



# 2008 Minerals Yearbook

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## EGYPT

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# THE MINERAL INDUSTRY OF EGYPT

By Mowafa Taib

In Egypt in 2008, the main focus of the mining industry and of international investors was on the exploration for and production of gold, hydrocarbons, phosphate rock, and tantalum. Egypt was a significant producer of natural gas and petroleum. It produced such metals as aluminum, ferroalloys, iron and steel, iron ore, manganese, secondary copper, and titanium. The country also produced industrial minerals, including basalt, bentonite, cement, construction sand and gravel, dolomite, feldspar, granite, gypsum, kaolin, limestone, marble, phosphate rock, quartz, salt, sandstone, silica sand, talc, and vermiculite.

## Minerals in the National Economy

The economic activity of the mineral industry (including gas and petroleum) accounted for 14.3% of Egypt's gross domestic product (GDP) at factor cost in fiscal year 2008-09<sup>1</sup> compared with 14.1% of the GDP in fiscal year 2007-08. Natural gas production accounted for 7.9% of the GDP; petroleum production, 6.0%; and production of nonfuel minerals, 0.4%. In fiscal year 2008-09, the value of the mining sector grew by 6.4% at fiscal year 2006-07 prices. Natural gas production, which increased by 6.9%, led the mineral sector's expansion followed by petroleum production, which increased by 5.9%, and nonfuel mineral production, which increased by 4.0%. Most of the increase in the production of natural gas was attributable to activity by private companies, which increased by 17.3% compared with a 5.0% increase in the economic activity of the state-owned natural gas sector (Central Bank of Egypt, 2009, p. 115).

Foreign direct investment (FDI) played an important role in Egypt's mineral industry in recent years. The flow of FDI to Egypt decreased by 38.7% to \$12,836 million (or 4.3% of the GDP) in fiscal year 2008-09 from \$17,802 million (or 8.1% of the GDP) in fiscal year 2007-08. However, the share the FDI received by the petroleum sector in fiscal year 2008-09 increased to 75.3% of the total FDI from 45.5% in fiscal year 2007-08, whereas the share of investment in the industrial sector decreased to 6.6% in fiscal year 2008-09 from 8.6% in fiscal year 2007-08 (Central Bank of Egypt, 2009, p. 82-83).

## Government Policies and Programs

The Ministry of Petroleum and Mineral Resources was in charge of managing the mineral industry in Egypt. Following the restructuring of the Ministry in 2004, five independently managed entities operate under the Ministry of Petroleum. They are the Egyptian Mineral Resources Authority (EMRA), the Egyptian General Petroleum Corp. (EGPC), Egyptian Natural Gas Holding Co. (ENGHC), Ganoube El Wadi Holding Co. (Ganope), and the Egyptian Petrochemical Holdings Co.

(Echem). The International Finance Corp. of the World Bank Group, which signed a technical cooperation agreement with the Ministry of Petroleum, which was represented by EMRA to conduct a mining policy reform project in 2007, completed the project in 2008. The project aimed to promote private investment in Egypt's mining sector and to rewrite the Mining and Petroleum Code law No. 66 of 1953. By yearend 2008, an updated draft of the law was waiting for Parliamentary and Presidential approval (International Finance Corp., 2007, 2008; Brigoren, 2009).

The Egyptian Mineral Resources Scientists Council of the Ministry of Petroleum developed a long-term mining strategy for the country. The national strategy was focused on developing the mineral resources of the Abu Tartur phosphate rock reserves, which are located in the western desert; the Al Wadi Al Gadid phosphate project, which is located in the southeastern part of the country; and the Sinai Peninsula. In 2008, the Ministry of Petroleum announced a new round of mining bids in Sinai; a bidding round for 12 petroleum exploration blocks in offshore and onshore areas; and the first round of petroleum exploration bids by Ganope (Ridley-Wordrich, 2008; Rigzone.com, 2008; Ministry of Petroleum and Mineral Resources, 2009).

In October, the Ministry of Trade and Industry (MTI) lifted the duties on cement and steel exports, which had been imposed in 2007, to ease the shortages in the supply of cement and steel in the domestic markets. The duties were about \$15<sup>2</sup> per metric ton for cement and \$33 per metric ton for steel. In July, the Government increased the minimum fine imposed for violating the country's antimonopoly law to \$60,000 from \$20,000 and the maximum fine to \$60 million from \$2 million (Capital Research, 2008, p. 34; Hasan and others, 2009, p. 34).

## Production

The mineral commodities for which production increased in 2008 compared with that of 2007 included barite (production of which increased by 2,060%), dolomite (838%), construction sand and gravel (728%), granite (dimension stone) (125%), kaolin (58%), basalt (57%), phosphate rock (42%), quartz (39%), vermiculite (31%), and feldspar (25%). Among the metals, there were also notable decreases in the production of manganese metal (44%), iron oxides (33%), and iron ore (17%). The industrial minerals for which production decreased significantly included fluorspar (56%), gypsum (21%), and lime (18%). Data on Egypt's mineral production are in table 1.

## Structure of the Mineral Industry

In 2008, 75 companies were working in mineral fuels exploration and production in Egypt; 50 of the companies were

<sup>1</sup>The fiscal year runs from the end of June in one year through the end of June in the following year.

<sup>2</sup>Where necessary, values have been converted from Egyptian pounds (EGP) to U.S. dollars (US\$) at the average exchange rate of 5.33EGP=US\$1.00.

operators and 25 were partners with the Ministry of Petroleum. Among these companies, seven were local operators [Gharib Oil Services, Glob Oil, Masawa Co., Petzed Investment and Project Management Ltd. Co. (a subsidiary of the National Petroleum Co.), Pico International Petroleum, Tharwa Petroleum Co., and Trident Petroleum Egypt] and one was a local partner company (Sahara Petroleum Services Co. S.A). International companies that were exploring for hydrocarbons in Egypt included Apache Egypt Co. of the United States; BG Egypt, BP Egypt, and Perenco North Sinai Petroleum Co. Ltd. (all of the United Kingdom); Dana Gas P.S.C.G. of the United Arab Emirates, Gaz de France; INA-Naftaplin of Croatia; Lukoil Co. of Russia; RWE-Dea A.G. of Germany, O.M.V. Aktiengesellschaft of Austria; and Shell Egypt N.V. of the Netherlands. The Government continued to play a significant role in the mineral industry and the local market, despite privatization efforts (Ministry of Petroleum and Mineral Resources, 2009).

El Nasr Mining Co., which was a subsidiary of Metallurgical Industries Holding Co., produced several mineral commodities in 2008, including barite, clay, feldspar, gypsum, ilmenite, iron ore (iron oxide), kaolin, magnesite, phosphate rock, quartz, and talc (El Nasr Mining Co., 2009). TAS Flowrance Group was a private company that produced and exported dolomite, feldspar, fluorite, granite, limestone, marble, phosphate rock, quartz, sandstone, silica sand, and talc from its mines at Aswan, El Minya, and the Red Sea coast (TAS Flowrance Group, 2009).

EMRA was in a 50-50 partnership with Centamin Egypt Ltd. of Australia for the development of the Sukari Gold Mine project. EMRA was also a partner with Gippsland Ltd. of Australia to develop the Abu Dabbab's tantalum-tin-feldspar deposit and the Wadi Allaqi's gold-copper-nickel deposit. The cement and steel markets had state-owned and private producers but were dominated by listed private companies. MTI was responsible for issuing licenses to build cement, fertilizer, and steel plants and for regulating the cement and steel markets. In 2008, MTI issued eight permits for new cement plants and two for the expansion of existing plants (Capital Research, 2008, p. 35; Global Investment House, 2008).

## Mineral Trade

Egypt's petroleum products exports and imports were valued at \$18.0 billion, or 23.9% of Egypt's external trade (the sum of exports and imports), which was valued at \$75.5 billion in fiscal year 2008-09. Exports of petroleum and petroleum products in fiscal year 2008-09 were valued at \$11.0 billion, or 43.7% of the country's total exports of goods compared with \$14.5 billion in fiscal year 2007-08, or 49.3% of the total exports of goods. The value of petroleum products imports was \$7.0 billion in fiscal year 2008-09, or 8.8% of total imports compared with \$9.6 billion, or 8.5% of total imports, in fiscal year 2007-08. Metal trade was valued at \$8.1 billion, or 10.7% of total external trade (Central Bank of Egypt, 2009, p. 70, 78).

The volume of crude oil exports averaged 45,000 barrels per day (bbl/d) in 2008, which was more than the 44,000 bbl/d in 2007 but less than the annual average of 57,200 bbl/d that was achieved between 2004 and 2006. Egypt's natural gas exports had been increasing steadily in the past 5 years; they increased

by more than sevenfold in 2005 to 8.0 billion cubic meters from just 1.1 billion cubic meters in 2004, and then more than doubled to 16.9 billion cubic meters in 2006. The volume of natural gas exports decreased to 16.0 billion cubic meters in 2007 but again increased to 16.9 billion cubic meters in 2008 (Organization of Arab Petroleum Exporting Countries, 2009, p. 57, 59).

In fiscal year 2008-09, the value of mineral commodity exports was \$2.1 billion and that of mineral commodity imports was \$6.0 billion. Mineral trade, which includes exports and imports of minerals and mineral-related products, accounted for 10.7% of the country's total external trade (Central Bank of Egypt, 2009, p. 78).

The Suez Canal, which is the waterway that connects the Mediterranean Sea and the Red Sea, was essential for the Egyptian economy, international trade, and world navigation. It contributed about 2.5% of Egypt's GDP in fiscal year 2008-09, down from 3.2% of the GDP in fiscal year 2007-08. Revenue from the Suez Canal was \$4.7 billion in fiscal year 2008-09, which was 7.2% less than the \$5.1 billion collected in the previous fiscal year. In April 2008, the Suez Canal Authority (SCA), which was the Government agency responsible for operating and managing the waterway, increased duties on ships passing through the canal by between 5% and 10.5%, depending on the ship category. In October, the SCA slashed its fees for certain classes of ships to prevent further reduction of traffic during the global recession. The SCA was also reviewing its fee structure following the decrease in the numbers of ships that passed the Suez Canal as Chinese exports of coal and iron ore to Europe and the United States plummeted significantly in the fourth quarter of 2008 (Middle East Economic Digest, 2008c, p. 18; Central Bank of Egypt, 2009, p. 70).

Sumed Arab Petroleum Pipeline Co. continued to transport petroleum from the Gulf region to Europe in 2008. Sumed composed two 320-kilometer (km)-long pipelines that were capable of carrying 3.1 million barrels per day of crude oil. Sumed was designed to transfer petroleum products from supertankers (tankers that carry more than 200,000 metric tons), which cannot be accommodated by the Suez Canal. Sumed was established as a joint venture of EGPC, which held 50% interest; Saudi Aramco, 15%; International Petroleum Investment Co. of the United Arab Emirates, 15%; Kuwait Investment Co., Kuwait Metal Pipe Industries Co., Kuwait Real Estate Investment Consortium, 15% combined; and Qatar Petroleum, 5% (U.S. Energy Information Administration, 2008; Sumed Arab Petroleum Pipeline Co., 2009)

## Commodity Review

### Metals

**Aluminum.**—Primary aluminum was produced by Aluminium Co. of Egypt [Misr Aluminium Co.] (Egyptalum) at Nag Hammady, which was a majority state-owned company located 100 km north of Luxor. Egyptalum continued working on its capacity expansion project, which aimed to increase production to 320,000 metric tons per year (t/yr) from 230,000 t/yr by yearend 2010. The expansion plan called for

adding a sixth potline and converting the existing Soderberg cells into anode cells (Aluminium International Today, 2009, p. 20).

**Copper.**—In October, 2008, El Sewedy Cables Egypt announced that it had delayed the planned copper smelter project at Ain Al Sokhna on the Red Sea coast because of “current market conditions.” The project, which was announced in June 2007 as the region’s first copper refinery, was a joint venture of El Sewedy Cables and Glencore International AG of Switzerland; the plant was designed to produce 300,000 t/yr of copper cathodes at a cost of \$850 million (Middle East Economic Digest, 2008a).

Gippsland completed drilling operations at Abu Swayel, which was a copper-nickel prospect located 160 km southeast of Aswan. The company identified a copper mineralization zone, including chalcopyrite, which varied in thickness from 4 to 18 meters (m) alongside historical sites that were mined by the ancient Egyptians (Gippsland Ltd., 2008, p. 16).

**Gold.**—Gold production in Egypt, which was stopped in 1958, was expected to be resumed in 2009 after a hiatus of more than 50 years. The Government awarded eight exploration licenses to seven international companies in 2006 and six new licenses in November 2007 to explore for gold in the Eastern Desert as part of its scheme to revive its precious metals industry. The new concessions, which would cover various parts of the country, and those already awarded were expected to increase annual output of gold to 8,000 kilograms (kg), which would be more than the country’s total production in the past century (Mining Weekly, 2008).

Centamin moved forward with the construction and development work at the Surkari Gold Project, which started in 2007. The project, which covers 160 square kilometers (km<sup>2</sup>), was owned and operated by a 50-50 joint venture of Centamin and EMRA. The work included delivering the Kori Kollo plant from Bolivia (where it was dismantled) to the Sukari Mine site; installing a 28-megawatt (MW) powerplant, which used heavy fuel, at the project site; and finalizing project financing. In 2008, Centamin completed civil works at the plant site, built a seawater pipeline and tailing storage facility, and prestripped the mine. The Sukari Mine, which would be the first up-to-date large-scale operating mine in Egypt, is located in the Eastern Desert 23 km southwest of Ras Alam on the Red Sea. Gold mining was scheduled to begin in the third quarter of 2008 but was delayed to the first quarter of 2009. Gold production was expected in the second quarter of 2009. Based on assay results from 14,352 m of drilling, Centamin upgraded the Sukari open pit mineral reserves estimates to 64 million metric tons (Mt) and 78 Mt of proven and probable reserves from 34.1 Mt and 44.2 Mt, respectively. At the end of 2008, gold resources at the Sukari deposit were about 400,000 kg of inferred, measured, and indicated proven and probable reserves (Centamin Egypt Ltd., 2008, p. 6-10).

Gippsland was awarded exploration rights in nine prospects of 16 km<sup>2</sup> each; eight of these prospects had a history of gold mining activity. The exploration areas were located in the Wadi Allaqi in the Eastern Desert, which is located between Lake Nasser on the west and the Red Sea on the east. In 2008, Gippsland was developing mineral resources in the exploration areas, which were estimated to hold 1.1 Mt of gold at a cutoff

grade of 0.7 gram per metric ton (g/t) gold (Gippsland Ltd., 2008, p. 20).

**Iron and Steel.**—In 2008, there were 20 iron and steel producers in Egypt whose combined capacity was 9.6 Mt of iron and steel products. Hot-rolled bar production accounted for about 73% of total production and hot-rolled sheets was 27% of the steel produced. Al Ezz Steel had 65% and 60% of the bar and sheet markets, respectively. Al Ezz Steel acquired a 53% share in Al Ezz Dkheila Steel Co.-Alexandria and built Al Ezz Flat Steel in the Ain Al-Sokhna Free Zone. Other steel producers included state-owned Egyptian Iron and Steel Co. (Hadisolb) and the privately owned Beshay Steel. Hadisolb was the only steel producer that produced steel using Egyptian iron ore. The country’s iron ore reserves were estimated to be 600 Mt, 40% of which were concentrated in the Al-Wahat Al-Bahriya district, which is located 365 km southwest of the city of Giza (Arab Steel, 2009).

In December 2007, the General Authority of Industrial Development of the MTI awarded four local steel companies permits to increase billet and sponge iron production by 8 million metric tons per year (Mt/yr). The companies were Ezz Steel, Egyptian Sponge Iron and Steel Co., Suez Steel Co., and Tiba Iron and Steel Co. (Capital Research, 2008, p. 67, 69; Hasan and others, 2009, p. 34).

In 2008, ArcelorMittal of Luxembourg was awarded a permit to build two steel plants in Egypt—a 1.4-Mt/yr-capacity billet plant and 1.6-Mt/yr-capacity direct-reduced iron plant. The cost of the two plants was expected to be between \$800 million and \$1 billion (Hasan and others, 2009, p. 35).

Gulf United Steel Holding Co. (Foulath) of Bahrain announced plans to build two new 7-Mt/yr-capacity pellet plants in Egypt; one in Alexandria and one in Suez. The engineering, procurement, and construction contracts for one of the plants would be awarded in 2009; contracts for the second plant would be awarded in 2010. It was believed that the plants would use imported iron ore from Brazil similar to the other two nearly identical plants planned by the same company in Bahrain and Oman (Steel Guru, 2009).

**Tantalum and Tin.**—In 2008, Gippsland completed its drilling program at the Abu Dabbab project. The company reported an ore reserve upgrade of 107% and an 11% increase in the Abu Dabbab project’s tantalum total resources to 44.5 Mt based on a cutoff grade of 100 g/t tantalum pentoxide (Ta<sub>2</sub>O<sub>5</sub>). The project was expected to become the world’s leading tantalum mine and would have more than 20 years of mine life. Tantalum Egypt J.S.C. was a 50-50 joint venture of EMRA and Tantalum International Pty Ltd., which was a wholly owned subsidiary of Gippsland. Tantalum production at the Abu Dabbab deposit was projected to exceed 650,000 t/yr of Ta<sub>2</sub>O<sub>5</sub> for 20 years. In December 2008, Gippsland announced its intention to produce SynCon, which is a tantalum concentrate that contains 55% Ta<sub>2</sub>O<sub>5</sub>. Gippsland signed an offtake agreement with H.C. Starck GmbH of Germany for the supply of 600,000 t/yr of Ta<sub>2</sub>O<sub>5</sub> for 10 years from the Abu Dabbab project. In addition to tantalum pentoxide, the Abu Dabbab Mine was expected to produce 1,530 t/yr of tin metal in concentrate, which would be sold on the open market. Commissioning of production at the Abu Dabbab Mine was scheduled for 2010



but was delayed to 2012 because of difficulties in securing financing, which was offered with an 80-20 debt-to-equity model. The International Finance Corp. held 25 million shares, or 8.16% of the total Gippsland shares in 2006. Gippsland also held mining rights for the tantalum-tin deposit at the Nuweibi site, which is located south of the Abu Dabbab deposit. The Nuweibi site contained 98 Mt of tantalum-tin-feldspar mineral resources, which was double that of the Abu Dabbab deposit, but the metal grade of Ta<sub>2</sub>O<sub>5</sub> was 40% lower than that of the Abu Dabbab. Given the size of identified resources of 142.5 Mt from the Abu Dabbab and the Nuweibi deposits, Gippsland expected to become the world's leading producer of tantalum for many years to come (Gippsland Ltd., 2008, p. 5; Mining in Africa, 2009, p. 4).

### **Industrial Minerals**

**Cement.**—In 2008, MTI, through the Egyptian Competition Authority, investigated anticompetitiveness practices of local cement producers and found the presence of a cartel among cement producers, which broke antimonopolies law and kept portland cement prices at higher levels during 2005 and 2006. Therefore, MTI recommended penalizing cement companies with fines that ranged between 10% and 15% of the companies' profit. In August 2008, an Egyptian court found 20 cement industry executives guilty of violating the Protection and Prohibition of Monopolistic Practices law No. 3 of 2005, charged them with price fixing, and fined them each a \$1.87 million penalty (El Madany, 2008).

In 2008, the Government increased natural gas and electricity prices (which make up about 53% of the cement production cost) and added a resource development fee on the price of the clay used as an ingredient in cement production. The Government expected that cement consumption would increase sharply in the next 5 years and lead to an estimated increase in cement production to 50 Mt in 2009 from 40 Mt in 2008. Out of the 13 cement companies that were present in Egypt in 2008, one was state-owned (National Cement Co.), four were private and locally owned, and eight were owned by international companies. The country's cement production capacity was 41.3 Mt in 2007. Cement production capacity was expected to increase to more than 60 Mt/yr by 2012 once the construction of the 10 new greenfield plants, the expansions of 2 existing plants, and the refurbishing of 5 old plants were completed (Global Investment House, 2008).

In June 2008, The Vicat Group announced the commissioning of a new kiln at the Sinai Cement Plant in El-Arish, thus doubling the plant's capacity to 3.5 Mt/yr. Italcementi Group of Italy was the leading producer of cement in Egypt by holding a 31% share of the market through its subsidiaries, which included ASEC Cement-Helwan, Suez Cement, and Torah Cement. Lafarge S.A. of France became the second ranked cement producer in Egypt, accounting for 21% of the Egyptian cement market after finalizing its takeover of Orascom Construction Industries (OCI) Cement Group in January 2008. Lafarge held 54% equity interest in Egypt Cement Co., which had a capacity of 10 Mt/yr of cement. Lafarge sold its 50% share in Lafarge Titan Cement Co. to Titan Cement Co. of Greece. The new

company, which became known as TITAN Cement Egypt, was 100% owned by TITAN, and had two plants—Alexandria Portland Cement Co. near Alexandria and Beni Suef Cement Co. near Cairo. The two plants had a combined capacity of 3.3 Mt/yr of cement. Construction work to add a second production line at the Beni Suef cement plant began in 2008. The new line, which was expected to commence production by yearend 2009, would increase the production capacity of TITAN's two plants in Egypt to 5 Mt/yr (Global Investment House, 2009; Lafarge S.A., 2009, p. 10-13; TITAN Cement Co. S.A, 2009, p. 18).

In 2008, Qena Cement Co., which was a local private sector plant, established a new 1.5-Mt/yr-capacity cement plant at Qena, which is located about 50 km from Luxor. The plant would be completed in 2010, and was expected to export 30% of its production. The owners of the plants were the Holding Company for Chemical Industries, Al Qawmiya Cement, and the Holding Company for Insurance and Arab Contractors Co. (International Cement Review, 2008, p. 16).

**Nitrogen.**—In August, state-owned Misr Oil Processing Co. S.A. (MOPCO) acquired Egyptian Agrium for Nitrogen Products (EAgrium), including its contractual obligations and rights, from Agrium Inc. of Canada. According to the share swap agreement, Agrium had 26% interest in the new combined company and EAgrium shareholders became MOPCO shareholders. MOPCO completed the construction of a nitrogen fertilizer plant at Rehab Industrial Zone in Damietta; the plant had the capacity to produce 675,000 t/yr of urea. The combined company planned to build two additional urea trains to increase urea production capacity to 2 Mt/yr (Agrium Inc., 2008).

Egypt Basic Industries Corp. (EBIC) completed the construction of a new ammonia plant at Ain Al-Sokhna near the city of Suez. Commissioning of the plant was scheduled for the third quarter of 2009 but it was delayed until January 2010. The plant, which was majority (60%) owned by Orascom, would have the capacity to produce 670,000 to 700,000 t/yr of ammonia for export. The plant received a \$229 million long-term guarantee from the Export-Import Bank of the United States (U.S. Trade and Development Agency, 2009, p. 13).

In 2008, Orascom acquired 100% of the Egyptian Fertilizer Co. from the fertilizer operations of Abraaj Capital of the United Arab Emirates for \$1.59 billion. Egyptian Fertilizer had a capacity of 792,000 t/yr of ammonia and 1.27 Mt/yr of urea. The plant was located at the Ain Al Sokhna Port in the Gulf of Suez and was undergoing a debottlenecking project, which was expected to increase the production capacity to 1.45 Mt/yr of urea by 2010 (AMEinfo.com, 2008; Orascom Construction Industries, 2009).

**Phosphate Rock.**—In 2008, Egypt's output of phosphate rock increased by 42% to 5.5 Mt from 3.9 Mt in 2007. The increase in 2008 followed another increase of about 77% in 2007. Phosphate rock was produced mainly by El Nasr Mining Co. at the East Sebaya Mine, the West Sebaya Mine, the Red Sea Mine at El Qusier, and the Abu Tartur Mine. The Abu Tartur Mine is located in the Western Desert about 50 km west of El Kharga, which is the capital of New Valley Governorate. Phosphate rock was transported by railway to Safaga Port on the Red Sea. Following the Government's decision to liberalize the fertilizer industry and to embark on a long-term plan for reforming the

agriculture sector in 2007, Egyphos was established as a joint venture of Abu Qir Fertilizer and Chemical Industries Co., Helwan Fertilizer Co., El-Nasr Mining, Polyserve for Fertilizers and Chemical Co., and Egyptian Financial and Industrial Co. Egyphos was formed in August 2008 to build a \$680 million nitrogen, phosphate, and potassium fertilizer plant at Idfu, which is located in Aswan Governorate. Idfu had also been chosen as the site of a \$350 million fertilizer production project that was partially financed by the International Finance Corp. in 2007. The project included establishing a greenfield phosphoric and sulfuric acid plant operated by Indian-Egyptian Fertilizer Co., which was a joint venture of Indian Farmers Fertilizer Cooperative Ltd. (IFFCO) of India (76% interest) and El Nasr Mining (24% interest). The plant was expected to produce more than 500,000 t/yr of phosphoric acid and 1.6 Mt/yr of sulfuric acid. El Nasr Mining agreed to supply about 2 Mt/yr of phosphate rock from the Sebaya Mine, and IFFCO agreed to offtake the entire production. The General Authority for Investment and Free Zones granted the project private free-zone status (International Finance Corp., 2007; Egyptian Financial and Industrial Co., 2009; Middle East Economist Digest, 2009a, p. 18).

**Soda Ash.**—In 2008, state-owned Chemical Industries Holding Co. sold 80% of its shares in Alexandria Sodium Carbonate Co. to Solvay S.A. of Belgium. Solvay had plans to increase the production capacity to 200,000 t/yr in the first phase and to 500,000 t/yr in the second phase of expansion (Maree, 2008).

### ***Mineral Fuels, Related Materials, and Other Sources of Energy***

**Coal.**—Egypt's coal reserves were estimated to be about 50 Mt. Coal was produced by state-owned Sinai Mining Co. from the Al Maghara underground mine in the northern part of Sinai at an average rate of 360,000 t/yr. In 2008, the Government was planning to invite international investors to develop the mine to export a fraction of its coal production as the local demand for coal was decreasing owing to the increasing use of natural gas by the steel industry in Helwan, which was the main user of coal. The Government was studying a proposal by the Arab Investment and Development Co. to build a 5,000-MW coal-fired powerplant at Safaga, which is located on the Red Sea coast (Ridely-Wordrich, 2008; Middle East Economic Digest, 2009b, p. 14).

**Natural Gas.**—Seventy-eight percent of Egypt's gas reserves lies under the Mediterranean Sea, 10% occurs in the Western Desert, 8% in the Gulf of Suez, and 4% in the Nile Delta. The Government policy of intensifying gas and oil exploration activity during the past 3 years paid off through a 5.1% increase in gas reserves, or an increase of 2,128 billion cubic meters in 2008 compared with reserves in 2007 and an 11.4% increase compared with reserves in 2006. The increase in natural gas production averaged 8.5% annually in the past decade. Discoveries of natural gas continued at greater frequency in 2008, totaling 24 discoveries compared with 7 discoveries in 2007 and 22 discoveries in 2006. In 2008, about 48.3 billion cubic meters of dry natural gas was produced in Egypt, which was about 4% more than in 2007. Most of Egypt's offshore discoveries had been natural gas discoveries, which made natural gas the fastest-growing mineral fuel sector in the

country in 2008. The Government was getting ready to put seven offshore oil and gas exploration areas up for bid in the Mediterranean Sea, which the Egyptian Natural Gas Holding Co. believed holds 81% of Egypt's confirmed gas reserves (Alexander's Gas & Oil Connections, 2008c; Middle East Economic Digest, 2008b, p. 50; Organization of Arab Petroleum Exporting Countries, 2009, p. 12, 13).

In 2008, Dana Gas pursued a drilling program that focused on Egypt's Nile Delta concessions. The company announced three new gas and condensate discoveries from the El Basnat-1 (originally called Al Tawil-1) and the El Basnat-2 exploration wells of the West Manzala concession and from the Salma-1 exploration well at the West Qantara concession (Dana Gas P.J.S.C., 2008).

In 2008, Eni S.p.A. of Italy moved forward with its gas exploration activity and reported one gas discovery at the Satis-1 gasfield, which is located offshore across the Nile Delta. Eni started production at the Denise gasfield in the El Temsah concession, the Taurt gasfield in the Ras El Bart concession, and the West Ashrafi gasfield. Eni was working to supply natural gas to the first and second trains of the Damietta liquefied nitrogen gas (LNG) plant (Eni S.p.A., 2009, p. 22).

The Arab Gas Pipeline (AGP) and the Arish-Ashkelon Pipeline were Egypt's two major pipelines for exporting gas to neighboring countries. AGP was designed to transport natural gas to Jordan, Lebanon, and Syria. The Governments of Egypt, Jordan, Lebanon, and Syria planned to expand the AGP through Syria to Turkey to be connected with the Nabacco Pipeline, which carried gas to several European countries. The Arish-Ashkelon pipeline was a 100-km-long natural gas pipeline that extended from the Egyptian coastal town of Al-Arish to the Israeli city of Ashkelon. In February 2008, Egypt began supplying Israel with about 60 million cubic meters of natural gas per year. The pipeline was established and operated by East Mediterranean Gas Co. (a partnership of EGPC, which had 68.4% ownership equity); Ampal American-Israel Corp. of Israel (6.6%); and Merhav Group of Israel (25%) (Alexander's Gas & Oil Connections, 2008b, d; Shirkhani, 2008).

**Nuclear Energy.**—In December 2008, Bechtel Group Inc. of the United States was awarded a 10-year, \$180 million contract to consult on and help design Egypt's first nuclear powerplant. Bechtel was expected to evaluate and choose the best nuclear energy technology available on the international market and to select a site for the reactor using international safety standards (Nuclear Power Daily, 2008).

**Petroleum.**—Thirty-seven crude oil discoveries were made in Egypt in 2008 compared with nine discoveries in 2007. In 2008, EGPC announced a 14-year record level of crude oil production in Egypt of 700,000 bbl/d. Egypt's crude oil production came from the Eastern Desert, the Gulf of Suez, the Nile Delta, the Sinai Peninsula, and the Western Desert. The increase in production (55,000 bbl/d) was attributable to the startup of production at new oilfields in the Gulf of Suez, the Nile Delta, and the Western Desert (Alexander's Gas & Oil Connections, 2008a).

**Renewable Energy.**—The Government expected the demand for energy to increase by between 6% and 7% in the next 10 years, which was about the same increase as in the previous decade. Thus, the Government had a goal to meet 80% of the

country's future energy demand from conventional energy sources and 20% from renewable energy sources by the year 2020.

In December 2007, the World Bank approved a financial package for the first solar thermal hybrid project in Egypt—the Kureimat Integrated Solar Combined Cycle Power Project—at a cost of about \$328 million. The project received a loan of \$151 million from Japan Bank for International Cooperation, a loan of \$126 million from the National Renewable Energy Authority (NERA), and grants of \$50 million from the Global Environment Facility. The 150-MW powerplant was being built by OCI at Kureimat, which is located 95 km south of Cairo. The project was expected to commence production in 2011. It would use both natural gas and solar energy to generate electricity (World Bank, The, 2007).

The Zafarana Windfarm was Egypt's the first wind-energy facility; it was established in 2001 and became operational in 2004. The farm was built by Gamesa Corporación Tecnológica S.A. of Spain, Nordex A.G. of Germany, and Vestas Wind Systems A/S of Denmark. The current (2008) capacity of the farm was 360 MW (Renewable Energy Development, 2008).

## Outlook

The Egyptian mineral industry is expected to continue to grow extensively during the next 5 years owing to the country's abundant mineral resources, including, gold, natural gas, crude oil, and tantalum, and because of the Government's recent restructuring of the mining sector. The Government plans to develop the mineral resources of the Sinai Peninsula and the South Valley region of the country. Egypt is working on diversifying its energy production capabilities, including developing renewable energies, which are targeted to account for 20% of the country's total energy portfolio by the year 2020. Egypt is on track to becoming a major exporter of gold, natural gas, nitrogen and phosphate fertilizers, phosphate rock, and tantalum.

## References Cited

- Agrium Inc., 2008, Agrium reaches agreement on Egyptian nitrogen facility: Calgary, Alberta, Canada, Agrium Inc. press release, August 11, 4 p.
- Alexander's Gas & Oil Connections, 2008a, Egypt's daily output reaches 700,000 barrels: Alexander's Gas & Oil Connections, November 12. (Accessed December 11, 2008, at <http://www.gasandoil.com/goc/news/nta84651.htm>.)
- Alexander's Gas & Oil Connections, 2008b, Egypt's Ministers agree to extend Arab gas pipeline to Europe: Alexander's Gas & Oil Connections, October 28. (Accessed October 28, 2008, at <http://www.gasandoil.com/goc/news/nte84440.htm>.)
- Alexander's Gas & Oil Connections, 2008c, Egypt's proven gas reserves to rise to record high levels: Alexander's Gas & Oil Connections, August 22. (Accessed August 25, 2008, at <http://www.gasandoil.com/goc/news/nta83489.htm>.)
- Alexander's Gas & Oil Connections, 2008d, Egypt starts gas exports to Israel: Alexander's Gas & Oil Connections, March 18. (Accessed October 28, 2008, at <http://www.gasandoil.com/goc/news/ntm81207.htm>.)
- Aluminium International Today, 2009, A summary of existing and new-build smelters in the Middle East: Quartz Business Media Ltd., v. 21, no. 1, January/February, p. 19-24.
- AMEinfo.com, 2008, Orascom Construction Industries announces agreement with Abraaj Capital: AMEinfo FZ LLC, February 24. (Accessed December 30, 2009, at <http://www.ameinfo.com/147837.html>.)
- Arab Steel, 2009, Egyptian iron ore reserves are put at 600 million tons: Arab Steel, November 6. (Accessed December 30, 2009, at [http://www.arabsteel.info/total/Long\\_News\\_Total\\_e.asp?ID=524](http://www.arabsteel.info/total/Long_News_Total_e.asp?ID=524).)
- Brigoren, Nilgun, 2009, Egypt's gold: Egypt Business Network, August 29. (Accessed December 30, 2008, at <http://www.xing.com/net/egypt/news-249716/egypt-s-gold-23938023>.)
- Capital Research, 2008, Egypt yearbook 2008: Cairo, Egypt, Commercial International Brokerage Co., 157 p.
- Centamin Egypt Ltd., 2008, Centamin annual report 2008: Alexandria, Egypt, Centamin Egypt Ltd., 98 p.
- Central Bank of Egypt, 2009, Annual report 2008/2009: Cairo, Egypt, Central Bank of Egypt, 129 p.
- Dana Gas P.J.S.C., 2008, Annual report and accounts 2008: Sharjah, United Arab Emirates, Dana Gas P.J.S.C., 82 p.
- Egyptian Financial and Industrial Co., 2009, Legend of fertilizer quality for green prosperity: Egyptian Financial and Industrial Co. (Accessed January 20, 2009, at <http://www.sfie.com.eg>.)
- El Madany, Sherine, 2008, 20 Egyptian cement executives found guilty in price-fixing: Cairo, Egypt, Egyptian Media Services Ltd., August 25. (Accessed December 29, 2009, at <http://www.thedailynewsegypt.com/article.aspx?ArticleID=15990>.)
- El Nasr Mining Co., 2009, Products: El Nasr Mining Co. (Accessed December 28, 2009, at <http://www.elnasrmining.com/product/html>.)
- Eni S.p.A., 2009, Annual report 2008: Rome, Italy, Eni S.p.A., 260 p.
- Gippsland Ltd., 2008, Annual report 2008: Claremont, Australia, Gippsland Ltd., p. 76.
- Global Investment House, 2008, Egypt economic & strategic outlook—Cement sector: Albawaba.com, April. (Accessed November 5, 2009, at <http://www.thefreelibrary.com/Global+Investment+House+-+Egypt+Economic+&+Strategic+Outlook+-+Cement...-a0177361254>.)
- Hasan, Faisal, Soheim, Mahmoud, and Farkouh, C.F., 2009, Global Research—Egypt steel sector: Safat, Kuwait, Global Investment House K.S.C.C., July, 104 p.
- International Cement Review, 2008, Qena new plant: International Cement Review, April, p. 16.
- International Finance Corp., 2007, Mining policy reform in Egypt: Washington, DC, International Finance Corp., 1 p. (Accessed December 29, 2009, at [http://www.gcgf.org/ifcext/mena.nsf/AttachmentsByTitle/Miningpolicyreformegypt/\\$FILE/Egypt+Mining+Brochure+English.pdf](http://www.gcgf.org/ifcext/mena.nsf/AttachmentsByTitle/Miningpolicyreformegypt/$FILE/Egypt+Mining+Brochure+English.pdf).)
- International Finance Corp., 2008, Industry-specific policy reform—IFC in the Middle East and North Africa: International Finance Corp. (Accessed May 5, 2010, at <http://www.ifc.org/ifcext/mena.nsf/Content/IndustrySpecificPolicyReform?OpenDocument&ExpandSection=4>.)
- Lafarge S.A., 2009, Lafarge in Egypt and the United Arab Emirates—A platform for sustainable growth: Lafarge S.A. press kit, January, 28 p.
- Maree, Karin, 2008, Belgium Solvay buys Egyptian soda ash firm: Middle East Economic Digest, September 30. (Accessed October 21, 2008, at <http://www.meed.com/sectors/industry/belgiums-solvay-buys-egyptian-soda-ash-firm/1883356.article>.)
- Middle East Economic Digest, 2008a, El-Sewedy Cable delays smelter project: Middle East Economic Digest, October 21. (Accessed October 22, 2008, at <http://www.meed.com/sectors/industry/el-sewedy-cables-delays-smelter-project/1902550.article>.)
- Middle East Economic Digest, 2008b, Sega's plans for Damietta stall after Cairo halts gas exports: Middle East Economic Digest, v. 52, no. 43, June 20.
- Middle East Economic Digest, 2008c, Suez Canal revises tariffs to maintain traffic volumes: Middle East Economic Digest, v. 52, no. 43, October 24.
- Middle East Economic Digest, 2009a, Abu Qir Fertilizer Company: Middle East Economic Digest, v. 53, no. 34, August 21.
- Middle East Economic Digest, 2009b, Cairo considers first coal-fired plant: Middle East Economic Digest, v. 53, no. 6, February 6.
- Mining in Africa, 2009, Preparing for tantalum-tin production and gold exploration in Egypt: European Gold Center, August, 10 p.
- Mining Weekly, 2008, Egypt to produce 8 t of gold in 2009: Creamer Media Pty Ltd., July 14. (Accessed July 15, 2008, at [http://www.miningweekly.com/print\\_version.php?a\\_id=137983](http://www.miningweekly.com/print_version.php?a_id=137983).)
- Ministry of Petroleum and Mineral Resources, 2009, Companies investing in mining sector: Cairo, Egypt, Ministry of Petroleum. (Accessed January 15, 2010, at <http://www.petroileum.gov.eg/InvestCompanies.aspx>.)
- Nuclear Power Daily, 2008, US Bechtel wins Egypt nuclear power contract: Nuclear Power Daily, December 22. (Accessed December 29, 2009, at [http://www.nuclearpowerdaily.com/reports/US\\_Bechtels\\_wins\\_Egypt\\_nuclear\\_power\\_contract\\_999.html](http://www.nuclearpowerdaily.com/reports/US_Bechtels_wins_Egypt_nuclear_power_contract_999.html).)



Orascom Construction Industries, 2009, OCI announces solid FY 2008 results and declares cash dividend: Cairo, Egypt, Orascom Construction Industries press release, March 16, 3 p.

Organization of Arab Petroleum Exporting Countries, 2009, Annual statistical report 2009: Safat, Kuwait, Organization of Arab Petroleum Exporting Countries, p. 87.

Renewable Energy Development, 2008, Wind power—Zafarana wind farm: Renewable Energy Development, March 5. (Accessed January 22, 2010, at <http://renewableenergydev.com/red/zafarana-wind-farm-egypt>.)

Ridley-Wordrich, Seven, 2008, Egypt to offer new mining bid rounds in Sinai: Resource Investor, March 1. (Accessed March 3, 2008, at <http://www.resourceinvestor.com/Pages/default.aspx>.)

Rigzone.com, 2008, Egypt offering 12 exploration blocks in 2008 first-round bid: Rigzone.com. (Accessed January 16, 2010, at [http://www.rigzone.com/news/article\\_pf.asp?a\\_id=58618](http://www.rigzone.com/news/article_pf.asp?a_id=58618).)

Shirkhani, Nassir, 2008, Egyptian gas flows to Israel: Upstreamonline.com, March 10. (Accessed January 17, 2010, at <http://www.upstreamonline.com/live/article150348.ece>.)

Steel Guru, 2009, Foulath plans to build 4 pellet plants across the region: Steel Guru, April 17. (Accessed December 28, 2009, at <http://steelguru.com/selectednews/#90486>.)

Sumed Arab Petroleum Pipeline Co., 2009, Shareholders: Sumed Arab Petroleum Pipeline Co. (Accessed June 3, 2010, at <http://www.sumed.org/Docs/shareholders.aspx>.)

TAS Flowrance Group, 2009, Products: TAS Flowrance Group. (Accessed May 3, 2010, at <http://www.tasflowrance.com/products.html>.)

TITAN Cement Co. S.A., 2009, Annual report and financial results 2008: Athens, Greece, TITAN Cement Co. S.A., 119 p.

U.S. Energy Information Administration, 2008, Egypt: U.S. Energy Information Administration country analysis brief. (Accessed December 3, 2008, at <http://www.eia.doe.gov/emeu/cabs/Egypt/Background.html>.)

U.S. Trade and Development Agency, 2009, 2008 annual report: Washington, DC, U.S. Trade and Development Agency, 48 p.

World Bank, The, 2007, World Bank supports the first solar thermal hybrid project in Egypt: Washington, DC, The World Bank Group press release, December 10, 1 p.

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

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2004	2005	2006	2007	2008
<b>METALS</b>					
Aluminum metal	215	244	252	258	260
Copper, refined, secondary	14	14	14	12	12
Iron and steel:					
Iron ore and concentrate, gross weight	2,287	1,599	1,600 <sup>e</sup>	2,185 <sup>r</sup>	1,811
Metal:					
Pig iron <sup>e</sup>	1,000	1,100	1,100	1,000	1,000
Direct-reduced iron	3,000 <sup>r</sup>	2,900 <sup>r</sup>	3,100 <sup>r</sup>	2,800 <sup>r</sup>	2,600
Steel, crude	4,777	5,565	6,004	6,224	6,198
Ferroalloys:					
Ferromanganese <sup>e</sup>	30	30	30	30	30
Ferrosilicon <sup>e</sup>	55	55	50	50	50
Manganese ore, gross weight	46	17	17	13 <sup>r</sup>	7
Titanium, ilmenite	120	120	120	108 <sup>r</sup>	88
<b>INDUSTRIAL MINERALS</b>					
Barite	500 <sup>e</sup>	500 <sup>e</sup>	500 <sup>e</sup>	50 <sup>r</sup>	1,080
Cement, hydraulic, all types	28,763	29,000 <sup>e</sup>	36,100 <sup>r</sup>	38,469 <sup>r</sup>	40,144
Clays:					
Bentonite <sup>e</sup>	30	30	30	30	32
Fire clay <sup>e</sup>	300	300	300	300	300
Kaolin	295	415	416	332 <sup>r</sup>	523
Feldspar, crude	178	357	360	135 <sup>r</sup>	169
Fluorspar	891	549	550	1,080 <sup>r</sup>	470
Gypsum and anhydrite, crude	7,634	3,290	3,300 <sup>e</sup>	3,007 <sup>r</sup>	2,381
Iron oxide pigments	NA	NA	NA	39	26
Lime <sup>e</sup>	800	800	800	1,000 <sup>r</sup>	1,000
Mica	NA	NA	NA	395	100
Nitrogen:					
Ammonia, N content	1,790 <sup>r</sup>	1,750 <sup>r</sup>	1,957 <sup>r</sup>	2,000 <sup>e</sup>	2,500 <sup>e</sup>
Urea, N content	1,120 <sup>r</sup>	1,110 <sup>r</sup>	1,300 <sup>r</sup>	1,500 <sup>e</sup>	2,000 <sup>e</sup>
Phosphate:					
Phosphate rock	2,223 <sup>r</sup>	3,371 <sup>r</sup>	2,177 <sup>r</sup>	3,890 <sup>r</sup>	5,523
P <sub>2</sub> O <sub>5</sub> content	667 <sup>r</sup>	1,011 <sup>r</sup>	653 <sup>r</sup>	1,167 <sup>r</sup>	1,657
Sodium compounds:					
Salt	1,010	1,200 <sup>e</sup>	1,200 <sup>e</sup>	227 <sup>r</sup>	271
Soda ash <sup>e</sup>	50	50	50	50	50
Sodium sulfate <sup>e</sup>	2,500	2,500	2,500	2,500	2,500

See footnotes at end of table



TABLE 1—Continued  
EGYPT: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2004	2005	2006	2007	2008	
INDUSTRIAL MINERALS—Continued						
Stone, sand and gravel:						
Basalt	thousand cubic meters	243	249	250 <sup>e</sup>	150 <sup>r</sup>	235
Dolomite	do.	949	1,371	1,400 <sup>e</sup>	4,000 <sup>r</sup>	37,505
Granite, dimension stone	do.	22,155	15,083	15,000 <sup>e</sup>	8,651 <sup>r</sup>	19,461
Limestone and similar	do.	25,000 <sup>e</sup>	25,000 <sup>e</sup>	25,000 <sup>e</sup>	28,103 <sup>r</sup>	35,569
Marble (includes alabaster) blocks		401	401	400	427 <sup>r</sup>	420
Quartz		NA	NA	NA	169	235
Sand: <sup>e</sup>						
Industrial sand (glass sand)	thousand cubic meters	650	650	650	690 <sup>r,3</sup>	645 <sup>3</sup>
Sand and gravel	do.	21	21	21	76 <sup>r,3</sup>	630 <sup>3</sup>
Sandstone	do.	60	1,125	1,100 <sup>e</sup>	174 <sup>r</sup>	162
Sulfur:						
Elemental, byproduct		20 <sup>r</sup>	20 <sup>r</sup>	20 <sup>r</sup>	20 <sup>r</sup>	20
Sulfuric acid, S content <sup>e</sup>		220	220	200	200	200
Talc, soapstone, pyrophyllite		54	39	40 <sup>e</sup>	41 <sup>r</sup>	44
Vermiculite		12 <sup>e</sup>	12 <sup>e</sup>	12 <sup>e</sup>	6 <sup>r</sup>	8
MINERAL FUELS AND RELATED MATERIALS						
Coal <sup>e</sup>		300 <sup>r</sup>	300 <sup>r</sup>	300 <sup>r</sup>	360 <sup>r</sup>	360
Coke		1,400 <sup>e</sup>	1,400 <sup>e</sup>	1,400 <sup>e</sup>	574 <sup>r</sup>	626
Gas, natural:						
Gross production	million cubic meters	33,000 <sup>r</sup>	42,500 <sup>r</sup>	54,700 <sup>r</sup>	55,700 <sup>r</sup>	58,900
Dry <sup>e</sup>	do.	18,000	23,000	23,700	37,000	40,000
Petroleum:						
Crude, including condensate	thousand 42-gallon barrels	245,645	240,170	233,235	228,610 <sup>r</sup>	240,990
Refinery products:						
Liquefied petroleum gas	do.	5,256 <sup>r</sup>	5,220 <sup>r</sup>	5,037 <sup>r</sup>	6,345 <sup>r</sup>	7,053
Gasoline and naphtha	do.	58,772	60,417	60,000 <sup>e</sup>	55,912 <sup>r</sup>	58,428
Kerosene and jet fuel	do.	12,884 <sup>r</sup>	13,724 <sup>r</sup>	11,461 <sup>r</sup>	19,024 <sup>r</sup>	20,223
Distillate fuel oil	do.	45,260 <sup>r</sup>	43,982 <sup>r</sup>	45,808 <sup>r</sup>	63,723 <sup>r</sup>	67,125
Residual fuel oil	do.	69,642 <sup>r</sup>	77,782 <sup>r</sup>	70,774 <sup>r</sup>	68,255 <sup>r</sup>	69,935
Lubricants	do.	2,590	2,576 <sup>r</sup>	2,600 <sup>e</sup>	1,792 <sup>r</sup>	1,862
Asphalt <sup>e</sup>	do.	5,800	5,800	5,800	5,563 <sup>r,3</sup>	5,266 <sup>3</sup>
Other <sup>e</sup>	do.	2,200	2,200	2,200	2,066 <sup>r,3</sup>	1,970 <sup>3</sup>
Total	do.	202,404 <sup>r</sup>	211,701 <sup>r</sup>	204,000 <sup>r,e</sup>	222,680 <sup>r</sup>	231,862

<sup>e</sup>Estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto. NA Not available.

<sup>1</sup>Table includes data available through March 31, 2010.

<sup>2</sup>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.

<sup>3</sup>Reported figure.

TABLE 2  
EGYPT: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(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	Egyptian Cement Co. (Lafarge S.A., 54%; private interests, 26%; Holcim Ltd., 20%)	70 kilometers east of Cairo	10,000.
Do.	Amirya Cement Co.	do.	4,450.
Do.	Assuit Cement Co. (Cemex Egypt)	Assiut	4,752.
Do.	Arab Swiss Engineering Co. (ASEC) (Suez Cement Co., 68.7%)	Helwan	3,615.
Do.	TITAN Cement Egypt (TITAN Cement Co., 100%)	Alexandria and Beni Suef	3,300.
Do.	Suez Cement Co. (Cements Français S.A., 54.2%)	Suez	4,200.
Do.	Helwan Cement Co. (Suez Cement Co., 98.69%)	Helwan	4,500.
Do.	Torah Portland Cement Co. (Suez Cement Co., 66.12%)	Torah	4,625.
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	3,100.
Do.	Misr Beni Suef Cement Co.	Beni Suef	2,800.
Do.	Misr Cement Co. (Qena)	Qena	1,400.
Do.	Sinai Cement Co.	Sinai	1,500.
Do.	South Valley Cement Co.	do.	1,400.
Do.	Sinai White Cement Co.	do.	410.
Do.	Arabian Cement Co.	El Ain El Sokhna	1,778 clinker.
Coke	El Nasr Coke and Chemical Co. (Government, 100%)	Helwan	1,400.
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.	Alexandria Fertilizer Co. (Alexfert) (private, 80%, and Abu Qir Fertilizer & Chemical Industries Co., 20%)	Alexandria	440 (ammonia); 720 (urea).
Do.	El Nasr Fertilizers and Chemicals Co. (SEMADCO) (Government, 100%)	Suez	146 (ammonia); 450 (nitric acid); 365 (ammonia nitrate).
Do.	Egyptian Chemical Industries (Government, 100%)	Kima	330 (ammonia); 600 (nitric acid); 800 (ammonium nitrate).
Do.	Egyptian Fertilizers Co. (Orascom Construction Industries, 100%)	Ain Al Sokhna, Suez	1,300 (urea).
Do.	EL Delta Company for Fertilizers and Chemical Industries (ASMEDA) (Government, 100%)	Talkha, Mansoura	130 (ammonia); 330 (nitric acid); 182 (urea).
Do.	Helwan Fertilizer Co. (private, 100%)	Helwan	440 (ammonia); 700 (urea).
Fertilizers, phosphatic	Abu Zaabal Fertilizers and Chemicals (private, 100%)	Qalyubiyah	730 (superphosphate); 60 (phosphoric acid).
Do.	Egyptian Financial and Industrial Co. (private, 100%)	Kafr El Zayat	750 (superphosphate);
Do.	do.	Assuit	750 (superphosphate).
Do.	Polyserve for Fertilizers and Chemicals (private, 100%)	Cairo	320 (superphosphate).
Do.	Suez Company for Fertilizers Production (Egyptian Financial and Industrial Co., 99.8%)	Ain Al-Sokhna	450 (superphosphate).
Ilmenite	El Nasr Mining Co.	NA	120.

See footnotes at end of table

TABLE 2—Continued  
EGYPT: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
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.	Egyptian General Petroleum Corp. (EGPC) (Government, 100%)	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 Co. [Egyptian General Petroleum Corp. (EGPC), 50%; Deminex SA, 25%; Repsol YPF S.A., 25%]	Ras Budran, Suez Gulf	15.
Pipeline	do.	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	2,250.
Do.		National Company for Mining and Quarries (Elwataneya)	NA	400.
Quartz		El-Nasr Mining Co.	NA	235.
Steel		Ezz El-Dekheila Steel Co. (EZDK) (Al Ezz Steel Rebars S.A., 53.2%)	Alexandria	2,700.
Do.		Egyptian Sponge Iron and Steel Co. (ESISCO) (Beshay Steel Group)	Sadat City	1,760.
Do.		Al Ezz Flat Steel Co.	Suez	1,200.
Do.		Egyptian American Steel Rolling Co. (Beshay Steel Group)	Sadat City	1,200.
Do.		Egyptian Iron and Steel Co., Hadisob (Government, 100%)	Helwan steel plant	1,000.
Do.		Al Ezz Steel Rebars S.A.	Sadat City	1,000.
Do.		Kandil Steel	Tenth of Ramadan City	1,000.
Do.		Al Ezz Rolling Mills	do.	400.
Do.		International Steel Rolling Mills (Beshay Steel Group)	Sadat City	800.
Do.		Suez Steel Co.	Suez	500.
Do.		National Port Said Steel	Port Said	400.
Do.		Misr National Steel Co.	Heliopolis	360.
Do.		Kouta Steel Group	Port Said	360.
Sulfuric acid		Abu Zaabal Fertilizers and Chemicals (private, 100%)	Qalyubiyah	350.
Do.		Egyptian Financial and Industrial Co. (private, 100%)	Kafr El Zayat	175.
Do.		do.	Assuit	210.
Do.		Suez Company for Fertilizers Production (Egyptian Financial and Industrial Co., 99.8%)	Ain Al-Sokhna	425.
Talc		El Nasr Mining Co.	NA	50.

Do., do. Ditto. NA Not available.