

2007 Minerals Yearbook

EGYPT [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF EGYPT

By Harold R. Newman

Natural gas, petroleum, and petroleum products continued to be the leading mineral commodities produced in Egypt in 2007. The mineral fuels sector continued to be a vital segment of and a major contributor to the economy. Government efforts with respect to the mineral industry were focused mainly on the further development of the country's mineral resources. Geologic studies have identified resources of different minerals, such as gold, granite, marble, and phosphate rock. The Government continued to work on a national plan to develop investment opportunities for the country's mineral reserves. The Government signed a memorandum of understanding with the International Finance Corp. to help revise the country's antiquated mining laws (Nones, 2007).

The Suez Canal was vital to the Egyptian economy and contributed about 4% of the country's gross domestic product (GDP). Revenues from the Suez Canal reached a record \$4.6 billion in 2007, which was a 21% increase compared with the \$3.8 billion collected in 2006. The Suez Canal Authority, which manages the waterway for the Government, was deepening the canal in an effort to accommodate larger ships, particularly oil tankers, as well as developing its port infrastructure (Middle East Economic Digest, 2008).

Minerals in the National Economy

Egypt's natural resources included iron ore, natural gas, petroleum, and phosphates. Natural gas was found mainly in the Nile Delta, off the Mediterranean seashore, and in the Western Desert. Petroleum was found primarily in the Gulf of Suez and in the Western Desert. The energy sector was the leading industrial activity in the country and accounted for 12% of the country's GDP. Exports of petroleum and related products amounting to \$2.7 billion (U.S. Department of State, 2008).

Government Policies and Programs

The Ministry of Industry and Mineral Resources, through the Egyptian Geological Survey and Mining Authority (EGSMA), was the Government agency responsible for regulating the exploration and prospecting for and exploitation of all mineral deposits in Egypt. The law that regulated the mining sector was the Mining and Petroleum Code law No. 66 of 1953. The Electricity and the Energy Ministries were the main Government agencies responsible for the energy sector.

Production

Egypt was a significant producer of petroleum. In addition, Egypt also produced metals, including aluminum, ferroalloys, iron ore, secondary copper, and steel. The country also produced industrial minerals, including cement, construction materials, granite, gypsum, limestone, and raw materials for glass (table 1).

Structure of the Mineral Industry

Ownership of the mineral producing and processing facilities was a mix of Government and private. Natural gas, petroleum, and petroleum products plants were the predominate producers controlled by the Government. Although the Government continued with its efforts to partially privatize mining and metal assets, it continued to play a decisive role in industry and the economy. Table 2 is a list of the major mineral industry facilities.

Mineral Trade

Trade played an important role in the Egyptian economy. The country was dependent upon export markets to generate income and upon imports for raw materials. The leading imports included machinery and equipment. The leading exports included chemicals, crude and refined petroleum, and metal products. The chief trading partners were, in order of the amount of trade, the European Union countries, the United States, and Japan (U.S. Census Bureau, 2007).

Commodity Review

Metals

Aluminum.—Aluminium Co. of Egypt (Egyptalum) announced that it would invest \$264 million during the next 3 years to increase its production capacity. Egyptalum was planning to expand its capacity from 230,000 metric tons per year (t/yr) to 320,000 t/yr by 2010. Further details of the expansion plans were not reported. The Ministry of Investment had planned to sell a 17% stake in the state-owned firm but it postponed the sale owing to a low demand for shares amid a slump in most Gulf Arab markets. Only 7.8% of Egyptalum was traded on the Egyptian bourse (El Dahan, 2007b).

Copper.—El Sewedy Cables Egypt announced that it had obtained approval to establish Red Sea Copper Co. (a free zone company) for the development of a copper smelter/refinery to be located at Ain Sokhna on the Red Sea coast. This would be the region's first copper refinery. The plant would produce 300,000 t/yr of copper cathodes. The plant would be a joint venture between local El Sewedy Cables and Glencore International AG of Switzerland. Glencore would provide 1 million metric tons per year (Mt/yr) of copper concentrates through a long-term supply agreement. Sewedy Cables would take 40% to 50% of the facility's output for its own use, with the rest to be sold by Glencore on the international market. The cost of the facility was estimated to be about \$1 billion, which was up from the original cost estimate of \$850 million. Construction would take an estimated 30 months (Middle East Economic Digest, 2007a).

Gippsland Ltd. of Australia announced the initiation of an exploration program at Abu Swayel, which was a copper-nickel

mining area that was one of two known sources of copper in ancient Egypt. Gippsland will use electromagnetic (EM) and induced polarization (IP) techniques in their exploration efforts. There had been no exploration outside of the immediate vicinity of the ancient workings since the early 1960s. Results of previous exploration had shown that mineralization was present and over widths that would be readily detected by geophysical methods, such as EM and IP techniques. The exploration program would also include geologic mapping and geochemical sampling together with followup drilling of the geophysical anomalies. The ancient mine is located 160 kilometers (km) southeast of Aswan and 35 km northeast of Gippsland's western group of Wadi Allaqi gold deposits (Mining Review Africa, 2007a).

Gold.—The Government planned to offer eight new gold mining concessions as part of its scheme to revive its precious metal industry. The new concession would be in various parts of the country. The new concessions and those already awarded were expected to lift annual output to 8,000 kilograms (kg), which was more than the country's total production in the past century (Said, 2007).

Klondike Star Mineral Corp. of Canada was awarded the rights to explore and exploit a gold property in the Oweinat area of the Western Desert. The property encompasses a 1,245-square-kilometer (km²) block of an underexplored Archean gold province. The EGsMA and Klondike Star considered the gold potential identified in the Oweinat area to be significant, and there was a possibility for multiple gold deposits. There was also a potential for iron ore in the area. Much of the favorable terrain is overlain by thin sand deposits; geophysical exploration methods would be beneficial for exploring in these areas (Klondike Star Mineral Corp., 2007).

Centamin Egypt Ltd. of Australia had a 160-km² exploitation lease for the Sukari Hill gold project and was continuing with exploration efforts to upgrade the project. Exploration was also carried out on lands surrounding the Sukari project. A feasibility study to upgrade the project to a 4-Mt/yr to 5-Mt/yr operation was completed in early 2007. Also contained within the 160-km² lease were a number of other occurrences and old workings, the most significant deposits of which were the Kurdaman, the Sabahiya, the Sukan East, and the Um Kola. Centamin's concessions in the Eastern Desert covered 66 old gold mines, none of which had previously been the subject of modern exploration or mining (Centamin Egypt Ltd., 2007).

The resource at Sukari was estimated to be 277,541 kg of gold. Mining was expected to be from open pit mining, and production was expected to begin by yearend 2008. The Kori Kollo processing plant in Bolivia was purchased second hand from Newmont Mining Corp. of the United States. The plant would be dismantled and shipped to Egypt. The plant, with more ancillaries, would be a carbon-in-leach operation with gravity separation to treat 4 Mt/yr of ore initially. Kori Kollo was a part of Newmont's subsidiary, Inti Raymi SA. The Sukari project was expected to have a mine life of 15 years. The project would be the first large-scale modern gold mine to be developed in Egypt (Mining Review Africa, 2007b).

Iron and Steel.—The Government reported that the Essar Global Group of India was considering building a steel plant

in Egypt that would entail an estimated investment of \$590 million. The capacity of the proposed plant was not reported. Essar also stated that it planned to set up three steel plants elsewhere in the Middle East (Reuters, 2007a).

Magnesium.—Magnesium International Ltd. placed its wholly owned subsidiary, Egyptian Magnesium Co. S.A.E. (EMAG), on maintenance status and closed its Egyptian office after failing to find an investor to develop the EMAG project. The company's shares on the Alternative Investment Market were suspended (Metal Bulletin, 2007).

Tantalum and Tin.—Gippsland was continuing with development of its Abu Dabbab tantalum and tin project in a joint-venture project with EGsMA. Tantalum Egypt LLC was the operating company in which EGsMA and Gippsland each held a 50% interest. Gippsland reported that it had secured a 10-year contract with H.C. Starck GmbH of Germany for the supply of 2.7 Mt of tantalum pentoxide from its Abu Dabbab project. In addition to tantalum pentoxide, Abu Dabbab would produce about 1,530 t/yr of tin, which would be sold on the open market or on the London Metal Exchange (London Stock Exchange, 2007).

Industrial Minerals

Cement.—In early 2007, the Government moved to cap the country's rising cement prices, which were inflated by rising electricity, gas, and fuel costs by announcing that it would impose an export duty of LE65 per metric ton (\$11.821 per metric ton)¹ on cement; then, in mid-2007, it announced that it would lower these same duties by yearend 2007 if domestic prices were to align with international cement prices. White cement was not affected by the export duty; only grey cement and clinker tariffs remained escalated until further notice (Al Ahram, 2007).

The Ministry of Trade and Industry announced that 24 companies had qualified to bid for the 14 new cement licenses that it had offered. Of the 24 bidders, Helwan Cement and Sinai Cement offered to expand their white cement facilities; the rest planned to build new projects. Some of the other companies that bid included the Egyptian Kuwaiti Holding Co., El Sewedey Cement, and Suez Cement. The Government wanted to increase cement production by more than 20 Mt/yr in the next 5 years to meet increasing demand (Global Cement Magazine, 2007).

The Government was looking to sell two licenses for building gray cement plants in the Upper Egyptian Governorate of Sohag and in the New Valley. The cement facilities would have a production capacity of 1.5 Mt/yr. Six companies were awarded licenses worth a total of \$145.2 million to set up new facilities in Assiout, Ben Soueif, Menya Quena, North Sinai, and Suez. The new projects were expected to raise cement production capacity to about 56 Mt/yr, as each new plant would have a production capacity of 1.5 Mt/yr (El Dahan, 2007a).

The Lafarge Group of France agreed to buy Orascom Construction Industries (OCI) cement group for \$12.9 billion in cash and \$2 billion in debt. Cash payments of \$8.8 billion in January 2008 and \$4.1 billion in March 2008 would be

¹Where necessary, values have been converted from Egyptian pounds (LE) to U.S. dollars (US\$) at a rate of LE5.6 = US\$1.00.

made. OCI's board would return \$1.1 billion to shareholders in the form of two extraordinary dividends in the first quarter of 2008. The company would retain the balance of Lafarge's cash payment to finance new investment and expansion. Lafarge's acquisition formed part of the continuing consolidation of the global cement industry (Middle East Economic Digest, 2007d).

Nitrogen.—Uhde GmbH of Germany began work to develop an estimate for a projected \$1,200 million fertilizer plant in Damietta on the Mediterranean coast for Agrium Egypt for Nitrogenic Products (EAgrium). The proposed EAgrium plant would have two ammonia and urea trains with a combined capacity of 1.3 Mt/yr of urea and 100,000 t/yr of ammonia. The first train would be completed in the first half of 2010; the second train would be completed by the end of the same year (Middle East Economic Digest, 2007e).

Mineral Fuels, Related Materials, and Other Sources of Energy

Egypt was a transit corridor to the Persian Gulf and had strategic importance because of its operation of the Suez Canal by the Suez Canal Authority and the Suez-Mediterranean (Sumed) Pipeline. The 3.1-million-barrel-per-day Sumed pipeline and the Suez Canal were two major routes for exports of oil from the Persian Gulf region to the Mediterranean Sea (U.S. Energy Information Administration, 2008).

Natural Gas.—Most of Egypt's offshore discoveries have been natural gas, which was the fastest-growing mineral fuels sector in the country in 2007. The natural gas sector's production increased by more than 30% between 1999 and 2007. Egypt's estimated proven gas reserves were about 1% of the world's reserves and were considered, at yearend 2006, to be adequate for 34 years of domestic consumption (Alexander's Gas & Oil Connections, 2007).

Dana Gas PJSC, which was the Middle East's leading regional private-sector natural gas company, announced a new gas and condensate discovery from its Dabayaa-1 exploration well. Centurion Petroleum Corp., which was the upstream division of Dana Gas, drilled the Dabayaa-1 well to a total depth of 2,001 meters (m). The well penetrated a gas-bearing interval in the Lower Abu Madi Sandstone formation that extended over a 10-km² area. An extensive drill steam test (DST) gave a production rate of 467,228 cubic meters per day of gas and 330 barrels per day of condensate through a 32/64-inch choke. Estimates of recoverable reserves were being evaluated. Dana Gas, which was headquartered in the United Arab Emirates, was the sixth ranked natural gas producer in Egypt. Dana Gas was reported to be the only private company from the region to make new Middle East gas and oil discoveries in 2007 (AME Info, 2007).

Eni SpA of Italy announced that it would invest \$12 billion to boost its Egyptian natural gas operations during the next 5 years. Eni also planned to increase its reserves in the onshore Belayim field, which it operates through a joint-venture agreement with Egyptian General Petroleum Corp (EGPC). Eni was Egypt's leading natural gas producer with operations in the Gulf of Suez, the Nile Delta, and the Western Desert. Also, Eni was a major shareholder in the Damietta liquefied natural gas train (EI Dahan, 2007c).

Major recent natural gas discoveries and a large domestic market were expected to position natural gas as the primary growth engine of the country's energy sector. Egypt produces more natural gas than petroleum. Port Fuad, South Tamsah, and Wakah were among the most important offshore field developments, with the Obeiyed field developing into an important natural gas area in the Western Desert. Khalda and Obeiyed were expected to play a major role in increasing natural gas production, and they were likely to be appealing fields to developers because of their low operating costs. Production could be transported upstream via a vast network of pipelines and processing plants (Buckley, 2007).

The Environment Ministry was moving ahead with its plans to convert 300 of the 1,000 clay brick plants in the country to run on natural gas. This would follow successful conversion of 50 plants in 2006. The plan would be funded by the Canadian International Development Agency's Climate Change Development Fund. The plants were running on Mazot fuel, which is a heavy crude oil that was a more-expensive alternative to natural gas. The switch was expected to reduce greenhouse emissions from each factory by up to 75% (Middle East Economic Digest, 2007b).

Petroleum.—Egyptian petroleum production comes from the following four main areas in the order of amount produced: the Gulf of Suez (which accounted for about 50% of production), the Western Desert, the Eastern Desert, and the Sinai Peninsula. Although the output of petroleum had declined, exploration activity in new areas could potentially result in the discovery of sufficient oil to slow the decline. The leading producer in the Gulf of Suez was the Gulf of Suez Oil Co. [a joint venture of EGPC and BP Amoco Corp. of the United Kingdom]. The second ranked producer was Belayim Petroleum Co., which was a joint venture of EGPC and International Egyptian Oil Co. The third ranked producer was the Suez Oil Co. (U.S. Energy Information Administration, 2008).

The Government planned to increase its petroleum output by 100,000 barrels per day (bbl/d) to 800,000 bbl/d in 2008 from 700,000 bbl/d in 2007. This plan was based on recent discoveries in the Gulf of Suez and Western Sahara. Production in the Gulf of Suez, which accounted for about 65% of Egypt's total production, was expected to increase by 60,000 bbl/d. Output from the Western Sahara fields was expected to increase by 40,000 bbl/d. Oil and Natural Gas Corp. Ltd. Videsh of India announced that it had struck an oilfield in the Gulf of Suez that was estimated to contain about 200 million barrels (Arabian Business, 2007b).

RWE Dea of Germany was awarded a new onshore concession called Tanta, which is located partly in the west central part of the Nile Delta and extends to the outskirts of the Western Desert. The block covers about 3,300 km² and was considered to have potential for both natural gas and petroleum. During the initial exploration period, RWE Dea committed to drill a minimum of two wells in addition to acquiring three-dimensional seismic data with minimum expenditures of \$18.9 million in the first 3 years (Rigzone.com, 2007).

The joint venture of GS Engineering & Construction of the Republic of Korea and Mitsui & Company of Japan won a contract worth \$1.8 billion to build a diesel oil plant at

Mostorod, which is located 10 km north of Cairo. The facility was part of a broader scheme to increase the country's refining capacity. The hydrocracker would have a capacity of about 2 Mt/yr when it is commissioned in 2010. Under the terms of the contract, GS would handle the engineering and construction, and Mitsui would provide procurement services (Middle East Economic Digest, 2007c).

Essar Group of India was to invest \$3.4 billion in a proposed 300,000-bbl/d refinery in northern Egypt. The new refinery was part of Essar's plan to have a larger presence in the Middle East where petroleum-fueled growth and a construction boom had boosted domestic consumption and squeezed supplies to Asia and Europe. The refinery was expected to come onstream in 2010 (Reuters, 2007b).

The Government announced plans for the construction of a plant to manufacture onshore drilling rigs. The plant would be built in the Gulf of Suez with joint Egyptian/Chinese investment of about \$30 million. The plant, which would cover about 84,000 square meters, would be built in the industrial area of Suez, with proximity to the Ports of Adabeya, El-Ein, and El-Sokhna. The output capacity targets were as follows: 3 drilling rigs in operation in 2007, 7 rigs in 2008, 10 rigs in 2009, 15 rigs in 2010, and 20 rigs in 2011, which was the plant's ultimate planned capacity. Future plans included the provision of well-maintenance and rig-overhaul services (Petroleum Africa, 2007).

Solar Energy.—OCI, which was Egypt's largest construction firm by market value, announced that it would build the region's biggest solar power station in the Middle East and North Africa for \$109.4 million. The 140-megawatt station, which would be built during a 30-month period, would be located in Kuraymat, south of Cairo. The deal would be financed by Egyptian and international lenders, including the National Bank of Egypt and the International Bank for Reconstruction and Development (Arabian Business, 2007).

Uranium.—The Government announced that it would start a program to set up several nuclear powerplants to generate electricity. The Government stated that nuclear energy would be established in cooperation with various international partners and the International Atomic Agency within a framework of transparency and respect for commitments to the nonproliferation system. The Government stated that the peaceful use of nuclear energy had become a part of Egypt's national security for energy (Chinaview.cn, 2007).

Outlook

The Egyptian mineral fuels industry is expected to grow during the next 3 to 4 years, mainly as a result of the Government's recent restructuring of the energy sector following several natural gas discoveries. The Government is expected to continue to move forward with its policy to develop the country's hydrocarbon resources. The natural gas sector is expected to continue to expand. Although natural gas exports are likely to overtake petroleum exports in the near future, the presence of several foreign companies exploring for petroleum offshore Egypt in 2007 suggests the possibility of further development of the petroleum sector if new discoveries are made.

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TABLE 1
EGYPT: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Thousand metric tons unless otherwise specified)

Commodity	2003	2004	2005	2006	2007
METALS					
Aluminum metal metric tons	194,600 ³	215,000	243,800 ³	252,300 ³	258,000
Copper, refined, secondary do.	14,119 ³	14,000	14,000	14,000	12,000
Iron and steel:					
Iron ore and concentrate	2,237 ³	2,287 ³	1,599 ³	1,600	1,600
Metal:					
Pig iron	1,080 ^{r,3}	1,000	1,100 ³	1,100	1,000
Direct-reduced iron	2,870	2,800	2,600	2,600	2,100
Steel, crude	4,398	4,777 ^{r,3}	5,565 ^{r,3}	6,004 ^{r,3}	6,224 ³
Ferroalloys:					
Ferromanganese	30	30	30	30	30
Ferrosilicon	55	55	55	50	50
Manganese ore metric tons	20,000	46,450 ³	16,535 ³	16,500	16,500
Titanium, ilmenite	120 ³	120	120	120	120
INDUSTRIAL MINERALS					
Asbestos metric tons	2,000	--	--	--	--
Barite	500	500	500	500	500
Cement, hydraulic, all types	26,639 ³	28,763 ³	29,000	29,000	29,000
Clays:					
Bentonite	26 ³	30	30	30	30
Fire clay	300	300	300	300	300
Kaolin metric tons	260,000	295,430 ³	415,400 ³	416,000	416,000
Feldspar, crude do.	350,000	178,249 ³	357,134 ³	360,000	360,000
Fluorspar do.	500	891 ³	549 ³	550	550
Gypsum and anhydrite, crude	7,920 ³	7,634 ³	3,290 ³	3,300	3,000
Lime	800	800	800	800	800
Nitrogen:					
Ammonia, N content	1,790 ³	1,652 ³	1,640	1,800	1,750
Urea, N content	1,134 ³	1,078 ³	1,000	1,000	1,000
Phosphate:					
Phosphate rock	2,183 ³	3,269 ³	2,144 ³	2,200	2,200
P ₂ O ₅ content	630	948	622 ³	625	625
Sodium compounds:					
Salt	1,341 ³	1,010 ³	1,200	1,200	1,200
Soda ash	50	50	50	50	50
Sodium sulfate metric tons	2,500	2,500	2,500	2,500	2,500
Stone, sand and gravel:					
Basalt thousand cubic meters	300	243 ³	249 ³	250	250
Dolomite	3,000	949 ³	1,371 ³	1,400	1,400
Granite, dimension stone cubic meters	40,000	22,155 ³	15,083 ³	15,000	15,000
Gravel thousand cubic meters	11,000	13,229 ³	16,152 ³	16,000	16,000
Limestone and similar do.	25,000	25,000	25,000	25,000	25,000
Marble (includes alabaster) blocks cubic meters	140,000	400,630 ³	400,771 ³	400,000	400,000
Sand:					
Industrial sand (glass sand)	640 ³	650	650	650	650
Construction sand	21,000	21,000	21,000	2,100	2,100
Sandstone thousand cubic meters	10	60 ³	1,125 ³	1,100	1,100

See footnotes at end of table

TABLE 1—Continued
EGYPT: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

(Thousand metric tons unless otherwise specified)

Commodity		2003	2004	2005	2006	2007
INDUSTRIAL MINERALS--Continued						
Sulfur:						
Elemental, byproduct	metric tons	4,500	4,500	4,500	4,500	4,500
Sulfuric acid, S content		220	220	220	200	200
Talc, soapstone, pyrophyllite	metric tons	40,000	54,145 ³	38,780 ³	40,000	40,000
Vermiculite	do.	12,000	12,000	12,000	12,000	12,000
MINERAL FUELS AND RELATED MATERIALS						
Coal		139 ³	100	75	75	75
Coke		1,406 ³	1,400	1,400	1,400	1,400
Gas, natural:						
Gross production	million cubic meters	30,969 ³	31,000	41,000 ^r	42,000 ^r	53,000
Dry	do.	17,680 ³	18,000	23,000 ^r	23,700 ^r	37,000
Petroleum:						
Crude, including lease condensate	thousand 42-gallon barrels	260,245 ^r	245,645 ^r	240,170 ^r	233,235 ^r	232,505 ^s
Refinery products:						
Liquefied petroleum gas	do.	6,763 ^{3,4,6}	4,662 ^{3,6}	13,943 ³	14,000	14,000
Gasoline and naphtha	do.	53,210 ^{3,4,7}	58,772 ³	60,417 ³	60,000	60,000
Kerosene and jet fuel	do.	19,335 ^{3,4}	19,233 ³	20,485 ³	21,000 ^r	21,000
Distillate fuel oil	do.	61,060 ^{3,4}	61,000	61,000	61,000	61,000
Residual fuel oil	do.	68,884 ^{3,4}	69,000	69,000	69,000	69,000
Lubricants	do.	1,855 ^{3,4}	2,590 ³	2,576 ³	2,600	2,600
Asphalt	do.	5,709 ^{3,4}	5,800	5,800	5,800	5,800
Unspecified ⁸	do.	2,155 ^{3,4}	2,200	2,200	2,200	2,200
Total	do.	218,971 ^{3,4}	223,257 ³	235,421 ³	236,000 ^r	236,000

^rRevised. do. Ditto. -- Zero.

¹Estimated data are rounded to no more than three significant digits; may not add to totals shown.

²Table includes data available through November 30, 2008. In addition to those listed, Egypt produced a number of commodities for which data were unavailable, including gemstones; a number of metals, such as gold, lead (which was produced from recycled material), and zinc; and manufactured mineral commodities, such as carbon black and glass.

³Reported figure.

⁴Source: Ministry of Petroleum of the Arab Republic of Egypt.

⁵Excluding condensate.

⁶Excluding product from fields.

⁷Gasoline only.

⁸Amounts needed to complete reported refinery products totals shown.

TABLE 2
EGYPT: 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
Aluminum	Aluminium Co. of Egypt (Egyptalum) (Government, 80%, and private interests, 20%)		Nag Hammadi	230.
Aluminum, secondary	The Egyptian Copper Co.		Alexandria	50.
Carbon black	Alexandria Carbon Black Co. (Egyptian Holding Co. for the Chemical Industry, 49%; Inco-Bharat, 36%; Grasim Industries 15%)		do.	20.
Cement	Amirya Cement Co.		do.	2,500.
Do.	Cemex Egypt		Assiut	5,000.
Do.	Arab Swiss Engineering Co. (ASEC) (Suez Cement Co., 68.7%)		Helwan	2,800.
Do.	do.		El Minya	200.
Do.	Egyptian Cement Co. (Orascom Group, 40%; private interests, 40%; Holcim Ltd., 20%)		70 kilometers east of Cairo	1,400.
Do.	Suez Cement Co. (Cements Français S.A., 54.2%)		Suez	3,000.
Do.	do.		Qattamiah	2,500.
Do.	do.		Tourah	2,500.
Do.	Alexandria Portland Cement Co. (Government 77%, and private interests, 23%)		El Mex	800.
Do.	National Cement Co. (Government, 77%, and private interests, 23%)		El Tabbin	4,000.
Do.	do.		Beni Suef	1,000.
Fertilizers, nitrogenous	Abu Qir Fertilizer & Chemical Industries Co. [private and public interests, 80.9%, and Egyptian General Petroleum Corp. (EGPC), 19.1%]		Abu Qir A	660 (ammonia); 760 (ammonia nitrate).
Do.	do.		Abu Qir B	300 (ammonia); 500 (urea).
Do.	do.		Abu Qir C	330 (ammonia); 600 (urea).
Do.	Société El-Nasr d'Engrais et d'Industries Chimiques (Government, 100%)		Suez	146 (ammonia); 450 (nitric acid); 365 (ammonia nitrate).
Do.	do.		Talkha	330 (ammonium nitrate); 570 (ammonia and urea).
Do.	Egyptian Chemical Industries (Government, 100%)		Kima	330 (ammonia); 600 (nitric acid); 800 (ammonium nitrate).
Iron:				
Ore	Egyptian Iron and Steel Co. (Government, 100%)		El-Gedida Mine, El Bahariya	3,000.
Oxide	El-Nasr Mining Co. (Holding Company for Metallurgical Companies, 100%)		Mines near Sinai and Aswan	150.
Natural gas	million cubic meters	Egyptian General Petroleum Corp. (EGPC) (Government, 100%)	Abu Madi	3,800.
Do.	do.	do.	Badreddin-3	3,000.
Do.	do.	do.	Abu Qir/Naf	1,900.
Do.	do.	do.	Ras Shukheir	1,600.
Do.	do.	Grupo Khalda (Repsol YPF S.A., 50%; Apache Oil Co., 40%; Samsung Corp., 10%)	Khalda	24.
Petroleum:				
Crude	million 42-gallon barrels	Gulf of Suez Oil Co. [Egyptian General Petroleum Corp. (EGPC), 50%, and BP Amoco, 50%]	October, Suez Gulf	45.
Do.	do.	do.	El Morgan, Suez Gulf	27.
Do.	do.	Belayim Petroleum Co. [Egyptian General Petroleum Corp. (EGPC), 50%, and International Egyptian Oil Co., 50%]	Belayim, Suez Gulf	65.
Do.	do.	Suez Oil Company [Egyptian General Petroleum Corp. (EGPC), 50%; Deminex SA, 25%; Repsol YPF S.A., 25%]	Ras Budran, Suez Gulf	15.

TABLE 2--Continued
EGYPT: 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:				
Pipeline	million 42-gallon barrels	Arab Petroleum Pipeline Co. (Governments of Egypt, 50%; Saudi Arabia, 15%; Kuwait, 15%; United Arab Emirates, 15%; Qatar, 5%)	Ain al-Sokhna to Sidi Kir	875.
Refined	do.	Cairo Petroleum Refining Co. (Government, 100%)	Mostorod	42.
Do.	do.	do.	Tanta	15.
Do.	do.	Alexandria Petroleum Co. (Government, 100%)	Alexandria	42.
Do.	do.	El-Nasr Petroleum Refining Co. (Government, 100%)	Suez	36.
Do.	do.	Ameriya Petroleum Refining Co. (Government, 100%)	Ameriya	27.
Do.	do.	Suez Petroleum Processing Co. (Government, 100%)	Suez	21.
Do.	do.	Asyut Petroleum Refining Co. (Government, 100%)	Asyut	18.
Phosphate rock		El-Nasr Mining Co. (Holding Company for Metallurgical Companies, 100%)	Mines at East Sabaiya, West Sabaiya, and El Qusier	1,000.
Steel		Ezz El-Dekheila Group (EZDK) (Alexandria Iron and Steel Co., Al Ezz Flat Steel Co., and Al Ezz Steel Rebars)	Plants at Alexandria, Sadat City, and Suez	4,500.
Do.		Egyptian Iron and Steel Co., Hadisolb (Government, 100%)	Helwan steel plant	1,500.