# NIGER

### By Philip M. Mobbs

Niger was an internationally important uranium producer, annually exporting concentrate containing approximately 3,000 tons of yellow cake  $(U_3O_8)$ . Other commercially exploited minerals were coal, gypsum, limestone, molybdenum, salt, and tin. The country had a significant area of the Birimian greenstone belt under exploration for gold. According to the Ministère des Mines, de l'Industrie et de la Technologie (1997), Niger also had indications of barite, columbium-tantalum, copper, chromite, graphite, iron ore, lead, lithium, monazite, molybdenum, nickel, phosphates, platinum-group metals, silver, talc, titanium, and zinc resources. Mining accounted for about 4% of the gross domestic product.

Law 93-016 of March 2, 1993, and Decree No. 93-044/PM/MMEI/A of March 12, 1993, provided the legal framework for the mining industry. The mining law provided a number of promotional incentives and guarantees, including dutyfree import of capital equipment, guarantees against expropriation, and the right to repatriate earnings and dividends. Additional laws affecting the mineral industry included the General Fiscal System, the General Customs and Excise System, the Exchange Regulation, the Labor and the Trade Acts. The Government retained 10% free equity in mining ventures and the option to purchase an additional 23% equity in mineral-There was a 5.5% royalty on the production ventures. commercial value of exported minerals. Mineral industry operations in southwestern Niger did not appear to be adversely affected by the national unrest attributed to drought, famine, and political turmoil (Mining Journal, 1998a).

The three major greenstone gold belts in the Liptako region of western Niger were the focus of the gold rush. The Gorouol (or Kourki) Belt bordered Burkina Faso and Mali in the northwest of the Liptako area, the Sirba Belt was west of Niamey, and the Tera Gassa Belt was between the Gorouol and the Sirba greenstone belts (Bureau of Geological Consultancy, 1993). A number of small-scale miners were producing from operations in the Sirba Belt. The Government estimated that production of artisanal gold from the entire Liptako region was about 1 metric ton per year; artisanal miners numbered in the tens of thousands.

Ashanti Exploration Ltd., a subsidiary of Ashanti Goldfields Co. Ltd. of Ghana, was the operating partner for three joint ventures. Ashanti continued mapping and trenching of the Namanga zone on the Tera gold property for its joint venture with Carlin Resources Corp. of Canada. In the Sirba greenstone belt, Ashanti sampled and began drilling the Tampena anomaly on the Nassile concession of Royalstar Resources Ltd. of Canada. North of the Nassile concession, Ashanti continued to explore the Libiri prospect on the Saoura concession for the joint venture with International African Mining Gold Corp. (IAMGOLD) of Canada.

Auspex Minerals Ltd. of Canada delineated a number of gold prospects on the Koulbaga gold concession, southeast of the Tera concession, by using geochemical sampling of termite mounds and soil, trenching, geophysical surveys, and drilling.

Etruscan Enterprises Ltd. of Canada acquired Hansa GeoMin Consult GmbH of Germany's remaining interest in the African GeoMin Mining Development Corp. (AGMD). AGMD owned the Tiawa concession, northwest of the Saoura concession, where Etruscan was evaluating the Bolon Djounga anomaly. Also on the Tiawa concession, Placer Dome of Canada was exploring the 81-square kilometer (km<sup>2</sup>) Samira deposit under an option agreement with Etruscan. Etruscan and the Office National des Resources Minières were exploring the Koma Bangou prospect east of the Tera concession. Additionally, Etruscan obtained an option to earn 50% interest in the Kossa permit in the Gorouol Belt, 225 kilometers (km) northwest of Niamey, from Berlant General Trading Establishment of Kuwait.

EXP Resources Ltd. of Canada was earning 60% interest in the Tin-Awati gold-copper concession from Proma Minerals SA of Norway. EXP's activity on the permit south of Etruscan's Kossa concession included trenching and sampling old artisanal workings and a program of aerial magnetic and radiometric surveys. First Quantum Minerals Ltd. of Canada completed geochemical analysis of soil and stream sediment and earned 45% interest in the Sakoira gold exploration permit held by Reunion Mining plc. of the United Kingdom. Because of discouraging exploration results, Reunion subsequently terminated the project. Sumitomo Corp., a subsidiary of Sumitomo Metal Industries, Ltd. of Japan, and Imperial Metals Corp. of Canada continued the geophysical evaluation of the M'Banga concession.

Also exploring in Niger were Al-Qudairi International Trading and Contracting of Kuwait on the Tringui concession in the Tera Gassa Belt, Barrick Gold Corp. of Canada on the Tialkam concession in the Sirba Belt, and Pioneer Goldfields Ltd. of the United Kingdom, a subsidiary of Pioneer Group, Inc. of the United States, on the Deba concession in the Sirba Belt.

Small quantities of tin ore were mined at Agahak, El Mécki, Guissat, Tarouadji, and Timia in the Aïr Mountains of central Niger, northeast of Agadez.

Uranium concentrates were produced by the Société des Mines de l'Aïr (SOMAÏR) and Compagnie Minière d'Akouta (COMINAK) of Niger. Uranium remained the main mineral commodity mined in Niger and accounted for about 70% of Niger's foreign exchange earnings (Mining Journal, 1998b). SOMAÏR's open-pit operations were northwest of Arlit, approximately 250 km northwest of Agadez. COMINAK's underground operations were near Akouta, approximately 10 km southwest of the SOMAÏR pits.

Production of industrial minerals and mineral fuels was limited to a few commodities that were consumed domestically. The Government proposed to sell 77% of its equity interest in the Malbaza Cement Works of Societé Nigérienne de Cimenterie.

Esso Exploration and Production Niger Inc., a subsidiary of Exxon Corp. of the United States, and its partner, Elf Aquitaine S.p.A. of France, continued seismic studies and resumed exploration drilling on the Agadem concession in southeastern Niger. TG World Energy Inc. of Canada was issued an oil prospecting license in the Ténéré region adjacent to the Esso-Elf permit.

The mineral industry of landlocked Niger depended on road and rail transportation to access the ocean. The ports of Abidjan, Côte d'Ivoire, and Cotonou, Benin, were connected by railroad to terminals at Ouagadougou, Burkina Faso (approximately 500 km by highway from Niamey, the capital of Niger), and Parakou, Benin (approximately 560 km by highway from Niamey), respectively. Highways also linked Niamey with ports at Accra, Ghana; Abidjan; Cotonou; Lagos, Nigeria; and Lomé, Togo.

Uranium will probably remain the most important mineral commodity produced in Niger and the largest foreign exchange earner for the immediate future; the proposed open-pit gold mines, however, have excellent potential to allow the gold sector to become a factor in the nation's economy. Development of additional natural resources, such as iron ore, petroleum, and phosphates, has the potential to provide additional jobs and foreign exchange revenue for the country.

#### **References Cited**

Bureau of Geological Consultancy, 1993, Golden opportunities in Liptako: Brussels, Bureau of Geological Consultancy, 30 p.

Mining Journal, 1998a, Niger: Mining Journal, v. 330, no. 8465, January 30, p. 91. ———1998b, Niger mutiny: Mining Journal, v. 330, no. 8470, March 6, p. 183.

Ministère des Mines Ministère des Mines, de l'Industrie et de la Technologie, 1997, Les Opportunités d'Investissements Miniers: Niamey, Niger, Ministère des Mines, 34 p.

#### **Major Sources of Information**

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#### **Major Publications**

- Mining Journal, London, July 23, 1993, v. 321, no. 8234, Niger Country Supplement, 12 p.
- Ministry of Mines and Energy, 1998, Mining Investment Opportunities: Ministry of Mines and Energy, Niamey, Niger, 42 p.

## TABLE 1 NIGER: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

#### (Metric tons unless otherwise specified)

Commodity 2/	1993	1994	1995	1996	1997
Cement, hydraulic	29,200	29,200	30,000	30,000	30,000
Coal, bituminous	133,500	133,500	135,000	140,000	140,000
Gold	1	1	1	1	1
Gypsum	1,700	1,700	1,800	1,800	1,800
Molybdenum concentrate, Mo content	10	10	10	10	10
Salt thousand metric to	ns 3	3	3	3	3
Tin, mine output, Sn content	20	20	20	10	10
Uranium 3/	2,914	2,975	2,970 r/	3,320 r/	3,463

r/ Revised.

1/ Includes data available through June 1998.

2/ In addition to the commodities listed, phosphate, tungsten, and a variety of construction materials (clays, limestone, sand and gravel, and stone) were produced; but information was inadequate to make reliable estimates of output.

3/ Reported figure.