THE MINERAL INDUSTRY OF

TUNISIA

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Production and processing of crude oil, mining of phosphate rock and manufacturing of its derivative products, resumption of operations at the Bougrine zinc-lead mine, and the partial privatization of a significant cement industry were the most important activities of the Tunisian mineral industry in 1998. All segments of the mineral industry combined contribute about 3% to the nation's gross domestic product.

Phosphate rock extraction was controlled and operated by the Government parastatal Compagnie des Phosphates de Gafsa, the largest company in Tunisia. Le Groupe Chimique Tunisien controlled phosphate processing through its Tunisian-owned Société Industrielle d'Acide Phosphorique et d'Engrais and Société Arabe des Engrais Phosphates et Azotes. Société Minière du Nord-Ouest operated a lead-zinc-barite mine at Boujabeur and a zinc mine at Hassine. The parastatal Société du Djebel Djerissa produced iron ore from the underground mine at Djerissa and from the open pit operations at Tamera and Douaria. The Government's hydrocarbon interests were overseen by Enterprise Tunisienne d'Activités Pétrolières (ETAP), which maintained an interest in each licensed tract.

Tunisia is currently in the ninth economic plan (1997-2001), and in this plan approximately 4% of its budget is slated to fund environmental projects. The incursion of phosphate mining tailing has seriously polluted the Bay of Gafsa, threatening coastal and fishing waters, as well as major underground aquifers. Other major polluting industries were cement, chemical, and steel manufacturers and petroleum refiners. All environmental safeguard activities are under the auspices of the Ministry of Environment and Land Use Planning. Actions taken by the Ministry include creating 10 industrial zones to locate centrally industries and to control their pollution; requiring mandatory environmental impact studies for new industrial projects; setting tight industrial operations standards to reduce future pollution; inspecting and fining those companies who pollute beyond the standards; and providing economic assistance to companies that invest in pollution controls (U.S. Embassy, Tunis, Tunisia, 1998).

The production of natural gas increased appreciably with the development of the Miskar Field, Tunisia's only domestic source of nonassociated natural gas. Crude oil, however, continued a slow decline as the nation's largest field, El Borma, nears depletion. This decline was partially offset in 1998 with the start of production from the El Biban Field in March. (See table 1).

The European Union dominated Tunisian trade, accounting for about 80% of total exports and 73% of total imports in 1998. France was Tunisia's main trading partner, accounting for 27% of Tunisia's total trade, followed by Italy, accounting for 20%. Imports in 1998 totaled $8 billion,[1] of which mineral imports accounted for $813 million. Petroleum imports alone were valued at $374 million. Exports in 1998 totaled $5.5 billion. The value of mineral exports was $957 million, of which phosphate rock and its derivatives were valued at $553 million (Institut National de la Statistique, 1998). About one-third of Tunisia's export earnings was absorbed in debt servicing.

In September 1997, Breakwater Resources Ltd. of Canada acquired the assets of the Bougrine zinc-lead mine for $19.3 million. Production resumed in May 1998 after low zinc prices forced suspension of mine operations in October 1996. The company produced about 40,000 metric tons (t) of zinc concentrates and 5,000 t of lead concentrates in 1998. Planned maximum production rate of 83,000 metric tons per year (t/yr) of zinc concentrates and 10,000 t/yr of lead concentrates was anticipated in 1999.

Tunisia's national demand for cement was some 4 million metric tons (Mt). Cement is produced by six plants with a combined capacity of 5.1 Mt. Two of the larger plants were privatized in 1998 with two more to follow in 1999. Société des Ciments d'Enfidha, 90 kilometers (km) south of Tunis near the eastern city of Sousse, and Société des Ciments de Jebel Ouest, 60 km south of Tunis, were privatized through international tender. Tunisia's largest plant, Société des Ciments d'Enfidha, was sold to Spain's Uniland Cementera S.A. for $161 million for 88% equity; the other 12% was owned by the Islamic Development Bank. The nation's second largest cement producer with a national market share of about 25% and 47% in the Tunis area, Société des Ciments de Jebel Ouest, was sold to Portugal's Cimentos de Portugal (Cimpor) for $231 million. Cimpor planned eventually to expand the 1.2 million-metric-ton-per-year (Mt/yr) capacity to 1.9 Mt/yr (Middle East Economic Digest, 1998b; Cimentos de Portugal, [undated], Tunísia, accessed March 20, 2000, at URL http://www.cimpor. pt/site_p/m_tun.html). The nearly $400 million received from the sale of cement companies in 1998 and the future cement company proceeds from the privatization of the four remaining plants will be used mostly to boost a large infrastructure investment program (Financial Times, 1998).

Tunisian phosphate rock mining was primarily in the Gafsa region from nine open pit and underground sources. Phosphate rock exports were 937,200 t in 1998 compared with 1.25 Mt in 1997. Phosphoric acid exports totaled 1.29 Mt compared with

[1]Deceased.

[1]Where necessary, values have been converted from Tunisian dinars (TD) to U.S. dollars at a rate of TD0.92=US$1.00.

1.34 Mt in 1997. In 1998, diammonium phosphate exports totaled 840,500 t, and triple superphosphate exports were 759,300 t.

The Ministry of Industry expected an average of $200 million to be invested yearly in the hydrocarbons exploration and production sector over the period 1998-2001 (Marek Enterprise Inc., May 6, 1998, [untitled], African Business Daily, accessed May 15, 1998, at URL http://www.Marekinc.com/ABD050698.html).

Petro-Canada signed a 2-year exploration agreement for a large concession in the Berkine Ghadames basin. This basin is relatively unexplored in Tunisia but has provided a number of substantial oil discoveries in neighboring Algeria. The company committed to spend $5 million in Tunisia in 1998 and 1999 for exploration in the 7,200-square-kilometer Tataouine Block. Upon expiration of the initial 2-year term, Petro-Canada will have extension options.

Natural gas supplies were from domestic output, with Algerian pipeline transit fees for payment in kind, and supplemental purchases from Algeria. Until the development of the Miskar Field in 1996, associated natural gas from El-Borma Field was Tunisia's sole domestic natural gas source. A new domestic supply source will be the Chergui Field, where the successful completion of three appraisal wells in 1998 confirmed recoverable reserves of 2 billion cubic meters (Middle East Economic Digest, 1998a).

Crude oil production averaged 76,000 barrels per day (bbl/d) from 24 fields. The largest field was El-Borma operated by Italy's Azienda Generali Italiana Petroli, with an output averaged about 28,000 bbl/d of 41° API gravity crude oil. The offshore Ashtart Field, owned jointly by Atlantic Richfield Co (ARCO) and ETAP, accounted for nearly 22,000 bbl/d of 30° API gravity oil as the result of a $210 million secondary development program. ARCO also owned 100% interest in the South Kerkennah exploration block immediately to the west of the Ashtart license.

Petroleum refining is for the present confined to a single 35,000-bbl/d-capacity refinery at Bizerte operated by the Société Tunisienne des Industries de Raffinage. The refinery output accounted for more than one-half of the nation's petroleum product requirements. The state-owned petroleum product distribution network, Société Nationale de Distribution de Pétrole, was slated for privatization by the end of 1999.

Tunisian phosphate rock reserves were 3.5 billion to 4 billion metric tons, or about 5% of global reserves. Tunisian crude petroleum reserves were 308 million barrels. Reserves of natural gas were 85 billion cubic meters (Arab Petroleum Research Center, 1998). The minable reserves at Bougrine were 5.3 Mt grading 11.7% zinc and 2.6% lead.

A total of 2,260 km of railway was the primary mode of transportation of phosphate rock to chemical plants and seaports. Highways within Tunisia totaled 17,500 km. Crude oil pipelines totaled 797 km, and natural gas pipelines totaled 742 km. Tunisia had an installed electrical generation capacity nearing 2,000 megawatts.

Tunisia is becoming an increasingly open, market-oriented economy because of structural adjustment supported by the International Monetary Fund and the World Bank. Investment in infrastructure is now a top priority and should result in increased economic growth. The outlook for Tunisia's cement industry is favorable as domestic infrastructure upgrading programs and expanding export markets are realized.

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TABLE 1
TUNISIA: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/		1994	1995	1996	1997	1998
METALS						
Iron and steel:						
Iron ore and concentrate, gross weight		288	224	238	252	220
Fe content		129	122	129	137	119
Metal:						
Pig iron		154	162	151	152	100 e/
Steel, crude		184	201	187	195	122
Lead, mine output, Pb content	metric tons	2,856	6,601	4,764	1,424	4,272
Silver metal, primary e/	kilograms	2,500	4,000	3,000	1,000	1,000
Zinc:						
Ore, gross weight	metric tons	23,379	80,446	58,044	5,389	57,036
Zn content	do.	14,548 r/	44,244	31,920	2,967	31,368
INDUSTRIAL MINERALS						
Barite	do.	15,732	10,825	15,360	12,841	8,011
Cement, hydraulic		4,606	4,998	4,566	4,431	4,590
Clays, construction e/		350	350	350	350	350
Fertilizers:						
Triple-superphosphate		830	818	791	748	767
Phosphoric acid		986	1,018	1,093	984	1,184
Diammonium-phosphate		741	830	928	745	919
Ammonium nitrate		112	193	186	349	156
Fluorspar, acid grade	metric tons	676	1,856	720	1,426	1,190
Gypsum e/	do.	100,000	100,000	100,000	100,000	100,000
Lime e/		600	600	600	600	600
Phosphate rock:						
Gross weight		5,565	7,241	7,167	6,941	7,901
P_2O_5 content e/		1,712	2,181	2,150	2,140	2,370
Salt, marine		414	481	477	393	473
MINERAL FUELS AND RELATED MATERIALS						
Gas, natural:						
Gross	million cubic meters	354	335	1,027	1,866	1,950
Dry e/	do.	250	250	800	1,500	1,500
Petroleum:						
Crude	thousand 42-gallon barrels	33,660	32,690	32,229	26,841	27,776
Refinery products:						
Liquefied petroleum gas	do.	1,545	1,465	1,573	1,353	1,355 e/
Gasoline	do.	2,917	2,846	3,040	3,179	3,180 e/
Kerosene	do.	1,057	1,035	1,012	827	830 e/
Distillate fuel oil	do.	4,003	4,297	4,261	4,842	4,845 e/
Residual fuel oil	do.	3,876	4,300	4,292	3,956	3,960 e/
Other e/	do.	448	568	551	1,995	2,000 e/
Total	do.	13,846	14,511	14,729	16,152	16,170 e/

e/ Estimated.

1/ Data available as of July 1, 1999.

2/ In addition to the commodities listed, a variety of crude construction materials (sand and gravel and stone) was produced, but output was not reported, and available information was inadequate to make reliable estimates of output levels.