



2011 Minerals Yearbook

EGYPT

THE MINERAL INDUSTRY OF EGYPT

By Mowafa Taib

In 2011, Egypt was the leading African country in petroleum products output, the second ranked producer of natural gas in Africa after Algeria, and the fourth ranked producer of crude oil in Africa after Nigeria, Angola, and Algeria. The country was Africa's second ranked crude steel producer after South Africa and the world's eighth ranked producer of direct-reduced iron (DRI). Egypt was the world's 11th ranked cement producer and accounted for about 1.5% of the world's cement production (BP p.l.c., 2012, p. 8, 22; Midrex Technologies, Inc., 2012, p. 7; van Oss, 2012).

Other mineral commodities produced in Egypt included aluminum, barite, basalt, bentonite, coal, coke, dolomite, feldspar, ferroalloys, fluorspar, gold, granite, gypsum, ilmenite, iron and steel, iron ore, kaolin, limestone, manganese, marble, phosphate rock, quartz, salt, sand and gravel, sandstone, secondary copper, silica sand, soda ash, sulfur, and talc. Furthermore, the country held mineral deposits that were not currently being produced but could be developed with additional investment; such minerals include chromite, molybdenum, nickel, niobium, tantalum, titanium, tungsten, and vanadium (table 1; Egyptian Minerals Resources Authority, 2012).

Minerals in the National Economy

Egypt was one of the countries that were involved in the series of popular uprisings termed the Arab Spring, which engulfed most of the Middle East and North Africa region in 2011. In January, demonstrations erupted in many parts of Egypt for 18 days, in what later came to be known as the January 25th Revolution, and ended with the overthrow of the President and the Cabinet and the installment of a military council as a caretaker entity during a transitional period. A new Parliament was elected in December and presidential elections were held in May 2012.

In 2011, the Egyptian economy grew at a rate of 1.9% in real terms compared with 5.1% in 2010. The sluggish growth in 2011 was because of weak performance in virtually all economic sectors following the January 25th Revolution. The share of the hydrocarbon sector in the Egyptian economy was 30% of the gross domestic product (GDP), and that of the manufacturing sector, which included the cement, fertilizer, and iron and steel industries, amounted to 17% of the GDP; construction accounted for 5% of the GDP. The mining sector, including the extraction of hydrocarbons, grew at a rate of 0.6% in 2011 compared with 0.9% in 2010 whereas the manufacturing and the construction sectors growth rates were -0.9% and 3.7% compared with 5.1% and 13.2%, respectively, in 2010 (Central Bank of Egypt, 2012a, p. 53–54).

The net flow of foreign direct investment (FDI) to Egypt, which amounted to \$2.1 billion in 2011, decreased to 0.9% of the GDP from 3.1% of the GDP in 2010. FDI played an important role in Egypt's mineral industry; the hydrocarbon sector alone received 60% of total FDI in the country in 2011

compared with 69% in 2010 and 75% in 2009. The share of the FDI in the manufacturing sector, which included the fertilizer subsector, was 6.2% of the total FDI (Central Bank of Egypt, 2012b, p. 4, 8).

Government Policies and Programs

The draft of the new mining law, which was prepared by the Egyptian Mineral Resources Authority (EMRA) with the help of the International Finance Corp. (IFC) of the World Bank Group in 2008, was still awaiting Parliamentary and Presidential approval as of yearend 2011. The new law was intended to address problems associated with the current mining law, which is based on law No. 66 of 1953 and law No. 86 of 1956, which had been amended only twice (in 1957 and 1964). Investment law No. 8 of 1997 provided the legal framework for several mining companies that were established in the country in the early 2000s. The law protects investments in the country against nationalization and provides incentives for investing in mining and in the manufacturing of fertilizer and petrochemicals in the country's Free Trade Zones.

The Government designated gold production and natural gas processing, treatment, and transportation projects as strategic projects for the development of the mineral industry. In 2010, the Egyptian Mineral Resources Scientists Council of the Ministry of Petroleum developed a long-term mining strategy for the country. The national strategy is focused on developing the resources of the Abu Tartur phosphate rock deposit, which is located in the Western Desert; the Al Wadi Al Gadid phosphate rock project, which is located in the southeastern part of the country; and the Sinai Peninsula (Ministry of Petroleum, 2011).

Production

In 2011, output of phosphate rock increased by about 37%; ammonia, by 17%; and salt, by 14% compared with that of 2010. Notable decreases in mineral commodity production compared with that of 2010 included vermiculite, which decreased by 100%; quartz, by 35%; natural gas liquids, by 31%; gold, by about 29%; ferromanganese, by 19%; bentonite, by 18%; gasoline, by 16%; refined petroleum products, by about 7%; crude oil and condensate, by 6%; crude steel by, 3%; urea, by 4%; and cement, by about 2% (table 1).

Structure of the Mineral Industry

Egypt's metals, industrial minerals, and mineral fuel industries were managed by the Ministry of Petroleum through five independently managed entities—Egyptian General Petroleum Corp. (EGPC), Egyptian Natural Gas Holding Co. (EGAS), Egyptian Petrochemical Holdings Co. (ECHEM), EMRA, and Ganoube El Wadi Holding Co. (Ganope). The EGPC managed

the exploration for and production, refining, marketing, and distribution of crude oil. The EGAS administered the country's natural gas activities, including exploration for and marketing, processing, production, treatment, and transportation of natural gas. Ganope was responsible for all natural gas and crude oil activities in Upper Egypt. The ECHEM carried out all petrochemical operations in the country. The EMRA was responsible for conducting geologic mapping and mineral exploration and issuing mining permits. The EMRA held shares in three mining companies—El Wadi Al Gadid Company for Mineral Resources and Oil Shale (Wadico), the Egyptian Company for Mineral Resources (ECMR), and Abu Tartur Phosphate Co. ECMR created Quartz Misr, which was a joint venture with local investors to exploit quartz deposits in the Eastern Desert of Egypt. ECMR was also a partner with Centamin p.l.c. of the United Kingdom in the development of the Sukari gold mine project. ECMR and Gippsland Ltd. of Australia were 50-50 partners in Tantalum Egypt J.S.C., which was a joint-venture company formed to develop the Abu Dabbab and Nuweibi tantalum-tin-feldspar deposits. ECMR was looking for local and international partners to explore for and produce bentonite, calcium carbonate, feldspar, fluorspar, granite, gypsum, ilmenite, iron or oxide pigments, marble, phosphate rock, quartz, talc, tantalum, silica sand, and vermiculite (Egyptian Company for Mineral Resources, 2012).

The Holding Company for Metallurgical Industries was an Egyptian joint-stock holding company (E.J.S.C) organized to operate under the provisions of the Public Enterprise law. Its affiliates included Aluminium Co. of Egypt (Egyptalum), Delta Steel Mill Co., Egyptian Copper Works Co., Egyptian Ferroalloys Co., Egyptian Iron and Steel Co. (Hadisolb), Egyptian Co. for Metallic Construction, El Nasr Coke and Chemicals Co., El Nasr Forging Co., El Nasr Mining Co., El Nasr Pipes and Fittings Co., and the General Co. for Ceramics and Porcelain.

The Industrial Development Authority (IDA) of the MTI was responsible for issuing licenses to build cement, fertilizer, and steel plants as well as for regulating the cement, fertilizer, and steel markets. The IDA also was responsible for ensuring the presence of a sufficient supply of cement, reinforcement bar, and other building materials in the local markets.

The cement and steel markets had both state-owned and private producers but were dominated by private companies. Several international cement companies had cement production operations in Egypt, including Cementos La Union S.A. of Spain, Cimentos de Portugal, SGPS, S.A. (Cimpor) of Portugal, Holcim Group Ltd. of Switzerland, Italcementi Group of Italy, Lafarge S.A. of France, TITAN Group of Greece, and Vicat Group of France. ASEC Cement was a listed Egyptian company that owned and operated cement plants in Algeria, Egypt, Iraq, Sudan, and Syria (table 2).

Egypt's fertilizer manufacturing industry, which produced some 15 million metric tons (Mt) of nitrogen and phosphate fertilizers in 2011 according to the Central Agency for Public Mobilization and Statistics (CAPMAS), attracted foreign investors because of the country's large mineral resources of phosphate rock, the availability of natural gas, and Egypt's proximity to world consumers in Europe, Africa, and South Asia (Central Agency for Public Mobilization and Statistics, 2012).

Mineral Trade

In 2011, the value of Egypt's total export commodities increased by about 17% to \$30.8 billion from \$26.3 billion in 2010. The value of petroleum products exports, which accounted for 30% of total exports, increased by about 22% to about \$9.2 billion from \$7.6 billion in 2010. The value of exports of nitrogen, phosphate-based fertilizers, and phosphate rock combined increased to \$1.3 billion from about \$1.1 billion in 2010 whereas the value of gold exports decreased to \$1.7 billion from about \$1.8 billion in 2010. The value of iron and steel exports decreased to \$450 million from \$458 million in 2010. Italy was the top recipient of Egyptian exports followed by India, Saudi Arabia, the United States, Turkey, France, South Africa, and the United Kingdom (United Nations Statistics Division, 2012).

Egyptian imports increased by about 13% to \$59.3 billion from \$53.0 billion in 2010. Mineral product imports increased to 15.7% from 13.3% of the total value of imports in 2010. The value of iron and steel product imports decreased by 18% to \$1.15 billion from \$1.401 billion in 2010, and semifinished iron and steel imports increased to \$1.10 billion from \$868 million in 2010. The value of crude oil imports totaled \$1.7 billion and accounted for 2.9% of the total value of imports (United Nations Statistics Division, 2012).

Egypt was the 53d ranked trading partner with the United States in 2011. Egyptian imports from the United States were valued at \$6.2 billion compared with \$6.8 billion in 2010, including \$414 million worth of iron and steel products. U.S. imports from Egypt were valued at \$2.1 billion compared with about \$2.2 billion in 2010, including \$356 million worth of crude oil and natural gas and \$264 million worth of fertilizers (Office of the United States Trade Representative, 2012; U.S. Census Bureau, 2012).

El Nasr Mining produced several mineral commodities, including ball clay, barite, clay, feldspar, fluorspar, gypsum, ilmenite, iron ore (iron oxide), kaolin, magnesite, manganese, phosphate rock, quartz, and talc. The company exported mineral commodities from its three export ports at Abu Ghosn, Hamrawein, and Safaga on the Red Sea (El Nasr Mining Co., 2012; Metallurgical Industries Co., 2012).

Commodity Review

Metals

Copper and Gold.—In 2011, gold was produced from two mines in Egypt—the Hamash gold mine and the Sukari gold mine. The Sukari Gold Mine Co., which exported gold to an overseas gold refinery, mined 6.2 Mt of ore, processed 3.1 Mt of ore, and produced 4,674 kilograms (kg) of gold (reported as 150,289 troy ounces). The Sukari gold mine was an open pit mine located about 23 kilometers (km) southwest of Marsa Alam in Egypt's eastern desert and was the first modern large-scale operating open pit gold mine in Egypt. The Sukari mineral reserves as of yearend 2011 were estimated to include proved reserves of 15.5 Mt of ore grading 1.04 grams per metric ton (g/t) gold; probable reserves of 151.5 Mt of ore grading 1.21 g/t gold;

and possible reserves of 66.0 Mt of ore grading 1.1 g/t gold. Centamin, which operated the mine, moved forward with stage 3 of the project to increase mill throughput by 25% to 5 million metric tons per year (Mt/yr) from 4 Mt/yr; the stage 3 expansion was expected to be completed in 2012. Centamin expected to complete the goal of the stage 4 expansion plan of 10 Mt/yr of mill throughput in 2013 (Centamin p.l.c., 2012, p. 5–7, 12–13).

The Hamash gold mine, which is located 100 km west of Marsa Alam in southeastern Egypt, produced 465 kg of gold in 2010 and 60 kg of gold in 2009. The mine used a heap-leach production method and was operated by Hamash Misr for Gold Mines, which was a 50-50 joint venture between Cypriot Matz Holdings of Cyprus and EMRA (Egyptian Minerals Resources Authority, 2012a, b).

Gippsland Ltd. moved forward with exploration works at eight gold prospects and one copper-nickel prospect in the Wadi Allaqi region, which is located 250 km southeast of Aswan in the Eastern Desert. Gippsland's drilling program identified several mineralization areas, including at Seiga, which had an estimated inferred gold resource of 2,635 kg (Gippsland Ltd., 2012, p. 7).

Gippsland completed drilling operations at the Abu Swayel prospect, which was a copper-nickel prospect located 160 km southeast of Aswan. The company identified a copper-nickel mineralization zone, including chalcopyrite, which varied in thickness from 4 to 18 meters (m) alongside historical sites that were mined by the ancient Egyptians. Egyptian Copper Co. and El Sewedy Industries Group produced secondary copper products (Gippsland Ltd., 2012, p. 7).

Alexander Nubia International Inc. (ANI) of Canada held four exploration concessions at the Abu Marawat, Abu Zawal, Hamama, and Semna properties, which are located in the Eastern Desert and together cover a total land area of 2,772 square kilometers (km²). The Abu Marawat gold-copper-zinc-silver project was a concession that ANI purchased through an international competitive auction from Centamin Egypt in 2008. ANI drilled 79 diamond drill holes and planned to release estimates of the Abu Marawat's mineral resource. The inferred mineral resource was 2.9 Mt grading 1.75 g/t gold, 29.3 g/t silver, 0.77% copper, and 1.15% zinc. The Hamama volcanogenic massive sulfide (VMS) property is situated within the Abu Marawat concession, which is located in Egypt's historical copper and gold mining zone (Alexander Nubia International Inc., 2012).

Iron and Steel.—Al Ezz Steel Rebars S.A. (Ezz Steel) products accounted for about 40% of Egypt's steel market in 2010 and had the capacity to produce 5.8 Mt/yr of iron and steel products. Ezz Steel produced 3.6 Mt of long products and 1 Mt of flat products and completed the construction of its newest steel mill in Suez in 2011 (Al Ezz Steel Rebars S.A., 2012).

In October, a group of investors from Egypt, Kuwait, and the United Arab Emirates proposed to invest \$672 million to build a steel and iron mill in Suez, which is expected to create 2,000 jobs in the first phase and an additional 2,000 jobs when the second phase is completed. Output from the mill would be sold to the domestic market and exported (Arab Steel, 2011).

Tantalum and Tin.—Tantalum Egypt J.S.C., which was a 50-50 joint venture of ECMR and Tantalum International Pty Ltd. (a wholly owned subsidiary of Gippsland), was seeking to raise \$225 million to fund phase I of the Abu Dabbab and the

Nuweibi tantalum-tin-feldspar project, which are located in southeastern Egypt near the Red Sea coast. The combined volume of the measured, indicated, and inferred resources of the Abu Dabbab deposit was estimated to be 44.5 Mt of ore grading 250 g/t tantalum pentoxide (Ta₂O₅) and 0.09% tin (Sn) (Petra Capital Pty Ltd., 2012, p. 12).

The Nuweibi deposit, which is located 17 km southwest of the Abu Dabbab project, contained 98 Mt of tantalum-tin-feldspar mineral resources. The indicated resource was 48 Mt grading 147 g/t Ta₂O₅ and 90 g/t niobium pentoxide (Nb₂O₅) and the inferred resource was 50 Mt grading 143 g/t Ta₂O₅ and 95 g/t Nb₂O₅; the volume of mineral resources was double that of the Abu Dabbab deposit but the average Ta₂O₅ grade was 40% lower than that of Abu Dabbab. Given the amounts of identified resources (measured, indicated, and inferred) from the Abu Dabbab and the Nuweibi deposits, Gippsland expected to rank among the world's leading producers of tantalum for many years to come (Gippsland Ltd., 2012, p. 11; Petra Capital Pty Ltd., 2012, p. 12, 14).

Based on a bankable feasibility study for the Abu Dabbab project that was completed in June, Tantalum Egypt planned to produce 420,000 kilograms per year (925,000 pounds per year) of high-purity tantalum synthetic concentrate, known as SynCon (a tantalum concentrate that contains 55% Ta₂O₅) and 2,300 metric tons per year (t/yr) of tin metal in concentrate in phase I; in phase II, the company would process 2.4 Mt/yr of feldspar. Commissioning of production at the Abu Dabbab Mine was scheduled for 2012 (Petra Capital Pty Ltd., 2012, p. 5).

Tantalum Egypt operated a General Authority of Investment Private Free Zone at the Abu Dabbab site. Tantalum Egypt received the Government's approval to use Port Turumbi to export about 1.5 Mt/yr of feldspar, which the company began to produce as a byproduct from the Abu Dabbab tantalum-tin-feldspar mine (Petra Capital Pty Ltd., 2012, p. 5).

Industrial Minerals

Barite, Bentonite, and Other Oilfield Minerals.—Barite was produced by El Nasr Mining and Rasheed Performance Minerals Group (PRM). PRM operated several barite and bentonite mines and as processing plants in Egypt. The company owned two barite mills that had a combined capacity of 80,000 t/yr and that used locally mined and imported barite ore. PRM was building a third barite mill and a concentration plant that was expected to begin production in 2013. The bentonite mines operated by PRM are located about 110 km southwest of Alexandria; the company also operated a bentonite processing plant at Borg El Arab (which is located 65 km southwest of Alexandria). The 225,000-t/yr-capacity processing plant included blending, chemical and mechanical activation, drying, sieving, milling, and packaging. PRM also had the capacity to produce 20,000 t/yr of organo clays and organophyllic lignite for oilfield drilling operations (Rasheed Performance Minerals Group, 2011).

Cement.—Consumption of cement in Egypt increased by more than 3% to about 49.5 Mt in 2010 (the latest year for which comprehensive data were available) from about 47.8 Mt in 2009. Domestic production accounted for 96.7% of the country's consumption of cement, and the remaining 3.3% (1.64 Mt)

was imported. Egypt added 13.5 Mt/yr of cement production capacity in 2012 with the commencement of the construction of seven 1.5-Mt/yr-capacity greenfield cement plants and two 1.5-Mt/yr expansion lines. Thus, Egypt's production capacity of cement was projected to increase by 41% to 65 Mt/yr by 2012 compared with the current (2011) capacity of 46 Mt/yr of cement (International Cement Review, 2011, p. 116).

Construction of a greenfield cement plant by Arab National Cement Co. (ANCC) in the Governorate of Minya in Upper Egypt was delayed because of protests associated with the January 25th Revolution; commencement of production was pushed to the first the quarter of 2013 from first quarter of 2012. The plant was expected to produce 1.8 Mt/yr of cement. In December, the ANCC signed an agreement with the Government for the supply of electricity from the national grid as well as natural gas and water supply. ASEC Cement owned a 45% and a 27.55% stake in ANCC and Misr Qena Cement, respectively (ASEC Cement, 2012, p. 7, 16, 18).

Nitrogen.—The combined ammonia and urea production capacities of nine Egyptian fertilizer companies was about 13.2 Mt/yr in 2011, which was similar to the amount of production in 2010. MISR Fertilizer Production Co. S.A.E. (MOPCO), which completed the construction of a 675,000-t/yr-capacity urea plant at the Rehab Industrial Free Zone in Damietta, moved forward with building two additional urea trains to triple its capacity to 1.95 Mt/yr of urea by the end of 2012. MOPCO's wholly owned subsidiary Egyptian Nitrogen Products Company S.A.E. obtained a \$1.05 billion loan from a consortium of local banks to finance the expansion plan. Agrium Inc. of Canada, which held 26% interest in MOPCO, was expected to acquire 507,000 t/yr of urea output and 39,000 t/yr of net trade ammonia of MOPCO's production after the expansion work is completed. Most of Agrium's share of the output would be sold through a subsidiary of Agrium Europe (Agrium Inc., 2011, p. 3).

In November, the Egyptian Government and MOPCO suspended work at the nitrogen fertilizer plant in Damietta, which employed more than 3,500 workers, because of protestor's claims that the plant violated environmental regulations and adversely affected the quality of the environment in the surrounding residential and tourist areas. In January 2012, a committee made of experts and academic professionals concluded that the MOPCO plant was entirely benign to the environment and recommended the resumption of operations and continuation of expansion plans. Soon after, an Administrative Court overruled the Government's decision to halt work and expansion activity in favor of the MOPCO plant and rejected the lawsuit by local civic societies (Abd Al-Fatah, 2012).

Orascom Construction Industries S.A.E. (OCI) of Egypt had a majority ownership in two nitrogen fertilizer plants at Ain Al-Sokhna near the city of Suez. The Egypt Basic Industries Corp. (EBIC) plant at Ain Al-Sokhna was majority owned (60%) by OCI and had the capacity to produce 0.7 Mt/yr of anhydrous ammonia. The plant had a dedicated 8-km pipeline from the plant to a bulk liquid export jetty on the Suez Canal. Egyptian Fertilizer Co.'s plant, which was 100%, owned by OCI, was undergoing a debottlenecking project that was

expected to increase the plant's production capacity to 1.6 Mt/yr of urea from 1.3 Mt/yr by 2012. In addition to the majority ownership in two plants in Egypt, OCI operated a third fertilizer plant in Algeria, a fourth plant that was under construction in the Netherlands, and a fifth plant that was under construction in the United States in 2011. OCI was expected to produce ammonia, granulated urea and nitrates in Algeria, Egypt, the Netherlands, and the United States by the end of 2012. The company, which was the world's leading producer of melamine (67% nitrogen), expected to increase its capacities to 2.2 Mt/yr of anhydrous ammonia, 2.8 Mt/yr of granular urea, 1.35 Mt/yr of calcium ammonium nitrate, 0.75 Mt/yr of methanol, and 0.25 Mt/yr each of melamine and urea ammonium nitrate (Orascom Construction Industries S.A.E., 2012).

Phosphate Rock.—El Nasr Mining was the main producer of phosphate rock in Egypt. The company produced 4.2 Mt/yr of phosphate rock in 2011 compared with 2.9 Mt in 2010. Production came from the East Sebaya Mine, the West Sebaya Mine, and the Red Sea Mine at El Qusier. El Nasr Mining owned two export ports on the Red Sea: Hamrawein Port, which had the capacity to load vessels of up to 35,000 metric tons (t), and Abu Ghusun Port, which had the capacity to load vessels of up to 12,000 t (Arab Fertilizer Association, 2012, p. 33; El Nasr Mining Co., 2012).

Phosphate Misr Co. S.A.E. operated the New Valley phosphate rock project, which is located on the Abu Tartur plateau, at equal distance (650 km) from Cairo and the Port of Safaga on the Red Sea. Geologic exploration studies by EMRA indicated the presence of about 715 Mt of proved unweathered phosphate rock reserves under a 150-m-thick overburden, on average. The deposit could be exploited underground using a fully mechanized long-wall mining process. An additional 20 Mt of weathered phosphate reserves could be exploited using an open cast technique. Phosphate Misr produced 346,000 t of phosphate rock in 2011 compared with 271,000 t in 2010 (Arab Fertilizer Association, 2012, p. 33).

El Wataneya for Mining and Quarries was a listed joint-stock company. The company explored for and exploited phosphate rock in the Nile Valley, the Red Sea, and the Eastern and Western desert areas. El Wataneya owned 16 phosphate rock deposits in the Nile Valley, which covers 300 km². El Wataneya reported acquiring seven Government-owned mines in East El Sebaiya. Among these mines, the El Kelh Mine has been operating for about 1 year, and the Nagae Mine was just at the beginning of its operations; the capacity of each of these mines was 600,000 t/yr. In 2011, El Wataneya produced 205,000 t compared with 252,000 t in 2010 (Arab Fertilizer Association, 2012, p. 33; El Wataneya for Mining and Quarries, 2012).

Production operations at the Egyptian Financial & Industrial Co. (EFIC)'s plants at Kafr El-Zayat and Suez were not disrupted by the protests that erupted in Egypt in January. The company produced phosphate-based fertilizers and sulfuric acid. In 2010 (the latest year for which comprehensive data were available), the company produced more than 650,000 t of superphosphate, 221,000 t of sulfuric acid, 163,000 t of ammonium sulfate, and 3,000 t of dicalcium sulfate. EFIC exported more than 200,000 t of its production (Egyptian Financial and Industrial Co., 2011).

Salt.—Two companies were responsible for salt production in Egypt—El Nasr Salines Co. and El Mex Salines Co. El Nasr Salines operated the Burj Al-Arab and the Sebika facilities and completed the first phase of its two-phase expansion plan, which increased the salt production capacity at the Sebika facility in El-Arish to 1.2 Mt /yr from 300,000 t/yr. El Nasr Salines also pushed ahead with the second phase of the expansion plan and completed the majority of the work needed to increase its salt production capacity to 2 Mt/yr by 2012. El Mex Salines Co., which operated two salt deposits, produced about 1.4 Mt/yr of salt from El Mex Salines and 350,000 t/yr at its facility in Port Said. Both companies produced and exported several varieties of salt products, including cosmetic, edible, and industrial salts (El Mex Salines Co., 2012; El Nasr Salines Co., 2012)

Mineral Fuels and Other Sources of Energy

Natural Gas.—According to the Organization of Arab Petroleum Exporting Countries, 21 natural gas discoveries were reported in Egypt in 2011 compared with 22 discoveries in 2010. The volume of natural gas produced in 2011 was 61.3 billion cubic meters, which was slightly less than the 61.6 billion cubic meters produced in 2010. Most of Egypt's natural gas production came from Mediterranean Sea blocks where 78% of the country's gas reserves are located. The remaining reserves are located in the Western Desert (10%), the Gulf of Suez (8%), and the Nile Delta (4%). The Government's policy of intensifying gas and oil exploration activity during the past 6 years paid off. Egypt's proved natural gas reserves at the end of 2011 were estimated to be close to 2.2 trillion cubic meters (Organization of Arab Petroleum Exporting Countries, 2012, p. 14, 20, 22).

Egypt had three operational liquefied natural gas (LNG) trains. The first train was located at Damietta in the Eastern Nile Delta and was operated by CEPSA. The second train was located in Idku in the Western Nile Delta and was operated by Egyptian LNG [a joint venture of BG Egypt, EGAS, EGPC, Gaz de France, and Petroliam Nasional Berhard (Petronas) of Malaysia]. Trains 1 and 2 had the capacity to produce a combined output of 7.2 Mt/yr. The third LNG train was located in the Mediterranean Gas Complex at Port Said and was jointly operated by BP Egypt and Eni. In October, BG Egypt commenced natural gas production from the phase 8a deepwater development project in the West Delta deep marine concession, which is located about 90 km offshore the Nile Delta (BG Group, 2012).

Natural gas exports to Israel and Jordan were disrupted several times during 2011 because of attacks by armed groups on natural gas pipelines in the northern part of Sinai Peninsula. The flow of natural gas in the pipelines was restored and exports were resumed in November (Press TV, 2011).

Petroleum.—According to the Organization of Arab Petroleum Exporting Countries, 57 crude oil discoveries were reported in Egypt in 2011 compared with 40 in 2010. Crude oil production averaged 566,000 barrels per day (bbl/d) in 2011, which was slightly more than the average production of 560,000 bbl/d in 2010. The volume of Egypt's crude oil exports was more than 85,000 bbl/d, on average, from 2008 through 2011

compared with 44,000 bbl/d in 2007. Egypt's crude oil production came from the Eastern Desert, the Gulf of Suez, the Mediterranean Sea, the Nile Delta, the Sinai Peninsula, and the Western Desert. The proved crude oil reserves of Egypt were estimated to be 4.3 billion barrels (BP p.l.c., 2012, p. 19).

Some 75 companies were working on mineral fuels exploration and production in Egypt; 50 companies were operators, and 25 were partners with the Ministry of Petroleum. Among these companies, eight were local operators (General Petroleum Corp., Gharib Oil Services Co., Glob Oil, Masawa Co., Petzed Investment and Project Management Ltd. Co., Pico International Petroleum, Sahara Petroleum Services Co. S.A., Tharwa Petroleum Co., and Trident Petroleum Egypt). The U.S. companies that had active hydrocarbon exploration programs in Egypt included Apache Egypt Co., El Paso Corp., Hess Corp., Merlon International Inc., and the IPR Group of Companies. The list of the United Kingdom companies that were conducting exploration oil and gas activities included Aminex p.l.c., BG Egypt S.A., BP Egypt, Burren Energy p.l.c., Dana Petroleum p.l.c., Europa Oil and Gas p.l.c., Melrose Petroleum Resources p.l.c., and Perenco North Sinai Petroleum Co. Ltd. The Canadian companies were Dover Petroleum Corp. and TransGlobe Energy Corp. Other companies included Al Thani Investments Group and Dana Gas P.S.C.G. (both of the United Arab Emirates); Arabian Oil Co. and Egyptian Petroleum Development Co. (both of Japan); CEPSA Egypt S.A. B.V. of Spain; Edison S.p.A. and Eni S.p.A. (both of Italy); ENAP Sipetrol S.A. of Chile; Gaz de France; Grey Stone Petroleum of Switzerland; Gujarat State Petroleum Corp. Ltd. of India; Hellenic Petroleum S.A., Kriti Oil and Gas. S.A., and Vegas Oil and Gas S.A. (all of Greece); Ina Industrial Nafta D.D Zagreb/Naftaplin of Croatia; Lukoil Co. of Russia; National JSC Naftogaz Ukrainy of Ukraine; Oil and Gas Corp. of South Africa (Pty) Ltd. (PetroSA); O.M.V. A.G. of Austria; Pan Pacific Petroleum N.L. of Australia; Petrocorp Exploration Ltd. of New Zealand; Petronas; Polskie Górnictwo Naftowe i Gazownictwo S.A. (PGNiG) of Poland; RWE-Dea A.G. of Germany; Shell Egypt N.V. of the Netherlands; Statoil ASA of Norway; and United Oil Inc. of Syria (Ministry of Petroleum, 2012).

Egypt had the capacity to process 726,300 bbl/d from its nine petroleum refineries and planned to increase its petroleum refining capacity by an additional 600,000 bbl/d by year 2016 (Organization of Arab Petroleum Exporting Countries, 2012, p. 38). Egyptian Refining Co. was a partnership company of state-owned Cairo Oil Refining Company Refinery (CORC) (40%), G.S. Engineering and Construction Corp. of the Republic of Korea (30%), and Mitsui and Co. of Japan (30%) created to build a \$3.7 billion hydrocracking and coking refinery. The new refinery, which would take 4 years to build, would be located next to the existing CORC within the Mostorod Petroleum Complex (about 20 km northeast of Cairo). The new refinery would produce lighter petroleum products, such as diesel and liquefied petroleum gas (LPG) in a more efficient fashion and emit less sulfur dioxide to the environment. Refinery products from both the new refinery and the upgraded existing refineries would be offtaken by EGPC and delivered to consumption points in Cairo. The private equity company of Citadel Group was a majority stakeholder (85% interest), and EGPC held

the remaining share (15% interest). The IFC approved a \$120 million investment in the proposed Egyptian Refinery Co. project (Alexander's Gas & Oil Connections, 2010; Egyptian Refining Co. 2012).

Renewable Energy.—The Government set a target of meeting 80% of the country's future energy demand from conventional energy sources and 20% from renewable energy sources (including 12% from wind energy) by the year 2020. The Government-owned New and Renewable Energy Authority (NREA) was building the Kureimat Integrated Solar Combined Cycle Power Project. NREA contracted Fichtner Solar GmbH of Germany to provide engineering work for the project; OCI for the engineering, procurement, and construction of the solar island; and Iberdrola Renewables L.L.C. of Spain for the engineering, procurement, and construction of the combined cycle powerplant. The Kureimat project was expected to supply an additional capacity of 750 megawatts (MW) and would cost about \$428 million when completed in 2013 (World Bank, The, 2012b).

The Zafarana windfarm, which was Egypt's first operative wind-energy powerplant, had an initial total capacity of 360 MW. The windfarm, which was built by Gamesa Corporación Tecnológica S.A. of Spain, Nordex A.G. of Germany, and Vestas Wind Systems A/S of Denmark, went through a capacity expansion increase to 545 MW in 2010. The World Bank allocated a \$220 million loan for building 250-MW-capacity wind powerplant near the Gulf of Suez (World Bank, The, 2012a).

Outlook

The Egyptian mineral industry has good growth potential owing to the country's abundant mineral resources—especially crude oil, gold, natural gas, phosphate rock, and tantalum—and the increased demand for steel reinforcing bar and cement needed by the construction sector. Achieving political stability, passing the draft mining law by the Parliament, reducing bureaucracy, and enhancing transparency are actions that could attract international investors to finance mineral industry projects, which could pave the way for the country to become a major producer of such mineral commodities as gold and tantalum.

References Cited

- Abd Al-Fatah, Ahmed, 2012, Administrative court rules in favor of MOPCO plant in Damietta: Al-Masry Al-Youm, March 20. (Accessed January 14, 2013, at <http://www.egyptindependent.com/news/administrative-court-rules-favor-mopco-plant-damietta>.)
- Agrium Inc., 2011, 2010 annual report: Agrium Inc., 129 p. (Accessed January 15, 2012, at http://www.agrium.com/includes/2010_Agrium_Annual_Report_FINAL.pdf.)
- Alexander Nubia International Inc., 2012, Abu Marawat gold-copper project: Alexander Nubia International Inc. (Accessed January 22, 2013, at <http://www.alexandernubia.com/cms/pages/13#>.)
- Alexander's Gas & Oil Connections, 2010, IFC invests in Egyptian Refining Company: Alexander's Gas & Oil Connections, June 30. (Accessed August 25, 2010, at <http://www.gasandoil.com/goc/news/nta103490.htm>.)
- Arab Fertilizer Association, 2012, Membership directory: Arab Fertilizer Association, 131 p. (Accessed December 15, 2012, at <http://www.afa.com.eg/library/publications/22>.)
- Arab Steel, 2011, Arab investors allocate 4 bln E.P. to build a steel mill in Egypt: Arab Iron and Steel Union, October 25. (Accessed January 15, 2013, at http://arabsteel.info/total/Long_News_Total_e.asp?ID=986.)
- ASEC Cement, 2012, Annual report 2011: Cairo, Egypt, ASEC Cement, 80 p.
- BG Group, 2012, Egyptian LNG: BG Group. (Accessed January 22, 2013, at <http://www.bg-group.com/OurBusiness/WhereWeOperate/Pages/pgEgypt.aspx#lng>.)
- BP p.l.c., 2012, BP Statistical review of world energy: London, United Kingdom, BP p.l.c., June, 45 p.
- Centamin p.l.c., 2012, Annual report—31 December 2011: Centamin p.l.c., 114 p. (Accessed January 26, 2012, at <http://www.centamin.com/centamin/operations/egypt/operational-overview>.)
- Central Agency for Public Mobilization and Statistics, 2012, Statistical yearbook 2012—Industry: Central Agency for Public Mobilization and Statistics, September. (Accessed November 24, 2012, at [http://www.capmas.gov.eg/pdf/Electronic Static Book/index/untitle1/index.aspx](http://www.capmas.gov.eg/pdf/Electronic%20Static%20Book/index/untitle1/index.aspx).)
- Central Bank of Egypt, 2012a, Annual report 2011: Cairo, Egypt, Central Bank of Egypt, 148 p.
- Central Bank of Egypt, 2012b, External position of the Egyptian economy FY 2011/12: Central Bank of Egypt, v. 38, 78 p.
- Egyptian Company for Mineral Resources, 2012, Main products and projects: Egyptian Company for Mineral Resources. (Accessed November 24, 2012, at <http://www.emraonline.com>.)
- Egyptian Financial and Industrial Co., 2011, 2010 annual report: Egyptian Financial and Industrial Co., 10 p. (Accessed November 20, 2011, at <http://www.sfie.com.eg/EFIC-FS.htm>.)
- Egyptian Minerals Resources Authority, 2012a, Gold projects at Sukari and Hamash areas: Egyptian Minerals Resources Authority. (Accessed March 27, 2013, at <http://www.emraonline.com/egypt-min/pages/view/76>.)
- Egyptian Minerals Resources Authority, 2012, Investment—Metals: Egyptian Minerals Resources Authority. (Accessed March 27, 2013, at <http://www.emraonline.com/egypt-min/pages/category/22>.)
- Egyptian Refining Co., 2012, Project overview: Egyptian Refining Co. (Accessed January 17, 2013, at <http://www.ercegypt.com/project-overview.html>.)
- El Mex Salinas Co., 2012, Company profile: El-Mex Salinas Co. (Accessed December 28, 2011, at <http://www.mexsalinas.com/English/About.htm>.)
- El Nasr Mining Co., 2012, Products: El Nasr Mining Co. (Accessed December 28, 2012, at <http://www.elnasrmining.com/product/html>.)
- El Nasr Salines Co., 2012, Company profile: El Nasr Salines Co. (Accessed December 29, 2012, at <http://www.nasrsalines.com/Profile.html>.)
- El Wataneya for Mining and Quarries, 2012, About us: El Wataneya for Mining and Quarries. (Accessed January 14, 2013, at <http://elwataneya.com/about.html>.)
- Ezz Steel Rebars S.A., 2012, Plants: Ezz Steel Rebars S.A. (Accessed November 14, 2012, at <http://www.ezzindustries.com/main.asp?pageID=3>.)
- Gippsland Ltd., 2012, 2011 annual report: Claremont, Western Australia, Australia, Gippsland Ltd., June 30, 80 p.
- International Cement Review, 2011, North Africa—Potential unlocked: Tradeship Publications Ltd., August, p. 116–126.
- Metallurgical Industries Co., 2012, Financial report 2010: Metallurgical Industries Co. (Accessed January 15, 2012, at <http://www.micor.com.eg/default.aspx>.)
- Midrex Technologies, Inc., 2012, 2011 World direct reduction statistics: Midrex Direct Reduction Corp., 12 p. (Accessed January 15, 2013, at <http://www.midrex.com/uploads/documents/MDX2010StatsBook.pdf>.)
- Ministry of Petroleum, 2011, Companies investing in mining sector: Cairo, Egypt, Ministry of Petroleum. (Accessed January 15, 2012, at <http://www.petroleum.gov.eg/InvestCompanies.aspx>.)
- Office of the United States Trade Representative, 2012, U.S.-Egypt trade facts: Office of the United States Trade Representative. (Accessed January 22, 2013, at <http://www.ustr.gov/countries-regions/europe-middle-east/middle-east/north-africa/egypt>.)
- Orascom Construction Industries S.A.E., 2012, Egyptian Fertilizers Company: Orascom Construction Industries S.A. (Accessed December 14, 2012, at <http://www.orascomci.com/index.php?id=egyptianfertilizercompany>.)
- Organization of Arab Petroleum Exporting Countries, 2012, Annual statistical report 2011: Safat, Kuwait, Organization of Arab Petroleum Exporting Countries, 148 p.
- Petra Capital Pty Ltd., 2012, Gippsland limited—Emerging “tier 1” tantalum-tin producer: Sydney, New South Wales, Australia, Petra Capital Pty Ltd., 26 p.
- Press TV, 2011, Egypt resumes gas export to Israel: Press TV. (Accessed January 22, 2013, at <http://www.presstv.ir/detail/206381.html>.)
- Rasheed Performance Minerals Group, 2012, Mineral operations: Rasheed Performance Minerals Group. (Accessed January 14, 2013, at <http://www.rpminerals.com/mineral-operations>.)

United Nations Statistics Division, 2012, International trade statistics yearbook 2011—Egypt: United Nation Statistics Division. (Accessed January 15, 2013, at <http://comtrade.un.org/pb/CountryPagesNew.aspx?y=2011>.)
 U.S. Census Bureau, 2012, Trade in goods with Egypt: U.S. Census Bureau. (Accessed December 28, 2012, at <http://www.census.gov/foreign-trade/balance/c7290.html>.)
 van Oss, H.G., 2012, Cement: U.S. Geological Survey Mineral Commodity Summaries, 2012, p. 38–39.

World Bank, The, 2012a, Egypt—Wind power development project: The World Bank. (Accessed December 21, 2012, <http://www.worldbank.org/projects/P113416/egypt-wind-power-development-project?lang=en>.)
 World Bank, The, 2012b, Kureimat solar thermal hybrid project: The World Bank. (Accessed December 21, 2012, at <http://www.worldbank.org/projects/P050567/kureimat-solar-thermal-hybrid-project?lang=en>.)

TABLE 1
 EGYPT: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2007	2008	2009	2010	2011
METALS					
Aluminum, metal:					
Primary ^e	258 ^r	260 ^r	265 ^r	359 ^{r,3}	360
Secondary ^c	110	170	180	180 ^r	180
Copper, refined, secondary	2	3	3	3	3
Gold kilograms	--	--	95 ^r	9,847 ^{r,3}	7,000
Iron and steel:					
Iron ore and concentrate, gross weight	773	1,780	195 ^{r,3}	256 ³	250
Metal:					
Pig iron	1,000	900	800	600	600
Direct-reduced iron	2,800	2,600	3,100	3,000	2,970
Steel, crude	6,224	6,198	5,500	6,700	6,486
Ferroalloys:					
Ferromanganese ^e	30	30	30	37 ^{r,3}	30
Ferrosilicon ^c	48	59	78	78	78
Manganese ore, gross weight	21	17	3	11	11
Titanium, ilmenite	108	88	88	11	11
INDUSTRIAL MINERALS					
Barite metric tons	504	1,556	1,100	3,600 ^{r,3}	4,000
Cement, hydraulic, all types	40,400 ^r	39,800	46,900 ^r	44,592 ^{r,3}	43,884
Clays:					
Bentonite ^e	30	32	32	33 ^{r,3}	27
Fire clay ^c	300	300	300	300	300
Kaolin	332	523	523	304	304
Feldspar, crude	135	169	354	406	406
Fluorspar metric tons	550	550	500	500 ^r	500
Gypsum	178	456	735	942 ^{r,3}	1,000
Iron oxide pigments	39	26	30	30	30
Lime ^e	1,000	1,000	800	800	800
Mica cubic meters	395	100	100	100	100
Nitrogen:					
Ammonia, N content ^e	2,000	2,500	1,790	3,000 ^r	3,500
Urea, N content ^c	1,500	2,000	1,120	2,310 ^{r,3}	2,225
Phosphate:					
Phosphate rock	3,890	5,523	6,227	3,435 ^{r,3}	4,700
P ₂ O ₅ content	1,167	1,657	1,868	1,030 ^{r,3}	1,400
Sodium compounds:					
Salt	1,879 ^r	2,952	2,666	2,460 ^{r,3}	2,800
Soda ash ^c	50	50	50	50	50
Sodium sulfate ^e metric tons	2,500	2,500	2,500	2,500	2,500

See footnotes at end of table

TABLE 1—Continued
EGYPT: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2007	2008	2009	2010	2011	
INDUSTRIAL MINERALS—Continued						
Stone, sand and gravel:						
Basalt	thousand cubic meters	150	235	--	243	245
Dolomite		190	108	93	117 ^{r,3}	120
Granite, dimension stone	thousand cubic meters	40	4	59	480 ^{r,3}	480
Limestone	do.	28,103	35,570	1,914	1,914	2,000
Marble blocks	do.	427	284	284	1,400	1,400
Quartz		8	8 ^r	34 ^r	54 ^{r,3}	35
Sand: ^c						
Industrial sand (glass sand)		327	384	410 ^r	401 ^{r,3}	400
Sand and gravel		420	440	266 ^r	910 ^{r,3}	900
Sandstone		537	217	453 ^r	400	400
Sulfur:						
Elemental, byproduct		28	24	32	28 ^{r,3}	29
Sulfuric acid, S content ^c		200	200	220	220	220
Talc, soapstone, pyrophyllite		67	69	44	48 ^{r,3}	48
Vermiculite		6	8	5	3	--
MINERAL FUELS AND RELATED MATERIALS						
Coal ^c		360	360	300	300	300
Coke		1,074	1,439	886	1,184 ^{r,3}	1,200
Gas, natural:						
Gross production	million cubic meters	46,500 ^r	61,000 ^r	62,100 ^r	61,600 ^r	61,300
Dry	do.	37,000	40,000	43,059	43,059	43,059
Natural gas liquids	thousand 42-gallon barrels	25,550 ^r	59,933 ^r	57,670 ^r	57,962 ^r	39,785
Petroleum:						
Crude, including condensate	do.	230,680 ^r	262,435 ^r	257,033 ^r	262,618 ^r	246,375
Refinery products:						
Liquefied petroleum gas	do.	5,000 ^r	6,862 ^r	5,986 ^r	5,986 ^r	5,694
Gasoline	do.	28,178 ^r	29,054 ^r	29,164 ^r	28,698 ^r	24,054
Kerosene and jet fuel	do.	11,461 ^r	12,520 ^r	11,607 ^r	13,104 ^r	13,797
Distillate fuel oil	do.	46,136 ^r	65,481 ^r	62,233 ^r	62,926 ^r	56,648
Residual fuel oil	do.	68,255 ^r	63,620 ^r	61,393 ^r	59,386 ^r	59,605
Lubricants	do.	1,800	1,900	2,600	2,600	2,600
Asphalt ^c	do.	5,400	5,600	3,200	5,600	5,600
Other ^c	do.	34,374 ^r	46,446 ^r	44,569 ^r	38,072 ^r	34,249
Total	do.	200,604 ^r	231,483 ^r	220,752 ^r	216,372 ^r	202,247

^cEstimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through December 31, 2012.

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

³Reported figure.

TABLE 2
EGYPT: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(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	266.
Aluminum, secondary	The Egyptian Copper Co. (Holding Company for Metallurgical Industries)	Alexandria	50.
Do.	Arab Aluminium Co. S.A.E.	Ismaelia	15.
Do.	Egyptian Aluminium Products Co. (Alumisr)	Cairo	12.
Do.	Egyptian Metal Works	do.	NA.
Do.	General Metals Co.	do.	6.
Do.	Helwan Company for Non-Ferrous Industries	Helwan	45.
Do.	Al Saad Aluminium Co.	Mostorod	10.
Do.	Al Qantara for Ferrous Metals Co.	Suez	25.
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. [Cimentos de Portugal, SGPS, S.A. (Cimpor)]	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.	Al-Arish Cement (Ministry of Defense)	Al-Arish	NA.
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 Qena Cement Co. (ASEC cement, 27.55%)	Qena	2,000.
Do.	Sinai Cement Co. (Vicat Group)	Sinai	1,500.
Do.	South Valley Cement Co.	do.	1,400.
Do.	Sinai White Cement Co.	do.	410.
Do.	Arabian Cement Co. (Cementos La Union S.A.)	El Ain El Sokhna	5,000.
Coke	El Nasr Coke and Chemicals 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	565 (ammonia), 365 (urea).
Do.	do.	Abu Qir B	876 (urea).
Do.	do.	Abu Qir C	330 (ammonia), 640 (urea).
Do.	Alexandria Fertilizer Co. (Alexfert) (private, 80%, and Abu Qir Fertilizer & Chemical Industries Co., 20%)	Alexandria	730 (ammonia), 720 (urea).
Do.	El Nasr Fertilizers and Chemicals Co. (SEMADCO) (Government, 100%)	Attaka, Suez	132 (ammonia), 193 (nitric acid), 200 (ammonium nitrate).
Do.	Egyptian Chemical Industries KIMA ASWAN (Chemical Industries Holding Co., 55.7%; public organizations, 39.2%; private investors, 5.5%)	Aswan	330 (ammonia), 600 (nitric acid), 800 (ammonium nitrate).
Do.	Egyptian Fertilizers Co. [Orascom Construction Industries S.A.E. (OCI), , 100%]	Ain Al Sokhna, Suez	800 (ammonia), 1,300 (urea).
Do.	EL Delta Company for Fertilizers and Chemical Industries (ASMEDA) (Government, 100%)	Talkha, Mansoura	400 (ammonia), 297 (nitric acid), 570 (urea).

See footnotes at end of table.

TABLE 2—Continued
EGYPT: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Fertilizers, nitrogenous— Continued		Helwan Fertilizer Co. (private)	Free Zone, Helwan	438 (ammonia), 700 (urea).
Do.		Misr Fertilizer Production Co. S.A.E. (MOPCO) [Egyptian Petrochemical Holdings Co. (ECHEM), 30.75%; Agrium Inc., 26%; National Investment Bank, 12.82%; Egyptian Natural Gas Holding Co. (EGAS), 7.62%; others, 22.81%]	Free Zone, Damietta	876 (ammonia), 1425 (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	900 (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	300 (superphosphate), 20 (dicalcium phosphate).
Ferrosilicon		Egyptian Ferroalloys Co.	Idfo, Aswan	50.
Fluorspar	metric tons	Egyptian Company for Mineral Resources (ECMR)	NA	4,500.
Gold		Cypriot Matz Holdings (50%)	Hamash	60.
Do.		Centamin Egypt Ltd.	Sukari Hill	5,270.
Ilmenite		El Nasr Mining Co.	NA	120.
Do.		Misr Quarried Development Co.	NA	NA.
Do.		Egyptian Company for Mineral Resources (ECMR)	NA	NA.
Iron:				
Ore		Egyptian Iron and Steel Co. (Government, 100%)	El-Gedida Mine, El Bahariya	1,200.
Oxide		El-Nasr Mining Co. (Holding Company for Metallurgical Companies, 100%)	Mines near Sinai and Aswan	150.
Methanol		El Delta Co. for Fertilizers & Chemical Industries	Talkha	24.
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.
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	52.
Do.	do.	do.	Tanta	12.
Do.	do.	Alexandria Petroleum Co. (Government, 100%)	Alexandria	46.
Do.	do.	El Nasr Petroleum Refining Co. (Government, 100%)	Suez	25.
Do.	do.	do.	Wadi Feiran, Sinai	4.
Do.	do.	Ameriya Petroleum Refining Co. (Government, 100%)	Ameriya	27.
Do.	do.	Suez Petroleum Processing Co. (Government, 100%)	Suez	25.

See footnotes at end of table.

TABLE 2—Continued
EGYPT: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum—Continued:			
Refined—Continued	Middle East Oil Refinery [Egyptian General Petroleum Corp. (EGPC), 78%; Petroleum Projects and Technical Consultations Co. (Petrojet), 10%; others, 12%]	Sidi Kerir	36.
Phosphate rock	El-Nasr Mining Co. (Holding Company for Metallurgical Companies, 100%)	Mines at East Sabaiya, West Sabaiya, and El Qusier	4,500.
Do.	Phosphate Misr Co. S.A.E.	Abu Tartur	1,750.
Do.	El Wataneya for Mining and Quarries	Aswan	600.
Quartz	El Nasr Mining Co. (Holding Company for Metallurgical Companies, 100%)	NA	235.
Do.	Misr Qurried Development Co.	Attaka Mountain	NA.
Do.	Egyptian Company for Mineral Resources (ECMR)	Branice near Marsa Alam	NA.
Salt	El Nasr Salines Co.	Burj Al-Arab	100.
Do.	do.	Sebika	1,200.
Do.	El Mex Salines Co.	El Mex	1,400.
Do.	do.	Port Said	350.
Steel			
Crude	Ezz El-Dekheila Steel Co. (EZDK) (Al Ezz Steel Rebars S.A., 53.2%)	Alexandria	2,200.
Do.	Egyptian Iron and Steel Co. (Hadisob) (Government, 100%)	Helwan steel plant	600.
Manufactured	Ezz El-Dekheila Steel Co. (EZDK) (Al Ezz Steel Rebars S.A., 53.2%)	Alexandria	3,000.
Do.	Beshay Steel Group	Sadat City	2000.
Do.	Al Ezz Flat Steel Co.	Suez	1,000.
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.	Al Ezz Rolling Mills	Tenth of Ramadan City	500.
Do.	Delta Steel Mill Co.	Qalyubiyah	200.
Do.	Kandil Steel	Tenth of Ramadan City	1,000.
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.
Do.	El-Nasr Co. for Fertilizer & Chemical Industries (SEMADCO)	Attaka	90.
Do.	Middle East Oil Refinery (MIDOR)	Amreya Free Zone	65.
Talc	El Nasr Mining Co.	Aswan	50.
Do.	TAS Flowrance Group	Aswan	NA.
Do.	Egyptian Company for Mineral Resources (ECMR)	South Eastern Desert	NA.

Do., do. Ditto. NA Not available.