



# 2007 Minerals Yearbook

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## SYRIA

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# THE MINERAL INDUSTRY OF SYRIA

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Syria produced 2.4% of the world's phosphate rock output in 2007 and was the world's eighth ranked phosphate rock producing country (Jasinski, 2009). Syria also produced asphalt, cement, crude oil, gypsum, marble, natural gas, nitrogen fertilizers, refined oil, steel, sulfur, and volcanic tuff.

## Minerals in the National Economy

In 2007, the mineral industry (mainly hydrocarbons) accounted for 27% of Syria's gross domestic product (GDP) at market prices. Preliminary estimates of petroleum-related proceeds in the budgetary revenue were 4.9% of the GDP, which was down from 7.3% in 2006 and 11.2% in 2003. Net petroleum exports, which averaged 184,000 barrels per day (bbl/d) in 2007, represented 37.9% of total exports. Exports of phosphate rock, which were 3.2 million metric tons (Mt) in volume, represented 0.4% of the value of total exports (U.S. Energy Information Administration, 2008; International Monetary Fund, 2009, p. 14).

## Production

In 2007, crude oil production averaged 370,000 bbl/d (380,000 bbl/d, including condensates), which represented a decrease of about 2% compared with 2006 production levels. The decrease in 2007 was a continuation in the downward trend since the peak in production of 615,000 bbl/d that was achieved in 1994. Similarly, natural gas output dropped slightly in 2007 compared with that of 2006. Production of cement increased by 8% and production of salt decreased by 39% in 2007 compared with that of 2006 (table 1).

## Structure of the Mineral Industry

The Ministry of Petroleum and Mineral Resources (MoPMR) was the Government agency that managed the mining sector activities through such state-owned companies as Banias Refinery Co., General Company for Homs Refinery, General Company for Marble and Asphalt (GCMA), General Company for Phosphate and Mines (GCPM), General Establishment for Geology and Mineral Resources, Syrian Company for Gas Transportation, Syrian Company for Petroleum Transportation, Syrian Gas Co. (SGS), and Syrian Petroleum Co. (SPC). SPC was also a partner in several 50-50 equity share joint ventures. These included Al-Furat Petroleum Co. [with Royal Dutch Shell plc of the Netherlands and Himalaya Energy Syria B.V. (a joint venture of Furlin Investments S.A.R.L.—which was a subsidiary of China National Petroleum Company International—Nile Ganga B.V. of India, and Oil and Natural Gas Corp.)]; Deir Ezzor Petroleum Co. (with Total S.A. of France); and Hayan Petroleum Co. (with INA Naftaplin of Croatia) (table 2). Phosphate rock mining was conducted solely by GCPM, which also produced salt and silica sands.

GCMA also produced gypsum, marble, and volcanic tuff. Cement production continued to be dominated by Government-owned General Organization for Cement and Construction Materials, which was one of the public establishments under the jurisdiction of the Ministry of Industry. However, some permits were issued to privately owned companies, which were planning to build new cement plants that would begin production in 2009.

## Commodity Review

### Industrial Minerals

**Cement.**—Syrian Cement Co. [a joint venture between Orascom Construction Industries S.A. of Egypt (75%) and Mas Economic Group, a private Syrian enterprise (25%)] signed an engineering, procurement, and construction agreement with FLSmidth of Denmark to build a new cement plant in the northwestern part of Syria near the Turkish border. The construction of the 3-million-metric-ton-per-year (Mt/yr)-capacity plant was expected to take 2 years at a cost of \$360 million (Orascom Construction Industries S.A., 2007).

**Phosphate Rock.**—Production of rock phosphate from the Ash Sharqiya and the Khunayfis Mines increased slightly (by 1%) to 3.7 Mt in 2007. GCPM was planning to expand its phosphate rock mining operations and increase its phosphate fertilizer production for local use and export to meet its goal of exporting 6 Mt/yr of phosphate by 2010. This ambitious goal could be achieved only when and if the railway between the Homs and the Tartous Governorates is upgraded; more than 20 50-metric-ton-capacity trailers are added; and the Port of Tartous, from which the phosphate rock and phosphate-based fertilizers would be exported, is overhauled (APS Review Oil Market Trends, 2008).

### Mineral Fuels

**Petroleum.**—Noor Petroleum Co., which was a subsidiary of Noor Financial Investment Co. of Kuwait, signed an agreement with the MoPMR to conduct a feasibility study for the establishment of an oil refinery at Deir Ezzor, which is located in northeastern Syria. The refinery would have a production capacity of 140,000 bbl/d and would cost \$1.5 billion to build.

In November, the MoPMR entered into a joint-venture agreement with the Ministry of Energy and Petroleum of Venezuela, the Ministry of Petroleum of Iran, and SKS Oil & Gas International Ltd. of Malaysia to create another oil refinery east of the city of Homs. The Ministry of Energy and Petroleum of Venezuela would hold a 34% interest in the new company; the Ministry of Petroleum of Iran, 26%; SKS Oil & Gas International Ltd., 16%; and the MoPMR, 15%.

## Outlook

The Syrian Government continues its gradual liberalization and transformation into a market economy by facilitating the influx of regional and international investment into the country. The mining sector, which is the recipient of the majority of foreign capital flow, is expected to grow during the next 5 years (despite the existing downward trend in petroleum production) to meet the country's increasing need for petroleum and gas products. The Government also plans to begin increasing phosphate rock production from its sizable reserves (estimated by the Government to be 2 billion metric tons). Revenue from phosphate exports would be used to offset the decline in revenue from hydrocarbon exports as the country becomes a net oil importer. Privatization of such sectors of the mineral industry as cement and steel is expected to introduce new technologies that will result in an increase in production capacity.

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TABLE 1  
SYRIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity	2003	2004	2005	2006 <sup>c</sup>	2007 <sup>c</sup>
Cement, hydraulic	4,824	4,757	4,700	4,700	5,100
Gas, natural:					
Gross <sup>c</sup>	9,401 <sup>2</sup>	9,700	8,300	8,600	8,500
Dry	6,850	7,110	6,090	6,290 <sup>2</sup>	6,020
Gypsum	376,715	431,561	467,000	443,800 <sup>2</sup>	447,900 <sup>2</sup>
Natural gas plant liquids <sup>c</sup>	3,650	3,650	3,650	3,650	3,650
Nitrogen:					
N content of ammonia	161,100	115,000	120,000 <sup>e</sup>	120,000	120,000
N content of urea	90,700	91,000	91,000 <sup>e</sup>	91,000	91,000
Petroleum:					
Crude	182,200 <sup>r</sup>	168,400 <sup>r</sup>	156,000 <sup>r,2</sup>	137,640 <sup>r,2</sup>	135,000
Refinery products:					
Liquefied petroleum gas	3,318 <sup>r</sup>	3,318 <sup>r</sup>	3,805 <sup>r</sup>	3,724 <sup>r,2</sup>	1,680
Gasoline	10,739 <sup>r</sup>	11,413 <sup>r</sup>	12,958 <sup>r</sup>	12,921 <sup>r,2</sup>	12,921 <sup>2</sup>
Naphtha	5,812 <sup>r</sup>	7,028 <sup>r</sup>	7,456 <sup>r</sup>	7,456 <sup>r,2</sup>	7,100
Kerosene and jet fuel	1,919 <sup>r</sup>	2,391 <sup>r</sup>	2,170 <sup>r</sup>	2,121 <sup>r,2</sup>	3,250
Distillate fuel oil	29,139 <sup>r</sup>	30,758 <sup>r</sup>	27,341 <sup>r</sup>	29,348 <sup>r,2</sup>	29,346 <sup>2</sup>
Residual fuel oil	31,921 <sup>r</sup>	30,210 <sup>r</sup>	30,942 <sup>r</sup>	32,900 <sup>r,2</sup>	32,900
Asphalt <sup>c</sup>	2,500 <sup>2</sup>	2,500 <sup>r</sup>	2,500 <sup>r</sup>	2,500 <sup>r,2</sup>	2,500
Other	850 <sup>r</sup>	900 <sup>r</sup>	900 <sup>r,e</sup>	900 <sup>r,e</sup>	900
Total	86,198 <sup>r</sup>	88,518 <sup>r</sup>	88,072 <sup>r</sup>	91,870 <sup>r,2</sup>	90,600
Phosphate:					
Phosphate rock, mine output:					
Gross weight	2,414	2,883	3,500 <sup>2</sup>	3,664 <sup>2</sup>	3,678 <sup>2</sup>
P <sub>2</sub> O <sub>5</sub> content	750	890	1,080	1,130	1,135 <sup>2</sup>
P <sub>2</sub> O <sub>5</sub> equivalent:					
Phosphatic fertilizers	91,000	127,000	130,000 <sup>e</sup>	130,000	130,000
Phosphoric acid	73,000	97,000	100,000 <sup>e</sup>	100,000	100,000
Salt	128,265	141,445	110,000	133,000 <sup>2</sup>	81,000 <sup>2</sup>
Steel: <sup>c</sup>					
Crude	70,000 <sup>2</sup>	70,000	70,000	70,000	70,000
Semimanufactured	600,000 <sup>2</sup>	800,000 <sup>2</sup>	800,000	800,000	80,000

See footnotes at end of table.

TABLE 1--Continued  
SYRIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity	2003	2004	2005	2006 <sup>c</sup>	2007 <sup>c</sup>	
<b>Stone:<sup>c</sup></b>						
Dolomite, refractory grade	thousand metric tons	5,000	5,000	5,000	5,000	5,000
Gravel and crushed rock	do.	6,000	6,000	6,000	6,000	6,000
Marble blocks	thousand square meters	340	340	340	340	350
Sand, construction	thousand cubic meters	450	450	450	450	450
Sand, industrial	thousand metric tons	850	850	850	850	850
Volcanic tuff	do.	650	650	650	650	760
<b>Sulfur</b>						
Byproduct of petroleum and natural gas		13,516	14,996	36,074	43,000 <sup>2</sup>	40,650 <sup>2</sup>
<b>Sulfuric acid:</b>						
Gross weight		250,000	362,000	360,000 <sup>c</sup>	360,000	360,000
S content		82,000	118,000	117,000 <sup>c</sup>	117,000	117,000

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>1</sup>Revised. do. Ditto.

<sup>1</sup>Table includes data available through March 31, 2009.

<sup>2</sup>Reported figure.

TABLE 2  
SYRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2007

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity	
Cement	Tartous Company for Cement and Building Materials <sup>1</sup>	Tartous	1,802.	
Do.	al-Chaba Cement and Building Materials <sup>1</sup>	Aleppo	923.	
Do.	Arabian Cement Company for Cement <sup>1</sup>	do.	898.	
Do.	Adra Company for Cement and Building Materials <sup>1</sup>	Adra	845.	
Do.	Syrian Company for Manufacturing Cement <sup>1</sup>	Hama	432.	
Do.	Rastan Company for Cement and Building Materials <sup>1</sup>	Rastan	131.	
Do.	Military Housing Cement Group (Government, 100%)	Musselemieh	336.	
Natural gas	million cubic meters	ConocoPhillips Co.	Processing plant at Deir ez-Zor	4,750.
Do.	do.	Al-Furat Petroleum Co. [Syrian Petroleum Co. (SPC), 50%, and Royal Dutch Shell plc and Himalaya Energy Syria B. V., 50%]	Processing plant at Omar	2,400.
Do.	do.	Hayan Petroleum Co. [INA Industrija Nafta d.d.-Naftaplin, 50%, and Syrian Petroleum Co. (SPC), 50%]	Processing plant at Palmyra	2,200.
Do.	do.	do.	Processing plant at Jebissa	1,060.
Do.	do.	do.	Processing plant at Suwaidiyah	240.
<b>Nitrogen:</b>				
Ammonia and urea <sup>2</sup>	General Fertilizers Co. (subsidiary of General Organization for Chemical Industries)	Homs	256 ammonia; 137 urea.	
Fertilizers	do.	do.	109.	
<b>Petroleum:</b>				
Crude	thousand 42-gallon barrels	Al-Furat Petroleum Co.	al-Thayyem	20,000.
Do.	do.	do.	al-Izba	18,300.
Do.	do.	do.	Omar/Omar North	14,600.
Do.	do.	do.	Maleh/Azraq	11,000.
Do.	do.	do.	Sijan	11,000.
Do.	do.	do.	Jarnof/Saban	9,100.
Do.	do.	do.	al-Ward	7,300.
Do.	do.	do.	Tanak	6,600.
Do.	do.	Syrian Petroleum Co. (SPC)	Suwaidiyah, Jebissa, and Karatchok	45,600.

See footnotes at end of table.

TABLE 2--Continued  
 SYRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2007

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum--Continued:				
Crude--Continued	thousand 42-gallonbarrels	Deir Ezzor Petroleum Co. [Syrian Petroleum Co. (SPC), 50%, and Total S.A., 50%]	Qahar	10,950.
Do.	do.	do.	Jafra	4,700.
Do.	do.	do.	al-Mazraa and Attala North	3,700.
Do.	do.	al-Khabur Petroleum Co. [Syrian Petroleum Co. (SPC), 50%]	Kishma	3,650.
Do.	do.	Tanganyika Oil Co.	Tishreen	2,190.
Refined	do.	Banias Refinery Co. (Government, 100%)	Banias	49,300.
Do.	do.	General Company for Homs Refinery (Government, 100%)	Homs	39,100.
Phosphate:				
Phosphate rock		General Company for Phosphate and Mines (GCPM) (Government, 100%)	Ash Sharqiya (A and B Mines)	3,050.
Do.		do.	Khunayfis	800.
Phosphatic fertilizers		General Fertilizers Co.	Homs	450.
Phosphoric acid		do.	do.	165.
Salt		General Company for Phosphate and Mines	Deir al-Zour	72.
Steel:				
Billet		General Company for Iron and Steel Products (Government, 100%)	Hama	60.
Rolled		Merri Family	Tartous	300.
Do.		Arab Steel Co.	Lattakia	250.
Do.		JoudCo Steel	do.	150.
Do.		Middle East Steel Industries	Yabroud	140.
Do.		General Company for Iron and Steel Products	Hama	78.
Sulfur	metric tons	Homs Refinery Co.	Homs	14,600.
Do.	do.	do.	Processing plant at Suwaidiyah	7,410.
Do.	do.	Syrian Petroleum Co. (SPC)	Processing plant at Jebissa	7,300.
Sulfuric acid		General Fertilizers Co.	Homs	560.

Do., do. Ditto. NA Not available.

<sup>1</sup>Subsidiary of General Organization for Cement and Building Materials, which is 100% Government owned.

<sup>2</sup>Expressed in nitrogen equivalent.