

TUNISIA

By Philip M. Mobbs

Production and processing of crude oil and mining of phosphate rock and manufacturing of its derivative products were significant segments of the Tunisian minerals economy. In 1999, hydrocarbon production and mining accounted for about 2.5% and for about 1%, respectively, of the gross domestic product (GDP) of this North African nation. For 1999, GDP estimates ranged from \$18 billion to \$21 billion (Middle East Economic Digest, 2000; World Bank, September 12, 2000, Tunisia at a glance, accessed October 2, 2000, via URL <http://www.worldbank.org/data/countrydata/countrydata.html>).

The World Bank estimated that total exports during 1999 were valued at about \$6 billion.¹ The value of exports of cement, phosphate-based fertilizers, phosphate rock, salt, and zinc was about \$600 million, according to the Institut National de la Statistique (1999, p. 33). The value of fuel exports was estimated by the World Bank to be \$392 million. In 1999, the World Bank estimated that the total value of imports was \$8.6 billion, of which fuel and energy imports accounted for \$451 million (World Bank, September 12, 2000, Tunisia at a glance, accessed October 2, 2000, via URL <http://www.worldbank.org/data/countrydata/countrydata.html>).

In July, Parliament approved a new petroleum law that will become effective in February 2000. Existing operations can amend their contracts to conform with the new legislation or remain under the 1990 Hydrocarbon Code (Middle East Economic Digest, 1999b).

In the cement sector, state-owned companies included Ciments de Bizerte, Société des Ciments des Gabés (SCG), Société des Ciments Artificiels de Tunis, and Société des Ciments d'Oum el-Kelil. Cimpor Internacional SGPS, S.A., which was a subsidiary of Cimentos de Portugal SGPS, S.A., owned Société des Ciments de Jbel Oust. Uniland Cementera S.A. of Spain and the Islamic Development Bank controlled Société des Ciments d'Enfidha. Cement also was produced by the Société Tuniso-Algérienne de Ciment Blanc.

Hydrocarbon exploration and production operations were conducted under production-sharing agreements in which foreign operators were contractors for the Government's Enterprise Tunisienne d'Activités Pétrolières (ETAP). This structure will change in the future because joint ventures with ETAP will be authorized in 2000 by the new petroleum legislation. Petroleum refining was confined to the 34,000-barrel-per-day (bbl/d)-capacity refinery at Bizerte, which was operated by the state-owned Société Tunisienne des Industries du Raffinage.

The parastatal Société du Djebel Djerissa produced iron ore from the underground mine at Djerissa and from the Tamera-

Douaria open pit operations. Most of the produced iron ore was used by the 200,000-metric-ton-per-year-capacity steel plant of El Fouladh—Société Tunisienne de Sidérurgie in Menzel Bourguiba. Breakwater Resources Ltd. of Canada operated the Bougrine lead-zinc mine. Société Minière du Nord-Ouest operated a lead-zinc-barite mine at Boujabeur. Small quantities of lead and zinc also were produced at Dar N'Hal, which was a mine on the Fej Lahdoum diapir.

Phosphate rock extraction was controlled by the Government's Compagnie des Phosphates de Gafsa, and phosphate rock was processed by subsidiaries of Groupe Chimique Tunisien. Tunisian phosphate rock mining primarily was conducted in the Gafsa region from eight open pit and underground mines.

In July, Aurora Gold Corp. of the United States optioned five zinc prospects from High Marsh Holding Ltd.; These included the Hamman Zriba/Jebel Guebli, the Koudiat Sidii, and the Ouled Moussa prospects. At yearend, Aurora was negotiating to acquire additional zinc prospects, such as El Mohguer, the Hammala, and the Jebel Oum Edeboua from High Marsh.

The Government's privatization of cement plants continued in 1999. Bids on SCG were due in December. After the sale of SCG, bids for Société des Ciments Artificiels de Tunis and Société des Ciments d'Oum el-Kelil will be accepted. Cement production increased in 1999 owing to slightly higher domestic demand (Central Bank of Tunisia, June 2000, Industrial activity—Global trends in economic activity—1999 annual report, accessed September 29, 2000, via URL <http://www.bct.gov.tn/english/publication/index1.htm>).

Uniland Cementera proposed a \$125 million upgrade for the Société des Ciments d'Enfidha in Sousse. The proposed project would make it possible for Enfidha's diesel-fuel-fired kiln to burn coke and to expand the cement plant's capacity by an additional 1 million metric tons (Mt) (International Bulk Journal, 1999).

Compagnie des Phosphates de Gafsa continued to close underground mines in favor of lower cost open pits. Open pit production reached 87% of total phosphate rock production in 1999 (Central Bank of Tunisia, June 2000, Industrial activity—Global trends in economic activity—1999 annual report, accessed September 29, 2000, via URL <http://www.bct.gov.tn/english/publication/index1.htm>).

In 1999, crude oil production increased slightly. Production from the major fields, however, continued to plummet. Production from El Borma Field dropped to about 22,000 bbl/d in 1999 from about 24,000 bbl/d in 1998, and that from the Ashtart Field also dropped from about 19,000 bbl/d to about 18,000 bbl/d. Production from smaller fields, however, increased to about 45,000 bbl/d from about 41,000 bbl/d across the same time frame (Central Bank of Tunisia, June 2000,

¹Where necessary, values have been converted from Tunisian dinars (TD) to U.S. dollars at the average rate for 1999 of TD1.18=US\$1.00.

Industrial activity—Global trends in economic activity—1999 annual report, accessed September 29, 2000, via URL <http://www.bct.gov.tn/english/publication/index1.htm>.

Natural gas supplies were derived from domestic output, payment in kind in lieu of Trans-Mediterranean Pipeline transit fees, and supplemental purchases from Algeria. Tunisian gross natural gas production reportedly declined to 1,819 million cubic meters (Mm³) in 1999 from 1,899 Mm³ in 1998, although natural gas production increased at El Franig and the Baguel gasfields to 113 Mm³ in 1999 from 41 Mm³ in 1998 (Central Bank of Tunisia, June 2000, Industrial activity—Global trends in economic activity—1999 annual report, accessed September 29, 2000, via URL <http://www.bct.gov.tn/english/publication/index1.htm>). British Gas Tunisia Ltd. proposed additional development of the Miskar Field, which was Tunisia's largest gasfield, to expand it from 1,600 million cubic meters per year (Mm³/yr) in 1999 to about 2,100 Mm³/yr by 2001 (BG Group Plc., [undated], Mediterranean Basin—Tunisia—Data book, accessed October 19, 2000, via URL <http://www.bg-group.com/world/index2.html>). British Gas Tunisia also began the expansion of the Hannibal gas-treatment facility near Sfax (Middle East Economic Digest, 1999c).

In 1999, 27 oilfields and gasfields were producing in Tunisia; of these, 5 were primarily gasfields (Arab Petroleum Research Center, 2000, p. 459, 462). In addition, 42 exploration and prospecting (seismic option) permits were held by 50 foreign and Tunisian companies (Arab Petroleum Research Center, 2000, p. 449; Enterprise Tunisienne d'Activités Pétrolières, [undated], Exploration activity, accessed October 20, 2000, at URL http://www.etap.com.tn/hydroc/html/exp_act.htm). During 1999, companies involved in the Tunisian petroleum exploration and production sector included Agip Tunisia B.V., which was a division of ENI S.p.A. of Italy; Ampolex (Tunisia) Pty. Ltd., which was a subsidiary of Ampolex Ltd. of Australia; Anadarko Petroleum Corp. of the United States; Anschultz Corp. of the United States; Bligh Tunisia Inc., which was a subsidiary of Bligh Oil & Minerals N.L. of Australia; British Gas Tunisia, which was a subsidiary of BG Group plc of the United Kingdom; Carthago Oil of Tunisia; CMS Oil and Gas Co., which was a subsidiary of CMS Energy Corp. of the United States; Command Petroleum Holdings Ltd. of Australia; Corexland B.V., which was the Dutch subsidiary of Coparex International S.A. of France; Ecumed Petroleum Grombalia, Ltd., Ecumed Petroleum Tunisia, Inc., and Ecumed Petroleum Zarzis, Ltd., which were subsidiaries of Centurion Energy International Inc. of Canada; Elf Hydrocarbures Tunisie, which was a subsidiary of Arco Mediterranean Inc.; ETAP; The Eurogas Corp. of Canada; Exxon Mobil Corp. of the United States; Fina Exploration Tunisie, which was a subsidiary of the TotalFinaElf Group of France; First Calgary Petroleums Ltd. of Canada; Habib Bouchamaoui & Sons of Tunisia; Kuwait Foreign Petroleum Exploration Co. of Kuwait; Lasmo plc of the United Kingdom; Marathon Petroleum Jenein Ltd., which was a subsidiary of Marathon Oil Co. of the United States; MOL S.A. of Hungary; MP Zarat, which was a subsidiary of Medex Petroleum of Tunisia; Nimir Petroleum Co. of Saudi Arabia; Nuevo Energy Co. of the United States; ONGC Videsh Ltd. of India; Petro-Canada of Canada; Petronas Carigali Bhd., which was a subsidiary of Petroliaam Nasional Bhd. of Malaysia;

Phillips Petroleum Co. of the United States; Pluspetrol El Ouara Corp., which was a subsidiary of Pluspetrol Resources of Argentine; Preussag Energie GmbH of Germany; Societe General Industrielle of Tunisia; and Union Texas Maghreb Inc., which was a subsidiary of Union Texas Petroleum Holdings Inc. of the United States.

In 1999, Tunisian phosphate rock reserves were estimated to be 100 Mt (Jasinski, 2000). Tunisian crude petroleum reserves were about 308 million barrels and reserves of natural gas were 78,000 Mm³ (U.S. Energy Information Administration, June 2000, Tunisia—Country analysis briefs, accessed October 2, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/tunisia.html>). The minable zinc-lead reserves at Bougrine were 2.35 Mt grading 11.1% zinc and 2.1% lead (Breakwater Resources Ltd., [undated], Bougrine production, accessed October 13, 2000, at URL http://www.breakwater.ca/oper/boug_r.htm).

Production of electric power increased to 9.5 billion kilowatt hours (GkWh) in 1999 from 8.7 GkWh in 1998. The Société Tunisienne d'Electricité et du Gaz produced 8.6 GkWh, primarily from natural-gas-powered thermal plants. The building materials, chemical, iron and steel, metallurgical, mining, and oil industries used 2.4 GkWh, about 28% of total national consumption that was reported as 8.5 GkWh (Central Bank of Tunisia, June 2000, Industrial activity—Global trends in economic activity—1999 annual report, accessed September 29, 2000, via URL <http://www.bct.gov.tn/english/publication/index1.htm>).

In March, the Government approved the contract for the 470-megawatt Rades independent powerplant. A consortium of PSEG Global of the United States, Marubeni Corp. of Japan, and Sithe Energies, which was the U.S. subsidiary of Vivendi of France projected a 2001 start-up date for the \$300 million project (Middle East Economic Digest, 1999a).

References Cited

- Arab Petroleum Research Center, 2000, Tunisia, *in* Arab oil & gas directory: Paris, Arab Petroleum Research Center, p. 445-468.
- Institut National de la Statistique, 1999, Bulletin mensuel de statistique—Tunisie: Ministère du Développement Economique, no. 516, 37 p.
- International Bulk Journal, 1999, Uniland Spain to invest \$125m in Tunis: International Bulk Journal, September, p. 17.
- Jasinski, S.M., 2000, Phosphate rock: U.S. Geological Survey Mineral Commodity Summaries 2000, p. 124-125.
- Middle East Economic Digest, 1999a, Tunisia—In brief: Middle East Economic Digest, v. 43, no. 37, September 17, p. 35.
- 1999b, Tunisia—New oil and gas terms approved: Middle East Economic Digest, v. 43, no. 32, August 13, p. 30-31.
- 1999c, Tunisia—EPIC contract for Costain: Middle East Economic Digest, v. 43, no. 5, February 5, p. 22.
- 2000, Testing times for Tunisia: Middle East Economic Digest, v. 44, no. 21, May 26, p. 36.

Major Sources of Information

Ministere de l'Industrie
37, Av. Kheireddine Pacha
1002 Tunis, Tunisia
Telephone: +(216-1) 289-368
Fax: +(216-1) 782-742
E-mail: mind@ministeres.tn

National Office of Mines
Department de Geologie
95 Avenue Mohamed V
1002 Tunis Le Belvedere
Tunisia

Major Publication

Ministere du Developpement Economique
Institut National de la Statistique
Bulletin Mensuel de Statistique
Monthly
Tunis, Tunisia

TABLE 1
TUNISIA: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/	1995	1996	1997	1998	1999	
METALS						
Iron and steel:						
Iron ore and concentrate, gross weight	224	238	252	220	222	
Fe content	122	129	137	119	120 e/	
Metal:						
Pig iron	162	151	152	123 r/	180 e/	
Steel, crude	201	187	195	171 r/	229	
Lead, mine output, Pb content	metric tons	6,601	4,764	1,424	4,272	6,589
Silver metal, primary e/	kilograms	4,000	3,000	300 r/	2,500 r/	4,000
Zinc concentrate, gross weight	metric tons	80,446	58,044	5,389	57,036	89,213
Zinc content	do.	44,244	31,920	2,967	31,368	49,066
INDUSTRIAL MINERALS						
Barite	do.	10,825	15,360	12,841	8,011	4,000
Cement, hydraulic		4,998	4,566	4,424 r/	4,588 r/	4,864
Clays, for construction, clay products, tiles		3,040 r/	3,175 r/	3,280 r/	3,478 r/	3,670
Fertilizers:						
Triple-superphosphate		818	791	748	767	812
Phosphoric acid		1,018	1,093	984	1,184	1,208
Diammonium-phosphate		830	928	745	919	1,048
Ammonium nitrate		193	186	165 r/	156	172
Fluorspar, acid grade	metric tons	1,856	720	1,426	1,190	1,000
Gypsum e/		100	100	100	100	100
Lime		412 r/	464 r/	466 r/	482 r/	475
Phosphate rock:						
Gross weight		7,241	7,167	6,941	7,901	8,006
P ₂ O ₅ content e/		2,181 3/	2,150	2,140	2,370	2,400
Salt, marine		481	477	393	473	450
MINERAL FUELS AND RELATED MATERIALS						
Gas, natural:						
Gross	million cubic meters	335	1,027	1,866	1,899 r/	1,819
Dry e/	do.	250	800	1,500	1,500	1,450
Petroleum:						
Crude	thousand 42-gallon barrels	32,690	32,229	26,841	30,570 r/	30,960
Refinery products:						
Liquefied petroleum gas	do.	1,465	1,573	1,353	1,473 r/	1,288
Gasoline	do.	2,846	3,040	3,179	2,951 r/	3,096
Kerosene	do.	1,035	1,012	827	978 r/	1,194
Distillate fuel oil	do.	4,297	4,261	4,842	4,178 r/	3,812
Residual fuel oil	do.	4,300	4,292	3,956	4,202 r/	4,149
Other e/	do.	568	551	1,995	800 r/	1,424
Total	do.	14,511	14,729	16,152	14,582 r/	14,963

e/ Estimated. r/ Revised.

1/ Data available as of September 29, 2000.

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.

3/ Reported figure.