THE MINERAL INDUSTRY OF

KUWAIT

By Bernadette Michalski

The production and refining of crude oil historically provided the bulk of Government revenues. The budget in the fiscal year commencing July 1, 1995, to June 30, 1996, projects revenues in exces of $9.9 billion[1]. Nearly 86% of these revenues or $8.5 billion were anticipated from the oil sector. The oil industry accounted for about 60% of the gross domestic product which was estimated by the National Bank of Kuwait at $27.6 billion in 1995 compared with $25.3 billion in 1994.

Government Policies and Programs

Kuwait's many investments, which included participation in foreign petroleum exploration, acquisition of foreign petroleum refining and distribution networks, and participation in overseas petrochemical facilities, have aided Kuwait in developing an economy with globally dispersed assets.

Under a privatization plan, the Kuwaiti Government, which employed most of the work force, considered selling state enterprises during the next 5 years. The plan included shedding a total of $2.68 billion in equity distributed among 62 companies and privatizing services that were being subsidized or provided free by the Government. These included electric power production, transportation, and communications. The Government planned to increase the private sector's contribution to the GDP from 25% to 31% by the year 2000.

Environmental Issues

The environmental damages resulting from the Iraqi occupation had not yet been fully realized. There was no precedent upon which to draw to make an assessment. It was expected to be some time before the full extent of the damage could be understood.

Production

The Organization of Petroleum Exporting Countries (OPEC) extended Kuwait's crude oil production quota of 2 million barrels per day (Mbbl/d) for 1995. The same quota level was assigned to Kuwait since the fourth quarter of 1993. Kuwait's crude oil production for 1995 averaged 2 Mbbl/d, including about 200,000 barrels per day (bbl/d) from the Divided Zone shared with Saudi Arabia. *(See table 1.)* This is the highest production level attained since 1979 when output was 2.5 Mbbl/d.

Trade

Total exports for 1995, mostly hydrocarbon-related, were reportedly valued at $12.3 billion. Total imports, principally vehicles and other consumer goods, were valued at $7.3 billion.

Crude oil exports averaged about 1.3 Mbbl/d in 1995. Principal markets were in Japan and Europe. Much of the crude oil destined for Europe was delivered to Kuwaiti refineries there and the resulting products were marketed through the Kuwaiti distribution system.

The United States imported 218,000 bbl/d of mostly crude and unfinished oil from Kuwait in 1995, accounting for 2.5% of the U.S. petroleum imports for the year.

Structure of the Mineral Industry

The Government of Kuwait imposed few restrictions on trade or financial flows and placed considerable emphasis on the private sector to develop the economy. The petroleum and natural gas extraction and processing industries, however, were under Government control.*(See table 2.)* Total control of the Kuwait Oil Co. (KOC) and the Kuwait National Petroleum Co. (KNPC) was in effect since 1975.

In 1980, the Government established a state umbrella company for hydrocarbon operations known as the Kuwait Petroleum Corp. (KPC). This organization controlled all the state hydrocarbon companies and managed Government shareholdings in various oil ventures, including those operations in the Kuwait-Saudi Arabia Divided Zone and the acquired interests in foreign operations.

Despite the liquidation of several billion dollars in stocks and bonds since the Iraqi invasion, Kuwait retained substantial worldwide investments, including an extensive refining and distribution network in Western Europe as well as downstream investments in Eastern Europe, India, and Southeast Asia.

Commodity Review

Metals

Arabian Light Metals Co. restored its extrusion capacity to 5,000 metric tons per year (t/yr). The company used billet imported from Bahrain, Dubai, and Egypt. Demand for aluminum products grew rapidly in the light of postinvasion reconstruction.

Industrial Minerals

Cement.—Before the occupation of Kuwait, the Saudi-Kuwaiti Cement Co. took the lead in coordinating efforts to improve marketing operations and promote exports. However, war-related plant and infrastructure damage caused by retreating Iraqi troops, combined with the Nation's own heavy reconstruction demands, ended any export plans for the near future.

Fertilizers.—The Petrochemical Industries Co. (PIC) operated the Shuaybah Fertilizer Complex, which had the capacity to produce almost 1 million metric tons per year (Mt/yr) of ammonia and 800,000 t/yr of urea. This complex, particularly the urea plant, was severely damaged by Iraq, but reportedly was fully restored by 1994.

Mineral Fuels

Natural Gas.—Fully restored, the gas system has the capacity to process associated gas from as much as 3 Mbbl/d of oil production, stripping liquids for export, and using dry gas for Kuwait's domestic needs.

Before the Iraqi invasion, Kuwait's domestic supply of associated natural gas from the Raudhatain and Sabiriya Fields near the northern Iraqi border was processed in northern Kuwait, and a mixed liquids stream was delivered by pipeline to the fractionator at Shuaybah. Natural gas from the Minagish, Umm Gudair, and South Umm Gudair Fields, near the western border with Saudi Arabia, flowed as wet gas to the processing plant at Shuaybah. Natural gas from the Burgan and Maqwa-Ahmadi Fields was processed at two field recovery plants. The recovered liquids were then delivered by pipeline to Shuaybah for fractionation.

Petroleum.—Production.—Swift and extensive field reconstruction had brought Kuwait oil production to preoccupation levels by 1993. The bulk of production was derived from the Burgan complex, which included the Maqwa and Ahmadi Fields.

The country's sustainable crude oil production capacity was estimated at about 2.5 Mbbl/d, including more than 200,000 bbl/d in the Divided Zone. The Government announced its objective of augmenting sustainable crude oil production capacity to 3 Mbbl/d by the year 2000 and a further increase to 3.5 Mbbl/d by 2005. Much of the expansion in capacity was expected to result from the development of the light crude oil reservoirs in the deep Marat, Naja, and Sarjelu formations. To maximize recovery rates at existing oilfields, service contracts were concluded with British Petroleum and Chevron in recent years.

Refining.—Overall damage during the Gulf War to the Mina al Ahmadi refinery was relatively light, while the Mina Abdullah and Shuaybah refineries were extensively damaged. However, a vigorous petroleum refinery reconstruction program was implemented. As a result, by the start of 1995, total domestic refining capacity was 750,000 bbl/d, to be increased to 830,000 bbl/d capacity in 1996. The KPC continued acquiring equity in overseas refining centers, progressing toward achieving its target of attaining 400,000 bbl/d of refining capacity in Asia. Plans include a joint venture with the Indian Oil Corp.(IOC) to construct a refinery in the state of Orissa. The refinery's initial capacity was planned at 120,000 bbl/d eventually to be expanded to 180,000 bbl/d. KPC and IOC will each have 26% ownership with the remainder offered for public subscription in India. Similar joint-venture refineries were planned in China, Pakistan, and Thailand.

Kuwait's refining equity in Europe was currently about 150,000 bbl/d, mostly from refineries in Rotterdam, the Netherlands, and in Gulfhaven, Denmark. In September 1995, KPC reportedly reached an agreement with Italy's Agip for a 50% stake in the 300,000- bbl/d Milazzo refinery in Sicily.

Petrochemicals.—The Nation's principal petrochemical complex was in Shuaybah and was operated by PIC, a wholly owned subsidiary of KPC. Initially commissioned in l966, the complex was expanded to include a fertilizer complex and salt and chlorine plants.

Union Carbide Corp. of the United States entered into a joint-venture agreement with PIC, each holding 45% equity and the Bubiyan Investment Co. holding 10% equity, forming Equate, a petrochemical company. Plant construction at Shuaybah commenced in late 1995 and completion is anticipated by 1998. The plant will include a 650,000-t/yr-capacity ethane cracker to produce ethylene, 450,000 t/yr of polyethylene, and 350,000 t/yr of ethylene glycol.

Reserves

Kuwait's proven reserves of crude oil as of January 1, 1995, were officially estimated by the KOC at 96.5 billion barrels (bbl), including 2.5 billion bbl representing Kuwait's share of the Divided Zone reserves. Kuwait enjoys a reserve-production ratio of 132 years. The bulk of crude oil reserves was contained in the Greater Burgan Field, containing about 65 billion bbl.

Natural gas reserves were estimated by OPEC at 1,498 billion cubic. The reserves are entirely based on associated natural gas since intensive exploration programs during the past decade uncovered no nonassociated gas reservoirs.

Infrastructure

The pipeline network and storage facilities supporting petroleum production, processing, and transportation were fully restored.

Outlook

The Government of Kuwait has filed claims amounting to nearly $95 billion with the UN Compensation Commission in Geneva for damages from Iraq's invasion in 1990. These claims only cover damage to oil reservoirs and loss of crude oil after Iraqi forces set Kuwait's oilfields ablaze. The UN Security Council Resolution 687 provided for receipt of a portion of Iraq's oil revenues in compensation for the human and material losses suffered.

After consultations with the International Monetary Fund and World Bank, Kuwait implemented steps promoting privatization, economic liberalization, and a reduction in the welfare state. To ease the budget deficit, Kuwait plans to reduce public spending by 20% through fees on public services and by privatizing state-owned enterprises. Kuwait Petroleum Corp. realized $435 million from the sale of assets owned by its subsidiary Santa Fe International Corp.

Domestic refineries were being upgraded while new joint-venture refining projects in Europe and Asia will provide secure outlets for Kuwaiti crude in the future. If world oil demand remains strong and Government programs for cost cutting and privatization continue to be successful, the Kuwaiti budget deficit was expected to be dissolved in this decade.

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[1]Where appropriate, values have been converted from Kuwaiti Dinars to U.S. dollars at the rate of KD0.2928=US$1.00

Major Sources of Information

Kuwait Petroleum Corporation (KPC)
P.O. Box 26565-Safat
13126, Kuwait
Telephone: (965) 245-5455 and (965) 245-2686

Kuwait Oil Company
P.O. Box 9758-Ahmadi
61008, Kuwait
Telephone: (965) 398-9111

Kuwait National Petroleum Company
P.O. Box 70-Safat
13001, Kuwait
Telephone: (965) 242-0121

Petrochemical Industries Company
P.O. Box 1084
Safat 13011, Kuwait
Telephone: (965) 244-8280
Fax: (965) 244-7159

TABLE 1
KUWAIT: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity		1991	1992	1993	1994	1995 e/
Chlorine e/		--	--	25,000	35,000 r/	40,000
Cement	thousand tons	98 r/	533 r/	500 e/	1,000 r/ e/	2,000
Clay products, nonrefractory, sand lime bricks e/	cubic meters	100,000	100,000	100,000	100,000	100,000
Lime, hydrated and quicklime e/		5,000	5,000	35,000	40,000 r/	40,000
Natural gas: 2/						
Gross	million cubic meters	16,000 r/	3,600	5,170 r/	7,560 r/	7,600
Dry	do.	500	2,040	4,470 r/	5,420 r/	5,990
Natural gas liquids	thousand 42-gallon barrels	--	12,400 r/	40,000	42,000 r/	42,000
Nitrogen, N content of ammonia		--	140,000	316,900	389,400 r/	492,800 3/
Petroleum:						
Crude 2/	thousand 42-gallon barrels	68,300	380,000	683,300	742,000	752,265 3/
Refinery products:						
Gasoline, motor	do.	7,670 r/	9,380 r/	10,180 r/	12,000 r/ e/	12,000
Kerosene	do.	9,320 r/	11,970	16,315 r/	18,000 r/ e/	18,500
Distillate fuel oil	do.	6,490 r/	20,440 r/	43,362 r/	50,000 r/ e/	50,000
Residual fuel oil	do.	13,240 r/	61,685	72,815 r/	80,000 r/ e/	80,000
Other	do.	1,860 r/	10,875 r/	21,316 r/	60,000 r/ e/	60,000
Total	do.	38,580 r/	114,350 r/	163,988 r/	220,000 r/ e/	220,500
Salt		--	800 r/	40,863 r/	36,897 r/	38,000
Sodium and potassium compounds, caustic soda		--	16,000 r/	25,000 r/	30,000 r/	40,000
Sulfur:						
Elemental, petroleum byproduct		2,000 r/	2,370 r/	2,400 r/	2,300 r/	2,200 3/
Sulfuric acid		--	-- r/	5,000	5,000 e/	5,000
Urea		--	140,000	637,000 r/	687,000 r/	850,000

e/ Estimated. r/ Revised.
1/ Table includes data available through May 1, 1996.
2/ Includes Kuwait's share of production in the Kuwait-Saudi Arabia Divided Zone.
3/ Reported figure.

TABLE 2
KUWAIT: STRUCTURE OF THE MINERAL INDUSTRY FOR 1995

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of facilities	Annual capacity
Nitrogen:				
Ammonia		Petrochemical Industries Co. (Government, 100%)	Shuaybah	1,000
Urea		do.	do.	800
Petroleum, crude	million barrels	Kuwait Oil Co. (Government, 100%)	Burgan	400
Do		do.	Maqwa	25
Do		do.	Raudhatain	80
Do		do.	Sabriya	30
Do		do.	Ahmadi	20
Do		do.	Minagish	50
Do		do.	Umm Gudair	50
Do		do.	Bahra	15
Do		Wafra Oil Co. (Saudi Arabian Texaco 50%; Kuwait Oil Co., 50%)	Wafra	35
Do		do.	South Fuwaris	2
Do		do.	South Umm Gudair	10
Do		Arabian Oil Co. (Japanese Petroleum Trading Co., 80%; Saudi Arabia, 10%; Kuwait, 10%)	Khafji	100
Do		do.	Hout	10
Petroleum, products	million barrels	Kuwait National Petroleum Co. (Government, 100%)	Mina Al-Ahmadi	400
Do		do.	Shuaybah	150
Do		do.	Mina Abdulah	245