THE MINERAL INDUSTRY OF

EGYPT

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In 2002, the minerals fuels sector continued to play an important role in the economy of Egypt. Mineral industry efforts were focused on additional development of the country's petroleum and natural gas resources. Crude petroleum and petroleum products have dominated Egypt's energy sector in recent decades. The petroleum and natural gas sector was a major source of export earnings. Petroleum exports, however, have been declining as consumption increases and production decreases at mature oilfields. About 75% of total crude petroleum production comes from the Gulf of Suez. Offshore petroleum production possibilities in the Mediterranean Sea were being explored throughout the year. Companies that operated in the Gulf of Suez, however, attempted to slow the natural decline in their fields by investing in enhanced oil recovery and increasing exploration. Several major discoveries of natural gas were made offshore from the Nile Delta and in the Western Desert. As a result, the natural gas sector expanded rapidly in 2002. As of October 2002, the Government's revised estimate of proven natural gas reserves was about 1.7 trillion cubic meters (reported as 58.5 trillion cubic feet) and probable reserves were estimated to be about 3.4 trillion cubic meters (reported as 120 trillion cubic feet) (Arab Communication Consult S.A.L, 2002§;[1] U.S. Energy Information Administration, 2003§). Besides petroleum and natural gas, Egypt also produced primary aluminum, ferroalloys, iron ore, and steel; secondary copper, lead, and zinc; construction materials, such as clay, dimension stone, and gypsum; and gemstones, gold, and raw materials for glass.

In 2002, Egypt's estimated gross domestic product based on purchasing power parity was $268 billion. According to the Ministry of Foreign Trade (2003§), Egypt's total exports, which consisted of chemicals, cotton, crude petroleum and petroleum products, metal products, and textiles, were valued at about $4.7 billion. Total imports amounted to about $12.5 billion. Crude oil and petroleum products accounted for about $1.5 billion, or 32% of the value of total exports in 2002. The value of fuel imports was down to $440 million compared with $578 million in 2001. The country's major export partners were the United States (20.1%), Italy (13.5%), the United Kingdom (9.2%), and France (4.0%). As of July 2002, Egypt's population was estimated to be about 71 million (U.S. Central Intelligence Agency, 2003§).

Government Policies and Programs

The Ministry of Industry and Mineral Resources through the Egyptian Geological Survey and Mining Authority (EGSMA) is the Government agency responsible for regulating and controlling exploration, prospecting, and exploitation of all mineral deposits in Egypt. The laws that oversee the mining sector are the Mining and Petroleum Code law No. 66 of 1953 and the Mining Code laws No. 86 and No. 151 of 1956. Prospecting licenses are issued by ministerial decree for a maximum area of 16 square kilometers (km^2) and for a period of 1 year renewable for a maximum of four times. Mining leases are also issued by ministerial decree and are granted for up to 30 years with one additional renewal option. Exploitation leases for quarries are issued for areas not to exceed 20 hectares for up to 30 years renewable once for a period of up to 15 years. A provision to law No. 86 allows for companies to enter into a special agreement with the Government for production sharing. Under the agreement, companies must bear all costs and expenses required to carry out exploration, exploitation, and marketing activities, which are to be recovered within 3 years after production begins. Following a commercial discovery, companies must form an operating company in conjunction with EGSMA under which development, exploitation, and marketing operations are to be conducted (Egyptian Geological Survey and Mining Authority, 2003§).

The Ministry of Petroleum and the Ministry of Electricity and Energy are the Government agencies relevant to the energy sector. The Organization for Energy Planning is the Government office responsible for analyzing energy policies, evaluating energy resources, analyzing energy supply and demand, and developing technical expertise in the field. Government-owned Egyptian Electric Holding Company is responsible for the country's power generation and is the owner of the distribution companies. Egyptian General Petroleum Company (owned by the Government) is concerned with implementing all the plans and policies related to petroleum activities in Egypt (U.S. Department of Energy, 2003§).

In 1991, the Government of Egypt adopted an economic reform and passed a privatization law (law No. 203) under which 314 Government-owned companies were identified as being suitable for privatization. The control of these public sector enterprises was removed from the auspices of the relevant ministries and transferred to state holding companies within the Ministry of Public Enterprises. These holding companies are organized by sector and are responsible for the management and rehabilitation of the firms under its control to prepare them for sale. One of the largest companies is the Metallurgical Industries Holding Company (MIHC), which initially focused on the metallurgical sector, but later incorporated ceramics and cement production, transport, and train manufacturing. MIHC sells its companies outright or forms joint ventures with foreign investors (Arab Communication Consult S.A.L, 2002§).

[1]References that include a section mark (§) are found in the Internet References Cited section.

Commodity Review

Metals

Aluminum.—Thermal Technology Consultancy Ltd, which was a United Kingdom aluminum plant maker, was working on a new 20,000-metric-ton-per-year (t/yr)-capacity secondary aluminum plant for Kantara Metals in Suez, Egypt. Production was expected to begin in early 2003 (Metal Bulletin, 2002c).

In August 2002, the Egyptian Government announced its intention to sell 90% of the Egypt Aluminum Company. The company had a production capacity of 190,000 t/yr (Middle East North Africa Financial Network, 2002§).

Gold.—Cresset International Ltd. (a subsidiary of Cresset Precious Metals Inc. of the United States) and EGSMA incorporated an operating company under the name of Hamash Egypt Gold Mines Company to develop the Umm Tundub Mine area in the Eastern Desert. In 2001, Cresset International was awarded the exclusive right for 30 years to the commercial production of gold and associated minerals in the eight properties that comprise the mining area. In April 2002, Cresset International signed a memorandum of understanding (MOU) with Lakefield Oretest Pty Ltd. of Australia to develop jointly the Umm Tundub Mine (Cresset Precious Metals Inc., 2002).

Drilling and trenching continued on the Sukari deposit. In March 2002, Centamin Egypt Ltd. of Australia (Centamin) announced the deployment of additional drilling equipment, which increased drilling capacity at Sukari to six rigs. Centamin, through its subsidiary Pharaoh Gold Mines NL, and EGSMA were awarded an exploration (mining) lease for the Sukari deposit in November of 2001. Measured gold resources at Sukari were reported to be 9.3 million metric tons of ore at a grade of 1.41 grams per metric ton (g/t) gold at a cutoff grade of 0.5 g/t (Centamin Egypt Ltd., 2002).

Iron and Steel.—In January 2002, the Egyptian Government, through MIHC, planned to launch a tender for the privatization of several of its companies—Delta Steel Mill Co., Egyptian Ferro Alloys Co. (Efaco), and General Metals Co. The privatization process was to be financed by the European Union under a technical assistance program that began in 1995. Delta's production capacity was 110,000 t/yr of rebar, which was 76% of its original design capacity. MIHC intended to sell 90% of Efaco. One of the companies interested in acquiring Efaco was Elkem ASA of Norway. Efaco produced 48,000 metric tons of ferrosilicon in 2001 (Metal Bulletin, 2002a).

Ezz Flat Steel of Egypt planned to begin hot testing its thin slab-based continuous hot-rolled coil plant in May 2002. The company, which had a production capacity of 1.2 million metric tons (Mt/yr), expected to begin production in the third quarter of 2002 but anticipated that it would not reach full capacity before the end of 2003 (Metal Bulletin, 2002b).

Tantalum.—In October 2001, EGSMA (50%) and Tantalum International (50%) (a subsidiary of Gippsland Ltd. of Australia) formed Tantalum Egypt to develop the Abu Dabbab tantalum deposit. The Abu Dabbab deposit is located about 770 kilometers (km) south of Cairo on the western shore of the Red Sea. A complete reassessment of all available geologic data generated from past exploration campaigns was carried out in 2002 to determine the deposit's tantalum resources. The new estimates indicated a measured resource of 12 Mt at a grade of 274 g/t tantalum pentoxide, an indicated resource of 2.1 Mt at a grade of 260 g/t tantalum pentoxide, and an inferred resource of 26 Mt at a grade of 240 g/t tantalum pentoxide. The project would cost $30 million to implement, and the estimated mining rate was 1 Mt/yr over 15 years (African Mining, 2002). In 2002, Gippsland Ltd. and EGSMA signed a shareholder agreement to develop the Abu Dabbab deposit. The agreement was for 40 years with the possibility of extension. Under the agreement, Tantalum Egypt will have customs import duty relief and exemption from a number of taxes including stamp duty and land tax. The agreement also provides the project a 20-year exemption from profits taxation (Gippsland Ltd., 2002). Gippsland began a bankable feasibility study in January 2002. The studies indicated the potential to produce 500,000 t/yr of high-quality feldspar as a coproduct. As a result of the discovery of the economic levels of feldspar, the feasibility study was extended from the end of 2002 to the end of the first quarter of 2003. The Abu Dabbab deposit will be exploited by a single open pit mine. The feldspar will be marketed to the Italian ceramic industry (Industrial Minerals, 2002b).

Industrial Minerals

Nitrogen.—Abu Qir Fertilizers & Chemical Industries Company evaluated offers for the construction of a 2,400-metric-ton-per-day-capacity ammonium nitrate unit at its complex near Alexandria. The bidders were Uhde GmbH of Germany and Snamprogetti S.p.A. of Italy. The project was estimated to cost about $300 million (Middle East Economic Digest, 2002d).

In 2002, in a decision to close the Egyptian Chemical Company (Kima) fertilizer plant in Aswan, the Government cited the plant's inability to compete with gas-based fertilizer plants (Middle East Economic Digest, 2002e). The company was established in 1956 to produce nitrogenous fertilizers for the Southern Valley by using electrohydraulic power generated by the Aswan Dam.

Silica.—About 15 localities of high-grade silica sands have been identified in Egypt. The main deposits are Wadi El-Dakhl and Wadi Qena, which are located in the Eastern Desert; Gebel El-Gunnah, which is located south of Sinai; and El-Maadi, which is located in the Cairo suburbs. The Wadi El-Dakhl (commercially known as El-Zaafarana) was considered to be one of the biggest deposits in the country, but no detailed studies to estimate the reserve have been carried out. The deposit represents the main source for the local glass industry and for exports and is located about 45 km from the Suez-Hurgada asphalt road. Value-added white sand from El-Zaafarana was produced by Asfoor Crystal Co. The Wadi Qena sands are characterized by their whiteness and few impurities. The percentage of silica (SiO_2) is 99.5%. Probable reserves at Wadi Qena were estimated to be 1 billion metric tons (Gt). The Gebel El-Gunnah deposit extends 30 km along the Neubea-Saint Catherine asphalt road. Sand reserves at El-Gunnah have been

estimated to exceed 1 Gt. Most of the deposit is exposed to the surface without overburden and contains about 10% kaolin. El-Maadi sand deposit was the main source of white sand to Middle East Glass Co., which has been a bottle glass producer since the mid-1970s (Industrial Minerals, 2002a).

Vein deposits of quartz have been identified in about 38 localities in the central part of the Eastern Desert. Reserves in the area have been estimated to be about Gt and to range between 98% and 99.3% SiO_2. Eastern Desert quartz was used locally by Efaco in the production of ferrosilicon. Some quartz was exported in lumps of 1 to 25 cm or in the form of powder. Silica fume was also produced by Efaco as a byproduct of ferrosilicon production. The company produced about 20,000 t/yr of silica fume (Industrial Minerals, 2002a).

Mineral Fuels

Natural Gas.—In November 2002, the Egyptian General Petroleum Corporation announced the closing of a 38-block exploration bid round, which offered 10 blocks in the Delta and Western Desert, 14 blocks in the Gulf of Suez, 10 blocks in the Mediterranean, 3 blocks in the Red Sea, and 1 block in upper Egypt. A previous round, which closed in February 2002, awarded six blocks in the Gulf of Suez—two each went to BP Amoco plc of the United Kingdom and Ocean Energy Inc. of the United States and one each to ENI-Agip of Italy and Kiriti of Greece (Middle East Economic Digest, 2002a).

The Government of Egypt signed an $8 billion agreement to supply Gaz de France 3.6 Mt/yr of liquefied natural gas (LNG). The contract was for 20 years and will represent 10% of France's annual gas demand. The LNG will be exported from a plant that will be constructed in Idku, which is located to the east of Alexandria. The plant will be operated by Egyptian LNG, which was a joint venture between BG Group plc and its partners Edison International of Italy, Egyptian General Petroleum Corp., and Egyptian Natural Gas Holding Co. The first train will have a capacity of 3.6 Mt/yr and was scheduled to begin production in 2005 (Oil & Gas Journal, 2002).

Initial construction work on the Damietta project was under way in January 2002. Unión Fenosa of Spain established the Egyptian subsidiary Spanish Egyptian Gas (Segas) to develop the $1 billion, 5-Mt/yr-capacity LNG train at Damietta. The engineering procurement and construction contract for the first train at Damietta was awarded in 2001 to the joint venture formed by Halliburton KBG Group of the United States, JGC Corp. of Japan, and Técnicas Reunidas S.A. of Spain. The train was scheduled to be operational by 2004. Segas planned to buy Egyptian gas from the domestic gas network and to ship LNG to Spain for use in Unión Fenosa's gas-fired powerplants. Two other LNG project proposals by Shell International Gas Ltd. and a BP Amoco-ENI-Agip consortium were under negotiation with the Government of Egypt in 2002 (Petroleum Economist, 2002a, b).

In April 2002, El Paso Global LNG (a subsidiary of El Paso Corp. of the United States) announced that it had signed a MOU with Egyptian General Petroleum and Egyptian Natural Gas Holding Co. to seek investment opportunities in Egypt's natural gas sector. The MOU included the possibility for El Paso to develop an LNG liquefaction plant in Egypt (El Paso Corp., 2002).

The first segment of the trans-Sinai pipeline network that will supply gas to Syria, Lebanon, and possibly Cyprus and Turkey was under construction in 2002 (Petroleum Economist, 2002b).

Petroleum.—In February 2002, Drucker Inc. of Canada announced that it had reached an agreement with Tanganyika Oil Company Ltd. of Canada by which Tanganyika Oil acquired 20% interest in the onshore West Gharib block, which is located on the western coast of the Gulf of Suez. Drucker received $250,000 and 1 million common shares from Tanganyika Oil. Tanganyika Oil's interest in the concession increased from 50% to 70%; GHP Exploration Limited of Egypt held the remaining 30% (Drucker Inc., 2002; Tanganyika Oil Company Ltd., 2002).

Apache Corp. of the United States announced a second commercial discovery at the East Bahariya concession in the Western Desert. The southeastern Karama-1X oil well increased the combined production from the Karama and Southeast Karama fields to an average of 1,800 barrels per day (bbl/d). Apache held a 100% contractor interest in the concession. The company planned to drill three more wells by the end of the year (Apache Corp., 2002b). The company also announced the first oil and gas production from the Ras Kanayes development lease located in the Western Desert. The rate of production at Ras Kanayes was 2,130 bbl/d of petroleum and condensate and about 500,000 cubic meters per day (reported as 17.8 million cubic feet per day) of natural gas. Apache's interest in Ras Kanayes was 63.64%; the remaining 36.36% interest was held by Kufpec Ltd. Apache had 11 producing concessions in Egypt. The gross production from all the company's concession in Egypt was 75,500 bbl/d of petroleum and 5.66 million cubic meters per day of natural gas (reported as 200 million cubic feet per day) (Apache Corp. 2002a).

In 2002, the Government of Egypt and Iran's National Petrochemical Co. (NPC) agreed on a draft MOU for their joint participation in a cracker and downstream project in Egypt. The project was first announced in November 2001. Alexandria, the Egyptian Delta, and the Suez Gulf were the three sites under evaluation for the proposed complex. The estimated production capacity would be 1 Mt/yr. The feasibility study will be conducted by NPC. NPC's interest would be between 20% and 30%, the Egyptian Petroleum Ministry would hold from 20% to 30%, and the remainder would be split between Egyptian petrochemical producers and plastic processors (Asian Chemical News, 2002).

Refined Petroleum.—In 2002, Technip-Coflexip of France was to take over the operation and maintenance of the 100,000-bbl/d Middle East Oil Refinery. The refinery was previously operated by Foster Wheeler Corporation of the United States. Foster's contract terminated in September 2002 (Middle East Economic Digest, 2002b).

Infrastructure

The construction of a 330-meter (m)-long dam at Naga Hammadi was under way in 2002. Upon completion the seven-gate dam, which will replace a structure built in the early 1900s,

was expected to raise the water level from 4 to 8 m for irrigation and drive a 64-megawatt hydroelectric plant. The project will be located 700 km south of Cairo along the Nile River and was estimated to cost $380 million and to be completed by 2006 (Engineering News Record, 2002).

Mitsubishi Heavy Industries of Japan was contracted to build a dredger for the Suez Canal Authority (SCA) in Egypt. The dredger had a hold capacity of 10,000 cubic meters (estimated to be the largest dredger ever built in Japan) and was scheduled for delivery in 2004. SCA was working on a long-term program to upgrade the canal by deepening and widening the main channel and building a new bypass channel at the southern end of the waterway. The new bypass was expected to save about 6 hours of crossing time. The deepening and widening of the navigational course was expected to be completed by 2010 (Middle East Economic Digest, 2002c; Egyptian State Information Service, 2002§).

References Cited

African Mining, 2002, Scoping study confirms potential of Abu Dabbab tantalite project: African Mining, v. 7, no. 2, March-April, p. 32-33.

Apache Corp., 2002a, Apache commencing production on Egyptian concession—Drilling success at Ras Kanayes brings oil, gas on stream: Houston, Texas, Apache Corp. press release, March 28, 1 p.

Apache Corp., 2002b, Apache reports discovery on Egypt's E. Bahariya concession: Houston, Texas, Apache Corp. press release, March 28, 1 p.

Asian Chemical News, 2002, NPC/Egypt agree on MOU for Egypt C2: Asian Chemical News, v. 8, no. 358, May 27-June 2, p. 33.

Centamin Egypt Ltd., 2002, March announcement: Sydney, Australia, Centamin Egypt Ltd. press release, March 13, 1 p.

Cresset Precious Metals Inc., 2002, Cresset Precious Metals announces signing of a memorandum of understanding for development of the Umm Tundub Mine: San Diego, California, Cresset Precious Metal Inc. press release, May 9, 2 p.

Drucker Inc. 2002, Drucker's sale of West Gharib 20%: Vancouver, British Columbia, Canada, Drucker Inc. press release, February 5, 1 p.

El Paso Corp., 2002, El Paso Global LNG announces memorandum of understanding to explore opportunities in Egypt: Houston, Texas, El Paso Corp. press release, April 8, 1 p.

Engineering News Record, 2002, Egypt's work at Naga Hammadi under way, with Assuit to follow: Engineering News Record, v. 249, no. 1, July 1, p. 16.

Gippsland Ltd., 2002, 40 Mt Abu Dabbab tantalum-feldspar project: Perth, Australia, Gippsland Ltd. press release, December 20, 1 p.

Industrial Minerals, 2002a, Egyptian silica—Current status and profitable trends: Industrial Minerals, no. 412, January, p. 34-37.

Industrial Minerals, 2002b, Gippsland discovers high-grade feldspar: Industrial Minerals, no. 420, September, p. 34-37.

Metal Bulletin, 2002a, Egypt offers Delta Steel for sale: Metal Bulletin, no. 8645, January 31, p. 7, 20.

Metal Bulletin, 2002b, Ezz delays sheet plant start-up: Metal Bulletin, no. 8670, May 2, p. 20.

Metal Bulletin, 2002c, New Al technology for Russia, Latvia, and Egypt: Metal Bulletin, no. 8668, April 25, p. 9.

Middle East Economic Digest, 2002a, Bid round draws strong response: Middle East Economic Digest, v. 46, no. 45, November 8, p. 18.

Middle East Economic Digest, 2002b, Egypt, *in* News in brief: Middle East Economic Digest, v. 46, no. 37, September 13, p. 13.

Middle East Economic Digest, 2002c, Egypt, *in* News in brief: Middle East Economic Digest, v. 46, no. 40, October 4, p. 20.

Middle East Economic Digest, 2002d, Egypt, *in* News in brief: Middle East Economic Digest, v. 46, no. 41, October 11, p. 17.

Middle East Economic Digest, 2002e, Egypt, *in* Petrochemicals: Middle East Economic Digest, v. 46, no. 42, October 18, p. 17.

Oil & Gas Journal, 2002, Another LNG mega project: Oil & Gas Journal, v. 100, no. 6, February 11, p. 9

Petroleum Economist, 2002a, Egypt, in News in brief: Petroleum Economist, v. 69, no. 3, March, p. 42-43.

Petroleum Economist, 2002b, Segas, ELNG emerge as LNG frontrunners: Petroleum Economist, v. 69, no. 4, April, p. 39.

Tanganyika Oil Company Ltd., 2002, Egypt operations overview: Vancouver, British Columbia, Canada, Tanganyika Oil Company Ltd. press release, February 28, 2 p.

Internet References Cited

Arab Communication Consult S.A.L, 2002, Egypt investment report 2002, accessed November 15, 2003, at URL http://www.arabcomconsult.com/egyptr/main.htm.

Egyptian Geological Survey and Mining Authority, 2003, Investment opportunities, accessed November 7, 2003, at URL http://www.egsma.gov.eg/introductioneg.htm.

Egyptian State Information Service, 2002, Suez Canal revenues to hit $2.5 billion, accessed October 29, 2002, at URL http://www.sis.gov.eg/online/html17/o010922b.htm.

Middle East North Africa Financial Network, 2002, Egyptian Government to sell 90% of Egypt Aluminum, accessed September 11, 2002 at URL http://www.menafn.com/qn_print.asp?StoryID=3311&subl=true.

Ministry of Foreign Trade, 2003, International trade by major commodity groups, Monthly Economic Digest, October 2003, accessed November 18, 2003 at URL http://www.moft.gov.eg/English/Statistical_Annex/Monthly/5e_1Trade.stm.

U.S. Central Intelligence Agency, 2003, Egypt, World Factbook 2003, accessed November 6, 2003, at URL http://www.cia.gov/cia/publications/factbook/geos/eg.html.

U.S. Department of Energy, 2003 (October), An energy overview of the Republic of Egypt, accessed November 7, 2003 at URL http://www.fe.doe.gov/international/egyptover.html.

U.S. Energy Information Administration, 2003, (January), Egypt, Country Analysis Brief, accessed May 29, 2003, at URL http://www.eia.doe.gov/emeu/cabs/egypt.html.

TABLE 1
EGYPT: PRODUCTION OF MINERAL COMMODITIES [1]

(Thousand metric tons unless otherwise specified)

Commodity		1998	1999	2000[e]	2001[e]	2002[e]
METALS						
Aluminum metal	metric tons	195,000	193,319	193,000	190,800 [r]	195,000
Copper, refined, secondary[e]	do.	6,000	6,000	5,000	5,000	5,000
Iron and steel:						
Iron ore and concentrate		3,001	2,700 [e]	1,900 [r]	2,600 [r]	2,300
Metal:						
Pig iron[e]		1,334 [2]	1,300 [r]	1,400 [r]	1,400 [r]	1,400
Direct reduced iron		1,610	1,670	1,530 [2]	2,370	2,530
Steel, crude		2,870	2,619	2,820 [2]	3,800	4,358 [2]
Ferroalloys:[e]						
Ferromanganese		18	30	30	30	30
Ferrosilicon		44	44	45	48 [r]	48
Manganese ore[e]	metric tons	10,000	20,000	20,000	20,000	20,000
Titanium, ilmenite[e]		125	130	125	125	125
INDUSTRIAL MINERALS						
Asbestos[e]	metric tons	700	1,000	2,000	2,000	2,000
Barite[e]		300	500	500	500	500
Cement, hydraulic, all types		21,000	23,313	24,143 [2]	24,500	23,000
Clays:						
Bentonite[e]		33	50	50	50	50
Fire clay		227	300 [e]	300	300	300
Kaolin	metric tons	285,497	290,000 [e]	290,000	300,000 [r]	300,000
Feldspar, crude	do.	325,654	330,000 [e]	330,000	300,000	350,000
Fluorspar	do.	140	500 [e]	500	500	500
Gypsum and anhydrite, crude		1,338	2,000 [e]	2,000	2,000	2,000
Lime[e]		800	800	800	800	800
Nitrogen:						
Ammonia, N content		1,141	1,407	1,511 [2]	1,801 [r, 2]	1,839 [2]
Urea, N content		482	700	853 [2]	1,091 [2]	1,000
Phosphate:						
Phosphate rock		1,076	1,018	1,096 [r, 2]	972 [r]	1,500
P_2O_5 content		311	298	317 [r]	293 [r]	434
Sodium compounds:						
Salt		2,387	2,400 [e]	2,400	2,400	2,400
Soda ash[e]		50	50	50	50	50
Sodium sulfate	metric tons	2,498	2,500 [e]	2,500	2,500	2,500
Stone, sand and gravel:						
Basalt	thousand cubic meters	241	300 [e]	300	300	300
Dolomite		3,444	3,500 [e]	3,500	3,000	3,000
Granite, dimension stone	cubic meters	35,817	40,000 [e]	40,000	40,000	40,000
Gravel	thousand cubic meters	11,463	12,000 [e]	12,000	11,000	11,000
Limestone and similar	do.	25,618	27,000 [e]	27,000	25,000	25,000
Marble (incl. alabaster) blocks	cubic meters	134,664	140,000 [e]	140,000	140,000	140,000
Sand:						
Industrial sand (glass sand)		574	600 [e]	600	600	600
Construction sand		19,420	22,000 [e]	22,000	21,000	21,000
Sandstone	thousand cubic meters	6	-- [e]	--	10	10
Sulfur:						
Elemental, byproduct[e]	metric tons	4,450	4,400	4,500	4,500	4,500
Sulfuric acid, S content		224	214	220	220	220
Talc, soapstone, pyrophyllite	metric tons	39,720	40,000 [e]	40,000	40,000	40,000
Vermiculite	do.	12,376	12,000 [e]	12,000	12,000	12,000
MINERAL FUELS AND RELATED MATERIALS						
Coal[e]		370 [2]	400	400	400	400
Coke[e]		1,500	1,420	1,400	1,400	1,400
Gas, natural:						
Gross production	million cubic meters	18,270	19,766	25,000	25,000	31,000
Dry	do.	16,430	17,800 [e]	21,000	21,000	27,900

See footnotes at end of table

TABLE 1--Continued
EGYPT: PRODUCTION OF MINERAL COMMODITIES [1]

(Thousand metric tons unless otherwise specified)

Commodity		1998	1999	2000[e]	2001[e]	2002
MINERAL FUELS AND RELATED MATERIALS--Continued						
Petroleum:						
Crude, including condensate	thousand 42-gallon barrels	313,000 [r]	302,000 [r]	285,000 [r]	277,000	274,000
Refinery products:						
Liquefied petroleum gas	do.	5,090	5,371	5,500	5,500	5,000
Gasoline and naptha	do.	43,465	43,699	45,000	45,000	40,000
Kerosene and jet fuel	do.	15,788	15,472	16,000	16,000	14,000
Distillate fuel oil	do.	45,230	45,857	46,000	46,000	42,000
Residual fuel oil	do.	87,625	82,011	83,000	83,000	74,000
Lubricants	do.	1,820	1,834	1,800	1,800	1,700
Asphalt	do.	5,042	6,030	6,000	6,000	5,500
Unspecified[3]	do.	2,350	1,987	1,700	1,700	1,600
Total	do.	206,410	202,261	205,000	205,000	184,000

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised. -- Zero.
[1]Table includes data available through November 19, 2003. In addition to those listed, Egypt produced a number of commodities for which data were unavailable; these include gemstones, a number of metals, such as gold; lead, which was produced from recycled material; zinc; and manufactured mineral commodities, such as carbon black and glass.
[2]Reported figure.
[3]Amounts needed to complete reported refinery products totals shown.