, Burmah) sought to preserve their independence by securing government support for a concession in Mesopotamia.¹⁵ This was a classic instance of what one historian calls "transnational structuring": behind the rhetoric of national interest, matters of profound strategic consequence were settled not by a strong, aggressive

¹¹ Corley, *History of Burmah*, 95-111, 128-145.

¹² The pre-1914 ownership structure of the company and its operations in Persia are summarized in the reports of the Admiralty Commission on the Persian Oilfields (led by Slade), the final one of which is reprinted in: *Agreement with the Anglo-Persian Oil Company, Limited*, Cd. 7419 (London: HMSO, 1914), CAB 27/180. For the history of the D'Arcy Concession until the foundation of APOC in 1909, see: Mostafa Elm, *Oil, Power, and Principle: Iran's Oil Nationalization and its Aftermath* (Syracuse: Syracuse University Press, 1992), 1-22; Ferrier, *History of BP*, 27-113; Jones, *British Oil Industry*, 128-141; Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell University Press, 1994), 53-56; and Anthony Sampson, *The Seven Sisters: The Great Oil Companies and the World They Shaped* (New York: Viking Press, 1975), 52-57.

¹³ P.J. Cain and A.G. Hopkins, *British Imperialism: Innovation and Expansion, 1688-1914* (London: Longman, 1993), 408-409.

¹⁴ By the time of the Royal Commission's visit to Persia in December 1913, not only was completion of the refinery behind schedule, but its products were second-rate. The most damning problem, however, was the quality of APOC's fuel oil – its viscosity was too high. This was not a problem in warmer temperatures, but unfortunately, the Admiralty's primary theater of operations was in the North Sea, where the colder temperatures rendered fuel oil from Abadan unusable. As late as the outbreak of the war, this problem had not been resolved, and Slade had informed Charles Greenway (Chairman and Managing Director of APOC) in October 1914 "that the Admiralty are now being put to considerable difficulties in the North Sea in consequence of the unsatisfactory viscosity of our Oil." Corley, *History of Burmah*, 193-194; and Ferrier, *History of BP*, 148-153, 199-200.

¹⁵ Burmah's leadership feared being sucked into another financial morass, particularly one designed to protect APOC from "competition" with Shell. As far as Burmah's Chairman was concerned, whether or not APOC monopolized oil production in both Mesopotamia and Persia was a matter of commercial indifference to Burmah, whose existing markets would not be disrupted in any way. Corley, *History of Burmah*, 204-208.

governments (since many within the Liberal Government retained their party's nineteenth-century aversion to excessive interference with the market), but rather, by a transnational firm that saw temporary advantage in surrendering a portion of its autonomy in the contest for commercial advantage over its rivals.¹⁶ London's support was invaluable in two regards. As a fledgling company, APOC lacked the "downstream" facilities to dispose of its Persian crude oil production, but now it had a customer for its Persian production through contracts with the Admiralty and the Government of India. London's patronage was essential in guaranteeing APOC a majority share in the TPC in 1914.

The TPC was originally a joint British-Dutch-German consortium established in 1912 under the leadership of prominent Anglo-German businessman, Ernest Cassel. Around the turn of the century, the Deutsche Bank (which had become intrigued by the possibilities for oil development in Mesopotamia during survey work for the Berlin-to-Baghdad Railway), Shell, and William Knox D'Arcy (owner of the 1901 Persian concession) all became competitors for an oil concession. Since the Ottomans were uninterested in granting a concession to any single company, in 1912, Cassel convinced the Deutsche Bank and Shell that they should pool their efforts by joining the TPC along with the National Bank of Turkey (actually a British-owned bank used to finance development projects within the empire). In March 1914, the partners in the TPC along with APOC and representatives of both the British and German governments signed the "Foreign Office" Agreement, which transferred the bank's shares to APOC and formalized both the new ownership structure of the TPC and its operations.¹⁷ Besides the fact that London had pushed for the transfer of shares to APOC, two aspects of this agreement are noteworthy. First, both APOC and Shell each had to cede 2.5% of their interest in the TPC to a major stakeholder in the National Bank, Calouste Sarkis Gulbenkian, who would help negotiate a concession with the Ottomans. Second, the agreement included a "self-denying" clause that compelled members of the consortium not to undertake operations anywhere within the Ottoman Empire except through the TPC or with the unanimous consent of the three major partners: APOC (47.5% of the TPC's shares), the Deutsche Bank

¹⁶ Nowell, *World Oil Cartel*, 55

¹⁷ A copy of the "Foreign Office" Agreement is reprinted as Appendix 1 to: D.J. Payton-Smith, *Oil: A Study of War-time Policy and Administration* (London: HMSO, 1971), 26-27.

(25%), and Shell (22.5%). This “self-denying” ordinance was included within the 1928 “Red Line” Agreement that reorganized the ownership structure of the TPC after the war to accommodate French and U.S. interests at the expense of the Deutsche Bank.¹⁸

According to one historian, the need to protect the Royal Navy’s oil supply “was the main reason for the growth of the State’s interests in the affairs of the oil companies, who became not merely purveyors of a commercial product, but suppliers of a strategic commodity on a par with armaments.”¹⁹ The Admiralty had already signed a supply contract with Burmah in November 1905, but the amounts involved were trivial: the Royal Navy could only draw up to 10,000 tons per year in peacetime and would have access to as much as 100,000 tons in wartime, while Burmah committed to accumulating a 20,000 ton reserve.²⁰

¹⁸ The history of the TPC, including both its claim to a concession in Iraq and as the object of Anglo-American squabbling up to 1923, is detailed in an internal Colonial Office summary: R.V.V. (?), “Turkish Petroleum Company,” 13 December 1923, Middle East No. 5, CO 935/1. Gulbenkian’s unpublished memoirs are also worth consulting, since he was present at both the creation of the TPC in 1912-1914 and its rebirth in 1928 with the signing of the “Red Line” Agreement: “Short Survey of the Iraq Petroleum Company’s Origins and Developments,” Yale University Library, Manuscripts and Archives (hereafter cited as: YUL), Papers of William Wiseman, Series III, Box 15. Gulbenkian’s son also provided the Foreign Office with a history of the TPC/IPC based on his father’s papers. “History of the I.P.C. and Mr. Gulbenkian’s Part in the Foundation,” April 1944, enclosed with: Nubar Gulbenkian to Neville Butler (Head of the American Department, Foreign Office), 27 October 1944, FO 371/40108. For the U.S. Government’s perspective, see: “Issues Concerning the Iraq Petroleum Company as Raised in the French Note of 13 January 1947 on the Cancellation of the Group Agreement by the American Partners,” March 1947, no author (probably Walter Levy), NARA, RG 59, Records of the Petroleum Division, Lot File No. 77D141, Box 6. For more detailed histories of the TPC before the Second World War, see: Corley, *History of Burmah*, 199-213; John DeNovo, *American Interests and Politics in the Middle East, 1900-1939* (Minneapolis: University of Minnesota Press, 1963), 167-209; Edward Mead Earle, “The Turkish Petroleum Company – A Study in Oleaginous Diplomacy,” *Political Science Quarterly* 39: 2 (1924): 265-277; Marian Kent, *Oil and Empire, Oil and Empire: British Policy and Mesopotamian Oil, 1900-1920* (London: Macmillan, 1976), 3-113; Helmut Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928* (London: Ithaca Press, 1976), *passim*; Nowell, *World Oil Cartel*, 53-76, 116-132, 183-191; Edith Penrose and E.F. Penrose, *Iraq: International Relations and National Development* (London: Ernest Benn, 1978), 20-23; and U.S. Senate, Select Committee on Small Business, *International Petroleum Cartel (Reprint)*, 94th Congress, 1st Session (Washington, DC: U.S. GPO, 1975), 47-51.

¹⁹ Jones, *British Oil Industry*, 9.

²⁰ Thanks to protection from the Government of India, which imposed a series of tariffs on imported petroleum between 1888 and 1911 and blocked attempts by both Standard Oil and Shell to drill for oil in Burma in 1902 and 1904, respectively, Burmah (in concert with Shell through a 1905 marketing agreement) controlled oil production and the distribution of kerosene within British India at the start of the twentieth century. By 1924, Burmah was the world’s ten-largest oil company in terms of capitalization, even though it had virtually no commercial presence beyond the Subcontinent and controlled only 1% of world production. In 1905, a few months before it signed its fuel contract with the Admiralty, Burmah also became a major shareholder in APOC. The Admiralty only claimed 11,000 tons a year during the First World War, which was half as much as it had on average between 1908 and 1913, since the Royal Navy did not have any opponents in the Indian or Pacific Ocean other than the occasional German commerce raider. Corley, *History of Burmah*, 1-3, 64-65, 78-94, 229-230; and Jones, *British Oil Industry*, 88-105.

The Royal Navy had been experimenting with the use of oil (derived from Scottish shale) as a form of propulsion since 1865, but progress was slow until after 1901. The Admiralty's annual demand for fuel oil thereafter spiked from 1,200 tons to 277,850 tons between 1902 and 1912.²¹ Heeding the advice of the Former First Sea Lord John "Jackie" Fisher (a self-confessed "oil maniac" since 1886) and numerous technical experts, First Lord of the Admiralty Winston Churchill took the "fateful plunge" in April 1912 and decided to begin converting the Royal Navy's battleships and battle-cruisers to burning oil for fuel.²² He did so over the objections of many within the Royal Navy establishment, who opposed basing Britain's security on a source of fuel not indigenous to Britain and whose global supply might not last for more than a few decades. Supporters of oil pointed to the myriad technical and tactical advantages it enjoyed over coal: the saving in space and weight, the elimination of stokers, and oil's higher thermal content allowed for faster speeds, longer range, thicker armor protection, and heavier armament.²³ The

²¹ The standard work on the Royal Navy's conversion to oil, particularly because of its analysis of the wider diplomatic and financial considerations at stake, remains: Marian Jack, "The Purchase of the British Government's Shares in the British Petroleum Company, 1912-1914," *Past & Present* (1968): 139-168. See also: Winston Churchill, *World Crisis, 1911-1914* (New York: Scribner, 1928), i: 125-148; Corley, *History of Burmah*, 181-198; Ferrier, *History of BP*, 158-201; A.A. Fursenko, *The Battle for Oil: The Economics and Politics of International Petroleum Conflict over Petroleum, 1860-1930* (Greenwich: JAI Press, 1990), 127-145; Jones, *British Oil Industry*, 9-31, 144-176; Sara Regeur, "Persian Oil and the First Lord: A Chapter in the Career of Winston Churchill," *Military Affairs* 46: 3 (1982): 134-138; Sampson, *Seven Sisters*, 49-57; and David Allen Snyder, "Petroleum and Power: Naval Fuel Technology and the Anglo-American Struggle for Core Hegemony, 1889-1922 (Ph.D. Dissertation, Texas A&M University, 2001). The influence of developments in naval technology is summarized in: Erik Dahl, Naval Innovation: From Coal to Oil," *Joint Forces Quarterly* (Winter 2000-01), 50-56. Unfortunately, as a result of his narrow fixation on naval affairs, Dahl did not reflect upon the wider, grand strategic significance of Britain's shift from coal to oil. For a wider perspective, see: Geoffrey Kemp and John Maurer, "The Logistics of Pax Britannica: Lessons for America," in: *Projection of Power: Perspectives, Perceptions, and Problems*, ed. Uri Ra'anan, Robert Pfaltzgraff, and Geoffrey Kemp (Hamden: Archon Books, 1982), 28-49.

²² The Royal Navy had already started construction of entirely oil-burning destroyers in 1909, and oil was the only suitable fuel for submarines.

²³ One ton of coal converted to steam could move one of weight 60,000 miles, as opposed to 90,000 tons using oil. This meant that a 10,000 tons steamer traveling between Britain and Singapore (a distance of 8,190 miles) at 11 knots required 1,365 tons of coal or 1,020 tons of oil. "Oil Policy for the Empire," no date or author, POWE 33/44. The provenance of the report is unclear, but the notation on the folder cover reads: "Petroleum Imperial Policy Committee[,] Minutes of First Meeting[,] 29th May 1918." The caloric value of oil was 1.3 times greater than that of the best coal (whose quality varied greatly unlike oil), and one ton of coal took up as much as forty-three cubic feet to store, compared to only thirty-eight cubic feet in the case of oil. By 1934, the savings in manpower for the Royal Navy was approximately 15,000 men or £30,000,000. "Öl gegen Kohle, endgültig?" *Deutsche Wehr*, Nr. 29/7. (38.) Jahrgang (19 July 1934); and Waldener-Harz, "Kohle oder Öl," *Militär-Wochenblatt*, 119. Jahrgang, Nummer 15 (18 October 1934).

ability to refuel at sea further increased the range of oil-fueled ships.²⁴ Recent research on the “dreadnought revolution” of 1905 has stressed the degree to which Fisher’s re-conception of British naval strategy depended upon speed rather than firepower. The advantage in speed Fisher desired was only possible through the application of oil rather than coal as fuel.²⁵ The fact that other navies such as the U.S. Navy were already considering a shift, settled the matter in favor of Fisher and Churchill.²⁶

Many historians have argued that the introduction of the HMS *Dreadnought* and HMS *Invincible* temporarily erased Britain’s numerical superiority vis-à-vis its rivals. What they have failed to note is that the introduction of oil also granted Britain a qualitative advantage that no other fleet in the world possessed save the U.S. Navy (including the Russian Navy, whose main units in Baltic and the Far East were based thousands of miles away from the oilfields in the Caucasus). At one stroke, the introduction of oil constrained rivals such as France or Russia from using interior lines of communication to challenge British naval predominance away from the high seas (in theaters such as the Mediterranean) or from waging *guerre de course* against British commerce. The swift dispatch of battle-cruisers would, in the case of the former, prevent rivals from temporarily establishing numerical superiority in any one theater, while commerce raiders could neither outrun nor outgun the new battle-cruisers.²⁷

²⁴ Warwick Brown, “When Dreams Confront Reality: Replenishment at Sea in the Era of Coal,” *International Journal of Naval History* 9: 1-3 (2010), <http://www.ijnhonline.org/2010/12/01/when-dreams-confront-reality-replenishment-at-sea-in-the-era-of-coal/>.

²⁵ The gradual shift in thinking about the “dreadnought revolution” (as well as a withering critique of the earlier interpretation put forward by Arthur Marder) is summarized in: Charles Fairbanks, “The Origins of the *Dreadnought* Revolution: A Historiographical Essay,” *International History Review* 13 (1991): 246-272. Fairbanks points out that Fisher considered the battle-cruiser, rather than the dreadnought, to be the core of the Royal Navy (pg. 259-260). Since speed rather than armor or firepower was what distinguished the battle-cruiser from other capital ships, the shift to oil was inevitable whatever the strategic or economic drawbacks.

²⁶ The Taft Administration had already decided to construct the U.S.S. *Nevada* as an oil-burning battleship, but the decision was not finalized until April 1913 by President Woodrow Wilson’s new Secretary of the Navy, Josephus Daniels. For the U.S. Navy’s perspective, see: John DeNovo, “Petroleum and the United States Navy before World War I,” *Mississippi Historical Review* 41: 4 (1955): 641-656; John Maurer, “Fuel and the Battle Fleet: Coal, Oil, and American Naval Strategy,” *Naval War College Review* 34: 6 (1982): 69-74; and Peter Shulman, “‘Science Can Never Demobilize’: The United States Navy and Petroleum Geology, 1898-1924,” *History and Technology* 19: 4 (2003): 365-385 (esp. 367-369 and 371-372). Shulman stresses the degree to which the U.S. Navy’s decision was predicated on the assurances of petroleum geologists that domestic oil reserves were large enough to satisfy future naval consumption, but he goes too far in asserting that, without them, “[it] was never inevitable that the Navy [would] embrace the oil age” (pg. 372).

²⁷ Fairbanks, “*Dreadnought* Revolution,” 263-271. Even as they combine insights from social and economic history with the history of technology, many naval historians still overlook the importance of logistics and raw materials. *Pace* Fairbanks, there is not a scintilla of evidence to claim, before 1905, that the French and Russian navies enjoyed

In 1913, on the basis of the findings of the Royal Commission on Fuel and Engines (which included Fisher) that had studied the matter of Britain's future supplies of naval fuel, Churchill laid down three principles for his Cabinet colleagues that served as the basis for British oil policy until 1939.²⁸ The first was the geographic dispersal of sources of supply, so as to avoid relying upon any one overseas source, which might prove disastrous in wartime if Britain was unable to maintain global naval mastery. The second was promoting competition in the international oil industry in order to avoid relying on any single company. In practice, this meant breaking the dominance of foreign oil "trusts" such as the U.S. Standard Oil Company or the, alternatively, Dutch or "Jewish" Shell.²⁹ In their place, London would cultivate pliant British alternatives such as APOC or Burmah. Between 1916 and 1924, some policymakers even entertained aspirations of an "all British" Shell fulfilling such a role.³⁰ Third, Britain would endeavor whenever possible to draw supplies from sources located within either the British Empire or areas of

any "geographic advantage" allowing them to wreak havoc upon British commerce from "a world-wide network of bases and coal stations." Fairbanks, "*Dreadnought* Revolution," 267. The fate of the Russian Second Pacific Squadron as it sailed around the world in 1904/5 before its destruction at the Battle of Tsushima disproves any notion of a Russian "geographic advantage" during the Age of Coal. The fleet actually burned Welsh coal since Russian coal was of inferior quality. Although the Russians docked at French ports, the French lacked the colliers to supply the fleet. The only alternative were German colliers, but these too had to purchase their coal from British firms, and London constantly interfered with supplies. Lamar Cecil, "Coal for the Fleet That Had to Die," *American Historical Review* 69: 4 (1964): 990-1005.

²⁸ Before the war, two committees considered the oil supply question for the Royal Navy: the Pakenham Committee (named after Capt. A.C. Pakenham, Fourth Sea Lord), which met between 1911 and 1912, and the Royal Commission led by Fisher, established by Churchill in July 1912, and which issued reports in November 1912, February 1913, and February 1914. Both committees considered the acquisition of reserves within Great Britain, while the latter also studied the viability of oil as a source of propulsion fuel. H.M. Petroleum Executive, "Negotiations Regarding the Petroleum Policy of His Majesty's Government: Volume I: Report and Proceedings of the Petroleum Imperial Policy Committee, 29th May, 1918, 10th February, 1919," March 1919, pg. 6, ADM 116/3452 (hereafter cited as: *PIPC*, i.).

²⁹ Criticism of the "Jewish" character of Shell stemmed from the fact that the British portion of the company, the Shell Transport and Trading Company, which merged with the Royal Dutch in 1907, was founded and operated by a British Jew, Marcus Samuel (no relation to Herbert Samuel, also Jewish, the Liberal Party politician and first High Commissioner to Palestine between 1920 and 1925). Even a brilliant public servant such as John Cadman, previously the leading expert on oil policy within the British Government and after 1927 Chairman of APOC, was not above Jew-baiting, privately confiding to a U.S. official in December 1921 that Shell "was now ruled by a Jewish Camarilla," which he condemned as "unprincipled." Fred Dearing (U.S. Assistant Secretary of State), Memorandum of Conversation, 23 December 1921, National Archives and Records Administration, Record Group 59: General Records of the Department of State (hereafter cited as: NARA, RG 59), 841.6363/188.

³⁰ Ironically, for all of its efforts after 1916 to make Shell an "all British" company, the British Government had been offered a controlling-stake in Shell Transport and Trading in 1902 but had passed since it had no defined oil policy at the time. Nowell, *World Oil Cartel*, 56. It would be a mistake to assume that the Admiralty went out of its way to harm Shell – practical considerations took precedence of nationalistic prejudices: "The only bias in the Admiralty was against expensive oil when it could get cheap oil," which hurt Shell since many of its oilfields were not only located farther away from Britain, but the oil they yielded did not always conform to Admiralty specifications. Jones, *British Oil Industry*, 23-26.

British influence such as Persia or after 1918 Mesopotamia, along secure trade routes, while stimulating oil development within the British Empire and its dependencies. Churchill argued that the best way to safeguard the navy's oil requirements would be through long-term supply ("forward") contracts for the Admiralty that avoided the extreme fluctuations in prices endemic to the oil industry and prevented the government from being "mercilessly fleeced at every purchase [...]." ³¹ Although APOC would be the largest recipient of government orders (200,000 tons starting in 1915, rising to 500,000 tons if necessary), Churchill also supported contracts with Shell (100,000 tons after 1915), Union Oil of California (80,000 tons per year), and Mexican Eagle (200,000 tons per year). Churchill estimated in 1913 that government purchases, including both annual consumption and the accumulation of reserves, would rise from 664,000 tons in 1913/14 to 729,000 tons by 1917/18. ³²

During a speech before the House of Commons, Churchill expressed the Admiralty's conviction that, although in the "interim" period the navy's requirements would be satisfied by forward contracts, the "ultimate policy" of the British Government should be to own and produce a portion of its oil requirements, in addition to possess the spare refining capacity to store and refine large volumes of crude oil purchased from suppliers before they entered the world market. ³³ The question of whether or not it was wise to base Britain's security on an imported commodity – as opponents complained – missed the point: Britain already depended on imports of any number of vital commodities. As Churchill asked the Cabinet in June 1913, "if we cannot bring oil, how can we get corn?" ³⁴

³¹ Whereas before 1912, the price of fuel oil f.o.b., 22/-, had been roughly equivalent to coal, it had risen to 39/- in 1913 and seemed set to rise to as much as 50/- by 1914, while freight rates had risen from 17/- to 27/- per ton/

³² Churchill also included a request that the government accumulate a reserve equivalent to six months of wartime requirements – from 441,000 tons in 1913 to 1,412,000 tons by 1917 – as compared to the four-year peacetime reserve suggested by the Royal Commission. W.S.C., "Oil Fuel Supply for His Majesty's Navy," 16 June 1913, CAB 37/115. Churchill misremembered the recommendations of the Royal Commission, claiming years later that it had recommended the collection of a four-year war reserve. This would have amounted to roughly 10,500,000 tons according to estimated consumption by 1917 (519,000 tons per year). Jack, "Shares Purchase," 152-153.

³³ "Navy Estimates (Oil Conversion), July 17, 1913, House of Commons," reprinted in: *Winston S. Churchill: His Complete Speeches, 1897-1963*, ed. Robert Rhodes James (New York: Chelsea House, 1974), ii: 2125-2132. Churchill brought up the matter of government ownership and production of oil because the Cabinet had already agreed in principle with the idea of purchasing shares in APOC during the discussion over the forthcoming Naval Estimates. Ferrier, *History of BP*, 181-182.

³⁴ W.S.C., "Oil Fuel Supply for His Majesty's Navy," 16 June 1913, CAB 37/115.

Although the British Government never directly entered the oil business as a producer and retailer of oil, it did effectively become an owner of foreign oilfields. In early-1913, the Admiralty commenced negotiations concerning a long-term supply contract with APOC, which then held an exclusive oil concession for 80% of Persia (excepting the five northern provinces within the Russian sphere of influence) and dispatched a team to Persia led by Vice Admiral Edmond Slade (a former Director of Naval Intelligence) and John Cadman (a professor at the University of Birmingham and adviser to the Colonial Office) to report on the suitability of the Persian oilfields.³⁵ Slade's team issued a favorable report in April 1914, and a month later the British Government purchased a 51% share in APOC for £2,200,000 and concluded a secret sales agreement between APOC and the Admiralty.³⁶ London would nominate two members of the APOC's Board of Directors, who would enjoy veto rights on all matters concerning the company's relationship with the British Government, such as the Admiralty supply contract, or any plans to sell out to foreign interests.³⁷

Under the terms of the secret contract with APOC, the Admiralty was guaranteed 6,000,000 tons of fuel oil over the next twenty years at a cost of 30/- per ton (excluding freight), minus a rebate calculated on the basis of APOC's excess profits, which reduced the cost by as much as one-third by 1920. Deliveries would start at 50-70,000 tons in 1914-1915, rising to 300-350,000 tons by 1917-1918, and much as 500,000 tons thereafter.³⁸ The two parties revised the agreement in 1928, and APOC agreed to fulfill the remainder of its contract at a fixed price of 22/- per ton. One historian calculates that, including freight charges and the rebate, the Admiralty paid APOC less than 50/- per ton of oil in 1922, whereas the

³⁵ The Final Report of the Admiralty Commission on Persian Oilfields (dated 06 April 1914) is reprinted in: *Agreement with the Anglo-Persian Oil Company, Limited*, Cd. 7419 (London: HMSO, 1914), CAB 27/180.

³⁶ Later described as "one of the most farseeing and prudent acts of statesmanship since the time when the Government acquired the Suez Canal shares." Wilkinson, "The Influence of Oil on Imperial Organization," *Journal of the Royal United Service Institution* (hereafter cited as: *RUSI*) 68: 469 (1923): 109-114.

³⁷ *Agreement with the Anglo-Persian Oil Company, Limited*, Cd. 7419 (London: HMSO, 1914), CAB 27/180. The terms of the veto were spelled out in a private letter from the Joint Permanent Secretary of the Treasury (John Bradbury, later one of the government directors on APOC's board) to the company. Bradbury to APOC, 20 May 1914, reprinted in: Ferrier, *History of BP*, 645-646. Interestingly, the first instance in which the government exercised its veto was in 1920, when it opposed APOC's offer of 100,000 shares to the Persian Government in order to settle outstanding disputes over royalties and wartime damages. Ferrier, *History of BP*, 198-199, 352-355.

³⁸ Actual deliveries between 1922 and 1932 went from a low of 434,493 tons in 1922/23 to a high of 621,118 tons in 1930. Ferrier, *History of BP*, 474.

market price for diesel fuel was 82/6d and 65/- for fuel oil. This was from London's point of view "an extremely good bargain." APOC's leadership also had every "reason to feel well pleased with themselves" for having guaranteed their independence from Shell.³⁹ The company also secured a commanding position within the Turkish Petroleum Company (TPC) as a result of the "Foreign Office Agreement" of March 1914, which was poised to begin prospecting for oil within Mesopotamia on the eve of the First World War. Two parties did, however, lose out. The first was the Iranian Government, whose oil revenues suffered as a result of the discount APOC was offering the Admiralty. The second was Shell, whose British co-founder (Marcus Samuel) questioned how the Admiralty could privilege Persian oil to the detriment of imperial sources such as Egypt or other British protectorates. Samuel warned the Admiralty that it was setting a precedent for other nations "to reserve their oil supplies for their own requirements" while discouraging the oil development within the British Empire.⁴⁰

Although concluded separately, the share purchase and the Admiralty supply contract were two halves of the same walnut since the latter depended upon the long-term commercial viability of APOC, which was in danger until it received the infusion of public capital.⁴¹ Churchill's policy was, however, not one of direct government intervention in the economy. British governments of the period, like their U.S.

³⁹ Jack, "Shares Purchase," 162-167; Jones, *British Oil Industry*, 154-155. According to internal APOC records, the price paid by the Admiralty fluctuated between 20 and 30/- and averaged 22/-. See files deposited in: British Petroleum Archive, Arc. Ref. 78504 (hereafter cited as: BP, No.). The original 1914 supply contract expired in 1951 following the nationalization of APOC in Iran. The Admiralty thereafter continued to sign new supply contracts until 1959, when it concluded a 5-year agreement. In 1962, the Admiralty gave notice that it would terminate the existing contract effective 31 December 1964, thus ending its special relationship with British Petroleum (BP). For additional details on the 1959-64 agreement, see: BP 63478.

⁴⁰ Churchill's covering letter to the Cabinet oozed contempt for the "great oil monopolist" Samuel, who was simply opposed to the government "acquiring an independent source of supply." Samuel to F.J.S. Hopwood (Civil Lord of the Admiralty), 29 May 1914, enclosed with: W.S.C., Minute for the Cabinet, 09 June 1914, CAB 37/120.

⁴¹ "The contract, especially when the success of the company is fully assured, should give the Navy a large supply of fuel oil for a long period of time; and as soon as the company is in a position to pay satisfactory dividends, the cost of oil to the state will be very materially reduced." E.J.W. Slade (Rear Admiral, President of the Admiralty Persian Oil Commission), *et al.*, "Anglo-Persian Oil: Memorandum showing present position of Negotiations with Anglo-Persian Oil Company," 10 February 1914, BP 71402. None of this should have been remotely surprising to the U.S. Government, which had pieced together a rather complete picture of APOC's relationship to British grand strategy by no later than 1919. For example, see: Maurice Wertheim (Finance Member, American-Persian Relief Commission), "Chapter VI: The Anglo-Persian Oil Company Limited," 06 January 1919, YUL, Papers of Edward M. House, Series III, Box 206. Wertheim's detailed paper (which includes a two-page synopsis and is based largely on publicly available sources such as the original 1913 report of the Slade Commission to Persia and various official statements by the APOC itself) accurately identified nearly all of the motivating factors behind the British Government's decision to purchase a controlling share of APOC in 1914, including tangential factors such as the possibility that the Indian railways could be converted to the burning of Persian oil rather than coal.

counterparts, shared an abiding faith in the efficacy of the capitalist system and an aversion to government interference within private industry. Governments on both sides of the Atlantic only tampered with the free market in order to preserve competition and thwart cartelization or monopolization. The fact that oil was also becoming a “strategic” commodity – one that was in short supply within Britain and its empire – forced the government to swallow its liberal sentiments and undertake “an unusual departure from the British tradition of laissez-faire which, if diminishing in influence, still represented the orthodox principle governing relations between state and industry.”⁴² The decision was not taken lightly, the Admiralty later explained, but it was “the lesser of two evils,” which “does involve much tact and judgment in the conduct of the affairs of the company [...]”⁴³

After the share purchase, the British Government had a guaranteed supplier for a significant portion of the Admiralty’s fuel requirements. It did so without the onus of interfering in the natural workings of the market, while promoting competition within the oil industry by frustrating Shell’s bid to take over APOC. The presence of two government directors on the board of APOC should not be construed evidence of any desire on London’s part to meddle in the management of the company since the government directors could exercise their veto power only in matters affecting the interests of the British Government. More often than not, such men, most notably Slade, went native and became as devoted to the interests of APOC as those of the government.⁴⁴ Although the British Government resisted pressure to abandon its share in APOC during the 1920s, its relationship with the company was far from perfect. Beyond disputes over the extent of the company’s independence, London feared that APOC would exploit its “special relationship” to manipulate the government into granting it privileges at the expense of

⁴² J.H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, vol. 2 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1994), 174-175.

⁴³ Charles Walker (Admiralty) to the Director, H.M. Petroleum Executive (Long), 28 February 1918, P. 84548/48009, POWE 33/42.

⁴⁴ Slade’s appointment to this position and subsequently to APOC’s board is something of a mystery: he had no particular knowledge of the oil industry or naval propulsion, and he had been passed over for promotion to the rank of Sea Lord after his tenure as Director of Naval Intelligence. Interestingly, his major critic was “Jacky” Fisher, the great apostle of oil, who derided Slade as a “fool.” Corley, *History of Burmah*, 192.

its competitors with no reciprocal obligation to act in accord with London's desires if doing so harmed the company's operations.⁴⁵

⁴⁵ One journalist went so far as to describe APOC's attempted manipulation of the British Government as the "Frankenstein Syndrome." Sampson, *Seven Sisters*, 56.

The First World War and the Need for Coordination, 1914-1919

The official history of the Ministry of Munitions observed that, over the course of the First World War, an adequate “supply of petroleum productions was a vital necessity for the conduct of the war [...]”⁴⁶ In 1913, the United States supplied over 62% of Britain’s total imports of 1,807,594 tons. The next four largest suppliers were Romania (11.8%), Russia (7.8%), the Dutch East Indies (7.7%), and Mexico (4.2%).⁴⁷ Britain lost access to Russian and Romanian oil following the Ottoman Empire’s entry into the war, while Persian oil production was still negligible and East Indian oil was both too far away and already supplying Far Eastern markets. The United States therefore became Britain and the Allies’ largest supplier of oil. U.S. oil production increased from 34,000,000 tons in 1913 to 48,800,000 tons in 1918, while oil exports during the entire war equaled 34,256,000 tons. During the 1917/18 fiscal year, of the 8,638,000 tons exported by the United States, 4,010,000 tons (46%) went just to Britain, not including the 2,168,000 tons that went to Canada and the rest of the empire.⁴⁸ Of the 21,200,000 tons imported by the Allies during the war, 17,900,000 tons (84%) came from the United States.⁴⁹ British imports of U.S. oil increased from 1,178,000 tons in 1914 to 4,001,000 tons in 1918 (or 70% and 77%, respectively, of total imports).⁵⁰ Mexico also remained an important supplier for Britain even if the sulfur content of its oil was too high for Admiralty specifications.⁵¹ At its peak, Mexico accounted for 10% of British wartime oil imports (399,000 tons in 1918), and it also tripled its share of U.S. oil imports during the war to 95%.⁵²

⁴⁶ *Official History of the Ministry of Munitions* (East Sussex: Naval & Military Press, 2009), 134-156.

⁴⁷ “Oil Policy for the Empire,” no date or author, POWE 33/44.

⁴⁸ Ferdinand Friedensburg, *Erdöl im Weltkrieg* (Stuttgart: Ferdinand Enke Verlag, 1939), 105-113.

⁴⁹ “Der amerikanische Kontinent – Wehrwirtschaftlicher Versorger der Demokratien? *Vierjahresplan*, 1939: XVI.

⁵⁰ Although the high point in percentage terms (82%) came in 1917. Friedensburg, *Erdöl*, 90.

⁵¹ Jonathan Brown, *Oil and Revolution in Mexico* (Berkeley: University California Press, 1933), 104-105.

⁵² This rate of increase actually grew more sharply after the war: Mexican oil exports to the United States quadrupled between 1918 and 1922 (from 37,719,000 barrels to 126,195,000 barrels), although Mexico’s share of U.S. oil imports slightly declined (from 99.9% to 96.9%). Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 60-61. By 1920, Mexican oil exports (78.08% of which went to the United States) equaled 20% of U.S. consumption and were valued at \$61,000,000 (compared to \$11,000,000 in 1914). Linda Hall, *Oil, Banks, and Politics: The United States and Postrevolutionary Mexico, 1917-1924* (Austin: University of Texas Press, 1995), 13 and 61.

These exports indirectly benefitted Britain by allowing the United States to build up a strategic reserve and export a larger percentage of its own production to the Allies.⁵³

Thanks to a 1924 study by the U.S. Navy's wartime expert on petroleum logistics, we also have a good idea about Allied rates of consumption and sources of supply during the last six months of 1918.⁵⁴ The largest consumer was Britain, with a six-month (July to December 1918) requirement of 3,161,000 tons of petroleum products, 97% of which had to be imported, with 77% coming from the United States alone. 2,213,500 tons, or 70% of the total requirements, was fuel oil primarily for the Grand Fleet, whose oil-burning units in 1917 (fifteen dreadnoughts and battle-cruisers, seventeen cruisers, and 125 destroyers, plus another forty-five pre-dreadnoughts and cruisers that burned both coal and oil) required 450,000 tons of imports per month to meet their operational and reserve requirements. Although the Royal Navy had begun converting to oil-burning ships starting in 1912, progress was slow. As of 1914, 120 of the Royal Navy's cruisers burned oil, only but five battleships did so.⁵⁵ Against the Royal Navy's estimated annual demand of 4,000,000 tons of fuel oil by 1918 (roughly 70% purchased from the United States), the French and Italian navies only consumed 90,000 and 120,000 tons, respectively. Britain was, however, responsible for supplying 100% of the French Navy's requirements (20,000 tons of which originated in the United States) and two-thirds of Italy's consumption (one-third of which came from the United States). The U.S. Navy would require only 750,000 tons.⁵⁶

⁵³ Friedensburg, *Erdöl*, 90, and 106-107; and Paul Garner, *British Lions and Mexican Eagles: Business, Politics, and Empire in the Career of Weetman Pearson in Mexico, 1889-1919* (Stanford: Stanford University Press, 2011), 204-205. In 1920, the United States still accounted for 59.8% of Britain's imports of 3,310,587 tons and Mexico 28.5%. The only other suppliers of consequence were Persia (4.5%) and the East Indies (3.7%). Appendix I to: Committee of Imperial Defence (CID), "Production of Oil from Coal: Report of a Sub-Committee," 29 November 1937, 272-A (also Paper No. O.C.C. 38), enclosed with: T.W.H.I. (Thomas Inskip, Minister for Coordination of Defence) to the Cabinet, "Report on the Sub-Committee of the Committee of Imperial Defence on the Production of Oil from Coal: Note by the Minister for Co-ordination of Defence," 03 February 1938, C.P. 19 (38), CAB 24/274.

⁵⁴ Paul Foley, "Petroleum Problems of the World War: A Study in Practical Problems," *United States Naval Institute Proceedings* 50: 261 (1924): 1802-1832.

⁵⁵ B.S. McBeth, *British Oil Policy, 1919-1939* (London: Frank Cass, 1985), 11.

⁵⁶ H.H.D.T. (Rear Admiral Hugh H.D. Tothill, Fourth Sea Lord) and E.C.G. (?), "Requirements of Oil Fuel and Ships in U.S.A.," 11 July 1917, G.T. 1433, BNA, CAB 24/20.

The British Expeditionary Force consumed only 6,900 barrels each day, which could be carried by a single oil tanker.⁵⁷ Total Allied consumption during the last six months of the war reached 4,587,524 tons (roughly 34,002,668 barrels), 80% of which came from the United States.⁵⁸ (Due to the primitive state of motorization, gasoline comprised only 20% of Allied consumption, compared to fuel oil, which accounted for 60%.⁵⁹) This figure is trivial when considered as a percentage of U.S. domestic production in 1918 (less than 10% of 355,928,000 barrels).⁶⁰ The financial cost was not: between 1914 and 1918, Britain alone spent £170,393,000 on petroleum imports.⁶¹ Imports also doubled during the war, from 2,000,000 tons in 1913 to 4,000,000 in 1917.⁶²

At the start of the war, the British Government allowed the oil industry to operate on a voluntary basis until the supply situation began to deteriorate in 1916.⁶³ It thereafter imposed controls such as rationing, centralized government purchases of petroleum under the supervision of the Board of Trade (BOT), and created an Interdepartmental Petroleum Committee in February 1917 comprised of representatives of the Admiralty, BOT, the War and Colonial offices, and the Ministry of Munitions to advise on the government's oil policy and make recommendations regarding the securing of adequate supplies for the

⁵⁷ Most of this was for the BEF's lorry fleet, which increased from 100 in August 1914 to 60,000 by war's end. Jones, "British Government and the Oil Companies," 655. The original BEF only boasted of 827 vehicles and 15 motorcycles but possessed 79,000 vehicles and 34,000 motor cycles in 1918, not including tanks and armored cars. Fursenko, *Battle for Oil*, 180. Lorries were especially important as armies' supply requirements increased. In 1916, British divisions required 50 wagon-loads of supplies each day, and lorries were preferable to horses because each five-ton truck could haul the same amount of goods as three teams of horses. Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 1 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 162-163.

⁵⁸ The economic analyst Ferdinand Friedensburg cites a figure of 9,000,000 tons for all of 1918, including 1,930,000 tons of gasoline and 5,350,000 tons of fuel oil. Allied monthly gasoline consumption was divided as follows: 88,000 tons for vehicles; 42,000 tons for tanks; and 31,000 tons for aircraft. Ferdinand Friedensburg, *Erdöl im Weltkrieg* (Stuttgart: Ferdinand Enke Verlag, 1939), 15. These figures are equivalent to those cited in: Fursenko, *Battle for Oil*, 183. The Royal Navy's cumulative wartime consumption exceeded 9,000,000 tons. Lt. Cmdr. G.J.A. Miles (Royal Naval Staff College), "The Supply of Oil Fuel for Fleets and Squadrons Abroad in the Future," 14 April 1920, ADM 203/48.

⁵⁹ Jonker and Zanden, *History of Shell*, 163.

⁶⁰ DeGolyer, *Petroleum Statistics*, 5. In fact, the year before Foley published his study, 1923, U.S. production (732,407,000 barrels) had almost doubled from the 1918 figure.

⁶¹ Friedensburg, *Erdöl*, 120.

⁶² "H.M. Petroleum Executive," no date or author (covering folder indicates that the author was the Treasury on 03 October 1918), POWE 33/150.

⁶³ At the start of 1916, which climaxed with the disastrous Battle of the Somme in July, stocks stood at 36,000,000 gallons. By the end of July, they had declined to only 12,500,000 gallons. Following the imposition of rationing, stocks quickly swelled to 37,500,000 gallons by the end of December 1916. Jones, "Oil Companies," 655-656.

armed services. Coordination between the oil companies was handled by the Pool Board, which was also under government supervision. Later in 1917, a new Petroleum Committee superseded the Interdepartmental Petroleum Committee. This new body was an executive agency under the leadership of the Colonial Secretary, Walter Long (with Cadman serving as his technical adviser), which reported directly to the War Cabinet. The Petroleum Committee (renamed the Petroleum Executive in December 1917) became the premier agency coordinating British oil policy during the war.⁶⁴ As evidence of its success, although monthly consumption between June 1917 and October 1918 increased from 397,055 tons to 487,191 tons, stocks also rose from 951,575 tons to 1,813,711 tons.⁶⁵

In February 1919, Long (now First Lord of the Admiralty) appealed to his colleagues to preserve the Petroleum Executive as an independent and permanent department. Britain could not afford to regress to the state that predated the war, when “each Government Department had managed to its own oil affairs,” without coordination. The defects of such a system became evident following the start of the German “unrestricted submarine warfare” campaign of 1917, when the lack of coordination led to squabbling over available tanker tonnage. The Petroleum Executive had resolved this logistical impasse, but Long argued that the importance of the agency’s work would only increase after the war, as Britain’s “dependence on seaborne and to a large extent on foreign supplies for our immense requirements of petroleum make the whole question one of peculiar importance vitally affecting our naval and mercantile supremacy [...]”⁶⁶

In June, Long appealed to Prime Minister David Lloyd George, warning him that the Petroleum

⁶⁴ For a useful postwar analyses that complements the Ministry of Munitions history, see: CID, Oil Board, “Oil Control during the Great War: Memorandum prepared in the Board of Trade,” August 1927, O.B. 23, CAB 50/3; “Petroleum Policy,” no author or date, BP 70025; Appendix VI (“Note on Government Mineral Oil Organisation during the First World War”) to Kent, *Oil and Empire*, 185-188. See also: Jones, “Oil Companies,” 654-657. Based on his experiences during the World War, following the Sudeten Crisis of 1938, Cadman began pressing his contacts in the British Government, including Brigadier Hastings Ismay (the newly appointed Secretary of the CID) and Admiral Ernle Chatfield (the former First Sea Lord and future Minister for the Coordination of Defence) to set up an interagency “mechanism for dealing with oil supplies” overseen by a member of the Cabinet. Ismay to Cadman, 02 November 1938; Cadman to Ismay, 30 September 1939; and Ismay to Cadman, 01 October 1939; all in: BP 70025.

⁶⁵ “H.M. Petroleum Executive,” no date or author (covering folder indicates that the author was the Treasury on 03 October 1918), POWE 33/150.

⁶⁶ Long, “Memorandum for the Cabinet: The Need for a Permanent Petroleum Department,” G.T. 6930, 27 February 1919, CAB 24/76; reprinted as Appendix H to: *PIPC*, i: 144-145.

Executive was losing many of its best staff (including Cadman) and suggesting that it be reconstituted an independent agency within the Ministry of Supply.⁶⁷

By the first anniversary of the Armistice, the Cabinet had failed to take any action, which prompted Long to chasten his colleagues, “who perhaps do not fully realize the importance of this subject and its growing complexity which make a unified and co-ordinated control imperative.” Whatever else happened, the Petroleum Executive should not be subsumed into a larger department, which would impair the former “exercising effectively the co-ordinating which constitutes one of its most important functions.”⁶⁸ This memorandum finally caught the attention of the Cabinet, which reconstituted the Petroleum Executive “as a separate Department... independent of the Department of Overseas Trade.” Although the Petroleum Executive retained its wartime role “as an advisory and consultative Department on petroleum questions,” it would not be led by a separate minister. Rather, the first three heads of the Executive also served as the Secretary of Overseas Trade (Hamar Greenwood, Frederick Kellaway, and Philip Lloyd-Greame).⁶⁹ Long’s desire for unified administration of British oil policy went unfulfilled: the Petroleum Department went to the BOT in 1922 and was then shuffled into the Mines Department (which was itself a sub-agency of the BOT) in 1928. By 1934, the Petroleum Department boasted of a full-time staff of three, supplemented by three part-time employees. None of the concerned parties (the Admiralty, the Treasury, the Foreign Office, the Colonial Office, etc.) was willing to cede any of their authority: “Those responsible were not indifferent to oil affairs, but their concern did not manifest itself in any concerted action to establish a positive, comprehensive oil policy.”⁷⁰

⁶⁷ Long to D. Lloyd George, 05 June 1919; and Long to Lord Inverforth (Minister of Supply), 05 June 1919; both in: MUN 4/6718.

⁶⁸ Long, “Memorandum for the Cabinet,” 11 November 1919, C.P. 115, CAB 24/93. The President of the Board of Trade (Auckland C. Geddes, later Ambassador to the United States) had also complained that the matter had been left in abeyance since the start of the year. A.C. Geddes, “Petroleum Executive: Memorandum by the President of the Board of Trade,” 10 November 1919, POWE 33/58.

⁶⁹ Hankey, “Petroleum Committee,” 24 November 1919, C.P. 180, CAB 24/93.

⁷⁰ Bamberg, *History of BP*, 175-176; Payton-Smith, *Oil*, 40. The work of the department and its relations with the Colonial Office, Foreign Office, Admiralty, CID, and the oil companies is summarized in: “Petroleum Department (Present Work),” no date or author (circa 1930), POWE 33/16.

Wartime Efforts to Create a National Oil Company, 1916

As early as 1916, various government agencies began taking an interest in promoting the development of a major British oil company that would reduce the influence of foreign oil companies within British markets and encourage greater oil production within the empire.⁷¹ The task confronting British policymakers was daunting. One scholar describes Britain before the First World War as the “Saudi Arabia of coal,” but the same did not apply to oil.⁷² The sun may not have set on the British Empire, but the empire accounted for only 2.5% of world oil production in 1913 (1,519,090 tons), plus 243,621 tons in Persia. By 1917, Persian oil production had almost quadrupled to 937,902 tons, but imperial production only rose to 1,774,689 tons. Consumption (production plus imports minus exports) within the Empire in 1913 was 4,713,319 tons and reached 7,485,645 tons four years later. During this period, imports had spiked from 3,076,340 tons to 6,224,258 tons, and the U.S. share rose from 62% to over 80%.⁷³ Hopes that a more favorable demand/supply ratio would emerge following the World War proved unrealistic. Following a drop between 1918 and 1919 (from 8,906,580 tons to 6,689,326 tons), consumption rebounded in two years to just below the wartime peak (8,827,463 tons in 1921). Imperial production between 1918 and 1921 stagnated, however, increasing by a mere 67,511 tons, and the 1921 figure (1,873,707 tons) equaled only 21% of consumption within the empire (8,827,463 tons).⁷⁴

⁷¹ Beyond the sources cited below, my analysis of British efforts to form an “all British” oil company between 1916 and 1924 relied upon the following secondary sources: Corley, *History of Burmah*, 243-260, 291-309; Ferrier, *History of BP*, 235-261, 371-385; Jones, *British Oil Industry*, 177-244; Kent, *Oil and Empire*, 127-136; and McBeth, *British Oil Policy*, 15-55. My findings do not differ from theirs, but this paper does have a different temporal and analytical focus. Consequently, the failure of the merger schemes is considered within the broader context of British efforts after 1918 to secure oil independence from the United States and U.S.-controlled sources of oil.

⁷² Ian Lesser, *Resources and Strategy* (Basingstoke: Macmillan, 1989), 25. As the Secretary of State for India (Lord Crewe) exclaimed in 1913, abandoning British coal for foreign oil was akin to French wine growers “preaching the virtues of Scotch Whiskey as a beverage.” Jones, *British Oil Industry*, 12.

⁷³ British figures regarding production, consumption, and imports between 1913 and 1917 are drawn from *PIPC*, i: 5, 108-112. See also: His Majesty’s Petroleum Executive, “Petroleum Production,” no date, enclosed with: Cadman to the Under Secretary of State, Colonial Office, 12 May 1919, S.140/J., CO 323/813/50.

⁷⁴ “British Empire Petroleum Production and Consumption,” no date (handwritten notation of 10 May 1923), enclosed with: J.C. Clarke (Deputy Director, Petroleum Department) to Grindle (Colonial Office), 11 May 1923, P.D./23/1923, CO 323/903/24. For data on the amounts of oil imported into Britain, their source, and cost between 1913 and 1937, see Appendix I to: CID, “Production of Oil from Coal: Report of a Sub-Committee,” 29 November 1937, 272-A (also Paper NO. O.C.C. 38), enclosed with: T.W.H.I. (Inskip) to the Cabinet, “Report on the Sub-Committee of the Committee of Imperial Defence on the Production of Oil from Coal: Note by the Minister for Co-ordination of Defence,” 03 February 1938, C.P. 19 (38), CAB 24/274.

In February 1916, Foreign Secretary Edward Grey had ruled out using either APOC or Burmah as the instrument of Britain's oil security, as neither possessed "the economic independence, the areas of supply, or the commercial ability" to handle the task. Assuming that oil controlled by U.S. interests would be absorbed by increased U.S. domestic consumption, the only option left was for Britain to acquire control of Shell, possibly through a merger with APOC. Britain would also need an aggressive British company to defend its interests in Mesopotamia against German infiltration, and Shell appeared to be the only viable candidate. Grey urged the BOT, which was overseeing oil policy at the time, to coordinate with the relevant departments immediately and recommend a policy for the government, for "the question cannot safely be left open until after the war."⁷⁵ The BOT produced the first official study of Britain's postwar oil policy the following August, although partisans of APOC caught wind of its contents as early as June.⁷⁶ As one historian observes, this paper represented "a landmark in official thinking."⁷⁷ This is an appropriate description for two reasons: First, it signaled the start of London's eight-year bid to create an "all British" major oil company that could challenge the major U.S. oil companies. Second, London committed itself to imposing British control over the Royal Dutch/Shell group.

The BOT concluded that "[in] respect of both the peace and war requirements of the Empire, petroleum is rapidly becoming as important as coal; in some directions it has already surpassed it." Unlike the United States, Russia, Germany or even Japan (*sic!*), all of which enjoyed relatively easy access to either domestic or foreign sources of oil through native oil companies, "the British Empire has to rely almost entirely on supplies drawn from foreign countries and even the development of her own limited

⁷⁵ Foreign Office (Maurice de Bunsen) to the Admiralty, 02 March 1916, F. 36846, POWE 33/41.

⁷⁶ "L.H." (Lewis Harcourt, First Commissioner of Works, acting-President of the Board of Trade), "The Future Control of Oil Supplies," August 1916, ADM 1/8537/240. This prompted an unnamed writer (probably now-Vice Admiral Slade) to send a blistering note to the Home Secretary, Herbert Samuel (no relation to Marcus Samuel), beseeching him "to stop the disgraceful way the Government are playing into hands of the Royal Dutch Shell," which had ensconced itself at the Ministry of Munitions and Board of Trade, and whose executives "have stated [that] they will smash the Anglo-Persian and make the Government recognize the Dutch Shell as the Government Company for supply," which would leave Britain at the mercy of a Shell monopoly, "which analyzed means more or less Germany." Note to the Home Secretary, 23 June 1916, BP 69537.

⁷⁷ Corley, *History of Burmah*, 250.

resources... is at present dependent to some extent on foreign or quasi-foreign sources.”⁷⁸ In order to avoid being “placed at the gravest disadvantage as compared with the other Powers,” it was “essential” that Britain solidify control over native or imperial sources of oil and expand British interests in foreign sources. This was beyond the capacities of the existing “all British” companies: Burmah, which lacked sufficient production, and APOC, whose oilfields in Persia and Iraq were either still under development or undiscovered. Mexican Eagle was also out of the running since the political situation in Mexico following the start of the 1910 Revolution was not promising (even as Mexican production and oil companies’ profits – thanks to irregular collection of taxes – soared).⁷⁹ The most effective instrument would be a “combination” including Shell. Burmah would be the bait so as to provide sufficient leverage to secure “permanent and effective British control” of both Shell Transport and Trading (the British portion of the Shell Group) and the group’s British subsidiary, the Anglo-Saxon Petroleum Company.⁸⁰ The latter controlled many of the group’s oilfields, including those in California, Russia, and Venezuela, plus its Far Eastern distributor, Asiatic Petroleum. Completion of the merger (excluding the group’s operations in the Dutch East Indies and Romania, which would remain under Dutch control) would secure numerous advantages to Britain, including British control of Anglo-Saxon’s substantial production and its fleet of oil tankers. The interests of the Shell Group and Burmah would then be amalgamated into an

⁷⁸ Japanese oil production had peaked in 1916 at just below 3,000,000 barrels, while imports totaled only 62,616 barrels. This favorable supply/demand balance did not last: due to motorization and the conversion of Japanese ships to diesel fuel, between 1916 and 1927, imports increased roughly 85 times, to 5,413,612 tons. Lt. Col. C. Burnett (U.S. Military Attaché), G-2 Report, Japan (Economic), “Oil Production for 1927,” Report No. 3399, 20 March 1928, University Publications of America, *U.S. Military Intelligence Reports: Japan, 1918-1941* (Frederick: University Publications of America, 1986), Reel 14. See also: United States Strategic Bombing Survey, *Oil in Japan’s War: Report of the Oil and Chemical Division* (Washington, DC: U.S. GPO, 1946), 23-29.

⁷⁹ Production rose from 3,634,080 barrels to 157,000,000 barrels between 1911 and 1920, but by the latter year, taxes paid by the oil companies equaled only 8.9% of the value of all exports (not including those smuggled out of the country), which was more than 92% of total production. Hall, *Oil, Banks, and Politics*, 14-15.

⁸⁰ The Managing Director of Asiatic Petroleum (R. Waley Cohen) had actually broached a similar proposal to the Chairman of Burmah (John Cargill) in June 1915. Burmah’s relations with Shell were rather cordial, unlike the relationship between Burmah and APOC (already strained before 1914 over the latter’s low return on investment, worsened during the war). Cargill quickly shot down the initiative, because it would incur the hostility of two of two of Burmah’s major patrons: the British and Indian governments. He did, however, promise to have Burmah’s board consider the matter if asked to do by London. To that end, he passed along Shell’s proposal to Slade (then serving as an adviser to First Lord of the Admiralty Arthur Balfour), who was unimpressed. Although the Admiralty, the Foreign and India offices, and the government of India were all opposed, the BOT remained enthusiastic. Corley, *History of Burmah*, 238-240, and 243-249.

“Imperial Oil Company” that would be 51% British-owned and forbidden from selling any of its oil-bearing properties without the unanimous consent of the board of directors, which would have “a permanent British majority of 5 to 3.”⁸¹

Suspicion of the Shell’s “foreign” ownership had encouraged the Admiralty’s to support the APOC share purchase in 1913/14.⁸² But any doubts about Shell’s loyalties should have been quelled during the World War. Although Royal Dutch (the Dutch component within the Shell Group) had adopted a position of strict neutrality, in reality, it was an enthusiastic supporter of the Allied cause. Shell constructed facilities for the production of toluol (a petroleum extract vital in the production of high explosives) in Britain and even supplied British forces with gasoline from reserves in Holland in 1916 during a temporary shortage. More importantly, the Dutch partners no longer insisted that their share of Shell’s profits be remitted to The Hague. Rather, these reserves went London, bolstering the position of sterling. By 1918, Royal Dutch’s reserves in London reached £13,000,000, and the company both bought Treasury securities and sold them to the Dutch Government. The displacement of Shell’s finances to London also ensured that the Anglo-Saxon Petroleum Company became the treasurer for the entire Shell Group. Several Shell executives, who had been subjected to vicious smear campaigns just a few years before, served and were knighted by the British Government.⁸³

The Admiralty’s oil expert, Admiral Slade, did not care.⁸⁴ After leading the commission to Persia in 1913, Slade became one of the two government members of APOC’s Board of Directors in 1916, and the Vice-Chairman of APOC a year later while continuing to serve on the Admiralty payroll.⁸⁵ Slade’s superior, First Lord of the Admiralty Arthur Balfour, was also unimpressed by the thought of giving government sanction to the creation “of a huge combine dealing with a prime necessity of modern life,”

⁸¹ Lewis Harcourt, “The Future Control of Oil Supplies,” August 1916, ADM 1/8537/240; reprinted as Appendix A to: *PIPC*, i: 103-108.

⁸² Jack, “Shares Purchase,” 143, 149-151, and 165.

⁸³ Jonker and Zanden, *History of Shell*, 157-162 and 169-173.

⁸⁴ Slade retired from military service the following year although he served on the government payroll for the remainder of the war.

⁸⁵ His ascent with APOC stalled in January 1918 after a failed coup against Greenway. Corley, *History of Burmah*, 239.

which gave Slade bureaucratic cover to air his concerns.⁸⁶ He fired off three rebuttals of the BOT's proposal, which Balfour circulated to the Cabinet in September.

The first paper was a line-by-line critique of the Board of Trade memorandum. Slade contended that APOC "in a few years will be in a position to produce more oil" than the rival Shell-Standard oil cartel but was unable to compete for the moment due to downstream shortcomings. By assenting to the Shell-Burmah merger, the government was effectively harming Britain's national and economic strategy, leaving the country more vulnerable to price hikes and the flight of capital (to the tune of £8,000,000 in the form of oil profits across the empire), not to mention "rendering the Government's investment in the Anglo-Persian Company nugatory and unrenumerative, instead of allowing it to remain one which (like their Suez Canal investment) will... be of immense political and economic value [...]."⁸⁷

In a paper on the "Strategic Importance of the Control of Petroleum," Slade evoked a broader conception of Britain's oil security than the BOT. Slade argued that "[it] is of prime importance that no foreign interests... shall have any of power hampering either the development of our own resources or shall control in any way the distribution of the oil." In reviewing the two possible combinations of oil companies, Slade calculated that a merger of APOC, Burmah, and the Mexican interests (primarily Mexican Eagle) of Lord Cowdray (Weetman Pearson before 1910) would yield more oil in both the Eastern and Western hemispheres than a Shell-Burmah combination (2,500,000 and 1,600,000 tons as compared to 2,430,000 and 940,000 tons).⁸⁸ Another problem with the Shell-Burmah proposal was Cowdray's opposition at the moment to any merger with Shell, while excluding Cowdray left his interests

⁸⁶ Minute by Balfour, either 18 or 19 August 1916, CAB 37/154/3. Unfortunately, the first page of the minute is missing, but according to Corley, *History of Burmah*, 250, Balfour had scraped together some "stray reflections" to present at the first meeting of the Cabinet Committee on Oil.

⁸⁷ E.J.W.S., "Observations on the Board of Trade Memorandum on Oil," 24 August 1916, enclosed with: A.J.B (Balfour) to the Cabinet, 06 September 1916, CAB 37/154/16. Not surprisingly, a copy found its way to APOC: BP 69537. Even if Slade was not acting as a puppet of APOC's leadership, the company was certainly interested in forming a closer relationship with Mexican Eagle: the Chairman of APOC, Greenway, had already brought up the idea of merging the companies with Cowdray in April 1915. Cowdray evinced some interest and discussions continued throughout in 1916, but he ultimately backed out since he wanted to liquidate his Mexican oil interests for cash rather than retain them. Jones, *British Oil Industry*, 179-180, 190-192.

⁸⁸ Shell had been hit hard by the war, losing access to both its Russian and Romanian sources after the Ottoman Empire joined the Central Powers. The company only managed to replace its lost production by boosting output in the United States. Jonker and Zanden, *History of Shell*, 185-190.

vulnerable to absorption by U.S. oil companies. Slade also noted that much of Shell's existing oil production in the Western Hemisphere, primarily Mexico, was unsuitable for use in ships' boilers, whereas its production in California was only useful in the Pacific theater of operations. Slade conceded that Shell's Venezuelan properties might have some value in future, but they were still "unproved," whereas Cowdray and APOC were active throughout the British formal and informal empires, including the Middle East.⁸⁹ APOC already was active in the Middle East, where it was undertaking geological surveys 100 miles inland from the Shatt-al-Arab in the winter of 1915/16. APOC's Chairman and Managing Director, Charles Greenway, believed that his company would "be given the complete oil rights over any portion of the Turkish Empire which may come under British influence."⁹⁰

Slade's figures appear to have been based upon those included in a paper prepared for him by Greenway and circulated to the Admiralty. Greenway claimed that the reason why his proposed "all British" company could supply more oil to Britain than Shell was because much of the latter's production was consumed locally: (3,210,000 tons out of 4,426,000 tons, thus leaving only 1,216,000 available for export). The APOC-led "all British" consortium, on the other hand, only lost 300,000 tons to local consumers (entirely in Mexico), thus leaving 3,682,300 tons available for export to Britain.⁹¹

Britain's aim, Slade explained in a separate work on "Petroleum Supplies and Distribution," should be placing the British Government in the position of being not only "a predominating factor in Oil *Production*," but also exercising "a controlling influence in the *Distribution* business of the Empire." The British Government already held a controlling-stake in APOC, but the company's operations were

⁸⁹ E.J.W.S., "The Strategic Importance of the Control of Petroleum," 24 August 1916, enclosed with: A.J.B (Balfour) to the Cabinet, 06 September 1916, CAB 37/154/16. The second page of the memorandum is missing, but another copy may be found in: ADM 1/8537/240.

⁹⁰ APOC (Greenway) to the Foreign Office, 24 February 1916, F. 36846, POWE 33/41. When de Bunsen brought this letter to Grey's attention, the Foreign Secretary threw cold water on the idea. Foreign Office to the Admiralty, 02 March 1916, F. 36846, POWE 33/41. The government informed APOC its decision in May 1916, although several departments concurred that eliminating the TPC from consideration still left APOC with preferential rights in Mesopotamia, at least. "Memorandum prepared in the Foreign Office Library," 20 February 1918, no author, POWE 33/41. See also: H.G.N., "Draft Note for Persia Committee," 14 February 1918, enclosed with the Under Secretary of Foreign Affairs (Cecil) to the Petroleum Executive, 26 February 1918; and J.C. Clarke (for Long) to the Under Secretary of State, Foreign Office, 02 March 1918, P.E. 0126; both in: POWE 33/41.

⁹¹ "Royal Dutch/Shell Companies' Capability of supplying Petroleum to British Empire," 18 July 1916, no author, enclosed with: Greenway to Lt. Serocold (Intelligence Department, Admiralty), 19 July 1916, ADM 1/8537/240.

confined to production, not distribution. Luckily, the government also controlled the assets of the British Petroleum Company (BP), a subsidiary of the German-dominated Europäische Petroleum Union (controlled by the Deutsche Bank), which had been a major retailer and distributor of Romanian and Russian oil within Britain before the war. Slade proposed that the government should nationalize British Petroleum and use it to control the marketing of oil throughout the empire. Backed by British Petroleum, Slade hoped that APOC would embark on an ambitious program of commercial expansion “until the British Empire becomes independent, so far as concerns its Oil requirements. In this way the Nation would secure an independent position in Oil as it now holds in Coal,” and perhaps one day, APOC might even “absorb the Shell,” rather than allowing Shell to gobble up APOC and Burmah.⁹² Slade reiterated these points two years later before Petroleum Imperial Policy Committee (PIPC), whose members were “very sceptical as to the possibility of exercising any control over the Oil trade of the British Empire” through a mere distribution company. Slade argued that this was the very model adopted by John D. Rockefeller and the Shell Group, for “control of world wide trades” did not flow from control of supplies, but rather, “through the preliminary control of the means of transport and distribution, which has inevitably lead to the ultimate control of the industry itself.” If a “National Oil Company” controlled distribution and sales within the British Empire (the world’s second-largest consumer), the U.S. oil companies and Shell would have no option but to do business with it.⁹³

The idea that APOC could fulfill this role was not out of the question. After three years of trying, in 1917, the company finally received government sanction to purchase three foreign-owned marketing firms in Britain: BP; BP’s shipping subsidiary, the Petroleum Steamship Company; and the Homelight Oil Company, the marketing arm of independent Russian refiners. Greenway made his case by arguing

⁹² E.J.W.S. “Petroleum Supplies and Distribution,” 24 August 1916, enclosed with: A.J.B (Balfour) to the Cabinet, 06 September 1916, CAB 37/154/16. Emphasis in the original. Greenway made much the same argument when trying to convince the government to support APOC’s bid to take control of BP. Greenway, “Anglo-Persian Oil Company in relation to the present foreign monopoly of the British Oil Trade and proposal to form an ‘all British’ Oil Company,” 08 July 1916, ADM 1/8537/240. Slade’s wartime efforts in “lobbying the British Government and vilifying Shell” during the war (in concert with Greenway and one of Slade’s successors as Director of Naval Intelligence, Reginald Hall) are summarized in: Jones, *British Oil Industry*, 182-186, 197-200.

⁹³ Slade to Lewis Harcourt (Chairman of the PIPC), 07 October 1918, POWE 33/45.

that “an ‘all British’ Oil Company, with the Anglo-Persian Oil Company as a nucleus,” could break of the power of “the two foreign groups which now control the trade in Petroleum products.”⁹⁴ Control of BP’s assets (850 depots and eleven tankers, at a cost of £2,000,000) was, according to APOC’s official history, “the missing link” that gave the company the means to market its Persian crude directly without relying on its 1912 marketing agreement with Shell, which APOC officials now considered burdensome.⁹⁵

In spite of Slade’s opposition, the Admiralty agreed to support a Shell-Burmah merger as long as “the new company [shall] have no part in the affairs and management of the Anglo-Persian Company,” and if APOC retained the ability to market its products in markets west of Suez.⁹⁶ Although the Cabinet Committee on Oil approved the revised Shell-Burmah merger in November 1916, the plan fell through due to “eleventh hour” opposition from the Admiralty and the fall of the Cabinet led by Herbert Henry Asquith the following month.⁹⁷ Although the BOT had failed to create an “all British” Shell, it had succeeded in bringing oil policy to the forefront of political discussion. British policymakers became determined to break the empire’s dependence upon foreign oil suppliers and continued to covet British control of the Shell Group. Plans even more ambitious than that of the BOT in 1916 to achieve both objectives would emerge when London began to define Britain’s postwar oil strategy in 1918.

⁹⁴ Greenway, “Anglo-Persian Oil Company in relation to the present foreign monopoly of the British Oil Trade and proposal to form an ‘all British’ Oil Company,” 08 July 1916, ADM 1/8537/240.

⁹⁵ Ferrier, *History of BP*, 217-219. APOC’s development into a proper, vertically integrated oil company following the First World War is also summarized in Alfred Chandler’s *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge: Harvard University Press, 1990), 298-304. The internal development of the British oil market around the turn of the century and the early histories of British oil companies in the Caucasus (which accounted for roughly one-third of total British investment in Russia), Mexico, and the East Indies (none of which involved the British Government in any meaningful way except in the case of Mexico after the start of the Revolution) is summarized in: Jones, *British Oil Industry*, 32-84.

⁹⁶ Arthur J. Balfour (First Lord of the Admiralty), “Progress of the Negotiations with Regard to the Burmah-Shell Amalgamation,” 19 October 1916, ADM 1/8537/240.

⁹⁷ *PIPC*, i: 6-7; “Views on the National Oil Policy,” 19 September 1918, no author (officially Greenway, but probably Slade), BP 69537; reprinted as Appendix G to: *PIPC*, i: 141-144.. According to Marian Kent, negotiations broke down over one of the Admiralty’s key demands: that APOC be freed from its existing marketing agreement with Shell’s Far Eastern subsidiary, Asiatic Petroleum. Kent, *Oil and Empire*, 132. Burmah did not raise any objections, presumably because the BOT’s scheme would not only ensure the company’s existence as a separate entity within a British-controlled Shell Group, but also because this merger would have the approval of the British and Indian governments. Corley, *History of Burmah*, 251.

The Petroleum Imperial Policy Committee and the Origins of Postwar Oil Policy, 1918-1919

In the winter of 1917/18, APOC began applying public pressure on the government through the media and questions in the House of Commons to establish an “all-British” company to free Britain from the clutches of Shell or the U.S. oil companies.⁹⁸ As Greenway explained during APOC’s general meeting, the company’s wishes were compatible with the government’s existing policy of creating an “all-British company” that was “free from foreign taint,” and which “might absorb all the existing British oil-producing companies.” This aroused the ire of Samuel, who now feared that British Government’s interference within the oil industry was a recipe for “disaster.” Other governments would soon follow London’s example, he complained to Cadman, such that “the oil question... might become such a bone of contention as to lead to international complications.” Shell might also need to distance itself from London to avoid the opprobrium of being tarred as an instrument of the British Government, which could threaten its concessions in Venezuela, since Caracas had forbidden the granting of concessions to any state-owned or -affiliated companies.⁹⁹ Even the Admiralty was embarrassed by APOC’s actions, but only because it believed that it was “undesirable” for “a Government Controlled Company” such as APOC to “compete for concessions in territory outside the British dominions or definite spheres of interest [...]”¹⁰⁰

The lack of clarity concerning Britain’s long-term oil policy, as well as the Allies’ deteriorating supply situation in 1918, prompted Long to form the Petroleum Imperial Policy Committee under the leadership of Lewis Harcourt.¹⁰¹ In a letter to his Cabinet colleagues, Long lamented that governmental policy had been formulated and pursued on an ad hoc basis. Long intended his committee to “[elaborate] an general policy which shall be applicable in all cases and shall form a basis which will enable His

⁹⁸ Britain could not afford such inflammatory talk when it still needed the assistance of the foreign oil companies. Long ordered that press speculation be squelched and a letter sent to Greenway “pointing out that the attitude which had been adopted by the Anglo-Persian Oil Company in this matter was no in accordance with the National interests.” “Conference on the Policy to be Adopted by His Majesty’s Government with Regard to the Proposals which have Appeared in the Press for the Formation of an All-British Oil Company held at the Colonial Office, Friday, December 21st, 1917,” POWE 33/42.

⁹⁹ Samuel (Chairman of Shell Transport and Trading) to Cadman (Ministry of Munitions), 06 December 1919 [*sic*; 1917], POWE 33/42.

¹⁰⁰ They were nonetheless amused by Marcus Samuel’s opposition to government participation in APOC, since “for many years past he has been urging the Government to identify with the Shell interests.” Charles Walker (Admiralty) to the Director, H.M. Petroleum Executive (Long), 28 February 1918, P. 84548/48009, POWE 33/42.

¹⁰¹ “Warrant of Appointment,” 29 May 1918, no author (*PIPC* indicates that it was Long), POWE 33/12.

Majesty's Government to deal uniformly with all questions relating to the [oil] industry," with particular emphasis on determining the policy the government "should follow to secure supplies of oil for naval, military and industrial purposes."¹⁰² Privately, Long hoped that the PIPC would tackle the festering issue of the future development of Mesopotamia.¹⁰³

Long elaborated further upon the mission of the PIPC in a memorandum for the committee's inaugural meeting on 29 May 1918. Long impressed upon the members of PIPC that the World War "has demonstrated the numerous purposes for which the British Empire is dependent on petroleum," and that the problem of ensuring future supplies had been the source of "more than ordinary anxiety." Long mentioned the United States, which had supplied the Empire with 80% of its oil during the conflict and had "the power to place this country in an impossible situation should they desire to be unfriendly." Ideally, the PIPC would help the government to formulate and implement a policy that would allow Britain to enjoy the same degree of commercial and strategic supremacy afforded to it by coal during the previous century.¹⁰⁴ Long left the PIPC's members with no doubts concerning the significance of their task: "The importance of the problems cannot be overstated and it is no exaggeration to say that the future of the British Empire depends on their satisfactory solution."¹⁰⁵ In communicating his decision to form the PIPC to the Cabinet, Long emphasized Britain's unfavorable oil position in light of the fact that "[for]

¹⁰² Long to A.J. Balfour (Foreign Secretary), *et al.*, 16 May 1918, POWE 33/12.

¹⁰³ Deputy Director, Petroleum Executive, to the Director, Petroleum Executive, 07 May 1918, POWE 33/41. Long scrawled on the bottom of the paper that the "matter must be submitted to the "Policy" Committee as soon as it gets to work."

¹⁰⁴ In a note to the War Cabinet, Long suggested that the terms of reference for the PIPC be expanded from simply making recommendations "on the policy to be followed in order to secure adequate supplies of oil for Naval, Military and Industrial purposes... to enable it to negotiate directly with the principal Oil Companies," and made reference to securing British control over Shell. He sought the approval of the War Cabinet to proceed with such a policy, "provided that such negotiations do not involve His Majesty's Government in any financial obligation." "Lord Harcourt's Imperial Policy Committee," no date or author (almost certainly Long), POWE 33/12.

¹⁰⁵ Untitled Memorandum, Downing Street, no author (probably Long), 29 May 1918, POWE 33/12. Like the aforementioned warrant of appointment, the memorandum does not list an author, but it was reprinted in the official documentary history of the PIPC, along with the minutes of the committee's first meeting (*PIPC*, i: 28-29), when Harcourt indicated that he had received the memorandum from Long.

practically the whole of our petroleum requirements we are dependent upon importation from overseas [...].”¹⁰⁶

The founding of the PIPC sparked a deluge of memoranda from the both committee and interested departments.¹⁰⁷ One memorandum considered by the PIPC at its first meeting estimated future British requirements of refined products at 11,700,000 tons (or 12,400,000 tons of crude oil). The report also made reference to a budding preoccupation of British policymakers: the impending depletion of U.S. domestic reserves. (As one naval analyst observed, unlike Britain, which “found herself blessed with a perpetual dominating position with regard to coal,” U.S. oil hegemony was likely “to be shortlived,” largely because of the insatiable demands of U.S. consumers.¹⁰⁸) Although there was no reason to believe that the United States would not be a reliable supplier in the immediate postwar period, the U.S. domestic oil industry was “showing distinct signs of distress and cannot be depended upon to continue her supplies at the same rate as formerly.” Such ominous developments compelled the British Government “to be prepared to substitute some other source of supply.” Although prospects in the Dutch East Indies and Venezuela seemed promising, any increases in production would most likely be absorbed by neighboring markets, while the United States would claim the lion’s share of any increases in North American production. The only alternatives were Persia, Iraq, and British India. Iraq’s oil reserves were still

¹⁰⁶ Long, “Memorandum for the War Cabinet: Petroleum,” 31 July 1918, G.T. 5275, CAB 24/59. Harcourt also presented a revised version of Long’s 29 May 1918 memorandum to the Imperial War Conference on 22 July 1918, suggesting to the assembled leaders of the British Empire “that no foreign influence, under any guise, shall be permitted in British territories.” Rather than risk the diplomatic repercussions of an outright ban on foreign capital in imperial oil development, Harcourt advised that the operations of foreign companies be constrained by not granting them licenses to operate in British territory. “Memorandum by the Right Hon. Viscount Harcourt. Presented to the Imperial War Conference, 22nd July 1918. Petroleum Position of the British Empire: Measures Suggested to Improve the Position,” 04 July 1918, *PIPC*, i: 112-113.

¹⁰⁷ For the views of three prominent British oil men, see: “Memorandum by Mr. J.T. Cargill, Chairman, Burmah Oil Company,” 08 October 1918; “Memorandum by Lord Cowdray on the Importance of this Country and the Dominions Overseas Having their Own Sources of Petroleum,” 05 December 1918; and “Memorandum by Mr. C. Greenway on the National Oil Policy,” 19 September 1918; appendices E-G to: *PIPC*, i: 134-144. Greenway (as explained below) wanted the government to safeguard APOC’s “development on ordinary business lines” independent from Shell, which would allow it serve “as the nucleus of a *real* ‘all British’ Government-controlled Company [emphasis in the original]” after the war. Cargill was broadly supportive of Greenway’s proposals, while Cowdray was convinced that greater oil production was possible within the empire (including Great Britain), which was why he was selling stake in Mexican Eagle.

¹⁰⁸ Lt. Cmdr. G.J.A. Miles (Royal Naval Staff College), “The Supply of Oil Fuel for Fleets and Squadrons Abroad in the Future,” 14 April 1920, ADM 203/48.

unproven and would not contribute to Britain's oil needs for another "4 to 5 years time." The onus therefore fell on Persia, and in view of the pivotal role of the Middle East to Britain's oil security, the government had to take all measures necessary to ensure the continued survival of APOC and Burmah as British enterprises.¹⁰⁹

On 30 July 1918, the enigmatic Cabinet Secretary and Secretary to the Committee of Imperial Defence (CID), Maurice Hankey wrote to the First Lord of the Admiralty, Eric Geddes, to express his concern over Britain's "uncertain" oil position. Considering that the United States might not have an exportable surplus in the future and was soaking up Mexican production, Hankey believed that control of potentially oil-rich regions of Iraq and areas adjacent to APOC's Persian concession was a vital "war aim."¹¹⁰ The following day, Hankey wrote letters to Foreign Secretary Balfour and Prime Minister Lloyd George, enclosing a paper by Slade on Britain's postwar oil position. In his letter to Balfour, Hankey remarked that he had come to the realization that "oil in the next war will occupy the place of coal in the present war," and the "only big potential supply that we can get under British control is the Persian and Mesopotamian supply," both of constituted "a first class British War Aim." Hankey advised the Foreign Secretary to "rub this [fact] in" during his next presentation before the Imperial War Cabinet.¹¹¹ After summarizing Slade's analysis, which he deemed "of supreme importance to our future," Hankey advised Lloyd George to push the British military to occupy Mesopotamia prior to the war's end.¹¹²

Slade was not a disinterested observer on account of his position within APOC. He was notorious within Whitehall for advocacy of APOC, having left government service in 1917 to become a full-time

¹⁰⁹ "Oil Policy for the Empire," no date or author, POWE 33/44. The fact that British policymakers grasped the pivotal role of the Middle East to Britain's energy security as early-1918 belies Elizabeth Monroe's claim that oil's significance to British policy in the region only became "obvious" after 1945. Elizabeth Monroe, *Britain's Moment in the Middle East, 1914-1971* (Baltimore: Johns Hopkins Press, 1981), 11.

¹¹⁰ Hankey to Geddes, 30 July 1918, CAB 21/119. It is not clear if Hankey read the Slade memorandum before he wrote to Geddes, but the tenor of the conclusions expressed within his letter is consistent with Slade's evaluation.

¹¹¹ The Imperial War Cabinet should not be confused with War Cabinet (both wartime innovations of Lloyd George), the latter consisting entirely of British Government ministers most intimately involved in the conduct of the war effort, while the latter was a consultative body comprised of the heads of government of Britain's major imperial allies.

¹¹² Hankey to Balfour, and Hankey to Lloyd George, 01 August 1918, CAB 21/119. See also: V.H. Rothwell, "Mesopotamia in British War Aims, 1914-1918," *Historical Journal* 13: 2 (1970): 273-294 (esp. 286-291). Balfour was not impressed, dismissing Hankey's suggestion as "a purely Imperialist War Aim." Hankey to Balfour, 12 August 1918, CAB 21/119.

member of the company's board. His strategic evaluation of July 1918 (plus an unsigned screed fulminating against the Shell/Standard Oil "monopoly" circulated within the Admiralty the following month) cast numerous aspersions regarding the patriotism of Shell and its management, which precipitated a backlash against APOC within the British Government.¹¹³ Slade's conflict of interest in presenting an official paper to the Cabinet that supported the interests of a company that also employed him prompted Geddes to apologize to Long and send a short note to the Imperial War Cabinet admitting that Slade's work "might be read as an *ex parte* statement on behalf of the Anglo-Persian Company vis-a-vis its trade rivals, especially the Royal Dutch Company." Nevertheless, Geddes did not revoke the Admiralty's earlier endorsement of Slade's analysis, particularly in reference "to the contention that the oil bearing districts of Mesopotamia and Persia are of very great importance to us."¹¹⁴

Slade contended that British oil policy had both a strategic and a logistical dimension, and although "[the] two are to a great extent interdependent... the question of sufficiency of supply may be satisfied without the strategic position, for which we ought to strive, being obtained." In light of oil's superiority over coal as a source of naval fuel, Britain's existence as a great power depended on "command" of secure oil supplies. British "control" had to "be absolute," since foreign interests "might and probably

¹¹³ Jones, *British Oil Industry*, 198-201. For Slade's memoranda of July and August 1918, see: E.J.W. Slade, "Paper by Admiral Sir Edmond Slade on the Petroleum Situation in the British Empire," 19 July 1918, enclosed with: R.E. Wemyss (First Sea Lord), "Admiralty Memorandum for the Imperial War Cabinet," 30 July 1918, G.T. 5267, CAB 24/59; and Slade, "The Threatened Foreign Oil Monopoly," 21 August 1918, ADM 1/8537/240. The latter paper received complementary assessments from leading Admiralty officials until it came across the desk of the Civil Lord of the Admiralty, E.G. Pretymann, who dismissed it as APOC propaganda that was riddled with "inaccurate or exaggerated" claims. Although Pretymann conceded that a "cosmopolitan" firm such as Shell was perfectly happy to do with business with Germany before the war, since then, it "has placed its entire resources at the disposal of this country and has served us well." Pretymann took the position that the British Government (through the Harcourt Committee) should continue its efforts at "roping in their [Shell's] very large petroleum assets without conferring a monopoly and without surrendering any of the freedom or possibilities of development of the Anglo Persian Oil Company." See the series of minutes attached to Slade's August 1918 paper including statements by Naval Intelligence (possibly Reginald Hall), the Director of Plans (Capt. Cyril T.M. Fuller), Pretymann, and possibly the Fourth Sea Lord (Tothill), dated between 26 August and 24 September 1918, in: ADM 1/8537/240.

¹¹⁴ Geddes to Long, 13 September 1918, ADM 1/8537/240; and Geddes, "Memorandum to the War Cabinet by the First Lord of the Admiralty: A Note in Reference to [the] Admiralty Memorandum on the 'Petroleum Situation in the British Empire' (Paper G.T. 5267)," 17 September 1918, G.T. 5710, CAB 24/64. Kent misidentifies Balfour as the author of this memorandum. Her contention that the Cabinet dropped Slade's recommendations in their entirety also seems unwarranted. Kent, *Oil and Empire*, 125-127. Although Jones will have nothing to do with Slade's accusations against Shell, he agrees that Slade's arguments about "Middle Eastern oil made an important strategic point, and Slade helped to convince Lloyd George and Balfour of the need to acquire the Mesopotamian oilfields for Britain." Jones, *British Oil Industry*, 198.

would be guided in their policy of development of oil territories by their private interests and not by what is best in the national interest,” including pursuing the development of low-cost oilfields beyond the British Empire at the expense of high-cost, lower-producing fields within it. Slade was also a strong believer in direct government intervention within the oil industry, reckoning that “[if] the British Government can obtain the control of any source or sources of supply that will provide a material proportion of the Petroleum requirements of the Empire,” it would break the power held over Britain by the major oil companies, “and we shall be masters in our own house in all matters relating to oil [...]”¹¹⁵

Slade warned that Britain and its empire had become even more dependent upon the United States than ever before now that access to Russian and Romanian production had been disrupted. Even if production within these two nations recovered following the war, that paled in significance to “[the] first and most important factor [which] is the life of the United States fields.” Noting the “anxiety” of both the U.S. Government and U.S. oil companies regarding future domestic oil production, Slade estimated “that within a measurable period, say 10 years, the amount of the Petroleum that we shall be able to draw from the United States will be greatly diminished if not entirely stopped.” Although Mexico boasted of large reserves and a strong British commercial presence, the United States would lay claim upon the oil before Britain could. Although Britain would be overmatched within the Western Hemisphere by the United States, the same did not apply to Persia and Iraq, which might “in the future provide a supply equal to that now given by the United States.”¹¹⁶

It is worth pointing out here that British concern over the lifespan of U.S. domestic oil reserves after 1918 echoed official and public sentiment within the United States, which fed on alarmist analyses of the lifespan of U.S. oil reserves by the U.S. Geological Service and the American Association of Petroleum

¹¹⁵ E.J.W. Slade, “Paper by Admiral Sir Edmond Slade on the Petroleum Situation in the British Empire,” 19 July 1918, enclosed with: R.E. Wemyss (First Sea Lord), “Admiralty Memorandum for the Imperial War Cabinet,” 30 July 1918, G.T. 5267, CAB 24/59.

¹¹⁶ E.J.W. Slade, “Paper by Admiral Sir Edmond Slade on the Petroleum Situation in the British Empire,” 19 July 1918, enclosed with: R.E. Wemyss (First Sea Lord), “Admiralty Memorandum for the Imperial War Cabinet,” 30 July 1918, G.T. 5267, CAB 24/59.

Geologists.¹¹⁷ These fears on both sides of the Atlantic proved to be misplaced. U.S. imports (almost entirely from Mexico) did quadruple between 1918 and 1922, peaking at 21% of the total U.S. supply in 1921, and the United States briefly became a net importer from 1920 to 1922. On the other hand, U.S. oil production increased continuously between 1918 and 1929, from 355,928,000 barrels to 1,007,323,000 barrels (280%), while proven reserves increased at the beginning of every year between 1918 and 1931, from 5,900,000,000 barrels to 13,600,000,000 barrels (230%). The specter haunting the U.S. oil industry (and therefore the entire world since, as of 1918, the United States had produced over 60% of all of the oil produced in human history) was not imminent depletion of U.S. reserves, but rather the likelihood of domestic consumption soon overtaking increases in production and the size of proven reserves. Domestic demand increased by 250% between 1918 and 1929 from 374,541,000 barrels to 940,995,000 barrels (4.3 barrels to 7.7 barrels per capita), which roughly corresponded to the concurrent increase in exports from 63,893,000 barrels to 163,120,000 barrels. For the time being, production and additions to proven reserves outpaced increases in total demand (consumption plus exports), but as was the case after the First World War, once the ratio of reserves to production began to decline during the Second World War (from 14.3 barrels in reserve for every barrel produced to only 11.9 just between 1942 and 1945), anxious voices in the United States would once again clamor for a more aggressive U.S. foreign oil policy.¹¹⁸

From the perspective of 1918, however, there was ample reason for London to question the longevity of U.S. oil reserves. Slade advised the government to encourage the development of Persian and Mesopotamian oil reserves “by purely British interests.” Likewise, London ought to promote exploration and production throughout the empire “by purely British interests.” In the interest of conserving imperial oil reserves, the government should also assist British oil companies in acquiring “control of as much oil lands in foreign countries as possible,” and that such oil should be marketed within Britain and its empire

¹¹⁷ Michael Aaron Dennis, “Drilling for Dollars: The Making of U.S. Petroleum Reserve Estimates, 1921-1925,” *Social Studies of Science* 15: 2 (1985): 241-265; and William Stivers, *Supremacy and Oil: Iraq, Turkey, and the Anglo-American World Order, 1918-1930* (Ithaca: Cornell University Press, 1982), 194-199.

¹¹⁸ David Painter, *Oil and the American Century: The Political Economy of U.S. Foreign Oil Policy* (Baltimore: Johns Hopkins University Press, 1986), 3-51 (esp. 9-17, 24-25, and 39-41). Statistics for the period between 1918 and 1945 are drawn from: DeGolyer, *Petroleum Statistics*, 12, 17, 53, 60-61, 63-64, 68, and 108.

only by British firms. Finally, the government had to discourage the entry of foreign interests within the British or imperial oil industry.¹¹⁹

A cover letter by the First Sea Lord, R.E. Wemyss, indicated that Slade's memorandum had been "[endorsed] in the strongest manner possible" by the Admiralty, and warned that failure to act would "wrest from our grasp one of the principal factors on which the maintenance of our Naval position depends." He also expressed the Admiralty's conviction that Britain's "present Allies" might pose as much of a threat to its future oil security as its enemies.¹²⁰ The Chief of the Air Staff, F.H. Sykes, also backed Slade's conclusions, for "[the] whole future of air power is dependent upon adequate supplies of liquid fuel." Sykes could not help himself from engaging in some inter-service jockeying, contending that the "Air force will in the near future be the first line of offence and defence." By "[clearing] the way for sea warfare and land warfare," Sykes believed "that the very existence of the Empire will depend in the first instance upon aerial supremacy."¹²¹

¹¹⁹ E.J.W. Slade, "Paper by Admiral Sir Edmond Slade on the Petroleum Situation in the British Empire," 19 July 1918, enclosed with: R.E. Wemyss (First Sea Lord), "Admiralty Memorandum for the Imperial War Cabinet," 30 July 1918, G.T. 5267, CAB 24/59. Slade's report (but not Wemyss' covering letter) is reprinted as Appendix D to: *PIPC*, i: 127-133. Both Marian Kent and Ronald Ferrier claim that Slade had first pressed the Cabinet on maintaining control of the oil of the Persian Gulf in a memorandum of 31 October 1916 ("The Political Position in the Persian Gulf at the End of the War"): Kent, *Oil and Empire*, 125; and Ferrier, *History of BP*, 580. No such memorandum currently exists within the Cabinet collection cited by both authors (CAB 24/3), and I have been unable to locate a copy elsewhere.

¹²⁰ R.E. Wemyss (First Sea Lord), "Admiralty Memorandum for the Imperial War Cabinet," 30 July 1918, G.T. 5264, CAB 24/59.

¹²¹ Sykes to the War Cabinet, "Petroleum Situation: Notes by the Chief of the Air Staff on Admiralty Memorandum No. G.T./5267 dated 30th July, 1918," 09 August 1918, G.T. 5376, CAB 21/119.

The Harcourt-Deterding Agreement, 1918-1919

Although the PIPC solicited plenty of opinions about Britain's postwar oil policy, Harcourt used the committee to resurrect the policy he had first articulated at the BOT in 1916: facilitating British control of Shell.¹²² The "Harcourt-Deterding" Agreement of 1918-19 would have restructured Shell's ownership structure to create a majority for British interests throughout the Shell Group (excepting those Shell subsidiaries that operated on Dutch territory that, for legal reasons, could not be transferred to British control). After several months of negotiation, in February 1919, Harcourt and Deterding reached an agreement. According to Harcourt, the PIPC considered "it most desirable" that the government do everything in its power to acquire control of oil reserves beyond the Empire, which only produced 2.5% of world production and satisfied 30% of imperial consumption. The committee wished to promote private enterprise rather than government control, deeming the latter to "be entirely hampering and uneconomic, and in the case of foreign sources of supply diplomatically disadvantageous, if not dangerous."¹²³ Of the two major oil companies with a global presence, the Standard Oil Company of New Jersey (Jersey) and Shell, only the latter was susceptible to British control, with the "price" being a "redistribution" of TPC shares in Shell's favor, now that London had decided to resurrect the TPC and its 1914 concession as a lever to acquire control of Mesopotamia's oil.¹²⁴ Harcourt commended the agreement, which would bring under British control Shell's Mexican, Romanian, Russian, and Venezuelan subsidiaries, as well as the distributor Asiatic Petroleum, and, "if not immediately, certainly in the near future, will be of great and growing importance and advantage to the Empire [...]."¹²⁵

¹²² Slade had tried to argue in favor of "National Oil Company" that controlled downstream operations within the Empire, or at least preserving the independence of APOC and Burma (whose "actual exportable surplus" was "equal to more than 50% of the pre-war consumption of the United Kingdom") but to no avail. Slade to Harcourt, 07 October 1918, POWE 33/45.

¹²³ Harcourt to Long, 07 February 1919, POWE 33/64.

¹²⁴ Edwin Montague (Secretary of State for India) to Harcourt, 23 December 1918, CAB 21/119. Control of the TPC was Deterding's key objective. Whether or not the Shell was nominally British or Dutch was irrelevant so long as it enjoyed London's patronage without having to cede any of its corporate autonomy. Corley, *History of Burmah*, 257-258.

¹²⁵ Harcourt to Long, 07 February 1919, POWE 33/64; reprinted along with an undated and unsigned copy of the agreement in: *PIPC*, i: 15-19. For Long's reply, see Long to Harcourt, 07 February 1919, POWE 33/64; reprinted in: *PIPC*, i: 20. The agreement only covered those properties controlled by Shell Transport and Trading. Therefore,

In return, British Government would be guaranteed a majority of British subjects on Shell's Board of Directors, plus assurances that no sale of Shell's assets or changes in the company's Articles of Association would be take place without London's permission. Long boasted to the Cabinet that "British influence in the group is greatly strengthened and ultimate predominance is secured" without any interference in the company's operations or "loss of efficiency," thus "lessening our present dangerous dependence on the United States for supplies of fuel oil."¹²⁶ During Cabinet deliberations, Long even surmised "that, as the result of the proposed arrangement, by the end of two or three years there would be a considerably improved position in regard to the oil supply, and that at the end of ten years this country would be independent of American supplies."¹²⁷ The Board of Royal Dutch granted its provisional approval provided that London assisted Shell in broadening its holdings within British territories; that Dutch shareholders were exempted from or received a rebate for any British taxation; and that Shell receive at least 34% of the shares in any company that obtained the Mesopotamian concession.¹²⁸ As Shell's official history points out, the Dutch had everything to gain and little to lose. Shell had indulged Harcourt through "an intricate charade designed to placate excited patriotism in return for serious commercial opportunities [...]."¹²⁹

Royal Dutch's properties on Dutch colonial land and its valuable U.S. subsidiary (Shell Union Oil Company after 1922) were not included.

¹²⁶ H. and H.D. (Harcourt and Deterding), "Memorandum [of Agreement with Shell]," no date, enclosed with: Long to the War Cabinet, "Acquisition of British Control over the Royal Dutch-Shell Group," 22 February 1919, G.T. 6961, CAB 24/76; reprinted in: *PIPC*, i: 21-26. A copy of the Harcourt-Deterding Agreement (dated 06 March 1919) is also reprinted as Appendix II to: Payton-Smith, *Oil*, 28-31.

¹²⁷ The War Cabinet granted its consent to the agreement, provided that some agreement could be reached over whether or not Dutch shareholders would be exempted from British taxation. "War Cabinet Meeting, 5th May, 1919. British Control of the Royal Dutch-Shell Petroleum Group," H.M. Petroleum Executive, "Negotiations Regarding the Petroleum Policy of His Majesty's Government: Volume II: History Summary, Agreements, Conferences and Correspondence, Index," pg. 17, POWE 33/14 (hereafter cited as: *PIPC*, ii).

¹²⁸ B. London [*sic*] to H.W.A. Deterding, 14 March 1919, POWE 33/71. For a contemporaneous summary of the negotiations preceding the Harcourt-Deterding Agreement, see *PIPC*, i: 11-14; *PIPC*, ii: 3. The key documents relating the proposed agreement are reprinted in *PIPC*, i: 15-26; *PIPC*, ii: 13-20. The British Government envisaged the following distribution of shares in Iraq: 70% for British interests (APOC and Shell with 34% each and London taking the remaining 2%), 20% for French interests (which Shell hoped to purchase, as well), and 10% for the Iraqis. "Note by Foreign Office," I.D.C.E 1022 c. iv, no date (circa December 1919/January 1920, following the signing of the Greenwood-Béranger Agreement of December 1919), T 161/738.

¹²⁹ Jonker and Zanden, *History of Shell*, 214-216.

The agreement collapsed on account of several factors. APOC was bitterly opposed, which effectively meant that the Admiralty was, as well. Once it caught wind of the negotiations, APOC fired off a blistering attack in September 1918 that extolled the company's "enormous potentialities." APOC claimed that Shell and Standard were draining the empire of £20,000,000 to £25,000,000 each year and questioned the wisdom of leaving Britain's energy security in the hands of "Companies domiciled in countries... which may become members of some 'League of Nations' formed for the purpose (inter alia) of endeavouring to destroy British Naval and Commercial supremacy [...]." APOC had the means to satisfy the primary objectives of British oil policy by serving as "an 'all British' Company capable of safeguarding Naval and Military interests and supply the whole Oil requirements of the Empire," either independently or in concert with other British firms such as Burmah. APOC preferred to avoid any merger and "be allowed to proceed with its development on ordinary business lines," which included expansion of the company's upstream presence in Persia and Mesopotamia and downstream presence in Britain. APOC's board was confident that their company would shortly "not only be able to supply all of the needs of the Empire but also other countries to a large extent, and thus be in the means of place Great Britain in the position of predominance in regard to Oil she now enjoys in regard to coal."¹³⁰

Both the British Government and Shell saw the agreement as part of a wider plan for organizing oil production within Mesopotamia. A British-controlled Shell, acting in concert with APOC, would guarantee British control of the TPC and Mesopotamia/Iraq, while an agreement with the French would allow the oil to be transported via pipeline through the French mandates of Syria and Lebanon to the Mediterranean. Throughout this process, the British Government operated under the assumption that the only incentive for Shell in signing the Harcourt-Deterding Agreement was a share of Mesopotamian oil production.¹³¹ In fact, Shell saw the agreement as a step toward securing control over the TPC itself.

¹³⁰ "Views on the National Oil Policy," 19 September 1918, no author (officially Greenway, but probably Slade), BP 69537; reprinted as Appendix G to: *PIPC*, i: 141-144. Emphasis in the original. This paper is an updated version of another unsigned memorandum of August 1918 by Slade. "The Threatened Foreign Oil Monopoly," 21 August 1918, ADM 1/8537/240. Both memoranda repeated many of Slade's claims in his three memoranda of August 1916, which opposed the BOT's proposed merger of Shell and Burmah.

¹³¹ Minute to Barstow, [?] 1920, T 161/738.

London's agreement would divide the shares under British control equally between Shell and APOC (34% to each company with London holding 2% and the remaining 30% available to other foreign interests such as France).¹³² During its negotiations with the PIPC, however, Shell had also been in touch with the French Government, with the aim of establishing a state-sponsored monopoly for Shell in France directed against Standard Oil. In exchange, a syndicate dominated by Shell would receive any shares in the TPC that Britain transferred to France, thereby giving Shell a majority stake in the TPC.

This plan collapsed under the weight of an oil embargo by Jersey against France for several months between 1919 and 1920 that broke the nerve of Paris, which had been counting on Shell to supply France with oil from Romania and the Caucasus on tankers seized from Germany. French plans were in shambles by December 1919, and Paris gave in the following March and abandoned its plans with Shell. Rather than risk another squabble with the United States by handing over its shares in the TPC to Shell, in 1923, the French Government created a new company, the Compagnie Française des Pétroles (CFP), to administer France's shares in the TPC. Most of the start-up capital for this new company came, in fact, from the French subsidiaries of the British and U.S. major oil companies.¹³³

The British Government had resurrected the TPC as a means of securing its control over Mesopotamia's oil, which facilitated the Harcourt-Deterding Agreement.¹³⁴ But in January 1920, British ministers (including Lloyd George) abruptly decided against turning over "the interests in the oil wells of Mesopotamia to joint Stock Companies," ostensibly because the government wanted the revenues from

¹³² The company's motivations and subsequent lack of enthusiasm are summarized in: Jonker and Zanden, *History of Shell*, 213-216, 251, and 256.

¹³³ The key work on post-WWI French interwar policy is Nowell, *World Oil Cartel*, *passim* (esp. 132-141 and 170-183), which should be read in concert with the statist accounts in: Richard Kuisel, *Ernest Mercier: French Technocrat* (Berkeley: University of California Press, 1967), 21-44; Eric Melby, *Oil and the International System: The Case of France, 1918-1969* (New York: Arno Press, 1981), 8-168; Mohamed Sassi, "The Emergence of the French Oil Industry between the Two Wars," *Business and Economic History On-line* 1 (2003), <http://www.thebhc.org/publications/BEHonline/2003/Sassi.pdf>; and Mohamed Sassi, "Evolution of the Structure of the French Oil Economy between the Wars: Toward a French Holding Company," *Business and Economic History On-line* 2 (2004), <http://www.thebhc.org/publications/BEHonline/2004/Sassi.pdf>. For a brief overview, see: Helmut Mejcher, "The International Petroleum Cartel (1928), Arab and Turkish Oil Aspirations and German Oil Policy towards the Middle East on the Eve of the Second World War," in: *Oil, the Middle East, North Africa and the Industrial States*, ed. Klaus Jürgen Gantzel and Helmut Mejcher (Paderborn: F. Schöningh, 1984), 51-53.

¹³⁴ Edwin Montague (Secretary of State for India) to Harcourt, 23 December 1918, CAB 21/119.

the “extensive” oil deposits for itself “to pay for the whole administration of the country [...]”¹³⁵ The reasons for the decision are unclear.¹³⁶ The previous year, the Civil Commissioner in Mesopotamia (Arnold Wilson) had expressed skepticism about relinquishing “the whole interests of the Iraq State and of the British Treasury in what might well prove to be the richest oilfields in the world, in exchange for nominal control over oilfields not in British territory,” to a multinational consortium. (Wilson was referring to the Long-Bérenger Agreement of April 1919, which would grant the Mesopotamian concession to a reconstituted TPC under Anglo-French control.) Such a policy ran contrary to Britain’s handling of the Persian oilfields, where it exercised indirect control through APOC. Oil revenues were also the only collateral Baghdad could offer against the loans it needed from London, while the enrichment of private industry through the transfer of public assets would run afoul of “the present trend of opinion in favour of nationalising certain essential industries [...]”¹³⁷ The Treasury was sympathetic to Wilson’s argument in view of the costs of the British presence in Iraq: Wilson had estimated that he would need £25,000,000 over the next five years to pay for the occupation.¹³⁸

Ministers took their decision the following year over the objections of the head of the Petroleum Executive, Frederick Kellaway, who was not even consulted. Kellaway complained that London’s sudden volte-face would create the impression that it was acting in bad faith and frustrate negotiations with Shell. “I consider,” Kellaway warned, “that this would be a most disastrous occurrence at the present time when the whole question of our future oil supplies is causing such anxiety and when our dependence on foreign controlled fields is such a source of danger.” There was also illogic of the British Government cutting out France by withdrawing its sponsorship of the TPC, while at the same time rebuffing U.S. demands for an

¹³⁵ “Conclusions of a Conference of Ministers,” 23 January 1920, T 1/12544.

¹³⁶ Kent describes the decision “to wreck the agreement” with the French and Shell as the product of a “sublime misunderstanding of the whole basis of the arrangement [...]” Kent, *Oil and Empire*, 152. Geoffrey Jones sees the Cabinet’s actions as a manifestation of public antipathy toward the great oil trusts. Jones, *British Oil Industry*, 215-216.

¹³⁷ India Office, “Mesopotamia: Oil Policy,” 10 April 1919, Pol. 1858/19, T 1/12544.

¹³⁸ Minute from A.P. Waterfield to George Barstow (Controller of Supply Services), 09 April [1919], T 1/12544. After Wilson’s brutal and incompetent leadership in Iraq provoked the uprising of 1920 and his dismissal, he secured a lucrative position with APOC with such alacrity that even establishment organs such as the *Times* were aghast. Aileen Keating, *Mirage: Power, Politics, and the Hidden History of Arabian Oil* (Amherst: Prometheus Books, 2005), 63-88. Barstow also joined APOC in 1927 as one of the government directors.

“Open Door” in Iraq by claiming that the rights of the TPC took precedence over the claims of rival firms. Kellaway (backed by Long and the Treasury) reserved his greatest objection for the idea of having a state-run oil company undertake operations in Mesopotamia, claiming that “[development] by private interests would almost certainly result in [a] far more rapid opening up of the oil resources of the country.” It would be unwise for the British Government to interfere in an industry that was “speculative, very technical and requires audacity in an exceptional degree.” London also lacked “experts of the proper calibre except by outbidding the large oil companies who are keenly competing at the present time for good men.” These same companies were unlikely to come to London’s assistance if it cheated them out of their prize.¹³⁹

Kellaway reiterated his objections to government participation in Iraqi oil exploration and production following the signing of the San Remo Oil Agreement of April 1920. (Besides formalizing the division of League of Nations mandates in the Middle East, the agreement granted France either 25% of the oil produced by a state-owned company operating in Mesopotamia or 25% of the shares of a private company. The agreement did not, however, specify whether the company that produced the oil was private or state-owned.). If London went ahead with its new policy, the cost to the taxpayer would run to between £10,000,000 and £15,000,000. Conversely, if a private company took over the concession, besides undertaking the exploration costs, it would also be responsible for paying for local security. This would absolve the government of stationing large numbers of British or Indian Army troops to guard oil installations, since the company would, like APOC in Persia, most likely conclude separate security arrangements with local tribes. Kellaway nonetheless insisted that the company must “be permanently British, with Government representatives on the Board,” and that Shell must either accept this

¹³⁹ Kellaway, “Mesopotamian Oilfields: Memorandum by the Minister in Charge of the Petroleum Department,” 22 April [1920], C.P. 1118, CAB 24/104. For Long and the Treasury’s concurrence, see: Long, “The Anglo French Petroleum Agreement and Mesopotamia: Memorandum for the Cabinet by the First Lord of the Admiralty,” 29 June 1920, C.P. 1554, CAB 24/108; and Minute to Barstow, [?] 1920, T 161/738.

arrangement or be content with its existing one-quarter share in the TPC under the terms of the 1914 “Foreign Office” Agreement.¹⁴⁰

Kellaway’s objections to government participation in Iraqi oil production were shared by both the Civil Commissioner in Baghdad, Wilson, and the minister most concerned with the development of Iraq’s oil, Colonial Secretary Winston Churchill.¹⁴¹ The latter considered the matter of private vs. public development of Iraqi oil to have been settled during the diplomatic exchange with the United States following the signing of the San Remo Oil Agreement, in which “it was definitely stated that the provisions of the Anglo-French Petroleum Agreement in regard to Mesopotamia were based upon the Turkish Petroleum Company’s claims.” The only government with any claim to Iraq’s oil was Baghdad, but Churchill considered it “far more satisfactory if the development were in the hands of a British company than in those of an Arab government over which our control will be hypothetical.”¹⁴²

Although the San Remo Oil Agreement undid some of the damage done by the government’s rash action in January, it could not save the Harcourt-Deterding Agreement. Shell now began to feel that the benefits of close cooperation with London were outweighed by the disadvantages of incurring the hostility of the U.S. Government. The company was in the process of a major expansion of its presence in Latin America, not just in Venezuela, but also in Mexico. Cowdray had been one of the pioneering figures in the Mexican oil industry after 1901 and had founded Mexican Eagle in 1909. Following failed bids to

¹⁴⁰ Kellaway, “The Anglo-French Petroleum Agreement and Mesopotamia,” 21 June 1920, C.P. 1524, CAB 24/108. See also: Kellaway, “The Anglo-French Petroleum Agreement and Mesopotamia: Memorandum by the Minister in Charge of [the] Petroleum Department,” 15 November 1920, C.P. 2110, CAB 24/115.

¹⁴¹ Wilson had concluded that the British Government was incapable of managing the Mesopotamian concession. In view of the immense capital investments required to build a pipeline before Iraqi oil could be exported, Wilson had come around to believing that private enterprise should take the lead – in this case, APOC, which Wilson believed was “best fitted” for the task. “Telegram from Civil Commissioner, Baghdad, to Secretary of State for India, dated 7th July 1920,” attached to: E.S.M. (Edwin Samuel Montague), “The Anglo-French Petroleum Agreement and Mesopotamia,” 12 July 1920, C.P. 1607, CAB 24/109.

¹⁴² Churchill to Hankey, 20 June 1921, enclosed with: Hankey, “Mesopotamian Oil: Note by the Secretary to the Cabinet,” 27 June 1921, C.P. 3077, CAB 24/125. Churchill reiterated these points in a separate memorandum for the Cabinet: “Mesopotamian Oil and the Turkish Petroleum Company: Memorandum by the Secretary of State for the Colonies,” 29 August 1921, C.P. 3271, CAB 24/127. The diplomatic exchanges between the Department of State and the Foreign Office regarding the future of oil production in Iraq between 1920 and 1921 are reprinted in: *Correspondence Between His Majesty’s Government and the United States Ambassador Respecting Economic Rights in Mandated Territories*, Cmd. 1226, Miscellaneous No. 10 (London: HMSO, 1921), T 172/1268. Developments in 1920 are summarized in: Minute for the Chancellor of the Exchequer, “Mesopotamian Oil,” 06 September 1921, signature illegible, T 161/738.

secure a supply contract with Jersey in 1912 and the Admiralty in 1913, by January 1914, Cowdray decided to sell off his Mexican interests as quickly and profitably as possible. He had nearly completed a sale to Jersey in 1917 before the British Government intervened by threatening the former Liberal MP and President of the Air Board with prosecution under the Defence of the Realm Act if he did not desist.¹⁴³ Time was of the essence after Cowdray learned in December 1918 that saltwater had begun to seep into Mexican Eagle's largest oilfield. He eventually managed to sell his stake in both Mexican Eagle and its downstream subsidiary, Anglo-Mexican, to Shell in March/April 1919 for £7,700,000.¹⁴⁴

The purchase of Mexican Eagle appeared to be a coup for Shell. The former had paid dividends of 16% in 1915-1916 in spite of the revolution, and in 1920-1921, the dividend soared to 45% and 60%, respectively, while profits from overseas and domestic sales in Mexico totaled £20,000,000 in 1921.¹⁴⁵ But immediately thereafter, Shell's investment went sour. Mexican production began to decline after 1921 even though the major oil companies continued to pour resources into the country for several years, and output only recovered following the discovery of the Poza Rica oilfield in 1930.¹⁴⁶ But Mexico was

¹⁴³ See the exchange between Ernest George Pretzman (Chairman of the Inter-Departmental Committee on Petroleum Products) and Cowdray's solicitors, Messrs. S. Pearson and Sons, attached to: Minute, no author, 10 September 1917, G.T. 2000, CAB 24/25. The government's opposition put Cowdray in a difficult position, since neither the Chancellor (Andrew Bonar Law) nor the Colonial Secretary (Long) was willing to "advance" Cowdray "a large sum of money" against his "Mexican oil properties as an alternative to their transfer to the Standard Oil Trust [...]." W.H.L., "Proposals for Purchase of Messrs. Pearson & Sons' Mexican Oil Properties," 18 July 1917, G.T. 1448, CAB 24/20. Cowdray had already tried to interest the government in acquiring a controlling stake in Mexican Eagle in December 1913 in exchange for a £5,000,000 infusion, but London already "had a better bargain over Persian oil for less than half that sum and therefore declined." Corley, *History of Burmah*, 245. The pre-WWI history of the Mexican Eagle is covered in: Fursenko, *Battle for Oil*, 147-158; and Jones, *British Oil Industry*, 63-77. For more on Mexican Eagle's wartime operations and its eventual sale to Shell in 1919, see: Brown, *Oil and Revolution*, 144-153; and Jones, *British Oil Industry*, 190-192, and 217-218.

¹⁴⁴ Shell did not secure majority control of Mexican Eagle, but the deal did allow it to exercise control over the management of the company. Jonathan Brown, "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s," *American Historical Review* 99: 2 (1985): 370-371. For details on the deal itself, see: Brown, "Shifted Their Production," 365-367; Garner, *Lions and Eagles*, 221-229; and Hall, *Oil, Banks, and Politics*, 61-65. Hall also points to Cowdray's frustration over London's reluctance to defend British interests in Mexico during the revolution more vigorously for fear of antagonizing the United States. Brown concludes that Cowdray felt "vulnerable" (pg. 367).

¹⁴⁵ Brown, "Shifted Their Production," 371; and Hall, *Oil, Banks, and Politics*, 15.

¹⁴⁶ Stephen Haber, Noel Maurer, and Armando Razo, "When the Law Does Not Matter: The Rise and Decline of the Mexican Oil Industry," *Journal of Economic History* 63: 1 (2003): 9-16; and Jonker and Zanden, *History of Shell*, 226, 259-261, and 453. It seems gratuitous to claim, as do Shell's official historians, that the Mexican oil industry had "declined to relative insignificance" by the mid-1930s. Jonker and Zanden, *History of Shell*, 261. Mexico was still the world's seventh-largest producer in 1937, when output was just short of 7,000,000 tons, which was 2,500,000 tons greater than Iraq, roughly equal to both the Dutch East Indies and Romania, and only 3,000,000 tons

just one of Shell's major investments in the Western Hemisphere. Already the leading producer in Venezuela and a major player within the United States, Shell had much to lose if it became an enemy in the eyes of the U.S. Government by virtue of any close association with the British Government.¹⁴⁷ The fact that Shell and London proved unable to reach an agreement concerning a British tax exemption for Shell's Dutch shareholders eliminated any remaining incentive for the company to go through with the Harcourt-Deterding Agreement. This was certainly a setback from London's perspective, but it was only facet of Britain's postwar oil policy, which ultimately revolved around the British presence within the nascent Middle Eastern oil industry. Already in control of the region's only oil-producing nation, Iran, London did not allow the failure of the Harcourt-Deterding Agreement to sidetrack it from securing control over the other great prize in the region, Iraq.

behind Iran. J.J. Llewellyn (Civil Lord of the Admiralty; Chairman of the Oil Board), *et al.*, "Oil Board: Thirteenth Annual Report," 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7.

¹⁴⁷ Jones, *British Oil Industry*, 217-221; and Jonker and Zanden, *History of Shell*, 251, 256.

Taking Control of Iraq: Oil and Anglo-French Relations, 1918-1920

One of the most important challenges confronting the British Government following the First World War was stabilizing its hold over Iraq. Elements within the British Government, most notably the Admiralty, had been pushing for British control of the reputed oil riches of Mesopotamia even before the World War had ended. Of course, Britain was not the only great power that coveted Mesopotamian oil. Germany, though the Deutsche Bank, had been a major player in the events leading up to the formation of the TPC between 1912 and 1914, and the German military even dispatched an oil expedition to Mesopotamia that produced limited amounts of oil using primitive drilling methods as early as 1917.¹⁴⁸ German interest in Mesopotamian oil was certainly a matter of concern for some in Whitehall, who used it as a cudgel to prod civilian leaders into supporting a more energetic policy during the war.¹⁴⁹

In 1915, the de Bunsen Committee considering Britain's war aims vis-à-vis the Ottoman Empire had shrunk from calling for its dismemberment between the European Powers and Britain's annexation of the vilayets (provinces) of Mosul, Baghdad, and Basra, even though the defense of Britain's oil interests in Iran and the possible deposits in Mesopotamia "makes it commercially desirable for us to carry on to Mosul," where "there are valuable wells possession of which by another power would be prejudicial to our interests." The committee ruled out annexation, however, not the least because of its excessive costs, both in terms of the resources needed to compel the Ottomans to accept such terms, and for the British to protect that what they had acquired thereafter. Nevertheless, Britain had to retain its "strategic position in the Eastern Mediterranean and in the Persian Gulf," while safeguarding its existing commercial

¹⁴⁸ Kontinentale Öl Aktiengesellschaft, Mineralöl-Archiv, "Wer erschloß Mossul-Öl? (Aus den Akten des Brennstoffkommandos Arabien)," no date (handwritten notation indicates 05 May 1941), NARA, Record Group 242: Foreign Records Seized (hereafter cited as: RG 242), Microfilm Publication T-580, Reel 907, Box 8, Ordner 56; and "Der Deutsche Anteil an der Erschließung des Iraköls," no date or author, enclosed with: Wi VI d, Aktennotiz, "Betr.: irakisches Erdöl," 27 May 1941, NARA, RG 242, Microfilm Publication T-77, Reel 1399, Item No. Wi/IIA 5.1-2.

¹⁴⁹ One Admiralty memorandum of August 1918 pointed out that German engineers had been active in Mesopotamia and argued that the Germans considered only the Suez Canal to be of greater value in the Middle East than the oilfields of Mesopotamia. "Memorandum on the reported oil fields of Mesopotamia and part of Persia," 02 August 1918, G.T. 5313, CAB 24/60. The provenance of the report is unclear but there is handwritten notation referring to a Col. Jones of the Admiralty, and the National Archives finding aid indicates that this was the originating agency. Mejer claims, on the basis of Hankey's letter to Balfour of 01 August 1918 (CAB 21/119), that the author was Slade. Left unexplained is how Hankey could have brought up the paper with Balfour one day before it was actually completed: *Imperial Quest for Oil*, 40 and 47 n. 54.

investments in the region, including “oil production.”¹⁵⁰ The government also informed APOC in 1915-16 that it considered the prewar arrangements concerning the TPC to be null and void and would not grant the company any preferential rights within the Ottoman Empire until it had time to consider the matter “at a later date when political conditions were altered and more settled.”¹⁵¹

The war ended with British troops occupying most of Ottoman Mesopotamia, and Britain’s position appeared unassailable: the need to placate allies such as Russia or preserving the Ottoman Empire on a decentralized basis (as the de Bunsen Committee had recommended) had vanished. The government also backtracked on its earlier position that the TPC’s claim to concession in Mesopotamia was invalid.¹⁵² But if Britain was to acquire the dearly earned spoils, the first step was securing international sanction for Britain’s postwar administration of Iraq. At the prompting of Long, Cadman produced a revised copy of Slade’s report at the end of 1918 for the benefit of Secretary Balfour and rest of the British delegation at the Paris Peace Conference. Cadman hoped that the report would encourage the British delegation to devote “special attention” to the matter of securing “British control over additional oil-bearing lands and to the confirmation and extension of concessions at present held by British subjects” (i.e. the TPC’s promise of concession from June 1914), so as to ensure “an uninterrupted supply of [oil] which has now become indispensable for the maintenance of our naval and mercantile supremacy.”¹⁵³

In fact, there were numerous challenges to British predominance. In view of the multitude of parties (British, Dutch, French, U.S., German, and even Turkish) clamoring for a share of Iraq’s possible oil

¹⁵⁰ Maurice de Bunsen (Chairman), *et al.* “British Desiderata in Turkey in Asia: Report, Proceedings, and Appendices,” 30 June 1915, CAB 27/1.

¹⁵¹ “Memorandum Prepared in the Foreign Office Library,” 20 February 1918, no author, POWE 33/41. The Foreign Office expanded this paper into a detailed summary of its correspondence concerning the competition over oil concessions in Mesopotamia between 1904, when the Anatolian Railway Company first secured a one-year window to search for oil in the vilayets (provinces) of Mosul and Baghdad, and 1916, when Greenway attempted to lay claim to all oil-bearing Ottoman territories that fell into British hands. Edward Parkes (Foreign Office), “Memorandum Respecting Oil Concessions in Mesopotamia,” 27 April 1918, 10967, enclosed with: Alwyn-Parker (Foreign Office) to the Petroleum Executive, 03 May 1918, POWE 33/41.

¹⁵² How exactly Britain could reconcile such a mercenary policy with its stated aim of ruling Mesopotamia “in the interests of the inhabitants” was tricky, since resurrecting the TPC “in our own interests” would “deprive the new State of a free hand in disposing of its most valuable assets.” Montague to Harcourt, 23 December 1918, CAB 21/119.

¹⁵³ Cadman, “Petroleum Position of the British Empire,” December 1918, enclosed with: Cadman to the Under Secretary State, Foreign Office, 06 January 1919, Secret 269, POWE 33/60.

wealth, guaranteeing British control over that country's oil industry would not be a straightforward matter. British exploitation of Middle Eastern oil depended upon French cooperation for a number of reasons. Although the most promising areas for oil development in Iraq (the former Ottoman vilayet of Mosul) lay within the British occupation zone, any oil produced there was worthless unless it had an outlet to overseas markets. The most practical route (and the one favored by the TPC – renamed the Iraq Petroleum Company, IPC, in June 1929) was a pipeline through what became the French League of Nations mandates of Syria and Lebanon. This route was considerably shorter and cheaper than the alternative route favored by the British Government through the future British mandates of Transjordan and Palestine.

The alternative of a pipeline down the Tigris River to Basra was never discussed, since it would have placed intolerable burdens on British and French tanker capacity and entailed additional expenses in the terms of Suez Canal tolls. These tolls were already a major burden on the operations of APOC, and the British Government hoped that any agreement with the French for a TPC/IPC pipeline would also include provisions for an APOC pipeline from Persia to the Mediterranean, which would allow the company to save money on transportation costs and canal tolls, while further strengthening its relative position vis-à-vis Shell. French diplomatic support was also essential in fending off U.S. and Turkish encroachments.

Between 1916 and 1920, Britain and France signed three agreements concerning the future development of oil in Iraq and other areas of interest (Romania, Russia, and Galicia), which divided the spoils from the Central Powers: the Long-Bérenger Agreement of April 1919, the Greenwood-Bérenger Agreement of December 1919, and the Cadman-Berthelot Agreement of April 1920 (also known as the San Remo Agreement). Under the agreements, the London promised Paris that France would receive a portion (first 20%, then 25%) of the shares of the TPC or any successor, which both governments agreed held a legal right to a concession by virtue of its 1914 agreement with the Ottoman Empire. The Cadman-Berthelot Agreement dropped any mention of the TPC and left open the question of whether a state-run or private company would receive the concession. In the case of the former, France would receive one-quarter of the oil produced, and in the case of the latter, one-quarter of the shares. Both of the agreements

stipulated that any company that received the Iraq concession would remain “under permanent British control.” In exchange, France would consent to the construction of pipelines carrying both Iraqi and Persian crude through its mandates in Syria and Lebanon. Both sides also agreed to abide by the principle of reciprocity when it came to oil development within their respective mandates.¹⁵⁴ Each of the agreements also extended to the future Government of Iraq and its nationals the option of acquiring up to 20% of shares in whatever company worked the concession, but this inconvenience was unceremoniously jettisoned in order to make room for the U.S. oil companies after 1922.¹⁵⁵

The Long-Bérenger Agreement was initialed while the Harcourt-Deterding Agreement was still in play, and it is imperative to understand that the two agreements were related. As Hamar Greenwood (Long’s successor as Petroleum Minister) explained to the Cabinet, the costs of securing French support for British ambitions in Iraq were negligible – no more than a 20% share of oil production, “in return for which we should obtain the immense benefit of cheap transport for two great producing companies which will remain under permanent British control.” Ratification of the two agreements would also lessen Britain’s “undesirable” reliance upon U.S. oil exports while promoting closer ties with the French, who were “as determined as ourselves to reduce their dependence on foreign-controlled supplies of oil.”

¹⁵⁴ “Memorandum of Agreement between Sénateur Henry Bérenger, Commissioner-General of Petroleum Products in France, representing the Government of the French Republic, and the Right Honourable Walter H. Long, M.P., His Majesty’s Minister in Charge of Petroleum Affairs, 08 April 1919, *PIPC*, ii: 25-26; “Memorandum of Agreement between Lieutenant-Colonel Sir Hamar Greenwood, Bart., M.P., His Majesty’s Minister in Charge of Petroleum Affairs, and Senator Henry Bérenger, Commissioner-General of Petroleum Products in France, representing the Government of the French Republic,” 21 December 1919, *POWE* 33/89; and “Memorandum of Agreement between M. Phillipe Berthelot, Directeur des Affaires politiques et commerciales au Ministère Étrangères, and Professor Sir John Cadman, K.C.M.G., Director in Charge of His Majesty’s Petroleum Department,” 24 April 1920, CAB 24/108. The agreements are reprinted as Appendix IV to: Kent, *Oil and Empire*, 172-178. For a contemporaneous summary, see: *PIPC*, ii: 3-10.

¹⁵⁵ For extended discussion of the agreements, see: Kent, *Oil and Empire*, 137-157; and Edward Peter Fitzgerald, “France’s Middle Eastern Ambitions, the Sykes-Picot Negotiations, and the Oil Fields of Mosul, 1915-1918,” *Journal of Modern History* 66: 4 (1994): 697-725. Fitzgerald’s article is particularly valuable, because he debunks the hoary myth that the Sykes-Picot Agreement ceded Mosul to the French sphere of influence, and that Clemenceau relinquished this gain to Lloyd George in 1918. In truth, the French had only received the northern portion of Mosul, while the most promising territories lay within the British sphere. Furthermore, Sykes-Picot would have guaranteed the prewar rights of the TPC to prospect throughout Mosul. Finally, the French lacked the technical capacity to develop Iraqi oil on their own, and they stood to gain more through cooperation with the British, not just in Iraq, but also in Romania. See also: Melby, *Oil and the International System*, 26-37.

Greenwood warned his colleagues that the French were “inexperienced in petroleum matters, and if they do not link up with us are certain to turn to the United States for assistance.”¹⁵⁶

From his new perch at the Admiralty, Long kept up the pressure in favor of ratifying the agreement he had negotiated with the French, even after the Cabinet withdrew its support for the Long-Bérenger Agreement in August 1919. Long condescended to his colleagues that they had not appreciated the agreement’s “scope and importance.”¹⁵⁷ Casting aside concerns about an agreement with France, Long claimed that Britain had no option but to cooperate. Not only was Britain already “committed to the French Government,” but it was irresponsible for the government to continue dithering “in face of the great overwhelming fact that oil is becoming every day more vital to our national life [...]” Long admonished his colleagues not to forsake their good fortune, for “if we lose the opportunities which have grown out of the war, we shall never be able to regain our position, and shall undoubtedly suffer once again from a shortness of supplies which will greatly hamper our national action.”¹⁵⁸

The following March, Long reminded the Cabinet that soaring U.S. domestic consumption would cut into the amount of oil available for export – hence his support for an agreement with Shell, which would diversify Britain’s sources of supply. Long worried that a failure to achieve an agreement with either the French or Shell would afford U.S. oil companies the opportunity to “make an alliance with the Shell group, or the latter may even come to some close working arrangement with the French Government,” which would further dilute the company’s already tenuous ties to Britain. This would leave Britain with Iraq and Persia as its only reliably British sources of oil, only one which was actually proven (TPC engineers did not strike oil in commercial quantities within Iraq until October 1927). This situation was intolerable from Long’s perspective: “[All] our Forces may easily be rendered immobile if we are dependent upon the United States of America for our supplies. [...] I cannot exaggerate the extent of the

¹⁵⁶ Greenwood, “Memorandum for the Cabinet: French Agreement: Export of Oil from South Russia,” 06 December 1919, C.P. 259, CAB 24/94.

¹⁵⁷ Long, “Memorandum for the Cabinet,” 11 November 1919, C.P. 115, CAB 24/93.

¹⁵⁸ Long, “Memorandum for the Cabinet by the First Lord of the Admiralty,” 04 November 1919, C.P. 59, CAB 24/92. Long’s memorandum also includes a detailed timeline of events surrounding the initialing of both the Long-Bérenger and Harcourt-Deterding agreements in 1918-1919.

disaster which must ensue if we fail to take advantage of this unique opportunity to secure the assistance of the great existing sources of supply [Shell], and instead deliberately provoke their hostility and drive them into alliances with foreign interests.”¹⁵⁹ R.S. Horne, President of the BOT, agreed with Long, remarking that Britain had to cede to Shell a portion of the Deutsche Bank’s former shares in the TPC. He had “little doubt” that allowing the Harcourt-Deterding agreement to lapse “may drive them [Shell] into a definite antagonism, and into the control of some other country.”¹⁶⁰

The British also worried that any failure to reach an accord with the French would drive Paris into the arms of Washington. As one PIPC summary explained, “[The] French Government was actually negotiating not only with His Majesty’s Government, but with the United States Government. [...] It was represented that the British Empire was at present, and must for some years continue to be, very largely dependent on the United States for its oil supplies, and it was felt that the prospect of the United States of America obtaining control, with or without French support of European and Mid-East oilfields could not be regarded with equanimity.”¹⁶¹ As the Foreign Office indelicately observed, British policy was designed explicitly “to buy away the French Government from the Standard Oil Company” while leveraging a majority stake in the TPC for British control of Shell (the Harcourt-Deterding Agreement). Handing over a minority stake in the TPC to France was “really a bargain to ensure His Majesty’s Government being in a position to obtain control of the Shell Combine.”¹⁶²

The British and the French finally came together in April 1920 to sign the San Remo Agreement. Although welcome, this accord could not, in and of itself, do much to address Britain’s immediate shortfall of oil, since Iraqi oil production would not become available until after the completion of a pipeline. In the summer of 1920, Long outlined the situation confronting the Admiralty. He estimated that the Royal Navy’s fuel requirements in 1920 would reach 1,113,000 tons, with 400,000 tons (rising

¹⁵⁹ Long, “Oil Supplies: Memorandum to the Cabinet by the First Lord of the Admiralty,” 18 March 1920, C.P. 903, CAB 24/101.

¹⁶⁰ Horne, “Mesopotamian Oilfields: Memorandum by the President of the Board of Trade,” 16 April 1920, C.P. 1085, CAB 24/103.

¹⁶¹ *PIPC*, ii: 3-4, 6-8.

¹⁶² “Note by Foreign Office,” I.D.C.E 1022 c. iv, no date (circa December 1919/January 1920, following the signing of the Greenwood-Bérenger Agreement of December 1919), T 161/738.

eventually to 500,000 tons) coming from Persia, 200,000 tons from Mexico, and a further 150,000 tons from Trinidad. This figure left still left the Royal Navy with a shortfall of approximately 150,000 tons, but “the Admiralty is experiencing considerable difficulty in securing supplies of Admiralty quality fuel oil to meet the balance of expenditure and to complete reserve,” which would rise from 1,500,000 tons to 4,500,000 tons over the next ten years. Long contended the present “distinct shortage” could “only be overcome the intensive development of existing oilfields and the exploiting of new oilfields,” and he argued that it was “essential that the development of potential oilfields within the sphere of British influence or under British control, such as that in Mesopotamia, should be pushed forward with all possible speed.”¹⁶³ Whereas efforts in Mesopotamia were still in their “infancy,” as Long observed the following December, Persia was already an indispensable supplier thanks to the low cost of its oil and its location, which spared the Admiralty the cost of accumulating larger stocks in Singapore. Long estimated that replacing the Admiralty’s current supply from Persia from other sources would cost “six to seven times” as much, which he implied more than outweighed the additional costs entailed by providing physical protection for the oilfields against either rebellious tribes or the Soviet Union.¹⁶⁴

Long also pushed for the construction of pipelines from Persia to the Mediterranean, since oil from British-controlled sources such as Persia was a major boon for Britain’s balance of payments, which had worsened during the war and left the country in a position of “heavy indebtedness to the United States of America which will not be liquidated for very many years [...]” Although he surmised that the Persian fields might “prove as large as those of the United States,” Britain would not be able to make full use of them unless London secured passage for Persian oil through the French mandates in the Near East. Even worse, U.S. interests might yet capitalize on Anglo-French differences to gain a foothold in the French

¹⁶³ Long, “The Anglo French Petroleum Agreement and Mesopotamia: Memorandum for the Cabinet by the First Lord of the Admiralty,” 29 June 1920, C.P. 1554, CAB 24/108.

¹⁶⁴ W.H.L., “South Persian Oilfields: Admiralty Memorandum for the Cabinet,” 24 December 1920, C.P. 2377, CAB 24/117.

mandates, which would prevent Britain from enjoying “the full advantages of our hold of the Persian oilfields” as the U.S. oil companies would block Persian oil’s access to the Mediterranean.¹⁶⁵

¹⁶⁵ W.H.L., “Anglo-French Petroleum Agreement,” 09 January [1921], POWE 33/176.

Problems in Persia, 1919-1920: The Armitage-Smith Agreement

In a lecture before the Royal Naval College in 1921, Slade observed that Britain's energy future lay to the east, in Persia and Mesopotamia. The development of this region was "a matter of supreme importance to the British Empire," in view of Britain's dependence upon imports from the United States and that country's potential unreliability, for "if she was not friendly to us, it would be quite possible for her to place such conditions on the supply of this commodity which is of such vital importance to us, as would seriously affect our conduct of war."¹⁶⁶ All the more reason, he argued, to focus Britain's energies in Persia and Iraq, which were only viable options that "may in future redress the balance in our favour." Slade condemned his government's inadequate defense of British interests in Persia, where "our Enemies are permitted to have a free hand and the United States, under the cloak of the Standard Oil Company, is intriguing to get the Persian Government to repudiate its Concessions."¹⁶⁷

A visit to Persia in April 1922 confirmed Slade's worst suspicions. Production there had exploded between 1911/12 and 1921/23 from 43,000 tons to 2,327,221 tons, while annual royalties to Tehran stood just under £600,000 (or £3,000,000 cumulatively).¹⁶⁸ Slade observed that whereas the fractured political opposition to Britain in that country "until a short time ago, was more or less ineffective... now, thanks apparently to American efforts, there is more cohesion among these hostile factions" with "dangerous" consequences for APOC. Slade was convinced that the Americans, both the U.S. Government and Standard Oil, were behind "a most carefully organized and systematic campaign of misrepresentation" to convince the Persians that APOC was dragging its heels with regard to the development of its 1901

¹⁶⁶ Five years later, Slade reiterated the point rather more bluntly: Washington could "with a stroke of a pen, deprive us of 50% of our supplies of Petroleum." It made no difference whether it did this to express disapproval of British policy or to conserve its domestic reserves: "the result would be the same." "Strategic Aspect of Oil Supplies in War," no date (circa 1926, for Slade makes direct reference to his 1921 speech and his 1925 presentation before the Royal United Service Institution), BP 68940.

¹⁶⁷ "The Strategic Aspect of Fuel Supplies: A Lecture delivered by *Admiral Sir E.J.W. Slade*, at the Royal Naval College, Greenwich, on 14th November, 1921," BP 69942. For a similar perspective that offered an optimistic appraisal of Venezuela, as well, see: Lt. Cmdr. G.J.A. Miles (Royal Naval Staff College), "The Supply of Oil Fuel for Fleets and Squadrons Abroad in the Future," 14 April 1920, ADM 203/48.

¹⁶⁸ Ferrier, *History of BP*, 271 and 370. Note that before 1929, APOC collected statistics on production and royalties for the financial year ending on 31 March. Thereafter, statistics covered the calendar year.

concession, and that they should “cancel certain parts of the Concession on the ground of Non-development and... offer these parts to the Americans.”¹⁶⁹

Slade was right that Britain’s position in Persia was insecure, even if he was wrong about the reasons. Persia was in political and economic disarray at war’s end, after having been occupied by both the Allies (Russia and Britain) and the Ottomans. Since 1905, Britain and APOC dominated South Persia through treaties with the local Bakhtiari tribes (who received 3% of APOC’s profits) and Sheik Khaz’al of Khuzestan (which included Abadan). After 1918, Britain saw its chance to solidify its control over the rest of the country. Although the British Government was reluctant to give its full support to APOC’s boundless claims to concessions throughout the Persian Gulf and Ottoman Empire, the Foreign Office agreed that the safety and extension of APOC’s Persian concession “must form one of the main points in our future policy in Persia [...]”¹⁷⁰ The Russians had already consented in 1915 to British control of the “neutral zone” between their respective spheres of influence under the 1907 Anglo-Russian Convention, which is where APOC first discovered oil in 1908.¹⁷¹

The elimination of Czarist Russia after 1917 left Britain free to make Persia a protectorate through the Anglo-Persian Agreement of 1919 and complete the imperialist vision of creating a string of dependences and colonies linking Britain’s formal and informal empire from Africa, through the Middle East, to India and the Far East. This agreement, which presaged the one forced upon Iraq in 1930 prior to the expiration of the League of Nations mandate, would have placed British civilian and military advisers throughout the Persian Government and Army. In exchange, the British agreed to modernize the Persian Army, improve the country’s communications and transportation infrastructure, and (through a separate agreement) grant

¹⁶⁹ Like Cadman, Slade was beginning to doubt the wisdom of APOC’s business relationship with the British Government, which led the Persians to believe “that the Anglo-Persian Oil Company is only the British Government under another form,” which “is already doing the Company a great deal of harm.” “Memorandum by Sir Edmond Slade on his Visit to Persia, 1922,” 23 May 1922, BP 72017.

¹⁷⁰ APOC wanted London’s support in compelling Tehran to accept an extension of the D’Arcy concession to 1986 (i.e. by 35 years). H.G.N., “Draft Note for Persia Committee,” 14 February 1918, enclosed with the Under Secretary of Foreign Affairs (Cecil) to the Petroleum Executive, 26 February 1918, POWE 33/41. The Petroleum Executive agreed: J.C. Clarke (for Long) to the Under Secretary of State, Foreign Office, 02 March 1918, P.E. 0126, POWE 33/41.

¹⁷¹ Much to the consternation of Marcus Samuel, who questioned the wisdom of drawing naval oil supplies from an area susceptible to Russian interference. Samuel to Hopwood, 29 May 1914, CAB 37/120.

a £2,000,000 loan. (None of this would be free: Britain would debit Persia for all of its expenses in implementing the agreement, including £131,000 to bribe the prime minister and two other ministers into signing the agreement. The loan itself would be secured against customs revenue and “other sources of income at the disposal of the Persian Government,” such as its oil revenues.) The Persian Government reluctantly accepted the treaty in August 1919, but before it could go into effect, it needed to be ratified by parliament (the Majlis), which had been dissolved in 1915. New elections would have to take place, but widespread anti-British sentiment throughout Persia ensured that ratification was impossible. In any event, the Persians refused even to consider the agreement until British troops withdrew. To add insult to injury, Tehran started negotiations for a treaty of friendship with Soviet Russia. The new Bolshevik regime had denounced the 1907 Anglo-Russian Convention dividing Persian into two spheres of influence in 1918. The following year, Moscow even expressed a willingness to recompense Tehran for wartime damage caused by Russian troops. A few days before the signing of the friendship treaty with Russia in February 1921, however, Cossack troops under the command of Reza Pahlavi overthrew the government, possibly with British support.¹⁷² If the British did support the coup, it turned out to be a spectacularly bad investment, for Reza Pahlavi was anything but London’s puppet. The new strongman in Tehran had no interest in resurrecting the moribund Anglo-Persian Agreement and chose to sign the treaty his predecessors had negotiated with Moscow.¹⁷³

Under these circumstances, APOC would have been the object of vilification no matter what it did, but the company’s actions during and immediately following the war did much to justify Persian suspicion. In retaliation for the sabotage of its pipelines in 1915 by revolting tribesmen supported by German operatives, the company billed Tehran almost £615,000, two-thirds for damages and the remainder for lost production. APOC claimed that the national government was responsible for the safety

¹⁷² Slade was enamored with Reza Khan: “At the same time he is in need of money and it may be possible to buy him.” “Memorandum by Sir Edmond Slade on his Visit to Persia, 1922,” 23 May 1922, BP 72017. Whether or not the British supported the coup, they certainly did nothing to stop it.

¹⁷³ Bamberg, *History of BP*, 27-32; Elm, *Oil, Power, and Principle*, 23-28; Ferrier, *History of BP*, 350-352; Gavin Hambly, “The Pahlavi Autocracy: Riza Shah, 1921-1941,” in: *Cambridge History of Iran*, ed. Avery, Hambly, and Melville, 213-243; and Nikki Keddi, “Iran Under the Later Qajars, 1848-1922,” in: *Cambridge History of Iran*, ed. Avery, Hambly, and Melville, 207-212.

of the company's operations on Persian soil, and until it received payment, the company declined to pay any royalties to Tehran between 1916 and 1917 (amounting to £44,347). The Persians disputed these charges and hired an external auditor (William McLintock) to audit the company's claims, which turned out to be largely fictitious. Actual damages amounted to only £20,000. McLintock also uncovered a host of financial irregularities, many of which appear to have been designed to get around APOC's contractual obligation to pay Tehran royalties equivalent to 16% of its profits in Persia. APOC quickly abandoned its claims for damages, resumed royalty payments, and paid Tehran a £1,000,000 settlement. To avoid a repetition, in 1920, the company used the services of the British expert appointed to manage Persia's finances under the yet to be ratified Anglo-Persian agreement (Sydney Armitage-Smith) to modify the existing concession.

The Armitage-Smith Agreement of 22 December 1920 rewrote APOC's prior obligation to pay 16% of its profits to Persia. Henceforth, only those operations that took place within Persia would pay the 16% royalty. APOC's operations beyond Persia would pay royalties only on those profits "defined and calculated" by APOC as stemming from its operations in Persia.¹⁷⁴ This revision empowered the company to set the level of compensation it paid Tehran. It also allowed APOC to create a wall between its operations within and beyond Iran. Even if the latter had been established using the proceeds from operations in the former, the Iranians would not be entitled to a share unless the company agreed. No doubt the British had extracted favorable terms from a helpless government, but such ungenerous and shortsighted acts would have major repercussions for British energy security in the years to come.

Britain could not afford to be indifferent to events in Persia, which London expected would soon become the Royal Navy's primary supplier of oil. As the Royal Navy grappled with the problem of supplying its ships with oil after the war, the major problem was not a lack of supply, so much as having

¹⁷⁴ Compare Elm, *Oil, Power, and Principle*, 19-22, with Ferrier, *History of BP*, 358-371. Ferrier, although he does not question McLintock's findings, claims that the irregularities discovered by the latter "deal with certain aspects of accounting principles over which there was no explicit professional guidance and on which discretion was exercised according to individual judgment in accordance with professional integrity" (pg. 367). The agreement is reprinted in: Ferrier, *History of BP*, 653-658.

enough oil where it was most needed.¹⁷⁵ In January 1919, the Admiralty briefed the Cabinet on Britain's immediate outlook on oil supplies: "The Navy is now dependent upon the goodwill of the United States of America for its vital supplies of oil fuel and this dependence must continue unless and until alternative supplies can be developed." The only avenues available to break this dependence were synthetic production or the development of the Persian and Mesopotamian oilfields. Although the Middle East offered the potential of large quantities of oil, as early as 1919, the Admiralty was concerned about the vulnerability of Britain's supply lines to the region: "Supplies have to come by a long and difficult sea route and even if a pipe line is constructed to a Syrian port it will always be vulnerable and transport through the Mediterranean may be hazardous." Another problem was that neither Middle Eastern oil nor synthetic fuel was likely to be available in sufficient volume for some time. The Admiralty therefore advised the Cabinet to approve the construction of a large naval reserve in Britain equivalent to one year's wartime consumption (4,500,000 tons), which entailed expansion of existing storage capacity by an additional 2,750,000 tons at a cost of roughly £1 per ton.¹⁷⁶

First Sea Lord Wemyss added in a supplementary evaluation two days later that neither Romania nor Russia was likely to provide more than "350,000 tons of oil fuel, on a very sanguine estimate" in the near future. Supplies from neither country would be reliable in wartime, especially in the event of the closure of the Turkish Straits. "We must therefore continue for a long time to come to look to the United States, Mexico, and Persia for the bulk of our supplies," although Wemyss hoped that Persia would triple its existing output of 700,000 tons shortly.¹⁷⁷ To keep the merchant marine from drawing on naval reserves

¹⁷⁵ The key developments and documents between 1919 and January 1924 are summarized in: M.P.A. Hankey, "Reserve of Oil Fuel for the Navy: Note by the Secretary [of the CID]," 02 February 1924, 479-B, CAB 4/10.

¹⁷⁶ R.E. Wemyss, "Oil Fuel Reserve for Navy in Home Waters: Admiralty Memorandum for the War Cabinet," 03 January 1919, G.T. 6594, CAB 24/72; and W.H.L., "Oil Fuel Reserve for Navy in Home Waters," 08 January 1919, G.T. 6634, CAB 24/73.

¹⁷⁷ Wemyss, "Oil Fuel Reserve: Petroleum Production in Russia: Memorandum for the War Cabinet by the First Sea Lord," 05 January 1919, G.T. 6703. CAB 24/74.

in the event of war, the Admiralty and the Petroleum Executive also advised the government to create an additional stockpile of 1,500,000 tons of fuel oil for civilian purposes.¹⁷⁸

¹⁷⁸ W.H.L. and H.G. (Greenwood), "Oil Fuel Reserve for British Oil-Burning Merchant Ships: Memorandum Prepared by the Admiralty and the Petroleum Executive for the Cabinet," 05 February 1920, C.P. 601, BNA, CAB 24/98.

Oil and Anglo-American Relations, 1918-1921

Until Middle Eastern oil production became available in large, secure quantities, Britain had no option but to continue relying upon imports from the United States. Unfortunately, Anglo-American relations in the immediate postwar era were strained, not least because of U.S. fears over the country's long-term energy security, and which had encouraged U.S. oil companies (backed by Washington) to seek control of overseas oil reserves in Latin America and the Middle East in competition with Shell and APOC.¹⁷⁹ British officials believed that Britain was the target of an unsubstantiated campaign of slander within the United States for monopolizing the world's reserves of oil. In response to a dispatch from the British Ambassador to the United States, Auckland Geddes (brother of the former First Lord of the Admiralty, Eric Geddes), concerning U.S. criticism of British oil policy and the publication by the Senate of a State Department report listing British restrictions on the overseas operations of U.S. oil companies, the Petroleum Department fired back with a blistering rebuttal of the concerns raised in Geddes' message. "The overwhelming disparity between the quantities of oil at present controlled by Great Britain and the United States," in the opinion of the minister responsible, Kellaway, "provides the most cogent argument in reply to the American complaints and allegations on this subject." Between its own domestic production and that of Mexico controlled by U.S. companies, the United States accounted for 80% of the world's oil production, as compared to 5% by Britain, only 3% of which actually came from within the empire. The Petroleum Department also dismissed concerns regarding the imminent depletion of U.S. domestic oil reserves and concluded that allegations that "Great Britain is monopolizing the undeveloped oilfields of the world are absurd."¹⁸⁰

Ambassador Geddes was perturbed by the anti-British sentiment he encountered in the United States on the oil question. Matters had come to a boil in May 1920 over the San Remo Oil Agreement. The State

¹⁷⁹ For the U.S. response to fears of domestic oil depletion and British monopolization of world oil reserves, see: John DeNovo, "The Movement for an Aggressive American Oil Policy Abroad, 1918-1920," *American Historical Review* 61: 4 (1956): 854-876.

¹⁸⁰ Petroleum Department to the Under Secretary of State, Foreign Office, 01 July 1920, S.381, CO 323/845/45. The dispatch from Geddes (dated 12 June 1920) was not included within this folder. The State Department report in question to the U.S. Senate is: *Restrictions on American Petroleum Prospectors in Certain Foreign Countries*, 17 May 1920, 66th Congress, 2nd Session, Document No. 272 (Washington, DC: U.S. GPO, 1920).

Department complained to the Foreign Office that the Anglo-French agreement represented an effort to monopolize oil production within the former Ottoman Empire through the TPC under the auspices of the League of Nations. Although the United States had neither declared war on the Ottoman Empire nor joined the League, the State Department claimed that U.S. nationals and firms were entitled to “equal treatment” in commercial matters within the mandates. Besides claiming that the TPC had a valid prewar concession (which had been retroactively affirmed by the Treaty of Sèvres in 1920), Foreign Secretary Curzon chided the “nervousness of American opinion concerning the alleged grasping activities of British oil interests” as “singularly unintelligible,” since U.S. oil companies controlled 82% of world oil production (mostly in the United States and three-quarters of Mexican output), whereas Britain, including Persia, only accounted for 4.5%. The United States, “notwithstanding their assured supremacy,” had passed legislation granting preferential status to U.S. firms on public lands (in the Philippines) and “used their influence” within the U.S. sphere of influence to annul “oil concessions previously and legitimately obtained by British persons or companies.”¹⁸¹

Geddes’ initial attempt to deflect criticism of British foreign oil policy backfired. During a speech in New York in May 1920, Geddes asked his audience how anyone could claim Britain was trying to establish an oil monopoly when the British Empire and Persia accounted only for 5% of world production, whereas the United States “have 82 per cent of the present world supply of oil [including Mexico] under your control.” This statement was, according to Arthur Millspaugh (the Foreign Trade Adviser to the U.S. Secretary of State), based on a disingenuous reading of statistics. Although the United States and Mexico did, in fact, account for 81% of global production, they accounted for less than 20% of world reserves, while U.S. nationals controlled less than two percent of world reserves beyond North America. The British and Dutch were in a much more favorable long-term position since “[the] oil regions under the control of the British are not fully developed regions,” whereas those in U.S. hands “are developed and in [the] process of exhaustion,” perhaps within twenty years. Therefore, the British and

¹⁸¹ The exchange of May 1920 to February 1921 is reprinted in: *Correspondence Between His Majesty’s Government and the United States Ambassador Respecting Economic Rights in Mandated Territories*, Cmd. 1226, Miscellaneous No. 10 (London: HMSO, 1921), T 172/1268. See also: DeNovo, *American Interests*, 176-184.

Dutch could end up controlling as much as 75% of world reserves, while Americans only held 7%. As far as Millspaugh was concerned, there was ample circumstantial evidence of a concerted British policy to monopolize the world's remaining oil reserves.¹⁸²

As Geddes explained to Curzon, U.S. complaints were symptomatic of a wider unease about the country's future oil supplies. The United States had enjoyed the luxury of being "self-supporting in the matter of oil, but the years of war have witnessed a profound change in her situation." The extraordinary demands imposed by the war had been exacerbated in peacetime by the higher civilian consumption. Fears of the depletion of domestic reserves within the coming decades had become of the "basis of intense propaganda," thanks to the efforts of Standard Oil and impolitic remarks by various British businessmen.¹⁸³ Geddes was probably referring to a speech (reprinted in the *Times*) by the banker Edward Mackay Edgar, who at chortled over how "Americans have misused their oil just as they have misused every other form of natural wealth," while the British had been busy "getting a firmer and ever firmer grip on the world's reserves of oil." Flush with oil, Britain could sit back and wait for the oil-starved United States to fork over tremendous sums (perhaps as much as \$1,000,000,000 a year) to pay for its imports. Such financial transfers would repair Britain's balance of payments and give the Empire a new lease on life.¹⁸⁴ Exacerbated by such comments, Geddes warned of a current of opinion in the United States "that within a relatively short period "the country would "be absolutely dependent on foreign countries, and especially on the British Empire... for supplies of oil, and consequently for her existence as a powerful

¹⁸² Office of the Foreign Trade Adviser (Millspaugh), "The British Ambassador's Remarks on Oil in his Speech at New York," 28 May 1920, YUL, Frank L. Polk Papers, Series III, Box 32. Millspaugh based his paper on an AP article summarizing Geddes' speech ("Geddes Denies Oil Control is Sought," no date), which is also appended to his memorandum of 28 May 1920.

¹⁸³ Geddes to Curzon, 29 July 1920, A 5494/898/45, CO 323/832/16.

¹⁸⁴ Mackay's speech ended up being the subject of an alarmist report by the U.S. Consul General in Britain. Robert Skinner to the Secretary of State, "The British Quest for Petroleum," 19 April 1920, No. 9458, NARA, RG 59, 841.6363/43. Skinner took care to pass along additional inflammatory rhetoric from prominent Britons. In October 1921, A. Beeby Thompson (described by Skinner as "the greatest British oil specialist"), concluded a speech before the London Chamber of Commerce with the observation: "We have scoured the world for new sources of supply while American has rested content with her home resources. [...] America has skimmed the cream of her oil wealth at a period when prices were low, while we enter the world's market with our flush production when the value of oil is appreciated and prices are high." Skinner, "The Oil Resources of the British Empire," 18 October 1921, NARA, RG 59, 841.6363/178.

industrial and maritime nation.”¹⁸⁵ What concerned Geddes most was the possibility of the U.S.

Government might abandon its “national isolation” and adopt “an aggressive policy with regard to such a matter as crude oil supply.”¹⁸⁶

In February 1921, the Petroleum Department produced a report for the British Embassy in Washington DC to rebut future U.S. criticism. Britain was currently the world’s third-largest consumer of oil, behind only the United States and (under normal circumstances) Russia. British consumption of oil continued to increase following the First World War, now that 90% of the ships of the Royal Navy were now powered by oil, twice as many as before the war. Furthermore, of the 3,368,600 tons of oil imported into Britain in 1920, a mere 2% had come from British possessions, as opposed to 61% from the United States. Consequently, despite the fact that per capita consumption of oil in Britain was only one-twelfth that of the United States, the absolute figure was still relatively high and imposed tremendous burdens on the nation’s economic and national security. The Petroleum Department dismissed U.S. accusations that Britain maintained a “closed door” policy concerning oil development by foreign firms in the empire, for “no real parallel can fairly be drawn between the British Empire, with its small and scattered production, and a country like the United States,” whose vast domestic oil industry precluded foreigners from establishing anything more than a token presence. Furthermore, the Petroleum Department pointed out that U.S. interests still controlled 80% of Mexican production, while the remaining 20% was “largely

¹⁸⁵ One observer contrasted British and U.S. oil policy by explaining that the former was derived “from the naval idea that oil suppliers were essential for national defence,” whereas the latter stemmed “from the mercantile idea that oil supplies were essential for money-making.” Even if prognostications of impending depletion of domestic reserves were nothing more than “journalistic ‘stunts,’” U.S. firms would still need access to overseas reserves to supply their foreign markets.” Paymaster Lieutenant Commander E. Kennedy, “Oil Imperialism: The Struggle for Petroleum,” no date (sometime following the 1922 Genoa Conference), ADM 203/58.

¹⁸⁶ Geddes to Curzon, 29 July 1920, A 5494/898/45, CO 323/832/16. Geddes subsequently took it upon himself to challenge some of the more egregious charges leveled against, most notably statements made by Senator Henry Cabot Lodge (R-MA) in April 1921 on the basis of a letter he received from Secretary of the Interior Albert Fall, alleging, among other things, that the British Government maintained a financial stake in Shell. Geddes to the Secretary of State (Charles Evans Hughes), 20 April 1921, No. 292, NARA, RG 59, 841.6363/143. Hughes’ reply was rather conciliatory, and while he fully accepted Geddes’ disclaiming of any British Government stake in Shell, Hughes nonetheless stood by the substance of the State Department’s reports of 1920 and 1921 regarding the restrictions imposed on U.S. oil companies operating in British territories. Hughes to Geddes, 10 June 1921, NARA, RG 59, 841.6363/143. The 1921 report was published as: *Restrictions on American Petroleum Prospectors in Certain Foreign Countries*, 16 May 1921, 67th Congress, 1st Session, Document No. 11 (Washington, DC: U.S. GPO, 1921).

Dutch-controlled” (Shell).¹⁸⁷ Interestingly, in the concluding section of the confidential version of the report, the Petroleum Department complained U.S. criticisms were “so unfounded” that they had to be symptomatic of a wider “anti-British campaign in the United States,” or “[a] move in the struggle of American oil interests to get a share in the at-present unproved Mesopotamian fields,” to which the United States possessed “no valid claim”¹⁸⁸

Within the Petroleum Department, officials fulminated at U.S. accusations and fears of imminent oil depletion: “[In] spite of inspired jeremiads about speedy exhaustion of their fields, it [the United States] will be unassailable for many years to come.” In comparison to U.S. control of 64.5% of the global oil production and its consumption of approximately two-thirds of Mexico’s 23% share of world production, British monopolization of Trinidadian and Indian production, amounting to 1.3% of world production, “has a purely theoretical and artificial importance.” The United States’ avowed fealty to the “Open Door” was better characterized as a demand that “[the] door is to be open wide enough to let Americans in, even if others stay outside.” In the case of Mesopotamia, the sole objective of the United States according the Petroleum Department was to secure an equal share of oil production as France (25%), leaving the remaining 50% to Britain.¹⁸⁹

¹⁸⁷ The breakdown in the ownership of Mexican oil production fluctuated constantly. According to the U.S. State Department’s Economic Adviser in 1920, U.S. interests controlled 65% of Mexican production. Office of the Foreign Trade Adviser (Arthur Millspaugh), “The British Ambassador’s Remarks on Oil in his Speech at New York,” 28 May 1920, YUL, Polk Papers, Series III, Box 32. Although U.S. interests predominated in terms of output, according to figures collected by the Mexican Government in 1913, the difference between U.S. and British firms in terms of investment was much smaller: the former had invested approximately \$195,000,000 in the Mexican oil industry, with the latter close behind at \$150,000,000. W. Shaw (USGS), “Preliminary Report on the Petroleum in Mexico,” 21 June 1918, YUL, Inquiry Papers, Series III, Box 16. In 1918, U.S. firms accounted for 75% of all investment in the Mexican oil industry, but by 1937, this figure had shrunk to only 30%, while British firms (Mexican Eagle) accounted for 70%. Whereas U.S. firms controlled 77% of Mexico’s production and 80% of its reserves in 1927, thanks to Mexican Eagle’s discovery of the massive Poza Rica oilfield in 1930 and the continuing decline of existing oilfields, by 1936 British interests controlled 71% of Mexico’s production and 64% of its reserves. Lorenzo Meyer, *Mexico and the United States in the Oil Controversy, 1917-1942* (Austin: University of Texas Press, 1977), 3-19.

¹⁸⁸ The confidential and public versions of the report are virtually identical, except for their closing sections. All quotations are drawn from the confidential version: Petroleum Department, Memorandum on the Petroleum Situation, 10 February 1921, A 982/44/45, CO 832/865/32. The public version was published as: *Despatch to His Majesty’s Ambassador at Washington enclosing a Memorandum on the Petroleum Situation*, Miscellaneous No. 17 (1921), Cmd. 1351 (London: HMSO, 1921), T 172/268.

¹⁸⁹ J.C.C. (Clarke), Minute, 09 November 1921, POWE 33/93.

Oil and Postwar Naval Planning, 1921

Nothing epitomized the evolving power relationship between Britain and the United States better than the waning of the Royal Navy's predominance. After 1918, it was no longer possible for Britain to preserve its "two power" standard of maintaining a fleet equal to its next two rivals combined. This meant that the Royal Navy could no longer be dispersed between the European and Pacific theaters, since concentrating sufficient forces to deter threats in one theater would leave it vulnerable in the other. Under such circumstances, the Naval Staff argued in May 1921 that the "Mobility of the Fleet must therefore be the keystone of British naval strategy [...]." Britain could supply an effective naval force in the Atlantic but it not in the Pacific. Consequently, Britain's entire strategy against Japan in the short term rested on bluff. In the event of a "by no means improbable" war between Japan and the United States, even if it remained neutral, Britain would still have to send a force to the Pacific to defend its interests. Unless the Royal Navy deployed using its own oil, it would be hard for Britain to maintain the pretense of neutrality, thus "[increasing] the probability of our being drawn into hostilities against our wishes."¹⁹⁰

Hopefully Britain would be able to avoid such an indelicate situation by collecting sufficient naval fuel reserves. It was insufficient just have enough oil – the Royal Navy also needed to have enough supplies on-hand "within practicable transport distance of the bases at which it will be required." Under such circumstances, the Naval Staff believed that the existing 4,500,000 ton reserve was no longer sufficient – an additional 3,500,000 tons of naval reserves and 1,500,000 tons of commercial reserves would have to be gathered for use beyond the European theater of operations, primarily in the Far East, by 1930. Assuming that a war was unlikely over the next ten years, the Naval Staff estimated that, in the event of a war against the United States in 1930, one year's oil consumption would total approximately 5,112,000 tons, which would consume the entirety of Britain's naval reserves. In the case of Japan, the figure was only 3,430,000 tons, but this was misleading because the navy would have to rely entirely on

¹⁹⁰ Vice-Adm. Osmond de B. Brock (Vice Chief, Naval Staff), "Memorandum: Oil Fuel Reserves," 24 May 1921, 147-C, ADM 116/3102.

reserves within the Indian Ocean and the Pacific theaters, as Britain lacked the resources to transport sufficient quantities of reserves from Great Britain to the Pacific (a journey of roughly 10,000 miles).¹⁹¹

Even if Britain managed to accumulate 9,000,000 tons worth of reserves, the Naval Staff's planning for a war against the United States retained an air of fantasy. Assuming that Britain managed to subsist on the 4,500,000 tons of reserves in Home waters during the first year of hostilities, what exactly was it supposed to do thereafter? The empire was incapable of filling any gap, since its total production in 1921 (including Persia during the 1920-21 fiscal year) was only 3,617,264 tons or 1.7% of world output, including miniscule production in Canada (27,200 tons) and Trinidad (336,285 tons), neither of which would be available if the U.S. Navy was an opponent.¹⁹² Since Mexican oil would also be unavailable, the only possible suppliers of any consequence in 1921 were Persia, the East Indies, and the Soviet Union. The East Indies accounted for only 3.7% (122,500 tons) of Britain's imports in 1921 (3,310,587 tons). The Soviet share of British oil imports rose quickly following the signing of the Anglo-Soviet Trade Agreement of March 1921 to 5.6% in 1925 and reached its interwar peak at 11.7% in 1931.¹⁹³ As of 1920, however, only 0.7% (23,000 tons) of Britain's oil imports came from Russia.¹⁹⁴

Arthur Lee (Long's successor as First Lord of Admiralty) took the Naval Staff's case before the CID in June 1921 to make the case for maintaining large naval oil reserves in both Britain and the Far East. The relative decline of the Royal Navy vis-à-vis its primary rivals after 1918 (Japan and the United

¹⁹¹ Vice-Adm. Osmond de B. Brock (Vice Chief, Naval Staff), "Memorandum: Oil Fuel Reserves," 24 May 1921, 147-C, ADM 116/3102.

¹⁹² "British Empire Petroleum Production and Consumption," no date (handwritten notation of 10 May 1923), enclosed with: J.C. Clarke (Deputy Director, Petroleum Department) to Grindle (Colonial Office), 11 May 1923, P.D./23/1923, CO 323/903/24.

¹⁹³ Britain and the Soviet Union did not normalize diplomatic relations until February 1924. Although the British Government did not discourage the importation of Soviet oil into Britain by private firms, it refrained from purchasing any for itself. Aside from legal considerations (much of the oil being produced from foreign-owned properties that had been expropriated after 1917), the Soviets were willing to use oil exports as a political weapon. In 1926, Moscow had halted oil exports to Britain as a show of sympathy with the General Strike of 1926, and London had considered it "undesirable" that any government departments should ever depend upon oil imports from the Soviet Union. P.C.-L. (Philip Cunliffe-Lister), "Memorandum by the President of the Board of Trade: Purchases of Russian Oil," 22 November 1927, C.P. 289 (27), CAB 24/189.

¹⁹⁴ Appendix I to: CID, "Production of Oil from Coal: Report of a Sub-Committee," 29 November 1937, 272-A (also Paper No. O.C.C. 38), enclosed with: T.W.H.I. (Inskip) to the Cabinet, "Report on the Sub-Committee of the Committee of Imperial Defence on the Production of Oil from Coal: Note by the Minister for Co-ordination of Defence," 03 February 1938, C.P. 19 (38), CAB 24/274.

States), and the need to disperse the fleet across the world to handle a variety of tasks and potential threats, meant that British security depended upon preserving the mobility and striking power of the fleet.¹⁹⁵ Even assuming that the British Government established a 4,500,000 ton war reserve, little action had been taken to disperse them, such that “the fleet is practically immobilised so far as operations outside Home and Mediterranean waters are concerned.” The Royal Navy was incapable of projecting power globally, particularly in the Far East. In the event that Britain would have to fight either the United States or Japan, the success or failure of naval operations would depend upon there being adequate amounts of oil in storage along the way to or near the future area of operations. A logistical network that could sustain the Royal Navy around the world was indispensable to maintaining Britain’s credibility as a great power: “[It] is well within the bounds of possibility that a foreign Power would take advantage of our weakness in this respect, where a proper provision of fuel reserves would have caused him to adopt a more cautious attitude.”¹⁹⁶

Lee requested that fuel sufficient for one year’s worth of operations “be available within practicable transport distance of the bases from which the fleet may be required to act in the event of war,” and that the necessary infrastructure for sustaining the fleet en route to the Far East be constructed.¹⁹⁷ Whereas progress was being made toward creating a one-year supply of fuel for operations in and around Great Britain (4,500,000 tons), a further 3,500,000 would have to be deposited overseas, some of which might be provided by the dominions and India, since “on the mobility of the main fleet rests the guarantee for their safety.”¹⁹⁸ More than one-third of the oil (1,215,000 tons) would go to Singapore and Hong Kong, but sizable reserves would also be deposited in the Indian Ocean (730,000 tons), North America and

¹⁹⁵ For additional discussion of the tactical and operational ramifications for the Royal Navy, see: Wilkinson, “The Influence of Oil on Imperial Organization,” 109-114.

¹⁹⁶ L of F (Lord Lee of Fareham), “Reserves of Oil Fuel: Memorandum by the First Lord of the Admiralty,” 21 June 1921, 145-C (also E-35), ADM 116/3102.

¹⁹⁷ The Naval Staff estimated that 2,713,000 tons of oil would be “required for passage of a fleet to the East and for operations extending over a limited period.” Admiralty, “Naval Oil Fuel Reserves: Note by the Naval Staff,” 26 July 1921, 147-C, CAB 5/4.

¹⁹⁸ L of F (Lord Lee of Fareham), “Reserves of Oil Fuel: Memorandum by the First Lord of the Admiralty,” 21 June 1921, 145-C (also E-35), ADM 116/3102. The Naval Staff hoped that the dominions and India would contribute one-quarter (700,000 tons) of the oil needed for the journey to the Far East (2,713,000 tons). Admiralty, “Naval Oil Fuel Reserves: Note by the Naval Staff,” 26 July 1921, 147-C, CAB 5/4.

Caribbean (660,000 tons), Australasia (426,000 tons), and the Mediterranean (300,000 tons). Moreover, another 1,000,000 tons would have to set aside for civilian merchant ships, which equaled a total naval and civilian reserve of 9,000,000 tons, only 2,000,000 tons of which would have been accumulated by 31 March 1922.¹⁹⁹

The Naval Staff and Lee's studies went to the Standing Defence Sub-Committee of the CID. Although the sub-committee agreed with the policy put forward by the Admiralty, the costs were prohibitive: just stocking the route to Singapore would cost £2,000,000 for the first year out of seven, and "the adoption of this scheme by no means covers all the needs of the Navy in respect to fuel reserves," but rather constituted the bare "minimum in which the Naval Staff is prepared to acquiesce."²⁰⁰

British policymakers had spent the World War and its immediate aftermath reflecting upon its lessons for Britain's energy security. The experience of the war appeared to validate the precepts laid down by Churchill in 1913: Britain's energy security depended upon geographically dispersed supplies, promoting competition within the international oil industry, and drawing oil from British-controlled oilfields and companies. But the matter of energy security took an additional urgency due to Britain's unwelcome wartime dependence upon imports from the United States. No self-respecting great power could afford to place its national and economic security in the hands of another, while spiraling U.S. domestic oil consumption and potentially dwindling U.S. oil reserves did not augur well for the future. By 1918/19, the PIPC had laid out a two-pronged strategy that would realize Churchill's prewar vision. The first was securing majority-British ownership of Shell. The second was securing British control of and developing the only region capable of replacing the United States as Britain's primary supplier of oil: the Middle East. Although neither objective had been achieved by 1921, they would form the basis of a coherent and concerted effort by Britain to achieve energy independence from the United States thereafter.

¹⁹⁹ L of F (Lord Lee of Fareham), "Reserves of Oil Fuel: Memorandum by the First Lord of the Admiralty," 21 June 1921, 145-C (also E-35), ADM 116/3102. This paper was a copy of a Naval Staff report dated 07 June 1921 (also located in ADM 116/3102), which had been circulated to the Admiralty Board that same day.

²⁰⁰ Hankey, "Reserves of Oil Fuel for the Royal Navy," 05 October 1921, C.P. 3367 (also C.I.D. 152-C), CAB 24/128.

Chapter II

The Years of Complacency: Britain, 1921-1932

The 1920s were a relatively tranquil period for British foreign and defense policy. But although this decade offered London the ideal environment in which to implement the program outlined by the Petroleum Imperial Policy Committee to make Britain independent of oil imports from the United States, the British record during the 1920s was unimpressive. The dream of creating an “all British” Shell persisted after the death of the Harcourt-Deterding Agreement, but attempts to try again upon an even more ambitious basis foundered as a result of disagreements within the British Government. In the Middle East, which was supposed to replace the Gulf of Mexico as the main the supplier to Britain, several years would pass before the Turkish Petroleum Company (TPC – Iraq Petroleum Company, IPC, after 1929) was able to commence operations in Iraq. Another seven years would lapse before the IPC finally completed a pipeline to bring Iraqi oil to European markets. This is not to say that London was not making progress – only that, by the end of the 1920s, Britain remained as incapable of meeting its oil requirements from British-controlled sources in wartime as before 1918.

The British “Control” Clause, 1921-1923

U.S. criticism of British commercial restrictions prompted a debate within the British Government over whether to maintain the existing policy of British “control” in place since 1904.¹ The principle of British “control” required that oil companies operating on many Crown Lands (in addition to protectorates such as Kuwait and Bahrain) be registered in Britain or its dominions; have a majority of its board comprised of British subjects; and not be owned directly or indirectly by foreigners.² This last condition was the most important, because it effectively ruled out participation by U.S. oil companies even through British subsidiaries. The Colonial Office had opposed foreign oil development within the empire since the First World War. Matters came to a head when the Colonial Office blocked the sale of an oil property in Trinidad to a Norwegian firm, leading Under Secretary of State for Foreign Affairs Robert Cecil to observe in October 1918 that “it seems very doubtful whether it is good policy for a country like the United Kingdom which depends more than any other both on foreign investments and on drawing raw material from foreign lands, to set an example of exclusiveness.”³ Colonial Secretary Long, on the other hand, rejected the idea of allowing foreign companies to develop those resources “on the grounds [...] that it gives us no security against foreign combinations, and above all leaves us to deal with a possibly hostile control during the period of tension preceding a war.”⁴

Once the issue emerged as a source of contention with the United States after the war, the Petroleum Department argued on behalf of reciprocity. The department was concerned that, in the wake of the passage of the Minerals Leasing Act by the U.S. Congress in February 1920 (which forbade the granting

¹ The British Government had developed these regulations in response to an effort by Standard Oil to begin production in Burma. D.J. Payton-Smith, *Oil: A Study of War-time Policy and Administration* (London: HMSO, 1971), 9-10. All primary sources cited in this chapter are from the British National Archives (BNA), unless otherwise indicated.

² Petroleum Department, “Oil Concessions in British Colonies and Protectorates: British Control of Companies,” no date (circa 1929), POWE 34/1. These restrictions were not applied uniformly across the empire: foreign companies could acquire concessions in Great Britain (after 1935), Canada (only through companies registered in Canada), much of Australia, New Zealand, and South Africa, but not in India (including Burma), Trinidad, and Nigeria. For a list of where the “control” clause did and did not apply, see: “Oil Concessions,” Annex to: BOT, “Treatment of Foreigners and Foreign Enterprises,” 28 October 1932, POWE 33/461.

³ Foreign Office, “Economic Defence and Development: Investment of Foreign Capital in the British Empire (Memorandum by Lord R. Cecil),” 14 October 1918, E.D.D.C./45, CAB 24/68.

⁴ W.H.L., “Investment of Foreign Capital in the British Empire (Memorandum by Mr. Walter Long),” 28 October 1918, G.T. 6141, CAB 24/68.

of such leases to foreign companies whose home country discriminated against U.S. companies), Britain's existing "policies can no longer be safely pursued without consideration of their reverberations abroad and without regard to the present [,] almost complete dependence of the British Empire on foreign territory for its oil supplies." The department also questioned whether such restrictions did anything to promote oil production within the empire. In the case of India and Trinidad – the two largest producers of oil within the empire at the time – where British firms benefitted from a state-sponsored oligopoly, "it may be asked whether a more rapid development might not have been secured if these territories had been thrown open to foreign enterprise."⁵ The department concluded that the policy of restriction had been "to the disadvantage of the Empire as a whole," by inhibiting "competition" and endangered British security by incurring retaliatory legislation in previously friendly nations.⁶

The Colonial Office disagreed: U.S. displeasure had less to do with British restrictions than the dispute over Iraq. Furthermore, the Colonial Office took exception to the Petroleum Department's disparagement of British oil companies for not having pursued oil development within the empire with sufficient vigor: "[There] is no evidence that there is any potential British oil-field lying fallow for lack of foreign capital. The trouble is that the Colonial Empire contains very little oil. All the more reason for conserving what there is instead of inviting rapid exploitation by foreign corporations." The Colonial Office pointed out the British "control" clause also preserved Britain's political ties with its colonial

⁵ Before the Second World War, production in Trinidad was divided between about a dozen firms, including the independent Trinidad Leaseholds (formerly a subsidiary of the Central Mining and Investment Corp. and Consolidated Gold Fields of South Africa until it was bought out by the Texas Company in 1956) and United British Oilfields (an affiliate of Royal Dutch/Shell – Shell). As of 1921, Trinidad Leaseholds was the largest producer, accounting for 159,579 tons, most of which it sold to Anglo-Persian (APOC) or the Admiralty. It also purchased the crude oil production of the third-largest producer, Apex Oilfields (46,003 tons). United British was far behind, with only 51,751 tons, most of which went to South Africa. Committee on Oil Companies Amalgamation, "List of British Oil Companies operating in British territory other than those controlled by the Shell, Burmah or Anglo-Persian Companies (Memorandum by the Colonial Office)," no date (1922), O.S.C. 8, ADM 116/3452. Trinidad Leaseholds and United British each accounted for 13% of production in the early-1930s. Trinidad Leaseholds also controlled 80% of the local refining capacity, while Shell's affiliate accounted for the remainder. Harry Foster Bain, *Ores and Industry in South America* (New York: Arno Press, 1976), 340. See also: Petroleum Department, "Preferential Treatment for Oil Produced by British Oil Companies Operating in Trinidad," May 1932, Annexure H to: Marquess of Londonderry (Secretary of State for Air; President of the Oil Board), *et al.*, "Oil Board: Eighth Annual Report," 31 July 1933, O.B. 122 (also C.I.D. Paper No. 1117-B), CAB 50/5.

⁶ Petroleum Department, "Memorandum: Acquisition by Foreigners of Oil Rights in British Territory," 23 March 1921, enclosed with: Clarke to the Under Secretary of State, Colonial Office, 07 June 1921, R.252, CO 323/879/12.

possessions in the face of geographical and economic handicaps. Finally, a policy of reciprocity with the United States was not feasible unless it could be applied throughout the British Empire, but London could not force the self-governing dominions or India to comply. Abandoning all restrictions on foreign ownership without securing reciprocal concessions was even less advisable, since it would only result in the “handing over [of] our oil enterprises to foreign control without getting any benefit in return.”⁷

The effects of British restrictions on Anglo-American relations were the focus of an Inter-Departmental Committee on Oil during preparations for an Imperial Economic Conference in 1923. Geddes had forwarded an alarmist U.S. Federal Trade Commission report describing commercial restrictions against U.S. oil companies by Britain, Holland, and Romania, and the extent to which nationals from those countries had interests within the U.S. oil industry.⁸ Geddes urged “removing every possible cause friction in the relations between the two countries,” while allowing that “American satisfaction with our oil policy might be too dearly bought by opening the door completely to foreign interests in the development of our oil resources.”⁹ The Petroleum Department agreed with Geddes. In a minute to leading officials within the BOT, one official outlined the reasons why the Petroleum Department’s position differed from that of the Colonial Office (which espoused the nationalist position of preserving imperial resources for the sole benefit of the Empire) and the Foreign Office (which considered the matter to be trivial importance). The department still considered exclusion of foreign oil companies from Crown Lands to be “unsound in principle, and has very little practical advantage,” especially since imperial production was actually declining under the protection of the “control” clause. Whether not there was much oil within the empire, “If foreigners like to come and spend money in looking for oil, it seems foolish to prevent their doing so; if they were successful, the oil position of the

⁷ “Copy of Colonial Office Memorandum on the Question of British Control of Empire Oilfields,” no date, enclosed with: Inter-Department Committee on Petroleum, “Agenda for Seventh Meeting to be held on Thursday, 24th November, 1921,” P.D. 1224, CO 323/880/1.

⁸ The FTC report was published as: *Report of the Federal Trade Commission on Foreign Ownership in the Petroleum Industry* (Washington, DC: U.S. GPO, 1923).

⁹ Geddes to Curzon, 23 March 1923, No. 371, enclosed with: H. Llewellyn Smith (Chief Economic Adviser to the Government), “Imperial Petroleum Policy (Note by Chairman), 07 June 1923, Dft. E.C. 24, POWE 33/353.

Empire would be strengthened.”¹⁰ The department enjoyed the enthusiastic backing of Shell, which argued that Britain’s interests were better served by seeking control over foreign oilfields where arrangements could be made to supply Britain in the event of war (in the United States). The last thing Britain needed was having other countries emulate its model of commercial restrictions. If that happened, the British oil companies would be powerless since they, unlike the major U.S. oil companies, had no domestic reserves to fall back upon in case access to foreign fields was curtailed.¹¹

There followed a flurry of memoranda clarifying the situation. The papers put forward by the Petroleum Department and the Colonial Office recycled many of the arguments made in previous years. In the case of the Petroleum Department, its criticism of the British “control” clause was three-fold: First, it was hindering the development of imperial oil reserves by preventing inflows of foreign capital and expertise. Second, it had engendered “friction and suspicion as to our general policy in regard to oil” with the United States. Third, Britain had more to lose from trade retaliation, since “[no] country is really as interested as we are in the maintenance of the open door.”¹²

The Colonial Office now shifted its position to supporting the so-called “Admiralty Clauses”: that the Royal Navy should retain the right to call upon any oil produced in the event of war or a national emergency. The Colonial Office also still believed that the empire might yet yield more oil “if we are patient,” while warning that it was unreasonable to expect that U.S. oil would always be forthcoming under any and all circumstances. It also had no reason to doubt that “in time of emergency, it makes a difference whether the [British] Government is dealing with its own subjects or with potential enemies or possibly unfriendly neutrals,” since British ownership would “mean that, other things being equal, there is

¹⁰ J.C.C. to Wills, Chapman, and the President (of the Board of Trade, Lloyd-Greame?), “Petroleum Policy: Minute by Mr. Clarke,” 21 April 1923, P.D. 195, enclosed with: Llewellyn Smith, “Imperial Petroleum Policy,” 07 June 1923, Dft. E.C. 24, POWE 33/353.

¹¹ R. Waley Cohen (Managing Director, Anglo-Saxon Petroleum Company) to the Director of the Petroleum Department, 15 May 1923, enclosed with: Clarke to the Under Secretary of State, Colonial Office, 18 May 1923, P.D. 198/23, CO 323/903/25.

¹² “Nationality Restrictions in oil leases on public lands in British territory (Statement of the present position by the Petroleum Department),” 18 July 1923, P.D. 267/23, enclosed with: Llewellyn Smith, “Imperial Petroleum Policy,” 07 June 1923, Dft. E.C. 24, POWE 33/353. The date of the Petroleum Department memorandum was added by hand, which implies that the enclosed copy was a revised version of the memorandum first considered by the Inter-Departmental Committee the previous June.

a tendency to buy and sell here which may operate to the advantage of both parties.” Nevertheless, the Colonial Office was willing to concede the benefits of reciprocity, so long as other nations were “prepared to enter into agreements to place British subjects on an equality [*sic*] with their own nationals,” which was an important consideration in view of the fact that the United States would treat the British Empire as a single “unit” (expect that the entire empire would adopt the same standard for U.S. firms).¹³

The Admiralty had never been unalterably opposed to the principle of foreign development of the empire’s oil reserves. Nevertheless, it believed that there was a compelling strategic rationale for maintaining certain commercial restrictions, such as having the British Government retain the right “to secure complete control” over any foreign firm producing oil within the empire in the event of an emergency.¹⁴ The Admiralty preferred to draw supplies from sources under British control, which could be produced in accordance with the Royal Navy’s technical specifications. Although it did not accept the argument that existing restrictions had resulted in the underdevelopment of oil reserves in Trinidad and India, the Admiralty conceded “that in special cases some relaxation of the regulations may have to be allowed to secure proper development of the [imperial] oilfields,” so long as doing so did not jeopardize the Royal Navy’s access to such supplies in wartime.¹⁵

The British “control” clause survived for the moment, but demands for financial retrenchment in the face of stubbornly high postwar public expenditures provided a more compelling incentive to reevaluate British oil policy, particularly London’s expensive decision in 1919 to create a naval stockpile equal to one year’s wartime consumption by the Royal Navy. In August 1921, the Lloyd George Government established a Committee on National Expenditure (chaired by former First Lord of the Admiralty Eric Geddes) to curtail government spending, which reported in December 1921 that “considerable savings”

¹³ “British Control of Oil Mining Companies (Memorandum by the Colonial Office),” June 1923, Dft. E.C. 23, enclosed with: Llewellyn Smith, “Imperial Petroleum Policy,” 07 June 1923, Dft. E.C. 24, POWE 33/353.

¹⁴ R.E. Wemyss (First Sea Lord), “Investment of Foreign Capital in the British Empire Development of Oil – Production in Private Lands in Crown Colonies: Admiralty Memorandum for the War Cabinet,” 22 December 1918, G.T. 6541, CAB 24/72.

¹⁵ “Admiralty Memorandum on Imperial Petroleum Policy,” no date, POWE 33/353. The developments before 1923 are summarized in: Petroleum Department, “Oil Concessions in British Colonies and Protectorates: British Control of Companies,” no date (circa 1929), POWE 34/1.

might be carved out of the Admiralty's stockpiling plan.¹⁶ Prime Minister David Lloyd George thereafter established a cabinet committee chaired by Colonial Secretary Churchill to review the proposed reductions in defense spending.

Churchill was in complete accord with the Admiralty's stockpiling policy. The rise of oil had eliminated the advantages Britain had enjoyed thanks to its coaling stations during the "Coal era." Britain's position in the Pacific was extremely vulnerable – the lynchpin of its defense was Singapore (Hong Kong being indefensible), but without sufficient oil on-hand in the Far East and Indian Ocean, the fortress could not be held. Since the U.S. Navy would be unable to assist for logistical reasons irrespective of Washington's attitude, "[if] Singapore fell in the first two or three months of a war, the whole of the Pacific would fall under the complete supremacy of Japan, and many years might elapse before either Britain or the United States could re-enter that ocean in effective strength."¹⁷ With great reluctance and assurances that a war in Europe could be discounted, Churchill and the Admiralty bowed to the demands for austerity and reduced the amount of oil to be stockpiled by 861,000 tons, from 9,000,000 tons to 8,139,000 tons (4,500,000 tons in Britain, 1,000,000 tons of commercial reserves, and 2,639,000 tons around the world). The savings would come primarily at the expense of reserves to be accumulated in the Mediterranean, North America, and the Caribbean.¹⁸

As of March 1923, fuel oil reserves in Britain had reached almost 2,500,000 tons, which was more than six months of wartime consumption prior to the Washington Naval Conference. Although it had supported the Admiralty's "expensive scheme" to accumulate reserves in the Far East in the event of a war with Japan, the Treasury now questioned the need for "unnecessary precautions at extravagant cost in

¹⁶ M.P.A. Hankey (Committee of Imperial Defence, CID), "Reserve of Oil Fuel for the Navy: Note by the Secretary," 02 February 1924, 479-B, CAB 4/10. For background on the work of the Geddes Committee, see: Henry Higgs, "The Geddes Reports and the Budget," *Economic Journal* 32: 126 (1922): 251-264; and Andrew McDonald, "The Geddes Committee and the Formulation of Public Expenditure Policy, 1921-1922," *Historical Journal* 32: 3 (1989): 643-674.

¹⁷ Winston Churchill, "Report of Committee Appointed to Examine Part I (Defence Departments) of the Report of the Geddes Committee on National Expenditure," 04 February 1922, C.P. 3692, CAB 24/132.

¹⁸ L of F., "Reserves of Oil Fuel on the Eastern Route: Memorandum by the First Lord of the Admiralty," 07 July 1922, 175-C, CAB 5/4. The reserves would be accumulated in secret to avoid raising Japanese suspicions, and the Admiralty agreed "with apprehension" to delay completion of the scheme to 1931 (or 1933 if the need arose). Secretary of the Admiralty to the Secretary of the CID, "Reserves of Oil-Fuel on the Eastern Route," 03 October 1922, 180-C, CAB 5/4.

acquiring a second six months' supply" of reserves within Great Britain: "There is no reason to suppose that except in the event of a war with United States of America there would be any serious difficulty in obtaining Oil Fuel: and immediate hostilities with the United States of America are surely not a believable supposition."¹⁹ Before the Admiralty could respond, the Government of Stanley Baldwin fell in January 1924 after a vote of no confidence. The new Labour First Lord of the Admiralty, Lord Chelmsford, vigorously challenged the Treasury's suggestion. The Treasury did not understand that the 4,500,000 ton reserve within Britain was "an integral part of the 8,139,000 tons which is the year's supply necessary to enable the Fleet to carry on a war in other than Home and Mediterranean waters." Chelmsford also disagreed with the belief that there was no need to worry about acquiring supplies from the United States. Aside from the fact "that dependence on the United States of America for such a vital supply in time of war would place in the hands of that Power a diplomatic weapon of first importance," Britain lacked enough tankers both to supply its fleet and to import oil from the United States.²⁰

The Treasury did not dispute the need for reserves. The amount to be stockpiled, the rate of accumulation, and the location of reserves, were, on the other hand, matters worthy of closer consideration. The Treasury pointed out the inconsistency at the heart of the Admiralty's position: in 1919, it had claimed that 4,500,000 tons equaled on year's wartime consumption. The fact that it had asked in 1921 to double the amount of be accumulated implied that British naval planning "was based on a combination of two alternative hypotheses": a war against the United States in the Atlantic and another war against Japan in the Pacific. The latter was no longer under consideration, while the Admiralty was overstating the threat posed by Japan, which could not disrupt British oil imports. Why then was Britain accumulating a reserve equal to two years wartime consumption (based on the size of the Royal Navy

¹⁹ W.J-H. (William Joynson-Hicks), "The Home Reserve of Oil Fuel for the Navy (Memorandum by the Financial Secretary of the Treasury)," 14 August 1923, C.P. 384/23, CAB 24/161.

²⁰ C. "Reserve of Oil Fuel for the Navy: Memorandum by [the] First Lord of the Admiralty," 30 January 1924, 476-B, CAB 4/10. Even if APOC shortly boosted Iranian production to over 5,000,000 tons, Abadan, the best-positioned refinery in the event of a war against Japan, could only produce 1,500,000 tons of fuel oil. British and Australian refineries could double the amount of fuel oil available, but their employment depended upon the availability of sufficient tankers to move the oil from Iran to either Britain or Australia. "The Admiralty view is that there would be few available for this purpose and possibly none." B. (Admiral of the Fleet David Beatty), "Oil Fuel: Memorandum by the First Sea Lord and the Chief of Naval Staff," 14 February 1924, 482-B, CAB 4/11.

before the Washington Naval Conference) to fight a war against Japan alone? Surely 5,000,000 tons of reserves, divided equally between Britain and overseas stations, was a more reasonable figure.²¹

In spite of the Treasury's objections, the Admiralty prevailed in February 1924, when the Committee of Imperial Defence (CID) upheld the original decision by the War Cabinet in 1919 to establish a one-year war reserve, although in future "the reserve should be considered as a whole," with no distinction between Home and overseas reserves.²²

²¹ P.S. (Philip Snowden), "Reserve of Oil Fuel for the Navy: Memorandum by the Chancellor the Exchequer," 31 January 1924, 477-B, CAB 4/10.

²² The Earl of Birkenhead (Secretary of State for India; Chairman of the Naval Programme Committee), "Report on Naval Fuel Oil Reserves," 20 February 1928, C.P. 47 (28), CAB 24/192.

Safeguarding and Expanding the British Presence in Iraq, 1921-1925

The key to meeting Britain's rapidly expanding oil consumption was encouraging production in the Middle East beyond just Persia. The most promising area, and an objective of British grand strategy since the World War, was the former Ottoman provinces of Mesopotamia. British troops had occupied Mosul before the war ended, but numerous obstacles delayed prompt exploitation of the expected oil riches of the fledgling nation of Iraq. By the end of 1920, two of the most pressing difficulties had been resolved: London and Paris had come to an understanding in April during the San Remo Conference over the division of oil-related spoils from the war, and by the end of the year, British occupation forces had managed to quell the nationalist uprisings that had broken out across Iraq in the summer. That left the United States (both Washington and the U.S. major oil companies), which opposed Anglo-French efforts to monopolize Iraq's oil wealth and was determined to frustrate London's plans until Britain appeased U.S. interests.

Britain's entire claim to predominance within Iraq and the exclusion of U.S. capital except on British terms rested upon the contention that the TPC possessed a valid oil concession. In fact, the TPC had only received the promise of a concession in 1914 from a government that no longer existed. To have admitted U.S. oil companies without any preconditions would have defeated the primary objective of British policy: to gather as many sources of oil under British control as possible. The United States was naturally hostile to such a policy. In the wake of the war, when fears of an oil shortage abounded, U.S. oil companies had hounded Washington to support U.S. access to overseas oil reserves.²³ U.S. pressure on behalf of the "Open Door" continued even as domestic production boomed – except now the impetus was on finding oilfields for U.S. companies to supply their overseas markets.

What changed after 1920 was that London realized it needed U.S. help. The start of oil production in Iraq was essential to what one historian calls the "Cairo Strategy," championed by Colonial Secretary

²³ John DeNovo, "The Movement for an Aggressive American Oil Policy Abroad, 1918-1920," *American Historical Review* 61: 4 (1956): 854-876.

Churchill following the Cairo Conference of April 1921.²⁴ In the wake of the Iraqi uprisings of 1920, Britain had to find some way of maintaining its predominance within Iraq in face of massive cutbacks in government expenditures and the need to create at least the fig-leaf of a nominally independent Arab government. This would be accomplished by withdrawing its existing contingent of regular and imperial troops and using royalties from oil production to create a standing Arab army and stabilize the Hashemite client dynasty. The latter two would, in turn, be backed up by Royal Air Force (RAF) fighter squadrons, a “cheap but effective alternative to military occupation” that could, as demonstrated during the 1920 uprisings, terrorize intransigent natives and deter foreign threats such as the Turks or the Saudi Ikhwan (militia) at only a fraction of the cost of ground troops; British advisers scattered throughout the native government; and a High Commissioner who would effectively rule the country as a proconsul.²⁵ For the system to be self-financing, Iraq needed oil revenues, which would then cover the costs of Britain’s *de facto* occupation under the guise of the 1921 Anglo-Iraqi Treaty.²⁶

The question of how to move forward was addressed by the Colonial Secretary, Churchill, in March 1922. He argued that there were three avenues open to Britain. One, the government could give in to the U.S. demand that the TPC’s preemptive right to a concession be nullified. Two, London could allow the TPC’s claim to be submitted to international arbitration. Three, the British could find some way to convince the Americans to accept the validity of the TPC’s position and “not to object to it as

²⁴ William Stivers, *Supremacy and Oil: Iraq, Turkey, and the Anglo-American World Order, 1918-1930* (Ithaca: Cornell University Press, 1982), 76-79. The official report detailing the work of the conference only made occasional references to oil: Colonial Office, *Report on the Middle East Conference Held in Cairo and Jerusalem, March 12th to 30th, 1921*, June 1921, CO 935/1. It is clear on the basis of a close examination of other British planning documents, however, that London hoped that oil would eventually provide Iraq with a substantial source of revenue that would simultaneously promote economic development and cover the costs of Britain’s enduring political and military presence in the country.

²⁵ The use of airpower in Iraq is detailed in: David Omissi, *Air Power and Colonial Control: The Royal Air Force, 1919-1939* (Manchester: Manchester University Press, 1990), 18-38. Omissi also explains how the employment of air power was a means of reconciling the interests of a variety of actors within both Britain and Iraq, including: Churchill, who hoped that success in Iraq would boost his political chances; Hugh Trenchard, the Chief of the Air Staff, who wanted to maintain an independent Royal Air Force (RAF); British officials, who wanted to retain access to Iraqi oil reserves cheaply; and Sunni elites within Iraq, who could use the British to crush local challenges to their rule.

²⁶ The genesis of the “Cairo Strategy” is described in: Stivers, *Supremacy and Oil*, 75-109. For a contemporaneous description of British policy and aims in Iraq, see: L.S. Amery, “The Situation in Iraq: Memorandum by the Secretary of State for the Colonies,” 11 May 1925, C.P. 235 (25), CAB 24/173.

monopolistic.” Churchill rejected the first option on the grounds of national prestige. The second was undesirable because it risked exposing the shaky legal foundation of the TPC and London’s position, and an international arbitration panel might render a decision inimical to Britain’s overriding objective in Iraq. Furthermore, even if the panel produced a decision favorable to Britain, the U.S. Government would likely still protest. Churchill therefore backed a proposal suggested by the Foreign Office (and supported by both the Petroleum Department and APOC) that the TPC’s partners offer U.S. oil companies a portion of the shares equal to that received by the French at the San Remo Conference (roughly 25%) in exchange for assurances from Washington that it would accept the TPC’s special position in Iraq.²⁷

The first major breakthrough came in April 1922, when Greenway (APOC Chairman), Cadman (now an APOC Director), and Arthur Bedford (Chairman of the Standard Oil Company of New Jersey – Jersey) came to a preliminary understanding that U.S. companies would join the TPC. Both sides wished to remove the dispute from “political channels” and handle it as a “commercial transaction.”²⁸ (This was also the position of the British Government.²⁹) The only difficulty was getting the three governments involved (the U.S., British, and French) on board. The French might complain, since the inclusion of U.S. oil companies into the TPC would compel them to yield a portion of their share. They were not contractually obligated to do so under San Remo Oil Agreement unless the Iraqi Government received a share in the TPC.³⁰ Negotiations in the summer of the 1922 yielded an agreement in principle between the existing members of the TPC (APOC, Shell, and the French Government) and a consortium of U.S. oil companies led by Jersey (the so-called “American Group” – reformed as the Near Eastern Development Corporation in 1928) on the matter of U.S. membership in the TPC. Although the exact details of U.S. participation had yet to be formalized, for the time being, “there seems little doubt that the Anglo-

²⁷ W.S.C. (Churchill), “Iraq Oil: Circulated by the Secretary of State for the Colonies,” 13 March 1922, C.P. 3832, CAB 24/134.

²⁸ Cadman, “Memorandum of a meeting held at Stambridge Earls on 9th April, 1922 [...],” enclosed with: Letter to the Under Secretary of State, Foreign Office (Cecil Harmsworth), author unclear (Petroleum Department?), S. 542, 21 April 1922, POWE 33/95.

²⁹ Lancelot Oliphant to the Secretary to the Board of Trade (Petroleum Department), 28 December 1922, E 14034/132/65, POWE 33/95.

³⁰ Letter to the Under Secretary of State, Foreign Office (Cecil Harmsworth), author unclear (Petroleum Department?), S. 542, 21 April 1922, POWE 33/95.

American oil controversy will for all practical purposes be at an end.”³¹ The denouement came in December 1922, when APOC and Anglo-Saxon signed a memorandum of understanding wherein APOC would yield half of its existing shares in the TPC to the “American Group” in exchange for a 10% overriding royalty on all oil produced by the TPC (reduced to 7.5% under the revised 1931 concession with Iraq) and assurances from the State Department that the new arrangement “satisfies American claims in respect to the oil resources of Iraq.”³²

Resolution of the dispute concerning the TPC, more than other single factor, appears to have resolved the tension in Anglo-American oil relations. In a review of the major developments since the First World War produced for the Treasury, the Petroleum Department explained that fears in the United States over its declining oil reserves and “active propaganda... against an alleged but quite imaginary British attempt to corner the oil resources of the world,” had combined to create a sense of hostility and suspicion toward Britain. According to the Petroleum Department, the “chief inspiration” for the dispute “was the desire of the big oil interests and particularly the Standard Oil to obtain some kind of footing in Mesopotamia.” Since it was vital for British interests that oil production in Iraq commence sooner rather later, the government adopted the policy of mollifying Standard Oil by offering it a share of the TPC and the chance to acquire a concession (in concert with APOC) for the five northern provinces of Persia not covered by APOC’s 1901 concession.³³

As acrimonious as the dispute over the “Open Door” in Iraq between 1920 and 1922 was, Britain and the United States cooperated more often than not following the First World War on issues such as the

³¹ J.C.C. (Clarke), “Anglo-American Oil Relations,” 16 October 1922, enclosed with: Clarke to P.J. Grigg (Treasury), 17 October 1922, T 172/1268. It should be pointed out the disagreement with the United States was only one of many threats to the future of the TPC.

³² “Memorandum of Agreement between Anglo-Saxon Petroleum Company Ltd., and Anglo-Persian Oil Company, Ltd., regarding participation in the Turkish Petroleum Company,” 12 December 1922, attached to: H.E. Nichols (TPC) to the Director of the Petroleum Department (Clarke), 13 December 1922, enclosed with: Clarke to the Under Secretary of State, Foreign Office, 13 December 1922, S. 610, FO 839/10. The Foreign Office made it clear, however, that it had no intention of convincing the French Government to sign off on the new agreement, lest Paris use this as an excuse to renegotiate the San Remo Agreement. Lancelot Oliphant to the Secretary to the Board of Trade (Petroleum Department), 28 December 1922, E 14034/132/65, POWE 33/95.

³³ J.C.C. (Clarke), “Anglo-American Oil Relations,” 16 October 1922, enclosed with: Clarke to P.J. Grigg (Treasury), 17 October 1922, T 172/1268. As explained below, the disagreement with the United States was only one of many threats to the future of the TPC.

exploitation of foreign sources of oil. Even when the two governments were still at odds, John Cadman (after he retired from government service) reassured U.S. officials “that the policy of the British Government was one of the open door,” and lamented the “folly in our opposing each other beyond the point where healthy and natural competition should prevail.”³⁴ Once the TPC had accommodated U.S. participation in December 1922, the U.S. Government tacitly recognized British predominance within the Middle East. Washington also extended reciprocal considerations to London in Latin America.³⁵ Self-interest was certainly one, if not the most important, consideration. Washington considered the British presence in the Middle East as a civilizing influence and was happy to let Britain handle the political and military burden beyond the Western Hemisphere if U.S. firms could enjoy the commercial benefits.³⁶ London believed that infusions of U.S. capital and technical expertise would solidify Britain’s hold over Iraq by improving the financial solvency of the new country through higher oil revenues. Like the United States in 2003, Britain essentially hoped that these oil revenues would fund both the occupation of Iraq and its economic development.

Britain’s troubles were not over yet, as the U.S. oil companies were not the only headache for London. Between 1908 and 1913, Colby Chester (a former admiral in the U.S. Navy) had tried to acquire a railroad concession through Anatolia and Mesopotamia in exchange for mineral rights. The Ottomans were willing to consider a concession in exchange for U.S. diplomatic considerations and arms sales, but the Germans blocked the proposal by claiming that Chester was a front-man for Standard Oil.³⁷ Chester

³⁴ Interestingly, Cadman also confided to State Department officials that he was strongly opposed to the British Government’s continued ownership of shares in APOC, and “that he for one wished that they would get out entirely.” Dearing, Memorandum of Conversation, 23 December 1921, National Archives and Records Administration, Record Group 59: General Records of the Department of State (hereafter cited as: NARA, RG 59), 841.6363/188; Arthur Millspaugh (Foreign Trade Adviser, U.S. State Department), “Memorandum of a Conversation between Sir John Cadman and Mr. Millspaugh, January 16, 1922,” 17 January 1922, NARA, RG 59, 841.6363/203.

³⁵ Michael Hogan, “Informal Entente: Public Policy and Private Management in Anglo-American Petroleum Affairs,” *Business History Review* 48: 2 (1974): 187-205, *passim*.

³⁶ William Stivers, “International Politics and Iraqi Oil, 1918-1928: A Study in Anglo-American Diplomacy,” *Business History Review* 55: 4 (1981): 517-540 (esp. 519-526); and Stivers, *Supremacy and Oil*, 19-48, 75-107.

³⁷ Pre-WWI developments are summarized in: Henry P. Starrett, no date, enclosed with: Stanley K. Hornbeck (Office of the Economic Adviser) to Leland Harrison (Assistant Secretary of State) and William Phillips (Under Secretary of State), 02 December 1922, NARA, RG 59, 867.602 OT81/338. See also: John DeNovo, “A Railroad for Turkey: The Chester Project, 1908-1913,” *Business History Review* 33: 3 (1959): 300-329; and John DeNovo,

tried again in the spring of 1920: playing on the post-WWI conception of oil's significance in "carrying on the industrial development of the country and for its national defense," he now sought Washington's backing in securing an oil concession for Mosul, going so far as to offer any oil found at "nominal" prices, and even minority participation, to the U.S. Navy.³⁸ Officially, the department did not go farther than saying that it "would look with favor on American participation in economic activities" within the former Ottoman Empire.³⁹ Privately, the State Department maintained a negative, if not contemptuous attitude toward the Chester Concession.⁴⁰ How could the department support a monopolistic concession for Chester when it opposed one for the TPC? There was also the fact that Chester had only received the promise of a concession rather than an actual agreement – again, exactly like the TPC.⁴¹

The State Department's Foreign Trade Adviser, Millspaugh, opposed granting U.S. support to any one group seeking a concession in Mesopotamia, for access to its oil reserves was a diplomatic problem that would have to be worked out by the United States and the Europeans. Since the solution would probably entail the creation of an international syndicate to develop the oil, Millspaugh suggested "the formation of a strong representative group of American financial and oil interests."⁴² Millspaugh was not indifferent to U.S. participation in the development of Middle Eastern oil and had pushed the State Department to block British efforts to monopolize control of the region's oil reserves.⁴³ He believed that

American Interests and Politics in the Middle East, 1900-1939 (Minneapolis: University of Minnesota Press, 1963), 58-86.

³⁸ Rear Admiral C.M. Chester (U.S. Navy, retired) to the Secretary of the Navy, "Oil for the Navy," 14 June 1920, enclosed with: R.E. Coonty (Acting Secretary of the Navy) to the Secretary of State (Bainbridge Colby), 07 July 1920, 13668-788-Eng., NARA, RG 59, 867.602 OT81/163; Office of the Foreign Trade Adviser (Wesley Frost?), "Petroleum in the Near East for the United States: Interview with Mr. H. Howe, Assistant to the Assistant Secretary of the Navy, by the Acting Foreign Trade Adviser, September 8, 1920," 17 September 1920, NARA, RG 59, 867.602 OT81/168.

³⁹ Edward Lauterbach to Bainbridge Colby, 19 November 1920; and Norman H. Davies (Acting Secretary of State) to Lauterbach, 03 January 1921; both in: NARA, RG 59, 867.602 OT81/169.

⁴⁰ Fiona Venn vastly overstates the State Department's support for Chester, which remained pro forma: Venn, "Oleaginous Diplomacy: Oil, Anglo-American Relations and the Lausanne Conference," *Diplomacy and Statecraft* 20 (2009): 414-433 (esp. 424).

⁴¹ Warren Delane Robbins (Chief, Division of Near Eastern Affairs), "Memorandum for the Secretary," 18 April 1921, NARA, RG 59, 867.602 OT81/172; Division of Near Eastern Affairs, "Memorandum for Dr. Millspaugh," 24 May 1921, NARA, RG 59, 867.602 OT81/181.

⁴² Arthur C. Millspaugh, "Memorandum," 29 November 1920, NARA, RG 59, 867.602 OT81/170.

⁴³ Millspaugh, "Memorandum on the Near Eastern Oil Question," 09 April 1920, NARA, RG 59, 800.6363/166.

U.S. interests could be best served through two measures. The first was a “combine” of U.S. oil companies that would participate in the development of the region’s oil reserves.⁴⁴

Second, and more importantly, Millspaugh considered the resolution of the Anglo-American oil rivalry as the first step toward building a more stable postwar world order. Both Britain and the United States understood that oil was vital to their economic and national security, but Millspaugh argued the best way to satisfy their needs was through an international oil agreement based on the “Open Door” and Anglo-American reciprocity.⁴⁵ Following consultations with other government departments (the departments of the Navy and Commerce) and private industry (Jersey), Millspaugh pressed for negotiations with London and even completed a draft of his proposed oil agreement in May 1921 in advance of the upcoming Washington Naval Conference.⁴⁶ Millspaugh’s outlook was based on his concerns about the depletion of domestic reserves and the United States’ sudden dependence upon imports from Mexico, which had increased from 7,383,000 barrels in 1912 to 108,782,000 barrels in 1920 (or from 3.1% of U.S. consumption to 20.5%). He likened the escalating commercial competition between the great powers over oil to the prewar armaments race. Millspaugh advised the U.S. delegation at the Naval Conference to make an issue of the “petroleum question” and push for “the establishment of suitable guarantees of equality of opportunity in all countries, together with reasonable assurances

⁴⁴ Millspaugh to the Hughes, “Proposed Combination of American Oil Companies for Operation Abroad,” 13 May 1921, NARA, RG 59, 811.6363/73.

⁴⁵ Millspaugh first broached the matter in a paper for Secretary Charles Evans Hughes: Millspaugh, “Informal and Provisional Memorandum on the General Petroleum Situation, Outstanding Petroleum Questions, and the Position Taken by the Department Relative Thereto,” 19 February 1921, enclosed with Merle-Smith to Hughes, 11 March 1921, NARA, RG 59, 800.6363/325.

⁴⁶ Millspaugh to Hughes, “Petroleum Negotiations with Britain,” 29 March 1921, NARA, RG 59, 890G.6363/69. For correspondence to and from the State Department concerning an international oil agreement, see: NARA, RG 59, 800.6363/242a, 243h, 250, 254-255, 257, 268, 270, 272, 278, 295, 296, 329, and 811.6363/71. For a copy of Millspaugh’s Anglo-American oil agreement, see: “Draft,” 12 May 1921, enclosed with: Minute to Millspaugh, 10 [sic] May 1921, NARA, RG 59, 811.6363. The exact provenance of these documents is something of a mystery. The note of 10 May 1921 has a declassification stamp (dated 01 June 1993), even though it originated in the period before the Department of State adopted a formal classification system. Evidently, these documents were inserted sometime between 1993 and 2003 without the knowledge of NARA archivists. A version of Millspaugh’s draft oil treaty also found its way into Herbert Hoover’s papers: “Draft. Strictly Confidential. Not to be communicated to any except Government officials.” 14 April 1921, no author, Herbert Hoover Presidential Library, Commerce Files, Box 452.

regarding supplies of oil essential to national security.”⁴⁷ The idea of establishing an Anglo-American “trust” to “deal justly and reasonably between themselves and the producing and consuming nations” enjoyed some support within Britain.⁴⁸ But the British Government was not interested: once news leaked that the United States would push for an oil agreement during the Naval Conference, Prime Minister Lloyd George made it clear that Britain’s overseas oil assets were “much too important to be used as diplomatic counters” and promised to rebuff any attempt “to give them away.”⁴⁹

One half of Millspaugh’s model for reorganizing Anglo-American oil relations had collapsed, but the idea of an international syndicate that would promote U.S. interest in maintaining an “Open Door” did not: indeed, it was the basis for the creation of the “American Group” of oil companies that would join the TPC after 1922. There was no room within such a vision of Anglo-American cooperation for independent and unreliable actors such as Chester, even if the U.S. Government cynically used his “quasi-legal claims” to frustrate “British claims” in the Middle East.⁵⁰ Chester did not see things this way and complained that Washington was kowtowing to the British.⁵¹ The Turks were willing to play along with Chester, if only to secure leverage against Britain at the Lausanne Conference during negotiations over Turkey’s postwar boundary with Iraq. Ankara awarded Chester’s company the oil concession for Mosul in April 1923, even though the area was under British occupation. The British resented Chester’s attempts at blackmail and warned that Chester’s efforts could derail the contemporaneous negotiations to admit

⁴⁷ A.C.M., “Memoranda for the American Delegation to the Conference on Limitation of Armament: The Petroleum Situation with Reference to the Far East,” 1921, Hoover Institute, Papers of Stanley K. Hornbeck, Box 436.

⁴⁸ Paymaster Lieutenant Commander E. Kennedy, “Oil Imperialism: The Struggle for Petroleum,” no date (sometime following the 1922 Genoa Conference), ADM 203/58.

⁴⁹ Lloyd George to Pretymen, 25 November 1921, POWE 33/93.

⁵⁰ Millspaugh, “The Chester Project in Turkey,” 01 March 1921, NARA, RG 59, 867.602 OT81/180. Millspaugh also opposed Chester’s efforts to merge with the TPC, since his company (the Ottoman-American Exploration Company) was in financial shambles. Rear Admiral C.M. Chester (USN, retired) to the Secretary of the Navy, “Oil Concession in Mesopotamia,” 30 March 1921, attached to: R.E. Coonty to the Assistant Secretary of the Navy, 02 April 1921, Op-10 Hu, enclosed with: Theodore Roosevelt Jr. (Assistant Secretary of the Navy) to the Henry Prather Fletcher (Under Secretary of State), 02 April 1921, NARA, RG 59, 867.602 OT81/175; and Millspaugh, “Memorandum,” 27 April 1921, NARA, RG 59, 867.602 OT81/173. Chief of the Near Eastern Affairs Division Allen Dulles also warned that the company’s shoddy finances could damage U.S.-Turkish relations if it did receive a concession but collapsed thereafter. G. Howland Shaw (Special Mission of the United States of America, Lausanne) to Allen W. Dulles (Chief, Division of Near Eastern Affairs), 11 June 1923; Dulles to Hughes, 26 June 1923; and Dulles to Shaw, 03 July 1923; all in: NARA, RG 59, 867.602 OT81/378.

⁵¹ Millspaugh, “Memorandum,” 30 November 1920, NARA, RG 59, 867.602 OT81/171.

U.S. oil companies into the TPC. Their complaints found some sympathy in Washington, and at least one official (Allen W. Dulles, then serving as Chief of the Near Eastern Affairs Division) shared the British perspective that Chester and the Turks were trying to foment “bad blood between the United States and Great Britain.”⁵² In any event, the Turks cancelled their concession in December 1923 after Chester’s company failed to start prospecting and the whole venture disappeared from view.⁵³

Even before the furor over the Chester Concession of 1923, the Colonial Office had been convinced that both the French and Standard Oil were aiding and abetting Turkish nationalists over control of Mosul. The Colonial Office claimed that the Turks had promised to repay French assistance with “priority rights” in the awarding of oil and railway concessions if Ankara recaptured Mosul. Meanwhile, Standard Oil was “inciting the Turks to attack Iraq” as a means of putting pressure on London to accede to U.S. demands for participation in the TPC. The Colonial Office was uncertain whether Standard Oil’s actions had the blessing of the U.S. Government but surmised that Washington “would not regret the return of the Turks to Iraq if it gave the United States oil interests a hold in the Iraq oil-fields.”⁵⁴

During the Lausanne Conference of 1922-1923, Britain had tried to work out a new peace treaty with a resurgent Kemalist Turkey that would preserve London’s gains in Iraq, specifically by forcing Ankara to abandon its claim to the province of Mosul and confirm all prewar concession agreements or promises with the Ottoman Empire and its successor states. This would have sanctioned the claims of the TPC, so the U.S. Government supported Turkey in blocking the inclusion of such terms into the new peace treaty.⁵⁵ (Britain and Turkey agreed to submit the dispute for arbitration by the League of Nations. When

⁵² Dulles to Assistant Secretary Harrison, 12 February 1923, NARA, RG 59, 867.602 OT81/250; Dulles, “Memorandum,” 12 April 1923, NARA, RG 59, 867.602 OT81/271; William R. Castle (Chief, Division of Western European Affairs) to Dulles, 13 April 1923, NARA, RG 59, 867.602 OT81/269; Dulles to Castle, 16 April 1923, NARA, RG 59, 867.602 OT81/270; Geddes to Hughes, 30 April 1923, and Hughes to Geddes, 01 May 1923, both in: NARA, RG 59, 867.602 OT81/300.

⁵³ The entire episode is covered in: DeNovo, *American Interests*, 191-196, 210-228; and Stivers, *Supremacy and Oil*, 154, 157-158, 169 186-187, and 190.

⁵⁴ Colonial Office, Middle East Department, “Foreign Incitement of the Turks to Attack Iraq: Circulated by the Secretary of State for the Colonies,” C.P. 3566, 13 December 1921, CAB 24/131. See also: “The Mosul Question,” 26 October 1925, *Editorial Research Reports: 1925*, vol. 4 (Washington, DC: CQ Press).

⁵⁵ The Anglo-American “oil war” at Lausanne is described in: Venn, “Oleaginous Diplomacy,” 414-433. Venn is also of the opinion that control of Mosul’s presumed oil deposits was a central aim of Britain’s negotiating strategy during the conference. See also: DeNovo, *American Interests*, 191-196.

the League agreed with Britain that Iraq should receive Mosul even though Turkey still enjoyed legal rights to the province, Ankara protested but relented in 1926 in exchange for 10% of the oil royalties from the disputed province for the next twenty-five years.⁵⁶) Nevertheless, the Petroleum Department was pleased with the course of developments by early-1924 and even “[suggested] that it may be sound to policy to encourage” international cooperation in major oil ventures, as opposed to allowing oil companies to compete with one another, thereby “provoking jealousies and competing with more or less success for concessions, and provoking jealousies and recrimination which have of recent years been unduly frequent on oil questions.” Responding to charges that the TPC’s monopolistic position in Iraq precluded meaningful competition, the Petroleum Department countered that “it is very debateable [*sic*] whether competitive development of an oilfield produces the best results,” contrasting the “colossal waste” that accompanied such practices in the United States with the managed development undertaken by APOC in Persia.⁵⁷ The department seriously miscalculated, however, by claiming that it was unlikely the TPC would restrict oil production in Iraq for commercial purposes.

The Colonial Secretary, Leo Amery, took a rather more cynical view. Like many in the British Government, he was contemptuous of the “sacred principle of the ‘open door’.” Now that the Americans had received their cut, London was “likely to hear nothing more about the State Department’s qualms on the subject of a Mandate [...]” The Iraqis were out of luck, though: although the San Remo Agreement left open the possibility of the Iraqi Government receiving a 20% share in the TPC, during the negotiations for the 1925 oil concession, none of the TPC’s partners was willing to see their share in the company reduced to accommodate Baghdad’s participation.⁵⁸ Amery also made the extraordinary admission that the major oil companies “had absolutely no interest in securing a particularly high rate of

⁵⁶ In reality, Ankara was desperate for cash and agreed in a separate exchange of notes with London that it had the option to trade its rights to oil revenues in exchange for a lump sum payment of £500,000. Turkey exercised this option almost immediately, much to Britain’s delight: not only was the sum “ridiculously small” according to the Foreign Office, but London made the Iraqis pay it. Geoff Berridge, *British Diplomacy in Turkey, 1583 to the Present: A Study in the Evolution of the Resident Embassy* (Leiden: Martinus Nijhoff Publishers, 2009), 145-151.

⁵⁷ J.C.C. (Clarke), “The Turkish Petroleum Company and Iraq Oil Policy,” 04 February 1924, P.D. 13, POWE 33/183.

⁵⁸ Edith Penrose and E.F. Penrose, *Iraq: International Relations and National Development* (London: Ernest Benn, 1978), 60-66.

profit” from the TPC, since they wanted to avoid paying corporate taxes in Britain. Although Amery did not say so explicitly, it made more sense for the companies to pay as little as possible for crude oil, as they could make their profits downstream rather than share them with each other or Baghdad.⁵⁹

With the U.S. companies on board, the TPC acquired a seventy-five year concession from the Iraqi Government in 1925 (originally for only 192 square miles but extended to most of Iraq east of the Tigris in 1931). Besides the fact that no oil had yet been discovered in Iraq, a number of problems remained. As one financial mission to Iraq reported to the Colonial Secretary, as much as “[we] may hope that Iraq may in the future derive a large revenue from oil... it would be rash to regard this as a certainty,” especially in the short run. Not only was the border dispute between Iraq and Turkey still unresolved, but there was also the small matter of a constructing a pipeline to the Mediterranean. The commission concluded that Baghdad was unlikely to “receive any appreciable revenue” from the TPC “for another seven years,” which meant that Britain would have to wait a little bit longer before oil revenues would pay for the British presence in Iraq, one of the lynchpins of its entire Middle Eastern policy.⁶⁰

Britain had nonetheless after years of political, diplomatic, and commercial wrangling finally established the preconditions for Iraq to become a major supplier of oil to the British oil empire. But London’s success at pacifying the many national and private interests within an interest in the future of the Iraqi oil industry was shadowed by a major setback that shattered one of the pillars of Britain’s oil policy since 1918.

⁵⁹ L.S.A. (Amery), “Iraq: Turkish Petroleum Company: Memorandum by the Secretary of State for the Colonies,” C.P. 108 (25), 23 February 1925, CAB 24/172. See also: Amery, “Iraq: Turkish Petroleum Company,” C.P. 171 (25), 18 March 1925, CAB 24/172.

⁶⁰ After running a budget deficit its first two years, Iraq had a healthy surplus in the 1923-24 of 9,000,000 rupees (£670,320), but this would be quickly wiped out since Iraq was obligated under the terms of the 1923 Treaty of Lausanne to pay its share of the Ottoman public debt, as well as massively increase its military spending in order to comply with a 1924 Military Agreement with Britain that would allow London to begin drawing down its forces in Iraq. Colonial Office, “Iraq: Report of the Financial Mission appointed by the Secretary of State for the Colonies to enquire into the Financial Position and Prospects of the Government of Iraq, 1925,” Middle East No. 6, May 1925, CAB 24/173.

The Shell-Burmah-APOC Merger Proposals, 1922-1924

Expanding the British presence in the Middle East and forming an “all British” major oil company had been the foundations of the Britain’s postwar oil policy. Disputes with France and the United States over the future of Iraq had delayed implementation of the former, but all obstacles appeared to have been overcome by 1922. Britain had not been so fortunate when it came to the formation of an “all British” major company. London had expected that the economic fruits of its labors in Iraq would accrue to a mighty “all British” Shell, which would then challenge the heirs of the Standard Oil Trust for commercial dominance not just within the British Empire, but around the world. Efforts had stalled following the failure of the Harcourt-Deterding Agreement in 1919, but in spite of the reluctance of various interest groups that were committed to preserving the status quo, elements within the British Government, not to mention Shell and Burmah, were determined to try at least once more.

The last, and most ambitious, attempt to create a “British” Shell took place in 1922.⁶¹ This effort entailed a merger between all three of the major British oil companies: Shell, APOC, and Burmah. Shell and Burmah worked out complicated formula whereby the latter would purchase the government’s shares in APOC and combine with Shell Transport and Trading to “extinguish” the Dutch majority within the Shell Group, again excepting those subsidiaries operating within Dutch territory.⁶² The final product would have created a true British competitor to Standard Oil’s global predominance. Under the proposed amalgamation, shares within the reorganized Shell Group would be divided as follows: 10.68% to Burmah, 33.24% to Shell Transport and Trading, and 6.25% to APOC, totaling 50.17% to British interests. The remaining 49.83% would remain in Dutch hands.⁶³ The British Government estimated that

⁶¹ The discussion of this episode in Shell’s official history is completely inaccurate and riddled with errors. It claims that the “Harcourt Committee” resurrected the idea of orchestrating British control of Shell through a merger with APOC. Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 2 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 256. This would have been some feat for Lewis Harcourt, who committed suicide in February 1922 following accusations of pedophilia.

⁶² Philip Lloyd-Greame, “Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum,” 06 January 1922, C.P. 3637, CAB 24/132.

⁶³ “Constitution of Royal Dutch-Shell group and proposed basis of formation of [the] new amalgamated group,” no date, Appendix I to: Lloyd-Greame, “Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum,” 06 January 1922, C.P. 3637, CAB 24/132.

Shell, APOC and Burmah produced about 13,107,910 tons of oil, about 12% of global oil production, compared to the 15,857,000 tons produced by the various Standard Oil companies, about 14% of global production.⁶⁴ Completion of the merger would have also eliminated any need for London to retain its stake in APOC, which had been a source of discomfort within both the government and the company.

The British Government first began studying the matter in January 1922, when the Petroleum Minister, Philip Lloyd-Greame, raised the matter before the Cabinet. His report included an impassioned defense of the merger by the Managing Director of Burmah, John Cargill. Besides recapitulating the commercial benefits of the agreement (such as a 50% reduction in capital costs and operating expenses), Cargill tried to convince the government that a Shell-AIOC-Burmah would enhance Britain's strategic position by eliminating its reliance upon the Persian oilfields to fulfill its military requirements. Rather than securing its fuel oil requirements just through the supply contract with APOC, a British-controlled Shell would guarantee Britain's "full requirements of *all* Petroleum products." British companies could then pool their resources against Standard Oil rather than each other. Although Burmah was enthusiastic about merging with Shell in any event, it lacked the financial weight to ensure a British majority without the inclusion of the government's shares in APOC.⁶⁵ Lloyd-Greame conceded from the start that the Shell Group was a tempting prize. It was a global enterprise comprising over 100 subsidiaries and capitalized at £300,000,000, while its British competitors were "at present considerably its inferiors in experience and in knowledge of all phases of the petroleum industry [...]."⁶⁶

⁶⁴ Petroleum Department, "Production of Petroleum by the Under-Mentioned Companies According to Latest Figures Available," 20 March 1922, O.S.C. 7, ADM 116/3452.

⁶⁵ "Proposed Combination of the Royal Dutch/Shell, Burmah, & Anglo-Persian Companies: Memorandum by the Managing Director of the Burmah Oil Company," no date (according to a copy of the memorandum enclosed within ADM 116/3452, it was dated 29 July 1921), Appendix III to: Lloyd-Greame, "Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum," 06 January 1922, C.P. 3637, CAB 24/132. Emphasis in the original.

⁶⁶ Lloyd-Greame, "Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum," 06 January 1922, C.P. 3637, CAB 24/132. Shell produced almost three times more oil than APOC and Burmah combined (9,667,910 tons vs. 3,440,000 tons). Shell-Mex – established following the merger of Shell and Mexican Eagle's British marketing subsidiaries in 1921 – was also the largest importer in Great Britain at 1,243,614 tons (28%), almost twice as much as APOC and British Petroleum with 653,389 tons (15%). The three firms lagged behind the Standard Oil companies when it came to combined oil production (15,857,000 tons) but were comfortably ahead in terms of their share of Britain's oil imports: 60% including the Admiralty vs. 26% for the Anglo-American Oil Company, the British subsidiary of the Standard Oil

The Admiralty still was not interested. The Royal Navy received 40% of its annual fuel requirements through its supply contract with APOC, and aside from a small contract with Burmah in the Far East, it purchased the remainder on the open market. By reducing the number of potential sellers, the Admiralty believed that the merger would hinder its ability to purchase oil on the market at a reasonable price. The only way to win Admiralty support was to ensure that Shell signed a new agreement with the Admiralty that provided the latter with greater amounts of oil than under its existing APOC contract at a discounted rate. Specifically, the Admiralty demanded a “perpetual” contract for 250,000 tons with an option to purchase an additional 150,000 tons at 20/- per ton (30/- minus a 10/- rebate on any excess profits, which was the existing arrangement with APOC), to be delivered at facilities of the Admiralty’s choosing and at the same specifications as provided by APOC. The Admiralty even admitted that it had drafted the terms with the specific intention of provoking their rejection by Shell.⁶⁷

As far as British foreign policy was concerned, the merger could antagonize the United States by creating the impression that the British Government was attempting to create a competitor to Standard Oil. Lloyd-Greame surmised that U.S. acquiescence would have to be bought through an arrangement with U.S. oil companies over their demands for concessions in Northern Persia, Romania, and Iraq. On the other hand, elimination of the government’s stake in APOC would remove a major source of irritation in Anglo-American oil relations. There were also major savings in public expenditure. Unless the government was willing to spend the extra capital required to fund APOC’s continued development, the only recourse was to raise money through the issuing of public stock, which would eliminate the government’s majority stake. Immediately selling the government’s shares was not advisable, since “the present is the worst possible time for realising an adequate price.” Lloyd-Greame suggested that the government should accept “the risk of diplomatic difficulties” until APOC’s share price improved.

Company of New Jersey (Jersey). Committee on Oil Companies Amalgamation, “Memorandum from Petroleum Department,” 20 March 1922, O.S.C. 7, CAB 27/180.

⁶⁷ “Note on proposal tentatively put forward by the Admiralty with regard to additional supplies from the new group if the amalgamation scheme is approved,” no date, Appendix IV to: Lloyd-Greame, “Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum,” 06 January 1922, C.P. 3637, CAB 24/132.

Retaining the shares also gave the government continued leverage over APOC to prevent a merger with Shell on terms unacceptable to London. Ultimately, however, the government would have to yield any meaningful interest in the operations of APOC, as Shell executives had made it clear that “[they] refuse to be partners with the government in the marketing business,” and would only accept having the government participate as a “sleeping partner,” which was unacceptable to London, since it would still have entailed financial obligations without any effective managerial control.⁶⁸

Another consideration was the possible reaction of Shell and APOC if the merger fell through. Lloyd-Greame doubted that APOC “would remain in isolation in competition with both the Royal Dutch-Shell group and the Standard,” and was, in fact, “confident that the Anglo-Persian will enter into closer relations with the Standard,” because APOC was flush with crude oil but lacked the downstream capacity to dispose of it, unlike Standard Oil. So long as this did not result in a diminution of the government’s control of APOC, a closer working arrangement between APOC and Standard might actually “be good policy as well” by forestalling the worst case scenario, a rapprochement between Shell and Standard, which would almost certainly squeeze APOC into submission. Lloyd-Greame considered this unlikely but warned that “conditions might easily change, and if the commercial attractions of co-operation become sufficiently strong to outweigh oil rivalries, it might come about quickly.”⁶⁹

In March 1922, the government established special Cabinet Committee on Oil Companies Amalgamation chaired by the President of the BOT and future Prime Minister, Stanley Baldwin, to render a decision as to whether the government should support the merger. Several British ministries including the Foreign Office, Treasury, Admiralty, Colonial Office, India Office, and the BOT participated in the deliberations.⁷⁰ The proposed merger drew fire from across Whitehall.⁷¹ One critical analysis conceded

⁶⁸ Lloyd-Greame, “Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum,” 06 January 1922, C.P. 3637, CAB 24/132.

⁶⁹ P. Lloyd-Greame, “Proposed Amalgamation of the Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies: Memorandum by the Minister in Charge of Petroleum,” 06 January 1922, C.P. 3637, CAB 24/132.

⁷⁰ T. St. Quintin Hill (Secretary), “Committee on Oil Companies Amalgamation,” 06 March 1922, O.S.C. 1, CAB 27/180. See also: “Committee on Oil Companies Amalgamation: Heads for Discussion,” 10 March 1922, O.S.C. 3, CAB 27/180, which offers a list of the possible benefits for the British Government from the scheme.

that, although Shell controlled several sources of production, it “cannot supply Admiralty quality oil from Mexico, California, Trinidad, Venezuela, Egypt, etc. and the Admiralty would not want oil from these sources instead of Persia except in an emergency.” Furthermore, the government could not afford to ignore the political dimensions, for it would be assenting to the creation of a gigantic British industrial conglomerate after it had justified the original purchase of APOC shares in 1914 to prevent such an outcome. Critics would also claim that the merger was yet another step toward creating a global oil monopoly in case Shell and Standard ever reached an accommodation. Ultimately, the merger was a poor idea that “does not appear to offer [the] prospect of anything but a shadow of British control over Shell operations,” while inviting Dutch participation in two British companies that heretofore were free of any degree of foreign ownership.⁷²

The Admiralty laid out its objections more fully in March 1922.⁷³ The Admiralty dismissed the argument that a merger was necessary to contain Standard Oil, which was not as “all-powerful” as alleged. Besides, most of the Admiralty purchases of U.S. oil came from suppliers other than Standard Oil. The merger would, however, create a monopoly for Shell in the Far East by allowing it to absorb Burmah. The Admiralty also reiterated its complaint that Shell’s sources of oil were too dispersed and not of the requisite quality, unlike those of APOC, which “are suitably situated strategically.” The Admiralty also believed that the merger would jeopardize the future of its supply contract with APOC. Finally, the Admiralty pointed out that the merger did not actually increase the amount of oil owned by Britain, since

⁷¹ The Admiralty first took up cudgels, but it was joined by the Treasury, Board of Trade, Colonial Office, India Office, and Foreign Office as the debate wore on. Director of Contracts (Admiralty), Minute for the Fourth Sea Lord, 28 November 1922, ADM 116/3452.

⁷² C.W., “Proposed Amalgamation of Royal Dutch Shell, Burmah and Anglo-Persian Oil Companies: Memorandum for Board,” 08 February 1922, ADM 116/3452. The provenance of the memorandum is unclear, but it appears to be a product of the Board of Trade. The memorandum argued that the merger had only been proposed because Shell was anxious to preserve its connection with APOC once their 1912 marketing agreement expired. In 1912, APOC, then in a period of extraordinary financial difficulties, agreed to market most of its crude oil and gasoline through the Asiatic Petroleum Company, a Shell subsidiary. The agreement did not include APOC’s fuel oil production, which went to the Admiralty after 1914.

⁷³ The matter had been discussed during meeting of the Admiralty Board on 02 March 1922, when they considered a paper on the proposed merger by Fourth Sea Lord. I have been unable to locate a copy of this paper, but the board was unimpressed by the thought that the merger would provide only “shadow” British control of Shell while allowing “an intrusion of Dutch influence” into both Burmah and APOC. “Extract from Board Minutes: Proposed Amalgamation of Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies,” 02 March 1922, ADM 116/3452.

many of Shell's assets were located in foreign countries that had no formal ties to Britain. Accordingly, "[it] appears to them [the Admiralty] to be an unfortunate suggestion that H.M. Government should at this stage surrender one of its valuable investments in private enterprises which has repaid them handsomely in the past six years and promise to be highly lucrative in the future."⁷⁴

Another factor militating against the merger was the fact that the 1914 share purchase had turned out to be a windfall for London. The British Government's initial investment of £2,200,000 in 1914 had yielded an exceptional rate of return. One 1922 calculation estimated that the government had already earned £17,410,000 from its 1914 share purchase based on additional tax receipts, appreciation in the value of its original shares, savings by the Admiralty's contract with APOC, and the Admiralty's potential savings from its dealing with other suppliers thanks to competition from APOC.⁷⁵

The Cabinet committee considering the merger reached a decision in June 1922. The committee concluded that, whereas the 1914 agreement with APOC had succeeded in "[placing] the Admiralty in a position to draw a large nucleus of their naval requirements of oil fuel from a source which was independent of Foreign Trusts and under Government control," the proposed merger did not offer an alternative means of acquiring "effective and permanent control, which would be exercised continuously in British National interests [...]." The committee agreed with the Admiralty that the merger would undermine the basis of the latter's existing arrangements with APOC, while resulting in monopoly control of Far Eastern oil reserves in Borneo and Sarawak (today a part of Malaysia). An enlarged Shell group would also have little interest in developing high-cost fields, which would curtail any increases in imperial production and probably leave India dependent on imported oil. Finally, the merger would harm Anglo-American relations, since Washington would probably object to any arrangement that gave the

⁷⁴ Committee on Oil Companies Amalgamation, "Proposed Amalgamation of Royal Dutch Shell, Burmah and Anglo-Persian Oil Companies: Statement of Admiralty Views," 11 March 1922, O.S.C. 5, CAB 27/180.

⁷⁵ This figure did not include investments made by the British Government after 1914, which "will in due course give large additional gains." "Estimate of Return obtained by His Majesty's Government on their original investment of £2,200,000 in the Anglo-Persian Oil Co., Ltd.," no date or author (circa June 1922), ADM 116/3452. By contrast, Iran's royalties between 1912 and 1924 added up to only £3,700,000, largely as a result of APOC's efforts to pay as little to Iran as possible. Mostafa Elm, *Oil, Power, and Principle: Iran's Oil Nationalization and its Aftermath* (Syracuse: Syracuse University Press, 1992), 17-22.

appearance of “setting up an organisation in opposition to the Standard Oil Company [...]” Bearing in mind APOC’s assurances that its share price would increase in the future, the committee recommended that the government retain its shares in APOC and oppose the merger with Shell.⁷⁶

The following September, Baldwin confided to the Managing Director of Burmah (Robert Watson, who had favored the merger) that the political obstacles were too daunting. In spite of the obvious commercial benefits, too many members of his own Conservative Party, Baldwin conceded, were personally invested in the success of APOC, while the Labour Party was unlikely to support selling off the government’s stake in such a profitable enterprise. Moreover, there was bound to be cross-party opposition to the formation of yet another major oil “trust,” while the Americans would complain about the creation of a rival to Standard Oil.⁷⁷

Although the committee’s report was the death-knell of the six-year project to bring Shell under British control, the government continued to examine the possibility of selling of its shares in APOC. Matters came to a head in late-1923 following accusations of mismanagement at APOC and a renewed effort by Shell and Burmah to push through a merger with APOC along the lines suggested in 1922. This effort was backed by, of all people, Winston Churchill, who was probably the only person capable of winning over the Admiralty. The former First Lord had been unceremoniously dumped by the electors of Dundee in 1922. After being approached by R. Waley Cohen (the Managing Director of Anglo-Saxon Petroleum) in the summer of 1923 and desperate for cash while searching for a new parliamentary seat, Churchill asked Shell and Burmah for £10,000 if his services proved unsuccessful and for £50,000 in case the merger went through.⁷⁸

Churchill turned out to be a failure as a lobbyist, as the Admiralty was unimpressed by his arguments. The latter were determined to maintain their favorable supply contract (which at the time still included a

⁷⁶ Committee on the Proposed Amalgamation of Royal Dutch, Shell, Burmah and Anglo-Persian Oil Companies, “Report,” 12 June 1922, enclosed with: S.B. (Stanley Baldwin) to the Cabinet, 23 June 1922, C.P. 4050, CAB 24/137.

⁷⁷ T.A.B. Corley, *A History of the Burmah Oil Company, 1886-1924* (New York: Heinemann, 1983), 296-297.

⁷⁸ Although Churchill managed to broker a draft agreement between Shell, APOC, and Burmah in October 1923, fearful of the consequences for his political future, Churchill resigned in December to run as the “Constitutionalist” candidate in Epping and returned his £5,000 advance from Burmah. Corley, *History of Burmah*, 298-304.

rebate based on APOC's profits), and there was no guarantee that the new combine would agree to such a rebate or to a lower contract price for fuel oil.⁷⁹ Since it supplied the Royal Navy with 40% of its annual fuel requirements and placed it in an advantageous position regarding the purchase of the remainder, the Admiralty had no reason to complain about the government's relationship with APOC.⁸⁰ Sticking with APOC required confidence in the continued productivity of the Persian oilfields, and supporters of a merger pointed to the "sudden failure" of the Mexican oilfields, where production between 1921 and 1923 dropped from 193,398,000 barrels to 149,585,000 barrels (more than 22%).⁸¹ The Admiralty discounted the possibility of an imminent collapse in Persian output since APOC was the sole concessionaire in south Persia, which gave the government "full knowledge, and also control, in regard to the rate at which the fields are depleted." If anything threatened the future of the Persian oilfields, it was the possibility of Shell gaining control of the APOC concession. Shell would doubtless boost Persian production on account of its low cost, whereas London had no interest in depleting Persia's reserves quickly.⁸²

The Admiralty again concluded that a merger would be "entirely unsatisfactory from the Naval point of view." The primary objections still revolved around the lack of control the government would exercise over the operations of the enlarged Shell Group, the latter's monopoly over Far Eastern production, and the likelihood that the merger would eventually provoke "a substantial increase in the prices of oil

⁷⁹ "Questions on Mr. Churchill's Scheme," no date or author (circa November 1923); and note to the First Lord of the Admiralty (Amery), "Mr. Churchill's Replies on the Oil Fuel Question," 14 November 1923, no author (probably the First Sea Lord, Beatty); both in: ADM 1/8658/55.

⁸⁰ APOC's annual sales of fuel oil to the Admiralty between 1921/22 and 1932 averaged over 500,000 tons (peaking at 621,118 tons in 1930), although the Admiralty's share of the company's total fuel oil sales declined from one-quarter to one-seventh during this period. R.W. Ferrier, *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982), 668.

⁸¹ Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 5. Contrary to much of the existing historical literature, the decline in Mexican oil production after 1921 was almost entirely the product of geological factors, rather than any concerns' on the part of the oil companies about their property rights. Foreign companies dominated the industry and could retaliate against "revenue expropriation" through production cutbacks and by appealing to Washington. Mexican governments of the 1920s could neither afford the loss of tax revenue (as much as one-third of government receipts), nor could they risk that the U.S. Government or the oil companies would support rival political factions within Mexico. Consequently, the major oil companies continued to invest large amounts money searching for new oilfields for several years (until 1926) after the postwar peak in production (1921): "They simply could not find sources of petroleum that could be extracted at a reasonable price using existing technology." Stephen Haber, Noel Maurer, and Armando Razo, "When the Law Does Not Matter: The Rise and Decline of the Mexican Oil Industry," *Journal of Economic History* 63: 1 (2003): 1-32, *passim* (quotation from pg. 3).

⁸² L.S.A. (Leo Amery), "Admiralty Views on the Proposed Sale of the Government's Holding in the Anglo-Persian Oil Company: Memorandum by the First Lord of the Admiralty," 10 January 1924, C.P. 20 (24), CAB 24/164.

products generally,” which the Admiralty could hardly avoid since it would have to purchase 60% of its oil requirements on the open market, where Shell would recoup any losses it made fulfilling APOC’s supply contract. The First Lord of the Admiralty had taken it upon himself to consult with Shell executives to inquire if they would be willing to conclude a new, long-term supply contract with the Admiralty to compensate London for the loss of the APOC rebate.⁸³ Finding “that in no circumstances would the [Shell] group bind itself by a long-term contract to supply at a fixed sum,” the First Lord concluded that “[the] differences of opinion on this point seems to me to be decisive, and to show that our interests and those of the Group are not in harmony and cannot be harmonized.” Any talk of a merger should therefore be halted, if only because “the Anglo-Persian Company is hampered in its management, by the fact of having this possibility of virtual extinction constantly hanging over its head.”⁸⁴

In the meantime, the Baldwin Ministry fell and was replaced by the first Labour Government. The change in governments did not have any effect on policy, as opposition to the merger was shared across party lines and by both politicians and officials. The Admiralty enjoyed the enthusiastic support of the Treasury, which had traditionally been ambivalent or hostile to the government’s stake in APOC. In spite of the change in ministers (Philip Snowden instead of Neville Chamberlain), the Treasury judged the Burmah-Shell merger proposal as an attempt by a “not too scrupulous [Shell] combine” to eliminate a promising competitor. Although the sagging international price of oil, and a possible mismanagement, had caused a significant drop in the value of the APOC stock (from £4 to £2½), the Treasury advised against any precipitate dumping of the government’s shares, reckoning APOC’s assets were valuable enough to cover any short-term losses in earnings and share prices. Like the Admiralty, the Treasury placed little credence in fears of any sudden collapse in Persian output as in Mexico, pointing to “the scientific advice received... that so far from their being any indication of failure all the signs go to show

⁸³ The terms are not listed in the memorandum, but they were 1,200,000 tons per year from any oilfield within the new oil combine (the point of supply to be determined by the Admiralty) at a cost of 20/- per ton, which was what the Admiralty were paying APOC after deducting the rebate. Note to the First Lord of the Admiralty (Amery), “Mr. Churchill’s Replies on the Oil Fuel Question,” 14 November 1923, no author (probably the First Sea Lord Beatty), ADM 1/8658/55.

⁸⁴ L.S.A. (Leo Amery), “Admiralty Views on the Proposed Sale of the Government’s Holding in the Anglo-Persian Oil Company: Memorandum by the First Lord of the Admiralty,” 10 January 1924, C.P. 20 (24), CAB 24/164.

the existence of an exceedingly large and extensive supply of oil which may well last for the full period of the concession” (until 1961).⁸⁵ The Treasury did, at least, devote a cursory mention to the political situation in Persia, concluding that “the obvious interest of the Persian Government in the maintenance of a reliable source of revenue... [is] the best protection against political disturbance.” The Treasury concluded that any merger with Shell should be “*unhesitatingly rejected*” and urged the government to make a public announcement “that on no account” would⁸⁶

On a pure profit-loss basis, the government’s decision continued to pay dividends. Between 1922 and 1928, savings through the Admiralty’s supply contract and the government’s rebate on APOC’s profits totaled £2,935,000, plus £4,272,000 in dividends and interest payments. In 1926-1927 alone, the British Government realized a profit of £8,125,000 when it received half of the 5,000,000 bonus shares distributed by the company, not including £11,250,000 worth of appreciation on its existing shares.⁸⁷ But the British Government did pay a heavy price for these profits, for London’s refusal to part with its shares in APOC doomed efforts to bring about British control of the Shell Group in 1918/19 under the “Harcourt-Deterding” Agreement and again in 1922/24 when Shell and Burmah worked out their own plan independent of London. As of 1924, one of the key tenets of Britain’s postwar oil strategy – the creation of an “all British” major oil company capable of servicing the requirements of the British Empire and breaking the power of the major U.S. oil companies – had sputtered. In hindsight, London’s preoccupation with eliminating “foreign” control of Shell seems peculiar. Shell had rendered yeoman service to the Allied cause between 1914 and 1918, and there was no reason to think this would not be the case in future, which probably reduced the urgency of bringing the Shell Group under British control if it

⁸⁵ One of APOC’s great technical successes of this period was implementing “unit operation” of its Iranian fields starting in 1927 that maximized extraction rates. Ronald Ferrier, “The Iranian Oil Industry,” in: *From Nadir Shah to the Islamic Republic*, ed. Peter Avery, Gavin Hambly, and Charles Melville, vol. 7 of *The Cambridge History of Iran* (Cambridge: Cambridge University Press, 2008), 646-647.

⁸⁶ P.S. (Philip Snowden), “Anglo-Persian Oil Company: Note by the Chancellor of the Exchequer,” 26 January 1924, C.P. 32 (24), CAB 24/164. Emphasis in the original.

⁸⁷ Cadman to Commander I.E.G. Maund (Royal Navy, CID), 14 March 1928, British Petroleum Archive, Arc. Ref. 71044 (hereafter cited as: BP, No.).

jeopardized the Admiralty's fuel oil contract with APOC and promoted further cartelization within the international oil industry.

The Creation and Early Years of the Oil Board, 1925-1931

By the mid-1920s, British policymakers had embraced an optimistic view of global oil supplies. While refraining from making any firm projections concerning future oil production, in a global survey from 1926, the Petroleum Department noted “that up to the present supply has always been equal to the demand.”⁸⁸ Unfortunately, the Empire’s contribution had heretofore been negligible. In 1926, imperial production (concentrated primarily in India, Trinidad, and Sarawak) was only 1.8% of global production and only 3.8% of Great Britain’s total imports (1,730,000 barrels out of 46,000,000 barrels). This figure would contract to only 3.2% in 1927 (1,560,000 barrels out of 49,000,000 barrels).⁸⁹ But London could take comfort in the increase in Persian production, which the Petroleum Department expected would double over the next decade, with the surplus going to Britain since there was no other market for it. The department also placed great hopes on Iraq: “It is obvious that the discovery of a field with a production equivalent to that of Persia, in Iraq, with the completion of pipe lines to the Mediterranean would have a great effect on the oil situation.”⁹⁰

New discoveries and improved extraction and refining techniques had rejuvenated the industry since the postwar “oil scare,” and there was even cautious optimism in London about the prospects for conservation within the United States.⁹¹ The Petroleum Department also took note of efforts by Jersey

⁸⁸ Oil Fuel Board, “Oil Supplies of the World: Memorandum prepared in the Petroleum Department, Board of Trade,” July 1926, O.B. 19, CAB 50/3.

⁸⁹ By 1928, the British Government had to concede that “on present evidence the possibility of any considerable increase in Empire production... appears remote.” Petroleum Department, “Petroleum Industry in the British Empire,” February 1928, POWE 33/253. Part of the problem was that only one-tenth of imperial production actually found its way to Great Britain. In trying to find a way to address this imbalance, a supplementary note to the aforementioned report concluded that “it is very doubtful whether a preferential rate of duty on empire produced oil would have any useful effect.” “British Empire Production: Supplementary note in reply to [the] points raised by Mr. Grylls,” no date or author (handwritten notation reads: “H.P.W.G.[.] Feb: 1928”), POWE 33/253.

⁹⁰ Oil Fuel Board, “Oil Supplies of the World: Memorandum prepared in the Petroleum Department, Board of Trade,” July 1926, O.B. 19, CAB 50/3. Of course, Middle Eastern oil could only be used if the major oil companies holding the concessions in Persian and Iraq invested in expanding local pipeline capacity. Accordingly, the Oil Board was pleased to note in February 1927 that Anglo-Persian would complete later that year a third pipeline from its Persian oilfields to the APOC refinery and port at Abadan, increasing the amount of oil that could be pumped from 4,750,000 tons to 7,000,000 tons per annum. APOC was also devoting “close attention” to the matter of expanding the output of its Abadan refinery. C.P. Hermon-Hodge (Joint Secretary, Oil Board), “Persian Oil Field – Increase in the Potential Trans [sic] from Oil Field to Abadan and Refinery Facilities to Deal with the Extra Crude,” 26 February 1927, O.B. 22, CAB 50/3.

⁹¹ Such hopes proved unduly optimistic. As the Oil Board’s Fifth Annual Report explained, the U.S. Government’s efforts to limit production in 1929 to the 1928 level had incurred the wrath of independent producers. Until

Standard, Shell, and APOC to control over-production during a conference at the Achnacarry Castle in the autumn of 1928 (the so-called “As Is” Agreement).⁹² In order to avoid future outbreak of price-cutting due to overproduction, signatories of the original agreement (plus supplements signed in 1930, 1932, and 1934) agreed to respect existing markets for oil “as is” in order to stabilize the existing market. Signatories also agreed to abide by a complicated pricing formula that used the price of oil at the Gulf of Mexico as the benchmark.⁹³ Since the United States was the largest producer of oil at the time and the largest exporter until it was overtaken by Venezuela in the late-1920s, it made sense to use the price in Gulf of Mexico as a benchmark. Companies operating in the Middle East had little incentive to undercharge their customers when they could always add the “phantom freight” from Texas to the price they added to the f.o.b. price to equalize the c.i.f. price with that of oil from the Gulf of Mexico. Until a second basing-point in Abadan was established in 1945, every government “strong” or not, paid for “oil as if it had been pumped and shipped from Texas, a costly fantasy to which all the great powers of the era, capitalist and noncapitalist alike, duly adhered.”⁹⁴

The fact that Britain was dependent on foreign supplies, while not desirable, was not considered crippling. Only two great powers, the United States and Soviet Union, enjoyed the luxury of significant

Washington secured legal authority to enforce conservation, “it is [too] early to say whether it is likely to be finally successful.” Lord Thomson (Secretary of State for Air; President of the Oil Board), *et al.*, “Oil Board: Fifth Annual Report,” 01 July 1930, O.B. 51 (also C.I.D. Paper No. 1007-B), CAB 50/3. As late as 1931, with the U.S. oil industry in the midst of an existential crisis following the discovery of the East Texas field the previous October, industry executives such as Arthur Hearn (formerly of the Admiralty and now a member of APOC’s Board of Directors) continued to hope that the United States was “slowly attaining a great comprehension of its responsibilities in regard to oil” to the rest of the world. “The Oil Industry in the Post-War Period,” 05 June 1931, no author (almost certainly Hearn, since the file enclosing the article bears his name), enclosed with H.T. Kemp to T.L. Jacks (APOC representative in Persia), 26 June 1931, BP 30153.

⁹² Petroleum Department (Board of Trade), “Oil Production and Development: General review of outstanding points of importance,” no date (circa 1929), O.B. 32, CAB 50/3.

⁹³ U.S. Senate, Select Committee on Small Business, *International Petroleum Cartel (Reprint)*, 94th Congress, 1st Session (Washington, DC: U.S. GPO, 1975), 197-210, 352-356. A copy of the agreement is reprinted as Appendix III to: J.H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, vol. 2 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1994), 528-534.

⁹⁴ Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell University Press, 1994), 199, 221-222. Even companies or countries that did not join the Achnacarry cartel (e.g. the Soviet Union) ended up abiding by its provisions, since they had much to gain from selling oil at an artificially established price and lacked the downstream capacity to challenge the majors through price-cutting. Bamberg, *History of BP*, 107-117; John Blair, *The Control of Oil* (New York: Pantheon Books, 1976), 54-63, 113-115; Jonker and Zanden, *History of Shell*, 278-282; Nowell, *World Oil Cartel*, 191-200; Sampson, *Seven Sisters*, 105-108; and Mira Wilkins, *The Maturing of Multinational Enterprise: American Business Abroad from 1914 to 1970* (Cambridge: Harvard University Press, 1974), 87-88, 233-234.

domestic production, and there was no expectation by the early-1930s that Britain would be fighting either of them. Most of Britain's possible rivals – Japan, Italy, and Germany – lacked London's relatively easy access to overseas supplies, and its close relationship to a major oil-producer such as the United States. The latter was still a major supplier of Britain: well over 40% of U.S. oil exports in 1927 (6,859,505 tons) went to the British Empire, and roughly 40% of Great Britain's imports in 1926 came from the United States.⁹⁵ Even if the United States banned exports to the British Empire, the British still expected to deal with U.S. oil companies in Latin America and import U.S. oil indirectly from those markets into which it would be diverted if it was denied entry into the empire.⁹⁶

Close scrutiny of British planning documents reveals, however, a more alarming picture. In 1925, the CID established the Oil Fuel Board (renamed the Oil Board in 1927) chaired by a cabinet minister and staffed by representatives from both the armed services and various government departments to gauge Britain's oil and tanker requirements in wartime, determine sources of supply, and to offer recommendations to the CID to rectify any shortfalls.⁹⁷ In 1924, the Admiralty had tried to bludgeon its way into controlling the allocation of both "oil fuel" (fuel oil and diesel) and tanker tonnage in wartime. The Admiralty based its claim on the fact that it would be Britain's single-largest consumer of petroleum products in wartime. Britain's survival also depended on the Admiralty's ability to keep the sea lanes open, particularly imports of food. The Board of Trade (backed by departments such as the Air Ministry) took umbrage at the idea of granting control over a vital resource to the military. Since oil was as vital to the civilian economy as it was to the military, it made sense to create an interagency committee answerable to the Cabinet that would scrutinize Britain's wartime oil requirements and determine

⁹⁵ J.J. Llewellyn (Civil Lord of the Admiralty; Chairman of the Oil Board), *et al.*, "Oil Board: Thirteenth Annual Report," 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7. Figures for 1927 are unavailable.

⁹⁶ "Some brief notes on the possible effect of a prohibition by the United States Government of [the] export of Petroleum to British Empire countries," no author or date (probably the Petroleum Department; circa 1928), POWE 33/765.

⁹⁷ C.P. Hermon-Hodge (Joint Secretary), "Oil Fuel Board: Composition and Terms of Reference," 01 May 1925, O.B. 1, CAB 50/3. The Oil Fuel board was initially chaired by James Stanhope (Civil Lord of the Admiralty), while William Peel (First Commissioner of Works) served as the president.

allocations between the military and civilian economy.⁹⁸ No action was taken to resolve this impasse until 1925, when the Principal Supply Officer's Committee (the logistical planning arm of the CID) completed an alarming assessment of Britain's oil supply position.⁹⁹

This committee estimated Britain's military and civilian oil requirements in wartime during the first year of operations at 11,169,620 tons fuel oil; 355,025 tons of aviation fuel (plus 97,509 tons of benzol, a type of synthetic fuel derived from the burning of coal in coke ovens); 1,680,760 tons of motor fuel; 415,762 tons of kerosene; and 166,000 tons of lubricants. The largest single consumer was the Admiralty, whose annual requirements of fuel oil during a war against a major rival naval power totaled 7,139,000 tons, whereas Britain's existing stocks throughout the empire amounted to 3,260,000 tons. As for the Army, assuming a starting force of five infantry and one cavalry divisions that would swell to 39 divisions by the end of the first year of hostilities, its annual demand for motor fuel would total 600,000 tons. The RAF would require 473,924 tons worth of aviation and motor fuel, and benzol. Finally, the BOT estimated civilian, industrial, and merchant marine demand at approximately 5,550,000 tons of oil products. Another pressing issue was the tanker shortage. The report estimated that Britain would require 470 tankers, with an average carrying capacity of 7,300 tons. In 1923, Britain could only rely upon 312 tankers, whose gross carrying capacity was 1,691,257 tons, about half of what was required. By the time war broke out, even if Britain's tanker fleet expanded, the best the committee could hope for was that the tonnage deficit "might be improved by assistance forthcoming from America or other sources [...]"¹⁰⁰

⁹⁸ C. (Chelmsford), "Oil Fuel: Admiralty Control in War Time: Memorandum by the First Lord of the Admiralty," 03 July 1924, 500-B; S.W. (Sidney Webb), "Oil Fuel: Control in War Time: Memorandum by the President of the Board of Trade," 16 July 1924, 501-B; C., "Oil Fuel: Admiralty Control in War Time: Memorandum by the First Lord of the Admiralty," 23 July 1924, 506-B; T. (Lord Thomson), "Oil Fuel: Control in War Time: Memorandum by the Secretary of State for Air," 25 July 1924, 507-B; and S.W., "Oil Fuel: Control in War Time: Memorandum by the President of the Board of Trade," 25 July 1924, 509-B; all in: CAB 4/11.

⁹⁹ The key source on the operations of the Oil Board is Orest Babij's "The Royal Navy and Inter-War Plans for War against Japan: The Problem of Oil Supply," in: *Merchant Marine in International Affairs, 1850-1950*, ed. Greg Kennedy (London: Frank Cass, 2000), 84-106. The only shortcoming of this article is its narrow focus on logistical issues, as Babij does not relate his findings to Britain's overall postwar oil policy.

¹⁰⁰ Noel Birch (Chairman of the Principal Supply Officer's Committee, CID), *et al.*, "Control of Oil Fuel in War: Report," 28 February 1925, P.S.O. 37 (also 579-B), enclosed with: Hermon-Hodge (Oil Board) to the CID, 01 May 1925, O.B. 2, CAB 50/3. The report's major recommendation to the CID was it "should appoint a Standing Sub-Committee, to be called the Oil Fuel Board," to make annual reports to the CID in peacetime, and, in wartime, advise the CID and all concerned departments how "to conserve and maintain adequate supplies [of oil], including

The tanker shortfall was especially troubling to the Royal Navy. The Admiralty estimated that it would need 1,603,000 tons worth of tanker tonnage to convey the Royal Navy's annual requirements of fuel oil. A further 24,000 tons would be required to carry the 83,000 tons of light petroleum products required by the Admiralty annually in wartime. The Admiralty's own tanker fleet only totaled 260,000 tons, while the combined tonnage of every British tanker larger than 3,000 tons only equaled 2,300,000 tons. In other words, the Admiralty would tie up almost 70% of Britain's available tanker tonnage, leaving the other the armed services and the civilian sector to divide up the remaining 30% and whatever neutral tonnage Britain could lay its hands on.¹⁰¹

One year later, the Admiralty advised the Oil Fuel Board that, under ideal circumstances, its reserves should equal "approximately 7 million tons laid down in suitable strategic locations" to cover an estimated wartime demand of 7,451,990 tons. During the first year of hostilities in the Far East, 48% of the Admiralty's requirements (3,558,100 tons) would be drawn from reserves while the remainder (3,893,890 tons) would be imported. Existing stocks on January 1926 were 3,190,800 tons short of the desired figure, which meant that if war broke out that year, the Admiralty would have to import an additional 3,768,740 tons on top of the aforementioned 3,893,890 tons to make up the existing shortfall in reserves (as well as fuel British tankers). This doubling of the Royal Navy's oil import requirements meant that a further eighty-three tankers would have to be enlisted into Admiralty service for that year (either to carry the oil or serve as floating storage tanks). As for the additional oil itself, the entire amount would have to be imported from the United States, Mexico, or Venezuela, with 2,243,650 tons (almost 60%) going to Great Britain, while the remainder was divided between eleven different stations, the most important of which was Singapore, which would require an additional 680,000 tons.¹⁰²

the provision of tanker tonnage," with special emphasis on fulfilling the needs of Admiralty. The report also suggested "that every effort should be made to encourage and expedite research on the problem of [domestic] Oil Production," including synthetic production.

¹⁰¹ "Departmental Requirements of Oil Fuels," Appendix A to: Birch (Chairman, Principal Supply Officer's Committee, CID), *et al.*, "Control of Oil Fuel in War: Report," 28 February 1925, P.S.O. 37, CAB 50/3.

¹⁰² W.A. Egerton (Director of Plans) and J.W.L. Oliver (Director of Stores), "Admiralty Estimate of Requirements of Oil Fuel during the First Year's Hostilities for a War in the Far East (Previous Reference O.B. 4): Note by Admiralty as to modifications necessary on the stock position on 1st January 1926," 22 March (Oliver) and 25 March (Egerton) 1926, O.B. 16, CAB 50/3.

In 1927, the CID assigned the Oil Board with the task of evaluating the requirements of the Admiralty (and, eventually, the War Office and Air Ministry) during a Far Eastern War (i.e. Japan).¹⁰³ For the next eight years, the Oil Board confined itself to examining “at a rather leisurely pace” Britain’s oil needs in the event of a war against either Japan or (after 1929) the Soviet Union in Afghanistan.¹⁰⁴ The Oil Board operated from 1926 until its dissolution at the outbreak of the Second World War, when the Petroleum Department assumed its functions. During its existence, the Oil Board produced thirteen annual reports, while its various sub-committees produced dozens of studies concerning everything from synthetic oil production to the size and shape of oil containers to be used by the Army.¹⁰⁵ The annual reports also included estimates from the armed services and from the BOT or Petroleum Department regarding wartime military and civilian consumption and requirements, as well as the number of tankers needed and available to haul the oil.

In its first Annual Report from 1926, the Oil Board provided the following estimates for oil consumption in the event of a Far Eastern War in 1937: 7,451,900 tons of fuel oil for the Admiralty; 226,500 tons of gasoline for the Army; and 181,250 tons of aviation fuel, fuel oil, gasoline, and benzol for the RAF. Civilian consumption would rise from 4,879,000 tons of all oil products to 7,459,000 tons between 1925 and 1937. Britain would require 467 tankers of over 3,000 tons to transport the necessary imports (221 for military needs, 136 going to Great Britain for civilian purposes, and 110 to supply the civilian needs throughout the empire). The Oil Board estimated that, by 1937, 482 tankers of British, Admiralty, and neutral registry (including U.S. vessels) over 3,000 tons would be available, leaving a surplus of fifteen tankers. As of 1926, however, there was a shortage of sixty-two tankers: 459 required

¹⁰³ Hermon-Hodge (Oil Board), “First Annual Report: Note by the Secretary,” 25 February 1927, O.B. 21, CAB 50/3.

¹⁰⁴ The official historian of the British oil industry the Second World War criticizes the Oil Board for its lack of productivity during its decade in operation: the board took four years to draft a supply plan in the event of a Far Eastern War with Japan and met only three times between 1926 and 1930. Payton-Smith, *Oil*, 40.

¹⁰⁵ The early history of the Oil Board is summarized in: Payton-Smith, *Oil*, 39-40. The annual reports are numbered and located as follows: O.B. 20, 24, 33, 39, 51 (CAB 50/3); 71, 83 (CAB 50/4); 122, 134, 147 (CAB 50/5); 184, 230 (CAB 50/6); and 294 (CAB 50/7).

versus 397 available.¹⁰⁶ As of 1925, only 7,000,000 tons out of the 18,000,000 tons of oil consumed within the empire came from imperial or British-controlled sources. The Oil Board concluded that while the “safety and control” of the Persian oilfields was “a matter of vital importance,” Britain had to maintain the goodwill of the United States, since “a very large part of the total requirements of the Empire has to be met by the imports of refined products from the United States of America.”¹⁰⁷

Among the perennial issues mentioned within the Oil Board’s reports was the constant shortage of tankers. Higher than expected increases in civilian consumption exacerbated these shortages, which meant that even the imposition of rationing would not eliminate the deficit. The shortage of tankers was endemic throughout the interwar period, and between 1926 and 1935, the shortfall (even assuming civilian rationing) ranged from a low of three in 1929 to a high of ninety-eight in 1935. Only in 1930 did Britain’s tanker requirements not exceed the available supply:

No. of Annual Report (Date)	Deficit (With Civilian Rationing)
First Annual Report (1926)	62 (35)
Second Annual Report (1928)	60 (14)
Third Annual Report (1929)	49 (3)
Fourth Annual Report (1929)	64 (10)
Fifth Annual Report (1930)	56 (0)
Sixth Annual Report (1931)	85 (16)
Seventh Annual Report (1932)	74 (9)
Eighth Annual Report (1933)	83 (28)
Ninth Annual Report (1934)	69 (19)
Tenth Annual Report (1935)	98 (46) ¹⁰⁸

¹⁰⁶ The Second Annual Report of the Oil Board added that if the British Government had, in 1926, implemented “severe rationing of Civil requirements... the deficit would have been reduced to 35.” In 1927, the overall tanker deficit was estimated at sixty tankers (fourteen in the event of “drastic rationing”). William Peel (President of the Oil Board), *et al.*, “Oil Board: Second Annual Report,” 26 March 1928, O.B. 24 (also C.I.D. Paper No. 859-B), CAB 50/3.

¹⁰⁷ Peel (President, Oil Board), *et al.*, “Oil Fuel Board: First Annual Report,” 31 December 1926, O.B. 20 (also C.I.D. Paper No. 755-B), CAB 50/3.

¹⁰⁸ These figures are drawn from the Oil Board’s annual reports (CAB 50/1 to CAB 50/7). Figures in brackets refer to the deficit remaining following the enactment of civilian rationing.

Britain's Most Important Source of Oil: Venezuela, 1914-1933

Britain's major success during the 1920s at diversifying its sources of supply came not in the Middle East, but rather, in South America. Before and immediately after the First World War, Shell had dominated the Venezuelan oil industry.¹⁰⁹ Under Henri Deterding's leadership, the group had adopted the "straight-line" strategy of supplying markets from the nearest available source. Since Shell wished to expand its presence in the Western Hemisphere, it moved aggressively to acquire upstream operations in the United States, Mexico, and most importantly Venezuela. Having acquired an pre-existing concession in 1913, Shell started production in 1916 and found one of the world's richest oilfields (Barroso No. 2) around Lake Maracaibo in 1922.¹¹⁰ Meanwhile, U.S. major companies such as Jersey floundered for years despite expenditures of \$27,000,000 until it finally struck oil in commercial quantities in 1928 and took control over a successful independent British oil company in Venezuela (Creole Petroleum).¹¹¹

Before the war, Standard Oil and its subsidiaries (such as Waters-Pierce) had dominated the Latin American oil trade either as an exporter of U.S. crude or through marketing agreements with small British companies active in South America (Peru) until independent operators such as Weetman Pearson and Edward Doheny struck oil in Mexico and built their own vertically integrated companies after 1909. Nevertheless, the prewar British economic and financial presence in the region dwarfed that of the United States. In 1913, Britain sent 10% of its exports to Latin America, and it received an equivalent percentage of the latter's exports. Latin America also received 25% of Britain's direct and portfolio investment, which had increased from £80,000,000 to £1,100,000,000 between 1890 and 1913. U.S. foreign

¹⁰⁹ Except where indicated, the following discussion is based upon: Jonathan Brown, "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s," *American Historical Review* 90: 2 (1985): 375-386; Jonathan Brown and Peter Linder, "Oil," in: *The Second Conquest of Latin America: Coffee, Henequen, and Oil During the Export Boom, 1850-1930*, ed. Steven Topik and Allen Wells (Austin: University of Texas Press, 1998), 126-187; Jonker and Zanden, *History of Shell*, 244-251; Henrietta Larson, Evelyn Knowlton, and Charles Popple, *New Horizons, 1927-1950*, vol. 3 of *History of Standard Oil Company (New Jersey)* (New York: Harper & Row, 1971), 132-144; B.S. McBeth, *British Oil Policy, 1919-1939* (London: Frank Cass, 1985), 86-120; B.S. McBeth, *Juan Vicente Gómez and the Oil Companies in Venezuela, 1908-1935* (Cambridge: Cambridge University Press, 1983), 1-4, 65-66, 205-206; and Stephen G. Rabe, *The Road to OPEC: United States Relations with Venezuela, 1919-1976* (Austin: University of Texas Press, 1982), 3-93.

¹¹⁰ Brown and Linder, "Oil," 135-139 and 146-149.

¹¹¹ Jonker and Zanden, *History of Shell*, 244-246; Larson, Knowlton, and Popple, *New Horizons*, 41-42, and 134. Jersey would end up spending about \$40,000,000 before it finally began exporting Venezuelan crude: Brown, "Shifted Their Production," 377-379.

investment during this period also grew impressively (from \$308,000,000 to \$1,600,000,000 between 1897 and 1913), but it still lagged far behind that of Britain as of 1914.¹¹²

The World War sped up the process by which the United States came to exercise political and economic predominance over Latin America, as Britain liquidated its foreign assets to pay for the war effort. By 1929, U.S. foreign investment in Latin America had increased to \$3,462,000,000, which was probably the year that the United States surpassed Britain in this category.¹¹³ That year, U.S. investment in the Venezuelan oil industry was more than double the figure in 1924 (\$75,000,000 vs. \$161,600,000).¹¹⁴ After the postwar “oil scare,” the U.S. Government and major oil companies also sought to expand the U.S. presence within the oilfields of South America, especially Venezuela.¹¹⁵ Having run into British obstinacy in Iraq, the U.S. Government tried to dislodge the British from Venezuela. Relations had warmed after 1922 when Britain consented to U.S. participation in the Turkish Petroleum Company (TPC), and although it tolerated Shell’s “initial economic predominance” in Venezuela, according one historian, Washington continued to press for “U.S. economic hegemony,” for example by helping to block APOC from acquiring a concession.¹¹⁶

Shell’s position was secure but in decline. As of 1928, it controlled 125,000 barrels worth of production in Venezuela per day, compared to nil for Jersey, and 148,000 barrels per day across Latin America (including 25,000 barrels per day in Mexico), compared to 89,300 barrels per day for Jersey.¹¹⁷ But Shell’s market share (particularly in the United States) did not keep pace with its share of production,

¹¹² Paul Garner, *British Lions and Mexican Eagles: Business, Politics, and Empire in the Career of Weetman Pearson in Mexico, 1889-1919* (Stanford: Stanford University Press, 2011), 16-18.

¹¹³ Rabe, *Road to OPEC*, 195. U.S. investment in Central America was greater than that of Britain as early as 1919, while Canada followed in 1922. Wilkins, *Maturing*, 155.

¹¹⁴ Brown, “Shifted Their Production,” 380.

¹¹⁵ In 1919, U.S. oil companies maintained 28% of their capital in North America and 17% in South America, whereas in 1939, the figures were 12% in North America and 42% in South America. Brian McBeth, “Venezuela’s Nascent Oil Industry and the U.S. Tariff on Crude Oil Imports, 1927-1935,” *Journal of Iberian and Latin American History* 27: 3 (2009): 435.

¹¹⁶ Rabe, *Road to OPEC*, 22-33. APOC had expressed interest in purchasing concessions in Latin America, particularly in Venezuela, but had to back off due to the prevalence of legislation prohibiting the sale or operation of concessions by companies associated with a foreign government. Ferrier, *History of BP*, 551-561; and Bamberg, *History of BP*, 144-146.

¹¹⁷ The imbalance was even more pronounced in terms of refining throughput: 318,000 barrels per day for Shell compared to 47,000 for Jersey. Brown and Linder, “Oil,” 139.

and it slowly lost ground to capital-rich competitors such as Jersey, which gobbled up smaller companies such as Creole.¹¹⁸ Over the course of the 1920s and 30s, Gulf Oil, Jersey, and the Standard Oil Company of Indiana (before it sold its Venezuelan and Mexican subsidiaries to Jersey in 1932, the former – Lago Petroleum – being the largest U.S.-owned producing company in Venezuela that year) eroded Shell’s position, from 99% of Venezuelan output in 1922, to 51% in 1933, and only one-third by 1939, even though the group’s production in 1939 was double that of 1928.¹¹⁹ In just twelve years (1927 to 1939), Jersey’s production went from nil to 273,000 barrels per day – about 40% of its entire global output.¹²⁰ U.S. investment in Venezuela (overwhelmingly concentrated in the oil industry) more than doubled from \$75,000,000 to \$161,600,000 in just five years (1924 to 1929).¹²¹ From 1929 until nationalization in 1976, U.S. companies accounted for more than half of Venezuela’s production, and by 1945, the largest operator in Venezuela was Jersey’s subsidiary (Creole), which alone accounted for half of the country’s output, whereas Shell still produced only one-third.¹²²

The oil companies’ investments in Venezuela paid off handsomely. Production started slowly at 121,000 barrels in 1917, the year that exports began. Venezuelan output skyrocketed following the major oil strike on the shore of Lake Maracaibo. Between 1921 and 1935, Venezuelan production rose from 240,000 tons to 15,100,000 tons, and the country became the world’s second-largest oil producer for two years before the Soviet Union overtook it in 1931.¹²³ In 1928, oil wells in Venezuela were three times more productive than the most prolific state in the United States, California (1,252,900 barrels per year vs. 454,000 barrels), with over 80% of all wells drilled producing oil before 1935, and a cost of production less than one-third that of the United States (\$0.65 vs. \$1.98 in 1931).¹²⁴ Mexico was not even

¹¹⁸ Brown and Linder, “Oil,” 148.

¹¹⁹ Jonker and Zanden, *History of Shell*, 249-251; McBeth, “Venezuela’s Nascent Oil Industry,” 430; McBeth, *Venezuela*, 64; Rabe, *Road to OPEC*, 33-42; and Wilkins, *Maturing*, 32.

¹²⁰ Larson, Knowlton, and Popple, *New Horizons*, 144.

¹²¹ Brown and Linder, “Oil,” 148. U.S. oil investment in Venezuela averaged roughly 95% of total U.S. investment in the country between 1929 and 1940. McBeth, “Venezuela’s Nascent Oil Industry,” 435-436.

¹²² Brown and Linder, “Oil,” 169-171; McBeth, *British Oil Policy*, 92-93; and Rabe, *Road to OPEC*, 34.

¹²³ Jonker and Zanden, *History of Shell*, 249; McBeth, *Venezuela*, 63; Rabe, *Road to OPEC*, 196-197.

¹²⁴ McBeth, *Venezuela*, 1-2. Between 1922 and 1935, each oil well in Venezuela yielded 72,769 barrels of oil, whereas the average U.S. well produced only 2,804 between 1933 and 1935. McBeth, “Venezuela’s Nascent Oil Industry,” 430-431.

close: per day production of new wells drilled in 1928 was 268 barrels compared to 1,376 barrels in Venezuela. The major oilfields in Venezuela were also closer to New York and Britain than the major Mexican oil port (Tampico), and only 644 miles from the Panama Canal, which meant that Venezuelan oil was “favorably situated” to supply markets around the world, including the eastern United States, where it was cheaper than domestic crude oil.¹²⁵

Shell and Pan American Petroleum and Transport (a subsidiary of Indiana Standard since 1925) built major refineries on the islands of Curaçao during the First World War and Aruba in the 1920s, respectively, to process Venezuelan crude oil and facilitate exports to Europe.¹²⁶ In 1928, Venezuela replaced the United States as the world’s largest oil exporter, and by 1936, it exported almost as much oil (43,050,000 tons) as the next seven leading exporters combined – the United States, Peru, Iran, Romania, the Dutch East Indies, Iraq, and the Soviet Union (44,390,000 tons).¹²⁷ Venezuela’s exports in 1930 (20,000,000 tons) were more than double Britain’s entire imports (9,000,000 tons) that year.¹²⁸

Political conditions in Venezuela were also much more favorable to the oil companies than in either Mexico or even the Middle East (much less the Soviet Union).¹²⁹ In the case of the Mexico, besides endemic political instability after 1910, output from existing oilfields within the “Golden Lane” collapsed over the course of the 1920s due to saltwater contamination. Mexico also received twice as much in

¹²⁵ Brown, “Shifted Their Production,” 381-382; McBeth, *British Oil Policy*, 93; and McBeth, *Venezuela*, 1-2. The U.S. Tariff Commission estimated that deliveries of U.S. oil to the Eastern Seaboard cost \$1.89 per barrel, compared to \$0.87 from Venezuela. McBeth, “Venezuela’s Nascent Oil Industry,” 441; and Rabe, *Road to OPEC*, 59.

¹²⁶ By the end of the 1920s, the Curaçao refinery handled 80% of Shell’s Venezuelan production (140,000 barrels per day). Brown and Linder, 147-148. Jersey and Shell’s refineries had a combined throughput of 17,000,000 tons per year by 1935: 8,000,000 tons each for Jersey’s Aruba facility and Shell’s Curaçao refinery, plus another 1,000,000 tons at a smaller Shell installation at Aruba. “Brief Survey of the Principal Oil Producing Countries,” no date or author, enclosed with: G.W.C. Norfolk (Joint Secretary, Sub-Committee on Petroleum Products Reserves, Oil Board, CID), 26 June 1936, O.B. (P.R.) 14, CAB 50/14.

¹²⁷ Helmut Mejcher, “The International Petroleum Cartel (1928), Arab and Turkish Oil Aspirations and German Oil Policy towards the Middle East on the Eve of the Second World War,” in: *Oil, the Middle East, North Africa and the Industrial States*, ed. Klaus Jürgen Gantzel and Helmut Mejcher (Paderborn: F. Schöningh, 1984), 32-33; and Reichs-Kredit-Gesellschaft AG, Ke/Schr., “Treibstoffwirtschaft in der Welt und in Deutschland,” April 1938, NARA, RG 242, T-84/51 (EAP 66-c-2-10/22).

¹²⁸ Petroleum Department, “International Control of Petroleum,” 24 October 1932, POWE 33/461.

¹²⁹ For a contemporaneous perspective on the shift in the geographical distribution of world production during the 1920s (from Mexico and Russia to Venezuela and Persia), see: Arthur Huber Redfield (U.S. Bureau of Mines), “Petroleum Resources of Foreign Countries and Outlying Possessions of the United States,” Appendix C to: Department of the Interior, *Report III of the Federal Oil Conservation Board* (Washington, DC: U.S. GPO, 1929), 52-53.

revenues per barrel as did Venezuela between 1922 and 1930, and even after 1931, the latter's revenues per barrel were still less than 80% those of the former, largely because the Venezuelan oil laws of 1922 and 1928 only increased royalties on properties leased after 1922.¹³⁰ Although Venezuela's oil laws granted Caracas a larger share of share of revenues per barrel than Middle Eastern governments received (\$0.23 per barrel vs. \$0.21 per barrel), they also encouraged competition and investment in Venezuela. By contrast, most of the Middle Eastern concessions were held by a single firm or joint venture, which allowed the concessionaries to stifle production to promote price stability. The cost of production was slightly higher in Venezuela than in the Middle East (\$0.52 vs. \$0.44), which meant that the companies earned a higher per barrel profit from the latter than the former (\$0.88 vs. \$0.66).¹³¹

Venezuela was, however, better suited geographically to supply world markets due to its close proximity to markets in the United States and Europe. Since the oilfields also lay close to the Atlantic Ocean, output could be moved relatively easily without expensive pipelines.¹³² The absence of any antitrust regulations in the country allowed companies to pool their properties and implement unit operation, which maximized the long-term yield of the oilfields.¹³³

Venezuela also benefitted from developments in the United States, where Venezuela had already surpassed Mexico by 1927 to become the largest source of U.S. oil imports (31,468,000 barrels including exports from the Dutch West Indies vs. 26,019,000 barrels) and accounted for 70.6% of U.S. imports by

¹³⁰ Brown, "Shifted Their Production," 381-382; and McBeth, *Venezuela*, 66. McBeth does not specify whether the revenues paid by the oil companies in Mexico went to the Federal Government or to various landowners, who retained ownership of subsoil resources on territories leased prior to the promulgation of 1917 Constitution. Exact figures about how much land the British and U.S. oil companies leased as opposed to owned is unavailable. According to the most detailed survey of land tenure by the foreign oil companies in Mexico before 1938, anywhere between half to three-quarters of the land held by the oil companies (as much 24,000,000 acres prior to nationalization) was leased. Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938* (Cambridge: Cambridge University Press, 2006), 67-70. See also: Brown, "Shifted Their Production," 368-369; and Linda Hall, *Oil, Banks, and Politics: The United States and Postrevolutionary Mexico, 1917-1924* (Austin: University of Texas Press, 1995), 18. Rents varied widely, from \$2.50 to \$200 per acre, while royalties "usually" fluctuated from 5% to 15% of the value of the oil produced. As with land tenure patterns, hard figures on the amounts of money paid by the oil companies in rents and royalties are sketchy: by the "mid-1930s," Mexican Eagle was paying \$1,100,000 to \$1,250,000. Lorenzo Meyer, *Mexico and the United States in the Oil Controversy, 1917-1942* (Austin: University of Texas Press, 1977), 18.

¹³¹ McBeth, *Venezuela*, 65-66.

¹³² Venezuela was an outlier even within South America, where many of the existing oilfields lay within jungles that were relatively inaccessible. Ernst Jung, "Ölleitungen Früher und Jetzt," *Vierjahresplan*, 1942: II.

¹³³ Larson, Knowlton, and Popple, *New Horizons*, 138.

1929-1930.¹³⁴ In June 1932, U.S. independent producers finally convinced the U.S. Congress to impose a major tariff on imported oil. The tariff varied from \$0.21 per barrel for crude oil to \$1.05 per barrel of gasoline and \$1.68 per barrel of lubricants.¹³⁵ U.S. companies could also still freely import crude oil into the United States for refining before re-exporting it to Europe.¹³⁶ By closing access to U.S. markets, the tariff redirected Venezuelan oil to Europe. Venezuela now replaced the United States as the most important source of imports until 1948, when the Middle East came on-stream.¹³⁷ Venezuela's share of European crude oil imports rose from 13.4% in 1928 to 21.4% in 1933, while the U.S. share fell from 38.8% to 18.6%. This trend was most noticeable in Britain, where Venezuela's share of imports rose from 17% to 49% during the 1930s.¹³⁸

Britain was now awash in oil from a source besides the United States and Iran. The only problem was that this new source – Venezuela – was not the one London had been counting upon. In spite of its promise and the discovery of a massive oilfield near Kirkuk in 1927, as the 1930s began, Iraq had yet to deliver any meaningful quantities of oil to Europe.

¹³⁴ Brown, "Shifted Their Production," 384; and McBeth, "Venezuela's Nascent Oil Industry," 432. After taking into account the varying transportation costs and the value of the refined products extracted (U.S. crude oil being significantly more expensive to produce and transport but more valuable in terms of the refined products it yielded), Venezuelan crude oil enjoyed a price advantage over U.S. crude oil of \$0.45 before the 1932 tariff and \$0.25 afterwards. McBeth, "Venezuela's Nascent Oil Industry," 442 and 455.

¹³⁵ McBeth, "Venezuela's Nascent Oil Industry," 452-454. Consider that U.S. crude oil prices in 1931 varied from \$0.39 per barrel to \$0.83 per barrel (with East Texas at \$0.56). DeGolyer, *Petroleum Statistics*, 107.

¹³⁶ McBeth, "Venezuela's Nascent Oil Industry," 455.

¹³⁷ Fears of a tariff also prompted Standard of Indiana to sell off its major upstream, transportation, and refining operations in Latin America (including its oil refinery in Aruba) to the Standard Oil Company of New Jersey (Jersey) in April 1932 – a month before passage of the tariff – for \$140,000,000 due to fears that it would soon lose access to its major downstream market (the United States). This move also helped Jersey to overtake Shell as the major producer in Venezuela. Larson, Knowlton, and Popple, *New Horizons*, 47-50; and Wilkins, *Maturing*, 207-211. See also: Rabe, *Road to OPEC*, 55. Shell's official history mistakenly claims that the U.S. Government "banned foreign oil imports" and misses the true significance of the tariff upon the international oil trade and Venezuela in particular. Jonker and Zanden, *History of Shell*, 251.

¹³⁸ McBeth, "Venezuela's Nascent Oil Industry," *passim* (esp. 453-454); McBeth, *British Oil Policy*, 93-94; and McBeth, *Venezuela*, 204-205. The tariff was modified twice: first in 1939 under the terms of a trade agreement with Venezuela, which halved the duty on imports of Venezuelan crude up to a figure less than or equal to 5% of the total U.S. supply that year (55,000,000 barrels in 1938); and again in 1942, when Washington halved the duties on imported crude and fuel oil while lifting existing import quotas for "all friendly countries." "Note on United States Tariff Policy," Appendix II (B) to: Ministerial Oil Committee, "Oil Policy," no date (circa April 1944), M.O.C. (44) 5, POWE 33/1399.

Pipeline Politics, 1929-1931

Britain, Iraq, and Turkey finally reached a settlement on the Mosul question in 1926, and in October 1927, the TPC struck oil at Baba Gurgur, near Kirkuk. The British presence in Iraq, long an albatross around the neck of postwar governments, might finally yield significant strategic and commercial benefits. Whereas London had been spending £20,000,000 per annum on Iraq in 1920-1921, by 1929 the cost of the British presence would be a mere £500,000. The discovery of oil in 1927 had “transformed the economic aspect of the question. We have now to consider our position in relation to what may well become one of the principal oil-fields of the world.”¹³⁹ Before Britain could reap the rewards of its investment, however, a pipeline to transport this new oil from northern Iraq to the Mediterranean would have to be constructed. The route of the IPC pipeline – finally completed in 1934 – proved to be a thorny matter. The British Government (prompted by the Admiralty and the Colonial Office) pushed for the pipeline to pass through British mandates of Transjordan and Palestine before terminating at Haifa for a variety of strategic and economic reasons. The French Government, by contrast, preferred the northern route via their mandates in Syria and Lebanon with a terminus at Tripoli. Each side wanted its particular mandates to enjoy the economic benefits of hosting the pipeline (employment for local workers and transit revenues), while the Admiralty expected to use Haifa as an alternative source of fuel in Eastern Mediterranean, assuming the IPC went ahead with its plans to build a refinery there.

King Faisal of Iraq backed the British for a variety of reasons including to support the fellow Hashemite dynasty in Transjordan ruled by his brother, Abdullah. Faisal also wanted to get even with the French, who had ignominiously ejected him from Damascus in 1920 when he had tried to establish an independent Kingdom of Syria. To make matters even more complicated, there was the Zionist

¹³⁹ P (Sidney James Webb, Lord Passfield), “Our Position in Iraq: Memorandum by the Secretaries of State for the Colonies,” 18 July 1929, C.P. 214 (29), CAB 24/205. Hopes that oil would place Iraq on its own feet financially proved optimistic, at least before the war. That was only possible if Iraq’s oil wealth encouraged foreigners to invest in developing the country’s irrigation system. Dr. Paul Ruprecht, “Finanzwesen und Erdöl im Irak,” *Militär-Wochenblatt*, 126. Jahrgang, Nummer 2 (11 July 1941).

“international brotherhood,” which hoped that a pipeline to and refinery in Haifa would convince Britain to “retain indefinitely the mandate for Palestine, without which Zionism must perish.”¹⁴⁰

The British Government’s policy was based on a variety of political and military considerations, but its support for a terminus at Haifa conflicted with the commercial interests of the TPC/IPC. Since the Tripoli line was shorter than the Haifa route (529 miles vs. 640 miles), it would cost less to construct and reduce the average cost per mile of pipeline (£8,500,000 vs. £11,000,000, and £16,070 vs. £17,200).¹⁴¹ Due to the 100 mile differential, the cost to transport one ton of oil worked out to 7/6d in the case of a Tripoli terminus and 10/6d for a Haifa terminus. No matter where the pipeline terminated, however, its existence would do much to restore the cost competitiveness of Middle Eastern oil compared to production from the Gulf of Mexico. The issue was not the actual fob price (cost exclusive of freight), since the major oil companies had used the price at the Gulf of Mexico as the benchmark for oil produced anywhere around the world since 1921 (the so-called “Gulf-plus” pricing system). Even if the companies priced oil identically, there was still a significant price differential between oil produced in the Western Hemisphere from that of the Middle East. The major drawback of the latter was the cost of transportation: oil moving from the Persian Gulf to Britain had to travel 1,500 miles farther than oil from the Gulf of Mexico (6,500 miles vs. 5,000 miles). Suez Canal tolls also added 5/- per ton to the final cost. Overall, the cost of transportation per 100 miles was identical for oil from either gulf (7/-) but because of the longer journey from the Persian Gulf, Middle Eastern oil cost 37/6d per ton to import to Britain, compared to 28/6d from the Gulf of Mexico.¹⁴²

In March 1928, the Cabinet delegated responsibility for formulating the government’s position to a sub-committee of the CID chaired by James Stanhope (Civil Lord of the Admiralty), which completed its

¹⁴⁰ Good contemporary summaries of the issues at stake and players involved may be found in: L.S.A. (Amery), “The Oil Position in Iraq,” 11 March 1929, C.P. 73 (29), CAB 24/202; and “A Note on Possible Alignments of a Trans-Desert Pipeline System,” 20 January 1930, no author, BP 68387.

¹⁴¹ Cadman, “Memorandum on Possible Alignments of a Trans-Desert Pipeline System from Iraq to the Mediterranean,” no date (circa 1930), enclosed with: “Letter and Memorandum by Sir John Cadman to the Secretary of State for Foreign Affairs [Arthur Henderson],” 20 March 1930, B.H. (30) 2, Appendix I to: Committee on the Baghdad-Haifa Railway and Pipeline, “Report,” 01 May 1930, C.P. 136 (30) (also B.H. (30) 6), CAB 24/211.

¹⁴² Iraq Oil Committee, “Some Notes on the Present World Oil Situation in Relation to the Iraq Oilfield and Proposed Pipeline to a Mediterranean Port,” no date (circa May 1930), I.O.C. (30) 5, CAB 27/436.

report three months later. The sub-committee concluded “that the Iraq field had been far more completely proved than had the Anglo-Persian Oil Company’s fields at the time when the government decided to invest in that company,” and “that the prospects of the future production of large quantities of oil in Iraq are sufficiently assured to justify the British Government in endeavouring to secure the Baghdad-Haifa alignment for the pipelines.” Cadman testified that the APOC was interested in building a supplementary line along the same route to transport Persian crude to the Mediterranean in order to save money on Suez Canal tolls, which were costing APOC £880,000 each year. Despite the fact that a Tripoli terminus would cost approximately £2,000,000 to £3,000,000 less to construct, along with lower maintenance fees, the government was determined to have a Haifa terminus “from the point of view of security and the present terminal facilities.” Britain’s partner in the Middle East, France, presented numerous headaches. Besides the possibility that the Royal Navy might not be able to take supplies of oil delivered to Tripoli during a war in which France was neutral, there was also the inconvenience of the San Remo Agreement, which guaranteed France 25% of the oil piped from Persia to the Mediterranean through French mandates. The sub-committee counseled patience, informing the Cabinet that it did “not think that any action is necessary, or indeed desirable, at the moment,” when it came to extending official financial support for the construction of a pipeline. Rather, it recommended that the government wait until the TPC reached a decision and was willing to meet certain political and economic conditions, such as agreeing to construct simultaneously a railway that ran alongside the pipeline (with the British, Iraqi, and Palestinian governments sharing ownership of the railway with the TPC).¹⁴³

The “strategical considerations” were most decisive. According to the British Chiefs of Staff, Iraq needed to be developed as an alternative source of the supply for the Royal Navy, since oil production in Persia “may, on account of political developments, become uncertain.” The fact that the pipeline would give Britain “virtual control over the output of what may well prove to be one of the richest oil-fields in

¹⁴³ CID, Sub-Committee on the Construction of the Proposed Haifa-Baghdad Railway and/or Pipeline, “Report,” 13 June 1928, 886-B (also Paper No. C.B.R. 19), enclosed with: Hankey (Cabinet Secretary) to the Cabinet, “The Proposed Baghdad-Haifa Railway and Pipeline,” 07 March 1929, C.P. 68 (29), CAB 24/202. Cadman’s report (“Evidence of Existence of Oil in Iraq: Memorandum by Sir John Cadman,” 28 March 1928, C.B.R. 7) is appended as Appendix I.

the world” might help realize the elusive dream of reducing Britain’s reliance upon imports of U.S. oil. Oil supplies from the Levant were 1,000 miles closer to Great Britain than any other British-controlled source of oil, could be easily accessed in the event of a Mediterranean conflict, and were conveniently located along Britain’s imperial lines of communication. A parallel APOC pipeline from Persia to the Mediterranean would also offer the Admiralty considerable savings in tanker costs while increasing the amount of oil available in close proximity to a future area of operations. Finally, the Chiefs envisaged the pipeline as a vital link in a chain linking British military and economic assets in the Middle East from Cairo to Basra that “should greatly strengthen the whole of our defensive organisation in the Near East by facilitating the transport of men and munitions to Iraq for the defense of our interests in those regions.”¹⁴⁴

The British Government’s decision to support the Iraqis in having a pipeline to Haifa provoked the wrath of the French Government.¹⁴⁵ The two sides traded accusations of bad faith for an entire year, with Paris complaining about British meddling in a purely commercial matter, while London pleaded ignorance, claiming that the initiative for a pipeline and railway to Haifa had not come from the TPC, but rather, a rival oil company, the British Oil Development Corporation (BOD), which had been angling for an oil concession in Iraq since 1928.¹⁴⁶ Moreover, the Iraqis had announced their preference for a Haifa

¹⁴⁴ The CID relied on the expert of opinion of the British Chiefs of Staff in arriving at these conclusions. H. Trenchard, Chas. E. Madden, and G.F. Milne, “The Baghdad-Haifa Pipeline and Railway: Strategic Importance and Defence,” 24 May 1928, C.I.D. Paper No. 884-B (also Paper No. C.O.S. 157), Appendix II to: CID, Sub-Committee on the Construction of the Proposed Haifa-Baghdad Railway and/or Pipeline, “Report,” 13 June 1928, 886-B (also Paper No. C.B.R. 19), CAB 24/202. German analysts shared the Chiefs’ assessment of Iraqi oil’s potential value to Britain’s security, even if they tended to be more skeptical of Britain’s ability to secure supplies from the Middle East in the event of war. Hptm. (Hauptmann) a.D. Hans Wagner, “Ölversorgung im Mittelmeer,” *Deutsche Wehr*, Nr. 8/7. (38.) Jahrgang (22 February 1934); B.R. (?), “Das irakische Erdöl – Machtfaktor Englands im Nahen Osten,” *Deutsche Wehr*, Nr. 24/45. Jahrgang (13 June 1941).

¹⁴⁵ Despite the fact that the Tripoli route was significantly cheaper, Cadman confided to Amery that APOC supported the Haifa route, which “will prove in the long run the only practical one,” but was “handicapped, however, by the international character of the Company [the TPC] and by the necessity of carrying his French colleagues with him.” L.S.A. (Amery), “The Oil Position in Iraq,” C.P. 73 (29), 11 March 1929, CAB 24/202. Cadman may, indeed, have felt that way, but APOC had yet to commit to either a Haifa or Tripoli terminus as late as January 1930. “A Note on Possible Alignments of a Trans-Desert Pipeline System,” 20 January 1930, no author, BP 68387.

¹⁴⁶ Initially a British venture headed by former First Sea Lord Wemyss and established in 1928, the British Oil Development Corporation (BOD) gradually expanded to include Italian, German, and French partners, and it received a concession from the Iraqi Government in 1932 for most of Iraq west of the Tigris River (the IPC’s revised 1931 concession covered the area east of the Tigris). The BOD tried to break the IPC’s monopoly in Iraq by offering to construct a railway from Baghdad to Haifa at no cost to the Iraqi Government, which helped it to secure the concession in 1932. The BOD’s concession would be operated by a wholly owned subsidiary, Mosul Oilfields,

terminus in August 1928 of their own volition, a most “fortunate identity of British and Iraqi interests” from London’s perspective. The hardening of the French position was dictated foremost by political developments in France the previous year, when the French Government purchased a 35% share in the CFP, the French partner in the IPC, and passed an oil law imposing strict import quotas and spurring the development of a French refining industry. Unlike the British, the French were not interested in importing refined oil products. Rather, crude oil piped to Tripoli would be shipped on French tankers to metropolitan France and processed in French refineries.¹⁴⁷

The British, on the other hand, planned to construct a refinery in Haifa (jointly owned and operated by APOC and Shell) to refine Iraqi crude prior to shipment. Although the British Government was unanimous in its support for a Haifa terminus, divisions appeared over the diplomatic repercussions, with the Foreign Office counseling compromise, while the Colonial Office fulminated against any appeasement of the French. After months of back and forth, the Cabinet finally determined on 20 March 1929 that London should dispense with the charade that it was a disinterested player and inform Paris that the British Government “did not conceal their desire for the adoption of Haifa as the terminus of a pipe-line and railway, and that they reserved their full right to promote this end.” Privately, Colonial Secretary Amery urged his colleagues to offer official financial support for a Haifa-pipeline and railway and no longer “allow the execution of a vital Imperial purpose to depend upon the vagaries of Iraqi local

Ltd. L.S.A. (Amery), “Conflicting Oil Interests in Iraq: Memorandum by the Secretary of State for the Colonies,” C.P. 164 (28), 22 May 1928, CAB 24/195; Petroleum Department, “Mosul Oilfields Limited and the British Oil Development Concession in Iraq,” 01 June 1933, enclosed with: C.C.A. Allen (Oil Board), “Mosul Oil Fields, Ltd., and the British Oil Development Concession in Iraq: Proposed Pipeline from the Mosul Area to the Mediterranean: Note by the Joint Secretary,” 14 June 1933, O.B. 116, CAB 50/5. See also: Helmut Mejcher’s *Die Politik und das Öl im Nahen Osten: I. Der Kampf der Mächte und Konzerne vor dem Zweiten Weltkrieg* (Stuttgart: Klett-Cotta, 1980), 102-210. The IPC secured a concession for southern Iraq in 1938 (operated by the subsidiary Basrah Petroleum Company) and bought out the BOD-owned Mosul Oilfields in 1937 after the BOD’s concession proved to be unprofitable and the Italian partners sold out rather than take majority control with the Germans. In 1941, the IPC transferred the old BOD concession to another IPC subsidiary, the Mosul Petroleum Company. Bamberg, *History of BP*, 166-171; and Penrose and Penrose, *Iraq*, 138-141.

¹⁴⁷ For contemporaneous summaries of French oil policy during the 1930s (with special reference to Iraq), see: “Frankreichs Ölversorgung,” *Deutsche Wehr*, Nr. 48/7. (38.) Jahrgang (29 November 1934); and Hptm. a.D. Hans Wagner, “Zweimal Erdöl: Der mandschurische Ölstreit – Frankreichs Iraköl,” *Deutsche Wehr*, Nr. 5/39. Jahrgang (31 January 1935).

politics,” as there was nothing stopping Baghdad from cutting a deal with the French.¹⁴⁸ With a General Election looming, the Cabinet opted to delay making a final decision.

The toppling of the Baldwin Ministry following the 1929 General Election complicated matters. Although many senior cabinet ministers appointed by newly elected Prime Minister Ramsay MacDonald to study the issue supported the position articulated by Amery in April, there was strong opposition by lower-level Labour ministers to the idea of spending £100,000 on a survey of the route for the pipeline and railway, much less the more than £1,500,000 worth of loans and guarantees for between £10,000,000 to £12,000,000. In September 1929, a new committee, led by the Colonial and Dominions Secretary, Lord Passfield, informed the Cabinet that it “has proven impossible to present an [*sic*] unanimous report,” in spite of “the danger that, if we do not ourselves move in this matter... the French authorities in Syria will forestall us” by constructing their own railway from the Mediterranean to the Iraqi border, its “avowed object being to induce the Iraq Petroleum Company to adopt that alignment for their trans-desert pipeline.” Passfield, along with Thomas Shaw and Lord Thomson (the secretaries of War and Air, respectively), concluded that support for a pipeline would not entail any new political or military responsibilities for Britain in the region. Rather, Britain would reap the benefits of not only bringing Iraqi oil production on-line, but also expanding production in Persia (which, Cadman informed them, was at only 50% capacity), since APOC was inclined to support construction of a pipeline connecting Abadan to

¹⁴⁸ L.S.A. (Amery), “The Oil Position in Iraq: Trans-Desert Pipe-Line and Railway to the Mediterranean,” 30 April 1929, C.P. 134 (29), CAB 24/203. The debate, which consumed the attention of the Baldwin Government until its collapse in May 1929, is detailed in: L.S.A., “The Oil Position in Iraq,” 11 March 1929, C.P. 73 (29), CAB 24/202; Foreign Office, Eastern Department, “The Attitude of the French Government regarding the proposed Bagdad-Haifa Railway and Pipeline,” 09 March 1929, enclosed with: A.C. (Austin Chamberlain), “The Attitude of the French Government regarding the Proposed Bagdad-Haifa Railway and Pipeline: Note by the Secretary of State for Foreign Affairs,” 12 March 1929, C.P. 78 (29), CAB 24/202; Colonial Office, Middle East Department, “Historical Note,” 16 March 1929, enclosed with: L.S.A., “Oil Position in Iraq: Memorandum by the Secretary of State for the Colonies,” 16 March 1929, C.P. 80 (29), CAB 24/202; and L.S.A., “Oil Position in Iraq: Memorandum by the Secretary of State for the Colonies,” 24 April 1929, C.P. 125 (29), CAB 24/203; and L.S.A., “The Oil Position in Iraq: Trans-Desert Pipe-Line and Railway to the Mediterranean,” 30 April 1929, C.P. 134 (29), CAB 24/203. Although the Foreign Office came around to supporting the position advanced by the Colonial Office, Foreign Secretary Austen Chamberlain took exception to Amery’s admonition that Britain must act quickly before Baghdad changed its mind as “we can no longer very well bring political pressure to bear on the Iraq Government.” Chamberlain objected to this description of British policy, noting that it contradicted the entire basis of the British response to the French protests. A.C. (Chamberlain), “The Oil Position in Iraq: Trans-Desert Pipeline and Railway to the Mediterranean: Memorandum by the Secretary of State for Foreign Affairs,” 07 May 1929, C.P. 145 (29), CAB 24/203.

the IPC line to Haifa. This would cut the distance Iranian oil needed to travel by sea to reach Europe by 6,400 miles (round-trip) and reduce APOC's expenditures on Suez Canal tolls (£900,000 in 1927).¹⁴⁹

The President of the BOT, the Chancellor of the Duchy of Lancaster, and the Financial Secretary to the Treasury each raised a number of domestic and foreign policy objections. William Graham and F.W. Pethwick-Lawrence (Trade and Treasury, respectively) cast doubt about the likelihood that the French Government had any serious intention to construct a rival railway, and whether the project would do anything to stimulate employment within Britain.¹⁵⁰ Oswald Mosley levied the most detailed objections. He explained that the government would have to announce to the Commons that it was undertaking the cost of the survey, which would be interpreted "as a definite commitment of policy which is connected both with oil and with military strategy." The new government would thereby be committing itself to a host of policies that ran directly counter to its electoral promise of "reducing and liquidating our commitments of every kind" in the Middle East. Whatever the strategic merits of the case, Mosley cautioned against "[dissipating] resources in remote and speculative projects which may soon be urgently

¹⁴⁹ Passfield, Shaw, and Thomson, "Committee on the Baghdad-Haifa Railway and/or Pipe-line: Report," 11 September 1929, B.H.R. (29) 11, enclosed with: P. (Passfield), "Baghdad-Haifa Railway and Trans-Desert Pipe-Line: Memorandum by the Secretary of State for the Colonies," C.P. 247 (29) (also C.I.D. Paper No. 959-B), CAB 24/205. Passfield also circulated to the Cabinet memoranda produced by the Colonial Office summarizing the historical origins of the pipeline dispute and the strategic benefits, as articulated the previous year by both the special CID subcommittee and the Oil Board. The latter made explicit reference to Britain's need to diversify its future wartime supplies "in event of either (i) the United States of America being unfriendly, or (ii) the maximum output of the South Persian Fields being unobtainable for any reason." Colonial Office, Middle East Department, "The Berlin-Haifa Railway and Trans-Desert Pipeline" and "Historical," both dated 12 July 1929 and enclosed with: P. (Passfield), "The Berlin-Haifa Railway and Trans-Desert Pipeline: Memorandum by the Secretary of State for the Colonies," 18 July 1929, C.P. 215 (29), CAB 24/205. For the CID reports quoted in the Colonial Office's report, see: CID, Sub-Committee on the Construction of the Proposed Haifa-Baghdad Railway and/or Pipeline, "Report," 13 June 1928, 886-B (also Paper No. C.B.R. 19), enclosed with: Hankey (Cabinet Secretary) to the Cabinet, "The Proposed Baghdad-Haifa Railway and Pipeline," 07 March 1929, C.P. 68 (29), CAB 24/202; and Peel (Oil Board), *et al.*, "Oil Board: Third Annual Report," 26 April 1929, 937-B (also Paper No. O.B. 33), CAB 50/3.

¹⁵⁰ The following October, the Air Ministry forwarded troubling intelligence reports suggesting the French authorities in Syria "have placed French military aircraft at the disposal of a survey party in the employ of the Iraq Petroleum Company." Air Staff, "Summary of Recent Information concerning the French Projects for a Railway and Pipe-Line from Syria to the Iraq Frontier," 18 October 1929, enclosed with: T. (Thomson), "Baghdad and Haifa Railway and Pipe-Line: Memorandum by the Secretary of State for Air," 21 October 1929, C.P. 286 (29), CAB 24/206.

required for sound propositions of home development,” while sparking “nothing less than a scramble for oil against the French.”¹⁵¹

In order to break the impasse, the government formed yet another committee, this one chaired by the Foreign Secretary, Arthur Henderson. The committee did not question the strategic significance of the pipeline: “It is pointed out that the mobility of the Fleet is dependent on adequate supplies of oil under British control: if the supplies are in foreign hands, there is [a] grave danger of interruption of supply,” whereas “our share of Iraqi oil would go far to render us independent of foreign supplies [...]” The Royal Navy remained opposed to a Tripoli terminus, and its hostility was understandable considering the poor state of naval reserves, which only covered six months of wartime operations and were not supplemented by any civilian reserves. In 1930, the Royal Navy estimated its annual requirements of oil at 7,139,000 tons, but a mere 14% came from sources under British control (Trinidad, Burma, Borneo, and Persia, the last one being “liable to interruption”). Shipping Iraqi oil to Abadan was undesirable in light of the costs entailed through shipment overseas and Suez Canal dues (now £1,000,000 per annum). There was also the quandary posed by the San Remo Agreement, which would guarantee France a share of Persian crude oil piped through French mandates. The Navy was strongly in favor of having an additional pipeline connecting the Persian and Iraqi oilfields, noting that it would shave thousands of miles off the journey between Abadan and Britain while freeing up fifty tankers for service in other theaters.¹⁵²

The Henderson Committee was not sympathetic to the Royal Navy’s position. For one thing, it was unlikely that Britain could defend the Haifa pipeline in the event of a war with France, which had

¹⁵¹ See annexures 1-3 to: Passfield, Shaw, and Thomson, “Committee on the Baghdad-Haifa Railway and/or Pipeline: Report,” 11 September 1929, B.H.R. (29) 11, enclosed with: P (Passfield), “Baghdad-Haifa Railway and Trans-Desert Pipe-Line: Memorandum by the Secretary of State for the Colonies,” C.P. 247 (29) (also C.I.D. Paper No. 959-B), CAB 24/205.

¹⁵² As the Henderson Committee’s report to the Cabinet explained, “[The] Naval Staff regard the possible loss of all Iraqi oil [*sic*] as so disastrous that it might in their view be well worth while for Great Britain to pay the bulk of the cost to ensure the Haifa alignment.” For more on the Navy’s position, see: C.E.M. (Charles Edward Madden), “Baghdad-Haifa Railway and Pipeline: Memorandum by the Chief of the Naval Staff,” 05 April 1930, attached to: A.V.A. (Albert Victor Alexander), “Note by the First Lord of the Admiralty,” 05 April 1930, B.H. (30) 4, enclosed with: Committee on the Bagdad-Haifa Railway and Pipeline, “Report,” 01 May 1930, C.P. 136 (30) (also B.H. (30) 6), CAB 24/211. Some of the concerns raised by the Navy bordered on hysterical. The aforementioned report relayed a comment by John Cadman to the effect that the construction of a Tripoli pipeline was “certain to result in the absorption of Iraq by the more virile [*sic*] Syrians.” This would hasten the collapse of the British position in the Middle East and cause “a break in our Air Communications with India and the East, which would be disastrous.”

stationed large numbers of ground and aerial forces in Syria. Furthermore, the Treasury was unwilling to offer the financial assistance needed to make the Haifa terminus a viable alternative to Tripoli. Although the Iraqis were opposed to a Syria-Lebanon pipeline, it was in their best interests that a pipeline be completed no matter what, since that was the only way Baghdad could expect to collect significant oil revenues. When one considered such economic and political factors, it became evident that “the Haifa alignment would prove the least advantageous from the point of view of the marketing of Iraqi oil [...]”. Although it did not dispute the strategic considerations raised by the Navy, the new Labour Government broke with its Conservative predecessor by adopting the position that “satisfactory arrangements” could be reached with France to ensure adequate supplies of oil in the event of a war in which France was neutral, while there no was point in having a Haifa terminal for security reasons since Britain could not defend it from the only plausible enemy in the region, France.¹⁵³

The Colonial Office still put forward a note of opposition to a Tripoli terminus. It challenged Cadman’s argument that the Tripoli pipeline was more economical than the Haifa alternative and even questioned where his loyalties lay, suggesting that his counsel may been “prompted as much by the desire to promote the commercial interests of his company as by any solicitude for British interests.” In the event that the IPC went ahead with a Tripoli terminus, the Colonial Office advised that the IPC “can no longer be considered as a British interest. To all intents and purposes it is now a French concern, following a policy dictated by the French Government.” The Colonial Office even questioned whether it was wise to entrust the development of Iraq’s oil solely to the IPC: “A little healthy competition in the Iraq oil-fields could scarcely operate to the disadvantage of Iraq, and by advising the Iraq Government not

¹⁵³ Committee on the Bagdad-Haifa Railway and Pipeline, “Report,” 01 May 1930, C.P. 136 (30) (also B.H. (30) 6), CAB 24/211. See also: Iraq Oil Committee, Cabinet, “Some Notes on the present World Oil Situation in relation to the Iraq Oilfield and proposed Pipeline to a Mediterranean Port,” no date (circa 1930), I.O.C. (30) 5, AIR 9/43, which offers some interesting suppositions concerning the future of the international oil industry and the role of Iraq in particularly, not to mention useful data such the cost of shipping oil from the Persian Gulf to Britain (37/6d per ton to traverse the 6,500 miles, including Suez Canal dues).

to grant a virtual monopoly to the Iraq Petroleum Company, His Majesty's Government would not be sacrificing Iraqi to British interests."¹⁵⁴

The British Government did not follow through with such a radical departure from its established policy of favoring APOC and the IPC. As the Foreign Office explained, the position of the IPC by 1930 was the product of intense negotiations between Britain, the United States, and France, and the latter two would not support any change in London's policy on behalf of the interlopers such as the BOD. Besides, the IPC had no leverage to force anyone to accept a pipeline through Syria since Iraq had made its preferences quite clear. The consequences of defying Baghdad, even if they did not result in the loss of the IPC concession, would probably "outweigh the economic advantages" of a pipeline to Syria.¹⁵⁵ Luckily, the IPC partners arrived at a resolution of the dispute that satisfied all parties. In 1931, they agreed to a compromise, brokered by Jersey's Chairman, Walter Teagle, whereby the TPC would build a pipeline that bifurcated at Haditha (240 km northwest of Baghdad) and terminated at both Tripoli and Haifa. Each line would be constructed simultaneously, completed by no later than the end of 1935, and share equally any oil produced by the IPC.¹⁵⁶ The pipeline to Tripoli was actually completed a year early,

¹⁵⁴ Middle East Department, Colonial Office, "Oil Policy in Iraq," 05 May 1930, Appendix B to: P. (Lord Passfield), "Oil Policy in Iraq: Memorandum by the Secretary of State for the Colonies," 16 May 1930, C.P. 164 (30), CAB 24/212. The suspicion of the Colonial Office toward the IPC was shared by British intelligence in Iraq. One report to RAF Iraq Command bluntly concluded: "[As] a matter of fact, neither the Anglo Dutch partners nor the American interest [in the IPC]... are in the least anxious to draw oil from Iraq. They prefer to look upon Iraq Oil fields as a large potential petroleum reserve to be tapped only as and when existing oilfields throughout the world... shows [*sic*] signs of becoming exhausted." Like the Colonial Office, after some initial skepticism, British officials in Iraq began to looking favorably upon the rival BOD, whose competition might, they hoped, cajole the IPC into developing Iraq's oil faster. Special Service Officer, Baghdad, to Air Staff Headquarters, Air Headquarters, [RAF] Hinaidi, "Oil Interests," 02 August 1930, AIR 23/393.

¹⁵⁵ Foreign Office, "Oil Policy in Iraq," 29 May 1930, Annex to: Iraq Oil Committee, "Note by the Secretary of State for Foreign Affairs," no date, I.O.C. (30) 6, E. 2777/51/93, CAB 27/436.

¹⁵⁶ Jersey's chairman, Walter Teagle (representing the U.S. interests in the IPC), was happy to support the French plan if it would convince the French to stop their purchases of expropriated Soviet oil and grant Jersey a preferential import quota for the French domestic market. The best treatments of this complex issue, both from the point of view of the British and French governments, but also the major oil companies (including the Americans), are in: Edward Peter Fitzgerald, "Business Diplomacy: Walter Teagle, Jersey Standard, and the Anglo-French Pipeline Conflict in the Middle East, 1930-1931," *Business History Review* 67 (2): 207-245; Eric Melby, *Oil and the International System: The Case of France, 1918-1969* (New York: Arno Press, 1981), 113-141; and Nowell, *World Oil Cartel*, 268-276. The Iraqis were none too pleased by London's willingness to compromise with Paris. For Baghdad's objections and London's attempts to strong-arm the former into accepting the plan to bifurcate the pipeline at Haditha, see: "Paraphrase Telegram from the High Commissioner for Iraq to the Secretary of State for the Colonies," No. 176, 16 June 1928," Appendix I to: Henderson (Chairman of the Iraq Oil Committee), "Interim Report," 20 June 1930, C.P. 209 (30), CAB 24/213; and "Draft Telegram for Despatch to the High Commissioner,

in 1934, and the line to Haifa followed a year later. Their combined cost exceeded £10,000,000, while throughput in 1938 reached 4,300,000 tons.¹⁵⁷

The British Government understood that there was little demand for Iraqi oil because of the surplus in global production, primarily from the United States.¹⁵⁸ The British and U.S. partners in the IPC would probably stifle production for the time being, even if the Iraqis and the French were pushing for more.¹⁵⁹ Although London probably did not know it at the time, the throttling of Iraqi production was a direct consequence of the “Red Line” Agreement signed in July 1928. The agreement reorganized the ownership structure and operations of the TPC: the partners included APOC, Shell, the CFP, and the Near Eastern Development Corporation (NEDC: Jersey, the Standard Oil Company of New York, Gulf, Pan American Petroleum Transport & Trading, and Atlantic Refining). Each of the companies received 23.75% of the TPC’s shares with the remaining 5% going to Gulbenkian.¹⁶⁰ The most important aspect of the agreement was the retention of the “self-denying” clause from the “Foreign Office” Agreement of March 1914, which forbade the individual partners of the TPC from seeking or accepting oil concessions anywhere within the “red line” area (the Arabian Peninsula, the Levant, Mesopotamia, and Anatolia) without the consent of all the other partners, who also enjoyed the option of sharing an equal part of any new concession.¹⁶¹ In order to prevent the CFP or Gulbenkian from flooding the market with cheap oil

Iraq,” no date or author, enclosed with: A.H. (Henderson), “Baghdad-Haifa Railway and Pipeline: Report by the Iraq Oil Committee,” 05 February 1931, C.P. 36 (31), CAB 24/209.

¹⁵⁷ Ernst Jung, “Ölleitungen Früher und Jetzt,” *Vierjahresplan*, 1942: II.

¹⁵⁸ Consequently, there was “no real evidence to support” the idea that world production would peak anytime soon.

Petroleum Department, “International Control of Petroleum,” 24 October 1932, POWE 33/461.

¹⁵⁹ Iraq Oil Committee, “Some Notes on the Present World Oil Situation in Relation to the Iraq Oilfield and Proposed Pipeline to a Mediterranean Port,” no date (circa May 1930), I.O.C. (30) 5, CAB 27/436.

¹⁶⁰ Between 1930 and 1934, Gulf, Pan American, and Atlantic Refining sold their interests in the Near Eastern Development Company (NEDC) to Jersey and the Standard Oil Company of New York, which divided the shares of the NEDC equally.

¹⁶¹ Portions of the “Red Line” Agreement are reprinted as Appendix III to: Payton-Smith, *Oil*, 32-37. For background on the negotiations leading up to the signing of the agreement, see: William Stivers, “A Note on the Red Line Agreement,” *Diplomatic History* 7: 1 (1983): 23-34. Nowell claims the “self-denying” clause was basically a way to protect “undercapitalized firms of overcapitalized ones.” If the latter found oil in a plot beside one owned by the TPC, it could buy that plot and use its veto over the operations of the TPC to keep production down, thus reserving for itself all of the profits while forcing the former (i.e. the poorer firm) to eat the loss. The weakest members of the TPC (the Deutsche Bank in 1914, and Gulbenkian and the Compagnie Française des Pétroles in 1928) were therefore the ones who insisted on the inclusion of the clause. Nowell, *World Oil Cartel*, 187. If this was indeed the rationale, then it failed miserably: three stronger members of the TPC (APOC – Anglo-Iranian after 1935 – Shell, and the NEDC) all had significant interests located elsewhere in the world, and they conspired to

from Iraq, the NEDC, Shell, and APOC ensured that any resolution before the TPC's board could only pass with the approval of three of four voting members (the CFP being the fourth). This gave the major companies veto power over any decision to boost Iraqi production.¹⁶²

Unaware of the actual situation, London was confident that conditions in the international oil market would improve: global consumption had doubled between 1920 and 1930, and by the time the IPC pipeline was finished, the Cabinet Committee on Iraqi Oil believed that "there should be no difficulty in absorbing the whole of Iraqi production." The IPC partners would also have every incentive to ratchet up Iraqi output to amortize the costs of building their pipeline. Iraqi oil shipped by pipeline to the Mediterranean and sold in Europe would also enjoy a significant cost advantage compared to oil sent by tanker from either the Gulf of Mexico or the Persian Gulf, thereby saving the major oil companies thousands of miles worth of overseas transportation costs. In the case of Shell, the reduction in distance worked out to: 1,000 miles compared to Venezuelan and Mexican oil; 2,000 miles for U.S. oil from the Gulf of Mexico; and 5,000 miles for Californian oil (through the Panama Canal). In the case of APOC, the savings reached 3,500 miles compared to oil shipped from Abadan. Iraqi oil would displace Persian oil from Europe, but APOC could use this oil to supply its growing markets south and east of the Middle East, "in which the Company is already getting a much firmer footing by recent arrangements with the Burmah Oil Company and Shell Group."¹⁶³

suppress Iraqi production until nationalization in 1972. The "self-denying" clause was repealed in 1948 as part of a wider reorganization of the IPC and the Middle Eastern oil industry the previous year. Anand Toprani, "The French Connection: A New Perspective on the End of the Red Line Agreement, 1945-1948," *Diplomatic History* 36: 2 (2012): 261-299.

¹⁶² Theodore Moran, "Managing an Oligopoly of Would-Be Sovereigns: The Dynamics of Joint Control and Self-Control in the International Oil Industry Past, Present, and Future," *International Organization* 41: 4 (1987): 580-583.

¹⁶³ Iraq Oil Committee, "Some Notes on the Present World Oil Situation in Relation to the Iraq Oilfield and Proposed Pipeline to a Mediterranean Port," no date (circa May 1930), I.O.C. (30) 5, CAB 27/436. The "arrangements" in question were marketing agreements between APOC, Shell, and Burmah. In 1927-1928, the three companies divided up the Indian market between them. The following year, APOC and Shell established a jointly owned marketing subsidiary (Consolidated Petroleum), which would operate in Egypt, East and South Africa, and in the Indian Ocean. Bamberg, *History of BP*, 106-107.

Britain's Oil Position at the End of the 1920s

The Admiralty had fended off the Treasury's attempts in 1923/24 to trim the Royal Navy's oil reserves by half. But when the Admiralty revised its consumption estimates upward in 1927, opponents used it as an opportunity to revisit the issue. Under the terms of the Ten-Year Rule, the Admiralty estimated that, in the event of a war with Japan in 1937, it would require 7,150,250 tons of fuel oil annually. This meant that 3,300,000 tons would have to be added to existing reserves over the following decade. The Oil Board of the CID upheld the Admiralty's decision, but not the Chancellor, Winston Churchill, who had come full circle from his position in 1922 and considered such expenditures unwarranted in view of "the excellent relations between ourselves and Japan now existing and likely to continue [...]." New sources of supply would soon be available in Iran and Iraq, while Britain was in serious economic difficulties (which he had exacerbated through a return to the Gold Standard in 1926). The government had to consider "the great importance of restricting expenditure at the present time on this service within the narrowest practicable limits." The Naval Programme Committee, set up to consider Britain's strategic posture in the Far East, sided with Churchill and advised the Cabinet that, "[in] view of the present serious financial position," reserves should only be increased by 100,000 tons per annum for the moment.¹⁶⁴

Even this compromise proved short-lived: in 1929, the new Labour Government suspended all further purchases of fuel oil for naval reserves.¹⁶⁵ With its reserves totaling only 4,000,000 tons (against an estimated 7,500,000 tons required per year in a war against Japan), the Admiralty could only fume impotently at the government's decision. Britain's position (a six-month reserve) compared unfavorably,

¹⁶⁴ The Earl of Birkenhead (Secretary of State for India; Chairman of the Naval Programme Committee), "Report on Naval Fuel Oil Reserves," 20 February 1928, C.P. 47 (28), CAB 24/192. The First Lord of the Admiralty, William Bridgeman, did not take defeat graciously. At the end of 1928, Bridgeman worked out an agreement with Churchill that an additional 100,000 tons would be added in 1929 (as in 1928), while additional orders for "the normal instalment [*sic*] of 323,000 tons" would be deferred until "further consultation" with the Treasury. Bridgeman acceded to this arrangement against his better judgment and wrote a strongly worded minute to his colleagues reminding them that British energy security was "for financial reasons, being retarded much beyond the limit which the Board of Admiralty think safe [...]." W.C.B. "Oil Fuel Reserve for the Navy: Notice of Agreement between the Chancellor of the Exchequer and the First Lord of the Admiralty as to expenditure in 1929," 18 December 1928, C.P. 410 (28), CAB 24/109.

¹⁶⁵ The debate over naval fuel oil reserves between 1921 and 1929 is summarized in: Babij, "Problem of Oil Supply," 87-90.

the Sea Lords complained, with that of the United States (where the navy actually owned oilfields), Japan (currently accumulating a two-year reserve), Germany (eleven months), and France (nine months). “Italy alone,” the Sea Lords mocked, “stands relatively at our present reserve.” The Admiralty warned that the government was taking a grave risk – imperial oil production was “swallowed up by India,” while Persian production was vulnerable: “[Our] position is, to say the least, far from reassuring unless we collect a reserve to rely upon.”¹⁶⁶

London could only contemplate a reduction in the size of its naval oil reserves because of the promising global supply situation, particularly after the discovery of oil in Iraq in 1927. Completion of an IPC pipeline to the Mediterranean, although it would open up a valuable new source of supply, could hardly redress all of Britain’s strategic vulnerabilities. The third report of the Oil Board in April 1929, which relied upon a detailed evaluation produced by a special Sub-Committee on Supply in Time of War, laid bare the weakness of Britain’s oil position. In the event of a global war at the “present time” (using 1927 figures as a baseline), and assuming that the United States was “friendly,” the Oil Board concluded that Britain’s oil requirements “could eventually be met,” but that “there would be a critical period following the declaration of hostilities during which time it would be impracticable to ensure full supplies to all parts of the Empire.” Canada, for example, would rely on the United States for its oil needs even if the United States was “unfriendly.” (This would not be a problem for the U.S. oil industry: the largest oil company in Canada, Imperial Oil, was a subsidiary of Jersey.) In the event of an “unfriendly” United States, “the situation would be precarious,” while “the critical period during which full supplies could not be assured for the Empire would probably be of considerable length [...]” The Oil Board also concluded that Britain’s oil security depended on Persia, which would supply 37% (7,000,000 tons) of the

¹⁶⁶ “Oil Fuel Reserve,” no date or author, enclosed with: F.L.F. (Admiral Frederick Field), 12 February 1931, attached to: A.V.A. (Albert Victor Alexander), “Oil Fuel Reserve,” 17 February 1931, C.P. 51 (31), CAB 24/220. See also: Thomson (President, Oil Board), *et al.*, “Oil Board: Fifth Annual Report,” 01 July 1930, O.B. 51 (also C.I.D. Paper No. 1007-B), CAB 50/3, especially Appendix No. 5: Roger M. Bellairs (Director of Plans) and J.W.L. Oliver (Director of Stores), “Revised Estimate of Oil Fuel and Tankers Required by the Navy for the First Year of Hostilities (Based on Stock Position of 01 April 1930),” 11 June 1930. The CID decided to re-establish to a naval reserve equal to twelve months of consumption (half of which would be stored at home) in 1936. Earl De La Warr (President of the Oil Board), *et al.*, “Oil Board: Twelfth Annual Report,” 28 December 1937, O.B. 230 (also C.I.D. Paper No. 1390-B), CAB 50/6.

19,336,000 tons required across the British Empire in wartime. Every effort should also be made to increase the refining capacity of the empire. Most importantly, unless the Royal Navy amassed reserve stocks equal to one year of wartime consumption, “the requirements of the Fleet... cannot be assured.”¹⁶⁷

According to figures provided by the Sub-Committee on Oil Supply in Time of War, the British Empire’s annual wartime requirement in 1927 was 19,336,000 tons (11,888,000 tons west of Suez), although this shrank to 17,384,000 tons if Britain imposed civilian rationing.¹⁶⁸ Assuming that neither domestic nor external forces disrupted either Persian or Iraqi oil production, and that an IPC pipeline to Haifa was completed, approximately 9,137,500 tons of the empire’s requirements would be supplied from the Middle East. Since it was impractical to transport Far Eastern oil west of Suez, most of the remaining 50% would have to come from the Western Hemisphere (Russia being discounted as a future supplier), primarily from the United States, Mexico, and Venezuela.¹⁶⁹ The United States was still the most important supplier, having exported to 6,859,000 tons to the British Empire in 1927 (2,591,000 tons of which went to Canada). Assuming the United States was “unfriendly,” there would be no choice but to impose strict rationing, while Venezuela would have take up the slack to an “alarming” extent: 5,500,000 tons of crude and refined oil products (32% of British requirements). “The dependence of the Empire on the U.S.A. and Venezuela... gives cause for great uneasiness,” the sub-committee concluded, but there was simply no alternative. Without full production in Persia and probably Iraq, in addition to the connivance of the United States, Britain could only wage a global war if the conflict was short.¹⁷⁰

¹⁶⁷ Peel (President, Oil Board), *et al.*, “Oil Board: Third Annual Report,” 26 April 1929, 937-B (also Paper No. O.B. 33), enclosed with: Hankey to the Cabinet, “Oil Fuel: Supply and Control,” 06 May 1929, C.P. 142 (29), CAB 24/203. By “unfriendly,” the Oil Board assumed that the Americans would only limit oil exports from the United States itself, and refrain from either “restrictions on the activities in other countries of United States nationals,” or limitations on the number of tankers available for British chartering. Brian McBeth mistakenly claims that the British expected than even an “unfriendly” United States would continue “supplying crude oil... for military use and not for civilian consumption [...]” McBeth, “Venezuela’s Nascent Oil Industry,” 454.

¹⁶⁸ The sub-committee warned that the “main disturbing factor is the additional 6 ½ million tons of Fuel oil required for the Navy during the first year of hostilities, which alone represent an increase of about 100 per cent over the peace-time imports of Fuel Oil for all Empire services [...]”

¹⁶⁹ Besides which, exports from Sarawak and the Dutch East Indies in 1925, and India in 1925-1926, only equaled 2,553,416 tons, and the Oil Board disregarded both Sarawak and the Dutch East Indies as wartime sources of supply on account of their vulnerability to a Japanese attack.

¹⁷⁰ On the other hand, “[if] the United States withheld oil from Japan it is difficult to see how the latter could obtain adequate supplies, Japan’s position being infinitely worse than our own [...]” Sub-Committee on Oil Supply in

The Oil Board also weighed in on the issue of a pipeline to carry Iraqi oil to the Mediterranean and pushed for the completion of a Haifa terminus so as to lay the groundwork for an additional outlet for Persian crude. Besides avoiding the journey around the Persian Gulf and through the Suez Canal, a pipeline reduced “the possibilities of interference by Persia [...]” The construction of a pipeline for Iraqi was a matter of “immense importance” in the event that supplies from either Persia or the United States were not forthcoming. The Oil Board estimated that Britain could count on 2,000,000 tons per annum from Iraq (excluding the oil owned by the U.S. partners in the IPC), or 10% of its total wartime requirements. All of these calculations would be upset if the IPC pipeline terminated in Tripoli, which reduced the likelihood of a complementary APOC pipeline, since France was entitled to 25% of any Persian oil transported through the French mandates under the San Remo Oil Agreement, while Syrians could levy an export tax.¹⁷¹

A war against Japan would probably not threaten British access to Persian oil, according to the Oil Board’s joint secretaries following a query from the CID, but the same could not be said of a war against the Soviet Union. Under such circumstances, Britain would have to find some way of replacing the oil imported from Persia, Romania, and the Soviet Union, while meeting an estimated military and civilian demand of 19,452,000 tons. The biggest hurdle would be the loss of Persia as a supplier, which had exported 3,175,000 tons to the British Empire in 1929 (1,784,000 tons to Great Britain, itself). The elimination of Persian and Soviet oil from the world export market would affect more than just Britain, as other customers would also have to find alternative supplies to replace the 2,144,000 tons of Persian and 2,840,000 tons of Soviet oil that were no longer available. Combined with the 8,000,000 tons of new oil

Time of War, March 1929, Annexure A to: Peel (President, Oil Board), *et al.*, “Oil Board: Third Annual Report,” 26 April 1929, 937-B (also Paper No. O.B. 33), enclosed with: Hankey to the Cabinet, “Oil Fuel: Supply and Control,” 06 May 1929, C.P. 142 (29), CAB 24/203. The report was also published separately as: Stanhope (Chairman), *et al.*, “Sub-Committee’s Report on Oil Supply in Time of War,” 20 March 1929, O.B. 27, CAB 50/3. Both the CID and the Cabinet approved the Oil Board’s Third Annual report in May 1929. The CID also directed “the Oil Board to revise the scheme for meeting Empire oil requirements in time of war triennially,” and to determine “how the oil supplies of the British Empire could best be met in the event of a war with Russia in Afghanistan.” L.E.H. Maund, “Oil Board: Third Annual Report – Approval Of (Note by the Secretary),” 10 May 1929, O.B. 35, CAB 50/3.

¹⁷¹ Peel (President, Oil Board), *et al.*, “Oil Board: Third Annual Report,” 26 April 1929, 937-B (also Paper No. O.B. 33), enclosed with: Hankey to the Cabinet, “Oil Fuel: Supply and Control,” 06 May 1929, C.P. 142 (29), CAB 24/203.

Britain would have to acquire, the Oil Board estimated that an Anglo-Soviet war that halted Persian exports could result in an overall disruption of world supplies totaling 13,000,000 tons. British oil requirements west of Suez could be satisfied through higher imports from the United States, Mexico, Trinidad, Peru, and Venezuela.¹⁷² But east of Suez, “the difficulties to be overcome would be considerable.” On the other hand, the tanker situation would not be as dire: Admiralty requirements in war against the Soviet Union (4,480,000 tons) were substantially lower than in a war against Japan (7,500,000 tons), and Britain would only have to charter eighteen neutral tankers. Unfortunately, the entire edifice depended on the neutrality of Japan, as most of the British Empire east of Suez depended upon oil from the East Indies if Persian supplies were unavailable.¹⁷³

Although the Oil Board approved the findings of its joint secretaries in its Sixth Annual Report, it concluded “that it would be hazardous to rely upon supplies from Roumania [*sic*] being available in such a war [...]” The Oil Board expected “that the supply situation should be considerably improved” by the completion of the IPC pipeline from Iraq to the Mediterranean by 1936 (although it seems unlikely that Iraq would still be producing oil for Britain if Persia was not), which would offset the loss of Romania.¹⁷⁴ In its Seventh Annual Report, the Oil Board remarked that no changes had been made to the previous year’s study of Britain’s oil requirements in an Asiatic War but indicated that the “scheme” would “be reviewed annually.”¹⁷⁵ The following year, the Oil Board completed a revision: Britain would now need to import 20,969,500 tons (15,935,800 for civil requirements, 12,016,100 tons of which went west of Suez), on 358.5 tankers, which required the chartering of 35 neutral vessels. The loss of Persia and Iraq

¹⁷² Although the Peruvian oilfields had been developed by British entrepreneurs starting in the 1870s, Jersey (through its Canadian subsidiary, Imperial Oil) had purchased control by 1913. Apparently, the British Government did not realize that the new company created to manage production in Peru, the International Petroleum Company, was actually owned by a U.S. firm until 1919. Brown and Linder, “Oil,” 137.

¹⁷³ “Memorandum by Joint Secretaries,” 22 September 1930, enclosed with: C.C.A. Allen (Joint Secretary, Oil Board), “Proposed Scheme for Providing the Empire Requirements of Petroleum and Benzol During the First Year of a War in an Asiatic Theatre,” 23 June 1931, O.B. 60 (Revise), CAB 50/4. A copy of the report is appended to the Oil Board’s Sixth Annual Report as Annexure A: Lord Amulree (Secretary of State for Air; President of the Oil Board), *et al.*, “Oil Board: Sixth Annual Report,” 30 September 1931, O.B. 71 (also C.I.D. Paper No. 1068-B), CAB 50/4.

¹⁷⁴ Amulree (President, Oil Board), *et al.*, “Oil Board: Sixth Annual Report,” 30 September 1931, O.B. 71 (also C.I.D. Paper No. 1068-B), CAB 50/4.

¹⁷⁵ Londonderry (President, Oil Board), *et al.*, “Oil Board: Seventh Annual Report,” 26 October 1932, O.B. 82 (also C.I.D. Paper No. 1096-B), CAB 50/4.

would not seriously impair Britain's war effort, for an Asiatic War did not threaten British access to Western Hemispheric oil production. The Admiralty's requirements of fuel oil (4,480,000 tons, which dwarfed the petroleum requirements of the Army and RAF) would come from five sources: Venezuela (1,637,000 tons), Mexico (947,000 tons), Texas (850,000 tons), Trinidad (746,000 tons), and the East Indies (300,000 tons).¹⁷⁶

¹⁷⁶ "Empire Requirements of Petroleum and Benzol during the First Year of a War in an Asiatic Theatre," no date or author, Annexure A to: Londonderry (President, Oil Board), *et al.*, "Oil Board: Eighth Annual Report," 31 July 1933, O.B. 122 (also C.I.D. Paper No. 1117-B), CAB 50/5. Another revised study is appended as Annex A to: Londonderry (President, Oil Board), *et al.*, "Oil Board: Ninth Annual Report," 31 October 1934, O.B. 134 (also C.I.D. Paper No. 1153-B), CAB 50/5. The empire's total requirements had increased by 560,500 tons (virtually all of which was additional civilian consumption), but the total number of tankers required had dropped by almost twenty (although twenty-seven neutral tankers would still have to be chartered).

The End of the British “Control” Clause, 1930-1932

Although the quest for energy independence from the United States would not be abandoned until the late-1930s, Britain’s continuing reliance upon imports of U.S. oil, and its failure to encourage greater oil production within the empire, forced London to abandon one of the key pillars of its postwar oil policy. In 1930, the British Government returned to the matter of the British “control” clause for oil companies operating within the empire when a U.S. firm, the Standard Oil Company of California (SOCAL), sought to purchase an oil concession to Bahrain.¹⁷⁷

In 1913, the Shah of Bahrain had agreed never to grant a concession to any foreign company without British approval. During the mid-1920s, Frank Holmes, an enterprising prospector originally from New Zealand, purchased concessions throughout the Persian Gulf, including Kuwait and Bahrain. Holmes had planned to sell these concessions to British oil companies such as APOC and Burmah, but he found no takers. APOC had an appalling track record when it came to finding oil and its geologists were convinced that none existed on the Arabian side of the Persian Gulf (they only changed their tune in 1932 when SOCAL proved them wrong in Bahrain).¹⁷⁸ Holmes had also bought an option for the al-Hasa district from Ibn Saud in 1923, when the latter was only the Sultan of the Nejd, with the proviso that he could not sell the concession to APOC, which had humiliated Ibn Saud the year before. The Saudi concession expired in 1925 before Holmes could find any takers.¹⁷⁹ Holmes eventually sold the Bahrain concession to the Gulf Oil Company in 1927, which had to relinquish the concession a year later since, as a member

¹⁷⁷ Events concerning Bahrain between 1925 and 1929 are summarized in: Petroleum Department, “Oil Concessions in British Colonies and Protectorates: British Control of Companies,” no date (circa 1929), POWE 34/1. The Standard Oil Company of California (SOCAL) had traditionally been a “self-sufficient” company that relied on its holdings in the United States. The company aggressively sought overseas concessions after the First World War but had been unsuccessful until it purchased the Bahrain concession. Irvine Anderson, *ARAMCO, the United States, and Saudi Arabia: A Study in the Dynamics of Foreign Oil Policy* (Princeton: Princeton University Press, 1981), 21-23.

¹⁷⁸ Years later, the Treasury lamented that U.S. oil companies had managed to acquire concessions in Bahrain and Saudi Arabia only “because the Anglo-Iranian was technically incompetent to find the oil.” Wilfrid Eady (Second Secretary, Head of the Finance, Treasury) to Thomas Padmore (Principal Private Secretary to the Chancellor of the Exchequer), “Oil Conference,” 17 February 1944, T 161/1195. In fairness, Shell’s track record was hardly better: it too had passed on Holmes’ concessions and turned down an offer to have the IPC join SOCAL in Saudi Arabia in 1934. Jonker and Zanden, *History of Shell*, 283.

¹⁷⁹ The story of Holmes, who was the first man to map the al-Hasa oilfield and was known to the Arabs as “Abu al Naft” (“the Father of the Oil”), is recounted in: Keating, *Mirage, passim*.

of the TPC, it was bound by the “Red Line” Agreement of 1928 and obligated to search and produce oil within the Arabian Peninsula only with the consent of its partners.¹⁸⁰

The Petroleum Department again led the charge for a modification of existing policy and did not mince words: Britain was still dependent on foreign supplies of oil, and if the United States and other oil-producing countries where British companies were active adopted legislation similar to that which applied to the British Empire, “the result would be disastrous to British Commercial interests.” The exclusion of foreign capital from imperial oil development had yielded no discernible benefits and was “actually harmful in so far as it prevents foreign capital from assisting in the search for oil in the Empire.” “If foreigners like to come and spend money in searching for oil,” the Petroleum Department reasoned, “it seems foolish to prevent them from doing so,” since their success would only redound to the benefit of the empire, while undiscovered oil deposits “are of no use to anyone [...]”¹⁸¹ The Petroleum Department urged the government to adopt a policy of reciprocity if foreign companies provided certain guarantees in the event that they wished to sell imperial concessions, register their companies in British territories, ensure that a majority of their employees and some directors (including the Managing Director) were British subjects, make provision that their refineries on British territory could produce fuel at Admiralty specifications, and offer the British Government the “right of pre-emption in case of emergency.”¹⁸²

¹⁸⁰ Aileen Keating, *Mirage: Power, Politics, and the Hidden History of Arabian Oil* (Amherst: Prometheus Books, 2005), 207-315, is good on the personalities involved (particularly Holmes), although the role of the U.S. and British governments is not well defined.

¹⁸¹ Petroleum Department, “Enclosure,” 25 July 1930, attached to: Hankey, “Policy Regarding Oil Concessions in British Territory,” 16 September 1930, 1017-B, enclosed with: Hankey, “Policy Regarding Oil Concessions in British Territory,” 07 October 1930, C.P. 328 (30), CAB 24/215. The language is almost identical to that of memoranda produced during interagency debates in the early-1920s. See: J.C.C. to Wills, Chapman, and the President (of the Board of Trade, Lloyd-Greame?), “Petroleum Policy: Minute by Mr. Clarke,” 21 April 1923, P.D. 195, enclosed with: Llewellyn Smith, “Imperial Petroleum Policy,” 07 June 1923, Dft. E.C. 24, POWE 33/353.

¹⁸² Petroleum Department, “Enclosure,” 25 July 1930, attached to: Hankey, “Policy Regarding Oil Concessions in British Territory,” 16 September 1930, 1017-B, enclosed with: Hankey, “Policy Regarding Oil Concessions in British Territory,” 07 October 1930, C.P. 328 (30), CAB 24/215. The Petroleum Department had actually completed the report the year before. Petroleum Department, “Oil Concessions in British Colonies and Protectorates. British Control of Companies,” July 1929, enclosed with: H.W. Cole (Petroleum Department) to R.V. Vernon (Colonial Office), 06 July 1929, P.D. 169, CO 323/1063/6. The CID concurred with the Petroleum Department and “[referred] the memorandum to the Cabinet [and Dominion representatives], with a recommendation that there was no objection to the policy proposed from the point of view of Imperial Defence.” CID, “Extract from the DRAFT Minutes of the 250th Meeting, held on September 29, 1930. (8.)—Policy Regarding Oil Concessions in British Territory,” 29 September 1930, enclosed with: Hankey, “Policy Regarding Oil Concessions in British Territory,” 07 October 1930,

London allowed SOCAL to take up the concession after it agreed to use a subsidiary – the Bahrain Petroleum Company, BAPCO – that was registered in Canada and under nominal British control. The company struck oil two years later. Adoption of the Petroleum Department’s recommendations allowed for the resolution of another dispute with the United States in 1932/3, this time over Kuwait, where the Gulf Oil Company was competing with APOC for a concession.¹⁸³ As in Bahrain, the Sheikh of Kuwait had also agreed before the First World War never to grant an oil concession to a foreign company without the consent of the British Government in exchange for London guaranteeing Kuwait’s independence from the Ottoman Empire. Since the U.S. Government was willing to abide by the precedent set in Bahrain, the Foreign Office advised the government to disregard the Admiralty’s demand that 50% of the capital of all foreign companies prospecting within in the empire was British.¹⁸⁴

The Admiralty was not pleased with how the Bahrain situation had been resolved. One of the Royal Navy’s fleet commanders worried that Britain was already “much too dependent upon the goodwill of both Persia and Russia” for its oil supplies. Bahrain, by contrast, would have been invaluable wartime source of oil because it was an island and could be defended more easily than APOC’s oilfields in Persia. But there was still a chance of salvaging the situation if Britain could develop Kuwait. Although not as defensible as Bahraini oil, Kuwaiti production “should be much safer, easier to defend and freer from political considerations in war than the Anglo-Persian Oil Company fields, owing to it being in Arabia

C.P. 328 (30), CAB 24/215. The to-and-fro between the Petroleum Department and the Colonial Office over the “Open Door” within the Empire is summarized in: McBeth, *British Oil Policy*, 122-128.

¹⁸³ The Anglo-American struggle for the Kuwait concession and the formation of the Kuwait Oil Company is detailed in: Fiona Venn, “A Struggle for Supremacy? Great Britain, the United States and Kuwaiti Oil in the 1930s,” University of Essex, Department of History, Working Paper Series, Working Paper II (2000), http://www.essex.ac.uk/history/Staff_Research/working-papers/fvenn-paper.pdf. The best source on the complex negotiations leading to formation of the Kuwait Oil Company (KOC) and its 1934 oil concession is: Bamberg, *History of BP*, 146-155. See also: DeNovo, *American Interests*, 202-209; and Benjamin Shwadran, *The Oil and the Great Powers* (New York: Council for Middle Eastern Affairs Press, 1959), 384-388. For the perspective of the British Government, see: “History of the Kuwait Oil Concession,” Appendix I (F) to: Ministerial Oil Committee, “Oil Policy,” no date (circa April 1944), M.O.C. (44) 5, POWE 33/1399.

¹⁸⁴ Foreign Office, “American Wish to secure an Oil Concession in Koweit,” 30 March 1932, enclosed with: J.S. (John Simon), “Koweit Oil Concession,” 02 April 1932, C.P. 120 (32), CAB 24/229.

and not Persia.” The problem, however, was APOC, which was not eager to develop low-cost Arabian alternatives to its Persian production.¹⁸⁵

Admiralty oil policy in the Persian Gulf had revolved around the maintenance of three conditions for all concessions: that the concessionaries be “British” in terms of their leadership and headquarters (but not shareholders); that the staff working the concession be British; and that all companies agree to construct both a refinery and afford the Admiralty “the right of pre-emption” during wartime. The agreement with the Americans over Bahrain included the first two clauses, but the not third, and this had to be avoided in the case of Kuwait. Interestingly, APOC was trying to have these stipulations waived in order to push through an agreement with Gulf.¹⁸⁶ In the case of Kuwait, like the Iraqi pipeline years before, the commercial interests of APOC came into conflict with the strategic imperatives of its most important patron, the Admiralty. The Admiralty was not averse to the idea of Anglo-American cooperation in Kuwait, for “it seems desirable that approval should be given” to Gulf, which had “a very deeper pocket than the Anglo-Persian Oil Company [...]” What irked the Admiralty was “the fact that the Foreign Office have given the American Government an understanding which practically amounts to an open door arrangement in that area.” The Admiralty also complained that the former U.S. Ambassador to Britain, Andrew Mellon, “seems to have made a very improper use of his position as Ambassador.”¹⁸⁷

APOC had been caught napping twice over the past few years: the company had passed on the concessions for both Bahrain and Kuwait when Holmes offered them, believing that there was no oil in the Arabian Peninsula. APOC and the IPC lost out to SOCAL again the following year for the concession to the Saudi province of al-Hasa, although the primary reason why the IPC fell short in this instance

¹⁸⁵ Admiral M.E. Dunbar-Nasmith (C-in-C, East Indies) to First Sea Lord Admiral A. Ernle M. Chatfield, 11 December 1933, ADM 1/8773/57. Chatfield concurred with Dunbar-Nasmith’s analysis, even if he considered the possibility of the Persians blocking oil exports during wartime to be remote (leaving aside the question of Soviet interference). Chatfield was also confident that Britain would be able to pre-empt Bahraini oil production in wartime through the intervention of the Sheikh. Chatfield to Dunbar-Nasmith, 05 February 1934, ADM 1/8773/57.

¹⁸⁶ Military Branch, Admiralty, “Oil in the Persian Gulf – Admiralty Policy,” no date, enclosed with: Plans Division, Admiralty, no title or date (handwritten notation reads: “Persian Gulf. The Oil Situation. Dated: 8.1.34”), ADM 1/8773/57.

¹⁸⁷ Military Branch, Admiralty, “Oil in the Persian Gulf: Short Summary up to January, 1934,” no date, enclosed with: Plans Division, Admiralty, no title or date (handwritten notation reads: “Persian Gulf. The Oil Situation. Dated: 8.1.34”), ADM 1/8773/57. Mellon’s bank was a major shareholder in Gulf, but the company was founded and operated by another branch of the Mellon family.

appears to have been Ibn Saud's desire to encourage the United States to maintain a larger presence in Saudi Arabia in order to counterbalance Britain.¹⁸⁸ By 1933, therefore, APOC had every incentive to avoid being shut out of Kuwait, while the British Government was disinclined to see a replay of the 1930 dispute with the United States over the Bahrain concession. After 1932, Britain could not afford to antagonize the United States when it was the verge of defaulting on its war debt, and it again abandoned its insistence upon the application of the British "control" clause.

One historian argues that British appeasement of U.S. oil ambitions in Bahrain and Kuwait between 1929 and 1934 was motivated by the desire of the Foreign Office to reverse the deterioration in Anglo-American relations once Britain sought relief on its wartime debt to the United States. Her excessive emphasis on Foreign Office records obscures the degree to which Britain's parlous oil supply situation also demanded a rapprochement with the United States.¹⁸⁹ German analysts understood that the entrance of U.S. interests in the Persian Gulf, even if they posed a challenge to British commercial supremacy, actually strengthened Britain's strategic position by giving the United States a stake in the region's security, particularly in the case of Bahrain, over which the Iranians claimed sovereignty.¹⁹⁰ Whatever the shape of Britain's finances, there was no viable short-term alternative to cooperation with the United States on oil matters. Since the mid-1920s, the assessments of agencies such as the Oil Board and the Petroleum Division had demonstrated that Britain's policy of seeking energy independence from the United States was failing, and that Britain would have no option but to acquire more than half of its wartime oil supplies from the U.S.-dominated Western Hemisphere.

After the Sheikh of Kuwait rejected individual bids by both APOC and Gulf, the companies came together to form the Kuwait Oil Company (KOC) in December 1933 with London's blessing.¹⁹¹ The

¹⁸⁸ Anderson, *ARAMCO*, 21-34; Edward Peter Fitzgerald, "The Iraq Petroleum Company, Standard Oil of California, and the Contest for Eastern Arabia," *International History Review* 13: 3 (1991): 441-460; and Clive Leatherdale, *Britain and Saudi Arabia, 1925-1939: The Imperial Oasis* (Frank Cass: Abingdon, 1983), 193-208.

¹⁸⁹ Fiona Venn, "'A Futile Paper Chase': Anglo-American Relations and Middle East Oil, 1918-1934," *Diplomacy & Statecraft* 1 (1990): 165-184.

¹⁹⁰ "Ölwirtschaft im Iranischen Golf," *Vierjahresplan*, 1938: X.

¹⁹¹ In March 1934, the KOC also signed a "political agreement" with London, promising the latter that it would not transfer the concession without the permission of the British Government, which would also have pre-emptive rights to Kuwaiti oil during wartime. "Political Agreement Between His Majesty's Government in the United Kingdom

following December, the KOC (like BAPCO, technically a British company) received a 75-year concession for all of Kuwait except the “Neutral Zone” with Saudi Arabia. Although ownership of the KOC was shared 50/50, in practice, effective control of output rested in the hands of APOC since both parties had to agree upon and share equally any production, while APOC could supply its partner with oil from its fields in Iran or Iraq if Gulf required additional supplies.¹⁹² The KOC discovered oil in 1938, but Kuwait was of marginal consequence before the Second World War, and Cadman did not bother to mention the AIOC’s activities there during the company’s annual meeting in 1939.¹⁹³

Although the Cabinet accepted the recommendations of the Petroleum Department and CID concerning the modification of the British “control” clause in October 1930, no official announcement was made until July 1936, and the relevant legislation was not passed until 1938. The most important change in policy was that foreign-controlled companies could now purchase previously restricted concessions so long as their host governments reciprocated to British firms. The new policy also met the Admiralty’s demands by forcing concessionaires to refine at least 50% of their production within the empire beyond an unspecified level of output and allowing the British Government to “pre-empt” production during an emergency.¹⁹⁴

The reasons for the delay in announcing the shift in policy were two-fold: First, Britain had to pass model legislation in 1934 and 1935 eliminating the old “control” clause within Great Britain itself. Second, Britain needed to bring along the self-governing dominions because of the terms of the U.S. Minerals Leasing Act of 1920. Passed during early stages of the Anglo-American “oil war” after 1918, the bill prohibited the granting of oil leases on Federal lands to any company whose home country discriminated against U.S. firms. Now that Britain had abandoned the “control” clause in the Persian Gulf, there was no point in maintaining it elsewhere, particularly if its elimination allowed Britain to

and the Kuwait Oil Company, Date 5th March, 1934,” Appendix VII (B) to: Ministerial Oil Committee, “Oil Policy,” no date (circa April 1944), M.O.C. (44) 5, POWE 33/1399; and Bamberg, *History of BP*, 150-151.

¹⁹² Blair, *Control of Oil*, 42-43.

¹⁹³ Wilkins, *Maturing*, 213-214. Wilkins misdates the discovery of oil at Burgan as occurring in 1937.

¹⁹⁴ J.H.T. (James Henry Thomas), “Oil Development in the Colonial Empire: Policy of British Control: Memorandum by the Secretary of State for the Colonies,” 27 April 1936, C.P. 119 (36), CAB 24/262.

qualify as a “reciprocating country” under Minerals Leasing Act. Officials had long argued that Britain’s case for “reciprocity” would only be strengthened if the entire empire abandoned the “control” clause.¹⁹⁵ There was also little to lose: by 1936, London had concluded that there was not much oil to be had within the empire. As one Treasury official observed, “it would appear that we stand to gain more than we offer by this reciprocity business.”¹⁹⁶ London’s flexible policy on Bahrain and Kuwait, and the gradual elimination of the “control” clause thereafter, ensured that Washington raised no complaints in 1935 when London queried if Britain was a “reciprocal country” under the Minerals Leasing Act, which meant that British firms could once again prospect for oil on Federal lands.¹⁹⁷ By then, Britain was going to need all the help it could get.¹⁹⁸

The fate of the policy of British “control” of imperial oil reserves was symbolic of the uninspiring track record of British oil policy between 1921 and 1932. The one triumph – Venezuela – was not applicable because the country fell within the U.S. sphere of influence, and Shell operated there at Washington’s sufferance. Iraq was only a partial success: London had secured the predominance of the TPC/IPC within the Iraqi oil industry, as well as British political control over Iraq as a whole, in the face of widespread opposition. But Iraqi oil exports had yet to arrive in Europe as of 1932 – five years after the discovery of oil at Baba Gurgur. The mixed results in Iraq had to be set against the failure to increase oil production within the empire significantly, in spite of the preferential treatment afforded to British oil companies and the harm inflicted upon Anglo-American relations. The plan to Shell under majority-British ownership had been both fruitless and misguided (in view of the group’s past and future contributions to Britain’s survival). Despite more than a decade of effort, Britain was nowhere near

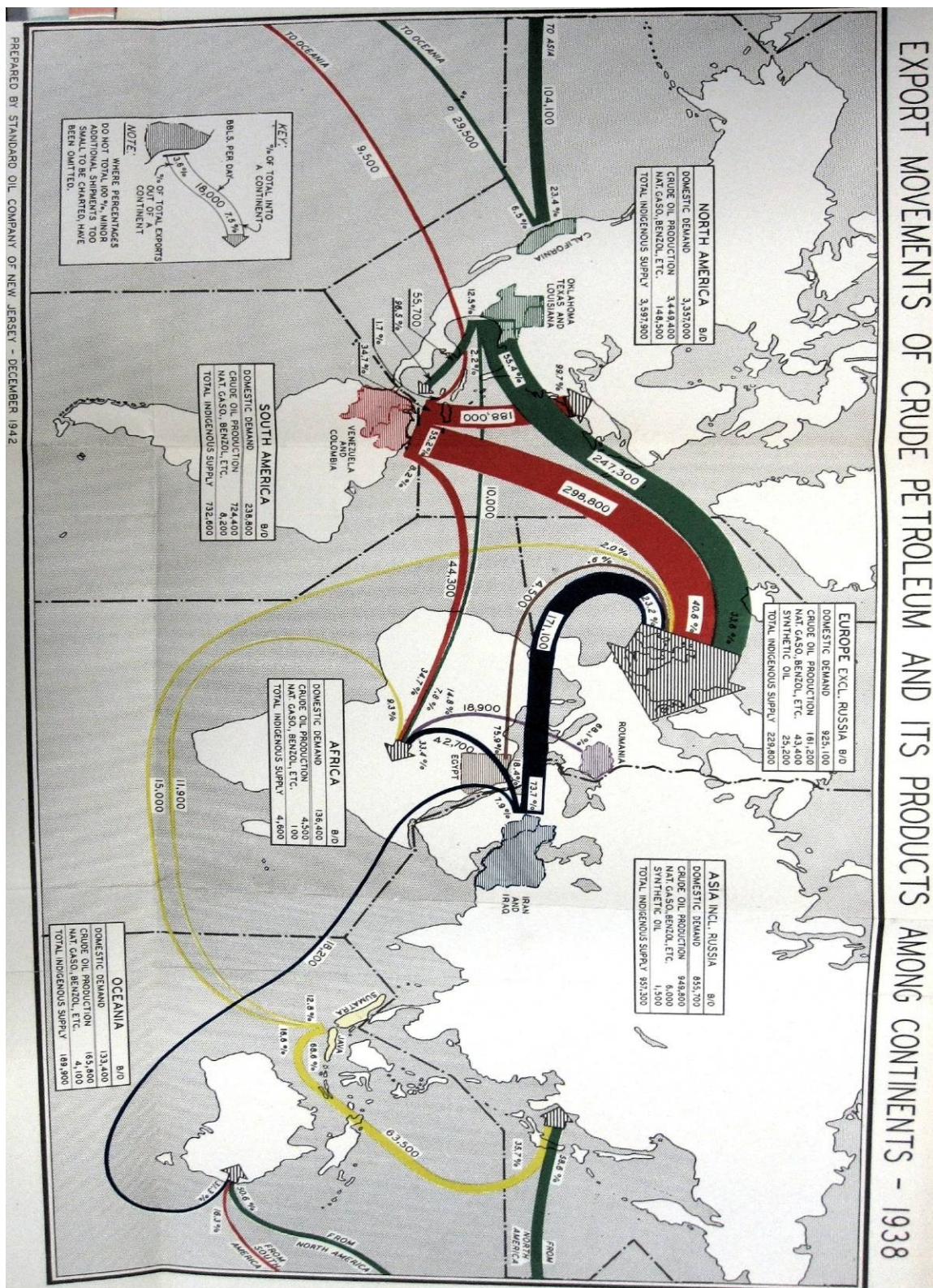
¹⁹⁵ BOT, “Treatment of Foreigners and Foreign Enterprises,” 28 October 1932, POWE 33/461.

¹⁹⁶ Edward E. Bridges, “Oil Development in the Colonial Empire: C.P. 119 (36),” 06 May 1936, T 161/172.

¹⁹⁷ The matter ended up being the subject of a voluminous exchange of correspondence between the British Embassy in Washington, and departments of State, Interior, and Justice, since the latter two had to contribute legal opinions. See the materials enclosed within: NARA, RG 59, 841.6363/412 to 841.6363/425.

¹⁹⁸ Developments between 1930 and 1938 are summarized in: Petroleum Department, “Oil Concessions: The Position of Aliens and Foreign Controlled Companies in Regard to the Granting of Oil Concessions in Great Britain and the Colonial Empire,” September 1938, POWE 34/1. See also: Charles More, *Black Gold: Britain and Oil in the Twentieth Century* (London: Continuum, 2009), 65-66.

realizing the dream of energy independence from the United States, which had appeared feasible in the aftermath of the World War but was becoming increasingly elusive. The relatively benign international atmosphere of the 1920s had masked the underwhelming results of Britain's oil policy. But starting in 1932, events would take a distinctly ominous turn and expose the gap between London's ambitions and the reality of Britain's oil position.



Map 3: Standard Oil Company of New Jersey, "Export Movements of Crude Petroleum and its Products among Continents - 1938 [in barrels per day]," December 1942

Source: National Archives and Records Administration (NARA), Record Group 59: General Records of the Department of State (RG 59), Lot File 77D141, Records of the Petroleum Division (PED), Box 3.

1938

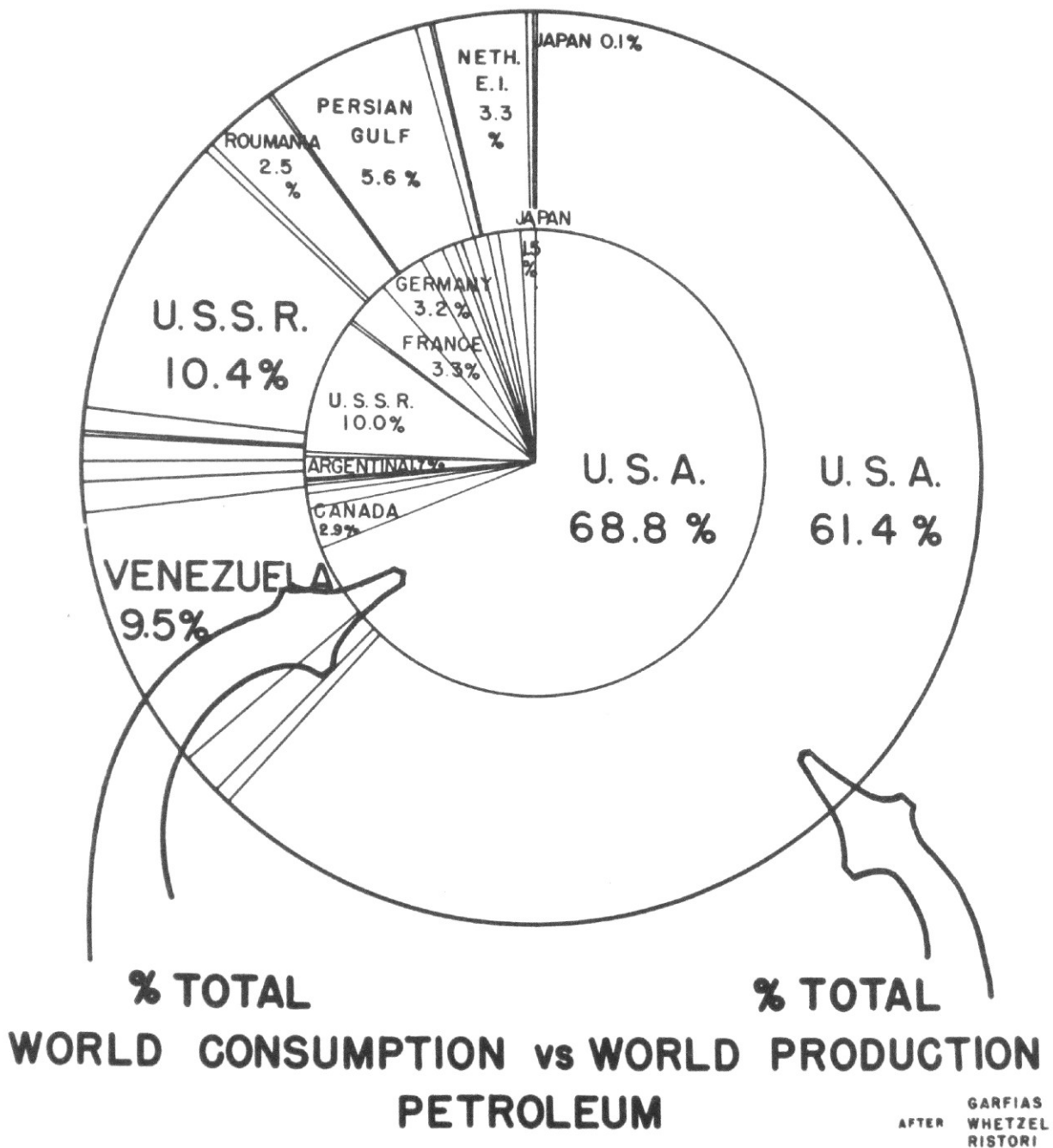
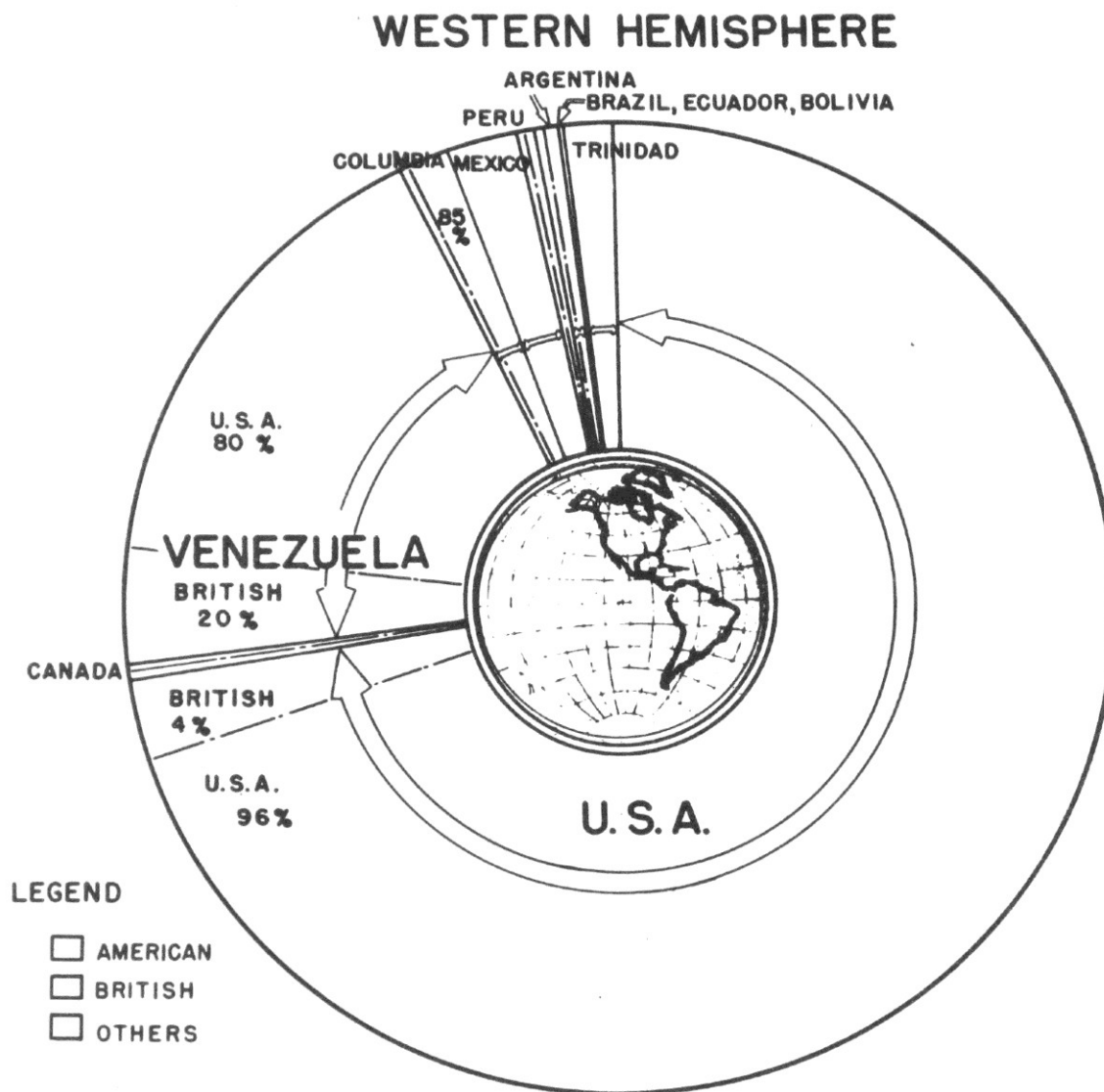


Illustration 4: "World Consumption vs. World Production [of] Petroleum," 1938
 Source: NARA, Record Group 107: Records of the Office of the Secretary of War (RG 107), Entry 141, Office of the Under Secretary for War, Administrative Office, Classified Decimal File, Box 251.

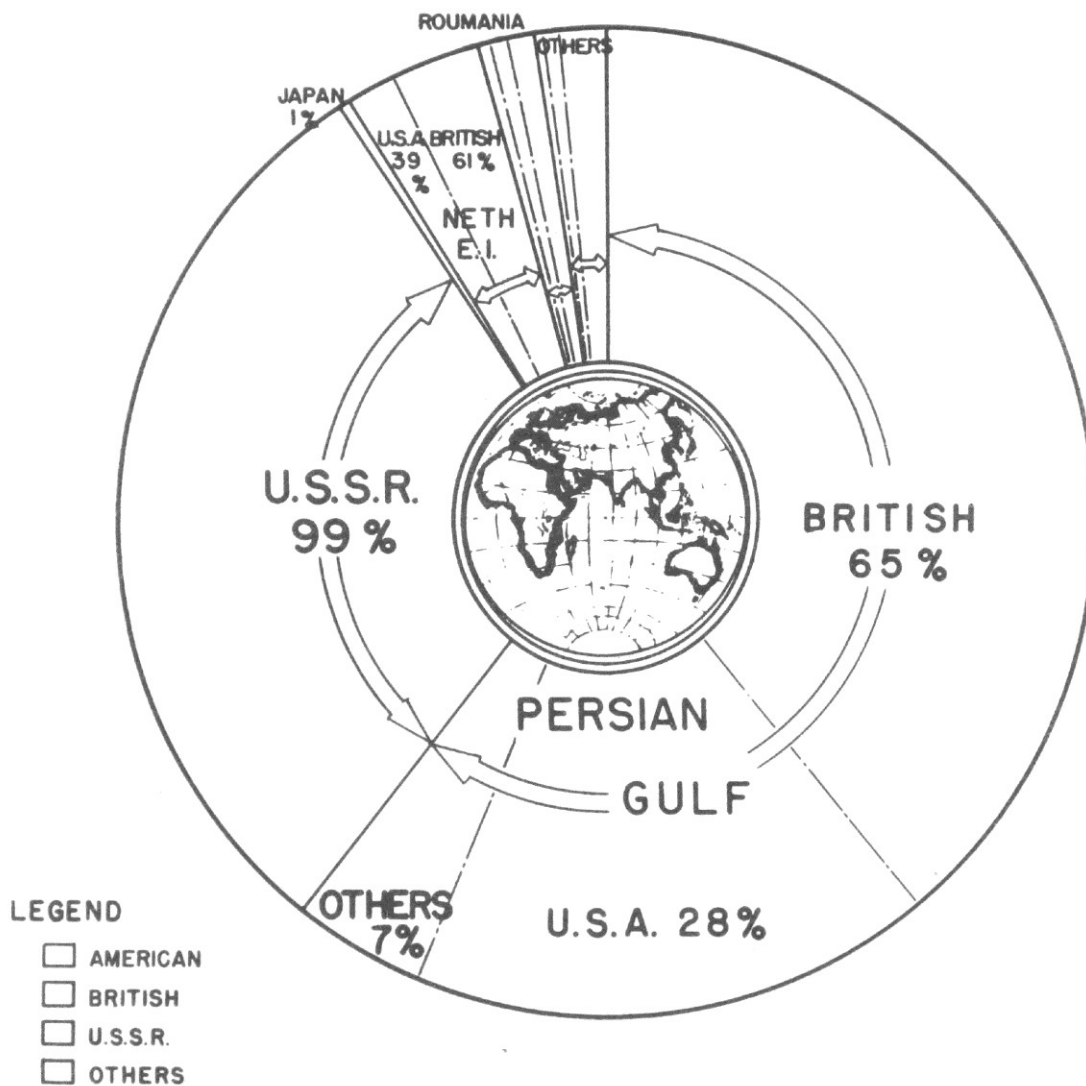


FINANCIAL CONTROL BY COUNTRIES OF PROVEN PETROLEUM RESERVES INSCLUSIVE OF U.S.A.

Illustration 5: "Financial Control by Countries of Proven Petroleum Reserves *Inclusive* of U.S.A.," Western Hemisphere, no date (circa 1938)

Source: NARA, RG 107, Entry 141, Office of the Under Secretary for War, Administrative Office, Classified Decimal File, Box 251.

EASTERN HEMISPHERE



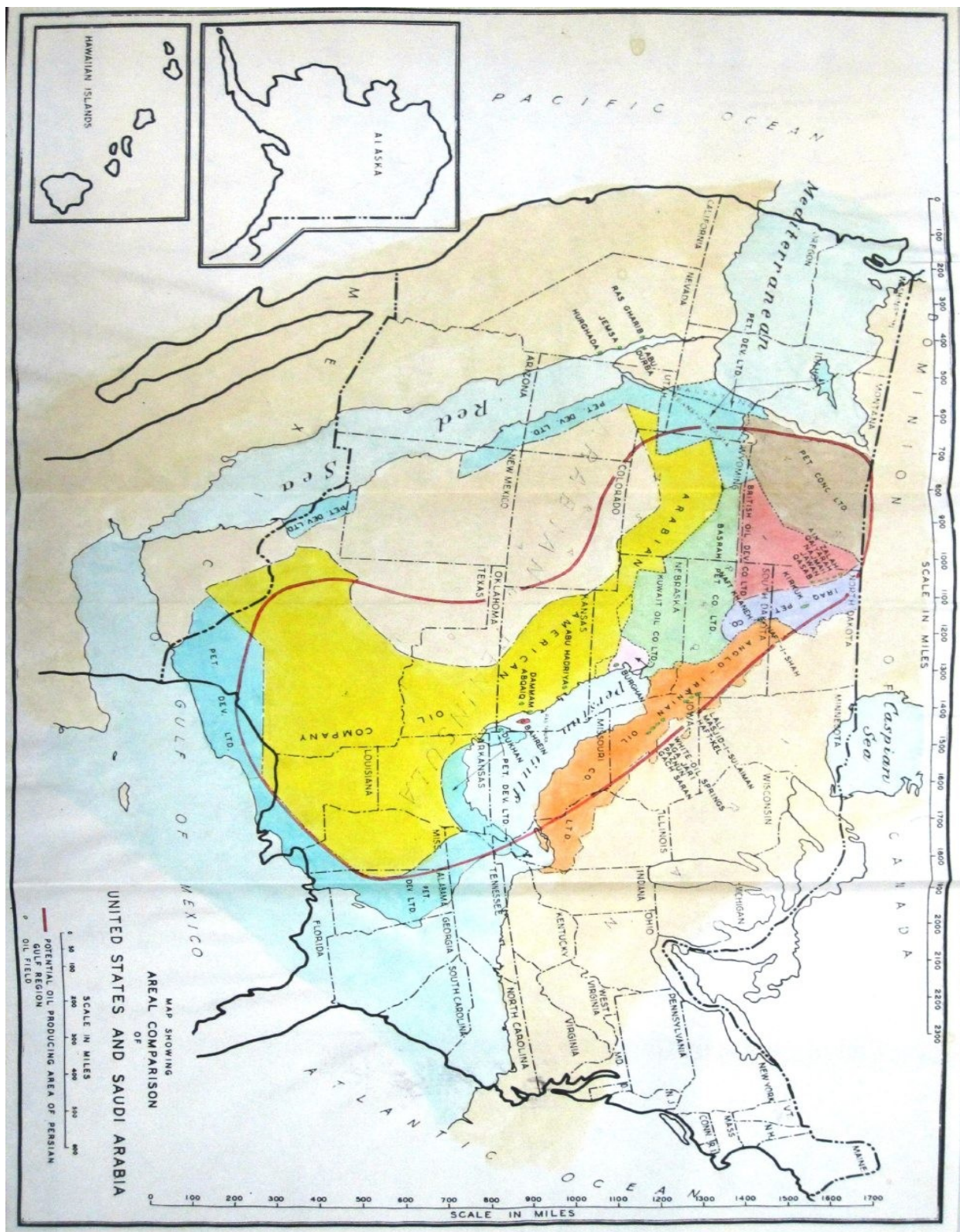
FINANCIAL CONTROL BY COUNTRIES OF PROVEN PETROLEUM RESERVES

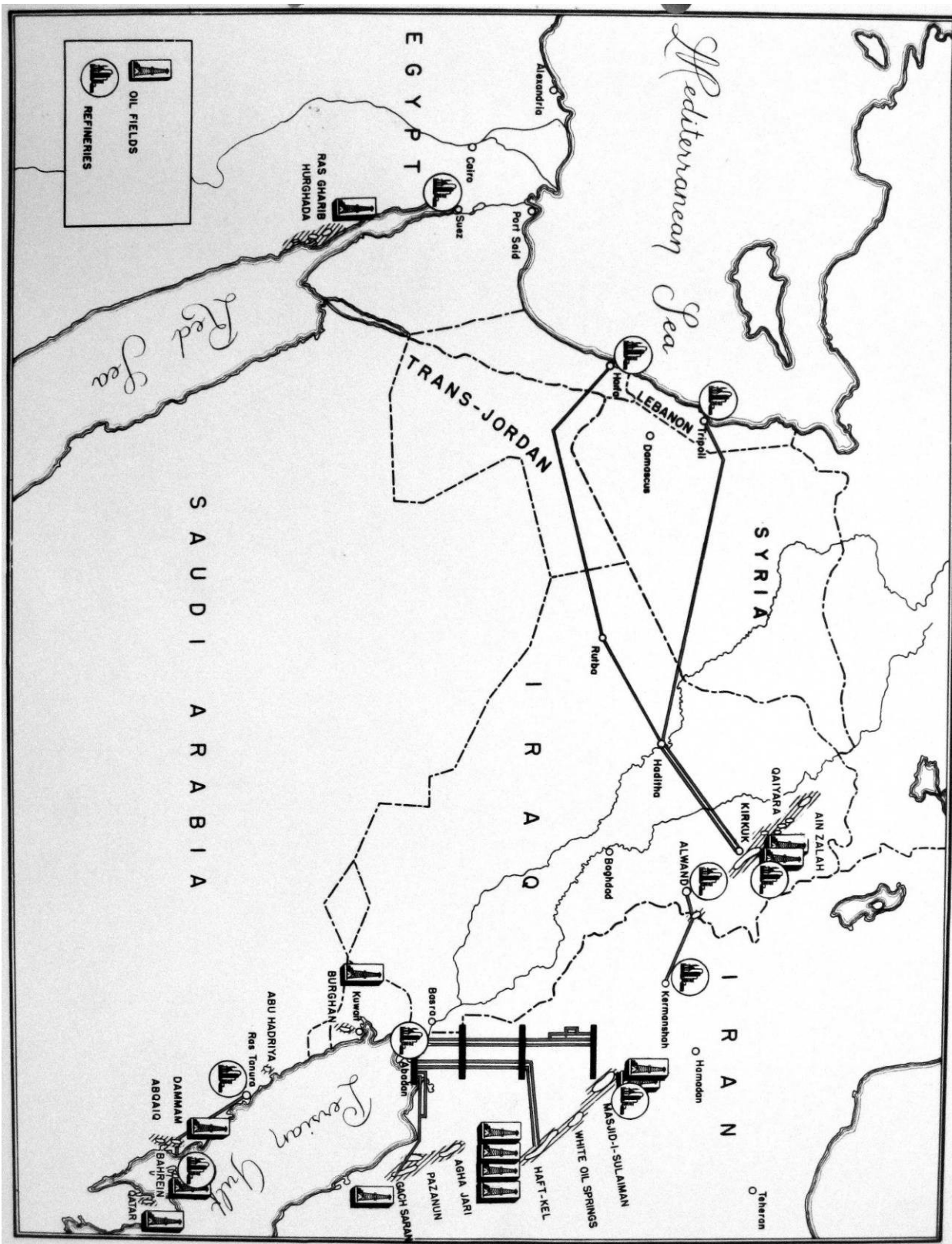
Illustration 6: "Financial Control by Countries of Proven Petroleum Reserves," Eastern Hemisphere, no date (circa 1938)

Source: NARA, RG 107, Entry 141, Office of the Under Secretary for War, Administrative Office, Classified Decimal File, Box 251.



Map 4: Foreign Office, Research Department, "Oilfields & Concession Areas in the Middle Eastern Countries Together with Neighbouring Oilfields in the U.S.S.R.," March 1945
Source: British National Archives, FO 371/45274.





Map 6: Oilfields, Pipelines, and Refineries of the Middle East, no date (circa 1943)
 Source: NARA, RG 107, Entry 141, Office of the Under Secretary for War, Administrative Office,
 Classified Decimal File, Box 251.

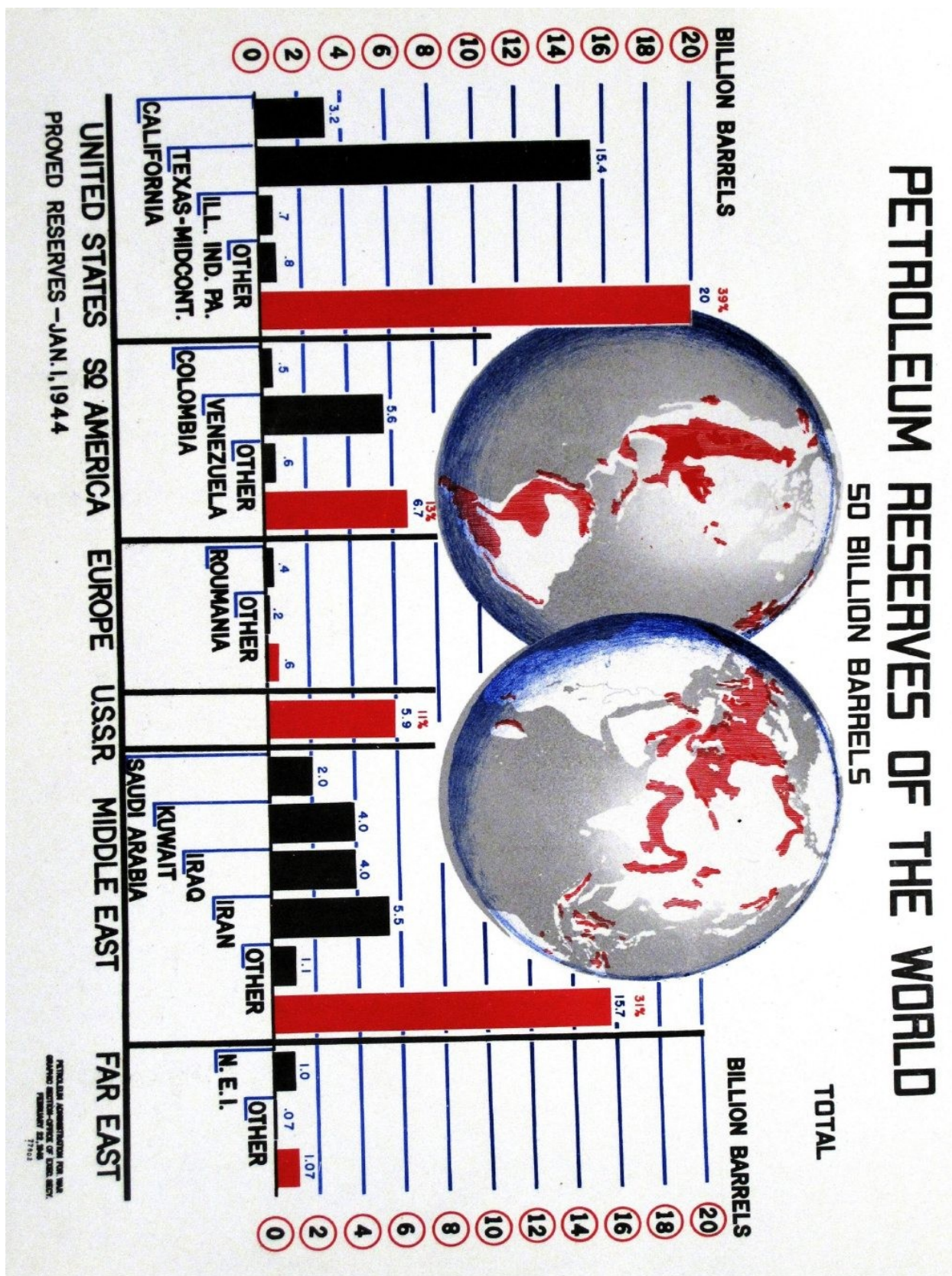


Illustration 7: Petroleum Administration for War, "Petroleum Reserves of the World," 22 February 1945
Source: LOC, Harold L. Ickes Papers, Box 221.

DIVISION OF PROVED RESERVES



Illustration 8: Petroleum Administration for War, "Division of Proved Reserves," 22 February 1945
Source: LOC, Harold L. Ickes Papers, Box 221.

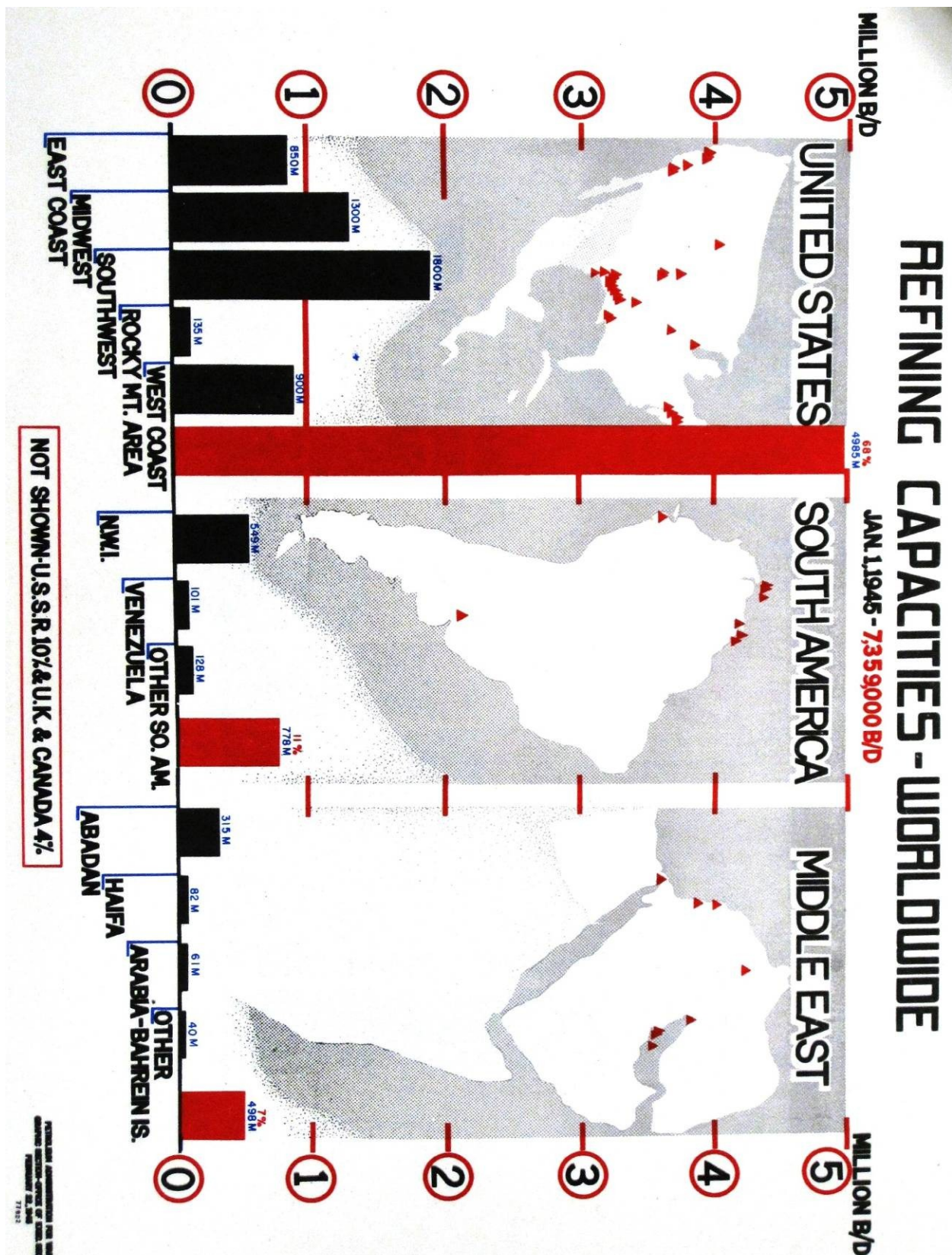


Illustration 9: Petroleum Administration for War, "Refining Capacities – Worldwide," 22 February 1945
 Source: LOC, Harold L. Ickes Papers, Box 221.

Chapter III

The Reality of Dependence: Britain, 1932-1939

Britain's Narrow Margin for Security

In 1925, Admiral Edmond Slade offered a thoughtful analysis of Britain's oil situation in a lecture before the Royal United Service Institution. Britain depended on three nations to supply more than 85% of its oil consumption in 1924 (5,749,577 tons): the United States (2,413,000 tons – 38%), Persia (1,439,000 tons – 25%), and Mexico (1,196,000 tons – 21%). Slade was concerned that increases in U.S. domestic consumption would reduce the amount of oil available for export – currently 20,559,000 tons, or 21.6% of its total production, of which Great Britain alone consumed 2,413,000 tons, or 11.7% of total U.S. exports.¹ Persia was the most important overseas asset beyond the United States, and since supplies from there were vulnerable to disruption, Britain had “to cultivate and maintain the most friendly relations with Persia and to demonstrate to her that it is to her interest to look to Great Britain for assistance in the development of her resources,” while also positioning adequate forces to defend the Persian oilfields. The size of the Persian oil reserves, combined with the country's small rate of domestic consumption, offered the possibility that “Persia may eventually take the place of the United States as the principal source of supply for the United Kingdom [...]” Although the British Government should continue to increase its reserve stocks and subsidize scientific efforts to develop a cost-effective means of synthetically producing oil from either coal or shale, Slade stressed “that it is to the East rather than to the West that we should look for supplies, and that we must use every endeavour to cement our ties with the nations in whose territories the oil is to be found.”²

¹ There were, for instance, 6.3 people for every automobile in the United States, compared to 32 people per automobile in Britain. Admiral Sir E.J.W. Slade, “Oil Supplies in War,” *Journal of the Royal United Service Institution* (hereafter cited as: *RUSI*) 71: 481 (1926): 129. In another speech before the Royal Naval College in 1926, Slade explained that technological advances would probably significant boost rates of extraction in the United States. Moreover, it was fair to assume “that the discovery of fresh pools has not, by any means, yet reached finality.” Nevertheless, Slade still believed that the U.S. Government would have no option but to limit oil exports within a decade. “Strategic Aspect of Oil Supplies in War,” no date (circa 1926), British Petroleum Archive, Arc. Ref. 68940 (hereafter cited as: BP, No.). All primary sources cited in this chapter are from the British National Archives (BNA), unless otherwise indicated.

² Slade, “Oil Supplies in War,” 119-135.

In an address before the Royal Naval College the following year, Slade ruled out drawing supplies from either the Soviet Union or Mexico, the former because it had only a small exportable surplus, while the United States would absorb most of the latter's output.³ Venezuela could become an important supplier "by 1930," which meant that "we are reduced to one country to which we can look for the supply of the greater part of our requirements, – namely, Persia." That country was capable of producing the sufficient quantities of oil, but Slade expressed skepticism about Persia's reliability in wartime. Production there could, for example, be disrupted through Soviet interference. In case supplies were no longer forthcoming, there was "no escape" from two equally unpalatable options: either mount a punitive expedition against Persia to seize control of the oilfields, "or, alternatively, submit to an ignominious peace [...]." In view of the likelihood "that we are not going to find 'free' Petroleum within the Empire," Slade again urged a policy of developing substitutes and building adequate storage capacity (40,000,000 tons worth).⁴

Slade's somber evaluation revealed the lack of progress in achieving energy independence from the United States. By the late-1920s, the British Government conceded that "on present evidence the possibility of any considerable increase in Empire production... appears remote." In 1926, imperial production shrank to 1.8% of global production and only 3.8% of Great Britain's total oil imports (1,726,000 barrels out of 45,542,000 barrels). This figure would contract to 3.2% in 1927 (1,562,000 barrels out of 48,842,000 barrels).⁵ Consequently, there was an implicit understanding in London that Britain's oil security in wartime still depended on the benevolent neutrality of the United States. Even this

³ Soviet exports in 1925 were only 1,250,000 tons (good for sixth place among oil-exporting nations), but they rose sharply after 1929, peaking at 6,601,000 tons in 1932 before quickly declining to only 931,000 tons in 1938. Reichs-Kredit-Gesellschaft AG, Ke/Schr., "Treibstoffwirtschaft in der Welt und in Deutschland," April 1938, National Archives and Records Administration, Record Group 242: Foreign Records Seized, National Archives Microfilm Publication T-84, Reel 51, Item No. EAP 66-c-2-10/22 – hereafter cited as: NARA, RG 242, Microfilm Publication No./Reel No. (Item No.); and the Reichsstelle für Bodenforschung, *Die wichtigsten Lagerstätten der Erde, Heft 4: Erdöl in Rußland* (Berlin, 1941), Library of Congress.

⁴ "Strategic Aspect of Oil Supplies in War," no date (circa 1926), BP 68940.

⁵ Petroleum Department, "Petroleum Industry in the British Empire," February 1928, POWE 33/253. Part of the problem was that only 10% of imperial production actually found its way to Great Britain. In trying to find a way to address this imbalance, a supplementary note to the aforementioned report concluded that "it is very doubtful whether a preferential rate of duty on empire produced oil would have any useful effect." "British Empire Production: Supplementary note in reply to points raised by Mr. Grylls," no date or author (handwritten notation reads: "H.P.W.G. Feb: 1928"), POWE 33/253.

might prove insufficient if the Middle Eastern oil was completely unavailable, and such a catastrophe could not be ruled out in the wake of the events of 1932-1933 in Persia.

The Cancellation of the APOC Concession, 1932-1933

Relations between Britain and Persia had not improved after the failure of the Anglo-Persian Agreement. They sunk to a new low in 1928, when the Persians had laid claim to the islands of Abu Musa and the Greater and Lesser Tunbs, which are located at the eastern end of the Persian Gulf and sit athwart the Strait of Hormuz. Britain had the islands and allowed them to be administered by their Trucial clients (Sharjah in the case of Abu Musa and Ras al-Khaimah in the case of the Tunbs). The Persians also started claiming sovereignty over Bahrain, Muscat (Oman), and the Trucial States themselves. The Secretary of State for India, the Earl of Birkenhead, advised his Cabinet colleagues in 1928 “that Persia has definitely thrown down the glove,” and was aiming at nothing less than the elimination of the British presence in the Persian Gulf. Since it was “axiomatic” that “the maintenance in the Gulf of British supremacy is of vital importance,” Birkenhead advised the government to go on “the diplomatic offensive against Persia.”⁶

The Persian Gulf Sub-Committee of the Committee of Imperial Defence (CID), of which Birkenhead was a member, stipulated that the significance of the Persian Gulf to Britain arose from three factors. The first was its value as a trade and communications link to India and the imperial possessions in the Far East. The second was the development of both the Persian and Iraqi oilfields. The third was “the advent of air-power,” which necessitated the construction of airbases linking Britain’s empire on both sides of Suez: “The Persian Gulf is a vital link in that chain and its rupture would cripple the Air Force to no less a degree than the closing of the Suez Canal would cripple the Navy.”⁷ Another member of the committee, Leo Amery, focused on the sub-committee’s suggestion that Britain might “adopt the attitude that the Persian Gulf is a special interest, comparable to the Monroe Doctrine,” and refuse to accept any international meddling in Gulf affairs. Although the subcommittee went no farther than stopping any foreign power from establishing naval or air bases in the region and maintaining the political status quo, Amery urged his Cabinet colleagues to consider the more radical approach. In terms similar to those of

⁶ Earl of Birkenhead, “British Policy in the Persian Gulf: Memorandum by the Secretary of State for India,” 11 October 1928, C.P. 299 (28) (Also C.I.D. Paper No. P.G. 14), CAB 24/197.

⁷ Committee of Imperial Defence (CID), “The Persian Gulf: Interim Report of a Sub-Committee,” 29 October 1928, 169-D, enclosed with: Hankey, “The Persian Gulf: Note by the Secretary,” 30 October 1928, C.P. 321 (28), CAB 24/198.

the Carter Doctrine of 1980, Amery wanted London to adopt the position that “we regard the Persian Gulf as an area where interference with our supremacy or with our established rights will be resisted as a direct act of aggression upon ourselves.”⁸

Birkenhead believed that Britain should not allow itself to be dissuaded by threats to the APOC concession: “Once Persia realises... that our anxiety as to the position of the Anglo-Persian Oil Company and our anxiety to stand well in the eyes of the League... she may be relied on to blackmail us through them.” Although Birkenhead did not dispute the strategic significance of Persian oil, he advised his colleagues to call Tehran’s bluff if it cancelled the APOC concession. Not only did Tehran depend upon oil revenues, but international opinion would run against Persia if it violated British rights. “I suggest,” he reassured his colleagues, “that the possible Persian threat to the Anglo-Persian Oil Company is more of a bugbear than a reality.”⁹ Other departments were more skeptical. Four years later, on the eve of the cancellation of the APOC concession, the Foreign Office pressed for a treaty with Persia, partially out of fears of Persian “retaliatory action,” since “it is impossible to rely on the Persians... acting in their own best interests.”¹⁰

The 1901 concession had long been a source of resentment in Persia. After he deposed the Qajar dynasty in 1925, the new Shah, Reza Khan, pressured APOC to renegotiate. The Persians were incensed by the decline in royalty payments, which had been set at 16% of the net profits of the company and all of

⁸ L.S.A., “The Persian Gulf: Interim Report of a Sub-Committee of the Committee of Imperial Defence: Note by the Secretary of State for the Colonies,” 29 October 1928, C.P. 322 (28), CAB 24/198. Compare with President Carter’s warning that any “attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force.” “The State of the Union Address Delivered Before a Joint Session of Congress,” 23 January 1980, The American Presidency Project, <http://www.presidency.ucsb.edu/ws/index.php?pid=33079>.

⁹ Birkenhead, “British Policy in the Persian Gulf: Memorandum by the Secretary of State for India,” 11 October 1928, C.P. 299 (28) (Also C.I.D. Paper No. P.G. 14), CAB 24/197.

¹⁰ Although the Foreign Office was skeptical that Britain could secure a treaty that satisfied its objectives with regard to Bahrain or the use of Hengam Island (at the mouth of the Strait of Hormuz) as a naval base, it nonetheless supported continuing negotiations for a variety of reasons, including “avoiding friction... in the strategically important area of the Persian Gulf,” blunting Soviet attempts to exert influence in Persia, and protecting Britain’s “important vested interests in Persia,” such as the 1901 concession of the Anglo-Persian Oil Company (APOC). J.S. (John Simon, Foreign Secretary), “Anglo-Persian Relations,” 24 October 1932, C.P. 358 (32), E 5481/208/34, CAB 24/234. The India Office, now under the leadership of Samuel Hoare, had taken a slightly softer line and was willing to compromise on Hengam, but not Bahrain, in the interest of securing an Anglo-Persian treaty. S.H., “Anglo-Persian Relations: Memorandum by the Secretary of State for India,” 31 October 1932, C.P. 371 (32), CAB 24/234.

its subsidiaries under the original concession.¹¹ Production had continued its wartime ascent, from 2,327,221 tons in 1921/22 to 5,939,302 tons in 1930, but the cost per ton of production had dropped from 13/10d to 8/8d between 1920/21 and 1925/26.¹² The fluctuations in royalty payments frustrated the modernization program begun by the new Shah, Reza Pahlavi, which required annual revenues of at least £1,000,000. Between 1918 and 1927, the royalties had steadily increased from £418,627 to £1,400,269.¹³ In 1928, after they cratered to £502,080, the Shah abrogated the Armitage-Smith Agreement of 1920 and his government started negotiations on a new agreement. The Persians' overriding objective was a share of the company (25%), plus 2/- per ton of oil produced, in order to guarantee revenues of at least £1,000,000 per year – well below the £1,400,000 received in 1927, although APOC Chairman John Cadman warned the lead Persian negotiator, Abdul Husayn Timurtash, that Persia “may not see [such royalties] again for some time in view of overproduction today and more to come.”¹⁴

Cadman, who was genuinely interested in reaching a long-term arrangement with Tehran, managed to sell the British Government and his board of directors on sharing ownership of APOC with Tehran, so long as the Persians agreed that they would not be able to sell those shares in future. Cadman went to Persia in February 1929 and offered Tehran a 20% stake in APOC, the 2/- royalty, and a reduction of the company's concession area to 100,000 miles if it added another thirty years to the 1901 concession. The Iranians refused to budge on their demand for a 25% stake (which they would retain even after the concession expired) and a minimum payment. They also offered only a 20-year extension of the concession. APOC's board rejected the Tehran's demands and the negotiations collapsed. The Persians had overplayed their hand, not realizing that the bump in royalties to £1,436,764 tons in 1929 was an

¹¹ The 1901 concession was revised in 1920 under the so-called Armitage-Smith Agreement to exclude APOC subsidiaries operating beyond Iran, which would pay royalties only on those profits APOC “defined and calculated” as stemming from the company's Iranian operations, even though all of them had originally been founded by the profits from APOC's operations in Iran. Mostafa Elm, *Oil, Power, and Principle: Iran's Oil Nationalization and its Aftermath* (Syracuse: Syracuse University Press, 1992), 21.

¹² R.W. Ferrier, *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982), 370, 601, 415.

¹³ Ferrier, *History of BP*, 370, 601.

¹⁴ Ferrier, *History of BP*, 602.

outlier. Even critics of APOC concede that the country had “gambled for high stakes and Iran lost.”¹⁵ By the time negotiations restarted in 1931, the world was in the throes of the Depression and APOC’s leadership was irrevocably opposed to sharing ownership with Tehran. The Persians’ objectives during the new round of negotiations were more limited than before (20% of the company’s profits). Although the two sides signed a provisional agreement in May 1932, it soon unraveled. Royalty payments for 1931 had slumped by more than three-quarters from those of 1929 as APOC’s profits sagged under the weight of the Great Depression (although only by 44%).

Year	Oil Production in Iran	Royalty (£)	Royalty per ton	APOC Profits (£)
1929	5,460,955 tons	1,436 764	5/3d	4,274,000
1930	5,939,302 tons	1,288,312	4/4d	3,786,000
1931	5,750,498 tons	306,382	1/1d	2,413,000

Frustrated by the course of negotiations, the Shah abrogated the 1901 concession on 27 November 1932.¹⁶ The Shah did not, however, nationalize the industry. He informed APOC’s local manager that his aim was to negotiate, and oil production continued without interruption throughout the crisis.¹⁷ London still protested and warned Tehran that it would “not hesitate if the necessity arises to take all legitimate measures to protect their just and indisputable interests.”¹⁸

The British were fortunate that they never had to back up their bluster. Once the crisis had broken out, it became apparent that British military forces could accomplish little.¹⁹ Although Britain enjoyed massive superiority, both the Chiefs of Staff and APOC warned against any “provocation.” Neither the dispatch of troops from Iraq, nor over-flights by Royal Air Force (RAF) aircraft, nor a “demonstration”

¹⁵ Elm, *Oil, Power, Principle*, 30. Ferrier, on other hand, considers Cadman’s flirtation with a partnership with Persia to have been “impractical. The centrifugal realities which kept them apart were stronger than the centripetal attractions which bound them together.” Ferrier, *History of BP*, 629-630.

¹⁶ This summary of events between 1928 and 1932 is based on: Elm, *Oil, Power, Principle*, 18, and 28-31; and Ferrier, *History of BP*, 599-631.

¹⁷ Ronald Ferrier, “The Iranian Oil Industry,” in: *From Nadir Shah to the Islamic Republic*, ed. Peter Avery, Gavin Hambly, and Charles Melville, vol. 7 of *The Cambridge History of Iran* (Cambridge: Cambridge University Press, 2008), 645-646.

¹⁸ The Persians were not impressed, replying the following day that the 1901 concession was “not in accord with the legitimate interests of Persia [...]” For Eden’s note to Persia of 02 December 1932 (which he read out before the House of Commons) and the Persian reply, see: “Persian Oil Concessions,” 08 December 1932, no author, BP 69287.

¹⁹ Peter Beck, “The Anglo-Persian Oil Dispute, 1932-1933,” *Journal of Contemporary History* 9: 4 (1974): 148-149.

by the Royal Navy at Abadan would strengthen the hand of APOC, which hoped the situation could be resolved through negotiation.²⁰ In the event that violence broke out, existing British forces in the region were too paltry to do anything more than evacuate British nationals from Abadan. Nothing could be done to protect the oilfields themselves “and recapture could not be effected until reinforcements on a large scale were provided from India or Home, *i.e.*, for several months.” British defense of the oilfields was hamstrung further by the fact that reinforcements would have to be comprised of white rather than Indian troops in order not to offend the sensibilities of the allied Bakhtiari tribes. To make matters worse, the Joint Planning Staff feared that unrest could spread if the Persians attacked Iraq or stirred up “trouble in the Kurdish area.” There was also the matter of Iraq’s Shia, who “might seize the opportunity of giving trouble as a means of gaining their own ends and assisting their co-religionists, the Persians.” The most worrying outcome was intervention by the Soviet Union under the terms of its existing treaties with Persia, which “would result in an incalculable extension of our commitments.”²¹

An armed response was also impractical because British public sentiment ran strongly against any unilateral application of force (as Japan had used against China in Manchuria). In view of the political and logistical hurdles, London’s only option was to refer the matter for arbitration by the League of Nations, which was the course championed by the Foreign Office. The Permanent Under Secretary of State for Foreign Affairs, Robert Vansittart, reassured the Cabinet in December 1932 that Britain had nothing to fear from international arbitration. He advised against any escalation until all options in Geneva and The Hague had been expended, “even under the strongest provocation on the part of the Persian Government,” lest the British find “themselves in a position in which the tables could be completely turned on them by Persia [...]” Like the Chiefs, Vansittart was also troubled by the prospect that Persia might make use of

²⁰ G.F. Milne (Chief of the Imperial General Staff), F.L. Field (First Sea Lord), and J.M. Salmond (Chief of the Air Staff), CID, Chiefs of Staff Sub-Committee, “Protection of the South Persian Oilfields,” 02 December 1932, C.O.S. 300 (Also C.I.D. Paper No. 381-C), enclosed with: Hankey, “Protection of the South Persian Oilfields,” 03 December 1932, C.P. 419 (32), CAB 24/235.

²¹ R.H. Haining, J.H.D. Cunningham, C. Portal, and G.L. Pepys, “Protection of the Anglo-Persian Oil Company’s Property: Report of the Joint Planning Sub-Committee of the Chiefs of Staff Committee,” 10 December 1932, C.O.S. 300 (J.P.) (Also Paper No. J.P. 81), enclosed with: G.F. Milne (Chief of the Imperial General Staff), F.L. Field (First Sea Lord), and J.M. Salmond (Chief of the Air Staff), CID, Chiefs of Staff Sub-Committee, “Protection of the South Persian Oilfields,” 12 December 1932, C.O.S. 301, attached to: Hankey, “Protection of the South Persian Oilfields,” 13 December 1932, C.P. 430 (32), CAB 24/235.

its 1921 and 1927 treaties with the Soviet Union, which guaranteed the former's territorial integrity and afforded the latter the right to intervene militarily if Tehran was unable to defend itself. Although "[such] a contingency is admittedly remote," Vansittart warned that Soviet intervention, with or without Tehran's approval, could not be ruled out.²²

After the matter was referred to the League of Nations, the Persian Government (by now desperate for some revenue) and APOC agreed on a new concession in April 1933. The Persians had originally sought a one-quarter stake in APOC, a minimum annual payment of £1,000,000 in gold on APOC's first 6,000,000 tons of production, and 16% of the profits on any additional oil produced. They ended up settling for much less. APOC's new concession area shrank by 80% (from 500,000 square miles to 100,000 square miles), and the company agreed to pay the Persian Government a fixed sum (four gold shillings) per ton of oil extracted plus an annual minimum payment of £750,000. The company also forfeited the right to own and operate pipelines within the concession area and would pay Tehran a sum equivalent to 20% of the company's dividend payments beyond £671,250. As a result, Persia's royalty for 1931 increased from £306,872 to £1,339,132 and more than doubled between 1932 and 1937 from £1,339,132 to £3,545,313. In exchange, the Persian Government gave up its right to 16% of the APOC's annual profits (as guaranteed under the original 1901 concession), extended the life of the concession from 1961 to 1993, and most importantly, did not receive any shares in the company.²³

The surge in royalties following the 1933 settlement – 38% just between 1936 and 1937 – stemmed from a 3,500,000 ton increase in production between 1933 and 1938 (6,446,000 tons to 10,196,000 tons), but it turned out to have regrettable consequences. "Such a spectacular rate of growth could not possibly be sustained," according to AIOC's official history, but "the peak year excited hopes and aroused

²² Vansittart, "Cancellation of Anglo-Persian Oil Company's Concession: Memorandum by the Permanent Under-Secretary of State for Foreign Affairs," 06 December 1932, C.P. 421 (32); and Vansittart, "Memorandum by Permanent Under-Secretary of State for Foreign Affairs Respecting the Cancellation of Anglo-Persian Oil Company's Concession," C.P. 428 (32), E 6607/388-/34, 13 December 1932; both in: CAB 24/235.

²³ The best treatments of the episode are: Bamberg, *History of BP*, 27-62; Beck, "APOC Dispute," 123-151; Elm, *Oil, Power, and Principle*, 23-43. Benjamin Shwadran, *The Oil and the Great Powers* (New York: Council for Middle Eastern Affairs Press, 1959), 41-56, is good on the legal issues, but his judgment as to which side benefitted most from the concession – that neither enjoyed a "decided advantage" – is questionable.

expectations which stood not the remotest chance of being fulfilled.” The British had only boosted production in order to gather stockpiles in the event of war, and Tehran’s royalties declined by £200,000 tons in 1938. Only Cadman’s direct intervention (including the promise of export credits from the British Government) dissuaded the Shah from cancelling APOC’s concession again in the spring of 1939.²⁴

This crisis should have provided London with definite evidence that Britain’s hold over Middle Eastern oil was tenuous. Instead, the events in Persia prompted no major reassessment of Britain’s oil position.²⁵ The sanguine analysis provided by the Oil Board was confined to the favorable nature of the new concession. Although the concession area had shrunk by 80%, APOC retained control of all of the most promising oil-bearing territories in South Persia. As far as the Oil Board was concerned, “[the] Company regard their position under the new Concession as very much stronger in many respects than under the old, and they have a period of 60 years from now, which will enable them to plan their activities for a long period ahead.”²⁶

Cadman reported his satisfaction to the Foreign Secretary, John Simon, and even bragged about how “he has successfully resisted the demand for the appointment to the board of any Persian director.”²⁷ A few days before, during a board meeting to review the agreement, APOC’s General Counsel lauded the work of Cadman and his deputy (and successor), William Fraser, observing “that it was the best Concession he had ever seen and the best that could be devised.” Another director gushed “that the

²⁴ J.H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, vol. 2 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1994), 57-62, 69.

²⁵ This was not the position taken by the author of the British Official History covering oil, who observed that the 1932/3 crisis with Persia, followed less than six years later by Mexican nationalization, provided ample evidence that British policy “was built on shaky foundations.” D.J. Payton-Smith, *Oil: A Study of War-time Policy and Administration* (London: HMSO, 1971), 24-25.

²⁶ Marquess of Londonderry (Secretary of State for Air; President of the Oil Board), *et al.*, “Oil Board: Eighth Annual Report,” 31 July 1933, O.B. 122 (also C.I.D. Paper No. 1117-B), CAB 50/5.

²⁷ “Memorandum,” enclosed with: J.S., “Anglo-Persian Relations,” 19 May 1933, C.P. 135 (33), CAB 24/241. Cadman also assured Simon (both in May and again in December) that the moment was ripe to seek a settlement of broader issues bedeviling Anglo-Persian relations. J.S., “Persia,” 08 December 1933, C.P. 297 (33), E 7623/1329/34 G, CAB 24/245. As a result, in exchange for Tehran recognizing the independence of Bahrain and the Trucial States, and granting Britain a 25-year lease to Hengam, the British Government was now willing to write off Persia’s debt to Britain and cede ownership of a 60-mile stretch of railway in Persia connecting the Persian and Indian lines constructed by the Government of India during the war. John Simon, “Anglo-Persian Relations: Proposed Negotiations with the Shah: Report by the Standing Ministerial Sub-Committee for Questions concerning the Middle East,” 23 January 1934, C.P. 18 (34), CAB 24/247.

negotiations had resulted not merely in a Concession good in the circumstances but in a really satisfactory Concession [...].” The board unanimously approved the new agreement, since, on a commercial basis, it was indeed extremely favorable to APOC.²⁸ That same year, the company announced a 7.5% dividend in spite of the crisis and the Depression.

The British had won a short-term victory at the expense of their long-term energy security. The Persians remained resentful toward APOC and would again challenge the concession once they felt that their share of revenues was inadequate. Although APOC had emerged from the events of 1932/33 in a stronger position than before, Britain’s most valuable single overseas asset (both in terms of its economic and national security) remained in jeopardy – and not just because of the animosity simmering in Tehran. Britain’s entire strategy of seeking energy independence from the United States by developing the Middle East as an alternative supplier assumed safe passage between the Persian Gulf and Great Britain through the Mediterranean due to the constant shortage of tankers. The elimination of any rival naval force in the Mediterranean after 1918 had afforded Britain a welcome degree of security, and even the advent of the Third Reich in 1933 did not pose a major threat to Britain’s oil supplies. The only plausible risk came from Britain’s former wartime ally – Italy. Any souring of Anglo-Italian relations would jeopardize the entire basis of London’s oil policy irrespective of whether British oil companies maintained control of their oilfields.

²⁸ “Anglo-Persian Oil Company, Limited: Board Meeting, 15th May, 1933,” BP 88373.

The Italian Threat to Britain's Oil Lifeline, 1935-1936

After 1933, Britain found itself in an increasingly unfavorable strategic position. Britain's most likely military opponent in the 1920s had been Japan, which, although a formidable naval power, lacked the ability to project power farther than the Pacific or to threaten Britain's oil supplies beyond the East Indies and Burma. The rise of the Third Reich and the fracturing of Britain's relationship with Italy over its invasion of Abyssinia in 1935 shifted the strategic balance against London. Germany and Italy, although inferior to Britain at sea, could sever access to the Middle East through the Mediterranean and possibly even invade the Middle East. Prior to 1935, Italy had every incentive to contain Germany in order to thwart its ambitions in Austria following the failed National Socialist coup d'état of 1934. Anglo-French-Italian cooperation flourished briefly after April 1935 with the formation of the "Stresa Front" after Germany abrogated the military restrictions of the Versailles Treaty and began rearming openly. London spent the rest of year undermining any chance for cooperation with Italy, first by signing a naval agreement with Berlin in June without bothering to inform either Paris or Rome. Any lingering hopes were dashed as a result of the League of Nations' attempt to apply economic sanctions on Italy after the start of the Second Italo-Abyssinian War in October 1935.²⁹

The latter gravely damaged Britain's security without any tangible results. Historians have debated the potential efficacy of a League oil embargo against Italy for decades. The prevailing consensus is that a League boycott on oil exports to Italy could, if combined with a pledge by U.S. oil producers to keep exports at peacetime levels, have disrupted the Italian war effort.³⁰ There is considerable disagreement, however, as to whether such an embargo was ever politically feasible. Critics of Anglo-French policy have observed that Paris was desperate to appease Rome, while London was willing to play along because of its perceived military vulnerability in the Mediterranean.³¹ Defenders of British policy (then and now)

²⁹ Zara Steiner, *The Triumph of the Dark: European International History, 1933-1939* (Oxford: Oxford University Press, 2011), 100-136.

³⁰ Cristiano Andrea Ristuccia, "The 1935 Sanctions against Italy: Would Coal and Oil Have Made a Difference?" *European Review of Economic History* 4 (2000): 85-110.

³¹ The Service Chiefs were willing to go along with military action, but warned that French military support and at least two months of preparation would be required beforehand. CID, Chiefs of Staff Sub-Committee, "Italo-

have pointed out that the League could not guarantee the compliance of the United States, much less openly hostile powers such as Germany or Japan.³² Washington lacked the power to impose a proper embargo, and although the major U.S. oil companies were willing to limit their exports to peacetime levels, smaller independent oil companies had both the spare production and transportation capacity to supply Italy if the major companies backed out. In other words, both critics and defenders of British policy agree that British policy hinged upon securing U.S. and League support.³³

Both the Petroleum Department and representatives from Shell and AIOC made clear that a complete embargo on oil would cripple Italy within a few months – a finding affirmed by the special League of Nations’ “Committee of Experts,” which had been established to study the feasibility of oil sanctions in January 1936. Neither formal sanctions by the League, nor a “voluntary” restriction of exports to Italy to prewar levels would have any meaningful effect without the full cooperation of Romania, the Soviet Union, and most importantly, the United States.³⁴ Unfortunately, the United States, unlike Romania and the Soviet Union, was not a member of the League, and even if the major U.S. companies restricted exports to Italy, Shell and AIOC warned that smaller U.S. independent companies (which accounted for

Abyssinian Dispute: Memorandum,” 09 August 1935, C.O.S. 392, enclosed with: Francis Hemming (Cabinet Office), “Italo-Abyssinian Dispute,” C.P. 166 (35), 19 August 1935, CAB 24/256. See also: Evan A. North, “Oil for Italy: Great Britain and the Demise of the League of Nations, 1935-36,” 08 December 2008, unpublished paper in the author’s possession.

³² CID, Advisory Committee on Trade Questions in Time of War, Sub-Committee on Economic Pressure, “Economic Pressure on Italy: Revised Draft Report,” no date (circa July 1934), A.T.B. (E.P.) 29 (4th Revise), enclosed with: Francis Hemming, “Economic Pressure on Italy,” 21 August 1935, C.P. 169 (35), CAB 24/256. The most recent defense may be found in: Bruce Strang, “‘The Worst of all Worlds’: Oil Sanctions and Italy’s Invasion of Abyssinia, 1935-1936,” *Diplomacy and Statecraft* 19 (2008): 210-235.

³³ This was London’s policy, at least within the economic realm, by October 1935: CID, Advisory Committee on Trade Questions in Time of War (W.E. Elliot), “Economic and Financial Sanctions: Provisional Report,” 03 October 1935, A.T.B. 131, enclosed with: M.P.A. Hankey, “The Italo-Abyssinian Dispute: Economic and Financial Sanctions,” 04 October 1935, C.P. 186 (35), CAB 24/257.

³⁴ In 1934, those three countries accounted for two-thirds of Italy’s oil imports, and 77.6% during the period between August and 13 November 1935. “Memorandum by the Oil Companies: Oil Sanctions and Italy,” December 1935, Annex I to: W.R. (Walter Runciman), “Oil Supplies for Italy: Memorandum by the President of the Board of Trade,” 09 December 1935, C.P. 236 (35), CAB 24/257. According to a copy of the memorandum in the BP Archive (ArcRef. 68621), the author of the oil company memorandum was Andrew Agnew, the former Managing Director of Shell Transport and Trading. In view of the dismal prospects for a formal oil embargo, Shell and the Anglo-Iranian Oil Company (AIOC) were reluctant to bear the brunt of Italy’s wrath by imposing voluntary exports, noting that the Italians would probably retaliate by nationalizing their properties and cutting them out of the lucrative Italian market.

80,000 tons of production each day) could fill in, as Italy's daily consumption only totaled 8,000 tons.³⁵ (This turned out to be an accurate forecast: sales from U.S. oil exports to Italy in November 1935 increased by 50% from the figure in October and were three times larger than normal monthly average even though many of the major companies abided by the U.S. Government's "moral embargo."³⁶) Even a diversion of oil tankers away from Italy would only have a negligible effect without the support of the Scandinavian nations, which controlled the third-largest bloc of tanker tonnage behind Britain and the United States. At worst, Italy might have to pay above-average oil prices and freight rates. The best Foreign Secretary Anthony Eden could suggest to his Cabinet colleagues was that Britain should express its willingness to join a formal League embargo for purely symbolic reasons, as there was no hope of actually doing anything meaningful to help Abyssinia, or "join in an announcement that the ineffectiveness of the oil sanction in present circumstances precludes its' imposition."³⁷

This was the course adopted by London in February 1936. Addis Abba fell to Italian forces the following April. Neither Britain nor France had been prepared to risk a war with Italy (and potentially Germany).³⁸ Nor could Britain rely on the support of the dominions. The nationalist William Lyon Mackenzie King had returned to power in Canada in October 1935. King had resisted any sort of imperial military cooperation since the "Chanak Crisis" of 1922, and he was unlikely to change course after

³⁵ Both the Standard Oil Company of New Jersey (Jersey) and Royal Dutch/Shell (Shell) attempted to do just that, limiting exports to their Italian subsidiary to prewar levels. Henrietta Larson, Evelyn Knowlton, and Charles Popple, *New Horizons, 1927-1950*, vol. 3 of *History of Standard Oil Company (New Jersey)* (New York: Harper & Row, 1971), 336; and Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 1 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 461.

³⁶ Robert Divine, *The Illusion of Neutrality* (Chicago: University of Chicago Press, 1962), 129-130.

³⁷ S.H. (Samuel Hoare, Foreign Secretary) and A.E. (Anthony Eden, Parliamentary Under Secretary of State, Foreign Office), "Dispute between Italy and Abyssinia: Embargo on Oil Supplies for Italy," 27 November 1935, C.P. 212 (35), CAB 24/257 (see, especially, Annex I: "Proposed Embargo on Supplies of Oil to Italy: Memorandum by Petroleum Department of the Board of Trade," 20 November 1935); Runciman, "Oil Supplies for Italy: Memorandum by the President of the Board of Trade," 09 December 1935, C.P. 236 (35), CAB 24/257; and Eden, "Dispute between Italy and Abyssinia: Oil Sanction," 22 February 1936, C.P. 53 (36), CAB 24/260. See also BP 68621, which includes a variety of correspondence concerning the issue of possible oil sanction against Italy, including a copy of Agnew's report to Runciman, which the former forwarded to Cadman on 04 December 1935.

³⁸ The British Government also placed extraordinary demands before it would join an embargo: as Chancellor of the Exchequer Neville Chamberlain explained during a debate in the House of Commons, the government would only support a League embargo after it was "satisfied that all members of the League are not only prepared to give assurances but to take part in meeting an attack" by Italy. B.W. Patch, "Oil in World Politics," 24 December 1935, *Editorial Research Reports: 1935*, vol. 2 (Washington, DC: CQ Press).

1935.³⁹ His Liberal Party depended on votes from Quebec (where anti-British sentiment ran high), and King wanted to devote his political capital to fighting the Depression.⁴⁰ The Australian Government of Joseph Lyons only reluctantly agreed to support sanctions and privately indicated to London their preference that Britain not antagonize Italy for the sake of the League when the British Empire already had to deal with the more pressing threats posed by Japan and Germany.⁴¹ If we reframe the issue to consider the long-term strategic ramifications, British policy was self-defeating. The League with British support did impose sanctions against Italy in February (by which time it was far too late to help the Abyssinians), and although the sanctions covered weapons, rubber, and metals, they did not include oil. This ensured the future hostility of Italy without improving the credibility of the League.

By 1935, there was every indication that Italy could pose a significant naval and aerial threat to Britain's dominance within the Mediterranean.⁴² Inexplicably, documents concerning London's policy vis-à-vis sanctions make no mention of the long-term risk to Britain and France's oil supplies.⁴³ Just prior to the war, an interdepartmental committee surmised that Italian control of Abyssinia might "constitute a more serious threat than at present to our strategical position in the Red Sea."⁴⁴ The Foreign Office concurred, but only in a limited sense – they too were concerned about Italy's potential for mischief with British lines of communication between the Mediterranean and the Indian Ocean if it occupied all of

³⁹ King's success (abetted by the South Africans) at sabotaging Britain's attempts to promote closer strategic cooperation with the "white" dominions after 1921 is summarized in: Correlli Barnett, *The Collapse of British Power* (London: Eyre Methuen, 1972), 166-233.

⁴⁰ B.J.C. McKercher, "From Isolation to Intervention: Anglo-Canadian Defense Relations from the Canadian Perspective, 1935-1939," in: *Multinational Operations, Alliances, and International Cooperation Past and Future: Proceedings of the Fifth Workshop of the Partnership for Peace Consortium's Military History Working Group*, ed. Robert Rush and William Epley (Washington, DC: Center for Military History, 2006), 85-87.

⁴¹ Christopher Waters, *Australia and Appeasement: Imperial Foreign Policy and the Origins of Appeasement* (New York: Palgrave, 2012), 11-15.

⁴² B.W. Patch, "Anglo-Italian Rivalry in the Mediterranean," 13 April 1937, *Editorial Research Reports: 1937*, vol. 1 (Washington, DC: CQ Press).

⁴³ One study of Britain's strategic position before the Second World War notes that as a "result of the Ethiopian mess... British military planners had to consider the possibility that Italy might cut the lines of communication to the Far East at the onset of war with Japan." Williamson Murray, *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton: Princeton University Press, 1984), 51-52. Unfortunately, there is no evidence of such thinking during the Abyssinian Crisis, nor does Murray discuss how that the closure of the Mediterranean would have Britain during a war against Germany.

⁴⁴ J.L. Maffey (Chairman; Permanent Under Secretary of State for the Colonies), *et al.*, "Report of Inter-Departmental Committee on British Interests in Ethiopia," 18 June 1935, enclosed with: S.H. (Samuel Hoare), "Italo-Ethiopian Dispute: Note by the Secretary of State for Foreign Affairs," 16 August 1935, C.P. 161 (35), CAB 24/256.

Abyssinia.⁴⁵ It took the Dominions Secretary, of all people, to point that Britain might have “to contemplate diverting British shipping from the Mediterranean to the Cape Route,” but again, he was talking only in the short term.⁴⁶

For reasons that remain unclear, Britain’s inability or unwillingness to base its handling of the Abyssinian War on a more ruthless calculation of national self-interest merely alienated rather than crippled Italy. Britain and France would now have to face Germany without a secure line of communication to one of their primary sources of oil, the Middle East. The repercussions for British strategy were hard to miss. Colonel W.A. Bristow, the President of the Low Temperature Coal Distillers Association, surveyed the grim circumstances in a lecture before the Royal United Service Institution in late-1935. As a representative of the coal industry, Bristow had every reason to accentuate the unreliability of imported supplies, but his analysis was sound. He noted that although Britain had succeeded in developing Iran and Iraq to the point where they supplied more than half of Great Britain’s crude oil imports, it was unreasonable to expect that a peacetime rate of supply could be maintained in the event of war. Assuming that Persian oil even made it out of the Persian Gulf and through the Suez Canal, it still “would have to run the gauntlet of the Mediterranean, every yard of which would be within range of attack [...]” Persian or East Indies oil would almost certainly have to be diverted around the Cape of Good Hope – “a very unhappy prospect” considering the fourteen-week transit period – but this was more than could be said for Iraqi oil, which was unlikely even to make it to the Mediterranean considering the vulnerability of the Iraq Petroleum Company (IPC) pipelines and the coastal ports. “It would appear,” Bristow concluded, “that the fate of the British Empire will probably lie in the hands of the United States,

⁴⁵ Foreign Office, “Points for Consideration by His Majesty’s Government in Connexion [*sic*] with the Imminent Discussions Between the United Kingdom, France, and Italy Concerning Abyssinia,” 09 August 1935, enclosed with: S.H., “Italo-Ethiopian Dispute: Note by the Secretary of State for Foreign Affairs,” 16 August 1935, C.P. 162 (35), CAB 24/256. The Foreign Office also put forward its own analysis, which again, was limited to the immediate diplomatic consequences of an Italo-Abyssinian War (particularly if the League undertook punitive economic measures), not of the risk to Britain of antagonizing Italy. Foreign Office, “Memorandum on Problems Likely to Arise in the Event of Outbreak of War between Italy and Abyssinia,” 13 August 1935, enclosed with: S.H., “Italo-Ethiopian Dispute: Note by the Secretary of State for Foreign Affairs,” 20 August 1935, C.P. 167 (35), CAB 24/256.

⁴⁶ J.H. Thomas to Samuel Hoare, 15 August 1935, enclosed with: J.H.T. (Thomas), “Italo-Abyssinian Dispute: Note by the Secretary of State for Dominion Affairs,” 20 August 1935, C.P. 168 (35), CAB 24/256.

Mexico, Venezuela, and the Dutch East Indies.”⁴⁷ Subsequent re-evaluations of Britain’s oil position by the Oil Board would demonstrate the accuracy of this assessment.

⁴⁷ Colonel W.A. Bristow, “Oil from Coal in War Time,” *RUSI* 81: 521 (1936): 40-54. Bristow also made special reference to the United States, where “it is now being hinted in official circles... that further power should be given to the President in order to enable him to veto the shipment of oil to nations at war [...]” German analysts took note of Bristow’s critique, a version of which appeared in the *Wehrtechnische Monatshefte* in April 1937: NARA, RG 242, T-77/425 (Wi/IF 5.3444).

Planning for War: The Reorganization of the Oil Board, 1935-1937

At its inception in 1925, the Oil Board had been charged by the CID with evaluating Britain's oil needs in the event of a war against Japan in the Far East, and shortly thereafter, against the Soviet Union in the "Asiatic" theater (Afghanistan). The evolving strategic situation after 1930 had forced Britain to reconsider its oil position even before the break with Italy. Following the Manchurian Crisis (1931-1932) and the failure of the World Disarmament Conference in Geneva after Germany withdrew (October 1933), in March 1934, the British Chiefs of Staff, with the support of key bureaucrats, pushed for an increase in defense spending.⁴⁸ The following November, the Chiefs advised the CID to begin preparations for a war against Germany in five years. In February 1935, the Oil Board's President (Lord Londonderry, Lord Privy Seal) suggested that, in view of the worsening situation in Europe – as evidenced by the abandonment of the Ten-Year Rule in 1932 – the Oil Board should also undertake responsibility for determining the oil requirements of Britain and its empire in the event of either a Far Eastern or European War, or both, by 01 January 1940. The CID agreed the following day and eliminated consideration of a war against the Soviet Union in Afghanistan, since the increased allocations of oil to the Army and RAF in a European War, and to the Admiralty in a Far Eastern War, would easily cover the lower requirements of the armed services in an Asiatic War.⁴⁹

⁴⁸ Although the British Government was in many respects a model of bureaucratic efficiency, with clearly defined lines of authority and communication, the machinery often functioned at an excruciatingly slow pace. The committee in question, the Defense Requirements Committee, took four months to issue its recommendations, which the Cabinet only approved in July 1934: "The whole process had taken eight months, countless discussions, and vast amounts of paperwork to reach... a rather modest increase in defense spending." Another notable shortcoming was the lack of coordination between the armed services and the Foreign Office in drawing up strategic assessments. Murray, *Balance of Power*, 55-57, 62-64 (quotation from pg. 57). A more thorough critique of Britain's strategic planning infrastructure may be found in Paul Kennedy's "British 'Net Assessment' and the Coming of the Second World War," in: *Calculations: Net Assessment and the Coming of World War II*, ed. Alan Millet and Williamson Murray (New York: Free Press, 1992), 19-59.

⁴⁹ These developments are summarized in: L (7th Marquess of Londonderry), "Proposals for the Future with Regard to the Contents of the Oil Board Annual Reports: Memorandum by the President of the Oil Board," 22 February 1935, O.B. 140 (also C.I.D. Paper No. 1165-B), CAB 50/5; and Londonderry (President, Oil Board), *et al.*, "Oil Board: Tenth Annual Report," 26 November 1935, O.B. 147 (also C.I.D. Paper No. 1196-B), CAB 50/5. In January 1939, the CID decided that, in wartime, the Oil Board's executive functions would be transferred to the Petroleum Department. J.J. Llewellyn (Civil Lord of the Admiralty; Chairman of the Oil Board), *et al.*, "Oil Board: Thirteenth Annual Report," 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7. This change did not last for long – in November, Neville Chamberlain established the Oil Control Board as a replacement for the Oil Board. Since the latter was only an "advisory body," Chamberlain intended that the Oil Control Board should "take the necessary action to conserve and maintain adequate supplies of petroleum products," while enjoying the right to

The following year, the Oil Board established a new Sub-Committee on Petroleum Products Reserves (PPR) to evaluate Britain oil requirements in view of the “entirely new problem” of a war against Germany.⁵⁰ As the Vice Chairman of the PPR explained in March 1936, the problem of fulfilling Britain’s oil needs in a war against Japan “was a comparatively simple one” when compared to a conflict with Germany.⁵¹ In the event of a Pacific War, the brunt of the fighting would fall upon the Royal Navy, which would have to engage the Japanese Navy. A war against Germany, by contrast, would be primarily and land and aerial affair. The RAF would defend Great Britain while the Army sent another small expeditionary force to the Continent. In either event, the Royal Navy would be responsible for guarding Britain’s overseas lifelines.⁵²

In the case of a war against Japan, there was no need to build up and protect sizable stocks of oil within Great Britain or most of the empire since Army and RAF requirements were comparatively low. Meanwhile, the “the security of supplies to this country for civil and industrial maintenance was not seriously threatened,” since Japan lacked the ability to either strike directly at Britain or most of its major suppliers of oil. This obviated the need for a civilian rationing scheme, at least west of Suez. Britain would enjoy none of these benefits in a war against Germany, during which time oil requirements among all of the branches of the armed services “will be a maximum,” while industrial and civilian requirements would probably also be higher. Most importantly, “we cannot be certain that the security of the supplies

adjudicate (subject to the approval of the War Cabinet) “priority claims for oil products and tanker tonnage.” The new board would be chaired by the Secretary of Mines (Geoffrey Lloyd), and its members would include representatives from the armed services and the Petroleum Department, as well as an “expert adviser” (the ubiquitous Cadman, until his death in 1941). Because the government lacked the necessary information or competence, AIOC and Shell’s joint-marketing subsidiary in Britain, Shell-Mex-BP, initially handled the actual organization of supplies. This lasted until 1940, when the government upgraded the status of the Petroleum Department, which effectively absorbed the Shell-Mex-BP into its orbit. Chamberlain, “Oil Control: Memorandum by the Prime Minister,” 09 November 1938, (G) (39) 78, CAB 67/2/29. Lloyd also led the Petroleum Department, initially as Secretary of Mines, and later as Petroleum Secretary when the department (renamed the Petroleum Division in 1942) was moved first to the Board of Trade in 1940 and then to the Ministry of Fuel and Power two years later. His liaison with the oil industry was Andrew Agnew, the chief executive of Shell-Mex-BP. Bamberg, *History of BP*, 206-210; Payton-Smith, *Oil*, 114-118.

⁵⁰ A.W. Clarke and G.W.C. Norfolk (Joint Secretaries to the Sub-Committee), “Sub-Committee on Petroleum Products Reserves: Composition and Terms of Reference,” 21 February 1936, O.B. (P.R.) 1, CAB 50/14. See also: Payton-Smith, *Oil*, 40-41.

⁵¹ Kenneth Lindsay (Civil Lord of the Admiralty), “Sub-Committee on Petroleum Products Reserves: Memorandum by the Vice-Chairman,” 24 March 1936, O.B. (P.R.) 2, CAB 50/14.

⁵² Payton-Smith, *Oil*, 45.

to this country and to the Armed Forces can be guaranteed with equal certainty.” Besides pushing each of the armed services to accumulate stocks, reserves would also have to be available to civilian consumers, since “the war can be lost as much by having inadequate fuel for industry as having, for example, an inadequate supply for the Navy.”⁵³

In June 1936, the PPR prepared a preliminary assessment of the Britain’s requirements in either a European or Far Eastern war. The Petroleum Department concluded that Great Britain’s oil requirements in a Far Eastern War totaled 19,536,440 tons (12,232,507 tons west of Suez, 7,253,933 east of Suez), as compared to 17,952,210 tons in a European War (16,605,530 tons west of Suez, 1,346,680 east of Suez), with the lack of civilian rationing in Great Britain during a Far Eastern War accounting for the difference. If one included the requirements of the empire as a whole, the totals rose to 25,250,000 tons in a Far Eastern War and 23,750,000 tons in a European War.⁵⁴

The First Report of the PPR, produced the following month, was dedicated to finding the sources and means to satisfy these requirements by 1940. The President of the Oil Board, William Ormsby Gore (Colonial Secretary), urged in his covering letter to the report that the most important step Britain could take would be to complete the accumulation of a six-month reserve of oil products for the armed services by 1939-1940. Ominously, he noted that the PPR’s favorable assessment of Britain’s tanker position was predicated on the Mediterranean being open to British trade, “and the [Oil] Board would be glad to know whether they can base their plans on this assumption.”⁵⁵

A war against Germany posed different problems from one against Japan: in the case of the latter, the needs of the Royal Navy would vastly exceed those of the other services, whereas with the former, the needs of the RAF and Army would be “substantially” higher while Admiralty requirements would be

⁵³ Lindsay, “Sub-Committee on Petroleum Products Reserves: Memorandum by the Vice-Chairman,” 24 March 1936, O.B. (P.R.) 2, CAB 50/14.

⁵⁴ “Summary of Oil Requirements and Stocks,” no date or author, enclosed with: G.W.C. Norfolk (Joint Secretary, Sub-Committee on Petroleum Products Reserves – PPR), 26 June 1936, O.B. (P.R.) 13, CAB 50/14. Norfolk’s cover letter indicates that the Petroleum Department produced the attached report. The report makes reference to another study (also numbered O.B. (P.R.) 13) concerning the sources of Britain’s wartime oil supplies. This report appears to have been subsequently renumbered as O.B. (P.R.) 14.

⁵⁵ William Ormsby Gore (Colonial Secretary), “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5.

unchanged. Moreover, the PPR reckoned that “the provision of the requisite security” in oil supplies was “a rather more difficult matter” in a war against Germany rather than Japan. The PPR estimated the British Empire’s total oil consumption during the first year of combat operations at

European War	28,500,000 tons
Far Eastern War	30,500,000 tons

or 23,750,000 tons and 25,750,000 tons of “new supplies” in a European and Far Eastern war, respectively, since the balance would be met by drawing upon commercial stocks and reserves. Within Great Britain itself, the figures were:

Total Requirements for Great Britain		Requirements West of Suez
European War	17,999,700 tons	16,645,400 tons
Far Eastern War	19,747,000 tons	12,340,300 tons ⁵⁶

Before addressing the question of how and where Britain would make up this shortfall, the PPR observed that Britain enjoyed “an advantage as compared with other important countries such as Germany, Japan, Italy, and France,” as British oil companies were active “in most important oil-producing countries,” possessed a large tanker fleet, and boasted of “a highly efficient organisation which, given freedom from political interference in the countries of production, the keeping open of the trade routes and the maintenance of reasonable stocks or reserves, should be able to ensure that our essential needs for oil are met.”⁵⁷ The primary consideration was the disposition of the United States – whether it was “friendly” or “unfriendly.” In the case of the latter, the sub-committee still believed that the United States would continue to supply Canada, while U.S. oil companies “might be counted upon” to sell oil they produced outside of the United States to Britain. Although “the position will be more difficult” in the event of an “unfriendly” United States, the PPR was convinced that, except possibly for

⁵⁶ Harry Crookshank (Secretary for Mines; Chairman of the PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5.

⁵⁷ The Royal Navy had been relatively successful in meeting its target objective of accumulating within Great Britain stocks equivalent to six months of wartime consumption (3,500,000 tons) and was only 500,000 tons short by 1936. The Army and Royal Air Force (RAF) had, until 1939, tried to gather an equivalent reserve, when the Air Ministry raised its reserve requirements to one year’s wartime consumption. For more on the accumulation of reserve stocks in the late-1930s, see: Payton-Smith, *Oil*, 61-64.

lubricating oils and aviation fuel, “sufficient supplies” would be available to Britain so long as “there is no interference with the South American oil-producing countries [...]”.⁵⁸

Irrespective of which country was Britain’s enemy, or the disposition of the United States, “[the] principal single source of supply” was Iran, which would provide Britain with approximately 10,000,000 tons of oil per year (roughly 40% of the empire’s requirements). The second and third largest suppliers would be a “friendly” United States and Venezuela, both of which would contribute around 4,000,000 tons. The East Indies, Iraq, and Trinidad would provide a further 3,500,000 tons. The PPR concluded that it could scrape together approximately 24,000,000 tons of oil, which would suffice in the event of war against either Germany or Japan. The disposition of the United States actually made little difference, since most of its exports were allocated to Canada in any event. The tanker situation was rather grimmer. By 1940, the PPR estimated that Britain would require 420 tankers against the 354 currently owned by either British firms or the Admiralty – a net deficit of sixty-six. This shortfall could be covered if Britain made use of the roughly 110 neutral tankers that would by then be in service and available for chartering.⁵⁹

A major problem would arise in the event of a “closed” Mediterranean. Diverting tankers around the Cape of Good Hope would significantly add to the distance they had to travel. The distance between Abadan and London using the Suez Canal is approximately 6,600 miles – compared to 11,200 miles when going around the Cape of Good Hope (70% farther).⁶⁰ A tanker travelling from the Persian Gulf to Liverpool via the Suez Canal required twenty-five days to make trip, while the route around the Cape added fifteen days to the journey.⁶¹ Forcing tankers to take the longer route around the Cape of Good

⁵⁸ Crookshank (Chairman, PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5. The potential shortage of lubricants had been ameliorated by the development of the solvent refining process, which enabled the production of required lubricants from high-sulfur Middle Eastern and Latin American crudes. For more on Britain’s supply of lubricating oils and aviation fuel on the eve of the war, see: Payton-Smith, *Oil*, 53-57.

⁵⁹ Crookshank (Chairman, PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5.

⁶⁰ Bamberg, *History of BP*, 217.

⁶¹ Dr. Flemmig, “Englands Ölmacht im Abstieg,” *Militär-Wochenblatt*, 125. Jahrgang, Nummer 47 (23 May 1941).

Hope to Britain would increase the tanker deficit from sixty-six to 230, which was more than twice the number of neutral tankers then in service.⁶²

The PPR concluded that, “[there] should be no difficulty in securing supplies to meet the remaining [outstanding] requirements if the United States of America is ‘friendly’,” but in the event that it was not, “sufficient supplies of oil should be available,” assuming that the U.S. Government did not prevent either its own nationals or Latin American oil producers from continuing to supply Britain. There was also the unpleasant fact that roughly half of Britain’s expected supplies (those from Iran and later Iraq) in any major war might be unavailable in the event that enemy forces blocked transit through the Mediterranean.⁶³ The best the PPR could suggest was “[that] in the event of the Mediterranean being closed to shipping the question of special arrangements for convoying tankers ought to be considered.” In other words, the PPR admitted that Britain might have no option but to risk moving a considerable portion of its oil requirements through an enemy-infested Mediterranean in wartime.⁶⁴ The CID approved the report on 30 July 1936, adding that the six-month military reserve should be accumulated as soon as

⁶² Crookshank (Chairman, PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5.

⁶³ This fact did not escape the notice of the U.S. Government. As one military intelligence report from December 1936 noted, at least 31% of Britain’s gasoline imports (6,399,888 barrels from Iran, 2,140,086 from Romania, and 1,027,343 from Russia), and 45% of its crude oil imports (3,449,828 barrels from Iraq and 2,262,057), between 01 January and 31 October 1936 travelled through the Mediterranean. The situation was even more disturbing in the case of France, since 58% of its total imports came via the Mediterranean. U.S. Military Attaché, Paris, “Fuel Situation in France & England,” 02 December 1936, Report No. 22,9890W, University Publications of America, *U.S. Military Intelligence Reports: France, 1919-1941* (Frederick: University Publications of America, 1986), Reel 10. By 1939, roughly 75% of French imports originated in Iraq, with the Compagnie Française des Pétroles accounting for 949,000 tons, and British and U.S. majors the remainder. Eric Melby, *Oil and the International System: The Case of France, 1918-1969* (New York: Arno Press, 1981), 146.

⁶⁴ Crookshank (Chairman, PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5. The PPR report is based on a separate study by the Petroleum Department attached as Appendix III: “Sources of Supply of Petroleum and Petroleum Products to meet the estimated requirements of the Services and for Industrial and Civil purposes of the Empire in the first year (1940) of a European War,” no date or author. Another copy of the report was published separately with: G.W.C. Norfolk (Joint Secretary, PPR), 26 June 1936, O.B. (P.R.) 14, CAB 50/14. Norfolk’s covering letter indicates that the Petroleum Department produced the report, which includes an appendix (“Brief Survey of the Principal Oil Producing Countries,” no date or author) not included with the official PPR report (O.B. (P.R.) 21).

possible instead of over the next three years, as suggested by the PPR. The CID also acknowledged the possibility of the Mediterranean's closure and the need to expand Britain's tanker fleet.⁶⁵

⁶⁵ A.W. Clarke, "Reserves of Petroleum Products: Note by the Joint Secretary," 12 August 1936, O.B. 166 (O.B. (P.R.) 24), CAB 50/5.

Planning for a “Closed” Mediterranean, 1936-1937

The First Report of the PPR in July 1936 had exposed the Achilles’ Heel of Britain’s wartime oil policy, which had always presumed safe transit through the Mediterranean.⁶⁶ Few officials responsible for British oil policy between 1918 and 1935 had questioned the wisdom of building Britain’s entire strategy upon this assumption. Nor, during the Abyssinian Crisis, did anyone in London mention the risk Rome’s hostility posed to Britain’s oil lifeline. British planning for a “closed” Mediterranean during a European War only began in 1936 – in the wake of the Italo-Abyssinian War. The year before, although alarmed by the deterioration in Anglo-Italian relations, the Oil Board had been sanguine about the consequences for British energy security, possibly because it was only considering Britain’s requirements in the event of a war against Italy alone. Closure of the Mediterranean “would necessitate a considerable diversion of traffic in the case of Persian and Dutch East Indies supplies,” over and above the loss of Soviet, Romanian, and Iraqi exports. Nevertheless, Britain could cope by importing larger amounts of oil from Venezuela, the United States, Mexico, and Peru.⁶⁷

Matters would not be so simple in the event of a war against Germany. In response to the PPR’s troubling report of July 1936, the CID determined, “That it was not possible to give an assurance that the Mediterranean route would be open to shipping” and instructed the Oil Board to “give further consideration to alternative sources of supply and to any steps deemed necessary to ensure adequate tanker tonnage.”⁶⁸ The major problem to be surmounted was not one of overall supply: Britain had control of ample supplies of oil in the Middle East but lacked the tanker capacity to transport enough of it around the Cape of Good Hope. As the Director of Sea Transport, W.G. Hynard, explained to the Petroleum Department, if Britain replaced 6,000,000 tons of oil from Iran and Iraq with oil from the Western Hemisphere, this would result in a savings of 218 tankers. He queried the Petroleum Department as to

⁶⁶ Crookshank (Chairman, PPR), “First Report,” 21 July 1936, O.B. (P.R.) 21, enclosed with: Ormsby Gore, “Reserves of Petroleum Products: Memorandum by the President of the Oil Board,” 27 July 1936, O.B. 162 (also C.I.D. Paper No. 1257-B), CAB 50/5.

⁶⁷ Londonderry (President, Oil Board), *et al.*, “Oil Board: Tenth Annual Report,” 26 November 1935, O.B. 147 (also C.I.D. Paper No. 1196-B), CAB 50/5.

⁶⁸ A.W. Clarke (PPR), “Reserves of Petroleum Products: Note by the Joint Secretary,” 12 August 1936, O.B. 166 (O.B. (P.R.) 24), CAB 50/5.

whether it was “we can reasonably increase our drawings from [the] U.S.A. East Coast, Dutch West Indies, Gulf [of Mexico], etc., in order to relieve the tonnage difficulty from Abadan and Haifa,” as there was no “possibility of our meeting the situation which would arise if we had to retain our present allocation of sources of supply with the Mediterranean closed and the consequential increase in our tanker requirements of 164.”⁶⁹

The Petroleum Department replied that, in the event of a “friendly” United States, “there is no doubt that the productive capacity in the U.S.A. could be increased far beyond the present output,” since U.S. refineries had 55,000,000 tons worth of slack refinery capacity. Likewise, imports from the Venezuela could be increased from 4,500,000 tons to 5,500,000 tons per annum, as the Dutch West Indies had a total refinery capacity of 17,000,000 tons, of which 9,000,000 tons was owned by Shell. There was no prospect of increasing production in Trinidad, whereas increased imports from other Latin American countries such as Mexico were undesirable since these countries lacked the refinery capacity to send anything other than crude oil. The matter of replacing Iranian oil was more complex than simply finding alternative supplies. Iranian oil was the primary source of fuel for the Admiralty, providing approximately 70% of its wartime requirements during the first year of hostilities. In the event of a “closed” Mediterranean and an “unfriendly” United States, the Petroleum Department concluded that “any allocating of sources of supply for the Empire which leaves out Iran seems to be out of the question.”⁷⁰

In the autumn of 1936, officials from the Petroleum Department, the Mercantile Marine Department, and the Admiralty demonstrated that Britain was incapable of replacing Middle Eastern oil completely in the event of a European War with a “closed” Mediterranean and an “unfriendly” United States. They explained that the disposition of the United States in a future war was of minor importance assuming the Mediterranean was “open,” especially if the United States continued to supply Canada with up to 3,900,000 tons of oil per annum. The United States would, ideally, provide Britain with 6,800,000 tons of

⁶⁹ Hynard to Starling (Petroleum Department), 07 September 1936, enclosed with: G.W.C. Norfolk (PPR), no date, O.B. (P.R.) 26, CAB 50/14.

⁷⁰ “Note by Petroleum Department on Mr. Hynard’s letter of 7th September [1936],” enclosed with: G.W.C. Norfolk (PPR), no date, O.B. (P.R.) 26, CAB 50/14.

oil (including the amount going to Canada). In the event that Washington was “unfriendly,” the remaining 2,900,000 tons that would normally have gone to Britain would have to be replaced by higher imports from the Dutch West Indies (5,000,000 tons instead of 3,900,000 tons), the Dutch East Indies (1,700,000 tons instead of 1,500,000 tons), Mexico (1,500,000 tons instead of 400,000 tons), Venezuela (900,000 tons instead of 500,000 tons), and Peru (400,000 tons instead of 300,000 tons).⁷¹

The situation was more precarious in the event that the Mediterranean was “closed.” The British expected that Iran would normally supply one-third of the empire’s oil needs (8,400,000 tons out of 23,800,000). Unfortunately, “there are not many alternative places in the Empire to which Iranian oil can be sent” to offset the effects of any closure of the Mediterranean, while “there is such a shortage of tankers as to preclude the oil being taken via the Cape.” At best, 2,000,000 tons of Iranian oil could be replaced by exports from the Dutch West Indies, Venezuela, Mexico, and Peru, but this would come at the expense of Britain’s allies, who might also wish to draw additional supplies from Latin America. That left 7,250,000 tons of oil still to be imported from Iran and Iraq, 4,000,000 tons of which was allocated to Great Britain. This oil was irreplaceable, but there were not enough tankers to transport it around the Cape of Good Hope since Britain already had a deficit of fifty-six tankers. Britain could move 2,000,000 tons per annum through the Mediterranean by convoying forty tankers each month (twenty going in each direction). Every 1,000,000 tons of Iranian and Iraqi oil that could be transported through the Mediterranean rather than around the Cape would result in a savings of twenty-seven tankers. Unless some means could be found of moving oil through the Mediterranean, the authors advised the PPR that “steps should be taken to increase the reserves to be kept for civil purposes in this country.”⁷²

The PPR presented its report on a “closed” Mediterranean to the Oil Board in December 1936. This study was a revised version of the report that had been produced by the Petroleum Department,

⁷¹ Report by the Sub-Committee on Petroleum Products Reserves, no date, O.B. (P.R.) 34, CAB 50/14.

⁷² Report by the Sub-Committee on Petroleum Products Reserves, no date, O.B. (P.R.) 34, CAB 50/14. Based on context, the report must have been written following the aforementioned exchange of letters between Hynard and the Petroleum Department (O.B. (P.R.) 26, CAB 50/14) and before the PPR completed its Third Report, which considered the ramifications of a “closed” Mediterranean on Britain’s oil position: O.B. 183 (Section B) also part of Paper No. O.B. (P.R.) 39, CAB 50/6.

Mercantile Marine, and Admiralty earlier that year. The PPR concluded that, in the event of a “closed” Mediterranean, Iranian and Iraqi oil could not fulfill their primary function west of Suez (supplying the Royal Navy), while the overall shortage of tankers ruled out the transportation of Middle Eastern oil to Great Britain around the Cape of Good Hope. The shortfall west of Suez presented “no insuperable difficulty” if the United States was “friendly” and unused Middle Eastern oil could be reallocated east of Suez, thereby freeing up U.S. exports to be allocated west of Suez.⁷³ If the United States was “unfriendly,” the PPR surmised that the 2,000,000 tons of Iranian oil previously allocated to Great Britain could be replaced by additional imports from Latin America, since that region would no longer be exporting to Germany and Italy, which had imported 7,200,000 tons from there in 1935. Total demand for Iranian and Iraqi oil with a “closed” Mediterranean would drop to 7,500,000 tons, with 4,000,000 tons going to Great Britain. Some of this allocation would have to be pushed through the Mediterranean via convoying at a rate of twenty tankers per month (ten going each way). How this was to be accomplished, and what would happen if tanker losses proved prohibitive, was not spelled out. On the bright side, the supply of tankers had increased according to a new estimate of the number of neutral tankers that would be available by 1940: 150 instead of 110. This lowered the deficit in the event of a European War with a “closed” Mediterranean and an “unfriendly” United States to only sixteen tankers. Any remaining shortfall could be covered by returning obsolete vessels to service (twenty-four being the estimate of the PPR) and seizing enemy tankers (twenty-three of which were likely to be at sea or within reach of the Royal Navy in the event of war).⁷⁴ The President of the Oil Board cautioned, however, that “[it] is

⁷³ As the relative importance of the United States as an oil supplier rose in late-1930s, the PPR questioned whether the United States still had the productive and infrastructural capacity “to increase her oil exports beyond the maximum quantity hitherto exported in any year, which was about 20 million tons in 1929.” The Petroleum Department reassured that PPR “that the potential capacity of United States ports for exporting oil is substantially in excess of the figure of 20 million tons [...]” Petroleum Department, “Capacity of the United States’ Ports to handle Oil Products for Exportation,” November 1937, O.B. (P.R.) 91, CAB 50/15. Nor was there much doubt following the adoption of pro-rationing (limiting oil production to market demand) across much of the United States that the country’s oil industry was capable of rapidly boosting output if demand increased substantially. “Brief Survey of the Principal Oil Producing Countries,” no date or author, enclosed with: G.W.C. Norfolk (Joint Secretary, PPR), 26 June 1936, O.B. (P.R.) 14, CAB 50/14.

⁷⁴ Crookshank (Chairman, PPR), “Effect on Supplies and Tanker Position of a Closed Mediterranean: Third Report (Section B) of the Sub-Committee on Petroleum Products Reserves,” 11 December 1936, O.B. 183 (Section B) (also part of Paper No. O.B. (P.R.) 39), enclosed with: Ormsby Gore (President of the Oil Board), “Effect on Supplies and

nevertheless obvious that in the contingency of the Mediterranean being entirely closed to the passage of British ships *and* the United States of America being ‘unfriendly,’ the Empire’s tanker position would be bound to become a very difficult one.”⁷⁵

The CID formally accepted the PPR report in February 1937 and “[instructed] the Oil Board to report as to how the contingent shortage of tankers can best be met.”⁷⁶ A supplementary study by the Board of Trade on Britain’s tanker requirements the following year estimated a net increase of 200 tankers by 1940: fifty under British registry and 150 neutrals that would fall into British hands. Britain would thereafter have a surplus of nineteen tankers, but this could turn into a deficit of three or more, “because in the event of the Mediterranean being closed the Admiralty would require 22 commercially owned ocean-going tankers for the transfer of oil fuel from Naval depots abroad.”⁷⁷ Another Board of Trade study from March 1938 posited a surplus of twenty-two tankers, although the Oil Board – heeding the advice of its Tanker Tonnage Committee – suggested to the CID that the British Government might want to accumulate an Admiralty reserve of as many as twenty-five surplus vessels.⁷⁸

Even as the Oil Board and its subcommittees grappled with the consequences of a “closed” Mediterranean, they could not afford to ignore events in the Far East, which had been strained since Japan’s invasion of Manchuria in 1931 and would escalate into all-out war after Japan invaded in China in July 1937. In its Fifth Report of May 1937, the PPR, with the assistance of the Petroleum Department, produced an assessment of Britain oil position in a Far Eastern War with the United States either “friendly” or “unfriendly.” During such a conflict, the PPR estimated that the British Empire would have

Tanker Position of a Closed Mediterranean,” 22 February 1937, O.B. 189 (also C.I.D. Paper No. 1310-B), CAB 50/6.

⁷⁵ Ormsby Gore (President, Oil Board), “Effect on Supplies and Tanker Position of a Closed Mediterranean,” 22 February 1937, O.B. 189 (also C.I.D. Paper No. 1310-B), CAB 50/6. Emphasis in the original.

⁷⁶ A.D. Nicholl (PPR), “Note by Joint Secretary,” 10 March 1937, O.B. (P.R.) 54 (also Paper No. O.B. 193), CAB 50/15.

⁷⁷ Board of Trade, “Allocation of British tanker tonnage to meet the Empire’s oil needs as set out in the First and Third Reports of the Petroleum Reserves Sub-Committee of the Oil Board assuming the Mediterranean closed and the U.S.A. unfriendly,” November 1937, enclosed with: G.W.C. Norfolk (Joint Secretary, PPR), 23 November 1937, O.B. (P.R.) 94, CAB 50/15.

⁷⁸ The reports of the Sea Transport Division of the Board of Trade (March 1938) and Tanker Tonnage Committee (07 April 1938, O.B. (T.T.C.) 14, Also Paper No. O.B. 248) are both appended to: Earl De La Warr (President of the Oil Board), “Oil Tankers: Best Means of Meeting a Possible Deficiency: Note by the Oil Board,” 09 May 1938, O.B. 251, CAB 50/7.

to import 25,681,000 tons (15,436,000 tons west of Suez and 10,245,000 tons east of Suez). Britain's major oil suppliers would be Iran (almost 11,000,000 tons of refined and crude oil), the Dutch West Indies/Venezuela, the United States, Mexico, Peru, Trinidad, Iraq, Bahrain, and Romania (the latter two serving as replacements for the East Indies, which had to be written off due to their exposed position). Minor adjustments were also made concerning the supplying of British possessions and dominions in the Pacific. The PPR assumed that a "friendly" United States would be the primary supplier to Australasia. If the United States were "unfriendly," it would still supply Canada, but additional imports would have to be drawn from the Dutch West Indies (6,000,000 tons – the maximum figure), Iraq (1,800,000 tons), Bahrain (400,000 tons), and Romania (800,000 tons) to replace U.S. exports to elsewhere in the empire. The tanker situation was reassuring: against the 407 and 436 tankers required if the United States were "friendly" or "unfriendly, respectively, if one included the 150 tankers expected to be in service by 1940, Britain enjoyed a surplus of ninety-seven and sixty-eight.⁷⁹

In its covering letter to the PPR study, the Oil Board warned that, although Britain could probably find enough oil to meet its overall requirements, the supply of aviation fuel was troubling. The most important source of aviation fuel in the Far East was the Burmah Oil refinery at Rangoon, which produced 216,000 tons of aviation fuel and accounted for more than 125% of the Britain's total requirements of aviation fuel east of Suez. The Oil Board surmised that, during a Far Eastern War, "Japanese ships would [initially] be able to operate freely in the Eastern Indian Ocean and the Gulf of Siam," and that the Rangoon refinery and neighboring facilities would present "attractive" targets. The loss of this refinery, in addition to the East Indies, would eliminate Britain's sources of aviation fuel in

⁷⁹ Crookshank (Chairman, PPR), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War," 26 May 1937, O.B. 195 (also Paper O.B. (P.R.) 63), CAB 50/6. The original report produced by the Petroleum Department (dated January 1937) was published under the same title as O.B. (P.R.) 52, CAB 50/15.

the Far East. The Oil Board concluded that “it is of the highest importance” to accumulate local stockpiles while there was still time.⁸⁰

A few months later, the Petroleum Department reassessed its original January 1937 study of Britain’s requirements during a Far Eastern War (which had been adopted by the PPR as its Fifth Report in May), but now taking into account the possibility of the Mediterranean being “closed” and supplies from the Rangoon refinery being unavailable.⁸¹ The covering letter from the Chairman of the PPR to the Oil Board endorsing the Petroleum Department’s findings insisted that “[the] possibility of a ‘closed’ Mediterranean during a Far Eastern War could, it would seem, only arise from the intervention of a hostile European power[...].” Since it lacked authorization from the CID to collect information regarding British requirements during such a “dual contingency,” the best the PPR and the Petroleum Department could do was to stick closely to their original instructions to determine Britain’s oil needs during a Far Eastern War with a “closed” Mediterranean. Whatever else happened, Britain could not afford to lose the Rangoon refinery. Its elimination would create a global “deficiency” in supplies of aviation fuel (216,000 tons), and Britain would be incapable of satisfying its requirements of aviation fuel in a Far Eastern War, which were already less than those of during a European War.⁸²

The supply situation by the autumn of 1937 appeared promising according to the Petroleum Department. The Empire’s total oil requirements in a Far Eastern War were 23,077,000 tons if the United States was “friendly,” and 23,155,000 if it was “unfriendly” (the difference being slightly higher demand west of Suez if the United States was “unfriendly”). The Petroleum Department assumed that if the

⁸⁰ Crookshank (in the absence of the President and Chairman of the Oil Board), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War,” 08 February 1938, O.B. 233 (also C.I.D. Paper No. 1404-B) CAB 50/6. The aforementioned study – O.B. 195 (O.B. (P.R.) 63) – is also appended.

⁸¹ For original January 1937 report, see: Petroleum Department, “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War,” January 1937, O.B. (P.R.) 52, CAB 50/15.

⁸² Crookshank (Chairman, PPR), “Estimated Requirements in First Year (1940) of a Far Eastern War: Allocation of Supplies in the Event of (a) A Closed Mediterranean, (b) Supplies from Rangoon Not Being Available: Memorandum by the Sub-Committee of Petroleum Products Reserves,” 18 November 1937, O.B. (P.R.) 95 (also Paper No. O.B. 225), CAB 50/6.

Mediterranean was “closed” during a Far Eastern War, rationing would be implemented at least in Great Britain, which reduced total demand by “almost 2½ million tons of products.” Since there were sufficient crude oil supplies east of Suez thanks to Iran (and even more if some way could be found of transporting Iraqi oil from Haifa south through the Suez Canal and Red Sea), the major problem was finding some way of getting enough oil to British consumers west of Suez. There was no problem if the United States was “friendly,” but if it was not, at least 452,000 tons of kerosene and motor fuel would have to be transported from Abadan around the Cape of Good Hope to Great Britain, while another 1,600,000 tons of petroleum from Latin America would be required east of Suez. The supply of aviation fuel would be extraordinarily tight if the Rangoon refinery was not operational, with Trinidad providing 37% of Britain needs east of Suez (65,000 tons out of 177,000 tons) and 40% west of Suez (85,000 tons out of 217,000 tons). In view of the “obvious disadvantage of relying on Trinidad as a source of supply east of Suez,” the department urged that resources be committed to strengthening the air defenses of the Rangoon refinery.⁸³

Although Trinidad was a negligible factor in terms of world oil production (with a mere 1,853,200 tons in 1936), due to the dearth of oil within empire, it still accounted for roughly 40% of imperial production, with approximately 92% of its production – 1,665,200 tons – being exported. But its role as a supplier of aviation fuel gave it a strategic value out of all proportion to its overall share of global oil production. Although Trinidad’s contribution to British oil consumption in the event of either a European or Far Eastern War “may appear to be relatively small,” as the Oil Board observed, its refineries would supply one-quarter of the RAF’s total annual requirements of high-octane aviation fuel in a European War, and all of Britain’s aviation fuel requirements west of Suez in the event of a Far Eastern War.

Unlike Rangoon, Trinidad was relatively secure from enemy attack. Trinidad was also one of the few

⁸³ “Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War; Allocation of Supplies in the Event of (a) a “Closed” Mediterranean, and (b) Supplies from the Rangoon Refineries being unavailable: Memorandum by the Petroleum Department,” November 1937, enclosed with: Crookshank (Chairman, PPR), “Estimated Requirements in First Year (1940) of a Far Eastern War: Allocation of Supplies in the Event of (a) A Closed Mediterranean, (b) Supplies from Rangoon Not Being Available: Memorandum by the Sub-Committee of Petroleum Products Reserves,” 18 November 1937, O.B. (P.R.) 95 (also Paper No. O.B. 225), CAB 50/6. The Petroleum Department’s original draft, completed the month before, was published under the same title as document O.B. (P.R.) 84, CAB 50/15, before being submitted to the PPR for consideration.

sources within the British Empire of 100-octane gasoline. Finally, it was actually the closest source of oil to Great Britain, and because of its imperial status, neither its production nor exports to Britain would be affected by any “political interference.” The Oil Board therefore concluded that “the maintenance of supplies from Trinidad is of paramount importance [...]”⁸⁴

⁸⁴ De La Warr (President, Oil Board), “The Importance of the Trinidad Oil Supply in an Emergency: Memorandum by the Oil Board,” 25 (?) November 1937, enclosed with: A.D. Nicholl, “Trinidad: Degree of Importance as a Source of Oil Supply in Time of War,” 30 November 1937, O.B. 226, CAB 50/6. Both the Oil Board’s report and the Appendix I (a letter from the Commander-in-Chief of the Americas and West Indies Station, Admiral Matthew Best, to the Admiralty from January 1937 concerning the “desirability” of upgrading the air, land, and sea defenses at Trinidad) were published separately as enclosures to O.B. 198 and O.B. 221, both in: CAB 50/6. Shell’s wartime production in Trinidad peaked at 750,000 tons, which was beyond what the company’s engineers was the ideal rate to preserve the health of its fields. Stephen Howarth and Joost Jonker, *Powering the Hydrocarbon Revolution, 1939-1973*, vol. 2 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 37.

The U.S. Neutrality Acts and British Oil Supplies, 1935-1937

Britain had made great progress at reducing the U.S. share of its oil imports – from 33.9% in 1922 to only 10.6% in 1935. But little had been achieved to reduce Britain's imports from the Western Hemisphere (61.9% as of 1935). Mexican imports had been replaced by Venezuelan, and the only new supplier from the Eastern Hemisphere (38.1% of imports) by 1935 was Iraq.⁸⁵ Ironically, this meant that the potential closure of the Mediterranean during any future war would not cripple Britain so long as it could continue to import the bulk of its oil requirements from the Western Hemisphere. London now needed the backing of Washington and U.S. oil companies more than ever – just when the passage of the first U.S. Neutrality Act in August 1935 reopened the question of the reliability of the United States.

Isolationist sentiment had been building due to the revelations of the U.S. Senate's Special Committee on Investigation of the Munitions Industry (the so-called "Nye Committee") between 1934 and 1936, which investigated the role of U.S. financiers and arms manufacturers in precipitating the United States' entry into the World War in 1917. Public anger over many nations' defaulting on their wartime debts to the United States as a result of the Great Depression also led to the passage of the Johnson Act of 1934. This law prohibited U.S. loans to any nation that had defaulted on its debt to the United States. The law gave the U.S. Government little flexibility, since debtor nations could not preserve their eligibility by making token payments. The most egregious offender was Great Britain, which still owed \$4,400,000,000 in war debts when it effectively defaulted in 1932.

Even though he was not an isolationist, President Roosevelt initially supported neutrality legislation for a variety of reasons. Besides a desire to outflank the Nye Committee (whose chairman was pushing for even more radical legislation such as the nationalization of the U.S. arms industry), and expand executive power by allowing the White House to set the terms of U.S. trade with belligerent nations, Roosevelt wished to avoid being dragged into a war simply to defend U.S. neutral rights. But he requested that any neutrality legislation allow him to distinguish between aggressor nations and victims

⁸⁵ Ormsby Gore (President, Oil Board), *et al.*, "Oil Board: Eleventh Annual Report," 31 December 1936, O.B. 184 (also C.I.D. Paper No. 1294-B), CAB 50/6.

when levying embargos. Isolationist senators outmaneuvered him and introduced legislation that imposed a blanket arms embargo to both sides in any war once the President certified that hostilities had commenced.⁸⁶

At the end of 1935, the U.S. Military Attaché in London bragged that the United States enjoyed the power to use its oil supply “to exert a major influence” over matters in Europe including “purely American interests” and even “war.” The neutrality acts were a manifestation of this tremendous power. Britain still drew 14% of its oil imports from the United States, and the attaché surmised that it would be easy for the United States to exert pressure on other suppliers in the Western Hemisphere (who supplied another 49% of Britain’s imports) to halt exports. The attaché advised Washington to consider ways of exploiting its newfound power “as a means of advancing American interests and welfare [...]”⁸⁷

In January 1936, the Industrial Intelligence Centre (IIC), the agency responsible for gathering and analyzing foreign economic intelligence for the CID, produced a grim assessment of the draft legislation submitted by the Roosevelt Administration to the U.S. Congress to replace the original 1935 act. Since the administration’s draft gave the President the authority to limit exports of items “used for war purposes” such as oil to “normal” levels (which was aimed against Italy), the IIC warned that “no foreign country can place any reliance upon receiving any raw material, commodity or manufactured article whatsoever from the United States in time of war in greater quantities than was normally received by the country in peace,” especially because President had wide latitude to determine what constituted a

⁸⁶ For a summary of the legislation and its origins, see: George Herring, *From Colony to Superpower: U.S. Foreign Relations since 1776* (New York: Oxford University Press, 2008), 502-519. The legislation is described more fully in: B.W. Patch, “Neutrality vs. Sanctions,” 21 October 1937, *Editorial Research Reports: 1937*, vol. 2 (Washington, DC: CQ Press); B.W. Patch, “American Neutrality Policy and the Balance of Power,” 01 April 1939, *Editorial Research Reports: 1939*, vol. 1 (Washington, DC: CQ Press); and B.W. Patch, “Present and Proposed Neutrality Legislation,” 03 October 1939, *Editorial Research Reports: 1939*, vol. 3 (Washington, DC: CQ Press). The key study of the neutrality acts is still: Divine, *Illusion of Neutrality*, 81ff.

⁸⁷ Lt. Col. Raymond E. Lee (Military Attaché), “Oil and Its Effect on British Warmaking Capacity,” 11 December 1935, Report No. 37765, NARA, Record Group 59: General Records of the Department of State (hereafter cited as: RG 59), 841.6363/413. Lee observed that few in Britain grasped that the new legislation would apply equally to all belligerents in any conflict, but he mistakenly thought that oil exports would be immediately curtailed along with arms.

“normal” level of exports.⁸⁸ Isolationists opposed this draft because it gave the U.S. Government the right to apply export restrictions selectively between belligerents if both the President and the Congress agreed – in other words, to avoid penalizing the victims of aggression equally as the aggressors. The two sides compromised with a bill that basically renewed the 1935 act.

Unlike the two previous acts, 1937 Neutrality Act was permanent (except in one regard) and did affect exports of raw materials. Previously, isolationists and peace groups had tried and failed to extend the arms embargo to include all strategic commodities, including oil.⁸⁹ The new legislation specifically excluded raw materials from the list of contraband items, but some restrictions on their export did apply. As the Foreign Office explained, the bill distinguished between “implements of war,” whose sale was prohibited, and goods “essential for the conduct of a war” but not actually weapons (oil being the most important). Section 2 of the 1937 act prohibited the export of “essential” items to belligerents on U.S. ships. But such items could be exported on belligerent ships after title had been transferred to the foreign purchaser. This section of the 1937 Neutrality Act – so-called “cash and carry” provision – would expire in two years. As one historian sardonically observes, “cash and carry” represented an effort by the United States to continue to profit from international trade in wartime without incurring the kinds of risks that contributed to U.S. belligerency in 1917.⁹⁰ The “cash and carry” provision, while preferable to a blanket embargo, was still a “nuisance” according to the Foreign Office because it required Britain to organize the shipping of goods to Europe and would strain its reserves of hard currency. Ultimately, Britain’s “relative immunity” to the legislation could only be realized if the British built up adequate stocks of war material, created “industries capable from the start [of hostilities] of manufacturing all our needs,” and enjoyed both “command of the sea” and “solvency and stability.”⁹¹

⁸⁸ Desmond Morton (Director of Industrial Intelligence Center), “Some Notes on the American Neutrality Bill and the Supply of Material to Belligerents,” 16 January 1936, ICF/558, enclosed with: A.W. Clarke, “U.S.A. Neutrality Bill: Supply of Material to Belligerents,” 22 January 1936, O.B. 155, CAB 50/5.

⁸⁹ Divine, *Illusion of Neutrality*, 122-161 (esp. 134-136 and 166).

⁹⁰ Divine, *Illusion of Neutrality*, 162-199 (esp. 163 and 193-195).

⁹¹ Foreign Office, “Memorandum on United States Neutrality,” 10 May 1937, A 4581/448/45, POWE 33/765. See, especially, Annex II to the aforementioned report (despite its somewhat misleading title): G.G. Fitzmaurice, “Memorandum on the Extent to which the American Neutrality Legislation is likely to assist in keeping the United States out of War,” 10 May 1937.

Britain's access to U.S. oil exports had nevertheless survived. The Petroleum Department concluded "that under the Neutrality Act the supply of oil to the United Kingdom from [the] U.S.A. in an emergency would not be prejudiced," although it conceded that the situation might change when the original "cash and carry" provision expired in May 1939. The Petroleum Department now assumed that it was unlikely that the United States would be "unfriendly" during any future war, and it saw no reason to challenge the assurances of the British Ambassador to the United States that "the general opinion [in Washington] seemed to be that the latitude given to the President ensures that he will apply the Act in such a way as to favour democratic nations if attacked by dictators." As long as Britain had the money to buy U.S. oil, the Petroleum Department was confident "that while the existing legislation is in force the possibility of [the] U.S.A. withholding supplies can be disregarded in any future calculations that may be made." Citing earlier reports by the PPR, the Petroleum Department noted that a "friendly" United States reduced the number of neutral tankers required by Britain if the Mediterranean was "closed" to fewer than sixty-six – a reasonable deficit considering that the PPR estimated that 150 neutral tankers (not including those under U.S. registry) would be available for service by 1940.⁹²

In view of this positive assessment by the Petroleum Department, the PPR felt there was no reason to revise its assumption that the United States would continue to supply Canada if it was "unfriendly."⁹³ The CID concurred and agreed to revisit the matter in 1939 after the expiration of the "cash and carry" provision. It also accepted the Oil Board's recommendation that British planning should continue to allocate U.S. oil to Canada even if the United States was "unfriendly."⁹⁴

⁹² Petroleum Department, "U.S.A. Neutrality Legislation," July 1937, O.B. 208 (O.B. (P.R.) 69), enclosed with: A.D. Nicholl and G.W.C. Norfolk, "Note by Joint Secretaries," 21 July 1937, O.B. 208, O.B. (P.R.) 70, CAB 50/6. The report appears to be incorrectly numbered – other copies of the report in CAB 50/15 and POWE 33/765 are numbered O.B. (P.R.) 70 and dated 09 July 1937. See also Orest Babij's "The Royal Navy and Inter-War Plans for War against Japan: The Problem of Oil Supply," in: *Merchant Marine in International Affairs, 1850-1950*, ed. Greg Kennedy (London: Frank Cass, 2000), 100-101.

⁹³ A.D. Nicholl and G.W.C. Norfolk, "Note by Joint Secretaries," 21 July 1937, O.B. 208, O.B. (P.R.) 70, CAB 50/6.

⁹⁴ A.D. Nicholl (PPR), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War: Note by the Joint Secretary," 15 March 1938, O.B. (P.R.) 118 (also O.B. 241), CAB 50/16.

Leaving aside the obvious disabilities imposed by the arms embargo, the 1937 Neutrality Act was a mixed bag for Britain. Contrary to the fears of the IIC, the U.S. Government did not adopt any legislation limiting exports of raw materials. The 1937 legislation erased – at least for the next two years – the longstanding fear that the United States might embargo oil exports to Britain. The oil would be available but only under the terms of “cash and carry.” By preventing the chartering of U.S. tankers and forcing Britain to pay cash in advance for any U.S. oil it purchased, the 1937 Neutrality Act did impose additional expenditures in two items that London could not afford to spare: tanker tonnage and foreign exchange. Britain was now caught in a vice: addressing the shortage of the latter by increasing imports of Middle Eastern oil would increase the deficit of the former. On the other hand, saving tanker tonnage by drawing more of Britain’s imports from the Western Hemisphere would accelerate the draining of Britain’s hard currency reserves since much of the oil would have to be purchased from U.S. companies. Whatever else happened, Britain could not afford to lose access to its major sources of oil in the Western Hemisphere, which was the most efficient source of supply both in terms of logistics and Britain’s balance of payments, as British firms in Latin America would accept payment in sterling rather than in dollars.

The Specter of Nationalism: Mexico, 1938-1941

Italy's hostility did not reduce the amount of oil available to Britain. Rather, the issue was the perennial problem of logistics. Any closure of the Mediterranean would force Britain to fall back on the Western Hemisphere since it could not transport enough oil from the Middle East around the Cape of Good Hope. The loss of U.S. imports was not decisive, but it was imperative that access to other sources in the Western Hemisphere was not jeopardized. In view of this situation, the Petroleum Division was not exaggerating when it called President Lázaro Cárdenas' decision in March 1938 to nationalize the Mexican oil industry and expropriate the assets of the major U.S. and Anglo-Dutch oil companies as "[an] event of considerable importance which may, directly or indirectly, have serious repercussions on the problem of the supply of oil to this country [...]".⁹⁵

Prior to the labor dispute between the foreign oil companies and Petroleum Workers' Union that precipitated nationalization, the main British company (Mexican Eagle, a subsidiary of Shell since 1919) seemed to enjoy a secure position in Mexico. The company had concluded an agreement with Mexico City in November 1937 guaranteeing the Mexican Government up to 35% of the its production from the rich Poza Rica oilfield. With more than 500,000,000 barrels worth of reserves, 41% of the oilfield lay within lands owned by the Mexican Government.⁹⁶ Mexican Eagle also agreed to produce oil at Poza Rica according to stringent conservation measures that would lengthen the lifespan of the field – something the Mexican Government had been promoting unsuccessfully since 1925.⁹⁷ Most significantly, the company finally recognized the Mexican Government's ownership of national subsoil resources (Article 27 of the

⁹⁵ Petroleum Department, "The Expropriation by the Mexican Government of the Properties of the Oil Companies in Mexico," 08 April 1938, O.B. 247, Annex to: De La Warr (President, Oil Board), "Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board," 09 May 1938, O.B. 252 (also C.I.D Paper No. 1428-B), CAB 50/7.

⁹⁶ Noel Maurer, "The Empire Struck Back: Sanctions and Compensation in the Mexican Oil Expropriation of 1938," *Journal of Economic History* 71: 3 (2011): 595; and Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution, 1900-1938* (Cambridge: Cambridge University Press, 2006), 287-288.

⁹⁷ Even if the agreement with Mexican Eagle was overtaken by events the following year, the concessions made by the company regarding oil conservation were significant because they represented the government's first major victory in the fight for "wise use" of Mexico's oil reserves, and which became the mantra of the industry after nationalization. Santiago, *Ecology of Oil*, 256-290 and 354.

1917 Constitution).⁹⁸ Mexican Eagle had signed the agreement (never implemented because of the nationalization the following year) over the opposition of the U.S. oil companies.⁹⁹ But it squandered any goodwill the following year when it sided with the U.S. oil companies against the Mexican petroleum workers' union, the national arbitration board, and the Mexican Supreme Court. Not for the first or the last time, the British would pay dearly for their intransigence in the face of what they perceived to be an infringement of their legal rights.¹⁰⁰

During the World War, when production had increased between 4,000,000 tons to 9,000,000 tons each year, Mexico had been Britain's second-largest supplier behind the United States. By 1937, however, Mexico's oil production of 46,907,000 barrels was only one-quarter the 1921 peak of 193,398,000 barrels.¹⁰¹ During this period, Mexico had also fallen from second to seventh in the international ranking of oil producers, contributing only 2.5% of global output in 1937. Thanks to the discovery of the Poza Rica oilfield in 1930 by Mexican Eagle, Britain accounted for two-thirds of

⁹⁸ Article 27 replaced a series of four laws passed between 1884 and 1909 during the Porfiriato (1876-1911) that eliminated government ownership of subsoil mineral resources, and which had prevailed since the period of Spanish colonial rule. Linda Hall, *Oil, Banks, and Politics: The United States and Postrevolutionary Mexico, 1917-1924* (Austin: University of Texas Press, 1995), 18; and Santiago, *Ecology of Oil*, 62-64. By encouraging foreign companies to search for oil, the dictator Porfirio Díaz hoped to reduce Mexico's crippling dependence upon imports of U.S. and British coal (4,500,000 tons by the end of the nineteenth century). Jonathan Brown and Peter Linder, "Oil," in: *The Second Conquest of Latin America: Coffee, Henequen, and Oil During the Export Boom, 1850-1930*, ed. Steven Topik and Allen Wells (Austin: University of Texas Press, 1998), 157.

⁹⁹ Jonker and van Zanden, *History of Shell*, 455.

¹⁰⁰ The key historical treatment of Mexican nationalization is: Lorenzo Meyer, *Mexico and the United States in the Oil Controversy, 1917-1942* (Austin: University of Texas Press, 1977), 149-228. See also: Stephen Haber, Noel Maurer, and Armando Razo, "When the Law Does Not Matter: The Rise and Decline of the Mexican Oil Industry," *Journal of Economic History* 63: 1 (2003): 1-32; Howarth and Jonker, *History of Shell*, 39-40; Catherine Jayne, *Oil, War, and Anglo-American Relations: American and British Reactions to Mexico's Expropriation of Foreign Oil Properties, 1937-1941* (Westport: Greenwood Press, 2001); Jonker and van Zanden, *History of Shell*, 453-456; Clayton Koppes, "The Good Neighbor Policy and the Nationalization of Mexican Oil: A Reinterpretation," *Journal of American History* 69: 1 (1982): 62-81; Larson, Knowlton, and Popple, *New Horizons*, 127-132; Maurer, "Empire Struck Back," 590-615; Lorenzo Meyer, "The Expropriation and Great Britain," in: *The Mexican Petroleum Industry in the Twentieth Century*, ed. Jonathan Brown and Allan Knight (Austin: University of Texas Press, 1992), 154-172; Santiago, *Ecology of Oil*, 326-341; and Mira Wilkins, *The Maturing of Multinational Enterprise: American Business Abroad from 1914-1970* (Cambridge: Harvard University Press, 1974), 225-230. Meyer concluded that Mexican Eagle had erred grievously by taking a hard line against Mexican labor unrest: had the company adopted a more conciliatory position, "it is highly likely that its presence in Mexico would have lasted a good many years longer, and that the nature of the Mexican oil industry would not be what it is today." "Expropriation and Great Britain," 168.

¹⁰¹ Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 5.

Mexican oil production on the eve of nationalization.¹⁰² Unfortunately for London, Mexico was no longer a major exporter. In 1920, it had exported roughly 175,000,000 barrels, but after 1930 exports had shriveled to less than 25,000,000 barrels per year. Domestic consumption within Mexico was negligible and fairly static: in 1921, 18,227,846 barrels (1%) of total production was consumed locally. By 1937, consumption equaled 18,293,576 barrels, or 39% of production. But thanks to the collapse in production, the balance between exports and domestic consumption had shifted noticeably: in 1922, 99% of Mexico's production went abroad, but by 1937, only 61% did.¹⁰³ In fact, one of Mexico's major attractions for the oil companies was the growth of domestic consumption, which they satisfied after 1925 through imports of U.S. crude from California, which was cheaper than Mexican crude on the Mexico's western coast.¹⁰⁴

In 1935, Mexico still exported 1,100,000 tons to Britain, but this figure slumped to 631,000 tons in 1937 – from 10.1% of Britain's total imports to 5.5%, although it remained the fourth-largest supplier, well behind the United States but slightly ahead of Romania. By 1937, London expected that Mexico would supply no more than 1,800,000 tons of oil to Britain in the event of war. Although Mexican oil production had retained a strategic significance out of proportion with its size thanks to its relative security and accessibility, the President of the Oil Board concluded that the loss of Mexican imports

¹⁰² De La Warr (President, Oil Board), "Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board," 09 May 1938, O.B. 252 (also C.I.D Paper No. 1428-B), CAB 50/7. By comparison, U.S. interests accounted for only 20%, with the remainder belonging to Mexican interests. "Mexican Oil Dispute," Appendix V (A) to: Ministerial Oil Committee, "Oil Policy," no date (circa April 1944), M.O.C. (44) 5, POWE 33/1399.

¹⁰³ Jonathan Brown, "The Structure of the Foreign-Owned Petroleum Industry in Mexico, 1880-1938," in: *Mexican Petroleum Industry*, ed. Brown and Knight, 10; and Meyer, *Oil Controversy*, 3-19. According to Clayton Koppes, prior to nationalization, Mexico's domestic consumption "remained about the size of that of Des Moines, Iowa." Koppes, "Nationalization," 64. This seems to be an understatement: in 1937, the Mexican domestic economy claimed 16.86% of the country's heavy oil production, 43.50% of its refined products, and 99.9% of its light crude oil. Santiago, *Ecology of Oil*, 334.

¹⁰⁴ By 1930, Mexico was the second-largest consumer of petroleum products in Latin America behind Argentina. Jonathan Brown, "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s," *American Historical Review* 90: 2 (1985): 373-375. As of 1933, four companies controlled the entire Mexican market for gasoline:

Company	Market Share
Shell	33.7%
Jersey	24.3%
Sinclair	21.6%
Standard Oil of California	20.4%

Source: Brown and Linder, "Oil," 166-167.

“would probably not present an insoluble problem.” At the same, he conceded that Mexico “possesses much greater possibilities [for increased production] than are indicated by the output of recent years,” thanks to the discovery of the Poza Rica oilfield.¹⁰⁵

There is a great deal of mythology surrounding the expropriation, which appears in hindsight (erroneously) as a harbinger of the resource nationalism of the 1970s. After the events of March 1938, London sniffed that nationalization had merely been a pretext to seize control of the Poza Rica oilfield.¹⁰⁶ In fact, there is no evidence that Cárdenas had engineered the nationalization. Rather, the impetus came from the increasingly radical labor movement, which often feuded with Cárdenas, who (much like his predecessors) sought to promote “equilibrium” between capital and labor while rejecting socialism in favor of managed capitalism.¹⁰⁷ Rather than striking premeditated blow against foreign ownership of Mexico’s natural resources, Cárdenas had only acted to prevent the wholesale collapse of the industry after most of the oil companies refused abide by the 1937 ruling of the Federal Labor Board (upheld by the Mexican Supreme Court) granting a major wage and benefit increase as well as greater control over hiring to the petroleum workers’ union. The companies reacted by ceasing to pay their workers, who retaliated by seizing control of the oil infrastructure and halting production altogether, thus paralyzing the entire industry and forcing Cárdenas’ hand. Ironically, Mexican Government proved to be an unsympathetic employer: it refused to implement fully the 1937 labor ruling, and although the number of workers and their nominal wages increased, inflation wiped out any gains by 1944. Union representatives also received only three of out of the nine chairs on the board of the new government oil monopoly, *Petróleos Mexicanos*.¹⁰⁸

¹⁰⁵ De La Warr (President, Oil Board), “Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board,” 09 May 1938, O.B. 252 (also C.I.D Paper No. 1428-B), CAB 50/7. See also: Jonker and Zanden, *History of Shell*, 453.

¹⁰⁶ “Mexican Oil Dispute,” Appendix V (A) to: Ministerial Oil Committee, “Oil Policy,” no date (circa April 1944), M.O.C. (44) 5, POWE 33/1399.

¹⁰⁷ The role of the labor unions as the driving force behind nationalization is stressed in: Santiago, *Ecology of Oil*, 291-341.

¹⁰⁸ Maurer, “Empire Struck Back,” 611-612; and Santiago, *Ecology of Oil*, 349-353.

Another myth is that the political situation following the Revolution of 1910, “revenue expropriation” in the form of tax increases by the Mexican Government during the 1920s and 1930s, and doubts about their long term property rights discouraged the major oil companies from exploring for oil, which led to the collapse in oil production after 1921 as the companies extracted whatever they could before they lost control of the oilfields. Recent studies have demonstrated that the opposite is the case: real taxes on the oil companies decreased after 1923 (while the companies avoided the increase on gasoline excise taxes by exporting crude overseas for refining), and investment by the major oil companies peaked somewhere between 1924 and 1928, or several years after the collapse in production. Although the companies did reduce their investment in Mexico, the cause was geological rather than political: they had tried and failed to find new oilfields to replace the production from the “Golden Lane” that had become contaminated by salt water. The discovery of Poza Rica led to a stabilization and even modest increase in production after 1932, but investment continued to plummet after 1926, even if the companies drilled a higher percentage of successful new oil wells (from around 40% in 1926 to almost 70% by 1930). Mexico would not return to its 1921 levels of production until the 1970s, but even this was accomplished using state-of-the-art technology unavailable before 1938.¹⁰⁹

While under “ordinary circumstances Mexico might therefore have been expected to become again of considerable importance as a supplier to this country,” in the wake of nationalization, the Petroleum Department lamented that “[these] possibilities are likely to disappear if the Mexican Government adhere to their present intentions.” The British believed that the Mexicans lacked the skills not only to boost production, but perhaps even to maintain output at levels sufficient to meet domestic demand. The greatest cause of discomfiture in London, however, was the possibility that Mexico’s actions might embolden other oil producers. If the Mexicans managed to convince other Latin American producers to

¹⁰⁹ For 1921-1929, see: Haber, Maurer, and Razo, “When the Law Does Not Matter,” *passim* (esp. 1-3 and 9-16); for 1938, see: Maurer, “Empire Struck Back,” *passim*. The analysis of Haber, *et al.*, “When the Law Does Not Matter,” does not necessarily conflict with that of Brown in “Shifted Their Production.” The latter overlooks the major investments made by foreign oil companies in Mexico during the 1920s to stabilize production, while the former does not mention the importance of Mexico as a budding oil consumer, which was especially important in an era of declining prices and demand globally.

implement “a similar policy... a serious situation would arise.” Britain could not afford to make do without the oil of Latin America, with almost 28,000,000 tons worth of production in 1936 between Venezuela, Colombia, and Peru, to which Britain enjoyed secure access, unlike the oil of either the Middle East or Romania. The Petroleum Department therefore urged that, irrespective of whether Mexico reversed its policy, “it is hardly necessary to emphasise the need of making every effort to ensure that the Mexican policy is not followed by other Latin American countries.”¹¹⁰

Most of the major oil companies – U.S. and British – adopted a hawkish position and collaborated (unsuccessfully beyond Britain) to boycott sales of expropriated oil. They could afford to use the nationalization to establish a “precedent” for other producers such as Venezuela because they had little money at stake in Mexico, from where they had already divested during the 1920s. Total revenues in 1937 (\$7,000,000, not including depreciation and depletion) were less than cost of the new agreement mandated by the Federal Labor Board.¹¹¹ The leader of the U.S. companies, the Standard Oil Company of New Jersey (Jersey) – which owned the largest U.S. producer in Mexico before nationalization, Mexican Petroleum – had not even wanted a share of Mexican production when it bought out the Standard Oil Company of Indiana’s foreign properties in 1932.¹¹² Indiana had, however, insisted that Jersey take Mexican Petroleum as the price for acquiring its more valuable Venezuelan subsidiary, Lago Petroleum.¹¹³

On the eve of nationalization, Mexican Eagle had been prepared to accept the ruling of the Mexican Supreme Court but stuck by the U.S. oil companies after Jersey’s subsidiary refused to compromise.¹¹⁴ Having suffered the greatest loss in Mexico as a result of the nationalization, Shell thereafter supported a

¹¹⁰ Petroleum Department, “The Expropriation by the Mexican Government of the Properties of the Oil Companies in Mexico,” 08 April 1938, O.B. 247, Annex to: De La Warr (President, Oil Board), “Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board,” 09 May 1938, O.B. 252 (also C.I.D Paper No. 1428-B), CAB 50/7.

¹¹¹ Maurer, “Empire Struck Back,” 601-603.

¹¹² Mexico’s share of U.S. oil investment had collapsed since 1929, from 18.5% to 6.4% by 1936. Brian McBeth, “Venezuela’s Nascent Oil Industry and the U.S. Tariff on Crude Oil Imports, 1927-1935,” *Journal of Iberian and Latin American History* 27: 3 (2009): 436.

¹¹³ Maurer, “Empire Struck Back,” 596-599. In 1931, the Standard Oil Company of Indiana’s Mexican properties had a daily production of 16,000 barrels per day, while those in Venezuela produced 88,000 barrels per day with estimated reserves of 550,000,000 barrels. Larson, Knowlton, and Popple, *New Horizons*, 49.

¹¹⁴ Brown and Linder, “Oil,” 168.

hard-line position, which entailed that any settlement with Mexico City must include “restitution” (for future profits now lost) rather than just “compensation.” The company’s executives were convinced the Mexicans would see the folly of their ways and invite Shell back once they realized they were incapable of running their own oil industry.¹¹⁵ But the really big stakes were not in Mexico, but rather in Venezuela, which accounted for almost 40% of the Shell’s total worldwide production by January 1940 (12,000,000 tons out 31,000,000 tons).¹¹⁶ Shell was determined to maintain high production in the region, not only because Caribbean oil “has always been recognized as a great source of security in the matter of oil supply,” but also to keep the Venezuelans happy in terms of oil revenues: “Any deterioration of the Venezuelan and West Indian activities,” the company warned, “might prove a calamity.” If the Venezuelans followed the Mexican example, “the consequences would be vastly more far-reaching in their effect than has been the withdrawal of Mexican supplies upon the oil supplies of this country and on British revenues.”¹¹⁷

Although the company supported a hard-line on Mexico and continued to profit from its position in Venezuela, Shell’s leadership could not have known that the events of 1938 marked the beginning of the end of the company’s history as a firm that produced more crude than it sold – the nationalization in Mexico would be exacerbated two years later by the effective seizure of its assets in Romania (which the Soviets nationalized in 1948) and the loss of its East Indies oilfields in 1942. By 1943, Shell had lost 37% of its prewar production, and whereas its production in 1937 was equal to that of Jersey (30,000,000 tons), by 1945, Jersey had a 22,000,000 ton advantage.¹¹⁸

¹¹⁵ Shell’s official history implausibly claims that Shell’s plan could have worked with “concerted diplomatic support,” but U.S. pusillanimity destroyed any chance of success. Howarth and Jonker, *History of Shell*, 39-40.

¹¹⁶ The many advantages of Venezuelan oil in comparison to both Mexican and Middle Eastern oil are summarized in: Brown, “Shifted Their Production,” 362-385; B.S. McBeth, *British Oil Policy, 1919-1939* (London: Frank Cass, 1985), 86-120; B.S. McBeth, *Juan Vicente Gómez and the Oil Companies in Venezuela, 1908-1935* (Cambridge: Cambridge University Press, 1983), 1-4, 65-66; and Jonker and van Zanden, *History of Shell*, 453.

¹¹⁷ Shell Transport and Trading Co., “Memorandum: Shell/Royal Dutch Group,” 16 January 1940, CAB 63/117. Although Caracas was not above using legal means to collect what it claimed were unpaid back taxes and royalties from the company before 1938, the Venezuelan Government opposed the nationalization, as the country was far too dependent on oil revenues (already one-quarter of total tax revenues by 1928) to risk any disruption. Maurer, “Empire Struck Back,” 602-603; McBeth, “Venezuela’s Nascent Oil Industry,” 429; and Stephen Rabe, *The Road to OPEC: United States Relations with Venezuela, 1919-1976* (Austin: University of Texas Press, 1982), 60-61.

¹¹⁸ Howarth and Jonker, *History of Shell*, 34-35.

In view of what was at stake for Britain economically and strategically, particularly in Venezuela and Iran, the British Government opposed the resumption of diplomatic relations with Mexico, which had been terminated in April 1938, until a favorable oil settlement had been reached. A Foreign Office assessment completed two years later remarked that London's uncompromising position on compensation for Mexican Eagle had "been conditioned not so much by the hope of saving what could be saved from the wreck as by the determination to avoid any move which could be constructed as condoning the original act of spoliation," which might have emboldened Venezuela or Iran to undertake similar action "with infinitely greater economic and strategic damage to the national interests." The Foreign Office derived a smug satisfaction from "the growing economic difficulties in Mexico," which London believed "vindicated the policy of leaving that country to stew in her own juice as a deterrent to others from following her example." [...]. Premature reconciliation should be avoided, as "it would inevitably be interpreted elsewhere as a first step toward a compromise solution of the oil dispute dictated by motives of weakness." The need to make an example out of Mexico to "deter" other oil producers and refusing to countenance the Mexican "banditry" trumped any desire to regain quick access to Mexico's oil industry even as Britain was fighting for its life following the surrender of France and prior to Pearl Harbor.¹¹⁹

The British Government's uncompromising stance was at odds with that of the U.S. Government, whose refusal to maintain a hard line raised suspicions in London that Washington wanted to purge foreign interests from Mexico before securing the readmission of the U.S. oil companies. Unlike the United States, which acknowledged the right of sovereign states to nationalize foreign-owned property with prompt compensation, Britain never accepted the legality of any nationalization undertaken without due cause. According to Foreign Secretary Eden, the question of whether or not adequate compensation was forthcoming was of secondary concern. Rather, the British Government rejected the very "justifiability of the expropriation." In London's eyes, the actions of the Mexican Government were an affront since the oil expropriation had been "essentially arbitrary in character" and not really in "any true

¹¹⁹ Rodney Gallop (Foreign Office), "Mexican Oil Dispute: Summary of Developments from 1939 to August 1940," 07 October 1940, A 4486/57/26, T 160/1263.

interest of Mexico.” Not only had labor conditions in the oilfields not been as poor as alleged, and the arbitration ruling against the oil companies unfair and excessive, but the British Minister in Mexico surmised that the Supreme Court ruling concerning the arbitration award – and whose refusal by the oil companies supposedly prompted the nationalization decree – had been rigged by the Mexican Government, which was acting purely on the basis of “political considerations.” Therefore, the British Government, unlike the U.S. Government, could not accept the idea of expropriation with adequate compensation as a prerequisite for a settlement. “[The] essential issue,” according to Eden, “is the justifiability of the expropriation itself, and the situation is of a character which can only be remedied by a restitution of the [oil companies’] properties.”¹²⁰

The British would fight expropriation by a combination of diplomatic and economic pressure to prevent the sale of Mexican oil, such as blocking financing, forbidding British merchants from trading expropriated oil, embargoing the sale and transport of Mexican oil by the major oil companies, and discouraging private industrial firms from supplying the Mexican oil industry.¹²¹ The primary aim of such measures, according to the Petroleum Department, was less to secure “the reinstatement of the [Oil] Companies” (a difficult proposition since Britain was running a trade deficit with Mexico), than “to serve as a deterrent to the other South American oil producing countries, which otherwise might be encouraged to follow Mexico’s example.” Nationalization had also impressed upon London the importance of maintaining a close watch over other oil producers and eliminating possible sources of “friction,” perhaps through “more frequent visits... by His Majesty’s Ships with the object of cultivating good relationships,”

¹²⁰ The Foreign Secretary (Eden) to the British Minister in Mexico (Owen St. Clair O’Malley), 06 April 1938, quoted in: Petroleum Department, “The Expropriation by the Mexican Government of the Properties of the Oil Companies in Mexico,” 08 April 1938, O.B. 247, Annex to: De La Warr (President, Oil Board), “Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board,” 09 May 1938, O.B. 252 (also C.I.D. Paper No. 1428-B), CAB 50/7. Eden’s note was rewritten and submitted to the Mexican Government on 08 April 1938. The key diplomatic exchanges between London and Mexico City between 08 April 1938 and 20 May 1938 are reprinted in: *Correspondence with the Mexican Government regarding the Expropriation of Oil Properties in Mexico*, Cmd. 5758 (London: HMSO, 1938), ADM 116/4815.

¹²¹ The measures undertaken by the British Government and Mexican Eagle are summarized in: Llewellyn (Chairman, Oil Board), *et al.*, “Oil Board: Thirteenth Annual Report,” 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7.

and having British diplomats offer suggestions concerning the “directions in which they consider that action might be taken which would strengthen our position [...]”.¹²²

Like the major oil companies, the British Government could afford to adopt an uncompromising concerning Mexican nationalization because Venezuela had already emerged as a superior source of supply. By the eve of the Second World War, besides the being the world’s largest exporter, Venezuela was also Britain’s most important oil supplier, providing 39% of its imports in 1937 (4,422,000 tons out of 11,249,000 tons). Production had increased by 10,000,000 tons just between 1932 and 1937, and British companies (affiliates of Shell) produced 38% of its output. During wartime, Venezuela would have to supply the British Empire with 9,634,000 tons assuming the Mediterranean was “closed” (or 6,304,000 tons if was “open”), but this was a manageable figure considering that total production in 1937 was 27,700,000 tons.¹²³ In fact, once the war began, Venezuela was eclipsed by the United States as Britain’s most important supplier because Venezuelan crude was not as suitable as U.S. oil for being refined into high-octane gasoline.¹²⁴ Nonetheless, Venezuela was an indispensable supplier once Iran stopped exporting west of Suez after 1940.¹²⁵ Venezuela ultimately reclaimed its position as the world’s second-largest producer in 1945 when Soviet oil production, hammered by wartime devastation and material shortages, collapsed by half between 1944 and 1945.

¹²² Petroleum Department, “The Expropriation by the Mexican Government of the Properties of the Oil Companies in Mexico,” 08 April 1938, O.B. 247, Annex to: De La Warr (President, Oil Board), “Expropriation of the Properties of the Oil Companies in Mexico: Note by the Oil Board,” 09 May 1938, O.B. 252 (also C.I.D Paper No. 1428-B), CAB 50/7. The CID broadly embraced the recommendations of the Oil Board and the Petroleum Department but narrowed their application to Latin America only. A.D. Nicholl, “Expropriation of the Property of the Oil Companies in Mexico: Note by the Joint Secretary,” O.B. 260, 26 May 1938, CAB 50/7.

¹²³ “Supply of Petroleum and Petroleum Products from Venezuelan Oilfields,” no date or author (circa 1938; probably Admiralty), ADM 1/10072.

¹²⁴ Howarth and Jonker, *History of Shell*, 36. Before the war, about 60% of the yield of the Shell and Jersey refineries at Curaçao and Aruba had been fuel oil and only 23% motor fuel. “Brief Survey of the Principal Oil Producing Countries,” no date or author, enclosed with: G.W.C. Norfolk (Joint Secretary, Sub-Committee on Petroleum Products Reserves, Oil Board, CID), 26 June 1936, O.B. (P.R.) 14, CAB 50/14.

¹²⁵ Outside of the United States, Venezuela was also the only supplier to the Western Allies capable of replacing the East Indies, which had produced more than 227,000 barrels per day in 1941. Thanks to Venezuela, the output of the Caribbean increased from 624,100 barrels per day in 1938 to 824,100 barrels in 1944. Overall, however, Allied production beyond the United States and Soviet Union was actually lower in 1944 than in 1941 (1,744,400 barrels vs. 1,798,600 barrels). John Frey and Chandler Ide, *History of the Petroleum Administration for War* (Washington, DC: U.S. GPO, 1946), 438.

The British did not let up even after the start of the war, or when the Mexicans gradually moved into the Allied camp after 1940. As a Petroleum Department summary from 1941 explained, acquiescing to expropriation would undermine the position of British oil companies around the world, whose success depended on their ability “to operate with as little political interference as is possible by the Government of the countries where they operate.” Government interference in the oil industry, by contrast, tended to curtail oil production, since most governments lacked the technical expertise or financial wherewithal to run such complex enterprises. This had to be avoided at all costs from Britain’s perspective since the success of British oil companies “affords the only basis on which the Empire can hope to have any assurance of securing the large supplies [of oil] needed.”¹²⁶ In effect, the British had boxed themselves in a corner: their uncompromising stance vis-à-vis Mexico City had been implemented with an eye to impressing Caracas and Tehran. Once the war began, however, it was the Venezuelans and Iranians that held the whip-hand: neither had any interest in settlement between Britain and Mexico, which might lead to a resumption of Mexican exports that would cut into their own oil revenues, which had already been harmed as a result of the war.¹²⁷

The Roosevelt Administration, led by U.S. Ambassador to Mexico Joseph Daniels, had advocated a less intransigent approach than London, The Hague, or even hardliners elsewhere in Washington preferred.¹²⁸ Although Washington shared London’s desire to see the re-entry of the major oil companies into Mexico, it believed that this could be accomplished through negotiation, a matter that took on added urgency once the war broke out.¹²⁹ The Mexicans certainly enjoyed greater leverage than before: the drying up of global foreign investment due to the Depression meant that the Mexicans did not worry

¹²⁶ “Mexican Oil Dispute,” no date or author, probably 07 September 1941 (handwritten notation reads: “P 7-9-41” and “Note by Petroleum Department”), ADM 116/4815. Of course, by 1941, the British had no need of Mexican crude and rather feared allowing it back into world markets at the expense of Venezuela and Iran. Meyer, “Expropriation and Great Britain,” 161.

¹²⁷ Maurer, “Empire Struck Back,” 607-608. Maurer misinterprets the additional royalties paid by Britain to Iran during the war by implying there was a relationship to events in Mexico. In fact, the British needed to compensate the Iranians for AIOC’s reduced off-take after 1940 due to the implementation of the “short-haul” policy after May 1940 to save tanker tonnage after Italy closed access through the Mediterranean.

¹²⁸ Howarth and Jonker, *History of Shell*, 39-40

¹²⁹ Besides David Painter, *Oil and the American Century: The Political Economy of U.S. Foreign Oil Policy, 1941-1954* (Baltimore: Johns Hopkins University Press, 1986), 22-31, the key work on the U.S. approach to nationalization is: Koppes, “Nationalization,” *passim* (esp. 68-81).

about how nationalization would affect their credit rating. This gave Mexico City, rather than the oil companies, the freedom to determine the terms of any financial settlement, which they calculated on the basis of the oil companies' own tax returns.¹³⁰

London's hard-line policy began to crumble in August 1941, after the British caught wind that the State Department was brokering settlement between the Mexican Government and a group of U.S. oil companies led by Jersey. These negotiations culminated in the Cooke-Zevada Agreement of November 1941, the details of which were hammered out the following April although the oil companies did not accept the agreement until 1943. The U.S. companies received roughly \$30,000,000 over four years, not including the money that went to Sinclair Oil under the terms of a separate agreement in 1940 (\$8,000,000, plus 20,000,000 barrels at \$0.25 discount). Much of the delay stemmed from the oil companies' overvaluation of their nationalized assets, and their desire that the dispute be settled through international arbitration rather than direct negotiations with Mexico City.¹³¹ In fact, Jersey received roughly as much (in 1938 dollars) as it had paid to acquire Mexican Petroleum in 1932 (\$19,000,000).¹³²

The person who pushed for a reassessment of British policy was none other than Eden. On 28 August 1941, he began urging colleagues to convince Shell to accept the terms that would be granted to the U.S. oil companies.¹³³ There was still some opposition. Geoffrey Lloyd (Chairman of the Oil Control Board) still advised against any resumption of relations until after a settlement had been worked out.¹³⁴ The Admiralty was dead set against any change in policy. Even if the oil companies returned to Mexico to manage the oilfields, they would be mere "middlemen," thus placing Britain "in a far weaker position" than if the oilfields were in British hands. Since Mexican oil was "not of vital importance to our war effort," the Fourth Sea Lord continued to urge that Britain make an example of Mexico in order to set an

¹³⁰ "Die Enteignung der Erdölkonzerne im Gesamtbild der nationalrevolutionären Politik," *Vierjahresplan*, 1938: VII.

¹³¹ Larson, Knowlton, and Popple, *New Horizons*, 131-132.

¹³² Maurer, "Empire Struck Back," 607, 609. As one German analyst ruefully noted, "Without the current war and the severing of the [trade] connections with the Europe, Mexico would not have felt the same urgency to negotiate." Dr. Walter Flemming, "USA. einigt sich mit dem Mexiko-Öl," *Deutsche Wehr*, Nr. 51/45. Jahrgang (19 December 1941).

¹³³ "Proposed agreement between British Oil Companies and Mexican Government, and resumption of diplomatic relations," no date or author (on or after 28 August 1941), ADM 116/4815.

¹³⁴ Lloyd to Eden, 01 September 1941, ADM 116/4815.

example for Venezuela and Iran.¹³⁵ Eden was not dissuaded, and with the support of the Ministry of Economic Warfare and the Petroleum Department, he advised the Cabinet “that we ought to take such steps as we could obtain for our own Oil Companies not less good than those which the American Companies would be having to accept” by using the State Department’s good offices. The aim of this shift in policy went beyond just ending the dispute with Mexico. London should adopt more a conciliatory tone vis-à-vis Mexico in order to win Washington’s goodwill when it came to the defense of British interests elsewhere in the world. “We are asking much of them,” Eden advised, “and we shall be asking more in parts of the world where we consider our interests primary.”¹³⁶

Britain and Mexico restored diplomatic relations on 22 October 1941 in spite of the absence of a settlement concerning Mexican Eagle’s claims, and Mexico declared war against the Axis on 22 May 1942. Nonetheless, the British Government continued to maintain its hard line against Mexico. When he announced the resumption of diplomatic relations, Eden stressed that nothing had changed concerning Britain’s attitude toward the nationalization. The Petroleum Department also opposed any attempt to lift the embargo on oil equipment to Mexico, for London had always “regarded it as of vital importance that no effect should be spared to prevent the Mexican Government making a success of their policy of expropriation [...]” Even now, Britain had to avoid showing any “sign of weakening and a willingness on our part to compromise.” Whether or not the embargo was working was irrelevant: the gains to be had from a resumption of industrial exports to Mexico would “be comparatively small and insignificant in relation to the important issues of principle at stake.”¹³⁷

The Anglo-Mexican oil dispute was not resolved until 1947. Earlier that year, London had, with Mexican Eagle’s blessing, abandoned its embargo against Mexican petroleum products and grasped the

¹³⁵ Fourth Sea Lord (Vice Admiral John H.D. Cunningham) to the First Sea Lord (Admiral of the Fleet A. Dudley P.R. Pound), 08 September 1941, ADM 116/4815.

¹³⁶ “Mexico: Resumption of Diplomatic Relations and Settlement of the Oil Dispute: Memorandum by the Secretary of State for Foreign Affairs,” 06 September 1941, W.P. (41) 215, CAB 66/18/38. The Cabinet backed Eden on the assumption that reopening relations with Mexico City would secure U.S. support during future negotiations, but it also stipulated that Britain would “not necessarily accept the same terms as the United States oil companies.” “Conclusions of a Meeting of the War Cabinet [...],” 08 September 1941, W.M. (41), 91st Conclusions, CAB 65/19/27.

¹³⁷ Petroleum Department, “Question whether British Companies should be discouraged from trading with the Mexican Oil Administration,” 28 February 1942, T 160/1263.

opportunity to reach a settlement before Mexico City's dollar reserves evaporated. At the start of the negotiations, the British claimed that Mexican Eagle's nationalized physical properties were now worth \$76,000,000 and its oil and gas reserves (2,800,000,000 barrels of proven and probable reserves) over \$310,000,000. Under the terms of its August 1947 agreement with Mexico City, Shell would collect \$81,250,000 retroactive to the date of the nationalization at 3% interest (the same rate the U.S. companies received under the 1941 Cooke-Zevada Agreement). Mexico would pay this figure in fifteen annual payments, which worked out to \$8,689,258 per installment.¹³⁸ By the time of the final payment in 1962, Shell had received over \$130,000,000 in nominal compensation. One scholar calculates the real value of the 1947 settlement in 1938 dollars at \$43,600,000 tons, which was 3.6 times greater than Mexican Eagle's market value in 1938 and 2.6 times greater than the company's book value that year.¹³⁹ Not surprisingly, according to its official history, the Shell "considered the settlement 'very satisfactory.'"¹⁴⁰

¹³⁸ Meyer, "Expropriation and Great Britain," 163-168; and William Wynne, *Selected Case Histories of Governmental Foreign Bond Defaults and Debt Readjustments*, vol. 2 of *State Insolvency and Foreign Bondholders* (New Haven: Yale University Press, 1951), 94-95.

¹³⁹ Maurer, "Empire Struck Back," 607-610.

¹⁴⁰ Howarth and Jonker, *History of Shell*, 40.

Opting for Imports: The Decision against Synthetic Fuel

Mexico's nationalization of its oil industry in 1938, coming less than six years after the Shah had abrogated the D'Arcy Concession, exposed the fragility of any oil policy based upon supplies from British-owned oilfields abroad. The Italian threat to British passage through the Mediterranean since 1936 added a logistical handicap that was insurmountable without reverting to abject dependence upon the United States. One would think that the emergence of so many grave threats to Britain's foreign oil concessions during the 1930s would have spurred efforts to develop synthetic sources of petroleum. But this was not the case.

British crude oil production remained miniscule until the discovery of the North Sea oilfields in the 1960s, but an alternative domestic source of petroleum did exist: synthetic fuel. Although the nation most-identified with synthetic fuel is the Third Reich, Britain also had the option of following Germany's example by virtue of its large coal reserves and heavy industrial sector (which could produce the immense quantities of steel necessary for the construction of synthetic fuel plants). The British Government's Department of Scientific and Industrial Research had established a Fuel Research Board in 1917 to study methods of synthesizing petroleum. Of particular interest was the process developed during the early-1920s by the German chemist Friedrich Bergius for liquefying coal (hydrogenation). In 1927, the largest British chemical company, Imperial Chemical Industries (ICI), acquired control of the British Bergius Syndicate, which had purchased the patent and marketing rights for hydrogenation in the British Empire in 1924.¹⁴¹ Meanwhile, the British Government levied a series of tariffs on imported gasoline to encourage the production of synthetic gasoline. And yet, in spite of the myriad risks entailed by importing virtually all of its oil requirements, in 1938 the British Government decided against developing an indigenous synthetic fuel industry.¹⁴²

¹⁴¹ Until 1925, the rights to hydrogenation were held by the International Bergin Corporation, a joint-venture established in 1921 between a German consortium (including Bergius) and Royal Dutch. Anthony Stranges, "Friedrich Bergius and the Rise of the German Synthetic Fuel Industry," *Isis* 75: 4 (1984): 663-665.

¹⁴² For overviews of the synthetic fuel industry in interwar Britain, see: Bamberg, *History of BP*, 179-182; Charles More, *Black Gold: Britain and Oil in the Twentieth Century* (London: Continuum, 2009), 62-65; Payton-Smith, *Oil*,

Although the superiority of oil vs. coal as a source of fuel was not challenged within the British military establishment following the First World War, the strategic liabilities that flowed from Britain's need to import oil spurred much debate. While acknowledging that Britain enjoyed an enviable position through its control of the oil resources of the Middle East, many analysts lamented that the transition from coal to oil had robbed Britain of the leverage it had once enjoyed over international trade through its control of a worldwide network of coal bunkering stations, without lessening Britain's need to maintain control of the seas.

As late as 1923, one writer still cautioned against completely converting the Royal Navy to burning oil, warning that Britain would be defenseless in the event that it lost access to overseas oil. Britain should guard against such a calamity by keeping some coal-burning ships in service.¹⁴³ Another writer concluded that oil had "reduced our independence... by reliance on fuel obtainable only on foreign sufferance," while "the present almost undignified stampede in favour of oil fuel" had introduced an element of friction within international relations that created new "political entanglements" and military obligations for an overstretched British Empire in places like the Middle East.¹⁴⁴ Still others urged the armed services to extend financial support for research into the conversion of coal into oil, since Britain's synthetic fuel capacity "surely should not be left largely undeveloped until an emergency arises, when, as happened in the Great War, other considerations blocked the way to development."¹⁴⁵ It was the Admiralty that made the case for oil most forcefully: naval technology had advanced too far to revert to

19-24; and Anthony Stranges; "From Birmingham to Billingham: Synthetic Fuels in Great Britain, 1910-1945," *Technology and Culture* 26 (1985): 726-57.

¹⁴³ Captain R.J. Wilkinson (12th Pioneers, Indian Army), "The Influence of Oil on Imperial Organization," *RUSI* 68: 469 (1923): 109-114. Wilkinson also mentioned how the shift to oil had damaged the British export trade by robbing British merchant ships of the luxury of using coal as "an outward freight certain of sale in almost any country." See also: W.H.L. (Walter Long, First Lord of the Admiralty) and H.G. (Hamar Greenwood, Secretary of Overseas Trade), "Oil Fuel Reserve for British Oil-Burning Merchant Ships: Memorandum Prepared by the Admiralty and the Petroleum Executive for the Cabinet," 05 February 1920, C.P. 601, BNA, CAB 24/98.

¹⁴⁴ "It emerges then that not only have our naval responsibilities on the Mediterranean route been added to, but all our Empire sea routes... require a higher degree of naval policing than heretofore." Captain G. MacLeod Ross, "Imported Oil or Native Coal?" *RUSI* 72: 485 (1927): 137-143. Ross was an energetic supporter of increased Government research spending to develop low-temperature carbonization as a cost-effective means of producing fuel.

¹⁴⁵ J.S.S. Brame, "Power Fuel for the Services," *RUSI* 76: 501 (1931): 64-77. Brame was the Professor of Chemistry and Metallurgy at the Royal Naval College, Greenwich.

coal – a move that “could not now be undertaken without grave prejudice to the strength of the fleet and its operational efficiency.”¹⁴⁶ The former Engineer-in-Chief of the Royal Navy warned that returning to coal would “render the fleet useless for defense of our Empire.”¹⁴⁷ But that still left open the possibility of exploring synthetic alternatives to crude oil.

The British Government first took up the question of whether to lend government support to the synthetic fuel industry in November 1929, when Prime Minister MacDonald established a special sub-committee to consider the viability of using various processes (low-temperature carbonization, pulverized fuel, and hydrogenation) to meet Britain oil requirements. In considering the sub-committee’s report, the Oil Board concluded “that the process of hydrogenating coal is the only one which can reduce the dependence of this country on imported oil supplies to any extent,” especially in wartime, when it might prove to “be of great military advantage [...]” The Oil Board was cognizant of the economic risks, remarking that it was still unclear whether synthetic fuel could compete with natural oil even with government subsidies (such as the existing oil import duty). Furthermore, the Oil Board warned that some arrangement would have to be worked out with the major oil companies beforehand, as they might react to the development of a synthetic fuel industry by dumping crude oil on to the British market to drive synthetic competitors out of business.¹⁴⁸

It was unlikely that a British synthetic fuel industry could develop organically, since synthetic fuel would cost at least twice as much as imported oil. The government would have to impose preferential tariffs on imported oil and bankroll the construction of synthetic fuel plants. Supporters of synthetic fuel stressed its benefits in terms of stimulating employment, particularly within the ailing British coal and steel industries. They also contended that the loss in government revenues from import duties on foreign

¹⁴⁶ C.G. Ammon (Admiralty Board), “Coal or Oil as a Fuel for the Navy,” *Journal of the Royal United Service Institution* (hereafter cited as *RUSI*) 76: 503 (1931): 634-637.

¹⁴⁷ Engineer Vice-Admiral Reginald W. Skelton, “Coal Versus Oil for the Navy,” *RUSI* 79: 514 (1934): 241-255. German analysts took note of Skelton’s conclusions. Waldener-Harz, “Kohle oder Öl,” *Militär-Wochenblatt*, 119. Jahrgang, Nummer 15 (18 October 1934).

¹⁴⁸ Lord Thomson (President of the Oil Board), *et al.*, “Oil Board: Fifth Annual Report,” 01 July 1930, O.B. 51 (also C.I.D. Paper No. 1007-B), CAB 50/3 (the report of the sub-committee is appended as Annexure B); and Thomson, “Production of Oil from Coal: Memorandum by the President of the Oil Board,” 22 July 1930, C.P. 267 (30), CAB 24/214.

oil would be offset by reducing the financial burden of supporting unemployed British miners and workers, and improving Britain's balance of payments. Synthetic fuel could also free the British economy from the extreme fluctuations in oil prices, not to mention the machinations of the major oil companies, while offering a secure source of petroleum in wartime. Opponents countered that the costs of subsidization would remain prohibitive barring any major technological breakthroughs. Therefore, government support was likely to be a permanent fixture. Considering that the Germans had little to show for their early investments in synthetic fuel, there was also considerable skepticism in the early-1930s as to whether hydrogenation on a commercial scale was even technically feasible. A rival synthetic fuel industry, sheltered by protective tariffs, would also have a negative effect on the financial position of the British oil companies and related industries such as shipbuilding, and their potential losses in terms of capital and employment could wipe out any gains made by subsidizing synthetic production.¹⁴⁹

Developing a synthetic fuel industry was not just an economic matter but also affected Britain's strategic position. The former Managing Director of Shell Transport and Trading, Andrew Agnew, pointed out in 1935 that producing enough gasoline to cover Britain's annual requirements would require an expenditure of £160,000,000, plus the loss of an additional £40,000,000 in tax revenues. Agnew was hardly an impartial observer, but he still raised a number of valid concerns. Domestic production of synthetic fuel did nothing to alleviate the energy needs of the British Empire as a whole. Agnew was also troubled that synthetic fuel "tends to create in the minds of those in authority an impression that the necessity for protection of trade routes has appreciably diminished." It was unwise to mortgage Britain's security when, for a "mere fraction of the cost of making even the British Isles independent of imported petroleum supplies," the government could instead "provide defensive armaments in the way of cruisers and aircraft ample to protect not only our own supplies of oil, but those required for the peoples of the

¹⁴⁹ The arguments for and against State support of the synthetic fuel industry during between 1930 and 1933 are well-summarized in the following documents: "Oil from Coal," no date or author; "Memorandum: Hydrogenation," 01 December 1932, no author; "Hydrogenation," 07 February 1933, no author; all in: T 160/536. The provenance of these documents is unclear. They appear to be briefing papers for senior civil servants or Cabinet ministers, and they are all included within the same Treasury folder, which carries the following title: "Production of oil from coal by hydrogenation. Papers leading up to [a] Bill providing for preference in respect of Customs and Excise duties on home product."

whole Empire.”¹⁵⁰ German analysts envied Britain’s luxury of choice – Britain unlike Germany could afford to continue importing oil since “problem of foreign exchange” was “unknown” there.¹⁵¹

Starting in 1928, the British Government began placing duties on imported gasoline. The initial duty was 4d, but this was raised to 6d in 1931 and to 9d in 1938. Domestic synthetic fuels produced either from shale or oil were, however exempt. In 1935, the British Government moved from providing indirect to direct support and passed the Hydrocarbons Oil Production Act in 1935, which granted synthetic producers preferential treatment vis-à-vis imported fuel cumulatively worth 36d over nine years. In October 1935, ICI, which had purchased the British patent rights to hydrogenation in 1927, constructed a plant in Billingham to liquefy coal into over 100,000 tons of petroleum per year.¹⁵² And, of course, there was example set by Germany.¹⁵³ The question of whether the government should undertake even more vigorous support of synthetic fuel was only resolved in 1937, when a sub-committee of the CID chaired by Lord Falmouth delivered its report on the “economic possibilities” afforded by synthetic fuel production, “and on the advantages to be obtained by way of security of oil supplies in emergency.”¹⁵⁴

The Falmouth Committee doubted that synthetic production could be ratcheted up swiftly enough in the event of an emergency, whereas “[in] the case of imported supplies... the possibilities of rapid expansion of output are much greater,” not the least because Britain already had a developed

¹⁵⁰ Andrew Agnew, “Empire Oil Supplies in War,” *RUSI* 80: 518 (1935): 278-292.

¹⁵¹ Dr. M.B., “Öl aus Kohle in England,” *Vierjahresplan*, 1937: VII.

¹⁵² Payton-Smith, *Oil*, 21-22; and Anthony Stranges, “Friedrich Bergius and the Rise of the German Synthetic Fuel Industry,” *Isis* 75: 4 (1984): 664-665. There were two major processes by which oil products could be produced from coal: hydrogenation and the Fischer-Tropsch Process. The former, developed prior to the First World War and embraced by I.G. Farben after 1925, could be used to produce high-octane gasoline, whereas the later, developed in 1926, yielded diesel fuel, fuel oil, and lubricating oils. German analysts were unimpressed by the quality of work performed at Billingham. Imperial Chemical Industries used hard coal rather than brown coal to produce petroleum but no other byproducts: “[It] appears that the English character attaches little value to the complicated chemical task of recovering byproducts.” Dr. M.B., “Öl aus Kohle in England,” *Vierjahresplan*, 1937: VII.

¹⁵³ A.W. Clarke (Oil Board), “Steps to Render Germany Independent of Foreign Supplies of Fuel,” 13 January 1936, O.B. 154, CAB 50/5. German opinions in the early-1930s regarding the viability of a British synthetic fuel program were mixed. See the following exchange in *Deutsche Wehr*: Honke (?) vom Rhyn, “Englands Treibstoff-Autarkie? Die Renaissance der Kohle? Nr. 6/7. (38.) Jahrgang (07 February 1934); and Kapitän zur See a.D. v. Waldener-Harz, “Englands flüssige Kohle,” Nr. 9/7. (38.) Jahrgang (28 February 1934).

¹⁵⁴ CID, “Production of Oil from Coal: Report of a Sub-Committee,” 29 November 1937, 272-A (also Paper No. O.C.C. 38), enclosed with: T.W.H.I. (Thomas Inskip, Minister for Coordination of Defence) to the Cabinet, “Report on the Sub-Committee of the Committee of Imperial Defence on the Production of Oil from Coal: Note by the Minister for Co-ordination of Defence,” 03 February 1938, C.P. 19 (38), CAB 24/274. The 8th Viscount Falmouth (Evelyn Hugh John Boscawen) was actually an engineer by training who later served as Chairman of the Governing Body of Imperial College, London.

infrastructure for transporting, distributing, and refining imported oil. Imported supplies were also less vulnerable to attack due to Britain's naval strength, and domestic stockpiles could be concealed. The same could not be said of hydrogenation plants, which were "conspicuous targets and... extremely vulnerable to air attack." Although the sub-committee was unable to render a judgment regarding "the relative costs of the two alternatives in war time," it did conclude that imported supplies were "the most reliable and economical means of providing for an emergency." One synthetic fuel plant capable of producing 150,000 tons of fuel a year would cost around £8,000,000. Although it would directly or indirectly employ approximately 6,000 men, it would do so at a cost of about £5 per man each week, which was greater than the average weekly wage in Britain at the time. There were also still many doubts about whether Britain could take "the step from technical achievement to economic success," and it would have been foolhardy to have gambled Britain's oil security on such an uncertain prospect.¹⁵⁵

Although it recommended that Britain continue to explore the technological possibilities of synthetic fuel, the sub-committee went no further than suggesting that the minimum import duty on oil be doubled from 4d to 8d, and that such duties be maintained for another twelve years, with the aim of spurring the development of all forms of indigenous oil production.¹⁵⁶

¹⁵⁵ This was the experience of Japan, which rushed into synthetic production prior to the Second World War without adequate technical preparation with disastrous results. Anthony Stranges, "Synthetic Fuel Production in Prewar and World War II Japan: A Case Study in Technological Failure," *Annals of Science* 50 (1993): 229-65.

¹⁵⁶ CID, "Production of Oil from Coal: Report of a Sub-Committee," 29 November 1937, 272-A (also Paper No. O.C.C. 38), *passim* (esp. 29-52), enclosed with: T.W.H.I. (Inskip) to the Cabinet, "Report on the Sub-Committee of the Committee of Imperial Defence on the Production of Oil from Coal: Note by the Minister for Co-ordination of Defence," 03 February 1938, C.P. 19 (38), CAB 24/274. The government produced classified and unclassified versions of the report, the latter being disseminated to the public. Both versions are enclosed within CAB 24/274 but all quotations provided here are from the classified report. A summary of the published report was reprinted as: "Oil from Coal and Wartime Supplies," *RUSI* (1938): 385-391. For an internal analysis of the Falmouth Committee's report circulated within the Cabinet, see: H.C. (Harry Crookshank), "Falmouth Committee's Report: Consideration of Recommendations included in published Report (Cmd. 5665): Memorandum by the Secretary for Mines," 10 May 1938, enclosed with: O.F.G.S. (Oliver Stanley), "Production of Oil from Coal: Falmouth Committee's Report: Note by the President of the Board of Trade," 13 May 1938, C.P. 114 (38), CAB 24/276. German analysts found it peculiar that the committee recommended additional evaluation of foreign methods of synthetic fuel production but refrained from suggesting that "the oldest industrial nation" should participate in this endeavor. "Der Falmouth Bericht," *Vierjahresplan*, 1938: VI.

Unlike in Germany after 1933, the debate in Britain over whether the government should sponsor the establishment of a synthetic fuel industry primarily revolved around economic factors.¹⁵⁷ Strategic factors were not entirely absent from the debate, but they were of secondary importance for three reasons. Unlike all other oil-poor industrial nations, Britain enjoyed relatively easy access to foreign sources of oil thanks to its maritime power and the strong position of British oil companies, which meant that Britain could also pay for a significant portion of its imports in sterling or have the dollar profits remitted home. Britain, unlike Germany, was no longer an aggressive military power bent on a program of conquest that could threaten its access to overseas sources of raw materials. Accordingly, it had the option of choosing between imports or synthetic production, whereas Germany's hands were basically tied.

Autarky was, by contrast, never a viable option for Britain. Even if British industry had succeeded in making synthetic fuel production commercially viable, oil was only one of many items that Britain had to import. Britain's survival during a conflict in either European or Far Eastern war would still depend upon preserving its overseas lines of communication. That task became much more difficult after 1939 – Britain was no longer planning for an either/or situation, as the risk of a simultaneous conflict in different sides of globe was substantial. Britain could have coped with the closure of the Mediterranean in a European War, but the requirements for a global war in Europe and the Pacific simultaneously revealed London's inability to guarantee the security of the empire without the active support of the United States.

¹⁵⁷ Leaving aside the fact that the Reich, unlike London, did more than just offer financial incentives and guarantees: it also threatened coercion if firms did not comply with its' directives concerning the expansion of synthetic output. Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003), 199.

Planning for a “Dual Contingency,” 1938-1939

During its planning in 1937 for a war against Japan, PPR had not bothered to consider the possibility that the Mediterranean might be “closed.”¹⁵⁸ The Oil Board logically concluded that the closure of the Mediterranean to British shipping “during a Far Eastern War could only arise from the intervention of a hostile European Power,” thus raising the specter of a “dual contingency”: a war against both Germany and Japan. By February 1938, it seemed about time for the CID to abandon the existing practice of assessing Britain’s oil position during a European War and a Far Eastern War “separately.” The Oil Board could not start planning for such a “dual contingency” since the “other Sub-Committees of the Committee of Imperial Defence have not, as yet, thought it necessary to formulate their requirements on such a dual contingency [...]” The Oil Board urged the CID to take action.¹⁵⁹ Authorization from the CID came in March 1938.¹⁶⁰ In other words, as late as 1938, the British Government had yet to determine how it would satisfy its oil requirements in the event of a war against both the European and Pacific Axis powers.

By the beginning of 1939, the seriousness of Britain’s predicament was apparent. Germany and Japan were poised to go on the offensive in Europe and East Asia. Italy had broken with Britain and France over Abyssinia in 1935. After some initial reluctance, it joined Germany in sending aid to the Nationalists in the Spanish Civil War in 1936, abandoned its defense of Austrian sovereignty, and signed on to the Anti-Comintern Pact with Germany and Japan in 1937. Meanwhile, it was doubtful if United States would be able to lend material assistance to Britain and France after July 1939, when the Roosevelt Administration tried and failed to repeal the embargo on arms sales and place all trade with belligerents on a “cash and

¹⁵⁸ Crookshank (Chairman, PPR), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War,” 26 May 1937, O.B. 195 (also Paper O.B. (P.R.) 63), CAB 50/6.

¹⁵⁹ Crookshank (in the absence of the President and Chairman of the Oil Board), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War,” 08 February 1938, O.B. 233 (also C.I.D. Paper No. 1404-B) CAB 50/6.

¹⁶⁰ A.D. Nicholl (PPR), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War: Note by the Joint Secretary,” 15 March 1938, O.B. (P.R.) 118 (also O.B. 241), CAB 50/16.

carry” basis (although it finally succeeded in November).¹⁶¹ Finally, in April 1939, the Nationalists triumphed in the Spanish Civil War. If Spain formed an alliance with Germany, British control of Gibraltar, and with it access in and out of the Mediterranean, would be in jeopardy.

The unfavorable strategic situation was reflected in the final planning paper produced by the Oil Board in December of 1938, which had finally been instructed by the CID the previous March to assess Britain’s oil position and requirements in the event of it “being engaged in a major war simultaneously in Europe and the Far East,” with the Mediterranean either “open” or “closed.”¹⁶² The armed services forwarded to the Oil Board their revised oil requirements in the event of a “dual contingency” the following April and July. The Admiralty had already returned in 1936 to the postwar standard (temporarily halted as an austerity measure in 1929) of accumulating a twelve-month operational reserve, half of which would be stored in Great Britain.¹⁶³ In 1938, the Admiralty estimated the Royal Navy’s requirements at 8,682,000 tons with the Mediterranean either “open” or “closed.” This figure was considerably larger than previous estimates due to the recent expansion of the fleet and the fact that all Royal Navy ships would be operating under wartime footing in the event of a “dual contingency.” In view of its longstanding policy of maintaining a fuel oil reserve sufficient to meet its entire wartime requirements for one year, the Admiralty requested that the Royal Navy’s fuel oil reserves be increased from 7,000,000 tons to 8,500,000 tons, and that this reserve should never fall below 50% capacity.¹⁶⁴

¹⁶¹ The Administration’s efforts throughout 1939 are summarized in: B.W. Patch, “Present and Proposed Neutrality Legislation,” 03 October 1939, *Editorial Research Reports: 1939*, vol. 3 (Washington, DC: CQ Press).

¹⁶² A.D. Nicholl (PPR), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for the Estimated Requirements of the Services and for the Industrial and Civil Purposes of the Empire in the First Year (1940) of a Far Eastern War: Note by the Joint Secretary,” 15 March 1938, O.B. (P.R.) 118 (also O.B. 241), CAB 50/16. Accordingly, it could not take into account the Nationalist victory in the Spanish Civil War in the spring of 1939, which posed a threat to British access into and out of the Mediterranean.

¹⁶³ De La Warr (President, Oil Board), *et al.*, “Oil Board: Twelfth Annual Report,” 28 December 1937, O.B. 230 (also C.I.D. Paper No. 1390-B), CAB 50/6.

¹⁶⁴ “Royal Air Force Requirements of Petroleum Products in the First Year of a Combined European and Far Eastern War: Memorandum prepared by the Air Ministry,” 13 April 1938, O.B. (P.R.) 128; “Estimated Requirements of the War Office in the First Year of a Major War Simultaneously in Europe and the Far East: Note by the Joint Secretary Covering Statement Forwarded by the War Office,” 29 April 1938, O.B. (P.R.) 129; and “The Navy’s Oil Requirements for the First Year of a War in Europe and the Far East Simultaneously,” 09 July 1938, O.B. (P.R.) 144; all in: CAB 50/16.

On the basis of these figures, the Petroleum Department estimated that civilian and military requirements throughout the Empire in a “dual contingency” would total 28,562,360 tons (19,198,000 tons in the case of Great Britain alone), against 28,342,700 tons in a European War and 29,116,900 tons in a Far Eastern War. Both the Admiralty and the War Office had higher oil requirements during a “dual contingency” than in a one-ocean war (1,000,000 tons higher in the case of the Admiralty and just under 200,000 tons greater in the case of the War Office), while the RAF required approximately 10,000 tons less in a “dual contingency” than it did during a European War. Consumption throughout the British Empire (excluding Britain itself) was identical in the case of either a “dual contingency” or a Far Eastern War (9,364,000 tons), and almost 1,000,000 less than during a European War (10,343,000 tons). Consumption in Britain was identical in the event of “dual contingency” and European War (8,945,000 tons), and substantially higher during a Far Eastern War (11,420,000 tons), since rationing would not be imposed in this case.¹⁶⁵ As for supplies, production in Venezuela had increased by 5,000,000 tons between 1936 and 1937, which would off-set the loss of Mexican oil following nationalization. The Petroleum Department also concurred with earlier assessments of the United States: while an “unfriendly” United States “would make the position of supplies... very difficult” for Britain during any “dual contingency,” “such an event is so unlikely that it is not necessary to make calculations on such a basis.” Provided that these assumptions held, the Petroleum Department was satisfied that, “even if the Mediterranean is closed, there should be no difficulty in meeting the Empire [*sic*] requirements.”¹⁶⁶

¹⁶⁵ In the Oil Board’s final report, the figures were slightly revised: 28,625,000 (European War); 30,298,400 tons (Far Eastern War); 29,109,360 tons (“Dual Contingency”). The primary difference between the two figures was lower civilian consumption in Great Britain during either a European War or “dual contingency” and significantly higher consumption throughout the rest of the Empire (i.e. well over 1,000,000 tons in all eventualities). The Empire’s import requirements worked out as: 24,382,000 tons (European War, U.S. “friendly” or “unfriendly,” and the Mediterranean “open” or “closed”); 25,681,000 tons (Far Eastern War, U.S. “friendly” or “unfriendly,” and the Mediterranean “open”); and 24,897,000 tons (“Dual Contingency,” U.S. “friendly,” and the Mediterranean “open” or “closed”). Great Britain’s requirements amounted to: 17,131,610 tons (European War); 19,510,400 tons (Far Eastern War); and 18,321,360 (two-ocean war, Mediterranean “closed” or “open”). Llewellyn (Chairman, Oil Board), *et al.*, “Oil Board: Thirteenth Annual Report,” 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7.

¹⁶⁶ Petroleum Department, “Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War simultaneously in Europe and the Far East,” no date (sometime between July and December 1938), O.B. (P.R.) 146, CAB 50/16.

The PPR presented its findings to the CID in December 1938 in its eighth (and final) report. The PPR accepted the judgment of the Petroleum Department that the United States would not be “unfriendly” during any “dual contingency.” The PPR therefore confined itself to examining Britain needs based on the situation in the Mediterranean. Thanks to revised estimates of civilian oil consumption after rationing, requirements in Great Britain had dropped by more than 870,000 tons from the initial figure presented by the Petroleum Department (18,321,000 tons vs. 19,198,000 tons). The total import requirement for the entire Empire came to almost 25,000,000 tons. The PPR considered Iran, the United States, and the Dutch West Indies (refined crude oil from Venezuela) to be most important sources of supply, and each would supply the following totals depending on the status of the Mediterranean:

Source	“Open”	“Closed”
Iran	8,900,000 tons	7,200,000 tons
United States	9,300,000 tons	10,600,000 tons
Venezuela	4,600,000 tons	4,300,000 tons ¹⁶⁷

Other sources of supply included Peru, Trinidad, Iraq, and Bahrain, but the PPR excluded Mexico, Romania, and the East Indies from the list potential suppliers. More than half of the empire’s requirements of aviation fuel – 340,000 tons out of 668,000 tons – would come from just one source, the Dutch West Indies, after AIOC scaled back its estimated output at Abadan from 150,000 tons to 53,000 tons (the other sources being Burma and Trinidad).¹⁶⁸

On the positive side of ledger, the British tanker situation had improved considerably. The number of tankers required with an “open” Mediterranean was now 364, or 332 in case of a “closed” Mediterranean (the journey from the Gulf of Mexico to Britain being shorter than that from the Persian Gulf). The

¹⁶⁷ It is unclear why the allocation for Venezuela is lower in the event of a “closed” Mediterranean than if it were “open.”

¹⁶⁸ Crookshank (Chairman, PPR), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Eighth Report of the Sub-Committee on Petroleum Products Reserves,” 23 December 1938, O.B. 290 (Revise) (also Paper No. O.B. (P.R.) 168 (Revise)), enclosed with: Llewellyn (Chairman, Oil Board), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Note by the Oil Board,” 22 February 1939, O.B. 304 (also C.I.D. Paper No. 1514-B), CAB 50/8.

British expected to have a comfortable surplus (114 tankers) whatever the state of the Mediterranean due to the vast expansion in the number of neutral, converted, and newly constructed tankers (206).¹⁶⁹ The latter figure did not include either captured enemy tanker or the 202 tankers under U.S. registry, some of which could be made available for the transatlantic haul (only forty-six serviced Europe at the time). Another factor contributing to the favorable tanker position was the ability to rely more heavily upon U.S. and Venezuelan oil exports, which were significantly easier to transport than Middle Eastern oil. The throughput of APOC's Abadan refinery had increased from 9-10,000,000 tons to 13-14,000,000 tons.¹⁷⁰ By 1937, the Persian Gulf was already the busiest oil transit artery in the Eastern Hemisphere, handling over 12,000,000 tons (about 15%) of all overseas oil exports.¹⁷¹ Abadan's capacity had increased so much that it was unlikely that it would have to operate at 100% capacity if the Mediterranean was "closed," as there was no way to allocate the additional production. Likewise, Bahrain's output in 1937 had topped 1,000,000 tons, and even though the throughput of the local Bahrain Petroleum Company refinery equaled existing production, it was only possible to allocated 569,000 tons of refined products with an "open" Mediterranean and 351,000 tons if it was "closed." Oil production had also begun in Saudi Arabia, and there were excellent prospects of finding new sources in Kuwait and Qatar. Unfortunately, it was impossible to make complete use of this bounty due to the higher transportation costs of moving Middle Eastern oil compared to imports from the United States.¹⁷²

¹⁶⁹ At the start of any "dual contingency," the PPR estimated that Britain would have 293 tankers at its disposal. If the Mediterranean were "closed," the PPR expected to lose fifty-three tankers to enemy action in the Mediterranean, Baltic, North Sea, and Far East, thereby leaving 240 tankers to meet an expected demand of 332. In the Mediterranean were "open," the number initially expected lost to enemy action would drop to twenty-one, thus leaving 272 to meet a demand of 364. In both cases, the initial deficit would be ninety-two tankers, plus 206 new vessels (mostly from neutral nations), thus resulting in a surplus of 114.

¹⁷⁰ AIOC had also made great investments to improve the quality and volume of petroleum produced by the refinery, such that output had doubled from 5,000,000 tons to 10,000,000 tons between 1932 and 1938, just short of the 12,000,000 tons the company considered the maximum throughput within the space available. Bamberg, *History of BP*, 69-75.

¹⁷¹ "Ölwirtschaft im Iranischen Golf," *Vierjahresplan*, 1938: X.

¹⁷² Crookshank (Chairman, PPR), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Eighth Report of the Sub-Committee on Petroleum Products Reserves," 23 December 1938, O.B. 290 (Revise) (also Paper No. O.B. (P.R.) 168 (Revise)), enclosed with: Llewellyn (Chairman, Oil Board), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major

It was possible for Britain to reduce its requirements from the Western Hemisphere by raising the throughput of the Abadan refinery to 100%. This would require importing into Great Britain 4,618,000 tons of Iranian oil on an additional twenty-five tankers if the Mediterranean was “open,” and 3,310,000 tons on an extra 105 tankers if the Mediterranean was “closed.” In the case of the former, there would still be a tanker surplus of eighty-nine, but in the case of the latter (when the oil would have to travel around the Cape of Good Hope), the surplus would only be nine. Adoption of this scheme was unlikely, not the least because France’s tanker fleet would “need to be considerably supplemented [...]” In spite of two decades of effort, the United States would again become Britain’s largest supplier in wartime. The U.S. and Venezuelan allocation with an “open” Mediterranean exceeded that of Iran by 5,000,000 tons (13,900,000 tons vs. 8,900,000 tons) and was more than twice as large if the Mediterranean was “closed” (14,900,000 tons vs. 7,200,000 tons).¹⁷³

War Simultaneously in Europe and the Far East: Note by the Oil Board,” 22 February 1939, O.B. 304 (also C.I.D. Paper No. 1514-B), CAB 50/8.

¹⁷³ Crookshank (Chairman, PPR), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Eighth Report of the Sub-Committee on Petroleum Products Reserves,” 23 December 1938, O.B. 290 (Revise) (also Paper No. O.B. (P.R.) 168 (Revise)), enclosed with: Llewellyn (Chairman, Oil Board), “Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Note by the Oil Board,” 22 February 1939, O.B. 304 (also C.I.D. Paper No. 1514-B), CAB 50/8. As mentioned above, these figures were incorporated into the final report of the Oil Board before they were presented to the CID: Llewellyn (Chairman, Oil Board), *et al.*, “Oil Board: Thirteenth Annual Report,” 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7. See also: Payton-Smith, *Oil*, 45-46. The Oil Board’s finding undermine Murray’s claim that the “central theme running through British strategic planning” before the war “was the belief that Britain was not and would be able to face war” against Germany, Italy, and Japan “simultaneously or even singly.” Murray, *Balance of Power*, 62.

The Price of Failure, 1939-1942

With the benefit of hindsight, it seems clear that there was little British policymakers could do by 1939 other than rely on the oil reserves of the Western Hemisphere. In the wake of the First World War, British policymakers had spent years chasing after the chimera of energy independence from the United States by creating “all British” companies that could supply the empire exclusively from sources under British control. AIOC, the only proper British major oil company and the recipient of significant government support since 1914, could contribute little to the Allied war effort west of Suez following the closure of the Mediterranean in 1940 since its sources of supply lay entirely within the Middle East (Iran, Iraq, and Kuwait). Although the fall of France temporarily eased Britain’s tanker burden by eliminating exports to the Continent, escalating tanker losses in the second half of 1940 forced Britain to embrace the principle of the “short-haul,” which all but ended Iran’s exports to Great Britain even before the Anglo-Soviet invasion (from 1,526,000 tons in 1940 to only 324,000 tons by August 1941) and rendered Middle Eastern oil superfluous for operations west of Suez (beyond North Africa, of course).¹⁷⁴

On the other hand, after 1939, the Royal Dutch/Shell Company again expressed its desire that London should “derive... the maximum benefit from the resources which the petroleum companies, and more especially the Shell group, are able to place at the disposal of the Allies in the present war.” Shell’s value to the Allied war effort at this early stage far exceeded that of any other oil company in the world, British or not. Shell boasted of an annual production of 31,028,000 tons per annum across four continents, which was greater than the estimated oil demand of the entire British Empire during the first year of either a European or Far Eastern War. Unlike AIOC, Shell’s production beyond the United States was concentrated in Latin America (Venezuela and Trinidad), which represented “a great source of security in the matter of oil supply because of the large quantities available, the capacity for easy and rapid expansion, the high quality of the products obtainable and the favorable geographical position.” Shell also

¹⁷⁴ The Admiralty briefly closed the Mediterranean to Allied shipping in August 1939 due to fears that Italy would immediately enter the war on Germany’s side. Two weeks after the start of hostilities in Poland, once it became clear that the Italians were holding off, the Admiralty lifted the ban, until the imminent collapse of French resistance in 1940 forced it to re-route all transit around the Cape. The Allies did not re-open the Mediterranean until after July 1943. Bamberg, *History of BP*, 216-220, 232.

owned and operated 36 refineries with an annual throughput of 35,750,000 tons, controlled the world's largest tanker fleet, and was the largest supplier of high-octane aviation fuel. Except for its U.S. receipts, the company repatriated 97% of its earnings – including those from Venezuela – back to London (not The Hague), to the tune of £260,000,000 per annum by 1940, with the remaining 3% going to the Royal Dutch shareholders in the form of dividends.¹⁷⁵ It was also company policy “to place all possible order for material within the sterling area,” thus reducing the drain on British hard currency reserves.¹⁷⁶ Most importantly in wartime, the tanker requirements to transport Shell's West Indies production were lower than those of sterling sources (the Middle East) and did not cost Britain additional foreign exchange since the company's profits in the Western Hemisphere (except the United States) were “all distributed in sterling.”¹⁷⁷ After the war began, Shell's Dutch partners also agreed to abide by the Treasury's foreign exchange controls. The fact that Anglo-Saxon (Shell's British subsidiary) served as the entire Shell Group's treasurer meant that its wartime foreign earnings went to the Treasury, which exchanged them for sterling or distributed dollars whenever the need to import U.S. goods arose.¹⁷⁸

Shell's assets were tangible, but they did not correspond to the objectives of British foreign oil policy after 1918. This judgment has nothing to do with whether Shell was “British” or not, or if it collaborated with U.S. companies in fixing prices and allocating production as a member of the Achnacarry oil cartel. One historian contends that Britain's interwar oil policy was a failure not only because the empire proved barren of oil, but also because Britain continued to rely on oil produced by “foreign” companies such as

¹⁷⁵ These dividends were dominated in Dutch guilders, which the British Government treated as a hard currency until the Netherlands joined the Allies, at which point they became freely convertible for sterling. Prior to the war, they amounted to £9,000,000 per annum. Payton-Smith, *Oil*, 149-150.

¹⁷⁶ Nonetheless, roughly 60% of the British oil companies' purchases of technical equipment and materials, not to mention royalty payments on patents held by U.S. firms (including, presumably, the Standard-IG Farben cartel) and wages for U.S. employees, were denominated in dollars. Local currency requirements depended upon the region: in Venezuela, Shell needed dollars, to the tune of \$58,000,000 in the twelve months after June 1940 (or half of Britain's dollar expenditures on purchases from U.S. firms). Payton-Smith, *Oil*, 150. In the Middle East, the British could use sterling. In practice, this contributed to the accumulation of the massive “sterling balances” in London that were seven times greater than Britain's total hard currency reserves by war's end and hindered the government and the City's efforts to restore full convertibility until 1972. P.J. Cain and A.G Hopkins, *British Imperialism: Crisis and Deconstruction, 1914-1990* (London: Longman, 1993), 269-285.

¹⁷⁷ Shell Transport and Trading Co., “Memorandum: Shell/Royal Dutch Group,” 16 January 1940; and “Shell Memorandum,” 18 January 1940, provenance unclear; both in: CAB 63/117.

¹⁷⁸ Howarth and Jonker, *History of Shell*, 31.

Shell and Jersey 1939 as it had after 1914.¹⁷⁹ The nature of Shell's nationality seems insignificant. The fact that Dutch shareholders exercised majority control over Shell is only significant if it can be proven that a British-owned company would have operated any differently.¹⁸⁰

The findings of this study disprove the notion that the British Government in the 1920s enjoyed a "strong" position vis-à-vis corporate oil interests relative to that of the U.S. Government in the 1940s (when elements within Washington sought to expand the U.S. presence within the Middle Eastern oil industry).¹⁸¹ If we consider the behavior of APOC/AIOC, we see that the company was not burdened by any excessive sentimentality for its majority shareholder and most important customer – the British Government. "Foreign" or not, a major international oil company was always going to safeguard its commercial interests, and APOC/AIOC was no exception. Far from challenging Shell and Jersey, APOC/AIOC joined them in 1928 when it signed both the Achnacarry "As Is" Agreements. The company also charged the British Government the same inflated prices and freight rates that it charged to all other consumers until the British Government discovered what the companies were up to during the Second World War.¹⁸² Also in 1928, APOC and Shell (with London's blessing) formed a jointly owned marketing subsidiary, Consolidated Petroleum Co., to supply Egypt, Sudan, East and South Africa, Ceylon, and Mauritius.¹⁸³ In 1931, APOC even merged its domestic marketing operations (BP, once the cornerstone of

¹⁷⁹ McBeth, *British Oil Policy*, 148-149.

¹⁸⁰ Nor was there any doubt, at least among Britain's enemies, about where Shell's loyalties lay. During an imperial conference in September 1940 to discuss an alliance with Germany, the pro-German former Foreign Minister of Japan, Yōsuke Matsuoka, tried to reassure the Navy that Germany could compel Holland into agreeing to increase the amount of oil sold to Japan from the East Indies. The Chief of Staff of the Navy, Prince Fushimi, was not impressed: "Since the Dutch Government has fled to Britain, can Germany freely dispose of the Indies' oil?" Michael Barnhart, *Japan Prepares for Total War: The Search for Economic Security, 1919-1941* (Ithaca: Cornell University Press, 1987), 168.

¹⁸¹ Lawrence Frank, "The First Oil Regime," *World Politics* 37: 4 (1985): 588-590 and 597-598.

¹⁸² Blair, *Control of Oil*, 113-114; and *IPC*, 352-356.

¹⁸³ Not only did the British Government not object, but in order to forestall U.S. criticism, but the Treasury even suggested that APOC consider avenues for cooperation with U.S. oil companies in places like China. APOC was happy to oblige. See the contents of T 161/284, esp. H.M. Treasury to the Government Directors, APOC (George Barstow and Edward Packe), 28 February 1928, S. 33045. APOC's participation in a series of cooperative agreements with the other major oil companies including the "Red Line" and Achnacarry agreements was part of a wider shift in company policy following Cadman's replacement of Greenway in 1927. Bamberg, *History of BP*, 106-141.

Slade and Greenway's ambitions to form an "all British" rival to Shell) with Shell's primary marketing subsidiary following its acquisition of Cowdray's Mexican interests (Shell-Mex).¹⁸⁴

Even APOC's relations with its closest customer, the Admiralty, were not always smooth. Problems had arisen as early as 1920 over the company's rebate to the Admiralty, and one official there fumed in 1925 "that the Company are exerting every effort and seeking very possible device to pare down the rebate which is properly due to the Admiralty."¹⁸⁵ Overseas, APOC and the Admiralty butted heads in 1929 when the former supported the construction of an IPC pipeline to Tripoli purely on economic grounds, and again in 1933/34 when it suddenly opted to cooperate with Gulf in Kuwait.

Interwar British oil policy was a failure due to the fact that the outcome did not correspond to the objectives laid out in 1918-19, with the consequence that Britain's oil position at the start of the Second World War was in many ways inferior to that at the outbreak of the First World War. This is the implicit verdict of the otherwise apologetic British Official History, whose author concludes that the policy of excluding foreign capital from oil development in the empire "may well have made" Britain's position "worse by reducing the supply of would-be developers, and by encouraging reprisals against British companies." He is more charitable when it comes to the British Government's success in establishing partnerships with sympathetic oil companies such as Shell and APOC, not to mention their subsidiaries such as the TPC/IPC and Kuwait Oil Company. "It must be observed," he concedes, however, "that the oil resources on which these companies had been founded were still largely undeveloped."¹⁸⁶

The reasons have less to do with economics than they do with geography. Britain's ideal source of supply from an imperial and financial perspective (the Persian Gulf) was 1,500 miles farther than the US-dominated Gulf of Mexico even if British tankers travelled through the Mediterranean.¹⁸⁷ After 1939,

¹⁸⁴ Bamberg, *History of BP*, 183-188. By 1938, three firms – the so-called "combine" – accounted for 85% of all downstream operations in Britain: Shell-Mex: 40%; BP: 15%; and the Anglo-American Oil Company (Jersey's subsidiary): 30%. Payton-Smith, *Oil*, 43-44.

¹⁸⁵ Geoffrey Jones, *State and the Emergence of the British Oil Industry* (London: Macmillan, 1981), 227-228 and 238-239.

¹⁸⁶ Payton-Smith, *Oil*, 24-25.

¹⁸⁷ Iraq Oil Committee, "Some Notes on the Present World Oil Situation in Relation to the Iraq Oilfield and Proposed Pipeline to a Mediterranean Port," no date (circa May 1930), I.O.C. (30) 5, CAB 27/436.

Britain would be fighting a global war that imposed the maximum strain on its tenuous oil supplies due to the distances involved and advances in military technology. At the beginning of 1939, the British Government estimated that the empire would have to import roughly 25,000,000 tons of oil a year, roughly 90% of which would come from three sources (Iran, the United States, and Venezuela), the first of which gave every indication of being unreliable as early as 1932, while the second was the supplier British policy had ostensibly been geared toward avoiding after 1918.¹⁸⁸ The number of consumers had also increased exponentially – not just due to the emergence of new weapons platforms, but also the continuing conversion of coal-fired ships to oil-burners.¹⁸⁹ This combination of higher requirements and more difficult logistics meant that Britain's oil supply was arguably more vulnerable to disruption than that of Germany, which could at least fall back on its burgeoning synthetic fuel industry, overland imports from within Europe, and limited domestic oil production. The Axis also had the ability to strike at Britain's oil reserves in the Middle East and East Indies or deny Britain access to these resources by closing vital trade routes such as the Mediterranean.

Assuming Britain could retain control of and access to its foreign oil reserves, there was still the matter of paying for and transporting the oil. Even if the world was awash in oil by the mid-1920s, transporting it to Britain, its overseas empire, or the Royal Navy was no simple matter. Britain entered the war with only a narrow margin of safety when it came to oil tankers, and London could only hope that British and neutral shipbuilders would keep pace with the losses caused by German U-boats and commerce raiders.¹⁹⁰

¹⁸⁸ Crookshank (Chairman, PPR), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Eighth Report of the Sub-Committee on Petroleum Products Reserves," 23 December 1938, O.B. 290 (Revise) (also Paper No. O.B. (P.R.) 168 (Revise)), enclosed with: Llewellyn (Chairman, Oil Board), "Sources of Supply of Petroleum and Petroleum Products to Meet the Estimated Requirements of the Services and for Industrial and Civil Purposes of the Empire in the First Year (1940) of a Major War Simultaneously in Europe and the Far East: Note by the Oil Board," 22 February 1939, O.B. 304 (also C.I.D. Paper No. 1514-B), CAB 50/8.

¹⁸⁹ During the World War, the bulk of the merchantmen bringing exports to Britain had been coal-fired. By 1937, due to the "flood of cheap fuel oil" of the 1920s, roughly half of the world's merchant fleet was oil-burning, although a good portion could consume either coal or fuel oil. Payton-Smith, *Oil*, 46-47

¹⁹⁰ Between September 1939 and January 1945, AIOC lost forty-four tankers to enemy action, which equaled 46% of its fleet at the start of the war. Bamberg, *History of BP*, 216. Shell Transport and Trading lost sixty-six tankers, or

The question of payment was even more knotty. Thanks to the vast amounts of oil available to British consumers prior to 1939 from British firms, paid for in sterling and produced either within the empire or the British sphere of influence, Britain had significantly reduced its peacetime dependence upon imports from the United States. But preserving this situation in wartime was possible only if Britain retained access to sterling sources of oil, particularly in the Middle East. Strangely, the question of how Britain would pay for the oil it needed was never addressed before the Second World War.¹⁹¹ This was in spite of the fact that British planners knew full well that Britain would need to import considerable quantities of dollar oil, and that it would after 1937 have to pay immediately in hard currency for any imports from the United States under the “cash and carry” provision of the 1937 Neutrality Act. And yet, the Chamberlain Government took no action to staunch “the steady hemorrhage” of hard currency from Britain between 1938 and 1939 until reserves had dropped by one-quarter (from £800,000,000 to £600,000,000).¹⁹² In 1938, roughly half of Britain’s oil imports (by value) had to be paid for in hard currency: £27,380,000 out of £46,040,000.¹⁹³

By the spring of 1939, the Treasury was warning that the entire basis of Britain’s military strategy against Germany (a long war of economic strangulation) was untenable: “while the Treasury warned that she [Britain] could only afford a *short* war, the Chiefs of Staff stated she could only win a *long* one.”¹⁹⁴ One historian considers the failure to reconcile the demands of Britain’s rearmament effort with its financial position in 1938 and 1939, which culminated in Britain’s effective bankruptcy by 1941, to be “perhaps [the] most egregious error” in British planning on the eve of the Second World War.¹⁹⁵

40% of its prewar fleet, while the Dutch and Mexican Eagle lost a combined forty-seven ships, thus leaving the entire Shell Group with a smaller fleet at the end of the war than in 1939. Howarth and Jonker, *History of Shell*, 57. One can only imagine the scale of losses had these tankers been compelled to traverse the narrow confines of the Mediterranean, at the mercy of continuous Axis aerial and naval attacks.

¹⁹¹ Even the Official History concedes that “[not] until the spring of 1939 had the foreign currency aspect of supply come even briefly to the attention of the [CID’s] Oil Board.” Payton-Smith, *Oil*, 147-148.

¹⁹² Murray, *Balance of Power*, 72-73.

¹⁹³ Eady to Padmore, “Oil,” 13 June 1944, T 161/1195.

¹⁹⁴ Correlli Barnett, *Strategy and Society: The Spencer Wilkinson Memorial Lecture, 1974* (Manchester, 1975), 7. Emphasis in the original.

¹⁹⁵ Prior to the passage of the Lend Lease Act, British hard currency reserves amounted to a grand total of \$12,000,000. Kennedy, “British Net Assessment,” 54-56. The Anglo-French strategy to exploit Germany’s economic vulnerability is summarized in: Murray, *Balance of Power*, 311-314.

In many respects, particularly in terms of planning and coordination, “the lessons of the First World War had been learned and absorbed.” Thanks to the CID, the examination and maintenance of Britain’s oil supply position had undergone a welcome degree of “professionalization,” and the Oil Board proved more than capable of transitioning from the relatively simple circumstances of the 1920s “to the more complex threat environment of the 1930s.”¹⁹⁶ The true audit of Britain’s oil policy, however, came not in peace but rather in war. And it is within the context of a struggle for survival that the inadequacy of British oil policy during the interwar period becomes incontrovertible.

Roughly 60% of the oil imported by Britain by “the middle of 1940” came sterling sources, while the remainder came from either the United States or U.S.-owned oilfields. Every barrel of oil purchased from U.S. sources required payment in dollars that were sorely needed to import of any number of other vital products. Although the Treasury tried to prioritize imports of sterling oil at the war’s outbreak, the shortage of tankers ruled this out. Consequently, total hard currency expenditures related to oil during the first six months of the war (not including freight) reached \$200,000,000.¹⁹⁷ What made the situation so egregious was that, whereas Britain might have been incapable of producing enough of many of the items it imported from the United States, the same cannot be said of oil, where Britain’s access to overseas sources was immeasurably superior to that of any great power besides the United States. Britain’s balance of payments position during the 1930s was already weak: London ran a deficit every year but one (1935) between 1931 and 1938, as well as a negative balance of trade between 1929 and 1938.¹⁹⁸ The last thing Britain needed was the burden of importing dollar oil, particularly when its current account deficit stemmed partially from its military and economic commitments in the Middle East, which had been undertaken largely to secure the region’s oil wealth.

By the start of the Second World War, the British could not even guarantee the safety of one of their most important suppliers. One Admiralty memorandum concerning the defense of British oil installations

¹⁹⁶ Babij, “Problem of Oil Supply,” 101. For a similarly laudatory evaluation of the Oil Board’s efforts, see: More, *Black Gold*, 65-68.

¹⁹⁷ Payton-Smith, *Oil*, 147-153.

¹⁹⁸ Luckily, the flight of capital from the Continent had increased British hard currency reserves from £121,000,000 in 1931 to £825,000,000 six years later. Murray, *Balance of Power*, 52-55.

in the Caribbean noted that 50% of Britain imports originated in the region, much of which could be purchased in sterling. Just as important as the oil were the local refineries, whose destruction would render the “oil from these areas... of little further use to the Allies as there are no alternative refineries in this country or France.” The loss of access to Latin American oil would be a disaster for Britain and France, because even if the oil could be replaced, “alternative sources have either to be paid for in dollars or carried far greater distances.” In surveying the inadequate defenses in the area, the Admiralty suggested that the British Government approach the United States with a request that the U.S. Navy undertake the defense of Aruba, since “[an] American Cruiser, paying a courtesy visit would be a greater deterrent than almost any weapon to a marauding German Cruiser!”¹⁹⁹ The security of the West Indies took on an additional degree of urgency by May 1940 with France reeling and Italy on the verge of belligerency. The Chiefs of Staff now observed, “The degree of importance of this source of supply would be considerably increased in the event of the Mediterranean route being closed.” The Chiefs therefore supported the recommendation of the British Ambassador the U.S. that Britain should extend “a formal invitation to the U.S.A. Government to share in the occupation” of Aruba and Curaçao.²⁰⁰ (Ironically, Adolf Hitler forbade the German Navy from attacking the refinery at Aruba in May 1940 because it was owned by “Standard Oil, the American corporation.”²⁰¹)

Following the surrender of France, the foreign exchange position became truly disastrous. In February 1940, the Treasury estimated that Britain’s dollar reserves could last as long as two years. This was no longer possible after August: the Treasury now concluded that British dollar expenditures over the coming year would reach \$3,200,000,000, against only £490,000,000 in foreign exchange and U.S. securities.²⁰² Britain’s hard currency requirements had effectively doubled through the need to import

¹⁹⁹ Vice Admiral Binney’s Committee, “Oil Supplies in Caribbean Sea: Importance and Vulnerability,” no date, I.D.C. 9, enclosed with: Binney, “Defence of Oil at Trinidad and Curacao,” 06 October 1939, ADM 1/9982.

²⁰⁰ Dudley Pound (First Sea Lord), *et al.*, “Aruba and Curacao: Protection of Oil Refineries in the Event of a German Invasion of Holland: Report by the Chiefs of Staff Committee,” May 1940, W.P. (40) 148 (also C.O.S. (40) 329), CAB 66/7/28.

²⁰¹ Holger Herwig, “Prelude to *Weltblitzkrieg*: Germany’s Naval Policy toward the United States of America, 1939-41,” *Journal of Modern History* 43: 4 (1971): 653.

²⁰² Barnett, *Collapse of British Power*, 12-14.

both war materiel and dollar oil (estimated at \$170,500,000 for the next twelve months after September 1940) in order to reduce the burden on Britain's tanker fleet. All Britain could do was pray for Roosevelt's re-election, and that the country's remaining foreign exchange reserves did not evaporate before the United States came to the rescue.²⁰³

The British Government's hands were tied even if it tried to substitute dollar oil for sterling oil. The Bank of England warned in November 1939 that the major oil companies "would not co-operate willingly in any scheme which completely disregarded their hard-won [marketing] agreements [...]." The U.S. oil companies would feel particularly aggrieved, as they were already suffering from the loss of their markets on the European Continent. Nor would Britain's savings in 1940/41 – estimated at \$50,000,000 after "drawing up to the hilt from sterling sources" – make much of a dent in its foreign exchange deficit. Finally, even if British oil companies did attempt the modest measure of substituting their purchases of U.S. materials and equipment with British goods, British industry was incapable of meeting the additional demand. In fact, Britain's share of the industrial requirements of its oil companies dropped during the war from 40% to 10%.²⁰⁴

Perhaps the situation would have been better if France had not succumbed and Italy not entered in the war in 1940, but things did not turn out that way. One historian argues that although "by September 1939 the practical preparations for Britain's oil needs were still far from complete [,] there can still be no doubt that in the forthcoming war Britain would have been at a far greater disadvantage had it not been for the careful planning of the interwar years and especially of the later 1930s."²⁰⁵ This seems overly generous. True, Britain enjoyed a favorable oil position compared to Germany even after the collapse of France, but this had little to do with British preparation. Even if the Mediterranean had remained open to Allied

²⁰³ The British Official History makes this point explicitly: "By the summer of 1940 however it had become clear that the scope of the British war effort would be drastically curtailed unless Britain could obtain American supplies without payment." London was so sure that Washington would come to its rescue that it made no effort to limit U.S. imports until August 1940. Payton-Smith, *Oil*, 148-149. The Sterling Area's net dollar expenditures on oil between 1941 and 1945 reached \$505,400,000. This figure was dwarfed by amounts of oil provided under Lease-Lease: \$320,000,000 to the Sterling Area between 1941 and 1942, and \$1,500,000,000 just to Great Britain by June 1945. Payton-Smith, *Oil*, 470-471.

²⁰⁴ Payton-Smith, *Oil*, 147-153.

²⁰⁵ Marian Kent, *Moguls and Mandarins: Oil, Imperialism, and the Middle East in British Foreign Policy, 1900-1940* (London: Frank Cass, 1993), 163.

tankers, the Western Hemisphere would have still been an indispensable source of supply for the British Empire, if only because the British could not spare the resources to supply the white dominions and hoped that even an “unfriendly” United States would pick up the slack.

It was the oil of Venezuela and most importantly the United States that allowed the British to write off most of their oil production in Middle East after Italy turned against the Allies. Although the United States was far and away the world’s most significant oil producer by the eve of the Second World War, the supply and demand balance was not as favorable as in 1914. Domestic U.S. consumption had increased by 50% since the First World War, and the share of U.S. production being exported had shrunk from 20% to 13% since 1913. For the United States again to supply 80% of the Allies’ wartime oil requirements (double their peacetime consumption) as it had during the First World War, not to mention cover a 20% rise in domestic consumption as a result of the war, U.S. oil production would have to increase by more than 30% – roughly 50,000,000 tons. One a “purely economic-technical” level, German analysts concluded, such an increase was possible, but it “presupposes a reasonably extensive regulation of the U.S. domestic oil industry and certainly restrictions in consumption.”²⁰⁶

Between May 1940 and April 1941, the Oil Control Board estimated that the United States would supply 23% of the empire’s requirements (6,291,200 tons out of 27,762,000 tons). But this number understates the value of the United States. Britain had already claimed all available non-U.S. sources of high-octane gasoline, and the United States was the only other producer available if anything happened to Britain’s existing suppliers (which turned out to be the case with Iran in 1941 and the East Indies and Burma the year after).²⁰⁷ Imports of U.S. oil into Great Britain rose from 1,857,796 tons in 1940 to 13,006,938 tons in 1944, and those from Venezuela peaked at 6,712,772 tons in 1944. Imports from those two countries comprised approximately two-thirds of the total import figure in 1940 and 93% in 1944.²⁰⁸

²⁰⁶ Der amerikanische Kontinent – Wehrwirtschaftlicher Versorger der Demokratie? *Vierjahresplan*, 1939: XVI.

²⁰⁷ Oil Control Board, “American Oil Policy and Empire Supplies: Memorandum by the Petroleum Department,” 15 August 1940, O.C.B. (40) 71, enclosed with: Cecil Kirsch (Petroleum Board) to Horace Seymour (Treasury), 15 August 1941, FO 371/25212.

²⁰⁸ “Petroleum Statistics of the UK for the War Years, 1939-1945,” no date, BP 60205.

These figures, Shell's official historians concede, are "slightly misleading," for Venezuelan production at war's end was only 200,000 tons higher than it had been when the war began. Although Venezuela had been the world's largest exporter since 1928 and was supposed to be Britain's primary supplier, its production turned out to be far less important than that of the United States because of the threat posed by U-boats (which reduced production between 1940-1942), as well as the fact that Venezuelan crude oil was more suited to being refined into fuel oil than high-octane gasoline.²⁰⁹ Meanwhile, Britain's wartime imports from Iran peaked in 1940 at 1,389,827 tons in 1940 before ending altogether following the Anglo-Soviet invasion of August 1941 due to the shortage of tankers.²¹⁰

Throughout much of the interwar period, the British had also taken it for granted that, even if U.S. oil was not available to Britain directly, the United States would continue to supply at least Canada and not disrupt exports from other suppliers Western Hemispheric suppliers. By the end of the 1930s, the British had assumed in their planning for a "dual contingency" against Germany and Japan that the United States would be "friendly." Their only hedge against an "unfriendly" United States had been the exclusion of U.S. tankers after 1936 from the pool of neutral vessels available to Britain, although British war-planning assumed that U.S. oil tankers would, in fact, be available for chartering. Most crucially, it was U.S. charity in the form of Lend-Lease that allowed the British to import dollar oil following the surrender of France, by which time its dollar reserves had dwindled to virtually nothing.²¹¹

The British record in the Middle East – the basis upon which "British oil independence rested" – was deplorable.²¹² The Persian Gulf was 1,500 miles farther away from Britain than the Gulf of Mexico when traveling by sea around the Arabian Peninsula and through the Suez Canal. In view of the logistical hurdles, exploiting this source would be a herculean task. Nonetheless, the British had expended considerable time, energy, and resources to hold and develop Iranian and Iraqi oil production, only to see neither play any meaningful role in the European theater of operations.

²⁰⁹ Howarth and Jonker, *History of Shell*, 36.

²¹⁰ "Petroleum Statistics of the UK for the War Years, 1939-1945," no date, BP 60205.

²¹¹ The contribution of Lend Lease to Britain's oil supply (\$1,500,000,000 by June 1945 just for Great Britain itself) is analyzed in: Payton-Smith, *Oil*, 195-198, 467-472.

²¹² Payton-Smith, *Oil*, 25.

Although Iraq was capable of producing oil in quantities similar to those of Iran, Iraqi production lagged consistently behind other major producers. The geographic obstacles were considerable. Although oil was discovered until 1927, it would be uneconomical to transport it without first constructing a pipeline. The IPC pipeline did not go into operation until 1934, and although little Iraqi oil went to Britain (546,000 tons), France imported a sizable quantity (2,548,000 tons). The primary consequence of Iraqi oil's introduction onto the French market was the displacement of Venezuelan, East Indian, Russian, and Iranian imports, which dropped from 425,000 tons to 4,000 tons between 1934 and 1935.²¹³ The completion of the pipeline prompted the First Lord of the Admiralty, Samuel Hoare, to press the CID to investigate the possibility of constructing a refinery at Haifa that could serve as an alternate source of supply for Royal Navy ships.²¹⁴ Although the Admiralty understood that importing crude oil into Great Britain could spur the development of a domestic refining industry, it was "committed to the policy of importing their main requirement (fuel oil) in a refined state." Finished petroleum products available to Royal Navy ships on-station were, for obvious reasons, preferable than crude oil that needed to be shipped to Britain and then re-exported, as Britain was already short on tankers. Nevertheless, the Admiralty recognized "that any supplies of oil from Haifa must inevitably depend upon the integrity of the [IPC] pipe-line [...]." The vulnerability of the pipeline ruled out considering supplies from Iraq as "vital supplies. They must therefore be regarded only as a very welcome addition to other sources."²¹⁵

But the main reason why Iraqi production lagged behind other producers was the machinations of the world oil cartel, which used Iraq as the world's "swing producer" before the war. All of the major companies in the TPC, with the exception of the French Compagnie Française des Pétroles (CFP), had interests beyond Iraq, so they had an interest in curtailing production there in order to protect the prices

²¹³ Ormsby Gore, *et al.*, "Oil Board: Eleventh Annual Report," 31 December 1936, O.B. 184 (also C.I.D. Paper No. 1294-B), CAB 50/6.

²¹⁴ A.D. Nicholl, "Oil Board: Eleventh Annual Report: Note by Joint Secretary," 23 February 1937, O.B. 190, CAB 50/6.

²¹⁵ "Establishment of Refineries at Haifa: Memorandum prepared in the Admiralty," 15 June 1937, O.B. 203, CAB 50/6. Emphasis in the original.

for their production in Iran – in case the case of AIOC – or Venezuela – in the case of Jersey or Shell.²¹⁶ The British and U.S. companies also thwarted the CFP's attempts to expand the IPC's pipeline throughput capacity to Tripoli after 1934.²¹⁷ Furthermore, Iraq's annual production of 4,500,000 tons on the eve of the war had to be shared with France and the existing refinery in Haifa (jointly owned by AIOC and Shell) could refine less than half that amount.²¹⁸ AIOC's share of Iraqi production rose only slightly, from 1,110,000 tons in 1935 (the first full year of the operation by the IPC pipeline) to 1,240,000 tons in 1938. By contrast, during the same period, the company's production in Iran increased from 7,490,000 tons to 10,200,000 tons. Between 1939 and 1941, however, AIOC's share of production dropped from 1,180,000 tons to only 570,000 tons, and British troops sabotaged all but six producing wells in Kirkuk the following year to prevent their seizure by the Axis.²¹⁹ Shell's share of production, meanwhile, dropped by two-thirds between the late-1930s and 1941, to 320,000 tons. IPC production only regained prewar levels in 1944.²²⁰

Problems arose in Iraq well before the danger of an Axis invasion. The Iraqis had actually received a relatively favorable concession agreement with IPC in 1931.²²¹ Baghdad received both a minimum payment of £400,000 irrespective of how much oil was produced ("dead rent") and royalties in gold sterling. Baghdad's oil revenues therefore maintained their constant value even as sterling depreciated during the 1930s. Although the IPC monopolized production throughout the country by 1939, it also owed Baghdad substantial quantities of "dead rent" (£400,000) under the terms of the old British Oil Development (BOD) concession of 1932 east of the Tigris (which it had purchased in 1937) and the new

²¹⁶ Walter Adams, James Brock, and John Blair, "Retarding the Development of Iraq's Oil Resources: An Episode in Oleaginous Diplomacy, 1927-1939," *Journal of Economic Issues* 28: 1 (1993): 69-93; Blair, *Control of Oil*, 80-85; Nowell, *World Oil Cartel*, 270-275; and Edith Penrose and E.F. Penrose, *Iraq: International Relations and National Development* (London: Ernest Benn, 1978), 72-74 and 141-144.

²¹⁷ Daniel Silverfarb, *Britain's Informal Empire in the Middle East: A Case Study of Iraq, 1929-1941* (New York: Oxford University Press, 1986), 97-98.

²¹⁸ For details concerning the Haifa refinery, see: Llewellyn (Chairman, Oil Board), *et al.*, "Oil Board: Thirteenth Annual Report," 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), CAB 50/7.

²¹⁹ The IPC still searched for oil within the old British Oil Development concession west of the Tigris and in the south around Basra. Exploratory drilling also continued in Kuwait until 1942 in order to confirm the extent of the Burgan field. Bamberg, *History of BP*, 168, 219-223.

²²⁰ Howarth and Jonker, *History of Shell*, 37.

²²¹ Penrose and Penrose, *Iraq*, 69-71.

Basra concession of 1938. The IPC managed to evade its obligation to start exporting oil from the BOD concession only by offering Baghdad a favorable loan of £3,000,000 in May 1939. In order to cover its increased expenses, the IPC finally decided to double the capacity of its pipeline in July 1939, which would have also doubled Baghdad's royalties from £800,000 to £1,600,000.

These plans had to be abandoned once the war began. The French were still eager to expand the output of their only overseas oil asset, which only required a journey of only 1,700 miles from Tripoli to southern France, as opposed to 5,400 miles from the Gulf of Mexico. Paris also contended that the initial dollar expenditures would be offset over the long run by higher purchases of sterling oil from Iraq (each 1,000,000 tons of imports from Iraq saving the Allies \$12,000,000 in foreign exchange). London nevertheless blocked the IPC's application for hard currency to purchase the necessary industrial goods from the United States: whereas France's savings in tanker tonnage was marginal (3.75 tankers per 1,000,000 tons), Britain could neither afford the additional drain of foreign exchange nor risk angering Venezuela by reducing production there to accommodate higher Iraqi output. The British also feared that if the French increased imports from Iraq, they would be less inclined to support the British policy of buying up Romania's output in order to deny it to the Germans. And there was also the threat posed by Italy, which became a reality in June 1940. On 11 June 1940 (one day after Italy joined the war), London instructed the IPC to shut down the pipeline to Tripoli and reduce the throughput from Haifa to 800,000 tons, which meant that Iraq's total exports collapsed by around 80% from prewar levels. This resulted in a 33% drop in Iraq's oil revenues, from £1,200,000 to £800,000 (gold). The only reason London did not dispense with Iraq altogether was a shortage of tankers to increase liftings from Iran. The British Government also forbade the IPC from starting production in its Basra concession in October 1940, as it was contractually obligated, which further irked Baghdad. In taking these actions, the British had never bothered to consult with the Iraqis, which doubtless contributed to the spread of pro-Axis sympathy that culminated in the coup d'état by Rashid Ali in April and the Anglo-Iraqi War the following month.²²²

²²² Silverfarb, *Britain's Informal Empire*, 94-105, 118-119.

The case of Iran was even more disappointing: the expansion of Iranian production was not hampered by any cartelistic restrictions, and London expected Iran to be the single largest supplier of oil to Britain's war effort. Iran could have supplied almost the entire wartime requirements of the Royal Navy.²²³ Instead, Iran's exports dropped from 9,119,000 tons in 1938 to 5,420,000 tons in 1941 (by more than 40%), and it exported virtually no oil west of Suez following the Anglo-Soviet invasion of August 1941.²²⁴ Between 1939 and 1942, the average amount of "royalty" tonnage produced by the company in Iran was 10% less than the 1938 average. Production had to be throttled to an amount that could be absorbed by markets that were still accessible (Africa, the Middle East, India, and Australasia), as there was a great demand for Iranian oil east of Suez following the loss of the Dutch East Indies and Burma in 1942. AIOC claimed that "[almost] the sole reason" behind this decline was the "shortage of tankers." This is somewhat misleading – there was no absolute shortage of tankers, only one that prevented Iranian exports from being sent to England around the Cape of Good Hope.²²⁵ The Iranians were not in a forgiving mood: they were still unhappy with renegotiation of the APOC concession in 1933 and continued to clash with Britain over Bahrain.²²⁶ Now that APOC would be contracting Iranian production due to the shortage of tankers, Tehran demanded that the company provide "make-up" payments to cover the difference between royalties on projected and actual production. Although AIOC attempted to placate the Iranians with a loan, the British Government supported a grant in order to avoid stirring up resentment.²²⁷ AIOC and Tehran signed an agreement in August 1940 whereby the company agreed to pay £1,500,000 in "make-up" payments for lost royalties in 1939 and whatever sums were required to boost Iran's total royalties in 1940 and 1941 to £4,000,000 per annum (which worked out to roughly

²²³ Payton-Smith, *Oil*, 16.

²²⁴ Bamberg, *History of BP*, 220.

²²⁵ AIOC, "Notes for History of Company's Activities during 1939/1945 War," 22 December 1943, BP 63800; AIOC, "Memorandum on the A.I.O.C.'s Operations during the War...", 04 February 1944, BP 71146.

²²⁶ "Das Bahrein-Öl," *Militär-Wochenblatt*, 125. Jahrgang, Nummer 19 (08 November 1940).

²²⁷ German analysts believed that Britain's weak strategic position had convinced London to appease Tehran's demands for additional compensation. "Die Anglo Iranian Oil Company, ein Pfeiler des britischen Einflusses im Orient," *Vierjahresplan*, 1940: XXII.

£1,200,000 in 1940 and £2,000,000 in 1941).²²⁸ This did not include the £3,000,000 Iran was allowed to convert into gold every year under the terms of a June 1940 agreement. Although London could hardly afford the additional pressure this placed on the position of sterling, it had no option since oil was Tehran's only means of accumulating gold.²²⁹

British policymakers did not have to weigh the strategic drawbacks of Middle Eastern oil during the 1920s because there was no plausible external threat of interdiction. London addressed the issue after 1935 by shifting the burden of supply from the Middle East to the Western Hemisphere. But even if most of Britain's wartime imports came from the United States and Venezuela, Iran would still provide supplies east of Suez that were irreplaceable due to the savings in tanker tonnage.

The AIOC refinery at Abadan was doubly important not only because it was one of the few sources of 100-octane gasoline within the empire, but also because Abadan was relatively secure compared the other major refinery east of Suez, the Burmah facility at Rangoon. In 1940, there was only one source of 100-octane gasoline within Great Britain (Stanlow).²³⁰ The other sources available to Britain were Abadan (after 1940), Trinidad, the West and East Indies, and the United States.²³¹ Prior to 1935, the RAF had consumed 77-octane gasoline before switching to 87-octane. By 1938, the newest aircraft engines required 100-octane gasoline, and the British Government established a committee to report on how Britain could increase its supply of the additives necessary for the production of 100-octane gasoline (iso-octane).²³² It made sense to develop Abadan as an additional supplier of aviation fuel east of Suez due to the vulnerability of the East Indies, but London did not make any substantial investment to expanding Abadan's capacity for producing 100-octane aviation gasoline (initially only 100 barrels per day) until

²²⁸ Half of the payments were covered by the British Government, which also allowed the Iranians to exchange £3,000,000 a year into gold. The company renewed the agreement in 1943 for the remainder of the war over the objections of the British Government, whose forces now occupied Iran and considered the original demand for "make-up" payments to be a form of "blackmail." The actual payments for 1942 and 1943 totaled only £572,067 and £382,083, and they ceased altogether in 1944/45, when royalties exceeded £4,000,000. AIOC's wartime operations in Iran are summarized in: Bamberg, *History of BP*, 218-219, 230-257; and Payton-Smith, *Oil*, 151.

²²⁹ Payton-Smith, *Oil*, 151.

²³⁰ Howarth and Jonker, *History of Shell*, 12.

²³¹ Gavin Bailey, "The Narrow Margin of Criticality: The Question of the Supply of 100-Octane Fuel in the Battle of Britain," *English Historical Review* 123: 501 (2008): 402-409.

²³² Bamberg, *History of BP*, 182-183; and Payton-Smith, *Oil*, 53-57.

October 1939, and the Air Ministry did not certify Abadan's production until June 1940. Exports of 100-octane gasoline from Abadan commenced in July 1940 but production for the rest of 1940 amounted to only 23,000 tons. Major expansion of Abadan's output of 100-octane gasoline did not start until after 1941, when production rose twelve-fold from 67,000 tons in 1941 to 858,000 tons in 1944.²³³

Even so, by July 1941, the British military warned that the empire could not afford the loss of Abadan, because this would leave the empire east of Suez dependent on the East Indies, which were vulnerable to Japan.²³⁴ By the winter of 1941/42, Allied intelligence concluded that the Third Reich not only recognized the Allies' dependence upon Middle Eastern oil but was poised to exploit this vulnerability.²³⁵ Remarkably, the British Government did not plan for the contingency that Britain would completely lose access to Middle Eastern oil until the summer of 1942, by which time the Afrikakorps was within striking distance of the Suez Canal, and Army Group A was poised to enter the Caucasus.

In May 1942, the Petroleum Department warned the British Chiefs of Staff that replacing lost production in Iraq and Iran with U.S. imports would impose a 2,500,000 ton increase in Britain's tanker requirements. The Petroleum Department concluded that these requirements "could not be met." Even a 15% reduction in Great Britain's civilian consumption (1,000,000 tons per year) would save only 300,000 tons of tanker tonnage, while a 20% reduction in overseas consumption (1,250,000 tons) would save only 500,000 tons of tonnage. Not only would these extraordinary measures fall short, but projected increases in military consumption would probably wipe out any savings extracted from the civilian economy. The Petroleum Department also warned that the loss of Abadan's production of 100-octane gasoline would "be little short of catastrophic," since global supplies were already short and Abadan was expected to increase its output from 240,000 tons to 800,000 tons by late-1943.²³⁶ One official worried that "the war with Japan, and in the Middle East against Germany, cannot be waged unless we can rely on supplies

²³³ Bamberg, *History of BP*, 241-246; Payton-Smith, *Oil*, 270-272.

²³⁴ "Situation in the Middle East: Aide Memoire by Joint Planning Staff," 23 July 1941, J.P. (41) 580, enclosed with: W.A. Howkins (Joint Planning Staff), "Arab Federation: Note by the Secretary), J.P. (41) 961 (8), CAB 95/1.

²³⁵ Coordinator of Information (William Donovan), "Oil and German Strategy," 05 March 1942, *Bulletin 8*, Franklin Delano Roosevelt Library, Papers of Harry L. Hopkins, Box 154.

²³⁶ "Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Memorandum by the Ministry of Fuel & Power," 01 July 1942, Ex. O.C.B. (42) 16, POWE 33/1349.

from Abadan,” and he urged his colleagues to reconsider the existing “Scorched Earth policy.”²³⁷

Considering the consequences for the entire Allied war effort, “[it] is inferential that there should be a maximum concentration on the military effort needed to safeguard the Persian oilfields.”²³⁸

Using the Petroleum Department’s findings as a baseline, the Oil Control Board calculated that, in the event that the Germany invaded Iran and Iraq from the Caucasus, Britain would lose 13,626,000 tons of the 14,585,000 tons (93%) it expected to receive from the Middle East (excluding Bahrain and Egypt) over the next twelve months. Even if production in Bahrain was doubled, Britain would still require an additional 10,666,000 tons from the Caribbean and California, in addition to another 200 tankers to transport it. If Bahrain ceased production, the amount of oil required from the Western Hemisphere would rise by another 2,750,000 tons, plus seventy additional tankers. The United States and Venezuela could probably replace most of the missing oil, although there would probably be a shortfall of aviation fuel and fuel oil. Again, the overall supply of oil was not the issue, “but the impossibility of finding the additional shipping capacity that would cause the real difficulty.” Britain would have to institute an across-the-board cutback in oil consumption of at least 20% to compensate for the expected tanker shortage even though previous reductions “represented the utmost that could be achieved without adverse effect to our war effort.”²³⁹

The fact that Britain was short of tankers rather than oil is a distinction that escapes many historians. One naval historian is at a loss to explain why the Royal Navy committed so many resources to the Mediterranean during the first nine months of the war, even though Italy was neutral.²⁴⁰ Another historian claims that the closure of the Mediterranean was a mere “nuisance” to the Allies, and that Middle Eastern

²³⁷ “Vital Importance of Abadan,” no date or author, POWE 33/1349.

²³⁸ “Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Memorandum by the Ministry of Fuel & Power,” 01 July 1942, Ex. O.C.B. (42) 16, POWE 33/1349. This is not the original Petroleum Department study (dated 26 May 1942), which I have been unable to locate. Besides offering a précis of the original study, the July paper is the Petroleum Department’s assessment of the consequences of a specific strategic scenario: that German forces overrun Iran from the north and halted production in northern Iraq without occupying either Bahrain or the Suez Canal.

²³⁹ G.L. (Geoffrey Lloyd, Chairman), “Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Report by the Oil Control Board,” 21 July 1942, C.O.S. (42) 352 (also O.C.B. (42) 70), enclosed with E.E. Bridges (Cabinet Secretary), “Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Note by the Secretary of the War Cabinet,” 04 August 1942, W.P. (42) 338, CAB 66/27/18.

²⁴⁰ Kennedy, “British Net Assessment,” 52-53.

oil “was vital, not for the Allied war effort in general, but as the only nearby and convenient source of supply for the British forces in the Mediterranean and Indian Ocean areas.” This assertion overlooks the lack of tanker tonnage to haul additional supplies of oil from the Western Hemisphere.²⁴¹ The Oil Control Board left no doubt as to the danger confronting Britain in the summer of 1942: “[It] is of vital importance that there should be a maximum concentration on the military effort needed to safeguard the Persian oilfields. Their loss would be calamitous, inasmuch as it would enforce a drastic reduction in our total war capacity, and probably the abandonment of some of our present fields of action.”²⁴²

²⁴¹ Alan Levine, “Was World War II a Near-run Thing?” *Journal of Strategic Studies* 8: 1 (1985): 58-59.

²⁴² G.L. (Geoffrey Lloyd, Chairman), “Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Report by the Oil Control Board,” 21 July 1942, C.O.S. (42) 352 (also O.C.B. (42) 70), enclosed with E.E. Bridges (Cabinet Secretary), “Oil Supplies in the East in the Event of the Destruction of the Persian Oilfields: Note by the Secretary of the War Cabinet,” 04 August 1942, W.P. (42) 338, CAB 66/27/18. In the event of an Axis breakthrough, the British could at least implement extensive plans to sabotage oil installations in Iraq and Iran. Due to U.S. opposition, however, Saudi Arabia was off limits. Daniel Silverfarb, “Britain, the United States, and the Security of the Sa’udi Arabian Oilfields in 1942,” *Historical Journal* 26: 3 (1983): 719-726.

Oil and British Decline

Works challenging the “declinist” trend in British historiography have performed an invaluable service by forcing scholars to reconsider the mythology of Britain as a broken power after the First World War that entered the Second World War laboring under “imperial overstretch” and equipped with an obsolete military-industrial complex.²⁴³ But it appears that the pendulum has swung too far in the opposite direction. One historian argues that Britain was in a better strategic and financial position after the First World War than after the Napoleonic wars. Although it is plausible to claim that “Great Britain was the *only* world power” during the interwar period (if only because no other power had any interest in being a global power before 1939), the argument is untenable because it rests upon the dubious assertion that “by the standards of economy and geography,” the position of the British Empire “had never been safer.”²⁴⁴

Another historian has gone so far as to claim that Britain ended the 1920s “pre-eminent in the world because, for ten years, its leaders inside and outside of government had resisted the American challenge,” not to mention the fact that war had eliminated two of the three greatest threats to the empire, Germany and Russia (Japan, of course, was another matter). He concedes that Britain only enjoyed this position because the United States refused to translate its preponderant economic power into strategic influence, but nowhere does he acknowledge that the basis of Britain’s “armed strength (resting on the potency of the RN [Royal Navy])” operated at the pleasure of the United States both before and during the “transition of power” from Britain to the United States.²⁴⁵

²⁴³ The “declinist” history of the British Empire is exemplified by such works as: Correlli Barnett, *The Collapse of British Power* (London: Eyre Methuen, 1972); and Paul Kennedy, *The Rise and Fall of the Great Powers* (New York: Random House, 1987). For a pungent critique of *Rise and Fall* as “anglocentric,” “a series of clichés embedded in a mountain of facts,” and “riddled with inconsistencies, contradictions, and ambiguities,” see: Gordon Martel, “The Meaning of Power: Rethinking the Decline and Fall of Great Britain,” *International History Review* 13: 4 (1991): 662-694 (quotations from pgs. 668, 676, and 670). Martel has little use for Kennedy, whom he accuses of using a flawed analysis of Britain’s relative decline before 1945 as the intellectual blueprint for the rise and fall of all great powers. Martel’s analysis of Britain’s failings is, however, not dissimilar from that of Barnett. The former ascribes Britain’s decline to the post-WWI “erosion of will and in the deterioration of imagination” that prevented London from taking advantage of its “extremely advantageous position” after the First World War to build an effective imperial commonwealth and modernize its economy (pgs. 689-692; quotations from pgs. 689 and 691).

²⁴⁴ Martel, “Meaning of Power,” 686-693 (quotations from pgs. 692 and 687).

²⁴⁵ Brian McKercher, *Transition of Power: Britain’s Loss of Global Pre-eminence to the United States, 1930-1945* (Cambridge: Cambridge University Press, 1999), 1-31, 339-343 (quotations from pgs. 30, 340). One is left wondering what to make of the supposed “rivalry” between the U.S. Navy and Royal Navy. Surely the latter could

The failure of many historians of the British Empire to consider the connection between fuel and British military and economic power is puzzling. How exactly any summary of the “true roots of British power between 1815 and 1914” can fail to mention coal is a mystery.²⁴⁶ Similarly, overlooking the role of oil in the gradual collapse of British power during the twentieth century makes for inaccurate history. How else to explain an historian’s boast that “[it] is impossible to find one instance in the 1930s when, over a major policy decision concerning Great Britain’s protection of its external interests, the United States was able to persuade London to adopt a policy Washington thought best.”²⁴⁷ This would have come as a surprise to the Colonial Office, which spent the 1920s defending the British “control” clause only to suffer two successive defeats in 1930 and 1934, when U.S. firms secured access to Bahrain and Kuwait, respectively. Considering the abundance of documents demonstrating London’s preoccupation with oil and energy security after 1912, it appears that too many historians have missed something that was plainly obvious to policymakers. As Britain’s Sea Lords explained in 1931, “Fuel was a large factor in England’s greatness,” from wind in the eighteenth century to coal in the nineteenth century and oil potentially thereafter if the country could acquire secure sources of supply at home and abroad.²⁴⁸ Conversely, Americans understood that the control of oil could serve as a lever to coerce Britain into serving U.S. interests.²⁴⁹

Another historian, by contrast, makes a compelling case that Britain’s assets within its formal and informal empire could serve as a source of strength if Britain could import raw materials from its imperial periphery rather than produce them inefficiently at home. But this alone does not substantiate his claim

not hope to fight the former for anything more than a brief campaign when the United States controlled Britain’s supply of oil. It appears that McKercher uses the term “rivalry” to refer to a peaceful, if expensive, competition to see which navy could build a larger fleet, irrespective of its actual use.

²⁴⁶ John Ferris, “The Greatest Power on Earth: Great Britain in the 1920s,” *International History Review* 13: 4 (1991): 733.

²⁴⁷ Brian McKercher, “Our Most Dangerous Enemy: Great Britain Pre-Eminent in the 1930s,” *International History Review* 13: 4 (1991): 783.

²⁴⁸ “Oil Fuel Reserve,” no date or author, enclosed with: F.L.F. (Admiral Frederick Field), 12 February 1931, attached to: A.V.A. (Albert Victor Alexander), “Oil Fuel Reserve,” 17 February 1931, C.P. 51 (31), CAB 24/220. See also: Lt. Cmdr. G.J.A. Miles (Royal Naval Staff College), “The Supply of Oil Fuel for Fleets and Squadrons Abroad in the Future,” 14 April 1920, ADM 203/48.

²⁴⁹ Lt. Col. Raymond E. Lee (Military Attaché), “Oil and Its Effect on British Warmaking Capacity,” 11 December 1935, Report No. 37765, NARA, RG 59, 841.6363/413.

that Britain had nothing to worry about when it came to oil because “it could import oil rather than waste resources on synthetic oil [...].”²⁵⁰ Moreover, his claim that only the military disasters of 1942 in North Africa and Singapore “made the Empire dependent on the United States, which only now emerged as what Britain had until recently been, a great global power,” is not plausible when considering oil. The assertion that Britain started the war seeking “to avoid the neutral USA as a source [of oil]” is only narrowly true before 1938.²⁵¹ Great Britain did not depend on oil imports from the United States before 1938, but the same cannot be said of the empire (especially Canada). Moreover, British planning for a “dual contingency” after 1938 was predicated on the idea that the United States would be “friendly,” since the shortage of tankers ruled out importing Iranian oil to Britain in favor of U.S. or Venezuelan production. Long before Britain depended on the U.S. financial assistance to pay for its oil imports through Lend Lease, its energy security rested in no small part on access to U.S. domestic oilfields.

The findings of this work suggest that critics of the “declinist” school understate the handicaps Britain operated under due to its need to import oil. Whether or not Britain was in fact a relatively efficient “warfare state” when it came to arms production and development meant little if it did not have the oil required to wage war effectively. Even if we accept that Britain did have a more formidable military establishment on the eve of the Second World War than the “declinists” would contend, it proved manifestly incapable of “[meeting] the obligations laid on her by the existence of the empire,” which one prominent “declinist” described as “a sprawl which entangled Britain in great-power rivalries both in the Mediterranean-Middle East region and in the Far East.”²⁵² Most importantly – and this cannot be emphasized strongly enough – at no point during the interwar period could Britain have contemplated a war against any of its major rivals without U.S. oil deliveries. Too many historians have focused their attention on British suspicions of Roosevelt’s motives rather than assessing the United States’ tangible

²⁵⁰ David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 57.

²⁵¹ David Edgerton, *Britain’s War Machine: Weapons, Resources, and Experts in the Second World War* (New York: Oxford University Press, 2011), 4-5, 76-78, and 84-85.

²⁵² Barnett, *Strategy and Society*, 6-7. See also: Murray, *Balance of Power*, 91-92.

contributions to Britain's security even before the war began.²⁵³ Illuminating the "human" dimensions behind Britain's decline is a doubtless a valuable exercise and certainly not odds with the general thrust of this study, which emphasizes that oil is necessary but not sufficient explanation for Europe's relative decline vis-à-vis the United States and Soviet Union. But the curious hostility of some scholars to the study of great power politics on the basis of "components that appear to lend themselves to weighing and measuring" can be just as mistaken the narrow-minded economic determinism they decry.²⁵⁴

This study should not be read as an argument in favor of Britain developing a synthetic fuel program. The decision against synthetic fuel made strategic and economic sense in view of the resources already committed to importing oil, not to mention the fact that Britain would still be dependent on imports of any number of other commodities even if oil was excluded. That being said, there is a difference between simple ownership of foreign oilfields and the ability to exploit such resources, particularly in wartime. The risks entailed by basing Britain's energy security on Middle Eastern oil were obvious soon after the First World War. The German Foreign Office observed in 1920 that if Britain tried importing oil during a "future war" from Mesopotamia or Persia, British "tankers would be as exposed to sinking as in the last war."²⁵⁵ German military analysts of Britain's oil position chortled over its vulnerability to interdiction in the Mediterranean or aerial and submarine attack throughout the 1930s and early-1940s. Although some argued as late as 1934 that Britain, unlike France, had the means to exploit the oil of the Middle East in wartime, they all changed their tune eventually.²⁵⁶ One 1940 analysis accurately described "England's oil supply... [as] a purely transport problem," while a 1936 piece argued, "[One] is fully justified in considering a secure supply of oil for England in a possible war as a question of life and death for its world empire, especially since its cohesion depends entirely upon English mastery of the seas,"

²⁵³ For example, see: Kennedy, "British Net Assessment," 41-42, 51-52.

²⁵⁴ Martel, "Meaning of Power," 679.

²⁵⁵ "Britische Erdölpolitik," 08 September 1920, no author, Politisches Archiv des Auswärtigen Amtes, R 97745.

²⁵⁶ Hptm. (Hauptmann) a.D. Hans Wagner, "Ölversorgung im Mittelmeer," *Deutsche Wehr*, Nr. 8/7. (38.) Jahrgang (22 February 1934). The Germans were not alone in reaching to this conclusion, although they too vastly overestimated the combat effectiveness of the Italian Navy. One 1936 paper posited that "Italy's naval –strategic position in the Mediterranean" was "by far" superior to that of Britain and France, and surmised that Italy might already possess the means to win "a bitter struggle" at sea against the Western Allies. Feldmarshalleutnant d.R. Schäfer, "Die geographischen Gegebenheiten der Ölversorgung der Seemächte England, Frankreich und Italien und deren Auswirkungen auf die Maßnahmen der Landesverteidigung," *Wissen und Wehr*, Siebzehnter Jahrgang (1936).

particularly the Mediterranean.²⁵⁷ Again, the problem was not so much the quantity of oil, but rather, logistics: British tanker capacity was insufficient to cover even the country's peacetime demand, and Britain depended upon the availability of neutral tankers.²⁵⁸ In the event that Britain lost access to the Middle East, its only alternative was the United States, although the Germans were unsure if the latter was "in the position to provide the western powers as much oil as they must require in case the Mediterranean was blocked."²⁵⁹ By 1941, it was clear to the Germans that Britain had no choice but to reorient the "center of gravity" of its oil imports to the Western Hemisphere.²⁶⁰

U.S. military intelligence assessments between 1940 and 1941 were equally accurate when it came to describing London's predicament. Britain was dependent on imports to satisfy basically 100% of its requirements within the United Kingdom. Imperial production, only 2.5% of global production, was negligible, but British firms nonetheless controlled approximately 20% of world production, and the tanker situation appeared satisfactory. If one included supplies available from U.S. firms, there was ample oil to fuel the British war effort. The "weak chain in the link" of Britain's oil supply was its need to preserve its overseas lines of communication and keep tankers losses at an acceptable level.²⁶¹

²⁵⁷ Britain's oil position was, for example, a frequent topic of discussion in the semi-official military journals such as *Deutsche Wehr*: Dr. Paul Ruprecht (Dresden), "Englands Versorgung mit Öl im Kriege," Nr. 22/40. Jahrgang (28 May 1936); Fr. Az, "Wachsende Ölzufuhr-Sorgen Englands," Nr. 8/44. Jahrgang (23 February 1940); and "Englands wachsende Ölsorgen," Nr. 19/45. Jahrgang (09 May 1941). At the same time, other German analysts expressed admiration for Britain's success in acquiring such a vast portion of the world's oil reserves beyond their empire, not to mention its constant awareness of the interrelationship between economic and military power, as well its willingness to abandon its liberal orthodoxy for state-directed economic policy when the circumstances demanded it. F.W. Fernau, "Erdölversorgung und Erdölpolitik im britischen Weltreich," *Wissen und Wehr*, Zwanzigster Jahrgang (1939). See also: F.W. Fernau, "Die britische Oelmacht," provenance unclear (possibly *Wehrwirtschaftliche Umschau*), date unknown (circa 1938), NARA, RG 242, T-77/437 (Wi/IF 5.3689). France received somewhat less, but equally critical, attention: "Frankreichs Erdölversorgung im Kriege," *Wehrtechnische Monatshefte*, 2 u. 3; and "Frankreichs Erdöl-Politik," *Die deutsche Volkswirtschaft*, Nr. 16 (1936); both in: NARA, RG 242, T-77/425 (Wi/IF 5.3444).

²⁵⁸ By contrast, "[the] incredible successes" of German petroleum policy ensured that its "demand was covered," while reserves swelled with imports from Romania and the Soviet Union. Vortragsmanuskript, "Rohstoff- und Versorgungslage Englands zu Beginn des Weltkrieges," no author or author (probably Dr. Leisse, Director of the Reich Office for Defense-Economy Planning – Reichsamt für wehrwirtschaftliche Planung; circa 1940), Bundesarchiv, Berlin-Lichterfelde, R 3102/3401.

²⁵⁹ Dr. Paul Ruprecht, "Das Mittelmeer und die Ölversorgung der Westmächte," *Militär-Wochenblatt*, Nr. 124, Nummer 51 (21 June 1940).

²⁶⁰ Dr. Flemmig, "Englands Ölmacht im Abstieg," *Militär-Wochenblatt*, 125. Jahrgang, Nummer 47 (23 May 1941).

²⁶¹ For representative samples of the attitude of U.S. military intelligence, see: Col. John Magruder to the Assistant Chief of Staff, G-2, "Petroleum products situation in Great Britain," 21 March 1940, NARA, Record Group 165: Records of the War Department, Military Intelligence Division, "Regional File," 1922-1944 (hereafter cited as: RG

“Fortunately for Britain,” as one informed observer of international petroleum affairs noted, “the United States were willing and able to correct” the most pressing deficiencies.²⁶²

Ultimately, the British proved better at acquiring titular control of foreign oilfields than they did in tailoring their foreign and defense policy to reflect the oil position of the Empire. How else to explain the fact that Britain only considered the ramifications of a “closed” Mediterranean after the break with Italy and not before? Important studies such as the British Official History of the Second World War offer a misleading picture of British oil policy and its results after 1918.²⁶³ Subsequent historians have also failed to distinguish between Britain’s success at supplying itself and its empire during the Second World War and London’s expectations following the First World War. The fact that Britain muddled through the war in spite of losing access to its Middle Eastern oilfields between 1940 and 1943 has obscured the long-term damage done to Britain’s economic position. U.S. economic assistance (once Britain could no longer afford to pay for its imports) and the remarkable resiliency of the U.S. oil industry allowed the Allies to fuel the vast war machine that bludgeoned the Axis into submission. Britain survived the Second World War, but not on terms of its own choosing and incapable of escaping the fate that now awaited it: bankruptcy and subordination to the United States.

165, MID), Box 1400; C.S. Snodgrass (Office of Naval Intelligence), “Near East Oil Concessions, Development and Facilities,” 12 February 1941, NARA, Record Group 38: Records of the Chief of Naval Operations, Foreign Intelligence Branch, Reports on Worldwide Petroleum Situation, 1940-2, Box 3; “Oil Supplies in the British Empire,” 26 August 1941, no author, NARA, RG 165, MID, Box 1400; Untitled report (“4115 – Foreign Fields”), 27 December 1941, NARA, RG 165, MID, Box 1400.

²⁶² Walter Levy, “Oil in this War’s Strategy,” undated speech (sometime between the fall of France and the start of Operation Barbarossa), American Heritage Center (University of Wyoming), Papers of Walter Levy, Box 1. See also: Walter Levy, “Axis Launches Desperate Offensive at Allied Oil Sources,” *World Petroleum* (April 1942), 29-34; reprinted in: Walter Levy, *Oil Strategy and Politics, 1941-1981* (Boulder, Westview Press: 1982), 36-43.

²⁶³ Contrast the analysis presented in Chapters One and Twenty-Two of Payton-Smith, *Oil*, 1-24 and 472-479. Edgerton’s *Britain’s War Machine*, 181-194, has an excellent summary of the supply situation during the war.

Chapter IV

Making Do with Less: Germany, 1918-1936

A reconsideration of oil's relationship to German grand strategy prior to 1939 challenges the prevailing historical narrative of crisis and scarcity.¹ Following its defeat in 1918, Germany was down but not out. Although the country had been at the forefront of the Second Industrial Revolution, it had always been short of most essential raw materials besides coal, not to mention arable land. The discrepancy between its industrial might and weak raw materials and agriculture position nurtured the development of both a dynamic export sector to pay for necessary imports and a predilection for an aggressive foreign policy. The outcome of the First World War did not bring about any significant change in what one historian considers the traditional "responses to Germany's uneven resource base – commerce and conquest [...]."²

Between 1933 and 1939, the Third Reich embraced a multi-faceted policy to secure the petroleum it would need to realize the first stage of Adolf Hitler's "Programme": the destruction of France and the colonization of the Soviet Union (with Britain forced to the sidelines). German policy included providing government incentives to increase Germany's tiny domestic oil production; accumulating domestic reserve stocks; and even acquiring overseas concessions in countries such as Iraq and Mexico, which

¹ See the appendix to this study for additional discussion of secondary sources. Unless otherwise indicated, all German-language sources are from the National Archives and Records Administration, Record Group 242: Foreign Records Seized (NARA, RG 242). Since all documents included within RG 242 are available only on microfilm, I have used the following citation format: Microfilm Publication No./Reel No. (Item No.). Given that the bulk of my archival research with German documents was completed at the National Archives II, College Park MD, I have usually cited the U.S. microfilm copy in preference to the original paper copy in the Bundesarchiv, Berlin-Lichterfelde (BA-B), the Bundesarchiv-Militärarchiv, or the Politische Archiv des Auswärtigen Amtes (PAAA). NARA citations may be crosschecked against the holdings of the Bundesarchiv by comparing the "alte Signatur" used by the former (which was based on the filing system created by U.S. and British historians following the Second World War during the process of cataloguing and microfilming captured German records) against the new archival signatures developed by the latter following the documents' repatriation to Germany, when German archivists broke up the NARA filing system in order to reconstruct the records of agencies in those instances when the originals had either been destroyed during the war or disappeared thereafter. For example, the NARA citation for "Die Mineralölwirtschaft im Vierjahresplan": Vortrag gehalten am 12. Januar 1938 im Haus der Flieger," is: T-77/107 (Wi/IF 5.469); while the Bundesarchiv citation is: BA-B, R 3112/167.

² Peter Hayes, "Carl Bosch and Carl Krauch: Chemistry and the Political Economy of Germany, 1925-1945," *Journal of Economic History* 47: 2 (1987): 353.

could supply Germany with oil in peacetime either on a barter basis or against payment in “Askimarks.”³ The most important decision, especially by comparison with Britain (whose overall oil position was equally precarious), was to harness the power of Germany’s cutting-edge chemical industry to produce among other things synthetic fuel from coal.⁴ Chemistry, abundant supplies of coal, and the mother of all invention – necessity – would allow the Germany to become “independent” of imports of many raw materials, even after it had been “robbed” of its former overseas colonies.⁵

This was not empty boasting. Synthetic fuels had already proven invaluable during the First World War, when domestic production of benzol have proven indispensable in keeping the German Air Force (Luftstreitkräfte) in the air, since prior to its collapse in 1916, the Romanian Government had forbidden the major German concessionaire, Steaua Romana, from exporting either crude oil or gasoline to the Central Powers.⁶ Even if the Third Reich still sought to acquire oil through conventional means such as imports, it could hardly afford to base its entire petroleum policy on such measures. Overseas imports during wartime were out of the question if Britain was an opponent. Even in peacetime, however, there were limits to how much oil Germany could import, the most important obstacle being the country’s chronic shortage of foreign exchange. Until the 1970s, the major U.S., British, Dutch (and later French) oil companies controlled much of the international oil trade beyond the Communist bloc. Purchasing oil

³ Briefly, the Germans used three methods of financing overseas trade during the Third Reich: clearing agreements; barter agreements; and payment in blocked currency. Clearing agreements are basically pools of money within a country into which a nation’s exporters deposit the hard currency proceeds of their sales. Importers thereafter draw from these pools in order to finance their purchases. Barter agreements are transactions denominated entirely in finished or unfinished goods. Finally, the Reich created special “Askimarks” (Ausländer-Sonderkonten für Inlandszahlung) to finance trade with Latin America, and which could only be used to purchase certain goods produced by Germany. David Haglund, “‘Gray Areas’ and Raw Materials,” *Inter-American Economic Affairs* 36: 3 (1982): 34.

⁴ Germany’s chemists produced more than just petroleum through synthesis. They also synthesized ammonia, methanol, rubber, acetylene, ethylene, benzol, and toluene, all of which were vital to the German war effort. Nuernberg Military Tribunal, *Trials of the War Criminals* (Washington, DC: U.S. GPO, 1953), viii: 1253-1254 – hereafter cited as: *NMT*.

⁵ Oberstleutnant Dr. rer. pol. W. Hedler, “Kampf um Rohstoffe,” *Militär-Wochenblatt*, 124. Jahrgang, Nummer 18 (27 October 1939). Hedler was also attached to the Defense-Economy and Aramaments Office of the Armed Forces High Command (Wehrwirtschafts- und Rüstungsamt of the Oberkommando der Wehrmacht – WiRüAmt, OKW) as a raw materials analyst.

⁶ “Die Bedeutung der deutschen Beteiligung an der Steaua Roman während des Krieges,” no date or author, BA-B, R 8119/8364; Ausrüstungsamt, Allgemeine Abteilung, “Deutschlands Rohstofflage,” April 1920, T-84/142 (EAP 66-c-12-62/6); and Ausrüstungsamt, Allgemeine Abteilung (II Fb), “Deutschlands Rohstofflage,” May 1920, T-84/142 (EAP 66-c-12-62/5).

from these companies compelled Germany to dip into its meager reserves of hard currency. Germany could not afford these expenditures in the wake of the global financial downturn. By reducing demand for German exports, the Great Depression preventing Germany from earning trade surplus to fund vital imports and pay off the reparations imposed by the Versailles Treaty. After 1933, when Germany's economic position improved due to rearmament and the gradual recovery of the global economy, importing significant quantities of oil remained problematic because Germany still lacked the means to pay for the oil: rearmament soaked up increasing amounts of German industrial production, leaving less available for export to earn hard currency. Even Hitler understood that trade with the United States was unfeasible since the country was economically self-sufficient and had accumulated much of the world's gold through its trade surpluses, which hindered other nations from purchasing U.S. goods.⁷

Synthetic fuel offered a way out at least in the short term.⁸ It would, Hitler hoped, obviate any need for Germany to depend upon international trade, which had “plunged” Germany into “the mire” that climaxed with the Great Depression.⁹ But German policymakers and analysts also understood that synthetic fuel – production of which was miniscule compared to crude oil – could not make their European empire independent of oil.¹⁰ Synthetic fuel could, however, provide the means for Germany to take what it needed, first in the Caucasus and then in the Middle East.¹¹ The costs were enormous: tens of

⁷ Norman Cameron and R.H. Stevens, trans., *Hitler's Table Talk: His Private Conversations* (New York: Enigma, 2000) : No. 25 (25 September 1941) and No. 35 (13 October 1941).

⁸ And possibly over the long term, too, in the event of the exhaustion of global crude oil reserves. Fritz Seidenzahl, “Erschöpfung der Erdölvorkommen?” *Die deutsche Volkskraft: Beilage zur “Deutschen Wehr,”* Nr. 13, 7. Jahrgang (09 December 1937). The move to offshore drilling, or drilling at greater depths, might also make synthetic fuel more cost-competitive with crude oil. Dr. Ruprecht, “Erschöpfung der Erdölvorräte,” *Deutsche Wehr*, Nr. 39, 44. Jahrgang (27 September 1940). German analysts also worried as early as 1938 that world oil production would be unable to keep up with demand once China began to motorize. Hauptmann a.D. Dr. phil. Ruprecht, “Ölsuche und Ölgewinnung in ihrer Bedeutung für die Wehrpolitik,” *Militärwissenschaftliche Rundschau* 3: 3 (1938).

⁹ The Führer mistakenly believed that the Reich had continued to import rubber and petroleum after 1918 even though it already possessed means of producing both synthetically. *Table Talk*: No. 45 (18 October 1941). Industrial production of synthetic fuel was not possible until the late-1920s, while U.S. and German scientists did develop processes for synthesizing rubber until the 1930s.

¹⁰ Consider that, in 1937, synthetic fuels accounted for only 3% of global consumption of light petroleum products; 2,830,000 tons out of 89,150,000 tons. W.F. Kiewitt, “Öl und Ölersatzstoff in der Wehrwirtschaft,” *Deutsche Wehr*, Nr. 42, 43. Jahrgang (27 October 1939).

¹¹ One should not overlook the financial benefits, for gasoline was a major source of indirect taxation in Germany even before the Third Reich. Between 1930 and 1936, the government raised the duty on imported gasoline from 8.6¢ to \$0.36. Raymond Stokes, “The Oil Industry in Nazi Germany, 1936-1945,” *Business History Review* 59: 2 (1985): 260. By 1936, gasoline taxes accounted for one-third of the regime's customs revenue (421,000,000 RM).

millions of tons of coal, millions of tons of steel, the labor of tens of thousands of workers and miners, and billions of Reichmarks, not to mention all manner of indirect subsidies such as limiting imports through currency controls and tariffs to keep high-cost synthetic petroleum competitive with cheap imported crude oil and slow the growth in domestic consumption.¹²

This was a cost that Germany's civilian and military leadership was willing to pay even before the National Socialist "seizure of power." Existing histories of synthetic fuel in German have demonstrated that government support for the industry was the product of civilian economic considerations, such as the alleviation of unemployment by creating new demand for German coal and steel, improving Germany's balance of payments, and promoting motorization of German society.¹³ In the event that German scientists managed to make synthetic fuel production cost competitive, Germany would be poised to reap immense economic advantages.¹⁴ Military considerations were not absent, however: German planners recognized after the First World War that their military's operational effectiveness depended upon the development of synthetic alternatives to Germany's lost sources of crude oil in Romania and Galicia.

Germany's economic position on the eve of the Second World War was hardly ideal, least of all with regard to raw materials. German analysts understood that although Germany was in certain respects better prepared in 1939 than it had been in 1914, the Reich was still dependent on imports it could not afford, while rearmament had been conducted "in *breadth* and too little in *depth*."¹⁵ Nevertheless, considering the

Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 151.

¹² One article in a German military journal that an unnamed country whose force structure was suspiciously like that of Germany (300 divisions – mainly infantry with a strong mechanized core – 9,000 military and civilian aircraft, and a navy comprised largely of small craft and submarines) would require 12,650,000 tons of petroleum annually in wartime. Substituting synthetic fuels for natural petroleum products would require an additional 37,000,000 tons to 40,000,000 tons of coal production, a capital expenditure of 4,000,000,000 RM, and the labor of 250,000 men. H. Steinberger, "Der Treibstoffverbrauch im Kriege," *Die Deutsche Volkskraft: Beilage zur "Deutschen Wehr"*, Nummer 1, 6 Jahrgang (16 January 1936). Steinberger's estimates for capital expenditure and coal production turned out to be close to the figures adopted by the regime in 1938.

¹³ Thomas Parke Hughes, "Technological Momentum in History: Hydrogenation in Germany, 1898-1933," *Past and Present* 44: 1 (1969): 106-132. Hughes' work ought to be read in conjunction with: Peter Hayes, *Industry and Ideology: IG Farben in the Nazi era* (Cambridge, 1987), 37-42.

¹⁴ Verbandssyndikus Kurt Bronk, "Deutschlands Erdöl-Selbstversorgung, militärisch gesehen," *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935).

¹⁵ Compare Maj. a.D. Dr. W. Hedler, "Deutsche Rohstofflage und die Rohstoffwirtschaft im Kriege," *Militär-Wochenblatt*, 120. Jahrgang, Nummer 32 (25 February 1936) with OKW, WiRüAmt, Stab Ib 5, "Deutschlands

overall precariousness of Germany's strategic position, one cannot help but concede that German bluster in 1939/40 that the Third Reich's petroleum position was stronger than that of Great Britain and France was not entirely without merit.¹⁶ Petroleum consumption in Germany on the eve of the war was relatively small – covering only 3% of the country's energy requirements, compared to 90% for coal – which meant that even the Third Reich's wartime requirements were moderate compared to those of Britain (much less the United States and the Soviet Union).¹⁷ Although certain kinds of petroleum products, mainly heavier oils such as diesel and fuel oil for the Navy (Kriegsmarine), were in short supply throughout the war, the primary instruments of the German armed forces (Wehrmacht), the Army (Heer) and the Air Force (Luftwaffe), were not handicapped by any lack of fuel during the first two years of the operations.¹⁸

Early postwar analyses of the German war economy claimed that Germany had been inadequately mobilized prior to Albert Speer's appointment as Armaments Minister in 1942. This view – known as the “Blitzkrieg” thesis – gained prominence following the publication of two articles in 1945 by John

Wehrwirtschaftspotential bei Kriegsausbruch,” no date (signed: “Tomberg, 26.2.40.”), T-77/425 (Wi/IF 5.3442). Emphasis (from the latter) in the original.

¹⁶ Maj. a.D. Mende, “Zur Treibstofflage,” *Deutsche Wehr*, Nr. 6, 44. Jahrgang (09 February 1940).

¹⁷ Stokes, “Nazi Oil Industry,” 254.

¹⁸ This was the conclusion of two major WiRüAmt retrospectives of Germany's petroleum policy. At the start of 1942, one paper observed that, thanks to Germany's reserves at the onset of the war (2,409,000 tons), booty captured during the 1940 campaigns (800,000 tons), imports from Romania, the Soviet Union, and Galicia, and rising domestic production, “until the beginning of the Russian campaign, serious difficulties in the supply of fuel did not arise.” WiRüAmt, Stab Z/SR, “Die deutsche Treibstoffversorgung im Kriege. Abgeschlossen um die Jahreswende 1941/42. Versuch einer Darlegung der Gesamtsituation unserer Treibstoffversorgung im Kriege unter Verzicht auf die Darstellung der Einzelheiten,” 16 February 1942, T-77/668 (Wi/VI. 216). Emphasis in the original. Two years later, another study reached a similar conclusion: although military and civilian demand consistently outpaced advances in natural and synthetic production, “in spite of increasing demand, the supply situation in the years before the war and even during certain circumstances during the war until the end of 1940 proved on average to be progressively healthier.” OKW, Gen.z.bV.1., “Die Arbeiten des WiRüAmtes an der Mineralöl-Versorgung,” no date (handwritten notation reads: “vom Dezember 1944”), T-77/183 (Wi/IF 5.751) – here after cited as “Die Arbeiten des WiRüAmtes.” This study and its invaluable Anlagen (most of which may be found in T-77/341 (Wi/IF 5.2164, 2687) and is comprised of many of important documents on German petroleum policy between 1933 and 1940) and others like it provide this chapter with its organizational and statistical backbone. Unfortunately, it had less to say about high-level policy or long term objectives than short term supply and demand considerations. Furthermore, the study, which was supposed to cover the period before June 1943, is incomplete, ending in the summer of 1941 during Barbarossa. It was also a key source for Georg Thomas' *Geschichte der deutschen Wehr- und Rüstungswirtschaft, 1918-1943/1945* (Boppard am Rhein: Boldt, 1966), which only deals with petroleum policy peripherally. According to Thomas (pg. 43), the 1944 study was completed by one Oberstleutnant Sadewasser. See also: OKW, WiRüAmt (Oberst Dr. Hedler), “Die Mineralöle und die Versorgungslage im Kriege,” Abgeschlossen 31 August 1941, T-77/438 (Wi/IF 5.2726). Also of particular interest in terms of providing a broad overview of the state of the petroleum industry in Germany on the eve of the war is: Reichs-Kredit-Gesellschaft AG, Ke/Schr., “Treibstoffwirtschaft in der Welt und in Deutschland,” April 1938, T-84/51 (EAP 66-c-2-10/22).

Kenneth Galbraith, a member of the United States Strategic Bombing Survey (USSBS).¹⁹ “The “Blitzkrieg” school came under fire in the 1970s and 1980s by historians who argued that Adolf Hitler had always planned for “a massive and longer-term war of the continents,” and that the Reich had been on a “war” footing since 1938/9 at least. The fact “that Hitler did not get value for money” had more to do with feuding over armaments priorities, inefficient production practices, the need to rebuild Germany’s fixed military infrastructure, the lag between weapons R&D and actual production, and the fact that capital intensive programs such as the Four-Year Plan (Vierjahresplan, VJP) were still in their infancy. Moreover, critics of the “Blitzkrieg” school argued that the regime had not synchronized rearmament with the Reich’s foreign policy. Germany went to war against the other great powers earlier than expected, and even after the start of the war, far too many resources were still committed to long-term, capital-intensive projects (such as the synthetic fuel program) that would yield little in the short run.”²⁰

Most recently, the debate has been reframed by a new wave of historians who make the case that “[the] chief problems of the Nazi war economy were not political,” but rather “objective,” since there was no way for Germany to reconcile the Third Reich’s “vast ambition and the modest military and economic means at its disposal.”²¹ These historians have incorporated into their analyses aspects of the “Blitzkrieg”

¹⁹ John K. Galbraith, “Germany Was Badly Run,” *Fortune* 32: 6 (1945): 173-200; and John K. Galbraith and George Ball, “The Interrogation of Albert Speer: Germany’s Wartime Production Minister Tells the Inside of the Nazi Collapse,” *Life* (17 December 1945): 57-66. For additional background, see Galbraith’s memoirs, *Life in Our Times* (Boston: Houghton Mifflin, 1981), 192-227. Galbraith’s sensationalistic argument was subsequently refined by various economists and historians. Nicholas Kaldor, “The German War Economy,” *Review of Economic Studies* 13: 1 (1945-1946): 33-52; Burton Klein, *Germany’s Economic Preparations for War* (Cambridge: Harvard University Press, 1959); and Alan Milward, *German Economy at War* (London: Athlone Press, 1965).

²⁰ Berenice Carroll, *Design for Total War: Arms and Economics in the Third Reich* (The Hague: Mouton, 1968), *passim* (esp. 179-190); Richard Overly, “Hitler’s War and the Germany Economy: A Reinterpretation,” *Economic History Review* 35: 2 (1982): 272-291 (quotations from pgs. 274, 280); Richard Overly, “Mobilization for Total War in Germany, 1939-1941,” *English Historical Review* 103: 408 (1988): 613-639; and Richard Overly, *War and Economy in the Third Reich* (Oxford: Oxford University Press, 1994), 188-200. The evolution in our understanding of the German war economy is summarized in: Mark Harrison, “Resource Mobilization for World War II: the U.S.A., U.K., U.S.S.R., and Germany, 1938-1945,” *Economic History Review*, 2nd Series, 41: 2 (1988): 171-192. Williamson Murray also took up arms against the “Blitzkrieg” thesis, but he stressed the shortage of hard currency as a factor inhibiting German rearmament: Murray, *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton: Princeton University Press, 1984), 12-19.

²¹ Adam Tooze, “No Room for Miracles: German Industrial Output in World War II Reassessed,” *Geschichte und Gesellschaft* 31 (2005): 439-464 (quotation from pg. 464); and Tooze, *Wages of Destruction*. The emerging thesis that “[the] key gulf in 1939 – both in Hitler’s mind and in retrospect – was not between what Germany was doing and what he wanted, but what Germany *could* do and his growing requirements,” is elegantly expressed in Peter Hayes’ “Polycracy and Policy in the Third Reich: The Case of the Economy,” in: *Reevaluating the Third Reich*, ed.

thesis – namely Germany’s inability to fight a long war in 1939 – while demonstrating how short, sharp campaigns (most notably Barbarossa) were geared toward preparing the Third Reich for a generational struggle against the United States. The following chapters incorporate oil within our evolving understanding of the German war economy and National Socialist grand strategy in general.

Germany experienced its first oil crisis not in 1939, but following its great wartime triumph – the victory over France and the Low Countries in June 1940.²² As even contemporary analysts recognized, in defeating France but not Britain, Germany achieved a major operational success but not a decisive strategic victory.²³ Key German economic policymakers such as General Georg Thomas – the Chief of the Defense-Economy and Armaments Office (Wehrwirtschafts- und Rüstungsamt, WiRüAmt) of the Armed Forces High Command (Oberkommando der Wehrmacht, OKW), which assessed the raw materials requirements of the armed forces – recognized that Germany was in uncharted territory.²⁴

Thomas Childers and Jane Caplan (New York: Holmes & Meier, 1993), 190-210 (quotation from pg. 196). Emphasis in the original.

²² For example, Paul Kennedy claims that the Germany “greatly expanded its available supplies of oil and raw materials” after its victories in 1940. Even if the total supply of the latter did increase (it certainly did not in the case of the former), that still leaves out the fact that Germany’s requirements also increased because of its new empire. Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987), 341. One secondary work (perhaps the only one) that makes this point explicitly is: Tooze, *Wages of Destruction*, 411.

²³ Walter Levy, “The Paradox of Oil and War,” *Fortune* (September 1941), 69ff, American Heritage Center (University of Wyoming), Papers of Walter Levy (hereafter cited as: Levy Papers), Box 1; reprinted in: Walter Levy, *Oil Strategy and Politics, 1941-1981* (Boulder: Westview Press, 1982), 9-23. Levy swam against the tide, as plenty of other analysts bought into the illusion of German strength, including the normally perceptive Ferdinand Friedensburg, who concluded in the autumn of 1940 that “[the] surprisingly auspicious [petroleum supply] position, which was established following the conclusion of the Western offensive, will probably continue during the next few months.” Friedensburg warned that aerial attacks on the synthetic plants could pose a threat, but he was not terribly concerned about any reduction in imports from Romania during the winter since he assumed that Germany would have accumulated large enough reserves before then. Overall, he surmised that existing production and imports could supply Germany “almost indefinitely” (fast unbegrenzt). Dr. F. Friedensburg, Regierungspräsident a. D., “Die deutsche Roh- und Treibstofflage,” Abgeschlossen am 03 October 1940, T-77/344 (Wi/IF 5.2199).

²⁴ Between 1918 and 1934, the Supply Staff (Nachschubstab) – after 1925, the Economics Division (Wirtschaftsabteilung) – of the Army Ordinance Office (Heereswaffenamt, HWA) handled all matters pertaining to the “defense-economy,” such as raw materials requirements. The Economics Division was transferred to the newly formed Armed Forces Office (Wehrmachtsamt) in 1935 and renamed the Defense-Economy Staff (Wehrwirtschaftsstab, WStb). In November 1939, the WStb was renamed as the WiRüAmt, and its chief (Georg Thomas) reported directly to the chief of the OKW (Wilhelm Keitel). Following Albert Speer’s appointment as Minister for Armaments and Munitions (Reichsminister für Bewaffnung und Munition) and General Plenipotentiary for Armaments Tasks (Generalbevollmächtigter für Rüstungsaufgaben im Vierjahresplan) in March 1942, those portions of the WiRüAmt dealing with armaments were transferred to the Armaments Ministry while the remainder (again renamed WStb) stayed with the OKW. Thomas remained in charge of both halves, but in November 1942 Speer removed him from his post in the Ministry of Armaments, and Thomas left active service the following February, ostensibly to complete the task of writing a history of the German war economy (which he did not finish

Germany's improvised petroleum supply infrastructure, combining domestic crude oil production, reserve stocks imported from abroad before the war, synthetic production, and imports from Romania and the Soviet Union, made no allowance for any country's requirements except its own. After the summer of 1940, however, the Third Reich was responsible for the oil requirements of the entire European Continent, now cut off from its traditional sources of supply in the Western Hemisphere and the Middle East. On the basis of 1938 production and consumption figures, the "Greater German area and German sphere of influence" following the fall of France consumed 9,558,000 tons more than it produced.²⁵ Germany not only had to pick up the slack left by former suppliers such as the United States, Venezuela, and Iraq, but it had to do so under wartime conditions. Invading the Soviet Union would only exacerbate the situation in the short run, as Moscow provided the Reich with more than 686,000 tons of petroleum products in 1940 under the Nazi-Soviet Commercial Agreement of February 1940 and would send 982,000 tons by August 1942 under the terms of a second agreement of January 1941.²⁶

Nevertheless, an invasion of the Soviet Union was the only viable option.²⁷ Careful appraisal of Germany's petroleum position in 1940/41, balanced against the strategic and ideological imperatives of its leadership, reveals that Germany had no option except to invade the Soviet Union and later the Middle East if Britain continued to fight. Germany's tiny petroleum industry, although inconsequential by the standards of its adversaries, had nonetheless fulfilled its primary objective: the Third Reich had enough

but was published in 1966). One of Thomas' former deputies, General Ludwig Becker, replaced him at the Chief of the WStb, which was renamed once more in March 1944 as the Field Economy Office (Feldwirtschaftsamt). See the organizational chart, "Die Entwicklung der militärischen Wehrwirtschaftsorganisation 1924-1945," reprinted in: Thomas, *Geschichte*, between 54-55. The sprawling system of oversight of the German war economy in 1939 is summarized in: Murray, *Balance of Power*, 19-27.

²⁵ Statistisches Reichsamt, Abteilung VIII, "Die Mangelstoffe des mittel-europäisch-großdeutschen Wirtschaftsraumes," June 1940, T-84/70 (EAP 66-c-12/11).

²⁶ In fact, Germany only received 876,000 tons from the Soviet Union during their brief partnership, compared to 8,820,000 tons from Romania from 1940 until mid-1944. OKW, Feldwirtschaftsamt (Bearbeiter: Dr. W. Tomberg), "Wehrwirtschaftliche Erkenntnisse von 5 Kriegsjahren," Abgeschlossen: November 1944, T-77/429 (Wi/IF 5.3517). The gap was slightly narrower between January 1940 and August 1941: 910,873 tons vs. 2,477,071 tons. OKW WiRüAmt/Ro, Az. 11 k 2209 V 1s [?], "Mineralöl-Einfuhr im 1. Und 2. Kriegsjahr," 22 December 1941, Imperial War Museum (Duxford), Foreign Documents Collection (hereafter cited as: IWM, FD) 4809/45. The various kinds of petroleum products imported from the Soviet Union and Romania between January and September 1940 are listed in: Ro V, Az. 11 k 2209 Vs, "Aufteilung der geschätzten Mineralöl-Einfuhr nach Sorten (ohne Einfuhr in das Protektorat)," no date, IWM, FD 4809/45.

²⁷ Norman Rich, *Hitler's War Aims: Ideology, the Nazi State, and the Course of Expansion* (New York: W.W. Norton & Company, 1973), 204-211.

petroleum for the German military to reverse the judgment of Versailles. Germany also had barely enough petroleum to launch Operation Barbarossa. Victory against the Soviet Union would allow Germany to escape the strategic dilemma afflicting it since the summer of 1940 and realize the geopolitical and racist fantasies of the National Socialist worldview (Weltanschauung).

Prologue: Petroleum and the First World War

During both of the world wars, Germany fought at significant disadvantage in terms of manpower, economic, financial, and materiel resources. Ironically, the Central Powers entered the First World War with a better oil position than the Western Allies, who lost access to Russian oil following the closure of the Turkish Straits when the Ottoman Empire joined the Central Powers in October 1914. Domestic consumption was tiny, as evidenced by the fact that there were only 83,000 trucks and cars in Germany in 1913, less than either France or Britain.²⁸ Germany started the war with a reserve of roughly 343,000 tons, which equaled one-quarter of its annual peacetime demand, or roughly 10% of its entire wartime consumption. Gasoline stocks amounted to 76,000 tons, against an estimated annual wartime demand of 105,000 tons.²⁹ Once these prewar stockpiles had been expended, Germany had to “anchor” its fuel supply on an early form of synthetic fuel, benzol, which is a byproduct from the burning of coal in coke ovens.³⁰ Domestic production of benzol increased from 130,000 tons in 1913 to 230,000 tons in 1917 (or 80% of Germany’s total gasoline imports in 1913 – 275,000 tons). The balance between the consumption and domestic production of kerosene (in this case, “Petroleum,” although “Leuchtöl” was the more common term), lubricating oils, and diesel fuel (Treiböl) was less favorable. Against roughly 800,000 tons of imported kerosene, 300,000 tons of lubricating oils, and 130,000 tons of bunker fuel in 1913, Germany’s domestic producers that year could muster only 50,000 tons each of kerosene and lubricants,

²⁸ There were 61,000 cars in Germany in 1913, compared to 91,000 in France and 209,000 in Britain. Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003), 93; and Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 1 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 173.

²⁹ In 1913, about two-thirds of Germany’s imports had come from the United States and Russia, while Galicia and Romania supplied about 27%. Ferdinand Friedensburg, *Erdöl im Weltkrieg* (Stuttgart: Ferdinand Enke Verlag, 1939), 67-80; Dr. Leonhardt, “Der kriegsentscheidende Treibstoff,” *Militär-Wochenblatt*, 124. Jahrgang, Nummer 26 (22 December 1939); and Hauptmann Walter Sußdorf, “Das Feldkraftfahrwesen,” in: *Der große Krieg, 1914-1918*, ed. M. Schwarte (Leipzig: Johann Ambrosius Barth, 1921), viii: 340 and 346.

³⁰ Alcohol could also be utilized as a power fuel after mixing it with benzol, but the supply of the former was circumscribed by the fact that the essential feedstock (potatoes) had to be used to feed the population first and foremost. Sußdorf, “Das Feldkraftfahrwesen,” 353-354. For more about benzol, see: Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell University Press, 1994), 227-228.

plus 90,000 tons of bunker fuel.³¹ Germany domestic crude oil production also collapsed, from a prewar peak of 114,000 tons to only 35,000 tons by 1920.³²

Unlike the Western Allies, which possessed virtually no indigenous sources of crude oil, Germany and Austria-Hungary could draw from two nearby sources: Romania and Austrian Galicia. In 1909, the latter was briefly the world's third-largest producer oil at just over 2,000,000 tons a year.³³ Production in Romania was 1,886,000 tons in 1913, of which 1,036,000 tons was exported.³⁴ Nearly 40% of Romanian exports went to Britain and France, and less than 20% went to Germany and Austria-Hungary.³⁵ Since combined German-Austrian wartime consumption peaked at 2,320,000 tons in 1918 and did not rise above 2,000,000 tons until 1917, the Central Powers would appear to have been in a strong position.³⁶

Things did not work out as planned. The Russians occupied Austrian Galicia in September 1914. When they retreated in May 1915, the Russians burned 350,000 tons worth of stocks, but they also left 480,000 tons of stocks plus the region's refineries untouched. The Austrians estimated that the occupation had cost them approximately 1,000,000 tons worth of damage and lost production – hardly an insignificant amount since German-Austrian consumption was only 1,130,000 tons in 1915.³⁷ A more important problem, however, was that Galician production had peaked in 1909 and then declined rapidly.

³¹ Ausrüstungsamt, Allgemeine Abteilung, "Deutschlands Rohstofflage," April 1920, T-84/142 (EAP 66-c-12-62/6).

³² Heinrich Gönningen, "Verstärkte Schmierölversorgung aus deutschem Erdöl," *Vierjahresplan*, 1937: XI.

³³ The best work on the history of the Galician oil industry is: Alison Frank, *Oil Empire: Visions of Prosperity in Austrian Galicia* (Cambridge: Harvard University Press, 2005).

³⁴ Friedensburg, *Erdöl*, 26, 21.

³⁵ Friedensburg, *Erdöl*, 52, 51. Germany's oil imports in 1913 totaled 1,296,000 tons, 93% of which came from the following sources:

Source	Quantity (Tons)
United States	693,000
Austria-Hungary	232,000
Russia	158,000
Romania	117,000

Source: Friedensburg, *Erdöl*, 70. See also: Karlsch and Stokes, *Faktor Öl*, 93.

³⁶ Friedensburg, *Erdöl*, 14.

³⁷ Friedensburg contrasts the Russians' oversight in Galicia with the thoroughness of the British in Romania two years later, where a small group of British and French saboteurs demolished the oilfields just prior to the arrival of German troops: "The destructive work of a few English officers... doubtless constituted one of the most significant individual successes of the World War. Friedensburg, *Erdöl*, 126-127. See also: Frank, *Oil Empire*, 185-189; and Sußdorf, "Das Feldkraftfahrwesen," 362-363 and 384.

Between 1914 and 1918, Austro-Hungarian production averaged only 850,000 tons a year.³⁸ The cause was geological: the Austrians had been producing oil since the 1850s, but they wasted huge amounts of oil through inefficient production techniques. Rather than conserve their oil before the war, the Austrians had inadvertently hastened the depletion of their reserves by encouraging the consumption of oil, which was cheaper than coal.³⁹

Romania also proved to be an unreliable source. Germany and Austria-Hungary were desperate for Romanian oil after the loss of Galicia, but the subsidiaries of the major U.S. and British oil companies operating in Romania would not do business with Germany. Although the major German oil company, Steaua Romana (owned by a subsidiary of the Deutsche Bank) tried exporting crude oil to Germany, the Romanian Government, under pressure from the Allies, forbade the export of either crude oil or gasoline soon after the war's outbreak. This led to a drop in exports from 1,036,000 tons in 1913 to only 429,000 tons in 1915, virtually all of which went to Germany and Austria-Hungary (155,000 tons and 227,000 tons, respectively).⁴⁰ Romania's entry into the war on the side of the Allies, and the subsequent destruction of its oilfields in December 1916, set back production considerably.⁴¹ Production dropped from 1,244,000 tons in 1916 to 517,000 tons in 1917 before recovering to 1,214,000 tons in 1918.⁴² Between July 1914 and August 1916, Steaua managed to send 161,418 tons of finished products (mainly kerosene, lubricants, diesel fuel, and turpentine) to Germany and Austria-Hungary, and another 318,720 tons to the German occupation authorities prior to the Armistice, or 5% of Germany and Austria-Hungary's total consumption between 1914 and 1918.⁴³ Exports over the course of 1918 reached 827,295 tons, of which 608,543 tons went to Germany, and the remainder to Austria-Hungary.⁴⁴ Total exports to

³⁸ Friedensburg, *Erdöl*, 21.

³⁹ Frank, *Oil Empire*, *passim* (esp. 173-204).

⁴⁰ Friedensburg, *Erdöl*, 52, and 27.

⁴¹ Besides the physical damage, the officer who led the Allied demolition estimated that they had destroyed roughly 210,000,000 gallons (5,000,000 barrels) of oil products. Lt. Col. J. Norton-Griffiths, "Report on the Destruction of the Roumanian Oilfields," 22 January 1917, G.T. 25, British National Archives (BNA), CAB 24/6.

⁴² Friedensburg, *Erdöl*, 26.

⁴³ "Die Bedeutung der deutschen Beteiligung an der Steaua Roman während des Krieges," no date or author, BA-B, R 8119/8364.

⁴⁴ Maurice Pearton, *Oil and Romanian State* (Oxford: Clarendon Press, 1971), 76-95.

the Central Powers during the twenty-month occupation amounted to 1,141,000 tons, 78% (890,000) of which went to Germany, and monthly deliveries had peaked at 110,000 tons.⁴⁵

Two weeks after the signing of the Armistice, Lord George Curzon (a member of the British War Cabinet) memorably claimed that “the Allies floated to victory on a wave of oil.”⁴⁶ Allied supplies dwarfed those of the Central Powers: by 1918, Allied oil consumption was more than quadruple that of the Central Powers (2,000,000 tons vs. 9,000,000 tons).⁴⁷ The ability to draw from such a surplus certainly played a key role at pivotal points in the war, such as when the French used taxis to ferry to troops to the Battle of the Marne in September 1914 and lorries four years later to contain then repel the German offensives of 1918.⁴⁸ At sea, the German High Seas Fleet was limited to a cruising radius of only eleven days, and German ships could not operate safely beyond the North Sea due to Britain’s control over the international coal trade.⁴⁹ In spite of its considerable successes in developing synthetic alternatives to gasoline such as benzol (production of which totaled as much as 2,000,000 tons over the entire war), Germany only managed to acquire enough petroleum during the war to meet 85% of its peacetime requirements, which were already disproportionately low compared to the Allies. By 1918, the disparity in tanks, mechanized transport, and aircraft had tilted decisively against Germany, even as it launched its last-ditch offensives in the spring.⁵⁰ German estimates put the Allied advantage in the air at

⁴⁵ Ro V, Az. 11 k 2209 (Vs), “Notiz für Chef W Ro anlässlich Besprechung in Karinhall am 15. February 1940,” 14 February 1940, T-77/123 (Wi/IF 5.533); and Wi VII, “Niederschrift: Sitzung in Karinhall am 2. Januar 1940 unter Vorsitz von Generalfeldmarschall Göring,” 29 January 1940, T-77/400 (Wi/IF 5.3063). For more information about Romania’s oil industry before and during the First World War, see: Dr. F/F., Vowi 3386, “Das rumänische Erdöl,” 11 April 1939, T-77/611 (Wi/IC 4.16).

⁴⁶ Quoted in: Anton Mohr, *The Oil War* (New York: Harcourt, Brace and Co., 1926), 155-156. Curzon’s assertion has been upheld by official historians of Royal Dutch/Shell (Shell), who argue that the lack of motorized transport put excessive strain on Germany’s stock of railways cars and horses. A shortage of the former reduced coal output, as much production could not be moved from the pithead. Demand for the latter also exacerbated the food crisis, itself partially a product of a lack of mechanization within German agriculture. Jonker and Zanden, *History of Shell*, 173-178.

⁴⁷ Friedensburg, *Erdöl*, 14-16. The Allies’ advantage is explained in more detail in: Jonker and Zanden, *History of Shell*, 163-173.

⁴⁸ Paul Foley, “Petroleum Problems of the World War: A Study in Practical Problems,” *United States Naval Institute Proceedings* 50: 261 (1924): 1816.

⁴⁹ W.G. Jensen, “The Importance of Energy in the First and Second World Wars,” *Historical Journal* 11: 3 (1968): 544.

⁵⁰ Jonker and Zanden, *History of Shell*, 175-177. Although the Allies did enjoy an overwhelming advantage in terms of mechanization, the Shell historians overlook the fact that simple numerical superiority means little unless soldiers have developed operations and tactics designed to exploit the capabilities of such weapons. Combined arms tactics

slightly more reasonable 3:1 ratio, although the situation was hopeless with regard to tanks – 45:3,000.⁵¹ Just as importantly, whereas the Allies could deploy 200,000 lorries by 1918, the Germans had only 25,000.⁵² Even had Germany managed to survive the defeats of the autumn of 1918, the future was bleak. Using the so-called “Plan 1919” drafted by Col. J.F.C. Fuller (one of the pioneers of armored warfare) as a starting point, the Allies were planning a massive onslaught for the coming July backed by tens of thousands of tanks and aircraft. “Had this come about,” one historian surmises, the Reich “would have been unable to offer effective resistance” since its oil shortage had constrained both its production of aircraft and its development of tanks, “despite being the country of Daimler, Diesel, and Benz.”⁵³ Of course, such hypotheses cannot be tested since Germany collapsed in 1918, before it ran out of petroleum.

The most effective rebuttal to Curzon’s claims came from Germany, in a 1939 book by a former mining engineer-turned politician, Ferdinand Friedensburg. *Erdöl im Weltkrieg* remains the only focused study on the subject.⁵⁴ In his discussion of “Crude Oil’s Significance for the Outcome of the World War,”

were only their infancy by 1918, and while tanks, planes, and lorries might have breached the German lines, the Allies had no understanding how to use those weapons to effect a decisive victory.

⁵¹ Dr. Leonhardt, “Der kriegsentscheidende Treibstoff,” *Militär-Wochenblatt*, 124. Jahrgang, Nummer 26 (22 December 1939).

⁵² Much of the credit went to the tremendous capacity of the U.S. automobile industry. The number of vehicles in the United States had exploded from 23,000 in 1902 to over 1,000,000 by the start of the war. During the war, the production of trucks increased from 23,500 in 1913 to 227,300 in 1918 (which was one-quarter of total automobile production that year). By the end of the war, the U.S. automobile fleet stood at 6,000,000 vehicles and increased a further 2.5 times over the next five years. A.A. Fursenko, *The Battle for Oil: The Economics and Politics of International Petroleum Conflict over Petroleum, 1860-1930* (Greenwich, 1990), 179-180, 192.

⁵³ Jensen, “Importance of Energy,” 542-545 (quotation from pg. 543).

⁵⁴ It is indicative of the esteem in which Friedensburg’s work was held by the German military that perhaps the only detailed analysis produced by the latter on the subject of oil and the First World War was taken verbatim from *Erdöl im Weltkrieg*: Maj. Gieche (?), G.L. 5 (I), “Studie: Mineralölversorgung und Kriegsentscheidung,” 01 February 1940, enclosed with: Der Reichsminister der Luftfahrt und Oberbefehlshaber der Luftwaffe (Ob.d.L. – Göring; signature illegible) an das OKW, Wi.RüAmt/Ro. z.Hd. v. Herrn Oberst Becht, GL 5, Min.Öl-Abt. Az./Nr. 2530/2.40 (I), T-77/231 (Wi/IF 5.1180). See also the laudatory review of *Erdöl im Weltkrieg* in: *Militär-Wochenblatt*, 124. Jahrgang, Nummer 3 (14 July 1939). Friedensburg was an unrepentant critic of the regime and actually spent time in Gestapo custody in 1935, which might explain why the Air Ministry did not want to draw attention to the fact that it was plagiarizing his work. The British also took notice of Friedensburg’s book, as it appeared immediately prior to the outbreak of the Second World War. Arthur C. Hearn, a former Anglo-Iranian Oil Company director, produced a summary of Friedensburg’s book for the company prior to re-entering government service as the Admiralty’s leading adviser on oil policy: “Das Erdöl im Weltkrieg (Petroleum Information Bureau) by Dr. Ferdinand Friedensburg (1939)...,” 11 August 1939, British Petroleum Archive, Archival Reference No. 72492. According to Hearn’s summary, Friedensburg’s primary contribution was his “very natural reflection that – mutatis mutandis – strategists of the future have much to learn from the knowledge and experience, painfully gained over two decades ago, in respect to the need for assigning to the economic issues their full and proper place in the general strategic plan.” During the Second World War, the Ministry of Economic Warfare also produced a summary for the benefit of

Friedensburg contended that existing analyses had been influenced by assumptions about oil's future importance.⁵⁵ The Allies did, indeed, have an overwhelming superiority in terms of overall supplies. This imbalance did not, however, determine the outcome of the war. Military consumption had increased dramatically, even before the war. In 1911/12, the Army estimated that it would require 20,000 tons per year in wartime, but this figured had more than tripled by 1913/14 and could reach as much as 180,000 tons by 1919. Nonetheless, Germany was still able to cover roughly 80% of its requirements during the war (as compared to peacetime consumption).⁵⁶ The German military still possessed adequate stocks by war's end: the U-boat fleet had enough reserves to continue operations for another four to five months, and although the Air Force and Army were not awash in oil, supplies were "adequate" and "sufficient."⁵⁷ Indeed, according to one immediate postwar assessment, domestic benzol production and imports from Romania and Galicia "sufficed to meet the most urgent requirements."⁵⁸ The German fuel position only became intolerable after the collapse of Bulgaria severed imports from Romania, which rendered any discussion of restarting the war after the Armistice out of the question.⁵⁹

the U.S. Government: "Some Notes on 'Das Erdöl im Weltkrieg' by Dr. Friedensburg," no date, enclosed with: O.F. Thompson (Ministry of Economic Warfare) to S. Kilbey (British Embassy, Washington DC), "The German Oil Position," 21 January 1943, NARA, Record Group 169: Record of the Foreign Economic Administration, Entry 361, Box 2202.

⁵⁵ Friedensburg, *Erdöl*, 121-128.

⁵⁶ Karlsch and Stokes, *Faktor Öl*, 93, 111.

⁵⁷ What Friedensburg failed to note was that Germany had to make do with benzol "stretched" with either gasoline or alcohol. Maj. H.H. Zornig (Assistant U.S. Military Attaché, Berlin), "The German Motor Fuel Situation and Its Effect on Motor Design," Report No. 9947, 22 January 1929, in: University Publications of America, *U.S. Military Intelligence Reports, Germany 1919-1941* (Frederick: University Publications of America, 1983), Reel 8. This was hardly ideal, for the benzol-mixture resulted in lower performance for German combat aircraft. Erich Ludendorff, *Meine Kriegserinnerungen* (Berlin: Ernst Siegfried Mittler und Sohn, 1919), 273. Benzol also had the unfortunate tendency to freeze in cold conditions unless it was mixed with toluol and gasoline. Supplies of the latter in particular were always in short supply and had to be reserved primarily for aircraft consumption. Sußdorf, "Das Feldkraftfahrwesen," 354. "Every German soldier at the front," one author recalled, could "remember the uncomfortable situation" that ensued when their motors failed as a result of the inferior fuel being used: "It dawned upon the more reflective that here lay a problem that could decide the war." Verbandssyndikus Kurt Bronk, "Deutschlands Erdöl-Selbstversorgung, militärisch gesehen," *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935).

⁵⁸ Ausrüstungsamt, Allgemeine Abteilung (II Fb), "Deutschlands Rohstofflage," May 1920, T-84/142 (EAP 66-c-12-62/5).

⁵⁹ Friedensburg, quoting Ludendorff, contends that the surrender of Bulgaria, and the "doubtful" prospects for stabilizing the Austro-German flank in order "to preserve Romania's oil deliveries to us," hastened the Army High Command's demand that the German Government request an armistice. Friedensburg, *Erdöl im Weltkrieg*, 124; Ludendorff, *Kriegserinnerungen*, 579. See also: Sußdorf, "Das Feldkraftfahrwesen," 394.

Friedensburg denied that “there was any direct connection between the collapse of 1918 and the supply of petroleum.”⁶⁰ The consequences of the Central Powers’ relative dearth of oil were more subtle. Inadequate supplies of industrial lubricating oils probably played a role in the decline in industrial productivity by the closing stages of the war. The oil shortage may also have contributed to the crisis of confidence both at the front and in Germany.⁶¹ Years later, former soldiers still complained about their “bitter” experience at coping with fuel shortages. “A poor man’s economy [Armeleutewirtschaft],” was the verdict of one officer.⁶² A lack of oil also contributed to the relative decline of the Germany Army, as evidenced by Germany’s inability to match the Allies in the production of important new weapons such as submarines, tanks, and aircraft.⁶³ “Even if the oil crisis in Germany in no way reached the most severe magnitude,” Friedensburg concluded that “it was doubtless one of the primary causes for the gradual and then ever faster breakdown in strength.” Of greater significance were the lessons to be drawn from the experiences of 1914-1918, for the war had demonstrated “the connection between the conduct of war and the economy, most notably the importance of raw materials questions and in particular the importance of

⁶⁰ This was also the opinion of at least one of Germany’s economic warfare planners, who challenged an approving reference to Curzon’s assertion by one of his colleagues. Although “during the World War Germany [enjoyed] no surplus of crude oil, there was in any case no shortage that would have played a significant role in the outcome of the war.” Aktennotiz, “Stellungnahme von W Wi VI d zur Ausarbeitung *Mineralölversorgung Deutschlands unter dem Gesichtspunkt des Wirtschaftskrieges* (von W Ro V),” no date, author’s signature illegible, T-77/526 (Wi/I.156).

⁶¹ Friedensburg based this part of his argument on Ludendorff’s memoirs. One is tempted to ascribe to Ludendorff an ulterior motive – as an outspoken proponent of the “Dolchstoßlegende,” he had every reason to blame the public for not persevering through the war’s privations. In this case, however, Ludendorff praised the resilience of the German people: “It is representative of our circumstances in Germany how little this evil [the lack of fuel] was the subject of discussion.” Ludendorff, *Kriegserinnerungen*, 274.

⁶² Obrstlt. a.D. Scholz Roesner, “Die Treibstoff-Frage in ihrer Bedeutung für die Landesverteidigung,” *Militär-Wochenblatt*, 118. Jahrgang, Nummer 44 (25 May 1934). See also: Verbandssyndikus Kurt Bronk, “Deutschlands Erdöl-Selbstversorgung, militärisch gesehen,” *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935).

⁶³ Friedensburg’s conclusions do not conflict with those of Walter Sußdorf, although the latter claimed (since he provided no citations) that the gradual motorization of the German Army, higher than anticipated operational consumption, and civilian requirements produced “a kind of shortage of fuels, particularly benzol,” as early as the summer of 1915. This shortage forced the High Command to impose rationing on the Army starting 01 September 1915. These efforts proved unsuccessful because nothing could be done to stem “the progressive motorization” of warfare due to the emergence of motor vehicles and aircraft: Sußdorf, “Das Feldkraftfahrwesen,” 353-354 an 363. As of 1925, Sußdorf was a Privy Councillor (Regierungsrat) in the Reich Ministry of Transportation (Reichsverkehrsministerium).

petroleum supplies [...].”⁶⁴ Germans would take this lesson to heart after 1918 as they grappled with challenges posed by the shift from coal to oil and plotted their revenge.

⁶⁴ Friedensburg, *Erdöl*, 121-128. This section was also reprinted in one of the many military journals in circulation during the Third Reich, whence it caught the attention of the WiRüAmt: “Die Bedeutung des Erdöls für die Entscheidung des Weltkrieges,” provenance unclear (possibly *Wehrwirtschaftliche Umschau*), date unknown, T-77/437 (Wi/IF 5.3689). For a complementary analysis, see also: Maj. F.G. Tryon (Office of the U.S. Assistant Secretary of War), “Raw Materials Supplies of Germany during the World War,” 16-29 June 1930, NARA, Record Group 107: Records of the Secretary of War (hereafter cited as: RG 107), Entry 191, Box 45; Karlsch and Stokes, *Faktor Öl*, 96-112; and Charles More, *Black Gold: Britain and Oil in the Twentieth Century* (London: Continuum, 2009), 17-22.

Picking up the Pieces: 1918-1925

After the Treaty of Versailles, German policymakers had to achieve their ambitions in the face of even greater scarcity. Before the war, German oil and banking interests seemed poised to break Anglo-American control of at least the European petroleum market. Germany's fledgling oil companies, Deutsche Petroleum A.G. (DPAG) and Deutsche Erdöl (DEA), backed by their banking patrons, the Deutsche Bank and Disconto-Gesellschaft, respectively, posed a serious threat to Standard Oil's domination of the European market.⁶⁵ Germany also enjoyed a strong position within the Romanian oil industry, where a Deutsche Bank subsidiary, Steaua Romana (acquired in 1903), was the country's second-largest oil company in terms of production in 1913 and the largest with regard to both capitalization and refining capacity.⁶⁶ The German banks were also hard at work building partnerships with Russian suppliers in order to eliminate the need for imports from the United States. These efforts culminated in 1906 with the formation of the Europäische Petroleum Union (EPU), whereby the Deutsche Bank, in partnership with the two largest Russian oil companies, Branobel and the Rothschilds, would market Caucasian oil in Europe. When efforts to drive Standard Oil from the European market failed, the EPU formed a cartel with the U.S. giant, receiving 20% of the European kerosene trade.⁶⁷ Building upon

⁶⁵ DPAG and DEA merged in 1925, with the latter holding a 54% stake in the new company (also called DPAG), while their patrons followed suit in 1929. The Deutsche Bank's official history briefly covers the pre-1918 history of the bank's involvement in the oil industry, as well as the failed attempt to merge DPAG and DEA in 1920, but not the final merger itself. Lothar Gall, *et al.*, *The Deutsche Bank* (London: Weidenfeld & Nicolson, 1995), 64-67, 146-150, 171-172, and 181. The unique relationship between banking and oil in Germany, which persisted until the end of the Third Reich, is considered in: Helmut Mejcher, *The Struggle for a New Middle East in the 20th Century: Studies in Imperial Design and National Politics* (Piscataway: Transaction Publishers, 2007), 259-269.

⁶⁶ The other German firm, Concordia (a subsidiary of the Disconto-Gesellschaft), occupied the fifth-place among Romanian oil producers in 1913. In 1907, German capital controlled 62% of the Romanian oil industry, against only 10% for Britain. The Germans later claimed that their displacement by British and French interests had harmed the Romanians, since the major oil companies had no desire to develop Romania at the expense of their more profitable possessions elsewhere. "Rumäniens Öl unter deutschem Schutz," *Militär-Wochenblatt*, 125. Jahrgang, Nummer 26 (27 December 1940); and W.F., "Neuordnung der rumänischen Erdölwirtschaft," *Deutsche Wehr*, Nr. 48, 45. Jahrgang (28 November 1941). For a detailed statistical overview of the Romanian oil industry from the turn of the century until 1939, see: Werner Trees, *Untitled Memorandum*, 09 August 1940, PAAA, R 105989.

⁶⁷ The agreement broke down in 1912, after the Deutsche Bank spearheaded efforts to establish a monopoly over the kerosene trade in Germany by cutting out Standard Oil and replacing it with oil from the Nobels, the Rothschilds (now owned by Shell), and U.S. rivals of Standard. The war intervened before these developments could play out. Alfred Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge: Harvard University Press, 1990), 435-441; Thilo Dähne, Hptm. a.D., Dipl. Volkswirt., "Die Bedeutung von Kohle und Öl in weltwirtschaftlicher und politischer Hinsicht," *Wissen und Wehr*, Sechster Jahrgang (1925); Fursenko, *Battle for Oil*,

its longstanding relationship with the Ottoman Empire since 1888 through the construction of the Baghdad to Berlin railway, the Deutsche Bank also secured a one-quarter share of the Turkish Petroleum Company (TPC). The TPC had been in the process of signing a concession to explore the Ottoman vilayets (provinces) of Mosul and Baghdad when the First World War broke out.

Oil played a prominent role within German strategy during the First World War. Thanks to its military successes in the east, in 1918, Germany coerced Romania into signing an favorable petroleum agreement in addition to the Treaty of Bucharest, which would give a German-Austrian holding-company a dominant position within the Romanian oil industry. Finally, in August 1918, even as the Western Front buckled under the weight of Allied counteroffensives, the Reich signed a supplementary agreement to the Treaty of Brest-Litovsk with the fledgling Bolshevik regime, giving it up to one-quarter of all of the oil produced in the Caucasus.⁶⁸

After 1919, Germany was left with nothing. The loss of Germany's overseas colonies was not especially harmful.⁶⁹ But Germany's new borders cut into its already meager domestic oil production: 50,000 tons out of the 120,000 tons produced in 1913 had been lost.⁷⁰ More damaging was the abrogation of the punitive treaties with Romania and Russia under the terms of the Versailles Treaty, and the

107-125; Nowell, *World Oil Cartel*, 59-65; and Harold Williamson and Ralph Andreano, *American Petroleum Industry: The Age of Energy, 1899-1959* (Evanston: Northwestern University Press, 1963), 242-260.

⁶⁸ Both U.S. and British analysts were quick to spot the economic as well as the strategic rationales behind the Treaty of Bucharest. For U.S. analysis, see the collection of papers concerning the treaty in: Yale University Library, Manuscripts and Archives, Inquiry Papers, Series III, Box 20, especially: "The Bucharest Treaty as Affecting Rumanian Petroleum Resources," no date or author; "Strategic and Economic Aspects of the Treaty of Bucharest: Summary of Major D.W. Johnson's Memorandum," no date or author; and "Abstract of the Petroleum Agreement between Rumania and the Central Powers, 7 May 1918, no author. For British analysis of the treaty, see: Political Intelligence Department, Foreign Office, "Memorandum on the Meaning and Effect of the Bucarest [*sic*] 'Peace Treaty,'" 19 September 1918, Rumania/002, BNA, CAB 24/67. The supplementary agreement to Brest-Litovsk is reprinted in: U.S. Senate, *Bolshevist Movement in Russia: Letter from the Secretary of State Transmitting to the Senate Committee on Foreign Relations a Memorandum on Certain Aspects of the Bolshevist Movement in Russia*, 66th Congress, 2nd Session, Document No. 172 (Washington, DC: U.S. GPO, 1920), 49-55.

⁶⁹ There was considerable debate in Germany over the economic value of the lost colonies. Supporters of the colonies' return to Germany in the 1930s such as Heinrich Schnee (the last Governor of German East Africa) claimed that their meager economic contributions to Germany stemmed from fact that they had only been under German rule for a generation and were still "wild and undeveloped." Although the former colonies subsequently exported considerable quantities of raw materials that would have gone a long way to covering Germany's import requirements in the mid-1930s, none of them produced oil. Gouverneur a.D. Dr. Schnee, "Rohstoffe und Kolonien," *Militärwissenschaftliche Rundschau* 1: 6 (1936).

⁷⁰ Oblt. Löhr, "Deutsche Treibstoffversorgung," *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933).

expropriation of the Deutsche Bank's assets in Romania, Galicia, and the former Ottoman Empire.⁷¹

Many of these properties went to France as spoils of war, and Paris used the Deutsche Bank's shares in the TPC to establish the first French major oil company, the Compagnie Française des Pétroles (CFP).⁷²

The Deutsche Bank's marketing subsidiary in Britain, ironically named British Petroleum (BP), was also expropriated. The British Government sold BP off to the Anglo-Persian Oil Company (APOC) in 1917, thereby giving the fledgling company whose only prior assets were its under-developed upstream operations in Persia a new lease on life by vastly expanding its downstream presence.⁷³

Within Germany itself, the outcome of the war gave a decisive edge to foreign oil companies, not just the U.S and British major companies, but also outsiders such as the Benzol-Verband, which marketed Soviet exports. Deprived of stable sources of supply, DPAG and DEA sold off their marketing subsidiary (OLEX) to APOC between 1925 and 1931. As late as 1938, the petroleum trade in Germany remained largely in the hands of the German subsidiaries of the U.S. and British major oil companies:

Subsidiary (Parent Company)	Share of German Market
Deutsche-Amerikanische Petroleum Gesellschaft (Standard Oil Company of New Jersey – Jersey)	26.1%
Rhenania-Ossag Mineralölwerke (Royal Dutch/Shell)	22%
OLEX (APOC)	9.6%

⁷¹ For the perspective of the leadership Deutsche Petroleum Aktien Gesellschaft (the Deutsche Bank subsidiary that owned Steaua between 1903 and 1918) on its postwar misfortunes, see: "Geschäfts-Bericht der Deutschen Petroleum-Aktien-Gesellschaft über das sechzehnte Rechnungsjahr (1. Oktober 1918 bis 30. September 1919)," March 1920, PAAA, R 89383. The DPAG's Managing Board (Vorstand) considered the Versailles Treaty to be just a fig leaf for the Allies to eliminate a dangerous commercial competitor: Germany's enemies "were determined to exterminate root and branch [mit Stumpf und Stiel auszurotten]" the German corporate presence overseas, which had heretofore developed "respectable enterprises of world renown." Leading Deutsche Bank executives, most notably Emil Georg von Strauss and Kurt Weigelt (both of whom served on DPAG's Managing Board), never reconciled themselves to the loss of the bank's assets Romania and Iraq, and they would seek redress throughout the Weimar Republic and Third Reich. Due to space constraints, it was impossible to include consideration of the Deutsche Bank's efforts to reacquire its lost "rights" in Romania and Iraq after 1918. See, instead: Dietrich Eichholtz, *Deutsche Ölpolitik im Zeitalter der Weltkriege: Studien und Dokumente* (Leipzig: Leipziger Universitätsverlag, 2011), 96-167 and 404-405.

⁷² Richard Kuisel, *Ernest Mercier: French Technocrat* (Berkeley: University of California Press, 1967), 21-44; and Nowell, *World Oil Cartel*, 148-222.

⁷³ R.W. Ferrier, *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982), 217-219.

The Benzol-Verband and the Standard Oil Company of New York claimed much of the remainder. Meanwhile, the tiny Deutsche Gasolin, an IG Farben subsidiary that sold synthetic gasoline, accounted for less than 4% of the German petroleum trade.⁷⁴

At the beginning of 1920, the Armaments Office (Ausrüstungsamt) of the Army High Command (Heeresleitung) in the newly constituted Defense Ministry (Reichswehrministerium, RWehrM) completed what may have been the military's first postwar assessment of Germany's fuel supply. The most important domestic source of fuel was benzol, the supply of which at the time was 85,000 tons per annum (35,000 tons of which went to the Allies), with only 10,000 tons available for common consumption, although a "gradual increase" in overall production was "to be expected." Imports of gasoline, handled by the subsidiaries of Jersey and Shell, stood at 20,000 tons per month but were "dependent upon the supply of foreign exchange."⁷⁵ Only a fraction of total civilian and military demand for fuel could be satisfied from the existing monthly supply of 20,000 tons available in January (6,000 tons of benzol and 14,000 of gasoline). The Armaments Office estimated the requirements of a 200,000-man Army at 1,200 tons per month, and 700 tons in the case of a 100,000-man Army. Deliveries, however, totaled only 500 tons in January and 600 tons in February. During the war, Germany's average civilian and military requirements reached 28,000 tons per month (half of which went to the Army), although supplies reached as much as 50,000 tons during "periods of major military operations" thanks to supplies "looted" from Romania.⁷⁶

Three months later, the Armaments Office produced a more thorough evaluation of Germany's raw materials position. The lessons of the World War were on the minds' of its authors. They lamented that, in the years before the war, little attention was placed on the fact that Germany's burgeoning economic power increasingly relied upon the importation of vital raw materials. Petroleum clearly "plays a pivotal

⁷⁴ Chandler, *Scale and Scope*, 519-521.

⁷⁵ For prewar figures concerning imports and domestic production of major petroleum products, see: Ausrüstungsamt, Allgemeine Abteilung, "Deutschlands Rohstofflage," April 1920, T-84/142 (EAP 66-c-12-62/6); and Auswärtiges Amt (AA, Außenhandelsstelle), Abschnitt XI B, Chemie (Rohstoffe), "Die Weltlage des Erdöls im Jahre 1919," Blatt Nr. 43/II (20 June 1920 [?]), PAAA, R 97787. The AA study provided a total 1913 import figure of 1,300,000 tons (750,000 tons of kerosene, the remainder divided equally between gasoline and crude oil), valued at 183,000,000 RM.

⁷⁶ Reichswehrministerium (RWehrM), Heeresleitung, Ausrüstungsamt, "Uebersicht über die Betriebsstofflage," February 1920, T-84/142 (EAP 66-c-12-62/6).

role within both the peace and wartime economy.” When it came to the civilian economy, “[even] if all other raw materials are available in large quantities,” the process of converting unfinished goods into war materiel was impossible “if fuels for motors and lubricating oils for machines and railways was lacking.” On the military side, the “increasing motorization” of the armed services ensured for oil a “steadily growing significance. Its shortage in the last war became all too noticeable for all of us.” Unfortunately, nature had been a “stepmother” to Germany when it came to crude oil. Prewar production had only reached 120,000 tons, nearly half of which came from Alsace and had to be written off following its return to France in 1918.⁷⁷ Imports on the other hand (primarily from the United States) were more than twelve times greater.⁷⁸ On the plus side, postwar imports of kerosene had dipped sharply as a result of electrification, while Germany’s territorial losses had the unintended consequence of reducing its total consumption.⁷⁹ The overall situation was grim: “As a result of this decisive dependence upon foreign imports our [supply] of fuels and lubricating oils would quickly become difficult during a war.”⁸⁰

Benzol was not necessarily the problem, although its supply was tied to the production of hard coal (anthracite or bituminous). The same could not be said of diesel fuel or lubricating oils. Only half of the 180,000 tons of the former required in 1913, which was the primary source of fuel for the U-boats, was produced domestically through the low-temperature carbonization of coal. Prewar research had indicated that carbonization could be used to produce both gasoline and lubricating oils, but little had been done to develop this capacity in view of the cost advantage enjoyed by natural petroleum. Although synthetic fuels had proven inadequate during the previous war, the report counseled that “it should not be said that this must be the case in the future.” Germany could now produce so-called “Reichskraftstoff” (literally,

⁷⁷ A handwritten addition indicates that production elsewhere in Germany (primarily around Hannover) dropped to only 40,000 tons by 1922.

⁷⁸ In view of the infancy of motorization, only 170,000 tons was gasoline.

⁷⁹ AA (Außenhandelsstelle), Abschnitt XI B, Chemie (Rohstoffe), “Die Weltlage des Erdöls im Jahre 1919,” Blatt Nr. 43/II (20 June 1920 [?]), PAAA, R 97787. The report acidly observed that “[whether] the stark impoverishment of Germany will have as a consequence a considerable shrinking of the automotive and aeronautical sectors is not yet apparent.” Import costs had also increased markedly as a result of the loss of Germany’s civilian oil tankers. Finally, the relinquishment of German interests in the Romanian and Galician oil industries, besides ending the threat to the Standard Oil’s “monopoly efforts,” could not be redressed since the dearth of foreign exchange precluded any efforts to search for and develop new sources of oil abroad.

⁸⁰ Ausrüstungsamt, Allgemeine Abteilung (II Fb), “Deutschlands Rohstofflage,” May 1920, T-84/142 (EAP 66-c-12-62/5).

Reich power fuel) by combining benzol with alcohol (57% to 34%), plus an additional 9% of tetralin (itself a derivative of coal tar), thereby alleviating the strain on benzol production.⁸¹ New facilities for the production of coal tar (which could subsequently turned into fuel) were being constructed, “and research and development into the task of improving the methods for treating our hard and soft coal” was being pursued “tirelessly.” Assuming it was possible reach a solid to liquid fuel conversion rate of 7%, 23,500,000 tons of coal would “suffice to cover our entire demand for oil.”⁸²

At the same time, defeat had rendered Germany irrelevant to the postwar struggle for oil according to a widely circulated study of global oil politics from the summer of 1920. The author, one Professor Schlawe (who had previously taught the Technische Hochschule in Bucharest and then led one of the German oil companies in Romania) stressed that that the “mastery of crude oil is synonymous with world leadership.” This was the most recent manifestation of a recurring theme: “the emergence and growth of British dominance first in Europe and then the world led back to its former mastery over certain important raw materials,” including coal. It was fair to say “that thanks to the control of crude oil, British world domination is definitively secured.” Which was fine for Britain, but less so for the rest of the world. Oil-poor states that could not purchase adequate supplies at “acceptable prices” would “lose the ability to compete economically,” while nations “whose supply of crude oil was not unconditionally secured could no longer conduct war.” Like the military, Schlawe believed that the most useful step Germany could take would be “the sharpest and most technically accomplished utilization of domestic raw materials,” most notably the development of synthetic substitutes for crude oil. Success in this endeavor “must be the aim of German industry and research,” for it alone offered the possibility of “freeing Germany to a large extent from imports of crude oil products.”⁸³

⁸¹ A crossed-out portion of the report, which appears to have been a working draft, even surmised that the day was not far off that alcohol could itself be used as a “full-fledged” fuel, thereby contributing to the “complete self-sufficiency [Selbstständigmachung] of Germany... at the very least during periods of emergency.”

⁸² Even then, another crossed out portion read, “we stand better prepared today in the event of a cut-off from overseas sources of oil than in 1914.” Ausrüstungsamt, Allgemeine Abteilung (II Fb), “Deutschlands Rohstofflage,” May 1920, T-84/142 (EAP 66-c-12-62/5).

⁸³ Abschrift W 1832, Prof. Schl/Str., 29-6-1920, “Das Erdöl in seinen Beziehungen zur äussern Politik [*sic*],” 08 July 1920, PAAA, R 94461. Schlawe’s paper made its way from the Office of the President to the Foreign Minister.

German scientists developed two methods of synthetically producing petroleum products: the Bergius Process (hydrogenation, 1913) and the Fischer-Tropsch Process (F-T, 1923).⁸⁴ The former, which seemed to be most promising economically, was the handiwork of the German Nobel Laureate, Friedrich Bergius.⁸⁵ Through hydrogenation, coal is liquefied by combining it with hydrogen under high pressure. The liquefied hydrocarbons can then be refined into various kinds of petroleum products, including high-octane motor and aviation fuel. If it turned out to be industrially feasible and cost-competitive (and this was not yet clear, since Bergius had been unable to find a suitable catalyst and could not demonstrate that large-scale production was possible), hydrogenation would transform Germany's economic and military position. The results during the World War had been disappointing, but the Germans had already confounded expectations once before by developing the Haber-Bosch Process for the fixation of nitrogen, and U.S. military analysts warned that "[the] next war may find the Germans' able to make their own oil as the last one found them able to make their own nitrates."⁸⁶ At one stroke, Germany could eliminate both its need for oil imports (thereby saving hard currency and freeing it from economic blackmail by Britain) and its unemployment problem by creating a vast new market for German coal and steel producers. Moreover, hydrogenation yielded better results with low-quality lignite rather than more expensive bituminous or anthracite coal.⁸⁷ Between 1924 and 1933, Germany accounted for 20% of the world's coal production (behind only the United States) and 75% of its lignite production.⁸⁸

Minute from [Illegible] (Ministerialdirektor, Büro des Reichspräsidenten) to Reichsaußenminister Dr. Walter Simons, 21 September 1920, PAAA, R 97745.

⁸⁴ For further explanation concerning the differences between the two processes, including their costs and coal/steel requirements, see: H. Koppenberg, "Mineralölgewinnung aus Kohle," *Vierjahresplan*, 1937: V; British Intelligence Objectives Subcommittee, B.I.O.S. Final Report No. 1697 (Interrogation No. 667), Item No. 30, "Synthetic Oil Production in Germany: Interrogation of Dr. Bütetisch," Fischer-Tropsch Archive (hereafter cited as: F-T Archive); and Stokes, "Nazi Oil Industry," 264-272. During the Third Reich, the Bergius Process was referred to as hydrogenation (Hydrierung), which will be the practice in this chapter for all sections dealing with the period after 1933.

⁸⁵ For more on Bergius himself, see: Anthony Stranges, "Friedrich Bergius and the Rise of the German Synthetic Fuel Industry," *Isis* 75: 4 (1984): 642-667.

⁸⁶ Maj. F.G. Tryon, "Raw Materials Supplies of Germany during the World War," 16-29 June 1930, NARA, RG 107, Entry 191, Box 45.

⁸⁷ Documents from this period usually referred to both anthracite and bituminous coal as "Steinkohle," and lignite (or soft coal) as "Braunkohle." The terms lignite and brown coal will be used interchangeably.

⁸⁸ Hughes, "Technological Momentum," 116.

In view of the possible gains, it should not come as a surprise it was the Weimar Republic – not the Third Reich – that took the first steps toward constructing Germany’s synthetic fuel industry. As early as 1925, the matter of state support for the construction of one or more large-scale industrial Bergius production facilities was the subject of discussions throughout the German Government and between the national and federal states. In March of that year, the Reichsarbeitsministerium (RARbM) invited representatives from across the government to participate in a conference to discuss whether or not to offer Bergius state assistance to establish a factory in Lower Saxony. The invitation made reference to the existing “sales crises” besetting the German coal industry and suggested that hydrogenation offered a viable, long-term means of support for the industry: “[This matter] has the appearance of being an invention of the greatest economic and social significance.”⁸⁹

During the conference, the RARbM took the position that the government had to find a new means of providing effective support for the coal industry, whose financial difficulties were less the product of short term economic difficulties than long term systemic challenges, including its increasing replacement by oil. For those reasons, the RARbM had been “following for some time with great interest stronger chemical applications for coal, most of the all the discovery of Dr. Bergius [...]” The RARbM believed that hydrogenation was capable of converting 100 kg of ground coal into roughly 50 kg of liquid hydrocarbons (primarily gasoline) – this 50% conversion ratio compared quite favorably to that of carbonization (only 7 to 10%), the most commonly used means of synthesis in Germany at the time.⁹⁰ The RARbM also pointed out that, in 1922, 740,000 tons of the 1,330,000 tons of petroleum consumed by Germany had to be imported at a cost of 300,000,000 RM: “The oil that has heretofore been imported could be for the most part replaced by the Berginization [*sic*] of 3,000,000 tons of coal dust.” This was

⁸⁹ Der Reichsarbeitsminister (Im Auftrage gez. Dr. Oscar Weigert) an den Herrn Reichsminister der Finanzen, *et al.*, IV Nr. 3310/25, “Förderung eines Verfahrens zur Verflüssigung der Kohle,” 31 March 1925, T-77/82 (Wi/IF 5.372). Among the parties invited was the Reichswehrminister.

⁹⁰ The Director of the Silesian Coal Research Institute (Breslau), Prof. Dr. Fitz Hofmann, modified this calculation slightly, estimating that the conversation rate “fluctuated depending on the kind of coal [used] between 35 and 40 kg of distilled oils.” He was nonetheless quite supportive, pointing out that Berguis’ work has been “examined very critically 10 to 12 times.” Hofmann also produced a favorable advisory opinion supporting the disbursement of “state financial support” for the project in Lower Saxony. Hofmann, “Gutachtliche Aeußerung über ein Verfahren zur Gewinnung von Mineralölen aus Kohle nach Bergius,” no date, T-77/82 (Wi/IF 5.372). See also: “Das Berginverfahren und seine Rentabilität,” Quelle: *Kulturbeiträge* Nr. 94 v. 26.11.25, T-77/82 (Wi/IF 5.372).

clearly a matter of economic, social, and military “significance,” for it would stimulate demand for coal from depressed mining communities. The necessary production facilities would also create a customer for German steel manufacturers (“probably Krupp”). The RArbM therefore endorsed granting a 2,500,000 RM interest-bearing loan from the Reich to be repaid in six years to commence industrial production using hydrogenation “for the first time.”⁹¹

The assembled officials (both bureaucrats and scientists) were reluctant to provide state support for a private enterprise, but there was a general consensus that it was justified in the event that private capital was not forthcoming. The representative of the Ministry of Transportation (Reichsverkehrsministerium, RVM) mentioned that the German automobile industry would be reassured by having a secure supply of fuel. Overall, he felt that the “Bergius process [was] of the greatest importance for the German automotive sector.” Interestingly, the only ministry lacking any “means” of assisting Bergius was the RWehrM.⁹² Nevertheless, its representative agreed that the “[process] deserved the strongest support from the standpoint of national defense.”⁹³

Although the RWehrM could not provide Bergius with any direct assistance, it did make representations on his behalf to the state government of Baden, where Bergius already had a plant in operation (at Rheinau). The RWehrM assured the Government of Baden that hydrogenation could achieve

⁹¹ Dr. Strunden (Reichsarbeitsminister), IV 3310/25., “Betr.: Förderung des Bergiusverfahrens,” 11 April 1925, T-77/82 (Wi/IF 5.372).

⁹² The minutes do not mention that the officer in question was Hauptmann Hermann von Hanneken of the HWA, which handled raw materials questions for the RWehrM until the establishment of the WStb in October 1935, which used to comprise the Wirtschaftsabteilung of the HWA. The Marineleitung, once it heard about the meeting in the Reichsarbeitsministerium, complained that it had not been consulted and asked for all copies of all corresponding “touching upon coal and oil questions.” The HWA reminded the Marineleitung that, since only preliminary discussions had taken place, there was no reason to send more than one representative – Hanneken – who had subsequently briefed other officials in the RWehrM, including the Navy, about hydrogenation on 28 May 1925. RWehrM, Chef der Marineleitung, Allgemeines Marineamt (signature illegible) an Heeresleitung (Wa A), BB Vb 3973, 29 May 1925; and HWA to the Chef der Marineleitung, Allg. Marinesamt, Nr. 299/25 Nachschubstab, zu dort. BB Vb 3973 vom 29. V. 25., 10 June 1925; both in: T-77/82 (Wi/IF 5.372). Hanneken later served as Göring’s Plenipotentiary for Iron and Steel Production in the Four-Year Plan (Vierjahresplan, VJP) and head of the raw materials division of the Ministry of Economics (Reichswirtschaftsministerium, RWM).

⁹³ Dr. Strunden (Reichsarbeitsminister), IV 3310/25., “Betr.: Förderung des Bergiusverfahrens,” 11 April 1925, T-77/82 (Wi/IF 5.372). The participants agreed to meet a week later with a mining official from Lower Saxony – one Dr. Gärtner. No record of this meeting exists within this particular file. Left unresolved was the question, raised by the representative of the Finance Ministry (Reichsfinanzministerium, RFM), Schwerin von Krosigk – later Finance Minister during the Third Reich – of whether the support solicited on behalf of Bergius should be drawn directly from the national budget or from the funds set aside for unemployment benefits [aus der produktiven Erwerbslosenfürsorge].”

a coal-to-liquid fuel conversion rate of 60% – the end product behind either light (gasoline and diesel fuel) or heavy oils (fuel oil and lubricants). This was of “great significance for the oil-poor Reich,” which currently depended on imports to fulfill three-fifths of its annual oil consumption of 1,300,000 tons. “Through the construction of a sufficient number of large facilities for the Bergius Process,” the RWehrM hoped, “it would be possible to make the Reich independent of oil imports.” The Reich and Prussian governments were convinced of the project’s economic viability and prepared to offer a loan guarantee to construct a new facility in Lower Saxony. They nonetheless hoped that the Government of Baden “might want to collaborate as much as possible.”⁹⁴ The topic soon came to the attention of Baden’s Minister of the Interior, who signaled his willingness to inspect Bergius’ Rheinau facility.⁹⁵ The RWehrM also made arrangements with state and private representatives of the Bavarian coal industry to ascertain if that state’s low-grade pitch coal could be utilized during hydrogenation.⁹⁶

Bergius had formed a partnership with Shell in 1921 through the International Bergin Company (IBC) to support his research at Rheinau.⁹⁷ Although Bergius made progress in demonstrating the commercial viability of hydrogenation, a lack of funds and resources forced him to sell control of the IBC to the Badische Anilin- und Soda-Fabrik (BASF) in 1925 for 2,850,000 RM. BASF improved upon Bergius’ existing process by increasing the yield of lighter fuels that could be refined into high-octane gasoline.⁹⁸

⁹⁴ RWehrM, [?], J.A. (gez. Wurzbacher) an die Badische Gesandtschaft, Nr. 248. 7. 25 Wa. A. Stab, 07 July 1925, T-77/82 (Wi/IF 5.372). A minute included at the bottom of the letter states that the RWehrM had initially broached the subject orally with a representative of Baden’s Minister, who was absent at the time.

⁹⁵ Badische Gesandtschaft an das RWehrM, Nr. 3819, auf gefl. Schreiben vom 7. Juli 1925, Nr. 248. 7. 25., Wa.A. Stab, 15 August 1925, T-77/82 (Wi/IF 5.372).

⁹⁶ Generalleutnant [signature illegible], HWA, to Professor Dr. Friedrich Bergius, Nr. 503 [?]/8. 25/Wa Stab, 20 August 1925, T-77/82 (Wi/IF 5.372).

⁹⁷ Bergius’ post-WWI work is summarized in: Stranges, “Friedrich Bergius,” 660-663.

⁹⁸ Stranges, “Friedrich Bergius,” 665-666. In December 1925, BASF merged with Bayer, Hoechst, Agfa, and two other companies to form the Interessen-Gemeinschaft Farbenindustrie AG (IG Farben). The date when BASF took control of the International Bergin Corporation is not clear: Hughes, “Momentum,” does not provide an exact date; Stranges, “Friedrich Bergius,” 665, says 26 May 1925; Raymond Stokes, “From the IG Farben Fusion to the Establishment of BASF AG (1925-1952),” in: Werner Abelshauser, *et al.*, *German Industry and Global Enterprise: BASF: The History of a Company* (Cambridge: Cambridge University Press, 2004), 192-193, says July 1925; and Wolfgang Birkenfeld, “Leuna 1933,” *Tradition: Zeitschrift für Firmengeschichte und Unternehmerbiographie* 8 (1963): 97-98, mentions 1926. According to Rainer Karlsch, BASF bought the German patent rights in 1925, 60% of the international patent rights from Shell the following year, and the remaining 40% in 1931. Karlsch and Stokes, *Faktor Öl*, 135-136. Contemporaneous documents indicate that the sale went through in 1925 before the creation of IG Farben. “Kennwort: ‘Naphta,’ Offizier – Preisaufgabe 1927/28: Kraftfahrwesen,” Gruppe IV a, March 1928, T-77/418 (Wi/IF 5.3329). The history and operations of IG Farben are summarized in: *NMT*, viii: 1246-1254. Bergius sold the international marketing

The Army Ordinance Office (Heereswaffenamt, HWA – responsible for military’s economic requirements until 1934) therefore persevered in its faith that synthetic fuels would one day redress the strategic balance in Germany’s favor. “The progressive motorization” of society compelled nations without adequate domestic crude oil reserves “to look for alternatives.” Germany’s domestic output was woefully inadequate and benzol production appeared to have reached its ceiling at 200,000 tons per year. The HWA was following developments in synthetic technology “with particular interest and believes in the essential necessity of making Germany self-reliant in the supplying of its own fuel.” Hydrogenation offered the most effective means of accomplishing this aim. It produced more than five times as much liquid fuel as carbonization without requiring the same kinds of high-quality coal – if anything, “marginal quality coal, such as coal dust, produces better results.” Equally important was the variety of finished petroleum products available through hydrogenation, since a modern economy or war machine could not function on a single kind of fuel. One ton of coal could be converted into roughly 500 kg of oil, which in turn could be refined into 140 kg of gasoline, 80 kg of lubricating oils, and 300 kg of fuel oil. 7,000,000 tons of coal (a trivial amount when Germany was producing almost 140,000,000 tons of lignite) could theoretically “suffice to cover an enormously enlarged demand for fuels in our own nation.”⁹⁹

By the early-1920s (before he sold out to BASF), Bergius was able to convert one ton of coal at a cost of 71 RM into as much as 650 kg of liquid fuel worth 141 RM, theoretically realizing a profit of 70 RM.¹⁰⁰ By that measure, German scientists had surpassed the planned 50% conversion rate from coal to liquid fuel. But such figures are misleading because they only take into account the coal to be liquefied – they make no allowance for the fact that coal was also necessary for a variety of supplementary tasks including power generation and hydrogen production. By 1937, the regime admitted that synthetic fuel producers required as much as twenty-two tons of brown coal or 4.5 tons of hard coal to produce one ton

rights to Shell, but he held onto the German rights, which passed to BASF in 1925. Shell briefly held onto a minority stake at the insistence of its Chairman, Henri Deterding. Jonker and van Zanden, *History of Shell*, 340.

⁹⁹ “Das Bergius-Verfahren: Seine Bedeutung für die Betriebstoffversorgung Deutschlands,” no date or author (circa 1925; the originating agency is clearly the HWA considering both the content of the letter and the description in the NARA finding aid), T-77/82 (Wi/IF 5.372).

¹⁰⁰ Stranges, “Friedrich Bergius,” 663.

of gasoline.¹⁰¹ Although the process of synthesizing petroleum continued to progress throughout the war, it remained expensive both in terms of financial and raw materials costs. According to a leading IG Farben engineer interrogated after the war, less than 1.6 tons of hard coal could be liquefied into one ton of petroleum through hydrogenation. But once one incorporated the coal burned for power generation and hydrogen production into their calculations, the total coal expenditure reached about seven tons per ton of liquid fuel. The financial cost worked out to between 260 RM and 310 RM per ton of liquid fuel including fixed capital expenditures for plant construction. The F-T Process was even more expensive: about eight tons of coal at a cost of as much as 360 RM to produce one ton of petroleum.¹⁰²

In the 1920s, however, the military was convinced that synthesis could be remunerative and estimated a profit of 30 RM per ton of coal extracted, converted into liquid fuels, and sold as finished petroleum products. Although there was considerable skepticism about synthesis, the HWA was certain that the critics would come around – they placed particular hopes in lignite producers and expected that Bergius’ current work would “bind” the two together. In any event, the HWA would continue to devote “particular attention” to the matter of Germany’s fuel supplies, with “the strong hope that the liquefaction of coal may be carried through without difficulties and that thereby at least insofar as fuel supplies are concerned Germany will be able to stand on its own two feet within the next few years.”¹⁰³ IG Farben, in particular, would take the lead role in reducing Germany’s need to import oil, although it operated under an entirely different set of considerations than the German military.

¹⁰¹ H. Koppenberg, “Mineralölgewinnung aus Kohle,” *Vierjahresplan*, 1937: V.

¹⁰² B.I.O.S. Final Report No. 1697, “Synthetic Oil Production in Germany: Interrogation of Dr. Bütetisch,” F-T Archive. See also: Karlsch and Stokes, *Faktor Öl*, 137; and Stokes, “Nazi Oil Industry,” 269-270. Stranges, “Friedrich Bergius,” 666, puts forward a much lower figure of 190 RM per ton (or \$0.24 per gallon of gasoline) of fuel produced by hydrogenation, but he does not appear to incorporate ancillary costs into his calculations.

¹⁰³ “Das Bergius-Verfahren: Seine Bedeutung für die Betriebstoffversorgung Deutschlands,” no date or author (circa 1925; the originating agency is clearly the HWA considering both the content of the letter and the description in the NARA finding aid), T-77/82 (Wi/IF 5.372).

IG Farben and the World Hydrocarbon Cartel, 1927

Following the war, the role of IG Farben in fueling the German war effort was a central component of the prosecution's case against the company during the so-called "IG Farben trial" at Nuremberg of 1947-1948.¹⁰⁴ While on the dock, Carl Krauch, who oversaw Germany's synthetic fuel program between 1938 and 1945, claimed that his initial dealings with the regime had not been motivated by rearmament considerations. Krauch had every incentive to make this claim to establish his innocence, but there is no reason to doubt his assessment that the new regime was concerned initially with tackling the unemployment and foreign exchange problem. Indeed, as Krauch pointed out, IG Farben had been negotiating increases in synthetic production in exchange for government assistance with the Brüning Government in 1932. When IG Farben first decided to invest in hydrogenation in 1925, the world price for gasoline was about 16 Pfennig per liter, against an estimated cost of 20 Pfennig per liter of synthetic gasoline. By 1931, the figures had diverged considerably: natural gasoline cost only 5.2 Pfennig per liter, while synthetic gasoline cost 23 Pfennig per liter, and IG Farben was in trouble.¹⁰⁵ In October, IG Farben had invited representatives of the German press and the major political parties (including the National Socialists) to Leuna "to convince [them] of the advantages and of the national-economic significance of hydrogenation."¹⁰⁶ In June 1932, IG Farben executives approached Hitler to gauge his intentions and were surprised by their warm reception. Hitler stressed that "an economy without oil is not to be thought of in a Germany which wishes to remain independent" and urged the company to continue its work.¹⁰⁷

¹⁰⁴ *NMT*, vii: *passim*, esp. the indictment (pgs. 11-80).

¹⁰⁵ *NMT*, vii: 607-614. The Reich also reduced internal the tax on Leunabenzin from 3.80 RM per 100 kg to 1.00 RM. Karlsch and Stokes, *Faktor Öl*, 135-138.

¹⁰⁶ Heinrich Gattineau, "Bericht über den Besuch der Leuna-Werke durch Presse und Politik (1. -9. 10. 1931)," 12 October 1931, NARA, Record Group 238: National Archives Collection of World War II War Crimes Records, National Archives Microfilm Publication T-301, Reel 123, Document NI-15257— hereafter cited as: NARA, RG 238, T-301/Reel No. (Document No.). One of the National Socialists present was Hitler's personal economic adviser, Otto Wagener (misspelled "Wagner" in the report), who assured his hosts "that the further supplying of the German market with German gasoline fully accords with the aims of his movement." IG Farben had been forced to cultivate more conservative elements of the Nationalsozialistische Deutsche Arbeiterpartei (NSDAP) after falling victim to vicious press attacks by party radicals. Hayes, *Industry and Ideology*, 64-67.

¹⁰⁷ Dr. Walter Greiling, "25 Years Leunawerke," no date, NARA, RG 238, T-301/116 (NI-14304); and *NMT*, vii: 535-554.

East German scholarship on the Third Reich emphasized the culpability of leading IG Farben executives in the planning and direction of the German war economy, particularly Krauch.¹⁰⁸ More recent studies have argued that the unprofitability of hydrogenation (for the company's early agreements with the Third Reich did nothing to cover IG Farben's financial losses prior to 1933) forced IG Farben into the role of a supplicant to the regime.¹⁰⁹ Since IG Farben had to recoup its losses by producing synthetic rubber, it depended on the regime's largesse in providing the company with a monopoly over production and guaranteeing a price that was competitive with that of natural rubber.¹¹⁰

There is no doubt that the company had initially pursued hydrogenation for purely commercial reasons. BASF had excess capacity for hydrogen production as a result of the manufacture of ammonia (which could then be converted into synthetic nitrates) that could also be used to create synthetic fuel through hydrogenation. If natural crude oil supplies became scarce, hydrogenation would offer the company entrée into the petroleum industry. In the event that oil supplies remained plentiful, the company could still make money if it created a protected market within Germany by convincing policymakers that hydrogenation could serve as a work-creation measure and improve Germany's balance of payments – in

¹⁰⁸ See for example: Dietrich Eichholtz, "Zum Anteil des IG-Farben-Konzerns an der Vorbereitung des zweiten Weltkriegs: Ein Dokument zur staatsmonopolistischen Kriegsplanung des faschistischen deutschen Imperialismus," *Jahrbuch für Wirtschaftsgeschichte* 1969/2, 83-105.

¹⁰⁹ According to Karlsch, IG Farben's expenditures between 1924 and 1932 ran to between 330,000,000 RM and 430,000,000 RM. Karlsch and Stokes, *Faktor Öl*, 137. See also: Birkenfeld, "Leuna 1933," 108-110. Total investment in the construction of synthetic fuel facilities during this period was only 108,000,000 RM. In fact, 88% of IG Farben's total expenditures on construction between 1925 and 1944 (786,000,000 RM out of 894,000,000 RM) took place after 1932, 65% (586,000,000) of which just between 1941 and 1944. Gottfried Plumpe, *Die I.G. Farbenindustrie AG: Wirtschaft, Technik und Politik* (Berlin: Duncker & Humblot, 1990), 292-293.

¹¹⁰ The company's "ambivalent" relationship to the Third Reich is a central theme of Hayes' *Industry and Ideology*, the most important findings of which are summarized in his: "Industrie und Ideologie: Die IG Farben in der Zeit des Nationalsozialismus," *Zeitschrift für Unternehmensgeschichte*, 32: 2 (1987): 124-136. See also: Plumpe, *I.G. Farbenindustrie*, 281-296; and Henry Ashby Turner, *German Big Business and the Rise of Hitler* (New York, 1985), 246-249. Hayes' argument has much to commend it, although it should be noted that contemporaries even within the VJP complained that "the influence of the IG Farbenindustrie is very large," particularly within the Office for German Raw and Basic Materials (Amt für deutsche Roh- und Werkstoffe), whose R&D division – Abteilung III, led by Krauch and staffed largely with IG Farben employees – was "the soul of the office." "Über die Organisation der Vierjahresplan," 27 January 1938, Nr. 24 in: *Akten der Reichskanzlei: Regierung Hitler, 1933-1938*, ed. Karl-Heinz Minuth and Friedrich Hartmannsgruber (Boppard am Rhein: Boldt, 1983-2008), v: 90 – hereafter cited as: *Akten der Reichskanzlei*. Moreover, Hayes' explanation cannot account for IG Farben's participation in Kontinentale Öl AG after 1941, which expanded rather than reduced the firm's investment in the petroleum industry, or the prominence of a number of IG Farben officials within the economic policymaking apparatus of the Third Reich beyond just Krauch, most notably Ernst Rudolf Fischer, Göring's chief adviser on petroleum affairs. For a more balanced perspective that acknowledges the company's "absolutely unique place in the Third Reich," see: Tooze, *Wages of Destruction*, 227-230.

which case, IG Farben could achieve even more of a stranglehold over the Germany economy through horizontal integration with coal and steel producers who needed new customers in the wake of the global economic downturn and the spread of economic nationalism within the industrialized world.

The fact that hydrogenation also served a strategic purpose was an ancillary consideration before the Third Reich. Since fears of an imminent exhaustion of global oil reserves were widespread, BASF/IG Farben quite reasonably saw a hydrogenation as an opportunity to corner an emerging market while enhancing the profitability of its existing operations.¹¹¹ Through a process of what another historian calls “transnational structuring,” the company would manufacture the necessary political rationale to mask its pursuit of self-interest, all the while continuing its partnerships with companies from the very powers against which the Third Reich was rearming.¹¹²

IG Farben began its business relationship with Jersey in 1926/27, when the two companies reached an agreement over oil refining in the United States.¹¹³ IG Farben proved an invaluable partner to Jersey since hydrogenation could also be used to refine heavy crude oil, which would give Jersey an edge in the event that reserves of lighter oil dried up.¹¹⁴ The success of this early partnership (which “had fulfilled all expectations,” according to one internal IG Farben history) created the foundation for negotiations to establish a partnership “upon a wider basis” in 1928. Jersey was eager to share the benefits of hydrogenation with its foreign subsidiaries and partners, while IG Farben wanted to promote “the further development of our process [hydrogenation] through its greatest possible application,” and stood to earn enormous profits in countries rich in coal but poor in oil in the event of “a future shortage of natural crude

¹¹¹ Hughes, “Momentum,” *passim*.

¹¹² “One historian argues that transnational firms perceive nations “as resources to protect conditions amenable to business” and use any manner of “tactics” to achieve commercial advantage. While states pursue their own national interest (most notably during wars), transnational firms may seek to profit from inter-state rivalry by clothing themselves “in the rhetorical garb of supporting the ‘national interest.’” Gregory Nowell, *World Oil Cartel*, 1-44 and 280-288 (quotations from pg. 43). For good example of the kind of propaganda IG Farben put out to demonstrate its utility to the regime, see: “Leunas Bedeutung als deutsches Chemiewerk: Vortrag von Dr. W. Boesler, Leuna,” June 1937, BA-B, R 8128/3293. Boesler described company’s task as “[defending] the independence of our Fatherland” from foreign oil. Boesler also spoke of “the chance to use Chemistry as a weapon that will fight our Germany and, after the difficult times beforehand, allow it to acquire the place in the world that we all desire.”

¹¹³ For the origins of the partnership, see: Henrietta Larson, Evelyn Knowlton, and Charles Popple, *New Horizons, 1927-1950*, vol. 3 of *History of Standard Oil Company (New Jersey)* (New York: Harper & Row, 1971), 152-159.

¹¹⁴ Although hydrogenation turned out to be a commercial failure in terms of coal liquefaction, it made a notable long-term contribution to the refining of heavy crude and residual oils. Plumpe, *I.G. Farbenindustrie*, 295.

oil.” Under a 1929 agreement, the two companies created a jointly owned holding company, Standard-IG (split 80/20 in favor of Jersey), to which both companies transferred their most important petroleum patents, with IG Farben receiving a cash payment (\$35,000,000) and 546,011 shares in Jersey. The following year, the two companies set up another firm, JASCO (Joint American Study Company), which functioned in the same manner as Standard-IG, except that it held the rights for numerous petrochemical patents, including synthetic rubber (Buna). Standard-IG, in cooperation with Shell (which had been a backer of hydrogenation since 1921 and owned a minority share of the international patents rights through the IBC until 1931), issued licenses for these patents through the International Hydro Patents Company after 1931, which operated around the world with the exception of Germany. Although Jersey would take over leadership of Standard-IG, IG Farben expected to earn “significant revenues” through licensing fees from the use of hydrogenation abroad, while preserving its privileged role within the German petroleum industry, since it had only relinquished its international patent rights under the 1929 agreement.¹¹⁵

These partnerships predated the rise of Hitler and “cannot be explained as a function of Nazi strategic interests,” so much as economic advantage or necessity.¹¹⁶ As early as 1933, German military analysts warned that IG Farben’s production of synthetic gasoline might be “tied to commercial agreements [Interessenverträge] with foreign concerns.”¹¹⁷ Between 1937 and 1940, Shell’s German subsidiary agreed to subsidize (along with IG Farben and Jersey, with whom it also partnered within Germany through joint ownership of a major distributor, Deutsche Gasolin) the construction of a synthetic fuel plant (Pölit, with a planned capacity of 600,000 tons per year) in order to preserve its market share.¹¹⁸ In fact, the impetus for the construction of Pölit came not from IG Farben, which was relatively

¹¹⁵ Dr. B./Kl., Vowi 6023, “Chronik der Auslandsinteressen der I.G.,” 13 December 1944, BA-B, R 8128/817. In 1926, IG Farben, the Standard Oil Company of New Jersey (Jersey), and Shell also entered into a partnership through Deutsche Gasolin, a marketing firm established out of the ruins of Hugo Stinnes’ industrial empire following the magnate’s death in 1924. BASF bought the firm in 1925 and offered the two major oil companies a 25% stake each in order to secure a short-term supply of crude oil until synthetic production could be ramped up. The relationship between the three companies was not warm: Jersey and Shell only wanted an additional outlet for their imported products, while IG Farben tried to use Deutsche Gasolin to dispose of its synthetic gasoline. Karlsch and Stokes, *Faktor Öl*, 138-140.

¹¹⁶ Nowell, *World Oil Cartel*, 241.

¹¹⁷ Oblt. Löhr, “Deutsche Treibstoffversorgung,” *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933).

¹¹⁸ The oil companies needed to participate secretly since outside of Germany they posed as opponents of synthetic gasoline and autarky. Jonker and van Zanden, *History of Shell*, 473-474.

uninterested in synthetic fuel after 1933/34, but rather, from Jersey and Shell, which saw the project as a means of investing their blocked funds earned from sales in Germany. Consequently, Jersey and Shell intended that Pölitz would use hydrogenation not to liquefy coal, but instead, to refine crude oil that they imported into Germany.¹¹⁹

Within the United States, after 1930, licenses to Standard-IG patents were issued by the Hydro Patents Corporation and supervised by another Standard-IG subsidiary (Hydro Engineering and Chemical, which also received all patents registered by licensees developed from the original patents held by Standard-IG), with Jersey receiving 80% of the royalties and the remainder going to IG Farben. The outbreak of the war forced the companies to terminate their research and development partnership, IG Farben transferred 2,000 of its patent rights vested under Standard-IG and JASCO within the United States, Britain, France, and their respective spheres of influence to Jersey to avoid their confiscation as enemy property in September/December 1939.¹²⁰ Although Jersey bought out IG Farben's shares in Standard-IG and JASCO for nominal fees, the latter could repurchase them and its patent rights after the war ended. When representatives of AIOC (a member of the international patent pool) complained in 1939 about making royalty payments to IG Farben, a Jersey executive brushed aside the objection with the observation that "technology has to carry on – war or no war [...]." The Hydro Patents Corporation, which counted eighteen U.S. oil companies as members (due to the value of its patents for refining and the fact that Standard charged non-members higher licensing fees), remained in operation until March 1942, when Jersey signed a consent decree dissolving the its agreements with IG Farben under pressure from the U.S. Government.¹²¹

¹¹⁹ Plumpe, *I.G. Farbenindustrie*, 289.

¹²⁰ Larson, Knowlton, and Popple, *New Horizons*, 405-408.

¹²¹ Larson, Knowlton, and Popple, *New Horizons*, 428-433. IG Farben's role in the formation of a gigantic world "hydrocarbon cartel" including oil, chemical, and coal companies (as well as the patents for both hydrogenation and, by 1938, the F-T Process, when the owner of its patent, Ruhrchemie AG, joined the cartel) in Germany, Britain, France and the United States during the 1930s designed to stabilize oil prices in the face of overproduction, decreased demand due to the Depression, and the threat of competition by synthetic producers, is detailed in: Nowell, *World Oil Cartel*, 223-279 (esp. 235-251 – quotations from pgs. 240-241). Nowell's key source (which includes reproductions of many of the key documents) was: U.S. Senate, *Hearings before the Committee on Patents*, 77th Congress, 2nd Session (31 July and 03-04 August 1942), Part VII (Washington, DC: U.S. GPO, 1942), *passim* (esp. 3279-3429). Summaries of the IG Farben-Standard Oil cartel agreements, as well as their relationship to the

Both companies claimed to have gotten the better of the other once news of their agreement became public knowledge during the war. Jersey was subjected to remorseless criticism within the United States, and the U.S. Justice Department even blamed the cartel agreement with IG Farben for contributing to the current shortage of rubber in the United States by delaying the production of Buna.¹²² In the wake of this fiasco, the company went on a public-relations offensive to salvage its reputation. One Jersey engineer, part of the original team that visited Germany in 1927 to investigate hydrogenation, pointed out that the patent-sharing agreement provided the Allied war effort with numerous benefits, including the ability to produce 100-octane gasoline, in addition to synthetic toluene and rubber.¹²³ An internal IG Farben assessment contended that these claims were nonsense: neither the production of iso-octane (used to raise the octane-rating of gasoline) nor of synthetic toluene had anything to do with hydrogenation. By contrast, IG Farben had managed to acquire indispensable technical information, such as the method for producing tetraethyl-lead, without which “the present method of warfare would be impossible.”¹²⁴ IG Farben’s efforts during the 1920s and 30s, although not motivated by strategic considerations, had nonetheless facilitated the adoption of a more aggressive German foreign and military policy after 1933.

wider cartelization of the oil industry in the 1920s and 30s, may be found in: Gabriel Kolko, “American Business and Germany, 1930-1941,” *Western Political Quarterly* 15: 4 (1962): 713-728; and Helmut Mejcher, “The International Petroleum Cartel (1928), Arab and Turkish Oil Aspirations and German Oil Policy towards the Middle East on the Eve of the Second World War,” in: *Oil, the Middle East, North Africa and the Industrial States*, ed. Klaus Jürgen Gantzel and Helmut Mejcher (Paderborn: F. Schöningh, 1984), 35-37. Anthony Sampson presents a somewhat sensationalistic picture of relations between the major oil companies and the Third Reich: Sampson, *The Seven Sisters: The Great Oil Companies and the World They Shaped* (New York, 1975), 77-83. There is, however, some truth to his verdict that cooperation between the majors and the Reich was not “evidence of any special moral turpitude on the part of the oil leaders [...]. But their ruthless and autocracy did reveal very sharply the basic uncontrollability of oil, and the ability of the industry to defy national governments” (pg. 77).

¹²² Larson, Knowlton, and Popple, *New Horizons*, 433-452.

¹²³ “Secrets Turned into Might War Weapons through I.G. Farben Agreement, Discussed by R.T. Haslam, Standard Oil Company (N.J.),” *Petroleum Times* (25 December 1943), reprinted as: Partial Copy of Document von Knieriem 17, *NMT*, vii: 1297-1303.

¹²⁴ “Comments on Professor Haslam’s Article in the ‘Petroleum Times’ of 25/12/1943,” 06 June 1944, enclosed with: Knieriem to Dr. Schmitz, *et al.*, “Haslam Article,” 06 June 1944, Translation of Document NI-10551, *NMT*, vii: 1303-1311.

Synthetic Fuel and the Prospect of Energy Independence before the Third Reich

Germany's abysmal raw materials position after 1919 meant that the country could not even contemplate rearmament, much less another war. One 1925 appraisal of Germany's raw materials requirements for a sixty-three division army pointed out that, thanks to the Versailles Diktat, Germany could only rely upon those assets located between the Rhine and Oder rivers ("rump Germany"), with everything else being written off due to its vulnerability to enemy attack.¹²⁵ According to a later study, part of the allure of synthetic fuel was its physical security against overland attack unlike most of Germany's other sources of raw materials. 70% of production before 1929 took place within Germany's interior rather than its border regions.¹²⁶ By contrast, the 1925 resource study pointed out that only 3,500 tons of Germany's benzol production took place within "rump Germany.") The armed forces would, upon mobilization, have the following immediate requirements ("1. Ausstattung"):

Type of Product	Quantity
Benzol	91,123 tons
Gasoline	2,121 tons
Lubricants	11,078 tons

Annual military and civilian demand for benzol, even assuming the "throttling" of civilian consumption, was 1,300,000 tons: 1,053,076 tons for the services, another 300,000 tons for the civilian economy. Existing production was woefully inadequate: total output in 1924 was only 180,000 tons, and "[a] significant increase of this production is not possible," as the supply of benzol depended entirely on the production of coke. Imports were out of the question due to the shortage of global tanker capacity. There was also the matter of 9,515 tons of diesel and 122,275 tons of fuel oil required by the Navy during its first year of operations. Using gasoline as a motor fuel was impossible, since annual production from German domestic crude oil was only 4,000 tons – but even this was less than half of the estimated

¹²⁵ "Denkschrift über den Rohstoffbedarf und die Rohstoffdecke für ein 63 Divisionenheer sowie eine entsprechende Luft- und Seemacht," no date or author, enclosed with: Nahe, Nr. 576/25 [illegible], 15 December 1925, NARA, T-73/4 (RMfRuK/69). The study's authors acknowledged the 63 division program was no longer even under consideration due to its recognized "unfeasibility." They nonetheless based their study around such an ambitious rearmament objective in the hope of delineating "the borders of what is possible for us."

¹²⁶ Stichwort Bismarck (HWA), "Preisaufgaben 1929 des Reichswehrministeriums, Grupp VI b," 12 March 1929, T-77/296 (Wi/IF 5.1601).

requirement of 8,751 tons. While it was possible “to stretch” the domestic production of lubricating oils to around 100,000 tons per year, just below the estimated military demand, that still left another 200,000 tons of civilian consumption unfilled, even after rationing.¹²⁷

The only conclusion to be drawn was that developing a modern, mechanized army was a fantasy: when it came to oil-fueled engines, “the supply of the armed forces with fuels in reference to the lasting, progressive motorization cannot be carried out.” Hydrogenation offered the most promising means “of producing oil in meaningful quantities,” either from coal or crude oil, but construction of the necessary facilities would take time. Until then, “the demand for fuel... can in the event of intervening developments in no case be met within the short term,” for Germany could expect to produce only roughly 200,000 tons of fuel per year “for at least the next 10 years.”¹²⁸

Hydrogenation never lived up to the billing promised by its proponents.¹²⁹ Synthetic production between 1928 and 1931 increased by 80,000 tons – from 40,000 tons to 120,000 tons.¹³⁰ But there is ample evidence that, during the 1920s at least, the German military considered it to be their salvation in an age of machine warfare. The author of one 1928 paper was in no doubt about the lessons of the last war: “The World War, the longer it lasted, increasingly demonstrated the decisive value of machines – be they planes, U-boats, or tanks – by multiplying several-fold the killing power of the personnel required to operate them.” After the war, the world’s armies had continued to develop these platforms, and Germany ought to expect that “war in the future would to a much larger extent be a contest of technology – of machines.” Of course, Germany could only hope to fight such a war if it possessed the requisite quantities and types of fuel – “a matter of life and death in the event of war.” The motorization of society was transforming civilian life, too. A country that managed to free itself from oil imports would enjoy an

¹²⁷ “Denkschrift über den Rohstoffbedarf und die Rohstoffdecke für ein 63 Divisionenheer sowie eine entsprechende Luft- und Seemacht,” no date or author, enclosed with: Nahe, Nr. 576/25 [illegible], 15 December 1925, NARA, T-73/4 (RMfRuK/69).

¹²⁸ “Denkschrift über den Rohstoffbedarf und die Rohstoffdecke für ein 63 Divisionenheer sowie eine entsprechende Luft- und Seemacht,” no date or author, enclosed with: Nahe, Nr. 576/25 [illegible], 15 December 1925, NARA, T-73/4 (RMfRuK/69).

¹²⁹ BASF/IG Farben’s difficulties between 1926 and 1933 are summarized in: Birkenfeld, “Leuna 1933,” 98-100.

¹³⁰ Oblt. Löhr, “Deutsche Treibstoffversorgung,” *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933).

“incalculable” advantage. In view of the unfavorable distribution of world oil reserves, the European “great powers” had only two options from which to choose: they could either acquire foreign oil concessions or find “other, suitable replacement fuels in order to avoid dependence on foreigners.”¹³¹

Germans had not appreciated the precariousness of their fuel situation before the last war and had paid a heavy price, for a lack of oil was “among the causes of our defeat.” Ten years later, the situation had not improved in spite of introduction of new forms of synthetic production due to the increase in consumption as a result of motorization. By 1927, there were 724,000 motor vehicles in Germany, a 30% increase from 1926. Oil demand in 1926 had been 1,100,000 tons, and in spite efforts to improve efficiency, consumption would probably rise by 300,000 tons in 1927.¹³² Only one-third of Germany’s motor fuel supply (250,000 tons) and half of its lubricating oils (170,000 tons), however, were produced domestically. This total was also shrinking now that the major U.S. and British oil companies were aggressively marketing their products in Germany. “If this share is not capable of being raised,” the author warned, “conditions would continue developing to our disadvantage” due to motorization. In 1928, there were 173 people per vehicle in Germany, against forty-three in both Britain and France.¹³³ Although Germany still did not have an air force, it did have several airlines in operation, including Lufthansa, whose total inventory ran to 207 planes with an annual consumption of 30,000 tons, primarily of lighter aviation fuel, although the Junkers aeronautical firm had enjoyed some success building engines designed to burn heavier oils. Total consumption of fuel oil was 330,000 tons (almost doubling over the past five years), 60% of which went to the merchant marine and 25% (80,000 tons) to the Navy.¹³⁴

As imports increased relative to domestic production, so would the financial costs of import-dependence, perhaps to as much as 300,000,000 RM per year by 1930. According to the 1928 Army

¹³¹ “Kennwort: ‘Naphta,’ Offizier – Preisaufrage 1927/28: Kraftfahrwesen,” Gruppe IV a, March 1928, T-77/418 (Wi/IF 5.3329).

¹³² Of course, all of these calculations would be upset in the wake of the Depression, whose effects in terms of placing downward pressure on prices (by slowing the process of motorization) was exacerbated by chaotic conditions within the oil market itself due to oversupply. “Zur Lage des Erdölmarktes,” no date or author (circa 1932; probably RWM or RFM), BA-B, R 2/16815.

¹³³ “Kennwort: ‘Naphta,’ Offizier – Preisaufrage 1927/28: Kraftfahrwesen,” Gruppe IV a, March 1928, T-77/418 (Wi/IF 5.3329).

¹³⁴ For a detailed study of the division of Germany’s consumption of various kinds of oil by 1930/31, see: “Das deutsche Ölmarkt,” no date or author (circa 1931; probably HWA), T-77/183 (Wi/IF 5.762).

study, Germany's only hope in escaping this trap was through efforts of its chemists and engineers, who had to improve existing methods of producing synthetic fuel, develop new processes, and introduce more fuel-efficient engines to limit the growth in consumption. The possibilities offered by hydrogenation were most attractive: a coal-to-liquid fuel conversion rate of almost 50% (1000 kg coal = 490 kg of oil, which could be refined into 350 kg of motor fuels, 80 kg of fuel oil, and 60 kg of lubricating oil); an outlet for Germany's massive supplies of low-quality coal; and possible profitability through some manner of financial alchemy (15 RM worth of coal being transformed into 65 RM worth of petroleum products). There was also the possibility that the conversion-yield could be boosted from 50% to 65%. The fact that IG Farben had recently purchased Bergius' patent was a welcome development in view of that company's considerable technical expertise through the Haber-Bosch process.¹³⁵ The new Bergius facility in Leuna, in the midst of some of Germany's largest lignite reserves, heralded great things, assuming that natural crude oil prices remained steady at their current level of 30 RM per ton.¹³⁶ It was hard to say when these efforts would bear fruit – assuming everything went “smoothly,” perhaps only ten to twelve years. The possibility of failure was not even considered: “We have therefore through the liquefaction of coal finally found the means to manufacture fuel as the primary product of our mineral reserves and have called into life an economical supply of fuel [...]” Synthetic fuel was the latest chapter in the glorious history of Germany's chemists and engineers, who “through the conversion of coal into oil had achieved a great deed, whose value will only continue to increase with continued motorization.”¹³⁷

The Great Depression reversed the growth in German petroleum consumption and reduced imports. By 1927, Germany's automobile fleet of 679,000 vehicles was growing at a rate of 25% per annum, with

¹³⁵ IG Farben had also let it be known that “on the basis of the Bergius process [it] could begin the profitable production of [synthetic] rubber within the near future.”

¹³⁶ The report estimated the cost of establishing and running a large Bergius facility at roughly 400,000,000 RM but was confident that such funds could be raised through private industry and banks once the profitability of the process had been demonstrated at Leuna. Foreign oil companies certainly recognized its potential, as evidenced by Shell's initial purchase of the international patent rights, and the negotiations between IG Farben and “leading American crude oil firms” (Jersey).

¹³⁷ The only risks foreseen were commercial, such as the possibility that the major international oil companies might take preventative action by wiping out the market for expensive synthetic gasoline “through a ruthless cutting of price, the most beloved tool of the oil companies [...]” “Kennwort: ‘Naphta,’ Offizier – Preisaufgabe 1927/28: Kraftfahrwesen,” Gruppe IV a, March 1928, T-77/418 (Wi/IF 5.3329).

the import bill for all forms of petroleum totaling 238,000,000 RM that year alone.¹³⁸ Between 1930 and 1932, total German petroleum consumption dropped from 3,445,000 tons to 2,655,000 tons (by 23%), and demand for gasoline and benzol from 2,000,000 tons to 1,500,000 tons (25%). The decline was borne entirely by petroleum imports, which fell from 2,805,000 tons to 2,020,000 tons (28%). Although domestic production increased its share of total consumption from 19% to 24%, the total volume held steady at roughly 640,000 tons (60% of which was gasoline and benzol). Germany's dependence upon imports had not lessened, the Ministry of Economics (Reichswirtschaftsministerium, RWM) warned, "with all of the attendant dangers, [including a] heavier burden on Germany's trade balance and higher foreign exchange commitments," once the economy recovered and motorization resumed.¹³⁹

¹³⁸ Maj. H.H. Zornig (Assistant U.S. Military Attaché, Berlin), "The German Motor Fuel Situation and Its Effect on Motor Design," Report No. 9947, 22 January 1929, in: University Publications of America, *U.S. Military Intelligence Reports, Germany 1919-1941* (Frederick: University Publications of America, 1983), Reel 8. According to Zornig, Germany's onerous import bill "will do more towards stimulating the developments which may eventually make Germany independent... for her supply of motor fuel than any amount of effort that the military authorities can possibly exert."

¹³⁹ Vermerk, zu Rk. 12081, 21 October 1933, BA-B, R 43 (II)/486 (reprinted as Nr. 25 in: *Akten der Reichskanzlei*, i: 918-920); and RWM, I A 13000, "Begründung," no date, enclosed with: der Reichswirtschaftsminister (Schacht) an den Herrn Staatssekretär in der Reichskanzlei, I A 13000, 27 October 1934, T-120/5677. See also: Oblt. Löhr, "Deutsche Treibstoffversorgung," *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933); and "Deutscher Kraftstoff," *Militär-Wochenblatt*, 119. Jahrgang, Nummer 12 (25 September 1934).

Setting a New Tone: The National Socialists, 1933

Within months of taking power, the National Socialists, backed by the military, pressed for the expansion of domestic petroleum output irrespective of the cost. State Secretary Gottfried Feder, one of the founders of the German National Socialist Workers' Party (Nationalsozialistische Deutsche Arbeiterpartei, NSDAP) and now responsible for petroleum affairs at the RWM, pledged that all available measures would be utilized to fulfill Hitler's plan to promote motorization, including increasing the production of synthetic fuel, expanding existing refinery capacity, and raising the output of domestic oilfields.¹⁴⁰ Feder had initially backed the construction of additional oil refineries, but by the autumn of 1933, he was committed to higher synthetic fuel production.¹⁴¹ Policy would not be determined solely by trade and foreign exchange considerations or even cost (since synthetic fuel cost through three times as much as imported gasoline – about 20 RM vs. 6 RM), but also employment and strategic factors, and synthetic production and importation of crude oil would be encouraged “simultaneously.”¹⁴²

The bureaucracy was, on the other hand, risk averse. The RWM acknowledged that the foreign exchange burden imposed by oil imports rendered “the expansion of domestic production necessary

¹⁴⁰ Many in the NSDAP shared this sentiment. According to one 1934 study by the NSDAP's Außenpolitisches Amt, roughly 40% of Germany's consumption of lubricating oils was imported (112,000 tons out of 250,000 tons), the remainder being refined out of domestic or imported crude. Refining all of Germany's oil imports would save 13,200,000 RM just in terms of lubricating oils (at a cost saving of 12 RM per 100 kg) and offer direct employment for several thousand workers, not just in the refineries, but also in related industries and in German ports. Moreover, well over half (753,000 tons out of 1,338,000 tons) of German crude oil imports in 1930 came through Belgian or Dutch ports and travelled to Germany along the Rhine. These supplies were vulnerable to interdiction either in foreign ports or along the Rhine. NSDAP, Reichsleitung, Außenpolitisches Amt, Abteilung III/Aussenhandel, an die Reichskanzlei (cc'd to ministers of Economics, Defense, and Aviation, and the HWA), “Betr. Massnahmen zur Förderung der Veredlung von Erdöl in deutschen Raffinerien,” 18 January 1934, BA-B, R 43 (II)/486.

¹⁴¹ Karlsch and Stokes, *Faktor Öl*, 167. Years later, Hitler claimed that he “broke with Feder” on account of the latter's opposition to synthetic fuel, but no evidence survives to support this claim. *Table Talk*: No. 68 (12 November 1941).

¹⁴² The early differences in outlook between the National Socialists (backed by the Army) and the civilian ministries are apparent from the minutes of an interdepartmental conference in August at the RWM: Zu II 17438/33, “Niederschrift über die Ressortsbesprechung betreffend Neuordnung der Mineralölwirtschaft im Reichswirtschaftsministerium am 8. August 1933,” enclosed with: der Reichswirtschaftsminister (im Auftrag: Mulert, Ministerialrat) an den Herrn Reichsminister der Finanzen, Abt. II, *et al.*, II 17438/33, 01 September 1933, T-120/5677. The following month, Feder stated that developing Germany's synthetic capacity was “enormously important from the perspective of purely national-economic considerations.” He insisted that the government would serve “as the initiator and inspirer” (for example, by preventing friction within the coal industry and between it and the oil industry) but not exercise direct control. “Erste Sitzung des Generalrats der Wirtschaft. 20 September 1933, 10.15 Uhr,” Nr. 213 in: *Akten der Reichskanzlei*, i: 794-795.

above all on strategic [Wehrpolitischen] grounds.”¹⁴³ It considered the primary tasks of the Reich to be expanding domestic synthetic and crude production in order to reduce the cost of fuel, promoting stockpiling, importing crude oil rather than finished petroleum, and managing imports to control expenditures of foreign exchange. But this should be accomplished through only “the most necessary interference in the petroleum industry.”¹⁴⁴ The RWM was reluctant to assist “high-risk” projects and wished to limit state support to price and marketing guarantees, plus targeted tariff reductions to encourage the construction of refineries (although this had to be done in such a way as to discourage over-consumption and not “to hinder the development of coal hydrogenation”).¹⁴⁵ Direct participation in the German crude oil industry was out of the question because the costs were not commensurate with the rewards, and few officials had much faith in it. The RWM was, however, willing to provide limited support for the construction of refineries to process imported crude oil from Iraq or Romania. The RWM also spoke favorably of IG Farben’s offer to expand synthetic production at Leuna if the Reich offered price and marketing guarantees. The military and the RVM, by contrast, wanted the impetus to go to synthetic fuel since refineries would be of little value if imports of crude oil stopped.¹⁴⁶ “The only worthwhile solution” to Germany’s dependence on oil imports, one popular military journal declared in 1934, “is high-pressure hydrogenation of soft and hard coal [...].”¹⁴⁷

¹⁴³ Vermerk, zu Rk. 12081, 21 October 1933, BA-B, R 43 (II)/486; reprinted as Nr. 25 in: *Akten der Reichskanzlei*, i: 918-920.

¹⁴⁴ Abschrift II 17438, “Vorschläge für die Neuordnung der Mineralölwirtschaft,” no date, enclosed with: der Reichswirtschaftsminister (in Vertretung, Dr. Posse, Staatssekretär) an den Herrn Reichsminister der Finanzen, Abteilung II, *et al.*, II 17438/33, 17 July 1933, T-120/5677.

¹⁴⁵ Vermerk, zu Rk. 12081, 21 October 1933, BA-B, R 43 (II)/486; reprinted as Nr. 25 in: *Akten der Reichskanzlei*, i: 918-920. The original paper copy includes a minute indicating that it was forwarded to the State Secretary of the RWM (Gottfried Feder), with the request that he bring it to Hitler’s attention. A copy also went to Wilhelm Keppler, then serving as Hitler’s personal representative on economic matters.

¹⁴⁶ Zu II 17438/33, “Niederschrift über die Ressortsbesprechung betreffend Neuordnung der Mineralölwirtschaft im Reichswirtschaftsministerium am 8. August 1933,” enclosed with: der Reichswirtschaftsminister (im Auftrag: Mulert, Ministerialrat) an den Herrn Reichsminister der Finanzen, Abt. II, *et al.*, II 17438/33, 01 September 1933, T-120/5677. Higher domestic crude oil production was a laudable aim, but military analysts worried that little could be done in view of the capital requirements, in spite of the danger that foreign oil companies would just buy up any promising land and leave it undeveloped in order to protect the market for their imports. Oblt. Löhr, “Deutsche Treibstoffversorgung,” *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933).

¹⁴⁷ “Deutscher Kraftstoff,” *Militär-Wochenblatt*, 119. Jahrgang, Nummer 12 (25 September 1934).

The new regime refused to be constrained by fiscal considerations, but progress was slow.¹⁴⁸ Years later, during the invasion of the Soviet Union, Hitler was still fuming over the RWM's early opposition to synthetic fuel and lamented "not having thrown all that crew overboard."¹⁴⁹ Although all-out measures to boost petroleum production did not begin until after the inauguration of the VJP in 1936, in fact, the armed forces, NSDAP agencies, and IG Farben were already making preparations to implement a "Vierjahresplan" as early as the summer of 1933.¹⁵⁰ The point man for these discussions was Ernst Rudolf Fischer, the head of the IG Farben subsidiary that sold synthetic gasoline produced at Leuna (Leunabenzin), Deutsche Gasolin AG.¹⁵¹ In June 1933, Fischer was also handling fuel matters as a Division Chief (Referent) within the NSDAP's Economic Policy Office (Wirtschaftspolitisches Amt) until its dissolution the following month.¹⁵² Also in June 1933, following negotiations with various German oil producers, Fischer unveiled an ambitious, four-year plan to officials at both the HWA and the Ministry of Aviation (Reichsluftfahrtministerium, RLM). The plan would raise German domestic production by more than 1,300,000 tons, from roughly 750,000 tons to over 2,100,000 tons (most of the

¹⁴⁸ The first two years' developments (from the Benzin-Vertrag to the foundation of Braunkohle-Benzin AG – BRABAG) are summarized in: Tooze, *Wages of Destruction*, 115-120.

¹⁴⁹ *Table Talk*: No. 68 (12 November 1941) and No. 128 (27 January 1942).

¹⁵⁰ This is not to be confused with the "first" VJP of 1933. After 1936, the regime claimed that it had waged a VJP since taking power in 1933, even though the term did not exist until 1936. The "first" VJP was supposed to encourage "the recovery of the economy, the re-establishment of German military strength [Wehrhoheit] and the rise of Germany to great power status," whereas the "second" VJP focused on securing "the food and raw materials freedom of the German people." Alfred-Ingemar Berndt, *Gibt mir vier Jahre Zeit! Dokumente zum ersten Vierjahresplan des Führers* (München: Zentralverlag der NSDAP. Franz Eher Nachf., G.m.b.H., 1937), *passim* (esp. 211-219 – quotation from pg. 212). The "second" VJP of 1936 should not be confused with the "second" VJP of 1940, which was an expansion of the 1936 program. "Decree on the Further Duties of the Plenipotentiary for the Four Year Plan, 18 October 1940," Translation of Document NI-125, *NMT*, xii: 535.

¹⁵¹ Fischer's biography before 1940 is summarized in: Titus Kockel, *Deutsche Ölpolitik, 1928-1938* (Berlin: Akademie Verlag, 2005), 82, n. 82; and Titus Kockel, "Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940: E. R. Fischer (Reichswirtschaftsministerium, II Min. Öl), 'Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,' September 1940," *Jahrbuch für Wirtschaftsgeschichte* 2003/1: 176-178.

¹⁵² Verbindungstab der NSDAP, Abteilung: Wirtschaft (Wilhelm Keppler) to Fischer, 16 July 1933; Fischer to Paul Völmicke (Direktor, Kohlenveredlung und Schwelwerke Atk. –Gas.), 8 June 1933; and Wirtschaftspolitisches Amt, Treibstoff, to the Reichsverband der Garagenbesitzer, 23 June 1933; all in: BA-B, R 8128/10352

increase being concentrated in gasoline, whose output would triple). By 1937, Fischer estimated that Germany ought to be able to produce 60% of its petroleum consumption.¹⁵³

A few months later, following an introduction by the industrialist Albert Vögler, Krauch, then still employed only by IG Farben (where he led “Sparte I,” which handled synthetic fuel), also presented State Secretary Erhard Milch of the RLM with “a four-year plan” to increase Germany’s petroleum production by 1,300,000 tons.¹⁵⁴ Krauch estimated the project would cost approximately 400,000,000 RM, but further increases in output would be relatively more expensive since they would require the construction of new facilities to produce additional hydrogen. Krauch assured Milch that IG Farben was now capable of using hydrogenation to produce high-octane aviation fuel and specialty lubricants.¹⁵⁵

Milch was enthusiastic about Krauch’s proposal and forwarded it to the head of the HWA, General Alfred von Volland-Bockelberg, with the suggestion that the “[appointment] of a Commissar would be necessary to carry out the necessary steps.”¹⁵⁶ Bockelberg appears to have agreed with Milch, for he

¹⁵³ Wirtschaftspolitisches Amt, Treibstoff (signature illegible, although the address belongs to Fischer), to the HWA (c/o Hauptmann Becht), 21 June 1933; and Wirtschaftspolitisches Amt, Treibstoff (signature illegible), to the Reich Ministry of Aviation (c/o of Oberstleutnant Wimmer), 27 June 1933; both in: BA-B, R 8128/10352.

¹⁵⁴ Vögler to Herrn Direktor Dr. Krauch, I.G.-Farbenindustrie A.G., 10 August 1933, NARA, RG 238, T-301/44 (NI-5930). Vögler was a great supporter of government assistance for hydrogenation, which he believed would improve both the country’s foreign exchange and employment situation. During a meeting with the ministers of Economics and Finance (Kurt Schmitt and Krosigk) the year before, Vögler estimated that a “solution of the oil problem... can lead to the long-term employment of an additional 150,000 people in Germany.” “Erste Sitzung des Generalrats der Wirtschaft. 20 September 1933, 10.15 Uhr,” Nr. 213 in: *Akten der Reichskanzlei*, i: 779. There were two other “Sparten” at IG Farben: No. II handled dyestuffs and No. III was responsible for explosives.

¹⁵⁵ Krauch to Milch, 14 September 1933, Partial Translation of Document NI-4718, *NMT*, vii: 571-573; for the original German document, see: NARA, RG 238, T-301/34 (NI-4718). The report referred to by Krauch in his letter to Milch was not reproduced, but I managed to procure a copy from the BASF Archive courtesy of Ray Stokes. In addition to the aforementioned cost and production figures, the plan would require the labor of approximately 46,000 workers. The report confidently claimed that the potential of hydrogenation was “practically unlimited,” and afforded Germany the means “of producing heavy or light fuels and other oils in any manner” desired (in beliebiger Weise). On the basis of the program formulated by IG Farben, 800,000 tons of the new production would come through hydrogenation. The company expected that these increases would allow Germany by 1937 “to cover around 63% of its demand [for motor fuels], which would have risen by 50% against existing consumption.” “Die deutsche Treibstoffwirtschaft,” June 1933, BASF Archive, IG Farben, M02/1. This paper might have also played a role in Feder’s conversion from supporting refinery construction to synthetic fuel. Karlsch and Stokes, *Faktor Öl*, 166-167. The U.S. occupation government’s first postwar investigation of IG Farben includes virtually nothing about its activities in the synthetic fuel industry: Col. B.B. Bernstein, Director, Finance Division, U.S. Group Control Council (Germany) to Lt. Gen. Lucius D. Clay (Deputy Military Governor of Germany), “Report on Investigation of I.G. Farbenindustrie,” 12 September 1945, NARA, Record Group 466: Office of the High Commissioner for Germany, Office of General Counsel, Decartelization Division, Cartel Subject Files, 1947-55, Box 26.

¹⁵⁶ Bockelberg agreed with Milch’s request that the services act in unison on the matter of the “domestic raw materials basis.” Bockelberg, “Besprechung im Reichsluftfahrtministerium am 15.9.33,” NARA, RG 238, T-301/55

impressed upon the Economics Minister (Kurt Schmitt) the need to support the construction of hydrogenation facilities (not to mention storage facilities and compelling existing suppliers to expand their inventories).¹⁵⁷ There is also circumstantial evidence that even Hitler supported the plan.¹⁵⁸ In any event, in December 1933 came the signing of the “Benzin-Vertrag” (otherwise known as the Feder-Bosch Abkommen). IG Farben agreed to more than triple Leuna’s production by 1935 in exchange for a guarantee that the Reich would, starting in 1934, purchase any Leunabenzin left unsold for the next ten years at a fixed price (18.5 Pfennig) that covered the company’s existing investment plus a five percent profit margin, with any additional profits being returned to the Reich.¹⁵⁹

(NI-7123). Emphasis in the original. Thanks to Krauch’s efforts with Milch, IG Farben and the Ministry of Aviation (Reichsluftfahrtministerium, RLM) eventually worked out the “Flugbenzin-Vertrag” of 10 June 1936, whereby the former guaranteed the latter in exchange for financial support to boost Leuna’s output of aviation fuel to 200,000 tons per annum until the end of 1950. Der Reichsminister der Luftfahrt (gez. i.V. Kesselring), Bütefisch and Fischer (IG Farben), “Vertrag zwischen dem Deutschen Reich... und der Ammoniawerk Merseburg... betreffend Erstellung von Anlagen zur Herstellung von Flugbenzin,” 10 June 1936, enclosed with: der Reichsminister der Luftfahrt (Im Auftrag, gez. v. Heinz) an den Herrn Reichskriegsminister (WStb), z.Hd. des Herrn Kapitänleutnant Rieve, LD I 1 D Nr. 5405/36 g., 14 September 1936, NARA, RG 238, T-301/64 (NI-7836). For background, see: Hayes, *Industry and Ideology*, 139-142.

¹⁵⁷ “Vortragsnotizen für die Besprechung mit dem Reichs-Wirtschafts-Minister,” 04 November 1933, no author; and Wa Wi, “Ergebnis der Besprechung beim R. Wirtschafts-Min. am 6. 11. 1933,” 07 November 1933; both in: NARA, RG 238, T-301/64 (NI-7828).

¹⁵⁸ Hitler referred to a proposal by Vögler, but he was probably referring to Krauch’s “four-year plan.” *Table Talk*: No. 68 (12 November 1941).

¹⁵⁹ For a copy of the agreement, see: “Benzin-Vertrag,” 14 December 1933, NARA, RG 238, T-301/9 (NI-881). The Reich Cabinet approved the agreement on 08 December 1933. See point VI (“Regelung der Mineralölwirtschaft”) of the “Kabinettsstizung vom 8. Dezember 1933, 16.15 Uhr,” Nr. 264 in: *Akten der Reichskanzlei*, i: 1012-1013. The deal was important enough that the RWM forwarded a copy to Hitler the following month: zu Rk. 14390 II, Vermerk, 10 January 1934 (signature illegible), RG 238, T-301/4 (NI-320). The negotiations between the Reich and IG Farben in 1933 are detailed in: Birkenfeld, “Leuna 1933,” 103-108. See also: Hayes, *Industry and Ideology*, 115-120; and Karlsch and Stokes, *Faktor Öl*, 167-168.

National Socialist Petroleum Policy, 1933-1935

The Third Reich's petroleum policy before 1939 was not synonymous with the development and expansion of a synthetic fuel industry sponsored by IG Farben. These misconceptions are the legacy of two factors. First, in the West, most scholars relied upon the reports of the United States Strategic Bombing Survey (USSBS) as their primary source.¹⁶⁰ These studies considered Germany as a gigantic target-system of interlocking production nodes. USSBS analysts, many of whom had identified bombing targets during the war, were less interested in understanding how the German economy functioned than identifying the most sensitive nodes (or chokepoints) within the system, whose destruction would have a ripple effect throughout the war economy and shatter Germany's capability to resist. The synthetic fuel industry, along with the transportation infrastructure and the Air Force, was an attractive target during the war precisely because its destruction would contribute to the paralyzing of the entire German war effort. Second, East German scholars considered the Third Reich to be an instrument of German monopoly capitalism. IG Farben was the largest German corporation before the war, and perhaps fourth largest in the world, behind General Motors, Jersey, and U.S. Steel.¹⁶¹

That the Third Reich devoted immense resources to the construction of a synthetic fuel industry that privileged the company's interests seemed to be irresistible proof of the underlying validity of the Marxist critique of the Third Reich. (In fact, the company's share of German petroleum production between 1933 and 1943 – 5.9% - was meager. Its output peaked in 1942 at 560,910 tons, and after Leuna, it never constructed another synthetic fuel facility except in partnership with another private firm.¹⁶²) Many scholars also made extensive use of records collected as evidence during the Nuremberg trials, where

¹⁶⁰ See especially: United States Strategic Bombing Survey (USSBS), *Oil Division, Final Report* (Washington, DC: U.S. GPO, 1945).

¹⁶¹ Turner, *German Big Business*, xvi.

¹⁶² Plumpe, *I.G. Farbenindustrie*, 284, and 287-288.

prosecutors targeted IG Farben as a criminal enterprise because it appeared that the company's interest in synthetic fuel had been a key element in the forging of an alliance with the National Socialists.¹⁶³

Many of the same interest groups that had competed for favor during the latter years of the Republic remained in the picture after 1933.¹⁶⁴ At the start of the Third Reich, there was still some doubt over whether synthetics could live up to expectations.¹⁶⁵ These reservations quickly disappeared once the new regime made clear its determination to boost consumption while reducing the foreign exchange burden imposed by imports – 438,000,000 RM in 1928 and up to four times as much if the number of automobiles in Germany reached that of Britain or France.¹⁶⁶

The new regime was not indifferent to commercial and financial considerations. In May 1933, Hitler himself met with independent representatives of the German oil industry and Feder to discuss a 100,000,000 RM plan to expand Germany's refinery capacity. When Hitler asked his guests if this proposal would "secure Germany's supply of necessary crude oil," he meant this in a commercial rather than strategic sense. Hitler and his advisers were less concerned about autarky than Germany's dependence first on costly imported petroleum products and second on the major oil companies, which controlled the market for finished products and about 80% of Germany's existing refinery capacity. The international market for crude oil was far more diversified, but processing the oil was only possible if

¹⁶³ See especially: Office of United States Chief of Counsel for Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression* (Washington, DC: U.S. GPO, 1946), iii: 871-874 (hereafter cited as: *NCA*), volumes vii and viii; and NARA, RG 238, T-301.

¹⁶⁴ Aside from the major oil companies, Titus Kockel identifies no less than eight different groups as of 1932, including IG Farben, independent U.S. and British oil producers, the German partners in the British Oil Development Company in Iraq, and small German producers in Lower Saxony (Hannover). Dietrich Eichholtz and Titus Kockel, *Von Krieg zu Krieg: Zwei Studien zur deutschen Erdölpolitik in der Zwischenkriegszeit* (Leipzig: Leipziger Universitätsverlag, 2008), 114-119.

¹⁶⁵ Maj. a.D. Otto Lehmann, "Der wehrpolitische Kampf um das Öl der Welt," *Deutsche Wehr*, Nr. 6/6. (37.) Jahrgang (10 February 1933); and Oblt. Löhr, "Deutsche Treibstoffversorgung," *Militär-Wochenblatt*, 117. Jahrgang, Nummer 47 (18 June 1933).

¹⁶⁶ "The only full-fledged solution" to the Germany petroleum difficulties "is the high-pressure hydrogation of brown and black coal," even if "complete independence" would not be feasible "for the foreseeable future." G. Heberlein, "Deutscher Kraftstoff," *Deutsche Wehr*, Nr. 6./7. (38.) Jahrgang (07 February 1934). Emphasis in the original. A more practical policy was to pair expansion of synthetic fuel output with financial incentives for crude oil exploration within Germany – it was, however, vital "not to become impatient." Lehmann, "Öl aus Kohle als deutsches Problem," *Deutsche Wehr*, Nr. 48/7. (38.) Jahrgang, (29 November 1934). Moreover, it was wise for oil-poor countries not to overlook the continued use of animal power whenever possible in order to save fuel for those emerging weapons systems dependent on petroleum. Lehmann, "Ölpolitik 1935," *Deutsche Wehr*, Nr. 5/40. Jahrgang (30 January 1936).

independent refineries existed. Eliminating Germany's need for imports of finished products (much as France, the model, had done after 1928) would result in a savings of 200,000,000 RM worth of foreign exchange – a figure that would only increase as German consumption increased due to motorization.¹⁶⁷

That same day, oil played a prominent role in a presentation by Hitler on economic affairs before leading German industrialists. Much of the talk was devoted to the construction of the Autobahnen, which had little strategic relevance.¹⁶⁸ Rather, Hitler considered their construction to be primarily a work-creation measure and economic stimulus (funded largely by gasoline taxes and savings in welfare payments).¹⁶⁹ But as he explained to the assembled businessmen, the Autobahnen were a means of developing a German petroleum industry freed from foreign influence. Instead of allowing foreign oil companies to establish gas stations along the Autobahnen, German firms would enjoy a monopoly under the supervision of the Reichsbahn-Automobilgesellschaft. Not only “would [this] be the best means of

¹⁶⁷ Even then, Hitler wished to solicit the use of private capital, including from foreigners, in order to reduce the exposure of the Reich. One of his people the Führer met with was Professor Leo Ubbelohde of the Technische Hochschule, Berlin (today the Technische Universität, Berlin), the former Secretary General of the International Petroleum Congress (an unofficial association of petroleum engineers) and founder of the German Deutsche Gesellschaft für Mineralölforschung (today the DGMK Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und Kohle e.V.). Ubbelohde had co-authored a Denkschrift outlining his proposal in consultation with Feder. I have been unable to locate a copy, but the details are summarized in the minutes of the meeting. Reichskanzlei (signature illegible), Rk. 6588, “Vermerk über den Empfang der Herrn Gottfried Feder, Professor Dr. Ubbelohde und Freiherr von la Roche-Starkenfels am 29. Mai 1933,” 31 May 1933, NARA, RG 238, T-301/6 (NI-549). See also: Birkenfeld, “Leuna 1933,” 102; and Eichholtz and Kockel, *Von Krieg zu Krieg*, 120-121; Karlsch and Stokes, *Faktor Öl*, 165. By the end of 1934, French refinery capacity would reach 34,000,000 barrels per year, compared to 22,700,000 barrels in Britain, and 13,800,000 barrels in Germany. “Deutscher Kraftstoff,” *Militär-Wochenblatt*, 119. Jahrgang, Nummer 12 (25 September 1934). French efforts at regulating the importation of crude oil rather than finished petroleum products, and stimulating the development of both a domestic refining industry (primarily to process France's share of crude oil production in Iraq) and a French tanker fleet, culminating in the passage of the 1928 Oil Law and additional legislation the following year, which guaranteed the government virtually a controlling-interest (25% – increased to 35% in 1931) in the main French oil company, the Compagnie Française des Pétroles, are summarized in: Richard Kuisel, *Ernest Mercier: French Technocrat* (Berkeley: University of California Press, 1967), 21-44; Nowell, *World Oil Cartel*, 148-222 (esp. 170-183 and 200-217); Eric Melby, *Oil and the International System: The Case of France, 1918-1969* (New York: Arno Press, 1981), 88-104, 141-148; Mohamed Sassi, “The Emergence of the French Oil Industry between the Two Wars,” *Business and Economic History On-line* 1 (2003), <http://www.thebhc.org/publications/BEHonline/2003/Sassi.pdf>; and Mira Wilkins, *The Maturing of Multinational Enterprise: American Business Abroad from 1914 to 1970* (Cambridge: Harvard University Press, 1974), 235-236. For a positive German assessment, see: Verbandssyndikus Kurt Bronk, “Deutschlands Erdöl-Selbstversorgung, militärisch gesehen,” *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935).

¹⁶⁸ The Army, in particular, evinced little enthusiasm for the Autobahnen. The Reich often chose the routes of roads on the basis of political rather than strategic calculations. Besides, even if the armed forces wished to use the Autobahnen to ferry troops or equipment, it was impossible due to shortage of gasoline and rubber. R.J. Overy, “Transportation and Rearmament in the Third Reich,” *Historical Journal* 16: 2 (1973): 390-400.

¹⁶⁹ *Table Talk*: No. 201 (18 July 1942).

encouraging” German crude oil and synthetic fuel production, but it would also give the Reich both an “economic” and “political instrument of pressure” that could be wielded against countries like Britain in the event of diplomatic scuffles. A reinvigorated German oil industry servicing the Autobahnen would also indirectly stimulate the flagging German automobile industry. Of course, it was out of the question for the Reich to enjoy the same rates of car ownership as the United States due to foreign-exchange considerations. Hitler expected that the country would increase its auto fleet to between 3,000,000 and 4,000,000, which would have positive ripple effects throughout the economy.¹⁷⁰ There was not a moment to lose: oil prices would surely rise in the future, and as Feder warned during a 1933 speech, Germany’s import bill if possessed the same number of automobiles as France (four times as many) would reach 800,000,000 RM.¹⁷¹

Three points need to be emphasized here. First, the National Socialists justified their early support for hydrogenation as an employment measure.¹⁷² Continuing and expanding the Reich’s support for IG Farben by having the latter provide between 10% to 25% of Germany’s petroleum supply would create employment for 12,000 workers and inject 45,000,000 RM worth of orders into the economy. Second, the regime was not eager to advertize its objectives: not out of any fear of alerting the Allies to Germany’s aggressive foreign policy ambitions, but rather, because the entire leadership of the Reich (including Hitler) was wary of incurring the wrath of the major oil companies.¹⁷³ Accordingly, Hitler suggested

¹⁷⁰ “Besprechung mit führenden Industriellen. 29. Mai 1933, 16.15 Uhr,” Nr. 213 in: *Akten der Reichskanzlei*, i: 512-513. The German automobile sector was in severe decline before the National Socialist takeover: the number of automobiles actually declined by half between 1930 and 1932, from 81,000 to 41,000. In April 1933, the regime eliminated all taxes on the purchase of cars, which led to a three-fold increase in the number of registered cars between 1932 and 1938 (486,001 and 1,271,000 – well below Hitler’s expectations). Birkenfeld, “Leuna 1933,” 100-101; and Tooze, *Wages of Destruction*, 150-151.

¹⁷¹ Limiting imports under such circumstances to their 1932-levels would have required a 13.5-fold increase in domestic petroleum production. Obrstlt. a.D. Scholz Roesner, “Die Treibstoff-Frage in ihrer Bedeutung für die Landesverteidigung,” *Militär-Wochenblatt*, 118. Jahrgang, Nummer 44 (25 May 1934).

¹⁷² A point Hitler reiterated during the war: *Table Talk*: No. 68 (12 November 1941) and No. 128 (27 January 1942).

¹⁷³ The appeasement of the major oil companies would continue until 1938 and was a major bone of contention between the German Navy and the RWM. The former supported an aggressive policy of seeking oil concessions in Iraq and then Mexico in concert with independent oil companies, while the latter preferred cooperated with the major oil companies. Der Oberbefehlshaber der Marine (Ob.d.M. – Raeder) an den Chef des OKW (Keitel), *et al.*, B. Nr. A IV, “Betr.: Ölversorgung der Kriegsmarine,” 06 May 1940, T-1022/3405 (PG 31762/B). In 1936, one of the reasons Hitler sided with RWM in opposing a stronger German presence in Iraq was his fear of “[incurring] for us the enmity of powerful international oil interests.” Keppler (Staatssekretär z.b.V.im AA) to Herrn Reichsminister

during one of his infrequent cabinet meetings that German firms would have to be informed about the regime's intentions.¹⁷⁴ Third, synthetic fuel was one aspect of a three-pronged approach before the war that also included stockpiling imported oil and encouraging domestic oil producers to redouble their search for crude oil within Germany.¹⁷⁵

With regard to stockpiling, the regime had initially hoped to secure the connivance of the major U.S. and British oil companies. Originally, the RWM intended that the oil companies would be mandated to stockpile a fixed amount of oil within Germany at all times. Indeed, Economics Minister Hjalmar Schacht was convinced that the oil companies would welcome the opportunity to dispose of their excess production in a saturated world market.¹⁷⁶ The regime tried also to convince the companies to expand their storage capacity in exchange for the Reich covering amortization and interest on the new construction. Both efforts failed due to the opposition of the oil companies, and by 1934, the RWM had to concede that the Reich would have to undertake such efforts on its own.¹⁷⁷

Funk (RWM), 15 May 1940, enclosed with: der Reichswirtschaftsminister (Funk) an den Ob.d.M. Herrn Großadmiral Raeder, II Min.-Öl 116/40 g. Rs., 06 June 1940, T-77/211 (Wi/IF 5.1082).

¹⁷⁴ The Soviets were also major distributors and needed to be kept in the dark because the Reich would not be supporting the renewal of existing delivery contracts that would expire in 1934. See point V ("Entwurf eines Gesetzes zur Förderung der Deutschen Mineralölwirtschaft") of the "Kabinettsitzung vom 1. Dezember 1933, 17.30 Uhr," Nr. 258 in: *Akten der Reichskanzlei*, i: 987-989 (esp. pg. 988, n. 11, for the Soviet Union). Military analysts considered imports from the Soviet Union were undesirable because they gave Moscow "an effective economic and political weapon." "Erdöl als Wirtschafts- und Wehrfaktor der Sowjetunion," *Militär-Wochenblatt*, 119. Jahrgang, Nummer 20 (25 November 1934).

¹⁷⁵ There were other means of producing fuel synthetically – not necessarily as a replacement for hydrogenation, but rather to complement it. One such method was the aforementioned Fischer-Tropsch Process. There was also the "Schwelen" (destructive distillation) of coal, which was championed by Ubbelohde. Prof. Dr. Ubbelohde, "Über die Gewinnung von Treibstoffen durch Schwelen von Braun- und Steinkohle," attached to: Ubbelohde to Feder, 23 July 1934, BA-B, R 3101/20320. Emphasis in the original. The memorandum is summarized in: *Akten der Reichskanzlei*, i: 918, n. 4. Ubbelohde also presented his case before the annual convention of Deutsche Gesellschaft für Mineralölforschung in April 1934 – the report of which offers a good overview of the various efforts then under way to boost domestic petroleum production. *Angewandte Chemie* 47: 21 (1934): 345-348. The Chancellery dismissed Ubbelohde's recommendations as a ploy to assist the coal tar industry. Rk. 9537, Vermerk, 07 November 1934, no author, BA-B R 43 (II)/486.

¹⁷⁶ Eichholtz and Kockel, *Von Krieg zu Krieg*, 133.

¹⁷⁷ See the summary of the work of the Kraftausschuss (power commission), which then handled all war-related measures concerning fuel for the RWM: "Teil A: Bericht über den Stand der Arbeiten für eine wirtschaftliche Mobilmachung am 30. September 1934 einschliesslich kurzer Begründung des beigefügten Verordnungswerks," Document 128-EC, reprinted in: International Military Tribunal, *Trial of the Major War Criminals* (Nuremberg, 1947-1949), xxxvi: 176-178 – hereafter cited as: *IMT*. The report stipulated that providing Germany with a secure supply was "the most import realm of responsibility of the power committee" precisely because of oil's relationship to military power, which "must suffer through any shortage of fuel the most sever disruptions." Overall, the RWM estimated

In September/October 1934, the new Economics Minister, Schacht, forced the major German coal producers into a “compulsory association” with IG Farben and DEA (the largest German independent oil company) answerable to the RWM to pool resources to expand synthetic fuel production.¹⁷⁸ After October, the new conglomerate came into existence as the Braunkohle-Benzin AG (BRABAG), with Krauch serving on its Managing Board (Vorstand) and the Führer’s economic adviser, Wilhelm Keppler, on its Supervisory Board (Aufsichtsrat). The following month, the Managing Board of BRABAG agreed that the company would construct three new hydrogenation facilities under license to IG Farben.¹⁷⁹ This was significant because although IG Farben’s direct share of German petroleum production during the Third Reich – 5.9% or 30% of synthetic fuel production – was relatively small, its indirect share through BRABAG, which accounted for 26.9% of synthetic production by 1942/43, was much higher.¹⁸⁰

In December 1934, Schacht proposed new legislation granting the RWM joint authority with the Finance Ministry (Reichsfinanzministerium, RFM) to provide economic guarantees to the textile, petroleum, metallurgical, and chemical industries “in the interest of reducing our raw materials imports with the aim of [encouraging] the greatest possible independence for Germany from overseas raw materials.” In a note to his cabinet colleagues, Schacht explained that the previous year’s agreement with IG Farben (which would be covered retroactively under the bill) would serve as the model for future guarantees made by the Reich. With regard to the petroleum industry, the RWM was negotiating for a 95,000 ton per annum increase in addition to the 350,000 tons promised by IG Farben. Schacht also

Germany’s total supply of fuel (domestic production plus reserves) for 1935 at only 1,000,000 tons vs. an estimated demand of 1,750,000 tons.

¹⁷⁸ Kockel suggests that Schacht undertook this action to head off criticism by the RKM of the slow pace in improving Germany’s petroleum supplies. Eichholtz and Kockel, *Von Krieg zu Krieg*, 140-141.

¹⁷⁹ Bütelfisch, “Gründung der Braunkohlenbenzin A.G. und ihre Beziehung zur I.G. [Farben],” enclosed with: “Bericht über die 1. Ölbesprechung in Ludwigshafen an Rhein am 10. Januar 1935, nachmittags 3 Uhr,” NARA, RG 238, T-301/62 (NI-7669). For a copy of the license agreement, see: “Lizenverträge zwischen der I.G. Farbenindustrie Aktiengesellschaft... und der Braunkohle-Benzin Aktiengesellschaft,” 14 June/22 August 1935, NARA, RG 238, T-301/63 (NI-7767). Many key documents concerning the foundation and operations of BRABAG (taken from the files of one of its members, the Anhaltische Kohlenwerke AG) may be found in: NARA, RG 238, T-301/28 (NI-3975). They are accompanied by a helpful summary: Office of the Military Government for Germany, Finance Division, External Assets & Intelligence Branch, Financial Intelligence Section, “Analysis of Records Concerning Braunkohlen und Benzin A.G. ‘BRABAG,’” 10 February 1947. See also: Hayes, *Industry and Ideology*, 133-135; Karlsch and Stokes, *Faktor Öl*, 182-184; Plumpe, *I.G. Farbenindustrie*, 281-285; and Stokes, “IG Farben,” 258-260.

¹⁸⁰ Plumpe, *I.G. Farbenindustrie*, 281-282, and 287.

expected that Germany's lignite producers (BRABAG) would furnish funds for the construction of facilities capable of adding another 500,000 tons of fuel to Germany's petroleum supply.¹⁸¹

By the spring of 1934, although it was not the product of any specific program, the Third Reich had implemented a multi-faceted petroleum policy that extended beyond just synthetic fuel. Feder outlined the situation to Hans Lammers, the Chief of the Reich Chancellery (Reichskanzlei). IG Farben was in the process of expanding production at Leuna under the terms of the 1933 agreement with the Reich and planning ("from its own resources") to construct two new facilities at Oppau and in Silesia provided that no strategic objections were raised. Meanwhile, planning for two new facilities using the F-T Process (the patent to which was held by the IG rival Ruhrchemie AG) "are so far advanced that the beginning of construction is to be expected within a short time." German independent oil companies had also committed themselves to expanding production and constructing new refineries (again, through their own funds), while the Reich would shortly begin providing these companies an annual subsidy of 5,000,000 RM for the purchase of new drilling equipment to begin the process "of acquiring a clear picture of the extent of domestic crude oil reserves."¹⁸²

¹⁸¹ "Gesetz über die Übernahme von Garantien zum Ausbau der Rohstoffwirtschaft," and "Begründung," enclosed with: der Reichswirtschaftsminister und Preußische Minister für Wirtschaft und Arbeit an den Herrn Staatssekretär und Chef der Reichskanzlei (Hans Lammers), II R 838/34, 01 December 1934, PAAA, R 28806; reprinted as Nr. 51 in: *Akten der Reichskanzlei*, ii: 194-196 (esp. pg. 194, n. 1). This law stemmed from a presentation Schacht had made the previous October before leading officials (including Hitler) concerning Germany's worrying foreign exchange position (the monthly deficit at the time running at about 360,000,000 RM in spite of "all efforts made to increase exports"). Germany might, he warned, have to dip into its reserves to save hard currency: in the case of petroleum, these amounted to only three months, while the "completion of major installations for the production of fuels still required a period of 1¼ to 1½ years." "Chefbesprechung in der Reichskanzlei vom 18. Oktober 1934, 12 Uhr," Nr. 25 in: *Akten der Reichskanzlei*, ii: 105. The Cabinet gave its approval to the draft law on 13 December 1934, which went into law that day. "Kabinettsitzung vom 13. Dezember 1934, 16.15 Uhr," Nr. 64: *Akten der Reichskanzlei*, ii: 242 (esp. n. 3).

¹⁸² Feder to Lammers, 23 April 1934, BA-B, R 3101/20320; partially summarized in *Akten der Reichskanzlei*, i: 919, n. 5, and 987, n. 9. The need for extensive and coordinated exploration efforts by the entire German crude oil industry was a constant refrain from Germany's leading petroleum geologist, Alfred Bentz of the Prussian Geological Institute (Preußische Geologische Landesanstalt). Even in areas as rich in crude oil as Texas, he pointed out, "only about one out of a hundred drillings encounters a new oilfield." Alfred Bentz, "Das Erdöl in Deutschland und seine Aufschließung. Planmäßige Erforschung erdölhaltiger Gebiete: Vortrag gehalten auf der Tagung der Deutschen Gesellschaft für Mineralölforschung am 17.-19. Sept. 1933," Bundesanstalt für Geowissenschaften und Rohstoffe, Nr. 1953 K 941 (hereafter cited as: BGR #); Alfred Bentz, "Das Erdöl in Deutschland und die Frage seiner Aufsuchung," Sonderabdruck aus *Petroleum Zeitschrift* 29: 50 (20 December 1933), BGR 1953 K 940; and Alfred Bentz, "Wie ist die Erdölhaltigkeit Deutschlands heute zu beurteilen? Vortrag anlässlich der wissenschaftlichen Tagung der Deutschen Gesellschaft für Mineralölforschung und der Brennkrafttechnischen Gesellschaft E.V. am 26. September 1935," BGR 1953 K 945.

Finally, Feder was negotiating with the Europäische Tanklanger- und Transport AG (Eurotank), which was controlled by an enigmatic U.S. oil man, William Rhodes Davis. Through Eurotank and Davis' oil interests in Mexico (where he possessed the right to drill "offset" wells in the vicinity of the rich Poza Rica field, then under concession to Shell), Feder hoped to barter Mexican crude oil in exchange for German finished goods. The crude oil would then be processed in a modern refinery in Hamburg being constructed by Eurotank and sold by independent German distributors. A quarter of Eurotank's gasoline production would remain in Germany, while the remainder would be exported to either Scandinavia or Britain to earn foreign exchange.¹⁸³ Feder described this project as the "first large-scale exchange of goods along the lines set by the National Socialist economic leadership."¹⁸⁴

By now, the major oil companies were becoming suspicious of Germany's intentions – not so much its foreign policy, but rather its commercial policy. As Henri Deterding (the Chairman of Shell) explained in September 1934, he had in the past been more than willing to stockpile at cost 1,000,000 tons of fuel in Germany, "which corresponds to roughly six months of consumption," purchased from the Soviets.¹⁸⁵ The plan had fallen through for reasons that even Deterding was unclear about. When asked if he might resurrect the plan, he replied in the negative. For one thing, geologists were raising alarms that existing rates of production could not be sustained for another "15-20 years," and that reserves should be "husbanded." More important, though, was the recent Japanese law that compelled major oil companies to maintain large stockpiles that could be "impounded" by the state, with compensation only in yen at a rate determined by the government alone.¹⁸⁶ Italy was also considering such measures, and Deterding was

¹⁸³ The whole scheme is summarized in: "Der Davis Plan," no date or author (handwritten notation seems to indicate 1934), T-120/5677.

¹⁸⁴ "[...] im Sinne nationalsozialistischer Wirtschaftsführung." Feder to Lammers, 23 April 1934, BA-B, R 3101/20320; partially summarized in *Akten der Reichskanzlei*, i: 919, n. 5, and 987, n. 9. See also: Karlsch and Stokes, *Faktor Öl*, 168-169. Feder was a crank and eventually replaced as the RWM's chief petroleum expert by a member of his "engeren Mitarbeitstab," Ernst Rudolf Fischer. Feder's economic theories are summarized in: Turner, *Big Business*, 62-64. The Eurotank refinery was completed in 1935 but little Mexican oil ended up coming to Germany until after nationalization in 1938.

¹⁸⁵ "[Weil] er damals in der Lage gewesen wäre, dieses gesamte Quantum über seine damalige Produktion hinaus von Russland zu kaufen."

¹⁸⁶ For additional details, see "Japanese Oil Law of July 1st, 1934," enclosed with: Maj. A.M Jones (General Staff, AC of S, G-2) to the AC of S (G-2), "Copy of translation of Japanese Oil Law," 29 August 1934, 010.91 (G-2); Maj. E.O. Sawyer to Maj. [Jones?], "New Japanese Oil Law," 31 August 1934; and Sawyer to G-2, Ninth Corps Area

attempting to get President Roosevelt to lodge a protest in order to stiffen the backbones of the Europeans. There was nothing stopping Germany, Deterding surmised, from adopting a similar policy.¹⁸⁷ Although he sympathized with National Socialism, Deterding urged Germany to refrain from such an action and, instead, implement its stockpiling policy “in concert” with the major oil companies.¹⁸⁸

The actual story was a little more complex than Deterding let on, although it sheds light on the differences between the petroleum policy favored by Schacht under the “New Plan,” and the kind that was adopted following the inauguration of the VJP in 1936. Basically, in July 1934, the RWM approached the German subsidiaries of Jersey, Shell, and Anglo-Persian with the following offer. The companies would, in excess of their existing imports, accumulate 1,000,000 tons of petroleum products in Germany in new storage facilities they themselves would construct (and which the Reich would amortize over the following five years). These 1,000,000 tons would become a special “national reserve” that would not enter into circulation except in the event of an emergency. The companies would also have to maintain at all times a working surplus equal to four months of consumption. Finally, the companies would agree not to repatriate any of their earnings in Germany for five years. These profits would, instead, be loaned to German banks and invested in the German economy for the purpose of infrastructure development, stimulating consumption, and expanding domestic production and storage capacity. In

HQ, “Japanese Oil Situation,” date illegible (received on 27 September 1933); all in: University Publications of America, *U.S. Military Intelligence Reports: Japan, 1918-1941* (Frederick: University Publications of America, 1986), Reel 15. Japan’s “quest for autonomy” is described in: Irvine Anderson, *Standard-Vacuum Oil Company and United States East Asian Policy* (Princeton: Princeton University Press, 1975), 71-103; Michael Barnhart, *Japan Prepares for Total War: The Search for Economic Security, 1919-1941* (Ithaca: Cornell University Press, 1987); and Michael Barnhart, “Japan’s Economic Security and the Origins of the Pacific War,” *Journal of Strategic Studies* 4: 2 (1981): 105-124.

¹⁸⁷ “[...] dass keinerlei Grund vorläge, Deutschland von einem ähnlichen Vorgehen abzuhalten [...].”

¹⁸⁸ Bericht, “Betr. Benzin- und Treibstofflagerung. Besprechung mit Sir Henry Deterding in Schöneberg/Preussen am 25 – 27. September 1934,” 28 September 1934, no author, T-77/228 (Wi/IF 5.1171). Emphasis in the original. Although there was great interest within the Reich in using Deterding as an asset, the Navy’s oil expert was convinced that this was fruitless since Deterding had lost any influence over Shell’s management after 1931. W Wi VI, Nr. 1740/38 gK, “Aktennotiz auf Grund einer Besprechung mit Herrn Ministerialrat Dr. Fetzer OKM [Oberkommando der Marine] betr. Oelversorgung,” 17 June 1938, T-77/683 (Wi/VI. 356). Deterding’s \ public flirtation with National Socialism during the 1930s is detailed in extensively within Shell’s official history: Jonker and van Zanden, *History of Shell*, 475-491.

exchange, the Reich would not expand its existing support for the synthetic fuel industry and allow the oil companies to maintain their existing market share.¹⁸⁹

Shell believed that there was a great deal that was “desirable” in the Reich’s proposal. As it explained to the British Petroleum Department, the company had invested much money (£17,000,000) and resources in Germany. Although the country’s per capita and absolute consumption lagged well behind that of both Britain and France (only 38% of Britain’s consumption, even though its population was 35% larger), there was every indication that this would change over the next few years because of the Reich’s vigorous economic policy. Moreover, Shell was concerned about “autarchic elements” in Germany urging the Reich to expand its support for synthetic fuel at the expense of imports. By accepting the offer, Shell believed it could undermine support for autarky within Germany.¹⁹⁰ (This was something Hitler later suspected, for he believed that Deterding had conspired with Schacht and the RWM to oppose expansion of the synthetic fuel industry in 1933.¹⁹¹) Moreover, Shell was not averse to currency controls, since it already operated under such constraints elsewhere in the world. Finally, the company would shortly be laboring under excess supplies of crude oil, as the French Government was pushing the major companies to supply France with imports from Iraq (where the CFP held a minority interest). The fact that Germany was eager to increase the size of its reserves stocks was therefore a welcome development.¹⁹²

The British Government was less than impressed, and its chief economic adviser dismissed Shell’s position as “lamentably weak.”¹⁹³ Jersey immediately expressed its opposition to the State Department, the main objection being the requirement to leave its profits in Germany with no guarantees concerning

¹⁸⁹ The most reliable summary of this episode may be found in: Ernest Brown (Secretary of Mines) to the President of the Board of Trade (Walter Runciman), “Supplies of Petroleum and Petroleum Products to Germany,” 08 November 1934, enclosed with: W.R., “Supplies of Petroleum to Germany: Note by the President of the Board of Trade, 09 November 1934, C.P. 252 (34), BNA, CAB 24/251.

¹⁹⁰ This was also the opinion of German critics of Shell: “Royal Dutch als Weltmacht,” *Die deutsche Volkswirtschaft* Nr. 21 (1936), T-77/425 (Wi/IF 5.3444).

¹⁹¹ “I’d like to know who *wasn’t* corrupt in that bucket-shop,” he later grumbled. *Table Talk*: No. 128 (27 January 1942). Emphasis in the original.

¹⁹² “Memorandum from the Asiatic Petroleum Co.,” 30 July 1934, enclosed with: F.W. [*sic*; F.C.] Starling (Director, Petroleum Department, Mines Department) to Frederick W. Leith-Ross (Permanent Secretary, Chief Economic Adviser to the British Government), 31 July 1934, BNA, T 160/602.

¹⁹³ Leith-Ross to Starling, 04 September 1934, BNA, T 160/602.

the exchange rate when the five-year waiting period expired.¹⁹⁴ During subsequent meetings in London to discuss the proposal, “[the] Anglo-Persian representative had said his company would probably not take up the matter with the British Foreign Office which he was sure would oppose the proposal.” Shell had modified its position somewhat, in that it was willing to abide by a three year waiting period on repatriation of profits (\$60,000,000), provided that the Reich guaranteed a fixed exchange rate and paid interest.¹⁹⁵ Privately, Jersey’s chief legal adviser in Germany explained to the U.S. Embassy that Shell was trying to undercut Jersey because of the latter’s partnership with IG Farben concerning synthetic fuel: “The former desires to impede its production whereas the Standard considers that if coal products of this kind are, economically speaking, viable, their marketing can not [*sic*] be stopped [...]” Shell was also attempting to maneuver Jersey and Anglo-Persian into incurring the Reich’s wrath by stipulating that its (Shell’s) support was conditional upon the other two companies also agreeing.¹⁹⁶

Unnamed oil executives also tried to convince U.S. diplomats that the whole scheme had actually been engineered by Shell because of Deterding’s support for National Socialism and anti-Communist hysteria, and that the Reich had initially been reluctant because it feared that the plan was so obnoxious that it would harm Germany’s economic relations with Britain and the United States after the oil companies complained.¹⁹⁷ One should avoid taking such accusations at face value – in spite of his anti-communism, for example, Deterding was willing to buy oil from the Soviet Union and store it in Germany. Nevertheless, it appears that Shell stood to gain disproportionately: under the plan, companies wishing to import oil into Germany would have to do so using hard currency earned through exports or re-exports, and Shell’s German subsidiary, Rhenania-Ossag Mineralölwerke AG, just happened to

¹⁹⁴ Jersey estimated that the total figure for all three companies at \$250,000,000. William Phillips (U.S. Under Secretary of State), “Memorandum of conversation with Mr. Chester O. Swain, of the Standard Oil Company of New Jersey,” 17 July 1934, NARA, Record Group 59: General Records of the Department of State (hereafter cited as: RG 59), 862.6363/152.

¹⁹⁵ Office of the Economic Adviser, U.S. Department of State, “Memorandum of Conversation with Mr. Chester Swain of the Standard Oil Company of New Jersey,” 25 July 1934, NARA, RG 59, 862.6363/153.

¹⁹⁶ J.C. White (Counselor, U.S. Embassy, Berlin) to the Secretary of State, “Certain Problems of the Standard Oil Company,” 18 August 1934, No. 1186, NARA, RG 59, 862.6363/154.

¹⁹⁷ John G. Erhardt (U.S. Consul General, Hamburg) to William E. Dodd (U.S. Ambassador to Germany), “Reported Negotiations Between the Reich Government and the Two Largest German Oil Importers,” 21 August 1934, NARA, RG 59, 862.6363/155.

dominate the German petroleum export market, accounting for 80% of all sales of lubricating oils alone.¹⁹⁸ Rumors also reached the U.S. Consulate in Hamburg that the RWehrM would place orders with the oil companies “in proportion to the extent to which the various mineral oil companies have aided the German export trade,” which the Americans interpreted as a transparent bid by the military “to award the bulk of its contracts for mineral oils to the Shell interests [...]”¹⁹⁹

Shell’s support could not overcome the resistance of not only Jersey and Anglo-Persian, but also the British Government, all of which appears to have been motivated purely by commercial rather than strategic considerations.²⁰⁰ The Reich reacted to its failure by introducing a plan in October 1934 to boost domestic production of motor fuels to 2,000,000 tons within two years, thereby eliminating Germany’s need for imports. The British Embassy did not take such threats seriously. In exchange for a savings of roughly 50-60,000,000 RM worth of hard currency, the Reich would be foregoing roughly 200,000,000 RM in import duties and would need to scrape together as much as 1,000,000,000 RM worth of credit to the chemical and coal companies involved in expanding synthetic output (BRABAG): “[It] is difficult to believe that, unless the process of treating lignite and coal can be much cheapened, the budget difficulties consequent on the change will not be serious.”²⁰¹ The Embassy’s guess that Berlin was bluffing turned out to be accurate: in November 1934, the Reich again tried to broker a deal with the oil companies, this time

¹⁹⁸ Erhardt to the Secretary of State, “Foreign Interests in German Mineral Oil Trade,” 15 February 1935, No. 332, NARA, RG 59, 862.6363/165. Rhenania managed to evade the foreign exchange controls in place since 1931 by exporting finished goods to countries such as Britain. As late as 1937, the company still ran a positive balance of payments, but its operations became increasingly difficult after the start of the Four-Year Plan, when the company was coerced into joining Jersey and IG Farben in the construction of a synthetic fuel plant at Pölitz. The Reich finally placed the company under receivership during the war. Jonker and van Zanden, *History of Shell*, 464-474; and Stephen Howarth and Joost Jonker, *Powering the Hydrocarbon Revolution, 1939-1973*, vol. 2 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 20-21, 78.

¹⁹⁹ Erhardt to the Secretary of State, “American Interests in German Mineral Oil Trade and Industry,” 15 August 1935, No. 523, NARA, RG 59, 862.6363/169.

²⁰⁰ The RWM, by contrast, was convinced that “political” as well as commercial factors had motivated the opposition of Anglo-Persian. Der Reichswirtschaftsminister und Preußische Minister für Wirtschaft und Arbeit, III. 1026/Mu., “Betr. Mineralölversorgungsplan. Schreiben vom 14. August 1934 – W 6143 –,” 25 August 1934, T-120/5677.

²⁰¹ “Memorandum on the Supply of Petrol to the German Market,” 09 October 1934, Enclosure No. 1 to: Eric Phipps (British Ambassador to Germany) to John Simon (Foreign Secretary), 12 October 1934, C 6780/3267/18, No. 1214 E., 09 October 1934, BNA, T 160/602.

using IG Farben as an intermediary.²⁰² The company would purchase £4,000,000 worth of petroleum products (obviously with the consent of the Reich considering the expenditure of foreign exchange), equivalent to one million tons at prevailing prices, over the next five years, although IG Farben would have the option of demanding delivery within two years. Compensation would be paid on a biannual basis and completed within five years of completion of the contract.²⁰³

Although it was clear that IG Farben was acting as a proxy for the Reich, both the oil companies and London looked upon the proposal favorably for much the same reason as Shell had supported the earlier deal: they saw it as a means of weaning Germany away from autarky, which would harm the interests of the major oil companies in Germany. Although the major oil companies chafed at German restrictions on the remittance of earnings, the companies did not complain too much since they earned high profits in Germany and usually managed to find loopholes by using their blocked accounts to construct physical assets such as tankers that could also be used to earn hard currency.²⁰⁴ Additionally, London figured that discouraging autarky would, over the long term, serve Britain's strategic interests by keeping Germany

²⁰² According to a postwar interrogation of an IG Farben executive (who misidentified the date of the transaction), Schacht and Blomberg had approached Krauch "asking us to try to procure for them a rather great stock of oil," in order to tide Germany over until it had completed construction of the necessary synthetic fuel plants. Krauch subsequently travelled to London with a coterie of executives including Fischer, who appears to have spearheaded the negotiations with the major oil companies. Only \$14-15,000,000 worth of products ended up being delivered, as Anglo-Persian backed out. Although the Reich recompensed IG Farben for its expenditures, the company did not earn any profits from the deal. "Comments on Professor Haslam's Article in the 'Petroleum Times' of 25/12/1943," 06 June 1944, enclosed with: Knieriem to Dr. Schmitz, *et al.*, "Haslam Article," 06 June 1944, Translation of Document NI-10551, *NMT*, vii: 1303-1311; and "Extracts from an Interrogation of Defendant von Knieriem, 25 August 1945, Concerning the 20 Million Dollar Purchase of Aviation Gasoline and Fuels from the United States by Farben on Behalf of the German Government," Partial Translation of Document NI-4690, *NMT*, vii: 1202-1209; for the original German document, see: NARA, RG 238, T-301/34 (NI-4690). Kockel claims, again without any evidence, that, as a result of its handling of the negotiations, IG Farben developed a sense of "self-confidence" in its "capacity... to plan, direct, and administer" oil policy "better than the Economics Ministry." Eichholtz and Kockel, *Von Krieg zu Krieg*, 143-145 (quotation from pg. 145).

²⁰³ Hiram Bingham (Third Secretary, U.S. Embassy in London) to the Secretary of State, 20 November 1934, NARA, RG 59, 862.6363/158. Bingham's telegram enclosed a Foreign Office memorandum also dated 20 November 1934. IG Farben modified the proposal to incorporate full payment upon delivery once the companies started bickering over having British and U.S. banks guaranteeing future payment. Phillips, Memorandum of Telephone Conversation, NARA, RG 59, 862.6363/159; and Department of State to the U.S. Embassy, London, 04 December 1934, NARA, RG 59, 862.6363/158. This latter paper was rewritten and forwarded to the Foreign Office the following day. Embassy of the United States of America, London, "Memorandum," 05 December 1934, C 8365/3267/18, enclosed with: the Under Secretary of State for Foreign Affairs (Earl Stanhope) to the Secretary of the Treasury (Duff Cooper?), "Supply of Petroleum to Germany," 13 December 1934, BNA, T 160/602.

²⁰⁴ Larson, Knowlton, and Popple, *New Horizons*, 333-334; and Wilkins, *Maturing*, 237-238.

dependent on oil imports.²⁰⁵ As officials concluded following an interagency meeting, it was in Britain's interest to avoid "taking any action which would force the German Government to undertake an intensive campaign designed to meeting the greater part of her oil requirements from her own resources. If such a position arose, Germany's defence would probably be strengthened."²⁰⁶

²⁰⁵ Washington played no role since it had chosen to adopt the position of observer and informed Jersey that it would have to rely on British official support. H.F. (Herbert Feis, Economic Adviser, U.S. Department of State), 21 November 1934, enclosed with: NARA, RG 59, 862.6363/158.

²⁰⁶ Ernest Brown (Secretary of Mines) to the President of the Board of Trade (Walter Runciman), "Supplies of Petroleum and Petroleum Products to Germany," 08 November 1934, enclosed with: W.R., "Supplies of Petroleum to Germany: Note by the President of the Board of Trade, 09 November 1934, C.P. 252 (34), BNA, CAB 24/251. The Foreign Office provided the U.S. Embassy in London with a memorandum that basically recapitulated the points raised in Brown's original paper: Hiram Bingham (Third Secretary) to the Secretary of State, 20 November 1934, No. 595, NARA, RG 59, 862.6363/158. State's evaluation was driven by purely commercial considerations: it agreed that the deal was "very much in the interest of the supply companies" if it stemmed German support for self-sufficiency, and because the Reich would probably be able to buy the oil it needed from Romania or the Soviet Union if the majors proved difficult. Office of the Economic Adviser, 03 December 1934, NARA, RG 59, 862/6363/160. The idea that Britain, perhaps aided by France, deliberately pursued a "subtle *containment policy on the oil energy level*" aimed at "[keeping] both Germany and Italy dependent on foreign controlled oil" is central element of Helmut Mejcher's analysis of interwar oil policy. Mejcher, "German Oil Policy," 47. Emphasis in the original. There is a dearth of evidence to support this hypothesis, but in any event, by January 1936, British scientists and oil executives were warning the Committee of Imperial Defence (CID) that Germany could be "Sanctions proof" as early as 1937. A.W. Clarke (Oil Board), "Steps to Render Germany Independent of Foreign Supplies of Fuel," 13 January 1936, O.B. 154, BNA, CAB 50/5.

IG Farben and Initial Planning to Meet Wartime Requirements, 1934-1935

Although we should not conflate the National Socialists' petroleum policy with that of IG Farben, one cannot avoid the impression that the latter did exercise considerable influence with the former considering the eventual direction of German policy after 1936. For that reason, we should consider more carefully IG Farben's conception of how Germany's petroleum industry should be reformed and additional production be encouraged. In the autumn of 1934, their expert on the industry, the ubiquitous Fischer, produced a wide-ranging assessment of Germany's petroleum position and the various means for addressing the existing deficit between production and consumption. He began by noting that, between 1929 and 1933, Germany had only managed to fill roughly 25% of its requirements internally (although the total value had shrunk significantly, from 134,300,000 RM in 1932 to 120,600,000 RM the following year). What little Germany did produce in the way of crude oil was subsequently refined into gasoline, fuel oil, and lubricants. Fischer expected that the pace of German motorization (and presumably, the economic recovery and rearmament) would contribute to a sharp increase in transportation-related petroleum consumption, perhaps by as much as 10% per year until 1938 (from 1,500,000 tons to 2,300,000 tons).²⁰⁷

When it came to meeting the existing and future shortfall, Fischer dismissed benzol and other, less advanced forms of synthesis as inefficient. German crude oil production might be raised significantly, but it was best suited to being refined into lubricating oils and diesel.²⁰⁸ Overall, however, none of these

²⁰⁷ Der gegenwärtige Stand der deutschen Treibstoffversorgung und die Ausbaumöglichkeiten der Inlandsproduktion," 07 September 1934, no author, enclosed with: Fischer (Abteilung Oele) to the Ammoniawerk Merseburg, *Leuna-Werke*, Direktion, 13 September 1934, BASF Archive, IG Farben, M02/1. Although 500,000 tons of this increase would be for gasoline, Fischer expected that increased utilization of diesel motors, particularly for military purposes would lead to a 300,000 ton increase in diesel fuel consumption.

²⁰⁸ Kockel considers the insistence that domestic crude oil be devoted to filling the deficit of lubricants rather than producing gasoline in new "cracking" facilities as evidence of an IG Farben conspiracy to eliminate a rival source of gasoline to hydrogenation. Eichholtz and Kockel, *Von Krieg zu Krieg*, 148-149. Of course, even Kockel concedes that IG Farben only advocated this policy because it believed that domestic oil production could not be raised significantly, which turned out to be the case until the discovery of new oilfields in Austria after 1938. According to the most optimistic predictions of domestic crude oil producers in November 1937, maximum output in wartime would reach only 1,500,000 tons twelve months after the start of hostilities. A.E. Gunther (British Military Government, Celle), "British Oil Fields Investigation, Part IV, Section 1: The War Structure of the German Crude Oil Industry, 1934-1945," May 1946, BNA, WO 252/1448. Kockel draws heavily on Gunther's analysis, which is highly critical of Krauch's skepticism of the domestic crude oil industry and IG Farben's attempts at creating a "national oil monopoly" akin to that of Standard Oil in the United States during previous century. Eichholtz and Kockel, *Von Krieg zu Krieg*, 187. By 1939, Krauch had changed in his mind and planned on boosting domestic

options could be expected “to cover Germany’s future increase in demand for liquid fuels and lubricating oils, much less to abate Germany’s import requirements.” The solution was the conversion of soft and hard coal (which existed “in quantities without limits”) into liquid fuels, either through hydrogenation or the F-T Process. Thanks to the experience gained at Leuna, IG Farben was capable of treating coal, oil, or tar, depending upon the circumstances, without much difficulty. Moreover, hydrogenation could be used to produce either gasoline or, if the need arose, a variety of heavy and light oil productions. Moreover, unlike the production of benzol or processing of coal tar, hydrogenation yielded no unwanted byproducts such as coke that needed to be disposed of elsewhere in the German market.²⁰⁹

In addition to the expansion at Leuna, IG Farben was busy converting existing facilities or building new ones and expected to reach a total synthetic output of 800,000 tons. It was impossible to know the precise division of labor between synthetic fuel and crude oil until the existing domestic oil exploration program had been completed. Fischer was nonetheless confident that only hydrogenation provided a “long-term” solution. There was certainly no shortage of coal: existing reserves stood at 22,000,000,000 tons of soft coal and 90,000,000,000 tons of hard coal, although these figures were doubtless conservative. Against an annual production of 130,000,000 tons of soft coal and 150,000,000 tons of hard coal, Germany’s reserves of soft coal would last for around 170 years and 600 years in the case of hard coal. Taking a figure of sixteen tons of soft coal and five tons of hard coal to produce one ton of gasoline, Fischer estimated that IG Farben would require only 8,000,000 tons of the former and 1,500,000 of the latter to produce the required 800,000 tons of fuel.²¹⁰

crude production (including Austria) to 2,000,000 tons a year by the end of the Krauch Plan – a fact that neither Kockel nor Gunther mention. Reichstelle für Wirtschaftsausbau (RWA), “Arbeitsbericht des Generalbevollmächtigten des Ministerpräsidenten Generalfeldmarschall Göring für Sonderfragen der chemischen Erzeugung Dr. C. Krauch vor den Generalrat,” 20/21 April 1939, T-77/430 (Wi/IF 5.3594)

²⁰⁹ “Der gegenwärtige Stand der deutschen Treibstoffversorgung und die Ausbaumöglichkeiten der Inlandsproduktion,” 07 September 1934, no author, enclosed with: Fischer (Abteilung Oele) to the Ammoniawerk Merseburg, *Leuna-Werke*, Direktion, 13 September 1934, BASF Archive, IG Farben, M02/1.

²¹⁰ “Der gegenwärtige Stand der deutschen Treibstoffversorgung und die Ausbaumöglichkeiten der Inlandsproduktion,” 07 September 1934, no author, enclosed with: Fischer (Abteilung Oele) to the Ammoniawerk Merseburg, *Leuna-Werke*, Direktion, 13 September 1934, BASF Archive, IG Farben, M02/1. I am grateful to Ray Stokes for sharing this document with me. An excellent statistical appendix for the period between 1929 and 1934 is also appended to Fischer’s memorandum.

Fischer's preferences were clear, but he was not obsessed with promoting hydrogenation and had a sense of his obligations to the oil industry as a whole, which he represented as the head of the government-organized Petroleum Section of the Chemical Industry Trade Group (Fachgruppe Mineralöle und Mineralölprodukte der Wirtschaftsgruppe Chemische Industrie). In a paper co-signed with representatives of the automobile and mining trade groups, Fischer expressed concern about the lagging state of diesel production, in view of the greater efficiency of diesel engines to gasoline-powered ones. Diesel engines were also of increasing importance to German automobile industry, both for the domestic and export markets. Only one-seventh of Germany's diesel consumption came from local sources. There was evidence, however, "suggesting that certainly the technical basis for providing Germany with a sufficient supply of diesel fuels exists," but an expansion was not feasible economically under the existing market price. Fischer therefore suggested raising the price to 16 RM per 100 kg either by increasing import duties or creating a price-equalization fund (Ausgleichskasse) while eliminating the export duty on German petroleum products. Fischer also complained about the misallocation of German crude oil to refining products such as gasoline, when it should be preserved as a wartime reserve of lubricating oils. More than anything else, the process of motorization in Germany (which already lagged far behind the rest of the world – German per capita consumption, forty liters, was half that of the French, less than one-third that of the British, and less than one-fifteenth that of the Americans) should never be threatened by a lack of fuel, particularly through a shortage of foreign exchange.²¹¹

Fischer's assessments were of considerable relevance to German military planning. IG Farben began compiling estimates of future supply and demand during peacetime and mobilization in collaboration with

²¹¹ Fischer, *et al.*, "Deutschlands Treibstoff- und Mineralölversorgung: Gemeinsame Denkschrift und Vorschläge der Mineralölindustrie, der Automobileindustrie, des Steinkohlen- und Braunkohlenbergbaues," no date (circa 1935), T-84/194 (EAP 66-c-12-62/130). See especially Anlagen 1-3, and 7. Fischer also articulated many of this paper's argument in a lecture before the annual conference of the Deutsche Gesellschaft für Mineralölforschung" in September 1935: "Nationale Mineralölwirtschaft: Vortrag gehalten von Dr. E.R. Fischer... 26. September 1935," Sonderdruck aus: *Die Chemische Industrie: Herausgegeben von Wirtschaftsgruppe Chemische Industrie... Nachrichten-Ausgabe*, 58. Jahrgang (05 October 1935), enclosed with: Fachgruppe Mineralöle und Mineralölprodukte der Wirtschaftsgruppe Chemische Industrie (signature illegible) to Hauptmann Czimatia (Reichskriegsministerium, Wehrmachtamt), Dr.My./Ha., II/727, 10 October 1935; and Czimatia to the Fachgruppe Mineralöle..., 17 October 1935; both in: T-77/416 (Wi/IF 5.3276).

the HWA and then the Defense-Economy Staff (Wehrwirtschaftsstab, WStb) as early as October 1934.²¹² The first study was revised at least twice (December 1934 and May 1935). According to the last version, the aim of German petroleum policy was “[an] expansion of internal production,” both for the purposes of freedom from imports and “to support the desired increase of German automotive sector, such that this must not be throttled [...] through an enforced saving of foreign exchange.” Planned increases in domestic output would be focused on expanding the supply of more expensive petroleum products (such as high-octane aviation fuel). Although Germany would strive for the “highest possible increases” over the next two years, the only way to cover the expected mobilization demand was through additional imports and stockpiling. Overall, normal consumption of all manner of petroleum products would rise from an estimated 3,680,000 tons in 1934 to only 3,945,000 tons by 1938. Mobilization demand, on the other hand, would be 5,675,000 tons. Domestic output would increase by roughly 50%, from 1,402,000 tons to 2,155,000 tons, thereby allowing Germany to cover 64.6% of its total consumption by 1938, against only 28.1% in 1935. Five synthetic plants, one existing (Leuna) and four under construction (Böhlen, Magdeburg, Ruhland, and Scholven) would account for any new production. Germany would still, however, have to import roughly 7,734,000 tons over the next four years at a cost of 511,300,000 RM in foreign exchange.²¹³

Interestingly, total output would actually decrease in the event of mobilization, since the production of motor fuels would have to be re-routed from supplying automobile to aviation fuel. Against the expected demand of 5,675,000 tons, only 1,655,000 tons of domestic production and 792,000 tons of stockpiles would be available (i.e. 2,447,000 tons or 43.2% of total demand). In order to satisfy its mobilization requirements for an entire year, Germany would need to make a “one-time, special

²¹² Dr. (Gerhard) Ritter to Dr. Krauch, 12 December 1935, NARA, RG 238, T-301/58 (NI-7295). Ritter explained that the figures concerning mobilization demand provided by the Wehrwirtschaftsstab were “out of date” (veraltet), but that IG Farben should make do for the time being, as “the total demand for the time being for all products cannot be overlooked.” Nonetheless, Ritter hoped to write a new assessment using more up-to-date figures shortly. Titus Kockel claims that IG Farben sought out cooperation with the military because of it believed that the RWM was hostile to its synthetic fuel program, even after the creation of BRABAG. The idea is not unreasonable, considering Schacht’s hostility to autarky after 1936, but Kockel does not present any evidence. Eichholtz and Kockel, *Von Krieg zu Krieg*, 143.

²¹³ “Zur Deckung des deutschen Mineralölbedarfs,” 22 May 1935, no author, NARA, RG 238, T-301/58 (NI-7295).

importation” of 3,153,000 tons by April 1937 that would be devoted entirely stockpiling, at a cost of 241,800,000 RM. Further, Germany would require an additional 2,970,000 tons of tanker storage, an expenditure of 387,400,000 RM. Although the center of gravity of the German effort was synthetic production, among the “additional tasks” suggested by the report was raising German crude oil output, which would be devoted to the production of lubricants. The report also placed great emphasis on expanding output of ersatz fuels using alcohol (Reichskraftstoff) or methanol, recycling low-quality fuels remaining from production of aviation fuel, and synthesizing lubricating oils for aircraft engines. In fact, this last product presented the most glaring shortfall in terms of its oil supply – German production of aviation lubricating fuels was nil in 1935 and IG Farben did not foresee any change even by 1938.²¹⁴

Overall, IG Farben was pleased by its current and expected progress. The aforementioned collaborative studies with HWA were rewritten and passed along to at least one other influential observer, the now-retired General Vollard-Bockelberg, a member of BRABAG’s Managing Board.²¹⁵ This study predicted that, whereas domestic oil production had only managed to cover between one-fifth and one-third of total consumption between 1930 and 1934, the situation would improve dramatically as a result of the measures implemented in 1935. Accordingly, “in spite of the increasing consumption” to be expected in the years to come, Germany would still enjoy “a clear reduction of import and thereby a lasting savings

²¹⁴ “Zur Deckung des deutschen Mineralölbedarfs,” 22 May 1935, no author, NARA, RG 238, T-301/58 (NI-7295). These figures differ somewhat from the earlier reports of October and December 1934 (both of which are appended with the May 1935 draft), in that estimated demand & supply was constantly revised upwards (roughly 200,000 tons and 500,000 tons, respectively) – and with much of the new supply coming either from synthetic gasoline production or additional diesel fuel refined from German domestic crude. See also the revised figures concerning supply & demand of motor fuel, diesel, and lubricating oils (but not fuel oil or kerosene), which differ slightly from those in the May 1935 study, appended to: Ritter to Krauch, 12 December 1935, NARA, RG 238, T-301/58 (NI-7295). Published estimates from this period assumed an increase in domestic production from 850,000 tons in 1933 to 2,025,000 tons by 1936/37. Hans Steinberger, “Kriegswirtschaft und Selbstversorgung,” *Deutsche Wehr*, Nr. 5/39. Jahrgang (31 January 1935).

²¹⁵ Vollard-Bockelburg is certainly an interesting character. A former General Staff officer attached to Supreme Army Headquarters in Spa at the end of the First World War, he subsequently played a major role in promoting development of Germany’s nascent armored forces during the 1920s and served as the Chief of the HWA from 1929 until his retirement at the end of 1933. A year later, he joined Krauch on the Managing Board of BRABAG. He disappeared into Soviet captivity in 1945.

of foreign exchange... will be achieved.”²¹⁶ By 1937, the company estimated that the country would only need to import 35% of its consumption. This turnaround was the result of additional investment to expand production of domestic crude oil and from hydrogenation (and hopefully from the F-T Process in future). According to IG Farben, synthetic production of both light and heavy petroleum products “*practically and technically, as well as in terms of raw materials, knows no boundaries*” other than financial constraints. Once the planned expansion of Leuna and construction of the new facilities was complete, Germany would be almost self-sufficient (85-90%) in light motor fuel. Even where major shortfalls did exist, such as for diesel fuel or lubricating oils, IG Farben was confident that a technical means of addressing the deficit synthetically would be found shortly.²¹⁷

²¹⁶ These savings would only come in relation to “normal,” peacetime demand/consumption: possible mobilization demand could only be covered by significant stockpiling through imports, which would undercut the efforts at saving foreign exchange (“die die erzielte Devisenersparnis annähernd wieder wettmachen dürfte”).

²¹⁷ “Die deutsche Mineralölversorgung. Zur Sicherung des Normalbedarfs und des A-Fall-Bedarfes,” June 1935, no author, enclosed with: Vollard-Bockelberg to Ritter, 04 December 1935 and 10 March 1936, NARA, RG 238, T-301/58 (NI-7295). Emphasis in the original.

The Battle for Control of Policy, 1935-1936

Even if its direct role in oil production was limited, the military kept a close watch over developments. By 1934, domestic production would have covered 68% of the country's consumption in 1930 and half of its current demand.²¹⁸ The military took a dim view, however, of the petroleum industry's future prospects in view of the bureaucratic and financial obstacles. In March 1935, the RWehrM (renamed the War Ministry – Reichskriegsministerium – in May) summarized Germany's wartime raw materials position. Although adequate supplies of coal, iron, and steel were available, petroleum imports were still indispensable. Since "autarky is impossible in the event of war," Germany's survival would depend upon not just open sea lanes but also the availability of foreign exchange to finance imports. Germany's shortage of foreign exchange and the impossibility of securing foreign credits left the country's petroleum supply in a "wholly insufficient" position, particularly as it had already been forced to start drawing down its existing stockpiles.²¹⁹

As War Minister Werner von Blomberg – probably at the prompting of his chief economic adviser, then-Colonel Georg Thomas – explained to Schacht in another overview of the oil position in June 1935, although tremendous advances in the supply of various petroleum products had been achieved, "[the] expansion of supply is not keeping pace with rise in demand, such that the supply position, rather than improving, is actually deteriorating."²²⁰ According to Blomberg, by 1938, petroleum consumption would have risen by the following amounts:

Type of Product	Increase
Aviation Fuel	160%
Motor Fuel	120%

²¹⁸ Verbandssyndikus Kurt Bronk, "Deutschlands Erdöl-Selbstversorgung, militärisch gesehen," *Militär-Wochenblatt*, 120. Jahrgang, Nummer 16 (25 October 1935).

²¹⁹ "These weaknesses," the study concluded, "rule out the possibility of conducting a war." RWehrM, "Die Wehrwirtschaftliche Lage von Deutschland, Frankreich, Belgien, Russland, Tschechoslowakei, Polen, Italien," 11 March 1935, Nr. 112 in: *Akten der Reichskanzlei*, ii: 416-417.

²²⁰ Blomberg had first brought the military's concerns regarding petroleum (specifically the Reich's inability to accumulate a 1,000,000 ton war reserve) to Schacht's attention during a conversation on 09 August 1934, shortly after the latter's appointment as Reichswirtschaftsminister. See: Nr. 51 in: *Akten der Reichskanzlei*, ii: 194, n. 1. For Thomas' role, see: Eichholtz and Kockel, *Von Krieg zu Krieg*, 149. Besides the documents cited below, the following discussion over responsibility for oversight of the petroleum industry is based on: Dieter Petzina, *Autarkiepolitik im Dritten Reich: Der nationalsozialistische Vierjahresplan* (Stuttgart: Deutsche Verlags-Anstalt, 1968), 36-39; and Eichholtz and Kockel, *Von Krieg zu Krieg*, 134-170.

Diesel Fuel	320%
Fuel Oil	20%
Aircraft Lubricants	160%
Automobile Lubricants	200%

As of October 1935, domestic output would cover only the following shares of demand:

Type of Production	Share of Demand
Aviation Fuel	52%
Motor Fuel	62%
Diesel Fuel	42%
Aircraft Lubricants	0%
Automobile Lubricants	43%

By the 1938, the supply position would have deteriorated even further:

Type of Product	Share of Demand
Aviation Fuel	40%
Motor Fuel	45%
Diesel Fuel	11%
Fuel Oil	40%
Aircraft Lubricants	0%
Automobile Lubricants	14%

According to an appended estimate of Germany's supply position as of 01 April 1937, domestic production covered less than six months of consumption: 4.3 months in the case of aviation and motor fuel, and between 2.6 to 3.5 months in the case of diesel fuel, fuel oil, and lubricating oils. The absolute annual shortfall ranged from 840,000 tons in the case of motor fuel to 100,000 tons in the case of aviation lubricants (not including reserves stocks). Blomberg therefore demanded that “[in] view of the war-decisive significance of a secure petroleum supply, it is without a doubt essential that the expansion of petroleum production be driven forward with all means and in all branches of the petroleum industry.” Blomberg believed that any problems could be overcome through better command-and-control. What he had in mind was the appointment of a “Fuel Commissar” to provide unified leadership over the relevant military and civilian agencies. Blomberg was also concerned about the financial difficulties and asked whether more of the burden could be placed upon private industry, and if overseas interests could

contribute more. In any event, the problem of “financing *must* be resolved, since the shortage of fuel oil, diesel fuel and lubricating oils can jeopardize our entire rearmament over the coming years.”²²¹

The military was clearly thinking along the lines of establishing what would be known as the VJP one year later.²²² During a meeting at the Reich Chancellery in July 1935, the RWM resisted any diminution of Schacht’s powers (he had been appointed “Plenipotentiary for the War Economy” in May) through the creation of a new agency to handle fuel policy. The military’s representative, Thomas, was unimpressed: the military, supported by Keppler, was uninterested in whether or not the proposed “Fuel Commissar” was attached to Schacht’s ministry, only that he had the requisite means and authority to handle the task.²²³ Blomberg backed Thomas and advised Schacht that the “tasks [of the “Fuel Commissar”] lay to a great extent within the practical realm and beyond the competence of the RWM.”²²⁴

For reasons that are unclear, Blomberg deferred to Schacht, who reiterated his objections during a meeting between the War and Economics ministers and their staffs at the end of July.²²⁵ Schacht pointed out that Germany still required the assistance of the international oil companies, who would be unlikely to cooperate with any “Commissar” intent on bullying them. The military resigned itself to the situation, but one of Blomberg’s deputies (Maj. Warlimont, later Alfred Jodl’s deputy at the OKW’s Operations Staff –

²²¹ Der Reichskriegsminister (Blomberg) an den Herrn Reichswirtschaftsminister (Schacht), Nr. 292 35. W.A. (W) g.Kdos., “Förderung der in[ländischen] Treibstoffversorgung,” 03 June 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6 to: “Die Arbeiten des WiRüAmtes.” Reprinted as Nr. 169 in: *Akten der Reichskanzlei*, ii: 611-613. Emphasis in the original.

²²² IG Farben was apparently also in favor of the installation of a “Fuel Commissar,” but it seems a stretch to argue that the whole matter “fundamentally amounted to a privatization of oil policy” on behalf of IG Farben. Eichholtz and Kockel, *Von Krieg zu Krieg*, 150-151.

²²³ The minutes included criticism of the RWM’s handling of petroleum policy: “[The] elevation of the RWM has lead to strategic [wehrpolitische] considerations being entirely ignored.” To wit, the RWM was still including overseas imports into its figures for German supply & demand, even though “in case of an emergency one cannot rely upon overseas oils.” Wi II, Aktz. 66 b 2134/IV Vi (IIb), “Aktenvermerk über eine Besprechung in der Reichskanzlei. Am 9. 7. 1935. Thema: Treibstoff-Kommssar,” 11 July 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6a to: “Die Arbeiten des WiRüAmtes.” For Keppler’s appointment, see: *Akten der Reichskanzlei*, ii: 194, n. 1.

²²⁴ Der Reichskriegsminister und Oberbefehlshaber der Wehrmacht (Ob.d.W. – Blomberg), to Herrn Reichsbankpräsident Dr. Schacht, Nr. 1340. 35. g.Kdos. W., 11 July 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6b to: “Die Arbeiten des WiRüAmtes.”

²²⁵ No record of Blomberg’s earlier meeting with Schacht (circa 19 or 20 July 1935) appears to exist: Eichholtz and Kockel, *Von Krieg zu Krieg*, 154, n. 165.

Wehrmachtsführungsstab) pointed out that Germany's deteriorating supply position was "the most urgent reason for the demand to establish a special, independent agency to handle the fuel question."²²⁶

The RKM and the RWM set about reconciling their divergent views concerning Germany's oil requirements the following month. During a meeting at the RWM, the RWM representative asked Warlimont "whether, from the perspective of the armed forces the aim should be a complete covering of mobilization demand," or just peacetime requirements? Warlimont replied that he "leaned" toward the latter, since that should suffice "to accommodate the securing of the armed forces' supply of fuel to a large extent." Against an estimated shortage of motor fuels of roughly 1,000,000 tons per annum during mobilization, the RWM representative now, finally, expressed doubts about the synthetic fuel industry. He "believes that we have overextended ourselves... in reference to hydrogenation. Production over and above the existing planning is out of the question." One other hand, the new F-T plants could make a dent into Germany's meager diesel production, which at present only covered 10% of the Navy's mobilization demand of 2,000,000 tons. The RWM also would "not shrink" from raising the duty on diesel fuel in order to boost domestic output. "Where the free market [freie Verhandlungen] fails, state coercion would be applied as necessary."²²⁷ Warlimont stressed that the petroleum industry "had to be steered by the state, which had been one of the reasons for the wish to create a Fuel Commissar."²²⁸ Following the meeting, Blomberg wrote to Schacht to request that their two ministries collaborate in reconciling "the foundations at this moment concerning the present and anticipated future supply of fuel in the event of peace and of mobilization." Blomberg also reiterated his wishes concerning future policy, including "ensuring" that all hydrogenation plants were capable of both producing exclusively aviation fuel and using only soft coal as a feedstock, should the need arise. Blomberg also urged that the search for new oil

²²⁶ According to Warlimont, whereas Germany could meet 51% of its mobilization demand in 1935, by 1938 it could only cover 40%. "Aktenvermerk über die Besprechung am 27.7.35 im Reichskriegsministerium betr. Treibstoffkommissar," T-77/341 (Wi/IF 5.2164, 2687), Anlage 6c to: "Die Arbeiten des WiRüAmtes." Reprinted as Nr. 193 in: *Akten der Reichskanzlei*, ii: 693-694.

²²⁷ One thing the RWM was unwilling to countenance, however, was displeasing the international oil companies, for example by demanding that foreign-born directors at their German subsidiaries be replaced. Such policies "would hardly find approval with President Schacht."

²²⁸ Wi II, Aktz. 66 b 34/I Wi (IIb), "Aktenvermerk über eine Besprechung im R.Wi.Min. am 9. 8. 1935. Thema: Maßnahmen zur Sicherstellung der deutschen Betriebstoffversorgung im Mob.-Fall.," 09 August 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6d to: "Die Arbeiten des WiRüAmtes."

fields within Germany was prosecuted by all means “in order to boost crude oil production and to replace those fields that will be exhausted within the next 6-8 years.”²²⁹

Unlike the RWM, the RKM could not afford to be complacent in the face of their depressing assessments of Germany’s supply position. According to one military assessment designed to serve as the statistical basis for future discussions with the RWM, as of 01 January 1936, Germany would produce only the following shares of its consumption:

Type of Product	Share of Demand
Motor Fuel	45%
Aviation Fuel	45%
Diesel Fuel	17.5%
Fuel Oil	33.5%
Aircraft Lubricants	0%
Automobile Lubricants	18%

When combined with existing stocks, “full supply” was possible for only six months in the case of aviation and motor fuel, and roughly three months for all other petroleum products. Even if the anticipated production increases by 1938 went through as planned (an increase of 800,000 tons), Germany’s overall position would, if anything, deteriorate slightly due to rises in consumption, in particular of fuel oil, diesel, and lubricants. Germany’s only hope, therefore, was to stockpile imports – but this “depends for the moment decisively upon the *foreign exchange position*.” The shortage of hard currency was posing “considerable difficulties” in the Reich’s negotiations with Standard Oil and Shell. German firms such as the industrial consortium within the British Oil Development Corporation (BOD) hoped one day to exchange Iraqi crude oil for German industrial goods, but such “deliveries can hardly be counted upon before a period of two years.”²³⁰ Domestically, there were no easy options left: “It should

²²⁹ Der Reichskriegsminister und Ob.d.W. (Blomberg) an den Herrn Reichswirtschaftsminister (Schacht), z.Hd. des Herrn Oberberghauptmann Schlattmann, “Betr.: Programm für die zukünftigen Maßnahmen auf dem Gebiet der Mineralölwirtschaft,” Bezug: Besprechung am 9.8.35 im Reichswirtschaftsministerium, 06 September 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6e to: “Die Arbeiten des WiRüAmtes.”

²³⁰ Due to space constraints, it was impossible to include an examination of German efforts to take control of the British Oil Development Corporation (BOD) between 1932 and 1936 and use the concession in Iraq as a source of crude oil that could be imported without expenditure of hard currency. The German Navy was a key player pushing for a stronger commitment in Iraq since it had little to gain from a synthetic fuel program geared around producing high-octane motor and aviation gasoline rather than naval fuel oil or diesel. When this plan failed, the Navy tried to

not be overlooked, that further expansion of fuel production will be considerably more difficult than has so far been the case.” Synthetic production, in particular, was running into technical and economic roadblocks. The paper concluded with a frantic warning that only “40-45% of the wartime consumption of fuels in 1938 can likely be covered from our own production and reserves for around three months of full supply will be on hand.”²³¹

Probably goaded by the concerns of his staff, Blomberg met with the Führer on 17 October 1935 to discuss the situation.²³² As Blomberg explained to Schacht a week later, he left the meeting “strengthened anew in my conviction that within the realm of fuel policy drastic measures and practical ways must be found in order to reduce the dangers that I still see at the moment in reference to the security of freedom of movement and thereby the striking power of the armed forces.” Blomberg could not conceive of any “really progressive improvement of the current situation” under the existing circumstances and complained about the lack of any central authority to impose order upon the myriad agencies “working within the realm of fuel entirely independent of one another and with numerous contradictory objectives.” The War Minister beseeched his colleague to reconsider his position concerning a new coordinating

parlay the proceeds of the sale of the German interest in the BOD into an oil concession or supply contract with Mexico, which was desperate to find buyers for its oil following the nationalization of its oil industry in 1938. The key source on Iraq is: Helmut Mejcher’s *Die Politik und das Öl im Nahen Osten: I. Der Kampf der Mächte und Konzerne vor dem Zweiten Weltkrieg* (Stuttgart: Klett-Cotta, 1980), 102-145. For Mexico, see: Klaus Volland, *Das Dritte Reich und Mexiko: Studien zur Entwicklung des deutsch-mexikanischen Verhältnisses 1933-1942 unter besonderer Berücksichtigung der Ölpolitik* (Frankfurt am Main: Peter Lang, 1976), 83-174. Both episodes are summarized in: Eichholtz and Kockel, *Von Krieg zu Krieg*, 151-160, and 179-192. The Navy’s quasi-independent perspective on German foreign oil policy is extensively described within the following memoranda: der Ob.d.M. (Raeder) an den Chef des OKW (Keitel), *et al.*, B. Nr. A IV, “Betr.: Ölversorgung der Kriegsmarine,” 06 May 1940; and der Ob.d.M. an den Reichswirtschaftsminister Herrn Walter Funk, *et al.*, B. Nr. A IV 170/40 G.Kdos., “Betr.: Ihr Schreiben B. Nr. II Min.-Öl 116/40 g.Rs. von 6. 6. 1940,” 27 June 1940; both in: T-1022/3405 (PG 31762/B). The OKM also sent a memorandum on the matter of oil supplies from Iraq and Mexico to the RWM, Göring, and the AA on 29 April 1940, which appears to be almost identical to the one dated 06 May 1940. This document is summarized in: NARA, RG 238, T-301/18 (NI-2019); and it is reprinted in: Eichholtz, *Deutsche Ölpolitik*, 269-274. For a survey of the Navy’s petroleum policy during the Third Reich, see: Wilhelm Meier-Dörnberg, *Die Mineralöversorgung der Kriegsmarine 1935 bis 1945* (Freiburg: Rombach, 1973).

²³¹ Wi II, “Vortragsnotiz über die Treibstoffversorgung im Mob.-Fall,” 23 August 1935, T-77/101 (Wi/IF 5.433). Emphasis in the original.

²³² No record of the meeting appears to have survived. According to a subsequent summary, Blomberg had pushed for a “Fuel Commissar” who could devote “their entire energy to the petroleum industry” but would be under the supervision (Oberleitung) of the RWM: “Gründe für die Einsetzung eines Treibstoffkommissars,” no date or author, T-77/101 (Wi/IF 5.433).

agency (which would still be under Schacht's leadership), darkly warning that he wanted "to avoid" having such agency imposed upon Schacht from outside.²³³

Schacht continued to stall for time by requesting another meeting with Blomberg to discuss the matter. He also took the opportunity to forward an update on the status of the German petroleum industry. Domestic oil producers, under the aegis of the 1934 "Reich Drilling Program" (Reichsbohrprogramm), had received 5,000,000 RM in government assistance in 1934, with a further 9,000,000 RM set aside for 1935-1936. These contributions would be matched by private industry, which would provide 4-5,000,000 RM in 1935 and another 5,500,000 to 6,000,000 RM in 1936. The results had so far, however, been disappointing: although five new fields had come on-line, with one exception, total production was a meager 100 tons per month. The RWM nonetheless advised that judgment should be reserved: "In no event have these fields been so developed that one can make a definitive assessment of their productivity for the foreseeable future." In any event, domestic oil production ought to be held in reserve, and refineries currently processing German crude should be switched over to processing imports.²³⁴

On the bright side, expansion of synthetic production through hydrogenation had been completed according to schedule at Leuna, and a further seven new facilities would come into operation over the course of 1936.²³⁵ Many of these facilities would be using the new F-T Process, and the RWM was

²³³ Der Reichskriegsminister und Ob.d.W. an den Herrn Reichs- und Preußischen Wirtschaftsminister, Aktz. 66 b 34 W Wi (II), Nr. 6763/35 geh., "Betr. Einheitliche Treibstoffpolitik," 25 October 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6f to: "Die Arbeiten des WiRüAmtes." Blomberg's letter was based upon an undated memorandum by Thomas, which detailed the lack of centralized authority over fuel policy in greater detail: "Entwurf zu einer Vortragsnotiz über die Notwendigkeit einheitlich geleiteter *Treibstoffpolitik*," no date or author (22 October 1935?), T-77/341 (Wi/IF 5.2164, 2687), Anlage 6k (?) to: "Die Arbeiten des WiRüAmtes." Another copy of this paper in T-77/228 (Wi/IF 5.1171) is signed by Thomas. See also: Thomas an Wa A, Aktz. 66 b 2134 W Wi (IIB), Nr. 7089/35 geh., "Betr. Betriebstoffversorgung. Bez.: Wa A Bb. Nr. 3177/35 geh. Prw. 6 VII vom 22.10.35," 02 November 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6g to: "Die Arbeiten des WiRüAmtes."

²³⁴ "Übersicht über den derzeitigen Stand der Ölversorgung und die weiteren Maßnahmen auf dem Gebiete der Mineralölwirtschaft," no date or author, enclosed with: Der Präsident des Reichsbank-Direktoriums, Dr. Hjalmar Schacht, an den Herrn Reichskriegsminister und Ob.d.W. (Blomberg), z.Hd.v. Herrn Oberst Thomas oder Vertreter im Amt, G.B. 323/35 g., 12 November 1935, T-77/101 (Wi/IF 5.433). Monthly crude oil production had roughly doubled between 1931 and 1935 (19,391 tons to 35,992 tons), but its share relative to the total supply was unchanged due to increased demand. Dr. Victor Pflanz, "Das deutsche Erdöl," *Die deutsche Volkskraft: Beilage zur Deutschen Wehr*, Nr. 3, 6 Jahrgang (16 April 1936). See also: "Erdöl- und Treibstoffproduktion in Deutschland," *Wehrtechnische Monatshefte*, Nr. 2 (1936), T-77/425 (Wi/IF 5.3444).

²³⁵ Leuna was using 94,000 tons of coal per month, as well as 12,000 tons of tar and oil, as feedstock. Converting the plant to producing fuel from coal exclusively would, however, require an additional expenditure of roughly five to

considering further construction of “an array” of F-T plants due to their ability to produce diesel fuel and lubricants.²³⁶ The RFM was also on board with plans to raise the customs duty on imports of both products (from 4 to 8 RM in the case of former, and 10 to 14 RM with the latter). Roughly 450,000 tons of light oils had been stockpiled, while an additional 95,000 tons of aviation fuel would be added through a “London Agreement.”²³⁷ Finally, negotiations were under way to stockpile additional imports from Romania (through IG Farben) and the United States (through the Standard Oil Company of California) without any expenditure of hard currency.²³⁸

The Supreme Commander of the Air Force, Hermann Göring now entered the fray. Göring assured Blomberg that he was in full accord with the RKM’s position, adding that the Air Force had a keen interest in resolving the fuel problem. Göring was of the opinion that this could only be accomplished “if a central agency is entrusted with leadership of this issue. It is self-evident that this agency is endowed with considerable powers [...]” Göring promised “to undertake steps with the Economics Minister, which have as their aim the appointment of a Fuel Commissar.”²³⁹ Göring’s intervention certainly had an effect, as evidenced by Blomberg’s letter to Schacht following the start of Italy’s invasion of Abyssinia. Blomberg observed that solving the shortage of petroleum “encompasses not only the raising of

8,000,000 RM. The costs in the case of new facilities (Böhlen and Magdeburg) would be even more expensive: roughly 40,000,000 RM

²³⁶ But it also entailed cooperation with Germany automobile producers, which had to produce diesel engines without “demanding” specifications for fuel quality. J. Werlin, “Rohstoffplan und Motorisierung,” *Vierjahresplan*, 1937: I.

²³⁷ Delivery of an additional 150,000 tons of motor fuel “had been called into question [in Frage gestellt] due to foreign exchange considerations.” No further details concerning this “London Agreement” were provided, although Schacht was probably referring to the agreement concluded between IG Farben and the U.S. and British oil companies in late-1934 (mentioned above).

²³⁸ “Übersicht über den derzeitigen Stand der Ölversorgung und die weiteren Maßnahmen auf dem Gebiete der Mineralölwirtschaft,” no date or author, enclosed with: Der Präsident des Reichsbank-Direktoriums, Dr. Hjalmar Schacht, an den Herrn Reichskriegsminister und Ob.d.W. (Blomberg), z.Hd.v. Herrn Oberst Thomas oder Vertreter im Amt, G.B. 323/35 g., 12 November 1935, T-77/101 (Wi/IF 5.433). On 18 November 1935, Thomas met with Schacht to discuss the points raised in the recent exchange of letters between Blomberg and Schacht. No record of the meeting was found other than a summary indicating that the RWM refused to back down, arguing that the fact that they were even meeting “should substantiate [darauf] the necessarily close cooperation between W Stb. und G.B. [Schacht] on petroleum issues [...]” Wi II, Aktz. 66 b 2134.VIII Wi (IIb), “*Vermerk über den Schriftwechsel und die Besprechungen betr.: ‘Treibstoffkommissar’ vom 3. 6. 1935 ab,*” T-77/101 (Wi/IF 5.433).

²³⁹ Der Reichminister der Luftfahrt und Ob.d.L. (Göring; gez. Erhard Milch, Staatssekretär, RLM) an den Herrn Reichskriegsminister (Blomberg), LC 12876/35 g.K.Chef-Ing., “Betr. Treibstoffkommissar. Vorgänge: W.A. (W) Nr. 292/35 geh.Kdos. vom 3. Juni 1935 [and] RLM, LC Nr. 8725/35 geh.Kdos. vom 24. Juli 1935,” 15 November 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6f to: “Die Arbeiten des WiRüAmtes.”

production, but rather overall guidance of petroleum and motor production problems by an agency that must be endowed with sufficient powers.”²⁴⁰

Schacht realized now that he was fighting a losing battle and tried to retreat gracefully.²⁴¹ He reminded Blomberg that the two of them had discussed the issue of a “Fuel Commissar” at great length since the summer, and that Blomberg had already agreed with the RWM that effective oversight over the petroleum industry “depends less upon which name such an agency carries, but rather that it is competent, regulates the relevant bureaucratic offices and possesses the sense of authority not to mention the will to compel the competing interests [to cooperate].” Schacht expressed astonishment at Blomberg’s denigration of the existing petroleum policy, since the RKM had (following conferences in August and November) twice signaled its “agreement with all aspects of the program” and “what had been accomplished in the interim and should be addressed in the future.” Schacht agreed that order had to be imposed upon the various competing interests involved in petroleum policy but pleaded that he had not yet had enough time to deal with the problem, which would only be exacerbated by creating yet another level of bureaucracy in the form of a “Fuel Commissar.”²⁴²

²⁴⁰ Der Reichskriegsminister und Ob.d.W. (Blomberg) to Schacht, Nr. 2532.35. g.K. W.Stb (Wi. II), 30 November 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6i to: “Die Arbeiten des WiRüAmtes”; reprinted in: Eichholtz, *Deutsche Ölpolitik*, 265. The RKM’s critique was developed further in a short paper by the WStb in December 1935. The military complained that motorization was proceeding without reference to military requirements. Emphasis ought to be placed only in those cases where “the supplies of fuel in the case of war appear secure in terms of quantity and quality.” W Wi II, “Notiz betr. Treibstoffkommissar,” 17 December 1935, no author (most likely Thomas) T-77/341 (Wi/IF 5.2164, 2687), Anlage 6k (?) to: “Die Arbeiten des WiRüAmtes.” Emphasis in the original. Another draft of this paper in T-77/101 (Wi/IF 5.433) is dated 08 January 1936, but it is identical to the December version.

²⁴¹ As Karlsch observes, one should not have the impression that the dispute between Schacht and the RKM was indicative of any dovishness on the part of former, who has been miscast “as the representative of a modern economic policy,” while Göring is presented as “unconditional advocate of autarky and accelerated rearmament.” Schacht had, after all, “initiated all important autarky projects until 1937,” and his feuding with Blomberg and Göring had “less to do with tactical differences, much less a renunciation of rearmament, but rather if anything with personal ambitions.” Karlsch and Stokes, *Faktor Öl*, 185-186.

²⁴² Der Reichs- und Preußische Wirtschaftsminister (Schacht) an den Herrn Reichskriegsminister und Ob.d.W. (Blomberg), A.K. 5530/35., “Betrifft: Einheitliche Treibstoffpolitik,” 13 December 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6l to: “Die Arbeiten des WiRüAmtes.”

Schacht subsequently met with Thomas and a number of leading military and economic officials to inform them that he was appointing one of his deputies as the Plenipotentiary for Fuel Questions.²⁴³ Blomberg quickly acceded to Schacht's suggestion that the military second a representative to the plenipotentiary's staff and join him in approaching the Führer to request the requisite executive authority over any relevant agencies.²⁴⁴ The following month a draft decree was prepared for Hitler's signature using guidelines determined by the WStb. Besides empowering the plenipotentiary to oversee "that the supply, refining, distribution, and utilization of petroleum, petroleum products and all other fuels are carried out in the most economically appropriate manner with a view to the common good [Gemeinwohl]," the decree included a secret portion dealing with the military aspects of the task: "The Special Plenipotentiary has to organize the entire petroleum industry along strategic and defense-economic lines. The aim is securing the foundation for the mobilization of the armed forces and for the conduct of war."²⁴⁵ For reasons that are unclear, Hitler never signed the decree. In any event, the new

²⁴³ No record of the meeting itself appears to have survived, just the invitation: Der Präsident des Reichsbank-Directoriums, Dr. Hjalmar Schacht als Generalbevollmächtigter, an den Chef des Wehrmachtamtes im RKM (Gen. Maj. Keitel), *et al.*, GB 424/35 g., 11 December 1935, T-77/101 (Wi/IF 5.433).

²⁴⁴ Der Reichskriegsminister und Ob.d.W. (Blomberg) to Schacht, Aktz. 66 b 2134/VIII W Wi (Iib), 24 December 1935, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6m to: "Die Arbeiten des WiRüAmtes." Blomberg settled upon an Army officer (Hauptmann Sadewasser) to serve as the RKM's liaison with the new Plenipotentiary: "Entwurf: Dienstanweisung für den 2. Verbindungsoffizier beim Reichswirtschaftsministerium," no date or author, Anlage to: der Reichskriegsminister und Ob.d.W. (Blomberg) an den Herrn Reichswirtschaftsminister (Schacht), z.Hd. der Herrn Oberberghauptmann Schlattmann and Herrn Min.Rat Godlewski, Aktz. 11 d W W (II), Nr. 540/36 g., "Betr.: 2. Verbindungsoffizier der wehrwirtschaftlichen Abteilung," 21 January 1936, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6q (?) to: "Die Arbeiten des WiRüAmtes." Meanwhile, "the particular interests of the armed forces" would be handled by the "Fuel Committee" of the WStb, which would coordinate when necessary with the military liaison on the staff of the Fuel Commissar and was already cooperating with the RLM on matters of mutual interest. In spite of its "agreement on all significant points" with the RLM, however, the WStb complained that "the interests of aviation have always been strongly preferred," to the effect that "[the] supply of the Air Force with fuels is several times better than that of the Army and Navy." W Wi II, "Vortragsnotiz über die Zusammenarbeit mit dem Treibstoffkommissar," 09 January 1936, T-77/101 (Wi/IF 5.433). The Air Force and Navy quickly put forward their candidates to serve on the "fuel committee" in its dealings with the new plenipotentiary. Der Reichsminister der Luftfahrt und Ob.d.L. (Göring) an den Herrn Reichskriegsminister und Ob.d.W. (Blomberg), LC Nr. 33 888/35 geh. Chef-Ing., Bezug: RKM, Nr. 8680/35 geh. Aktz. 66 b 34 W Wi (II b) v. 23.12.35, "Betr. Beauftragten für Treibstofffragen beim Generalbevollmächtigten der Kriegswirtschaft," 10 January 1936; and Allgemeines Marineamt an W A (W Stb), B Wi 3335/35 geh. III, Vorgang: Der R.K.M. und Ob.d.W. Aktz. 66 34 W Wi (Iib), Nr. 8680/35 geh. Vom 23.12.35., "Betrifft: Beauftragte für Treibstoff-Fragen beim Generalbevollmächtigten der Kriegswirtschaft," 16 January 1936; both in: T-77/341 (Wi/IF 5.2164, 2687), Anlagen 6o to: "Die Arbeiten des WiRüAmtes."

²⁴⁵ Erlaß, January 1936, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6n to: "Die Arbeiten des WiRüAmtes." Earlier drafts prepared by the WStb may be found in: "Entwurf des RKM (W Wi II), January 1936; and "Entwurf des R.K.M. (W Wi II): *Geheime Ergänzung zu dem Erlaß über die Einsetzung des Sonderbeauftragten für die*

position would have become superfluous following Göring's ascent to leadership over the German war economy later that year.²⁴⁶

The end of the World War found Germany in desperate straits. Hobbled by the military and economic restrictions imposed by the Treaty of Versailles, the country lacked many of the means (oil not the least) to reassert itself as a great power. But a decade before the rise of the Third Reich, German official and business circles seized upon the promise of synthetic fuel. The German Army, in particular, believed as early as 1925 that synthetic fuel could restore the country's military and economic greatness by making Germany independent of ruinously expensive oil imports. After purchasing control of the patent rights to hydrogenation in 1925, IG Farben improved upon the work of Friedrich Bergius and took major strides in making large-scale production of synthetic fuel feasible. But progress had stalled by 1932 due to the high cost of production for synthetic fuel relative to imported crude oil, the price of which had started to collapse even before the Great Depression due to the general state of global overproduction. Ordinary economic considerations were of little consequence to Germany's new rulers after 1933, who were keen to eliminate unemployment by stimulating demand for German coal and steel.²⁴⁷ Although the Third Reich enthusiastically supported any measure that would reduce Germany's oil imports (particularly those

Mineralölwirtschaft," January 1936; both in: T-77/101 (Wi/IF 5.433). Both the draft and the confidential addendum are reprinted as Nr. 21 in: *Akten der Reichskanzlei*, iii: 101-102.

²⁴⁶ One person who seems to have been left out of the discussions was Keppler, who was "disappointed" not to have been informed about the January "proposal of the RKM" and informed Thomas "that he [Keppler] could not be placed under the authority of any Fuel Commissar within the RWM." "Atkenvermerk über die Besprechung beim Wirtschaftsberater des Führers am 10. 2. 36.," no date, author's initial illegible, T-77/228 (Wi/IF 5.1171). See also the commentary included in: *Akten der Reichskanzlei*, ii: 102, n. 5. For summaries of the correspondence and meetings concerning the creation of a "Fuel Commissioner" in 1935, see: "Gründe für die Einsetzung eines Treibstoffkommissars," no date or author; and Wi II, Aktz. 66 b 2134.VIII Wi (Iib), "Vermerk über den Schriftwechsel und die Besprechungen betr.: 'Treibstoffkommissar' vom 3. 6. 1935 ab"; both in: T-77/101 (Wi/IF 5.433). The former paper mentioned that the RKM intended that the "Fuel Commissar" should be "an expert from the fuel industry, richly supplied with expert personnel," and with a military liaison reporting to him. According to Birkenfeld, Blomberg's initial candidate was none other than IG Farben's Ernst Rudolf Fischer, but I have been unable to locate any documents that mention Fischer since Birkenfeld only cites the entire folder rather than the specific document. Birkenfeld, *Der Synthetische Treibstoff* (Göttingen: Musterschmidt-Verlag, 1964), 54, n. 10. This is problematic because virtually all subsequent studies of German petroleum policy mention Birkenfeld's claim. See, for example: Eichholtz and Kockel, *Von Krieg zu Krieg*, 163.

²⁴⁷ The Führer understood that advances in labor-saving technology such as machine tools and mass production forced the government to develop more elaborate methods of utilizing the surplus labor: "My idea is that we shall never economise enough on labour. If I found that I need only half as much labour to build an autobahn, well, I'd build it twice as wide." *Table Talk*: No. 135 (02 February 1942).

paid for in foreign exchange), by 1936, energy independence was still a chimera. The modest increases in domestic production achieved during the early years of the regime could not keep pace with the higher consumption once the economy recovered and rearmament began. More drastic measures were necessary.

Chapter V

Fueling War: Germany, 1936-1939

Synthetic fuel was indispensable to the Third Reich's long-term grand strategy: the country could not continue importing oil while pursuing rearmament, since the latter reduced the industrial surplus available for export, which in turn reduced the amount of foreign exchange earned to pay for the former. The only way to resolve the impasse was to accelerate the expansion of German synthetic fuel production on a massive scale. The Four-Year Plan (Vierjahresplan, VJP) of 1936 and its successor for petroleum, the "New Defense-Economy Supply Plan" (Wehrwirtschaftlicher neuer Erzeugungsplan – otherwise known as the Krauch Plan) of 1938, represented a radicalization of German economic policy that mirrored the increasingly belligerent foreign policy adopted by the Reich. As the likelihood of war increased, so too did the need to free the Third Reich from overseas oil imports. This was, as policymakers understood from the beginning, impossible through synthetic and domestic crude oil production alone, which is why the Third Reich never sought autarky within its own borders, but rather within those of Europe and beyond. Therefore, even as the regime poured resources into expanding domestic output, Berlin's gaze returned to the oilfields of Romania, which had played an indispensable role in fueling the last German war effort and would do so again shortly. Ultimately, the crash drive for self-sufficiency in petroleum between 1936 and 1939 was not an act of self-delusion. Officials at all levels of the Third Reich believed that self-sufficiency was in fact possible – and they proved correct. As war drew near in 1939, whatever doubts may have existed about Germany's overall readiness, they did not extend to its petroleum supply.

The Four-Year Plan, 1936

Werner von Blomberg's criticism of Hjalmar Schacht's handling of the fuel question was indicative of the military's wider frustration with the opposition of the Ministry of Economics (Reichswirtschaftsministerium, RWM) to further rearmament by the first half of 1936.¹ The War Ministry's (Reichskriegsministerium, RKM) obsession with bureaucratic reorganization seems curious in view of the major problems besetting Germany's petroleum industry by the spring of 1936, which did not appear immediately resolvable by any "Fuel Commissar." Germany's peacetime supply situation actually appeared rather favorable, at least with regard to light fuels: the Reich Chancellery (Reichskanzlei) forecast roughly 1,470,000 tons of production in 1936 (of which 825,000 tons was through hydrogenation and the F-T Process) against about 2,000,000 tons of demand, which worked out to between 70 and 75% of peacetime requirements being covered through domestic production. Of course, this figure did not include demand for fuel oil or diesel, supplies of which were "significantly less favorable."²

These figures were entirely inappropriate for a country planning to conduct military operations. As one Defense-Economy Staff (Wehrwirtschaftsstab, WStb) paper from March 1936 explained, "even with the greatest efforts and in spite of the planning started for an additional expansion of production," the Reich could not expect any "appreciable relief" of its oil position until 1938. Even then, as outlined in a statistical appendix, only the supply of aviation and motor fuels would improve significantly: by 1938, production would cover roughly 61% of mobilization demands. The supply of diesel relative to consumption would double, but it would still stand at only 22% of demand. The ratio with regard to fuel oil would, however, noticeably decrease (from 31% to 22%). One bright light was the future availability of aviation lubricants: Germany currently produced none of its requirements, but by 1938, 22% would

¹ Richard Overy, *War and Economy in the Third Reich* (Oxford: Oxford University Press, 1994), 183-185. Overy dates the fraying of the Blomberg-Schacht partnership to 1936, but differences had clearly emerged due to differences over petroleum policy the year before. Unless otherwise indicated, all German-language sources are from the National Archives and Records Administration, Record Group 242: Foreign Records Seized (NARA, RG 242). Since all documents included within RG 242 are available only on microfilm, I have used the following citation format: Microfilm Publication No./Reel No. (Item No.).

² Ministerialrat Willuhn to Staatssekretär Lammers, 21 January 1936, Nr. 12 in: *Akten der Reichskanzlei: Regierung Hitler, 1933-1938*, ed. Karl-Heinz Minuth and Friedrich Hartmannsgruber (Boppard am Rhein: Boldt, 1983-2008), iii: 62-63 – hereafter cited as: *Akten der Reichskanzlei*. According to a minute by Lammers, Hitler "had taken notice [of this memorandum] with the greatest of interest." *Akten der Reichskanzlei*, ii: 808.

come from domestic sources. Two crises earlier that year, however, threatened to “shake the very foundations” of the German economy and rearmament effort: the Soviet Union’s prohibition of petroleum exports, and Romania’s refusal to continue trading for oil on a clearing basis and demand that oil exports (which accounted for 40% of Germany’s total oil imports at the time) be paid for either in hard currency or at significantly higher rates in Reichmarks.³ Since the military could not afford any slowdown in motorization or accumulating reserves, the only avenues left open were: caving into Romanian demands; boosting “imports from Anglo-Saxon countries” (purchases from the major oil companies); or “accelerating or expanding the facilities for German production.” The Reich was already re-negotiating the terms of the oil trade with Romania but nothing had been finalized yet. The second option was out of the question since it required diverting foreign exchange away from the purchase of even more urgently required goods. Finally, there were no means of immediately raising domestic production.⁴

As a result, Germany’s foreign exchange deficit due to oil reached 162,000,000 RM in 1936, while the overall trade deficit ballooned to 500,000,000 RM.⁵ The grim economic situation forced Adolf Hitler in April to grant extensive powers to Hermann Göring, the Supreme Commander of the Air Force, to bring about “an improvement of the raw materials and foreign exchange situation,” supported by but not answerable to either Schacht or Blomberg.⁶

³ The impasse was only resolved in October under a new agreement that reduced Romania’s oil exports to 25% of total exports to Germany. Romania’s actions are explained more fully in: *Akten der Reichskanzlei*, ii: 168, n. 9.

⁴ “Memorandum on the Supply Situation in the Field of Fuels and its Effect on the Wehrmacht,” 09 March 1936, Translation of Document 1301-PS, reprinted in: Office of United States Chief of Counsel for Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression* (Washington, DC: U.S. GPO, 1946), iii: 871-874 (hereafter cited as: *NCA*); reprinted as Nr. 40 in: *Akten der Reichskanzlei*, iii: 166-170. For the original German document, see: International Military Tribunal, *Trial of the Major War Criminals* (Nuremberg, 1947-1949), xxvii: 128-132 – hereafter cited as: *IMT*. According to original German version (as well as the reprint in the *Akten*) the author was one Maj. Czimatis. A handwritten notation indicates that he prepared the memorandum for Hitler and passed it along to Keitel on 03 March 1936 to deliver to the Führer.

⁵ Appendix B (“Effects of Control of Oil Economy on Germany’s Foreign Trade Balance”) to: FEA, “Study of the Interagency Drafting Committee on the Treatment of the German Petroleum Industry from the Standpoint of International Security,” 15 October 1945, NARA, RG 59, 862.6363/7-2946; and Raymond Stokes, “The Oil Industry in Nazi Germany, 1936-1945,” *Business History Review* 59: 2 (1985): 257-258.

⁶ State Secretary and Chief of the Reich Chancellery to Hess, Keppler, *et al.*, 06 April 1936, Bundesarchiv, Berlin-Lichterfelde (BA-B), R 26 I/35. Göring also established a special “Rohstoff- und Devisenstab” to assist him, which later grew into the Office for Economic Development (Reichsamt für Wirtschaftsausbau, RWM), the primary executive agency within the Four-Year Plan (Vierjahresplan, VJP). The division of authority between this new agency and the WStb is spelled in: der Reichskriegsminister und Oberbefehlshaber der Wehrmacht an den Ministerpräsidenten Herrn Generaloberst Göring, W Stb.Abt.W Wi 5460/36 g. IIz, Aktz. 11 d 35., 23 June 1936, T-

The events leading up to the promulgation of the Four-Year Plan have already been subjected to intense historical scrutiny, so this discussion will focus only on matters pertaining to petroleum.⁷ During the ensuing interagency conferences to tackle financial and raw materials crises, Göring and Schacht clashed repeatedly. With regard to oil, Schacht felt Germany was trapped between the need to continue importing significant quantities (hence the negotiations with Standard Oil of New Jersey and Royal Dutch/Shell – Jersey and Shell) and its inability to finance such purchases either through exports or expenditures of hard currency.⁸ Göring was uninterested in importing oil: “If we have war tomorrow, we must help ourselves by substitutes. [...] If that is the case, then we must be ready to create the prerequisites for that in peace.”⁹ During a subsequent meeting, Schacht agreed that “a solution of the raw material problem by self-producing is absolutely necessary and agreed with, theoretically.” The problem was funding additional investment and “scruples” over supporting industries that were not “economically feasible.” When Finance Minister Johann Ludwig von Krosigk suggested a policy of limited state support to stimulate the development of “new and cheaper production methods,” Göring cut him off: “Waiting upon new methods is no longer appropriate.” Rather (as indicated by the appended draft proposal for

77/341 (Wi/IF 5.2164, 2687), Anlage 7 to: OKW, Gen.z.bV.1., “Die Arbeiten des WiRüAmtes an der Mineralöl-Versorgung,” no date (handwritten notation reads: “vom Dezember 1944”), T-77/183 (Wi/IF 5.751) – here after cited as “Die Arbeiten des WiRüAmtes.”

⁷ Besides Adam Tooze’s *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 203-243, for more on the origins of the VJP, see: Richard Overly, “The Four Year Plan,” *European Yearbook of Business History* (2000): 87-106; and Dieter Petzina, *Autarkiepolitik im Dritten Reich: Der nationalsozialistische Vierjahresplan* (Stuttgart: Deutsche Verlags-Anstalt, 1968), 30-53. There is still some value to reading Wilhelm Treue’s commentary on the genesis of Hitler’s August 1936 memorandum in his “Hitlers Denkschrift zum Vierjahresplan, 1936,” *Vierteljahrshäfte für Zeitgeschichte*, 3: 2 (1955): 188-202. For a contemporaneous summary, see the relevant portions of Thomas’ internal history of the German war economy, summarized as Partial Translation of Document 2353-PS, reprinted in: Nuernberg Military Tribunal, *Trials of the War Criminals* (Washington, DC: U.S. GPO, 1953), vii: 793-798 – hereafter cited as: *NMT*.

⁸ This was the lament of the head of the Überwachungstelle der Mineralöle during a meeting with Schacht in August 1936. Rather than “striving for complete autarky,” however, he asked for more freedom to conduct barter or third-party trade agreements. He also fumed at the incompetence of Göring’s Rohstoff- und Devisenstab, which had “sacrificed” German “interests” due a lack of “experience”: “One should only accommodate the foreigners if they give firm commitments concerning the adequate supplying of the German market.” “Besprechung des Reichsbankpräsidenten Schacht mit den Reichsbeauftragten der Überwachungsstellen in der Reichsbank vom 13. August 1936, 11 Uhr,” Nr. 124 in: *Akten der Reichskanzlei*, iii: 457-458.

⁹ “Record of the Council of Ministers on 12 May 1936 1700 hours,” Translation of Document 1301-PS, *NCA*, iii: 878-884; for the original German document, see: Nr. 89, *Akten der Reichskanzlei*, iii: 317-324. There is mistranslation in the exchange concerning the major oil companies. Schacht’s warning that “The foreign relations must be decreased all of a sudden,” is better translated as: “Foreign relations must not be abruptly dismantled [Die ausländische Beziehungen dürfen nicht überstürzt abgebaut werden].”

addressing the fuel shortage), Germany's outstanding mobilization requirement of just under 3,000,000 tons of all products would be satisfied by the construction of ten new synthetic plants (six of them F-T facilities) at a cost of 1,150,000,000 RM.¹⁰

The following month, the council discussed the oil situation in greater detail. Considerable progress had been insofar as peacetime consumption was concerned. Germany would most likely be self-sufficient in gasoline by the beginning of 1937, although imports for 1936 and 1937 would probably exceed 2,500,000 tons (more than 155,000,000 RM, 90% of which was covered through clearing or barter agreements, the remainder in foreign exchange). An RWM official also indicated that the F-T Process could help redress the shortage of diesel, which was a matter of particular concern to Göring, who reminded everyone "that in time there will be in aviation, too, a steadily increasing conversion from light gasoline to Diesel oil." He urged that progress be made in resolving the technical obstacles: "As soon as the process has been perfected, it will only be a question of constructing the necessary installations. The basic raw material is available in unlimited quantities." Germany's fate rested upon boosting domestic, especially synthetic production, for in the event of war, "we won't get a drop of oil from abroad." Germany ability to wage war would depend upon resolving the "problem" of dependence upon imports.¹¹

Any debate concerning the acceleration of German rearmament was settled by Hitler in his Denkschrift of August 1936, which led to the implementation of the Four-Year Plan the following month. The 1936 paper was basically an updated reflection on the themes that Hitler had discussed in his unpublished "Second Book" of 1928, which dealt largely with foreign policy and political economy. At that time, Hitler argued that German land expansion eastwards was the prerequisite to providing

¹⁰ "Copy of meeting of Minister[ial Council] on 27 May 36, at 1130 o'clock," enclosed with Lt. Col. Loeb (Raw Material and Foreign Exchange Staff) to the Reich Minister of War (Blomberg), 30 May 1936, Translation of Document 1301-PS, *NCA*, iii: 886-891; for the original German document, see: Nr. 93, *Akten der Reichskanzlei*, iii: 339-344.

¹¹ "Niederschrift der Sitzung des Gutachter-Ausschusses über Rohstoff-Fragen am 26.5.36, 16 Uhr," NARA, Record Group 238: National Archives Collection of World War II War Crimes Records, National Archives Microfilm Publication T-301, Reel 39, Document NI-5380 – hereafter cited as: NARA, RG 238, T-301/Reel No. (Document No.).

Germans with “a life comparable to that of the American people.”¹² A great admirer of automobiles, Hitler expressed a certain envy of the United States, whose massive industries (backed by ample domestic supplies of raw materials) had, for example, allowed U.S. car manufacturers to flood the German market.¹³ He made one fleeting, yet suggestive remark to oil in the context of the Soviet Union being “a possessor of oilfields, which have the same significance today as iron and coal mines had in the past century.”¹⁴

The popular perception of the VJP (cultivated by the regime) was that it aimed to make Germany autarkic within four years, particularly in the case of petroleum.¹⁵ Neither Hitler nor the planners behind

¹² For more on Hitler’s ambivalence about the United States in his “Second Book,” see: Tooze, *Wages of Destruction*, 9-11 and 658.

¹³ “My weakness is for motor-cars.” Norman Cameron and R.H. Stevens, trans., *Hitler’s Table Talk: His Private Conversations* (New York: Enigma, 2000): No. 101 (09-10 January 1942). Foreign manufacturers controlled 40% of the German automobile market in 1928, while German production was divided between 102 firms in 1929, which rendered German automobiles more expensive. The Depression wiped out a large number of these firms and as a result of consolidation between the remainder, prices dropped while the market share of German firms increased from 60% in 1928 to 91% in 1934. R.J. Overy, “Cars, Roads, and Economic Recovery in Germany, 1932-8,” *Economic History Review* 28: 3 (1975): 466-483. In 1929, General Motors acquired an 80% stake in Opel, Germany’s largest automobile manufacturer, raised to 100% two years later. Although the company hemorrhaged money during the Depression, it thrived in the Third Reich thanks to special tax-exempt status and controlled half of the German automobile market by 1935. Gabriel Kolko, “American Business and Germany, 1930-1941,” *Western Political Quarterly* 15: 4 (1962): 725-726; and Henry Ashby Turner, *General Motors and the Nazis: The Struggle for Control of Opel, Europe’s Biggest Carmaker* (New Haven: Yale University Press, 2005), 1-12.

¹⁴ Gerhard Weinberg, ed., *Hitler’s Second Book: The Unpublished Sequel to Mein Kampf* (New York: Enigma, 2003), 105, 107, 158-159, and 172. Although Hitler apprehended the economic and strategic value of petroleum, he also supported increasing natural gas consumption (including by automobiles) to reduce dependence on petroleum and was an advocate of alternative energy sources including wind and tidal power, as well as hydrogen. *Table Talk*: No. 1 (05 July 1941), No. 16 (02 August 1941), No. 104 (13 January 1942), and No. 269 (26 July 1942). An excellent introduction of Hitler’s understanding of economics (an eclectic fusion of racism and Social Darwinism) may be found in: Henry Ashby Turner, *German Big Business and the Rise of Hitler* (New York, 1985), 71-83. The “Second Book” is somewhat of an outlier, for Turner points out that Hitler rarely made reference to acquisition of raw materials such as oil prior to the *Machtergreifung*: “His conception of economic autarky remained narrowly and archaically agrarian, assigning at most a secondary status to the vast and immensely valuable industrial resources which the realization of his grandiose scheme for conquest would have placed at Germany’s disposal” (pg. 74). Carroll stresses that “Hitler’s economic policies were shaped with better logic, and better information, than his critics allowed,” in that the Führer recognized Germany could never overcome its economic deficiencies except by acquiring “living space” (*Lebensraum*). Berenice Carroll, *Design for Total War: Arms and Economics in the Third Reich* (The Hague: Mouton, 1968), 93-105 (quotation from pg. 104).

¹⁵ See, for example, an article by the head of the German Office for Raw Materials, Fritz Löb, published in the VJP’s very own periodical, *Vierjahresplan*. His agency’s mission was to implement “the quickest possible elimination of our fatherland’s dependence on foreign raw materials wherever this is possible in the present situation.” Partial Translation of Document NI-6709, *NMT*, vii: 820-821. Emphasis in the original. One IG Farben executive even claimed that, by supporting the process of motorization, synthetic fuel was “making it possible for every German to have his own vehicle.” “The Chemical Industry and the Four Year Plan by Dr. H. Kuehne,” 01 August 1938, Partial Translation of Document NI-15013, *NMT*, vii: 835. See also: Krauch, “Tasks and Operations of the Office of German Raw Materials and Synthetics,” 1937, Translation of Document NI-6629, *NMT*, vii: 827-35.

the VJP intended this. As one of Göring's deputies, State Secretary Erich Neumann, later explained, "Of a perfect autarchy, however, one did not think," as opposed to providing Germany with the tools to achieve a "large sphere solution" that would allow it to take advantage of the resources of its neighbors.¹⁶ In his August 1936 memorandum, Hitler ruled out "[producing] artificially or otherwise to replace individual raw materials which we do not possess in Germany." Rather, the aim should be to provide Germany with a "temporary easing-up of conditions," to accomplish the most important long-term objective, "the extension of our living space, that is, an extension of the raw materials and food basis of our nation."¹⁷ In other words, Hitler had determined that "autarchy" (relative self-sufficiency to attain wider aims) rather than "autarky" as the goal of the German war economy in peacetime.¹⁸ Since some imports were unavoidable in the short term, substitutes had to be found wherever possible in order to save hard currency for those items that could not be produced domestically. Financial, rather than purely strategic, considerations also underlay Hitler's directive that "German fuel production must now be developed with the utmost speed and brought to a definitive completion within 18 months."¹⁹ Hitler understood that Germany could not contemplate fighting a war until it had surmounted the remaining technical and financial obstacles to greater synthetic fuel production, but Göring had apparently convinced him beforehand using information provided by IG Farben executive Carl Krauch that it was possible for Germany to meet up to 80% of its estimated demand by 1938.²⁰

One group that enthusiastically supported the mission of the VJP, even if it was becoming increasingly alienated from the National Socialist regime, was the Pan-German League. One speaker, during a wider discussion of "Crude Oil in Politics and Economics," lauded the supposedly peaceful mission of the VJP: "Germany is showing that war is no longer necessary for the sake of peace [um des lieben Friedens willen keinen Krieg zu führen braucht]," because the country could now just "produce substitutes." Excerpt from Gestapo report on the Pan-German League, Special Archive (Sonderarchiv) of the Russian State Military Archive, Fond 500, Opis 3, Vol. 567, pg. 123. I am grateful to Bjoern Hofmeister for sharing this document with me.

¹⁶ "The Four Year Plan," 29 April 1941, Partial Translation of Document NID-13844, *NMT*, xii: 538-542.

¹⁷ "Adolf Hitler's memorandum concerning the tasks of the Four Year Plan – 1936," Translation of Document NI-4955, *NMT*, xii: 430-439.

¹⁸ This is a crucial distinction. Ian Lesser, *Resources and Strategy* (Basingstoke: Macmillan, 1989), 51.

¹⁹ Hitler added that money was no object when it came to boosting German economic output for war – all that mattered was making up lost time since 1933, when Germany could have laid the foundations for producing 3,000,000 tons of petroleum rather than the existing 700,000 tons to 800,000 tons. "Adolf Hitler's memorandum concerning the tasks of the Four Year Plan – 1936," Translation of Document NI-4955, *NMT*, xii: 430-439.

²⁰ "Aus dem geheimen Bericht der Abteilung 'Forschung und Entwicklung' des Rohstoff- und Devisenstabes über umfassende wirtschaftliche Planungen für den Krieg," No. 46 in: Dietrich Eichholtz and Wolfgang Schumann, ed.,

Schacht was appalled by Hitler's decision and urged Blomberg to "warn the Fuehrer from this step" before he spoke at the upcoming Party Congress. Schacht claimed that the only way out of the present crisis was through "the *promotion of export*" and ruled out meeting the Führer's ambitious target for the petroleum industry, since "[we] shall have reverses in the field of fuels until the middle of next year [...]."²¹ It was too late. On 04 September 1936, Göring announced the Führer's new policy before a ministerial council including Schacht and Blomberg. Rearmament would "be sped-up rather than slowed down," with the expectation that "conflict with" the Soviet Union was "inevitable." After reading aloud Hitler's Denkschrift, Göring added that Germany must achieve "autonomy in all those fields in which it is technically possible," as this would save 600,000,000 RM worth of foreign exchange.²² When the Führer and leading officials made public pronouncements concerning the VJP, they made no mention of its ulterior purpose. Instead, they claimed that the sole aim was to save foreign exchange in order to fund imports of other critical items, most notably food.²³ Some officials even had the audacity to claim that Germany was rendering the world a great service by providing an alternative supply of fuel once oil reserves gave out, not to mention contributing to world peace by eliminating competition over oilfields.²⁴ Private speeches before German industrialists and soldiers, while not eliding the fact that the VJP was designed to further rearmament, made no mention of any war against the Soviet Union.²⁵

Anatome des Krieges: New Dokumente über die Rolle des deutschen Monopolskapitals bei der Durchführung des zweiten Weltkrieges (Berlin: VEB Deutscher Verlag der Wissenschaften, 1969), 139-142 (esp. pg. 142, n. 3); also reprinted in: Dietrich Eichholtz, *Deutsche Ölpolitik im Zeitalter der Weltkriege: Studien und Dokumente* (Leipzig: Leipziger Universitätsverlag, 2011), 266-268.

²¹ Minute by Thomas, 02 September 1936, Translation of Document 1301-PS, *NCA*, iii: 894-895; for the original German document, see: *IMT*, xxvii: 153-154. Emphasis in the original.

²² "Minutes of the Meeting of the Ministerial Council of 4 September 1936, 12 Noon," Translation of Document EC-416, *NMT*, xii: 439-442; for the original German document, see: *IMT*, xxxvi: 488-491.

²³ See the sampling of press clippings included with: Partial Translation of Koerner Document 140, *NMT*, xii, 442-446

²⁴ H. Koppenberg, "Mineralölgewinnung aus Kohle," *Vierjahresplan*, 1937: V; and J. Werlin, Rohstoffplan und Motorisierung," *Vierjahresplan*, 1937: I.

²⁵ For example, see: "Minister President General Goering on the Execution of the Four Year Plan: The Speech in the Big Assembly Hall of the 'Preussenhaus' on 17 December 1936," Partial Translation of Document NI-051, *NMT*, vii: 814-817; and Chef des WStb im Wehrmachtamt (Thomas), "Vortrag vor der Wehrmachtakademie am 1. XI. 37: Einführung in die Wehrwirtschaft unter Berücksichtigung der derzeitigen wirtschaftlichen Lage des Reiches," Document 014-EC, *IMT*, xxxvi: 110-111.

Göring did not receive a formal appointment from Hitler to implement the VJP until October 1936.²⁶ A week later, the self-styled “Plenipotentiary for the Four-Year Plan” unveiled the executive structure of the VJP, which included several executive agencies to handle raw materials production, distribution, labor, agriculture, price controls, and foreign exchange. The most important in terms of petroleum was the Office for German Raw and Basic Materials (Amt für deutsche Roh- und Werkstoffe), which was an outgrowth of the existing Raw Materials and Foreign Exchange Staff (Rohstoff- und Devisenstab) established in April and would have the same director, Lt. Col. Fritz Löb. Besides overseeing domestic output of all manner of raw materials (both natural and synthetic), the office would also be responsible for supervising the entire petroleum industry, including both imports and domestic production.²⁷

Schacht’s reluctance to appoint to a “Fuel Commissar” in the summer of 1935 had come back to haunt him. The irreconcilability of Schacht’s position as Plenipotentiary for the War Economy with that of Göring and the VJP was unmistakable. The RKM warned “that this situation is untenable,” and rather than get bogged down in a “fruitless correspondence,” it advised that Blomberg should wield “executive power” in wartime, while Schacht exercised such authority in peacetime in concert with Göring, who would primarily be responsible for “*Safeguarding the independent basis of the life and economy of the German people.*”²⁸ Blomberg, by contrast, expressed puzzlement at the suggestion of “overlapping in the realm of economic mobilization [...]” As far as he was concerned, Göring’s mission “to clear all bottlenecks” and improve the supply of ore, fuel, and rubber would complement Schacht’s “task of

²⁶ “Ordinance for the Execution of the Four Year Plan of 18 October 1936,” Translation of Document 1862-PS, *NCA*, vi: 499; for the original German document, see: Document 2827-PS, *IMT*, xxxi: 198-199. Hitler renewed Göring’s mandate exactly four years later: “Decree on the Further Duties of the Plenipotentiary for the Four Year Plan, 18 October 1940,” *NMT*, Translation of Document NI-125, xii: 535.

²⁷ Matters pertaining to the financing of expanding production would be dealt with in consultation with the Ministry of Economics (Reichswirtschaftsministerium, RWM) and the Ministry of Finance (Reichsfinanzministerium). Minister President, General Göring, Plenipotentiary for the Four Year Plan, St.M.Dev.265, “Decree on the Execution of the Four Year Plan,” 22 October 1936, Partial Translation of Document NG-1221, *NMT*, xii: 447-452; for the original German document, see: Nr. 158, *Akten der Reichskanzlei*, iii: 559-564. Göring had expressed his determination that direction of the petroleum industry should be exercised by the Rohstoff- und Devisenstab a month before issuing his official decree concerning the structure and responsibilities of the VJP: “Auszug aus Aktenvermerk von 23. 9. 36.,” no author, T-77/101 (Wi/IF 5.433).

²⁸ Div. of National Defense, “Report Memorandum on the Four Year Plan and Preparation of the War Economy,” 30 December 1936, Translation of Document EC-408, *NCA*, vii: 465-466; for the original German document, see: *IMT*, xxxvi: 478-480. Emphasis in the original.

preparing the existing economic forces of Germany for the event of war [...].”²⁹ This could not have been any further from Göring’s actual objective: the imposition of centralized control through the VJP, which necessarily entailed Schacht’s displacement.³⁰ As of November 1936, the Office for German Raw Materials would assume responsibility for supervision of the civilian petroleum market, which had been exercised by the RWM since 1934.³¹

The WStb preserved its existing prerogatives even after the start of the VJP, specifically with regard the location and types of fuel to be produced within the new synthetic facilities, stockpiling, supply contracts between the military and the oil companies, and most importantly “the supervision of all work that is necessary for securing the supply of the armed forces and the armaments industry.”³² Moreover, the Naval High Command (Oberkommando der Marine, OKM) managed to carve out its own sphere of

²⁹ The Reichwehrminister [*sic*] and Supreme Command of the Armed Forces to Hitler, WFStG.O. Nr. 599/37 g.K.IaF, 22 February 1937, Translation of Document EC-244, *NCA*, vii: 342; for the original German document, see: *IMT*, xxxvi: 238-239.

³⁰ Koerner, “Leadership and Economy: The Reorganization and Unification of the National Economy Leadership,” Translation of Document NID-12215, *NMT*, xii: 489-492.

³¹ The responsibilities of the Office for German Raw Materials vis-à-vis the petroleum (oil and synthetic fuel) industry are spelled out in greater detail in: Ministerpraesident General Goering, Plenipotentiary for the Four-Year Plan, St.M.Dev.1007., “Jurisdiction re Development of Raw and Synthetic Materials,” 26 November 1936, Translation of Document EC-243, *NCA*, vii: 338-341; for the original German document, see: *IMT*, xxxvi: 233-237. Within the Raw Materials Office, the primary sub-agency responsible for the petroleum industry would be Abteilung II (Mineralölwirtschaft), under the command of Maj. Hans Eduard von Heemskerck. Abteilung III (Krauch) would handle research & development and, in concert with Abteilung I (Planung und Statistik), would “arrange the raw materials basis, the technical means and location [Standort] for soon-to-be constructed fuel objectives [neu zu erstellende Treibstoffzwecke].” Finally, Abteilung V would handle financing in cooperation with the relevant agencies. Amt für deutsche Roh- und Werkstoffe, Abteilung II (Mineralölwirtschaft), Heemskerck, “Richtlinien für die Tätigkeit der Wirtschaftsgruppe Kraftstoffindustrie bei Durchführung des Vierjahresplans (Mineralöl),” 27 November 1936, T-77/341 (Wi/IF 5.2164, 2687), Anlage 6q (?) to: “Die Arbeiten des WiRüAmtes.” Heemskerck’s organizational memorandum made an important observation concerning the fundamentally instrumentalist character of German petroleum policy under National Socialism: “The already announced *Petroleum Plan* is not a program. It merely indicates the direction by which the desire aim [gesteckte Ziel] can be accomplished under the currently existing conditions. The execution of the Petroleum Plan is always to remain adaptable [anpassungsfähig]. All measures are to be carefully evaluated, as to whether they allow for this consideration.” Emphasis in the original.

³² Chef W Ro, “Vorschlag für die Abgrenzung der Arbeitsgebiete zwischen dem Amt für deutsche Roh- und Werkstoff und dem W Stb.,” 03 December 1936, T-77/101 (Wi/IF 5.433). In fact, Göring’s new office soon started muscling into matters within the military’s purview, such as the mobilization requirements of the armed services. Ministerpräsident Generaloberst Göring, Beauftragter für den Vierjahresplan (BVJP), Amt für deutsche Roh- und Werkstoffe (gez. Heemskerck), an den Herrn Reichs- und Preußischen Wirtschaftsminister, 36 II/3c Dr.Kü/Pe, “Betr.: Vorbereitungen für den Mob.-Fall auf dem Gebiet der Mineralölwirtschaft,” 12 January 1937, T-77/101 (Wi/IF 5.433).

authority, separate from both the WStb and the VJP, concerning purchases of imported oil for naval consumption during peace- and wartime.³³

It would take some time before the policy shift heralded by the VJP would have any tangible effects on Germany's petroleum supply. The growth in imports decreased significantly starting in 1937, but that had less to do with any increase in the domestic supply rather than a shortage of hard currency.³⁴ Germany's foreign exchange position also deteriorated due to the decline in exports as the VJP and rearmament consumed ever larger portions of German industrial output. By April 1937, Schacht pointed out that Göring's assurance that increased synthetic fuel production would ease Germany's foreign exchange position was not true: the increase in gasoline production from 570,000 tons in 1933 to 1,240,000 tons in 1936 had been eclipsed by the rise in consumption, from 1,491,000 tons to 2,448,000 tons.³⁵ The following month, however, the first round of planning for the VJP was ready: between 1937 and 1940, 8,800,000,000 RM worth of government and private funds would be invested, with the aim of achieving self-sufficiency in motor and aviation fuel within eighteen months and complete energy

³³ Oberkommando der Marine (OKM) an Ministerpräsident Generaloberst Göring, BVJP, Amt für Deutsche Roh- und Werkstoffe, B.Nr. 20701/BB Vb, "Betr.: Zusammenarbeit zwischen dem Oberkommando der Kriegsmarine und dem Amt für Deutsche Roh- und Werkstoffe auf dem Gebiete der Mineralöl-Bewirtschaftung. Besprechung vom 25. 11. 36," 06 January 1937, T-77/101 (Wi/IF 5.433). The OKM had also tried to exert independence from both the VJP and WStb on other logistical and planning matters, which quickly squashed such pretensions. Wehrmachtamt an OKM (B), Az. 11 d 3512, WStb Abt. W Ro 57/37 g.IA, "Betr.: Zusammenarbeit zwischen dem Oberkommando der Kriegsmarine und dem Amt für deutsche Roh- und Werkstoffe auf dem Gebiete der Mineralöl-Bewirtschaftung," Bezug: OKM B.Nr. 20701/BB Vb vom 6. 1. 37., 26 January 1937; and Ministerpräsident Generaloberst Göring, BVJP, Amt für Deutsche Roh- und Werkstoffe an das OKM, Tg. B. Nr. 1141/37/II/v.H [illegible]/Sch., "Betr. Zusammenarbeit zwischen dem Oberkommando der Kriegsmarine und dem Amt für deutsche Roh- und Werkstoffe auf dem Gebiete der Mineralölwirtschaft," Bezug: Schreiben vom 6. 1. 1937 – B. Nr. 20701/BBVb, Anlage 2 to: OKM an Wehrmachtamt – WStb, B. Nr. 2409 g BB Vb II. Ang., "Betrifft: Zusammenarbeit zwischen dem Oberkommando der Kriegsmarine und dem Amt für deutsche Roh- und Werkstoffe auf dem Gebiete der Mineralölwirtschaft," Vorgang: Dort. Schrb. Vom 24. 3. 37, Az. 11 d 3512 – W Stb Abt. W Ro 494/37/g Ia, 21 April 1937; both in: T-77/101 (Wi/IF 5.433).

³⁴ The growth between 1937 and 1939 was a mere 245,562 tons. Az. 015957/44g, "Mineralöl-Einfuhr ins Reich in t.," Quelle: Planungsamt Hpt. Abt. Statistik, October 1944, T-77/341 (Wi/IF 5.2164, 2687), Anlage 30 to: "Die Arbeiten des WiRüAmtes."

³⁵ Schacht to Göring, 02 April 1937, enclosed with Karl Blessing (Generalreferent, RWM) to Thomas, 02 April 1937, Translation of Document EC-286, *NCA*, vii: 380-388; for the original German document, see: *NMT*, xxxvi: 282-291. Schacht reiterated many of these points in his letter of resignation later that year: Schacht to Göring, 05 August 1937, Translation of Document EC-497, *NCA*, vii: 567-575; for the original German document, see: *IMT*, xxxvi: 567-578.

independence by 1940.³⁶ Until the promises of the VJP could be fulfilled, Germany would have to make do the policies and investments enacted since 1933, which, at the very least, were doing a good job of matching the increases in consumption with new production.³⁷

At the beginning of 1937, the WStb estimated Germany's mobilization demand in 1937/38 (5,300,000 tons) would be 55% higher than the previous year's figure – this increase being almost entirely the result of higher military consumption, “whose demand had increased around 80 – 100%.”³⁸ In terms of supply, there was good news and bad news. On the one hand, overall production had doubled. “Particularly noteworthy” was the fact that one of the new facilities, the Deutsche Raffinerie AG facility at Misburg, would finally start producing aircraft lubricants out of German crude oil.³⁹

On the other hand, the percentage of consumption covered by domestic production had not changed: 36% – against 35% in 1936/37. Whereas Germany's domestic supply of aviation and motor fuels was improving (40% and 60% of demand, respectively), its supplies of diesel (8%), fuel oil (32%), and aircraft (18%) and automobile lubricants (25%) remained abysmal.⁴⁰ Even the figures for aviation and

³⁶ Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003), 188-189.

³⁷ Between 1928 and 1937, domestic output had almost quadrupled from 651,000 to 2,264,000 tons, whereas imports (both of finished products and crude) had almost doubled, from 1,833,000 to 3,374,000 tons. “Abschrift einer Aufstellung der Überwachungsstelle für Mineralöl vom 3. Mai 1938: Deutschlands Mineralölbilanz nach In- und Auslandsaufkommen in den Jahren 1928-1937 in 1000 t.,” T-77/341(Wi/IF 5.2164, 2687), Anlage 28 to: “Die Arbeiten des WiRüAmtes.”

³⁸ The breakdown in the increase between various petroleum products worked out as follows:

Type of Product	Increase
Aviation Fuel	10%
Motor Fuel	80%
Diesel Fuel	100%
Fuel Oil	40%
Aircraft Lubricants	110%
Automobile Lubricants	90%

³⁹ W Ro, “Vortragsnotiz betr. Stand der Mineralölversorgung,” 11 January 1937, T-77/123 (Wi/IF 5.533). The regime considered the completion of the Misburg refinery to be a cause for celebration. Heinrich Gönningen, “Verstärkte Schmierölversorgung aus deutschem Erdöl,” *Vierjahresplan*, 1937: XI. The new facility would immediately double existing domestic production of lubricants (27,600 tons), which only covered 34.5% of total requirements (80,000 tons).

⁴⁰ The imbalance between the improvements in the supply of gasoline and that of fuel oil and diesel led Blomberg to ask Göring to reorient “the expansion of petroleum supplies more toward the raising of diesel and fuel oil production.” Under existing planning, by the end of the VJP, Germany would be self-sufficient in light fuels and only produce 55% of its diesel consumption and 30% of its fuel oil consumption. This was “from the standpoint of

motor fuels were somewhat deceptive, since the quality of light fuels refined from German crude oil was poor unless combined with benzol and alcohol, whose production was lagging. The results of stockpiling were mixed: an additional 250,000 tons had been added during the past year alone, with two large storage facilities completed and another six under construction, but little progress had been in terms of stockpiling diesel and fuel oil, “since neither the necessary foreign exchange nor the storage capacity is available.” Combining production with reserves would only provide for roughly six months of full consumption of gasoline and lubricants, and roughly two months of diesel and fuel oil consumption.⁴¹ The situation would, however, improve dramatically by 1940, when Germany would be able to meet roughly half of its estimated mobilization demand (3,300,000 tons out of 7,000,000 tons). The WStb also looked forward to adding up to 700,000 tons to the national stockpile, particularly diesel and fuel oil, “[although] the entire policy of stockpiling will be significantly influenced by our foreign exchange position [...]” Assuming all went according to plan, by “1940 roughly 3/4 to 1 year’s worth of military consumption, with the exception of the Navy, can be secured.”⁴²

the armed forces intolerable, since it urgently requires all manner of fuels equally.” Blomberg to Göring, W Stb Ro Nr. 146/37 geh., 26 January 1937, T-77/594 (Wi/I. 273). Blomberg’s letter was taken almost verbatim from a WStb memorandum written the day before: W Stb Ro, “Forderungen der Wehrmacht zum Ausbau der Mineralölherzeugung im Vierjahresplan,” 25 January 1937, T-77/229 (Wi/IF 5.1171).

⁴¹ For more detailed statistics concerning the supply & mobilization demand position as of early-1937, see the Anlagen to: Wehrmachtamt (Thomas), Aktz. 66 b 2134, W Stb Abt. W RO (III), 4760/36 g.Kdos., 15 January 1937, T-77/341 (Wi/IF 5.2164, 2687), Anlage 32 to: “Die Arbeiten des WiRüAmtes,” and “Betriebsstoff-Bilanz am 1. 4. 1937,” no author, T-77/101 (Wi/IF 5.433). The covering note to the former expressed the hope that the introduction of the VJP should lead “to a significant improvement of the supply situation within all areas,” and looked forward “to having achieved a wide-ranging adaptability [Umstellbarkeit] from the manufacture of one kind of petroleum to others.”

⁴² W Ro, “Vortragsnotiz betr. Stand der Mineralölversorgung,” 11 January 1937, T-77/123 (Wi/IF 5.533).

Carl Krauch's Ascent and Germany's Supply Position before the Munich Crisis, 1938

The second and perhaps most important stage in prewar petroleum policy in the Third Reich took place over the course of 1938. The previous November, Hitler had stunned his military and diplomatic advisers by suggesting that Germany might need to take advantage of Anglo-French preoccupation with Italy over Ethiopia to overrun Austria and Czechoslovakia, thus eliminating the threat to Germany's southern flank when it eventually turned on France and Britain.⁴³ The sharpening in Germany's posture internationally was mirrored by a renewed effort at home to achieve petroleum autarchy.

In January, Col. Löb of the Office for German Raw Materials delivered a major presentation on the future of the petroleum industry under the VJP. He noted that "heightened motorization" had been objective of the National Socialist regime since the "seizure of power," as evidenced by the construction of the Autobahnen. It was no longer "bearable," he believed, "that the motorization of the economy and armed forces should continue to be unconditionally dependent on foreign imports." Efforts to boost domestic production had so far been "insufficient," even though the raw materials and technical means were available, which is where the VJP came in. Löb was convinced that Germany's fuel problem was actually "solvable upon a domestic basis," thanks to both the country's existing mineral reserves and the efforts of the German chemical and mining industries. Not only was Germany capable of meeting its expected increase in consumption, but it could do so without comprising on quality. "The degree to which demand for power fuels is met depends merely upon the willingness to make the requisite investment, the expenditure in labor and steel necessary for the construction of new supply facilities, and utilization of experts to provide leadership." It was essential that planning "be geared toward" estimated rises in consumption, which was 4,224,000 tons in 1936 (42% of came from domestic sources). Löb's office had

⁴³ Friedrich Hossbach (Hitler's Military Adjutant), "Notes on the Conference in the Reichskanzlei on 5 November 37 from 1615-2030 hours," 10 November 1937, Translation of Document 386-PS, *NCA*, iii: 295-305; for the original German document, see: *IMT*, xxv: 402-413.

determined that, by the end of the VJP, consumption would increase relative to the 1936 figure by 33% for gasoline, 50% for diesel, and 25% for lubricants, which worked out to roughly 6,300,000 tons.⁴⁴

Löb articulated a multi-faceted strategy for addressing the challenge. Among the most important were utilizing synthetic measures that conserved Germany's reserves of coal and crude oil, and were capable of being "adjusted" to evolving technical and economic factors.⁴⁵ Although German soft and hard coal reserves would last for hundreds of years at prevailing rates of consumption, the regime could not afford to be profligate with the application of coal since there were limits to how much could be extracted. Between 1932 and 1937, production of hard coal production had increased from 107,740,000 tons to 184,500,000 tons, brown coal from 122,650,000 tons to 184,670,000 tons, and coke from 19,340,000 tons to 41,000,000 tons. But the synthetic fuel industry was not the only, or even the most important, customer for coal – that honor went to the iron and steel industries. Coal was also an essential to Germany's balance of payments, accounting for 600,000,000 RM worth of exports in 1937.⁴⁶

Great care had to be exercised over the location for new synthetic fuel facilities, their funding (which had to be arranged by the industry itself rather than through the capital market or by the Reich), and the material expenditure during construction. In view of the foreign exchange considerations, "preference" should be given to raising production of those fuels most expensive to import. Ultimately, Löb believed that Germany could eliminate its imports of motor fuel and lubricants.⁴⁷ He also anticipated the total

⁴⁴ "Die Mineralölwirtschaft im Vierjahresplan": Vortrag gehalten am 12. Januar 1938 im Haus der Flieger," T-77/107 (Wi/IF 5.469).

⁴⁵ "Die Mineralölwirtschaft im Vierjahresplan": Vortrag gehalten am 12. Januar 1938 im Haus der Flieger," T-77/107 (Wi/IF 5.469).

⁴⁶ Hermann von Hanneken, "Die Kohle als Wirtschaftsgrundlage," *Vierjahresplan*, 1938: VI.

⁴⁷ Unfortunately, the slides accompanying his presentation do not appear to have survived, which means that there is a dearth of actual statistics. We do, however, have a good idea of expected increase thanks to a report on industrial expansion completed by General Hermann von Hanneken, Plenipotentiary for Iron and Steel Management (Generalbevollmächtigter für die Eisen- und Stahlbewirtschaftung) and Under State Secretary in the RWM. As of 01 January 1938, petroleum production stood at 4,390,000 tons, with an additional 624,000 tons coming on line over the year, and a further increase of 1,624,000 tons the following year, thus leaving Germany with a total supply of 6,639,400 tons by 01 January 1940. Hanneken was concerned that these targets would not be met in view of the myriad problems, including inadequate allocations of iron, cement, and lumber; transportation bottlenecks; and delays in the delivery of needed machinery and electrical equipment. Hanneken, "Bericht über den Industrieausbau im Jahre 1938 im Rahmen des Vierjahresplan," no date, enclosed with: Hanneken to the Office for Economic Development (Reichsstelle für Wirtschaftsausbau, RWA), 21 January 1939, BA-B, 3112/36. Unfortunately, the NARA microfilm copy – T-84/217 (EAP 66-c-12/62/46) – is largely illegible.

savings in foreign exchange at 350,000,000 RM, which would be used to finance imports to meet new demand. Interestingly, imports of crude oil would continue – in fact, they would “experience a systematic, additional increase,” since Løb intended to process this crude oil in facilities that could, if necessary, be quickly switched over to using either German crude oil or coal as a feedstock. In other words, Løb expected that Germany would continue importing crude oil (and other fuels, such as diesel, which had a low import duty) by the end of the VJP, if only for reasons of expediency and to conserve German raw materials.⁴⁸ Lest there be any misunderstanding, Løb reminded his listeners that “my office is intent upon preserving the [German] petroleum industry’s connection with the outside world and its involvement with the international petroleum industry, so long as this does not jeopardize the security of the Fatherland.”⁴⁹

We have a good overview of Germany’s oil position at the beginning of 1938, thanks to an intercepted British estimate of German peacetime and mobilization demand vs. supply, which the WStb helpfully contrasted with the actual German figures.⁵⁰ British estimates for German peacetime demand between 1936 and 1939 were almost exactly right, and the estimate for mobilization demand in 1939 was only slightly higher than the German estimate: 8,600,000 tons vs. 7,800,000 tons. The only major discrepancy came with regard to German supplies in 1939 – whereas the British estimated production plus reserves at 6,300,000 tons, the Germans were only expecting 5,200,000 tons (the main difference being the 1,000,000 ton gap in each side’s estimate of German storage capacity). Overall, there was only a 300,000 tons difference between both sides figures for Germany’s import requirement: 2,300,000 tons in the case of the British report, and 2,600,000 tons according the WStb. British and German estimates concerning the possible supply of oil from Romania were identical: 2,500,000 tons. When combined with the “highest” possible Polish exports (100,000 tons), planners in both Germany and Britain had concluded

⁴⁸ German crude oil production would be fixed at 450,000 tons for the time being, but it was essential that “the maximum possible quantity of lubricants” had to be refined from it.

⁴⁹ “‘Die Mineralölwirtschaft im Vierjahresplan’: Vortrag gehalten am 12. Januar 1938 im Haus der Flieger,” T-77/107 (Wi/IF 5.469). The NARA finding aid mistakenly ascribes authorship of the speech to Krauch. Løb’s name does not appear anywhere on the speech, but the text is virtually identical to an article published later that year under his name: Fritz Løb, “Die deutsche Mineralölwirtschaft,” *Vierjahresplan*, 1938: II. This article does not include the figures Løb provided for existing and estimated consumption during his January speech.

⁵⁰ The provenance of the British report is unclear – a German translation was appended with the following details: “Deutschland: Mineralölversorgung im Falle eines Krieges 1939,” I G [?] F/47, 07 October 1937.

by the beginning of 1938 that Germany could, in fact, find enough oil to fight a war in 1939, but only with large imports from Romania.⁵¹

Following Schacht's resignation as Economics Minister in 1937, Göring began a major reorganization of the VJP, particularly the Office for German Raw Materials, which had "vainly" attempted to impose order over the various civilian and military agencies responsible for petroleum affairs.⁵² The additional production of petroleum during the first year of the VJP was valued at 39,700,000 RM (well above the anticipated savings of 24,800,000 RM through reduced imports).⁵³ Nevertheless, as Göring explained during a conference at his Karinhall estate on 16 July 1938, although VJP's "function consists in preparing the German economy for total war within 4 years," progress had so far been "unsatisfactory in the fields essential to the war effort, due to too much decentralization."⁵⁴ Implementation of the VJP during this second stage, which lasted until Albert Speer's rise in 1942, would be in the hands of trusted deputies endowed with wide-ranging powers. In the case of the petroleum, the most important figure at

⁵¹ WStb an Abwehr, Az. 66 b 9010, Abt. W Ro Nr. 172/38 g.K.Ia, "Betr.: Mineralöversorgung Deutschlands," Bezug: Englischer Bericht über Mineralölversorgung Deutschlands im Falle eines Krieges 1939, 29 January 1938, T-77/427 (Wi/IF 5.3481). Another British report from later that year, on the other hand, overstated German wartime consumption by 1,300,000 and understated its domestic production in 1937 by 700,000 tons. WStb, Rohstoffabteilung (Griebel) an W Wi über Ro I, Az. 11 k 2216b W Ro V, Nr. 3897/38gK Vc, "Betr.: Stellungnahme zu dem mit Bezugsschreiben übermittelten englischen Bericht über Deutschlands Mineralöllage (Abw.III 1727/38gK)," Bezug: W Wi Nr.3897/38gK Id vom 18. 11. 1938, 28 November 1938, T-77/123 (Wi/IF 5.533). The original British report is not appended.

⁵² "Über die Organisation der Vierjahresplan," 27 January 1938, Nr. 24 in: *Akten der Reichskanzlei*, v: 84-92.

⁵³ The total value of all increases in production and exports at the end of the first year of the VJP equaled 367,300,000 RM. The increase in demand had, however, negated any positive effect on Germany's overall import burdens. Ministerpräsident Generaloberst Göring, BVJP, Der Chef des Amtes für deutsche Roh- und Werkstoffe (Löb), "Ergebnis der Arbeit des ersten Jahres im Vierjahresplan," 30 Oktober 1937, T-301/70 (NI-8590).

⁵⁴ Göring was referring to the production of gunpowder/explosives, petroleum, aluminum, synthetic rubber, and iron ore. "Business transacted at conference with Field Marshall Goering at Karinhall on 16 July 1938," Translation of Document 1436-PS, *NMT*, vii: 895-897. The day before, the WStb estimated that existing production and reserves of motor fuel and diesel would last for only three months in wartime. Oberkommando der Wehrmacht, Wehrwirtschaftsstab (OKW, WStb), W Ro Vc, Az. 11 k 2216, Aktenvermerk für Chef der 6. Abt. Gen St d H., "Betr.: Betriebsstoff-Versorgungslage im Mob-Fall (Stand 1. 7. 1938) für Wehrmacht und Wirtschaft im Reich einschl. Ostpreußen außer Österreich," 15 July 1938, T-77/123 (Wi/IF 5.533). Göring elaborated further during a discussion at the Ministry of Aviation (Reichsluftfahrtministerium) the following October. He candidly admitted that Germany was broke ("The treasury is empty") and vowed "to make barbaric use of his plenipotentiary power [...]." Since it was proving impossible to reconcile rearmament with the need to earn hard currency through exports, Göring demanded that the emphasis of VJP had to be directed toward those industries that contributed directly to the war effort and saved foreign exchange – in both cases, the petroleum industry fit the bill. "Conference at General Field Marshal Goering's at 1000, 14 Oct. 38, in the Reich Air Ministry," Translation of Document 1301-PS, *NCA*, iii: 901-904; for the original German document, see: Nr. 218, *Akten der Reichskanzlei*, v: 738-744.

this juncture was Krauch, who at the start of 1938 was still technically a second-tier official within the Office for German Raw Materials. This would soon change.⁵⁵

With regard to petroleum policy, the Raw Materials Office was integrated into the RWM as the Office for Economic Development (Reichsstelle für Wirtschaftsausbau, RWA – elevated to the status of Reichsamt in December 1939). The RWA would become the executive, planning, and research & development arm of the VJP.⁵⁶ The RWA was comprised of four departments, the most important being Division F (research and development), under the leadership of Krauch, who was effectively in charge of the whole agency and took over formally in December 1939. Geological matters (both in Germany and abroad) would, however, be handled by the Office for Soil Exploration (Reichsstelle für Bodenforschung, RfB – after 1941, Reichsamt für Bodenforschung). This agency was an outgrowth of the old Prussian Geological Institute (Preußische Geologische Landesanstalt) and led by Wilhelm Keppler, with Alfred Bentz serving as the Director of the Crude Oil Division (having held the same position with the Landesanstalt).⁵⁷ Finally, oversight over the raw materials industry theoretically returned to the RWM, and Ernst Rudolf Fischer of IG Farben took over the Petroleum Division in 1939.⁵⁸

⁵⁵ According to Peter Hayes, the unprofitability of hydrogenation (\$40,000,000 in losses by 1932) had cost Krauch his chance to replace Bosch as the head of IG Farben, thus encouraging him to seek opportunities for advancement within the regime: Hayes, “Bosch and Krauch,” 358-359.

⁵⁶ Minister President Field Marshal Goering, Plenipotentiary for the Four Year Plan, St. M. Dev. 11319/39, “Reorganization of the Reichsstelle for Economic Development,” 05 December 1939, *NMT*, vii: 963-964; for the original German document, see: T-401/5 (RBF 96).

⁵⁷ These developments are summarized Bentz’s self-serving “Supplement to My Questionnaire,” 11 February 1946, BNA, FO 1039/496. The postwar recollections of men such as Bentz and Günther Schlicht (an employee of Deutsche Erdöl AG, formerly attached to Kontinentale Öl AG and the Technische Brigade Mineralöl in the Caucasus) comprised the backbone of Albert E. Gunther’s histories of the German oil industry during the war. For the history of the domestic crude oil industry (including Austria), see: A.E. Gunther (British Military Government, Celle), “British Oil Fields Investigation, Part IV, Section 1: The War Structure of the German Crude Oil Industry, 1934-1945,” May 1946, BNA, WO 252/1448; and A.E. Gunther, “The German War for Crude Oil,” *Petroleum Times* (08 November 1947), 1095-1099; *ibid* (22 November 1947), 1147-1152; *ibid* (06 December 1947), 1211-1215; *ibid* (03 January 1948), 22-26; and *ibid* (08 May 1948), 470-475. For Gunther’s role in the official postwar investigation of the German oil industry that culminated in his historical series for the *Petroleum Times*, see: Gunther, “A Note on the Oil Fields Investigation under Military Government at Celle,” *Geologisches Jahrbuch*, Reihe A, Heft 102, 13-21 (Hanover, 1987), Bundesanstalt für Geowissenschaften und Rohstoffe, Z1 A 102 (hereafter cited as: BGR #). Gunther proved instrumental in the postwar rehabilitation of Alfred Bentz, despite the latter’s prominent position within the petroleum policymaking apparatus of the Third Reich.

⁵⁸ Minister President, Field Marshal Goering, Plenipotentiary for the Four Year Plan, St. Dev. 1245, “Decree on the Reorganization of the Reich Ministry of Economics and the Continuation of the Four Year Plan,” 05 February 1938, Translation of Document NID-13629, *NMT*, xii: 482-488; for the original German document, see: Nr. 36, *Akten der Reichskanzlei*, v: 118-124. For an explanation of how Göring’s 1938 reform worked out in practice, see: Donner

Göring also opted to make greater use of his power to appoint plenipotentiaries to handle matters of special importance.⁵⁹ In August/December 1938, Krauch received two appointments from Göring, first as Plenipotentiary and then as General Plenipotentiary for the Chemical Industry.⁶⁰ The previous July, Göring appointed Bentz as the Plenipotentiary for Crude Oil Production, whose brief Göring extended to cover the former Czech territories and occupied Poland the following year.⁶¹ When it came to the direction of petroleum policy, Krauch would oversee the synthetic fuel industry, while responsibility for the crude oil industry would be divided between Fischer (policy) and Bentz (geology). Although all three men were technically subordinate to the new Economics Minister, Walter Funk, in fact, they all reported to Göring.⁶² The quadrumvirate of Krauch (RWA), Bentz (RfB), Fischer (RWM), and Georg Thomas (WiRüAmt) would shape Germany's petroleum policy until 1942, when Speer's Zentrale Planung board sidelined Göring's VJP.⁶³

In the wake of the annexation (Anschluss) of Austria, Hitler fixed his attention on Czechoslovakia. The absorption of Austria had been relatively peaceful (save for Austria's Jews and other targets of the regime) but liquidating Czechoslovakia carried with it the risk of a wider European conflagration.

(assistant to State Secretary Neumann), "Organizational Questions of the Four Year Plan," 27 August (1940), Translation of Document NID-13894, *NMT*, xii: 543-548.

⁵⁹ Minister President Field Marshall Goering, Plenipotentiary for the Four Year Plan, St. M. Dev. 1008 Rs, 16 July 1938, Translation of Document EC-278, *NMT*, vii: 900-901; for the original document, see: Nr. 166, *Akten der Reichskanzlei*, v: 548-549 (esp. pg. 548, n. 2).

⁶⁰ According to the footnote included with the Translation of Document EC-278 (*NMT*, vii: 900-901), Krauch testified that he never received an official letter of appointment to either position. Copies certainly did survive: Ministerpräsident Generalfeldmarschall Göring, BVJP, an Herrn Direktor Dr. C. Krauch, RWA, St.M.Dev. 5598, 22 August 1938, NARA, RG 238, T-301/113 (NI-13901); and Göring (gez. Neumann) to Krauch, St.M.Dev. 1194 g., 26 August 1938, NARA, RG 238, T-301/113 (NI-13900). Krauch's tasks, as well as the overall mission of the RWA are spelled out in great detail in: Hans Kehrl (RWM) to Krauch, 30 March 1943, Translation of Document NI-820, *NMT*, vii: 971-977.

⁶¹ Ministerpräsident Generalfeldmarschall Göring, BVJP, to Herrn Professor Dr. A. Bentz, St.M.Dev. 5153, 28 July 1938, NARA, RG 238, T-301/113 (NI-13902) – reprinted in: Eichholtz, *Deutsche Ölpolitik*, 268-269 – and Göring to Bentz, St.M.Dev. 8781, 04 October 1939, BGR 86534.

⁶² As Funk conceded during his testimony at Nuremberg, as a result of the 1938 reforms, the portion of the RWM still under his control functioned more like a "Ministry of Commerce, which dealt only with the distribution of consumer goods," whereas all of its functions pertaining to economic policy fell under Göring's jurisdiction. Testimony of 04 May 1946, *IMT*, xiii: 99-102.

⁶³ Fischer would retain his position following Göring's eclipse, although he would now report to Hans Kehrl, chief of the Raw Materials Office (Rohstoffamt) within the RWM after 1943, who in turn answered to Albert Speer. Kehrl had enormous respect for Fischer (nicknamed "Mineralölfischer"). Hans Kehrl, *Krisenmanager im Dritten Reich: 6 Jahre Frieden – 6 Jahre Krieg, Erinnerungen* (Düsseldorf: Droste Verlag, 1973), 203 and 227. For a schematic of the post-1942 administrative structure for petroleum policy, see: Stokes, "Nazi Oil Industry," 262-264.

Germany had to be prepared for a war in the short term, well before its ambitious rearmament programs were complete. Accordingly, it was time for the Reich to begin taking stock of its existing resources.⁶⁴

The picture with regard to petroleum was mixed. Although domestic production had kept pace with increases in consumption, the overall foreign exchange burden had swollen from 145,000,000 RM to 230,000,000 RM between 1933 and 1937 to account for the larger volume of imports (2,478,000 tons to 4,313,000 tons), even if the share of imports relative to demand remained unchanged (roughly 75%).⁶⁵

The increase in imports was distributed unevenly, with demand for diesel (90% of which had to be imported) and crude oil tripling, and doubling in the case of fuel oil. On the other hand, Germany had also gone from the least motorized of the great powers to near parity with Britain while vaulting past France:

Country	No. of Automobiles (1937)
Britain	688,000
Germany	621,000
France	455,000

(The per capita figure was somewhat less impressive: the German figure had been halved between 1933 and 1937, from eighty-nine to forty-seven people per vehicle, but it still lagged behind Britain and France, which had seen a decline from twenty-nine to twenty-one and twenty-five to nineteen, respectively.⁶⁶)

The increase in the number of automobiles was matched by a sharp drop in gasoline imports:

Year	Imports (Tons)
1932	1,088,000
1936	1,325,000
1937	1,058,000

⁶⁴ An excellent overview of Germany's strategic and economic position, particularly its crippling raw materials deficiencies and various military shortcomings, on the eve of the Sudeten Crisis may be found in: Williamson Murray, *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton: Princeton University Press, 1984), 3-49.

⁶⁵ Germany's consumption (4,910,000 tons) remained relatively low: as of 1936, it was well behind the United States (145,200,000 tons), the Soviet Union (18,800,000 tons), Britain (10,300,000 tons), France (5,500,000 tons) and even Canada (5,030,000 tons). Reichs-Kredit-Gesellschaft AG, Ke/Schr., "Treibstoffwirtschaft in der Welt und in Deutschland," April 1938, T-84/51 (EAP 66-c-2-10/22).

⁶⁶ Per capita fuel consumption Germany was also forty liters, compared to eighty-three liters in France, 144 liters in Britain, and 609 liters in the United States. Overall, the number of motor vehicles (including motorcycles and trucks) had increased from 85,000 in 1914 to 2,158,000 by 1935. "Bestand an Kraftfahrzeugen in Deutschland," Material: *Wehrtechnische Monatshefte*, Nr. 2 (1936), T-77/425 (Wi/IF 5.3444).

This reduction in imports was only possible because domestic production of light petroleum products (including benzol and alcohol) had quadrupled since the start of the Third Reich:

Year	Domestic Production (Tons)
1933	386,000
1937	1,480,000

Such increases were indispensable due to the concurrent rise in consumption:

Year	Consumption (Tons)
1932	1,600,000 tons
1937	2,600,000 tons

Roughly 60% of Germany's gasoline supply now came from domestic sources, a figure that would grow once the expansion of the synthetic fuel industry had been completed. Even German crude oil production had also almost doubled: from 230,000 tons in 1932 to 453,000 tons in 1937, most of which was refined into fuel oil (320,000 tons), lubricants (140,000 tons), diesel (120,000 tons).⁶⁷

The price of imported gasoline had dropped by two-thirds, from 18.49 RM per 100 liters in 1927 to only 6.76 RM in 1936.⁶⁸ At first glance, the price differential between synthetic and natural petroleum (16 Pfennig per liter of synthetic fuel vs. 3.45 Pfennig per liter of gasoline sold at the U.S. Gulf Coast) seemed immense. But once one subtracted the labor cost from the synthetic fuel (which stimulated the domestic economy) and included the freight rates to Hamburg, one liter of U.S. gasoline cost approximately 8 Pfennig to import, and one liter of Rumanian gasoline 10 Pfennig. Moreover, the price of synthetic fuel would probably drop in future as production became more efficient.⁶⁹

The Reichs-Kredit-Gesellschaft was therefore confident that "[the] German petroleum economy is therefore on its way to fulfilling its' stated task: to make Germany as independent as possible from imports of light fuels." Whether Germany could find the roughly 12,650,000 tons of petroleum it would

⁶⁷ Reichs-Kredit-Gesellschaft AG, Ke/Schr., "Treibstoffwirtschaft in der Welt und in Deutschland," April 1938, T-84/51 (EAP 66-c-2-10/22).

⁶⁸ "Entwicklung der Durchschnittswerte wichtiger Rohstoffposten der deutschen Einfuhr 1927-1936," no date or author, BA-B, R 8128/488.

⁶⁹ Reichs-Kredit-Gesellschaft AG, Ke/Schr., "Treibstoffwirtschaft in der Welt und in Deutschland," April 1938, T-84/51 (EAP 66-c-2-10/22).

need in a war “depends not the least upon” upon whether the material and human labor to expand synthetic output could be found.⁷⁰ Germany could not afford to be stingy in view of its experience during the war and the current geopolitical situation: “The additional efforts imposed by Germany’s bid for self-sufficiency and which other industrial nations with a more favorable raw materials basis or with greater capital-generating facilities in colonial nations or territories can avoid, are adequately justified at present due to the noticeable significance accorded to the progressive motorization.”⁷¹

Until the expansion of synthetic production was complete, however, the situation would be dire in the event of a war of extended duration. An examination by the WStb of Germany’s existing stockpiles and production in the event of mobilization revealed that the country could only cover its full requirements for four months. Monthly consumption of all products would run to 636,000 tons (84,000 tons for the Army; 161,500 tons for the Navy; 174,500 tons for the Air Force; and 216,000 tons for the civilian economy). Since overall production would shrink slightly as production shifted from motor fuel to aviation and diesel fuel, once stockpiles had been expended, the Third Reich would only satisfy one-quarter of its consumption. If Germany wished to have enough fuel to cover six months of consumption, it needed to import 934,000 tons of petroleum products at a cost of 65,000,000 RM. The costs of providing one year’s worth of consumption were even more onerous: 300,000,000 RM, largely in foreign exchange.⁷²

⁷⁰ The Reichs-Kredit-Gesellschaft drew this figure from: H. Steinberger, “Der Treibstoffverbrauch im Kriege,” *Die deutsche Volkskraft: Beilage zur “Deutschen Wehr,”* Nummer 1, 6 Jahrgang (16 January 1936).

⁷¹ Reichs-Kredit-Gesellschaft AG, Ke/Schr., “Treibstoffwirtschaft in der Welt und in Deutschland,” April 1938, T-84/51 (EAP 66-c-2-10/22). This detailed paper is of extraordinary value, not only in terms of describing the state of petroleum industry in Germany by 1938, but also contextualizing it within the global oil industry. For more on Germany’s overall raw materials position at the start of 1938, see also: Volkswirtschaftliche und Statistische Abteilung der Reichsbank, “Die Entwicklung der deutschen Rohstoffversorgung,” 9 July 1938, Nr. 159 in: *Akten der Reichskanzlei*, v: 515-517. The Reichsbank was pleased with the significant increase in foreign exchange earnings since 1934 (from 6,000,000,000 RM to 7,740,000,000 RM), which allowed the country to replenish some of its stocks of raw materials. The outlook for 1938 did not look so favorable, as the Reichsbank forecast a significant decrease in exports even as global commodity prices rose.

⁷² The situation was probably slightly worse considering the fact that these figures did not take into account the consumption in Austria. W Stb W Ro, Az. 11 k 2216 Vc, “Mineralöl-Versorgung für den Mob-Fall 1938,” 08 June 1938, T-77/341 (Wi/IF 5.2164, 2687), Anlage 33 to: “Die Arbeiten des WiRüAmtes.” See also: W Stb W Ro, Az. 11 k 2216 Vc, “Bemerkungen zur Mineralöl-Bilanz im Mob-Fall nach dem Stande vom 1.4.38,” 03 May 1938; and W Stb W Ro Vc, Az. 11 k 2216, “Schluss – Folgerung,” 17 May 1938; both in: T-77/123 (Wi/IF 5.533). The latter document offers a useful comparison of the most recent figures for production and stockpiles with those of the previous year.

Germany's petroleum position would not have been a matter of urgency if there was no chance of war in the immediate future. But Hitler had already announced his intentions to speed up his timetable during the so-called "Hossbach Conference" of November 1937. The purge of the Army and foreign policy leadership during the Fritsch-Blomberg Affair between January and March 1938 had been followed by the annexation of Austria, and Czechoslovakia was next on the menu. The Third Reich did not have the luxury of waiting several years for the completion of its existing synthetic fuel program and would have to speed up the process of achieving self-sufficiency.

The Krauch Plan, 1938

The VJP never really aimed at autarky, at least within Germany's existing borders. Even assuming that self-sufficiency was technologically feasible, there was always the question of whether the available resources existed and might not be better expended elsewhere. Supporters of the synthetic fuel industry had pointed out that if there was one item in which Germany truly needed to be self-sufficient (or close to it), it was petroleum. Additional resources such as coal, ore, and food could be bought or taken from Germany's neighbors. With the exception of Romania (whose oil production had already peaked in 1936 and was shared with Germany's probable enemies, Britain and France, before 1940), Europe had no significant oil producers of which to speak. The Continent had depended and would continue to depend upon imports from the Western Hemisphere until the massive expansion of Middle Eastern production following the Second World War. Oil was a resource that Germany could not acquire (at least in meaningful quantities) within its immediate vicinity.

But as war planners from all of the great powers understood, oil was a commodity that had been available in sufficient quantities right from the start of the hostilities. The sheer volume of supplies required, and the cost and vulnerability of storage facilities, meant that it was impractical for a country to stockpile too much fuel in anticipation for a war. The only option when cut off from imports was to produce your own petroleum. Such strategic considerations, as well as contingent factors such as the bitter competition for natural, labor, and financial resources within the Third Reich on the eve of the Second World War, provided the background for the most ambitious synthetic fuel project ever attempted – the Krauch Plan of 1938.⁷³

Although the production figures envisaged by the Krauch Plan (roughly 11,000,000 tons) were tiny by comparison to U.S. and Soviet oil production, they are significant when one recalls that Germany's total petroleum supply peaked in 1943 at 11,300,000 tons including imports, withdrawals from stockpiles,

⁷³ Karlsch and Stokes, *Faktor Öl*, 197-198.

and booty from the occupied territories.⁷⁴ Considering Germany's limited means and requirements, this was an ambitious objective – but it should not be confused with autarky. Germany would require oil imports for the conceivable future. Knowledgeable analysts of the oil industry recognized that, even if Germany reached the targets set by Krauch, this would still fall short of satisfying all of Axis Europe's petroleum consumption.⁷⁵ Europe's postwar energy future, no matter who won the Second World War, would depend upon imports from the Soviet Union and the Middle East.

Krauch's proposal, presented to Göring at his Karinhall estate at the end of June 1938 and formally initiated as the "New Defense-Economy Supply Plan" a month later, depended upon a doubling of the steel allocation to the synthetic fuel industry after December 1938: from 60,000 tons to "at least" 110,000 tons through 1942.⁷⁶ Krauch also argued in favor of expanding the capacity of existing "stand-by plants" (Bereitschaftsanlagen) and stockpiling the surplus rather than the more costly alternative of constructing new facilities altogether, which would have to be postponed until the end of 1942.⁷⁷ He based his projections on an estimated 1942 peacetime consumption of 7,200,000 tons and 13,835,000 tons in the event of mobilization (which now had to include Austria), with most of the extra 6,635,000 tons coming in the form of aviation fuel and fuel oil (5,550,000 tons).⁷⁸ Since mobilization demand was about 50% greater than in peacetime, providing the necessary amounts of fuel theoretically required only the construction of a sufficient number of facilities capable of doubling their output in wartime. Things were

⁷⁴ United States Strategic Bombing Survey (USSBS), *Effects of Strategic Bombing on the German War Economy* (Washington, DC: U.S. GPO), 75.

⁷⁵ Alfred Bentz, "Sicherstellung des europäischen Erdölbedarfs," 24 July 1940, BGR 49459 (reprinted in: Eichholtz, *Deutsche Ölpolitik*, 467-469); and Titus Kockel, "Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940: E. R. Fischer (Reichswirtschaftsministerium, II Min. Öl), 'Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,' September 1940," *Jahrbuch für Wirtschaftsgeschichte* 2003/1: 175-208.

⁷⁶ For background on the "Karinhall Plan" and Krauch's appointment as one of Göring's plenipotentiaries, see Krauch's testimony at Nuremberg: *NMT*, vii: 1002-1010.

⁷⁷ For details concerning the intended modifications in the both peacetime and mobilization output (as well as the necessary feedstock, including coal, oil and its residues), see: Krauch an das RWM, z.Hd.d.Herrn Ministerialdirigent von Heemskerck [*sic*] o.Vertreter i.Amt, Tgb.Nr. 142/38 g.Rs., "Betr. Sofortprogramm, Sachgebiet Mineralöl," (?) September 1938, enclosed with: Krauch an das OKW, Rohstoff-Abt., z.Hd.d.Herrn Oberstleutnant Becht o.Vert.i.Amt, Tgb.Nr. 142/38 g.Rs., 29 September 1938, NARA, RG 238, T-301/60 (NI-7471).

⁷⁸ The addition of Austria (Ostmark after 1938) was not entirely a negative, as the country had a small crude oil industry. Production in 1938 was 609,000 tons, up from 174,000 tons in 1930. Vowi 3280, "Tabellen über die Versorgung Deutschlands mit Mineralölen," 03 March 1939, BA-B, R 8128/853.

not so simple in real life. Krauch quickly ruled out meeting 100% of the mobilization demand: one could not simply increase production “at will” (nach Belieben) at facilities such as Leuna, Böhlen, Scholven, and Gelsenberg, which meant that it was “not possible to build a mobilization capacity equivalent to 100% of demand upon the normal supply in reference to continuously running operations.”⁷⁹

Rather, Krauch again fell back on seeking self-sufficiency only in those cases where it was actually feasible: in this case, diesel and lubricating oils. Meanwhile, motor fuel would be produced at 85% of demand, aviation fuel at 75%, and fuel oil at 60%. Overall, Krauch envisaged a mobilization output of 11,085,000 tons against an estimated demand of 13,835,000 tons (79%).⁸⁰ Although a gap remained in wartime, it could be filled in peacetime, when production would reach 9,250,000 tons against 7,200,000 tons worth of demand (128%). The extra capacity would also come in handy during peacetime once the process of stockpiling ended, as Krauch expected “further healthy development” of civilian consumption following the introduction of the Volkswagen around 1945. The scale of the investment of natural and financial resources was staggering: the new facilities would require an additional 28,800,000 tons of soft coal and 17,000,000 tons of hard coal, plus a further 1,250,000 kilowatts of electrical power. The plan as whole consume 4,460,000 tons of steel and the labor of 77,500 works – all at a cost of 4,350,000,000 RM.⁸¹ To give an idea of the scale of these requirements, consider that the amount of steel stipulated by Krauch would have sufficed to build a fleet 3.5 times the size of the Royal Navy as of 01 January 1940.⁸²

Until the fulfillment of the Krauch Plan, Germany would have to make do with Romania, as illustrated by a two-part RWA assessment from August 1938. The first section considered Germany’s

⁷⁹ “[Es] ist nicht möglich, auf der normalen Erzeugung in Anlehnung an dauernd laufende Betriebe eine Mob-Bereitschaft zur 100 %igen Deckung des Mob-Bedarfs aufzubauen.” RWA, Abt. F 7/P 7, “Neuer Mineralölplan (Erläuterungen),” 12 July 1938, T-77/423 (Wi/IF 5.3398).

⁸⁰ By comparison, this figure would satisfy only 25% of estimated British and French requirements. RWA, “Verzögerung im wehrwirtschaftlichen *neuen* Erzeugungsplan vom 12. Juli 1938 durch verringerte Stahlzuteilung,” 29 November 1938, NARA, RG 238, T-301/73 (NI-8838).

⁸¹ The figures for requirements of steel, financing, and labor include the costs of constructing additional storage facility and boosting coal production. RWA, Abt. F 7/P 7, “Neuer Mineralölplan (Erläuterungen),” 12 July 1938, T-77/423 (Wi/IF 5.3398). Additional statistics can also be found in: BA-B, R 3112/89. The Krauch Plan also included significant increases in the production of synthetic rubber (Buna), light metals (e.g. aluminum), and gunpowder and explosives. Office for Economic Development (RWA), Division F (Research), Division P (Production), “New Military-Economic Production Plan [...],” 12 July 1938, Partial Translation of Document NI-8800, 12 July 1938, *NMT*, vii: 890-893; for the original German document, see: NARA, RG 238, T-301/72 (NI-8800).

⁸² USSBS, *German Oil Industry, Ministerial Report Team 78* (Washington, DC: U.S. GPO, 1945), 22.

immediate (1938-39) supply position following mobilization in the event of one of three possible scenarios: 1) overseas imports being cut off but “existing” imports from Romania continuing; 2) all imports being eliminated; and 3) Germany importing “*all of Romania’s export*.” The study also considered “[the] possibilities for covering any *gaps in mobilization supply* through a *boosting of domestic production* [...]” In the first case, Germany would only be able to meet 61% of its immediate estimate of demand (6,235,000 tons) and would need to have 2,431,000 tons stockpiled. In the second case, the situation would deteriorate only slightly (57%), as only an additional 233,000 tons of stockpiles would be required. In the third case, however, there would be no need to stockpile at all: “The possibility exists to make available out of Romania’s entire export trade balance the required finished [petroleum] products for German consumption in the event of mobilization.” For the time being, “*the single*” means of providing Germany with an assured supply of oil in war was by “*keeping free the Southeast European economic area for Germany*,” which meant claiming at least half of Romania’s existing exports of oil to nations besides Germany (4,900,000 tons).⁸³

The second section studied Germany’s prospects during the period preceding the completion of the Krauch Plan – 1938-43 – on the basis of the new 1942 mobilization target established by Göring (13,835,000 tons). The RWA considered Germany’s position during either of the following scenarios: 1) the disruption of all imports; and 2) “*recourse to Romania’s entire export trade balance*.” In the case of the former, Germany would meet between 26% of its requirements in 1939 and 79% by 1943, with any gap covered by stockpiling – 5,300,000 tons using the estimated production in 1942-43 as a baseline. Clearly, “*the single way*” of coping with any the shortfall until the end of the Krauch Plan was to claim a share of Romania’s exports to other countries – from a high of 98% in 1939 to 39% by 1943. Romania would also remain a “valuable reserve” as German production rose since it represented “*the only possibility... to procure supplies in the event of a suddenly acute rise in requirements*.” The RWA recommended that, no matter what its requirements were, Germany should try to increase production in

⁸³ RWA, F 7/P 7, “Mob-Bedarf u. Versorgungslage auf dem Mineralölgebiet, 1938-43,” 05 August 1938, T-77/500 (Wi/I.54). Emphasis in the original.

Austria, explore for oil in Hungary, and ascertain whether additional exports from Romania “could be secured politically and militarily.” Even if it secured additional oil, however, Germany lacked the refinery capacity to handle Romania’s exports if they were all crude oil. There was, also, the matter of logistics, which would eventually bedevil the Germans: everything “depends not only upon the political and military situation, but also decisively upon the *service capacity of the transportation lines* on the way from Romania to Germany.”⁸⁴

The RWA subsequently produced detailed plans for stockpiling the necessary reserves in case Romania proved unreliable – roughly 6,000,000 tons over the course of two years in government, naval, and private depots (in both above- and underground tanks). The imported fuel would cost well over 2,000,000 RM, not including the expense of constructing 8,000,000 cubic meters of storage space and providing 18,000 railway tank wagons to distribute the petroleum (12,000 of which had yet to be built).⁸⁵

In the meantime, Krauch’s plan was running to difficulties. The Mining Division of the RWM made it clear in August that Krauch’s expectations concerning additional coal production were unrealistic in terms of the time, cost, material, and labor required to produce the additional 38,600,000 tons of hard coal and 118,300,000 tons of soft coal required each year by 1942.⁸⁶ More troubling still was the perennial shortage of steel. According to Krauch’s original projections, the synthetic fuel industry would see a temporary decline in its steel allocation until 01 April 1939, at which time it would increase sharply to over 110,000 tons. In November, however, Krauch learned that the allocation would not be raised until 01 April 1940 if not later. He warned frantically that any reduction could delay the fulfillment of his plans by between one to six years depending upon when the full allocation was restored (eighteen months in the event of 01 April 1940). He could not understand why this was happening, considering that, by his

⁸⁴ RWA, F 7/P 7, “Mob-Bedarf u. Versorgungslage auf dem Mineralölgebiet, 1938-43,” 05 August 1938, T-77/500 (Wi/I.54). Emphasis in the original.

⁸⁵ RWA, Abt. F. 7, Dr. Sc./Mk., “Ergänzung zum Wehrwirtschaftlichen neuen Erzeugungsplan vom 12. Juli 1938: Mineralöl-Bevorratung,” 21 October 1938, T-77/427 (Wi/IF 5.3481). An earlier draft of the study – T-77/423 (Wi/IF 5.3300) – indicates that it was the product of a joint effort between the RWA and RWM. The figures provided within it differ somewhat from those of the later draft but not the overall recommendations.

⁸⁶ Bergabteilung des RWM, “Betrifft: Neuer wehrwirtschaftlicher Erzeugungsplan,” 31 August 1938, Nr. 193 in: *Akten der Reichskanzlei*, v: 643-648.

calculations, Germany would save as much as 144,000,000 RM in foreign exchange by 1943 if it carried out his plan, while it would lose as much as 165,000,000 RM if the steel allocation only went up in April 1940 and as much as 379,000,000 RM if the allocation stayed at 42,000 tons permanently.⁸⁷

The following month, Krauch explained how the effects of any reduction in the steel allocation would be “significantly greater” than just a chronological delay. A number of industrial firms had already committed themselves to providing the necessary machinery over the course of 1939. Forcing them to restructure their operations for another year until the Krauch Plan was implemented in earnest would probably add another six months to the final completion date: “*A reduced steel allocation will thereby displace [verschoben] the date of the attainment of the final construction stage by around one and a half years!*” In that event, Germany could not begin stockpiling excess synthetic production until 1942.

Krauch also pointed out that any delays would have a disproportionate effect on the production of high-octane aviation gasoline, which was of particular importance to now-Field Marshal Göring. Replacing this production with imports was not possible, not just because such fuel required precious foreign exchange, but also because there was none to be had in view of higher global demand. German efforts to import greater quantities from Southeastern Europe had to be judged a failure (“als gescheitert anzusehen”) and synthetic fuel represented Germany’s hope for developing “security fuel” for the Air Force. Replacing the 7,000,000 tons of petroleum whose production would be delayed would probably

⁸⁷ The figures were calculated against the estimated market value of the additional 10,000,000 tons of petroleum produced by Germany by 1943, against the losses incurred by ceasing exports of necessary industrial goods, the export value of the coal to be devoted to synthetic production, the provision of materials such as light metals (aluminum) for plant construction, and the costs of importing petroleum for both peacetime requirements and wartime stockpiling. RWA, “Verzögerung im wehrwirtschaftlichen *neuen* Erzeugungsplan vom 12. Juli 1938 durch verringerte Stahlzuteilung,” 29 November 1938; and RWA, “Auswirkungen einer verminderten Stahlzuteilung,” 14 December 1938; both in: NARA, RG 238, T-301/73 (NI-8838). Krauch claimed the initial cause of the shortfall was the construction of the “Westwall” (the Siegfried Line), but that submarine and tank production caused problems once the war began, as well. *NMT*, vii: 1018-1019. The petroleum industry was not the only sector hammered by the shortage of steel at the end of 1938. The steel allocation to the war economy for the first quarter of 1939 was not reduced from the last quarter of 1938 (306,600 tons), although it was significantly lower than the required 613,500 tons. In fact, the sector most hurt by the steel shortage was the military, which actually saw a small reduction in its allocation (from 584,333 tons to 573,113 tons), which was only 53% of the required total (1,088,300 tons). Overall, the entire German economy had to grapple with an almost 1,000,000 ton shortfall at the start of 1939, with first priority going to the “upkeep” of existing industries. W.Wi Id., “Material for the Conference with Goering on 25 November 1938 (General Keitel, Brig. Gen. Thomas),” 27 October 1938, Translation of Document 1301-PS, *NCA*, iii: 904-906; for the original German document, see: *IMT*, xxvii: 164-166.

cost around 420,000,000 RM in foreign exchange.⁸⁸ Another paper by Krauch made the point that even the 120,000 tons per month figure originally demanded represented only 8.7% of Germany's current steel output. While Krauch agreed that diverting steel away from the petroleum industry to munitions production would result in a "greater acceleration" in the expansion of the armed services, what purpose did this serve if the new weapons were immobilized for lack of fuel? "A reduction in the steel allocation for this area [petroleum] is therefore not justifiable on defense-economic grounds."⁸⁹

Steel shortages were not the only specter haunting Krauch – his plans were also at the mercy of a general shortage of credit. In January 1939, the WStb came to Krauch's defense. Although it was responsible for overseeing the procurement of all of the military's requirements of munitions and raw materials, the WStb had accepted Krauch's logic that new weapons systems would be worthless unless there was enough petroleum to go around: "*Petroleum is as important to modern warfare as planes, tanks, ships, arms and munitions. It must therefore be considered [as seriously] as every other instrument of war [...]*."⁹⁰ The WStb was mortified by the fact that a two-thirds reduction in the steel allocation to the petroleum industry would limit German domestic production by 1943 to only 6,500,000 tons, well short of the expected peacetime demand of 8,300,000 tons and nowhere near the revised mobilization figure of 21,000,000 tons.⁹¹

⁸⁸ "Verzögerung im wehrwirtschaftlichen *neuen* Erzeugungsplan vom 12. Juli 1938 durch verringerte Stahlzuteilung. Sachgebiet: Mineralöl," 18 December 1938, no author, enclosed with: Krauch to Keitel, Tgb.-Nr., 546 (?)/38, 23 December 1938, NARA, RG 238, T-301/60 (NI-7471). Emphasis in the original.

⁸⁹ "Zur Auswirkung der verringerten Stahlzuteilung auf den wehrwirtschaftlichen *neuen* Erzeugungsplan vom 12. Juli 1938," 18 December 1938, no author, enclosed with: Krauch to Herrn Generaloberst Keitel (Chef des Wehrmachtsamtes), Tgb.-Nr., 546 (?)/38, 23 December 1938, NARA, RG 238, T-301/60 (NI-7471).

⁹⁰ W Ro III, Az. 66 b 2134, "Vortragsnotiz über die Auswirkungen der Verknappung des Kapitalmarktes und der Eisenkontingentierung auf den Ausbau der Mineralölerzeugung," 10 January 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 26 to: "Die Arbeiten des WiRüAmtes." Emphasis in the original. Thomas harped upon this point in his history of the German war economy. Thomas and the WStb had seen eye-to-eye with the objectives of the VJP and worked well with Krauch and the RWA. On the other hand, "the military services and later the Armaments Ministry were always prone to place the expansion of the petroleum industry behind their own munitions projects," even though WStab insisted "that in a war of the future, the supply of petroleum will be one of the decisive factors in terms of the attainment of victory, and that the provision of necessary fuels can be many times more important [mal wichtiger] as the production of arms and munitions." Georg Thomas, *Geschichte der deutschen Wehr- und Rüstungswirtschaft, 1918-1943/1945* (Boppard am Rhein: Boldt, 1966), 114.

⁹¹ W Ro III, Az. 66 b 2134, "Vortragsnotiz über die Auswirkungen der Verknappung des Kapitalmarktes und der Eisenkontingentierung auf den Ausbau der Mineralölerzeugung," 10 January 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 26 to: "Die Arbeiten des WiRüAmtes." The WStb's upward revision of the 1943 mobilization figures (from 13,835,000 to 21,000,000 tons) stemmed from a 2½ times increase in Air Force consumption after 1941 (from

To make matters worse, the scarcity of credit threatened reaching even the 6,500,000 tons figure. The WStb warned that bond markets were unwilling to make loans to the relevant companies whose capital requirements were “several times greater than their own existing capital.” In fact, the companies involved no longer had the resources to finance the few construction projects already under way. WStb urged the Reich to step in and make significant loans to the petroleum industry on the grounds that any “further construction of planes, ships and combat vehicles is... useless if the necessary fuels cannot be provided.” Stockpiling was not a viable alternative due to the shortage of foreign exchange.⁹² Therefore, WStb recommended a one year “postponement of other rearmament measures in the interest of a strongly accelerated expansion of petroleum facilities” that would improve Germany’s supply position during

4,000,000 tons to 10,000,000 tons). Az. 11 k 2216 Vc, “Vorausgeschätzter Gesamt-Mineralölbedarf im Mob-Fall für die Jahre 1939-1944,” Anlage to: OKW, Az. 66 b 2133 W Stb/W Ro III, “Vortragsnotiz für Generalfeldmarschall Göring über Zielsetzung und Forderungen für die Weiterführung des Mineralöl-Bauprogramms,” 31 January 1939, NARA, RG 238, T-301/60 (NI-7471). Following the Munich Crisis, Göring announced five-fold increase in the operational strength of the Air Force by 1942 to almost 22,000 combat aircraft. Adam Tooze describes this plan as an “absurdity” largely because of the immense fuel requirements (10,700,000 cubic meters, or 67,303,000 barrels), although these were by no means “twice the current level of global production” (which was about 2,000,000,000 barrels in 1938) unless he is referring to high-octane aviation fuel, in which case the only potential problem was not the supply of oil but rather that of the necessary additives to boost the octane-rating of gasoline such as tetraethyl lead. Tooze, *Wages of Destruction*, 287-289 and 293-294; and Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 4. The WStb did not, however, factor in the additional requirements imposed by the Navy’s “Plan Z,” which envisaged the creation of a battle fleet designed to challenge the Royal Navy. Strangely, Krauch continued in 1939 to operate on the basis of the lower mobilization target established by Göring in June 1938. “Work Report of Dr. C. Krauch, Plenipotentiary General for Special Questions of Chemical Production of Minister President, Field Marshal Goering, Submitted to the General Council of the Four Year Plan,” 20/21 April 1939, Partial Translation of Document EC-282, *NMT*, vii: 944-956; for the original German document, see: T-77/430 (Wi/IF 5.3594). An August 1939 study by the RWA referenced a mobilization figure by 1942 of 23,850,000 tons for both “Greater Germany” as well as Italy, Spain, and Southeastern Europe. “Möglichkeiten einer Großraumwehrwirtschaft unter deutscher Führung,” August 1939, no author or date, T-77/500 (Wi/I.44). Eichholtz cites the 23,850,000 ton figure but does not mention that it was for the entire “Großraum” rather than just Germany itself. Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941* (Leipzig: Leipziger Universitätsverlag, 2005), 9-10; and Dietrich Eichholtz, *Krieg um Öl: Ein Erdölimperium als deutsches Kriegsziel, 1938-1943* (Leipzig: Leipziger Universitätsverlag, 2006), 10-11.

⁹² It was, for the time being at least, the only recourse left open to the Navy. Representatives of the OKM had complained to Krauch in October that his plan did not pay enough attention to the navy’s fuel oil requirements. Korv. Kapt. (Ing.) Grossmann (Leiter des Referates I, Min. Öl 7 im RWM), “Vermerk über die Besprechung beim Generalbevollmächtigten des Herrn Ministerpräsidenten Generalfeldmarschall Göring, BVJP, für Fragen der chemischen Erzeugung am 12. Oktober 1938,” “Betreff: Sofortprogramm Mineralöl,” 12 October 1938, T-77/228 (Wi/IF 5.1171). On the basis of a study conducted in February 1939, the Navy estimated that domestic production of fuel oil and diesel would reach only 2,000,000 tons and 1,500,000 tons, respectively, by the beginning of 1944. “*The securing of the fuel-oil supply of the Navy must take place through a major, systematic stockpiling (from imports).*” 180,000,000 RM worth of imports (6,000,000 tons) would be needed in order to create a reserve equivalent to three years of wartime consumption. “Sicherstellung des Heizöl- und Dieselmotorenstoffbedarfes innerhalb des neuen wehrwirtschaftlichen Erzeugungsplanes vom 12. Juli 1938. Stand vom 30. Januar 1939,” 15 February 1939, no author, enclosed with: W Ro III, [illegible], an Ro V., 22 March 1939, NARA, RG 238, T-301/60 (NI-7471). Emphasis in the original.

mobilization and save foreign exchange that was currently being “*devoured*” by imports and could be re-invested into armament production at a later date.⁹³

The Armed Forces High Command (Oberkommando der Wehrmacht, OKW) took its case to Göring directly later that January, reminding him that Führer’s promises in October 1936 about completing the expansion of petroleum production within eighteen months were “nowhere near” being realized. The OKW warned that, in the absence of decisive action, Germany could “*reckon upon a thorough collapse of the further expansion of petroleum production,*” with all of the attendant risks to the armed forces in wartime and Germany’s precarious foreign exchange position. OKW put forward, however, a less ambitious program than the WStb had recommended: a “practical and viable aim” of increasing production to 8,000,000 tons by “mid-1942,” while making preparations for a more extensive expansion to be completed by the end of 1944, when mobilization requirements would max out at 22,000,000 tons. Even accomplishing this limited objective would require Göring to make “an immediate decision” to put the petroleum industry “in first place” in terms of economic and financial resources. The Reich would also have to provide the necessary 1,500,000,000 RM per year and ensure that the steel allocation was raised to 120,000 tons per month – which could only be achieved at the expense of other sectors of the armaments industry.⁹⁴ Göring appears to have gotten the message and issued a directive on 09 February

⁹³ W Ro III, Az. 66 b 2134, “Vortragsnotiz über die Auswirkungen der Verknappung des Kapitalmarktes und der Eisenkontingentierung auf den Ausbau der Mineralölerzeugung,” 10 January 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 26 to: “Die Arbeiten des WiRüAmtes.” Emphasis in the original. See also: W Ro III, Az. 66 b 2134, “Entwicklung des Mineralölbedarfs und der Mineralölerzeugung bis 1944,” 20 January 1939, T-77/231 (Wi/IF 5.1180). This paper explained that, with the existing steel allocation of 42,000 tons, the Krauch Plan would not be completed until 1947, while only 38% of the estimated average mobilization requirements between 1941 and 1943 would be met internally. Raising the steel allocation from April 1940 onwards would shave three years off the waiting period, but Germany would still only produce 54% of its mobilization requirements as of 1944. The paper also suggested that between 650,000,000 RM and 1,000,000,000 RM would be required annually for six years to cover the increases in the production of both petroleum and iso-octane.

⁹⁴ The petroleum would also require the labor of roughly one-third to two-fifths of the total number of miners to be added by the end of 1942. OKW, Az. 66 b 2133 W Stb/W Ro III, “Vortragsnotiz für Generalfeldmarschall Göring über Zielsetzung und Forderungen für die Weiterführung des Mineralöl-Bauprogramms,” 31 January 1939, NARA, RG 238, T-301/60 (NI-7471). Emphasis in the original. See also the Anlage (Az. 11 k 2216 Vc, “Vorausgeschätzter Gesamt-Mineralölbedarf im Mob-Fall für die Jahre 1939-1944”), which included a breakdown of Germany’s mobilization requirements between 1939 (9,100,000 tons) and 1944 (23,100,000 tons). The major increase was for aviation fuel, consumption of which would spike from 2,100,000 tons in 1939 to 10,000,000 tons by 1941. These figures were only used by the WStb and none of the RWA documents from the period include such estimates.

1939 restoring the full steel allocation to the Krauch Plan starting in the third quarter of 1939, thus delaying its completion by only six months.⁹⁵

Synthetic fuel was not going to make Germany energy independent, or even autarchic, any time soon.

As of March 1939, the Reich could cover only the following shares of its wartime petroleum needs:

Type of Product	Share
Motor Fuel	42%
Aviation Fuel	30.8%
Diesel Fuel	19.2%
Fuel Oil	20.5%

These figures worked out to between three to six months of wartime consumption.⁹⁶ A month before the start of the war, the Office for Defense-Economy Planning (Reichsamt für wehrwirtschaftliche Planung, RWP) estimated that Germany's yearly mobilization deficit would be roughly 117% of its 1937 level of imports (4,285,600 tons), almost 70% of which had come from nations deemed "hostile" or "doubtful."⁹⁷ If such overseas imports would be out of the question due to an Allied blockade, the only alternative was Romania – a point that both the WStb and RWA stressed throughout 1939.

⁹⁵ RWA, "Wehrwirtschaftlicher neuer Erzeugungsplan vom 12. Juli 1938 (Karinhall): *Sachgebiet Mineralöl*," 14 February 1939, T-77/423 (Wi/IF 5.3394, [illegible], 3398, 3400).

⁹⁶ W Ro V, Az. 11 k 2216 b Vc, "Mineralöl-Versorgungslage im Mob-Fall: Stand 1. 3. 1939," 22 February 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 34 to: "Die Arbeiten des WiRüAmtes." The figures fluctuated widely, as an evaluation from the following month produced a slightly different result (e.g. a smaller percentage of aviation requirements and slightly higher in the case of motor fuel). W Ro V, Az. 11 k 2216 Vc, "Mineralöl-Bilanz (Stand 1. 4. 1939)," 08 May 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 36 to: "Die Arbeiten des WiRüAmtes." In this case, the discrepancy probably had to do with a decision to concentrate on the production of motor fuel at the expense of aviation fuel, since the overall supply position (production vs. consumption and reserves) was more favorable to the latter than the former. Accordingly, one should not place excessive emphasis on any one particular balance sheet. One can compare five different assessments between 1937 and 1939 in: OKW, Gen.z.b.V.1, "Vergleichende Zusammenstellung von Vorkriegs-Mineralöl-Mobilanzen," September 1944, T-77/341 (Wi/IF 5.2164, 2687), Anlage 37 to: "Die Arbeiten des WiRüAmtes."

⁹⁷ Reichsamt für wehrwirtschaftliche Planung (RWP), "Die Einfuhrabhängigkeit der Achse an kriegs- und lebenswichtigen Roh- und Halbstoffen und ihre mögliche Sicherstellung im Kriegsfall," August 1939, T-84/72 (EAP 66-c-12/32). For a breakdown according to specific petroleum product (albeit using 1937 domestic production and consumption figures), as well as potential contributions from Romania, Poland, and Estonia, see: RWP, "Der deutsche Außenhandel im Kriegsfall: I. Die Einfuhrmöglichkeiten für gewerbliche Rohstoffe und ihre Bedeutung im Rahmen der deutschen Rohstoffversorgung," May 1939, T-84/195 (EAP 66-c-12-62/160).

Germany's Accelerating Preparations for War, 1939

The diplomatic, economic, and financial crises that beset Germany throughout the latter half of 1938 lent a new urgency to the inadequacies of Germany's petroleum policy to that point. Germany had escaped the Munich Crisis with a diplomatic triumph even though the country was woefully unprepared for war. Although there is little doubt that the Czechs would have been quickly overwhelmed, Germany would have been denied the use of Czech military hardware, stocks, and armaments factories, all of which fell into the Reich's hands intact when it occupied the country the following year. Moreover, the expansion of synthetic production was nowhere near complete, and unlike in September 1939, the Reich could not rely on imports from the Balkans and the Soviet Union to fill any gaps. In fact, the Romanians had warned the Reich on 03 October 1938 that they would cut off oil exports in the event of war.⁹⁸

At the start of the New Year, the chief of the WStb's Raw Materials Division insisted that Germany needed "to push motorization forward" while "strengthening its own production of petroleum," since only this strategy could provide Germany with a secure source of petroleum in wartime, while ameliorating the shortage of foreign exchange. The policy of seeking "autarky" in petroleum – self-sufficiency in terms of immediate military requirements – had failed: the 500,000 ton increase in domestic production between 1937 and 1938 was eclipsed by a 600,000 ton increase in imports, and imports remained almost twice as high as domestic production (4,400,000 tons vs. 2,400,000 tons), with the latter only covering 27% of the expected mobilization demand (8,000,000 tons). Even fulfillment of the Krauch Plan was in jeopardy due to the shortage of steel and capital. As of January 1939, Germany could only rely on production rising to 6,500,000 tons, well short of the original target of 11,300,000 tons, while mobilization requirements by

⁹⁸ Williamson Murray surmises that, had war broken out in October 1938, Germany would not have suffered an immediate collapse, largely because the Allies were just as unprepared and unwilling to wage an aggressive war as Germany was to sustain one. "Instead, the situation would have resembled the slow steady deterioration which took place in the Italian economy in the years 1940-42. The Germans would have had to resort to a series of expedients to meet present demands," with deleterious consequences for future war production and fighting strength. "Once this vicious cycle had begun, there would have been little chance that Germany could have escaped the inevitable consequence: military defeat." Murray, "Munich, 1938: The Military Confrontation," *Journal of Strategic Studies* 2: 3 (1979), 282-302 (quotation from pg. 294).

1943 were expected to rise considerably from the existing figure of 14,000,000 tons due to higher Air Force requirements.⁹⁹

When it came to imports, “by far the greatest portion” came from overseas, namely the Americas. Even Romanian imports largely travelled by sea to Hamburg rather than along the Danube. Only one-fifth (800,000 tons) of Germany’s imports from Southeastern Europe in 1936 (4,000,000 tons) travelled along the Danube: the remainder was divided almost equally between those travelling by rail (1,400,000 tons) or by sea (1,800,000 tons). Besides an Allied blockade, Germany’s lack of tankers ruled out continuing to import large quantities from across the seas. Germany therefore needed to look to its “neighbors,” among which the only “noteworthy supplier” was Romania, already the source of 10% of Germany’s imports. Thankfully, Germany’s requirements were so small that “[if] Germany during mobilization could make full use of Romania’s exports,” these plus existing domestic production “would cover Germany’s entire mobilization demand.” This option was only “theoretical so long as Romania finds itself beyond the German sphere of influence.” Since foreign capital now accounted for roughly two-thirds of Romania’s production, Germany could not afford to rely upon “Romania’s good will” to boost exports to Germany.¹⁰⁰ As of 1938, however, the carrying capacity of Germany’s existing fleet of tugs and barges was only 950,000 tons each way per year.¹⁰¹ Additional investment was required before Germany could expect to exploit Romanian oil in massive quantities, even if supplies were available.

The military had to be prepared for conflict in the short term and could not use as a basis the more long-term (and optimistic) estimates provided by economic planners such as Krauch. By contrast, it had to come up with a plan for supplying petroleum using the means at hand. Synthetics might one day render Germany virtually independent of imports of certain kinds of petroleum products, but until then, there

⁹⁹ Griebel, “Mineralölversorgung Deutschlands unter dem Gesichtspunkt des Wirtschaftskrieges,” 19 January 1938 (*sic*; 1939, since the paper refers to the “period of tension in the autumn of 1938”), T-77/526 (Wi/I. 164).

¹⁰⁰ Griebel, “Mineralölversorgung Deutschlands unter dem Gesichtspunkt des Wirtschaftskrieges,” 19 January 1938 (*sic*; 1939), T-77/526 (Wi/I. 164). See also the appended: Aktennotiz, “Stellungnahme von W Wi VI d zur Ausarbeitung *Mineralölversorgung Deutschlands unter dem Gesichtspunkt des Wirtschaftskrieges* (von W Ro V).” For notes on a presentation Griebel gave concerning his findings, see: “Aktennotiz über Vortrag von Korv. Kapt. Griebel am 19.1.39 über *Mineralölversorgung*,” no date or author (initialed by Griebel on 19 January 1939), T-77/649 (Wi/VI. 39).

¹⁰¹ Oberregierungsrat Haßmann (Reich Ministry of Transportation – Reichsverkehrsministerium, RVM), “Betrifft den Ausbau der Donau-Flotte,” 21 Oktober 1938, Nr. 221 in: *Akten der Reichskanzlei*, v: 749.

was no substitute for crude oil close at hand. This was the fundamental point made by the WStb's most detailed prewar examination of Germany petroleum position, which appeared in the spring of 1939. The aim of the paper was to determine the best means of meeting Germany's petroleum requirements "*for the length of a long war*," rather than just a "Blitzkrieg." Using a worst-case scenario, the WStb assumed that Germany would be at war with both the Western Allies and the Soviet Union, while most of Europe maintained "hostile neutrality." Presumably, Romania (listed as "indifferent") was excluded because it was indispensable. Based on the existing state of motorization, WStb estimated that Germany would require 673,000 tons of petroleum per month: 210,000 tons of gasoline; 120,000 tons of aviation fuel; the same amount of diesel; 200,000 tons of fuel oil; and 23,000 tons of lubricants. According to the WStb's calculations (which were significantly more pessimistic than those of the RWA in its August 1938 study), as of March 1939, Germany was capable of producing 193,000 tons per month during mobilization, thus creating a shortfall of 480,000 tons.¹⁰²

Combining production with existing stockpiles would keep the German war machine running for no more than three to four months. Germany's total crude oil reserves were negligible (2,300,000 tons), and the country accounted for only 0.2% of world production (eighteenth-place). Even if one could extract all of them at once, they would not last more than three months in wartime. Although it was now possible to refine German crude into gasoline through "cracking," the WStb believed producing synthetic fuel was preferable (probably because crude oil was more useful as a source of lubricating and heavy oils). Unfortunately, besides the fact that it consumed inordinate amounts of labor (about 12,000 workers to produce the necessary coal), the synthetic industry appeared to have reached peak production for the time being at 2,640,000 tons in 1938.¹⁰³ In view of the inadequacy of domestic production, filling the more

¹⁰² OKW, WStb, Nr. 1010/39 gK W Wi VIId, "Die Mineralölversorgung Deutschlands im Kriege," April 1939, T-77/500 (Wi/I.37).

¹⁰³ The study excluded any consideration of the Krauch Plan, expectations of which had been scaled down dramatically (from 11,300,000 tons to only 6,500,000 tons) due to the shortage of steel and was years away from completion anyways. Nor was it possible to even hazard a guess when Germany might achieve self-sufficiency due to the "discrepancy" between the process of motorization and "the interplay of all the measures adopted."

than 5,000,000 ton gap between annual production and requirements constituted “the most urgent life-and-death requirements of the armed forces [...]”.¹⁰⁴

Finding such quantities of oil from beyond Germany’s borders was difficult. 78% of Germany’s imports in 1938 came from just three countries: the United States, Mexico, and Venezuela, and the Allies would undoubtedly sever transatlantic imports. Nor was it wise to expect that Germany could import much indirectly through neutrals. “The most urgent war aim must therefore unconditionally be the domination of crude oil territories lying close to Germany and most removed from enemy interference.” There was only one option: “Romania!”¹⁰⁵ In 1938, Romania provided only 9% of Germany’s oil imports. Of the 45,000 hectares of oil-producing land currently under concession, only 5,000 hectares were being developed, while “around 90% of the Romanian petroleum region has yet to be exploited.” The WStb took an optimistic view of Romania’s possible output. Although production had dropped from 8,700,000 tons in 1936 to 6,600,000 tons 1938, WStb insisted that the latter figure be used as a “benchmark” (Maßstab). This was the only plausible way to claim that Romania’s exports alone could be used to meet the entirety of Germany’s shortfall. As far as WStb was concerned, “[here] lies the solution to Germany’s petroleum supply in war.” The Reich had to use every economic, diplomatic, and military tool as its disposal to ensure “[the] domination of the Romanian oilfields and consequently of the entire Danubian region as the prerequisite for an adequate German petroleum supply in a war of a long duration.”¹⁰⁶

¹⁰⁴ OKW, WStb, Nr. 1010/39 gK W Wi VIId, “Die Mineralölversorgung Deutschlands im Kriege,” April 1939, T-77/500 (Wi/I.37).

¹⁰⁵ The study made a vague reference to “military means” being “the only instrument to envisage [ins Auge zu fassen] the greatest and most profitable aim: The domination of Europe’s mightiest crude oil territory, *the Caucasus*.” WStb put off “[the] question of the utilization of this distant territory,” which “must remain subject to a special examination [Sonderbearbeitung vorbehalten].” Eichholtz makes great use of this document but overstates the role of the Caucasus, which was of secondary importance compared to Romania. Eichholtz, *Krieg um Öl*, 11-12. Rolf-Dieter Müller similarly misreads this paper as a plea for the “occupation” of both the Romanian and Caucasian oilfields, when it says no such thing. Militärgeschichtliches Forschungsamt, *The Attack on the Soviet Union*, vol. 4 of *Germany and the Second World War* (New York: Oxford University Press, 1998), 119.

¹⁰⁶ OKW, WStb, Nr. 1010/39 gK W Wi VIId, “Die Mineralölversorgung Deutschlands im Kriege,” April 1939, T-77/500 (Wi/I.37). Emphasis in the original. See also: WStb, Rohstoffabteilung, W Ro III d/Is, Az. 66 b 34 IV, Vortragsnotiz, “Betr.: Mineralöl Rumänien,” 17 January 1939, T-77/645 (Wi/Vi. 13a, b), which appears to be the basis for the claim in the April study concerning Romania’s ability to fill Germany’s entire mobilization demand. The January paper also suggested that the Krauch Plan be “[driven] forward with the greatest emphasis,” such that domestic production reached 8,000,000 tons by 1943. This would allow Romanian imports to fill the gap between peacetime and mobilization requirements.

While the German petroleum industry ought to continue striving for “wide-ranging independence from foreign imports” through synthetic fuel (while finding ways to limit the cost in labor), the country was incapable of “covering its petroleum supply in a war of long duration itself” due to its meager mineral reserves and a lack of steel and iron for new synthetic output. Accordingly, Germany’s military, diplomatic, and intelligence services needed to take every precaution to preserve access to its “principal area of supply in war” and ensure that the Axis enjoyed “first right to Romanian crude oil in wartime.” The oil refineries in Romania and other neighbors of Germany (Hungary, Yugoslavia, Poland, “and the former Czechoslovakia”) also could not be overlooked, since German refineries only had an annual throughput of 2,000,000 tons of crude. Most importantly, the Reich had to be prepared to take direct action if all other forms of “external military pressure” failed. Although Germany enjoyed a commanding position within Romania’s oil industry before 1914, this had not stopped Bucharest from going over to the Allies. Military action should only be undertaken “with a view to the maintenance and operability of the Romanian crude oil industry,” but there was strong likelihood that this would lead to sabotage even more extensive than that of 1916.¹⁰⁷ The Reich therefore needed to preserve “other supply possibilities,” paying “particular attention” to East Galicia in view of its former productivity.¹⁰⁸

¹⁰⁷ The Germans received confirmation of their fears following the surrender of France, when they captured a January 1939 memorandum signed by General Charles Huntziger (the former commander of French forces in the Levant and a member of the Supreme War Council thereafter) outlining plans to deny Germany the use of the oilfields of both Romania and Iraq. Der Oberste Landesverteidigungsrat (General Huntziger), “Verfügung betreffend die etwaige Zerstörung der Petroleumfelder im Rumänien und im Irak (Ergänzung der Verfügung vom 17. 1. 1939),” 30 January 1939, T-77/1058 (Wi/ID. 29).

¹⁰⁸ OKW, WStb, Nr. 1010/39 gK W Wi VI d, “Die Mineralölversorgung Deutschlands im Kriege,” April 1939, T-77/500 (Wi/I.37); reprinted in: Eichholtz, *Deutsche Ölpolitik*, 351-355. The prospects in Galicia were hardly auspicious: Poland’s petroleum exports had collapsed from 147,000 tons in 1935 to only 34,000 tons in 1938. OKW/Oberkommando des Heeres (OKH), “Mineralöl-Statistik,” no date, T-77/658 (Wi/VI.109). Wartime production remained disappointing: as of July 1942, Galicia’s output was only 360,000 tons from 4,500 wells (an average of 0.25 tons per well each day). More problematic was the immense labor requirements: 36,000 malnourished workers in both production and refining. Min. Öl P. Dr. [unclear], “Zusammenfassung: Erdöl- und Erdgasgewinnung in Galizien (Besuch v. 30.6.-4.7.42),” 14 July 1942, provenance unclear (RWA?), NARA, RG 238, T-301/118 (NI-14577). German plans to exploit Galician oil are summarized in: Hans Radandt, “Deutsche Monopole Raubten Polnisches Erdöl,” *Jahrbuch für Wirtschaftsgeschichte* 1960/2, 301-311; Eichholtz, *Krieg um Öl*, 18-21; and Rainer Karlsch, “Ein vergessenes Großunternehmen: Die Geschichte der Karpaten Öl AG,” *Jahrbuch für Wirtschaftsgeschichte* 2004/1, 95-138. Karlsch’s article is especially useful in two regards: First, he explains how the Germans grappled with the need to keep their captive workforce alive (including Jewish laborers), since experienced oil workers could not be simply replaced by unskilled labor. Second, Karlsch pointed out that Reich officials originally considered the Galician oilfields to be of marginal value and concentrated their efforts within Greater Germany, Romania, or the occupied territories. This assessment changed at the end of 1942 after the failure

Romania's proven reserves on the eve of the war stood at 60,000,000 tons (perhaps two or three times as much including probable reserves) and would last for another twenty-five years at current production levels. Just as importantly, the country's refining capacity stood at 12,000,000 tons, while its domestic consumption (only 1,674,000 tons in 1938) was relatively low.¹⁰⁹ It is easy to see why so many in the Third Reich considered Romania the answer to Germany's oil problems – at least the short term.¹¹⁰ The Romanian oil industry had suffered greatly during the World War and did not regain prewar levels of production until the late-1920s. Although the Reich continued to monitor developments in Romania, it evinced little interest in its oil industry until after 1933.¹¹¹

At the beginning of the Third Reich, the impetus for greater oil exports to Germany actually came from Romania, which was worried about losing ground to rivals such as the Soviet Union. When the

of the Caucasus expedition and the intensification of the Allied bombing of Germany, after which the Germans poured resources into Galicia until their retreat in the autumn of 1944.

¹⁰⁹ Dr. F/F., Vowi 3386, "Das rumänische Erdöl," 11 April 1939, T-77/611 (Wi/IC 4.16).

¹¹⁰ For many years, the key source on oil and German-Romanian relations was Philippe Marguerat's *Le III^e Reich et le pétrole roumain, 1938-1940* (Genève: Institut universitaire des hautes études internationales, 1977). Andreas Hillgruber's *Hitler, König Carol und Marschall Antonescu* (Wiesbaden: Franz Steiner Verlag, 1954) is primarily a political and diplomatic history, although he does reference oil policy before 1943 briefly (pgs. 81-86 and 157-163). The best history of the Romanian oil industry (at least in English) is still: Maurice Pearton, *Oil and Romanian State* (Oxford: Clarendon Press, 1971), esp. 223-263 for relations with the Third Reich. These works have been supplanted by Dietrich Eichholtz's *Rumänisches Öl*. Wartime relations are also summarized in: *Krieg um Öl*, 26-39; and *Ende mit Schrecken: Deutsche Ölpolitik und Ölwirtschaft nach Stalingrad* (Leipzig, 2010), 14-21. See also: Karlsch and Stokes, *Faktor Öl*, 205-207. For a summary of German-Romanian economic relations in the 1930, see: David Kaiser, *Economic Diplomacy and the Origins of the Second World War: Germany, Britain, France, and Eastern Europe, 1930-1939* (Princeton, Princeton University Press, 1980), 218-283. For a good contemporaneous overviews of the state of the industry at the start of the war, see: Busch-Zantner, "Rumänien: Die Zukunft des rumänischen Erdöls," *Vierjahresplan*, 1939: XXIV; and Dr. Paul Ruprecht, "Rumäniens Erdölwirtschaft," *Militär-Wochenblatt*, 124. Jahrgang, Nummer 49 (07 June 1940). For details and statistics concerning the Romanian oil industry during the 1930s and early-1940s, see: Dr. F/F., Vowi 3386, "Das rumänische Erdöl," 11 April 1939, T-77/611 (Wi/IC 4.16); "Sonderinformation: Die rumänische Erdölindustrie," 29 January 1940 (no author; possibly Griebel of WiRüAmt), T-77/600 (Wi/IC 4.77); Reichstelle für Bodenforschung (RfB), *Erdöl in Europa und im Nahen Osten* (Berlin, 1940), Library of Congress; OKW (gez. Becker), WiRüAmt/Wi IIb, Nr. 5953/40 geh., *Nachrichtenblatt: Wehrwirtschaft Südosteuropa* Nr. 4, "Die Erdölwirtschaft Rumäniens seit Anfang 1939," 29 March 1940, T-77/606 (Wi/IC 4.3a); HaPol IVb, 2548/42. "Die rumänische Mineralölwirtschaft," no date or author (1942), T-120/2618; Kontinentale Öl Aktiengesellschaft (Konti), Mineralöl-Archiv, Do/Re., "Zahlen zur Mineralöl-Wirtschaft Rumäniens i.J. 1941," 16 September 1942, enclosed with: Konti to Herrn Professor Dr. A. Bentz (RfB), 29 September 1942, T-401/5 (RBF 141).

¹¹¹ Exports to Germany did not resume to any significant extent until 1921 (27,749 tons, or 7% of total exports). Minute (Auswärtiges Amt, AA, Abteilung X) to Herrn Ministerialdirektor Wiedenfeld (?), Herrn Wirkl. Leg. Rat Dr. Bücher, and [illegible], 14 October 1920, Politisches Archiv des Auswärtigen Amtes (PAAA), R 97745; and Hans Freytag (German Minister to Romania), K. Nr. 117., "Inhalt: Rumänische Petroleumindustrie," 31 December 1922, PAAA, R 89383.

Romanian Minister “pointed to Romania’s great interest in petroleum exports to Germany” during a May 1934 meeting at the German Foreign Office (Auswärtiges Amt, AA), his German counterpart reminded him that, before the war, “the German economy was very interested in the Romanian petroleum industry. This is no longer the case.” A larger volume of purchases was impossible because the Romanian National Bank was opposed to either barter agreements or an “unfreezing” (Auftauung) of blocked German credit accounts. The Romanian Minister replied that one or the other “would be approved,” and that it was “in any event a point over which one can speak with the relevant Romanian agencies.”¹¹²

The following year, the two countries signed a trade agreement guaranteeing Germany that 25% of its imports from Romania could be oil.¹¹³ By 1936, Romania was Germany’s second-largest source of oil imports. That year, however, a dispute over payment resulted in a 50% drop over two years, while Germany paid exorbitant rates in Reichmarks in order to save foreign exchange.¹¹⁴ By 1937, only 15.5% of its exports went to the territories that comprised Greater Germany by 1939.¹¹⁵ The Germans tried repairing commercial relations after 1937, but to little effect until the Munich Crisis. In spite of threats to cut off oil exports to Germany, relations improved significantly during and after the Crisis, when the Romanian Government (still ostensibly an ally of France) quietly reached out to Berlin out of fear of both the Soviet Union and Hungary.¹¹⁶ Both Hitler and Göring, during separate meetings with King Carol in Germany in November 1938, expressed willingness to mend fences in exchange for greater German-

¹¹² Ritter, Aktenvermerk, Vorzulegen der Abteilung II, 14 May 1934, PAAA, R 89383.

¹¹³ Eichholtz, *Rumänisches Öl*, 17; and Pearton, *Oil*, 194.

¹¹⁴ Including Austrian imports but excluding petroleum subsequently stockpiled, Germany imported 900,500 tons from Romania in 1936 at a cost of 54,115,000 RM. Two years later, it imported only 450,400 tons at a cost of 36,024,000 RM. “Deutschlands Mineralöleinfuhr,” Quelle: *Monatliche Nachweise über den auswärtigen Handel Deutschlands*, 21 April 1939, T-77/295 (Wi/IF 5.1589).

¹¹⁵ The Navy was particularly skeptical of Romania. Even though it had a pressing need for imported fuel oil, during a conversation with the WStb in June 1938, the Navy’s oil expert, Fritz Fetzer, expressed skepticism over whether the Romanians could be convinced to increase their imports of German finished goods beyond the existing level of 5,000,000 RM, which Fetzer considered “a solid barrier to deliveries from Romania.” W Wi VI, Nr. 1740/38 gK, “Aktennotiz auf Grund einer Besprechung mit Herrn Ministerialrat Dr. Fetzer OKM betr. Oelversorgung,” 17 June 1938, T-77/683 (Wi/VI. 356).

¹¹⁶ Bucharest had no inkling that Berlin would sell out Romania. The 1939 Non-Aggression Pact with the Soviet Union stipulated Germany’s “disinterest” in the fate of Bessarabia, while Hungary received half of Transylvania through the Second Vienna Award arbitrated by Germany and Italy, and Bulgaria Southern Dobruja a week later.

Romanian economic collaboration (with Göring making specific reference to Romania's oil industry).¹¹⁷

The Romanians were especially anxious to get their hands on German weapons to defend themselves against the Hungarians and the Soviets.¹¹⁸

The decline in Romanian production after June 1936 (from 25,330 tons per day to only 18,500 tons a year later) had not escaped the notice of the AA, but this was of little strategic significance to Germany before 1939, even if it was a matter of economic life-and-death for Romania.¹¹⁹ Thereafter, German economic and military planners began to pay much greater attention to Romania's economic value to the Reich. In January 1939, the RWP, although expressing some concerns about the decline in Romanian production since 1936, agreed that it was "conceivable" that Romania could satisfy Germany's peacetime petroleum deficit of 5,000,000 tons.¹²⁰ If war came, so long as Germany could pursue opportunities to raise production, one might "reckon that also then German demand could be satisfied in Romania."¹²¹ Just as important was Romania's massive refining industry (whose development the state had encouraged in

¹¹⁷ See document nos. 228, 254, 257, 293, and 294 in: AA, *Documents on German Foreign Policy, 1918-1945, Series D* (Washington, DC: U.S. GPO, 1949-1964), v: 309-311, 338-342, 344-347, 392-394, and 394-395 – hereafter cited as: *DGFP* (D).

¹¹⁸ Eichholtz, *Rumänisches Öl*, 17-32. See also: Christian Leitz, "Arms as Levers: 'Matériel' and Raw Materials in Germany's Trade with Romania in the 1930s," *International History Review* 19: 2 (1997): 312-332.

¹¹⁹ "The export of crude oil products was therefore always the last trump card [Trumpf] during economic negotiations with all nations and Romania owes virtually of its commercial successes to it [...]." Abschrift W III S E 5681, Deutsche Gesandtschaft, Bukarest (gez. Fabricius), Tgb. Nr. 1575/37, VI 4, "Inhalt: Rückgang der rumänischen Erdölförderung," 08 July 1937, T-77/599 (Wi/IC 4.41). The German Legation saw the decline as less the result of any deliberate policy by the major oil companies of throttling production than as evidence of the imminent exhaustion of the Romanian oilfields, although the lack of exploration and the incompetence of the Romanian Government were also factors. See also: zu Abwehrstelle im Wehrkreis VII, Az. XXVIII d/A III, Nr. 240/38 I wi geh., "Rumänien: Rückgang der rumänischen Erdölproduktion," 25 January 1938, T-77/599 (Wi/IC 4.41).

¹²⁰ The consensus in Germany before 1941/42 was that the decline in production was due primarily to a lack of interest and investment on the part of the major oil companies operating in Romania: "Rumäniens Öl unter deutschem Schutz," *Militär-Wochenblatt*, 125. Jahrgang, Nummer 26 (27 December 1940); and W.F., "Neuordnung der rumänischen Erdölwirtschaft," *Deutsche Wehr*, Nr. 48, 45. Jahrgang (28 November 1941).

¹²¹ At least one German geologist (Prof. Karl Krejci-Graf, a professor at the Bergakademie Freiberg) was already on the ground by early-1939, reporting back to Berlin – specifically, to Keppler of the AA/RfB – and coordinating with the German Legation. In his first report to Keppler, Krejci-Graf suggested that German oil interests needed to establish a partnership with Romanians, since the most promising territories not already under concession were in state-controlled lands that could only be worked by "national companies" with majority Romanian ownership and a supervisory board (Aufsichtsrat) composed entirely of Romanians. "Betr.: Möglichkeiten einer deutschen Beteiligung an der rumänischen Erdölförderung," 16 February 1939, enclosed with: Krejci-Graf to Keppler, 17 February 1939, PAAA, R 106220.

order to fetch higher prices for its products) – as of 1937, it had a slack capacity of 40%, which “could in the event of war be of decisive importance.”¹²²

Another RWP report from March 1939 on the economic value of Southeastern Europe did raise some concerns. Even assuming “the stemming” of the downward trend in production, Germany would probably have to yield at least one-third of Romania’s oil exports to Italy.¹²³ More troubling was the vulnerability of the oilfields to a Soviet attack – whereas the Red Army could strike directly at the oilfields (most of which were clustered around the producing and refining hub at Ploiești in Wallachia, about thirty-five miles north of Bucharest), the path of the German Army would be blocked by the “bothersome hindrance” of the Carpathian Mountains, since the oilfields lay either to the east or south (the Soviet side). All the more reason to take precautions, since Romania’s 6,600,000 tons of crude oil production in 1938 (in addition to the 600,000 tons in Greater Germany, not including synthetic fuel, and 47,000 tons in Hungary) were irreplaceable against a total consumption of 8,800,000 tons within Germany and SE Europe (not including Italy). Although it dismissed fears of the imminent exhaustion of Romanian oil reserves as “twaddle” (*Zukunftsmusik*), in view of the overwhelming advantage enjoyed by Germany’s likely enemies in terms of oil supplies, the RWP strongly advised that Reich continue the “lavish expansion” of synthetic production as a “matter of national interest.”¹²⁴

IG Farben, by contrast, put forward a more optimistic analysis the following month. According to its economic intelligence, the decline in production since 1936 was due “only to a limited extent” to “a natural exhaustion” of the oilfields. Rather, the culprits were inefficient drilling practices and the

¹²²RWP, “Rumäniens Rohstoffwirtschaft und ihre Bedeutung für das Deutsche Reich,” January 1939, T-84/109 (EAP 66-c-12-42/34). See also: Dr. Ruprecht, “Rumäniens Rohstoffbesitz,” *Deutsche Wehr*, Nr. 20, 45. Jahrgang (16 May 1941).

¹²³ Total petroleum consumption in Italy in 1938 was around 2,845,000 tons (plus another 50,000 tons for East Africa) of which 2,626,000 tons had to be imported, primarily from the United States (37%), Romania (20%), Latin America (16%), and the Middle East (10%). OKW/OKH, “Mineralöl-Statistik,” no date, T-77/658 (Wi/VL.109).

¹²⁴ RWP, “Die rohstoffwirtschaftliche Bedeutung des Südostraumes für die deutsche Wehrwirtschaft,” March 1939, T-84/80 (EAP 66-c-12-4/24). See also: IG Farben, Vowi 3633, “Der deutsche Rohstoffbezug aus der UdSSR und Südosteuropa,” no date (circa 1939), T-84/80 (EAP 66-c-12-4/27); der Chef des OKW (gez. Becker), WStb W Wi (III), Nr. 9773/39 geh., “Nachrichtenblatt: Wehrwirtschaft Südosteuropa Nr. 2: Der Kriegsaussenhandel mit den südosteuropäischen Ländern,” 26 June 1939; and der Chef des OKW (gez. Becker), WiRüAmt/Wi IIIb, Nr. 2884/40 geh., “Nachrichtenblatt: Wehrwirtschaft Südosteuropa Nr. 3: Die Zufuhren Deutschlands aus Südosteuropa im Kriege und ihre Durchführung,” 15 February 1940; both in: T-77/1060 (Wi/ID. 37).

government's nationalistic oil policy.¹²⁵ The collapse in production in 1936 had certainly coincided with a precipitous decline in drilling activity: 395,000 meters drilled in 1937 but only 152,000 meters during the first seven months of 1939.¹²⁶

Although Romania began moving toward the Third Reich in 1938, German interests in its oil industry remained miniscule. Fifty-six companies participated in oil production, but in terms of actual output, seven of the eight largest firms were either wholly or largely foreign-owned. Just seven companies accounted for 80% of production and the top three for over 50%.

Company	Production (1938)	Nationality
Astra Romana (Shell)	1,461,000 tons	Majority British-Dutch
Romano-Americana (Jersey)	899,000 tons	U.S.
Concordia	864,000 tons	Romanian-Belgian-French
Steaua Romana	740,000 tons	French-British-Romanian
Unirea (Phoenix Oil and Transport)	671,000 tons	British
Creditul Minier	381,000 tons	Romanian
Colombia	377,000 tons	French
Prahova	335,000 tons	Italian
Total for Top Seven Companies	5,728,000 tons	
Total Romanian Production	6,603,000 tons	

British, Dutch, French, Belgian, and U.S. nationals accounted for 54% of the capital invested in the Romanian oil industry, even greater than the Romanian share (43%), while Germans claimed a paltry 0.2%.¹²⁷ The OKW therefore hailed the German-Romanian Economic Treaty of 23 March 1939, which allowed for "[the] founding of a mixed German-Romanian company that shall be engaged in the exploration for petroleum and execution of a drilling and processing program."¹²⁸ This treaty was the first step toward converting Romania into a German satellite and establishing the Reich's economic primacy,

¹²⁵ Dr. F/F., Vowi 3386, "Das rumänische Erdöl," 11 April 1939, T-77/611 (Wi/IC 4.16).

¹²⁶ Busch-Zantner, "Rümanien: Die Zukunft des rumänischen Erdöls," *Vierjahresplan*, 1939: XXIV.

¹²⁷ Eichholtz, *Rumänisches Öl*, 13-15.

¹²⁸ "Vertrag über die Förderung der wirtschaftlichen Beziehungen zwischen dem Deutschen Reich und dem Königreich Rumänien Gezeichnet, in Bukarest, am 23. März 1939," *1940 League of Nations Treaty Series*, <http://www.worldlii.org/int/other/LNTSer/1940/9.html>. The German signatories were Wilhelm Fabricius (Minister to Romania) and Helmuth Wohlthat (Ministerialdirektor, Preußisches Staatsministerium, and Göring's personal representative). The treaty was to expire five years after its signing. Although the treaty promoted closer economic integration, the Germans failed to expand their presence in the Romanian oil industry after a group of four German oil companies was thwarted in their effort to take control of the largest purely Romanian company, Credit Minier. Eichholtz, *Rumänisches Öl*, 23-27.

which would be of “immense value” in the event of war thanks to the “tremendous latent capacity” (Entwicklungsfähigkeit) of Romania’s raw materials sector.¹²⁹ The British and French did not stand by idly: both countries concluded several economic agreements with Romania over the course of 1939 (the French securing a doubling of oil imports – 600,000 tons – between March 1939 and March 1940), offered credits to purchase war materiel, and extended guarantees for Romania’s security on 13 April 1939. But they were fighting a losing battle as Germany slowly increased its share of Romania’s foreign trade and arms purchases.¹³⁰

Even if Romania devoted its entire export balance to the Axis, one tremendous obstacle remained: inadequate transportation capacity.¹³¹ Previous historians have focused on the problems posed by the Romanians and their excessive demands for compensation.¹³² Although there is no doubt that Romania forced the Reich to pay a premium for oil, disputes over payment were not intractable, unlike the problems posed by both geology (Romania’s declining reserves) and geography.

Of the 5,000,000 tons Romania could probably export – which was equal to the estimated German mobilization demand – OKW estimated that Germany could only count upon 3,500,000 tons after the requirements of Italy (1,150,000 tons), Slovakia, Hungary, and Yugoslavia (350,000 tons) had been subtracted. As of 1939, the railways and the Danube could only handle 2,000,000 tons worth of supplies.¹³³ Adding another 1,500,000 tons of throughput presented a dilemma – Germany had only two

¹²⁹ OKW, Az. 3 i/10/32 W Stb W Wi IV, Nr. 2690/39 g, “Übersicht über die wehrwirtschaftliche Lage Rumäniens,” 31 March 1939, T-77/611 (Wi/IC 4.37). See also a follow up study completed in mid-1940: OKW, Az. 3 i/13/WiRüAmt/Wi III, Nr. 7600/40 geh., “Die Wehrwirtschaft Rumäniens nach dem Stand von Anfang 1940,” no date, T-77/611 (Wi/IC 4.33). By this point, with Britain and France no longer claimants for Romania’s favor, Germany was “in the position... to exercise a strong effect upon the [latter’s] defense-economic development and thereby [affect] a rise in Romania’s oil and grain deliveries, which are so important to Germany in wartime.”

¹³⁰ Eichholtz, *Rumänisches Öl*, 29-30; and Zara Steiner, *The Triumph of the Dark: European International History, 1933-1939* (Oxford: Oxford University Press), 744-748.

¹³¹ This was not an unexpected problem. During the occupation of Romania during the First World War, the Germans had depended upon the Danube when shipping oil back to Germany. The task was made somewhat more difficult by the fact that the Germans needed to replace the tankers scuttled by the Romanians. Hauptmann Walter Sußdorf, “Das Feldkraftfahrwesen,” in: *Der große Krieg, 1914-1918*, ed. M. Schwarte (Leipzig: Johann Ambrosius Barth, 1921), viii: 363.

¹³² Tooze, *Wages of Destruction*, 307-308.

¹³³ The RVM had already determined in October 1938 that the existing German Danubian fleet was “in no way sufficient for fulfillment” of “the economic and defense demands placed upon it.” Following an inter-ministerial conference on 12 August 1938, the Reich decided to expand the existing fleet by as many as thirty-three barges,

options: it could construct an additional 10,000 railway tank wagons, since the existing railway network could handle the required freight; or it could construct a pipeline from Romania to Germany. The former would require 120,000 tons of steel, take eighteen to twenty-four months to complete, and cost 40,000,000 RM; the latter, 300,000 tons of steel, twenty to twenty-four months, and 400,000,000 RM. Each option had its own benefits and drawbacks. Railway cars were cheaper to construct and could be re-routed if the need arose, but they increased the strain on the railway network without increasing the total throughput since they did not carry any freight on their return journey to the oilfields. A pipeline, on the other hand, could transport considerably more oil than railways cars, and the construction costs could be amortized quickly thanks to the higher throughput of the pipeline (thus ensuring lower transportation costs vis-à-vis rail over the long run).¹³⁴ Pipelines were, however, vulnerable to sabotage, could only handle one particular kind of petroleum product at time, and would degrade quickly in the absence of “sufficient and continuous usage.” Ultimately, the expenditure was only justified in the event of oil deliveries far in excess of what Romania could deliver – in other words, only if “the crude oil region of Baku,” became a supplier.¹³⁵ Left unsaid was that deliveries along the Danube (which accounted for 875,000 tons out of the 2,071,640 tons that could be handled at present) would be disrupted in wintertime when the river froze. By November, deliveries had dropped to 60,000 tons per month, “while a minimum of 100,000 tons per month is required to meet the needs of the absolutely essential program.”¹³⁶

In September 1939, the two governments signed a one-year economic agreement worth 300,000,000 RM, whereby the Reich would exchange captured Polish war materiel for Romanian foodstuffs and oil in

tankers, and refrigeration ships, but administrative bickering over who was responsible for funding (5,500,000 RM) delayed implementation. Oberriegierungsrat Haßmann (RVM), “Betrifft den Ausbau der Donau-Flotte,” 21 Oktober 1938, Nr. 221 in: *Akten der Reichskanzlei*, v: 748-754 (quotation from pg. 749).

¹³⁴ Consider that between 4,000 to 5,000 railways cars (or eighty to 100 train columns) would be needed every day to move the daily throughput of a single pipeline with an hourly carrying capacity of 2,000 tons. Paul Ruprecht, “Erdölbeförderung,” *Militär-Wochenblatt*, 127. Jahrgang, Nummer 17 (23 October 1942).

¹³⁵ “Erdöl-Transportfrage von Rumänien nach Deutschland,” 06 July 1939, no author (probably WStb; type-written notation indicates that a copy was sent to Thomas), T-77/612 (Wi/IC 4.55).

¹³⁶ The Director of the Economic Policy Department to the Legation in Rumania, No. 835, 30 November 1939, Document No. 402 in: *DGFP* (D), viii: 467-468.

volumes “to the utmost limits of transportation facilities.”¹³⁷ The amount of oil was not specified until the signing of a supplementary agreement on 21 December 1939, which set monthly deliveries for the first year at 130,000 tons. The Romanians also agreed “to fulfill the obligation to deliver oil, if necessary compelling the [foreign] oil companies to sell, possibly even by resorting to expropriation.”¹³⁸

As the WStb’s commentary on the September 1939 trade agreement explained, the “utmost limits” worked out to 1,500,000 tons per year, which represented a 73% increase over the 1937 level of imports, or 30% of Germany’s mobilization requirement (5,000,000 tons).¹³⁹ Nevertheless, the WStb judged the agreement to be only a “limited success” with regard to oil, since the existing transportation infrastructure was incapable of handling anything more than the agreed total (90,000 tons per month until the addition of sixty-four new Danubian tankers in July 1940). Assuming this logistical bottleneck could be cleared, and that the Romanians limited oil exports to countries besides Germany – 3,500,000 tons in 1937 – the Germans could acquire 100% of their mobilization requirements (70% if exports continued to go to neutral countries). Boosting imports to 3,500,000 tons was only “conceivable” in the event of a “gradual” program of expanding the existing transportation infrastructure by building tankers and railway cars, expanding the existing railway lines, and constructing a limited pipeline. There was simply no way, however, to accommodate the remaining 1,500,000 tons of imports, which normally went to neutral

¹³⁷ The Legation in Rumania to the Foreign Ministry, No. 673, 29 September 1939, Document No. 166 in: *DGFP* (D), viii: 172-173.

¹³⁸ Memorandum by the Director of the Economic Policy Department (Wiehl), 03 January 1940; and Foreign Minister Ribbentrop to Field Marshal Göring, 16 March 1940; document nos. 502 and 678 in: *DGFP* (D), viii: 598-603 and 925-926. Problems arose in November when the Army refused to make more than 10,000,000 RM worth of war booty available to Romania on the grounds that it was needed to re-equip the armed forces following the invasion of Poland. The matter was not resolved until March 1940, after a series of meetings between the OKW, RWM, and AA. Wi VII (Thomas?), Aufzeichnung, “Betr.: Rumänien [/] Verhandlungen wegen Öllieferungen,” 04 March 1940, T-77/400 (Wi/IF 5.3063). The Germans now agreed to exchange a number of anti-tank, anti-aircraft guns, and artillery pieces in exchange for a credit of 600,000,000 lei, which would be used to finance purchases of Romanian oil at a cost of 78.1 RM per ton fob Constanța. Document nos. 74, 111, 350, 380, and 660 in: *DGFP* (D), xiii: 73-74, 111, 401-402, 435, and 868-869.

¹³⁹ During conversations with Fabricius and Carl Clodius (the Deputy Chief of the AA’s Commercial Policy Division – Handelspolitische Abteilung, HaPol), the Romanian Minister-President (George Tatarescu) reiterated his nation’s commitment to sell Germany up to 130,000 tons of oil per month, and perhaps more in case the Reich increased the amount of arms it was willing to exchange for the oil. The two sides bickered, though, over the rate of exchange, in spite of Tatarescu’s willingness to agree to a modest devaluation of the lei and guarantee Germany one-quarter of Romania’s oil exports at lower prices. The Legation in Rumania to the Foreign Ministry, Nos. 963 and 1009, 06 and 14 December 1939, document nos. 422 and 451 in: *DGFP* (D), viii: 493-494, and 530-532.

nations. Although the WStb supported the agreement, it lamented that little had been done to assure the “security” of Romanian oil production and transportation. In view of the “magnitude of the danger” (whether to Germany or Romania is not clear), the Reich could not content itself with “guarantees of the Romanian state.”¹⁴⁰ Germany had to insist upon “the reorganization of the Romanian crude industry under German leadership and control,” and that that Bucharest cede to Berlin “its sovereign rights” to “exercising police power” within the oilfields and directing the oil transportation network for the duration of the war.¹⁴¹ Nothing less would suffice, since the Third Reich’s prewar policy of rendering Germany independent of overseas oil imports in wartime would only be successful if it secured access to Romania’s small but adequate oil production.

¹⁴⁰ Germany had an escape clause in the event of sabotage of oil deliveries either as a result of Romanian “complacency” or “connivance.” Unfortunately, this would be of limited value since the “replacement of Romanian petroleum with Russian in equal volume is not feasible.”

¹⁴¹ W Wi III, “Betrachtungen über die volle Ausnutzung der rumänischen Ausfuhr für die Versorgung Deutschlands im Kriege,” 18 October 1939, T-77/612 (Wi/IC 4.71). See Anlagen 2-3 for additional details.

Germany's Petroleum Position on the Eve of War, 1939

By the spring of 1939, the National Socialist regime could boast of considerable success in expanding Germany's domestic petroleum output. According to the Institute for the World Economy (Institut für Weltwirtschaft), "The goal of procuring the entire German fuel requirements through domestic production has not yet quite been reached" due to unexpected rises in consumption as a consequence of the regime's policy of encouraging motorization. Between 1933 and 1938, total petroleum consumption had more than doubled from 2,920,000 to 6,250,000 tons (tripled in the case of diesel, from 550,000 to 1,650,000 tons). This led to an 80% increase imports, from 2,437,000 tons to 4,418,000 tons (largely gasoline, fuel oil, and diesel), more than two-thirds of which came from Venezuela, the United States, and Romania by 1937-1938.¹⁴² Nevertheless, since 1932, production had increased tripled, thanks in large part to a "tenfold increase in the capacity of hydrogenation and synthetic production plants."¹⁴³ Krauch bragged to the German public that there was "for the German petroleum and power fuel supply no longer any basic unresolved technical problem." Hinting at the disputes over the steel allocation, he remarked that only "economic, commercial and other overriding considerations" would determine the further expansion of output. The acquisition of Austria and the Sudetenland the previous year also promised major dividends. The oilfields of the latter would allow Germany to triple its existing output of crude oil (600,000 tons in 1938 including Austria, already a 33% increase since 1937 following the Anschluss), while the latter possessed soft coal deposits with an output equal to 10% of the Reich's previous production.¹⁴⁴

On the other hand, a vast gap between requirements and production had yet to be filled – 480,000 tons per month during mobilization (673,000 tons of demand minus 193,000 tons of production).¹⁴⁵ A

¹⁴² Institut für Weltwirtschaft an der Universität Kiel, "Die Versorgung Großdeutschlands und Kontinentaleuropas mit Mineralölerzeugnissen während der gegenwärtigen kriegesischen Verwicklungen," February 1940, T-84/72 (EAP 66-c-12/33).

¹⁴³ [Handwritten Note] Handed to Major Dref on 15 February 1939, Thi [Regierungsrat Thierer of the OKW], "Progress made, since the seizure of power in 1933, in the procurement of chemical raw materials, especially through the execution of the Four Year Plan," Translation of Document EC-144, *NMT*, vii: 845-849; for the original German document, see: T-77/428 (Wi/IF 5.3495).

¹⁴⁴ Carl Krauch, "Weg und Erfolg der Kraftstoffwirtschaft," *Vierjahresplan*, 1939: I/II.

¹⁴⁵ W Wi VI d an W Ro, Nr. 429/39 g.K., "Betr.: Sicherstellung des Mob.-Bedarfs an Mineralöl," 20 February 1939; and W Ro V (Griebel) an W Wi VI, Az. 11 k 2216b Vc, Nr. 429/39gK., "Betr.: Sicherstellung des Mob.-Bedarfs an Mineralöl," Bezug: W Wi VI d Nr. 429/39g.K. vom 20. 2. 1939," 24 February 1939; both in: T-77/649 (Wi/VI. 39).

temporary dip in imports of motor fuel and diesel during the first third of 1939 also wiped out any gains in output by forcing the country to start drawing on its reserves.¹⁴⁶ Consequently, civilian and military policymakers understood that Germany would have to adopt a balanced strategy of boosting domestic production and increasing imports from within its sphere of influence if it intended to wage war.

One of the most notable exponents of this view was none other than the apostle of synthetic fuel himself, Krauch. In an extensive overview of his progress as of April 1939 in implementing Göring's directives at the Karinhall Conference of June 1938, Krauch expressed immense pride with the advances made in terms of expanding the supply of the raw materials most critical to any future German war effort: petroleum, rubber, light metals, and munitions.¹⁴⁷ At that time, numerous criticisms to the effect that his plans were "*exaggerated or impossible*" had been levied. The real challenge had, however, been the reduced steel allocation.¹⁴⁸ Only Göring's direct intervention in February 1939 had prevented setbacks Krauch feared would have been impossible to overcome.¹⁴⁹

With the matter resolved to his satisfaction, Krauch was confident that Germany would reach a production capacity of 8,300,000 tons by 1942/43 and a further 3,000,000 tons by 1944 according to a revised target for mobilization capacity (11,495,000 tons) completed on 30 January 1939. This worked out to 6,590,000 tons of motor and aviation fuel, 1,760,000 tons of diesel, 2,270,000 tons of fuel oil, and 875,000 tons of lubricants, all of which roughly corresponded with the RWM's 1943 estimate for

In response to the initial query, Griebel also pointed out that Germany still lacked adequate refinery capacity to meet its supply deficit entirely through imports of crude oil.

¹⁴⁶ Aktenvermerk, "Betr.: Mineralöl-Situation," 09 June 1939, no author, T-77/123 (Wi/IF 5.533).

¹⁴⁷ Krauch had been producing brief progress reports since at least August 1938. These reports varied greatly in the length of time they covered – anywhere between two to ten weeks. The last report covered the period between 01 June and 15 August 1939. They may be found in: NARA, RG 238, T-301/72 (NI-8791).

¹⁴⁸ Between June and December 1937, the monthly steel allocation for the petroleum industry had fluctuated between a low of 27,500 tons to a high of 62,400 tons. During 1938, the figure peaked in the first quarter at 60,000 tons before dropping to an average of less than 44,000 tons until the second quarter of 1939, when it was supposed to rise to 120,000 tons. The actual allocation that quarter turned out to be only 50,000, but Göring had ensured that the required amount would be restored the following quarter.

¹⁴⁹ RWA, "Arbeitsbericht des Generalbevollmächtigten des Ministerpräsidenten Generalfeldmarschall Göring für Sonderfragen der chemischen Erzeugung Dr. C. Krauch vor den Generalrat," 20/21 April 1939, T-77/430 (Wi/IF 5.3594). Emphasis in the original. Actually, by the start of the war, the monthly steel allocation was only 90,000 tons, or 75% of the required figure, although the RWA still believed that this was enough to allow Germany to reach a total output of 6,950,000 tons in 1942 and 8,350,000 tons the following year. "Treibstoffversorgung," 15 January 1940, no author (handwritten notation reads: "Anlage zum Schreiben an Staatssekr. Körner v. 16. 1. 40."), T-84/216 (EAP 66-c-12-62/29).

peacetime consumption (11,055,000 tons), since it was possible to reorient production of aviation fuel to motor fuel, and gasoline and fuel oil to diesel, depending upon the circumstances. In deference to his patron, Krauch stressed that the primary objective of his plan was to fulfill the requirements of the Air Force. To that end, Germany's capacity to produce aviation fuel would rise from 220,000 tons at present to 2,800,000 tons by the end of 1943. Krauch justified the decision to focus on the production of aviation fuel on the not unreasonable grounds that it cost far more than ordinary gasoline to import (100 RM in foreign exchange per ton vs. 65 RM). In any event, nowhere near the amounts required by the Air Force would be available on world markets. Overall, by 1944, which represented the "maximum that was technically feasible," Krauch expected that Germany would be able to meet the following shares of its mobilization demand:

Type of Product	Share of Demand
Aviation Fuel	100%
Motor Fuel	75%
Diesel Fuel	60%
Fuel Oil	40%

None of this would be possible without annual deliveries of 23,700,000 tons of hard coal and 45,300,000 tons of soft coal (12% and 21% of production in 1938, respectively). Germany's small crude oil producers would provide an additional 1,200,000 tons (including Austria) in peacetime by the end of the program, or 2,400,000 tons during mobilization.¹⁵⁰

Although Krauch accepted that there were "limits" to what could be accomplished within Greater Germany, not only was his plan "not a utopia," but there was no alternative "[if] *Germany as a great power wishes to secure for itself unconditionally the necessary supply of petroleum [...]*." Even if it did not guarantee independence from oil imports, the plan would provide "full coverage" of aviation fuel requirements in wartime and allow the country to amass larger stockpiles, either through excess domestic product or through imports. This combination of synthetic production and stockpiling would, Krauch

¹⁵⁰ RWA, "Arbeitsbericht des Generalbevollmächtigten des Ministerpräsidenten Generalfeldmarschall Göring für Sonderfragen der chemischen Erzeugung Dr. C. Krauch vor den Generalrat," 20/21 April 1939, T-77/430 (Wi/IF 5.3594).

surmised, allow for “[a] truly ideal fulfillment of mobilization supply” by 1944/45. But this was not a long-term solution, he conceded: “[*Our*] *Greater German economic area* is *too small* [to allow for] *a full satisfaction of defense-economic petroleum claims*,” and Germany’s only “promising possibility” of meeting its oil requirements over the long run was to be found in “*Southeastern Europe*.” The “highest and most important” task was to expand German control of the region’s oil reserves and promote exploration. If Germany succeeded, it would not only free itself from overseas imports, but it could also speed up the process of “*systematically stockpiling*” and expand the range of petroleum products available to German consumers by converting hydrogenation plants to process crude oil rather than coal.¹⁵¹

There is no doubt that Krauch’s ambitions far exceeded those of the existing petroleum plan – once it had been “refined” in consultation with industry and military officials, Krauch expected to move on to the next “great goal,” which extended far beyond the borders of Greater Germany. He was already thinking in terms of “*Großraumplanung*,” which would transcend the limitations of the existing German economic sphere and lay the basis for an “*ideal petroleum supply during mobilization for the Axis through the integration of the southeast European economic and raw materials area*.” The “anti-Comintern powers” now found themselves the target of an “economic war led by England, France and the U.S.A.”¹⁵² Germany could only escape such an “initially economic and political, but ultimately military encirclement” by extending its reach into Southeastern Europe through the “construction of united greater economic bloc” under German leadership geared toward fighting a “defensive war.” This German-led “coalition” would “extend its influence to Romania, Turkey and Iran” – although Krauch did not rule out the need for improved commercial relations with the Soviet Union as a result of “the gradual re-anchoring of the Germany economic and export center of gravity toward the East [...]” Once the political and economic connections across Europe had been forged, Krauch called for his existing plan “to be

¹⁵¹ RWA, “Arbeitsbericht des Generalbevollmächtigten des Ministerpräsidenten Generalfeldmarschall Göring für Sonderfragen der chemischen Erzeugung Dr. C. Krauch vor den Generalrat,” 20/21 April 1939, T-77/430 (Wi/IF 5.3594). Emphasis in the original.

¹⁵² The paper made reference to a unified bloc comprised “of the four European anti-Comintern partners, to which Yugoslavia and Bulgaria must soon join.” At this point in time, the anti-Comintern Pact included only one other European power, Italy. Presumably, the other two were Hungary and Spain, or perhaps Slovakia.

expanded... with the aim of securing the defense-economic autarky of the anti-Comintern coalition.”

Unless Germany developed “its own war potential and those of its allies” to the extent that they eclipsed (gewachsen) those of the rest of the world, “all of the sacrifices in blood during the next war” would not save it from the kind of “self-inflicted bitter end” it had already endured once before.¹⁵³

Depending on one’s perspective, the outlook for the immediate future could also appear rather grim. As Thomas pointed out in a briefing for German diplomats, even if the Krauch Plan delivered on its promises over the next few years, Germany could not afford to think only of its own needs – there was also Italy of which to think. For the time being, “we must be clear that even Romanian production, assuming we get it in our hands undestroyed, together with German production cannot cover the entire demand that the Axis Powers will have in an emergency.” There was also the “as of yet unresolved transportation question” when it came to Romania. Thomas concluded that the Axis’ only hope in “overcoming all possibilities” was to stockpile fuel. By contrast, the Allies were positively swimming in oil thanks to the United States, South America, and the Middle East.¹⁵⁴

Krauch’s report of April 1939 prompted the RWA to undertake a feasibility study of a German-led “Great Economic Area” (Großraumwirtschaft) including Slovakia, Italy, Spain, Hungary, Yugoslavia, Romania, and Bulgaria in the event of a war within the immediate future. Even assuming that sufficient quantities of steel and labor would be made available, the Krauch Plan represented “the higher limits” of

¹⁵³ RWA, “Arbeitsbericht des Generalbevollmächtigten des Ministerpräsidenten Generalfeldmarschall Göring für Sonderfragen der chemischen Erzeugung Dr. C. Krauch vor den Generalrat,” 20/21 April 1939, T-77/430 (Wi/IF 5.3594); for a partial translation, see: *NMT*, vii, 944-956. Emphasis in the original. Portions of the document are reprinted with commentary in: Eichholtz, “Zum Anteil des IG-Farben-Konzerns,” 83-105. See also the commentary provided in: Tooze, *Wages of Destruction*, 307-308. During his trial, Krauch explained that he produced such reports every six months, but that they were usually summarized before being presented to Göring. *NMT*, vii: 1010. Accordingly, the surviving reports are nowhere near as insightful as the April 1939 paper. See, for example: “Execution of the New Military Economic Production Plan of 12 July 1938, including the Rapid Plan (powder, explosives, chemical warfare agents and preliminary products) of 13 August 1938 in the event of mobilization: Status on 15 October 1939,” Partial Translation of Document NI-8796, *NMT*, vii: 958-962; for the original German document, see: NARA, RG 238, T-301/72 (NI-8796).

¹⁵⁴ “Vortrag gehalten von Generalmajor Thomas am 24. May 1939 im Auswärtigen Amt,” Document 028-EC, *IMT*, xxxvi: 112-32. Thomas spelled out the situation for the OKW and OKH more clearly at the beginning of August: “full coverage” of gasoline requirements for only four months and 2.5 months in the case of diesel, with roughly 50% coverage thereafter. Thomas demanded the “complete domination” of the Southeastern Europe, although he conceded that the region could provide only 60% of the Axis’ import requirements during mobilization. “Stand der wehrwirtschaftlichen Lage Deutschlands,” T-77/312 (Wi/IF 5.1788), no author or date (handwritten notation indicates the minute was presented by Thomas to Brauchitsch and Keitel on 09 August 1939).

what one could “reasonably” expect from the German economy” when it came to expanding domestic petroleum production.¹⁵⁵

The RWA’s “Großraumwirtschaft” paper, completed in August, conceded that the VJP had failed “to produce blockade-security for a European group of powers standing under German leadership.”¹⁵⁶ The RWA’s study revolved around the concept of “blockade-security”: Was it “entirely or even to a large extent achievable” if Germany developed the “defense-economies” of the aforementioned countries “to their fullest extent,” while utilizing the essential economic assets of other regions (Scandinavia, the Ukraine, Turkey, and French North Africa) that lay within the orbit of the “Great Economic Area”? Greater Germany including Slovakia was incapable of making more than a dent in the demand for anything but coal. Peacetime petroleum consumption within the “Greater Economic Area” in 1938 was 11,500,000 tons, roughly half of which came from continental sources. By 1942, consumption would rise to 14,950,000 tons in peacetime and 23,850,000 tons in war. Assuming that German output rose in accordance with the Krauch Plan, and that Southeastern Europe added more than 5,000,000 tons of finished products to their existing production, the peacetime deficit in 1942 would be 1,500,000 tons and 7,900,000 tons during mobilization. In the latter case, Romania would have to cease its exports beyond Europe, which at present amounted to 1,500,000 tons. Germany could cover only 25% of the consumption of the “Greater Economic Area.” Moreover, the transportation situation was “extremely difficult and requires far-reaching, very extensive improvement measures [...]” The biggest contributor

¹⁵⁵ RWA, “Notizen für die Besprechung mit Herrn Staatssekretär Körner,” 16 May 1939, NARA, RG 238, T-301/64 (NI-7858); reprinted as Document 2 in: Dietrich Eichholtz, “Die ‘Grossraumwehrwirtschaft’ für den großen Krieg: Zwei geheime Memoranden der Reichsstelle für Wirtschaftsausbau vom Frühjahr/Sommer 1939,” *Bulletin des Arbeitskreises ‘Zweiter Weltkrieg’* (1986): 82-85.

¹⁵⁶ A little more than a week before the outbreak of hostilities, another RWA minute stipulated that existing production and reserves could cover between five to six months of mobilization consumption of aviation fuel, motor fuel, and fuel oil, but only three months for diesel. Thereafter, Germany could cover around 60% of its gasoline demand and 29% for fuel oil and diesel. Luckily construction of a number of synthetic and refining facilities was nearing completion, which would improve the situation by 1940. RWA, Dr. Alt/Fe., 23 August 1939, enclosed with: der Leiter der RWA an das OKW, WStb., z.Hd. Herrn Generalmajor Thomas o.V.i.A., Tgb.-Nr. 1225/39 g.Rs., 24 August 1939, T-77/123 (Wi/IF 5.533).

was Romania, which produced the equivalent of 40% of the necessary supply. Without Romania, the “Greater Economic Area” could cover no more than 30% of its petroleum requirements.¹⁵⁷

The situation would become catastrophic if Italy entered a war alongside Germany. By June 1939, WStb estimated that Germany and Italy required 9,400,000 tons of imports to cover one year’s estimated consumption during mobilization. Romania’s export balance would probably shrink from 5,000,000 tons in 1938 to 4,000,000 tons in 1939. Assuming that the Danube serviced imports to Germany, while both Germany and Italy would draw imports using railways, the existing transportation network could deliver 2,200,000 tons to Germany and 1,000,000 to Italy, thus leaving 6,200,000 tons of consumption unfilled. It was unlikely that the Axis could convince Romania to boost production by 6,000,000 tons in wartime, a variety of measures would be necessary, the most important of which was addressing the low throughput of the main Romania port for shipping oil up the Danube, Giurgiu, which could only handle 1,270,000 tons per year.¹⁵⁸

The RWA concluded that “blockade-security” within the “Greater Economic Area” was, even assuming “great efforts” and significant contributions from Scandinavia, conceivable “only to a limited extent” unless Germany established “*an economic union with Russia.*” The situation was particularly dire with regard to iron ore, petroleum, phosphates, and copper, and the costs of building up an adequate stockpile of even one year’s consumption during mobilization would run to approximately 747,000,000 RM. In the case of oil, at least another 8,000,000 tons divided between Germany (4,500,000 tons), Italy

¹⁵⁷ “Möglichkeiten einer Großraumwehrwirtschaft unter deutscher Führung,” August 1939, no author or date, T-77/500 (Wi/I.44).

¹⁵⁸ W Wi IV d, “Betr.: Transportmöglichkeiten für die Mineralölversorgung der Achsenmächte im Kriege,” Vorg.: Reisebericht Inspekteur W [illegible] III Mai/Juni 1939, 21 June 1939, T-77/526 (Wi/I. 156). This report was itself based on a much larger study concerning the potential contributions of raw materials from expected European neutral countries to the Axis. The author pointed out that Romania, Hungary, Yugoslavia, and Estonia (shale) could provide at best 6,145,000 tons of oil to Germany and Italy (since Romania’s reliability “must in any case be looked upon as assured”), against their mobilization import demand of 11,000,000 tons. Of the outstanding 5,000,000 tons, the author had to concede that additional supplies “out of the neutral European area must at this be considered as impracticable [undurchführbar].” Besides precluding any “enlargement” of oil deliveries from the Caucasus, Turkey’s “expected attitude” vis-à-vis the Axis ruled out making use of Mediterranean, over which 80% of Romania’s exports normally travelled. OKW, W Stb W Wi VI, Nr. 5015.39 g., “Vortrag des Kapitän zur See Dose gelgentlich der Wehrwirtschaftlichen Übungsreise nach Schwalbach am 20. 6. 1939 über ‘*Möglichkeiten der Versorgung Deutschlands/Italiens in einem Krieg mit den Westmächten aus dem voraussichtlich neutralen europäischen Raum,*’” T-77/516 (Wi/I. 84).

(2,500,000 tons), and Spain (1,000,000) and costing roughly 385,000,000 RM would be required (Germany already had a reserve of roughly 2,200,000 tons as of 01 April 1939). In order to keep costs down, Germany would shift entirely to the production of expensive aviation fuel (which would be stockpiled), while continuing to import cheaper motor fuel, not to mention diesel and fuel oil. If “proper blockade-security” was what the Reich required, this was “only to be accomplished through a close economic association [Zusammenschluß] with Russia.” Barring that, the only suggestions the report could offer for “improving the petroleum situation” was a “sharp throttling of non-defense-related peacetime consumption and a rapid boosting of supply, particularly upon the Romanian basis.” But this was not a feasible long-term solution: Germany needed to embrace the “construction and maintenance of a European Großwirtschaftsraum, which secures in peace and war the existence of its members.” “Root-and-branch [restlos] security” would require more than just Scandinavia – it was “possible *only with the raw materials of Russia*,” although the report hoped that this could be accomplished through an “alliance-policy” that “made possible a sustainable relationship with Russia.”¹⁵⁹

¹⁵⁹ Although in the event that a “military altercation with Russia or Poland cannot be avoided,” Germany might make be able to scrounge together another 1,100,000 tons from either the Polish or Ukrainian oilfields. “Möglichkeiten einer Großraumwehrwirtschaft unter deutscher Führung,” August 1939, no author or date, T-77/500 (Wi/I.44). Emphasis in the original. The NARA finding aid indicates that the memorandum was found within the files of one of Krauch’s aides in the RWA, Dr. Gerhard Ritter, and that the report was probably completed within that agency. Eichholtz concurs with this judgment in his examination of the memorandum, which is reprinted with extensive commentary as Document 2 in: “Großraumwirtschaft,” 86-160. See also: Institut für Weltwirtschaft an der Universität Kiel, “Die Versorgung Großdeutschlands und Kontinentaleuropas mit Mineralölerzeugnissen während der gegenwärtigen kriegserischen Verwicklungen,” February 1940, T-84/72 (EAP 66-c-12/33).

An Appraisal of the Third Reich's Prewar Petroleum Policy

A recent survey of European international history between 1933 and 1939 argues that oil was Germany's "Achilles' Heel" – a popular leitmotiv within the historiography of the Second World War.¹⁶⁰ This was also the verdict of at least one contemporaneous assessment of Germany's petroleum position published in the United States ("the *tendo Achilles* of Germany's war potential"), which concluded on the basis of exaggerated estimates of German wartime consumption – 15,000,000 tons per annum – that the Reich was incapable of meeting its wartime requirements without access to the oilfields of Eastern Europe, the Caucasus, and the Middle East.¹⁶¹ But this is a banal judgment, for oil (or energy more broadly) is the "Achilles' Heel" of any modern society and war machine. No industrialized country on earth besides the United States or the Soviet Union could meet its wartime requirements of oil from domestic sources of production. For all others, "oil strategy thus becomes a 'system of substitutes,'" including boosting domestic oil production, developing synthetic alternatives, and accumulating stockpiles.¹⁶² This was especially the case of European great powers, in view of the Continent's tiny oil reserves.¹⁶³ Even before the war, Europe's import deficit was between 22,000,000 to 26,000,000 tons, not far behind the figure for total Soviet oil production.¹⁶⁴

¹⁶⁰ Steiner, *Triumph of the Dark*, 674. See also: Lizzie Collingham, *The Taste of War: World War Two and the Battle for Food* (London: Allen Lane, 2011), 518, n. 96; and Mark Mazower, *Hitler's Europe: How the Nazis Ruled Europe* (New York: Penguin, 2008), 290.

¹⁶¹ Fritz Sternberg, *From Nazi Sources: Why Hitler Can't Win* (New York: Stratford Press, 1939), 103-110 (quotation from pg. 109).

¹⁶² "Oil Strategy," *Militär-Wochenblatt* (15 January 1937), NARA, Record Group 165: Records of the War Department, Military Intelligence Division, "Regional File," Box 1400; Paul Ruprecht, "Ölbeschaffung und Ölverbrauchspolitik und totaler Krieg," *Die deutsche Volkskraft: Beilage zur "Deutschen Wehr,"* Nr. 8, 7. Jahrgang (05 August 1937); and Dr. Leonhardt, "Der kriegsentscheidende Treibstoff," *Militär-Wochenblatt*, 124. Jahrgang, Nummer 26 (22 December 1939).

¹⁶³ At the beginning of 1936, excluding Romania, Poland, and the Soviet Union, the Continent's oil reserves totaled only 10,000,000 tons, against 24,400,000 tons of demand that year alone among Europe's great powers. Dr. Paul Ruprecht, "Europa als Selbstversorger mit Erdöl," *Deutsche Wehr*, Nr. 11, 43. Jahrgang (16 March 1939).

¹⁶⁴ Germany and Romania accounted for almost 90% of the 11,625,000 tons produced in Europe in 1938. Statistisches Reichsamt, Abteilung VIII, "Rohstoffversorgung des mitteleuropäisch-großdeutschen Wirtschaftsraumes nach dem Kriege," July 1940, T-84/70 (EAP 66-c-12/10); Statistisches Reichsamt, Abteilung VIII, "Rohstoffversorgung des europäischen Wirtschaftsraumes (ohne UdSSR), Teil II: Gewerbliche Rohstoffe und Genußmittel 1938," October 1940, T-84/69 (EAP 66-c-12/8a); Institut für Konjunkturforschung, "Rohstoffbilanz Kontinentaleuropas unter Einschluss des Europäischen Russland und Nordafrikas," 1941, T-84/69 (EAP 66-c-12/4); and Statistisches Reichsamt, Abteilung VIII, "Versorgung des europäischen Wirtschaftsraumes (ohne UdSSR) in wichtigen Nahrungsmitteln und Rohstoffen (Zahlenangaben) 1938," January 1942, T-84/69 (EAP 66-c-12/11/9).

In that case, what makes National Socialist Germany so special? That, on the eve of war, it needed to import roughly half of its wartime requirement of 8,000,000 tons? Then what are we to make of the record of Britain and France? Both countries expended tremendous resources during the 1920s and 1930s in failed efforts to develop the Middle East as an alternative source of supply from the Western Hemisphere. Both countries, unlike Germany, had to import virtually 100% of their oil requirements. Unlike Germany, which could bully and cajole its major supplier (Romania) because it lay within Berlin's sphere of influence after 1938, Britain and France had to place their fate in the hands of either resentful Middle Eastern clients such as Iraq and Iran, or a more powerful and politically unreliable United States.

Furthermore, Germany's total import requirements can be misleading unless they are broken down by types of petroleum products. Synthetic fuel did not make Germany independent of oil imports, but it did make the country virtually self-sufficient when it came to motor and aviation fuel, which were the primary fuels consumed by the main striking forces of the German armed forces: the Army and the Air Force. Germany did lack diesel and fuel oil, the primary fuels for the Navy.¹⁶⁵ But no one in Berlin expected the German Navy to challenge the Royal Navy in a Trafalgar-style battle for supremacy anytime soon. Moreover, the most effective naval units in terms of their operational success and the threat they posed to the Allied war effort were the U-boats, whose fuel requirements were manageable.

Naturally, factions within the Third Reich's chaotic policymaking circle competed over resources and blamed everyone else for their failure to fulfill Hitler's demand in August 1936 that Germany be self-sufficient in petroleum in eighteen months.¹⁶⁶ There was nonetheless a genuine sense of accomplishment by the start of the war. One even detects a cautious sense of optimism that the country could collect enough petroleum to fight a major war as long as it could retain access to Romanian oil imports. The only

¹⁶⁵ The inability of synthetic fuels to cover Germany's requirements of both "light" and "heavy" petroleum products was accepted years before the war. "Produktion [der] synthetischen Treibstoffes in Deutschland," *Wehrtechnische Monatshefte*, Nr. 2 (1936), T-77/425 (Wi/IF 5.3444).

¹⁶⁶ Without disputing the "polycratic" nature of the Third Reich, as Williamson Murray observes, "[although] there might have been serious squabbles between Göring, Schacht, and Thomas through the [prewar] period, it is clear that they as well as their bureaucratic organizations worked wholeheartedly toward the resurrection of German military power." Murray, *Balance of Power*, 25-27 (quotation from pg. 27).

reason why Germany could not expand its petroleum supply even more than it did had less to do with an actual scarcity of petroleum than material constraints – namely steel, labor, and hard currency.

In retrospect, one cannot fail to be impressed by the Third Reich's success in freeing itself from overseas oil imports. That the Third Reich's ability to wage war after 1939 depended on a series of fortuitous developments (new discoveries in Austria and imports from the Soviet Union) does not change this.¹⁶⁷ In 1938, the country imported 5,107,000 tons, more than half of which came just from the United States and Venezuela, against a total consumption of 7,117,000 tons.¹⁶⁸ Once the war broke out, the Reich transitioned quickly to relying entirely on its own production and overland imports. It is also worthwhile to recall one fundamental point: there was not enough crude oil in Europe to fuel any major industrialized nation's war effort, hence the Continent's large and increasing import figure. In 1913, Britain, France, Germany, and Italy imported around 4,493,000 tons of petroleum. By 1931, in the depths of the Depression, the figure was 16,814,000 tons.¹⁶⁹ In one of the more remarkable feats of engineering in the modern era, Germany expanded its domestic supply virtually out of thin air. Not a lot, but certainly enough for it to exploit its relative military advantage in 1939-41.

It is also true that the results never lived up to the optimistic predictions of men such as Krauch.¹⁷⁰ Even under the best-case scenario, exemplified by the Krauch Plan of 1938, Germany would produce only 11,000,000 tons of petroleum products by 1944 against an estimated demand of 14,000,000 tons.¹⁷¹ To

¹⁶⁷ Indeed, expanded imports from Romania and the Soviet Union comprised roughly 16% of Germany's consumption in 1940. Karlsch and Stokes, *Faktor Öl*, 205, 208.

¹⁶⁸ OKW/OKH, "Mineralöl-Statistik," no date, T-77/658 (Wi/Vl.109)

¹⁶⁹ G. Heberlein, "Deutscher Kraftstoff," *Deutsche Wehr*, Nr. 6./7. (38.) Jahrgang (07 February 1934).

¹⁷⁰ Although, as of February 1944, the Germans still had every intention of reaching Krauch's production targets (11,700,000 tons, of which 7,200,000 would be synthetic), albeit in 1945. "Probleme der Mineralölversorgung unter besonderer Berücksichtigung der Wehrmacht," 14 February 1944, no author (probably the Wehrwirtschaftsstab, successor to WiRüAmt after 1942), T-77/90 (Wi/IF 5.399).

¹⁷¹ RWA, Abt. F 7/P 7, "Neuer Mineralölplan (Erläuterungen)," 12 July 1938, T-77/423 (Wi/IF 5.3398). Total German petroleum production in 1943 (the last full year of operations before Allied bombers blasted the synthetic fuel plants) was only 7,600,000 tons and lagged considerably behind Krauch's estimates from 1938/39. After adding imports (2,200,000 tons, which was 600,000 tons less than the 1941 figure) and booty, Germany's total petroleum supply amounted to only 10,000,000 tons. Jonas Scherner, "Bericht zur deutschen Wirtschaftslage 1943/44: Eine Bilanz des Reichsministeriums für Rüstung und Kriegsproduktion über die Entwicklung der deutschen Kriegswirtschaft bis Sommer 1944," *Vierteljahrshefte für Zeitgeschichte* 55: 3 (2007): 522. According to a more detailed set of statistics, German output had increased from 5,641,230 tons to 7,442,455 in just two years (1941-1943). OKW/Fwi Amt/Abt. Min. Öl/1c, Az. 66 b 3430, "Gesamt-Mineralölerzeugung 1940-1943," Quelle:

illustrate how modest Krauch's expectations were, consider that, according to the RWA's calculations, the Royal Navy alone would consume more fuel oil (12,000,000 tons) than Germany would produce by the end of the Krauch Plan.¹⁷² In 1943, the United States produced almost 228,000,000 tons worth of liquid hydrocarbons, and its daily average that year (roughly 625,000 tons) was two-thirds of the monthly average projected by the RWA.¹⁷³ Soviet production on the eve of the war (31,000,000 tons per year) would have been equivalent on a per capita basis with that of Germany by the end of the Krauch Plan, but that left aside the fact that the Soviet Union boasted of massive reserves and was capable of boosting output considerably with additional investment.¹⁷⁴ Even Britain, which lacked Germany's tiny domestic crude oil production, could easily satisfy its prewar estimates for annual wartime consumption (29,000,000 tons) from a variety of overseas sources stretching from the Western Hemisphere to the Middle East and the Dutch East Indies (the only constraints being logistical, but even that problem was not crippling as long as the United States was supportive).¹⁷⁵

Krauch's colleague, Thomas, complained incessantly during the war that the regime had never taken the expansion of Germany's raw material production as seriously as it should have, preferring instead to placate the Führer by focusing on weapons production.¹⁷⁶ The results were nonetheless remarkable: In 1936, Germany produced only 1,554,000 tons of petroleum, and this figure had increased by less than 50% two years later. After 1938, however, production rocketed upward, from 2,281,000 tons to 7,600,000

Planungsamt Hpt. Abt. Statistik, October 1944, T-77/341 (Wi/IF 5.2164, 2687), Anlage 29i to: "Die Arbeiten des WiRüAmtes." Anlagen 2b-h provide a more thorough breakdown by source and type of product between 1939 and 1943.

¹⁷² RWA, "Verzögerung im wehrwirtschaftlichen *neuen* Erzeugungsplan vom 12. Juli 1938 durch verringerte Stahlzuteilung," 29 November 1938, NARA, RG 238, T-301/73 (NI-8838). In fact, on the eve of hostilities, the Royal Navy estimated its annual wartime requirements of fuel oil at 7,000,000 tons, which was roughly double Germany's domestic crude and synthetic production in 1939. J. Payton-Smith, *Oil: A Study of War-time Policy and Administration* (London: HMSO, 1971), 61.

¹⁷³ Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 20.

¹⁷⁴ RfB, *Die wichtigsten Lagerstätten der Erde, Heft 4: Erdöl in Rußland* (Berlin, 1941), LOC.

¹⁷⁵ J.J. Llewellyn (Chairman of the Oil Board, Committee of Imperial Defence), "Oil Board: Thirteenth Annual Report," 24 January 1939, O.B. 294 (also C.I.D. Paper No. 1529-B), BNA, CAB 50/7.

¹⁷⁶ As Germany troops plunged headlong toward the Don River in July 1942, Thomas warned Göring "that the day will come, when responsibility for the inadequate expansion of petroleum production will be sought. I have always held to the position, which WiRüAmt has likewise demanded for years, that the expansion of petroleum facilities enjoy a higher level of priority than has hitherto been the case." Chef WiAmt, Aktennotiz, 06 July 1942, Imperial War Museum (Duxford), Foreign Documents Collection (hereafter cited as: IWM, FD) 4809/45.

tons by 1943, only slightly behind the RWA's target figure (8,350,000 tons). It would therefore be churlish to deny that the regime had, as one RWA retrospective analysis of June 1940 claimed, "transformed" Germany's petroleum position by comparison to the "seemingly hopeless situation of the years prior to 1936."¹⁷⁷ By 1941, Germany produced approximately 75% of its requirements, as opposed to only 31% in 1936. Annual petroleum production had risen 342% between 1936 and 1942 (1,790,000 tons to 6,120,000 tons), and the production of aviation fuel by 579% (76,000 tons to 1,200,000 tons), during the same period.¹⁷⁸ Germany's achievements were qualitative as well as quantitative, for the Reich also achieved self-sufficiency in the production of high-octane aviation fuel and specialized lubricants.¹⁷⁹

These were remarkable accomplishments considering that the synthetic fuel industry had to compete for resources with a host of other vital economic priorities, including munitions production. In fact, except for the first three quarters of 1939, Krauch never received the steel allocation he needed in order "to realize all of the technical possibilities at hand."¹⁸⁰ But even though synthetic output stalled below the targets set by Krauch, better than expected crude oil production – which hit a peak of 1,989,000 tons in Greater Germany in 1944 – captured supplies, booty extracted from the occupied territories, new sources such as Hungary, further reductions in the fuel allocation for occupation and reserve troops, and existing

¹⁷⁷ RWA, "Die deutsche Rohstoffversorgung durch den Vierjahresplan," 20 June 1940, T-84/216 (EAP 66-c-12-62/29).

¹⁷⁸ There are a variety of primary sources that give good overviews of Germany's successes in boosting its petroleum production after 1933. For a sampling, see: RWA, "Zuwachs an *Mineralöl-Kapazität* rein inländischer Erzeugung," 09 January 1940, T-77/429 (Wi/IF 5.3558); RWA, "Treibstoffversorgung," 15 January 1940, no author (handwritten notation reads: "Anlage zum Schreiben an Staatssekr. Körner v. 16.1.40."), T-84/216 (EAP 66-c-12-62/29); RWA, "Die deutsche Rohstoffversorgung durch den Vierjahresplan," 20 June 1940, T-84/216 (EAP 66-c-12-62/29); RWA, Minöl. P Dr. So/Gu, "Entwicklung der heimischen Mineralöl-Produktion in den Jahren 1936-1940," 15 October 1940, T-84/216 (EAP 66-c-12-62/29); "Vierjahresplan: Industrielle Rohstoffe: Stand vom 30. 1. 1941 (Unterlagen für den Vortrag Prof. Dr. C. Krauch vor den Führungsstäben Wirtschaft am 30. 1. 1941)," BA-B, R 3112/173; Dienststelle des Beauftragten für den Vierjahresplan, "Ergebnisse der Vierjahresplan-Arbeit: Ein Kurzbericht nach dem Stande vom Frühjahr 1942," BA-B, R 26 I/18; VJP, "Chemischer Erzeugungsplan: Steigerung der Erzeugung," 10 June 1942, T-77/649 (Wi/VI. 34); Dr. R./G. (Gerhard Ritter), "Mineralöl: Vortrag vor den Mitgliedern der Parteikanzlei München am 21. 7. 1942," BA-B, R 3112/175; Aktenvermerk, 03 August 1944, IWM, FD 4809/45; OKW, Feldwirtschaftsamt (Bearbeiter: Dr. W. Tomberg), "Wehrwirtschaftliche Erkenntnisse von 5 Kriegsjahren," Abgeschlossen: November 1944, T-77/429 (Wi/IF 5.3517); and der Beauftragte für die Förderung der Erdölgewinnung (Bentz) an das OKW (WiAmt M/3), DB-080/45 Btz/Schr., "Betr.: Entwicklung der deutschen Erdölförderung," 29 January 1945, IWM, FD 4809/45.

¹⁷⁹ Carl Krauch, "Die Kriegsleistungen der chemischen Erzeugung und ihre kommenden Aufgaben," *Vierjahresplan*, 1942: I.

¹⁸⁰ RWA, "Treibstoffversorgung," 15 January 1940, no author (handwritten notation reads: "Anlage zum Schreiben an Staatssekr. Körner v. 16.1.40."), T-84/216 (EAP 66-c-12-62/29).

reserves tided Germany over until the spring of 1944.¹⁸¹ Thereafter, Allied bombers finally began systematically targeting the Reich's synthetic fuel industry and oil production in Romania, reducing hydrogenation output by over 90% and exports from Romania by two-thirds in just three months.¹⁸²

Although control of foreign sources of oil became a vital war aim after 1940, German policymakers never wavered from their belief that the Third Reich's only indispensable source of petroleum was the synthetic fuel industry.¹⁸³ The second VJP began in September 1940 and stressed the need for "the systematic rationalization and mechanization of the entirety of German economic life."¹⁸⁴ According to the RWA, besides continuing to stockpile reserves sufficient to cover six months of fuel consumption (estimated at 4,900,000 tons), "The objective must be to produce as much petroleum... from pure German supplies, that is to say coal, German crude oil, oil shale and the like, as the greater German military and *war economy* continuously require in a war." Germany's synthetic fuel plants would also be constructed in such a fashion as to allow them to process either coal or crude oil as a feedstock. Under existing planning, Germany would seek to produce roughly 533,000 tons per month of petroleum products per month to maximize aviation fuel supplies, or 548,000 tons per month if diesel output was emphasized. Future mobilization demand would probably reach 845,000 tons per month, and the OKW would make the final determination as to whether this gap would closed by either further expansion of synthetic fuel

¹⁸¹ The increase in crude oil production was primarily the result of Austria (now Ostmark). Production within the "Altreich" actually peaked in 1940, but the output of the Ostmark more than compensated, increasing from 144,354 tons in 1939 to 1,103,526 tons in 1943. "Erdölgewinnung in Deutschland von 1934 – 1943 t," Quelle: Deutsches Institut für Wirtschaftsforschung, October 1944, T-77/341 (Wi/IF 5.2164, 2687), Anlage 24 to: "Die Arbeiten des WiRüAmtes."

¹⁸² For a summary, see: Stokes, "Nazi Oil Industry," 272-276. For more detailed assessments of the Allied strategic bombing campaign against the German petroleum industry, see: Assistant Chief of Staff, A2, Headquarters United States Air Forces in Europe, "The Contribution of Air Power to the Defeat of Germany," 07 August 1945 (esp. Appendix E: "The Attack on Enemy Oil Production and Distribution"), Library of Congress, Papers of Carl Spaatz, Boxes 272-273; USSBS, *Effects of Strategic Bombing on the German War Economy* (Washington, DC: U.S. GPO, 1945), 73-83; USSBS, *German Oil Industry, Ministerial Report Team 78* (Washington, DC: U.S. GPO, 1945), 51-68; USSBS, *Oil Division, Final Report* (Washington, DC: U.S. GPO, 1945); and USSBS, *Over-all Report (European War)* (Washington, DC: U.S. GPO, 1945), 39-45.

¹⁸³ See especially: Dr. R./G., "Mineralöl: Vortrag vor den Mitgliedern der Parteikanzlei München am 21. 7. 1942," BA-B, R 3112/175.

¹⁸⁴ Staatssekretär Körner, "Der zweite Vierjahresplan," *Vierjahresplan*, 1941: I/III. Hitler formally renewed Göring's mandate in October 1940 "with the special assignment of adapting it [the VJP] to the demands of war." "Decree on the Further Duties of the Plenipotentiary for the Four Year Plan, 18 October 1940," Translation of Document NI-125, *NMT*, xii: 535.

capacity or imports.¹⁸⁵ The major point of departure between the VJP of 1936 and that of 1940 was each plan's long-term objectives. The first VJP would only satisfy Germany's prewar military and civilian consumption. The second VJP aimed at no less than meeting the petroleum requirements for all of Axis Europe "in the struggle against the Anglo-Saxon world and Soviet Russia [...]."¹⁸⁶

It could be argued that Germany did not have a "grand strategy" for oil because there was really only one path to choose: synthetic fuel and imports from Romania. After all, if Germany was sure to lose access to overseas oil under any plausible war scenario, it had no options besides these two. Moreover, there was no way for the Germans to exploit any possible gains during the war due to a variety of geographical, technical, economic, and raw materials obstacles, so why bother developing a grand strategy like the British and the Americans? If Germany won the war, it could dictate whatever terms it liked. Grand strategy is a luxury for great powers that have both the means and the ambition, and the Third Reich was at a clear disadvantage when it came to the former. Germany's petroleum supply (including Romania) and consumption was trivial by comparison to Britain, even though Germany's total GDP in 1938 (not including Austria) was 24% larger than that of the United Kingdom (\$351.4 billion vs. \$284.2 billion).¹⁸⁷ By 1941, the Anglo-American coalition produced twenty-two times more petroleum than Axis Europe (78.9% vs. 3.5% of global production, or 295,000,000 tons vs. 10,400,000 tons). Even occupying the Caucasus would only reduce the deficit to 5.4: 1.¹⁸⁸ This disparity did not prevent the Germans from driving to the suburbs of Moscow.

¹⁸⁵ RWA, "Gesichtspunkte zur Weiterführung der Massnahmen des Vierjahresplanes nach dem Kriege," 05 September 1940, NARA, RG 238, T-301/73 (NI-8845). Emphasis in the original. RWA also urged the creation of an intellectual infrastructure within German universities and technical institutes to continue the mission of the VJP once the existing development program had been completed: "Gedanken über die weitere Entwicklung der Arbeiten zur Sicherung der deutschen Rohstoff-Versorgung nach Ende des Vierjahresplanes," 22 September 1940, no author (the NARA finding aid indicates that the memorandum was found in the files of Ritter of the RWA), T-77/634 (Wi/IV. 258).

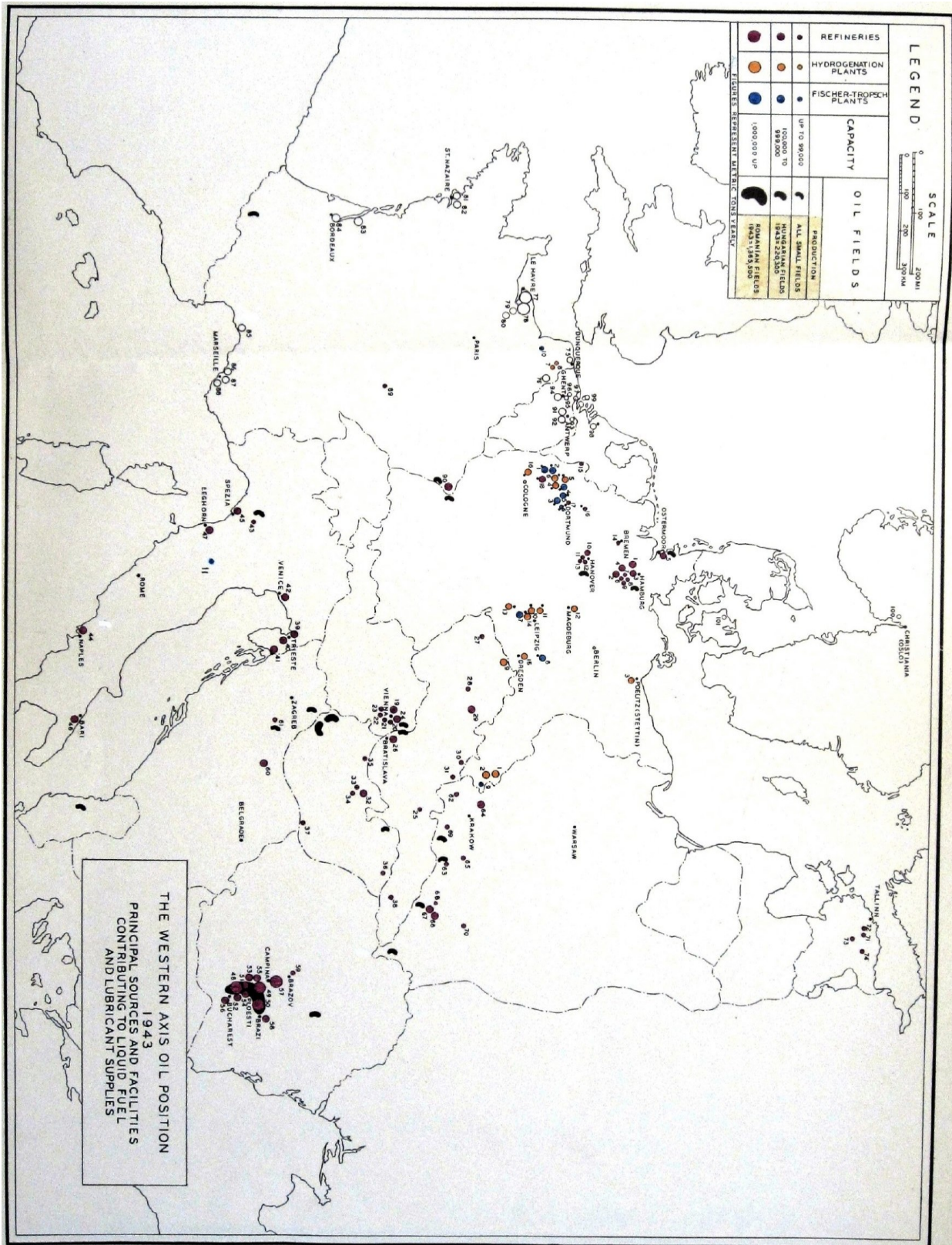
¹⁸⁶ Carl Krauch, "Die Kriegsleistungen der chemischen Erzeugung und ihre kommenden Aufgaben," *Vierjahresplan*, 1942: I

¹⁸⁷ Mark Harrison, "The Economics of World War II: An Overview," in: *The Economics of World War II: Six Great Powers in International Comparison*, ed. Mark Harrison (Cambridge: Cambridge University Press, 1998), 3.

¹⁸⁸ Statistisches Reichsamt, Abteilung VIII, "Produktionskapazitäten im Angelsächsischen und im Europäischen Wirtschaftsraum," February 1942, T-84/46 (EAP 66-c-2-34/7).

Germany did not place all of its eggs into the synthetic basket – to believe that it did would be to confuse the propaganda of the VJP for reality. The Germans never aspired to autarky, and the synthetic program competed for resources just like every other sub-sector of the economy. The policy that had emerged by 1939 (synthetics, stockpiling, and overland imports) was comprised of equal parts technological fortitude and improvisation, with a healthy dollop of optimism. But it was not the product of any consistent “grand strategy.” Rather, Germany’s petroleum policy evolved fitfully in response to various economic, political, and technological challenges. Most importantly, its aims were limited – synthetic and domestic production was a means to an end: “freedom of maneuver for the armed forces until the expected conquest of the greater oil resources of the Caucasus and the Near East.”¹⁸⁹ This policy initially exceeded expectations, such that Germany even ran a minor surplus in 1940. German policymakers had correctly diagnosed their relative weaknesses and adopted policies that proved capable of allowing their military to create facts on the ground conducive to thinking in grand strategic terms. It was at the moment of its greatest triumph, however, that the Third Reich realized that its existing supplies were woefully inadequate for purposes of a true world power. Europe was a dead-end, as cursed by the latest incarnation of the hydrocarbon revolution as it had been blessed by the first. Germany would have to look east if it was to find enough oil to win the battles yet to come.

¹⁸⁹ Karlsch and Stokes, *Faktor Öl*, 243.



Map 7: Foreign Economic Administration, Enemy Oil Committee, "The Western Axis Oil Position," 1943
 Source: National Archives and Records Administration (NARA), Record Group 59: General Records of the Department of State (RG 59), Lot File 77D141, Records of the Petroleum Division (PED), Box 27.

Chapter VI

Crisis and Opportunity: Germany, 1939-1941

Control of foreign oilfields was a major objective of German strategic planning during the zenith of the German war effort between the fall of France and the Stalingrad debacle.¹ This chapter will examine how the seizure of Soviet and even Middle Eastern oil figured into the thinking of German policymakers until the failure of Operation Barbarossa. By relying excessively on the findings of the United States Bombing Survey, the existing English-language scholarship on oil and German strategy has provided a distorted picture of German oil policy by focusing on Germany's synthetic fuel industry, which only contributed 26.8% of Germany's petroleum supply between 1939 and 1943, compared to 32.6% from imports, 16.1% from German crude oil production, and the remainder from various alternative fuel sources such as benzol.² Readers of such works, therefore, learn nothing of Germany's establishment of Kontinentale Öl A.G. (Konti), a joint-public/private and vertically integrated major oil company in 1941 that would seize the oilfields of Continental Europe, the Caucasus, and the Middle East.³

The only way to gain a nuanced appreciation of the scope of German oil ambitions during the Second World War is to consult the small, body of German-language secondary sources on the subject.⁴ The pre-eminent German scholar on the subject argues that the Third Reich planned to establish a "crude oil empire" that extended beyond the Caucasus into the Middle East. Central to his argument that Middle Eastern oil represented a discrete objective of National Socialist Germany is the fact that the Third Reich planned a grand "Caucasus Pincer" following the defeat of the Soviet Union, whereby German forces in the Caucasus would overrun Iran and Iraq from the north in concert with the Afrikakorps, which would

¹ Unless otherwise indicated, all German-language sources are from the National Archives and Records Administration, Record Group 242: Foreign Records Seized (NARA, RG 242). Since all documents included within RG 242 are available only on microfilm, I have used the following citation format: Microfilm Publication No./Reel No. (Item No.).

² Gottfried Plumpe, *Die I.G. Farbenindustrie AG: Wirtschaft, Technik und Politik* (Berlin: Duncker & Humblot, 1990), 287-289.

³ Partial exceptions (based on a narrow documentary foundation) include: Peter Hayes, *Industry and Ideology: IG Farben in the Nazi Era* (Cambridge: Cambridge University Press, 1987), 255-257; and Richard Overy, *Goering: The Iron Man* (London: Routledge & Kegan Paul, 1984), 119 and 132-133.

⁴ See the appendix to this study for additional discussion of secondary sources.

strike against the Suez Canal, and German forces moving through Turkey into the Near East.⁵ Another historian refers to this conception of German grand strategy as the “Weltblitzkrieg.” The first step was the defeat of the Soviet Union, then a pincer-attack against the British position in the Middle East combined with a Japanese assault in SE Asia directed against both Britain (Singapore and the Indian Ocean) and the United States (the Philippines), and finally the closure of the Western Mediterranean through the capture of Gibraltar and occupation of French North Africa. The aim would be, as Adolf Hitler informed Alfred Jodl (Chief of Operations at the Armed Forces High Command – Chef des Wehrmachtsführungsstabes, Oberkommando der Wehrmacht, OKW) in December 1940, to “solve all Continental European problems, since from 1942 the United States would be in a position to intervene.”⁶

An examination of German economic and military records bears out the contention of East German historiography that the control of foreign oilfields was a central element of the Third Reich’s war aims. The Four-Year Plan (Vierjahresplan, VJP) of 1936 went beyond promoting autarky within Germany: the implicit aim was always to create the economic and military prerequisites to establish a German-dominated “Greater Economic Area” (Großraumwirtschaft) by force.⁷ When Hitler spoke of “autarky,” what he actually meant was economic self-sufficiency within “Europe” – which included both the

⁵ Dietrich Eichholtz, *Krieg um Öl: Ein Erdölimperium als deutsches Kriegsziel, 1938-1943* (Leipzig: Leigziger Universitätsverlag, 2006), 80-121. Hitler laid out such a strategy in his Directive No. 32 of June 1941: The Fuehrer and Supreme Commander of the Armed Forces, OKW/WFSt/Abt. L (I Op.) Nr. 44886/41 g.K. Chefs., “Directive No. 32: Preparations for the Period after ‘Barbarossa,’” 11 June 1941, reprinted in: U.S. Department of the Navy, Office of Naval Intelligence, *Fuehrer Directives and other Top-Level Directives of the German Armed Forces, 1939-1941* (Washington, DC: 1948), 186-189. A revised version of the directive, which elaborated upon the section pertaining to the assault against Britain’s position in the Mediterranean and Middle East, and released on 30 June 1940, made reference to “a concentric attack which is to be launched from Libya through Egypt, from Bulgaria through Turkey, and possibly from Transcaucasia through Iran.” The revised directive of 30 June 1941 does not differ from the earlier 11 June draft in any significant manner. The two versions may be compared against one another in: The Führer and Supreme Commander of the Wehrmacht, OKW/WFSt/Abt. L (I Op.) No. 44886/41 g. K. Chefsache, “Directive No. 32 Preparations for the Time after Barbarossa,” 11 June 1941, Document No. 617 in: Auswärtiges Amt (AA), *Documents on German Foreign Policy, 1918-1945, Series D* (Washington, DC: U.S. GPO, 1949-1983), xii: 1012-1016 – hereafter cited as: *DGFP* (D).

⁶ Andreas Hillgruber, “Der Faktor Amerika in Hitlers Strategie, 1938-1941,” in: *Nationalsozialistische Aussenpolitik*, ed. Wolfgang Michalka (Darmstadt: Wissenschaftliche Buchgesellschaft, 1978), 513-515. See also: Holger Herwig, “Prelude to *Weltblitzkrieg*: Germany’s Naval Policy toward the United States of America, 1939-1941,” *Journal of Modern History* 43: 4 (1971): 662.

⁷ Richard Overy, “The Four Year Plan,” *European Yearbook of Business History* (2000): 87-106 (esp. 93-95).

Continent and European Russia.⁸ In view of the Continent's resource poverty, Germany could not rest easy even after the collapse of France in June 1940. European oil production (even including European Russia) was woefully inadequate. According to one 1943 book by an influential German economic analyst, total European production including the Soviet Union in 1938 was only 36,800,000 tons against 65,200,000 tons of consumption (including Britain), which worked out to a per capita consumption of 90 kg (excluding the Soviet Union) compared to 550 kg in Canada and 1,130 kg in the United States.⁹

Hitler himself admitted to Fritz Todt (Albert Speer's predecessor as Armaments Minister) on the eve of Operation Barbarossa: "The course of the war shows that we went too far in our autarchical endeavors. It is impossible, to try and manufacture everything we lack, by synthetic procedures [...]. One has to choose another way. What one does not have, but needs, one must conquer." He added that the manpower requirements of maintaining the synthetic fuel facilities represented a tremendous drain on the German war economy, and that taking the needed oil by force was, in the long run, a cheaper alternative. Ultimately, Hitler concluded, "[the] aim must also be to secure all territories, which are of special interest to us for the war economy, by conquering them."¹⁰ This was not a simple exercise in imperial aggrandizement: according to Hitler's Social Darwinist worldview (*Weltanschauung*), a nation's health depended upon its supply of raw materials.¹¹ "Despite all its efforts," he explained to Economics Minister Walter Funk in October 1941, "the side that hasn't got the natural riches must end by going under."

⁸ Norman Cameron and R.H. Stevens, trans., *Hitler's Table Talk: His Private Conversations* (New York: Enigma, 2000): No. 25 (25 September 1941) and No. 35 (13 October 1941).

⁹ Ferdinand Friedensburg, *Die Rohstoffe und Energiequellen im neuen Europa* (Berlin: G. Stalling, 1943), 140-150. Friedensburg made no reference to occupying the oilfields of either the Caucasus or the Middle East in order to redress Europe's oil deficit. Rather, he urged that the substitution of coal for oil whenever possible. Friedensburg also advocated on behalf of more intensive development of Continental oil reserves and synthetic production, but counseled that at least partial dependence on overseas imports was inevitable.

¹⁰ Chief of Agency for Armament Economy (General Georg Thomas), "Memorandum," 20 June 1941, Partial Translation of Document 1456-PS, reprinted in: Office of United States Chief of Counsel for Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression* (Washington, DC: U.S. GPO, 1946), iv: 21 – hereafter cited as: *NCA*. For the original German document, see: International Military Tribunal, *Trial of the Major War Criminals* (Nuremberg, 1947-1949), xxvii: 220-221 – hereafter cited as: *IMT*.

¹¹ Which probably explains his chagrin at having to cajole the Romanians for oil: "These people for whom chance has suddenly put a petroleum well under their feet... it's contrary to the whole natural order!" *Table Talk*: No. 161 (26 February 1942).

Human conflict was the inevitable byproduct of the scramble for finite resources, which Hitler described as being “in the natural order of things – for it makes for the survival of the fittest.”¹²

In contrast to the rather programmatic assessment of National Socialist petroleum strategy offered by East German historians (who nonetheless pioneered the study of German oil imperialism), this chapter will argue that German plans to seize the oilfields of the Caucasus and later of the Middle East were as much a product of a wartime petroleum shortage as of any grand strategy.¹³ Germany’s stunning military successes during the first two years of the war were accompanied by a worsening supply position that began to manifest itself as early as the winter of 1939/40, when inclement weather hampered imports from Romania.¹⁴ The occupation of Western Europe only exacerbated the problem: Germany’s existing supply regime was barely adequate to satisfy its own needs. Satisfying occupied Europe’s requirements was out of the question. In that sense, Germany’s escalating oil crisis after the summer of 1940 mirrored the Third Reich’s wider strategic dilemma after Britain’s refusal to seek terms in July 1940. Germany had won a tremendous strategic victory, but victory remained out of reach.

The question therefore arose of where Germany could hope to satisfy its immediate and long-term requirements, since Romania (its most important supplier) was incapable of doing anything more than covering Germany’s existing deficit, much less that of Italy and France. German analysts and

¹² *Table Talk*: No. 35 (13 October 1941).

¹³ For a critique of Eichholtz, see my review of *Deutsche Ölpolitik im Zeitalter der Weltkriege* (Leipzig: Leipziger Universitätsverlag, 2011) in the *Zeitschrift für Geschichtswissenschaft* 59: 7 (2011): 680-681. For a more nuanced analysis of German oil ambitions in the Middle East that conveys Berlin’s ambivalence regarding the region and the contradictory considerations that swayed in policy from one direction to another (most notably, the need to placate German’s Axis partner, Italy, which also had expansive claims in the Middle East), see: Helmut Mejcher, *Die Politik und das Öl: II. Die Teilung der Welt, 1938-1950* (Stuttgart: Klett-Cotta, 1990), 29-30, 50-63.

¹⁴ For contemporaneous overviews, see: Wehrwirtschafts- und Rüstungsamt (WiRüAmt), Stab Z/SR, “Die deutsche Treibstoffversorgung im Kriege. Abgeschlossen um die Jahreswende 1941/42. Versuch einer Darlegung der Gesamtsituation unserer Treibstoffversorgung im Kriege unter Verzicht auf die Darstellung der Einzelheiten,” 16 February 1942, T-77/668 (Wi/Vl. 216). Key WiRüAmt papers circulated to higher levels concerning the supply and transportation situation between 1940 and May 1941 are summarized in: WiRüAmt/Stab I b 5, “Vortragsnotizen und Exposé WiRüAmt an höhere Stellen über die Betriebstofflage,” [?] June 1941; and WiRüAmt/Stab I b 5, “Schreiben WiRüAmt an andere Stellen zur Mineralöl-Transportlage,” 06 June 1941; both in: Imperial War Museum (Duxford), Foreign Documents Collection (hereafter cited as: IWM, FD) 4809/45. For a running commentary on Germany’s petroleum position between September 1939 and November 1940, see: Oberkommando der Wehrmacht (OKW), WiRüAmt, Stab Ib 5, “Abschriften nur Mineralölbetreffend aus Interne Monatsberichte zur deutschen Rüstungswirtschaft (Auswertung der Kriegstagebücher WiRüAmt Stab, W Rü and W Ro),” no date, T-77/668 (Wi/Vl. 216). For the period between January 1941 and September 1942, see: “Auszug aus KTB WiRüAmt/Stab (nur Mineralöl betreffend),” no date, T-77/668 (Wi/Vl. 216).

policymakers such as Ernst Rudolf Fischer (head of the Petroleum Division at the Ministry of Economics – Reichswirtschaftsministerium, RWM), Alfred Bentz (Hermann Göring’s Plenipotentiary for Crude Oil Production), and Carl Krauch (Plenipotentiary for Special Matters Pertaining to Synthetic Production), who cumulatively shaped German oil policy between 1938 and 1942, all recognized that the long-term prospects for oil production in the Middle East were greater than anywhere else in the world.¹⁵

Contemporary documents also highlight the fact that the Germans considered the Caucasus and the Middle East to be part of the same geological formation and geographic area.¹⁶

Capturing and exploiting the oilfields of the Middle East was not a simple matter. The logistical obstacles for German military forces were immense, possibly insurmountable without concurrent attacks from Egypt, Turkey, and the Caucasus. Capturing the oilfields would only lead to new problems. Extracting, transporting, and refining Middle Eastern oil would require massive expenditures of capital and resources, not to mention long-term peace and security, during which the local oil infrastructure could be built (or, as the case may be, rebuilt).¹⁷ Germany’s resources would be stretched to the limit simply trying to restoring production in the Caucasus, and it made no sense to fritter away resources in Iraq or Iran, especially since doing so would not decisively alter the strategic calculus in Germany’s favor by knocking Britain out of the war. By contrast, the occupation of the Caucasian oilfields, although also a costly proposition, would demonstrably improve Germany’s strategic outlook by both providing it with

¹⁵ For useful lists of the key personnel within the German Government, private oil companies, and research institutes responsible for shaping Germany’s oil policy during the first-half of the Second World War, see: “Wichtige Dienststellen der deutschen Mineralölwirtschaft,” no date or author, T-77/86 (Wi/IF 5.384); Wi VI d, “Die wichtigsten öffentl. Stellen, Firmen u. Persönlichkeiten der deutschen Erdölwirtschaft,” 18 June 1941, T-77/1401 (Wi/II. 2-3); and “Reichswirtschaftsministerium, Abtl. II Min.Öl. (Mineralölwirtschaft) Leiter: Dr. Ernst Rudolf Fischer,” no date or author, T-77/1401 (Wi/II. 2-3).

¹⁶ As one important OKW report explained, the Caucasus “belong geologically within the realm of the crude oil deposits of the Near Orient.” OKW, Az. 31/34/42/43/45 WiRüAmt/Wi VI, Nr. 17109/40g, “Das Erdöl des Nahen Orients und des Kaukasusgebietes,” 01 October 1940, T-77/646 (Wi/VI. 19).

¹⁷ Even superb works such as Milan Hauner’s mis-titled *India in Axis Strategy: Germany, Japan, and Indian Nationalists in the Second World War* (Stuttgart: Klett-Cotta, 1981), or Alan Levine’s provocative synthesis, “Was World War II a Near-run Thing?” *Journal of Strategic Studies* 8: 1 (1985): 57-59, overlook the many hurdles to either a major German offensive in the Middle East or the effective exploitation of the region’s oil. Both men appear to take their cues from Field Marshal Erwin Rommel, who recognized the strategic opportunities in the Middle East but was oblivious of the logistical handicaps. B.H. Liddell Hart, ed., *The Rommel Papers* (New York: Harcourt Bruce, 1953), 511-515. I am grateful to Scott Boorman for drawing my attention to this source. For a necessary corrective, see: Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 2004), 181-201.

an ample source of oil and eliminating one of its key rivals. With the Soviet Union out of the way, Germany would be free to overrun the lynchpin of Britain's entire empire.¹⁸ The loss of the Middle East would effectively split the empire into two, leaving Allied forces west of Suez unable to support those to the east, and vice versa. Its successful completion would allow the oilfields of the region – whose value did not go unnoticed within German policymaking circles – to fall into hands of the Axis like ripened fruit. Planning for the development of such resources, and their future division between Germany and its allies would, however, have to wait at least until after the war against the Soviet Union ended.

¹⁸ Both the Army High Command (Oberkommando des Heeres, OKH) and the OKW completed operational studies concerning the feasibility of an invasion of the Middle East following the collapse of the Soviet Union. OKW and OKH, Op.Abt. (II), "Studie über Operationsmöglichkeiten im Vorderen Orient," August 1941, T-78/647 (H 22/315); and OKW and OKH, "Studie Kaukasus: Operation aus Nordkaukasien über den Kaukasus und Nordwestiran zur Inbesitznahme der Pässe Rewandus und Khanaqin an der iranisch-irakischen Grenze," no date, T-78/336 (H 22/364a); reprinted as Document No. 84 in: Helmuth Greiner and Percy Ernst Schramm, ed., *Kriegstagebuch des Oberkommandos der Wehrmacht* (Frankfurt am Main: Bernard & Graefe, 1961-1965), i: 1038-1040 – hereafter cited as: OKW, *KTB*. The chronology of the OKW's war diary (*KTB*, i: 1233) dates the report to 24 October 1941. The memorandum of conversation from the General Staff meeting of 24 October 1941 to discuss the study is appended to the original report (also reprinted as Document 105 in: OKW, *KTB*, i: 1072-1073). These plans were rendered moot when Hitler called off the invasion of the Northern Caucasus in 1941 on 07 November 1941. *Halder Diary*: 07 November 1941. When citing from Halder's diary, I have relied upon the version reproduced as: Arnold Lissance, ed., *War Journal of Franz Halder* (1950), retrieved from the Combined Arms Research Library, Digital Library (hereafter cited as: CARL). Following the war, Alfred Jodl, the chief of operations at the OKW, confirmed to U.S. military intelligence that "[it] was the intention of the Führer [*sic*] to break the Southern Russian front with the final objective of denying the Caucasian oilfields to Russia. When these operations had been successfully completed, it was intended to advance towards Tiflis and subsequently join up with Rommel." Supreme Headquarters, Allied Expeditionary Force, Office of the Assistant Chief of Staff, G-2 (Intelligence), "Interview between Brigadier Foord and Colonel General Jodl," no date, Library of Congress (LOC), Papers of Carl Spaatz, Box 134.

Germany's Petroleum Position during the First Year of the War, 1939-1940

On the eve of the war, the Defense-Economy Staff (Wehrwirtschaftsstab, WStb) concluded, "Germany finds itself still in a position of economic weakness," in view of the only partial success of the VJP. Existing motor fuel stocks were sufficient for only four months of consumption, and only 2.5 months in the case of diesel fuel. The European Axis powers had a deficit of 4,000,000 tons of fuel against an estimated demand of 10,000,000 tons, even assuming that they extracted the maximum levels of imports of Romania, Hungary, and Yugoslavia. Again, increasing the amount of imports was difficult in view of the transportation bottlenecks and Turkey's attitude, since Italy depended upon overseas imports of Romanian fuel through the Straits.¹⁹

The WStb estimated a week into the Polish campaign that, over the first year of hostilities, Germany would have to import roughly 3,123,500 tons of fuel and lubricants to cover the gap between supply and demand once reserves had been drained.²⁰ On the positive side of the ledger, a major new supplier to Germany became available after August 1939: the Soviet Union sent over 600,000 tons of oil to Germany in 1940 under the terms of the first German-Soviet Commercial Agreement of February 1940.²¹ As the lead German negotiator (Karl Schnurre) explained, by February 1941, Germany would receive 900,000 tons of petroleum valued at 115,000,000 RM (presumably including the amount specified in the 1939 Non-Aggression Pact).²² Overall, if one included the figures covered under the August 1939 credit agreement (32,000 tons) and Germany's share of Galician oil production under the terms of the Molotov-Ribbentrop Pact (102,000 tons), the figure increased to over 1,100,000 tons of petroleum. As of 01

¹⁹ "Stand der wehrwirtschaftlichen Lage Deutschlands," no author or date (handwritten notation indicates the minute was presented by Thomas to generals Walter Brauchitsch and Wilhelm Keitel – Oberbefehlshaber des Heeres and Chef des OKW, respectively – on 09 August 1939), T-77/312 (Wi/IF 5.1788).

²⁰ W Ro I Nr. 4596 g, 66 p 2010 Is, "Einfuhrbedarf Deutschland in den ersten 12 Mob-Monaten," 09 September 1939, IWM, FD 4809/45.

²¹ OKW WiRüAmt/Ro, Az. 11 k 2209 V 1s [?], "Mineralöl-Einfuhr im 1. Und 2. Kriegsjahr," 22 December 1941, IWM 4809/45. There is no space to summarize the complex negotiations leading up to the signing of the German-Soviet Economic Agreement of 11 February 1940. For the text of the agreement, see: Document No. 607 in: *DGFP* (D), viii: 762-769. The German-Soviet trade in petroleum is summarized, with little analysis unfortunately, in: Hartmut Schustereit, "Die Mineralöllieferungen der Sowjetunion an das Deutsche Reich 1940/41," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 67: 3 (1980): 334-353.

²² Memorandum by the Chairman of the German Economic Delegation to the Soviet Union, W 1027 g. Rs., RM 9 g. Rs., "The German-Soviet Agreement Signed on February 11, 1940," 26 February 1940, Document No. 636 in: *DGFP* (D), viii: 814-817.

October 1940, of the 908,980 tons that the Soviets had contractually agreed to deliver, only 531,500 tons had arrived, with an additional 65,000 tons expected that month.²³ In January 1941, the two sides concluded a new commercial agreement, under which the Soviets would deliver almost 1,000,000 tons of petroleum products to Germany between February 1941 and August 1942.²⁴ Imports would be handled by the Mineralöl-Einfuhr GmbH, a public-private venture that would import and distribute imported Soviet petroleum according to the guidance of the Office for Petroleum (Reichsstelle für Mineralöl), the agency within the RWM responsible for administering internal German consumption and distribution.²⁵

Disputes over payment and counter deliveries resulted in numerous delays and ensured that Soviet exports never quite reached German expectations.²⁶ The inability (or unwillingness) of the Germans to deliver the military hardware and raw materials (coal) they had promised prompted the Soviets to cut off exports of grain and oil in early-1940. Göring thereafter convened a high-level meeting of the relevant military, diplomatic, and economic officials where he reiterated that the armed services should abandon their “misgivings,” as “Russian raw materials are absolutely vital to us” in the event of a “prolonged war.” The Führer had made “an explicit decision” that “where reciprocal deliveries to the Russians are endangered, even German Wehrmacht deliveries must be held back so as to ensure punctual delivery to

²³ “Mineralölbezüge Deutschlands aus der Sowjetunion,” 03 October 1940, author’s initials illegible (typewritten notation indicates that it was presented to Carl Clodius, Deputy Chief of the Commercial Policy Division of the AA – Handelspolitische Abteilung, HaPol), Politisches Archiv des Auswärtigen Amtes (PAAA), R 105990. See also: (WiRüAmt, Ro) V b, “Aktenvermerk über eine Besprechung beim RWM am 22. Dezember 1939,” 23 December 1939, T-77/671 (Wi/IV. 236).

²⁴ OKW, WiRüAmt (Oberst Dr. Hedler), “Die Mineralöle und die Versorgungslage im Kriege,” Abgeschlossen 31 August 1941, T-77/438 (Wi/IF 5.2726). Ominiously, during an interagency discussion of the treaty, Schnurre stressed “that German exports must be guaranteed in the period up to August 11, 1941, because up to that time the Soviet side had committed itself to especially large deliveries, which in part could not be matched until later by German counterdeliveries.” Document nos. 637 and 640 in: *DGFP* (D), xi: 1066-1068 and 1070-1072; and “Record of the Meeting of the Interministerial Committee of February 4, 1941,” zu Ha. Pol. V a 357, Document No. 13 in: *DGFP* (D), xii: 19-21.

²⁵ Kapitän zur See Gottfried Griebel an den Herrn Chef des WiRüAmtes über Chef Ro., W Ro, Az. 66 b 24 (Va), 05 January 1940, IWM, FD 4809/45.

²⁶ The problems are summarized in: Militärgeschichtliches Forschungsamt (MGFA), *The Attack on the Soviet Union*, vol. 4 of *Germany and the Second World War* (New York: Oxford University Press, 1998), 118-136. For 1940, the Ministry of Economics (Reichswirtschaftsministerium, RWM) had planned on 60,800 tons of imports per month, but they peaked at 56,286 tons in January and amounted to only 38,261 tons in June. Ro V, Az. 11 k 2209 (Vs), “Mineralöl-Einfuhr aus Rußland 1941 nach den Planungen des RWM vom 4. 12. 1940,” 11 January 1941; and OKW WiRüAmt/Ro, Az. 11 k 2209 V 1s [?], “Mineralöl-Einfuhr im 1. Und 2. Kriegsjahr,” 22 December 1941, IWM 4809/45.

the Russians.”²⁷ Deliveries of Soviet grain and oil did not resume until 09 April 1940, after Göring “had personally given satisfactory assurances” to Moscow’s representatives.²⁸ Soviet deliveries spiked to the point of overloading the German railway system soon after the collapse of France and in the spring of 1941 after reports reached Moscow of a German military build-up along the German-Soviet border. In both cases, the Soviets had increased exports to soften their hard line on political matters, such as the annexation of the Baltic Republics and Bessarabia in June 1940 and during Foreign Minister Vyacheslav Molotov’s disastrous visit to Berlin in November 1940.²⁹ Even assuming the Allies did not interdict these supplies by launching an aerial assault on the Caucasus from the Middle East, imports of Soviet oil could not fill the gap left by disappointing imports from Romania and higher than expected consumption after the Polish campaign.³⁰

²⁷ Memorandum by an Official of the Four Year Plan (Friedrich Gramsch, Ministerialdirektor), V.P. 5697 g, W 1734 g., 01 April 1940, Document No. 32 in: *DGFP* (D), ix: 59-61.

²⁸ Document nos. 51 and 70 in: *DGFP* (D), ix: 82-83, and 106. Commercial relations between 1939 and 1941 are summarized in Manfred Zeidler’s “German-Soviet Economic Relations during the Hitler-Stalin Pact,” in: *From Peace to War: Germany, Soviet Russia and the World, 1939-1941*, ed. Bernd Wegner (Providence: Berghahn Books, 1997), 95-111. Zeidler concludes that the Germans received extremely favorable terms under the 1941 commercial agreement, and that they came out ahead on both the 1940 and 1941 agreements to the tune of 146,000,000 RM (the German deficit vis-à-vis Soviet deliveries). The overall financial balance was, however, unfavorable to the Reich if one includes the 1935 and 1939 credit agreements (a loss of 300,000,000 RM). Wolfgang Birkenfeld argues that the Germans got the better of the agreement. Although the Soviets received state-of-the-art German hardware, it quickly became obsolete, and there was no time for the Soviet armaments industry to make use of the new technology, except in the case of machine tools. On the other hand, the Germans used Soviet raw materials deliveries to top-up their stockpiles, although Birkenfeld’s claim that the German supply position was never stronger than on the eve of Barbarossa is not true in the case of petroleum. Birkenfeld, “Stalin als Wirtschaftspartner Hitlers, 1939-1941,” *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 53: 4 (1966): 477-510. The Germans managed to import 250,000,000 RM worth of goods from the Middle and Far East via the Trans-Siberian Railway, including 15,000 tons of vital rubber prior to Barbarossa. Schwendemann, “German-Soviet Economic Relations,” 162. See also Hartmut Pogge von Strandmann’s “Appeasement and Counter-Appeasement, 1939-1941,” in: *Conflict, Catastrophe, and Continuity: Essays on Modern German History*, ed. Frank Biess, Mark Roseman, and Hanna Schissler (New York: Berghahn Books, 2007), 157-176; and Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003), 207-208. The best treatment of Nazi-Soviet economic relations between 1939 and 1941 (with an invaluable statistical appendix) is: Edward E. Ericson, *Feeding the German Eagle: Soviet Economic Aid to Nazi Germany, 1933-1941* (Westport: Praeger, 1999).

²⁹ Throughout the period of the Nazi-Soviet Pact, Stalin had labored under the mistaken impression that he was dealing directly with Hitler, and that his many concessions on economic matters would demonstrate the Soviet Union’s value to Germany. In fact, Hitler had no interest in the relationship with the Soviet Union and had delegated negotiations to the AA, which did not represent Hitler’s interests, *per se*, but rather those of the bureaucracy in Berlin, much of which valued the economic benefits of Nazi-Soviet cooperation. Heinrich Schwendemann, “German-Soviet Economic Relations at the Time of the Hitler-Stalin Pact, 1939-1941,” *Cahiers du Monde russe* 36: 1/2 (1995): 161-178.

³⁰ WiRüAmt estimated the loss of Soviet oil imports as a result of an attack on Baku (700,000 tons in 1940) would result in a 44% reduction in Germany’s imports and the loss of 14% of its total supply – “a loss [Ausfall] that is

In October 1939, the chief of the WStb, General Georg Thomas noted that although Germany had managed to acquire “a good crude oil territory” in Poland, the overall situation remained dire, even if the additional coal from Polish Silesia was exchanged for oil from elsewhere in Europe or from the Soviet Union. Although Germany signed a new economic agreement with Romania in September 1939, oil exports were limited to 1,500,000 tons due to a lack of transportation capacity: “In the case of crude oil transports, the shortage of railway freight cars and Danube barges presents particular difficulties.” Thomas concluded “that the possibilities for the supplying of Germany with the most urgently required goods from the European area are judged to be unfavorable,” while any expansion of Soviet exports would run into transportation bottlenecks that would not be resolved “for a fairly long period of time.”³¹

Despite his optimism in April 1939, by October, the German economy again proved incapable of meeting Krauch’s steel requirements.³² Even before German forces fell upon Western Europe in May 1940, the optimistic assumptions that had underpinned German petroleum planning before September 1939 had come undone. During the first six months of the war, reserves of motor and diesel fuel, and navy fuel oil dropped by more than half, from 970,000 tons to 438,000 tons, although aviation fuel reserves increased slightly from 442,000 to 480,000 tons.³³

The Polish campaign did not pose extraordinary demands on German petroleum reserves – consumption was manageable and stocks replenished by higher domestic production and imports. The

unbearable if the armed forces are expected to undertake major action.” Ro V (Griebel), Az. 66 b 24 (Va), “Vortragsnotiz über die Auswirkungen des Ausfalls des Bakuer-Erdölreviers auf die deutsche Mineralölversorgung,” 27 January 1940, T-77/128 (Wi/IF 5.549). For more on Allied planning to bomb the Caucasian oilfields in 1939-40, see: Ronald Cooke and Roy Nesbit, *Target, Hitler’s Oil: Allied Attacks on German Oil Supplies, 1939-1945* (London: W. Kimber, 1985), 21-51; and Charles Richardson, “French Plans for Allied Attacks on the Caucasus Oil Fields, January-April, 1940,” *French Historical Studies* 8: 1 (1973): 130-156.

³¹ “Inspekteurbesprechung am 12. 10. 39: Vortrag Chef W Wi,” T-77/312 (Wi/IF 5.1788). These difficulties, arising from the collapse in imports as a result of the Allied blockade even after the signing of the Non-Aggression Pact with the Soviet Union, are summarized in: Williamson Murray, *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton: Princeton University Press, 1984), 326-334.

³² By then, only 95,000 tons were left available after the RWM and military had received their share. A further 10,000 tons would have to be subtracted to meet the requirements of the German domestic crude oil industry. Dr. R/Hoe., “Notiz über den Stand der Durchführung des wehrwirtschaftlichen neuen Erzeugungsplan vom 12. July 1938 (Karinhallplan) im Mobfalle. *Stand 1. Oktober 1939*,” 02 Oktober 1939, no author (probably the Office for Economic Development – Reichsamt für Wirtschaftsausbau, RWA), T-77/310 (Wi/IF 5.1773-4).

³³ The supply position during the first year of hostilities is summarized in: OKW, WiRüAmt/Ro, “Entwicklung der Rohstofflage im 1. Kriegsjahr und ihr gegenwärtiger Stand,” 11 September 1940, T-77/123 (Wi/IF 5.533).

consumption of aviation fuel in September 1939 was a mere 54,000 tons, against 276,000 tons of motor fuel and 155,000 tons of diesel fuel. Germany began the war with 2,400,000 tons worth of reserves.³⁴ As of 01 October 1939, German petroleum stocks stood at 1,810,000 tons, which worked out to 4.5 months of aviation and motor fuel consumption, three months of diesel, and 6.5 months of fuel oil. On the basis of these reserves, Germany could fight a war for twelve months by importing an additional 3,123,500 tons, equal to about half of Romania's production at the time.³⁵

Interestingly, these rates of consumption were almost identical to estimates by the main British economic intelligence agency at the time, the Industrial Intelligence Centre (IIC). Following the war, British investigators came upon WStb's estimates of Germany's raw materials position in October 1939 and found the similarities between the German and British assessments "little short of staggering." The most important point of divergence was the size of German reserves. IIC put forward a figure of 3,000,000 tons, but the rest of the British Government found this figure implausible – surely no country would go to war with such meager stocks – and they revised the estimates upwards by 2,000,000 tons. Consequently, all subsequent British economic intelligence estimates overestimated German reserves by this amount for the rest of the war. The former deputy head of the IIC concluded in September 1945 that there was "much deliberate bluff" behind the Germans' decision for war, and that their success during the first year of the war created "a false sense of security" concerning Germany's petroleum supply.³⁶

At the end of September 1939, Plenipotentiary for Automotive Affairs (Kraftfahrwesen) Adolf von Schell assured the Chief of the General Staff, General Franz Halder, that the "fuel problem" had been "solved," while Thomas reported that Air Force consumption had only been "equivalent to half a month's

³⁴ OKW, Feldwirtschaftsamt (Bearbeiter: Dr. W. Tomberg), "Wehrwirtschaftliche Erkenntnisse von 5 Kriegsjahren," Abgeschlossen: November 1944, T-77/429 (Wi/IF 5.3517).

³⁵ W Ro I Nr. 4595 g, 66 p 2010 Is, "Einfuhrbedarf Deutschland in den ersten 12 Mob-Monaten," 09 September 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 46 to: OKW, Gen.z.bV.1., "Die Arbeiten des WiRüAmtes an der Mineralöl-Versorgung," no date (handwritten notation reads: "vom Dezember 1944"), T-77/183 (Wi/IF 5.751) – here after cited as "Die Arbeiten des WiRüAmtes."

³⁶ Martin Watson to Desmond Morton (Director of Industrial Intelligence Center), 05 September 1945, British National Archives (BNA), PREM 7/14. For more on Germany's relatively weak petroleum position at the start of the war, see: Williamson Murray, "The Change in the European Balance of Power, 1938-1939," Ph.D. Dissertation, Yale University (1975), 128-136; and Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 412.

production.”³⁷ Unfortunately for the Reich, this proved to be only a temporary reprieve: between October and December, reserves of motor fuel and diesel suffered a precipitous decline (40% in the case of the former – 454,000 to 280,000 tons – 50% in the case of the latter – 298,000 to 150,000 tons) for three reasons. First, production of motor fuel had initially been curtailed by 30% in favor of aviation and diesel fuel. This shortage could be rectified relatively easily by shifting the emphasis back to motor fuel output, since the reserves of aviation fuel were actually larger by the end of 1939 than they had been on 01 September (500,000 vs. 492,000 tons).³⁸ The other two reasons were somewhat more intractable: both civilian and military consumption of gasoline and diesel even during the lull in the fighting after the Polish campaign was higher than expected; and imports bottomed out not only because of the loss of overseas imports but also because deliveries from Romania dropped due to transportation difficulties, particularly the freezing of the Danube and frost/snow on the railways. On the eve of the German invasion of Norway in April 1940, Defense-Economy and Armaments Office (Wehrwirtschafts- und Rüstungsamt, WiRüAmt, which succeeded the WStb in November 1939) forecasted that motor fuel reserves would be exhausted by the summer.³⁹

According to the WiRüAmt’s calculations, the situation would “gradually” improve starting in April due to higher domestic production, the arrival of imports from the Soviet Union, and the resumption of

³⁷ *Halder Diary*: 28-29 September 1939.

³⁸ Krauch shot down this idea the following month during a meeting of the General Council of Four-Year Plan (Vierjahresplan, VJP), pointing out that Germany could simply import the required motor fuel from Romania and the Soviet Union, neither of which could offer much in the way of aviation fuel. Moreover, Krauch was convinced that Germany’s “*mineral oil supply* was assured” through the addition of imports from Romania and the Soviet Union (to the tune of 2,500,000 tons for the year), although “[this] presupposed the settling of the transportation question.” “Meeting of 10 January 1940,” Partial Translation of Document NI-7474, in: Nuernberg Military Tribunal, *Trials of the War Criminals* (Washington, DC: U.S. GPO, 1953), vii: 965-967 – hereafter cited as *NMT*. Emphasis in the original. A detailed overview of Germany’s petroleum position by the RWA later that month also pointed out that Air Force consumption would increase dramatically by the second half of 1940, which would leave Germany able to produce only 58% of its requirements even assuming that the production of aviation fuel received maximum priority. If need be, the excess aviation fuel could simply be used in lieu of motor fuel in vehicles, whereas the opposite was impossible. “Treibstoffversorgung,” 15 January 1940, no author (handwritten notation reads: “Anlage zum Schreiben an Staatssekr. Körner v. 16.1.40.”), T-84/216 (EAP 66-c-12-62/29).

³⁹ These factors are summarized in: OKW, WiRüAmt (Bearbeiter: Reg. Rat Dr. Tomberg), “Abschrift nur Mineralöl betreffend aus *Die Probleme der deutschen Rüstungswirtschaft im Kriege*,” Abgeschlossen Ende September 1940, T-77/668 (Wi/VI. 216). To give an indication of the how the winter conditions impaired imports, consider that Romanian deliveries of crude oil and refined petroleum products dropped from 234,000 tons during the last quarter of 1939 to 94,000 in the first quarter of 1940, before climbing to 183,000 tons by the second quarter. See also: Murray, *Balance of Power*, 326-329.

full deliveries from Romania. WiRüAmt stressed, however, that the “utilization of the possibilities for imports” depended upon “the still existing difficulties in the provision of the transportation means necessary for that being remedied.” Until then, WiRüAmt could only suggest “reorienting” production from aviation to motor fuel, further “bothersome but not particularly crippling” reductions in gasoline consumption, having the Army and the civilian economy draw from the relatively large reserves of the Air Force and the Navy, and implement any and all measures to increase imports from Romania.⁴⁰

Basically, the German petroleum position before May 1940 depended on Romania and the Soviet Union fulfilling their assigned roles. This was as clear to the Germans as it was to the Allies, who estimated that Germany could not cover more than one-third of its requirements (even including the occupied Polish oilfields), but that “the pictures changes” if it could make use of Romania’s entire production (33,000,000 barrels) and an equivalent amount from the Soviet Union.⁴¹ The situation was somewhat more complicated if one took into account the entire European Continent. The Institut für Weltwirtschaft estimated that Germany’s wartime consumption was somewhere between eight to

⁴⁰ OKW, Wi Rü Amt/Ro Nr. 3040/39 gK I/V, Az 66 p 2010, “Überblick über die Betriebsstoff-Versorgungslage,” 16 December 1939, T-77/341 (Wi/IF 5.2164, 2687), Anlage 47 to: “Die Arbeiten des WiRüAmtes.” In view of the “strongly variable” situation in terms of consumption and accumulation of motor and aviation fuel, the OKW demanded that the OKH and the Air Force High Command (Oberkommando der Luftwaffe) provide daily supply reports, while the Reichsstelle für Mineralöl (responsible for the allocation of petroleum to civilian consumer) do the same in the case of imports, as well as monthly reports on the overall supply situation. Keitel, Ro V, Az. 11 k 2209 (Vs), “Vortragsnotiz für Chef Wi Rü Amt betreffend kurzfristige Meldungen über Veränderungen in der Betriebsstoff-Versorgungslage,” 16 January 1940, T-77/341 (Wi/IF 5.2164, 2687), Anlage 48 to: “Die Arbeiten des WiRüAmtes.”

⁴¹ Anlage I to: Chef der Sicherheitspolizei und des SD an das AA, “Beurteilung der deutschen Öl-Versorgung in England und in den neutralen Staaten,” 31 January 1940, Bundesarchiv, Berlin-Lichterfelde (BA-B), R 901/116640. German officials monitored Allied assessments of the German oil position throughout the war. Most of these assessments, although they tended to overstate the size of German production and reserves, were nonetheless broadly accurate in that they warned against “underestimating” Germany’s productive capacity while pointing out the Reich’s difficulties in satisfying both European consumption and the requirements of the German armed forces on the Eastern Front without the acquisition of the Caucasus and/or the Middle East. For a sampling, see: OKW, Amt Ausl/Abw, Abt. Ausland, “Schätzung über die deutsche Treibstofflage,” 20 February 1941, T-77/86 (Wi/IF 5.384); Anlage 1) zu “Bremen” nr. 1520/41 g vom 20. 1. 1942, “Betr.: U.S.A. Meldung über die Ölversorgung der Vereinigten Staaten und der Achsenmächte während des Krieges nach amerikanischer Ansicht,” T-77/1375 (Wi/IVB. 21); and the Kontinentale Öl Aktiengesellschaft (Konti), Mineralöl-Archiv, Übersetzung, “*Europäischer Krieg und russisches Öl: Zusammenfassung eines Aufsatzes ‘European War and Russian Oil: the Oil Blockade, Its Evaluation and Importance’ von Frederick Phillip Hellin in der ‘Petroleum Times’ vom 27.6.42,*” enclosed with: Konti to General der Infanterie Thomas (WiRüAmt), [illegible] August 1942, T-77/551 (Wi/I. 315).

10,000,000 tons, with between five to 7,000,000 tons to be imported.⁴² There was no conceivable way of filling this gap in the short term if Romanian and Soviet production had to be shared with the rest of Europe. Assuming the all of the latter two countries' exports in 1938 (5,276,000 tons) went just to Europe, there would still have been a shortfall of 9,205,000 tons (and this was against peacetime consumption figures).⁴³ The Institut therefore argued that it was in Germany's "interest" that neutral Europe, especially Italy, continued to draw, or even increase, its imports from overseas, thus allowing for the "re-orientation" of Romanian and Soviet exports entirely "to the benefit of Germany," at the expense of the Allies. "The most important condition" to meeting the "6-8 million tons," which the Institut determined was Germany's indispensable import requirement, was "*that Romania and particularly the Soviet Union raise their entire export of petroleum,*" since any significant increase in Soviet production would basically render Romania an afterthought.⁴⁴

The Reich's relatively weak raw materials spurred Hitler to finish off France as quickly as possible.⁴⁵ As Göring informed Thomas in January 1940, Hitler was determined "to bring about a decision to the war in 1940." Accordingly, the Reich would expend all available resources to the upcoming offensive in the West "without consideration" for Germany's long-term raw materials position.⁴⁶ As German planning for the assault on the Low Countries and France progressed, it appeared that the Reich would be confronted

⁴² This figure was actually on the high side – in May 1940, WiRüAmt estimated Germany's entire mobilization demand (including Denmark, Norway, and the former Czechoslovakia) at a mere 8,000,000 tons. Ro V an Ro III, Az. 11 k. 2209 (Vs), 15 May 1940, T-77/123 (Wi/IF 5.533).

⁴³ This figure was significantly higher than the quantities provided under Germany's commercial agreements with either country: 130,000 tons per month in the case of Romania – 30,000 tons of which went to the Protectorate of Bohemia and Moravia (the former Czech portion of Czechoslovakia) – and 650,000 tons for the remainder of 1940 from the Soviet Union. It also exceeded the existing capacity of the transportation network linking the Reich to either Romania or the Soviet Union: 100,000 tons per month in the case of the former, and 50,000 tons for the latter. Ro V, Az. k 2209 (Vs), "Notiz für Besprechung in Karinhall am 15. Februar 1940," 14 February 1940, T-77/123 (Wi/IF 5.533).

⁴⁴ Institut für Weltwirtschaft an der Universität Kiel, "Die Versorgung Großdeutschlands und Kontinentaleuropas mit Mineralölerzeugnissen während der gegenwärtigen kriegerischen Verwicklungen," February 1940, T-84/72 (EAP 66-c-12/33). See also: "Das Gewerbe im mitteleuropäischen Wirtschaftsraum (Großraum einschließlich Belgien und den Niederlanden)," Bearbeitet im Institute für Konjunkturforschung, June 1940, T-77/201 (Wi/IF 5.991).

⁴⁵ Murray, *Balance of Power*, 332-333.

⁴⁶ Chef Wi Rü Amt, Aktennotiz, "Betr.: Besprechung bei Generalfeldmarschall Göring in Karinhall am 30. 1. 1940," 30 January 1940, Hoover Institute, Records of the International Military Tribunal at Nuremberg (hereafter cited as: Hoover Institute, Nuremberg Records), Box 995 (PS-1456).

not by an overall shortage of petroleum, but rather, one limited to motor fuel.⁴⁷ In an estimate of Germany's requirements for the first nine months of 1940, the WiRüAmt assumed a spike in Army consumption for three months starting in March 1940 to 110,000 tons, Air Force consumption peaking at 150,000 tons, naval consumption of fuel and diesel "gradually rising" to 95,000 tons and 26,000 tons, respectively, and civilian consumption of 64,000 tons following "the sharpest throttling of demand." WiRüAmt also presupposed "full operability" of all potential sources of supplies, including imports. On the basis of these calculations, WiRüAmt did not believe that there would any problems with the supplies of aviation fuel, or diesel and fuel oil for the Navy. On the other hand, with "gasoline and diesel fuel [for the Army], a temporarily higher consumption will lead to the supply difficulties within weeks, even if the estimated additions [production plus imports] arrive in their full amount." WiRüAmt therefore expressed the most serious concerns about the consequences upon both any "possible" military operations on-going at the time and the civilian food supply.⁴⁸

Although the OKW established an operational reserve on 08 March 1940, the motor fuel situation did not improve – as General Wilhelm Keitel (Chief of the OKW) informed Göring six days later, it had "worsened," to the point "large operations of the Army must be considered as endangered." Following a briefing from Thomas, Keitel warned Göring that, in spite of negligible military requirements and "the exhaustion of every possibility with regard to supplies or imports," motor fuel consumption continued to outpace new supplies – the prime culprit being the "extraordinary weather conditions" that were hindering imports. Between 01 September 1939 and 01 March 1940, motor fuel reserves fell from 324,000 tons to 108,000 tons, while diesel reserves dropped from 230,000 tons to 55,000 tons. If Germany undertook major offensive operations, it could cover its motor fuel requirements for a mere "4-6 weeks," after which

⁴⁷ Halder learned on 12 April 1940 that the existing fuel supply would "[probably] be sufficient until fall," although the Army's operational reserve would run out after three weeks, thereby forcing it to "fall back on the central reserve." *Halder Diary*: 12 April 1940.

⁴⁸ WiRüAmt urged the immediate creation of special, OKW operational reserves of 50,000 tons of both diesel and aviation fuel out existing naval and Wirtschaftsforschungsgesellschaft (Wifo) stockpiles. WiRüAmt, Ro, Nr. 294/4 OgK I/V, Az. 66 p 2010, "Untersuchungen über die Entwicklung der *Betriebsstoffversorgungs-lage* in der Zeit v. 1. 1. – 30. 9. 40," 08 February 1940, T-77/341(Wi/IF 5.2164, 2687), Anlage 49 to: "Die Arbeiten des WiRüAmtes." Created in 1934, Wifo was responsible for the construction of underground Army and Air Force petroleum storage tanks.

it could provide supplies equal on average to only 30% of consumption. Based on Thomas' recommendations, Keitel offered a list of possible corrective measures, including further withdrawals from the Air Force and Navy reserves to boost the existing operational reserve to 100,000 tons of aviation fuel and 200,000 tons of diesel fuel. Keitel also suggested that Thomas be given dictatorial authority over the petroleum industry in Göring's absence, including the right to make the final determination on all questions pertaining to the allocation of fuel.⁴⁹ Göring obliged Keitel ten days later, authorizing not only the expansion of the operational reserves, but also ordering the increased production of motor fuel at the expense of aviation and diesel fuel. He also freed essential personnel within the petroleum industry from military service and instructed the Reichsarbeitsministerium to grant the industry "preferential" treatment concerning its labor needs. Finally, besides granting Thomas the authority to make "recommendations based on the existing operational situation," Göring instructed Krauch, Bentz, and Funk to come up with a plan for assuring a "steady supply" for both the military and the essential portions of the civilian economy, "in particular the agricultural sector."⁵⁰

Germany's first wartime oil crisis was the subject of one of the irregular "Oil Conferences" (Ölsitzungen) chaired by Göring on 27 March 1940 with all of the leading civilian and military official responsible for petroleum policy.⁵¹ Thomas began the conference by explaining that the existing shortage had arisen due to three factors: poor weather hampering imports from Romania and the Soviet Union; higher than expected consumption due to the weather-induced "aggravation of the transportation

⁴⁹ Der Chef des OKW an den Vorsitzenden des Ministerrates für die Reichsverteidigung (Göring), Az. 66 b 2205, Wi Rü Amt/Ro Nr. 1831/40g Vb, 14 March 1940, T-77/377 (Wi/IF 5.2694). Thomas had briefed Keitel on the serious depletion of Germany's reserves over the winter of 1939/40 on 09 March 1940. Keitel had ordered that WiRüAmt's recommendations be forwarded to Göring. WiRüAmt, Besprechungsnotiz, "Vortrag bei Gen. Oberst Keitel," 09 March 1940, IWM, FD 4809/45.

⁵⁰ Der Vorsitzende des Ministerrates für die Reichsverteidigung (Göring) an den Herrn Chef des OKW (Keitel), V.P. 5794/5 g., "Maßnahmen für die Verbesserung der Mineralölversorgung," 24 March 1940, T-77/606 (Wi/IC 4.40).

⁵¹ Records of the Ölsitzungen between 1939 and 1942 (not all of which dealt exclusively with petroleum policy) are scattered between several archival collections. For a list of extant sources, see: Eichholtz, *Deutsche Ölpolitik*, 377, n. 16; and Titus Kockel, "Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940: E. R. Fischer (Reichswirtschaftsministerium, II Min. Öl), 'Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,' September 1940," *Jahrbuch für Wirtschaftsgeschichte* 2003/1: 181, n. 27. Protocols for two conferences in July and November 1942 are reprinted in: Dietrich Eichholtz, "Der Raubzug des faschistischen deutschen Imperialismus zu den Erdölquellen des Kaukasus, 1941-1943," *Jahrbuch für Geschichte* 14 (1976): 462-477 and 483-499.

position”; and “the planned rise in military consumption,” which now ran to 230,000 tons of motor fuel per month, as opposed to the usual 140-150,000 tons. After suggesting that the Navy should be compelled to share some its reserves as a “stopgap measure,” Fischer gave a detailed presentation on the current state of imports from Romania and the Soviet Union.⁵²

The maximum throughput to Germany from Romania was only 130,000 tons per month, which fell to 95,000 tons once one subtracted the requirements of the Protectorate of Bohemia and Moravia (the Czech portion of the former Czechoslovakia) and the Danubian tanker fleet. Current imports, however, stood at only 50,000 tons. Fischer expected to boost the capacity of the Danubian tanker fleet (currently around 80,000 tons) by a further 7,000 tons starting 01 May 1940. It was impossible at the moment, however, to boost the railway carrying capacity (45,000 tons per month using 2,200 tanker cars) due to problems within “Romania itself, where the loading of tank wagons often experiences delays [...]” Hopefully, the situation would improve with delivery of an additional 4,000 wagons over the course of 1940 and the construction of pipelines connecting the Danube to the primary consumers.⁵³ As for the Soviet Union, only 80,000 tons had been delivered during the first quarter of 1940, but Fischer expected that by May, exports would rise to 84,000 tons per month. Poor weather had also delayed the expansion in crude oil production to 200,000 tons from August 1940 to November. Finally, hydrogenation plants were operating at 113,000 tons per month, with a further 6,000 ton increase expected “after August/September.”⁵⁴

The Navy’s oil expert, Fritz Fetzner, claimed during the Oil Conference that the Romanians were not doing enough to procure the agreed upon amounts from the foreign oil companies, such that rail cars were returning to Germany empty. He also suggested that if Germany sold the captured Polish weapons set

⁵² Ministerpräsident Generalfeldmarschall Göring, Beauftragter für den Vierjahresplan (BVJP), gez. Ministerialdirigent, VJP, V.P. 5909 g., “Sitzung betr. Mineralölversorgung unter Vorsitz des Herrn Generalfeldmarschall,” 27 March 1940, T-77/435 (Wi/IF 5.3654), Anlage 52 to: “Die Arbeiten des WiRüAmtes.”

⁵³ The subject of disappointing deliveries from Romania had already come up during a previous conference in January 1940. The former German transportation chief in Romania during the First World War suggested that the lack of unified leadership over railways deliveries was holding back exports. Wi VII, “Niederschrift: Sitzung in Karinhall am 2. Januar 1940 unter Vorsitz von Generalfeldmarschall Göring,” 29 January 1940, T-77/400 (Wi/IF 5.3063).

⁵⁴ Production elsewhere in Axis Europe was trivial: 8,000 tons so far in the General-Government, and 18,000 tons from Italy, Denmark, and Sweden. Ministerpräsident Generalfeldmarschall Göring, BVJP (gez. Ministerialdirigent, VJP), V.P. 5909 g., “Sitzung betr. Mineralölversorgung unter Vorsitz des Herrn Generalfeldmarschall,” 27 March 1940, T-77/435 (Wi/IF 5.3654), Anlage 52 to: “Die Arbeiten des WiRüAmtes.”

aside for Romania to other nations for dollars, “more petroleum could be bought in Rumania with these dollars.”⁵⁵ Carl Clodius, the Deputy Director of the Commercial Policy Division of the German Foreign Office (Handelspolitische Abteilung, Auswärtiges Amt – AA), Wilhelm Fabricius (German Minister to Romania), and Hermann Neubacher (Special Representative to Southeastern Europe for Economic Affairs) disputed Fetzner’s allegations. Clodius claimed that the primary U.S. oil company (Romano-Americana, a subsidiary of the Standard Oil Company of New Jersey – Jersey) was “one of our principal suppliers.”⁵⁶ There was no point in trying to get oil from the British and French companies while the Danube was frozen since Germany already received more oil than it could transport. Clodius and Fabricius were confident that, now that the Danube was melting, the Romanians would follow through with their promise to “compel the British and French companies to supply us, either directly or indirectly.” Finally, Fetzner’s suggestion concerning purchases of oil in dollars would be “very bad business,” since oil prices had increased 150% since the war began, while the dollar had appreciated by 65% against the Reichmark. Clodius also reminded the AA that arms sales “are the most important factor in our efforts to bring the Rumanians more and more into our camp,” and Bucharest would not take kindly to Berlin reneging on its previous commitments.⁵⁷ Clodius felt no reason to change his opinion concerning Romania’s goodwill following meetings with leading Romanian officials including Prime Minister Gheorghe Tătărescu, who promised that “Rumania was holding at our disposal 80,000 tons a month of state-produced petroleum alone.”⁵⁸ Manfred von Killinger, then serving as a special emissary of Foreign Minister Joachim von Ribbentrop, was more skeptical of Romanian intentions. He was convinced

⁵⁵ The Director of the Economic Policy Department to the Legation in Rumania, No. 295, e.o. W 1627 g., 27 March 1940, Document No. 14 in: *DGFP* (D), ix: 30-31.

⁵⁶ President Franklin D. Roosevelt personally inquired about Romana-Americana exports to Germany during the first months of the war. According to figures procured from the U.S. Embassy in Bucharest, roughly one-quarter of Romana’s exports of gasoline and kerosene went to Germany and the Protectorate between January 1939 and January 1940. F.D.R., “Memorandum for the Secretary of State [and] Assistant Secretary Berle,” 27 January 1940; Bucharest (Hibbard) to the Secretary of State, 08 February 1940; and A.A. Berle, Jr., Memorandum for the President, “Re Romanian deliveries of oil to Germany: Romano-Americana Co.,” 09 February 1940; all in: Franklin Delano Roosevelt Library, President’s Secretary’s File, Box 72.

⁵⁷ The Legation in Rumania (signed by Clodius and Fabricius) to the Foreign Ministry, No. 399, W 1670 g., 29 March 1940; and the Legation in Rumania (signed by Neubacher and Fabricius) to the Foreign Ministry, No. 400, W 1671 g., 29 March 1940; document nos. 21 and 23 in: *DGFP* (D), ix: 41-43, 44.

⁵⁸ The Legation in Rumania to the Foreign Ministry, No. 413, 30 March 1940; and the Legation in Rumania to the Foreign Ministry, No. 421, 01 April 1940; document nos. 27 and 33 in: *DGFP* (D), ix: 49-53 and 61-62.

that what the Romanians most feared was a Soviet invasion, and they would destroy the oilfields with British assistance in such an event.⁵⁹

Göring enthusiastically backed the suggestions made at the March conference and, after securing the Führer's assent, reissued his letter of 24 March 1940 to the OKW the following month as a formal directive.⁶⁰ Special notes went out to Thomas and Bentz requesting that they "make appropriate suggestions" in light of the 27 March 1940 conference.⁶¹ When Thomas reported back in late April, he was pleased to note that the overall military supply position had improved in spite of the recent operations against Denmark and Norway: Air Force consumption would rise, but "only to approximately half of the expected demand peak of 150,000 tons per month," while naval consumption would "decline considerably" in view of their heavy losses in Norway (three cruisers and ten destroyers).⁶²

After consultation with Krauch and the RWM, Thomas suggested additional increases in the production of aviation fuel, since the industry had already achieved a 6,000 ton rise in motor fuel output by reducing production of diesel. The import situation showed little improvement, however, with deliveries from both Romania and the Soviet Union "proving to be sluggish and in no way corresponding to the quantities" stipulated in Germany's commercial treaties with both countries. In April, they delivered only 32,000 tons of motor fuel out of the expected 46,000 tons, and 35,000 tons of diesel fuel

⁵⁹ Minister Killinger to the Foreign Minister, RM 18 g. Rs., 14 April 1940, Document No. 116 in: *DGFP* (D), ix: 165-166.

⁶⁰ Der Vorsitzende des Ministerrates für die Reichsverteidigung (Göring) an den Herrn Chef des OKW (Keitel), V.P. 5794/5 g., "Maßnahmen für die Verbesserung der Mineralölversorgung," 02 April 1940, T-77/377 (Wi/IF 5.2694).

⁶¹ Ministerpräsident Generalfeldmarschall Göring, BVJP, an Herrn Generalleutnant Thomas – oder Vertreter im Amt – OKW (cc'd to Bentz), V.P. 5928, 03 April 1940, T-401/5 (RBF 96). For Bentz's response, see: der Beauftragte des Ministerpräsidenten Generalfeldmarschall Göring für die Förderung der Erdölgewinnung to Generalleutnant Thomas (OKW, WiRüAmt), "Betr.: Sicherstellung der Kraftstoffversorgung," 13 April 1940, T-401/5 (RBF 96). Bentz's reply was based on: Fachgruppe Erdölgewinnung der Wirtschaftsgruppe Kraftstoffindustrie, Wietze Kr. Celle, Hu/P, "Aktennotiz über die zur Zeit bestehenden und in Zukunft zu erwartenden Schwierigkeiten in der Durchführung des Mob-Planes der Erdölindustrie," 07 April 1940, enclosed with: Fachgruppe Erdölgewinnung der Wirtschaftsgruppe Kraftstoffindustrie to Professor Dr. Bentz, Beauftragter für die Förderung der Erdölgewinnung, Hu/P, 07 April 1940, T-401/5 (RBF 96).

⁶² In January 1940, the RWA had warned that Germany would need to import an addition 1,900,000 tons of fuel oil between January 1940 and 01 July 1941 in order to cover the Navy's requirements. "Treibstoffversorgung," 15 January 1940, no author (handwritten notation reads: "Anlage zum Schreiben an Staatssekr. Körner v. 16.1.40."), T-84/216 (EAP 66-c-12-62/29).

instead of 53,000 tons.⁶³ While the Soviets were “suspending” petroleum exports due to disagreements between the two governments over “counter deliveries” from Germany, in Romania, it was the foreign-owned oil refineries that were holding back exports. High water levels were also impairing transit along the Danube, but deliveries would climb to 107,000 tons per month by May/June.⁶⁴ This increase in Romanian exports proved vital – not for Germany to wage its next military campaign, but rather, to cope with the unexpected demands of its greatest wartime victory.

⁶³ The primary point of contention was the price charged for Soviet oil exports: Berlin was offering a figure 20% higher than the prevailing world price (the price charged at the Gulf of Mexico) and willing to settle for roughly 80%, while Moscow was demanding more than double the Gulf price (138%). In fact, the Soviets were simply attempting to coerce the Germans into accepting a lower price for a cruiser they promised to deliver under February 1940 commercial agreement, which would then be credited against the oil deliveries. Documents No. 229 and 332 in: *DGFP* (D), ix: 317-318 and 454.

⁶⁴ Der Chef des WiRüAmt, OKW (Thomas), an den Vorsitzenden des Ministerrates für die Reichsverteidigung (Göring), Az. 66 b 2205 Ro Nr. 2879/40g Vb, “Betr.: Massnahmen für die Verbesserung der Mineralölversorgung,” Bezug: V.P. 5794/40g vom 2. 4. 1940, 25 April 1940, T-77/606 (Wi/IC 4.40).

The Burden of Victory: The Origins of the Oil Crisis in Axis Europe, 1940-1941

The German campaign against France and the Low Countries in May-June 1940 ranks as one of the most dazzling victories in military history. The degree to which luck had anything to do with the final outcome (a lot) does not detract from the overall magnitude of Germany's triumph, which was as decisive (in terms of speed and overall shock effect) as any that has occurred in modern history.⁶⁵ Historians have nonetheless come to see the events of the summer of 1940 as a different sort of turning point – one that demonstrated the limits of German power. If war is defined as a clarifying act of violence designed to compel an opponent into submission, then Germany was out of short-term options by July 1940. Although its land forces were undefeated, Germany lacked the air and naval assets to do anything more than harass Britain, which would only get stronger as a result of U.S. assistance.

More troubling was the fact that the energy balance had also tipped decisively against Germany.⁶⁶ France had added nothing to the Allied oil supply beyond its 23.75% share of the Iraq Petroleum Company (IPC). Although Middle Eastern oil was no longer available to the British Isles, Britain itself could still fall back on alternative sources and suppliers in the Western Hemisphere. Germany, on the other hand, had acquired one ally (Italy) and a number of dependencies (most of all France) that placed additional strain on German resources without contributing anything meaningful in terms of petroleum.⁶⁷ Italy demanded a share of French oil reserves in the mainland and North Africa, but this was impossible since Germany had to keep the French munitions industry and Mediterranean fleet supplied (presumably

⁶⁵ Karl-Heinz Frieser, *The Blitzkrieg Legend: The 1940 Campaign in the West* (Annapolis: Naval Institute Press, 2005); Williamson Murray, "May 1940: Contingency and Fragility of the German RMA," in: *The Dynamics of Military Revolution, 1300-2050*, ed. Macgregor Knox and Williamson Murray (Cambridge: Cambridge University Press, 2001), 154-174; and Ernest May, *Strange Victory: Hitler's Conquest of France* (New York: Hill and Wang, 2000).

⁶⁶ This is a point neglected in many secondary accounts. One exception is Adam Tooze's *Wages of Destruction*, 411-420, although even he claims that Germany's "main worry" when it came to oil at the end of 1940 "was the problem of finding sufficient storage facilities" (pg. 385).

⁶⁷ As Krauch explained during a presentation in January 1941, existing production was sufficient to cover Germany's own requirements with only a 25% reduction in existing reserves: "[A] worsening of the supply situation enters however through [the] subsidy requirements [Zuschussbedarf] of the occupied territories, particularly France and... Italy," leaving Germany with a 1,600,000 ton deficit for 1941 alone. "Vierjahresplan: Industrielle Rohstoffe: Stand vom 30. 1. 1941 (Unterlagen für den Vortrag Prof. Dr. C. Krauch vor den Führungsstäben Wirtschaft am 30. 1. 1941)," BA-B, R 3112/173. Emphasis in the original.

because they hoped to use it one day against the Royal Navy).⁶⁸ As a result, the Italians warned that their fuel reserves would be completely expended by May 1941, and the AA even warned the OKW in February 1941 that Italians might give up on the war unless Germany rushed 214,000 tons of petroleum products to them for the first six months of the year.⁶⁹

Whether or not the Krauch Plan could be completed was now irrelevant – Germany simply had to acquire more oil in the east. The situation would not be serious for the remainder of the year, except with regard to diesel fuel.⁷⁰ Thereafter, Germany's position would become difficult. As Thomas explained to Göring in June 1940, now that Germany was responsible for supplying most of Europe with oil, the Reich's long-term supply situation had deteriorated significantly. In 1938, Continental consumption totaled 26,800,000 tons, against production of only 7,950,000 tons (not including Germany's synthetic fuel output).⁷¹ Even after ruthlessly curbing consumption, Thomas estimated that existing production, inventories, and imports could keep Axis Europe (not including Italy) fully supplied only until the end of 1940. The following year, assuming that Germany resumed offensive actions, there would be a monthly deficit of 118,000 tons (768,000 tons of demand against 650,000 tons of supply) that could not be filled without dipping into the Reich's stockpiles. Germany could not afford to deplete these reserves entirely, which meant that it was "urgently necessary to accelerate" existing construction projects and further "throttle" consumption. The "improvement of the petroleum situation" should, he argued, be "the most important" task of Germany's armament effort, specifically suggesting that additional resources be

⁶⁸ Chef WiRüAmt, "Aktennotiz über den Vortrag beim Reichsmarschall am 6.11.40. in Beauvais," 08 November 1940, Nuremberg Records, Box 995 (PS-1456).

⁶⁹ Aktennotiz, 06 January 1941, signature illegible (Thomas?); and Thomas, Aktennotiz, 06 February 1941; both in: Hoover Institute, Nuremberg Records, Box 995 (PS-1456).

⁷⁰ Der Chef des OKW (i.A. Thomas) an den Herrn Reichsmarschall des Großdeutschen Reiches, Az. 11 k 2209, WiRüAmt/Ro Nr. 1719/40 gK Vs, "Betriebstoffversorgungslage," 29 August 1940, T-77/377 (Wi/IF 5.2694). Thomas expected that Germany would enter 1941 with reserves of motor fuel, aviation fuel, and fuel oil sufficient for four to five months consumption.

⁷¹ Konti, Mineralöl-Archiv, "Förderung und Verbrauch von Erdöl in der Welt sowie regionale Verteilung der Welterdölausfuhr i.J. 1938 (Schaubild und Tabellen)," May 1942, T-84/51 (EAP 66-c-2-10/21).

devoted to expanding synthetic production and transportation capacity to boost imports from Romania and the Soviet Union.⁷²

Thomas' analysis presented the worst-case scenario, for it was possible to read the supply and demand figures differently. Captured stocks during the May-June 1940 campaigns probably exceeded German consumption and fueled the Battle of Britain in the autumn.⁷³ According to a WiRüAmt assessment of the raw materials position after the first year of fighting, Germany's petroleum reserves had actually increased over the previous twelve months, from 1,900,000 to 2,100,000 tons. If reserves continued to accumulate through higher domestic production and imports, Germany would soon "have reserves by which we could live for five months without a single ton of [additional] imports or supply being necessary." The only immediate cause of concern was the sharp drop in diesel reserves, from 850,000 to 470,000 tons, since demand was expected to rise with the increased construction of U-boats.⁷⁴ This WiRüAmt paper also took a more sanguine view of Germany's ability to cover the requirements of the occupied territories, whose demand was relatively small, with the exception of France, which "possesses reserves, which provide for a provisional supply until next summer." If one recalled that Germany's overall raw materials position, beyond petroleum, was actually "propitious," there was every reason to conclude that Germany "could await further development calmly and optimistically."⁷⁵

This was also the opinion of the economic staff of the Naval High Command (Oberkommando der Marine, OKM). In July 1940, German petroleum production was 31% greater than in September 1939.

⁷² Chef, WiRüAmt, OKW, an den Vorsitzenden des Ministerrats [*sic*] für die Reichsverteidigung, Aktz. 11 k 2209, Wi Rü A/Ro 1330/40 gK Vs, "Betr.: Maßnahmen zur Sicherstellung der Mineralölversorgung im Jahre 1941," 28 June 1940, T-77/347 (Wi/IF 5.2233). According to the Anlage (Ro V, Aktz. 11 k 2209 (Vs), "Übersicht über die voraussichtliche Mineralöl-Versorgungslage 1941," 19 June 1940), the largest shortages would be for diesel and motor fuel (approximately 45,000 and 32,000 tons per month, respectively) although there would be a modest surplus of aviation fuel (12,000 tons).

⁷³ Eichholtz, *Krieg um Öl*, 23-25.

⁷⁴ Göring had consequently ordered in August that fuel production be shifted to boosting diesel output. Overall, however, he was "satisfied" with the fuel position. Chef Wi Rü Amt, *Aktennotiz*, "Besprechung bei Reichsmarschall Göring," 29 August 1940, Hoover Institute, Nuremberg Records, Box 995 (PS-1456).

⁷⁵ OKW, WiRüAmt/Ro, "Entwicklung der Rohstofflage im 1. Kriegsjahr und ihr gegenwärtiger Stand," 11 September 1940, T-77/123 (Wi/IF 5.533). See also: OKW, WiRüAmt (Bearbeiter: Reg. Rat Dr. Tomberg), "Abschrift nur Mineralöl betreffend aus *Die Probleme der deutschen Rüstungswirtschaft im Kriege*," Abgeschlossen Ende September 1940, T-77/668 (Wi/VI. 216). Interestingly, Air Force consumption had actually been one-third lower than originally estimated by the Ministry of Aviation (Reichsluftfahrtministerium).

Romania had, over the past year, delivered 746,000 tons (including 132,000 tons in July alone) and the Soviet Union and Estonia another 565,000 tons. These supplies (which would only increase over the year until the winter), plus the nearly 800,000 tons captured during the campaigns of 1940, meant that Germany enjoyed a “not inconsiderable” surplus, “with the exception of diesel fuel [...]”⁷⁶

In spite of these optimistic forecasts of Germany’s immediate prospects, it seems difficult to dispute the underlying validity of Thomas’ gloomy prognosis. Neutral consumption in Europe in 1938 (excluding Romania, the Soviet Union, and the Iberian Peninsula) was 9,649,000 tons, which was 2,500,000 tons greater than that of Greater Germany.⁷⁷ Even if French consumption under German occupation was cut to the bone, it would still impose an additional drain of 100,000 tons per month on German supplies in 1941, rising to 149,000 tons the following year. This increase would be eclipsed by that of the German armed forces, whose consumption of aviation fuel, motor fuel, diesel, and fuel oil would, according to a WiRüAmt estimate from late November 1940 (not taking into account Operation Barbarossa) rise from 305,000 tons per month in 1940 to 605,000 tons in 1942. Overall consumption in Axis Europe would therefore swell from 754,000 tons per month in 1940 to 1,250,000 tons in 1942.⁷⁸

Rather than making progress toward energy independence, Germany still relied “decisively upon imports from Russia and Romania” – much to the chagrin of now-Reich Marshal Göring. During one of the periodic Ölsitzungen in October 1940, Göring emphasized that Germany needed “to counterbalance [ausgleichen] this dependence upon imports through stockpiling as much as possible.” He did not specify the reasons why this should be the case, except to hint darkly that precautions ought to be taken in

⁷⁶ Amtsgruppe Wehrwirtschaft Kriegsmarine (Vizeadmiral Kurt von dem Borne), M Wa Wi 21 220/40 geh., “Betrifft: Die allgemeine Rohstofflage (ohne Ernährung): Ausführungen Chef M Wa Wi am 21. 9. 40 vor dem Ob.d.M. [Oberbefehlshaber der Marine – Erich Raeder],” 23 September 1940, T-1022/1772 (PG 32209). The Germans lamented that considerable quantities of enemy fuel had been destroyed over the course of the fighting. As early as 22 May 1920, Halder received reports that “little” oil had been captured in Belgium, and that “[tremendous] stocks were deliberately spoiled” in Brussels and Antwerp. *Halder Diary*: 22 May 1940. Fischer of the RWM complained during a press conference in November 1940 of the misinformation concerning the amount of petroleum captured in France. Against roughly 700,000 tons acquired (10% of German consumption) roughly 1,000,000 tons (one-fourth of German production) had been destroyed before capture. Wi VIIIa2, Az. 1t16, “Wirtschafts-Pressekonferenz vom 12. 11. 1940,” 13 November 1940, T-77/220 (Wi/IF 5.1143).

⁷⁷ OKW/OKH, “Mineralöl-Statistik,” no date, T-77/658 (Wi/VI.109).

⁷⁸ Ro V, Az. 11k 2209 (Vs), “Mineralöl-Bedarf 1940, 1941 u. 1942,” 20 November 1940, T-77/704 (Wi/IE 4.40).

the event that “Russia should for some reason no longer serve as a supplier of petroleum.”⁷⁹ For the moment, Germany needed to exercise greater responsibility for the protection of oil production in Romania by dispatching troops to prevent “sabotage and enemy actions.”⁸⁰

Unexpectedly high petroleum consumption also sparked a nasty exchange between the Army High Command (Oberkommando des Heeres, OKH) and the OKW during the winter of 1940/41. After castigating the Army for not providing accurate reports concerning its consumption (which had been off by as much as 100,000 tons of gasoline and diesel), the OKW requested that the OKH voluntarily abide by a monthly allocation 85,000 tons of gasoline and diesel (roughly twice the March 1940 figure, since the Army was in the process of expanding). The Supreme Commander of the Army, Field Marshal Walter von Brauchitsch, complained that this was unacceptable. For one thing, OKW’s comparison between the Army’s current consumption and that of March 1940 was fatuous. In March, the Army had only ten Panzer and seven mechanized divisions, whereas it was now in the process of raising the number to nineteen and thirteen, respectively. The Army was also preparing for operations “in the East” and against Gibraltar and the Balkans (“Felix” and “Marita”). Brauchitsch therefore insisted that the allocation be raised to 117,000 tons, even though this figure would not suffice to cover the Army’s requirements during operations “Felix” and “Marita,” on top of the buildup in the East. By late December, much to the chagrin

⁷⁹ The previous August, Göring had instructed Thomas to ensure that all deliveries from the Soviet Union took place as scheduled until the spring of the 1941. After then, “we would have no further interest in a full satisfaction of Russian wishes.” Chef Wi Rü Amt, “Aktennotiz betr. Besprechung bei Reichsmarschall Göring am 14. 8. 1940,” 14 August 1940, Hoover Institute, Nuremberg Records, Box 995 (PS-1456).

⁸⁰ V.P. 16596 g.Rs., “Vermerk: Besprechung unter Vorsitz des Reichsmarschalls am 4. Oktober 1940 über die Lage auf dem Mineralölgebiet,” BA-B, R 26 I/15. Only a fragment of the protocol survived in the records of the WiRüAmt. All other copies appear to have been lost after the Göring’s office ordered their return in order to make some revisions without apparently resending them. Der Reichsmarschall des Großdeutschen Reiches, BVJP, an Herrn Professor Dr. Bentz, Reichstelle für Bodenforschung (RfB), *et al.*, V.P. 16596/5., “Betrifft: Mineralölsitzung vom 4. Oktober 1940,” 16 October 1940, T-401/5 (RBF 96); and der Reichsmarschall des Großdeutschen Reiches, BVJP, V.P. 16596 g.Rs., 29 October 1940, T-77/594 (Wi/I. 273). Thanks to Thomas’ memorandum of conversation, we do know that much of the discussion focused on boosting imports from Romania. Now that Operation Sealion (the invasion of Great Britain) had been called off, 2,000 railways tank wagons could be rerouted back to carrying oil from Romania. Additionally, Göring ordered the construction of two pipelines with a monthly throughput of 350,000 tons, “built largely with French materials.” Finally, Göring instructed that future imports from the Soviet Union should privilege deliveries of diesel fuel and lubricants, which were in short supply in the Reich. Chef WiRüAmt, “Ergebnis der Besprechung über Treibstofffragen bei Reichsmarschall Göring am 4. Oktober 1940,” 05 October 1940; and Ro I, Aktennotiz, “Besprechung beim Reichsmarschall am 4.10.40,” 05 October 1940; both in: T-77/606 (Wi/IC 4.40). Bentz also briefly described his contributions to the conferences held on 06 September 1939 and 04 October 1940 in: Bentz, “Supplement to my questionnaire,” 11 February 1946, BNA, FO 1039/496.

of the OKH, the OKW put its foot down and imposed rationing on the armed services on the grounds that, if nothing was done to address the impending shortage of motor and diesel fuels, the military would have to dip into its strategic reserve (nicht einsetzbare Bestände) by the spring of 1941.⁸¹

Another person who was concerned that Germany could no longer balance its long-term supply with demand was Krauch.⁸² Allied bombing was not yet a factor: the Allies had begun targeting Germany's synthetic fuel plants in May 1940, but these attacks had only been a nuisance.⁸³ As of January 1941, the Allies had launched 120 bombing raids against synthetic fuel targets but only destroyed 65,000 tons of petroleum.⁸⁴ In fact, until 1943, total German losses of petroleum from Allied bombing equaled only ten days of production.⁸⁵ As Krauch explained to one of Göring's deputies, State Secretary Paul Körner, in December 1940, "various changes have emerged, which have as a consequence a significant aggravation of the fuel supply," including, of all things, an earthquake in Romania in October. For 1940 as a whole, German domestic production reached 3,586,000 tons, 42,000 tons less than expected due in large part to aerial attacks against synthetic fuel plants. Romanian imports were 51,000 tons lower than expected due to aforementioned earthquake and various "political difficulties." The Soviets were also causing headaches by calling off exports of gasoline in October, such that total exports in 1940 fell below expectation by 129,000 tons. Against such losses in supply, consumption turned out to be higher than previously thought – in the case of motor fuel for the military, 166,000 tons. Between June and

⁸¹ The exchange may be reviewed in T-77/341 (Wi/IF 5.2164, 2687), Anlagen 60, 62, 63a-c, and 64 to: "Die Arbeiten des WiRüAmtes"; and OKW (Keitel) to the OKH, Oberkommando der Marine (OKM), Reichsminister der Luftfahrt und Oberbefehlshaber der Luftwaffe (Göring), Az. 66 b 2201, WiRüAmt Ro Nr. 2497/40 gK Va., 23 December 1940, T-77/377 (Wi/IF 5.2694).

⁸² Although he publicly extolled the accomplishments of the VJP, Krauch subtly conceded that the plan had not been designed to cope with meeting Europe's entire raw materials consumption, and that the Reich's supply position was "tight" as a result of this additional burden. Carl Krauch, "Die Kriegsleistungen der chemischen Erzeugung und ihre kommenden Aufgaben," *Vierjahresplan*, 1942: I

⁸³ As of November 1940, WiRüAmt judged the Allied bombing attacks to be "insignificant." (OKW), WiRüAmt, Stab Ib 5, "Abschriften nur Mineralölbetreffend aus Interne Monatsberichte zur deutschen Rüstungswirtschaft (Auswertung der Kriegstagebücher WiRüAmt Stab, W Rü und W Ro)," no date, T-77/668 (Wi/VI. 216).

⁸⁴ "Vierjahresplan: Industrielle Rohstoffe: Stand vom 30. 1. 1941 (Unterlagen für den Vortrag Prof. Dr. C. Krauch vor den Führungsstäben Wirtschaft am 30. 1. 1941)," BA-B, R 3112/173.

⁸⁵ A source of great happiness to Hans Kehrl (one of Albert Speer's key deputies after 1942), who "sighed with relief" whenever he learned that Allied bombers were targeting Berlin rather than the synthetic fuel plants. *Krisenmanager im Dritten Reich: 6 Jahre Frieden – 6 Jahre Krieg, Erinnerungen* (Düsseldorf: Droste Verlag, 1973), 366-367.

September, moreover, the military had also helped itself to an extra 78,000 tons of booty in France without bothering to inform anyone. For the year as whole, Krauch had to revise an earlier estimate of German reserves from October 1940 downwards, from 2,428,000 to 2,057,000 tons (18%).⁸⁶

Krauch estimated that German production in 1941 would increase to approximately 4,470,000 tons, but the import situation would be less promising. Imports from Romania would be less than originally planned: 2,872,000 tons vs. 3,200,000 tons – which assumed that the country would raise production to 6,000,000 tons, 800,000 tons of which would go to Italy, leaving the remainder for internal and neighboring consumption. Meanwhile, imports from the Soviet Union would likely remain at the 1940-level, 740,000 tons, instead of the desired 835,000 tons, since however much it might desire higher exports, Germany lacked the means to pay for them.⁸⁷ Military and civilian consumption would, on the other hand, rise by 1,072,000 tons and 180,000 tons, respectively. The former had nothing to do with any expected offensive operations – they were the result of already planned expansions of the Air Force and Navy, as well as training to preserve the military's operational readiness. As the Office for Economic Development (Reichsamt für Wirtschaftsausbau, RWA) explained, “[the] *elimination of the island of England as an American aircraft carrier*” was the “pre-requisite” for guaranteeing Germany the raw materials and munitions foundation for a drawn out war. For that reason, the needs of the Air Force and the Navy (U-boats) ought to take precedence over those of the Army.⁸⁸ By the beginning of 1942, Krauch

⁸⁶ Krauch to Körner, Min. Öl. P Dr. Ad.M./Schw, “Treibstoffversorgung,” 14 December 1940, T-77/704 (Wi/IE 4.40).

⁸⁷ There was also the fact that Soviet demand had outpaced new production since the mid-1930s, such that Soviet exports had shrunk from 6,000,000 tons in 1932 to only 1,930,000 tons in 1937. German analysts correctly judged that this decline would be rectified once the Soviets made the necessary capital investment to start up production in the Volga-Urals. In the meantime, Baku would remain the “backbone” of the Soviet oil industry. Dr. Paul Ruprecht, “Die Ergänzung des kriegswichtigen bergbaulichen Rohstoffbesitzes Deutschlands durch den russischen,” *Militär-Wochenblatt*, 124. Jahrgang, Nummer 20 (10 November 1939); Dr. Paul Ruprecht, “Die Ölfelder von Baku in der Erdölversorgung Russlands,” *Militär-Wochenblatt*, 124. Jahrgang, Nummer 47 (24 May 1940); and Dr. Paul Ruprecht, “Erdölbedarf und Erdölverteilung,” *Militär-Wochenblatt*, 125. Jahrgang, Nummer 40 (04 April 1941).

⁸⁸ I Dr. R./vB., “Zur Entwicklung der Rohstofflage bei langer Kriegsdauer,” 28 January 1941, NARA, Record Group 238: National Archives Collection of World War II War Crimes Records, National Archives Microfilm Publication T-301, Reel 73, Document NI-8835 – hereafter cited as: NARA, RG 238, T-301/Reel No. (Document No.). Emphasis in the original.

expected that German reserves would stand at only 840,000 tons instead of the 3,492,000 tons he originally estimated.⁸⁹

The situation would become truly critical in 1942. Krauch assumed that German production would rise by an additional 1,260,000 tons, and Romanian crude oil output by 1,500,000 tons (thereby leaving 3,350,000 tons for Germany, or 2,750,000 tons of fuel), while Soviet imports would remain at the 1941-levels and consumption within the civilian economy and occupied territories only increase slightly. Again, these additions would be eclipsed by military consumption, which would increase by a further 1,500,000 tons. Assuming that the 350,000 tons currently set aside as a special “transportation reserve” for Romanian imports was added to the overall reserves, Germany would have on hand on 01 January 1942 1,190,000 tons, plus 9,230,000 tons worth of new supplies (production plus imports), or 10,420,000 tons in total. Against this, consumption would reach 9,920,000 tons, leaving Germany with a miniscule 500,000 ton reserve by 01 January 1943. Krauch tried to make light of the situation by noting Germany could “at least” cover its requirements in 1942. Thereafter, all existing possibilities of managing the situation would be exhausted, leading Krauch to conclude: “A significant easing of the fuel supply situation would only arise if over the course of the war it became possible to import petroleum from Romania and Russia through the Mediterranean and *most of all* if oil from Iraq from either Tripoli or Haifa was available for supplying Europe.”⁹⁰

Krauch’s estimates were useless in the event of an invasion of the Soviet Union. Besides severing an important source of supply, the military’s monthly “operational demand” – estimated in February 1941 at 200,000 tons of motor fuel and 55,000 tons of diesel fuel for the Army, and 150,000 tons of aviation fuel

⁸⁹ Krauch to Körner, Min. Öl. P Dr. Ad.M./Schw, “Treibstoffversorgung,” 14 December 1940, T-77/704 (Wi/IE 4.40).

⁹⁰ Krauch to Körner, Min. Öl. P Dr. Ad.M./Schw, “Treibstoffversorgung,” 14 December 1940, T-77/704 (Wi/IE 4.40). Emphasis added. I have been unable to locate a copy of the report of 01 October 1940 to which Krauch referred. Please note that although the December paper is almost illegible, in view of its relevance to policymaking, I have made every effort to utilize the most important portions. See also: WiRüAmt, “Übersicht über die Betriebstoff-Versorgungslage 1941,” 12 December 1940, T-77/704 (Wi/IE 4.40), which urged that the expansion of petroleum production should enjoy the same official “level of urgency” (Dringlichkeitsstufe) as that of the production of tanks, planes, and U-boats.

for the Air Force – would skyrocket.⁹¹ As early as January 1941, the OKW feared that Germany would begin Barbarossa with a deficit 150,000 tons per month – and even this figure was based on the assumption that the country had used up its “untouchable reserves” (nicht einsetzbare Bestände) to cover the shortfall between March and May 1941.⁹² Following a January conference with Thomas, Halder noted that the fuel supply position was “serious.” The situation had not improved by March, with Soviet oil exports “down to a dribble,” and even these meager supplies would be unavailable after the start of Barbarossa. Without them, “we shall be able to sustain a large-scale offensive on existing stocks for a period of 2 to 2½ months. After that we shall have to depend on our own production and on Romania.”⁹³ If the invasion began in June 1941, existing production, imports (excluding the Soviet Union), and stocks would no longer cover the military and civilian requirements of Axis Europe for motor fuel and diesel by the end of August. Therefore, Germany’s “aim must be the achievement of a new, sufficient basis [of supply] by no later than August through either military operations or contractual agreements with a partner willing to deliver.”⁹⁴

Two weeks later, following discussions with the RWM and OKW, Krauch laid out the situation for Göring. Expected supplies over the course of 1941 (production plus imports, including 580,000 tons from the Soviet Union) would fall below expectations by 540,000 tons due to disappointing production in Romania and a shortage of skilled labor within Germany, which was holding back the expansion of synthetic production. OKW also revised their requirements upward by 530,000 tons. Once one included the requirements of France and Italy, Germany would end 1941 with an unfilled deficit of 1,180,000

⁹¹ Ro V (Griebel), 11 k 2209 (Vs), “Untersuchung der Betriebsstoffversorgungslage, Januar – August 1941,” 08 February 1941; and Rohstoffabteilung, Az. 11 k 2209 (Vs), Vortragsnotiz für Chef WiRüAmt, “Betr.: Übersicht über die Betriebsstoffversorgungslage 1941,” 25 February 1941: both in: T-77/704 (Wi/IE 4.40).

⁹² The situation was equally grim with regard to diesel fuel. L IV/Qu, “Betr.: Treibstofflage im Fall Barbarossa,” 24 January 1941, IWM, FD 356/46.

⁹³ *Halder Diary*: 28 January and 13-14 March 1941.

⁹⁴ “Vermerk: Kraftstoffversorgungslage im Sommer 1941,” 13 March 1941, no author (according to Wi/IF 5.2726, the author was the Rohstoffabteilung of the WiRüAmt), enclosed with: Min. Öl P Dr. Ad.M./Gr. (RWA?), “Treibstoff-Versorgung: Kalenderjahr 1941,” 27 March 1941, T-77/704 (Wi/IE 4.40). This study made no specific reference to Barbarossa, although it did mention that the “possibilities for acquiring booty in the East like in the West in 1940 cannot be likely be calculated” due to absence of any major ports that could serve as conduits for overseas exports.

tons.⁹⁵ Krauch could offer no real suggestions for addressing this gap other than boosting Soviet imports to the maximum level previously achieved (80,000 tons in August 1940), diverting drilling equipment previously earmarked for delivery to the Soviet Union to Romania in order to raise production beyond the estimated 5,800,000 tons, and “rigorous execution” of orders to the military to conserve fuel.⁹⁶

On the basis of the aforementioned discussion, we might reasonably surmise two things. One, by the end of 1940, German planners understood that the country would sooner or later face a “fuel crisis” due to persistently higher consumption and the continuing inability to increase supplies (particularly imports from Romania) to the extent required.⁹⁷ This crisis was the product both systemic and contingent factors – in the case of the former, that Germany’s obligations after June 1940 vastly exceeded the means available in Continental Europe; as to the latter, once the buildup for Barbarossa began, railways cars had to be reallocated from importing petroleum to moving troops to their staging grounds.⁹⁸ Two, the German

⁹⁵ Leaving aside an “unused minimum reserve” (nicht einsetzbare Mindestbestände) of 760,000 tons.

⁹⁶ Der Generalbevollmächtigte für Sonderfragen der chemischen Erzeugung (Krauch) an den Herrn Reichsmarschall des Großdeutschen Reiches (Göring), I Dr.R./G., 2543/41 g.Rs., “Treibstoffversorgungslage für das Jahr 1941,” 28 March 1941, T-77/594 (Wi/I. 273). Naturally, the Reich was keen to project the image of energy security to outsiders. In April 1941, General Hermann von Hanneken (Plenipotentiary for Iron and Steel Production in the VJP and head of the RWM raw materials division) bragged to foreign newspaper correspondents that, unlike the British and French, who depended on overseas imports vulnerable to interdiction, “our petroleum supply for the most part rests upon a secure, domestic raw materials basis [...]” He advised Germany’s enemies not to hold their breath that Germany would collapse anytime soon because of any raw materials shortages – quite the contrary, the Reich had enough to continue the war “until the final victory is achieved.” “Deutschlands Rohstoffversorgung: Vortrag des Generals von Hannken, Unterstaatssekretär im Reichswirtschaftsministerium, vom 8. 4. 1941 vor den in Berlin tätigen Auslandskorrespondenten,” BA-B, R 3101/3203.

⁹⁷ Between August and December 1940, German military petroleum consumption was higher than at any point prior to the invasion of France, including during the Polish Campaign. This trend continued into 1941: during the five-plus months prior to Barbarossa, consumption was higher every month except February than the peak figure in 1940 (May, during the Battle of France). Overall consumption in 1941 was two-thirds greater than that of 1940: 5,145,000 tons vs. 3,014,000 tons. V.P. 6719/5 gRs, “Treibstoffverbrauch seit Kriegsbeginn in 1000 t,” 03 August 1944, IWM, FD 4809/45.

⁹⁸ By May 1941, OKW informed Halder that it could only send sixteen fuel trains to the forces assembling in the east, rather than the required 22, even though the local fuel depots were only 20% full. *Halder Diary*: 19 May 1941. For more on the difficulties imposed by the preparations for Barbarossa, see: Part IV, Section C, and Anlage 2 (Chef Wi Rü Amt (Thomas), “Die Gründe für die Treibstoffkrise zu Beginn der Ostoperationen und die daraus zu ziehenden Folgerungen,” 03 July 1941) of: OKW, WiRüAmt (Oberst Dr. Hedler), “Die Mineralöle und die Versorgungslage im Kriege,” Abgeschlossen 31 August 1941, T-77/438 (Wi/IF 5.2726). An earlier draft of the “Treibstoffkrise” paper (dated 30 June 1941), which has more to say about WiRüAmt’s logistical planning for Barbarossa, may be found in: T-77/704 (Wi/IE 4.40). Well after Barbarossa, troop transports continued to receive higher priority than those for petroleum, much to the consternation of WiRüAmt. The situation was only resolved at the end of July 1941, when, armed with authorization from both Göring and the OKW, a WiRüAmt officer visited Romania to sort things out. He succeeded in getting 498,000 tons per month’s worth of transportation assets devoted to hauling Romanian oil overland, either to Germany and Italy directly, or by rail or pipeline to the Danube. Luckily, there was no longer any shortage of Danubian tankers. Ro V (d), Az. 11 k 2426, “Aktennotiz über die Reise des

leadership reckoned on having enough petroleum to make it through the year provided that non-military consumption was further reduced, and, most of all, that Barbarossa ended quickly.

The General Staff had drawn up its operational plans on the assumption that the attacking forces would receive 6,710 tons of motor fuel and diesel per day on from twenty-two supply trains. WiRuAmt pointed out in May that this was impossible – the Reich could only provide sixteen trains per day, and that only for the first six weeks. Thereafter, additional conservation measures within the civilian economy and the diversion of Air Force supplies to the Eastern Army (Ostheer) would be required. There was also the matter of where fuel oil for the Navy and Italy would be found. The former would have to rely on its relatively large reserves after the start of Barbarossa in order to cope with the loss of 45,000 tons per month of Soviet imports. The latter could only be supplied adequately from Romania by sending supplies through the Turkish Straits due to the lack of overland and Danubian transportation capacity.⁹⁹ A drawn-out campaign would be catastrophic, for Germany would start running a deficit of 10% as early as July 1941, while reserves would, as Thomas informed Halder nine days prior to Barbarossa, “be exhausted in [the] fall.” Halder scoffed at Thomas’ concerns: “Operational plans cannot be tailored to suit economic planners.”¹⁰⁰ Among the many flaws of the Chief of the General Staff was a contemptuous disregard for logistical matters. In the absence of actual preparations, Halder could only advise his subordinates to “exhaust all means of improvisation.” One historian excoriates Halder’s indifference: “Makeshift solutions were to be a palliative against the truth that only 20 percent of the Eastern Army could engage in the envisaged rapid and far-reaching mobile warfare! The attempt to solve provisioning problems – the vast area, distant objectives, [and] no trains – by using lorries to send supplies illustrates the arrogance of the men who had conquered France.”¹⁰¹

Major Bahl nach Bukarest v. 28.6. – 24.7.41,” 31 July 1941, T-77/612 (Wi/IC 4.75). The letters of authorization from Göring and the OKW are appended as Anlagen 1-2.

⁹⁹ OKW, WiRuAmt/Ro, Az. 11k 2216 (Vb), “Untersuchung der Betriebstoffversorgungslage,” 15 May 1941, enclosed with: WiRuAmt (Thomas; gez. Griebel) an Herrn Oberst Jansen, Az. 11k 2216 Ro Nr. 1600/41gK (Vb), 16 May 1941, T-77/366 (Wi/IF 5.2528-34).

¹⁰⁰ *Halder Diary*: 20 May and 13 June 1941.

¹⁰¹ Förster, “Hitler Turns East – German War Policy in 1940 and 1941,” in: *From Peace to War*, ed. Wegner, 115-133 (quotation from pg. 129).

In February 1941, Thomas warned Keitel and Jodl that, in the event of an invasion of the Soviet Union, aviation fuel reserves would only last until the autumn, while motor and diesel fuel reserves would dry up by “the middle of August.” Keitel reacted by ordering a savings between March and July 1941 of 50,000 tons to 100,000 tons of motor fuel and 50,000 tons of diesel. He informed Thomas that military would have to find a way to deal with problem, since “the Führer would not allow his plans to be influenced by such economic difficulties.”¹⁰² The following month, Thomas explained to both Keitel and Göring that, with the exception of aviation fuel (where the supply situation remained favorable) Germany could probably scrape together its petroleum requirements during the first three months of campaigning. The situation would become either difficult (in the case of motor fuel) or outright untenable (diesel) by September, even assuming that military consumption dropped dramatically. Thomas therefore suggested a series of stringent conservation measures, including cutting the allocation to the civilian economy starting 01 June 1941 by a further 10% and reducing Romania’s exports to third-parties by 20,000 tons a month (including the entirety of Turkey’s imports).¹⁰³

Even then, both WiRüAmt and RWM estimated in May that Axis Europe would be running a monthly deficit of 400,000 tons by 01 October 1941 – roughly one-third of expected demand. The only way to “compensate” for this deficiency was “though the capture of a major oil-producing area” by no later than August in order to assure that deliveries would reach the Reich by October. Unfortunately, even the capture of new oilfields would not completely alleviate Germany’s difficulties, for the Reich would start the New Year without any appreciable reserves, while the winter weather would adversely affect the level of imports from the east.¹⁰⁴ Krauch also agreed that Germany needed the Caucasus. Two days after

¹⁰² Thomas, Aktennotiz, 08 February 1941, IWM, FD 4809/45.

¹⁰³ Der Chef des WiRüAmtes an den Herrn Reichsmarschall des Großdeutschen Reiches, BVJP, [and] Chef des OKW, Herrn Generalfeldmarschall Keitel, Az. 11 k 2209, Nr. 316 [?]/41 gK [?], “Betr.: Betriebstoffversorgung im Sommer 1941,” 27 March 1941, IWM, FD 356/46. Göring was not keen on using aviation fuel for land warfare, but he relented and gave Thomas the requisite authority to divert Air Force supplies to the Army in the event of an emergency. Chef WiRüAmt, “Vortrag beim Reichsmarschall am 26. 6. 1941,” 26 June 1941, IWM, FD 4809/45.

¹⁰⁴ OKW, WiRüAmt/Ro, Az. 11k 2216 (Vb), “Untersuchung der Betriebstoffversorgungslage,” 15 May 1941, enclosed with: WiRuAmt (Thomas; gez. Griebel) an Herrn Oberst Jansen, Az. 11k 2216 Ro Nr. 1600/41gK (Vb), 16 May 1941, T-77/366 (Wi/IF 5.2528-34); and der Reichswirtschaftsminister (i.V. Dr. Landfried) an den BVJP, Herrn Reichsmarschall Göring zu Hd. Von Herrn Staatssekretär Körner o.V.i.A., II Min Öl 82/41 gRs, “Betr. Anforderung

the start of Barbarossa, he explained to the General Council of the VJP that the Reich could probably meet its demands by completely depleting its existing reserves.¹⁰⁵ This would not be possible in 1942: even under the assumption that Germany's total supply increased by the projected 1,400,000 tons (both domestic production and additional imports from Romania), the Reich would still have a 600,000 ton gap that could only be filled by imports from the Soviet Union.¹⁰⁶ This left aside the requirements of the so-called "Göring Plan" of 23 June 1941, which would have quadrupled the strength of the Air Force over the next two years to deal with Britain and the United States. This plan naturally entailed a significant increase in aviation fuel requirements, which would be satisfied by refining 4,000,000 tons of crude oil imported from the Soviet Union.¹⁰⁷

By the autumn of 1940, it was clear to Berlin that Europe would face an oil crisis once existing reserves had been expended unless the Reich took corrective action or, better yet, ended the war. The latter option seemed within reach in 1940, but it posed a new set of problems. Postwar Axis Europe would also depend upon oil imports from overseas, but a return to the prewar status quo was unacceptable – Germany had not fought the war to return Europe to a state of subservience to the major U.S. and British oil companies. Even as German planners tried to resolve Axis Europe's immediate petroleum shortage, they devoted some of their energies to the more ambitious challenge of independently supplying their postwar empire.

der Wehrmacht an Betriebstoffen und Entwicklung der Versorgungslage bis Ende 1941," 24 May 1941, T-77/704 (Wi/IE 4.40). The RWM note enclosed a statistical overview, but I have been unable to locate it.

¹⁰⁵ Compared to the year before, in 1941, Germany would have to reconcile 2,300,000 additional tons of consumption with only 200,000 new tons of supplies. RWA, Dr. Ad. M./Gr., "Treibstoff-Versorgung 1940 und 1941: Stand 13. 6. 1941 (Bermerkung zu dem Schaubild für den Vortrag vom 24. 6. 1941)," 21 June 1941, T-84/217 (EAP 66-c-12-62/13).

¹⁰⁶ Der Reichsmarschall des grossdeutschen Reiches, BVJP, V.P. 10103/1 g.Rs., "11. Sitzung des Generalrats vom 24. 6. 41 unter Vorsitz von Staatssekretär Körner," no date, T-77/430 (Wi/IF 5.3593). Krauch also believed that the existing transportation network could handle 400,000 tons of Soviet imports a month, which "would place" the supply position of the European Axis "upon an entirely new, sufficient basis." I Dr. R./G., "Bericht des Herrn Professor Dr. C. Krauch über die Lage auf dem Arbeitsgebiet des GB-Chemie in der Sitzung des Generalrates am 24. 6. 1941," 25 June 1941, T-84/217 (EAP 66-c-12-62/13).

¹⁰⁷ Eichholtz, *Krieg um Öl*, 90-91; and Karlsch and Stokes, *Faktor Öl*, 204.

Oil and Postwar Planning, 1940

The victory over France in May/June 1940, as unexpected as it was decisive, prompted policymakers across the Reich to speculate on the nature of postwar economic order Germany would establish once it had hammered out peace treaties with the Allies.¹⁰⁸ The question of who exactly would formulate postwar economic policy set off a bitter bureaucratic feud between the AA and the VJP, as both sides claimed authority to determine Germany's economic objectives in future peace negotiations. Göring fired the first shot on 20 June 1940 when he claimed responsibility for the "unified direction of economic matters for the peace negotiations" and designated Funk to handle the formation of the "German-European economic sphere." Ribbentrop whined that the AA had traditionally been responsible for foreign trade, and although he accepted that the VJP was supreme in all internal economic matters, he insisted that the AA handle all matters pertaining to Reich's foreign relations.¹⁰⁹

Meanwhile, Clodius of the AA outlined a series of economic desiderata, including full economic integration with Holland, Belgium, Luxembourg, and Norway. Germany would also have to reacquire its colonial empire, in addition to the Belgian Congo, "largely to close the gaps in its [Germany's] supplies of raw materials." Interestingly, Clodius advised against the simple expropriation of British and French assets. Rather, "in contrast to the Treaty of Versailles," Germany should engineer "[the] sale of English and French interests in third countries, which are of particular interest to us," making specific reference to Anglo- and French-owned oil companies in Romania.¹¹⁰ Clodius then collaborated on postwar economic

¹⁰⁸ Mark Mazower, *Hitler's Europe: How the Nazis Ruled Europe* (New York: Penguin, 2008), 102-136.

¹⁰⁹ Memorandum by the State Secretary, 22 June 1940, St.S. No. 475, 22 June 1940, Document No. 530 in: *DGFP* (D), ix: 683-684; Ribbentrop to Neumann, No. 112, 26 June 1940, Document No. 23; Göring to the AA, V.P. 10996/5 g, 02 July 1940, Document No. 82; Körner (State Secretary, VJP) to the AA, V.P. 11088/1, 03 July 1940, Document No. 103; Ribbentrop to Göring, Pol. XII 1790 g, 09 July 1940, Document No. 142; all in: *DGFP* (D), x: 24, 93, 115, and 170-173. For Funk's specific role in Germany's campaign of economic "spoliation," see: Funk to Hans Lammers (Chief of the Reich Chancellery), Rk. 11834 B., 30 July 1940, Document No. 261 in: *DGFP* (D), x: 369-370; and Funk's testimony at Nuremberg on 05 May 1946, *IMT*, xiii: 129-130. Meanwhile, Ernst Bohle, the head of the Auslandsorganisation, pledged the services of his agency to the AA (where he also served as a State Secretary) when it came to providing information that could assist in the conduct of peace negotiations. Within the section pertaining to "Claims for Damages," Bohle made specific reference to the "oil trusts, mining companies of all kinds, [and] the Suez Canal Co. [...]." Minute from the St. S. und Chef A.O. presented to Emil von Rintelen (Ministerialdirigent, Politische Abteilung), 12 July 1940, PAAA, R 106289.

¹¹⁰ Clodius, "Aspects of the Economic Organization of the Peace," 30 May 1940, Document No. 354 in: *DGFP* (D), ix: 476-482. During the summer of 1940, IG Farben collaborated with the RWM in determining how the European

planning with Ambassador Karl Ritter (AA liaison to the OKW and responsible for all matters pertaining to economic warfare), and the two presented their findings to Ribbentrop on 29 May 1940. Ritter's vision was similar to that of Clodius, if somewhat more expansive, for he envisaged a continental economic and possibly political union of 200,000,000 people and expanded colonial empire in Africa that would also include former French and British possessions. Both Ritter and Clodius were most concerned with the issue of postwar trade, since, as Ritter observed, the population of a German-dominated Europe "have for the most part a consumption and production capacity above average."¹¹¹

Control of Europe would be worthless without oil, however, and various agencies began considering how Germany might address this deficiency. Before the war, Continental Europe had consumed 26,800,000 tons of petroleum products against a local production of 7,950,000 tons of oil (not including German synthetic production).¹¹² In the case of Romania, the Office for Soil Exploration (Reichsstelle für Bodenforschung, RfB – after 1941, Reichsamt für Bodenforschung) estimated that 60,000,000 tons worth of reserves remained. Romania's restrictive mining laws had limited exploration and production, such that output had fallen from a peak of 8,700,000 tons in 1936 to 6,240,000 tons in 1939, and exports from 6,885,000 tons to only 3,848,000 tons during the same period. The major player in Europe was the Soviet Union, whose reserves could be as large as 1,000,000,000 tons. The Soviets had recently begun production in the Volga-Urals – the so-called "second Baku" – but 90% of total production was still concentrated in the Caucasus. The Soviets had shown considerable ingenuity in raising production from a post-Civil War trough of 3,138,000 tons in 1921 to over 29,000,000 tons by 1939, in spite of the fact that

chemical industry would be reorganized under German leadership, with the expressed aim of making the Third Reich's sphere of influence autarkic. IG Farben was also interested in regulating future trade and economic competition with other economic spheres (the United States, Japan, and Italy). "New Order (Neuordnung)," no date or author, enclosed with: Georg von Schnitzler (Managing Board, IG Farben) and Kurt Krüger (Deputy Chief of the Volkswirtschaftliche Abteilung, Vowi) to Ministerialdirigent Gustav Schlotterer (RWM), 03 August 1940, Partial Translation of Document NI-11252, *NMT*, vii: 1451-1463; and Col. B.B. Bernstein, Director, Finance Division, U.S. Group Control Council (Germany) to Lt. Gen. Lucius D. Clay (Deputy Military Governor of Germany), "Report on Investigation of I.G. Farbenindustrie," 12 September 1945, NARA, Record Group 466: Office of the High Commissioner for Germany, Office of General Counsel, Decartelization Division, Cartel Subject Files, 1947-55, Box 26.

¹¹¹ Memorandum by Ritter to Ribbentrop, 01 June 1940, Document No. 367 in: *DGFP* (D), ix: 496-501. According to fn.1 (pg. 496), no record of Clodius and Ritter's oral presentation to Ribbentrop survived.

¹¹² Konti, Mineralöl-Archiv, "Förderung und Verbrauch von Erdöl in der Welt sowie regionale Verteilung der Welterdölausfuhr i.J. 1938 (Schaubild und Tabellen)," May 1942, T-84/51 (EAP 66-c-2-10/21).

they labored under shortages of equipment and experienced manpower. Although rising Soviet consumption had limited the exportable surplus to only 1,000,000 tons to 1,500,000 tons by the end of the 1930s, the RfB nevertheless felt confident “that Russian production will rise further during the next few years.”¹¹³

The most promising source of supply for Europe in the future was neither Romania nor the Soviet Union: according to the RfB, only South America and the Middle East “enter into the equation” as possible suppliers. The estimated reserves of the latter (960,000,000 tons) dwarfed those of the former (500,000,000 tons).¹¹⁴ Production in the Middle East (16,700,000 tons in 1939) was also trivial by comparison to the scale of the reserves. “*When it comes to satisfaction of demand of the oil-poor nations of Europe and Africa, the deposits in the Near Orient, whose production can moreover in future be powerfully raised, will have for the long term a decisive importance.*”¹¹⁵

¹¹³ RfB, *Erdöl in Europa und im nahen Orient* (Berlin, 1940), LOC. For more on the Soviet Union, see: RfB, *Die wichtigsten Lagerstätten der Erde, Heft 4: Erdöl in Rußland* (Berlin, 1941), LOC.

¹¹⁴ German geologists were skeptical of the prospects for significant oil discoveries in Africa, either in Arab North Africa or elsewhere on the continent. Concerning the former, although oil had been discovered in Algeria and Morocco, the level of discoveries “was in spite of all efforts only limited.” Härle (?), A1 Mitt.15, “Nordafrika,” 27 November 1942 (handwritten notation indicates that the memorandum was for Dr. Gerhard Ritter, one of Krauch deputies at the RWA), T-84/51 (EAP 66-c-2-10/17). Even within Egypt, where production had reached over 1,000,000 tons by 1939/40, more than half of output was consumed locally, leaving little available for the Afrikakorps if they succeeded in conquering the country, none of which could be refined locally into high-octane aviation fuel. Krauch to Staatsrat Scheiber (Reichsministerium für Bewaffnung und Munition), “Erdöl in Ägypten,” 02 July 1942; and Härle (?) to Ritter, “Die Möglichkeiten der Lebensmittel- und Rohstoffversorgung aus Ägypten,” 28 July 1942; both in: T-84/51 (EAP 66-c-2-10/17). As for the rest of Africa, although there was some hope that more extensive exploration efforts might yield major discoveries in the future, the prognosis in the short to medium term was grim. See: A. Mayer-Gürr (RfB, Abteilung Erdöl), “Bericht über *Die Ölanzeichen Afrikas* mit Ausnahme der bereits produzierenden Länder,” 15 January 1939, Bundesanstalt für Geowissenschaften und Rohstoffe, 48971 (hereafter cited as: BGR #); A. Mayer-Gürr, “Afrika: Ölzeichen und Aufschlussarbeiten,” July 1940, BGR 48973; “Gibt es eine ‘hoffnungslose Ölarmut’ Afrikas?” *Deutsche Wehr*, Nr. 27/45. Jahrgang (04 July 1941); and Mayer-Gürr, “Die Erdölhoffigkeit Afrikas: Sonderdruck aus *Oel und Kohle* 38, 73 (1942),” BGR 48972. Ironically, the Axis Powers were already in possession of territories containing quantities of oil beyond their wildest imagination in Libya. Unfortunately for them, oil was not discovered until 1959. By 1969, Libya was producing over 3,000,000 barrels per day, compared to Germany’s peak daily synthetic production of 110,235 barrels in 1943. United States Strategic Bombing Survey, *Effects of Strategic Bombing on the German War Economy* (Washington, DC: U.S. GPO, 1945), 75.

¹¹⁵ RfB, *Erdöl in Europa und im nahen Orient* (Berlin, 1940), LOC. Emphasis in the original. For additional studies examining production and foreign ownership of oil in the Middle East, see: Institut für Weltwirtschaft an der Universität Kiel, “Die Erdölwirtschaft des Vorderen Orients,” April 1940, T-84/66 (EAP 66-c-8-38/3); and Institut für Weltwirtschaft an der Universität Kiel, “Die Entwicklung der Erdölwirtschaft in Nahen Osten seit Kriegsbeginn: Als Nachtrag zu unserem Bericht über die Erdölwirtschaft des Vorderen Orients von April 1940,” May 1944, T-84/66 (EAP 66-c-8-38/5). Whereas in the report of April 1940, British interests in the Near East “outweighed” all others, the situation had completely changed by May 1944: “The crude oil industry of the Near Orient stands today as a symbol of the advancing influence of the United States, which believes that, in the Near Orient, it sees the crude

Many of these points were elaborated upon in a follow-up report produced by the RfB in 1942 that dealt exclusively with the Middle East. The RfB believed that, although production in 1940 was limited to 15,700,000 tons, it could be more than doubled to 35,000,000 tons without any expansion of the region's existing transportation infrastructure. Furthermore, current production was limited to only six fields, but a further nine could quickly go into production, thus boosting the region's annual output to 55,000,000 tons, against an internal consumption of only 2,500,000 tons. The bulk of this increase would take place in just five nations: Iran, Iraq, Bahrain, Saudi Arabia, and Kuwait. But the RfB also warned that raising Middle Eastern production was more complicated than just raising output from existing fields. For one thing, "[a] boosting of Near Eastern oil production is dependent upon the possibilities for transportation." Besides the difficulty in bringing the oil to consumers in Europe via pipelines and tankers, Middle Eastern crude oil was "sour" (high in sulfur) and processing it would require special measures during refining.¹¹⁶

Within the prevailing atmosphere of jubilation and reflection upon the shape of the postwar world in Berlin after the armistice with France, two of the Reich's leading petroleum experts – Bentz and Fischer – took up the task of examining the long-term basis for Europe's petroleum supply following the successful conclusion of the war. On 24 July 1940, Bentz completed a study considering "The Safeguarding of

oil territory of the future, [and] whose development with great energy stimulates the protection of its own [oil] deposits [...]."

¹¹⁶ The report's introduction also paid homage to the role played by Germans in the early history of oil development in the Middle East, starting in 1892 when a German firm first drilled for oil in the Sanjak of Alexandretta. The Deutsche Bank's involvement stretched back to 1904, while the German military had tried again in 1916. Finally, although the discovery of oil in Iran was strictly a British measure in a commercial sense, Germans had participated in both the initial exploration and production efforts. RfB, *Die wichtigsten Lagerstätten der Erde, Heft 21: Erdöl in Vorderasien* (Berlin, 1942). Gunther ascribed a sinister motive to the publication of *Die wichtigsten Lagerstätten* series, alleging that they constituted definitive proof of German intentions to seize foreign oil reserves. Gunther surmised that the RfB's report on the Soviet Union "may be described as economic intelligence and it aimed to make essential technical data, from geology to production and reserves available to the occupying forces." A.E. Gunther, "Oil Fields Investigation, Part V, Section 2: Russia (U.S.S.R.), The Ukraine," January 1947, BNA, WO 252/1451 (the last nine pages of which are actually a review of German technical literature regarding the overseas oil industry); and A.E. Gunther, "German War for Crude Oil," (27 March 1948), 314-320. Such allegations are without substance. The language within the reports is inoffensive, while the conclusions were based on publicly available data, especially trade publications. Most importantly, both *Erdöl in Europa und im nahen Orient* and *Erdöl in Vorderasien* were published as installments within an RfB series that would run to at least 23 volumes covering raw materials production across the entire world. Accordingly, in 1942, the RfB also published *Die wichtigsten Lagerstätten der Erde, Heft 18: Erdöl in Südamerika* (Berlin, 1942), T-84/52 (EAP 66-c-2-34/1). Unless one believes that the publication of this study is evidence of a German plot to seize control of South America's oil reserves, there is no reason to think that there were any ulterior motives behind the release of similar studies of the Middle East, or for that matter, of the Soviet Union.

Europe's Crude Oil Requirements."¹¹⁷ Although Germany stood triumphant on the Continent, it now had to take responsibility for provisioning Axis Europe with petroleum without recourse to imports from the Western Hemisphere. Using the 1938 figures as a baseline, the Reich needed to scrape together more than 9,500,000 tons to meet the Continent's requirements in peacetime.¹¹⁸ He noted that Germany had produced 885,000 tons of crude oil in 1939, and that this figure could rise to as much as 1,500,000 tons in 1940. Unfortunately, this rate of production was unsustainable, and Bentz concluded that "one should not count upon Germany being able to deliver a yearly figure of more than 1 million tons of crude oil." Bentz was also skeptical of the geological prospects in Romania, where production in 1940 was already on pace to drop by 2% from the 1939 figure. He was confident that Soviet production would rise in spite of the existing material and labor handicaps, thanks in large part to the development of the "second Baku" west of the Urals. Finally, Bentz surveyed developments in the Middle East. By and large, the same situation prevailed across the region: existing production, already considerable by Europe's meager standards, was only a fraction of potential production due to inadequate transportation capacity (pipelines) and a lack of interest among the major oil companies in boosting output. Bentz made special mention of Iraq, where the output of the Kirkuk field (4,200,000 tons) per annum was considerably below its "natural capacity" of between 15,000,000 to 20,000,000 tons.¹¹⁹

As for reserves, Bentz ventured a guess of 10,000,000 tons in Germany, between 5,000,000 to 10,000,000 tons in Estonia, Hungary, and Albania, 60,000,000 tons in Romania, and 800,000,000 to 1,000,000,000 tons in the Soviet Union. Within the Middle East, reserves fluctuated from a low of 10,000,000 tons in Egypt, to a high of 350,000,000 tons in Iraq just within the Kirkuk field (and a further 200,000,000 tons elsewhere in the country). As for demand, Bentz stressed "that the *greatest consumers*

¹¹⁷ Bentz, "Sicherstellung des europäischen Erdölbedarfs," 24 July 1940, BGR 49459. The language of the report is, in many instances, identical to that of the RfB's *Erdöl in Europa und im nahen Orient*, which suggests that Bentz was the primary author of the latter report, as well.

¹¹⁸ Statistisches Reichsamt, Abteilung VIII, "Die Mangelstoffe des mittel-europäisch-großdeutschen Wirtschaftsraumes," June 1940, T-84/70 (EAP 66-c-12/11). This figure more than doubled if Britain's requirements were included: Statistisches Reichsamt, Abteilung VIII, "Rohstoffversorgung des mitteleuropäisch-großdeutschen Wirtschaftsraumes nach dem Kriege," July 1940, T-84/70 (EAP 66-c-12/10); and Statistisches Reichsamt, Abteilung VIII, "Rohstoffversorgung des europäischen Wirtschaftsraumes (ohne UdSSR), Teil II: Gewerbliche Rohstoffe und Genußmittel 1938," October 1940, T-84/69 (EAP 66-c-12/8a).

¹¹⁹ Bentz, "Sicherstellung des europäischen Erdölbedarfs," 24 July 1940, BGR 49459.

lie in *Europe*, [while] the countries with the *greatest production* and with yet the *greatest reserves* [are] however in the *Near Orient*.” Furthermore, unlike Europeans, Middle Eastern consumers did not have great demand for high-quality refined petroleum products. Excluding England, Ireland, the Soviet Union, and Turkey, Bentz estimated that demand in Europe exceeded the supply by 19,000,000 tons. The situation was only slightly better if European supply and demand was combined with that of the Middle East: a demand of 30,600,000 tons against a total crude oil production of 24,800,000 tons. Bentz believed that there were two ways to resolve this shortfall: The first was through an expansion of synthetic fuel production. The other was through a “significant boosting of crude oil production, which would be easily accomplished within the Near Orient,” as this was a “matter of transportation and would require the construction of some great oil pipelines.” In conclusion, Bentz warned his readers that “[the] *self-supply of European area from European oilfields is entirely out of the question*,” and that it was an “*absolutely necessary*” that Europe secure the crude oil reserves of the Middle East, which was “*the only territory in close proximity to Europe within which major production increases are possible*.”¹²⁰

Bentz was not a voice in the wilderness. An RWA study concerning the viability of a “European economic area” incorporating all European nations besides England, Ireland, Russia, Finland, and the Baltic Republics from June 1940 reached a similar conclusion. The RWA sought to answer a number of questions, including whether Europe could “supply itself with essential raw materials,” and if the “Near Eastern area” (encompassing Iraq, Iran, and the Persian Gulf), could “contribute to the closing of gaps (most decisively for petroleum).” The RWA concluded that German “influence over *the crude oil fields in the Near Eastern area*... must be secured,” since besides the Soviet Union, the remainder of “European and African economic area presents no possibility for supply.” The Middle East, by contrast, produced 18,500,000 tons of oil per annum and could satisfy two-thirds of Continental Europe’s petroleum requirements.¹²¹

¹²⁰ Bentz, “Sicherstellung des europäischen Erdölbedarfs,” 24 July 1940, BGR 49459; reprinted in: Eichholtz, *Deutsche Ölpolitik*, 467-469. Emphasis in the original.

¹²¹ “*Rohstoff Bilanz Europas ohne russischen Wirtschaftsraum und England: Bedarf und Deckung an wehrwirtschaftlich unentbehrlichen Rohstoffen (außer Textilien und Leder)*,” 26 June 1940, no author, T-84/216

At the beginning of August 1940, Göring announced that “[one] goal of German economic policy is the increase of German influence in foreign enterprises.”¹²² At the very least, the Reich would undo the damages inflicted upon Germany and Austria under the treaties of Versailles and St. Germain. Besides a “lump sum payment” of 20,000,000,000 RM, the Reich reserved the right to repossess German or Austrian assets seized by the French after 1918. Among the spoils available was the 23.75% stake held by the Compagnie Française des Pétroles (CFP) in the IPC and the Steaua Romana oil company, both of which had been the property of the Deutsche Bank until their expropriation during the First World War.¹²³

The division of Allied raw materials was the subject of a conference at the RfB on 14 August 1940 chaired by Wilhelm Keppler, who held a joint appointment as the President of the RfB and State Secretary in the AA. During his presentation on the international oil industry, Bentz emphasized the disparity between German consumption and production, noting that whereas peacetime consumption had been 7,000,000 tons, one could “reckon upon an extraordinary rise in view of the progressive motorization and the future excess demands for air travel and in particular sea travel.” He argued that Romania’s declining oil output ruled it out as “long-term” supplier, which rendered it “imperative... at the very least to secure a thorough influence over the oilfields of Iraq (eventually in common with Italy).” Furthermore, “penetration” of the Iranian oil industry would, Bentz advised, be “desirable.” It was vital that Germany coordinated with the governments of oil-producing nations to prevent the transfer of oil concessions held by enemy oil companies to those of neutral nations. Bentz also indirectly argued that Germany ought to take over Royal Dutch/Shell (Shell), since it already occupied Holland, whose nationals controlled 60% of the shares in the company. As Bentz noted, Shell accounted for roughly 30,000,000 tons (over 10%) of the world’s annual production. Although much of this was located in the Western Hemisphere, roughly 2,750,000 tons lay within the grasp of the Third Reich in Romania, Iraq,

(EAP 66-c-12-62/29). According the NARA finding aid for T-84, this report came from a file belonging to Ritter of the RWA, which was probably the originating agency as well.

¹²² Göring to the Reich Commissioners for the Netherlands (Arthur Seyss-Inquart) and Norway (Josef Terboven), and the Military Commander in Belgium (Alexander von Falkenhausen), V.P. 11964/5 g., 02 August 1940, Document No. 278 in: *DGFP* (D), x: 401-403.

¹²³ “Vorschläge für wirtschaftliche Bestimmungen im Friedensvertrag mit Frankreich,” 25 June 1940, no author, PAAA, R 106289.

and Egypt – a figure that would certainly rise in the case of Iraq. Shell also owned a number of refineries, a global marketing organization, and a large tanker fleet.¹²⁴

Whereas Bentz outlined the extent of the challenge confronting Germany, Fischer offered a possible solution in September 1940. Fischer argued that the Reich should establish a joint public-private oil company that would take over the assets of at least the major British oil companies in the Middle East. Fischer surmised that, “[for] the period after the war,” one should “count upon a significant rise in demand, since the motorization of Germany would continue to stride forward.” He calculated that immediate postwar demand would be 50% higher than that of 1938 – 48,000,000 tons (including both Africa and the Middle East but not Britain), of which Germany would account for 50%.¹²⁵ Postwar Europe could either continue to import oil from the Americas or find alternatives. In the case of the latter, there were two options: crude oil and synthetic fuel production within Greater Germany; or imports from Southeastern Europe, the Soviet Union, Iraq, Egypt, Arabia, and Iran. Germany was in a special position: due to its considerable coal reserves, but it was the only nation capable of pursuing synthetic fuel production. Fischer estimated that, by 1943, total synthetic production would reach 7,500,000 tons, on top

¹²⁴ “Protokoll über die Sitzung in der ‘Reichsstelle für Bodenforschung,’ am 14. August 1940,” PAAA, R 106289. The Reich’s primary corporate auditor, the Deutsche Revisions- und Treuhand AG soon completed detailed studies of the assets of both the French petroleum industry (including the Compagnie Française des Pétroles and its holdings in Iraq) and Royal Dutch/Shell (Shell), perhaps as a precursor to German expropriation of French and Dutch oil properties following a future peace treaty: “Bericht Nr. 7268/14329 der Deutsche Revisions- und Treuhand-Aktiengesellschaft, Berlin, über die bei der französischen Erdölwirtschaft vorgenommene Prüfung,” 1940; and “Bericht der Deutsche Revisions- und Treuhand-Aktiengesellschaft, Zweigniederlassung Den Haag, über die beim Koninklijke/Shell-Konzern vorgenommene Prüfung,” 1941; both in: T-401/1 (RBF 2). See also: Wi VI d, “Übersicht über die Beteiligung französischen Kapitals in der Wirtschaft ‘Iran’” and “Beteiligung im ‘Irak,’” 21 January 1940, T-77/1400 (Wi/IIA 5.3-4)

¹²⁵ Much of the increase in consumption would be due to the construction of large Autobahnen that would connect the new empire – a task near and dear to the Führer. *Table Talk*: No. 2 (05-06 July 1941), No. 101 (09-10 January 1942), No. 161 (26 February 1942), and No. 201 (18 July 1942). Following the victory over France, the Organization Todt began the construction of roads linking the Reich to France, Norway, and Poland, and after the start of Barbarossa, planning started for a highway to Moscow. Jochen Thies, “Hitler’s European Building Programme,” *Journal of Contemporary History* 13: 3 (1978): 415-416. Thies’ offers an invaluable perspective on the regime long-term ambitions, but his focus is rather narrow: he notes that, in terms of building material, “Europe alone, to judge only by the projects already in train, would have been unable to supply what was needed,” which meant that the Reich would have to expand its reach to fulfill its architectural objectives (pg. 423). But this judgment applies equally in the case of oil.

of an annual crude oil production of 2,000,000 tons, which would cover roughly two-thirds of Germany's estimated requirements (14,000,000 tons).¹²⁶

Southeastern Europe (including Romania) would probably be able to boost production to 9,000,000 tons, provided that "the Romanian crude oil industry came under German leadership." As for the Soviet Union, it was highly unlikely that any large exportable surplus would exist within "the next few years," but there was every "possibility of producing a much larger quantity for export through a corresponding development of its crude oil industry." As for the Middle East, production there could easily be raised by expanding the capacity of existing pipelines (Iraq), opening up new territories for development (Iran), and allowing production rise beyond the capacity of local refineries (Arabia). Excluding the Soviet Union, the aforementioned nations in Europe and the Middle East currently produced 23,000,000 tons of finished products. Provided that "the transportation and the refining bottlenecks" could be addressed, by 1945, Fischer expected that production could be raised to 54,000,000 tons of finished products against a demand of 48,000,000 tons under the "best-case scenario." The "most important result of these considerations" was that the Axis Powers could "in no event dispense with the oil production of Iran and Arabia."¹²⁷

Fischer noted that the "concentration" of Anglo-Dutch-French interests within the primary suppliers of oil to postwar Europe presented, "on the one hand the possibility of the acquisition of these companies [the Anglo-Iranian Oil Company – AIOC – Shell, and the CFP], while requiring on the other hand, that a corresponding German organization either exist or be created." The assets of U.S. firms would not be seized, since Fischer was confident that the Reich could reach an accommodation with the Standard Oil Company of California and the Texas Company, which controlled production in Saudi Arabia and Bahrain. AIOC and Shell would not be so lucky, as Fischer was certain "that both of these leading groups following the end of the war will carry on a hostile policy to handicap the supplies of the Axis Powers."¹²⁸

¹²⁶ E.R. Fischer (II Min. Öl), "Die Versorgung Europas mit Mineralöl vor dem Kreige, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940," September 1940, BGR, No. 0049457.

¹²⁷ E.R. Fischer (II Min. Öl), "Die Versorgung Europas mit Mineralöl vor dem Kreige, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940," September 1940, BGR, No. 0049457.

¹²⁸ E.R. Fischer (II Min. Öl), "Die Versorgung Europas mit Mineralöl vor dem Kreige, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940," September 1940, BGR, No. 0049457.

As for the German oil company that would replace the Allies in the Middle East, Fischer concluded that a government-owned firm would be incapable of quickly taking over the operations of the major oil companies. German independent oil companies, on the other hand, lacked the necessary capital and skilled personnel. Only a public-private partnership of the sort that had proven so successful at raising domestic petroleum production before the war could “accomplish the intentions of the state in a most efficacious manner.”¹²⁹

Although Hitler agreed that “[we] must at all costs advance into the plains of Mesopotamia and take the Mosul oil-fields from the British,” his objective was always limited to undermining the Allied war effort.¹³⁰ As far as the Reich’s energy security was concerned, his gaze remained fixed upon Romania and the Caucasus, which (along with higher production in Greater Germany) “would have saved us from all anxiety for the future.”¹³¹ The memorandums composed by Bentz and Fischer are nonetheless suggestive, because they demonstrate that men at the highest levels of German petroleum policy understood that the Third Reich would eventually have to secure Middle Eastern oil industry as a postwar source of supply for Axis Europe.¹³² Whether their analyses drove policy or reflected it, after the fall of France, the acquisition of overseas oil assets held by British, French, and Dutch nationals in countries such as Iraq became at least a mid-level war aim of the Reich. Informed observers of the international oil industry certainly believed that Germany would seek the sort of terms that Fischer was suggesting: “the

¹²⁹ Since it was impossible to calculate the value of the assets being disposed of by the German Government, Fischer suggested German firms might purchase the rights to any oil extracted, while the concessions themselves would remain in the possession of the Reich. E.R. Fischer (II Min. Öl), “Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,” September 1940, BGR, No. 49457 (the document itself does not bear this title, but that is the one used in the BGR finding aid); reprinted in Kockel, “Eine Quelle,” 198-208, and Eichholtz, *Deutsche Ölpolitik*, 470-473. Kockel’s article was the first study to cite Fischer’s memorandum directly, although the British Technical Sub-Committee on Axis Oil alluded to a report on the “Petroleum Plan for Europe” produced by the VJP shortly after the French signed the armistice at Compiègne that appears to be either Fischer’s memorandum or a document closely related to it. Chiefs of Staff Committee, Technical Sub-Committee on Axis Oil, *Oil as a Factor in the German War Effort, 1933-1945*, 08 March 1946, A.O. (46) 1, BNA, CAB 121/418. Unfortunately, the report does not provide a citation for this document.

¹³⁰ Part of the reason was his mistaken belief that Haifa was Britain’s “sole loading port for oil.” *Table Talk*: No. 280 (05 August 1942).

¹³¹ Although Hitler agreed that the government ought to take a more energetic role in oil exploration, since private companies could not always be trusted to sacrifice financial gains for the national interest. *Table Talk*: No. 269 (26 July 1942).

¹³² The contents of both memoranda are summarized in: Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941* (Leipzig: Leipziger Universitätsverlag, 2005); and Eichholtz, *Krieg um Öl*, 46-49.

confiscation of the British and French oil interests in Rumania and in the Far and Near East and the acquisition of the British and Norwegian tanker fleet was the least [of] what had to be expected.”¹³³

Bentz and Fischer were not the only people in the Third Reich who believed that Middle Eastern oil could free Axis Europe from the major U.S. and British oil companies. In July 1941, the Minister for the Occupied Eastern Territories, Alfred Rosenberg, argued that one of Germany’s objectives in the Caucasus must be to acquire a “landbridge” to the Near East, as “[only] *this* connection to the sources of oil [in the Middle East] can make Germany and all of Europe independent of any maritime coalition for all time.”¹³⁴

The OKW was also impressed by the significance of Middle Eastern oil to the Third Reich. In a study from October 1940, the OKW assumed that, if Britain lost control of the Eastern Mediterranean, its share of Iraqi production through AIOC (800,000 tons) would go to Germany, while the remaining 3,200,000 tons would be divided between Italy and France. (The prospects in Iran were not good: “Since the British Air Force in the Oriental and East African territories, as well as the British naval support points in Egypt, Malt, Cyprus, [and] Aden, depend overwhelmingly upon the supply of fuel from Abadan, it is not to be presumed that England will yield Abadan without a struggle.”) Middle Eastern oil, which used to travel across the Mediterranean and past Gibraltar, could be re-routed through the Turkish Straits and up the Danube, although this would entail a journey 700 km greater than the one from Batum – the terminus for the pipeline carrying oil from Baku to the Black Sea – to the mouth of the Danube. The report also

¹³³ Since Britain had not obliged Germany by accepting the hopelessness of its position after June 1940, the émigré petroleum economist Walter Levy argued that the Reich had set its sights on the oil of the Caucasus before that of the Middle East because the former was more likely to make a contribution to the German war effort in the short term. Not only was Caucasian production significantly higher than of the Middle East (200,000,000 barrels per year vs. 120,000,000 barrels), but it was also easier to transport it to Germany across the Black Sea (especially since the British would destroy the pipelines from Iraq to the Mediterranean), and because Caucasian oil was easier to refine into specialty products such as lubricating oils than oil from the Middle East. Walter Levy, “Oil Drives Hitler’s Army,” March 1942, American Heritage Center (University of Wyoming), Papers of Walter Levy (hereafter cited as Levy Papers), Box 1. For additional analyses by Levy of oil and German strategy, see: Walter Levy, “Petroleum’s Part in Axis Strategy,” *World Petroleum* 12: 7 (July 1941), 39-43, Levy Papers, Box 1; and articles by Levy from September 1941 and April 1942 published in *Fortune* and *World Petroleum*, reprinted in: Walter Levy, *Oil Strategy and Politics, 1941-1981* (Boulder: Westview Press, 1982), 7-23, 36-43.

¹³⁴ Germany would also take what it needed in the Caucasus: “Economically the German Reich must take the entire oil supply [of the Caucasus] in its hands,” while any arrangements concerning the actual division of resources between the Reich and its Caucasian clients “could be dealt with in the future.” Rosenberg, “Über die Gestaltung Kaukasiens,” 27 July 1941, NARA, RG 238, T-988: Prosecution Exhibits Submitted to the International Military Tribunal, Reel 2 (USSR-58 – quoted in: *IMT*, vii: 326). Emphasis in the original.

observed that “[the] sources of crude oil in the Near Orient could deliver a far higher yield” were it not for the fact that the British and U.S. major oil companies were so worried about overproduction and either “limited or hindered exports to politically unsuitable countries [...]”¹³⁵

For the time being, Britain had the greatest stake in maintaining control of the oil of the Middle East, since British military forces in the region depended on it. In fact, the Axis Powers were in certain respects in a stronger position than the British. Whereas Britain relied upon the refineries at Suez and Haifa to refine Middle Eastern crude, the Axis were supplied from Europe and boasted of sufficient domestic refining capacity to handle large imports of crude oil from the Middle East in the future. In the event of Britain’s “expulsion” from the Middle East, the Axis would be in the position to take over oil production in Iraq and Egypt, which would “mean a strengthening of the crude oil supply of Axis Powers by at least 5 million tons per year.” Iraq was of particular importance to Germany because, unlike in Romania, where the “crude oil fields demonstrate a descending tendency,” Iraq’s oilfields “are capable of boosting production considerably without noteworthy investments.”¹³⁶

The OKW weighed a variety of options for gaining control of the IPC but stressed that this was of “secondary significance” to occupying Iraq itself and the “readiness” of the Iraqi Government “to revise the [oil] concession agreements according to the interests of the Axis Powers.” Before then, any number of headaches could emerge. For example, the British might try to steal a march on the Axis by selling AIOC’s shares in the IPC to their U.S. partners (the Near Eastern Development Corporation – a joint-venture between Jersey and the Standard Oil Company of New York), which the Germans could not touch since the United States was still a neutral power. The Iranian Government might also complicate matters by nationalizing their oil industry before the Axis arrived, although this would still be preferable to the entry of a third-player – the Soviet Union – into the equation. The OKW warned, much as U.S. and

¹³⁵ OKW, Az. 31/34/42/43/45 WiRüAmt/Wi VI, Nr. 17109/40g, “Das Erdöl des Nahen Orients und des Kaukasusgebietes,” 01 October 1940, T-77/646 (Wi/Vi. 19).

¹³⁶ OKW, Az. 31/34/42/43/45 WiRüAmt/Wi VI, Nr. 17109/40g, “Das Erdöl des Nahen Orients und des Kaukasusgebietes,” 01 October 1940, T-77/646 (Wi/Vi. 19). The OKW/WiRüAmt made no mention of the immense resources that would be required to rebuild the IPC pipelines to the Mediterranean in the event of their destruction, a subject that will be discussed below.

British intelligence services did after 1945, that there was ample “evidence” of the Soviets’ “lively interest” in the Iranian oil industry. If the USSR “succeeded in laying its hands upon the Southern Iranian oilfields,” it would “gain an extraordinary augmentation of its economic and military potential.”¹³⁷

The German Minister to Iran prior to the Anglo-Soviet invasion, Erwin Ettel, harped on the Soviet threat in his dispatches. By the spring of 1940, he warned Berlin that the Soviet Union was attempting to take advantage of Britain’s weakness in Iran.¹³⁸ Moscow was “fully aware” of the strategic significance of Iran’s oil reserves and the AIOC oil concession to Britain. Ettel surmised that the Soviets had given up on their long-standing ambition of acquiring free passage through the Turkish Straits. Rather, “[a] glance at the map shows the shortest route from the Soviet Union to the warm oceans would be through Iran.” Ettel’s primary concern was the future of the Iranian oil industry: “Should Iran become part of the Soviet Union, the latter would gain a predominant place in the sphere of petroleum which would, in practice, be tantamount to a position of monopoly.” Since both Germany and Italy had “considerable interest in Iranian oil,” Ettel advised that Soviet energies be channeled “in another direction where there is less a clash with the interests of the Reich,” such as India, which “would not injure the *common* interests of Germany, Italy, and Iran.”¹³⁹ These attempts proved fruitless as the Soviet Union remained committed to

¹³⁷ OKW, Az. 31/34/42/43/45 WiRüAmt/Wi VI, Nr. 17109/40g, “Das Erdöl des Nahen Orients und des Kaukasusgebietes,” 01 October 1940, T-77/646 (Wi/VI. 19). For whatever reason, this document has not been cited anywhere in the secondary literature. It is difficult to assess how widely it circulated, since only one copy appears to have survived. According to a cover letter from the WiRüAmt to the Prussian State Ministry, the attachment was the last remaining copy within the possession of the WiRüAmt. Accordingly, the WiRüAmt requested its “expedited return” within a week. This suggests that the report enjoyed a wide readership, including the leadership of the VJP, which was housed in the Prussian State Ministry. WiRüAmt an das Preussisches Staatsministerium, Az 31 36-48/WiRüAmt/Wi VI (d), Nr.25 629/42g, “Betr.: Erdöl im Nahen Osten,” 16 April 1942, T-77/1401 (Wi/II. 2-3). According to the OKW war diary, a Maj. Zinnemann gave a presentation on Britain’s fuel supplies from the East on 16 October 1940 and delivered supporting materials to the Chief of the Abteilung Landesverteidigung, Warlimont, who was responsible for planning and reported directly to Jodl. Zinnemann’s presentation was probably based upon the aforementioned study, which had only been completed two weeks before. Entry for 15-22 October 1940, OKW, *KTB*, i: 122.

¹³⁸ The two countries had concluded a new Treaty of Commerce and Navigation in March 1940. German analysts interpreted the treaty as an attempt by Moscow to wean Tehran away from London in order to reduce the British threat to the Caucasian oilfields, which Berlin had publicized after capturing incriminating documents in Paris following the fall of France. “Iran: Die Anglo Iranian Oil Company, ein Pfeiler des britischen Einflusses im Orient,” *Vierjahresplan*, 1940: XXII.

¹³⁹ The Minister in Iran to the Foreign Ministry, No. B 938/40-E.G./Z., Pol. VII 463, “Political Report,” 19 May 1940, Document No. 277 in: *DGFP* (D), ix: 379-383. Emphasis in the original.

defending and even expanding its interests in Eastern Europe, which threatened Germany's most important foreign source of oil during the war – Romania.

Romania Chooses Sides, 1939-1941

Although Germany began pulling Romania into its orbit in March 1939, the results had not lived up to the expectations.¹⁴⁰ Romania was Germany's indispensable source of oil imports during the war.¹⁴¹ Ideally, even with its relatively small oil production, Romania could meet Germany's entire wartime petroleum deficit – provided that the financial, political, geological, and most importantly logistical obstacles could be surmounted. As the WiRüAmt concluded at the end of 1939, Germany needed to import at least 190,000 tons a month to meet its minimum military requirements, and 430,000 tons in the event of the “full application of all weapons.” The only possible suppliers besides Romania were the Soviet Union and Estonia. The latter could deliver a meager 10,000 tons per month, while the former had exported only 1,500,000 tons in 1938 and would have less available now due to the war against Finland, which began in November 1939. The 130,000 tons per month secured in the September agreement with Bucharest were impressive considering how much demand there was for Romanian oil, but more needed to be done, including expanding the German presence in Romania, “[expelling] the English and French influence within the Romanian crude oil economy,” developing alternative sources of supply elsewhere in Eastern Europe, seizing control of and expanding the existing transportation network, and ensuring the security of the Romanian oilfields.¹⁴²

The possibility of Anglo-French sabotage could not be discounted due to the presence of Allied personnel in Romania until the summer of 1940. Göring was particularly worried and complained during a January 1940 conference that too much attention had been devoted during the negotiations to the “foreign exchange question” – much to the chagrin of the lead German trade negotiator, Clodius, who pointed out his efforts had resulted in 50,000,000 RM worth of savings for the Reich.¹⁴³ German

¹⁴⁰ The following discussion is based on: Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941* (Leipzig: Leipziger Universitätsverlag, 2005), 17-68; Eichholtz, *Krieg um Öl*, 26-39; and Maurice Pearton, *Oil and the Romanian State* (Oxford: Clarendon Press, 1971), 226-263.

¹⁴¹ A fact Soviet prosecution harped upon during the first Nuremberg trial. *IMT*, vii: 324-326.

¹⁴² Griebel, “Betr.: Rumänien. I) *Bedeutung der Erdölzufuhren aus Rumänien für die deutsche Kriegsversorgung*,” 29 December 1939, T-77/606 (Wi/IC 4.3a).

¹⁴³ Göring had been prompted to raise the issue by the Air Force attaché in Bucharest, Col. Alfred Gerstenberg. In a note from December 1939, Gerstenberg had argued that too much faith had been placed in the talents of German engineers and chemists to replace Romanian oil with “substitute fuels [produced] from the air and crap [Dreck].”

intelligence (the Abwehr) had, however, already implemented a “range of countermeasures” that would be in place later that month.¹⁴⁴

The quickest way to resolve any concerns about Romanian oil production would have been to occupy the oilfields, but this was out of the question. Germany could only exert so much pressure on Romania without risking the destruction of the oilfields themselves. There was no point in seizing the oilfields unless the Reich had the means of maintaining existing rates of production – 70,000 tons per month by May 1940.¹⁴⁵ Hitler himself understood the risks: he told Keitel in April 1940 that he was “striving with all means to keep the Balkans quiet” and had warned off the OKH from planning with the Hungarians to occupy Romania. He would only consider “defensive action” in Balkans, primarily to protect Romania from the Soviet Union or the Allies.¹⁴⁶

On the eve of the invasion of France and the Low Countries (“Case Yellow” – Fall Gelb) in May 1940, Romania supplied 1,640,000 tons out of Germany’s requirements of 8,220,000 tons (20%). Even then, German consumption exceeded supplies by 1,440,000 tons (17.5%), which meant that Romania’s contribution was not only irreplaceable but had to be increased. WiRüAmt warned that an occupation of Romania should only be considered if the Reich could maintain the existing rate of production (70,000 tons) and redirect existing exports to countries beyond the European Axis (1,491,000 tons) to Germany. In such an eventuality, WiRüAmt believed that Germany would need to occupy the oil-producing districts of Prohova (the capital of which was Ploiești), Dâmbovița, and Buzău, plus all of the territories north of

The agency that was responsible for oil policy (and who exactly was in charge was “unclear”) should immediately undertake “assessments” of whether Romanian oil could be replaced with imports from the Soviet Union, and how long it would take to repair any sabotage of the oilfields by the Romanians (possibly aided by the British) in the event of a Soviet attack. Minute enclosed with: Abwehrabteilung II an Abw. III (wi 5) [and] Wi Rū Amt (W Wi), Nr. 1233/[illegible] g Abw II/1 (08), “Betrifft: Rumänien,” 29 December 1939, T-77/600 (Wi/IC 4.77). Emphasis in the original. Gerstenberg wrote this note in response to a report by one Dr. Schober (a member of the German legation in Bucharest), which I have been unable to locate, although copies did go to Fischer, the OKW, and Bentz, among others.

¹⁴⁴ Wi VII, “Niederschrift: Sitzung in Karinhall am 2. Januar 1940 unter Vorsitz von Generalfeldmarschall Göring,” 29 January 1940, T-77/400 (Wi/IF 5.3063).

¹⁴⁵ Griebel, Ro V Az. 66 b 1210 (Va), “Rumänien,” 06 May 1940, T-77/606 (Wi/IC 4.3a-b).

¹⁴⁶ Besprechungsnotiz, “Vortrag Amtschef bei Gen. Oberst Keitel,” 26 April 1940, Hoover Institute, Nuremberg Records, Box 996 (PS-1456).

Danube (including Bucharest), in order to guarantee “the preservation and improvement of petroleum supplies from Romania.”¹⁴⁷

Before the war, Germany achieved limited success in dealing with the thorniest financial and political issues, and its share of Romania oil exports almost doubled from 15.5% in 1937 to 28.9% two years later.¹⁴⁸ Once the war began, the total value of Romanian motor fuel and lubricating oil exports exploded from 65,646,000 RM in 1939 (31.3% of total trade with Germany) to 214,749,000 RM two years later (62%).¹⁴⁹ The Reich proved less successful at tackling the geological and logistical problems. Before the war, most of Romania’s exports had travelled overseas from Constanța: 5,597,000 tons out of 6,885,000 tons in 1936 and 3,315,000 tons out of 4,495,000 tons in 1938. The outbreak of the war and the surrender of France meant that exports, although devoted solely to the Axis, could no longer travel overseas. Exports from Constanța thereafter fell to only 1,393,000 tons in 1940 and 224,000 tons as traffic was rerouted by rail or along the Danube.¹⁵⁰ Germany (not to mention its allies and occupied Europe) required as much oil as Romania could produce, but the inadequacy of the existing transportation network kept deliveries to disappointing levels. Less than 20,000 tons was exported to Germany in January and February 1940, and the figure did not crack 100,000 tons until July.¹⁵¹

During a high-level interagency conference chaired by Göring at his Karinhall estate in January 1940, a representative of the RWM explained that the AA’s negotiations with the Romanians had been too successful – Germany was entitled to more oil (130,000 tons per month) than it was able to transport (only 30,000 tons due to the winter conditions). Rather than trying to pry more oil from Romania, Germany should concentrate on transporting its existing share, ensure that the Romania complied with its obligations, and frustrate any attempts at sabotage by the Allies. All present agreed that this could be best

¹⁴⁷ Griebel, Ro V Az. 66 b 1210 (Va), “Rümanien,” 06 May 1940, T-77/606 (Wi/IC 4.3a-b).

¹⁴⁸ OKW/OKH, “Mineralöl-Statistik,” no date, T-77/658 (Wi/VI.109).

¹⁴⁹ The value of crude oil and tar exports also trebled from 13,552,000 RM to 36,559,000 RM between 1939 and 1942 (from 6.5% of total trade with Germany to 8.5%). Vowi 4968, no date or author, BA-B, R 8128/950.

¹⁵⁰ HaPol IVb, 2548/42. “Die rumänische Mineralölwirtschaft,” no date or author (1942), T-120/2618.

¹⁵¹ WiRüAmt/Ro V, Az. 11 k 2209 [illegible], “Deutsche Mineralöl-Einfuhr aus Rumänien seit Kriegsbeginn,” 02 December 1940, IWM, FD 4809/45.

handled by sending a special representative to Romania to oversee commercial and logistical affairs.¹⁵² At the suggestion of Ribbentrop, the AA established the position of “Special Representative for Economic Questions” within its Romanian legation. Clodius of the AA would fill in on an interim basis (and would remain responsible for all economic negotiations with Bucharest) until Neubacher, then-Mayor of Vienna, could take up the position permanently.¹⁵³

In May 1940, following a query from Wiehl, the AA’s transportation division calculated the transportation infrastructure between Romania and Germany was capable of delivering the amounts to which Germany was contractually entitled (130,000 tons) rather than the existing monthly throughput of 75,000 tons by both rail and river. Reaching the former was impossible unless more railway wagons were made available. Luckily, the slack in deliveries from the Soviet Union (which were considerably below the 60,000 ton limit) meant that some wagons could be diverted to Romania.¹⁵⁴

¹⁵² Memorandum by the Director of the Economic Policy Department (Wiehl), 03 January 1940, Document No. 502 in: *DGFP* (D), viii: 598-603.

¹⁵³ Foreign Minister Ribbentrop to Field Marshal Göring, 04 January 1940; and the Foreign Minister to the Legation in Rumania, W 144g., 13 January 1940; document nos. 508 and 533 in: *DGFP* (D), viii: 615-617 and 661. In 1941, Ribbentrop expanded Neubacher’s remit to cover the whole of Southeastern Europe. The Foreign Ministry to the Special Representative in Charge of Economic Questions, e.o. Ha. Pol. IVb 516, 17 January 1941, Document No. 729 in: *DGFP* (D), xi: 1223-1224. “On account of the cooperation with Neubacher’s office within the area of fuel,” Göring insisted on “unity” between the VJP, the RWM, and WiRüAmt on petroleum policy regarding Romania. Chef WiRüAmt, “Vortrag bei Reichsmarschall Göring am 19.3.41,” 20 March 1941, Nuremberg Records, Box 995 (PS-1456). The following year, Fischer loaned to Neubacher his personal Reichsbeauftragter für Mineralöl (a retired mining engineer by the name of Raab). Der Reichswirtschaftsminister (gez. Fischer), an den Sonderbeauftragten für Wirtschaftsfragen, Herrn Gesandten Dr. Neubacher, “Betrifft: Massnahmen zur Steigerung der Erdölförderung in Rumänien, Ungarn, Kroatien,” 21 January 1942, T-77/606 (Wi/IC 4.3a-b). The Germans were partial to using troubleshooters to deal with thorny bureaucratic problems. Only a few months after Neubacher’s appointment, Göring named General Adolf von Schell, already Plenipotentiary for Automotive Affairs (Generalbevollmächtigter für das Kraftfahrwesen) and an Under State Secretary the Reich Ministry of Transportation (Reichsverkehrsministerium), as the Plenipotentiary for Economic Transports from the Eastern Area (Beauftragter für die Wirtschaftstransporte aus dem Ostraum), “[to] ensure that all imports, which are secured through trade policy and firmly purchased, can be transported without delay or friction to Germany as quickly as possible. This applies first and foremost to petroleum imports, which are a matter of life and death during wartime.” Ministerpräsident Generalfeldmarschall Göring, BVJP, V.P. 9810/2/5, Abschrift W X II 4216/40, 12 June 1940, PAAA, 105988. Schell had been one of the Reichswehr’s leading authorities on motorization during the interwar period (as well as a collaborator with and later rival of Heinz Guderian). He even spent a year at Fort Benning, Georgia (1930-1931), where he attended the Infantry School and studied motorization in the United States. Heinz Guderian, *Panzer Leader* (Cambridge, 2002), 316-317; and Jörg Muth, *Command Culture: Officer Education in the U.S. Army and the German Armed Forces, 1901-1940, and the Consequences for World War II* (University of North Texas Press: Denton, 2011), 142-145.

¹⁵⁴ Martius (Director, Transportation Division, AA), Aufzeichnung, 15 May 1940, PAAA, R 105988.

Neubacher (a former IG Farben representative to Southeastern Europe with impeccable ties to leading figures in the Third Reich and extensive powers to improve the transportation situation) reached a similar conclusion a few days later following his own ground-level investigation. Theoretically, the Danube could handle as much as 874,000 tons between April and December 1940, but “in practice” the actual amount would be around 700,000 tons (an average of 58,000 tons per month, with a high of 117,000 tons between May and November). The available railway cars added an additional 25,000 tons per month, or 300,000 tons for the year, thus allowing Germany to import 1,000,000 tons.¹⁵⁵ Thereafter, “[all] efforts aiming to raise German crude oil deliveries from Romania must... begin with the improvement of the possibilities for transportation, that is to say providing additional tanker tonnage and railway wagons.” Besides the obvious “bottleneck” imposed by transportation capacity, Germany’s ability to import Romanian petroleum also depended upon the availability of refineries owned by hostile oil companies, which itself hinged upon Romania’s willingness to apply pressure on Germany’s behalf.¹⁵⁶ Neubacher was convinced that Romania would play its assigned role so long as Germany continued delivering weapons in exchange for the oil. Price was not a concern for Germany since Neubacher had secured Romanian acquiescence to a fixed price well below the prevailing market rate.¹⁵⁷

Neubacher was referring here to the so-called “Oil Pact” he negotiated a few days later, which formalized the terms for the exchange of Polish arms for Romanian oil first agreed to in March 1940. Rather than purchase oil from Romania at inflated wartime prices, Germany would exchange military

¹⁵⁵ Roughly equivalent to the 130,000 tons per month to which Germany was entitled (190,000 tons in the event of any disruption caused by the Romanians).

¹⁵⁶ With France reeling by mid-May 1940, Romanian officials went out of their way to express their goodwill to Germany, first and foremost King Carol II, who pledged to Fabricius “that Rumania’s future depended solely on Germany” and offered to resolve any outstanding concerns about oil supplies. The Minister in Rumania to the Foreign Ministry, No. 712, 16 May 1940, Document No. 252 in: *DGFP* (D), ix: 349-350. Killinger agreed, pointing out that France’s imminent collapse proved to Carol “that there is no purpose in his being aligned with the Allies.” Germany was now the only power strong enough to defend Romania from the Soviet Union and had every incentive to do so due to its reliance on Romanian oil exports. Minister Killinger to the Foreign Minister, 26 g. Rs., 29 May 1940, Document No. 346 in: *DGFP* (D), ix: 467-470.

¹⁵⁷ “Wieviel Mineralöl kann Deutschland aus Rumänien monatlich beziehen?” 24 May 1940, enclosed with: Der Sonderbeauftragte für Wirtschaftsfragen (Neubacher) an das AA, 18 May 1940 [*sic*], PAAA, R 105988.

hardware for the oil roughly on the basis of prewar prices.¹⁵⁸ Under the pact, Germany would pay 76.52 RM per ton of petroleum including shipping, which was more favorable than the prewar rate that, although about 7% lower, did not include freight charges.¹⁵⁹

Neubacher's efforts and improvements in the weather played a huge role in the quintupling of exports to Germany, from 21,000 tons in February to 105,000 tons by June.¹⁶⁰ The elimination of British and French influence in Romania in 1940 following the collapse of France and the abdication of King Carol was a mixed blessing, however, thanks to Italy's entry into the war. Not only was Romania Italy's only major supplier, but exports would have to travel along the same overloaded rail lines that handled deliveries to Germany via Yugoslavia now that the Mediterranean was off-limits, while the rail network in Albania too primitive to handle the necessary volumes.¹⁶¹ Moving Italy's required 60,000 tons a month would require the services of 4,000 wagons, plus the 5,000 already earmarked for Germany, which worked out to 300 wagons in transit each day. During an interagency conference to discuss the issue, the RWM suggested that the Italians be made aware "the capacity of the Romanian railways has been utilized for the purpose of shipments to Germany so relentlessly that the question will become acute, whether, in view of the possible appearance of additional strain through shipments of crude oil to Italy, other German

¹⁵⁸ Foreign Minister Ribbentrop to Field Marshal Göring, 16 March 1940, Document No. 678 in: *DGFP* (D), viii: 925-926. With the support of the British Government, the major oil companies in Romania had conspired to boost prices in Romania after August 1939. By 1940, the prices for various petroleum products had risen as follows:

Type of Product	Price Increase
Aviation Fuel	347%
Gasoline	256%
Diesel Fuel	258%

Source: Eichholtz, *Rumänisches Öl*, 33, n. 85.

¹⁵⁹ The Special Representative for Economic Questions at the Legation in Rumania to the Foreign Ministry, Tgb. No. 156, I.C. 4 R, W 2891 g., "Signature of the Oil Pact," 28 May 1940, Document No. 338 in: *DGFP* (D), ix: 459-460. See also: Eichholtz, *Rumänisches Öl*, 38-40; and Tooze, *Wages of Destruction*, 381-382. In October, Göring ordered that the pact be "liquidated" and replaced by a clearing agreement. Ro I, Aktennotiz, "Besprechung beim Reichsmarschall am 4.10.40," 05 October 1940, T-77/606 (Wi/IC 4.40).

¹⁶⁰ Eichholtz, *Rumänisches Öl*, 34-38.

¹⁶¹ Production in Albania by 1940 was running at only 300,000 tons a year, while local refinery capacity had been increased to 400,000 tons. Dr. Paul Ruprecht, "Italien und das albanische Erdöl," *Militär-Wochenblatt*, 125. Jahrgang, Nummer 33 (14 February 1941).

imports [from Romania] shall have to regress behind the war-essential petroleum.”¹⁶² RWM advised that the Italians ought to seize control of the Eastern Mediterranean “as quickly as possible,” but the AA replied that this was easier said than done and worried about the political ramifications.¹⁶³

On the other hand, with Romania firmly in the Axis camp, the Reich could now re-establish the commanding position with the Romanian oil industry it had enjoyed prior to the First World War. The defeat of France and the expulsion of Britain from the Continent opened up the possibility of acquiring outright or joint German-Romanian control of those companies with majority French, Dutch, and Belgian ownership, such as Astra Romana (a Shell subsidiary), Concordia, Steaua Romana, and Colombia.¹⁶⁴ During a conference at the RfB in August 1940, Keppler suggested that, for the time being the Reich would only acquire control of the five largest enemy-owned oil companies.¹⁶⁵ With both France and Belgium under German occupation, the Reich expected to coerce the owners of the oil companies to part with their shares, and over the course of the summer, exports to Britain and France ceased, while Germany’s share increased to over 60%.¹⁶⁶ After Romania consented to the dispatch of a German military

¹⁶² Clodius met with the director of commercial affairs at the Italian foreign ministry, Alberto Giannini, a few days later. Giannini agreed that Italy’s requirements should not cause any disruption of deliveries to Germany and “recognized in principle that the Danube must be reserved primarily for us as a transport route.” Memorandum by the Deputy Director of the Economic Policy Department, 22 June 1940, Document No. 531 in: *DGFP* (D), ix: 684.

¹⁶³ Werner Trees, e.o. W III B 3445/40, “Aufzeichnung: über die Ressortbesprechung bei Herrn Gesandten Martius am 14. Juni 1940,” PAAA, R 105988. The Germans also began studying the possibility of constructing a pipeline with an annual capacity of around 1,500,000 tons – or 2,400,000 tons in wartime – of finished petroleum products from Ploiești to the primary loading ports along the Danube, Giurgiu and Orșova. Beginning in March 1941, 340 tankers would be available, but conveying the petroleum would require 6,500 tank wagons (4,000 more than currently in operation), and it was unlikely that the existing railway network or the ports could handle the additional traffic. Dr. Schober (?) to Gesandten Dr. Neubacher, “Aufzeichnung über Besprechung in der Deutschen [*sic*] Gesandtschaft, Bukarest, betreffend geplante Erdölleitung Ploiești – Donau,” 13 September 1940 (?), PAAA, R 105989.

¹⁶⁴ Der Sonderbeauftragte für Wirtschaftsfragen (Neubacher) an das AA, Tgb. Nr. 623/40, “Inhalt: Beteiligung an rumänischen Erdölunternehmen,” 19 September 1940, PAAA, R 105989. See also: Eichholtz, *Rumänisches Öl*, 42-46. The Romanians were certainly keen on eliminating British, French, and Dutch influence over the oil industry: W.F., “Neuordnung der rumänischen Erdölwirtschaft,” *Deutsche Wehr*, Nr. 48, 45. Jahrgang (28 November 1941).

¹⁶⁵ It would not, however, take over all companies owned by Allies due to Germany’s lack of petroleum specialists. “Protokoll über die Sitzung in der ‘Reichsstelle für Bodenforschung’ am 14. August 1940,” PAAA, R 106289. U.S. interests in Romania (Romano-Americana, a subsidiary of the Standard Oil Company of New Jersey) would be unaffected for the time being. Of course, if U.S. companies hoped to sell their oil in Germany after the war, they would need to show good faith by delivering what they could during the war. Hopefully, the Reich could use the Americans in such a fashion “to break the resistance, possibly inspired by England, of Romanian officials.” Gottfried Aschmann (The Hague) to the AA, “Der englische Petroleumkrieg,” 18 April 1940, BA-B, R 901/116641.

¹⁶⁶ Clodius, “Aufzeichnung über die deutschen Wirtschaftsinteressen in Rumänien,” 26 August 1940, PAAA, R 105989. Franco-German negotiations in 1940-1941 over the transfer of French oil assets in Romania are

mission in July 1940, the Reich could finally oversee the “direct protection” of the oilfields against Allied attacks and sabotage.¹⁶⁷

The Romanian State Secretary for Petroleum and Mining Affairs within the Ministry of Economic Affairs (Basil Dimitriuc) also assured Keppler and Bentz during a visit to Berlin in October 1940 that Romania would “during wartime place at Germany’s disposal all of the oil it required.” Although it was cordial, the meeting highlighted the contradictory aims of German and Romanian policy. Dimitriuc welcomed increased regulation of the major oil companies in Romania, which he believed had squandered the nation’s resources by depleting productive oilfields while refusing to develop new ones. But he was also determined to prevent “excessive production” in either existing or new oilfields, which he claimed was in the “interest” of both Germany and Romania. Keppler agreed that the major oil companies had done a poor job of developing new oilfields, and he too wanted a new exploration program “to acquire clarity about the oil wealth of Romania.” On the other hand, he complained that the Romanians were doing their best to keep German firms away from “promising territories” and reassured Dimitriuc that Germany had every interest in maintaining Romania as a long-term supplier of oil.¹⁶⁸

summarized in: Eric Melby, *Oil and the International System: The Case of France, 1918-1969* (New York: Arno Press, 1981), 177-182. Melby and Eichholtz contend that the Vichy regime was willing to part with French oil interests in Romania to protect its shares in the IPC. Eichholtz, *Rumänisches Öl*, 49, n. 131. The regime even mooted the possibility in July 1940 of helping the Axis overrun Iraq and transferring the British and U.S. shares in the IPC to Germany and Italy as compensation. Robert Paxton, *Vichy France: Old Guard and New Order, 1940-1944* (New York: Columbia University Press), 59. See also: Eichholtz, *Krieg um Öl*, 24-25. The long-term status of Shell’s interests (Astra Romana) was unclear. The board of directors of Royal Dutch (the Dutch portion of the Shell Group) fled to the Dutch West Indies in 1940, but the Germans took nominal control over the company’s remaining assets in Holland on a trustee basis. They thereafter managed to get a pro-German director (J.H.W. Rost) appointed as the head of Astra Romana in July 1940, who subsequently established a 50-50 partnership between Astra and Konti. Eichholtz, *Rumänisches Öl*, 45-46; Andreas Hillgruber, *Hitler, König Carol und Marschall Antonescu* (Wiesbaden: Franz Steiner Verlag, 1954), 157-158; and Stephen Howarth and Joost Jonker, *Powering the Hydrocarbon Revolution, 1939-1973*, vol. 2 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 29-34, 69.

¹⁶⁷ Armed Forces High Command, WFSt/Abt. L., Nr. 33 298 g.K. Chefs. (I), 20 September 1940, reprinted in: *Fuehrer Directives, 1939-1941*, 115-117. The OKW directed stressed that German troops would only be called in to assist the Romanians in “special cases.” See also: “Rumäniens Öl unter deutschem Schutz,” *Militär-Wochenblatt*, 125. Jahrgang, Nummer 26 (27 December 1940).

¹⁶⁸ “Aufzeichnung von Wilhelm Keppler, Staatssekretär im Auswärtigen Amt z.b.V. und Leiter der Reichsstelle für Bodenforschung, 31. Oktober 1940,” reprinted in: Eichholtz, *Deutsche Ölpolitik*, 358-359.

Germany's new stake in the Romanian oil industry would be consolidated within the nascent Kontinentale Öl AG (see below).¹⁶⁹ The company's "task" in Romania would be "to do everything in view of the wartime requirements for an increase of Romanian oil production" to halt the decline in production and exploration since 1936.¹⁷⁰ In February 1941, State Secretary Erich Neumann of the VJP, "in his capacity as Vice President of this company," expressed his desire to visit Bucharest to meet with officials from those oil companies already or soon to be under German management. Besides clarifying their relationship to Konti, Neumann wished to discuss how they would begin "the fastest possible execution of rises in production, which are necessary to secure German requirements."¹⁷¹

In March 1941, Göring organized a conference with the dictator (Conducător) of Romania, Ion Antonescu, in Vienna. The ostensible purpose was to convince the Romanians to raise production, but Göring's real aim (which he did not share with Antonescu) was to arrange adequate supplies for the upcoming invasion of the Soviet Union. The previous month, Thomas had warned Göring that existing fuel reserves would cover only two months of operational consumption.¹⁷² During his meeting with Antonescu on 05 March 1941, Göring admitted that although Germany had made great strides toward meeting its military requirements of petroleum through domestic sources, the synthetic plants were extremely vulnerable.¹⁷³ This meant that Germany was especially reliant on its two largest suppliers of oil, Romania and the Soviet Union. Göring told Antonescu that he was not sure if the Soviet Union could be counted upon as a reliable supplier.¹⁷⁴ Germany had therefore poured immense resources into

¹⁶⁹ For a brief summary of the company's operations in Romania in 1941, see: Dienststelle des Beauftragten für den Vierjahresplan, "Ergebnisse der Vierjahresplan-Arbeit: Ein Kurzbericht nach dem Stande vom Frühjahr 1942," BA-B, R 26 I/18.

¹⁷⁰ Dr. vdW/Hof., "Memorandum über die Ergebnisse der Tätigkeit der Kontinentöl in Rumänien," 17 September 1943, T-401/2 (RBF 36).

¹⁷¹ Wiehl, Aufzeichnung, 26 February 1941, PAAA, R 105991.

¹⁷² "Aktennotiz über Vortrag beim Reichsmarschall am 26. 2. 1941," 27 February 1941, signature illegible (Thomas?) Hoover Institute, Nuremberg Records, Box 995 (PS-1456).

¹⁷³ This was not just show for Antonescu. During his first postwar debriefing by U.S. interrogators, Göring claimed that the attacks against Germany's synthetic fuel industry and the transportation industry were the two most effective elements of the Allied strategic bombing campaign. Headquarters, Air P/W Interrogation Detachment, Military Intelligence Service, A.P.W.I.D. (Ninth Air Force Adv) 65/1945, "Enemy Intelligence Summaries: Hermann Goering," 01 June 1945, CARL.

¹⁷⁴ Although Göring, perhaps not wishing to tip off the Romanians about Barbarossa, "stressed explicitly that this remark did not refer to the general relationship between Germany and Russia – quite to the contrary, it applied only

developing its transportation links to with Romania, but all of this would be naught if Romanian production continued to decline.¹⁷⁵ Although Romania had every right to conserve its oil reserves in peacetime, Göring beseeched Antonescu to open his country to German technical experts, drilling equipment, and financial resources.¹⁷⁶ Germany had the means to reorganize the Romanian oil industry right away, and Göring believed “it was absurd to waste drilling equipment on unproductive German fields if the same equipment could drill [*sic*] three times as much in Romania.” Antonescu promised “to do everything in his power to increase the production and refining of Rumanian production,” and he had no love for the British or Americans, whose subsidiaries he believed had wasted the country’s oil through inefficient production practices (a perspective shared by Hitler).¹⁷⁷ Nevertheless, he stressed that he was not about to allow any other country to take over ownership of Romania’s economic resources.¹⁷⁸

to petroleum deliveries.” The Romanians only learned about the German plans two weeks before Barbarossa when Hitler confided to Antonescu that “Russia had gone over to the camp of Germany’s enemies.” When asked by Hitler if he wished to participate in the German invasion “from the very first day,” Antonescu replied in the affirmative, as there was no reason to expect the Soviets would show any “restraint”: “The Russian would bomb the oil regions even if Rumania should not participate at the start [...]” Memorandum by an Official of the Foreign Minister’s Secretariat (Schmidt), “Record of the Conversation between the Führer and General Antonescu at the Führerbau in Munich on June 11, 1941 [...]” 13 June 1941, Document No. 614 in: *DGFP* (D), xii: 996-1006.

¹⁷⁵ During a preparatory meeting between Fischer and Clodius on 03 March 1941, the point was made that unless Romanian production for the year increased to 6,000,000 tons, “for the first time in many years the situation would arise that the transportation capacity [would] exceed the rate of production.” Göring would bring up the matter with Antonescu and offer him the services of his finest geologist, Bentz. HaPol IVb/224/41, Wiehl an die Adjutantur des Herrn Reichsaussenministers, 03 March 1941, T-120/3671; reprinted in: Eichholtz, *Deutsche Ölpolitik*, 359-361.

¹⁷⁶ Eichholtz describes Göring lording over Antonescu “in the manner of potentate over his vassals.” Eichholtz, *Rumänisches Öl*, 60-61. The tenor of the meeting (according to the German minutes) does not suggest this. Moreover, by neglecting to consider the parlous state of Germany’s fuel supply at the time within his overall thesis, Eichholtz overestimates any leverage Göring might have had over Antonescu.

¹⁷⁷ Hitler commended the Romanians for breaking the power of the major oil companies, which he believed had been buying up oilfields “with the intention of restricting their development to a degree compatible with their other interests [...]” *Table Talk*: No. 269 (26 July 1942).

¹⁷⁸ Memorandum by an Official of the Foreign Minister’s Secretariat (Schmidt), “Record of the Conversation between Reichsmarschall Göring and General Antonescu in the Presence of State Secretary Neumann, Minister Neubacher, Professor Benz [*sic*], and Dr. Fischer, and of the Rumanian State Secretary, Dimitriuc, in the Belvedere Palace in Vienna, on March 5, 1941,” 08 March 1941, Document No. 126 in: *DGFP* (D), xii: 221-227. Neumann subsequently left for Bucharest, where, along with Neubacher, he met with Antonescu and Maj. Gen. Gheorghe Potopeanu, Romania’s Economics Minister, on 14 March 1941. Neumann indicated that he was visiting the country as a representative of Kontinentale Öl (actually, the telegram says “Kommissionen Öl-AG,” but this is clearly a mistake). He wanted to have a tour of the oil fields that would fall under German jurisdiction but also wished to discuss the results of the Vienna Conference, “in particular the immediate utilization of German drilling equipment.” Neubacher to the AA, Nr. 637 v.14.3., 14 March 1941, PAAA, 105991. Neubacher and Neumann met with Mihai Antonescu the following day to inform him that Germany was making available the additional drilling equipment in order to make good on the production increases to which Göring and Antonescu had agreed in Vienna. When it came to reforming their oil industry, however, the Romanians managed to get the matter referred to a joint German-Romanian commission. Neubacher, Neumann, and Antonescu, “Notiz über das Ergebnis der Besprechung

The Third Reich had other plans. Although a military occupation of the Romanian oilfields was not in the cards, Berlin was still determined to find some means of bringing the European oil industry under *de facto* German control. Only two weeks after Göring-Antonescu conference, in fact, the Reich would put the final touches to the instrument that would implement this process.

zwischen Minister Antonescu and Staatssekretär Neumann,” 15 March 1941, enclosed with: Deutsche Gesandtschaft (Bukarest), der Sonderbeauftragter für Wirtschaftsfragen (Neubacher), an das AA, Tgb. Nr. 1559, WR 2, “Inhalt: Besprechung zwischen Minister Antonescu und Staatssekretär Neumann,” 17 March 1941, T-120/3671; the former is reprinted in: Eichholtz, *Deutsche Ölpolitik*, 361. The results of the Vienna Conference came up briefly during Thomas’ briefing of Göring on 19 March 1941: Chef WiRüAmt, “Vortrag bei Reichsmarschall Göring am 19.3.41,” 20 March 1941, Nuremberg Records, Box 995 (PS-1456).

Germany's Answer to Standard Oil: The Formation of the Kontinentale Öl AG, 1940-1941

In the summer of 1940, officials within the Third Reich began considering how Germany would secure its long-term oil requirements from sources beyond Europe's borders. It was not enough simply to occupy foreign oilfields. Capital, labor, and equipment were needed to explore, produce, refine, transport, and market any oil within the Reich's expanded domain. Only a vertically integrated oil company with resources that rivaled those of the British and U.S. majors could hope to satisfy all of Axis Europe's needs. Germany's domestic oil industry was far too small to accomplish a task of such magnitude. Not only did it lack the necessary resources – financial, technical, or personnel – but Germany neither controlled any significant sources of oil, nor could it hope to acquire any through normal commercial practices. Private industry would, as Fischer noted in his paper of September 1940, need the Reich to provide it with those assets it could not acquire on its own. The Kontinentale Öl AG was the product of these circumstances.

It is impossible to date with any exactitude when Germany's leadership decided to establish a foothold in the international oil industry.¹⁷⁹ Part of the impetus for the creation of the Konti appears to have come from a note from Grand Admiral Erich Raeder, Supreme Commander of the Navy, to Göring in June 1940. As Raeder observed, "[following] the termination of the war extensive oil interests around the world previously under English and French ownership will fall to Germany." Raeder urged that "[such] possibilities be seized as quickly as possible, not only to deal with the rising demand of the European Continent for crude oil," but most importantly that of the Air Force and the Navy.¹⁸⁰ Raeder urged Göring to use the existing preparations for peace negotiations "to determine, which claims Germany, in consultation with Italy, must put to England and France within the realm of petroleum

¹⁷⁹ The following discussion builds upon the path-breaking analysis of Dietrich Eichholtz: *Krieg um Öl*, 45-53.

¹⁸⁰ Raeder may have been prompted by an undated memorandum (most likely from the spring of 1940) by the commander of naval forces in the Baltic, Admiral Rolf Carls. He argued that Germany ought to demand both the "neutralization" of Suez Canal from a defeated Britain and France, as well as the "[surrender] of all rights in the Persian Gulf and the Persian-English [Anglo-Persian] oil facilities to Germany." "Memorandum von Admiral Carls," no date, Appendix B to: "Raumerweiterungs- und Stützpunktfragen," 03 June 1940 – 04 August 1941," reprinted in: Michael Salewski, *Die Deutsche Seekriegsleitung, 1935-1945* (Frankfurt am Main: Bernard & Graefe, 1970-1975), iii: 105-120.

supplies over the long-term around the world.” His demands included: overseas territories, not simply for the purposes of oil production but also to establishment of a military infrastructure to protect Germany’s access to foreign oil; and “direct interests” within the oil-producing territories of the Near East, Arabia, and North Africa. Finally, Raeder believed that Germany would also have to take control of oil companies, “which, up to now domiciled in enemy nations, are henceforth to come under German domination as a consequence of military operations.”¹⁸¹

Göring did not reply until 14 November 1940, and his response is noteworthy because it contains the first official reference to Konti.¹⁸² A week before, Göring had informed Thomas “that he wanted to establish a Central European fuel company.” Although the company would be nominally private, in reality, the Reich would exercise control. Its mission was “the acquisition and utilization of all fuel reserves within Central Europe,” and Göring requested that Thomas serve on the supervisory board. The two were also in agreement that Germany needed to start making preparations to fight a “long war.”¹⁸³ In his letter to Raeder, Göring agreed that the “centralized direction” of the supplying of the civilian economy and the military during both peace- and wartime was “essential.” On account of oil’s “paramount significance for the entire economy and the conduct of war,” Göring stated that he had taken personal responsibility for policymaking in this regard. One of his most important decisions was the founding of the “Continental Öl-Aktiengesellschaft,” which would “improve the possibilities for supplies from abroad and strengthen Germany’s position in the international oil business... [by] taking over those oil interests of the enemy powers and neutrals that fell to us now and in the future.” Until the company became operational, Göring had “specially commissioned” Fischer with the task of handling all

¹⁸¹ Der Ob.d.M. (Raeder) an den BVJP, Herrn Generalfeldmarschall Göring, z.Hd. Herrn Generalsekretär Körner, A IV Nr. 167 gKdos., “Betr.: Ölversorgung,” 13 June 1941 (*sic*; 1940), T-77/1399. For the correct date, see: OKM an das AA, A IV Nr. 922 gen., “Betr.: Irak-Erdöl,” 26 April 1941, T-77/1399 (Wi/IIA 5.1-2).

¹⁸² Eichholtz’s earliest document is a minute (Vermerk) dated 22 November 1940 attached to an AA circular of 04 December 1940 (WI 2985) from Clodius (HaPol) to ten German diplomatic missions. Both documents are reproduced in: Eichholtz, *Krieg um Öl*, 51-52. The content of the minute is virtually identical to Göring’s response to Raeder.

¹⁸³ Chef WiRüAmt, “Aktennotiz über den Vortrag beim Reichsmarschall am 6.11.40. in Beauvais,” 08 November 1940, Nuremberg Records, Box 995 (PS-1456).

matters relating to the “acquisition of oil data” and requested that Raeder instruct his subordinates to cooperate with Fischer.¹⁸⁴

Although Göring had (possibly as a result of Fischer’s paper of September 1940) decided during the autumn of 1940 to establish Konti, the Reich did not present any specific plans regarding the ownership structure and financing of the company until the beginning of 1941. On 21 January 1941, State Secretary Neumann convened a meeting at the RWM with representatives of the Deutsche Bank, the Dresdner Bank, the Reichs-Kredit-Gesellschaft, and the Berliner Handels-Gesellschaft, as well as various government officials involved with the Reich’s financial policy. Those attending the meeting already had an inkling of its purpose. According to Hermann Abs of the Deutsche Bank’s Managing Board, Neumann informed those assembled “of the reasons why it seemed advisable to establish” a holding company (Aktiengesellschaft – AG) “that would comprise all foreign petroleum interests which now came into the German sphere of interests and explained the plan already known to us to establish the Continental Petroleum A.G.” Neumann indicated that Konti would be formed with an initial capitalization of 50,000,000 RM, of which 30,000,000 RM would be provided by a special holding corporation, Borussia GmbH, owned entirely by the Reich.¹⁸⁵

To allay any concerns about excessive government interference, “State Secretary Neumann expressly emphasized that the company should carry on its business and be managed according to the principles of purely private economy.” The remaining 20,000,000 RM would come from a consortium of firms involved in German natural and synthetic petroleum production, including Gewerkschaft Elwerath, Deutsche Erdöl (DEA), Wintershall, Preußische Bergwerks- und Hütten-Aktiengesellschaft, IG Farben, and Braunkohle-Benzin AG. Those parties that contributed to the original 50,000,000 RM capitalization would receive a special class of “Name shares” that would allow them to retain an absolute majority within Konti even “if the entire capital was to be extended to several hundred millions.” Specifically,

¹⁸⁴ Der Reichsmarschall des Großdeutschen Reiches, BVJP, an den Ob.d.M. (Raeder), V.P. 18[illegible]8/5, 14 November 1940, T-120/3671.

¹⁸⁵ “File note by Herman J. ABS concerning a meeting at the Ministry of Economics to the founding of the Continentale Petroleum A.G.,” 23 January 1941, NARA, RG 238, T-301/89 (NI-10797).

bearers of “Name shares” would have fifty votes, whereas holders of ordinary “Bearer shares” would only enjoy a single vote per share.¹⁸⁶ Those members of the consortium that already possessed direct foreign investments in the oil sector would be allowed to retain them, but henceforth, all future purchases would have to secure the approval of the other partners within Konti. So as to avoid offending German domestic producers, Konti was prohibited from producing oil within the Reich, but it would “not bind itself to any limitation of [its] activities in foreign countries.” Economics Minister Funk would serve as the chairman of Konti’s Supervisory Board (Aufsichtsrat), along with Neumann (his deputy), Keppler, the four bankers invited to the meeting, representatives from the aforementioned industrial consortium, and members of the Air Force High Command (Oberkommando der Luftwaffe) and the OKH.¹⁸⁷ Actual management of the company would be handled by the Managing Board (Vorstand), whose membership would be determined later, although Fischer would continue to oversee the company’s affairs as he “enjoys the confidence of the Reich Marshal to a very great extent.”¹⁸⁸ Not for nothing does the leading historian of National Socialist oil imperialism describe Fischer as the “*spiritus rector* of Konti.”¹⁸⁹

¹⁸⁶ As one U.S. investigator concluded after the war, “[If] the ‘Konti’ officials are trying to present the company as a ‘predominately’ private controlled corporation, because ‘Borussia’ owned only RM 30.000.000. – out of a total capitalization of RM 80.000.000. –, they are misrepresenting the case.” Jules Wangler to Maj. Teisberg (Chief, Property Section), 26 July 1946, NARA, Record Group 260: Records of U.S. Occupation Headquarters, World War II, Records of the Office of Military Government for Germany (OMGUS – hereafter cited as: RG 260), Records of the Property Division, Records of the Office Director, General Records, Box 9. See also: Jules Wangler, Office of the Military Government for Germany, Finance Division, “Research Report Covering Documentary Material of Kontinentale Oel A.G. Landshut A/ISAR Held under Control of Military Government in Landshut,” 10 August 1946, enclosed with: Murphy to the Secretary of State, “Transmitting Report on Investigation of Kontinentale Oel, A.G., Berlin,” 29 August 1946, No. 6431, NARA, RG 59, FW 862.6363/8-2946.

¹⁸⁷ The reference to the OKH may have been a mistake on Abs’ part when he composed his memorandum of conversation, since it was OKW that eventually secured representation on Konti’s Supervisory Board, with Thomas of the WiRüAmt holding the position (although one of his deputies, Griebel, often attended on his behalf).

¹⁸⁸ “File note by Herman J. ABS concerning a meeting at the Ministry of Economics to the founding of the Continentale Petroleum A.G.,” 23 January 1941, NARA, RG 238, T-301/89 (NI-10797). Many of the officials responsible for petroleum policy in the Third Reich also held leading roles within the company. Bentz, Funk, Keppler, Krauch, and Thomas all served as members of Konti’s Supervisory Board. (Thomas, who was sacked by Speer in early-1943, was replaced by one of his former deputies, Griebel, in September 1943: “Translation of a memorandum found among the data held in custody of Mil. Govt. Landshut, concerning the influence Walter Dählman had in ‘Konti’ affairs,” RG 260, Property Division, Box 9.) Fischer of the RWM also held a joint appointment to both the supervisory board (Aufsichtsrat) and the managing board (Vorstand), of which the latter actually handled the day-to-day operations of the company. The distinction between the supervisory board and managing board is a crucial one, in that under German corporate law, the former only exercises an oversight function and is not responsible for the management of a company. Accordingly, the Nuremberg Military Tribunal was forced to acquit Krauch, Bütetisch, and Keppler on the charge of “spoliation” under Control Council Law No. 10. *NMT*, vii: 49, 283-284; viii: 923, 1152, 1154, 1162; xii: 264-266; xiv: 694-695. Funk, during his interrogation by

As for the company's future activities, these included purchasing control of Belgian and French-owned companies operating in Romania (Concordia and Colombia, respectively) and Jersey's Hungarian holdings (which was being negotiated by the IG Farben).¹⁹⁰ These and other endeavors would probably require the infusion of an additional 70,000,000 RM, which would be collected by the German banks that would join Konti, since, as Hans Fischböck (State Secretary at the VJP for price control and a member of the Reichbank's advisory council) explained, "it was impossible to raise all of it by way of [public] loans." The banks would furnish the required sum by purchasing 30,000,000 RM worth of Class B ("Bearer") shares, which represented Konti's initial public offering, while offering Konti a two-year, 40,000,000 RM credit, which would be repaid with interest. Therefore, Konti's capitalization would increase from 50,000,000 RM to 80,000,000 RM, although effective control of the company remained in the hands of the companies that had contributed the initial capitalization.¹⁹¹

a Soviet prosecutor during the first Nuremberg Trial, had been the first to claim that his membership on the supervisory board "mainly had to do with the financing of that company only." *IMT*, xiii: 189.

¹⁸⁹ Eichholtz, *Krieg um Öl*, 50.

¹⁹⁰ Eichholtz, *Rumänisches Öl*, 42-46; and Eichholtz, *Krieg um Öl*, 31-34. The Deutsche Bank, at Göring's prompting, had already worked out an agreement in December 1940 with the Compagnie Financière Belge des Pétroles, which owned Concordia, which was itself the product of a fusion of several German-owned companies that had been confiscated after 1918 and now accounted for roughly 11% of Romanian production. The Deutsche Bank secured the purchase of 1,865,112 shares in Concordia for the sum of 22,439,108 RM. In August 1941, the bank arranged another stock purchase, this time with a French banking consortium led by the Banque de Paris et des Pays-Bas, for 650,000 shares of Colombia (out of the 760,000 existing shares), which accounted for roughly 7% of Romanian production. The Deutsche Bank also reserved the right to purchase any outstanding shares until 30 November 1941. Deutsche Bank, Central Office: Ausland Dr. Fe/Gl. (Herman Abs and Helmuth Pollems) to Kontinentale Öl Aktiengesellschaft, 16 April 1941; and Deutsche Bank, Central Office: Ausland, L./Kl., to Kontinentale Öl A.G., 11 August 1941; both in: NARA, RG 260, Property Division, Box 9; and Konti an den Leiter der Deutschen Waffenstillstands-Delegation für Wirtschaft (Gesandten Hemmen), Di/Wh, "Betrifft: Erwerb einer Majoritätsbeteiligung an der 'Colombia' Société Franco-Roumaine de Pétrole, Bukarest," 29 July 1941, enclosed with: der Reichsmarschall des Großdeutschen Reiches, BVJP, der Zweite Staatssekretär (Neumann), an den an den Leiter der Deutschen Waffenstillstands-Delegation für Wirtschaft, 29 July 1941, T-120/3671. For an accounting of Konti's assets in Romania on the eve of the latter's surrender to the Soviet Union in August 1944 (which the Soviets expropriated after the Romanians nationalized all German-owned property), see: Eugen Halder, "Kontinentale Oel G.m.b.H. subsidiary, Bucharest," 18 June 1946, NARA, RG 260, Property Division, Box 9.

¹⁹¹ "File note by Herman J. ABS concerning a meeting at the Ministry of Economics to the founding of the Continentale Petroleum A.G.," 23 January 1941, NARA, RG 238, T-301/89 (NI-10797). The Deutsche Bank immediately staked a claim to "leadership" over the banking consortium within Konti in view of "the position of the Deutsche Bank in the crude oil sector [...]." Aktenvermerk, 25 January 1941, no author (probably Abs), T-301/89 (NI-10800). For a short introduction on the role of the Deutsche and Dresdner banks in the founding of Konti, the purchase of shares held by French nationals in Romanian oil companies, and the economic spoliation of the Soviet Union, see: Christopher Simpson, ed., *War Crimes of the Deutsche Bank and the Dresdner Bank: Office of the Military Government (U.S.) Reports* (New York, 2002), 198-201 (Deutsche Bank) and 287-291 (Dresdner Bank).

Having laid the groundwork in January, additional details concerning the financing of Konti were hammered out during a meeting on 18 March 1941.¹⁹² The participants reaffirmed the plan set out by Neumann in January, with the exception that the aforementioned four banks would participate as a syndicate. (Dresdner's representative suggested that it and the Deutsche Bank share management, since each of them would each hold a 35% stake in the syndicate).¹⁹³ Two days later, Göring invited each of the banks and companies involved to a meeting at the Preussenhaus on 27 March 1941 to commemorate the official founding of Konti. Besides reiterating plans for Konti to take over French and Belgian oil assets

¹⁹² For Göring's invitation (signed by Neumann) to the conference of 18 March 1941 at the Preussenhaus, which also references the earlier conference of 21 January 1941 (including details concerning the banks' role in provided the aforementioned 70,000,000 RM worth of financing), see: "Letter of Goering to Deutsche Bank (ABS), Dresdner Bank (Goetz), Reichskreditgesellschaft (Rohdewald), and Berliner Handelsgesellschaft (Weltzien), re: Financing of the Kontinentale Oel AG," 08 March 1941, NARA, RG 238, T-301/18 (NI-2020).

¹⁹³ The banks also pressured the Reich into accepting an initial 5% interest rate on the 40,000,000 RM loan, which would drop to 4.5% after Konti paid its first dividend. "Summary record on a conference re: Financial of Kontinentale Oel A.G.," 18 March 1941, no author (most likely Karl Rasche, a member of Dresdner's Managing Board who appears to have attended the meeting instead of the Chairman of the bank's Supervisory Board, Goetz, who had originally been invited), NARA, RG 238, T-301/18 (NI-2016). For some reason, this document states that the date of the earlier conference was 22 January 1941, instead of 21 January. For an internal Deutsche Bank memorandum concerning the meeting, see: Aktenvermerk, "Betr.: Kontinentale Öl-Aktiengesellschaft," no date or author (handwritten notation reads: "Kontinentale Öl-AG Gründung RM 30.000.000. Aktien 1941"), BA-B, R 8119/1826. The day after the conference of 18 March 1941, Abs contacted Dresdner to inform them that the Deutsche Bank was willing to cede equal participation in the management of the banking syndicate, so long as the Deutsche Bank retained "standing control" (ständige Federführung) of the syndicate's affairs. "Record for the files (unsigned) re: Agreement on the financing of the Kontinentale Oel A.G.," 19 March 1941, NARA, RG 238, T-301/18 (NI-2022). Ultimately, Deutsche and Dresdner both accounted for 35% of the 30,000,000 RM worth of shares purchased by the banking consortium, while the Reichskreditgesellschaft and Berliner Handelsgesellschaft settled for 15% each. See also: "Invitation to the floating of the Kontinentale Oel A.G., addressed to ABS, Deutsche Bank, Rasche, Dresdner Bank, Rohdewald, Reichskreditgesellschaft, and Weltzien, Berliner Handelsgesellschaft; also agreement between banks on the financing quota," 24 March 1941, T-310/18/NI-2017; and the Deutsche Bank an den Herrn Reichsmarschall des Grossdeutschen Reiches, BVJP, "Ihr Zeichen: V.P. 4278/5. Betr.: Finanzierung der Kontinentalen Öl-Aktiengesellschaft," 24 March 1941 (handwritten notation reads: "Kontinentale Öl-AG Gründung RM 30.000.000. Aktien 1941"), BA-B, R 8119/1826; "Blatt zum Kreditprotokoll vom 16 Januar 1942 für Kontinentale Öl Aktiengesellschaft, Berlin," BA-B, R 8119/1826; and "Statement covering credits extended to the Kontinentale Oel A.G. by the Deutsche Bank" 23 February 1943, NARA, RG 238, T-301/89 (NI-10801). According to the February 1943 statement, the Deutsche Bank also provided 100% of the 2,000,000 RM credit extended to Ost Öl GmbH, a wholly owned subsidiary of Konti that would operate in the Caucasus following the German victory. For a detailed study of the Dresdner Bank's role in the early history of Konti (based largely on internal bank correspondence), see Harald Wixforth's "Die Ausbeutung von Ressourcen im Zeichen der Kriegswirtschaft: die Kontinentale Öl AG," in: *Die Dresdner Bank in der Wirtschaft des Dritten Reichs*, ed. Johannes Bähr (Munich: R. Oldenbourg, 2006), 360-370. The Deutsche Bank's official history makes only a brief mention of the bank's involvement with Konti: Lothar Gall, *et al.*, *The Deutsche Bank* (London: Weidenfeld & Nicolson, 1995), 327 and 336. See also: Paul H. Gantt, "Preliminary Memorandum Brief on *The German Oil Industry*," 03 October 1946, Paul Hawkins Gantt Nuremberg Papers, Towson University Archive, Volume U, Document 5.

in Romania, Göring's letter also stipulated the exact breakdown of shares within the industrial consortium that would, along with Borussia, provide the initial 50,000,000 RM of capitalization.¹⁹⁴

The documents concerning the foundation of Konti make no mention of any activities beyond Continental Europe.¹⁹⁵ Following the start of Operation Barbarossa, German documents did, of course, make reference to the company's future operations in the Soviet Union. According to a retrospective analysis of the VJP between 1936 and 1942, Konti had been formed with intention of acquiring control of French and Belgian oil companies operating in Romania, such that the company controlled 23% of that

¹⁹⁴ Deutsche Erdöl (DEA), Elwerath, Wintershall, Preußische Bergwerks- und Hütten-Aktiengesellschaft (Preussag), and IG Farben each held 3,000,000 RM, Braunkohlen Benzin AG 2,000,000 RM, and Preussag and another bank holding 2,000,000 and 1,000,000 RM, respectively, on a trustee basis. Reichsmarschall of Greater Germany, Plenipotentiary for the Four Year Plan (Göring) to DEA (Attn: Direktor Karl Schirner), Gewerkschaft Elwerath (Attn: Direktor Hans Brochhaus), Wintershall A.G. (Attn: Generaldirektor Rosterg), Preußische Bergwerks- und Hütten-Aktiengesellschaft (Attn: Generaldirektor Wisselmann), Braunkohle Benzin A.G. (Attn: Fritz Kranefuss), and IG Farben (Attn: Direktor Bueteffisch), V.P. 4373/5, 20 March 1941, enclosed with: Reichsmarschall of Greater Germany, Commissioner for the Four Year Plan, Second Secretary of State (Neumann) to Rasche (Dresdner Bank), V.P. 4373/5, 20 March 1941, attached to: "Letter of Staatssekretär Neuman [*sic*] to Dr. Rasche informing him about the intentions of the founders of the Kontinentale Oel A.G., to appoint him [a] member of the Aufsichtsrat in that corporation, with enclosed invitation by Goering to the floating of the Kontinentale Oel A.G.," 20 March 1941, NARA, RG 238, T-301/18 (NI-2018). Neumann's covering letter to Rasche of 20 March 1941 also mentioned that Keppler would serve alongside Neumann as the vice-chairman of Konti's Supervisory Board, with Funk continuing to hold the chairmanship; and that Ministerialrat Fritz Fetzer (the oil expert at the OKM and a member of the board of directors of Eurotank, a major Hamburg refinery), Fischböck, Fischer, Brochhaus, and Karl Blessing (a former aide to Hjalmar Schacht at the RWM) would also serve on Konti's Supervisory Board. Bentz also received a copy of Göring's invitation of 20 March 1941 (BGR 86537), along with a cover letter from Neumann identical to the one he sent Rasche, which includes Anlagen such as a copy of the company's articles of incorporation, guidelines for cooperation between Konti and those German oil companies that held stock in it, the arrangements concerning Konti's financing by the banking consortium (undated, but according to the copy summarized in NARA, RG 238, T-301/18 (NI-2017), it was dated 24 March 1941), and bylaws for both the Managing Board and the Supervisory Board not included within NARA, RG 238, T-301/18/ (NI-2018). Konti's partners commemorated the company's establishment during the meeting of 27 March 1941 by completing a report listing the breakdown of shares, as well as the memberships of both the Supervisory Board and the Managerial Council (Verwaltungsrat – later replaced by the Managing Board): Schirner, *et al.*, "Foundation Report," 27 March 1941, attached to: NARA, RG 238, T-301/18 (NI-2023). Those present at the meeting also nominated the Deutsche Revisions- und Treuhand-Aktiengesellschaft to serve as Konti's auditor. A membership list for both the Supervisory Board and the Managing Board is included with the protocol of the proceedings for a general assembly of Konti's shareholders on 29 May 1942, which is attached to: NARA, RG 238, T-301/18 (NI-2023). For an original exemplar of the company's articles of incorporation, see: *Satzung der Kontinentale Öl Aktiengesellschaft in Berlin*, 1941, BNA, FO 1039/496. This document explicitly stated under Article II that the "[purpose] of the undertaking is the acquisition of shares and every other business activity within the domain of fuel, in particular abroad." The documents from January-March 1941 concerning the foundation of Konti played a prominent role in the work of East German historians concerning the collaboration between German industry and the Reich in planning for the economic exploitation of the Soviet Union. Four documents are reprinted with commentary in: Roswitha Czollek and Dietrich Eichholtz, "Die deutschen Monopole und der 22. Juni 1941: Dokumente zu Kriegszielen und Kriegsplanung führender Konzerne beim Überfall auf die Sowjetunion," *Zeitschrift für Geschichtswissenschaft*, 15: 1 (1967): 64-76.

¹⁹⁵ When questioned about his role activities with company during the first Nuremberg Trial, Funk stressed that the Konti was interested in oil development beyond just "the Occupied Territories – this company was concerned with oil industries all over Europe." *IMT*, xiii: 188-189.

country's oil production by the spring of 1942. More importantly, Konti was responsible for promoting more energetic exploitation of Romania's oil reserves by overcoming "the resistance of Romanian government agencies," which had thus far succeeded in stifling production from the 1936 high of 8,700,000 tons to only 5,200,000 in 1941. As for the Soviet Union, Konti served as an invaluable substitute for the Reich by putting up its own capital (250,000,000 RM so far, with "further hundreds of millions" to follow) for the reconstruction of the Caucasian oil industry.¹⁹⁶

Foreign reporting on Konti claimed that its objectives included the acquisition of oil reserves in the Middle East, but it is difficult to find official corroboration of the company's intentions in the region. Speculation over the company's intentions was a source of great embarrassment for the German Minister in Tehran, Ettel, who was confronted by the Iranian Prime Minister (Ahmad Matin-Daftari) in April 1941 with a report from Iran's Ambassador to Turkey that included a report by the Turkish wire service in Berlin. According to that report, "In Berlin a company was founded for the distribution of Romanian oil, which after the war will have the task also of distributing oil from Mosul and Iranian oil." The Iranian Prime Minister warned Ettel that such a report, if accurate, could harm German-Iranian relations. Ettel guessed that the Turkish wire service was referring to Konti based on the circular he had received from Clodius the previous December, and he requested that Berlin wire him instructions.¹⁹⁷ A week later, Clodius informed Ettel that Konti's primary task was to "represent German petroleum interests overseas," and that allegations concerning its future activities in Romania, Iraq, and Iran were "untrue."¹⁹⁸

The company was also ready in February 1942 to send engineers to Iraq if the Afrikakorps broke through the British defenses in North Africa.¹⁹⁹ That same month, Fritz Grobba, the former German Minister to Iraq and AA Plenipotentiary for the Arab World, and Rashid Ali, the exiled Prime Minister of

¹⁹⁶ Dienststelle des Beauftragten für den Vierjahresplan, "Ergebnisse der Vierjahresplan-Arbeit: Ein Kurzbericht nach dem Stande vom Frühjahr 1942," BA-B, R 26 I/18.

¹⁹⁷ Ettel (Tehran) to Berlin, Nr. 207, 07 April 1941, PAAA, R 106109. For earlier AA circular regarding the foundation of Konti, see: Clodius an die Deutsche Botschaft in Ankara, *et al.*, WI 2985, 04 December 1940; reproduced in: Eichholtz, *Krieg um Öl*, 51.

¹⁹⁸ Clodius to Tehran, Nr. 181, 15 April 1941, PAAA, R 106169.

¹⁹⁹ Fritz Grobba, "Vordringen Deutschlands über den Kaukasus nach dem arabischen Raum," 05 February 1942, PAAA, BA 61123.

Iraq who had fled to Europe after the Anglo-Iraqi War of May 1941, agreed that the IPC's concession would be transferred to Konti if the Germany ever returned Rashid Ali to power.²⁰⁰

There was significant interest in the company's founding and operations beyond Germany's borders, much of which was fueled by official announcements like the one provided by the German Embassy in Spain. According to a press release from April 1941, "[the] purpose of the new company is to defend the interests of the German petroleum industry, especially in foreign countries." Konti would soon "take its place among the great world petroleum companies" and "be the means through which a constant supply of petroleum will be assured to the European Continent at all times." There had already been a "constant" supply of oil to Europe before the war. The problem was that Europe had depended upon foreign companies to provide the imports and run many of the local oilfields. Konti would rectify this situation by "making Germany independent of the great Anglo-American Companies," while "the European supply of petroleum will remain guaranteed under its control." U.S. oil executives were deeply troubled by the emergence of a company that threatened not only their properties in Romania and the Middle East, but also their postwar access to the world's most important market after the United States.²⁰¹

The German business press also covered Konti's formation, and besides providing detailed information concerning the company's formation and leadership, stressed that its primary function was to free Germany and Europe from having to buy oil from the U.S. and British major companies. As the *Berliner Börsen-Zeitung* explained, "Germany has initiated with the current action an ordering and securing of the markets, which should be of value to us as well as Europe, in contrast the existing situation, which is characterized by the predominant position of the Anglo-American concerns."

Although the VJP had done an admirable job of satisfying Germany's immediate, wartime needs, it had not been designed to provide Europe with "imports for the coming peacetime economy," which required a

²⁰⁰ Der Bevollmächtigte des AA für die arabischen Länder (Grobba) to the Büro des Herrn Reichsaußenministers, *et al.*, "Inh.: Abschluß eines Rahmenvertrages mit Raschid Ali el-Gailani," 10 February 1942, T-120/773.

²⁰¹ At least one of them took up the matter directly with the State Department by forwarding a copy of the aforementioned press release. "German Embassy Information Bulletin: Petroleum Autarchy," 30 April 1941, enclosed with: Harold Sheets (Vice President, Standard Oil Company of New York) to James Clement Dunn (Adviser on Political Relations), 14 May 1941, NARA, Record Group 59: General Records of the Department of State (hereafter cited as: RG 59), 862/6363/209. Emphasis in the original.

stronger presence for Germany on the international stage. “Although Germany already stands at the door – Romania, Iraq, Iran – the international companies were in the position to create considerable difficulties [...]” Germany now had the means of bypassing these obstacles and return to the position it had enjoyed prior to the Versailles Diktat, when it “had played a great role, above all in Romania, whose oil industry owed its development to German initiative.”²⁰²

Various news agencies beyond Germany also covered the company’s activities, and their reports formed the bedrock for Allied economic intelligence estimates regarding Konti.²⁰³ Foreign officials were also quick to grasp the significance of Konti’s founding.²⁰⁴ In early April 1941, the U.S. Embassy in Berlin transmitted a short report on Konti’s founding that summarized a more detailed report completed by the Vice-Consul. U.S. chargé d’affaires Leland Morris informed Washington that while “Rumanian and French interests form the present nucleus of the trust,” a “[monopoly] in Rumania and ultimate control in Iran and Iraq with the operation of a tanker fleet is envisaged according to the press.”²⁰⁵ According to the U.S. Vice-Consul, much of the speculation concerning the company’s long-term ambitions came from the press: “To popularize German expansion into foreign fields, the local press comments that the corporation is only seeking to recover what the Reich lost through the Versailles Treaty, or to reacquire for the Reich an interest in certain fields where German engineers have served as

²⁰² For a sampling of opinion within the German business press, see: “Eine deutsche Oel-Holding: Gemeinschaftsgründung ‘Kontinentale Öl-AG,’” *Berliner Börsen-Zeitung*, Nr. 151 (30 March 1941); “Die deutschen Erdölinteressen: Das Muster einer Gemeinschaftsgründung von Staat und Wirtschaft,” *Wirtschafts-Beilage*, 5. Beiblatt/Nr. 77 (30 March 1941); and “Kontinentale Oel-AG., Berlin: Eine ölandustrielle Holdinggesellschaft für ausländische Petroleumbeteiligungen,” no date or author (handwritten notation reads: “Frankfurter Ztg 30.3.41”); all in: BGR 86537.

²⁰³ Much of the dossier on Konti compiled by the U.S. Enemy Oil Committee within the Foreign Economic Administration consisted of press articles from a variety of neutral newspapers and trade publications. The dossier also included short summaries of Intelligence Minutes compiled by the British Ministry of Economic Warfare. One such entry for 24 May 1943 recounted how the “president of Continentale Oel A.G., Dr. W. Fischer [*sic*]” had told a neutral colleague “that Germany could not win the war” and “was evidently anxious to place on record that he was ‘different’ and thus endeavoring to put himself in a position that would be of help to him in the difficult times ahead.” The entire file is enclosed with: Charles Mayer to Brandon H. Grove, 06 September 1944, RG 169, Box 2201.

²⁰⁴ One top U.S. official who knew precious little about the company was the U.S. Petroleum Administrator for War, Harold Ickes, who in late-1943 confessed in an off-the-record note to a journalist to “[not] having heard of this Continental Oil Company [...]” Ickes to John P. Lewis (Managing Editor, *PM*), 08 October 1943, LOC, Papers of Harold Ickes, Box 221.

²⁰⁵ Morris to the Secretary of State, 02 April 1941, No. 1226, NARA, RG 59, 862.6363/205.

pioneers.” Germany had a long history when it came to oil production in Romania, and German engineers had been active in Mesopotamia during the First World War.²⁰⁶ Konti would be in the position to exploit “reserves in Irak [that] are capable of extraordinary expansion,” while in Romania, it would “prevent the ruthless exploitation by private companies and injury to German military interests.”²⁰⁷

But such ambitions could only be realized if Germany won the war. The U.S. Commercial Attaché in Berlin laid out the uncertain prospects for Konti. Germany was unlikely to pry its way into foreign oilfields through commercial means, which entailed that “military developments [must] prepare the way.” The logistical problem was also daunting. Germany had no tanker fleet worth speaking of, and even if it did, they would be easy prey for enemy ships. Developing one would be difficult, even in peacetime, since Germany would be competing against established rivals that already dominated the market.²⁰⁸ Unless Germany’s overall strategic position improved to the extent that it could guarantee secure access to overseas sources of oil, Konti would remain “little more than a grandiose facade.”²⁰⁹ Or, as one historian sarcastically remarks, “the greatest oil company in the world without any oil [...]”.²¹⁰

German planners had concluded on the eve of the invasion of Poland that the Third Reich possessed an adequate supply of petroleum to wage war. Although logistical difficulties arising from the rerouting

²⁰⁶ Little is known of Germany’s attempt to produce oil in Mesopotamia during the First World War, although the so-called “Brennstoffkommando Arabien” formed for that purpose actually found small quantities of oil using “primitive methods.” For historical summaries, see: Kontinentale Öl Aktiengesellschaft, Mineralöl-Archiv, “Wer erschloß Mossul-Öl? (Aus den Akten des Brennstoffkommandos Arabien),” no date (handwritten notation indicates 05 May 1941), T-580/907 (Box 8, Ordner 56); and “Der Deutsche Anteil an der Erschließung des Iraköls,” no date or author, enclosed with: Wi VI d, Aktennotiz, “Betr.: irakisches Erdöl,” 27 May 1941, T-77/1399 (Wi/IIA 5.1-2).

²⁰⁷ William L. Smyser, “Formation of German Oil Trust,” Completed: 02 April 1941, Mailed: 07 April 1941, No. 2389, NARA, RG 59, 862.6363/206.

²⁰⁸ Sam E. Woods, “Weekly Economic Background Report No. 40 (for week ending April 5, 1941): State Control Emphasized in Formation of New German Oil Corporation,” 07 April 1941, Serial 244, enclosed with: Naval Attaché (Berlin) to Director of Naval Intelligence, 15 April 1941, NARA, Record Group 38: Chief of Naval Operations, Intelligence Division, Confidential Reports of Naval Attaches, Box 678.

²⁰⁹ William L. Smyser, “Formation of German Oil Trust,” Completed: 02 April 1941, Mailed: 07 April 1941, No. 2389, NARA, RG 59, 862.6363/206.

²¹⁰ Karlsch and Stokes, *Faktor Öl*, 208-211 (quotation from pg. 211). Karlsch is fairly contemptuous of the company: whereas the major U.S. and British oil companies boasted of legions of skilled personnel, Konti was staffed by “bureaucrats and bankers with NSDAP [Nationalsozialistische Deutsche Arbeiterpartei] memberships” (pg. 211). One cannot challenge Karlsch’s assessment, since Konti’s prospects depended upon the successful conclusion of the war.

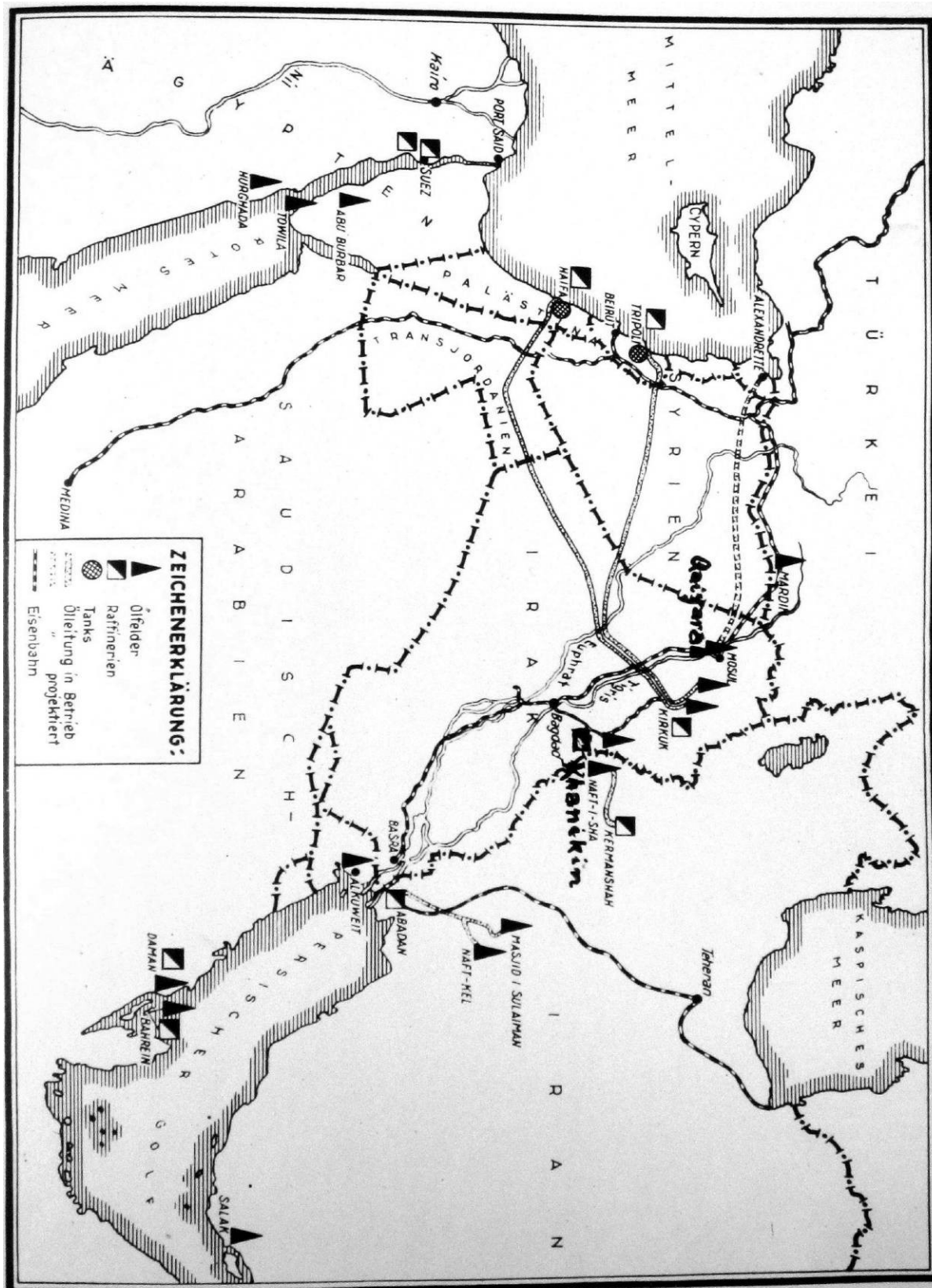
Romanian oil exports up the Danube led to shortages in the winter of 1939/40, Germany scraped by thanks to its accumulated reserves and the military's manageable operational consumption during the campaigns of 1939 and 1940. But in one of the war's great ironies, Germany's greatest victory – the defeat of France in June 1940 – left it strategically exposed. The Third Reich's prewar planning had been focused on the manageable task of satisfying Germany's relatively small requirements of petroleum, which were equivalent to those of just the Royal Navy. As analysts and policymakers grappled with the challenge of supplying the entire European Continent with oil – both during and after the war – among their more remarkable decisions was to establish the Kontinentale Öl AG in March 1941.

The history of Konti deserves closer attention for two reasons. First, it provides historians with a window onto the Third Reich's postwar economic vision. The economic planners of the Third Reich intended that Konti should reassert Germany's rightful (and historic) place within the international oil industry as both a leading producer and supplier of oil to Europe. But even more significantly, Konti would also contribute to the grander project of liberating Europe from the liberal economic order dominated by Britain and the United States, albeit by mimicking the methods of the very institutions it was seeking to displace. In that sense, the story of Konti fits within the wider history of German expansionism before the 1945 – that is to say, an effort to escape economic and strategic irrelevance vis-à-vis global great powers such as Britain, Russia, and especially the United States by appropriating British and U.S. models of imperial rule (British India), genocidal settler colonialism (the American West), and economic development through the violent acquisition of arable land and raw materials.²¹¹

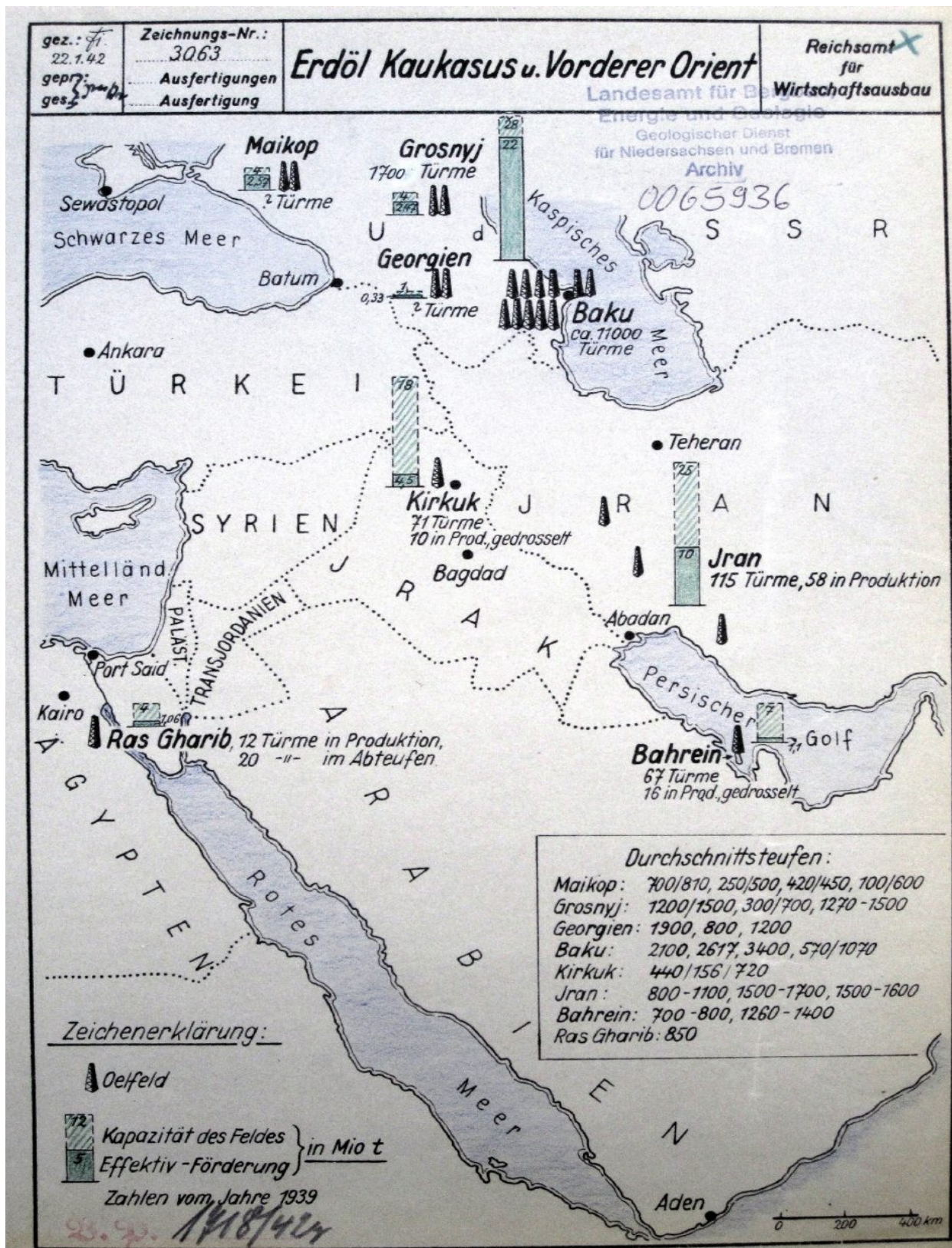
²¹¹ I am indebted to Adam Tooze's *Wages of Destruction*, *passim* (esp. xxii-xxv, 9-11, 166-167, 510-511, and 658), for bringing the idea of National Socialist imperialism "as an intelligible response to the tensions stirred up by the uneven development of global capitalism" (pg. xxiv-xxv). See also: Timothy Snyder, *Bloodlands: Europe between Hitler and Stalin* (New York: Basic Books, 2010), 161. The influence of U.S. landed expansion, colonialism, and imperialism upon the National Socialist worldview (*Weltanschauung*) has recently become a subject of considerable interest among scholars. For a survey of the relevant English-language literature, see: Carroll Kakel, *The American West and the Nazi East: A Comparative and Interpretive Perspective* (New York: Palgrave, 2011). Although Kakel sees many similarities between the U.S. settler colonialism of the nineteenth-century and the German bid for "living space" (*Lebensraum*) after 1941, he overlooks the economic pressures driving expansion. These co-existed alongside the colonialist imperative and, in the case of Germany, preceded the advent of the Third Reich, while they persisted in the United States even after the "closing" of the frontier in 1890. Hitler also made no secret of his admiration for British rule in India, upon which he often expounded during his wartime monologues. *Table Talk*:

No. 11 (27 July 1941) and No. 17 (08-11 August 1941). For an overview of Hitler's thinking about India, see: Hauner, *India in Axis Strategy*, 26-34.

DAS ERDÖL VORDERASIENS



Map 9: German Foreign Office (Auswärtiges Amt), "The Crude Oil of the Near East," 07 March 1941
Source: Politisches Archiv des Auswärtigen Amtes, BA 61123.



Map 10: Reich Office for Economic Development (Reichsamt für Wirtschaftsausbau), "Crude Oil [in] the Caucasus and Near Orient," 22 January 1942

Source: Archiv der Bundesanstalt für Geowissenschaften und Rohstoffe, No. 65936.

Chapter VII

Oil and Operation Barbarossa: Germany, 1941

Any examination of oil and German strategy after 1940 that does not give predominance to the Soviet Union would be misleading.¹ Germany had been scheming to gain control of the Caucasus and its oil since the First World War and briefly succeeded in gaining a quarter of Baku's production in August 1918 as a result of one of the Russian-German treaties supplementing the Treaty of Brest-Litovsk.² In concert with their Ottoman allies, German troops poured into the Caucasus from the Ukraine and occupied Georgia. They even took possession of "valuable crude oil reserves" but the lack of tankers in the Black Sea prevented its shipment to Germany before the end of the war.³

Germany's attentions returned to Caucasus in 1940 following the defeat of France. There was some opposition by the spring of 1941 to Adolf Hitler's decision to launch Barbarossa. A clique within the German Foreign Office (Auswärtiges Amt, AA) including Orientalists such as Fritz Grobba (the former Minister to Iraq) had in concert with representatives of the Deutsche Bank been pushing for an anti-British strategy centered on the Arab Middle East since 1939, particularly after the pro-Axis coup of April 1941 in Iraq.⁴ Raeder had been trying to convince the Führer to concentrate upon the defeat of Britain by

¹ The best focused study is Joel Hayward's "Hitler's Quest for Oil: The Impact of Economic Considerations on Military Strategy," *Journal of Strategic Studies* 18: 4 (1995): 94-135. See also: Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003), 213-217. Unless otherwise indicated, all German-language sources are from the National Archives and Records Administration, Record Group 242: Foreign Records Seized (NARA, RG 242). Since all documents included within RG 242 are available only on microfilm, I have used the following citation format: Microfilm Publication No./Reel No. (Item No.).

² Fritz Fischer, *Germany's Aims in the First World War* (New York: W.W. Norton, 1967), 550-557. For the text of the treaty in question, see: U.S. Senate, *Bolshevist Movement in Russia: Letter from the Secretary of State Transmitting to the Senate Committee on Foreign Relations a Memorandum on Certain Aspects of the Bolshevist Movement in Russia*, 66th Congress, 2nd Session, Document No. 172 (Washington, DC: GOP, 1920), 49-52.

³ Hauptmann Walter Sußdorf, "Das Feldkraftfahrwesen," in: *Der große Krieg, 1914-1918*, ed. M. Schwarte (Leipzig: Johann Ambrosius Barth, 1921), viii: 381.

⁴ Due to space constraints, it was impossible to include an extended discussion of Grobba's activities and the Third Reich's Middle Eastern policy during the war. Existing studies such as Lukasz Hirsowicz's *Third Reich and the Arab East* (London: Routledge, 1966), although good on Germany's attempts to harness Arab nationalist sentiment, have little to add in terms of its oil ambitions in the Middle East. This is unfortunate considering the close collaboration between Grobba, the German Foreign Office (Auswärtiges Amt, AA), and the Deutsche Bank to reclaim Germany's "lost rights" to Iraq's oil after the First World War. See, instead: Dietrich Eichholtz, *Krieg um Öl: Ein Erdölimperium als deutsches Kriegsziel, 1938-1943* (Leipzig: Leipziger Universitätsverlag, 2006), 62-80.

focusing on the Eastern Mediterranean since the fall of France.⁵ In November 1940, he conveyed to Hitler the Navy's "conviction that the commencement of an offensive against Alexandria/Suez" that would eventually extend to the "African and Near Eastern area [was] of *war-decisive significance*." Exerting control over the "the African region" was the only way for Germany to compensate for the economic advantage enjoyed by the Britain through its partnership with the United States. The Navy's planning arm, the Naval Warfare Command (Seekriegsleitung, SKL) was convinced that the "securing [of a] greater Europe/Africa under German leadership" would enhance Germany's economic position by offering "possession of [a] decisive basis for raw materials and foodstuffs," including oil.⁶

SKL reiterated these points seven months later, in the wake of German occupation of the Balkans and Crete, pointing out that "sea and air superiority in the Aegean" not only safeguarded Italy, France, and Spain's lifelines to imports from the Black Sea, but also "brings in future significant relief for our own supply of grain and oil through sea transport over Italy." Germany should also not pass up the opportunity to strike at Britain in the Middle East. The British recognized the "grave danger" confronting them and placed their "hopes upon the punctual insertion of U.S. support [...]." In spite of Raeder's pleading, however, the Navy could do little except implore Hitler not to allow Operation Barbarossa "to lead to any giving up, decrease or retardation of military operations in the Eastern Mediterranean."⁷ The OKM's

⁵ Eichholtz, *Krieg um Öl*, 60-61. Holger Herwig emphasizes the Navy's interest in North Africa and the Atlantic Islands (which were directed primarily at the United States) but only briefly mentions operations in the Middle East to dislodge Britain. Herwig, "Prelude to *Weltpolitik*: Germany's Naval Policy toward the United States of America, 1939-1941," *Journal of Modern History* 43: 4 (1971): 655-659

⁶ "Beurteilung Mittelmeer," no date or author, Anlage 3 to: Oberkommando der Marine (OKM), I op 2486/40, "Besprechung des Ob.d.M. [Oberbefehlshaber der Marine – Erich Raeder] beim Führer am 14.11.40. 13. Uhr.," T-1022/1727 (PG 32184). Emphasis in the original.

⁷ Among the various suggestions put forward by the Seekriegsleitung (SKL) was the seizure of Alexandria and Suez, but the SKL's ambitions went much farther: "The SKL is as before of the resolute conviction that the domination of the Eastern Mediterranean and thorough elimination of each expression of British political and military power in this area" should not stop until Germany had extended its reach "over the entire Near East and beyond that toward India [...]." Captain Heinz Abmann (1b/1.SKL), "Betrachtung über die strategische Lage im östlichen Mittelmeer nach Balkanfeldzug und Kretabesetzung und die weitere Kampfführung," no date, Anlage 5 to: B.Nr.1/Skl.885/41, Op Chfs., "Vortrag Ob.d.M. beim Führer am 6. 6. 1941 auf dem Berghof," T-1022/3407 (PG 32185). All of these points were reiterated using the strongest possible language in the SKL's "Denkschrift zum gegenwärtigen Stand der Seekriegsführung gegen England ('Juli-Denkschrift')," July 1941, reprinted in: Michael Salewski, *Die Deutsche Seekriegsleitung, 1935-1945* (Frankfurt am Main: Bernard & Graefe, 1970-1975), iii: 189-214. The author (Abmann) warned that Germany could not afford to comfort itself in thinking that either defeat of the Soviet Union or the loss of the Middle East would compel Britain to seek terms. Britain, and its U.S. ally, could only be beaten into submission by a German victory in the Battle of the Atlantic – the "pivotal event in the greatest

criticism of Barbarossa was politically irrelevant, and after 22 June 1941, the Navy could only hope that the invasion of the Soviet Union would yield the expected strategic benefits when Germany finally turned west to deal with Britain and the United States.⁸

Other notables at the fringes of power, such as Finance Minister Johann Ludwig von Krosigk, registered their concerns through third-parties such as Hermann Göring. In April 1941, Krosigk pointed out that Germany was unlikely to wrest any immediate economic gains from the occupied territories – certainly less than they were already receiving under the supplemental economic agreements to the Molotov-Ribbentrop Pact – Krosigk implored Göring to move against “the most sensitive position of the English world empire,” the Suez Canal, rather than undertaking a course that would bolster Anglo-American determination to fight one by “[bringing] Russia on to the side of our opponents.”⁹ Germany would be better served by building upon its existing successes in the west by moving “with all available forces” against the Suez Canal, “which would give us the dominant position for Africa and the Near East.”

economic war of all times.” Germany would also have to secure its control over French Northwest Africa (to prevent its use as an Anglo-American launching pad for attacks on Europe) and “incorporate the Iberian Peninsula – including Gibraltar – in its own sphere of influence.” Raeder’s opposition to Barbarossa – which was based entirely on strategic rather than moral considerations – is outlined in the following historical study: “Memorandum for Admiral Assmann for His Own Use, Signed ‘Raeder,’ 10 January 1944,” Translation of Document C-66, reprinted in: Office of United States Chief of Counsel for Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression* (Washington, DC: U.S. GPO, 1946), vi: 887-892 (hereafter cited as: *NCA*); for the original German document, see: International Military Tribunal, *Trial of the Major War Criminals* (Nuremberg, 1947-1949), xxxiv: 276-282 – hereafter cited as: *IMT*. See also: “A File on Russo-German Relations Found in the Files of the High Command of the Navy,” no date, Translation of Document C-170, *NCA*, vi: 977-1002 (for the original German document, see: *IMT*, 674-718).

⁸ As Abmann explained in his “Juli-Denkschrift,” “[the] center of gravity of action of the German armed forces lies at the moment in the East, with the building of a secure eastern-flank for the Reich and the securing of the foodstuffs and oil supplies necessary for a war of a long duration.” Unfortunately, the temporary concentration of Germany’s military and industrial energies in the East would give Britain “breathing space” to prepare the “healthiest starting basis for the decisive struggle against Germany still to come.” “Denkschrift zum gegenwärtigen Stand der Seekriegsführung gegen England (‘Juli-Denkschrift’),” July 1941, reprinted in: Salewski, *Seekriegsleitung*, iii: 189-214. Hopefully, the impending victory against the Soviet Union, and the acquisition of its oil in particular, would immeasurably strengthen the German economy by making it “blockade-proof.” This was the “fundamental prerequisite for a successful final struggle against Britain” (and, implicitly, the United States). Abmann, “Lagebetrachtung der Seekriegsleitung zur weiteren Kampfführung gegen England (Stand 20. 10. 1941),” 20 October 1941, reprinted in: Salewski, *Seekriegsleitung*, iii: 215-233.

⁹ Prominent diplomats offered a similar critique. In a memorandum prepared for Ribbentrop (who himself was distinctly unenthusiastic about Barbarossa and wished to present his objections to Hitler), Weizsäcker prophesied in April 1941 that “I believe we would be victors over Russia only in a military sense, but would, on the other hand lose in an economic sense.” The Soviets would probably continue to wage war from Siberia, while the British would receive a “moral lift.” Memorandum by the State Secretary, Document No. 419 in: AA, *Documents on German Foreign Policy, 1918-1945, Series D* (Washington, DC: U.S. GPO, 1949-1983), xii: 661-662 – hereafter cited as: *DGFP* (D).

Besides bolstering Italy and compelling Turkey to join the Axis, “the oil of Mosul would come in rich quantities” to Germany.¹⁰

Hitler’s flirtation with a “peripheral strategy” in the Mediterranean was never an “alternative” to the invasion of the Soviet Union in either 1941 or 1942.¹¹ Any interest Hitler may have expressed in striking at targets in either the Western (Gibraltar and the Azores) or Eastern Mediterranean (Suez) was transitory. Although Germany had dispatched France at only negligible cost, it lacked the means to grapple with Britain directly due to the weakness of both the German Navy and Air Force – the former being completely out-classed by the Royal Navy, the latter lacking the long range fighters and strategic bombers necessary for a waging a sustained campaign for aerial supremacy over the whole of Great Britain, much of which lay beyond the existing operational range of the Air Force, particularly its escort fighters.¹² Following the fall of France, Hitler had briefly considered reorganizing Germany’s armaments production around the needs of the Air Force and the Navy in a campaign against Britain. This entailed a significant reduction in the front-line strength of the Army to only 120 divisions (although the number of armored divisions would be doubled to twenty). Hitler backed off in August and decided that the military needed

¹⁰ Krosigk to Göring, 19 April 1941, enclosed with: Krosigk to Göring, 20 April 1941, Bundesarchiv, Berlin-Lichterfelde (BA-B), R 2/24243. It seems doubtful that Göring took any of Krosigk’s strategic suggestions seriously, if only because the latter had also opposed the invasion of France. Krosigk to Göring, 06 November 1939, BA-B, R 2/24243.

¹¹ See: Milan Hauner, *India in Axis Strategy: Germany, Japan, and Indian Nationalists in the Second World War* (Stuttgart: Klett-Cotta, 1981), 173-193 and 259-274; Andreas Hillgruber, *Hitlers Strategie: Politik und Kriegsführung, 1940-1941* (Frankfurt am Main: Bernard & Graefe Verlag für Wehrwesen, 1965), *passim*; Alan Levine, “Was World War II a Near-run Thing?” *Journal of Strategic Studies* 8: 1 (1985): 51-59; Militärgeschichtliches Forschungsamt (MGFA), *The Mediterranean, South-east Europe, and North Africa, 1939-1941*, vol. 3 of *Germany and the Second World War* (New York: Oxford University Press, 1995), 180-301, 557-640; Gerhard Schreiber, “The Mediterranean in Hitler’s Strategy in 1940: ‘Programme’ and Military Planning,” in: *German Military in the Age of Total War*, ed. Wilhelm Deist (Leamington Spa: Berg Publishers, 1985), 240-281; Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 395-512; and MGFA, *The Global War: Widening of the Conflict into a World War and the Shift of the Initiative, 1941-1943*, vol. 6 of *Germany and the Second World War* (New York: Oxford University Press, 2001), 110-144 and 843-1215. Levine explicitly contends that Germany could have never won the war under any circumstances after 1939. Having ruled out a successful invasion of Great Britain (geography) or the Soviet Union (geography and ideology), and dismissed the significance of German efforts either in the Battle of the Atlantic or the Mediterranean, Levine concludes (compellingly in my opinion) that “the only victories Germany might reasonably have hoped to achieve would not have affected the outcome of the war” (pg. 59). The other authors tend to hedge their bets, with the balance of opinion resting on the idea that Germany’s last remaining hope of staving off defeat was Operation Barbarossa. I find this unpersuasive: even if Germany had triumphed in the East, it would have taken years to create the material preconditions for a cross-Channel invasion. In the meantime, the United States would have fully mobilized and developed the atomic bomb.

¹² Williamson Murray, *The Luftwaffe: Strategy for Defeat* (Washington: Brassey’s, 1996), 39-56.

“to prepare for every potential arising political situation,” including the impossibility of defeating Britain in 1940, the intervention of the United States in 1941, and a “change” in relations with the Soviet Union.¹³

If an invasion was out of the question, Germany need some other means of compelling Britain to recognize the futility of further resistance and sue for peace, thereby allowing Germany to escape the trap of a “two-front” war when it finally turned against the Soviet Union. Jodl (Chief of Operations at the Armed Forces High Command – Wehrmachtsführungsstab, Oberkommando der Wehrmacht, OKW) first broached to Hitler the idea of a “peripheral strategy” in the summer of 1940 as a means of “breaking England’s will to resist.”¹⁴ The most effective means of forcing Britain to sue for peace would, of course, be an invasion, but if that was impossible, Jodl suggested “the extension of the war to the periphery.” Such a strategy entailed the support of possible allies who “are interested in the breakup of the English world empire and hope for a fruitful inheritance [ergiebige Erbschaft],” such as Italy, Spain, the Soviet Union, and Japan.¹⁵

Prospects for achieving a decisive victory in the Mediterranean appeared fleeting in view of the weakness or vacillation of Germany’s existing (Italy) and potential (Spain and Vichy) allies. Moreover, German successes in this theater were unlikely either to break British resistance or afford the Axis any meaningful short-term economic gains (including oil). A drawn-out campaign in the Mediterranean would also contribute nothing toward the fulfillment of Hitler’s “Programme,” with its emphasis on the acquisition of “living space” in the east. Hitler was also unenthusiastic about forcing the matter with

¹³ “*Aktennotiz über die Entwicklung der Rüstungslage im Sommer 1940*,” no date or author (circa August 1940; probably Thomas), Hoover Institute, Records of the International Military Tribunal at Nuremberg (hereafter cited as: Hoover Institute, Nuremberg Records), Box 995 (PS-1456).

¹⁴ A good summary of German planning directed against Britain through the Middle East between June 1941 and Barbarossa may be found in: Walter Warlimont, *Inside Hitler’s Headquarters, 1939-1945*, (New York: F.A. Praeger, 1964), 104-134. Warlimont is a problematic source in view of his unabashed desire to redeem the honor of the German Army, but he has much to offer when it comes to purely operational and planning matters, even if economic factors such as oil almost never make an appearance in his memoirs.

¹⁵ Jodl, “Die Weiterführung des Krieges gegen England,” 30 June 1941, Document 1776-PS, *IMT*, xxviii: 301-303.

Britain, and he worried that the collapse of the British Empire would benefit the United States and Japan rather than Germany.¹⁶

Although he did not commit himself to Operation Barbarossa until December 1940 when he issued his Directive No. 21, Hitler was already thinking about eliminating the Soviet Union as an indirect means of convincing London to come to terms as early as July 1940: “*With Russia smashed, Britain’s last hope would be shattered*,” Halder recorded Hitler stating on 31 July, when the decision to begin planning for Barbarossa was announced. Liquidating the Soviet Union would also weaken Britain’s other key ally, the United States. The Soviet Union was the “*Far Eastern sword of Britain and the United States pointed at Japan*.” If Germany eliminated the threat to Japan’s rear, Hitler reckoned that Tokyo would be able to concentrate its energy against the Western powers, thereby splitting their forces between two theaters.¹⁷ Hitler reiterated many of these points during a conference with Ribbentrop on 09 January 1941: “What keeps Britain standing is hope upon the USA and Russia [...]. England hopes however to carry on until it has brought together a great continental block against Germany.” Once the British realized that their last hope in Europe was gone, they would see the light, if only because if “they lost [the war], they would no longer have the moral strength to hold their Empire together.”¹⁸

Moreover, only the occupation of the Soviet Union could provide Germany with the economic and physical security it needed to wage the drawn-out conflict Hitler expected between a German-dominated Europe and the United States. As Hitler explained to Ribbentrop in January 1941, Barbarossa would have the following objectives: first, “the destruction of the Russian Army”; second, “the seizure of the most

¹⁶ Besides Lothar Gruchmann, “Die ‘Verpassten strategischen Chancen’ der Achsenmächte im Mittelmeerraum 1940/41,” *Vierteljahrshefte für Zeitgeschichte* 18: 4 (1970): 456-475, see the appendix to this study for additional discussion of secondary sources.

¹⁷ *Halder Diary*: 13, 22, and 31 July 1940. Emphasis in the original. According to Halder, besides “inciting Russia against us,” Hitler was concerned that Britain might strike at one of Germany’s most vulnerable points by attacking its synthetic fuel plants (22 July 1941). When citing from Halder’s diary, I have relied upon the version reproduced as: Arnold Lissance, ed., *War Journal of Franz Halder* (1950), retrieved from the Combined Arms Research Library, Digital Library (hereafter cited as: CARL).

¹⁸ Armed Forces High Command (Oberkommando der Wehrmacht, OKW) War Diary Entry for 09 January 1941, reprinted in: Helmuth Greiner and Percy Ernst Schramm, ed., *Kriegstagebuch des Oberkommandos der Wehrmacht* (Frankfurt am Main: Bernard & Graefe, 1961-1965), i: 253-259 – hereafter cited as: OKW, *KTB*. As Jürgen Förster puts it, “The decision to embark on Operation ‘Barbarossa’ was taken not on account of London’s uncompromising attitude, but in spite of it.” Förster, “Hitler Turns East – German War Policy in 1940 and 1941,” in: *From Peace to War*, ed. Wegner, 115-133 (quotation from pg. 122).

important industrial territories and the destruction of the remainder, most of all the area around Yekaterinburg”; and third, the occupation of Baku.¹⁹ Once it controlled the “immeasurable riches” of the Soviet Union, Hitler believed Germany would have everything it needed “to wage war in future against continents. [...] If this operation can be pulled off, Europe will hold its breath.”²⁰ Following the start of Barbarossa, Hitler remarked to Arthur Seyss-Inquart (the Reich Commissar of Holland) that it was “an absurdity that a great empire should have existed in the East of the European Continent with almost inexhaustible mineral resources and raw materials... whereas in the thickly-settled central and western European countries there existed a scarcity of raw materials” that had heretofore been surmounted only by the possession of overseas colonies.²¹ Germany could short-circuit this historical trend by forcibly integrating its developed economy with the vast natural resources of Eurasia, “so that in the future the western European industrial areas and eastern European agricultural and raw materials areas could complement one another in a healthy manner.” If it freed itself from having to import rubber and oil from overseas, there was no need for Axis Europe to re-join the global economy or compete for colonies and markets after the war.²² Besides being a source of raw materials and labor, the Soviet Union would also serve as a captive market for German exports, which would no longer have to compete against foreign rivals by lowering prices to the detriment of German workers.²³

If victory in the East finally convinced Britain to abandon its struggle, or discouraged the United States from more active participation in the war (since the elimination of the Soviet Union would

¹⁹ Hitler had mentioned a “Limited drive on Baku oilfields” to Halder on 31 July 1940, but Hauner points out that “[when] exactly the Caucasus was included in Hitler’s war plans is not easy to determine.” Hauner, *India in Axis Strategy*, 182, n. 42.

²⁰ Entry for 09 January 1941, OKW, *KTB*, i: 258.

²¹ This was a familiar refrain in German analyses of the global distribution of oil reserves. Dr. Paul Ruprecht, “Erdölbedarf und Erdölverteilung,” *Militär-Wochenblatt*, 125. Jahrgang, Nummer 40 (04 April 1941).

²² The Representative of the Foreign Ministry with the Reich Commissar for the Occupied Netherlands to the Foreign Ministry (Otto Bene), Pol. II 2762, 02 October 1941, Document No. 377 in: *DGFP* (D), xiii: 606-608. Hitler stressed the idea of Barbarossa as a Pan-European crusade to harness the economic resources of the east in the service of a reorganized and unified Europe under German leadership during several of his meetings with various foreign ministers who assembled in Berlin on the occasion of the renewal of the Anti-Comintern Pact. See document nos. 507-511, and 519 in: *DGFP* (D), xiii: 849-867 and 891-894. This theme also came up frequently during his wartime monologues. Norman Cameron and R.H. Stevens, trans., *Hitler’s Table Talk: His Private Conversations* (New York: Enigma, 2000): No. 18 (19-20 August 1941).

²³ Unlike U.S. and British laborers, who struggled under the constraints imposed by the liberal trading order and the Gold Standard. *Table Talk*: No. 25 (25 September 1941) and No. 35 (13 October 1941).

strengthen Japan), then so much the better – but it was not the determining factor. Hitler had been committed to attacking the Soviet Union even when he still believed, in the summer of 1940, that Britain might seek terms and showed little desire to break up the British Empire for the benefit of Japan and the United States. The Führer recognized that any strategy that deferred the settling of accounts in the east worked to the advantage of the Reich's enemies. Germany's military strength would be sapped by indecisive military engagements, while the German economy would struggle to support resource-poor Europe. Meanwhile, Germany's foes would gain either a respite (Britain) or the opportunity to further develop their military infrastructure (the United States and the Soviet Union). Although there is not a shred of evidence that the Soviet Union was planning a pre-emptive war against Germany – or that Hitler believed that one was imminent – the scale of Soviet demands in Eastern Europe was a source of concern in Berlin because their fulfillment would enhance Moscow's economic leverage over the Reich.²⁴

German analyses of the Soviet oil industry on the eve of the Second World War or during its early years emphasized the immensity of the Soviet reserves. In 1941, the Office for Soil Exploration (Reichsstelle für Bodenforschung, RfB – after 1941, Reichsamt für Bodenforschung) estimated Soviet reserves at over 8,600,000,000 tons, of which 882,400,000 tons were classified as proven or probable.²⁵ Although the Soviet oil industry had recovered from the depredations of the Civil War, actual production by the end of the Second Five-Year Plan (1933 to 1937) lagged well behind expectations: 28,396,000 tons

²⁴ The argument of H.W. Koch's "Hitler's 'Programme' and the Genesis of Operation 'Barbarossa'," *Historical Journal* 26: 4 (1983): 891-920, is based on a caricature of the thesis put forward by Andreas Hillgruber in *Hitlers Strategie*. But the former is still valuable by illustrating how the irreconcilability of Soviet and German ambitions in Eastern Europe by the time of Soviet Foreign Minister Vyacheslav Molotov's visit to Berlin in November 1940 pushed Hitler toward a confrontation that even Koch concedes was premised on the notion of fulfilling Germany's "Manifest Destiny" through a "process of territorial expansion analogous to that experienced by the U.S.A. and Russia in the preceding century" (pg. 920).

²⁵ Reichsstelle für Bodenforschung (RfB), *Die wichtigsten Lagerstätten der Erde, Heft 4: Erdöl in Rußland* (Berlin, 1941), Library of Congress (LOC). Production in 1938 was over 30,000,000 tons, 90% of which was concentrated within the Caucasus, along with over 80% of the country's refining capacity and about 65% of its proven or probable reserves. For more detailed information regarding oil and gas production, refining, and transportation in the Caucasus, see: Vowi 4615, "Erdöl und Erdgas im Kaukasus," 29 April 1942, T-84/117 (EAP 66-c-12-44/100). For more specific data compiled by the RfB on the oil industry in the Caucasus (circa 1941-1942), including Georgia and Dagestan, see: "Erdöl," no author or date, Bundesanstalt für Geowissenschaften und Rohstoffe, 63070 (hereafter cited as: BGR #).

instead of 47,000,000 tons.²⁶ As a result, Soviet output could not keep up with rising internal consumption due to the mechanization of agriculture, rearmament, and industrialization, which quadrupled from 6,700,000 tons in 1928 to 25,000,000 tons in 1939. The narrowing gap between production and consumption led to a collapse in exports from 6,600,000 tons in 1932 to only 931,000 tons in 1939 (3% of production that year). Whereas domestic consumption had equaled 54% of total production in 1928, by 1939, production covered only 76% of consumption. Although this should have left an exportable surplus of 7,800,000 tons, waste and inefficiency had reduced the amount available for export to only 1,200,000 tons.²⁷ The decline in exports also encouraged the Soviets to reduce investment in their oil export infrastructure, obviously a matter of concern to Berlin if not Moscow.²⁸ Not for nothing did one National Socialist periodical refer to the oil industry as the “problem child of the Russian economy.”²⁹

Before the invasion of the Soviet Union, there was a great deal of speculation within Germany as to whether the amount of oil available for export could be increased through higher production.³⁰ Although Alfred Bentz (Director of the Crude Oil Division, RfB) and Ernst Rudolf Fischer (Petroleum Division, Ministry of Economics – Reichswirtschaftsministerium, RWM) had argued in the summer of 1940 that the Reich could not expect Soviet exports alone to satisfy European demand, there was consensus among German analysts that exports to Germany at least could be raised. Experts also surmised that actual oil reserves might be significantly larger than existing estimates due to the sheer size of the Soviet Union:

²⁶ “Erdöl als Wirtschafts- und Wehrfaktor der Sowjetunion,” *Militär-Wochenblatt*, 119. Jahrgang, Nummer 20 (25 November 1934).

²⁷ A.M. Stahmer (RfB, Abt. Erdöl), “Bericht über die Erdöl-Industrie Sowjet Russlands,” 26 April 1941 (with “Geological Observations” by A. Mayer-Gürr), BGR 48745. For more detailed statistics prewar Soviet oil production, consumption, and exports, as well as the amounts sent to each of the major recipients of Soviet exports, see: “Wandlung in der Erdölausfuhr der UdSSR,” Material: *Ostwirtschaft*, Heft 5/6, 1937, no date, T-77/425 (Wi/IF 5.3444); and OKW/Oberkommando des Heeres (OKH), “Mineralöl-Statistik,” no date, T-77/658 (Wi/VI.109).

²⁸ E. Sch., “Öl in der Sowjetunion,” *Vierjahresplan*, 1942: IX.

²⁹ “Die Erdölbasis der Sowjetunion,” *Vierjahresplan*, 1937: VI.

³⁰ Germany became the primary recipient of Soviet oil exports following the signing of the German-Soviet Commercial Agreement of February 1940. According to one important WiRüAmt study of the Soviet economy, German imports of all manner of Soviet petroleum products in 1940 had totaled almost 686,833 tons (worth roughly 71,600,000 RM). OKW, WiRüAmt, Wi (VI), Nr. 2758/41 g Ax 3i/34/35, “Die Wehrwirtschaft der Union der Sozialistischen Sowjet-Republiken (UdSSR),” March 1941, LOC. For additional WiRüAmt economic analyses (useful for data, but of little policy content), see also: OKW, WiRüAmt, Az. 3i./34/25 (Wi VIa), Nr. 4720/42, “Die Wehrwirtschaft des kaukasischen Raumes,” April 1942, LOC; and OKW, WiRüAmt, Chef Wehrwirtschaft Ausland, Az 3i/34, Nr. 26007/43 g, “Die Wehrwirtschaft der UdSSR, Rohstoffwirtschaft, Erdöl: Die außerkaukasischen Erdölgebiete und Raffinerien,” 01 March 1941, T-77/1085 (Wi/ID. 257).

21,500,000 square km, of which “until today only a minimal portion” had according to the RfB been “geologically and geo-physically explored exhaustively.” But the largest short-term gains would come through greater efficiency and better management. According to the Office for Defense-Economy Planning (Reichsamt für wehrwirtschaftliche Planung), “With regard to crude oil a significant rise of the amount available for export can be accomplished by means of an intensification of crude oil extraction and first and foremost by decreasing the high losses in extraction, refining, transportation and demand.”³¹ The RfB concurred: “The raising of production is not a problem of discovering new crude oil fields, but rather ultimately a question of organization, of industrial infrastructure and of transportation.”³²

Agencies such as the RfB did not neglect the Soviets’ development of the so-called “Second Baku” in the Volga-Urals region, or Emba (Kazakhstan). Although proven reserves in those two regions were rather small (only 77,000,000 tons) the possible reserves (3,876,000,000 tons) dwarfed even those of Baku. Production in both areas had risen sharply at the end of the 1930s, and under the Third Five Year Plan, their combined production was supposed to exceed 9,000,000 tons by 1942. All told, the areas beyond the Caucasus would have a planned production of 12,800,000 tons in 1942, or roughly 26.6% of the total estimated production of 48,400,000 tons. One RfB analysis from 1942 poured cold water on the idea that the areas beyond the Caucasus could supply the Soviet Union in the event that the Caucasus fell to Germany, noting that production in 1941 had only been 4,400,000 tons instead of the estimated 5,700,000 tons. The RfB doubted that the Soviets, for all of their “ruthlessness” when it came to mobilizing labor, could achieve the goals set out for the Third Five Year Plan, reckoning that the only meaningful short-term increases would come in Emba and Sakhalin, but these would hardly compensate for the “stagnation of production in the ‘Second Baku’ [...]”³³ Another report by the Wirtschaftsstab Ost

³¹ Ironically, the study included the assumption that the Soviets’ might expand their exports when they “felt free from the continual cumbersome nightmare [lastenden Alpdruck] since 1917 of a ‘unification of the capitalist states’ for the purpose of an intervention against the ‘only socialist state in the world.’” Reichsamt für wehrwirtschaftliche Planung, “Der Wirtschaftspotential der UdSSR, I: Urproduktion,” January 1940, LOC.

³² RfB, *Erdöl in Rußland*. See also: A. Mayer-Gürr and A.M. Stahmer, Abt. Erdöl, RfB, “Das Erdöl Russlands,” no date (circa 1940/41), BGR 2026385, which appears to have provided the factual basis for the *Erdöl in Rußland* pamphlet.

³³ Alfred M. Stahmer, RfB, Abteilung Erdöl, “Russland ohne das kaukasische Erdöl,” no date, T-84/119 (EAP 66-c-12-44/241); according to the copy of the report in the BGR – No. 65842 – the report is dated August 1942. See also:

on the eve of the 1942 offensive concurred: an advance to the Volga and the capture of the Caucasus would have “grave and decisive” consequences for the Soviet effort. Even if the Soviets managed to import oil from Iran and Iraq across the Caspian, the “raw materials potential” of the Soviet Union by the start of the 1943 campaigning season would be insufficient to support “energetic military operations,” since the supposed extent of “the development of the Urals- and Far Eastern-industry” had been “deceptive and incomplete.”³⁴ Other RfB analyses were critical of the systemic waste of oil (“indirect consumption”) which meant that even though there was a gap of 7,800,000 tons between production and consumption, only 1,200,000 tons was available for export.³⁵

Many of these studies, written before Barbarossa, were premised on the idea of continued German-Soviet trade.³⁶ Therefore, they did not make the obvious point: if Germany invaded the Soviet Union and

Arnold Bonwetsch, “Die Erdölindustrie im ‘Zweiten Baku,’” *Ost-Express*, Sonderbericht No. 26 (367), 18 November 1941, BGR 65936.

³⁴ Wirtschaftsstab Ost, Führungsgruppe der Chefgruppe W, “Das Rohstoff-Potential der Rest-Sowjetunion,” no date (circa late-1941, early-1942), T-77/1203 (Wi/ID.1375).

³⁵ A.M. Stahmer (RfB, Abt. Erdöl), “Bericht über die Erdöl-Industrie Sowjet Russlands,” 26 April 1941 (with “Geological Observations” by A. Mayer-Gürr), BGR 48745.

³⁶ For a sampling of economic analyses prior to Barbarossa, see: Vowi 3582, “Die Rohstoffgrundlage der Sowjetunion,” 10 August 1939, T-84/117 (EAP 66-c-12/44/87); Dr. F/F. (Volkswirtschaftliche Abteilung, Vowi), “Der deutsche Rohstoffbezug aus der UdSSR und Südosteuropa,” 04 September 1939, BA-B, R 8128/579; Dr. Erwin Haudan (Wehrpolitisches Institut der Universität Berlin), “Treibstoffversorgung Deutschlands aus Rußland,” 23 September 1939, enclosed with: Wehrpolitisches Institut an den Chef der 3. Abteilung des Generalstabes des Heeres (Fremde Heere Ost), 23 September 1939, T-78/491 (H3/851) (“[In] my judgment, for the first year of deliveries [and] under the most favorable circumstances, a total volume of 1.5 to 2.0 million tons of fuel [experts] can be adopted.”); Institut für Weltwirtschaft, “Das russische Wirtschaftspotential und die Möglichkeit einer Intensivierung der russischen Handelsbeziehungen,” September 1939, T-84/118 (EAP-66-c-12-44/177) (“Without a doubt a rise in production seems possible and thereby a rise in exports of crude oil, because Germany’s demand for imports is meager in relation to Russian production and the total Russian exports. [...] Crude oil exports from the existing assets of the Russian economy are the easiest and the fastest [that] can be placed at Germany’s disposal.”); Ferdinand Friedensburg, “Bodenschätze und Bergbau der Sowjet-Union,” Sonderabdruck aus... Jahrgang 1940 der Berg- und Hüttenmännischen Zeitschrift “Glückauf,” BGR 63042; and “Die Sowjetunion als deutscher Erdöllieferant,” no date or author (circa January 1939 to June 1941; probably the Ministry of Economics – Reichswirtschaftsministerium, RWM), BA-B, R 3101/15337. At some point during the second half of 1941, the WiRüAmt also completed an immense, 155-page survey of every aspect of the Soviet oil industry, based largely on data published in the primary German trade journal for the petroleum industry, *Öl und Kohle*: OKW, WiRüAmt, Ro, “UdSSR[:] Mineralölunterlagen,” no date, T-77/1084 (Wi/ID. 255). The various economic intelligence estimates for Soviet production between 1938 and 1943 (including official Soviet claims) are contrasted in: Imperial War Museum (Duxford), Foreign Documents Collection (hereafter cited as: IWM, FD) 4479/45. For whatever reason, the Germans continued producing studies of the Caucasian oilfields as late as 1944: Dr. J. Witt (Kontinentaleuropäische Forschung, Reichsministerium für die besetzten Ostgebiete), “Die Bodenschätze Kaukasiens und ihre europäische Bedeutung,” 1944, T-84/51 (EAP 66-c-2-10/19). The author of this study clearly had an eye to the future: “Europe’s natural sources of supply lie to its East.” Hopefully, after the return “of political and economic relations to normal conditions,” the “almost inexhaustible sources” of oil in the Caucasus could be harnessed to the “peaceful work of European reconstruction.” Such a study is only of value when it comes to ascertaining the accuracy of German

exterminated or enslaved its population, it would not have to worry about allocating much oil to the Soviet economy. The Third Reich intended to keep the population of Western and Central Europe alive not just because of National Socialist racial ideology: Germany also needed to harness the economic and military power of Europe. Berlin had no such incentives when it came to the Slavic (and Jewish) populations of Eastern Europe and the Soviet Union.

Following the war, when asked to describe “to what extent German military strategy had been influenced by economic considerations,” Albert Speer claimed “that in the case of the attack on Russia the need for oil certainly was a prime motive.” He also recounted that, following the start of Barbarossa, Göring instructed him and Carl Krauch to prepare Germany’s synthetic fuel plants to refine Soviet crude oil.³⁷ But Operation Barbarossa was more than just an exercise in economic plunder. Nor was the invasion just a ploy to protect the Romanian oilfields – although that was a consideration as early as July 1940, Hitler appears to have used it as an *ex post facto* rationalization, and even then only in the event that the Soviets launched an offensive to pre-empt Barbarossa.³⁸ Rather, Germany’s oil crisis following the victory over France, and its lack of strategic alternatives in other theaters, precipitated both the timing and the direction of the assault against the Soviet Union.³⁹

Oil and the control of Soviet raw materials competed for attention within Germany policymaking circles alongside a host of military, diplomatic, and ideological factors including the extermination of “Judeo-Bolshevism” or the acquisition of “living-space.” Not to be underestimated was the belief that, by

estimates of Soviet oil reserves and production. As this report, along with Gunther’s analyses, make clear, much of the data the Germans relied upon (such as the proceedings of the International Geological Congress of 1937 in Moscow) was out-of-date. A.E. Gunther, “Oil Fields Investigation, Part V, Section 1: Russia (U.S.S.R.), The Caucasus Expedition, 1942-1943,” March 1946, British National Archives (BNA), WO 252/1151; and A.E. Gunther, “Oil Fields Investigation, Part V, Section 2: Russia (U.S.S.R.), The Ukraine,” January 1947, BNA, WO 252/1451.

³⁷ C.S. Snodgrass (Director of Foreign Refining Division, Petroleum Administration for War) to Ralph Davies (Deputy Petroleum Administrator for War), “German War Oil,” 16 July 1945, NARA, Record Group 253: Records of the Petroleum Administration for War, Entry 10, Box 665. See also: United States Strategic Bombing Survey, *German Oil Industry, Ministerial Report Team 78* (Washington, DC: U.S. GPO, 1945), 76.

³⁸ *Halder Diary*: 22 July 1940. For Hitler’s perspective, see: *Table Talk*: No. 223 (20 May 1942).

³⁹ Eichholtz claims that fuel shortages prior to Barbarossa only emerged as a result of German operations against Yugoslavia and Greece in April/May 1941. As we have seen, officials such as Thomas were worried well before then. Lack of attention to Germany’s deteriorating fuel situation well before Barbarossa is one of the shortcomings of Eichholtz’s otherwise invaluable work, particularly in *Krieg um Öl*, 40-46, 80-100.

destroying the Soviet war machine and occupying its most economically productive areas, “Russia will be eliminated as an ally of any consequence for England,” even as “German war potential will be tremendously increased” while freeing Berlin from any concern about its flank as it devoted its full attention to the defeat of Britain.⁴⁰ Even if oil was not the pre-eminent factor behind the invasion of the Soviet Union, it certainly predetermined the geographical extent of Barbarossa. In February 1941, as preparations for the assault on the Soviet Union began in earnest following the promulgation of Hitler’s Directive No. 21, the Defense-Economy and Armaments Office (Wehrwirtschafts- und Rüstungsamt, WiRüAmt) produced the first of two important studies concerning the German acquisition of Soviet raw materials.⁴¹

The first paper considered the state of the Soviet war economy in the wake of a possible German advance to a line stretching from the Crimea along the Dnieper to Smolensk and Leningrad. WiRüAmt considered such vast territorial losses to be “in general without [any] decisive significance for Russia’s supplies” of raw materials, particularly in the case of crude oil, the total supply of which would drop by a mere 1%. If Germany pushed on to a line stretching from Baku to Stalingrad, Saratov, Gorki, and Archangel, the Soviet economy would find itself in a precarious state, having lost 90% of its existing oil production. WiRüAmt therefore advised that the capture of the territory south of the mouth of the Don and Volga rivers to be of “particular importance.” On the other hand, if Germany occupied just European Russia, but not the Caucasus, it would find itself with a tremendous oil deficit on its hands, as the regions now under its control had previously accounted for only 1% of Soviet oil production and depended upon imports from elsewhere in the Soviet Union. The Soviet agricultural sector, which accounted for 60% of Soviet consumption before the war, would pose a particularly large burden.⁴²

⁴⁰ Circular of the Foreign Minister, RAM 365/R, 27 August 27 (actually August 26) 1941, Document No. 244 in: *DGFP* (D), xiii: 389-390.

⁴¹ Preparations for economic exploitation of the Soviet Union began in November 1940 and are described in: MGFA, *The Attack on the Soviet Union*, vol. 4 of *Germany and the Second World War* (New York: Oxford University Press, 1998), 118-224. Such a topic is beyond the scope of this chapter, which will focus only on oil policy. See also: Eichholtz, *Krieg um Öl*, 40-46, 84-90.

⁴² OKW, WiRüAmt/Wi, B.Nr. 337/41 gK, Vortragsnotiz, 07 February 1941, T-77/1066 (Wi/ID. 73).

A few days later, Georg Thomas completed his evaluation of “The Economic Effects of an Operation in the East.” Although Thomas had once been skeptical of an invasion of the Soviet Union, he had quickly changed his tune once he learned of Hitler’s determination. Thomas reiterated all of the points of the earlier study concerning the economic rationale for occupying the Caucasus. He also pointed out that Germany would no longer be able to full satisfy its full military requirements by the late summer, early autumn of 1941, without “*recourse to Russian stocks or Russian production. In case this is not possible, consumption would have to sink to [a level compatible with] German domestic production and Romanian imports.*” Even assuming a successful conclusion to the war, and a return to normal levels of fuel consumption by the military (which, in the case of the Air Force and Navy at least, could be satisfied though German and Romanian production), there was still the matter of supplying the occupied eastern territories, for which the Soviet oilfields would be “*essential.*” For that reason, Thomas concluded that the Caucasus had “to be factored into the operation. *The Caucasian fuel-territory is indispensable for the utilization of the occupied territories.*”⁴³ Göring agreed with Thomas’ evaluation of the need to occupy both the Ukraine and the Caucasus, but he was more sanguine about Germany’s chances of capturing the oilfields intact. Echoing the Führer’s sentiments, Göring reassured Thomas that the “Bolshevik state” would collapse too quickly to engage in any effective sabotage.⁴⁴

⁴³ Thomas, WiRüAmt, “Die wehrwirtschaftlichen Auswirkungen einer Operation im Osten,” 13 February 1941, T-77/1060 (Wi/ID. 39); reprinted in: Georg Thomas’ *Geschichte der deutschen Wehr- und Rüstungswirtschaft, 1918-1943/1945* (Boppard am Rhein: Boldt, 1966), 514-532. Emphasis in the original. Lizzie Collingham is correct in observing that Thomas was determined to use Caucasian oil production to supply the Soviet agricultural sector during the German occupation, but she misunderstands the broader context by claiming that German planners considered the Reich’s overall petroleum position to be of secondary importance on the eve of Barbarossa. Lizzie Collingham, *The Taste of War: World War Two and the Battle for Food* (London: Allen Lane, 2011), 38.

⁴⁴ “Aktennotiz über Vortrag beim Reichsmarschall am 26. 2. 1941,” 27 February 1941, signature illegible (Thomas?), Hoover Institute, Nuremburg Records, Box 995 (PS-1456). Thomas continued to make the case for the German occupation of the Caucasus in a memorandum of 22 October 1941 to Halder, but now the emphasis was on identifying vulnerabilities that could be exploited to speed up the collapse of Soviet resistance. Thomas advised that, in the event that German forces advanced to the point where the oilfields of Baku and the West Urals lay within range of the Air Force, “Russia runs the risk” that its supply of crude oil, “the last essential raw material still available in sufficient quantities, will be limited.” Thomas did not believe, however, that this would bring about the collapse of Soviet resistance, which was rather “to be expected following the loss of the industrial areas of the Urals.” Thomas, WiRüAmt, Abt. Wi, Nr. 3208/41 gk, “Voraussichtliche Entwicklung der wehrwirtschaftlichen Lage Russlands mit Fortschreiten der Operationen nach Osten,” 01 October 1941, enclosed with: der Chef des WiRüAmt im OKW (Thomas) an das Chef des Generalstabs des Heeres, Herrn Generaloberst Halder, Nr. 3409/41 g.K., 22 October 1941, T-77/1066 (Wi/ID. 73).

Oil and the Economic Spoliation of the Soviet Union, 1941

Planning for the capture of the Caucasian oilfields also began well before the start of Operation Barbarossa.⁴⁵ One OKW study from 05 May 1941 noted that existing Axis monthly consumption including the occupied territories was 1,150,000 tons per month against a total production (including including imports from all nations other than the Soviet Union) of only 850,000 tons. At this rate, stocks would be expended by August, and the resulting deficit of 300,000 tons per month “could, if Iraq stays out of consideration, be covered only from Russia.” After considering Caucasian oil’s significance to Soviet agriculture, the problem of transporting it (which entailed transportation through the Dardanelles and the Aegean), and the risk of Soviet or British sabotage, the OKW concluded that “[the] necessity of taking the Caucasian crude oil district, at the very least the area around Maikop (7% of total Soviet production) and Grozny (9%) and the transportation route for the oil, at the earliest possible time is irrefutable.”⁴⁶ Once Barbarossa began, however, the WiRüAmt realized that, as important the oilfields might be to Germany, there was little chance of preventing their destruction, particularly those of Baku in view of the distances entailed. Accordingly, WiRüAmt now argued that, at least in the short term, it would be more worthwhile for the German Army to focus on the capture of the North Caucasian oilfields

⁴⁵ For a summary of the role of oil in the planning and conduct of Operation Barbarossa, besides Eichholtz, see: Titus Kockel, “Geologie und Krieg: Die Erdölpolitik des Reichsamt für Bodenforschung und seiner Vorläufer 1933-1945,” Magisterarbeit (Technische Universität Berlin, Fachbereich 1, 1995), 43-53. I am grateful to Dietrich Eichholtz for providing me with a copy of this work.

⁴⁶ “Unterlagen für die Prüfung eines Vorgehens gegen das kaukasische Ölgebiet,” no date or author, Anlage to: OKW, Nr.44564/41 g.K. Chfs. WFSt/Abt. L (I Op.), “Betr.: Das kaukasische Ölgebiet,” 04 May 1941, T-77/1066 (Wi/ID. 73). See also WiRüAmt’s comments on the original study by the Armed Forces Operations Staff (Wehrmachtsführungsstab, WFSt): WiRüAmt an WFSt/L, Nr. 50/41 Chfs./g.Kdos. Wi Ia H, “Betr.: OKW 44564/41 g.Kdos./Chfs. WFSt/L (I Op.) v. 5.4.41[,] ‘Das kaukasische Ölgebiet,’” 19 May 1941, T-77/1066 (Wi/ID. 73). To frustrate the destruction of the oilfields, the WFSt raised the possibility of a pre-emptive sea or air landing by German troops, but judged this to be unfeasible. It also broached the idea of supporting the creation of an autonomous Caucasian nation, “which naturally would be interested in intact oil districts [...]” To that end, the Abwehr suggested to the WiRüAmt in July that it should begin recruiting Caucasian émigrés from Romania, Bulgaria, and Turkey to form a counter-revolutionary cadre that would infiltrate the remaining Soviet personnel still working in the fields under German supervision. The Abwehr expected that such a plan would incur opposition from the AA and trusted that it would enjoy the support of the WiRüAmt. Wi VI, Gr. Nr. 2/41 g.Kdos. Wi VI, Vortragsnotiz, “Betr.: Sicherung des Erdölgebietes Baku,” 09 July 1941, T-77/1066 (Wi/ID. 73).

and refineries, since the latter, which boasted of an annual throughput of 19,100,000 tons, were easier to destroy and harder to reconstruct than the oilfields themselves.⁴⁷

Under Göring's leadership, prior to Barbarossa, the Third Reich prepared detailed plans for the ruthless economic exploitation of the Soviet Union, especially its petroleum and agricultural sectors.⁴⁸ Göring had not been terribly engaged with economic policy since the outbreak of the war, but he took a special interest in the economic planning for Barbarossa, particularly when it came to the seizure of oil.⁴⁹ The despoliation of the Soviet Union would be managed by the Economic Command Staff (Wirtschaftsführungstab Ost, WFO), which was directly subordinate to Göring and would be run by State Secretary Körner of the Four-Year Plan (Vierjahresplan, VJP), although Thomas would be responsible for all "military matters." After delegating the responsibility for creating the administrative structure to Thomas in February 1941, Göring established the WFO (unofficially in March; officially in May 1941) to provide unified leadership regarding economic and political management of the occupied territories.⁵⁰

In his "Green Map" (Grüne Mappe) instructions of June 1941, Göring made reference to Hitler's instructions concerning the "the immediate and highest possible utilization of the occupied territories for the benefit of Germany," which was "to be carried through first and foremost within the areas of the

⁴⁷ Chef Wi (Thomas), Vortragsnotiz, "Betr.: Inbesitznahme der kaukasischen Erdölgebiete," 16 July 1941, T-77/1066 (Wi/ID. 73). According to the OKW's *KTB*, i: 1220, the Operationsabteilung completed its "first Denkschrift for an offensive against the Caucasus" on 24 July 1941, but I have been unable to locate a copy of this paper.

⁴⁸ The Soviet prosecution at Nuremberg provided a decent historical summary of German planning for the despoliation of the Soviet Union while making its case concerning German crimes against humanity between 08 and 13 February 1946: *IMT*, vii: 158-345. For more measured surveys, see: Alex Kay, *Exploitation, Resettlement, Mass Murder: Political and Economic Planning for German Occupation Policy in the Soviet Union, 1940-1941* (New York: Berghahn, 2006), *passim* (esp. 26-46); Mark Mazower, *Hitler's Europe: How the Nazis Ruled Europe* (New York: Penguin, 2008), 137-178; and Norman Rich, *Hitler's War Aims: The Establishment of the New Order* (New York: W.W. Norton & Company, 1974), 326-393 (esp. 336-343 for economic planning).

⁴⁹ Hans Kehr, *Krisenmanager im Dritten Reich: 6 Jahre Frieden – 6 Jahre Krieg, Erinnerungen* (Düsseldorf: Droste Verlag, 1973), 223.

⁵⁰ Memorandum, "Conference at Office Chief, General of the Infantry Thomas on February 28, 1941, Re: Oldenburg," 01 March 1941, Document 1317-PS, *NCA*, iii: 911-913 (for the original German document, see: *IMT*, xxvii: 169-171); Chef WiRüAmt, "Vortrag bei Reichsmarschall Göring am 19.3.41," 20 March 1941, Nuremberg Records, Box 995 (PS-1456); and der Reichsmarschall des grossdeutschen Reiches, Beauftragter für den Vierjahresplan (BVJP), V.P. 10103/1 g.Rs., "11. Sitzung des Generalrats vom 24. 6. 41 unter Vorsitz von Staatssekretär Körner," no date, T-77/430 (Wi/IF 5.3593). Following their meeting of 26 June 1941, Thomas proudly recalled Göring's observation that the "success of the Eastern campaign" would have been "impossible without the organization of the WiRüAmt," which had not only provided him with accurate economic intelligence but had also undertaken "the especially valuable groundwork" for the creation of the "Economic Organization East." Chef WiRüAmt, "Vortrag beim Reichsmarschall am 26. 6. 1941," 26 June 1941, IWM, FD 4809/45.

agricultural and the crude oil economy. The primary economic aim of the action is to win as much as much foodstuffs and petroleum for Germany as is possible.” The objectives of the WFO would be implemented by the Economic Staff, East (Wirtschaftsstab Ost, WSO – codenamed “Oldenburg” prior to the invasion), with Thomas serving as the link between the two. Since petroleum occupied the “heavy weight” position of importance ahead of all other industrial raw materials, Göring decreed that maintaining the supply and transportation of oil from the Soviet Union was to take “precedence in all circumstances” besides restoring agricultural production. He stressed that furnishing the Soviet agricultural sector with sufficient tractor fuel presented a “special task,” since food production depended upon it. This had nothing to do with supplying the captured population with food – they would be starved and replaced with German settlers in any event. Rather, the regime did not want to risk the loyalty of German civilian population by imposing additional rationing, which policymakers believed had contributed to the breakdown of the war effort in 1918.⁵¹ To that end, supplying fuel to the Soviet agricultural sector in the occupied territories “*took precedence over exports to Germany.*” Göring also declared that the Kontinentale Öl AG (Konti) would take a leading role “[with] regard to the execution of all measures to be undertaken within the realm of petroleum, in particular in the Caucasus.”⁵²

Göring reiterated these points in a decree of 27 July 1941 establishing the primacy of Konti when it came to the execution of the Reich’s oil strategy in the Soviet Union. After referring to Hitler’s decree (Erlaß) of 29 June 1941 authorizing him to use any means necessary to exploit Soviet economic resources, Göring stressed that, at least initially, German efforts would be concentrated upon “bringing into order again” only those industries that “are of decisive importance to the German war economy. These

⁵¹ Collingham *Taste of War*, 32-38. Minister for the Occupied Eastern Territories Alfred Rosenberg also pointed to the indispensability of Caucasian oil to the “material output, and indeed the existence of the other mainly agricultural areas of the USSR” due to mechanization. “[Any] strangulation of the oil supply,” he observed, “tends to famine.” Unsigned Memorandum in Rosenberg’s Files, “The USSR,” 02 April 1941, Document 1017-PS, *NCA*, iii: 674-681; for the original German document, see: *IMT*, xxvi: 547-554.

⁵² Der Reichsmarschall des Großdeutschen Reiches, “Richtlinien für die Führung der Wirtschaft (Grüne Mappe), Teil I: Aufgaben und Organisation der Wirtschaft,” June 1941, Document 1743-PS, *IMT*, xxviii: 3-15. Emphasis in the original. For the creation of the Wirtschaftsführungstab Ost and Wirtschaftsstab Ost (WFO and WSO), see: “Conference with the Branches of the Armed Forces at 1000 hours on 29th April 1941,” Translation of Document 1157-PS, *NCA*, iii: 811-816 (for the original German document, see: *IMT*, xxvii: 32-38); and der Reichsmarschall des Großdeutschen Reiches, “Richtlinien für die Führung der Wirtschaft (Grüne Mappe), Teil I (2. Auflage): Aufgaben und Organisation der Wirtschaft,” July 1941, Document 472-EC, *IMT*, xxxvi: 542-545.

centers of gravity are grains, oilseeds [vegetable oil], crude oil and light metals.” With regard to petroleum, Göring declared that “[the] the Russian *crude oil economy* must on account of its overarching significance for the German military and economy stay permanently in German hands. I have therefore delegated Kontinentale Öl A.G. to take over all petroleum sources that fall into German hands.”⁵³ Hitler had assigned the “civilian administration” of the occupied territories to Alfred Rosenberg (Minister for the Occupied Eastern Territories), but in practice, this was a meaningless task as Rosenberg would only take up his responsibilities following the end of military operations. Moreover, his authority did not extend to economic affairs, where the VJP (Göring) took precedence.⁵⁴

Konti was one for four different “monopoly companies” accredited by Göring’s decree of 07 July 1941, the other three being the Zentralhandels-gesellschaft Ost für landwirtschaftlichen Absatz und Bedarf (responsible for supplying the agricultural sector); “Ostland” Berg- und Hüttenwerk Gesellschaft (mining); and Ostfaser GmbH (textiles, paper, and pulp).⁵⁵ On 22 July 1941, the RWM provided Konti with instructions elaborating upon the company’s responsibilities and powers, as well as those of the “Petroleum Commandos” (Mineralölkommandos) operating in support of the WSO. Konti would “carry out the industrial economic measures to be taken in the field of mineral oil. The exclusive right of mining, processing and trading in mineral oil products has been transferred to it,” along with the authority to

⁵³ Der Reichsmarschall des Großdeutschen Reiches, BVJP, V.P. 12028, 27 July 1941, BA-B, R 26 I/13. Emphasis in the original. For Hitler’s proclamation regarding economic exploitation of the , see: “Erlaß des Führers über die Wirtschaft in den neu besetzten Ostgebieten,” 29 June 1941, reprinted as Document 93 in: Martin Moll, ed., *Führer-Erlasse, 1939-1945* (Stuttgart: F. Steiner, 1997), 179-180.

⁵⁴ “Erlaß des Führers über die Verwaltung der neubesetzten Ostgebiete vom 17. Juli 1941,” Document No. 74: OKW, *KTB*, i: 1027-1028. Although Rosenberg did not object to Göring’s mission “to secure Germany’s nourishment and war economy,” he believed that this could be accomplished by “a shrewd policy” that cultivated the Soviet Union’s various disgruntled minorities as client states. “Rede des Reichsleiters A. Rosenberg vor den engsten Beteiligten am Ostproblem am 20. Juni 1941,” Document 1058-PS, *IMT*, xxvi: 610-627. Hitler’s statements during a conference with Göring, Rosenberg, and Keitel on 16 July 1941 left no doubt that the Führer was indifferent to the wishes of the national minorities of the Soviet Union. Germany’s overriding “principles” in the east would be the creation of physical security by eliminating the possibility of any military challenger ever emerging from the lands west of the Urals and “[creating] a Garden of Eden in the newly occupied eastern Territories; they are vitally important to us; as compared with them colonies play only an entirely subordinate part.” The Caucasus and the Volga region would be incorporated into the Reich and a “military colony” established around Baku. “Memorandum for the Record,” 17 July 1941, Translation of Document L-221, *NCA*, vii: 1086-1093; for the original German document, see: *IMT*, xxxviii: 86-94. German plans for the Caucasus are summarized in: Rich, *Hitler’s War Aims*, 388-392.

⁵⁵ Geo. W. Hirschfeld an die Industrie- und Handelskammer, Bremen, 11 October 1941, BA-B, R 8119/1825. Hans Kehrl (the Chairman of the Managing Board of Ostfaser) recalled that the inspiration for the creation of Ostfaser came from his friend, Ernst Rudolf Fischer, who informed him of Konti’s formation. Kehrl, *Krisenmanager*, 227.

expropriate any physical infrastructure formerly serving the Soviet oil industry. The “Petroleum Commandos” were responsible for securing and restoring production in recently captured Soviet oilfields, initially in the Baltic Republics (Estonian shale) and Galicia, but hopefully later in the Caucasus as well.⁵⁶ Once they had been secured, the oilfields would pass into the hands of Konti and its subsidiaries (the most important being Ost Öl, which would operate in the Caucasus). One historian appropriately describes these “Petroleum Commandos” as “the stormtroopers of Continental Oil in the truest sense of the word.”⁵⁷

As Göring explained during an interdepartmental conference in November 1941 concerning economic policy in the east, the occupied territories “will be economically exploited *from colonial viewpoints* and by colonial methods.” All Soviet agricultural and economic assets captured by German forces would immediately become the property of the Reich except oil installations, which would be administered by Konti. Remarkably, although the company was acting on behalf of the Reich, it would operate autonomously, without “any real exertion of influence” by the Reich’s civilian administrators.⁵⁸ Later that month, Günther Schlicht of Deutsche Erdöl AG (the largest independent German oil company) was commissioned to serve as the “Chief Representative” (Generalbevollmächtigter) of Konti and its Caucasian subsidiary (Ost Öl) in the occupied territories.⁵⁹ Hermann Neubacher, the former “Special Representative for Economic Questions” in Romania, who had handled the negotiations with Bucharest

⁵⁶ The RWM decided that, in the interest of “simplicity,” whenever possible the staff of each Mineralölkommando would be identical to that of the local Konti subsidiary. At the very least, the commander of each Kommando would also be a Konti official, who could rely on two separate staffs: the Mineralölkommando staff for government and military matters, and Konti personnel for technical and commercial matters. Reich Minister for Economics to Kontinentale Oel, II Min. Oil 18893/41, “Ref.: Russian Mineral Oil Economy,” 22 July 1941, NARA, Record Group 238: National Archives Collection of World War II War Crimes Records, National Archives Microfilm Publication T-301, Reel 18, Document NI-2021 – hereafter cited as: NARA, RG 238, T-301/Reel No. (Document No.); for the original German document, see: BA-B, R 3010/32413. See also: Roswitha Czollek, “Zum Raub estnischer Ölschiefervorkommen für die deutsche Kriegswirtschaft: 1941 bis 1944,” *Jahrbuch für Wirtschaftsgeschichte* 1969/2, 107-115.

⁵⁷ Karlsch and Stokes, *Faktor Öl*, 214-215.

⁵⁸ The Reichs Marshal of the Greater German Reich, Commissioner for the Four Year Plan, Economic Management Staff, East, to the Chef des OKW (Keitel), *et al.*, Four Year Plan 19203/6 g., 20 November 1941, NARA, RG 238, T-301/5 (NI-440). Emphasis in the original.

⁵⁹ “Vollmachterteilung für Herrn Bergassessor a.D. Schlicht,” 26 November 1941, BA-B, R 176/1. For the company’s official financial statement regarding its first year of operations on the occasion of its first regular stockholders’ meeting (Hauptversammlung), see: Kontinentale Öl Aktiengesellschaft, Berlin, “Jahresabschluß für das Geschäftsjahr 1941,” 29 May 1942, BA-B, R 8119/1825.

concerning the German-Romanian oil trade since 1940, would at the Führer's personal insistence oversee the regime's economic interests in the Caucasus.⁶⁰

The failure of Operation Barbarossa during the winter of 1941/42 did not interfere with Konti's preparations. The second meeting of Konti's Supervisory Board on 13 January 1942 was devoted to the company's current and future business in the Soviet Union. Karl Blessing of the Managing Board noted that, "[in] preparation of the operations in the Caucasus," Konti had established Ost Öl with an initial capitalization of 100,000 RM.⁶¹ Another subsidiary, Kontinentale Transport Gesellschaft, had been formed with an initial capitalization of 3,500,000 RM to satisfy the transportation requirements of Konti's various subsidiaries by purchasing, leasing or constructing tankers, oil loading and offloading facilities, and pipelines – both in the Black Sea region and in the Mediterranean, which meant that Konti would have to stay "in constant touch with the Navy." Fischer gave a presentation on future German management of the Soviet oil industry. He noted that, although Konti was not the only officially sanctioned monopoly operating within the occupied territories, its position was unique. Whereas the other monopoly companies existed only on a temporary basis and would be dissolved at war's end, Konti would continue to operate "on its own account and at its own risk; the company pays rent for this to the German Reich until such time as it will acquire these installations by purchase."⁶² With regard to the Caucasus, Fischer fretted about the current shortage of oil equipment due to German industry's focus on munitions production: "Only if this situation can be remedied completely is there any guaranty," Fischer

⁶⁰ Chef WiRüAmt, "Ergebnis der Vorträge beim Reichsmarschall und bei Feldmarschall Keitel am 17. 7. 1941," 18 July 1941, Hoover Institute, Nuremberg Records, Box 996 (PS-1456); and Karlsch and Stokes, *Faktor Öl*, 215.

⁶¹ Ost Öl's capitalization was later raised to 4,000,000 RM: Kontinentale Öl Aktiengesellschaft an die Herrn Mitglieder des Aufsichtsrat der Kontinentale Öl Aktiengesellschaft, "Betrifft: Berichterstattung an den Aufsichtsrat," 03 February 1943 (for the period between 01 October to 31 December 1942), T-401/2 (RBF 35). Blessing became President of the Bundesbank between 1958 and 1969.

⁶² Within reason, of course: Konti received compensation from the military for all equipment dispatched and then lost during the invasion of the Caucasus, "so that the company accrued no financial damages." "Interner Bericht an den Aufsichtsrat über den Jahresabschluss der Kontinentale Öl Aktiengesellschaft," no date (circa 1943), T-401/2 (RBF 35).

warned, that “the capacity of the plants [oilfields] can be fully used and most of all a continuous flow of production can be guaranteed [...]”⁶³

During the invasion of the Caucasus in the summer of 1942, the company would be assisted by the Technical Petroleum Brigade (Technische Brigade Mineralöl, TBM – also known as the Mineralölbrigade Kaukasus). Göring ordered the TBM to take all “necessary measures for the safe [treuhänderisch] appropriation and operation of these territories and businesses on behalf and for the account of Kontinentale Öl, that is to say to carry out in particular the extraction, production, refining, transportation and *marketing* of finished petroleum products for the account of Kontinentale Öl as long as this company is not in the position to take over leadership of the business itself or through one of its sister-companies.”⁶⁴ Konti also enjoyed a close working relationship with the WiRüAmt, which was responsible (through the WSO) for overseeing the operations of the TBM. The fact that Konti personnel basically staffed the TBM also contributed to the spirit of cooperation.⁶⁵

⁶³ “Minutes of the 2nd meeting of the Aufsichtsrat of the Kontinentale Öl Aktiengesellschaft on Tuesday, 13 January 1942, in the Preussenhaus, Berlin,” NARA, RG 238, T-301/83 (NI-10162). Much of the initial planning for the occupation of the Caucasus, especially the purchase of drilling equipment, is summarized in: Gunther, “Oil Fields Investigation, Part V, Section 1: Russia (U.S.S.R.), The Caucasus Expedition, 1942-1943,” March 1946, BNA, WO 252/1151; and Kockel, “Geologie und Krieg,” 54-64.

⁶⁴ Der Reichsmarschall des Großdeutschen Reiches, BVJP, an das OKW, Chef des Wehrwirtschaftsamtes, Herrn General Thomas, V.P. 12618/5 g, “Betr.: Mineralölwirtschaft in den besetzten russischen Gebieten,” 16 July 1942, T-77/1058 (Wi/ID. 29). Emphasis in the original.

⁶⁵ For a complete set of the instructions given to the TBM based on Göring’s earlier Erlaß, see: Der Chef des OKW an Technische Brigade Mineralöl, Az. 1 d 10 Wi Amt – Z 1/II, Nr. 5160/42 geh., “Betr.: Mineralölwirtschaft in den besetzten sowjetischen Gebieten,” 28 July 1942, T-77/1058 (Wi/ID. 29). For material regarding Konti’s cooperation with the TBM to procure and deliver oil drilling equipment to the Caucasus in the autumn of 1942 in order to restore production over the course of 1943, see the following record of a meeting between Konti’s Managing Board, Alfred Bentz, and two TBM officials (including Günther Schlicht, who had been seconded to the TBM from Ost Öl) on 12 September 1942: Di/Gi., “Stand der Materialbeschaffung für den Einsatz im Kaukasus,” 17 September 1942, enclosed with: Dihlmann (Konti) to Thomas (Wehrwirtschaftsamt), “Betr. Kaukasus,” 17 September 1942, T-77/551 (Wi/I. 315). For Konti’s internal and public financial statements regarding its operations during the autumn of 1942 and the winter of 1942/43 (during the invasion of the Caucasus), see: “Interner Bericht an den Aufsichtsrat über den Jahresabschluss der Kontinentale Öl Aktiengesellschaft,” no date, T-401/2 (RBF 35); Kontinentale Öl Aktiengesellschaft an die Herrn Mitglieder des Aufsichtsrat der Kontinentale Öl Aktiengesellschaft, “Betrifft: Berichterstattung an den Aufsichtsrat,” 06 November 1942 (for the period between 01 July and 30 September 1942), T-77/1223 (Wi/IA 3.7); Kontinentale Öl Aktiengesellschaft an die Herrn Mitglieder des Aufsichtsrat der Kontinentale Öl Aktiengesellschaft, “Betrifft: Berichterstattung an den Aufsichtsrat,” 03 February 1943 (for the period between 01 October to 31 December 1942), T-401/2 (RBF 35); and Kontinentale Öl Aktiengesellschaft, “Bericht des Vorstandes und Aufsichtsrates und Jahresabschluß für das Geschäftsjahr 1942: 2. Ordentliche Hauptversammlung, Dienstag, den 21. September 1943,” T-401/2 (RBF 35). As the report of the Supervisory Board’s meeting of 30 June 1943 laconically observed: “The contraction of the front in the southern portion of the Eastern Front has brought about some changes in the activities of our company. A range of already assigned tasks

Strangely, the Reich did not conclude a concession agreement with Konti until July 1942. Konti would enjoy “the exclusive right to the prospecting, production, refining and marketing of crude oil, natural gas and all other bituminoid materials as well as their derivatives” throughout all of the occupied territories of the Soviet Union in exchange for a quarterly royalty equivalent to 7.5% of its oil and gas production (although production from “newly opened fields” was exempt from any royalties owed to the Reich). In his covering letter, Göring stressed that the “petroleum industry in the concession area is to be directed in the interests of the Reich,” and that Konti should “keep the long-term duration of this concession agreement secret for the time-being under all circumstances [...]”⁶⁶ By the summer of 1942, however, the course of the war had already turned against Germany, and the Reich’s hopes for Konti in the Soviet Union would soon be dashed at Stalingrad.

was cancelled; further, under official instruction, materials and equipment from our inventory were given to other consumers [Bedarfsträger] in the interests of an increase in petroleum production from oil-bearing territories lying within the German sphere of influence [...]” Kontinentale Öl Aktiengesellschaft an die Herrn Mitglieder des Aufsichtsrat der Kontinentale Öl Aktiengesellschaft, “Betr: Berichterstattung an den Aufsichtsrat,” 30 June 1943 (for the period between 01 January 1943 and 31 March 1943), T-401/2 (RBF 35).

⁶⁶ Enclosed with: Der Reichsmarschall des Großdeutschen Reiches, BVJP, an den Vorstand der Kontinentalen Öl A.G., zu. Hd. von Herrn Direktor Blessing, V.P. 12301/5 g.Rs., “Betrifft: Einsatz im Osten,” 10 July 1942, BA-B, R 176/111. Eichholtz claims that Göring issued a decree in September 1941 assigning concession rights in the Soviet Union to Konti, but the language he quotes is identical to the contract cited above, which Eichholtz does not cite. Eichholtz, *Krieg um Öl*, 53.

The Oil Crisis Reaches the Front, July-September, 1941

Germany's oil position was poor even before Barbarossa due to a variety of unexpected difficulties, including problems in Romania and unexpectedly high consumption by the German military due to unforeseen military campaigns such as the invasion of the Balkans in April-May 1941.⁶⁷ Germany itself could not make up the deficit, which threatened to reach crisis proportions by the autumn of 1941, even though it had been waging only limited campaign following the surrender of France. According to a presentation Thomas gave to Keitel on 08 February 1941, existing supplies of petroleum products would no longer be "sufficient" by the "middle of August" or the autumn at the latest: "from there on the covering of demand is possible only through our own production and imports."⁶⁸ The following month, General Eduard Wagner, the Army Quartermaster General, gave an equally gloomy prognosis to Halder, informing him that, once Germany lost its imports from the Soviet Union, existing stocks were only sufficient for two months of "large-scale offensive" consumption.⁶⁹

In the midst of the German high tide in July 1941, WiRüAmt reminded the OKW that Germany would run out of "appreciable quantities of freely available motor fuel reserves" by the end of September.⁷⁰ The remaining reserves (Umlaufsmengen), equivalent to one month's consumption, were already in circulation and could not be diverted to the front since they were essential for supply purposes, such as transporting fuel from production facilities to distribution and refining installations. Nor were any reserves to be found within Axis Europe, including Romania. Short-term prospects for addressing this shortfall were non-existent. Demand within Axis Europe during the "winter half year" (October 1941 to

⁶⁷ For an excellent summary of the "fuel crisis" confronting Germany on the eve of Barbarossa, see Part IV, Section C, and Anlage 2 (Chef Wi Rü Amt (Thomas), "Die Gründe für die Treibstoffkrise zu Beginn der Ostoperationen und die daraus zu ziehenden Folgerungen," 03 July 1941) of: OKW, WiRüAmt (Oberst Dr. Hedler), "Die Mineralöle und die Versorgungslage im Kriege," Abgeschlossen 31 August 1941, T-77/438 (Wi/IF 5.2726).

⁶⁸ Entry for 11 February 1941, OKW, *KTB*, i: 316-317.

⁶⁹ *Halder Diary*: 13 March 1941. The situation was even worse with regard to Italy, whose reserves would "touch bottom" by the June 1941 without an immediate transfer of 260,000 tons – 60,000 tons of which "have yet to be found." *Halder Diary*: 27 May 1941.

⁷⁰ Fuel consumption, Halder sheepishly noted at the beginning of July 1941, had been "quite a lot more than expected": 11,500 cubic meters (cbm) per day instead of the estimated 9,000 cbm. (One cbm of oil equals roughly 6.3 barrels of oil.) Only a week into Barbarossa, the Eastern Army (Ostheer) was already depending on captured Soviet stocks for one-third of its consumption. *Halder Diary*: 01 July 1941. Luckily, in a conspicuous example of foresight, the Army had taken precautions to set up mobile facilities to raise the octane-rating of captured Soviet fuel supplies with benzol in order to render them usable in German engines. *Halder Diary*: 20 May 1941.

April 1942) would be 1,007,000 tons per month (or 6,042,000 tons in total), but Germany would need 1,170,000 tons (7,000,000 tons) if it wanted to restart stockpiling in preparation for future offensive operations.⁷¹ Total production within Germany and Romania was a mere 770,000 tons, leaving a six-month shortfall of 1,440,000 tons. Breaking down the figures by specific petroleum products, Germany could barely cover its minimum requirements of motor and aviation fuel for the next six months (1,404,000 tons and 726,000 tons), but diesel and fuel oil production lagged well behind (68% and 61% of consumption, respectively, or 1,428,000 tons per month).⁷²

WiRüAmt believed that Germany's only hope of redressing the deficit was imports from the Soviet Union, to the tune of 400,000 tons per month for six months (2,400,000 tons) to cover the existing shortfall (1,400,000 tons) and accumulate new stockpiles (1,000,000 tons), not including 100,000 tons of crude oil per month to carry out the planned expansion of aviation fuel production. The transportation requirements were also enormous, for if Germany wanted to avoid having deliveries from Romania being paralyzed by the freezing of the Danube, twenty trains would be required each day to move the required 240,000 tons per month. Even this assumed, moreover, that 80,000 tons per month could be transported through the Mediterranean. As for deliveries from the Soviet Union, they depended on whether sufficient numbers of French, Italian, and Soviet tankers, plus Soviet railway wagons, could be mustered.⁷³

⁷¹ WiRüAmt Ro/V, Az. 11 k 2209 (s) I., "Laufender Bedarf an Treibstoffen (ohne sonstige Mineralöle) Winter 1941/42 ohne Russland," no date, Anlage 1 to: WiRüAmt/Ro, Az. 11 k 2209 (Vs), "Beurteilung der Treibstoff-Heizölversorgungslage für das Winterhalbjahr 1941/1942," 07 July 1941, T-77/500 (Wi/I. 36). This figure did not include the 45,000 tons of gasoline and diesel consumed by the armed forces in the Soviet Union, who would have to live off the land, although it did include 10,000 tons of Air Force consumption that had to be supplied from Germany since it could not make use of the inferior quality aviation fuel used by the Red Air Force.

⁷² WiRüAmt/Ro, Az. 11 k 2209 (Vs), "Deutsche und rumänische Treibstoff-Erzeugung im Winterhalbjahr 1941/42," no date, Anlage 2 to: WiRüAmt/Ro, Az. 11 k 2209 (Vs), "Beurteilung der Treibstoff-Heizölversorgungslage für das Winterhalbjahr 1941/1942," 07 July 1941, T-77/500 (Wi/I. 36).

⁷³ WiRüAmt/Ro, Az. 11 k 2209 (Vs), "Beurteilung der Treibstoff-Heizölversorgungslage für das Winterhalbjahr 1941/1942," 07 July 1941, T-77/500 (Wi/I. 36). WiRüAmt revised the figures used in this study a month later. Although it did not alter its outlook for German production, WiRüAmt cut the expected monthly production of motor fuel and fuel oil in Romania by 33,000 and 23,000 tons, respectively. This reduced the expected six month production figure by almost by almost 400,000 tons (from 4,602,000 tons to 4,206,000 tons), although estimated demand did not change (6,042,000 tons, or 6,372,000 tons including the requirements of German troops in the Soviet Union). WiRüAmt/Ro, Az. 11k 2209 (Vs), "Deutsche und rumänische Treibstoff-Erzeugung im Winterhalbjahr 1941/42," 05 August 1941, T-77/704 (Wi/IE 4.40).

Both Göring and the OKW leadership concurred with WiRüAmt's assessment. During a conference on 17 July, Göring asked Thomas to undertake a "quick assessment" of Germany's ability to raise imports from Romania and ship oil from the Caucasus via pipeline.⁷⁴ Although the OKW was insisting by the end of July that "the *seizure of the Caucasian oil reserves* is... of decisive importance to the conduct of future military operation and an important objective of the operations in the Russian area," it grudgingly admitted that Soviet sabotage would likely hinder "the desired relaxation of the fuel situation" for a significant period of time. This meant that "considerable savings" would have to be extracted from the civilian economy and the occupied territories ("ruthless cutbacks"), over and above those from all German troops not deployed in the Soviet Union.⁷⁵

By August, the situation had become so serious that even Halder had to take notice after learning that Germany would be running a deficit of 120,000 tons per month starting on 01 October 1941.⁷⁶ A week later, representatives of the WiRüAmt (Thomas), AA (Wiehl), RWM (Fischer), and the VJP, on the basis of figures tabulated jointly by the OKW and RWM, agreed on a two-pronged strategy to deal with the crisis. First, production in Germany, Romania, and Hungary would be "immediately pushed upward to the highest degree that was technically feasible." The key element was getting the Romanians to go along

⁷⁴ Chef WiRüAmt, "Ergebnis der Vorträge beim Reichsmarschall und bei Feldmarschall Keitel am 17. 7. 1941," 18 July 1941, Hoover Institute, Nuremberg Records, Box 996 (PS-1456).

⁷⁵ Der Chef des OKW (Keitel), WFSt/Abt. L (IV/Qu), Nr. 7/41 g.Kdos., "Mineralölversorgung im Winterhalbjahr 1941/42," 30 July 1941, T-77/429 (Wi/IF 5.3563). Emphasis in the original. Such analyses left out consideration of the long-term challenges confronting Germany, namely the massive projected increase in requirements over the course of 1942 due to the expansion of the Air Force and Navy, as well as "the necessity to provision the occupied territories to an ever increasing extent from the spring of 1941 [...]." Whereas the deficit between supply and demand in 1941 was estimated to be 1,300,000 tons, it would rise to 3,500,000 tons the following year (11,500,000 tons, including imports from the Soviet Union, vs. 15,000,000 tons). Even if consumption in 1943 remained unchanged while production expanded according to plan, Germany would still have a 1,700,000 ton shortfall. The only way to fill this deficit was through the immediate construction of "at least" three major synthetic plants with a yearly output of 480,000 tons to 600,000 tons, although this would require at least 1,000,000 tons of steel to be distributed in monthly allocations of 42,000 tons for two whole years. "Mineralölerzeugung," no date or author (probably WiRüAmt; circa summer of 1941), T-77/704 (Wi/IE 4.40). The sheer barbarity by which the "ruthless cutbacks" would be squeezed from the Soviet population is detailed in: Timothy Snyder, *Bloodlands: Europe between Hitler and Stalin* (New York: Basic Books, 2010), 155-186.

⁷⁶ Even if Germany managed to close the gap by cutbacks everywhere but the Eastern Front, Halder complained that "the Armed Forces are in no position to embark on any large-scale operation." *Halder Diary*: 07 August 1941. During preparations for Operation Typhoon against Moscow, OKW informed the Army that it could only provide between twenty-two and twenty-seven fuel trains per day during September instead of the required twenty-seven; twenty-two in October; and just three in November, even though the requirements would rise to twenty-nine trains per day following the start of the offensive. *Halder Diary*: 11 September 1941.

with this. To that end, while Konti started the “necessary preparations” for expanded production, the AA would undertake negotiations with Bucharest to ensure its compliance.⁷⁷ Second, since it was impossible to reduce either the military’s operational requirements or consumption by the German agricultural sector, those in attendance agreed that all military forces stationed within Germany or on garrison duty would suffer a 20% reduction in their fuel allocation, while the RWM “once again” imposed “curtailments” upon both the civilian economy and the transportation sectors, “even though these are already undersupplied.” But this was the end of the line when it came to reductions of non-essential consumption: all existing possibilities, at least within Germany, had been “fully exhausted,” and “[additional] cuts from the economy would weaken the defense-economic potential of the Reich to a considerable extent.”⁷⁸

WiRüAmt described the necessary measures in more detail two weeks, by which time it had also concluded that “for the time being [Germany] cannot reckon on petroleum imports from the Caucasus,” even though consumption during the last quarter of 1941 would exceed expectations. WiRüAmt regretted that military requirements could only be satisfied “somewhat” (einigermaßen) even though military consumption during Barbarossa in July had been lower than originally estimated.⁷⁹ Of particular interest was the observation that, even with the envisaged savings, securing “*large quantities [of fuel] for Army operations starting at the beginning of 1942 is not possible any longer... without Russian imports.*”⁸⁰

Whereas WiRüAmt’s July 1941 assessments were predicated on the idea that major combat operations would end by September 1941, it was now clear that a “considerable operational demand” would persist

⁷⁷ In December 1941, Neubacher, already seconded to the AA to handle German petroleum policy in Southeastern Europe, received a new appointment from Göring to promote “the greatest possible increases of crude oil production” within Romania, Hungary, and Croatia. Der Reichsmarschall des Großdeutschen Reiches, BVJP, to Herrn Gesandten Neubacher, V.P. 20882/5., 16 December 1941, T-77/606 (Wi/IC 4.3a-b).

⁷⁸ Der Reichsmarschall des Großdeutschen Reiches, BVJP (signed: Löbbbecke, persönl. Referent to Staatssekretär Erich Neumann) an das OKW, z.Hd. des Chefs des WiRüAmts, Herrn Gen.d.Inf. Thomas, V.P. 13698/5 g.Rs., Vermerk, “Betr.: Treibstofflage. Besprechung bei St.S. Neumann am 14. 8. 1941,” 19 August 1941, T-77/594 (Wi/I. 273).

⁷⁹ And it would continue to decline – precipitously: whereas the operational demand for troops in the Soviet Union was 216,000 tons of gasoline and diesel in August, it would shrink to only 45,000 tons by December, plus 17,000 tons for so-called “Schnelle Divisionen” starting in October. Meanwhile, the allocation for all three services stationed in Germany or on occupation duty had been reduced from 89,900 tons in July to 41,500 tons by September. Ro V (Griebel), Az. 11 k 2209 (Vs), Vortragsnotiz für Chef WiRüAmt, 14 August 1941, T-77/704 (Wi/IE 4.40).

⁸⁰ WiRüAmt, Az. 11 k 2209 (Ro Vs), Nr. 2873/41gK, “Betr.: Mineralölversorgungslage in Europa bis zum Frühjahr 1942,” 26 August 1941, T-77/704 (Wi/IE 4.40). Emphasis in the original.

at least until the end of the year. Since all avenues for expanding production had been “exhausted,” current operational requirements could only be satisfied by “reconciling consumption to the [existing] possibilities for supply through cutbacks.” Without drastic reductions (21% of motor fuel, 16% of diesel, and 23% of fuel oil consumption for all sectors besides units engaged in combat in the Soviet Union and North Africa), Germany ran the risk of incurring a deficit of 1,272,000 tons of motor fuel, diesel, and fuel oil by year’s end. Such cutbacks, WiRüAmt warned, “*are so substantial that negative political, military, and economic repercussions are to be expected.*” Even if Germany made it through 1941, no additional reserves of motor fuel would be available for divisions being circulated back to Germany, or for new Panzer and mechanized formations then in the process of formation. Equipping these troops was essential if Germany was to undertake extensive offensive operations in 1942, such as the planned assault against Gibraltar. In fact, consumption during the first quarter of 1942 would be greater than that of the previous quarter, “in spite of the end of operational consumption in the East.” Rectifying the 1942 deficit (127,000 tons during the first quarter alone, not including anything carried over from 1941) was only conceivable “if at the very least the crude oil territory of Maikop can already be exploited.”⁸¹

At the end of August 1941, WiRüAmt drafted a number of estimates for supply and demand for the second half of 1941. In the case of Romania, WiRüAmt hoped it would produce 80,000 tons of crude oil beyond the expected figure of 3,030,000 tons, which would be refined into 2,703,000 tons of petroleum products. Meanwhile, German petroleum production would rise from 343,000 tons in July to 376,000 tons by December, or a six-month total of 2,180,000 tons. Even assuming implementation of the suggested reductions in civil and military consumption, demand over the same period would still reach at least 3,680,000 tons, and perhaps as high as 3,940,000 tons. Considering that Romanian production had to be

⁸¹ WiRüAmt (Thomas), Az. 11 k 2209 (Ro Vs), Nr. 2873/41gK, “Mineralölversorgungslage Europas im 2. Halbjahr und 1. Vierteljahr 1942,” 26 August 1941, T-77/704 (Wi/IE 4.40). Emphasis in the original. This conclusion was reiterated in a follow up study in October using the latest figures. WiRüAmt, Az. 11 k 2209 Ro Vs, “Stand der Mineralölversorgung im 4. Vierteljahr 1941 ausgehend von der Lage am 1. 10. 1941,” 07 October 1941, T-77/704 (Wi/IE 4.40).

shared with Italy and the rest of Europe, it is clear that German and Romanian production were falling considerably short of the requirements.⁸²

In view of the seriousness of the situation, Keitel ordered that all measures be taken to reduce the expected shortfall during the first quarter of 1942. When WiRüAmt pointed out that this would result in “grave effects” across Axis Europe, Keitel responded “that all of these downsides would have to put up with in order to secure the supplies necessary for [military] operations under all circumstances.”⁸³ Göring gave his approval two days later, although he still placed his hopes on capturing Maikop, which Hitler had identified as the next objective of the German offensive, not to mention the only major Soviet oilfield the Germans could conceivably bring into operation in the short term (being relatively close to both Rostov and the Black Sea). Göring figured it would take six months to repair the damage in Maikop, after which the new oil production could “bring the fuel situation again into equilibrium.”⁸⁴ Until then, however, higher production within the Reich and Romania was vital to maintaining the operational effectiveness of the German armed forces. This hope turned out to be misplaced in the case of the latter.

⁸² WiRüAmt, Az. 11 k 2209 (Ro Vs), “Rumänische Mineralöversorgung vom 1.7. – 31.12.41,” 27 August 1941; WiRüAmt, “Deutsche Erzeugung vom 1.7. – 31.12.41,” 27 August 1941; and WiRüAmt, “Deutscher Bedarf vom 1.7. – 31.12.41,” 30 August 1941; all in: T-77/704 (Wi/IE 4.40).

⁸³ Keitel also shot down proposals for Göring to receive the authority for administering the entire European petroleum industry, reckoning that it was not “in the military’s interests” if the various agencies of the Four-Year Plan (Vierjahresplan, VJP) took over petroleum allocation in wartime. Ro, “Aktenvermerk über Vortrag beim Chef OKW im Führerhauptquartier am 30.8.41,” 02 September 1941, IWM, FD 4809/45.

⁸⁴ Chef WiRüAmt, “Aktennotiz über Vortrag beim Reichsmarschall am 4.9.41 im Reichsjägerheim Rominten,” 05 September 1941, IWM, FD 4809/45.

Failure in Romania, 1941

Besides the failure to reach the Caucasus, Romania was the greatest disappointment for German petroleum policy in 1941.⁸⁵ Even before Barbarossa, Thomas believed that the entire Axis war effort depended upon expanding Romanian exports.⁸⁶ The Germans had managed to boost their imports between September 1940 and August 1941 by almost one 1,000,000 tons from the previous twelve months, even as Romanian production continued its inexorable decline, from 6,600,000 tons in 1938 to only 5,300,000 tons in 1943.⁸⁷ The failure of Barbarossa had one unintended consequence: it allowed the Germans to divert drilling equipment they planned to use in the Caucasus to Romania, instead, and thereby fulfill the program established at the Vienna Conference. This infusion managed to halt temporarily the decline in Romanian output, which actually increased slightly between July and December 1941.⁸⁸ But the additional production was nowhere near what Germany required.⁸⁹

More than one historian argues that Romania made every effort to meet the Reich's oil demands after the start of Barbarossa. Deliveries between July and December 1941 averaged 267,000 tons per month and reached 500,000 tons in October (largely by emptying existing reserves).⁹⁰ Exports to Germany in 1941 were double those of the previous year: 3,055,310, tons vs. 1,390,467 tons – 576,169 tons in August

⁸⁵ For a critical assessment of German efforts, see: A.E. Gunther, "The German War for Crude Oil in Europe, 1934-1945," *Petroleum Times* (17 January 1948), 65-68 and 84.

⁸⁶ Der Chef des WiRüAmt an den Chef des Transportwesens, Herrn Generalleutnant (Rudolf) Gercke, 11608/41g, 21 May 1941, T-77/377 (Wi/IF 5.2694).

⁸⁷ OKW WiRüAmt/Ro, Az. 11 k 2209 V 1s [?], "Mineralöl-Einfuhr im 1. Und 2. Kriegsjahr," 22 December 1941, IWM 4809/45. For a comparison of Romanian production vs. exports to Germany in 1940-1941, see: der Reichsmarschall des Großdeutschen Reiches, BVJP, V.P. 18756/2/5/6 (?), Vermerk, "Vergleich zwischen der rumänischen Rohölproduktion und den deutschen Mineralölbezügen aus Rumänien für Januar bis Oktober 1940 und 1941," 30 November 1941, T-77/594 (Wi/I. 273).

⁸⁸ Whereas the Romanians had previously complained that they could not fulfill German expectations because of the lack of equipment, German officials were now concerned that the Romanians would block full implementation of the German drilling program in 1942 through the restrictive mining law of 1937, which Bucharest had yet to revise in spite of Berlin's entreaties. "Aufzeichnung für Herrn Ministerialdirektor Wiehl betreffend rumänische Erdölproduktion," 17 February 1942, author's initial illegible (Bentz?), T-120/2618.

⁸⁹ RWM was apparently counting on monthly exports to Greater Germany (including Slovakia) reaching 288,000 tons by May 1940 and staying there for the entire year: Ro V, Az. 11 k 2209 (Vs), "Voraussichtliche Mineralöl-Einfuhr aus Rumänien im Jahre 1941 nach den Planungen des RWM vom 10. Januar 1941," 11 January 1941, IWM, FD 4809/45.

⁹⁰ Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941* (Leipzig: Leipziger Universitätsverlag, 2005), 58-59.

1941 alone.⁹¹ Overall, Romania sent somewhere between 55% and 70% of its wartime production to the Axis Powers.⁹² And yet, the oil crisis of late-1941 was in no small part attributable to the Romanians' failing to deliver the required amounts of irreplaceable fuel oil, in part because they had not bothered to restrict their domestic consumption of this product.⁹³

By November 1941, for example, the Germans were only receiving 41,000 tons out of 92,000 tons of fuel oil they expected. The Romanians had also rebuffed German efforts to raise the domestic price of oil in order to spur greater production and exploration, such that oil production was lagging by as much as 60,000 tons per month, "because the crude oil industry lacks the incentive to boost supplies." As far as WiRüAmt was concerned, the fault lay entirely with Romanian officials, who either "deliberately" or through "negligence" were "unable or unwilling to elicit the utmost from the petroleum industry for our benefit." Germany had virtually no leverage over Romania, however, which meant that all the Reich could do besides exhorting Romanian dictator Ion Antonescu to appoint an "Oil Dictator" (backed by German advisers) was "to increase German deliveries of goods" as payment, "even at the cost of considerable German sacrifice."⁹⁴ On the other hand, civilian experts such as Fischer pointed to the fact that the planned expansion of production was being starved of resources in order to implement the Krauch Plan, which he believed was "for the current war not of such direct and decisive significance as the accelerated execution of the expanding drilling program in Romania."⁹⁵ That same month, Bentz

⁹¹ Of course, this would have been impossible without additional investment to expand the capacity of the transportation network: the number of tankers plying the Danube increased from 138 in September 1939 to 505 by December 1941, while 23,000 railway cars were in service during the winter of 1941/42, compared to 1,800 in 1939/40. AA, HaPol IVb, 2548/42., "Die rumänische Mineralölwirtschaft," no date or author (1942), T-120/2618.

⁹² Karlsch and Stokes, *Faktor Öl*, 206-207.

⁹³ Zu HaPol IV b 1302/42, "Aufzeichnung über die deutsche-rumänischen Wirtschafts- und Finanzierungsfragen," 17 February 1942, T-120/2618. Total petroleum consumption in 1941 was more than 200,000 tons higher than in 1938: 1,986,000 tons vs. 1,776,000 tons. 134,000 tons of this increase was for fuel oil. HaPol IVb, 2548/42. "Die rumänische Mineralölwirtschaft," no date or author (1942), T-120/2618.

⁹⁴ OKW, Az. 66 b 1210, WiRüAmt – Ro Va, "Vermerk über notwendige Massnahmen zur Steigerung der Mineralölbezüge aus Rumänien," 03 November 1941, T-77/606 (Wi/IC 4.3a-b).

⁹⁵ Spalke, "Grundsätzliche Stellungnahme zur Mineralöllage in Rumänien," no date, enclosed with: der Chef der deutschen Wehrwirtschaftsmission in Rumänien (Spalke) an das OKW, WiRüAmt, zu Händen des Herrn General d.Inf. Thomas, Br. Tgb. Nr. 2327/41 g, "Betr. Mineralöllage in Rumänien," 09 October 1941, T-77/606 (Wi/IC 4.3a-b). The Raw Material Division of the WiRüAmt agreed with Fischer and Spalke that efforts in Romania were suffering due to "competition with a great number of proposed plans, whose authors consider them just as important, if not more." It nonetheless disagreed with Spalke's suggestion that the OKW take over the production and

conceded that the targets for Romanian oil production had not been met, nor would they for the foreseeable future. He estimated output at 5,200,000 tons for 1941, while the Romanians were claiming that production during the first six months had been only 2,418,447 tons. On the plus side, expected German production in 1942 would probably rise to above 5,000,000 tons according to Bentz's new estimate of German crude oil production, which was 9,000 tons per month higher than originally planned by the Office for Economic Development (Reichsamt für Wirtschaftsausbau).⁹⁶

Ribbentrop, Göring, and Hitler all brought up the necessity of Romania increasing its oil production during three separate meetings with Deputy Prime Minister Mihai Antonescu (no relation to the Conducător) in November 1941. Ribbentrop and Göring both expressed hope that Germany would occupy at least the North Caucasus before the end of the campaigning, but the latter reckoned that it would take at least a year to restart production. Until then, Germany needed Romania to step up, even at the risk of exhausting its oilfields. Göring foreswore any German designs over the Romanian oil industry and promised Antonescu that Romania "would be compensated by... participation in Russian and Iranian petroleum interests."⁹⁷ Upon hearing of these entreaties, Ion Antonescu replied in December that Romania could, after the most stringent rationing, only make available an additional 25,000 tons of fuel oil. If, however, Germany could provide 60,000 tons of coal and material to pump natural gas to Bucharest, Antonescu believed that another 45,000 tons of fuel could be scrounged. Although he conceded that Romanian production had dropped by more than 3,000,000 tons per year between 1936 and 1941, he had

distribution of Romanian oil, pointing out that neither did the military have the competence to handle such a task, nor would the Romanians look kindly upon such a measure. Rohstoffabteilung an den Chef des WiRüAmtes, Herrn General der Infanterie Thomas, "Betr.: Mineralöllage in Rumänien," 27 October 1941, T-77/606 (Wi/IC 4.3a-b).

⁹⁶ Ro Vf, Az. 66 b 3430, Aktenvermerk, "betr. Mineralölerzeugung," 18 November 1941; and der Beauftragte [*sic*] für den Vierjahresplan, der Generalbevollmächtigte für Sonderfragen der chemischen Erzeugung, Tgb.-Nr. 8342/41 g.Rs. (Ro-Nr. [?]/41gK), "Treibstoff-Produktionsplan 1942: Stand 28. November 1941," 02 December 1941; both in: T-77/385 (Wi/IF 5.2816).

⁹⁷ During all of these meetings, Antonescu stressed that Romania was already doing everything possible to increase oil production and pointed out that Germany and Italy were currently receiving two-thirds of Romania's production (3,300,000 tons out of 5,500,000), with 1,500,000 tons being delivered just over the past four months. Nonetheless, Antonescu was unhappy about the state of affairs with Hungary, which he claimed was persecuting the Romanian minority in Northern Transylvania, which had been ceded to Hungary under the Second Vienna Award. Although Antonescu did not explicitly link higher oil production to resolving Romania's tensions with Hungary, the fact that Antonescu brought up the matter during all three meetings is suggestive that Romanians were using their oil as diplomatic leverage. See document nos. 505, 513, and 519 in: *DGFP* (D), xiii: 844-848 (quotation from pg. 845), 870-876, and 891-894.

nonetheless made every effort to live up to his promises at the Vienna Conference, as evidenced by the fact that daily production had recently increased by 2,500 tons. Finally, even if Romania's total production had declined, Germany and Italy's share of Romanian exports had more than trebled, from 25% in 1936 to 83% in 1941.⁹⁸ (Antonescu's figures for 1936 were accurate – 1,725,000 tons out of 6,885,000 tons of exports – but those for 1941 were actually an understatement: Germany and Italy's share of Romania's exports in 1941 was 90%: 3,660,000 tons out of 4,048,000 tons.⁹⁹)

Although no one in Berlin was happy about the situation, the leadership of the Third Reich, particularly Göring, shrank from taking the hard line against Romania advocated by his civil and military advisers, such as Neumann and Thomas, who believed that Antonescu was either misinformed or being “deceived systematically by his own people.” Göring, on the other hand, considered the Conducător to be “the only one in Romania who still defends the German line,” and the Reich therefore needed to treat him delicately.¹⁰⁰ As always, the specter of 1916 hung over any discussion about how to handle the Romanians – Germany could not do without Romanian exports, which ruled out the application of “the

⁹⁸ Marshal Antonescu to Adolf Hitler, 05 December 1941, Document No. 549 in: *DGFP* (D), xiii: 963-964. Neither the WiRüAmt nor the RWM put much stock in the Romanians' protestations of good faith. The following February, in preparation for a meeting between Hitler and Antonescu on 11 February 1942, the RWM provided a set of talking points for the Führer concerning Germany's expectations of Romania in regard to oil. The paper stressed that, rather than reducing their consumption as promised, the Romanians had actually increased it. The most important concession to wring from Romania was a promise that it would no longer export to third-parties without the prior approval of the Reich. “Entwurf einer Notiz für den Führer anlässlich des Besuchs von Marschall Antonescu,” no date or author, enclosed with: Der Reichswirtschaftsminister (signature illegible) an das OKW, WiRüAmt, z.Hd.v. Herrn Major von Versen o.V.i.A., II Min.Öl. 787/42 g, “Betrifft: Besuch von Marschall Antonescu,” 03 February 1942; and Besprechungsnotiz für den Herrn Chef OKW, “Betr.: Besprechungspunkte ‘Mineralöl’ für die Begegnung des Führers mit Marschall Antonescu,” 04 February 1942; both in: T-77/606 (Wi/IC 4.3a-b). In expectation of taking the Caucasus during the upcoming campaign, OKW was keen on getting the Romanians on board with plans to rebuild the destroyed oil loading facilities at the port of Odessa, which was then occupied by Romanian troops. Besprechungsnotiz für den Herrn Chef OKW, “Betr.: Besprechungspunkte ‘Mineralöl-Umschlagseinrichtungen Odessa’ für die Begegnung des Führers mit Marschall Antonescu,” 07 February 1942, T-77/606 (Wi/IC 4.3a-b).

⁹⁹ Dr. F/F., Vowi 3386, “Das rumänische Erdöl,” 11 April 1939, T-77/611 (Wi/IC 4.16); HaPol IVb, 2548/42. “Die rumänische Mineralölwirtschaft,” no date or author (1942), T-120/2618; and Kontinentale Öl Aktiengesellschaft (Konti), Mineralöl-Archiv, Do/Re., “Zahlen zur Mineralöl-Wirtschaft Rumäniens i.J. 1941,” 16 September 1942, enclosed with: Konti to Herrn Professor Dr. A. Bentz (RfB), 29 September 1942, T-401/5 (RBF 142). Complete figures for Romanian production, exports to Germany, and Romania's percentage-share of German oil imports between 1938 and 1944 may be found in: Eichholtz, *Rumänisches Öl*, 67.

¹⁰⁰ Antonescu had apparently been complaining that the Germans had not been delivering sufficient quantities of coal or drilling equipment. Chef WiRüAmt, “Aktennotiz über Vortrag bei Reichsmarschall Göring im Sonderzug am 7. März 1942,” 09 March 1942, IWM, FD 1434/46.

extreme measures” the Reich had “so frequently adopted elsewhere, often with far less provocation.”¹⁰¹

The most the Germans were prepared to do was to request that the Romanian Government take action to reduce Romanian consumption of key products such as fuel oil, which was 19,000 tons higher in February 1942 than in February 1939 without any discernible reason.¹⁰² Bentz also urged the AA to speed up the process of acquiring ownership of the two major French-owned companies operating in Romania, Colombia and Concordia, so that the Reich could make the personnel changes necessary to increase production.¹⁰³ Although the Germans managed to secure a new mining law in 1942, the Romanians remained recalcitrant.¹⁰⁴ Although Germany (and Italy) poured resources into Romania throughout 1942 and 1943, all they managed to accomplish was to hold production steady. Meanwhile Germany’s share of Romanian production never reached the heights of 1941 (53%).¹⁰⁵ In combination with the synthetic fuel industry, Romanian oil would at least preserve Germany’s ability to wage a defensive war until 1944. But the dream of victory had already faded almost three years before with the failure of Operation Barbarossa.

¹⁰¹ Rich, *Hitler’s War Aims*, 255-256.

¹⁰² Deutsche Gesandtschaft (Bukarest) an den Herrn Königlich Rumänischen Ministerpräsidenten (Antonescu), “Note,” 27 February 1942, T-120/2618. See also: RWM an den Bevollmächtigten für Erdölangelegenheiten im Südosten, Herrn Gesandten Dr. Neubacher, II Min. Öl 6899/42, no date, enclosed with: der Reichswirtschaftsminister (i.A. gez. Rosencrantz) an das AA, z.Hd.v. Herrn Dr. Wapenhentsch, II Min. Öl 6899/42, 10 March 1942, T-120/2618.

¹⁰³ BVJP, der Beauftragte für die Förderung der Erdölgewinnung (Bentz) an das AA, 02 July 1942, NARA, RG 238, T-301/18 (NI-1934).

¹⁰⁴ Maurice Pearton, *Oil and the Romanian State* (Oxford: Clarendon Press, 1971), 226-244.

¹⁰⁵ Eichholtz, *Rumänisches Öl*, 63-64, and 67; and Pearton, *Oil*, 259-263.

Oil and the Turning Point of the Second World War, December 1941

Through the most stringent curtailment of consumption, Germany managed to get enough fuel to its offensive spearheads in the Soviet Union.¹⁰⁶ Reserves of motor fuel and diesel had withered to their minimum allowable level. Allocations to the civilian economy of motor fuel and diesel in December 1941 were less than one-quarter and 42%, respectively, of those of September 1939. On the other hand, between June and December 1941, total deliveries to the Eastern Front exceeded consumption to the extent that the Army technically had a surplus of 173,000 tons by the end of the year.¹⁰⁷ The defeat of Operation Typhoon at the outskirts of Moscow exacerbated the existing shortage of petroleum further because it left Germany on the hook for meeting the requirements of both Axis Europe and the occupied portions of the Soviet Union, which were just as oil-poor as Continental Europe. There was also the matter of the German forces still locked in combat on the Eastern Front – they would require at least 100,000 tons to 120,000 tons per month for defensive purposes, but the most WiRüAmt could initially allocate was 48,000 tons. Once the existing surplus accumulated in 1941 was used up in March 1942, the Eastern Army's ability even to conduct "*defensive military operations would be endangered.*" The "grotesque" refusal of the military and civilian leadership to grasp that Barbarossa had used up any remaining operational fuel reserves and acknowledge that none were available for the anticipated spring offensives was the source of considerable consternation at WiRüAmt, which fumed that precious production was still being claimed for useless projects such as expansion of the Autobahnen.¹⁰⁸

¹⁰⁶ Average monthly consumption by the armed forces in 1941 totaled 102,000 tons of aviation fuel, 135,000 tons of motor fuel, 68,000 tons of diesel, 183,000 tons of fuel oil (including the requirements of the Italian Navy), and 10,500 tons of lubricants. WiRüAmt, Az. 66 b 1210 Ro V 1a, Nr. 4604/42g, "Anlage zum Beitrag zum Schrb. Des Herrn Chef OKW an Marschall Antonescu," 29 April 1942, T-77/606 (Wi/IC 4.3a-b). The actual battlefield logistics of Barbarossa are described in: Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 2004), 142-180.

¹⁰⁷ The General Staff, on the other hand, reported that reserves amounted to less than 100,000 tons, leading WiRüAmt to surmise that "the consumption of the troops must therefore be higher" than the Army was admitting.

¹⁰⁸ "*Whence the additional, considerable fuel demand for the planned offensive operations in the spring or summer 1942 shall be found, nobody knows at the moment.*" WiRüAmt, Stab Z/SR, "Die deutsche Treibstoffversorgung im Kriege. Abgeschlossen um die Jahreswende 1941/42. Versuch einer Darlegung der Gesamtsituation unserer Treibstoffversorgung im Kriege unter Verzicht auf die Darstellung der Einzelheiten," 16 February 1942, T-77/668 (Wi/VI. 216). Emphasis in the original. The Reich did not begin curtailing its gargantuan postwar building program until the military crisis of 1942 forced the regime "to return at least to that minimum of rationality in economic

Germany needed the Caucasus now more than ever, but as 1942 dawned German troops would no longer enjoy “the same operational freedom” as before, since Barbarossa had drained the military’s operational reserve.¹⁰⁹ A new offensive along the entire breadth of the Eastern Front was out of the question in 1942, since “[the] shortage of kinds of petroleum is so great that the operational freedom of all three branches of the military” was now “impaired.”¹¹⁰ Axis Europe would labor through 1942 under the 600,000 ton shortfall first identified in the spring of 1941, while the completion of new synthetic fuel facilities would provide only a “slight improvement,” rather than a “decisive change.”¹¹¹ The great hope in 1939, Romania, was still indispensable, but it was now becoming clear that Romania would never live up to expectations.¹¹² Thanks to the massive application of German resources and technical expertise, most notably by Konti, the Germans managed to halt temporarily the decline in Romanian production, which actually increased by 3% in 1942 from the previous year’s figure.¹¹³

But what good were a few thousand extra tons of petroleum when the Reich was responsible for all of Europe? As WiRüAmt recognized, “Germany’s petroleum supply cannot be considered secure until the territory of Maikop is in German hands and can be made usable.”¹¹⁴ Getting there would require still more petroleum, but not nearly as much was available the year before. Thomas informed Halder in November

affairs which it had temporarily abandoned.” Jochen Thies, “Hitler’s European Building Programme,” *Journal of Contemporary History* 13: 3 (1978): 421-422.

¹⁰⁹ OKW, Az. 11 k 2209 (Vs), WiRüAmt/Ro Nr. 3515/41gK, “Entwicklung der Mineralölversorgungslage bis Frühjahr 1942 nach dem Stand vom 1. 11. 1941,” 03 November 1941; and OKW, WiRüAmt (Thomas), Az. 11 k 2209 Ro V 1[?], Nr. 4071/41gK, “Gegenüberstellung des monatlichen Verbrauchs an Betriebsstoffen im Jahre 1941 und der voraussichtlich im den einzelnen Vierteljahre und im ganzen Jahr 1942 zur Verfügung stehenden monatlichen Durchschnittsmengen,” 12 January 1942; both in: T-77/704 (Wi/IE 4.40).

¹¹⁰ Aktenvermerk, “Treibstoff- und Heizöl-Versorgungslage,” no date or author (circa January 1942), T-77/704 (Wi/IE 4.40); and WFSt, “Wehrkraft 1942,” 06 June 1942, quoted in: OKW, *KTB*, ii: 170-173 (quotation from pg. 172 of the latter source).

¹¹¹ WiRüAmt (Griebel), Az. 11 k 2209 Ro Vs, “Voraussichtliche Mineralölversorgungslage Europas (ohne Spanien und Portugal) im 1. Vierteljahr 1942,” 24 October 1941, T-77/704 (Wi/IE 4.40); WFSt, “Wehrkraft 1942,” 06 June 1942, quoted in: OKW, *KTB*, ii: 170-173 (quotation from pg. 172 of the latter source).

¹¹² Keitel nonetheless had to send a groveling letter (drafted by WiRüAmt) to Antonescu in May 1942 practically begging that 320,000 tons of petroleum products be set aside for the armed forces during the upcoming “Case Blue” (Fall Blau – the invasion of the Caucasus). WiRüAmt (Griebel) an Herrn Chef OKW, Az. 66 b 1210 (Ro V/1a), Nr. 4604/42g, 27 April 1942; WiRüAmt, Az. 66 b 1210 Ro V/1a, Nr. 4604/42g, “Beitrag zum Schreiben des Herrn Chef OKW an Marschall Antonescu,” 27 April 1942; and Keitel to Antonescu, 06 May 1942; all in: T-77/606 (Wi/IC 4.3a-b).

¹¹³ Dr. vdW/Hof., “Memorandum über die Ergebnisse der Tätigkeit der Kontinentöl in Rumänien,” 17 September 1943, T-401/2 (RBF 36).

¹¹⁴ Rohstoffabteilung an den Chef des WiRüAmtes, Herrn General der Infanterie Thomas, “Betr.: Mineralöllage in Rumänien,” 27 October 1941, T-77/606 (Wi/IC 4.3a-b).

1941 that the military's monthly fuel quota for the first quarter of 1942 would be reduced to 75,000 tons from the 95,000 it would receive in December. "This is for us," Halder moaned, "the end of operational freedom."¹¹⁵ The following spring, Göring had to rebuke the General Staff, reminding them that "he could not give more than he had [...]." If Germany was to regain the strategic initiative, the military would have to "adjust" its operational requirements to the prevailing supply situation.¹¹⁶ It would yet again have to do more with less.¹¹⁷

Germany would return to the offensive in 1942, but even as the Third Reich ratcheted up the level of violence directed against Jews and other undesirables, it fought for more modest strategic objectives. The Third Reich had risked two-front war in June 1941 because the civilian and military leadership was convinced that Germany could annihilate the Soviet Union within only a few weeks. Such a victory would have radically altered the strategic calculus in Germany's favor and allowed it to reorient its war effort to waging an aerial and naval campaign against the Anglo-Saxon powers. Even before the failure of Operation Barbarossa, the resilience of the Soviet regime in the face of the disastrous military defeats of June-October 1941 shattered the German war plan, which had been predicated upon the assumption that a decisive operational victory would induce a strategic (political) victory. If the Soviet regime failed to concede, Germany had no means of compelling its surrender, just denuding its war-making capacity (hence the decision to cut off Soviet access to the Caucasian oilfields). Hitler grasped the strategic reality

¹¹⁵ *Halder Diary*: 19 November 1941.

¹¹⁶ Chef WiRüAmt, "Aktennotiz über Vortrag bei Reichsmarschall Göring im Sonderzug am 7. März 1942," 09 March 1942, IWM, FD 1434/46. See also: der Chef des WiRüAmtes im OKW (Thomas) to Herrn Chef OKW (Keitel), Nr. 650/42gK, "Betr.: Betriebstoffversorgung im Sommer 1942," 16 March 1942, T-77/704 (Wi/IE 4.40).

¹¹⁷ Hence Göring's Erlaß of January 1942, bolstered by Hitler's personal approval, decreeing that the "raising of petroleum production" within the German sphere of influence would "have precedence over all other undertakings [Vorhaben]." Der Vorsitzende des Ministerrats [*sic*] für die Reichsverteidigung und BVJP, V.P. 306/42 g., 07 January 1942; and der Führer und Oberste Befehlshaber der Wehrmacht, Nr. 1/42 g/K. OKW/WFSt/Org.-WiRüAmt, "Betr.: Rüstung 1942," 10 January 1942; both in: T-77/1057 (Wi/ID. 26). Hitler's instructions are reprinted in: Office of Naval Intelligence, *Fuehrer Directives and other Top-Level Directives of the German Armed Forces, 1942-1945* (Washington, DC: 1948), 1-4. Krauch outlined the material and labor requirements to fulfilling Göring's directive, as well as completing the task of the second Four-Year Plan ("to supply Europe and not just Germany"), in: BVJP, der Generalbevollmächtigte für Sonderfragen der chemischen Erzeugung, "Auszug aus dem Vortrag Dr. Ritter vor dem Chef OKW – WiRüAmt und den Rüstungsinspektoren am 21. January 1942 in Berlin 'Über die Arbeiten des Generalbevollmächtigten für Sonderfragen der chemischen Erzeugung,'" 21 January 1942, T-77/649 (Wi/VI. 34). Emphasis in the original. See also: Carl Krauch, "Die Kriegsleistungen der chemischen Erzeugung und ihre kommenden Aufgaben," *Vierjahresplan*, 1942: I.

as early as the beginning of 1942: not that defeat was inevitable, but rather that Germany lacked the means of achieving victory. By the time German troops entered Caucasus in the summer of 1942, the grand strategy that determined their movements was essentially defensive in character. The acquisition of oil was now truly the centerpiece of the German war effort, but the illusions of 1940/41 had vanished. As Hitler explained to Raeder in August 1942, the Reich was no longer fighting for victory, but rather to win space and resources sufficient to keep the Soviet Union at bay and fight a protracted war against Britain and the United States until the Anglo-Saxons were “ready to make peace.”¹¹⁸ Oil would no longer be the instrument by which Germany reversed the judgment of history, just the means of forestalling it.

The decision to attack the Soviet Union in June 1941 stemmed from three factors. The first was National Socialist ideology, specifically Hitler's obsession with the extermination of “Judeo-Bolshevism” and the more widespread desire in the Third Reich to acquire “living space” (Lebensraum) to redress Germany's economic disadvantages vis-à-vis the other great powers. The second factor was the strategic position within which Germany found itself following its unexpectedly rapid victory over France. Although Germany stood unchallenged on the Continent, Britain had vowed to continue the fight, which put Hitler in an awkward position, since the Reich presently lacked the aerial and naval means to coerce Britain militarily. Pouring resources into the Mediterranean and Middle East, although it offered the prospect of cheap victories, was a dead end. Even the more thoughtful strategists within the German leadership could not explain how Axis victories in peripheral theaters would compel Britain to submit.

But the lack of military options in the west did not pose an insuperable problem Hitler, who never had any firm idea about how he would end the war he had unleashed. If anything, he expected (indeed, hoped) that the generational struggle for world dominion with the United States and Britain would extend

¹¹⁸ The preceding discussion was based on: Hillgruber, *Hitlers Strategie*, 549-556; MGFA, *Germany and the Second World War*, vi: 1206-1215; and Bernd Wegner, “The Road to Defeat: The German Campaigns in Russia, 1941-1943,” *Journal of Strategic Studies* 13: 1 (1990): 114-121. The relevant portions of Hitler's 26 August 1942 conversation with Raeder are reprinted in: OKW, *KTB*, ii: 8. The record of the conversation included with *Hitler's Table Talk* is rather different from Raeder's recollection, but Hitler did stress that he had to go on the offensive in 1942 to “gain the initiative” and forestall “the danger of being annihilated.” *Table Talk*: No. 300 (26 August 1942).

indefinitely since conflict was the only way to preserve the martial spirit of the German race. Irrespective of Britain's posture, then, Germany would eventually have to wage "long war" of some sort. Such a conflict could only be sustained from a resource base far in excess of what was available in either Germany or even Axis Europe – which left only the Soviet Union. Whether or not victory over the Soviet Union compelled Britain to yield was irrelevant, for Germany needed the economic resources of the Soviet Union in any event.

The final factor animating German grand strategy, and one that has so far escaped the attention of many historians, is the oil crisis that overcame Axis Europe following the defeat of France. The list of economic resources in short supply was long, but the deficit was most acute in the case of oil, as prewar Europe had produced no more than 40% of its own petroleum requirements internally. Without the oil of either the Middle East or the Soviet Union – ideally both – Germany would be unable to mobilize the resources of Europe against the Anglo-American coalition assembling against it.

If it came to a choice between whether to attack the Soviet Union or the Middle East, the decision was an easy one to make. Leaving aside the thorny matter of dividing the spoils between Germany's current and prospective allies (Italy, Vichy France, and Spain), an assault against the Middle East would neither compel Britain to seek terms nor guarantee Germany the economic resources it needed to wage a war of indefinite duration in the west – particularly oil in view of the logistical difficulties entailed by its transport to Europe. A war against the Soviet Union, by contrast, would fulfill both Germany's immediate strategic requirements and many of the long-term objectives of National Socialist ideology. Besides eliminating Britain's only possible ally of consequence in Eurasia, the conquest of European Russia and the Caucasus would provide Germany with a plethora of resources unavailable in or inaccessible from the Middle East, including oil, coal, minerals, arable land, and slave labor. Once these resources had been tied to Europe's mighty industrial centers, the Third Reich could look forward to the air and naval struggle against the Anglo-American coalition with every expectation of success.

Conclusion

Oil and the Illusion of Grand Strategy

The primary aim of this work has been to establish that any effort to understand contemporary great power conflict is bound to be incomplete or even misleading if it does not reference oil's significance. The gradual displacement of coal by oil as the industrial world's greatest source of energy after 1900 was the most important development in global energy consumption patterns of the twentieth century. This shift also influenced the course of international relations after the First World War and helped to upend the global balance of power that had predominated since the end of the nineteenth century, particularly by undermining the autonomy of Great Britain and Germany on the international stage throughout the twentieth century.

The findings presented here should temper the historical rehabilitation of Britain's post-WWI military and economic capacity as well as the strategic viability of the empire on the eve of the Second World War. After 1912, Britain began restructuring its armed forces around the consumption of petroleum. This development turned out to have major consequences for Britain's national and economic security. Although its empire swelled to its greatest territorial extent following the Allies' victory in the First World War, Britain's imperial pretensions after 1918 were hollow without adequate supplies of oil, access to which could no longer be guaranteed by the Royal Navy due to the unfavorable location of Britain's oil assets in the Middle East. It does not seem unfair to contend that Britain descended to the rank of second-tier power and ward of the United States well before 1940 due to its lack of energy security.¹ Britain's relative decline vis-à-vis the other great powers did not simply correlate to the rise of oil – but this study does suggest a casual relationship between the two phenomena. After 1918, Britain still had an armaments industry capable of producing first-rate weapons systems and platforms, as well as a shipbuilding industry that churned out not only naval vessels but also invaluable merchant ships, including tankers. When bolstered by the resources of the empire, Britain was certainly more deserving of

¹ David Snyder makes this point with regard to Britain only in passing, but he cannot really prove his case since his study ends in 1922: "Petroleum and Power: Naval Fuel Technology and the Anglo-American Struggle for Core Hegemony, 1889-1922" (Ph.D. Dissertation, Texas A&M, 2001), 255-274.

the title of “great power” than Germany.² Indeed, during the Second World War, it produced more combat aircraft, artillery, mortars, and machine pistols than the Third Reich, and even more tanks than the birthplace of Blitzkrieg between 1940 and 1942.³ Unlike during the Age of Coal, however, Britain no longer independently possessed the means to fuel all of them.

Contemporaries understood that one of the foundations of British power in the nineteenth century was Britain’s almost “unlimited supply of marine coal” and stranglehold over the international distribution of naval coal through its network of overseas bases. Moreover, Britain had managed to acquire this position at only moderate cost during the relatively peaceful nineteenth century.⁴ Britain entered the oil age, however, saddled with an energy production and distribution infrastructure at home and abroad that was becoming increasingly “obsolete.”⁵

Some overseas bases, such as Aden, that guarded access to foreign oil or were used as staging or refurbishment points for the Royal Navy in case it deployed beyond Home waters would retain their value.⁶ On the other hand, thanks to the declining demand for coal at sea, many of the existing coaling stations would either have to be discarded or refurbished as oil storage facilities at great cost. In 1914, coal accounted for 96.6% of the fuel consumed by the world’s ships: 43,859,381 tons of coal compared to

² David Edgerton’s *Britain’s War Machine: Weapons, Resources, and Experts in the Second World War* (New York: Oxford University Press, 2011), *passim* (esp. 11-85).

³ Mark Harrison, “The Economics of World War II: An Overview,” in: *The Economics of World War II: Six Great Powers in International Comparison*, ed. Mark Harrison (Cambridge: Cambridge University Press, 1998), 15-16.

⁴ Lt. Cmdr. G.J.A. Miles (Royal Naval Staff College), “The Supply of Oil Fuel for Fleets and Squadrons Abroad in the Future,” 14 April 1920, British National Archives (BNA), ADM 203/48.

⁵ Orest Babij, “The Royal Navy and Inter-War Plans for War against Japan: The Problem of Oil Supply,” in: *Merchant Marine in International Affairs, 1850-1950*, ed. Greg Kennedy (London: Frank Cass, 2000), 88.

⁶ Andrew Lambert places special emphasis on those bases that included dry dock facilities: Malta, Gibraltar, and Bermuda (which were owned and operated by the British Government); and Sydney, Auckland, Halifax, Esquimalt, Hong Kong, Cape Town, and Bombay (ownership and costs split between London and the local governments). “The Royal Navy and the Defence of Empire, 1856-1918,” in: *Imperial Defence: The Old World Order 1856-1956*, ed. Greg Kennedy (London: Routledge, 2008), 127. Geoffrey Kemp and John Maurer – building upon Halford Mackinder’s theoretical work, also make a compelling case that British naval supremacy in the nineteenth century rested upon the twin foundations of coal and underwater cable, which were undermined by the development of railways in continental powers such as Russia, wireless (which undercut Britain’s stranglehold over transoceanic communications), and oil: “In this new age based on oil and radio waves, Britain’s competitive advantage over her rivals in the ability to project military power diminished by degrees and has never been recovered.” Kemp and Maurer, “The Logistics of Pax Britannica: Lessons for America,” in: *Projection of Power: Perspectives, Perceptions, and Problems*, ed. Uri Ra’anan, Robert Pfaltzgraff, and Geoffrey Kemp (Hamden: Archon Books, 1982), 28-49. For a concise introduction to Mackinder’s thinking, see: Geoffrey Sloan, “Sir Halford J. Mackinder: The Heartland Theory Then and Now,” *Journal of Strategic Studies* 22: 2-3 (1999): 15-38.

1,544,496 tons of oil. By 1922, however, coal's share had dropped to 73.9% – 45,338,327 tons (the postwar peak) – whereas oil's share had risen eight-fold and consumption now stood at 16,004,625 tons. By 1932, demand was almost evenly balanced: 38,194,758 tons of coal vs. 30,173,383 tons of oil.⁷ British policymakers had realized as early as 1920 that the conversion of the world's merchant ships from burning coal to oil would have a "serious effect" on British trade, since coal was Britain's single largest export by volume. Nor could Britain use its existing coal bunkering network to control naval refueling, "and unless therefore we take early steps to convert our coaling stations to oil stations we shall risk losing, to some extent, the means of bunker control of neutrals which was so valuable in the recent war when coal was in general use."⁸

Years later, the U.S. Military Attaché in London wondered at the "solid unwillingness" of the British Government and public to face "the fact that the traditional source of motive power, coal [,] has largely been displaced," thus rendering political discussions about the "depressed" coal industry entirely superfluous.⁹ But refurbishing or liquidating such obsolescent assets was not a simple matter in view of the human costs, as anyone familiar with the concept of path dependence will recognize. Just the physical infrastructure alone, including coal mines at home or coaling stations abroad, represented sunk costs that Britain could not easily liquidate since the fate of coal industry was as much a political and economic quandary as a strategic dilemma.

The rise of oil undermined the very basis of the Pax Britannica, which one historian describes as resting upon "trade, colonies, and the navy."¹⁰ Colonies – in particular overseas bases – no longer enjoyed the same strategic or economic significance. In terms of trade and finance, the substitution of oil for coal

⁷ R.W. Ferrier, *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982), 674.

⁸ W.H.L. (Walter Long, First Lord of the Admiralty) and H.G. (Hamar Greenwood, Secretary of Overseas Trade), "Oil Fuel Reserve for British Oil-Burning Merchant Ships: Memorandum Prepared by the Admiralty and the Petroleum Executive for the Cabinet," 05 February 1920, C.P. 601, BNA, CAB 24/98.

⁹ Lt. Col. Raymond E. Lee (Military Attaché), "Oil and Its Effect on British Warming Capacity," 11 December 1935, Report No. 37765, National Archives and Records Administration (NARA), Record Group 59: General Records of the Department of State, 841.6363/413.

¹⁰ It is unfortunate that Kennedy does not reference oil or its strategic and economic consequences even once in his *The Rise and Fall of British Naval Mastery* (London: A. Lane, 1976). Doing so would have bolstered his thesis that there was a causal relationship between the waxing and waning of Britain's naval strength and its relative economic position.

began to deprive British firms of earnings from the sale of coal either at British-owned coaling stations or when British merchant ships carried it as ballast during their voyages from Britain to overseas markets.¹¹ Imports of oil also strained Britain's balance of payments. Britain had been running a trade deficit since the 1880s following the economic rise of the United States and Germany, and it only balanced its current account through exports to captive markets in Asia such as India and earnings from invisible income.¹² The sudden need to import oil (by 1933, 13% of the Britain's daily imports consisted of oil) added yet another burden on a country that already depended on overseas trade for its national survival while degrading Britain's ability to pay for these new imports by depressing demand for coal.¹³ Finally, on the strategic level, Britain's ability to employ economic warfare was degraded: its coaling stations no longer determined the movements of foreign navies because oil-fueled ships needed to be refueled less frequently than their coal-burning predecessors and could be resupplied at sea from tankers.

After 1918, Britain had two options. It could subordinate itself to the United States to secure reliable oil supplies in wartime. This was hardly advisable if, as policymakers in both London and Washington feared, U.S. oil reserves declined or domestic consumption increased to the point where there was no exportable surplus left. There was also the matter of Britain's outstanding war debt and shortage of foreign exchange. The second option was to undertake costly efforts at exploring and producing oil in territories that were strategically vulnerable, politically unstable, and taxed Britain's already over-extended military forces – not just in the Middle East, but also in Burma and the East Indies. This was quite a reversal of fortune from London's perspective. One political scientist describes Britain as the “Saudi Arabia of coal” during the nineteenth century not just because of the extent, but also the quality, of its reserves (Welsh coal being ideally suited for naval boilers). This is, if anything, an understatement: by

¹¹ According to one 1921 article, coal accounted for 90% of the tonnage of all of Britain's exports. Quoted in: John Maurer, “Fuel and the Battle Fleet: Coal, Oil, and American Naval Strategy, 1898-1925,” *Naval War College Review* 34: 6 (1981): 62.

¹² Kenneth Pomeranz, *Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000), 283-284.

¹³ “Ölstrategie,” *Militär-Wochenblatt*, 121. Jahrgang, Nummer 27 (15 January 1937).

virtue of its stranglehold over the international coal trade, Britain exercised the power of life or death over the world's other navies, including the U.S. Navy.¹⁴

Although blessed with natural resources, one thing that the United States did lack was coal reserves on its West Coast suitable for use in naval boilers, which meant that naval operations in the Pacific depended upon shipments of coal from the Atlantic Coast by U.S. Navy colliers around the Cape Horn (the Panama Canal not being completed until 1914), refueling at British coaling stations, and resupply at sea from British colliers. Even with British assistance, on the eve of the First World War, the U.S. Navy was still incapable of supporting a coal-fueled fleet in the Pacific. After the First World War, oil did more than just solidify the supremacy of the U.S. Navy by ending its dependence upon Britain's coal-supply network. The existence of plentiful, high-quality oil supplies in California also radically upset the balance of power in the Pacific in favor of the United States, at the expense of both Britain and Japan. As one historian concludes, "Oil would be the foundation of American overseas expansion much as coal served to underpin British imperial policy."¹⁵

Britain did derive some advantages from oil. The major British oil companies, Royal Dutch/Shell and Anglo-Persian/Anglo-Iranian, earned valuable foreign exchange and improved Britain's balance of payments by reducing its imports of oil denominated in dollars. Moreover, successive British governments sought to use oil to offset the costs of their expanded, post-WWI empire in the Middle East. That such schemes were failures is less important than the fact that they were needed in the first place – they demonstrate that London recognized that it had to formulate a new grand strategy to take into account its unfavorable economic and strategic position in a world denominated by access to oil.

The argument here is not that Britain made the wrong choice in 1912 when the Royal Navy shifted to oil. Considering Britain's political, economic, and strategic position in the world by the twenty-first century as a "winner" of the world wars relative to that of "losers" such as Germany and Japan, we need to ask ourselves whether terms such as "victory" or "defeat" mislead as much they explain. For Britain, in

¹⁴ Ian Lesser, *Resources and Strategy* (Basingstoke: Macmillan, 1989), 25.

¹⁵ Maurer, "Battle Fleet," 60-74 (quotation from pg. 73).

one vital regard, winning or losing either of the world wars turned out to be irrelevant over the long run, as neither the victories of 1918 nor 1945 did anything to forestall the disintegration of the British Empire. Britain's days as a world power were already numbered in 1912 whether it switched to oil or stuck with coal. Neither option was especially palatable, and both of them would have sooner or later resulted in the erosion of British strength. Although it had some control over the timing, London could not indefinitely delay the conversion of the Royal Navy from burning coal to oil due to advances in naval technology, for a coal-burning fleet would have been at a major tactical disadvantage against oil-fueled rivals. Likewise, achieving energy security by embracing rather than fighting its dependence upon the United States made sense in view of Britain's overall relative decline, and it was certainly more advisable than placing Britain's energy security in the hands of resentful clients such as Persia or Iraq. But the end result was the same: the end of Britain's reign as an independent great power.

Germany was hardly in a better position, even if its synthetic petroleum and domestic oil industries provided it with a margin of security unavailable to its rival across the English Channel. Unlike Britain, it could not even consider relying on overseas imports during wartime. Germany's remarkable military successes between 1939 and 1941 also ended up exacerbating its economic weaknesses by forcing it to supply Axis Europe with raw materials that had previously come from overseas.¹⁶ Germany could and did manage to scrape by thanks to oil imports from Romania and synthetic fuel, but neither option was ideal. German analysts had deluded themselves into thinking that Romania could be a reliable wartime supplier in spite of ample evidence that oil production there had peaked in 1936. The Third Reich proved incapable of arresting this downward trend, not the least because Romania had no interest in turning over its oil industry to a new set of foreign owners or losing the diplomatic and economic leverage that came from being the only oil-producer of consequence in Europe. Coercion was out of the question – the last time Germany occupied Romania in 1916, an Anglo-French demolition team sabotaged the oilfields so thoroughly that the Central Powers were unable to restore prewar rates of production before the war

¹⁶ A point that stressed in: Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2007), 411-420.

ended. After 1939, the Third Reich had no option except to expend inordinate amounts of resources to secure and transport relatively small quantities of oil.

Likewise, reliance upon synthetic fuel was a dangerous gambit that imposed tremendous burdens upon Germany's economy without guaranteeing its long-term energy security. Germany invested billions of Reichmarks, millions of tons of coal and steel, and the labor of tens of thousands of skilled and slave laborers to construct its synthetic fuel industry. Even at peak production, however, the synthetic fuel plants could cover barely half of Germany's petroleum requirements, which were already tiny compared to those of the other Western industrialized nations. The vast synthetic production facilities, which often produced a variety of synthetic products besides petroleum, including rubber or chemicals such as ammonia and methanol, were also vulnerable to bombing. Production could even be disrupted indirectly by attacks on the railway lines and distribution hubs that supplied these facilities with the coal and steel they needed to function, and which carried their output to consumers across Axis Europe.¹⁷

During and after the war (usually on the basis of the findings of the United States Strategic Bombing Survey), many analysts argued that Germany developed Blitzkrieg as a means of overcoming its resource and manpower deficiencies.¹⁸ The concept actually has two meanings, one at the level of tactics and operations, the other for strategy and economics. In the case of the former, we are speaking of the revolutionary application of tanks supported by mechanized infantry and close air-support that interwar theorists (in Germany and elsewhere) designed to overcome the stalemate of the First World War, and which supposedly brought France to its knees in six weeks. In the case of the latter definition, we are

¹⁷ For additional information concerning the extent of prewar capital, material, and labor investment in the German oil industry (both natural and synthetic), as well as detailed information concerning production, imports, and consumption, see: Chiefs of Staff Committee, Technical Sub-Committee on Axis Oil, *Oil as a Factor in the German War Effort, 1933-1945*, 08 March 1946, A.O. (46) 1, BNA, CAB 121/418; Office of the U.S. High Commissioner for Germany, Economics Division, Decartelization Branch, "The German Oil Industry," 04 December 1946, NARA, Record Group 466: Office of the High Commissioner for Germany, Office of General Counsel, Decartelization Division, Cartel Subject Files, 1947-55, Box 47; United States Strategic Bombing Survey (USSBS), *The German Oil Industry: Ministerial Report, Team 78* (Washington, DC: U.S. GPO, 1945), 22-24; and USSBS, *Oil Division: Final Report* (Washington, DC: U.S. GPO, 1945), 14-16.

¹⁸ Although the term was, in fact, coined by the German military before the war, it into entered the popular imagination thanks to Western propagandists trying to excuse the incompetence of the British and French high commands during the invasion of France and the Low Countries by exaggerating the prowess of the German armed forces. Karl-Heinz Frieser, *The Blitzkrieg Legend: The 1940 Campaign in the West* (Annapolis: Naval Institute Press, 2005), 4-11.

referring to the idea Germany deliberately contrived to fight a series of short wars in 1939 until it achieved the mastery of Europe because it lacked the economic resources to fight a single, long war on multiple fronts.¹⁹ Germany's economic resources would also be only partially mobilized to ease the burden on the German civilian population, so as to ensure their loyalty and avoid a repeat of 1918. Each military campaign from the invasion of Poland to Operation Barbarossa was designed to be self-supporting and timed in such a way as to allow Germany to gather its economic resources before launching itself at its next opponent. The so-called "Blitzkriegswirtschaft" finally gave way to a "total war" only after the failure of Barbarossa and Albert Speer's appointment as Armaments Minister.²⁰

If there was one "fundamental lesson" that "the military and economic geniuses of the Reich" had learned from the last world war, according to one astute U.S. analyst, it was "that under no circumstances should Germany be forced into a long war."²¹ He estimated that Germany's petroleum requirements during its victorious campaigns between September 1939 and June 1941 totaled around 13,500,000 barrels, which worked out to less than one-quarter of its prewar consumption – three or four days of U.S. production. The aforementioned analyst even surmised that Germany "came out ahead of the game," since he estimated that it managed to capture about 20,000,000 barrels in France and the Low Countries.²²

¹⁹ The idea that Germany was pursuing a Blitzkrieg strategy due to its lack of oil first appeared in the writings of the petroleum economist (and future U.S. intelligence analyst) Walter Levy in 1940/41: "When it was realized that the material requirements would be so enormous... it becomes clear to the strategist that fighting on such a scale would only be possible in intervals and would always have to be interrupted by breathing spaces, during which stocks for short [and] heavy campaigns could be accumulated. The decision must thus be obtained in short and heavy battles [...]." Walter Levy, "Oil and War," 09 May (or 05 September) 1941, NARA, Record Group 169: Records of the Foreign Economic Administration, Entry 360, Box 2191.

²⁰ The classic formulations of this argument may be found in: Nicholas Kaldor, "The German War Economy," *Review of Economic Studies* 13: 1 (1945-1946): 33-52; Burton Klein, *Germany's Economic Preparations for War* (Cambridge: Harvard University Press, 1959); and Alan Milward, *German Economy at War* (London: Athlone Press, 1965). See also: W.G. Jensen, "The Importance of Energy in the First and Second World Wars," *Historical Journal* 11: 3 (1968): 545-554; and Lesser, *Resources and Strategy*, 70-72.

²¹ Walter Levy, "The Paradox of Oil and War," *Fortune* (September 1941), 69ff, American Heritage Center (University of Wyoming), Papers of Walter Levy (hereafter cited as: Levy Papers), Box 1; reprinted in: Walter Levy, *Oil Strategy and Politics, 1941-1981* (Boulder: Westview Press, 1982), 9.

²² Levy, "Paradox of Oil and War," 14-15; Levy, "Oil in this War's Strategy," no date (circa late-1940, early-1941); Levy, "Petroleum's Part in Axis Strategy," *World Petroleum* 12: 7 (July 1941), 39-43; and Levy, "Oil Drives Hitler's Army," article manuscript dated March 1942; the latter three in: Levy Papers, Box 1. The 20,000,000 barrel figure turned out to be exaggerated. The British Government estimated that the Germans captured 550,000 tons of oil in Norway, Denmark, Holland, and Belgium (3,850,000 barrels). A.G. (Arthur Greenwood), "The Economic Consequences of a Complete or Partial Collapse of French Resistance: Memorandum by the Minister without Portfolio," 17 June 1940, W.P. (G) (40) 155, BNA, CAB 67/7/5. The Germans, however, acquired only 800,000

Neither definition of Blitzkrieg is entirely accurate. The Germans rarely used the term, but analogous concepts such as Bewegungskrieg (war of movement) had a long pedigree in Prussia-Germany that dates back at least to Frederick the Great. The Prussian Army had a tradition of making do with less. By virtue of its exposed position in the center of Europe, small population prior to unification and industrialization, flat terrain, and lack of natural resources, Prussia, which did not even have contiguous borders until after the acquisitions from the Wars of Unification, had to make a virtue out of necessity. Prussia's strategic predicament could be turned into an advantage, at least in the short run, if its army made effective use of interior lines of communication to strike at its more numerous and better-equipped enemies quickly before they had a chance to coalesce. The emergence of the oil-fueled triad of combined arms (tanks, mechanized infantry, and airplanes), like railroads and telegraphs before them, allowed practitioners of the German "way of war" to fight more effectively the kinds of short, sharp battles of encirclement and/or annihilation Prussia-Germany needed to win if it was to deny its enemies the time to make good on their numerical, economic, and materiel superiority. German officers served an institution that even before 1918 already valued the key tenets of Blitzkrieg/Bewegungskrieg: speed, surprise, tactical flexibility, mobility, and most importantly, aggression. The dreaded alternative was a static "positional warfare" (Stellungskrieg) that would gradually erode Germany's tactical and operational advantage until it was at

tons of "booty" (Beute) from Norway, Holland, Belgium, and France, not including supplies captured by the German armed forces in the field. The breakdown was: 363,000 tons of gasoline; 65,000 tons of diesel fuel; 222,000 tons of aviation fuel; and 150,000 tons of fuel oil. OKW, Wehrwirtschafts- und Rüstungsamt (WiRüAmt), Stab Z/SR, "Die deutsche Treibstoffversorgung im Kriege. *Abgeschlossen um die Jahreswende 1941/42. Versuch einer Darlegung der Gesamtsituation unserer Treibstoffversorgung im Kriege unter Verzicht auf die Darstellung der Einzelheiten*," 16 February 1942, T-77/668 (Wi/Vl. 216). Before the war, it was an article of faith that France had pursued a conscientious policy of accumulating large war reserves, since it lacked either the extensive overseas oil concessions of Britain or sufficient coal to synthesize into petroleum like Germany. G.F., "Treibstoffe auf Vorrat," *Vierjahresplan*, 1937: VII; and "Aufgaben und Methoden der Treibstoffpolitik," *Vierjahresplan*, 1939: IV. The Italians were astonished by the dearth of French reserves in the summer of 1940, having believed that the French Navy possessed "underground lakes" of petroleum in Tunisia and huge reserves in Toulon. In reality, France had been dependent upon shipments from Iraq, where the British and U.S. partners in the Iraq Petroleum Company determined production according to their commercial requirements, while the major oil companies had thwarted the accumulation of anything larger than a three-month national reserve within France during the 1920s. Gregory Nowell, *Mercantile States and the World Oil Cartel, 1900-1939* (Ithaca: Cornell University Press, 1994), 252-262 and 275-276.

the mercy of the enemy's numerical and materiel superiority.²³ What passed for grand strategy within the German military leadership before the Third Reich was fighting total wars for limited aims: the maximum application of military force against an enemy to convince them as quickly as possible to seek a negotiated peace rather than resort to extraordinary measures such as a "people's war."²⁴

Even amid the carnage of the First World War, "the German army had been the most flexible and innovative of the armies that had engaged in the 1914-1918 war." The necessity of rebuilding the military from scratch after Versailles without being burdened by obsolete arms encouraged German planners to "concentrate upon a weapon's future possibilities rather than its immediate capabilities." Similarly, Germany's indefensible borders and tiny conventional forces forced its military to embrace a flexible doctrine of mobile defense and counterattack.²⁵ German generals also needed little prompting to embrace the technical developments of the First World War, many of which complemented the existing mindset of Germany's military leadership: "[The] internal combustion engine was not altering the parameters of strategy but restoring them. Prospects for decisive victory, as opposed to bean-counting attrition, seemed to be reemerging."²⁶

²³ Robert Citino, *German Way of War: From the Thirty Years' War to the Third Reich* (Lawrence: University Press of Kansas, 2005). The political and social consequences of the failure of *Bewegungskrieg* were also troubling. In such an event, Germany's only hope would be the adoption of the *levée en masse*. This would have undermined the leadership pretensions of Germany's aristocratic officer-class, which as a whole remained hostile to the idea of privileging merit over social status until Second World War. Ironically, the regime that finally institutionalized the kinds of military reforms articulated by Prussian liberals during the Napoleonic Wars such as Gerhard von Scharnhorst that rewarded "outstanding bravery and presence of mind" or "Selbständigkeit" (self-reliance) was the Third Reich. MacGregor Knox, *Common Destiny: Dictatorship, Foreign Policy, and War in Fascist Italy and Nazi Germany* (Cambridge: Cambridge University Press, 2000), 186-226. See also: David Schoenbaum, *Hitler's Social Revolution: Class and Status in Nazi Germany* (Garden City: Doubleday, 1966), 234-274.

²⁴ Dennis Showalter, "German Grand Strategy: A Contradiction in Terms?" *Militär-geschichtliche Mitteilungen* 58 (1990): 65-102; and Dennis Showalter, "Total War for Limited Objectives: An Interpretation of German Grand Strategy," in: *Grand Strategies in War and Peace*, ed. Paul Kennedy (New Haven: Yale University Press, 1991), 105-123.

²⁵ Williamson Murray, "Germany Army Doctrine, 1918-1939, and the Post-1945 Theory of 'Blitzkrieg Strategy,'" in: *German Nationalism and the European Response, 1890-1945*, ed. Carole Fink, Isabel Hull, and Williamson Murray (Norman: University of Oklahoma Press, 1985), 71-79. Of course, the German military's tactical and operational virtuosity was balanced by a staggering incompetence in matters such as intelligence gathering and assessment, logistics, industrial mobilization, and overall strategy – all areas in which "they were quite literally at sea." Williamson Murray, *The Change in the European Balance of Power, 1938-1939: The Path to Ruin* (Princeton: Princeton University Press, 1984), 360-361; Williamson Murray, *German Military Effectiveness*, 1-38; and Williamson Murray, "Net Assessment in Nazi Germany," in: *Calculations: Net Assessment and the Coming of World War II*, ed. Alan Millet and Williamson Murray (New York: Free Press, 1992), 60-96.

²⁶ Showalter, "Total War for Limited Objectives," 120.

The downside of this mentality – an almost fanatical focus on tactical and operational skill – was that Germany’s military leadership abrogated any responsibility to think critically about Germany’s grand strategy, or even its military strategy for that matter, which it frequently confused with operations. Rather than weighing means and ends, the military stuck to its area of expertise, perhaps as a means of preserving its political independence, since military interference within traditionally civilian areas of policymaking would have risked reciprocal meddling in military affairs by politicians. In exchange for not commenting on matters of grand strategy in peacetime, German officers expected that political and economic considerations would be subordinated to “military necessity” in wartime. The ramifications would be sorted out by the civilian leadership after the military had achieved a decisive military victory.²⁷

At the strategic level, it is not really possible to plan for a short war, otherwise every nation would. As for economics, historians have undermined the idea of a “Blitzkriegswirtschaft” before Speer’s appointment as Armaments Minister by demonstrating that the Third Reich was largely mobilized from the start of the war, and that the “Speer miracle” of 1942-45 was the product of investments made beforehand.²⁸ The apparent effortlessness by which Germany secured its unbroken string of military victories between 1939 and 1941 has misled many then and since into thinking that they were the product of design rather than contingency.²⁹ The fact that the National Socialist regime had devoted vast resources to the development of synthetic substitutes for many raw materials and stockpiles of critical war materiel

²⁷ Besides the aforementioned works by Williamson Murray, see also: Isabel Hull, *Absolute Destruction: Military Culture and the Practices of War in Imperial Germany* (Ithaca: Cornell University Press, 2005); and Jehuda Wallach, *The Dogma of the Battle of Annihilation: The Theories of Clausewitz and Schlieffen and their Impact on the German Conduct of the Two World Wars* (Westport: Greenwood Press, 1986). For an excellent sampling of some of the recent scholarship concerning German military strategy during the Second World War, see the contributions by Martin van Creveld, Karl-Heinz Frieser, and Williamson Murray in Part III of: *Die Wehrmacht: Mythos und Realität*, ed. Rolf-Dieter Müller and Hans-Erich Volkmann (München: Oldenbourg, 1999).

²⁸ Adam Tooze “No Room for Miracles: German Industrial Output in World War II Reassessed,” *Geschichte und Gesellschaft* 31 (2005): 439-464; and Tooze, *Wages of Destruction*, 552-589.

²⁹ The idea that Hitler intended to use the German military as an instrument for waging Blitzkriege against France and then the Soviet Union in order to establish a German-dominated “Greater Economic Area” (Großraumwirtschaft) in Western Eurasia before the British and the Americans could bring their superior economic strength to bear against the Axis – the so-called “Stufenplan” (step-by-step) – is one of the more contentious elements of Andreas Hillgruber’s remarkable analysis of Hitler’s grand strategy: *Hitlers Strategie: Politik und Kriegsführung, 1940-1941* (Frankfurt am Main: Bernard & Graefe Verlag für Wehrwesen, 1965). Although Hitler and the German Army thought Germany could wage such a campaign against the Soviet Union in 1941, there is no evidence that either intended to wage a “Blitzkrieg” against France in 1940.

before 1939 proves that the Third Reich was preparing to fight a war of greater duration and intensity than allowable under a “Blitzkrieg” strategy.³⁰

The timing and conduct of “Case Yellow” (Fall Gelb) – the invasion of France and the Low Countries, and the prototypical Blitzkrieg campaign – in May 1940 was accidental: Hitler had no intention of biding his time after the subjugation of Poland and tried browbeating the German Army into launching an offensive against France as quickly as possible. Only a combination of bad weather, opposition by the military (which wanted time to rest and refit while absorbing the lessons of the Polish campaign), and the compromising of the German war plan in January 1940 (after a plane carrying it accidentally landed in Holland) convinced Hitler to postpone the offensive.

Moreover, the extent of Germany’s success against France in 1940 has obscured the fact that the Germans had been extraordinarily lucky and never expected such a swift and decisive victory.³¹ The original 1939 war plan was basically a repeat of the failed Schlieffen Plan and had much more modest aims: the acquisition of ports and airbases along the English Channel, from where Germany would mount an aerial and naval campaign against Great Britain.³² The magnitude of the victory in June 1940 was exhilarating to the civilian and military leadership contributed to their excessive optimism by the eve of Operation Barbarossa, which comes as close as any campaign fought by Germany during the Second World War to being a “Blitzkrieg” operation, since German planners expected from the start to win it within six to eight weeks.³³

³⁰ A concise refutation of the Blitzkrieg-as-strategy thesis on military grounds may also be found in: Murray, *German Military Effectiveness*, 217-228.

³¹ Besides Frieser, a good demolition of the operational myth of Blitzkrieg during the 1940 campaign against France and the Low Countries may be found in Robert Doughty’s “Myth of the *Blitzkrieg*,” in: *Challenging the United States Symmetrically and Asymmetrically*, ed. Lloyd Matthews (Carlisle Barracks: U.S. Army War College, 1998), 57-79; and Williamson Murray’s “May 1940: Contingency and Fragility of the German RMA,” in: *The Dynamics of Military Revolution, 1300-2050*, ed. Macgregor Knox and Williamson Murray (Cambridge: Cambridge University Press, 2001), 154-174.

³² Murray, *Balance of Power*, 334-340.

³³ The key work on the subject of Blitzkrieg is Frieser, *Blitzkrieg Legend*, *passim* (esp. 320-353). Frieser offers the provocative thesis that “the German conception of Blitzkrieg was equally revolutionary and reactionary,” in that it represented the harnessing of “the most modern methods” of tactics with an “anachronistic view of war” when it came to strategy: “In the age of industry, in which two world wars were decided in terms of strategy, and indeed on the assembly lines of factories, Hitler and his generals hoped to be able to decide the war through purely military

At the same time, this work should not be construed as a wholesale assault on the “Blitzkrieg” thesis. The leadership of the Third Reich (down the line from Hitler to military and civilian experts such as Georg Thomas, Ernst Rudolf Fischer, and Alfred Bentz) understood that autarky was not economically viable even if it was scientifically feasible due to the capital, labor, and material demands. German petroleum policy, like the rearmament effort as a whole, was explicitly designed to derive maximum value from Germany’s short-term advantages (its scientific skill at producing synthetic fuel) in order to accrue long-term strategic dividends through conquest.

Germany’s prospects in 1939 nonetheless appeared inauspicious. In spite of massive investments of scarce raw materials, labor, and capital that could have been devoted to other sectors of the economy, the German synthetic fuel industry could not satisfy Germany’s petroleum consumption. Even allowing for the fact that Germany’s per capita income in 1939 was only two-thirds that of Britain and less than half that of the United States, per capita consumption of petroleum in Germany lagged even farther behind the other industrialized nations of the Euro-American world.³⁴ At the start of the Third Reich, annual per capita oil consumption was only forty liters, against eighty-five liters in France, 144 in Britain, and 609 liters in the United States.³⁵ As late as 1938, Germany ranked 27th in the world in terms of per capita oil consumption at 0.67 barrels – one-thirteenth that of the United States.³⁶

But to condemn German planners for failing to achieve autarky would be unreasonable, since that would imply that such grandiose objectives were feasible in the first place. It cannot be stressed enough that the German leadership never sought autarky but rather autarchy: the ability to take by force what Germany could not produce for itself. While it fell short of providing Germany with energy independence by 1939, synthetic fuel did facilitate rearmament by limiting oil imports, which conserved foreign

means upon the battlefield.” Karl-Heinz Frieser, “Die deutsche Blitzkriege: Operativer Triumph – strategische Tragödie,” in: *Die Wehrmacht*, ed. Müller and Volkmann, 182-196.

³⁴ Richard Overy, “Mobilization for Total War in Germany, 1939-1941,” *English Historical Review* 103: 408 (1988): 619.

³⁵ Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941: Eine Studie über Erdölimperialisumus* (Leipzig: Leipziger Universitätsverlag, 2005), 8.

³⁶ USSBS, *German Oil Industry*, 7. Germany’s production that year was only one-fifteenth that of the United States: 7,500,000 tons vs. 164,000,000 tons USSBS, *Overall Report (European War)*, (Washington, DC: U.S. GPO, 1945), 39.

exchange for the purchase of those commodities that could not be produced at home. Synthetic fuel production also promoted horizontal integration across German industry by stimulating demand for German steel and coal even before rearmament began, while complementing the production of other essential synthetic products such as ammonia, methanol, and later rubber.

Horizontal and vertical integration throughout the German war economy, which linked the synthetic fuel and chemical industries, steel, ore, and coal producers, finance, and domestic oil producers and refiners, turned out to be a source of both immense strength and weakness. By harnessing Germany's limited means to its unparalleled strengths in scientific research and development, the Third Reich managed to punch above its weight as a resource-starved continental power. This process of economic integration and centralization also established connections across various industrial sectors that, in the event of a German victory in the Second World War, would have allowed the country to exercise a dominant position over the provision of energy within Western Eurasia particularly through IG Farben's control of hydrogenation and the emergence of the Kontinentale Öl AG. The drawbacks only became evident in the summer and autumn of 1944, when Allies bombing induced a systemic failure across the German economy by striking at certain vulnerable production and transportation nodes. For example, besides disrupting fuel production, attacks against hydrogenation facilities also reduced the output of synthetic nitrates, creating a ripple effect throughout the German war economy by impairing the production of both munitions and fertilizers.

Control of the oilfields of the Caucasus and the Middle East between 1940 and 1942 also constituted vital elements of the Third Reich's plan to create an economically and racially self-contained Greater German empire that would wage a decades-long struggle against the United States and the British Empire for world domination after the subjugation of the Soviet Union. Although France and the Low Countries had been neutralized at minimal cost, Germany had only won an incomplete victory. The Third Reich still lacked the means to bring the war in the west to close, either through diplomacy or force, since neither the German Air Force nor the Navy possessed the means to subdue Britain. Paradoxically, Germany's final defeat was sealed within weeks of its greatest operational and strategic victory – a fact that did not go

unnoticed even at that time. As a young Walter Levy, later of the pre-eminent petroleum economists of the twentieth century, observed in 1941: “[...] Germany’s hopes that a decisive victory in the West would mean the end of the war have been crudely shattered in June, 1940, and the Reich is now responsible for the oil supplies of practically the whole European Continent.”³⁷ Within the course of just a six-week campaign, Germany had come down with a terminal case of “imperial overstretch.”

Although gravely weakened following Dunkirk, Britain would draw strength from its empire and the United States while Germany looked on helplessly. Germany could strike at Britain along the periphery, but any successes in the Mediterranean or the Middle East would not force Britain to seek terms, while frittering away German resources and most importantly time to no good end. Most troubling from the perspective of the Third Reich, the United States would continue to aid Britain, and both it and the Soviet Union would continue to expand their militaries and war industries. Hence Hitler’s decision in December 1940 to strike at the Soviet Union, which was motivated in no small part by the need to expand Germany’s oil supply now that it had to meet both its own needs and those of occupied Europe, which had previously depended on overseas imports that were no longer forthcoming.

Geography’s curse upon Germany was two-fold: not only had it deprived the Third Reich of adequate supplies of numerous natural resources by stranding it in the midst of resource-poor Europe, but the physical geography of Western Eurasia also worked to its strategic disadvantage. Every military triumph only weakened Germany by extending its lines of supply, increasing the number of dependents claiming a share of Axis Europe’s paltry economic reserves, and swelling the ranks of the Allies – all without reducing the materiel gap vis-à-vis the Allies. Even if Germany had managed to seize two economic assets that could have altered the strategic calculus in its favor – the oilfields of the Caucasus and the Middle East – the geographical obstacles and extraordinary material requirements ruled out their effective exploitation in wartime. Meanwhile, geography – from the English Channel to the vast expanses of the Soviet Union – afforded the European Allies’ varying degrees of physical security that checked

³⁷ Levy, “Oil and War,” 09 May (or 05 September) 1941, RG 169, Entry 360, Box 2191; and Walter Levy, “Oil Drives Hitler’s Army,” March 1942, Levy Papers, Box 1.

Germany's relative operational superiority. Even worse, the most important military and economic partner within the Grand Alliance – the United States – lay entirely beyond the reach of the Third Reich.

Ultimately, the rise of oil narrowed rather than broadened the range of alternatives available to either Britain or Germany. Both sides had profited immensely during the period of industrialization in the nineteenth century from the fact that they could fall back on large domestic reserves of coal to power their burgeoning industries. This favorable situation did not last once the world entered the Age of Oil. The facts of oil geography are stubborn ones and proved especially nettlesome for the European powers. Neither the British nor the Germans could dismiss oil's significance, but the only options available to them in the absence of vast domestic oil reserves besides overseas imports – synthetic production, stockpiling, and intimidation of suppliers – were undesirable for various reasons.³⁸ Both sides had the raw materials necessary to establish a synthetic fuel industry, but the costs were too high in Britain's case because of path dependency – in this instance, the vast infrastructure established at home and abroad to exploit oil produced in exotic locales such as Mexico, Venezuela, the Middle East, and the East Indies. Assuming that the technical hurdles to synthetic production on an industrial scale had been surmounted, Britain could not afford to maintain its extensive overseas commitments to secure access to foreign sources of oil while subsidizing the development of a domestic synthetic fuel industry. Moreover, only Britain and Germany had the luxury of even considering such a ruinously expensive program, as no other European nation had the requisite supplies of coal, steel, capital, technical expertise, and labor.

Stockpiling was a stopgap measure that was unlikely to accomplish anything other than delaying defeat in the event that all other supplies were cut off. Finally, intimidation of suppliers yielded meager results: it was hard to hold an oil-producing nation hostage if pulling the trigger ensured that neither side had any oil. Accordingly, Germany had to cajole Romania into being a reliable oil supplier without daring to threaten military action since it could not afford a repeat of what happened during the First World War. The same situation applied in the case of the Soviet Union in 1942, where German "Petroleum Commandos" proved incapable of producing more than a trickle of oil during their brief occupation of

³⁸ David Deese, "Oil, War, and Grand Strategy," *Orbis* 25: 3 (1981): 551.

Maikop between October 1942 and January 1943.³⁹ Although firm statistics are hard to come by, it seems likely that the Germans extracted less oil by force from the occupied eastern territories between 1941 and 1944 than they received through trade during the two years of the Nazi-Soviet alliance.

The history of oil provides additional proof that the Second World War was fundamentally a contest of and for resources (economic, natural, financial, and technological), wherein traditional military factors such as strategy, operations, and tactics played a supporting rather than decisive role.⁴⁰ By 1942 the United States, Soviet Union, and Britain boasted of a combined GDP (in 1990 dollars) that was double that of Greater Germany, Japan, and Italy (\$1,906,000,000,000 vs. \$903,000,000,000), while the 1938 GDP of pro-Allied neutrals was 1.7 times greater than pro-Axis ones (\$259,400,000,000 vs. \$151,000,000,000). Neither the Allied advantage in manpower in 1942 (1.5 times on the Eastern Front and 1.1 times on the Western and Pacific fronts) nor 1938 per capita GDP (\$4,184 vs. \$3,598 when considering only the major powers) was decisive. The real disparity was in terms of materiel output: between 1942 and 1944, the United States, Britain, and Soviet Union produced three times as many rifles, machine guns, artillery pieces, and combat aircraft as did the Axis, and five times as many tanks and naval vessels. The U.S. contribution was spread equally except for its overwhelming contribution to naval production, while the Soviet Union concentrated more on small arms and tanks, and Britain on artillery.⁴¹

Even assuming that Germany could have made more effective use of the economic assets of Axis Europe, there existed an insuperable gulf between Germany's capacity to produce more weapons (which it started to do after 1942) and its ability to utilize them effectively due to the shortage of petroleum. Notwithstanding the recent assertion of one historian who claims that "[by] the summer of 1942 the resources of the area under the military control of the Axis Powers were in no way substantially inferior

³⁹ Roughly 1,000 tons of oil between December 1942 and January 1943 at the cost of approximately 10,000 tons worth of equipment that had to be abandoned when Army Group A withdrew from the Caucasus following the debacle at Stalingrad. Albert Gunther, "Oil Fields Investigation, Part V, Section 1: Russia (U.S.S.R.), The Caucasus Expedition, 1942-1943," March 1946, BNA, WO 252/1151

⁴⁰ It appears that historians are gradually coming to recognize the centrality of resources in the Second World War. In spite of its numerous factual errors, Lizzie Collingham's *The Taste of War: World War Two and the Battle for Food* (London: Allen Lane, 2011) is an invaluable and overdue contribution.

⁴¹ Harrison, "Economics of World War II," 1-42.

to those controlled by the Allies,” Germany never commanded more than a fraction of the petroleum at the disposal of the Allies.⁴² In 1943, Germany’s total supply – domestic crude and synthetic oil production, plus imports from Romania and elsewhere in Europe – peaked at roughly 80,000,000 barrels (11,300,000 tons).⁴³ By contrast, U.S. oil production that year reached 4,250,000 barrels per day, or 1,505,613,000 barrels over the entire year – more than 133 times the German figure.⁴⁴ Since supplies of oil were abundant, the only meaningful obstacles to the Allies’ exploitation of their energy superiority were logistical.

The Allies could translate their economic superiority into military strength precisely because they never lacked the petroleum products essential for modern warfare. Economic superiority, once redirected to the production of war materiel, gave the Allies the quantitative edge necessary to blunt the tactical and operational superiority of the Axis during the crucial “hinge years” of the war (1941-1943), when they first blocked Germany’s desperate attempts to win the war in the Soviet Union and North Africa, before turning the tables once their own commanders and troops had acquired the skills necessary to compete against their more experienced adversaries. The example of oil therefore bolsters one historian’s observation that “[the] Allies won the Second World War because they turned their economic strength into effective fighting power.”⁴⁵ Oil was an essential ingredient to this formula because it gave the Allies the means to “bridge” the gap between their economic strength and their fighting power.⁴⁶

Germany, on the other hand, gambled that it could leverage its brief window of opportunity in terms of superior fighting ability and head start at rearmament into decisive victories first against its neighbors (Poland and France) and later the Soviet Union before its economically superior foes could mobilize their economic might. Fighting power is, however, a wasting asset – it degrades even during victories due to

⁴² Gerhard Weinberg, “Some Myths of World War II,” *Journal of Military History* 75: 3 (2011): 702. Although Weinberg does concede that “[the] wider issue of resources also needs a more careful look.”

⁴³ USSBS, *Effects of Strategic Bombing on the German War Economy* (Washington, DC: U.S. GPO, 1945), 75.

⁴⁴ Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004), 5.

⁴⁵ Richard Overy, *Why the Allies Won* (New York: W.W. Norton, 1995), 325.

⁴⁶ Rear Admiral Henry E. Eccles, *Logistics in the National Defense* (Harrisburg: The Stackpole Company, 1959), 41, 46-47, and 52-56. I am grateful to Scott Boorman for drawing my attention to this source.

casualties and the expenditure of resources on the one hand, and by giving opponents the opportunity to practice their craft on the other. Once this qualitative edge had eroded, the Axis were in dire straits because both Germany and Japan lacked the economic means to confront their opponents on anything approaching equal terms. And even if the weapons had existed, there was no petroleum to fuel them – much less prepare soldiers to use them properly, as evidenced by the fate of the raw German pilots thrust into aerial combat over the Reich in 1944 without adequate training due to a lack of fuel.⁴⁷

The simple fact of the Allies' industrial and raw materials superiority does not mean that the outcome of the Second World War was a foregone conclusion, only that the result is inexplicable without taking their economic advantages into consideration. One should be wary of falling into the trap of economic and geographical determinism by ascribing the outcome of the war exclusively to the Allies' access to greater quantities of vital raw materials and human resources without taking into account more intangible factors such as superior management, political will, flexibility, and even creativity.⁴⁸ But leaving aside the question of whether the Allies' made better use of their economic and human resources than the Axis, this study has revealed the extent to which the exploitation of such assets depended upon certain structural factors such as the availability of oil that were beyond the control of policymakers on either side.

Under most circumstances, the absolute (as opposed to relative) decline of any great power is the product of decisions by individual leaders or policymaking elites that contribute to "imperial overstretch" or worse.⁴⁹ But Britain and Germany did not choose to decline because of their shortage of oil – geology, geography, and technological change had all conspired to put them in that position. Recognizing the gravity of their predicaments, both countries spent a generation trying to escape the handicaps imposed upon them by the unequal distribution of world oil reserves. The allure of energy independence exerted a

⁴⁷ USSBS, *The Defeat of the German Air Force* (Washington, DC: U.S. GPO, 1945).

⁴⁸ See again: Overy, *Why the Allies Won*; and Paul Kennedy "History from the Middle: The Case of the Second World War," *Journal of Military History* 74: 1 (2010): 35-51. Kennedy seems to have come full circle: his earlier works stressed the primacy of economic factors with little reference to individuals. See especially: Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987).

⁴⁹ Kennedy, *Rise and Fall*, xv-xvi. Although the phrase "imperial overstretch" is associated with Kennedy's *Rise and Fall*, it was in fact Correlli Barnett who first used the term ("strategic over-extension") within the context of British grand strategy in *The Collapse of British Power* (London: Eyre Methuen, 1972).

tremendous pull on policymakers in both countries, forcing them to expand their ambitions and commitments well beyond their means, whether in the Middle East for Britain or in the Soviet Union in the case of Germany. In that sense, the quest for oil exerted an ambiguous influence over grand strategy. Sometimes it complemented existing ambitions, such as Britain's wish to preserve access to India through the Middle East, or Hitler's determination to exterminate "Judeo-Bolshevism." At other points, it spawned policies that ran contrary to the status quo, such as the purchase of shares in the Anglo-Persian Oil Company by a Liberal Government, or the acquisition of foreign oil reserves by the United States to compensate for the failure of conservation at home.⁵⁰

A consideration of oil as both the means and object of grand strategy ultimately has great analytical value because it shed light on one of the key factors that determined the outcome of the great power rivalries that convulsed the world during the first half of the twentieth century. Among the most important results by 1945 were the crippling of the European great powers and the rise of the superpowers on the peripheries of the industrialized core. By integrating the history of oil and energy security into the international history of the twentieth century, we can better appreciate why the international system evolved from a state of multipolarity into one of U.S.-Soviet bipolarity and later outright U.S. hegemony. Britain and Germany's failure to win energy independence from rival great powers paved the way for the United States to assert global predominance earlier and to a greater extent than would have been conceivable at the start of the Second World War, before the devastation of Europe, the Soviet Union, China, and Japan. The accelerating mechanization of society and warfare after the First World War ensured that only nations with unfettered access to oil could hope to impose their will upon the rest of the world with any expectation of success. Once we grasp this fact, the outcome of the great power competition between 1918 and 1945, although not inevitable, was certainly unsurprising.

⁵⁰ David Painter, *Oil and the American Century: The Political Economy of U.S. Foreign Oil Policy, 1941-1954* (Baltimore: Johns Hopkins University Press, 1986).

Appendix

Bibliographical Essay

Only a handful of studies have examined the relationship between oil and grand strategy in the twentieth century. The most notable is Daniel Yergin's *The Prize*, whose chapters on the world wars, unlike the rest of the book, move beyond the operations of the oil industry to assess oil's impact on the evolving global balance of power.¹ *The Prize* comes as close as any other secondary source to being indispensable to this study. I have therefore refrained from including references to this work in my footnotes only because such citations would be superfluous. Nevertheless, there are some limitations with *The Prize*, the most important being that it is only as strong as its secondary sources. For example, Yergin's chapters on the world wars are based on a limited number of English-language secondary sources. In the case of Germany, because his most important sources were the reports of the U.S. Strategic Bombing Survey, Yergin lavished attention on the synthetic fuel program, while neglecting German oil imperialism in the Caucasus and the Middle East. David Painter's article on "Oil and the American Century" succinctly covers the important developments of the 20th century, but it is focused on the post-1945 period.² Not to be forgotten is the Federal Trade Commission's pioneering exposé on the operations of the "International Petroleum Cartel" which is still an essential reference work on the global operations of the oil industry during the first half of the twentieth century.³

Beyond Yergin and Painter, the best overviews have been produced by political scientists: David Deese's "Oil, War, and Grand Strategy"⁴; and Ian Lesser's *Resources and Strategy*.⁵ Both authors make important theoretical observations, but their analysis is based on outdated, English-language secondary sources. Lesser's work is also limited by the fact that he considered strategy only under the narrow terms

¹ Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, and Power* (New York: Simon & Schuster, 1991).

² David Painter, "Oil and the American Century," *Journal of American History* 99: 1 (2012): 24-39. See also: David Painter, "Oil," in: vol. 3 of *Encyclopedia of American Foreign Relations*, ed. Alexander DeConde, Richard Dean Burns, and Fredrik Logevall (New York: Scribner, 2002), 1-20.

³ U.S. Senate, Select Committee on Small Business, *International Petroleum Cartel (Reprint)*, 94th Congress, 1st Session (Washington, DC: U.S. GPO, 1975).

⁴ David Deese, "Oil, War, and Grand Strategy," *Orbis* 25: 3 (1981): 525-555.

⁵ Ian Lesser, *Resources and Strategy* (Basingstoke: Macmillan, 1989). See also his *Oil, the Persian Gulf, and Grand Strategy* (Santa Monica: Rand Corporation, 1991).

established by Basil Liddell Hart: “the art of distributing and applying *military* means to fulfill the ends of policy.” By his own admission, Lesser did “not systematically explore” matters pertaining to foreign relations or political economy “except as they bear directly on questions of strategy.”⁶ W.G. Jensen’s “The Importance of Energy in the First and Second World Wars” is dated, but it deals with both oil and coal and is still useful.⁷ My understanding of how vast economic disparities between the belligerents contributed to the outcome of the Second World War has been aided immeasurably by the work of Mark Harrison⁸ and Richard Overy,⁹ and I was pleasantly surprised by the continuing relevance of Alan Levine’s “Was World War II a Near-run Thing?”¹⁰

This study is fairly critical of British policymaking and doubtless bears the imprint of “declinist” works such as Corelli Barnett’s polemical *The Collapse of British Power*,¹¹ and Paul Kennedy’s *The Rise and Fall of British Naval Mastery*¹² and *The Rise and Fall of the Great Powers*.¹³ But I believe that the works of David Edgerton are indispensable to avoid falling prey to any easy assumptions about British decline since the late-nineteenth century.¹⁴ Williamson Murray’s skill at blending comparative military, diplomatic, and economic history, particularly in *The Change in the European Balance of Power*, is a model for my own scholarship.¹⁵

There are a number of studies of various aspects of pre-WWI and interwar British oil policy. The best one is still Geoffrey Jones’ *State and the Emergence of the British Oil Industry*.¹⁶ But also of some value

⁶ *Resources and Strategy*, 4. Emphasis in the original.

⁷ W.G. Jensen, “The Importance of Energy in the First and Second World Wars,” *Historical Journal* 11: 3 (1968): 538-554.

⁸ Mark Harrison, ed., *The Economics of World War II: Six Great Powers in International Comparison* (Cambridge: Cambridge University Press, 1998).

⁹ Richard Overy, *Why the Allies Won* (New York: W.W. Norton, 1995).

¹⁰ Alan Levine, “Was World War II a Near-run Thing?” *Journal of Strategic Studies* 8:1 (1985): 38-63.

¹¹ Corelli Barnett, *The Collapse of British Power* (London: Eyre Methuen, 1972).

¹² Paul Kennedy, *The Rise and Fall of British Naval Mastery* (London: A. Lane, 1976).

¹³ Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987).

¹⁴ David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006); and David Edgerton, *Britain’s War Machine: Weapons, Resources, and Experts in the Second World War* (New York: Oxford University Press, 2011).

¹⁵ Williamson Murray, *The Change in the European Balance of Power, 1938-1939, The Path to Ruin* (Princeton: Princeton University Press, 1984).

¹⁶ Geoffrey Jones, *The State and the Emergence of the British Oil Industry* (London: Macmillan, 1981).

still are: Marian Kent's *Oil and Empire*¹⁷ and *Moguls and Mandarins*¹⁸; B.S. McBeth's *British Oil Policy*¹⁹; Helmut Mejcher's "Die britische Erdölpolitik im Nahen Osten, 1914-1956,"²⁰ *Imperial Quest for Oil*,²¹ and *The Struggle for a New Middle East in the 20th Century*²²; and D.J. Payton-Smith's contribution to the British Government's Official History of the Second World War.²³ Only McBeth's book provides a complete survey of the entire interwar period. Although he is strong on Venezuela, McBeth's treatment of "Britain's efforts to achieve oil independence" from the United States is misplaced at times. His cursory treatment of the 1930s and British grand strategy results in an incomplete appraisal of the reasons why British policy failed. Charles More offers a well-written, albeit eclectic history of the British oil industry in the twentieth century in *Black Gold*, but since he relies largely on secondary works and the official histories of British Petroleum and Royal Dutch/Shell, the sections covering the period before 1945 do not make any original contributions. That the book's subchapters are organized thematically also obscures the relationship between developments in the oil industry and official British policy.²⁴

The operations of the Anglo-Persian Oil Company (later Anglo-Iranian – APOC/AIOC) are detailed in R.W. Ferrier and J.H. Bamberg's contributions to *The History of the British Petroleum Company*.²⁵ Ferrier's work is overly sympathetic to APOC in terms of the company's relationship to Persia, and it should be balanced against the more critical conclusions of Mostafa Elm in *Oil, Power, and Principle*.²⁶ We are still waiting for a history of Anglo-Iranian relations that provides adequate attention to both sides as well as third parties such as Russia and Germany. In the meantime, the relevant chapters of the

¹⁷ Marian Kent, *Oil and Empire: British Policy and Mesopotamian Oil, 1900-1920* (London: Macmillan, 1976).

¹⁸ Marian Kent, *Moguls and Mandarins: Oil, Imperialism and the Middle East in British Foreign Policy, 1900-1940* (London: Frank Cass, 1993).

¹⁹ B.S. McBeth, *British Oil Policy, 1919-1939* (London: Frank Cass, 1985).

²⁰ Helmut Mejcher, "Die britische Erdölpolitik im Nahen Osten, 1914-1956," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 59: 3 (1972): 350-377.

²¹ Helmut Mejcher, *Imperial Quest for Oil: Iraq, 1910-1928* (London: Ithaca Press, 1976).

²² Helmut Mejcher, *Struggle for a New Middle East in the 20th Century: Studies in Imperial Design and National Politics* (Piscataway: Transaction Publishers, 2007).

²³ D.J. Payton-Smith, *Oil: A Study of War-time Policy and Administration* (London: HMSO, 1971).

²⁴ Charles More, *Black Gold: Britain and Oil in the Twentieth Century* (London: Continuum, 2009).

²⁵ R.W. Ferrier, *The Developing Years, 1901-1932*, vol. 1 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1982); and J.H. Bamberg, *The Anglo-Iranian Years, 1928-1954*, vol. 2 of *The History of the British Petroleum Company* (Cambridge: Cambridge University Press, 1994).

²⁶ Mostafa Elm, *Oil, Power, and Principle: Iran's Oil Nationalization and Its Aftermath* (Syracuse: Syracuse University Press, 1992).

Cambridge History of Iran will have to suffice.²⁷ The history of the Burmah Oil Company (a key shareholder in APOC/AIOC) is handled in: T.A.B. Corley, *A History of the Burmah Oil Company*.²⁸ Despite its coffee-table format and excessive graphics, the relevant portions of the recent three-volume history of Royal Dutch/Shell are invaluable in view of how difficult it is for historians to gain access to the company's archive.²⁹

The key work on the Royal Navy's shift to oil and London's purchase of a controlling-interest in APOC is still Marian Jack's "The Purchase of the British Government's Shares in the British Petroleum Company, 1912-1914."³⁰ Elizabeth Monroe has a chapter on the Middle East and British oil policy until the Suez Crisis, but it is dated, tends to be overly credulous of British policy, and has many important gaps.³¹ Likewise, Benjamin Shwadran's *The Middle East, Oil and the Great Powers* summarizes the key issues but is now out of date.³² The recent literature on British imperial history, although of great value in terms of its scope and conceptual insights, has little to offer insofar as oil and grand strategy is concerned.³³ The key secondary sources on Anglo-American competition over Iraqi oil after 1918 are:

²⁷ Peter Avery, Gavin Hambly, and Charles Melville, ed., *From Nadir Shah to the Islamic Republic*, vol. 7 of *The Cambridge History of Iran* (Cambridge: Cambridge University Press, 2008).

²⁸ T.A.B. Corley, *A History of the Burmah Oil Company, 1886-1924* (New York: Heinemann, 1983).

²⁹ Joost Jonker and Jan Luiten van Zanden, *From Challenger to Joint Industry Leader, 1890-1939*, vol. 1 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007); and Stephen Howarth and Joost Jonker, *Powering the Hydrocarbon Revolution, 1939-1973*, vol. 2 of *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007).

³⁰ Marian Jack, "The Purchase of the British Government's Shares in the British Petroleum Company, 1912-1914," *Past & Present* 39 (1968): 139-168.

³¹ Elizabeth Monroe, *Britain's Moment in the Middle East, 1914-1971* (Baltimore: Johns Hopkins University Press, 1981).

³² Benjamin Shwadran, *The Middle East, Oil and the Great Powers* (New York: Council for Middle Eastern Affairs Press, 1959).

³³ See especially: P.J. Cain and A.G. Hopkins, *British Imperialism: Innovation and Expansion, 1688-1914* (London: Longman, 1993); P.J. Cain and A.G. Hopkins, *British Imperialism: Crisis and Deconstruction, 1914-1990* (London: Longman, 1993); and John Darwin, *The Empire Project: The Rise and Fall of the British World-System, 1830-1970* (Cambridge: Cambridge University Press, 2009).

Michael Hogan, “Informal Entente”³⁴; William Stivers, “International Politics and Iraqi Oil, 1918-1928”³⁵ and *Supremacy and Oil*³⁶; and Fiona Venn, “‘A Futile Paper Chase.’”³⁷

The English-language literature on German petroleum policy is surprisingly small considering the volume of works on the Third Reich. The best overall history remains Raymond Stokes’ “The Oil Industry in Nazi Germany, 1936-1945.”³⁸ Anthony Krammer’s “Fueling the Third Reich” lacks the breadth of Stokes’ article.³⁹ The best work on the German crude oil industry is still A.E. Gunther’s articles on the “The German War for Crude Oil in Europe” in the *Petroleum Times*.⁴⁰ Anthony Stranges’ work is solid on the technical aspects of German synthetic fuel production.⁴¹ Thomas Parke Hughes’ “Technological Momentum in History”⁴² is still a joy to read, even if it has been supplanted by Peter Hayes’ *Industry and Ideology*.⁴³ Gottfried Plumpe’s *I.G. Farbenindustrie* should be used with caution in view of the criticism it has drawn.⁴⁴ Thomas Hager provides an accessible if somewhat melodramatic introduction to the history of the Haber-Bosch process and the twisted path to hydrogenation,⁴⁵ but more sophisticated readers are advised also to consult Ray Stokes’ contribution to the official history of

³⁴ Michael Hogan, “Informal Entente: Public Policy and Private Management in Anglo-American Petroleum Affairs,” *Business History Review* 48: 2 (1974): 187-205.

³⁵ William Stivers, “International Politics and Iraqi Oil, 1918-1928: A Study in Anglo-American Diplomacy,” *Business History Review* 55: 4 (1981): 517-540.

³⁶ William Stivers, *Supremacy and Oil: Iraq, Turkey, and the Anglo-American World Order, 1918-1930* (Ithaca: Cornell University Press, 1982).

³⁷ Fiona Venn, “‘A Futile Paper Chase’: Anglo-American Relations and Middle East Oil, 1918-1934,” *Diplomacy & Statecraft* 1 (1990): 165-184.

³⁸ Raymond Stokes, “The Oil Industry in Nazi Germany, 1936-1945,” *Business History Review* 59: 2 (1985): 254-277.

³⁹ Anthony Krammer, “Fueling the Third Reich,” *Technology and Culture* 19: 3 (1978): 394-422.

⁴⁰ A.E. Gunther, “The German War for Crude Oil in Europe, 1934-1945,” *Petroleum Times* (08 November 1947 – 08 May 1948).

⁴¹ Anthony Stranges, “Germany’s Synthetic Fuel Industry, 1927-1945,” in: *The German Chemical Industry in the Twentieth Century*, ed. John Lesch (Dordrecht: Kluwer Academic Publishers, 2000), 147-216.

⁴² Thomas Parke Hughes, “Technological Momentum in History: Hydrogenation in Germany, 1898-1933,” *Past and Present* 44: 1 (1969): 106-132.

⁴³ Peter Hayes, *Industry and Ideology: IG Farben in the Nazi Era* (Cambridge: Cambridge University Press, 1987).

⁴⁴ Gottfried Plumpe, *Die I.G. Farbenindustrie AG: Wirtschaft, Technik und Politik* (Berlin: Duncker & Humblot, 1990). Dietrich Eichholtz derides Plumpe’s work as an exercise in “intensive whitewashing.” Dietrich Eichholtz, “Öl, Krieg, Politik: Deutscher Ölimperialismus, 1933-1942/43,” *Zeitschrift für Geschichtswissenschaft* 51: 6 (2006): 502, n. 32. For a more measured critique, see Peter Hayes’ review of *I.G. Farbenindustrie* in *Economic History Review* 65: 4 (1991): 1020-1023, and Plumpe’s reply in *Geschichte und Gesellschaft* 18: 4 (1992): 526-532.

⁴⁵ Thomas Hager, *The Alchemy of Air: A Jewish Genius, a Doomed Tycoon, and the Scientific Discovery that Fed the World but Fueled the Rise of Hitler* (New York: Harmony Books, 2008).

Badische Anilin- und Soda-Fabrik.⁴⁶ Hans-Erich Volkmann's contribution on Germany's prewar economic preparations for war in the introductory volume of the Militärgeschichtliche Forschungsamt's (MGFA) *Germany and the Second World War* is disappointing.⁴⁷ My understanding of German economic history and National Socialist grand strategy has been profoundly shaped by Adam Tooze's *Wages of Destruction*.⁴⁸

The German-language literature is superior to what is available in English. For many years, the key source was Wolfgang Birkenfeld's *Der synthetische Treibstoff*.⁴⁹ Of limited use is Georg Thomas' *Geschichte der deutschen Wehr- und Rüstungswirtschaft*.⁵⁰ Dieter Petzina's *Autarkiepolitik im Dritten Reich* is by now obsolete.⁵¹ Today, any examination of the Third Reich's petroleum policy must begin with: Dietrich Eichholtz, *Deutsche Ölpolitik im Zeitalter der Weltkriege*⁵²; and the relevant portions of his *Geschichte der deutschen Kriegswirtschaft*.⁵³ *Deutsche Ölpolitik* is itself a compilation of several short studies Eichholtz wrote between 2005 and 2010, the most important of which is *Krieg um Öl*,⁵⁴ but whose major shortcoming is that it omits discussion of developments before 1938.⁵⁵ See also Hanns-Heinz

⁴⁶ Werner Abelshauser, et al., *German Industry and Global Enterprise: BASF: The History of a Company* (Cambridge: Cambridge University Press, 2004), 206-361.

⁴⁷ Militärgeschichtliches Forschungsamt (MGFA), *The Build-up of German Aggression*, vol. 1 of *Germany and the Second World War* (New York: Oxford University Press, 1990), 157-372.

⁴⁸ Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2007).

⁴⁹ Wolfgang Birkenfeld, *Der synthetische Treibstoff, 1933-1945* (Göttingen: Musterschmidt-Verlag, 1964).

⁵⁰ Georg Thomas, *Geschichte der deutschen Wehr- und Rüstungswirtschaft, 1918-1943/45* (Boppard am Rhein: Boldt, 1966).

⁵¹ Dieter Petzina, *Autarkiepolitik im Dritten Reich: Der nationalsozialistische Vierjahresplan* (Stuttgart: Deutsche Verlagsanstalt, 1968).

⁵² Dietrich Eichholtz, *Deutsche Ölpolitik im Zeitalter der Weltkriege* (Leipzig: Leipziger Universitätsverlag, 2010).

⁵³ Dietrich Eichholtz, *Geschichte der deutschen Kriegswirtschaft* (München: KG Saur, 1999).

⁵⁴ Dietrich Eichholtz, *Deutsche Politik und rumänisches Öl, 1938-1941: Eine Studie über Erdölimperialisismus* (Leipzig: Leipziger Universitätsverlag, 2005); Dietrich Eichholtz, *Krieg um Öl: Ein Erdölimperium als deutsches Kriegsziel 1938-1943* (Leipzig: Leipziger Universitätsverlag, 2006); Dietrich Eichholtz, *Die Bagdadbahn, Mesopotamien und die deutsche Ölpolitik bis 1918: Aufhaltsamer Übergang ins Erdölzeitalter* (Leipzig: Leipziger Universitätsverlag, 2007); Dietrich Eichholtz and Titus Kockel, *Von Krieg zu Krieg: Zwei Studien zur deutschen Erdölpolitik in der Zwischenkriegszeit* (Leipzig: Leipziger Universitätsverlag, 2008); and Dietrich Eichholtz *Ende mit Schrecken: Deutsche Ölpolitik und Ölwirtschaft nach Stalingrad* (Leipzig: Leipziger Universitätsverlag, 2010). Eichholtz's "Öl, Krieg, Politik," 493-510, is a useful summary of *Krieg um Öl*.

⁵⁵ For a necessary corrective, consult Helmut Meijer's work on German attempts to acquire control of the British Oil Development Company's concession in western Iraq between 1932 and 1936 in: *Die Politik und das Öl im Nahen Osten: I. Der Kampf der Mächte und Konzerne vor dem Zweiten Weltkrieg* (Stuttgart: Klett-Cotta, 1980).

Kasper's dissertation, "Die Erdölgewinnung Deutschlands in der Zeit von 1933-1945,"⁵⁶ portions of which were reprinted as: "Die Mineralölpolitik des deutschen Faschismus und der Erdölbergbau in Deutschland 1933 bis 1945."⁵⁷

Eichholtz and Kasper's studies are products of East German historiography and should be read in conjunction with less polemical works such as Hayes' *Industry and Ideology*. Rainer Karlsch and Raymond Stokes have produced the best general history of the German oil industry.⁵⁸ Also of value is Titus Kockel's revisionist *Deutsche Ölpolitik*,⁵⁹ which is summarized in a short work he co-authored with Dietrich Eichholtz, *Von Krieg zu Krieg*. The major problem with Kockel's work is that he considers petroleum policy in the broadest sense, such that it is difficult to distinguish between what was strategically significant (synthetic fuels or relations with Romania) and what was not (private interest in oil concessions in Ecuador).

Eichholtz's *Deutsche Ölpolitik* is obligatory reading for any student of German oil imperialism during the Second World War. His earlier "Der Raubzug des faschistischen deutschen Imperialismus zu den Erdölquellen des Kaukasus" is still useful regarding the invasion of the Soviet Union and the Caucasian campaign of 1942.⁶⁰ Hanns-Heinz Kasper's "Das Erdöl in den Raubplänen des Deutschen Faschismus in Vorbereitung und bei der Durchführung des Zweiten Weltkrieges" covers much of the same ground.⁶¹ Eichholtz's deterministic presentation of German oil ambitions in the Middle East should be tempered by a perusal of the second volume of Helmut Mejcher's *Die Politik und das Öl*, which stresses "the improvisational character of German Middle Eastern policy during the National Socialist era."⁶² Titus

⁵⁶ Hanns-Heinz Kasper, "Die Erdölgewinnung Deutschlands in der Zeit von 1933-1945 (Ph.D. Dissertation, Technische Universität, Dresden, 1974).

⁵⁷ Hanns-Heinz Kasper, "Die Mineralölpolitik des deutschen Faschismus und der Erdölbergbau in Deutschland 1933 bis 1945," *Beiträge zur Geschichte der Produktivkräfte* 10 (1976): 15-65.

⁵⁸ Rainer Karlsch and Raymond Stokes, *Faktor Öl: Die Mineralölwirtschaft in Deutschland, 1859-1974* (München: C.H. Beck, 2003).

⁵⁹ Titus Kockel, *Deutsche Ölpolitik, 1928-1938* (Berlin: Akademie Verlag, 2005).

⁶⁰ Dietrich Eichholtz, "Der Raubzug des faschistischen deutschen Imperialismus zu den Erdölquellen des Kaukasus, 1941-1943," *Jahrbuch für Geschichte* 14 (1976): 445-502.

⁶¹ Hanns-Heinz Kasper, "Das Erdöl in den Raubplänen des Deutschen Faschismus in Vorbereitung und bei der Durchführung des Zweiten Weltkrieges," *Jahrbuch für Wirtschaftsgeschichte* 3 (1976): 55-77.

⁶² Helmut Mejcher, *Die Politik und das Öl, Band II: Die Teilung der Welt* (Stuttgart: Klett-Cotta, 1990) – quotation from pg. 50.

Kockel offers many vital insights regarding long-term German planning in 1940 and the origins of Kontinentale Öl (Konti) in “Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940.”⁶³ The MGFA’s magisterial *Germany and the Second World War* provides the essential historical context and an introduction to the most important primary sources.⁶⁴ The contributions of Gerhard Schreiber on Hitler’s decision to forego “peripheral strategy” in the Mediterranean aimed at Britain in 1941⁶⁵; Rolf-Dieter Müller on the economic exploitation of the Soviet Union during Operation Barbarossa⁶⁶; and Bernd Wegner on German grand strategy in 1942 were especially enlightening.⁶⁷

With the exception of Peter Hayes’ *Industry and Ideology*,⁶⁸ most English-language sources only mention Konti in passing, even though the company figured prominently in both A.E. Gunther’s important survey of the German oil industry in the Third Reich and Franz Neumann’s *Behemoth*.⁶⁹ Neumann characterized Konti “as the model of a new ruling class” in Germany combining the party, military, bureaucracy, and private enterprise (pg. 396), while Gunther was particularly critical of the

⁶³ Titus Kockel, “Eine Quelle zur Vor- und Gründungsgeschichte der Kontinentale Öl AG aus dem Jahr 1940: E. R. Fischer (Reichswirtschaftsministerium, II Min. Öl), ‘Die Versorgung Europas mit Mineralöl vor dem Kriege, Ermittlung des Nachkriegsverbrauchs und Sicherung der Belieferung, 1940,’ September 1940,” *Jahrbuch für Wirtschaftsgeschichte* 2003/1: 175-208.

⁶⁴ MGFA, *Germany and the Second World War* (New York: Oxford University Press, 1990-2008).

⁶⁵ MGFA, *The Mediterranean, South-east Europe, and North Africa, 1939-1941*, vol. 3 of *Germany and the Second World War* (New York: Oxford University Press, 1995), 180-301 and 557-640. For a précis of his main argument, see: Gerhard Schreiber, “The Mediterranean in Hitler’s Strategy in 1940: ‘Programme’ and Military Planning,” in: *German Military in the Age of Total War*, ed. Wilhelm Deist (Leamington Spa: Berg Publishers, 1985), 240-281.

⁶⁶ MGFA, *The Attack on the Soviet Union*, vol. 4 of *Germany and the Second World War* (New York: Oxford University Press, 1998), 118-224 and 1081-1188. Rolf-Dieter Müller’s, “Der Wettlauf um das Erdöl: Zur wirtschaftlichen Bedeutung der Kaukasusregion für die deutsche Kriegsführung,” in: *Mitteilungen der Gemeinsamen Kommission für die Erforschung der jüngeren Geschichte der deutsch-russischen Beziehungen: Volume II*, ed. Horst Möller and Aleksandr Tschubarjan (Munich: R. Oldenbourg, 2005), 35-44, is based on secondary sources, especially the MGFA volumes.

⁶⁷ MGFA, *The Global War: Widening of the Conflict into a World War and the Shift of the Initiative, 1941-1943*, vol. 6 of *Germany and the Second World War* (New York: Oxford University Press, 2001), 110-144 and 843-1215. Abridged versions of Wegner’s work may be found in: Bernd Wegner, “The Road to Defeat: The German Campaigns in Russia, 1941-43,” *Journal of Strategic Studies* 13: 1 (1990): 105-127; and Bernd Wegner, “Facing the Global War: Germany’s Strategic Dilemma after the Failure of ‘Blitzkrieg,’” in: *From Peace to War: Germany, Soviet Russia and the World, 1939-1941*, ed. Bernd Wegner (Providence: Berghahn Books, 1997), 611-627.

⁶⁸ Hayes, *Industry and Ideology*, 255-257. See also: Richard Overy, *Goering: The Iron Man* (London: Routledge & Kegan Paul, 1984), 119 and 132-133.

⁶⁹ Franz Neumann, *Behemoth: The Structure and Practice of National Socialism, 1933-1944* (New York: Octagon Books, 1963).

company, condemning it as a “regression in social economy” and a specimen of “the industrial feudalism of the XVIIIth Century.”⁷⁰

Hitler’s decision-making in 1940/41 is summarized in: Jürgen Förster, “Hitler’s Decision in Favour of War against the Soviet Union”⁷¹ and “Hitler Turns East – German War Policy in 1940 and 1941.”⁷² Barry Leach’s *German Strategy against Russia*, based on Alan Milward’s conception of a “Blitzkrieg” economy,⁷³ is out of date but still has much to commend it, particularly its consideration of the role of oil in German strategy and operations.⁷⁴ The best recent synthesis of the Soviet-German War is Stephen Fritz’s *Ostkrieg*, which acknowledges oil’s relationship to German strategy but not in a systematic fashion.⁷⁵ Ian Kershaw’s *Fateful Choices* discusses the various permutations of the “peripheral strategy” championed by the German armed forces and the Foreign Office as an alternative to Operation Barbarossa before explaining why Hitler rejected them, although like Milan Hauner, he underestimates the obstacles Germany had to surmount before it could hope to exploit the oil reserves of the Middle East.⁷⁶ The scope of Hauner’s comparative study is truly daunting – his book has set a standard for empirical research that I cannot hope to surpass.

The most important historian of National Socialist grand strategy is Andreas Hillgruber. Although he overuses the economic conception of “Blitzkrieg,” Hillgruber’s *Hitlers Strategie* remains the finest study of German grand strategy during the first half of the war.⁷⁷ Hillgruber, Tooze, and Wegner provide the intellectual foundations for my understanding of German grand strategy between 1939 and 1942. Earlier works by Hugh Trevor-Roper⁷⁸ and Eberhard Jäckel⁷⁹ present a deterministic picture of National Socialist

⁷⁰ Gunther, “German War for Crude Oil,” *Petroleum Times* (08 May 1948), 472.

⁷¹ MGFA, *Germany and the Second World War*, iv: 13-51.

⁷² In: *From Peace to War*, ed. Wegner, 115-133.

⁷³ Alan Milward, *Germany Economy at War* (London: Athlone Press, 1965).

⁷⁴ Barry Leach, *German Strategy against Russia, 1939-1941* (Oxford: Oxford University Press, 1973).

⁷⁵ Stephen Fritz, *Ostkrieg: Hitler’s War of Extermination in the East* (Lexington, University Press of Kentucky, 2011).

⁷⁶ Ian Kershaw, *Fateful Choices: Ten Decisions that Changed the World, 1940-1941* (New York: Penguin, 2007); and Milan Hauner, *India in Axis Strategy: Germany, Japan, and Indian Nationalists in the Second World War* (Stuttgart: Klett-Cotta, 1981).

⁷⁷ Andreas Hillgruber, *Hitlers Strategie: Politik und Kriegsführung, 1940-1941* (Frankfurt am Main: Bernard & Graefe Verlag für Wehrwesen, 1965).

⁷⁸ Hugh Trevor-Roper, “Hitlers Kriegsziele,” *Vierteljahrshefte für Zeitgeschichte* 3: 2 (1960): 121-133.

policy that fails to account for the role of contingency, which sometimes compelled Hitler to alter the timing (though not the substance) of his various political, diplomatic, and military gambits. A good introduction to some of Hillgruber's work in English may be found in his essay on "England's Place in Hitler's Plans for World Dominion."⁸⁰ It is impossible to gain a full appreciation of Hillgruber's thinking without also consulting his "Faktor Amerika" essay in: Wolfgang Michalka, ed. *Nationalsozialistische Aussenpolitik*.⁸¹ Hillgruber's most important essays were published together as *Deutsche Großmacht- und Weltpolitik*.⁸² One invaluable essay is, however, found in a separate collection.⁸³ Chapters twelve to fifteen of Adam Tooze's *Wages of Destruction*, covering the period between the defeat of France and the failure of Barbarossa, are invaluable for their blending of grand strategy and political economy.⁸⁴ Milan Hauner offers a good if outdated summary of the various strains of thinking concerning Hitler's long-term objectives in his "Did Hitler Want a World Dominion?"⁸⁵

Wherever possible, I used the translations of documents entered into evidence during the Nuremberg trials⁸⁶ or reprinted in documentary collections such as *Documents on German Foreign Policy* rather than the originals themselves.⁸⁷ The following are the most important U.S. or British government reports on the German oil industry (arranged alphabetically by originating agency): A.E. Gunther (British Military Government, Celle), "British Oil Fields Investigation, Part IV, Section 1: The War Structure of the

⁷⁹ Eberhard Jäckel, *Hitler's Weltanschauung: A Blueprint for Power* (Middletown: Wesleyan University Press, 1992).

⁸⁰ Andreas Hillgruber, "England's Place in Hitler's Plans for World Dominion." *Journal of Contemporary History* 9: 1 (1974): 5-22.

⁸¹ Wolfgang Michalka, ed., *Nationalsozialistische Aussenpolitik* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1978), 493-525.

⁸² Andreas Hillgruber, *Deutsche Großmacht- und Weltpolitik im 19. und 20. Jahrhundert* (Düsseldorf: Droste, 1977), especially chapters 11-12 and 14-15.

⁸³ Andreas Hillgruber, "Die weltpolitischen Entscheidungen vom 22. Juni 1941 bis 11. Dezember 1941," in: *Nationalsozialistische Diktatur, 1933-1945: Eine Bilanz*, ed. Karl Dietrich Bracher, Manfred Funke, and Hans-Adolf Jacobsen (Düsseldorf: Droste, 1983), 440-464.

⁸⁴ Especially pgs. 396-512.

⁸⁵ Milan Hauner, "Did Hitler Want a World Dominion?" *Journal of Contemporary History* 13: 1 (1978): 15-32.

⁸⁶ Office of United States Chief of Counsel for Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression* (Washington, DC: U.S. GPO, 1946); and Nuernberg Military Tribunal, *Trials of the War Criminals* (Washington, DC: U.S. GPO, 1953).

⁸⁷ Auswärtiges Amt, *Documents on German Foreign Policy, 1918-1945* (Washington, DC: U.S. GPO, 1949-1983). Hitler's war directives were reprinted in: U.S. Department of the Navy, Office of Naval Intelligence, *Fuehrer Directives and other Top-Level Directives of the German Armed Forces* (Washington, DC: U.S. GPO, 1948).

German Crude Oil Industry, 1934-1945,” May 1946,⁸⁸ and “Oil Fields Investigation, Part V, Section 1: The Caucasus Expedition,” March 1946⁸⁹; Foreign Economic Administration (FEA), “Study of the Interagency Drafting Committee on the Treatment of the German Petroleum Industry from the Standpoint of International Security,” Technical Industrial Disarmament Committee, Project 6, 15 October 1945⁹⁰; Foreign Office and Ministry of Economic Warfare, Economic Advisory Branch, “The German Oil Industry,” October 1944⁹¹; Ministry of Fuel and Power, *Report on the Petroleum and Synthetic Oil Industry of Germany*⁹²; United States Strategic Bombing Survey (USSBS), *The Effects of Strategic Bombing on the German War Economy*,⁹³ *The German Oil Industry, Ministerial Report Team 78*,⁹⁴ and *Oil Division, Final Report*.⁹⁵ The finest piece of analysis produced by the Allies is: Chiefs of Staff Committee, Technical Sub-Committee on Axis Oil, *Oil as a Factor in the German War Effort, 1933-1945*.⁹⁶ Although this report is rarely cited, U.S. intelligence analysts were so impressed with it that the Executive Secretary to the Enemy Oil Committee of the FEA admitted to a British Embassy official “that from a statistical and historical standpoint this report will be both accurate and comprehensive, so that a parallel report by the Enemy Oil Committee would be superfluous and hardly to be recommended.”⁹⁷

Statistics on global, regional, and U.S. oil production before 1945 are drawn from: Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics*.⁹⁸ Statistics on British oil

⁸⁸ British National Archives (BNA), WO 252/1448.

⁸⁹ BNA, WO 252/1151.

⁹⁰ National Archives and Records Administration, Record Group 59: General Records of the Department of State (hereafter cited as: NARA, RG 59), 862.6363/7-2946

⁹¹ NARA, RG 59, Records of the Petroleum Division, Lot File No. 77D141, Box 30

⁹² Ministry of Fuel and Power, *Report on the Petroleum and Synthetic Oil Industry of Germany* (London: HMSO, 1947).

⁹³ United States Strategic Bombing Survey (USSBS), *Effects of Strategic Bombing on the German War Economy* (Washington, DC: U.S. GPO, 1945).

⁹⁴ USSBS, *German Oil Industry, Ministerial Report Team 78* (Washington, DC: U.S. GPO, 1945).

⁹⁵ USSBS, *Oil Division, Final Report* (Washington, DC: U.S. GPO, 1945).

⁹⁶ Chiefs of Staff Committee, Technical Sub-Committee on Axis Oil, *Oil as a Factor in the German War Effort, 1933-1945*, 08 March 1946, A.O. (46) 1, BNA, CAB 121/418.

⁹⁷ Brandon Grove to Sidney Kilbey, 21 July 1945, enclosed with: Kilbey to Charles Rayner, “Post-Mortem on German Oil,” 16 July 1945, NARA, Record Group 169: Records of the Foreign Economic Administration, Entry 361, Box 2202, which also includes a copy of the questionnaire (Oil Section, German Economic Department, Foreign Office, “The Factor of Oil in Germany’s Defeat: Outline Questionnaire for German Strategists & Planners,” 19 June 1945) used during postwar interrogations of German officials.

⁹⁸ Everette Lee DeGolyer and Lewis MacNaughton, *Twentieth Century Petroleum Statistics* (Dallas: DeGolyer and MacNaughton, 2004).

supplies are drawn largely from the records of the Oil Board of the Committee of Imperial Defence, particularly the thirteen annual reports published between 1926 and 1939.⁹⁹ The lack of any central agency coordinating German petroleum policy means that there is no single, authoritative statistical source for the Third Reich's petroleum supplies. A detailed statistical appendix based primarily on the USSBS reports may be found in: Birkenfeld, *Der synthetische Treibstoff*.¹⁰⁰ I have also drawn upon figures provided by the Office for Defense-Economy Planning (Reichsamt für wehrwirtschaftliche Planung – renamed the Reich Statistical Office, Statistisches Reichsamt, in 1940), Konti, the Reich Office for Soil Exploration (Reichsamt für Bodenforschung), and various private research institutes and firms such as IG Farben and its economic intelligence division (the Volkswirtschaftliche Abteilung). A number of German military sources were also of considerable use.¹⁰¹

⁹⁹ BNA, CAB 50/3 to 50/8.

¹⁰⁰ Pgs. 217-236.

¹⁰¹ Most sources originating from private firms or civilian governmental agencies may be found in: NARA, Record Group 242: Foreign Records Seized (hereafter cited as: RG 242), Microfilm Publication T-84 (Miscellaneous German Records Collection), reels 29-148 and 193-228. Military sources are scattered throughout: NARA, RG 242, Microfilm Publication T-77 (Records of the Headquarters, German Armed Forces High Command).

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