



2007 Minerals Yearbook

IRAQ [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF IRAQ

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The mineral industry of Iraq was adversely affected by the armed civil conflict that continued during 2007. According to a 2008 Iraq review by the International Monetary Fund, the violence indicators, which included multiple fatality bombings and civilian casualties, reached their peak in 2006 and continued throughout most of 2007 but substantially decreased by yearend 2007. Similarly, the number of attacks on pipelines, oil installations, and oil personnel, which remained high during the first 9 months of 2007, dropped sharply in the last 3 months of the year. Nevertheless, Iraq, which held about 9.3% of the world's proven oil reserves and 1.8% of the world's proven natural gas reserves, produced 2.7% of the world crude oil production in 2007 according to BP p.l.c.'s 2008 review of world energy (BP p.l.c., 2008, p. 6, 9, 22; International Monetary Fund, 2008, p. 5).

Hydrocarbons were Iraq's main exports and accounted for 60% of the country's gross domestic product. Eighty percent of the 2.0 million barrels per day of crude oil produced in Iraq was exported at an annual average price of \$63 per barrel. The preliminary value of revenue from crude oil exports was \$47.2 billion in 2007 compared with \$43.7 billion in 2006 (International Monetary Fund, 2008, p.19, 20).

Production

In 2007, crude production decreased by 5.6% compared with that of 2006 and refinery production also fell significantly. Natural gas output was unchanged. Data on mineral production are provided in table 1.

Structure of the Mineral Industry

The Ministry of Industry and Minerals (MIM) administered the activities of the nonfuel mineral sector in Iraq and the Ministry of Oil was the official agency in charge of the activities of the hydrocarbon sector. Although, the Cabinet approved a new Iraq Hydrocarbon Law on February 26, 2007, the proposed law was soon disputed and was not sent to the Parliament for approval during 2007. In accordance with investment law No. 13 of 2006, which covers all areas of investment other than the oil and gas sector, the Government was seeking investors to create joint ventures to rehabilitate public industrial establishments, including 16 cement plants and fertilizer and float glass plants. Table 2 is a list of major mineral industry facilities.

Commodity Review

Industrial Minerals

Cement.—Iraq produced more than 4 million metric tons (Mt) of cement in 2007, which was well below the design capacity of its plants and far less than market demand. The

design capacity of cement production for the existing and planned cement plants in Iraq in 2007 was estimated to be 41 million metric tons per year (Mt/yr). It includes the design capacities of the Government-owned cement plants, which were estimated to be 8.2 Mt/yr; the cement plants in the area under the control of Kurdistan Regional Government, which were estimated to be 7.2 Mt/yr; and the combined expected capacities of the new licensed plants of 25.6 Mt (U.S. Agency for International Development, 2007, p. 2).

As part of the Government efforts to encourage entrepreneurship and privatization, a total of 20 licenses to build new cement plants had been awarded as of yearend 2007. Eight of these new plants would be located in the Governorate of Al-Anabar, 6 in the Governorate of Al-Muthanna, 3 in the Governorate of Karbala, 2 in the Governorate of An-Najaf, and 1 in the Governorate of Ninawa. In addition, Orascom Construction Industries of Egypt completed the rehabilitation of two production lines at the Tasluja cement plant, which was located near the city of As-Suleimaniyah in northern Iraq. FLSmidth Group of Denmark and Lafarge S.A. of France planned to sign partnership agreements with the MIM to restore the Government-owned cement plants (Global Cement Magazine, 2007; U.S. Agency for International Development, 2007, p. 25).

Mineral Fuels

Natural Gas.—Iraq held 3.15 trillion cubic meters of proven gas reserves. However, 60% of the 33 million cubic meters per year of natural gas that was produced was flared. Royal Dutch Shell p.l.c. of the Netherlands (Shell), proposed a plan to create a joint venture with the Iraqi Ministry of Oil to capture flared natural gas produced in association with oil production in the Al Basra Governorate in southern Iraq. Shell intended to build a gas processing facility that would supply natural gas to local markets and export surplus gas (Hafidh, 2007).

Petroleum.—DNO International ASA of Norway moved forward with its drilling operations and production testing in the Tawke area of Kurdistan, northern Iraq, following the signing of a production-sharing agreement with the Kurdistan Regional Government in 2006. DNO held a 55% working interest in the Tawke exploration field and a 40% interest in each of the Dohuk and the Erbil exploration field (DNO International ASA, 2008).

Outlook

Iraq's mineral industry will play a substantial role in the reconstruction and rehabilitation phase in Iraq as the country embarks on achieving sound economic development to make up for destruction caused by wars and years of economic sanctions. The speed and ways in which the post-conflict rehabilitation and construction plans are executed will have a lasting effect not only on Iraq's economy but also on that of the whole

region. Thus, the demand for mineral products in general and for cement, iron and steel, and other construction materials in particular is expected to increase in the short term and mid term if the country's political stability and national security are achieved and sustained.

References Cited

BP p.l.c., 2008, BP statistical review of world energy—June 2008: London, United Kingdom, BP p.l.c., 45 p.
 DNO International ASA, 2008, Update on projects in Kurdistan: Oslo, Norway, DNO International ASA press release, March 14. (Accessed March 25, 2009, at <http://www.dno.no/Press--Media/Press-Releases/2335/DNO-International-ASA---Update-on-projects-in-Kurdistan>.)

Global Cement Magazine, 2007, Firms vie for \$500 million Iraq cement deals: Global Cement Magazine, September, p. 56.
 Hafidh, Hassan, 2007, Shell eyes developing Iraqi gas field - Iraqi official: Dow Jones & Company, Inc., March 13. (Accessed March 14, 2009, at http://www.rigzone.com/news/article.asp?a_id=42463.)
 International Monetary Fund, 2008, Iraq—Second review under the stand-by arrangement and financing assurance review: Washington, DC, International Monetary Fund, December 29, 42 p.
 U.S. Agency for International Development, Iraq Private Sector Growth and Employment Generation (IZDIHAR) Project, 2007, An overview of the Iraq cement industry: Washington, DC, U.S. Agency for International Development, November, 28 p.

TABLE 1
 IRAQ: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2003	2004	2005	2006	2007 ^c	
INDUSTRIAL MINERALS						
Cement, hydraulic: ^c						
Portland	1,901 ³	2,500	3,000	3,500	4,500	
White	54 ³	15	15	15	15	
Nitrogen, N content of ammonia ^c	90 ³	30	30	10	10	
Phosphate rock, beneficiated, phosphorus pentoxide content ^c	10 ³	1	1	1	1	
Salt ^e	50 ³	50	25	25	25	
Sulfur, elemental: ^c						
Native, Frasch	50	--	--	--	--	
Byproduct ⁴	1	20	30	30	30	
Total	51	20	30	30	30	
MINERAL FUELS AND RELATED MATERIALS						
Gas, natural:						
Gross	million cubic meters	4,000	5,000	4,000	5,000	5,000
Dry	do.	1,500	1,800	2,700 ^r	1,500 ^r	1,500
Natural gas plant liquids	thousand 42-gallon barrels	7,300 ^r	11,000 ^r	11,000 ^{r,e}	11,000 ^{r,e}	11,000
Petroleum:						
Crude, including lease condensate	do.	503,000 ^r	769,000 ^r	698,000 ^r	716,000 ^r	676,000
Refinery products:						
Liquefied petroleum gas	do.	6,000	18,000	21,000	21,000	6,000
Gasoline	do.	31,000	30,000	25,000	25,000	19,000
Kerosene and jet fuel	do.	20,000	16,000	12,000	12,000	10,000
Distillate fuels	do.	38,000	40,000	28,000	28,000	19,000
Residual fuels	do.	64,000	79,000	84,000	87,000	58,000
Other	do.	--	--	4,000	4,000	4,000
Total	do.	159,000 ^r	183,000 ^r	174,000 ^r	177,000 ^r	116,000

^rRevised. do. Ditto. -- Zero.

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown.

¹Table includes data available through March 31, 2009.

²In addition to the commodities listed, secondary aluminum, clay, fertilizers, gypsum, secondary lead, lime, limestone, industrial sand (glass or silica), sand and gravel, and stone also may have been produced but available information is inadequate to estimate output.

³Reported.

⁴From petroleum and natural gas processing.

TABLE 2
IRAQ: STRUCTURE OF THE MINERAL INDUSTRY IN 2007

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity	
Cement:				
Portland	Southern Cement Co. (Government, 100%)	Al Jinoob plant, Samawa; Al Najaf Al Ashref plant, Kufa; Al Sadaa plant, near Sadat Al Hindia; Karbala plant, Karbala; Kufa I plant, Kufa; Muthena plant, near Muthena; As Samawa plant, Samawa; and Um Qasr plant, Um Qasr	7,500,000 ¹	
Do.	Iraqi Cement Co. (Government, 100%)	Al Qaim plant, Al Qaim; Al Tamim plant, Kirkuk; Fallujah plant, Fallujah; and Kubaisa plant, Kubaisa	5,200,000 ¹	
Do.	Northern Cement Co. (Government, 100%)	Badoosh I, II, and III plants, Mosul; Hammam Al Alil I and II plants, Mosul; and Sinjar plant, Mosul	3,740,000 ¹	
Do.	United Cement Co. (Kurdistan Regional Government)	Bazian plant at Sarchinar, near Hayasi	2,900,000 ²	
Do.	Tasluja Cement Plant (Kurdistan Regional Government)	Tasluja plant, near Suleimaniyah	2,300,000	
White	Iraqi Cement Co. (Government, 100%)	Fallujah White Cement plant, Fallujah	300,000 ¹	
Fertilizers	State Company for Fertilizers (Government)	Ammonia plant at Abu Al-khasib, near Basra	660,000 ¹	
Do.	do.	Urea plant at Abu Al-khasib, near Basra	1,060,000 ¹	
Do.	do.	Urea plant at Bayji	500,000	
Do.	State Enterprise for Phosphate (Government)	Phosphatic fertilizer plant at Al-Qaim	130,000 ¹	
Petroleum:				
Crude	North Oil Co. (Government)	Ain Zaleh, Ajil, Balad, Bai Hassan, East Baghdad, Jambur, Kirkuk, Sufaiya, Tikrit, and West Butmah Fields	(3)	
Do.	South Oil Co. (Government)	Abu Ghraib, Amara, Burzurgan, Fakka, Halfaya, Luhais, Majnoon, Nahr Umar, North Rumaila, South Rumaila, West Qurna, and Zubair Fields	(3)	
Refined products ⁴	42-gallon barrels per day	Midland Refineries Co. (Government)	Daura refinery at Daura	110,000 ¹
Do.	do.	North Refineries Co. (Government)	Baiji (North and Salahudin) refineries at Baiji	310,000 ¹
Do.	do.	South Refineries Co. (Government)	Basra refinery at Basra	150,000 ¹
Phosphate rock	State Enterprise for Phosphate (Government)	Akashat	NA	
Sulfur	Misraq Sulphur State Enterprise (Government)	Near Al Qayyarah	820,000 ¹	

Do., do. Ditto. NA Not available.

¹Actual production was significantly less than design capacity.

²Under construction.

³Average production capacity for all Iraqi fields in 2006 was about 2,000,000 barrels per day (bbl/d).

⁴In addition to the three large refineries, several small (7,000- to 10,000-bbl/d-capacity) topping plants were in various stages of repair. A 10,000-bbl/d-capacity plant at Najaf opened in 2006.