



THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
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IRAQ'S OIL SECTOR: PAST, PRESENT AND FUTURE

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PREPARED IN CONJUNCTION WITH AN ENERGY STUDY SPONSORED BY
THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
AND
JAPAN PETROLEUM ENERGY CENTER

RICE UNIVERSITY – MARCH 2007

THIS PAPER WAS WRITTEN BY A RESEARCHER (OR RESEARCHERS) WHO PARTICIPATED IN THE JOINT BAKER INSTITUTE/JAPAN PETROLEUM ENERGY CENTER POLICY REPORT, *THE CHANGING ROLE OF NATIONAL OIL COMPANIES IN INTERNATIONAL ENERGY MARKETS*. WHEREVER FEASIBLE, THIS PAPER HAS BEEN REVIEWED BY OUTSIDE EXPERTS BEFORE RELEASE. HOWEVER, THE RESEARCH AND THE VIEWS EXPRESSED WITHIN ARE THOSE OF THE INDIVIDUAL RESEARCHER(S) AND DO NOT NECESSARILY REPRESENT THE VIEWS OF THE JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY NOR THOSE OF THE JAPAN PETROLEUM ENERGY CENTER.

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ABOUT THE POLICY REPORT

THE CHANGING ROLE OF NATIONAL OIL COMPANIES IN INTERNATIONAL ENERGY MARKETS

Of world proven oil reserves of 1,148 billion barrels, approximately 77% of these resources are under the control of national oil companies (NOCs) with no equity participation by foreign, international oil companies. The Western international oil companies now control less than 10% of the world's oil and gas resource base. In terms of current world oil production, NOCs also dominate. Of the top 20 oil producing companies in the world, 14 are NOCs or newly privatized NOCs. However, many of the Western major oil companies continue to achieve a dramatically higher return on capital than NOCs of similar size and operations.

Many NOCs are in the process of reevaluating and adjusting business strategies, with substantial consequences for international oil and gas markets. Several NOCs have increasingly been jockeying for strategic resources in the Middle East, Eurasia, and Africa, in some cases knocking the Western majors out of important resource development plays. Often these emerging NOCs have close and interlocking relationships with their national governments, with geopolitical and strategic aims factored into foreign investments rather than purely commercial considerations. At home, these emerging NOCs fulfill important social and economic functions that compete for capital budgets that might otherwise be spent on more commercial reserve replacement and production activities.

The Baker Institute Policy Report on NOCs focuses on the changing strategies and behavior of NOCs and the impact NOC activities will have on the future supply, security, and pricing of oil. The goals, strategies, and behaviors of NOCs have changed over time. Understanding this transformation is important to understanding the future organization and operation of the international energy industry.

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ACKNOWLEDGEMENTS

The James A. Baker III Institute for Public Policy would like to thank Japan Petroleum Energy Center and the sponsors of the Baker Institute Energy Forum for their generous support in making this project possible.

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The author would like to thank Saira Karim for her contributions to this study. All responsibility for views presented here belong to the author alone.

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JPEC's international collaborations cover joint research and exchange of researchers and information with oil producing countries and international institutions and support for infrastructure improvement and solving environmental problems of the petroleum industries in oil producing countries.

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IRAQ'S OIL SECTOR:

PAST, PRESENT AND FUTURE

Amy Myers Jaffe, James A. Baker III Institute for Public Policy

Iraq holds an important place in the political development and economic trend of the international oil market both historically and at the present time. Iraq's stated proven oil reserves of 115 billion barrels -while perhaps somewhat overestimated during the rule of Saddam Hussein- are among the largest in the world. The country's resource base is considered the second largest in the world, second to Saudi Arabia, and its oil export policy has been a critical element in setting international oil supply and pricing for over 30 years. Iraq was a founding member of the cartel of the Organization of Petroleum Exporting Countries (OPEC) and was among the first oil producing countries to nationalize some of its oil fields in 1961. Iraq's Iraq National Oil Company (INOC) was an early leader in international oil policy and could play a similar role in the future, depending on the inclinations of a new Iraqi government.

Iraq's production today stands at around 2.0 million barrels a day (b/d) or 2.5% of total world oil supply. In 1979, Iraqi production stood at 4 million b/d, OPEC's third largest producer after Iran and Saudi Arabia. Oil production, which was averaging 3.5 million b/d prior to Iraq's invasion of Kuwait in 1990, began to decline in the 1990s in the aftermath of the Gulf war and the imposition of international sanctions against Baghdad. At the time of the U.S. military action in Iraq in 2003, the country's oil production capability was estimated at around 2.5 to 2.7 million b/d. Production has averaged considerably less than that in recent years, at 1.5 million b/d in 2003, 2.00 million b/d in 2004 and 1.8 million b/d in 2005.

In early 2006, Iraq's oil production rates averaged around 2.06 million b/d, well short of the government of Iraq's projected target of 2.5 million b/d for 2006. However, since oil prices have been higher than projected, Iraq has been able to meet its budget revenue targets.

Problems with production over the past two years are primarily due to the lack of proper attention to reservoir management and due to inadequate maintenance of pumping stations, pipelines, and other infrastructure. An acute shortage of adequate crude oil storage facilities at the offshore loading terminals in the Gulf has worsened the impact of ongoing security and weather-related disruptions to production and exports. There has been little or no development of new fields since 2003. The main reason for this lack of investment has not been lack of funds, but rather the politicization of the oil ministry, the absence and/or exodus of trained personnel, and poor or corrupt management in the oil sector. The deterioration of the security situation in key production areas has only compounded the problems.

Iraq's Oil Sector

Iraq is debating the merits of reorganizing its national oil industry or privatizing parts or its entire oil sector. Resolution of this issue could have direct bearing on the competitiveness of international oil markets in the years to come and the relationship between key oil producing states and the private international oil companies. An increase in the level of Iraqi oil exports could be a major variable in international energy markets in the coming years. Investment dollars are currently being targeted to expanding capacity at Rumaila, West Qurna, Kurmala, and Kirkuk, but it remains to be seen how quickly Iraq can ramp up its export capabilities given ongoing attacks on its oil transportation and processing infrastructure.

At this juncture, the future strategies of Iraq's oil industry remains unclear. However, local entities and groups appear to be interested in monetizing oil assets quickly and in a manner that would benefit individuals and local groupings. A draft petroleum law was under negotiation at the time of the publishing of this paper and appeared to have the support of most of the important Iraqi political factions. However, Kurdish leader Massoud Barzani, president of the Kurdistan regional government of Iraq, has been resisting the agreement, seeking concessions that would favor deals already signed for the exploitation of fields in Kurdish areas.

The draft law, which includes provisions for a national oil company but also paves the way for foreign investment in Iraq's oil sector, would establish a Higher Petroleum Council—representing all internal factions—that would issue exploration licenses with an eye to ensure the highest revenue for the country as a whole and ensure that no one region dominated the process of letting new fields. Governorates or regions would then also have their own petroleum council committee to create development

plans. These local committees would be comprised of local officials as well as federal representatives such as federal officials from the Planning and Oil ministries and the Iraqi Central Bank. These local committees would in turn send approved deals to the Oil ministry and then onto the Higher Petroleum Council which would eventually send approved programs to the Parliament for final ratification. In his recent negotiations on the oil law in mid-February 2007 as this paper went to print, President Barzani was insisting that all decisions of the Higher Petroleum Council be made on a unanimous basis, effectively giving Kurdish leaders veto power on oil development in other parts of the country. This stipulation, among other proposed Kurdish amendments to a document with wide consensus, was blocking approval of the petroleum law by the Iraqi Cabinet, which had been expected to approve the deal on February 22, 2007.¹ A final draft law would be submitted to Parliament for debate and approval.

Passage of a petroleum law would be a major milestone in the process of repairing Iraq's oil industry and in removing one key variable blocking national reconciliation. The politics of oil and how will control future oil field development and revenues from this future development has been one key factor hindering the country's fragile efforts to create a unified central government. The success of the oil sector is critical to the success of Iraq's economy, and the oil sector cannot move forward productively without clearer definition of a petroleum law. Oil production and sales account for nearly 70 percent of Iraq's GDP and more than 95 percent of government revenues. Thus, enhanced progress in the oil sector is instrumental to the future economic reconstruction of Iraq.

¹ Authors interviews with Iraqi officials familiar with the negotiations.

Iraq's Oil Sector: U.S. Reconstruction and Beyond

U.S. grant aid of \$1.72 billion was allocated for reconstruction of the oil sector under the Iraq Reconstruction and Relief Fund II, but the effort lacked proper coordination and oversight and failed to establish a strategic vision for prioritization of projects. Early efforts did not focus sufficiently on reservoir repair and rehabilitation due to political and public diplomacy concerns. Emphasis was placed on above-ground facilities such as gas oil separation plants, pipelines, and export facilities. According to the Department of Defense, only 22% of 69 engineering, procurement, and construction projects listed have been completed as of December 31, 2005.

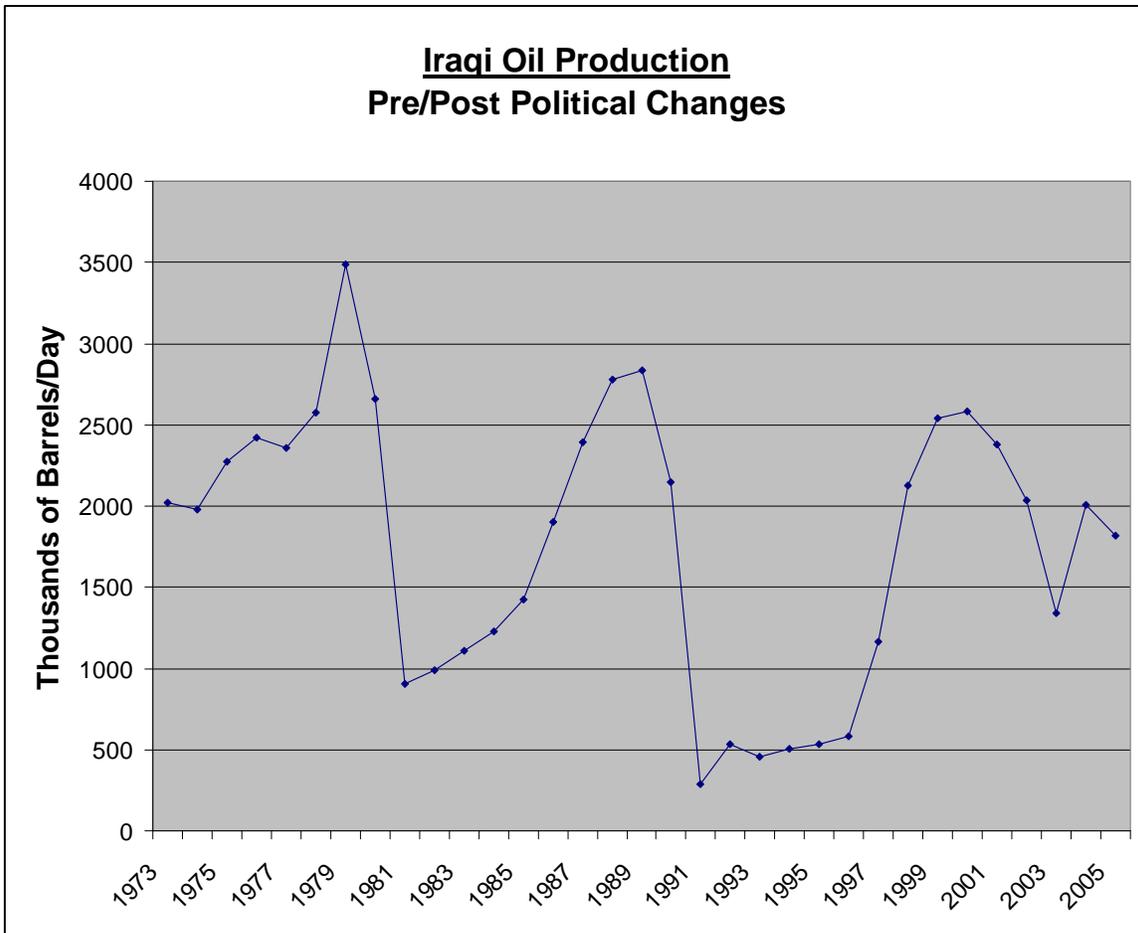
U.S.-directed aid programs for Iraq's oil industry have not resulted in the expected improvement in oil production. The four largest projects implemented included the Al-Fatah Crossing project, which was designed to increase flows to the Baiji refinery and the Iraq-Turkey pipeline; the Qarmat Ali Water injection system project for the Rumaila fields; the rehabilitation of the Gulf export terminal; and the rehabilitation of gas-oil separation plants. Of these projects, only the rehabilitation of the Gulf export terminal has been fully implemented successfully.

The Al-Fatah crossing project has been victim to insurgency attacks, and major damage has been sustained to the Baiji gas oil separation plant, preventing the processing of 300,000 b/d or more of oil production for export via Turkey. Water injection activities at the Rumaila fields experienced prolonged delays, and lack of technical training and experience is hindering the optimum implementation of water injection activities to boost production potential at the field. Experts have raised concerns that without proper

execution of remediation at Rumaila, the fields' reservoirs may be damaged and productive capacity may be lost.

The lack of adequate security poses a major challenge for the government in the oil sector. Between April 2003 and October 2005, there were 282 documented attacks against existing oil infrastructure in Iraq. Iraq industry leaders report that the industry's daytime workforce is infiltrated by workers who moonlight as insurgents and target facilities that they themselves may have been involved in previous repairs. Sectarian and regional strife undermines the ability to operate facilities or the sector as a whole either efficiently or effectively.

Intimidation of key experts, either those trained abroad or those holding critical positions, has become a serious problem and hundreds of oil industry leaders have been killed or purged from the sector. This, combined with a looming gap in technical and managerial expertise due to Iraq's relative isolation over the past 25 years as the energy industry rapidly evolved, has seriously eroded the capacity of the Iraqi government to manage the oil sector. Without competent personnel, investments in reconstruction and maintenance of facilities may not be properly managed, and reconstruction of the oil sector could be considerably delayed. The need to expand and accelerate training of Iraqis in contemporary oil industry technical and management skills is urgent. International oil service companies remain reluctant to undertake work inside Iraq, due to the security situation and because payments to contractors have typically been chronically in arrears since 2003. These same companies also have high demand for their services elsewhere.



In recent years, war, economic sanctions and now civil strife have prevented Iraq from substantially increasing its oil production capacity. But specialists agree that the oil potential of Iraq is significant and could be major factor influencing oil supply and pricing trends in the coming two decades.

Of Iraq's 74 discovered and evaluated oil fields, only 15 have been developed. Iraq's western desert is considered to be highly prolific but has yet to be explored. Six of the 74 known fields are deemed giant, containing more than 5 billion barrels, while some 23 are classified as large (between 500 million and 5 billion barrels). A major investment program could easily allow Iraq to return to its historical production levels of from 3 to 5

million barrels a day in the next decade. Thus, Iraq's oil policy and industry structure will have critical influence on the international oil industry in the coming years.

The Iraqi government projects a rise in production to 2.7 million b/d in 2007 and 3.1 million b/d in 2008, and a rise in exports from 1.4 million b/d in the first half of 2006 to 2.5 million b/d in 2008. These projections are unrealistic given the government's current policies and the security situation. Until these obstacles are overcome, Iraq will be able to do little more than maintain its present production level, if that.

Iraq has the potential to expand its oil production capability by 2010, but any expansion is likely to be well below the Oil Ministry's stated target of 4.0 million b/d. Achieving even a more modest objective of 3 to 3.5 million barrels a day will be quite a challenging task, requiring creation of corporate structures and greatly improved management systems as well as an ethnically-blind, merit-based reassignment of competent managers to plan and oversee implementation of an ambitious list of major oil field projects. Significant expansion of Iraq's production would likely entail development of new fields and production areas not currently in operation. Training programs for the Iraqi industry are being undertaken in a number of countries, including neighboring Jordan and Dubai as well as in Italy, France, Russia and China. U.S. government programs are small and incremental, and could be an important area for expansion of ongoing U.S. aid to Iraq.

Existing Iraqi oil production is concentrated in two geographic areas in Northern Iraq in and around Kirkuk and in the South in and around Basrah. The Kirkuk oil field accounts for the vast majority of northern oil production. The practice of oil reinjection at Kirkuk has increased the viscosity of oil in the reservoir, making it more difficult and

Iraq's Oil Sector

costly to extract and some damage to the field may be permanent. The second largest northern field is Bai Hassan. Most northern production is exported via pipeline through Turkey.

The most important oil field in Iraq currently is the southern field of Rumaila. Southern oil production in Iraq totals about 1.6 million barrels a day, most of which comes from the Rumaila field. Other large southern fields include Al-Zubair, Missan and West Qurna. The southern fields depend on water injection systems to maintain pressure and gas treatment facilities. The Rumaila field has been damaged from over-drilling and poor reservoir management. Remediation efforts are directed at reversing coning and restoring pressure at the field. Production from southern oil fields is currently exported via the Gulf port of Mina al-Bakr. There are pumping stations at North Rumaila and Bin Umar that feed crude to the Mina al-Bakr port. There are two 800,000 b/d pipelines (Zubair-Fao and Rumaila-Fao) that feed the port.

Prior to the U.S. campaign of 2003, the Iraqi oil industry had identified several fields as potential contributors to a production expansion program.

STAGE 1: INVESTMENT

Fields	Potential Production Rate Thousand barrels a day	Capital Cost (millions \$)
Galabat/Qamar/Qarachog Kashm al-Ahmar	120	500
Qayara/Najma/Jawan/Qasab	170	500
East Baghdad/ Balad	120	800
South Rumaila/Mishrif+	230	850
North Rumaila/Mishrif+	160	750
Zubair/Mishrif	60	150
Luhais/Suba+	80	200
North Rumaila CG6	60	250
TOTAL	1 million barrels a day	\$4 Billion

+Foreign oil company sought deal under Hussein Regime.

STAGE 2: MAJOR FIELD EXPANSIONS

Field	Production Rate Thousands barrels a day	Capital Cost millions \$
Majnoon+	600	\$3 to \$8 billion
West Qurna+	600	\$3.5 billion
Bin Umar+	440	\$3.4 billion
Nassiriyah+	300	\$1.9 billion
Halfaya+	225	n.a.
Ratawi+	200	\$1.3 billion
Gharaf+	100	n.a.
Al-Ahdab+	100	\$1.3 billion
Tuba	180	n.a.
Rafidain+	75	n.a.
TOTAL	2,820	\$14.4 billion to \$25 billion

+Hussein government planned to develop these fields with foreign participation.

Recently, Iraqi officials announced the existence of new studies that increase the amount of oil and gas estimated to lie in Sunni territory to the north and east of Baghdad, including the Akkas field.² The reassessment paved the way for Sunni agreement to the

² Glanz, James, "Iraqi Sunni Lands Show New Oil and Gas Promise," New York Times, February 19, 2007, p. 1

new petroleum law by giving the Sunni community leaders a larger stake in seeing the oil industry move forward.

Oil Refining

Iraq has 10 oil refineries of which four are major facilities and six are small topping plants. The country's refining capacity is estimated at 600,000 b/d. Two major refineries are located at Baiji (140,000 b/d and 150,000 b/d respectively). Large refineries are also located at Daura (100,000 b/d) and Basrah (126,000 b/d). Iraq's refineries were seriously damaged in the years of war and the sector remains dilapidated and in need of massive repair. According to Iraqi Oil ministry statistics, due to the deterioration in security and lack of maintenance, only 60 percent of Iraq's refining capacity is currently being utilized.³

The highly distorted pricing system in Iraq promotes consumer consumption while reducing supply. In the first half of 2006, gasoline sold for less than \$0.25 a gallon and was sold at less than \$0.05 a gallon in 2005. Iraqi oil industry officials are accused of taking advantage of these low, regulated prices and their positions to smuggle crude and products out of the country to be sold at dramatically higher international market prices. Controlled prices result in shortages and long lines for fuel, which in turn creates a target for insurgents. Price controls are a significant factor in promoting corruption, criminality inside the industry, and may well be providing financial support for the insurgents. In addition, there is general vandalism at pipelines and shipments by truck, further feeding the black market and smuggling activities. Also, a large proportion of oil products are diverted from warehouses, fuel stations, gas factories and other outlets for

³ Presentation by Fayahd H. Nima, Director General of Studies and Planning, Ministry of Oil, Iraq and Ghanim al-Jumaily, Ambassador of Iraq to Japan, at the JCCP International Symposium, Tokyo, Japan, November 29-December 1, 2006

resale in the black market or abroad. The Iraqi government imports 45 percent of the fuel consumed in the country. These imports cost the government billions of dollars a year. The Iraqi office of the Inspector General noted in its Second Transparency Report that the rate of government subsidies for imported products was \$4.2 billion in 2005 and was estimated to reach \$5 billion in 2006. It is a vicious circle: imports are paid for by oil revenues that are constrained by Iraq's price controls, and this in turn promotes smuggling and lessens the product available domestically for consumption and increases the need for imports.

A key constraint to solve the problem of this corruption is lack of accountability on the part of government officials. The Iraq's new inspector general laws have failed due to intimidation and corruption, including within the ranks of the inspector generals. A number of employees in the inspector generals' office have been killed or wounded; no arrests have been made. Financial and inventory controls are weak and often subverted. The introduction of incentives for managers to perform well, and the institution of proper controls and monitoring to evaluate performance, are essential preconditions if Iraq is to thrive economically.

To address the domestic fuel problem, the Iraqi government has accepted the conditions laid out in its Standby Agreement with the IMF – to raise fuel prices in stages. Some of the planned increases were delayed because of the difficulties in forming the new Iraqi government. The government is committed to increasing the price of oil products gradually to bring prices will be more in line with that of the region.

Iraq's Oil Sector

Iraq's fuel demand (light petroleum products) grew by about 4 percent a year between 1980 to 2003. That rate is expected to rise to 10 percent a year, should the security situation in Iraq improve and reconstruction be undertaken to a fuller extent.

Details of project demand by product are in the table below:

<i>Product</i>		<i>2001</i>	<i>2004</i>	<i>2005</i>	<i>2008*</i>	<i>2012*</i>
<i>Gasoline</i>	<i>Cons.</i>	13900	19000	21000	24500	32000
	<i>Prod.</i>	13800	10100	9700	21000	37000
<i>Kerosene</i>	<i>Cons.</i>	7600	8300	7000	9000	15000
	<i>Prod.</i>	7600	6000	4800	11500	17500
<i>Gasoil</i>	<i>Cons.</i>	12700	17800	18000	20000	30000
	<i>Prod.</i>	21000	12400	11000	25000	33500

Source: Iraq Oil Ministry

The meet this demand for light oil products, the Ministry of Oil has developed the following plan for the period 2006 to 2012.

<i>Refining Co.</i>	<i>Location</i>	<i>Capacity thousand BBPD</i>	<i>Date of commission</i>
<i>Midland refineries Co.</i>	Daura	210	2010
	Najaf	30	2008
	Samawa	30	2007
	Karbala	140	2012
<i>South refineries Co.</i>	Basrah	210	2010
	Nassiriya	30	Exist
	Nassiriya	300	2012
	Ammara	30	2008
<i>North refineries Co.</i>	Salahdeen (1,2,North Ref.)	290	Exist
	Kirkuk	55	2007
	Baiji	30	2007
	Hadetha	36	2008
	Kasak	10	Exist
	Qayarah	30	2008
<i>Kurdistan Refineries.</i>	Koya	70	2012
	Arbeel	20	2008
	Bazyan	20	2008

The Ministry of Oil has also approved many projects to build and upgrade existing units at the Basrah, Daura, Nassiriyah, and Kirkuk refineries to meet international environmental standards for transportation fuels. The Ministry has also issued feasibility studies for construction of several FCC units to process the low value residual product stream from existing refineries.

Natural Gas

Iraq holds 110 trillion cubic feet (Tcf) of proven natural gas reserves, as well as approximately 160 Tcf in probable reserves. Much of the gas has remained untapped. Gas development has in the past taken a backseat to oil development where markets and profits are more immediately tangible.

In 1997, Baghdad reached an agreement with Ankara to build a \$2.5 billion 1,380-km gas pipeline from northern Iraq to southwestern Turkey, which could possibly be linked to Europe. The proposal was said to involve the transport of 10 Bcm of Iraqi gas annually to Turkey from five fields in the north -- Al-Anfal, Al-Mansuriya, Jaryat Pika, Al-Khasham al-Ahmar and ChemChemal. There has also been speculation that a new Iraqi government would consider building a natural gas export system to Jordan.

Associated gas primarily comes from the Kirkuk, Ain Zalah, Butma and Bai Hassan oil fields in northern Iraq, as well as the North and South Rumaila and Zubair fields in the south. The Southern Area Gas Project, brought online in early 1995, consists of nine gathering stations and has a processing capacity of 1.5 Bcf/d. Gas gathered from the North and South Rumaila and Zubair fields is transported by pipeline to a 575-Mmcf/d natural gas liquids (NGL) fractionation plant in Zubair and a 100-Mmcf/d processing plant in Basrah. At Khor Al-Zubair, a 17.5-MMcf LPG storage tank farm and loading terminals were added to the southern gas system in 1990. The Al-Anfal field in northern Iraq produces the only non-associated gas in the country at about 200 MMcf/d. Al-Anfal production is piped to the nearby Jambur gas processing station. Al-Anfal has estimated reserves of 4.5 Tcf, of which 1.8 Tcf is proven. In November 2001, there were reports that Iraq had discovered a large non-associated natural gas field in the Akkas

region of western Iraq, near the border with Syria, and that it held an estimated 2.1 Tcf of reserves.

In order to establish priorities for the rehabilitation and expansion of the country's gas sector, the Iraqi government will have to study alternative uses for its natural gas, relative to the time frame for that end use.

The following table shows the time, cost-effectiveness and irreversibility of various gas use options.

TABLE 5.1.1 OPTIONS FOR IRAQI GAS USE

Gas Use	Netback Value (U.S.D/MMBtu at wellhead)	Time Frame for Development	Expected Gas Use (mmcf/d)
Power Generation	0.60 - 2.25	Rehabilitation phase: increase HFO substitution in dual fuel stations, Transition phase: repower existing HFO stations, Transformation phase: Build new CCGT units	~200 mmcf/d to ~450 mmcf/d
LNG	0.75 – 1.50	Not feasible until current backlog of LNG projects in Gulf is cleared and new gas output from non-associated fields in Iraq is developed	0 mmcf/d to 450-900 mmcf/d
Methanol	0.75 - 1.00	No projects envisioned, SABIC has very strong position in world Methanol markets	0 mmcf/d
Ammonia	0.75 - 1.00	Rehabilitation of current plants, plus construction of new plants in Transformation phase for export to Turkey & Jordan	n.a.
GTL	0.75 - 1.00	Not competitive with crude oil in Iraq	0 mmcf/d
Oil Recovery	1.20 - 2.40	Rehabilitation phase: well work should utilize gas reinjection, Transition phase: additional field use, Transformation phase: additional field use plus EOR in some older fields	100 mmcf/d to ~450 mmcf/d
CNG	(-1.00) - (-2.00)	Not competitive with refined products in Iraq	0 mmcf/d
Exports by Pipeline	0.75 – 2.00	Rehabilitation phase: exports to Kuwait for well reinjection, Transition phase: additional field and power plant use in Kuwait, Transformation phase: additional exports to Kuwait plus exports to Jordan, Syria, Turkey	50 mmcf/d to ~250-1,000 mmcf/d

Iraq's Oil Sector

In a perfectly orderly world, Iraqi gas planners would simply move from the highest valued use of gas down the list of prospective projects until the feasible gas investments were exhausted or the gas reserves were exhausted. In the less orderly world of contemporary Iraq, gas sector planner must consider not only the payoff to prospective investments, but also the following key constraints:

- Limits on financing available to gas sector
- Limits on gas availability with regard to crude production levels
- Competition for export customers from other suppliers

It would require considerable institutional and financial reform in the gas sector for Iraq to pursue LNG and pipeline exports to abroad. Other options, such as power plant use, though perhaps not as remunerative, are easier to implement.

Iraq's energy sector is currently suffering from both an excess of unutilized natural gas and a persistent surplus of high sulfur fuel oil. While neither natural gas nor high sulfur fuel oil are currently attaining their full market value, high sulfur fuel oil is currently the more fungible commodity on international markets. This is because the fuel oil can be sold by sea without requiring a major restructuring of the Iraqi downstream industry nor the kind of major infrastructure building and reform programs it would take to create a successful, international natural gas export business. Fuel oil can be exported by sea from southern Iraq to any number of a wide variety of places, were the Iraqi government to make minimal investments to facilitate its movements to the export terminal at Basrah and build related storage to facilitate exports.

The value of gas for alternative uses depend on the market value of that gas or the end product made from that gas. According to an internal study developed for the Ministry of Oil, the following values were calculated for gas use:

1) Gas reinjection is worth more than \$2.00 per mmbtu of gas (net basis) in terms of additional oil production as long as oil prices remain above the \$42-44/bbl range, assuming an average rate where Each 100 mmcf of gas can result in the production of at least 6,100 b/d of additional crude oil

2) Gas substitution for HFO in steam power plants is valued between \$0.60 and \$1.50/mmbtu. Feasible short term measures involve the replacement of HFO, which can then be exported in exchange for light products. Replacement of HFO in steam turbine units is worth about \$1.50/mmbtu if the HFO can be exported, less than \$0.50/mmbtu if not. In a combined cycle power plant (CCGT), gas is worth about \$1.40/ mmbtu, when electricity is priced at \$30/MWh.

HISTORY OF IRAQ'S OIL INDUSTRY

The Mesopotamian region became known for its remarkable potential for oil exploitation and development in the early 19th century. The collapse of the Ottoman Empire created many opportunities for those seeking to exert economical and political influence over the area now constituted as Iraq,⁴ and several companies expressed their interest for concessions.

After the discovery of oil in Iran in 1908 at Masjid Al-Suleiman,⁵ great interest emerged in the region as a whole, including three primary Iraqi provinces of Mosul, Baghdad, and the southern port of Basra. In 1911, the Turkish Petroleum Company

⁴ Ferruh Demirmen, "Oil in Iraq: The Byzantine Beginnings," *Global Policy Forum*, April 25, 2003.

⁵ Ibid.

Iraq's Oil Sector

(TPC) was formed under the guiding hand of Calouste Gulbenkian, a man well known for his strong links back to the Ottoman Turkish leadership. The purpose of the consortium was to minimize competition among firms seeking individual concessions in Iraq. In 1914, the British government controlled firm, Anglo-Persian Oil Company, bought 50 percent of the shares of TPC and began pressing for a concessionary agreement while the Deutsche Bank of Germany and Shell each took 25 percent of the shares.

After World War I, the 25% allocated German shares were confiscated by the British in accordance with the stipulations of the 1919 Paris Peace Conference, which rendered Iraq under rule of a British mandate. In order to hold American firms out of the TPC, Britain offered the remaining 25 percent, once owned by Germany, to France under an agreement between France and Britain finalized during the secret San Remo Conference held in Italy on April 20, 1920. In this agreement, Britain officially became the overseer of Iraq while France became the discretionary power over Syria. As a direct result, the shares of the Turkish Petroleum Company were reallocated, giving the lion's share to Britain while stipulating that Iraq could request a 20 percent interest at a future juncture.⁶

The Americans were not satisfied with the arrangement, and U.S. President Woodrow Wilson demanded a share in the Turkish Petroleum Company to defend America's own financial and economic interests. Consumption of oil dramatically increased 90 percent between 1914 and 1920 in the post-war period while warnings of an imminent depletion of American reserves remained persistent.⁷ The United States pressed Britain, officially refusing to recognize the legitimacy of the San Remo treaty and

⁶ Ferruh Demirmen, "Oil in Iraq: The Byzantine Beginnings," *Global Policy Forum*, April 25, 2003

⁷ Yergin op cit, 194

asserting that since the United States was also a winning participant of the war; it should also be included in the process of splitting the spoils of war.⁸ Essentially the Wilson administration demanded an open door policy, and the U.S. government argued that not only did the San Remo Agreement unfairly discriminate against Americans but that deals made prior to the collapse of Turkish rule in Iraq had no standing.

The British, meanwhile, contended that U.K. citizens had “acquired rights” stemming from the earlier decision of the Ottoman Turks to allow the U.K. a concession through the Turkish Petroleum Company.⁹ Eventually, geopolitical considerations forced Britain and France to sell a portion of the consortium stake to American companies after six prolonged years of negotiations and diplomatic exchanges. The accord that was reached on July 31, 1928 became known as the “Red Line Agreement.” The settlement admitted U.S. companies as partial shareholders in the TPC through a consortium called the Near East Development Company (NEDC). The companies were Standard Oil Co. (NJ), Standard Oil Co. (NY), Gulf Refining Co., and the Pan American Petroleum and Transport Co.¹⁰ To appease Gulbenkian, the Anglo-Persian Group and the Shell Company each gave up 2.5 percent of their shares, giving Gulbenkian a 5 percent voting right to his additional 5 percent beneficiary participation in the company.¹¹

The stipulation agreed upon during the 1920 San Remo Conference that allowed for a 20 percent Iraqi participation in the TPC at a later date became the primary source of conflict between the Iraqi government and the Turkish Petroleum Company. The

⁸ A.A. Fursenko, *The Battle for Oil* (London: Jai Press, 1990)194.

⁹ *The International Petroleum Cartel*: 69; Roy Lebkicher et al, *Aramco Handbook* (New York: Arabian American Oil Co, 1960),132.

¹⁰ By 1934, though, mergers among U.S. companies and exchanges of shares left the American NEDC consortium with only two shareholders, Standard (NJ) and Socony-Vacuum, formerly Standard (NY).

¹¹ Yergin *Op Cit.*187.

foreign companies that comprised the TPC deliberately prolonged the negotiations to avert any Iraqi representation in the administration of the company. Following considerable negotiation, TPC was granted a 75 year concession in March 1925, bringing Iraq into the oil world with a visible role. The proposed concession granted Turkish Petroleum Company the exclusive right to select twenty four plots in exchange for royalties to be paid to the Iraqi government at a flat fee per ton in English pound sterling. The Iraqi government, then led by the Hashemite heir King Faisal who had been installed by the British, in accordance with this agreement reserved the right to tax TPC at a rate consistent with the existing industries. Additionally, the agreement required TPC to build an oil refinery to alleviate domestic oil shortages and to construct a pipeline to facilitate crude oil export.¹²

In October 1927, TPC discovered oil in Kirkuk field, and the shareholders of TPC signed a formal agreement the following year giving the Anglo-Persian Oil Company, the Dutch Shell Group, CFP (France), and the Near East Development Corporation each 23.7 percent of the TPC while Gulbenkian retained his 5 percent non-voting share. The oil discovery of Kirkuk, a field that contained reserves of nearly 16 billion barrels, marked a turning point in the history of the TPC as well as the Middle East.

Soon thereafter, in 1929, the Turkish Petroleum Company was renamed the Iraqi Petroleum Company (IPC). Although the IPC had an attractive concession in Iraq, the company delayed the development, as several partner companies such as the Anglo-Persian Oil Company and the Standard Oil of New Jersey had access to other major sources of crude oil production and strategically desired to hold Iraqi properties in reserve. This strategy met local opposition inside Iraq which desired to benefit from more

¹² U.S. Library of Congress, Country Studies, The Turkish Petroleum Company.

rapid development of its resources, so by 1931, the concessionary agreement with the Iraqi Petroleum Company was renegotiated to meet new performance requirements. The revised contract offered IPC a seventy-year concession on a larger area consisting of 83,200 square kilometers.¹³ In exchange for this extended concession, the Iraqi government demanded increased payments and an agreement that IPC would be committed to building two oil pipelines to the Mediterranean by 1935 to create opportunities for the transportation of Iraqi oil to the international market for sale.

To diversify itself away from the IPC monopoly, Iraq granted a second concession area west of the Tigris River to the British Oil Development Co. (BODC) in 1932, but BODC was unable to raise the finances to perform its commitments and was eventually taken over by the IPC and renamed the Mosul Petroleum Company (MPC). To reinforce their desire for monopolized control of the region, IPC shareholders won a new concession area in southern Iraq in 1938 and founded the Basrah Petroleum Company (BPC).

One key barrier to the development of oil production in Iraq was the need for a system to efficiently transport crude oil to other markets. In the 1930s, as market opportunities expanded for Iraqi oil, a pipeline was built from Kirkuk to Al Haditha where it divided into two branches: one leg to Syria and a second leg to Haifa. Exports began in 1938 in larger quantities through the newly constructed pipelines and production averaged roughly 100,000 b/d until the advent of World War II.¹⁴

For the following decades, the IPC maintained exclusive control of the Iraqi petroleum resources, and the relationship between the IPC and the Iraqi government,

¹³ Ibid.

¹⁴ Ibid.

controlled by the Hashemite Monarchy, remained relatively stable until the 1950s.¹⁵ The creation of the state of Israel in 1948 forced the closure of the Haifa line which created significant transport constraints for the IPC administration. In 1951, however, BPC exports began through a new pipeline through Al-Faw on the Persian Gulf coast. An additional thirty-inch pipeline was built to connect the Kirkuk fields to the Syrian port of Baniyas.¹⁶ By 1952, Iraqi production had increased to 400,000 b/d, up from about one fourth of that in the 1930s.

In the late 1940s and early 1950s oil producing countries began to agitate for a higher share of the oil revenue pie. In 1949, the Anglo-American company was forced to negotiate a supplemental agreement with Iran that conceded a large hike in royalties as well as a lump sum payment. But still nationalists movements across the Middle East were calling for outright nationalization of Western oil holdings. Amid fears of nationalization and in an effort to counter Soviet penetration in the Middle East, the U.S. government helped fashion a compromise in 1951 on oil revenue sharing between the American companies operating in Saudi Arabia and the Saudi government. The deal paved the way for Saudi Arabia to impose income taxes, royalties and fees to be paid by Aramco to the tune of 50 percent of the company's profits.

IPC and the Iraqi government and Iran and the Anglo-Iranian Oil Company were also tangling on the same issues, and the United States government urged Britain to pressure Anglo-American to offer a deal that the Iranian government could swiftly accept. The situation in Iran, however, did not progress as smoothly as had similar circumstances in Saudi Arabia; amidst the negotiations, Iran's Majlis (parliament) chose

¹⁵ Michael E. Brown, The Nationalization of the Iraqi Petroleum Company, *International Journal of Middle East Studies* 10, no. 1 (February 1979): 108.

¹⁶ U.S. Library of Congress, Op cit.

Mohammed Mossadegh as Prime Minister, who had risen to prominence as an avowed foe of Anglo-American.¹⁷

The Iranian crisis came to a head, when soon after his election to the office, Prime Minister Mohammed Mossadegh of Iran moved to implement a resolution already passed by parliament to nationalize Iran's oil industry in May 1951 against the backdrop of failed negotiations seeking to increase Iranian oil production and revenue. The initial consequence of the nationalization was detrimental for Iran as Iranian oil was subsequently embargoed by the British, leaving the fledgling Iranian government with rapidly sinking revenues. Oil revenues had comprised half of Iran's revenues prior to the Mossadegh government's move, and the boycott of Iranian oil caused Iran to suffer severe economic turmoil.¹⁸ The Iranian situation also had implications for Iraq which imported a third of its gasoline needs from a refinery in Abadan, Iran.¹⁹ The Iraqis viewed this policy of importation of badly needed local fuel supplies from a neighboring country as inconsistent with its national economic and security goals. Consequently, such views hit home after the political crisis in Iran in May 1951, which led to a cutoff in Iranian petroleum exports, including gasoline exports to Iraq.

Fearing continued loss of refined products from Iran and lacking trust in the IPC, Iraq took steps to protect itself by taking over control of the Kirkuk refinery and hiring an American contractor to construct a new refinery near Baghdad.²⁰

Against this same backdrop of rising nationalist sentiment across the Arab world and to quell radical opposition movements in Iraq who were railing against "foreign

¹⁷ Yergin, 455

¹⁸ Yergin, op cit, 467.

¹⁹ U.S. Library of Congress, Country Studies, Post-World War II Through the 1970's.

²⁰ U.S. Library of Congress, op cit.

exploitation,” the Iraqi government and the IPC continued to negotiate about the terms of the IPC operations in Iraq. An agreement was signed in March 1952 that would generate more governmental revenue by increasing output and production capacity rates.²¹ The signed agreement stipulated that the government of Iraq receive a 50 percent share in the profits of the IPC, and also required the IPC to expand production to 225 million barrels of petroleum per year as well as allow Iraqi citizens access to managerial positions in the company.²² Iraqi Petroleum Company willingness to concede to Iraqi government demands was motivated, in part, by the realization that anti-western and anti-imperialist dissent within the country might succeed in pressuring the government to seek even more national control of the petroleum industry.

Despite the compromise agreements, nationalist sentiment continued to brew inside and outside Iraq as an emerging, revolutionary Egypt called for Arab solidarity against foreign domination and colonialism. In July 1952, Egypt, under the revolutionary leadership of Gamal Abdul Nasser, had overthrown the Egyptian Monarchy and abrogated the Anglo-Egyptian treaty, creating a wave of nationalism throughout the region. To protect itself from increasing Egyptian dominance in the Arab block and the threat of Soviet influences, the Western-oriented, parliamentary and monarchical government of Iraq, led by Prime Minister Nuri-al-Said, joined a pro-Western alliance accord, the Baghdad Pact, in February 1955. The pact prescribed a regional defense treaty including Turkey, Iran, Pakistan and Iraq under the guidance of the British leadership to maintain alliances in the face of rising threats stemming from the Soviet Union and other radical movements. The pact allowed Iraq to obtain access to strategic arms from Great

²¹ Michael Eppel, *Iraq from Monarchy to Tyranny: From the Hashemites to the Rise of Saddam*, Miami: University Press of Florida, 2004: 94.

²² Ibid

Britain on terms that allowed the Iraqi government to reduce funds for internal defense expenditures. Against the backdrop of the Baghdad Pact, Egypt continued to denounce any Arab nation that signed an agreement with any state that was not a member of the Arab League. This suited the new Egyptian leadership which wanted to expand Egyptian dominance in regional affairs.

In the autumn of 1955, Egypt's Nasser asserted himself in front of the western powers by signing a weapons deal with the Soviet Union, raising fears that the Egyptian leader would have the leverage to cut off access to the Suez Canal to Western oil and naval movements. Tensions escalated when then U.S. Secretary of State John Foster Dulles cancelled loan packages for Egypt's proposed Aswan Dam project, aid which had been offered to placate Nasser who had demanded a high stake in canal toll profits in line with rising shares in oil concession profits for his neighboring Middle East nations. Nasser expropriated the Canal, prompting a military response from Britain, France and Israel in October 1956. But before the Western countries could get their troops in place, Nasser blocked the waterway with sunken ships and commissioned Syrian engineers to sabotage the pumping stations along the Iraqi Petroleum Company pipeline.

The two events, combined with sabotage against Kuwait's oil installations, caused a major international oil crisis that lasted until the spring of 1957. The British, French and Israeli attack on Egypt generated much sympathy from the Arab world and heightened Arab nationalist sentiments. Iraq's military and political ties with Britain came under sharp criticism from all around the Arab world, putting Nuri and his government in a very vulnerable position. Nasser survived the war with enhanced prestige as the leader of the Arab world. The nationalization of the Suez Canal created hysteria of excitement for the

Egyptian populace and placed Nasser on even a higher pedestal as the leader standing up against colonial Western powers.

Iraq's leadership was tagged within the rising tide of Arab nationalists as betraying pan-Arab brotherhood. Influenced by Nasser's quest towards Arab unity, Iraq came under fire from a rise of anti imperialistic rhetoric aimed towards foreign oil companies and interests operating in its national boundaries. Nasser cleverly targeted oil as a central focus in advocating pan-Arab unity, hoping to enhance his regional leadership credibility despite the fact that Egypt was a non-oil state. In response to the Baghdad Pact, Egypt along with Saudi Arabia and Syria, signed an agreement of cooperation, an agreement that later became known as the Tripartite Arab Alliance.²³ This agreement symbolized Nasser's primary objective to weaken Arab alliances with the West.²⁴ At the conclave of Arab Oil Experts in Egypt in the spring of 1957, Nasser defined the oil politics of the day as a struggle against colonialism and used the oil forum (even though Egypt was not an oil exporter) as a vehicle to propel his personal power and momentum for his campaign among the Arab masses.

Rhetoric against the IPC accelerated, with the Western oil consortium squarely accused of seeking only to serve purely self-interested corporate motives without attesting for the betterment of the Iraqi society.²⁵ The Iraqi population quickly came to view the IPC as a purely imperialistic endeavor that sought to promote its commercial interests at the expense of Iraq's own national interests. Opposition groups inside Iraq began calling for removal of this foreign interference in the Iraqi domestic realm.

²³ Ibid, 142.

²⁴ John Galvani, The Baathi Revolution in Iraq. *MERIP Reports*, no. 12 (September –October 1972): 7.

²⁵ Michael E. Brown, "The Nationalization of the Iraqi Petroleum Company," *International Journal of Middle East Studies* 10, no. 1 (February 1979): 108.

With the support of major Iraqi political parties, General Abdul Karim Qassim overthrew the Hashemite Monarchy of King Faisal in Iraq in 1958. In its early days, the new Iraqi revolutionary government considered a possible union with Nasser's United Arab Republic. Iraq officially retracted from the Baghdad Pact in March 1959 in an attempt to sever all binding relations with the western bloc.

Initially, the 1958 Iraqi Revolution did not focus on the IPC concession terms but it was not long before the Qassim administration began to experience financial difficulties and became dissatisfied with the lack of revenues obtained from the IPC operations. Qassim was under pressure to increase government revenue but could not immediately nationalize the oil industry due to the natural economic constraints that would prove such an endeavor to be unsuccessful. The lessons of the Iranian crisis of 1951 convinced the Qassim regime that taking an aggressive stance against the foreign IPC shareholders could be risky given Iraq's inability to lead its own oil industry to maintain markets for its oil. Still, to appease popular sentiment and to address geopolitical competition from Nasser of Egypt, Qassim demanded that Iraq be included within the shareholding composition of the IPC and be given a percentage of the company's profits to increase government revenues. As negotiations bogged down, Qassim acted unilaterally, increasing the transit rate at the Basrah port twelvefold from 23.4 fils to 280 fils per ton. Rather than concede to renewed negotiations, the IPC ceased all oil production conducted at the port in retaliation. At this point, the condition between the Iraqi government and the IPC became extremely volatile.²⁶

²⁶ Michael E. Brown, "The Nationalization of the Iraqi Petroleum Company," *International Journal of Middle East Studies* 10, no. 1 (February 1979): 108.

Iraq's Oil Sector

In response to the IPC's determination to isolate Iraqi participation in the company, Iraq had a strong interest in advocating a movement to organize a coalition to battle the influence of the international oil companies. Newcomers to the Middle East oil business such as Italy's ENI and the Standard Oil of Indiana were also offering increasingly attractive terms. To build its strength to resist IPC, Iraq became a fervent supporter for the creation of the Organization of Petroleum Exporting Countries (OPEC) and was, in actuality, the first nation to convene the meeting in Baghdad in September 1960 to propose its formation. The five founding members of OPEC accounted for 80 percent of the world's crude oil export and the creation of OPEC was aimed to strengthen the oil producers hand in negotiations for a larger share of oil revenues and also to discourage the Western oil companies from unilaterally initiating price or production changes.²⁷

Qassim continued with increased demands for negotiations but the IPC continued to respond with obstinacy, resulting in further breakdowns in the roadmap for negotiations. In December 1961, the Iraqi government in response to increasing frustrations proposed Law 80 which called for the expropriation of all the IPC concession areas that were not being utilized for production. The law deprived IPC of the rights to exploit the giant North Rumaila field and initiated a decade of future conflict between the IPC and the new Iraqi government. After Law 80 was implemented, the IPC only retained 0.5 percent of the original concession areas.²⁸

The IPC immediately demanded arbitration to repudiate Law 80, a law they believed to be contractually illegitimate according to the agreements of 1925 and 1938.

²⁷ Yergin, 523.

²⁸ Brown, op cit, 109.

Although Qassim did not possess the technical means of exploiting the retrieved oil fields, Law 80 took an aggressive stance against the foreign-controlled IPC and laid the groundwork for eventual Iraqi control.

The antagonism towards Israel from the Arab community also bled into the oil issues in Iraq. Suspicions that the French Company, ERAP, was marketing and selling Iraqi oil to the Israeli government lead Qassim to threaten to nationalize French interests in the Iraqi Petroleum Company if evidence could be brought forth to validate the accusation.²⁹ Then, on July 14, 1962, four years after his arrival to power, Qassim declared in a radio broadcast to Baghdad that “a new oil national oil company is to be established soon in Iraq” while additionally reiterating that although Iraq desires independence from imperialist entities, Iraq does not “wish to suppress the rights of the oil companies, but must still defend the rights of our nations.”³⁰ A few months later, Qassim issued a statement initiating a plan to establish “an Iraqi National Oil Company which would have a \$56,000,000 government capitalization and operate in all stages of the industry” as well as possess the “right to exploit oil in all areas outside those unspecified for the Iraqi Petroleum Company group under a 1961 law.”³¹

The announcements were designed to help strengthen Iraq’s hand while Qassim was battling against the IPC for representation in the company and an increase in revenues. It is interesting to note that although Qassim undertook severe measures to reinstate Iraqi governmental control in the oil market, he did not immediately nationalize the Iraqi Petroleum industry in fear of similar repercussions as witnessed through the nationalization of the Iranian Petroleum Industry in the early 1950’s. Qassim could not

²⁹ Richard P Hunt. “Iraq Drive Perils French Oil Share,” *New York Times*, December 26, 1960.

³⁰ “Iraq to Establish a New Oil Company,” *New York Times*, July 15, 1962.

³¹ “Iraqi National Oil Setup is Projected by Baghdad,” *New York Times*, September 30, 1962.

risk retaliation from the international community as his financial burdens were only amplifying and the military and government expenditures to sustain his administration meant he could not survive a cutoff in oil revenues. His revolutionary administration greatly depended upon the power and strength of the military to function as an act of deterrence for many who desired to overthrow his regime.

Qassim's attempt to wrest more money from the IPC proved to be one of his most "significant and enduring legacies of the regime"³² Government revenues increased from \$224 million dollars to \$353 million dollars as a result of Qassim's repeated attempts for negotiation with the IPC.³³ However, despite the benefits of the economic reforms proposed by Qassim, he was not able to hold on to power indefinitely. He had managed to retain his control over the Iraqi populace by forging some sort of equilibrium between the communist and nationalist forces but eventually the imminent revolution growing under his regime materialized.

The Baath Nationalist Party put an end to Qassim's rule in a bloody coup on February 8, 1963. The Baath platform was centrally based on a movement that opposed foreign influence on domestic affairs and a strong belief in Nasser's pan-Arabism which Qassim had resisted. The basis of the Baath party was formed on three primary principles including "Arab unity, liberty and socialism."³⁴ In the early stages, the Baath party seemingly took on an anti-communist alignment and a more radical oil policy as they pursued rapid economic development. Continuing on the momentum Qassim had established for limiting foreign influence on the nation's industries, the Baath party

³² John Galvani. *The Baathi Revolution in Iraq. MERIP Reports*, no. 12 (September –October 1972): 8.

³³ Michael Eppel, *Iraq from Monarchy to Tyranny: From the Hashemites to the Rise of Saddam*. Miami: University Press of Florida, 2004: 162. 00.

³³ Ibid,198.

³⁴ Ibid.

subsequently called for a detachment from foreign institutions influencing economic sectors. Coinciding with the enactment of laws conducive to the new pan-Arab nationalist ideology, the Baath regime initiated a series of measures designed to eliminate the IPC in its entirety. The primary aim on the agenda also included retrieving the rights to exploit the North Rumaila Field from the IPC.

The Iraq National Oil Company (INOC) was first established in 1964 to develop the concession areas taken over from international oil companies that had previously controlled Iraq's oil sector. In the early period of nationalization, INOC was granted exclusive rights, by law, to develop Iraq's oil reserves, and the granting of new concessions to foreign oil companies was rendered illegal. As a result of the 1967 Six Day War with Israel, the Iraqi oil policy took another abrupt turn to isolate the British, American, and Dutch members from benefiting from any Iraqi oil concession. On August 19, 1967, Law 97 was passed with the sole intent of designating the INOC as the appropriate company to exploit the North Rumaila Field without foreign interference. Unfortunately for Iraq, the creation of OPEC did not lead to a fully unified front in negotiating terms with international oil companies, but led rather to separate negotiations which left Iraq, the most radical in insisting on national terms, out in the cold. International companies responded by again switching from Iraqi sources to other oil production areas, and on again-off again negotiations continued between IPC and Iraq over terms and conditions. Iraq realized that it needed to enhance the technical capabilities of INOC and sought assistance from other countries that were not involved in the IPC. Iraq concluded a services contract with Entreprise Des Recherches et des

Activites Petrolieres (ERAP) of France for technical assistance in Southern Iraq and the offshore. The agreement did not grant any concessionary rights to the French firm.

The 1967 Six Day War had paved the way for anti-western sentiment throughout the Middle East making negotiations with the Soviet Union almost inevitable. The pain and humiliation that emerged as a result of the Six Day War spread throughout Arab regimes. A month after the loss, the Arab nations convened at an economic conference held in Baghdad to discuss the possibilities of progressively nationalizing the prolific oil industries in the Middle East to permanently remove both the United States and Britain from the Middle Eastern economic landscape. The defeat of the Six Day War with Israel propelled the Arabs to seek retaliation by effectively using their leverage with the West through their profitable oil industry. According to the *New York Times* on August, 30, 1967, the primary objective of the conference was to “lay down a program for a unified Arab economic war against the western powers that were allegedly pro-Israel, in a bid to force an Israeli withdrawal from Arab Areas captured during the war in the Middle East.”³⁵ Additionally, “the socialist regimes in Iraq, Algeria and Syria were pressing hard at the conference for immediate nationalization of the American and British companies.”³⁶

Iraq's leverage over the IPC changed dramatically when the Soviet Union agreed in 1969 to provide technical assistance worth over \$140 million for the development of Iraq's national oil industry and to promote the production of oil in the North Rumaila field.³⁷ Rather than assigning ERAP the rights to explore the Rumaila field, Iraq decisively took upon the responsibility to exploit Rumaila in 1968. In July 17, 1970, the

³⁵ “Accord by Arabs on Oil Reported,” *New York Times*, August 20, 1967.

³⁶ *Ibid.*

³⁷ Brown, *op cit*, 110.

INOC began drilling oil in commercial quantities with Soviet technical and financial assistance. For INOC officials, success in the Rumaila fields became critical in order to establish a positive precedent for the future.³⁸ Production in the North Rumaila field began with Soviet help by 1972.

By 1972, the Iraqi administration had compiled a prolonged list of demands to be met by the IPC. In accordance with the complete list of demands, the primary mandates reiterated 20 percent participation in the assets of the IPC and Iraqi representation on the executive board. The IPC did not respond compliantly as the Iraqi government had hoped and retracted back to their original resolute attitude toward Iraqi demands. Tensions were further culminated between the duo when in May 1972, the Iraqi government proceeded to give the IPC a two week deadline to meet a further list of demands including the previous mandates including a 20 percent share in the IPC and an increase in crude oil production levels in areas already designated for expropriation. In response, the IPC put forward a compromise which the Iraqi government fervently rejected. Ironically, it was a young Saddam Hussein who was put in charge of the Follow Up Committee for Oil Affairs that was charged with trying to move forward stalled negotiations with IPC. After 8 sessions of negotiations, Iraq gave the IPC partners an ultimatum. On June 1, 1972, all shares of IPC, except the French 23.75%, were nationalized under Act 80 of 1961 by Decree Law No. 69. BOC, not party to the original dispute though owned by IPC, wasn't nationalized until October 1973. Despite the consortium's wishes to retain a share in

³⁸ Marvin Howe, "Iraq National Oil Company Nears Desert Production", *New York Times*, December 13, 1971.

Iraqi's oil industry, then Iraqi President Ahmed Hassan al-Bakr proclaimed that Iraq has "decided to go on the offensive against the oil monopolies."³⁹

The Iraqi Revolutionary council, under Vice President Saddam Hussein, granted a French Company a 10 year contract to continue exploiting oil in the Kirkuk fields. The French share in the company was decisively retained by the Iraqi council "in appreciation of France's policy of support to the Arabs in the Middle East conflict."⁴⁰

Despite the advantages that tagged along with the 1972 nationalization, the Baath party suffered international ostracism attacking the regime's unreliability as well as abandonment from western trading partners, creating financial burdens for the state. Predicted challenges for the nationalized company included "paying compensation for the seized assets and marketing the oil abroad" considering the fact that "the parent companies of the IPC control about 60 percent of the world market."⁴¹ Prior to the nationalization, the Iraq government experienced severe monetary shortages and fell largely dependent upon monthly royalties received from the IPC. But the political and economical support given by the Soviet Union allowed the INOC to have the financial and technical prowess to function unilaterally without the assistance of the IPC. With the Soviet backing, there were not just an increase in the technical expertise in the INOC but the Soviet Union essentially offered a guaranteed market for oil produced from the nationalized company. The negotiations between the INOC and the Soviet Union were crucial prior to nationalization to ensure that there would be a committed buyer to purchase Iraqi oil as fears of a western boycott still prevailed.⁴²

³⁹ "Iraq Takes Over Big Oil-Company After Talks Fail" *New York Times*, June 2, 1972.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Brown, 123.

The Soviet Union backed Iraq's nationalization and gave it teeth, signing a treaty for mutual military commitments that it would protect the Iraqi government from any possible intervention by a foreign power on behalf of the international oil company interests. Iraq created the Iraqi Oil Company for Oil Operations (ICOO) to take over remaining IPC facilities in Kirkuk. All remaining foreign interests were nationalized by 1975.

The nationalization of IPC areas is a key element of Iraq's revolutionary history and shouldn't be overlooked in thinking about the cultural issues surrounding the industry today. By the 1970s, Iraq's Baath party socialist doctrine focused squarely on its revolutionary achievements in wrestling with international capitalist companies and the nationalization became part of the Iraqi psyche for its leadership status in the Arab world. The nationalization of assets was expressed in the context of the Baath doctrine of socialism and Arab unity, and it was stated that the purpose was to use the oil to develop Arab society and to attain other political and ideological goals with regard to the struggle against Israel and the West. The nationalization enhanced the political legitimacy of the Baath regime, which began with a shaky hold on popular support. It also created an export-oriented ideology, allowing the Baghdad regime to reach out to Arab masses beyond its borders and pressure other Arab regimes to follow its revolutionary path of converting Arab oil to use and direct back to Arab peoples instead of to international oil company profits and markets.

Iraq did, however, briefly continue to deal with foreign oil companies and in 1967, under Act 97, it concluded a series of service contracts with Elf Aquitaine of

France (Buzurgan, Abu Ghirab and Fauqi finds) and with Braspetro of Brazil (Majnoon and Nahr Umr).

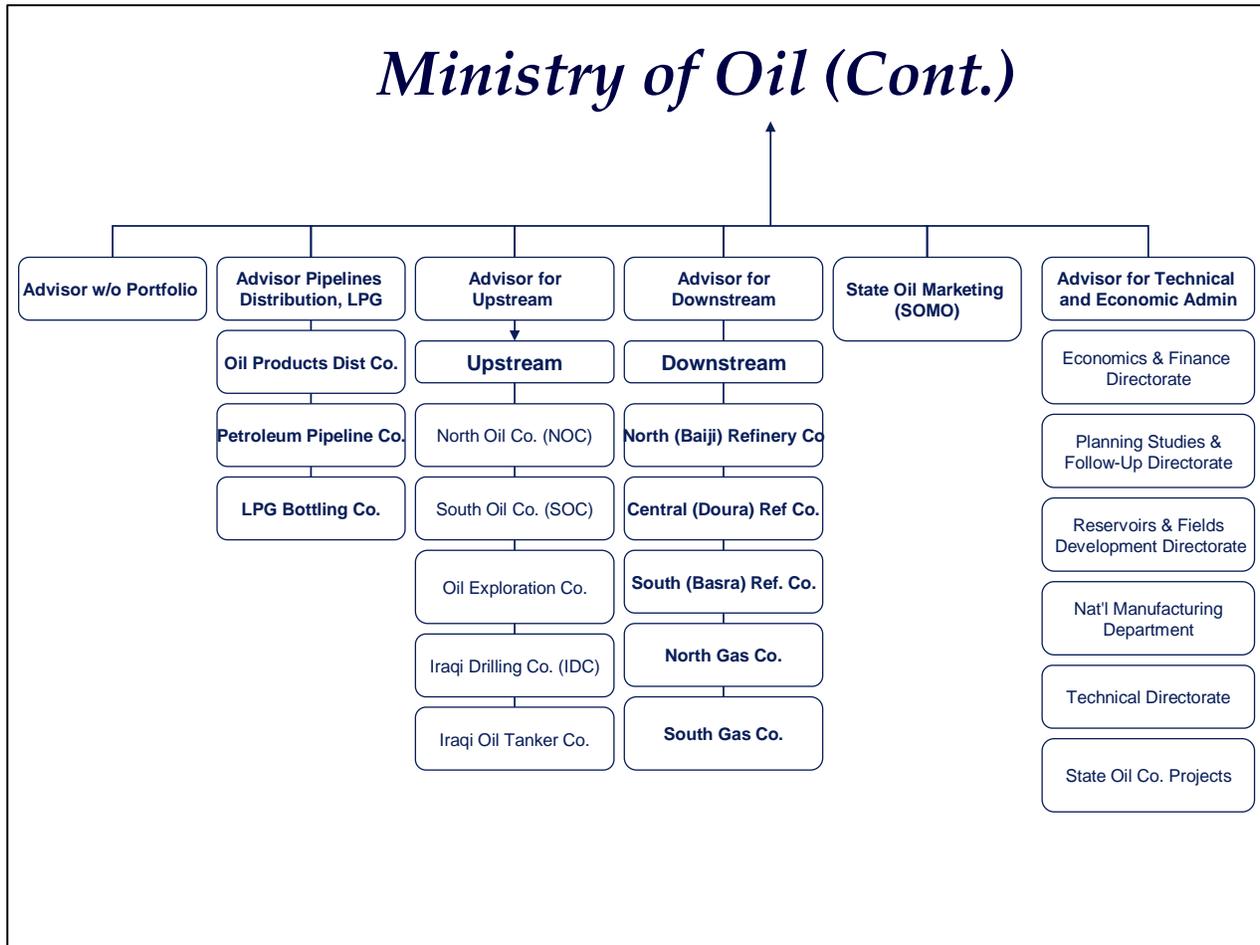
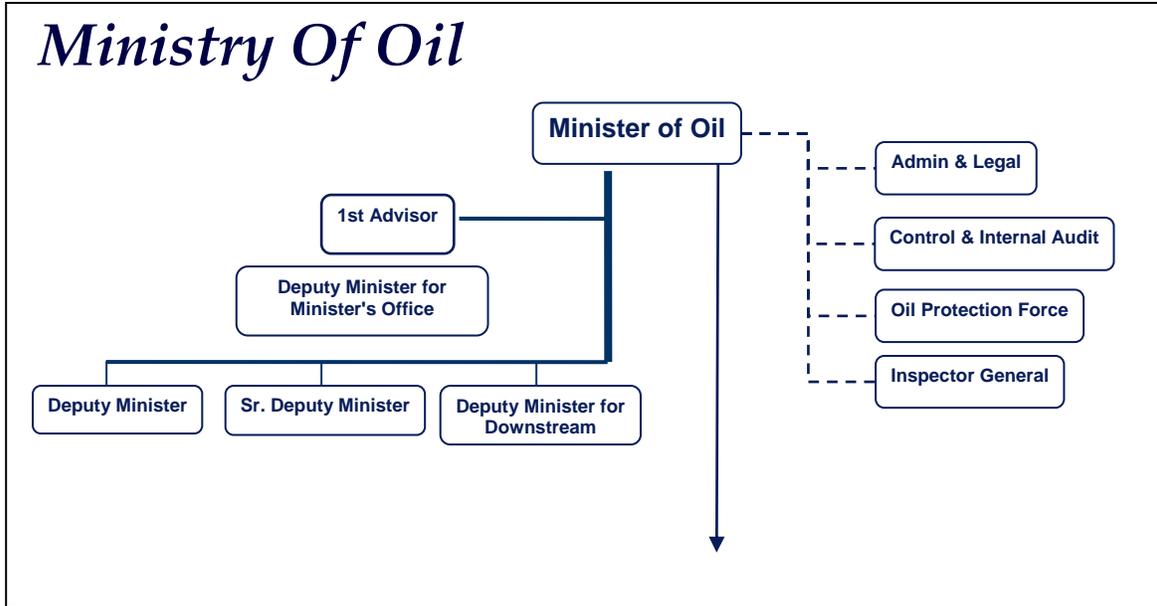
Although oil production in Iraq nearly doubled between 1968 and 1979, production levels and revenue from sales was greatly affected by the political and financial instability that was witnessed during the 1960's in Iraq. Iraq was the highest producer in the Gulf between 1975 and 1979 but again suffered a downward trend during the Iraq-Iran War. By 1980, Iraq had developed nine refineries throughout the nation that possessed a capacity of producing up to 300,000 barrels per day.

ORGANIZATION AND LEADERSHIP

Iraq established a new Ministry of Oil in 1976. The Ministry was commissioned to perform functions of planning and direct construction of petroleum sector infrastructure, and new operating companies were created under INOC. In 1980, the energy sector management structure under the Oil Ministry and the State Organization for Oil Production and Gas Distribution was adjusted to include four new state oil establishments. Then in 1987, a major reorganization of the oil sector took place and INOC became part of the Oil Ministry itself. Prior to becoming part of the ministry, INOC reported to an independent board of directors and had a hierarchy more similar to a corporate entity with a legal department, its own budget, an accounting, geology, transport and analysis department, among others, and independent hiring and firing practices.

Currently, the Iraqi oil industry remains structured around both regional lines and functional duties, generally speaking, based on the 1987 organizational plan. The Oil Minister is the functional head of the industry, with several undersecretaries reporting

directly to him. Below this hierarchy are state-run companies functionally defined, each led by a Director General and other senior staff. For all practical purposes, North Oil Company and South Oil Company are run as autonomous companies with their own management structures increasingly responding to regional leadership. Key companies have the following responsibilities: North Oil Company is responsible for eight fields in the Kirkuk area, including Kirkuk, Jambur, Bai Hassan, Khabaz, Ajil, East Baghdad, Sufalya, and Naft Khana, and has a staff of 9,400 employees. South Oil Company's main fields are Rumaila, Zubair, Majnoon, West Qurna, and Luhais and it has a staff of 14,200 employees. State Company for Oil Projects is currently managing 75 major projects associated with engineering, contracting and rehabilitation of various oil and gas plants. Iraqi Drilling Co. is located in Baghdad and Kirkuk and specializes in drilling and oil and gas well work-overs. It has 18 rigs in operation and employs 4,170 staff. State oil Marketing Company (SOMO) manages sales of crude oil outside Iraq and is in charge of importing oil products.



Operating Entity	Number of Employees
North Oil Company	9377
Guard Force (Erinyes)	13400
South Oil Company	14192
South Gas Company	2392
Iraqi Tanker (Truck) Company	1613
Gas Filling Company	3335
Ministry of Oil Headquarters	694
Oil Research and Development Company	206
Iraqi Drilling Company	4132
Oil Pipeline Company	2743
Oil Products Distribution Company	10627
Basrah Institute	176
Oil Exploration Company	1312
North Gas Company	1580
South Refinery Company	3071
Oil Training Institute	561
State Oil Projects Company	2235
North Refinery Company	5163
Middle Refinery Company	2944
State Owned Marketing Company	147

Source: Iraq Government

Iraq has considered several options for reorganizing its oil sector. In the summer of 2004, Iraq's interim government set up a Supreme Oil and Gas Council (SOGC) to formulate the public policy for managing the hydrocarbon resources of the country. The Council was charged with overseeing medium- and long-term plans for the industry, major investments and how they will be financed, foreign contracts, crude oil marketing policy, domestic oil products pricing, and the terms of service for members of the ministry of oil and the companies under its purview.⁴³

⁴³ "Iraq Establishes Supreme Oil and Gas Council," Middle East Economic Survey (MEES) July 19 2004

Iraq's Oil Sector

At its first meeting in August 2004, the Supreme Oil and Gas Council (SOGC) proposed the reestablishment of Iraq National Oil Company (INOC) to be structured as an independent holding company with regional subsidiaries. Under this initial proposal, INOC would be a public company owned by the state and responsible for all technical and commercial aspects of exploration, development and production of the country's oil and gas resources. INOC would oversee the operations of four existing operating firms including South Oil Company, North Oil Company, Iraq Drilling Co. and Oil Exploration Company. Under the proposal, a board of directors would be created for INOC, with the minister of oil serving as the board's chairman. The board would also include the CEO of INOC and oil executives and others recommended by the Ministry of Oil.⁴⁴ Proposals also circulated to change the role of the Ministry of Oil to one of regulation for the industry. Suggestions have also been circulated to make Iraq's refining companies autonomous from the Oil Ministry or even to privatize them.

Those advocating a state oil company model believe it would reduce friction over the dispensation of oil receipts by centralizing revenues and permitting oil earnings to go directly to the national treasury and to the federal budget, promoting national unity and the authority of a federal government structure. This option was supported by Iraq's technocratic elite.

Throughout 2004 to early 2007, local sectarian groups resisted a centralized structure, trying to preserve their direct access to the inflow of oil revenue. The General Union of Oil Employees, which comprise 15,000 workers of the South Oil Company, went on a 24-hour strike in July 2005, for example, demanding that a larger share of oil

47:29 A3.

⁴⁴ "Iraq to Establish National Oil Company," MEES August 30, 2004, 47:35, A4.

revenue be sent back to their local economy. The strike, designed to influence the constitutional process, came after the governor of Basra, Mohammed Mosbeh Al-Waeli, called for the central government to give a fair share of oil revenues to his region. Statements cited Basra's poverty, high unemployment, damaged sewage system and electricity grid, and limited medical services as key grievances.⁴⁵

The ambiguity of the fate of Iraq's oil sector damaged the country's already tenuous cohesion. Competition over who has the right to sign contracts for the development of new oil and gas assets was a source of instability and a driver to strife and violence in Iraq, both on a sectarian and geographical basis and within sectarian communities. Resolution of this issue will make national reconciliation more feasible.

Iraq's draft constitution left the door open for semi-autonomous regions taking the lead in developing new oil resources.

Article 108 of the constitution states that "oil and gas are the ownership of all the peoples of Iraq in all the regions and governorates." This article is interpreted as protecting oil assets as property of the Iraqi nation and therefore implying that all oil policy falls under the jurisdiction of the central government. However, Article 109 tasks the federal government with "the management of oil and gas extracted from *present* fields" while Article 111 proscribes that "all powers not stipulated in the exclusive powers of the federal government belong to the authorities of the regions and governorates that are not organized in a region. With regard to other powers shared between the federal government and the regional government, priority shall be given to the law of the regions and governorates not organized in a region in case of dispute."

⁴⁵ "Oil Workers in Southern Iraq Demand Bigger Share of Income from Exports," *International Oil Daily*, July 19, 2005.

This ambiguity has led to intense negotiations in recent months over how to structure Iraq's oil industry in the new federal Iraq to both respect the needs of local regions and still meet the constitution's stipulation that the country's oil belongs to the Iraqi people.

Article 109 reads:

“(a): The federal government, with the producing governorates and regional governments, shall undertake the management of oil and gas extracted from present fields, provided that it distributes its revenues in a fair manner in proportion to the population distribution in all parts of the country, specifying an allotment for a specified period for the damaged regions which were unjustly deprived of them by the former regime, and the regions that were damaged afterwards in a way that ensures balanced development in different areas of the country, and this shall be regulated by a law.”

“(b): The federal government, with the producing regional and governorate governments, shall together formulate the necessary strategic policies to develop the oil and gas wealth in a way that achieves the highest benefit to the Iraqi people using the most advanced techniques of the market principles and encouraging investment.”

Although the constitution suggests that oil revenues will be shared between the federal government in Baghdad and the different provincial governments, there was disagreement on just how they will be shared. A negotiating committee, including Hussain al-Shahristani, the current Iraqi oil minister, and Thamir Ghadban, a former oil

minister, was formed to handle such sticky issues. Among the compromises proposed are that oil revenues would be distributed to the regions based on per capita population.

The distribution of oil and gas resources across Iraq is not uniform, undermining the case that individual regional development and localized retention of oil revenues can meet the constitution's requirement that oil development will "benefit all the peoples of Iraq."

Most of the country's oil wealth is concentrated in the Shiite southern areas and to a lesser extent in and around Kirkuk in the North. The largest potential oil fields are located in various areas of southern Iraq. Uncertainty about who will control revenue generated from that oil is also leading to conflicts among differing Shia groups in the region over ultimate control of these assets.

There are fewer oil and gas assets located in the control of the Sunni minority in Iraq or of the central province, which will include Baghdad. Only the East Baghdad field is located near the capital city. The Kurdish Regional Government claims control of the Kirkuk field which it says falls under "disputed territories." Iraq's sparsely populated Western Desert is also believed to hold extensive unexplored resources, leaving other questions about whether the few clans in the region will be allowed to exploit such a bonanza on their own or whether other groups can assert the right to annex these areas.

Kurdish leaders have been particularly aggressive in asserting independent control of their oil assets. Kurdish leaders sent a letter to U.S. President George W. Bush in June 2004 requesting that the United States support their plans to "own and manage

Kurdistan's natural resources, and in particular our efforts to develop new petroleum resources in the Kurdistan region..."⁴⁶

In addition, since then, the Kurdish Regional Government (KRG) has started to sign contracts with foreign companies and has passed a law inside its territory asserting that any oil and gas revenues from these new deals would stay in its own province.⁴⁷ The KRG draft petroleum law—according to supporting memorandums—is aimed to “reflect and implement the extent of Kurdistan’s constitutional right to control petroleum development in its territory.”⁴⁸ The KRG draft law asserts Kurdistan’s constitutional right to directly receive revenue from future fields but also claims a right to retain a share of revenues from existing fields “unless there is an agreement in place with the government of Iraq under which Kurdistan receives a proportionate share of revenues and compensation for damage and denial of petroleum revenues by the former regime.”

The KRG draft law defines existing fields as a field that is producing an average of 20,000 b/d over any 12-month period prior to August 22, 2005. This definition would exclude all fields currently in the defined territory of the KRG. Later in the draft, in articles 3 and 4, the KRG lays claim to be the “sole authority” in respect to oil operations in Kurdistan and “disputed territories,” which it notes includes the Kirkuk oil field. The KRG draft oil law commits to coordination with the federal government on issues related to OPEC production quotas and apportioning of revenues “provided that those institutions (federal ministries) have regional representation and unanimous decision-

⁴⁶ “Iraqi Kurds Demand Right to Own and Manage Northern Oil Reserves,” MEES 47:24 June 14 2004, A4.

⁴⁷ “Kurdish Draft Oil Law Demonstrates Strident Political Ambitions In Months Ahead,” MEES 49/36, September 4, 2006, A1-3.

⁴⁸ Ibid.

making protocols.”⁴⁹ However, the flexibility for the KRG to operate independently of the Iraqi Oil Ministry will be limited by its need for access to transportation and export infrastructure. The Iraqi Ministry of Oil is telling companies that it must be involved in negotiations and approval of any oil deals.

The KRG draft oil law also paves the way for production-sharing agreements (PSA) with international oil companies. Many of the prospects inside Kurdish territory are considered to be poor quality in terms of recoverable resources. Still, despite the geologic, political and legal risk, several small international firms have signed agreements with the KRG. Norway’s DNO has already drilled a well under a PSA agreement with the KRG. Heritage Oil has a memorandum of understanding studying several fields in the Irbil-Mosul area near the Taq Taq field while Canada’s Western Oil Sands subsidiary, Western Zagros, has a PSA with the KRG for a block in the Zagros fold belt. Prime Natural Resources, Petoil of Turkey, and Oil Search of Papua New Guinea have taken stakes in the Bina Bawi field.

Shi’a politicians and individual leaders from the Anbar province are actively pursuing oil investment contracts with foreign companies for development activity in the South and West. A regional Arab oil company is pursuing a memorandum of understanding for the Kifl oil field in Najaf, and various parties are pursuing the support of Abdel Aziz al-Hakim and other Shia leaders for consideration of development of other important fields in southern Iraq. Iraqi politician Ahmad Chalabi has also allegedly been pursuing oil development deals with international companies.

As discussed above, Iraq’s main political factions have made solid progress hammering out an oil revenue sharing agreement and national oil law that would give the

⁴⁹ Ibid.

central government more power over the oil sector and determine how to distribute current and future oil revenues. It was hoped that the draft agreement, drafted and negotiated by a committee of politicians and cabinet ministers from the main Shiite, Sunni and Kurdish blocs in government, would be able to be approved by the Iraqi cabinet in mid-February. As discussed, Kurdish leader Massoum Barzani has, as this paper went to print, continued to block finalization of the draft.

The working draft of the oil law would reestablish the state-run Iraq National Oil Company (INOC) that would serve as an umbrella organization and holding company. Regional companies like the North and South Oil Companies, which would serve as operating companies, would fall under the INOC umbrella, with exports still sold solely by the state marketing company SOMO. The draft law is also said to propose that a minimum production threshold be determined as a criteria for the creation of new oil companies. There appears to be agreement from all major parties that the central government will collect oil revenues and distribute them back to the regions on the basis of population.⁵⁰

The draft law anticipates the formation of a Higher Petroleum Council—representing all factions—that would issue exploration licenses with an eye to ensure the highest revenue for the country as a whole and make sure that no one region dominated the process of letting new fields. Governorates or regions would then also have their own petroleum council committee to create development plans. These local committees would be comprised of local officials as well as federal representatives such as federal officials from the Planning and Oil ministries and the Iraqi Central Bank. These local committees

⁵⁰ Authors interviews and as reported in the media by Edward Wong, “Iraqis Near Deal On Distribution of Oil Revenues,” *The New York Times*, December 9, 2006.

would in turn send approved deals to the Oil ministry and then onto the Higher Petroleum Council which would eventually send approved programs to the Parliament for final ratification.

It is unclear what, if any, role the U.S. government is playing in guiding the deliberations on this latest breakthrough on the oil laws. This is clearly an area where the United States is in a position to provide both technical assistance and its services as an honest broker, especially should the negotiations process break down.

Given the investment needs of Iraq's oil sector, which is in even more disarray and disrepair now than before the U.S.-led campaign, the question of how to raise such sums will have to be addressed. It is likely to take between \$5bn and \$10bn to get Iraq's production capacity back to pre-war levels and an additional \$15–25bn to raise output to the 5m b/d range.⁵¹ Continued lack of definition for how prospective outside investors will participate in the sector could potentially widen the prospects for corruption and profiteering and increase acrimony among political factions vying for power inside Iraq.

At the level of overall policy, significant sums of debt and equity are difficult to organize or attract without a well-organized sector legally defined and sanctioned. Thus, the outcome of the drafting and approval of a final Iraqi petroleum law and the development of political institutions and court systems will have tremendous implications for the health of the oil sector. Over the next several years, the newly constituted Government of Iraq will need to make a large number of critical decisions on the future of the oil industry, the role of oil revenues in funding other national reconstruction efforts, and define the role of national oil company entities in the oil industry's restructuring. The ability of Iraq to attract outside funds for capacity expansion and oil

⁵¹ Author's estimates based on interviews with senior officials from Iraq's oil industry.

field development will be dependent on its ability to establish well-defined, legally authorized roles for various state oil sector institutions and provincial authorities.

In the past, state-owned entities were responsible for the production and development of virtually all of Iraq's oil and gas. Iraq's prior strategy to self-finance its industry in and outside the oil sector over the 1980s and its lengthy war with Iran left the country with high national debts and a commodity price driven economy. Moving forward, at average oil prices of \$35 a barrel, financing future capacity expansion out of current cash flow would take about \$3 billion annually or about 10% of the government's share of oil proceeds. A more ambitious expansion program might be possible under higher oil price scenarios.

Achieving higher levels of output through self-financing, though possible, will present a number of tough and potentially controversial, hard to implement decisions, including the need for rapid corporatization of the national oil company, possible underinvestment in other areas of the country's economy, and potential limitations on activities promoting oil sector transparency and best practices. Whatever strategies and options are chosen for the oil sector, and when they are chosen, will have implications for the development of the overall economy and society, for the speed and level of capacity expansion that can be achieved, and for the exposure of investment budgets to changes in oil prices.

There are three major economic impacts of self-financing oil investment. They include 1) Iraq's government will control the equity in its oil industry, making it easy to cooperate with OPEC on production sharing and capacity expansion levels 2) more of the

domestic economy will be dependent on the oil sector than if external financing is tapped
3) the country's fiscal policy will be extremely dependent on world oil price levels.

Given the likely investment needs of Iraq's oil sector—several billion just to restore oil production and more than \$20 billion to raise output to the 5 million b/d range—the question of how to raise such sums has to be addressed. If it is decided that higher levels of production are desired, it is inevitable that the potential role of outside investors and lenders will loom large.

If a role is indeed envisaged for outside investors and lenders, then that in turn will necessarily influence the restructuring policies and implementation measures required. Self-financing may be less onerous in terms of required reorganization of the sector and its legal environment but many countries that have chosen to self-finance and kept upstream sectors closed to foreign participation have found that this strategy has generally led to both production and fiscal difficulties; if not often in the immediate term, then more frequently in the longer run.

Over the next several years, the newly constituted Government of Iraq will need to make a large number of critical decisions on the future of the oil industry, the role of oil revenues in funding other national reconstruction efforts, and defining the role of the national oil company entities in the oil industry's restructuring.

Improved national oil company management will have to serve as a basis for any program to expand production. Issues related to the role of the existing oil company subsidiaries such as South Oil Company and North Oil Company will have to be tackled head on. Some governments have opted to use their NOCs as a tool to achieve wider policy objectives such as employment, community services, revenue generation, or

economic diversification. In some cases, decisions regarding the utilization of the NOC's resources have been made on political rather than economic grounds. Although this may be judged to be beneficial to the nation as a whole, additional costs and non-core responsibilities that might be imposed on the emerging new Iraqi oil institutions would affect their profitability and ability to build core functions of oil production capacity management and expansion.

The ability of Iraq to attract outside funds for capacity expansion and oil field development will be dependent on the policy steps taken by the government, including the attractiveness of fiscal terms offered to potential IOC investors; the legal and regulatory environment; and the establishment of clearly defined, mandated roles for various state oil sector institutions.

In studying the possible involvement of international oil industry investment, Iraq will have to consider the experiences of other oil producing countries:

- Upstream contractual arrangements vary widely according to the history, domestic political circumstances, and goals of the host country.
- Inadequate regard for the risks borne by IOC contractors has led to less-than-successful investment programs and an inability to tender fully offered exploration acreage in a timely manner.
- Countries with less attractive geology and/or governance have been able to overcome their risk profile and pull in massive injections of capital by offering very competitive terms.

Contracting terms remain the major means of allocating risks and rewards from exploration. Should external financing be sought, it is worth remembering that in the past countries that did not offer risk-adjusted rates of return equal to or above other nations were unable to achieve significant levels of investment, regardless of the richness of their geology (e.g.: Iran, July 2003 round; Venezuela, post 2001 tenders; Saudi gas initiative; Pertamina, 1990s).

The consequences of Iraq's decisions about the future organization of its oil sector will have major implications for future oil market trends and global oil pricing and security, just as Iraq's decisions to nationalize its oil industry in the 1960s played a pivotal role in formulating OPEC strategies and raising the price of oil worldwide. Because of the extensive size of its resource base, the manner of Iraq's participation in oil markets will be a major factor of the next decade and beyond.

If Iraq chooses to reconstitute its national oil company under strategies similar to the manner in which it participated in international oil trade in the 1960s and 1970s, it could become a leader in working together with other OPEC countries to restrain future investment in oil resources and to limit output to achieve sustainable, high oil prices for a significant period of time until backstop technologies and energy efficient technologies could be brought to bear in the market by consuming countries.

If on the other hand, Iraq were to restructure its industry to allow foreign direct investment or to privatize its oil sector, fostering increased competition among domestic operations inside the country's oil sector, the consequences are likely to lead to more competitive structures for global oil markets in general and thereby lower energy prices over time.

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