THE MINERAL INDUSTRY OF

MAURITANIA

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Iron ore mining and beneficiation, which continued to dominate the mineral industry in Mauritania, accounted for about 12% of the gross domestic product (GDP) and about 50% of export revenues in 1999. The country's annual GDP growth rate was estimated to be 4.3% (Ishac Ould Rajel, Minister of Mines and Industry, written commun., December 2000; World Bank, September 9, 2000, Mauritania at a glance, accessed October 4, 2000, at URL http://www.worldbank.org/data/countrydata/aag/mrt_aag.pdf). Mining occupied about 5,000 of the nation's population of 2.6 million people. Principal mining output in 1999 included gypsum, iron ore, and salt (table 1). Mineral exploration interest was focused on diamond on the Archean Reguibat craton, gold in the Inchiri region, oil offshore, and continued evaluation of copper-gold, kaolin, and peat deposits.

In December 1999, a new decree was adopted to outline the rules concerning mining titles comprised in the Mauritanian mining code. The Décret Portant sur les Titres Miniers (Law No. 99/013) established four types of licenses for prospecting, exploration, exploitation, and small-scale mining. Under the decree, a prospecting license is valid for 6 months and renewable only for the same time period. The license does not grant any exclusive rights. Exploration licenses limit the area of exploration to 1,500 square kilometers (km²) for all resources except diamond, which can be as large as 10,000 km². Exploration entities can acquire and maintain up to 20 licenses or 10 in the case of diamond exploration. Exploration licenses are valid for 3 years and can be renewed twice, each renewal not to exceed 3 years. An exploitation license confers on its holder, within the limit of the license perimeter and indefinitely in depth, the exclusive right of prospecting, exploring, and exploiting the mineral resources mentioned in the exploration license for 30 years. The license can be renewed. A small-scale mining exploitation license is for areas that do not exceed 2 km². The license is granted for a period of 3 years up to a minimal amount of production determined by the Ministry of Mines. Two renewals can be granted for a period of 3 years each after a negotiable level of production is reached or exceeded.

In 1999, the Project de Reinforcement Institutionelle de Secteur Minier was established by the Government with the assistance of Coopération Française, the Islamic Development Bank, and the World Bank to update information on Mauritania's geologic infrastructure. Income tax during 1999 was 30% of profits with a 3-year tax-free period for new mining operations. Withholding tax was set at 16%, and export royalty was negotiable within a minimum of 3% and a maximum of 7% of profits (Rex Diamond Mining Corp., 2000, p. 6-7).

The infrastructure of the country, in particular the road network, limited the development of the mineral industry in 1999.

Commodity Review

Iron and Steel.—Mauritania's proven iron ore reserves have been estimated to be 190 million metric tons (Mt) of hematite ore grading 60% to 68% iron and 660 Mt of magnetite ore grading 36% to 40% iron (Mining Journal Research Services, 2000, p. 7). Société Nationale Industrielle et Minière (SNIM) was responsible for iron ore production and beneficiation. Mining was carried out in open pits at SNIM's three main locations at Guelb El Rhein, Kedia d'Idjill, and M'Haoudat. Hematite was mined at Kedia and M'Haoudat, and magnetite was extracted from Guelb El Rhein. At Guelb El Rhein, ores were magnetically separated in a dry process to produce a 67% iron concentrate. The ore produced by SNIM was transported by railway from the mines to the Nouadhibou harbor facilities. SNIM owned and operated its own railway. The company produced more than 11 million metric tons per year of iron ore, the majority of which was exported to Europe (Société Nationale Industrielle et Miniére, [undated], From the mining center to the harbor, accessed August 8, 2000, at URL http://www.snim.com/mine-port2.html).

Gold and Copper.—In 1999, the Guelb Moghrein Project was being developed by Guelb Moghrein Mines d'Akjouit SA (GEMAK) of Mauritania. GEMAK was equally owned by a subsidiary of General Gold Resources NL of Australia and by Societé Arab des Mines de l'Inchiri, which was partly owned by the Government of Mauritania (45%). The project, which was located within Mining Concession CM2 at Akjoujt, contains copper and gold resources that were estimated to be 23.7 Mt at a grade of 1.88% copper, 1.41 grams per metric ton gold, and 144 parts per million cobalt using a 1% copper cut-off grade. A copper mine had been operated on the concession area from 1970 to 1978. In 1999, General Gold's pilot plant, which was built for the leaching of gold from the old copper mine tailings, remained on care and maintenance. In addition to the Guelb Moghrein Project, General Gold held 7,600 km² of exploration permits in the Inchiri region near Akjoujt (General Gold Resources NL, 2000, p. 6-9).

Diamond.—Diamond exploration was among the principal exploration activities that took place in 1999. Ashton Mining Ltd. of Australia, Dia Met Minerals Ltd. and Rex Diamond Mining Corp. of Canada, and De Beers Consolidated Mines Ltd. of South Africa were exploring their diamond permits. Rex Diamond discovered the first diamond-bearing kimberlite near the Tenoumer and the Touajil properties in November 1999. Rex Diamond's 100% owned exploration permits in Mauritania were increased to 100,000 km² in 1999 from 71,700 km² in 1998. Other exploration permits held by Rex Diamond included the Akchar, the Arouedil, the Char, the Choum, the Chegga, the

Hammami, the Ouassat, and the Tourine properties. During the year, the company began the drilling program at Touajil, where microdiamond and macrodiamond concentrations had been found (Rex Diamond Mining Corp., 2000, p. 6-7).

In 1999, Ashton Mining and Dia Met signed a joint venture agreement to explore diamond deposits in Mauritania. Ashton, which initiated diamond exploration activities in Mauritania in 1995, had discovered kimberlite with diamond indicator minerals in the Reguibat Shield area in 1998. Dia Met planned to acquire 49% of Ashton's equity in the project by 2003. The Government of Mauritania had a 10% equity interest in some of the properties (African Mining, 1999). The joint venture comprised 20 granted exploration licenses that covered an area of 234,600 km². Under the terms of the agreement, Dia Met would be the sole fund provider, and Ashton Mining would remain as the project operator (Normandy La Source, 2000, p. 19).

Oil and Gas.—Many international oil companies were involved in offshore oil exploration in Mauritania in 1999. In July, the joint venture of Dana Petroleum plc and Hardman Resources NL of Australia was awarded three productionsharing contracts on offshore blocks 1, 7, and 8. Dana Petroleum held an 80% interest in the joint venture and was operator, and Hardman held an 18% interest. In 1998, Hardman had entered into joint venture agreements for Blocks 2, 3, and 6 and the shallow and deep-water sections of Blocks 4 and 5 with

Woodside Mauritania Pty. Ltd. and British-Borneo International Ltd. (Hardman Resources NL, [undated], Mauritania, accessed February 10, 2001, at URL http://www.hdr.com.au/Maurit.htm).

An Algerian company operated the 20,000-barrel-per-day Somir Refinery in Nouadhibou under a management contract and processed imported Algerian crude oil. All refined products were consumed in the country [MBendi Information Services (Pty.) Ltd., September 29, 2000, Mauritania—Oil and gas industry—Marketing and distribution, accessed at URL http://www.mbendi.co.za/indy/oilg/ogds/af/mu/p0005.htm]. Electricity in Mauritania was generated and supplied by the Société Nationale d'Eau et d'Electricite. More than one-half of the installed capacity was generated by hydroelectric plants; the remainder was thermally fired [MBendi Information Services (Pty.) Ltd., July 12, 2000, Mauritania—Electrical power, accessed February 2, 2001, at URL http://www.mbendi.co.za/indy/powr/af/mu/p0005.htm].

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TABLE 1 MAURITANIA: PRODUCTION OF MINERAL COMMODITIES 1/

Commodity 2/		1995	1996	1997	1998 e/	1999 e/
Cement e/	metric tons	120,000	100,000	80,000	50,000	50,000
Gold	kilograms	1,196	189			
Gypsum	metric tons	5,810	12,500	80,000 e/	100,000	100,000
Iron ore:						
Gross weight	thousand metric tons	11,610	11,360	11,700 e/	11,400	11,500
Iron content e/	do.	7,000	7,384 r/ 3/	7,605 r/ 3/	7,410 r/ 3/	7,475 3/
Petroleum refinery products: e/						
Liquefied petroleum gas	thousand 42-gallon barrels	439	440	440	440	440
Gasoline	do.	1,962	1,900 r/	1,900 r/	1,900 r/	1,900
Kerosene	do.	479	470	470	470	470
Distillate fuel oil	do.	1,100	1,100	1,100	1,100	1,100
Residual fuel oil	do.	2,458	2,450	2,450	2,450	2,450
Other	do.	700	700	700	700	700
Total	do.	7,138	7,060 r/	7,060 r/	7,060 r/	7,060
Salt e/	metric tons	5,500	5,500	5,500	5,500	5,500

e/ Estimated. r/ Revised. -- Zero.

 $^{1/\,} Table$ includes data available through January 3, 2001.

^{2/} In addition to the commodities listed, modest quantities of crude construction materials (clays, sand and gravel, and stone) presumably were produced, but output was not reported quantitatively. The minimill of Société Arabe de Fer et d'Acier en Mauritanie produced rebar and wire, but available information was inadequate to make reliable estimates of output levels.

^{3/} Reported figure.