

BURKINA FASO, MALI, MAURITANIA, AND NIGER

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BURKINA FASO

In 2000, the mineral sector played a minor role in Burkina Faso's economy, which was dominated by agriculture and services. The gross domestic product (GDP), which was based on purchasing power parity in 1999, was \$12.4 billion. In 1999, exports were \$255 million led by cotton, which accounted for more than one-half of total exports and gold. Burkina Faso's population as of July 2000 was estimated to be 11.9 million (U.S. Central Intelligence Agency, 2000, Burkina Faso—Economy, World Factbook 2000, accessed September 14, 2001, at URL <http://www.odci.gov/cia/publications/factbook/geos/uv.html>; World Bank, September 12, 2000, Burkina Faso at a glance, accessed September 14, 2001, via URL <http://www.worldbank.org/data/countrydata/countrydata.html>). Burkina Faso produced gold, manganese, marble, pumice, and salt.

The Government agency responsible for mining is the Ministère de l'Énergie et Mines. In 1997, the Government adopted a new mining code with two primary objectives—to standardize all the legal measures that are used to regulate the mining sector and to amend those parts of the previous legislation that had proved inadequate and hindered future mining development. Other provisions of the 1997 mining code are as follows: to prevent the state from holding sole ownership of a mining title, to ensure that an exploration permit confers the automatic right for the holder to apply for a mining permit for deposits discovered within the area concerned, to require a mining permit holder to begin production within 2 years of the permit being granted, and to retain a 10% free-carried state interest in the project (Mining Journal, 2000d).

The Poura gold mine closed in 1999 despite completion of a \$11.6 million rehabilitation project in 1997 that had been financed by the European Union. The Mining Minister said that the mine had to be closed owing to low gold prices (Chamber of Mines of South Africa, September 2, 1999, Burkina Faso closes gold mine, Business Day (Johannesburg), accessed September 14, 2001, at URL <http://www.bullion.org.za/bulza/newsotd/1999notd/020999.htm>). The mine was owned by Sahelian Goldfields, Inc. of Canada and had a remaining resource of 450,000 metric tons (t) at a grade of more than 12 grams per metric ton (g/t) gold.

Numerous other mining companies had gold interests in Burkina Faso in 2000. Among them were Ashanti Goldfields Co. Ltd. of Ghana, Channel Resources Ltd. of Canada, Cluff Mining plc of the United Kingdom, Coronation International Mining Corp. of Canada, Delta Gold Ltd. of Australia, Echo Bay Mines Ltd. of the United States, High River Gold Mines Ltd. of Canada, Orezone Resources, Inc. of Canada, Placer Dome Inc. of Canada, Randgold Resources Ltd. of South

Africa, Ranger Minerals Ltd. of Australia, Repadre Capital Corp. of Canada, Resolute Mining Ltd. of Australia, and Semafo Inc. of Canada. Artisanal workers produce around 1,000 kilograms per year (kg/yr) of gold (Mbendi Information Services, April 25, 2001, Burkina Faso—Mining—Gold mining, accessed June 8, 2001, at URL <http://www.mbendi.co.za/indy/ming/gold/af/bf/p0005.htm>).

In 1999, Billiton plc of the United Kingdom sold to Metorex Ltd. of South Africa its 90% holding in the Perkoa zinc deposit, which is located in western Burkina Faso; the Government of Burkina Faso owned the remaining 10%. Perkoa is a high-grade zinc ore deposit still in development with resources of 7 million metric tons (Mt) at a grade of 17.6% zinc at a cutoff grade of 10% zinc. Planned production levels are 60,000 metric tons per year (t/yr) of zinc with an estimated mine life of 15 years. In 2000, Metorex Ltd. was seeking investment in infrastructure needs, such as water supply, roads, and power; the deposit is located within 30 kilometers (km) of an already existing railway line (Metorex Ltd., December 14, 2000, Metorex poised to enhance delivery, press release, accessed February 6, 2001, at URL <http://www.metorexgroup.com/pr7.htm>).

MALI

Mali's mineral sector was dominated by gold mining, and in early 2001, the country became the third largest gold producer in Africa after South Africa and Ghana (Mbendi Information Services, July 31, 2001, Mali—Mining—Gold mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ming/gold/af/ml/p0005.htm>). Since 1997, Mali has attracted more than \$850 million in new gold development investments and was expected to be producing around 50,000 kg/yr of gold by 2006. Mali's economy was dominated by agriculture in 2000, which accounted for about 47% of the GDP; the GDP based on purchasing power parity in 1999 was \$8.5 billion. In 1999, exports, which were led by cotton, gold, and livestock, totaled \$640 million. Mali's population as of July 2000 was estimated to be 10.7 million (U.S. Central Intelligence Agency, 2000, Mali—Economy, World Factbook 2000, accessed August 16, 2001, at URL <http://www.odci.gov/cia/publications/factbook/geos/ml.html>). Principal mining output in 2000 included diamond and gold. Mineral exploration interest was focused on diamond, gold, and oil.

The Government agency responsible for mining is the Direction Nationale de la Géologie et des Mines, which is part of the Ministère des Mines, de l'Énergie et de l'Hydraulique. In 1999, at the request of mining companies, the Government agreed to set up a regional mining office in Kayes in the western part of the country; mining officials noted that this would

eliminate the need for officials of mining companies and the Government to travel up to 500 km between the capital Bamako in southern Mali and the primary mining region to carry out routine administrative operations. In addition, the Government revised its mining code by making changes to taxes and mining permits. The total taxes on sales by mining companies were reduced to 3% from 6%; the tax on proceeds from the transfer of shares in mining companies was reduced to 10% from 20%; and the tax on vehicle insurance for vehicles used on mining sites was eliminated. The length of tenure for medium-scale mining permits was extended from 2 to 3 years; and a 4-year permit was introduced for small-scale mining (Direction Nationale de la Géologie et des Mines, 2000; Mining Journal, 2000d).

In 2000, seven significant gold deposits were in either production or a development stage in Mali (table 2). Deposits were, in decreasing order of production, Sadiola Hill, Syama, and Morila. Deposits that were in the development stage were, in decreasing order of their resource potential, Loulo, Yatela, Segala, and Alamoutala.

The Sadiola Hill open pit gold mine, which is located 80 km southwest of Kayes, produced more than 19,000 kilograms (kg) (611,442 ounces) of gold in 2000, thus making it the second largest gold mine in West Africa. The mine was operated by the Société d'Exploration des Mines d'Or de Sadiola S.A. [a consortium made up of AngloGold Ltd. of South Africa (38%), IAMGOLD Corp. of Canada (38%), the Government of Mali (18%), and the World Bank's International Finance Corp. (6%)]. In September, a \$1 million sulfide drilling program with the aim to delineate mineralization, particularly higher grade material that could support a significant deepening of the current open pit began. Resources are estimated to be 120 t of gold to be mined during a 12-year project life (IAMGOLD Corp., September 29, 2000, IAMGOLD gears up drill programs on six properties, accessed September 13, 2001, at URL <http://www.iamgold.com/public-relations/press-releases/releases/prsept29-00.html>; Mbendi Information Services, July 31, 2001, Mali—Mining—Gold mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ning/gold/af/ml/p0005.htm>).

The Syama open pit gold mine, which is located 75 km southwest of Sikasso in southern Mali, produced more than 8,000 kg (270,000 ounces) of gold in 2000. The mine was operated by Randgold (75%), the Government of Mali (20%), and the World Bank's International Finance Corp. (5%). In early 2001, operations were mothballed pending a return to higher gold prices. Syama has resources estimated to be 196,000 kg (6.3 million ounces) of gold (Mining Journal, 2001; Mbendi Information Services, July 31, 2001, Mali—Mining—Gold mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ning/gold/af/ml/p0005.htm>).

In July 2000, Randgold sold 50% of its 80% share in the open pit Morila gold mine, which is located 180 km southeast of Bamako, to AngloGold Ltd. for \$132 million; the Government of Mali owned the remaining 20% (Financial Times, 2000). In 2000, about 4,400 kg (142,953 ounces) of gold were produced. In early 2001, the President of Mali officially opened the mine, which was expected to yield about 15,550 kg/yr (500,000 ounces per year) of gold during a minimum 9-year period (African Mining Bulletin, 2001).

In May 2000, work began on constructing the open pit Yatela gold mine, which is located 60 km southwest of Kayes and is 25

km north of the Sadiola Hill mine. Investment by AngloGold (40%), IAMGOLD (40%), and the Government of Mali (20%) totaled \$75 million. Production was expected to begin in July 2001. The mine was to produce about 7,250 kg/yr during a 6-year period to yield about 43,500 kg (1.4 million ounces) of gold (Mining Journal, 2000e; IAMGOLD Corp. and AngloGold, October 12, 2000, First concrete for Yatela gold mine project in Mali, accessed October 17, 2001, at URL <http://www.iamgold.com/public-relations/press-releases/releases/pr-oct12-00.html>). About 12 km south of the Yatela deposit is the Alamoutala deposit, which has a resource of almost 5,000 kg (160,000 ounces) of gold. IAMGOLD and AngloGold plan to incorporate this into Yatela operations (Engineering & Mining Journal, 2000a).

Two additional notable gold deposits were also being examined for potential development in the near future. Randgold was said to be considering the development of the Loulo gold deposit, which is located in western Mali and has a resource estimated to be about 105,000 kg of gold (30.1 Mt at a grade of 3.49 g/t gold). In 1999, development of the deposit was halted owing to low gold prices (Mbendi Information Services, July 31, 2001, Mali—Mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ning/gold/af/ml/p0005.htm>). The Segala gold property, which is located in western Mali, has a gold resource estimated to be 42,350 kg (15.4 Mt at a grade of 2.75 g/t gold). In January, Semafo purchased Oliver Gold Ltd.'s (Canada) 75% share in the deposit (Semafo, Inc., May 25, 2000, Semafo, Inc. commences exploration work on Segala project in Mali, accessed September 13, 2001, at URL <http://www.semafo.com/press.php?id=24>).

Numerous other mining companies had gold interests in Mali in 2000. Among them were the Canadian companies Etruscan Resources, Inc., Fancamp Resources Ltd., Golden Eagle International, Inc., Great Quest Metals Ltd., Nevsun Resources Ltd., Orezone Resources, Inc., and Robex Resources, Inc., and the Republic of Korea's Hyundai Corp.

In March 2000, the Export-Import Bank of China agreed to a \$18 million loan to assist with the construction of a Sino-Malian cement plant via the China Overseas Engineering Company and local group Société Lou Kouma. The construction of the plant was anticipated to be completed in late 2001 with a capacity of 236,000 t/yr of cement (China Economic Information Network, March 22, 2000, Eximbank support JV overseas, accessed December 20, 2001, at URL http://ce.cei.gov.cn/ew/new_ew/e1/e6200c63.htm).

In May, the Africa Development Fund approved a loan for \$31.66 million to address Mali's underdeveloped transportation network. More specifically, the loan will go towards financing the multinational Kankan-Kouremale-Bamako road project in Guinea and Mali. The project will contribute to opening up Guinea's northeastern and Mali's southwestern regions and will involve the construction of a new 344-km road, 217-km in Guinea, and 127-km in Mali (African Development Bank Group, May 30, 2000, African Development Fund—Signing of a US \$31.66 million loan agreement for the Kankan-Kouremale-Bamako road project [Guinea-Mali], accessed July 31, 2000, at URL http://www.afdb.org/knowledge/loans2000/adf_KKB_road_Guinea_Mali.htm).

MAURITANIA

In 2000, iron ore mining and beneficiation dominated the

mineral industry in Mauritania. The country's GDP, which was based on purchasing power parity in 1999, was estimated to be \$4.9 billion (U.S. Central Intelligence Agency, 2000, Mauritania—Economy, World Factbook 2000, accessed August 16, 2001 at URL <http://www.odci.gov/cia/publications/factbook/geos/mr.html>). Exports in 1999 were \$333 million; iron exports of \$178 million accounted for more than 50% of all exports (World Bank, September 9, 2000, Mauritania at a glance, accessed September 10, 2001, at URL <http://www.worldbank.org/data/countrydata/countrydata.html>). Mining employment occupied a small portion of the nation's population, which was estimated to be 2.7 million in July 2000. Principal mining output in 2000 included gypsum, iron ore, and salt. Mineral exploration interests were 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.

The Ministère des Mines et de l'Industrie is the Government agency responsible for the mining industry in Mauritania. In August 2000, it appointed the Council for Geoscience in South Africa to provide technical supervision and advice to the *Projet de Renforcement Institutionnelle de Secteur Minier (PRISM)*; PRISM is a 5-year program intended to accelerate the growth of the Mauritanian mining sector with a \$16.5 million loan from the International Development Association of the World Bank. Projects include the production of a 1:500,000-scale geologic map of the nation and 1:200,000-scale maps of areas with mineral potential. PRISM began in September 2000 and was scheduled to run until 2004 (Mining Journal, 2000f).

In 1999, the Ministère des Mines et de l'Industrie adopted a new decree that outlines the rules concerning mining titles in the Mauritanian Mining Code. The *Decret Portant sur les Titres Miniers* (law No. 99/013) established four types of licenses for prospecting, exploration, exploitation, and small-scale mining exploitation. Under the decree, a prospecting license is valid for 6 months and renewable only for the same time period and 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; these 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 a duration of 30 years; this license can be renewed. A small-scale mining license is for areas that do not exceed 2 km² and is granted for a period of 3 years up to a minimal amount of production determined by the Ministère des Mines et de l'Industrie; two renewals can be granted for a period of 3 years each after a negotiable level of production is reached or exceeded.

The Société Nationale Industrielle et Minière (SNIM) was responsible for iron ore production and beneficiation. SNIM operated three open pit iron ore mines at the Guelb El Rhein, the Kedia d'Idjill, and the M'Haoudat, each located in the Tiris region in northern Mauritania. In 2000, more than 11 Mt of iron ore was produced, most of which was exported to France, Italy, and Belgium (SNIM Group, 2000, Mauritania, accessed August 8, 2000, at URL <http://www.snim.com/mine-port2.html>; Mbendi Information Services, October 30, 2001, Mauritania—

Mining—Iron ore mining, accessed December 19, 2001, at URL <http://www.mbendi.co.za/indy/ming/iron/af/mu/p0005.htm>.

In 2000, the Guelb Moghrein Project, which was being developed by Guelb Moghrein Mines d'Akjoujt S.A. of Mauritania, continued to be delayed owing to low gold and copper commodity prices as well as encountering problems at its pilot plant (Mbendi Information Services, January 12, 2001, Mauritania—Mining—Gold mining, accessed April 4, 2001 at URL <http://www.mbendi.co.za/indy/ming/gold/af/mu/p0005.htm>). The project, which is located within mining concession CM2 at Akjoujt, contains cobalt, copper, and gold resources that have been estimated to be 23.7 Mt at a grade of 1.88% copper, 1.41g/t gold, and 144 g/t cobalt with a 1% copper cutoff grade. In addition to the Guelb Moghrein Project, General Gold Resources NL of Australia held 7,600 km² of exploration permits in the Inchiri region near Akjoujt (General Gold Resources NL, 2000, p. 6-9).

In October, Rex Diamond Mining Corporation of Canada announced that results of exploration activities in the Karet South permit revealed concentrations of platinum, palladium, nickel, and gold. The combined concentration of platinum, palladium, other platinum-group metals, and gold averaged 1.64 g/t at a depth of between 18 and meters. Rex Diamond Mining also noted that more drilling was needed to assess the tonnage potential (Rex Diamond Mining Corporation, October 11, 2000, Rex Diamond Mining Corporation confirms concentrations of nickel, platinum, and palladium in Mauritania, accessed October 18, 2001, at URL http://www.rexmining.com/rdmc/Pressroom/2000/2000_10_11_E.htm).

Diamond exploration was among the principal exploration activities that took place in 2000. Ashton Mining Ltd. of Australia, Dia Met Minerals Ltd. of Canada, Rex Diamond Mining, and De Beers Consolidated Mines Ltd. of South Africa were all actively exploring for diamond. In November 2000, Rio Tinto plc of the United Kingdom acquired Ashton Mining Ltd. after its takeover bid of \$712 million was accepted (Barry Fitzgerald, November 7, 2000, Today's Business—Rio beats De Beers for control of Ashton, accessed September 10, 2001, at URL <http://www.theage.com.au/bus/20001107/A31264-2000Nov6.html>). In July, Rex Diamond Mining announced a joint-venture agreement with De Beers, in which De Beers can earn up to a 60% interest in Rex Diamond Mining's 10,000-km² Akchar permit area if De Beers invests \$24 million or produces a bankable feasibility study within 5 years. De Beers already owned a 3,426-km² permit in the same area (Mining Journal, 2000b).

In December, Rex Diamond Mining announced the discovery of another 8 kimberlites in Mauritania, thus bringing the total for the year to 17. Rex Diamond Mining also announced that microdiamond test analysis of samples from several of its previously discovered kimberlites show that diamonds were present (Mining Journal, 2000c; CanadaNews Wire, December 12, 2000, Rex Diamond Mining Corporation announces the discovery of a further 8 kimberlites in Mauritania, accessed December 28, 2000, at URL <http://www.newswire.ca/releases/December2000/12/c2966.html>).

Many international oil companies were involved in offshore oil exploration in Mauritania in 2000. In November, Woodside Petroleum Ltd. of Australia announced that it had taken a 35% interest in an offshore joint venture with Dana Petroleum plc of the United Kingdom, Elixir Corporation Pty. Ltd. of Australia, and Hardman Resources NL of Australia. The joint venture is

in a 13,500-km² area in one of the northernmost areas in Mauritanian waters. Woodside was already operating in five other offshore areas where it has joined with British-Borneo Oil and Gas plc of the United Kingdom and Hardman. Woodside was expected to undertake three drilling projects each of which was expected to cost \$25 million (Africa Energy Intelligence, 2000a).

An Algerian company operated the Somir Petroleum Refinery in the port of Nouadhibou under a management contract and processed imported Algerian crude oil. All refined products were consumed in country. The refinery had the capacity to treat 20,000 barrels per day of crude petroleum.

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, July 12, 2000, Mauritania—Electrical power, accessed February 2, 2001, at URL <http://mbendi.co.za/indy/powr/af/mu/p0005.htm>).

In 1999, Mauritania signed an agreement with France to upgrade its iron-exporting port of Nouadhibou. France's Fond d'Aide et de Cooperation approved a loan for \$310,000 for the purchase of a computerized system to facilitate the checking and analysis of data (Africa Energy & Mining, 2000). Overall, the infrastructure of the country, in particular the road network, limited the development of the mineral industry in 2000.

NIGER

Uranium mining dominated Niger's mining sector in 2000. Niger's overall economy was led by agriculture in 2000; the GDP based on purchasing power parity in 1999 was \$9.6 billion. In 1999, exports totaled \$256 million; uranium ore was the primary export product accounting for 41% of exports. Niger's population as of July 2000 was estimated at 10.1 million (U.S. Central Intelligence Agency, 2000, Niger—Economy, World Factbook 2000, accessed August 16, 2001, at URL <http://www.odci.gov/cia/publications/factbook/geos/ng.html>; World Bank, September 12, 2000, Niger at a glance, accessed October 22, 2000, via URL <http://www.worldbank.org/data/countrydata/countrydata.html>). In addition to uranium, Niger also produced cement, coal, gold, gypsum, molybdenum, salt, and tin.

The Government agency responsible for mining is the Ministry of Mines and Energy. In November, the Government announced an offering of four oil exploration blocks with a number of tax exemptions. The exemptions include a complete waiver on taxes during the exploration phase; an exemption from duties and import tax on material, supplies, equipment and spares for oil operations; a waiver on taxes on bank loans; free import and export of oil products; and tax-free currency exchange and transfers. Once production begins, royalties will amount to 12.5% on oil and 5% on gas, and the corporate tax rate will be set at 45%. Exploration permits will be awarded for a 4-year period and be renewable twice for periods of 3 years apiece. In the case of a commercial discovery, a concession will be awarded for 15 years and be renewable for one additional 15-year period (Africa Energy and Intelligence, 2000c).

In an official ceremony in September, Niger's Prime Minister laid the cornerstone for the country's first gold mine, the open pit Samira Hill gold mine, which is located about 150 km west of the capital Niamey. The mine, which was intended to begin production in 2001 at a rate of 10,000 metric tons per day of

ore, was owned by a consortium of Etruscan Resources (40%), Semafo (40%), and the Government of Niger (20%). An updated reserve study carried out by the Resource Service Group of Australia reported that the combined reserves of Samira Hill and the nearby Libiri deposit (also owned by the above consortium) were 10.1 Mt at a grade of 2.2 g/t with 19,200 recovered kilograms (reported as 618,036 ounces) of gold. The estimated mine life of these deposits is 6.3 years (Engineering & Mining Journal, 2000b; Semafo, Inc., [undated], Operations—Niger—Samira Hill project, accessed September 14, 2001, at URL http://www.semafo.com/operations_niger.html).

The Koma Bangou gold deposit was being developed by Etruscan Resources and the Government. In addition, GeoAfrica Gold Corp. of Canada had holdings close to the Algerian border. The Government estimated that production of artisanal gold was about 1 t/yr (Mbendi Information Services, March 6, 2001, Niger—Mining—Gold mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ming/gold/af/ni/p0005.htm>).

In 2000, Niger was the world's third largest producer of uranium after Canada and Australia (World Uranium Mining, June 2001, Nuclear issues briefing paper 41, accessed September 14, 2001, at URL <http://www.uic.com.au/nip41.htm>). Niger has two main uranium producing mines, the Akouta underground mine and the Arlit open pit mine, which are located in northern Niger. Cogema of France operated both mining operations that together produced 2,898 t of uranium in 2000; this was a decrease of 18 t from 2,916 t in 1999. Production costs have been high for these two mines, and uranium products are purchased under special agreements between the Niger Government and customers in France and Japan (Mbendi Information Services, March 6, 2001, Niger—Mining—Uranium mining, accessed September 13, 2001, at URL <http://www.mbendi.co.za/indy/ming/urnm/af/ni/p0005.htm>).

Soon after the Government announced an offer for four oil exploration permits, two of them located in eastern Niger were awarded to two U.S. companies, ExxonMobil Corp. and Hunt Oil Co. (Africa Energy Intelligence, 2000b). The Niger oil industry was regulated by the state-owned Société Nigérienne de Produits Pétroliers (Sonidep). Sonidep has the responsibility of not only representing the Government in all dealings concerning the country's petroleum resources, but importing petroleum products, and it owns most of the 10 petroleum storage depots in the country (Mbendi Information Services, March 27, 2001, Niger—Oil and gas, accessed September 14, 2001, at URL <http://www.mbendi.co.za/indy/oilg/af/ni/p0005.htm>).

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Major Sources of Information

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TABLE 1
BURKINA FASO, MALI, MAURITANIA, NIGER: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1996	1997	1998	1999	2000
BURKINA FASO 3/					
Cement	30,000	40,000	40,000	50,000	50,000
Gold	1,063 4/	1,089 4/	1,091 4/	886 4/	1,000
Manganese, Mn content of ore	10,000	1,000	1,000	--	--
Pumice and related volcanic materials	11,000	10,000	10,000	10,000	10,000
Salt	7,000	5,000	5,000	5,000	5,000
Stone, marble	110,000	100,000	100,000	100,000	100,000
MALI 5/					
Cement, hydraulic	12,000	10,000	10,000	10,000	10,000
Gold, mine output, gold content 6/	4,329	16,323	20,562	23,688	25,000
Gypsum	500	100	500	500	500
Salt	6,000	5,000	6,000	6,000	6,000
Silver 7/	270	800	900	1,000	1,000
MAURITANIA 8/					
Cement	100,000	80,000	50,000	50,000	50,000
Gold	189	--	--	--	--
Gypsum	12,500	80,000	100,000	100,000	100,000
Iron ore:					
Gross weight	11,363 r/ 9/	11,703 r/ 9/	11,373 r/ 9/	10,401 r/ 9/	10,400
Iron content	7,384 4/	7,605 4/	7,410 4/	7,475 4/	7,500
Petroleum refinery products:					
Liquefied petroleum gas	440	440	440	440	440
Gasoline	1,900	1,900	1,900	1,900	1,900
Kerosene	470	470	470	470	470
Distillate fuel oil	1,100	1,100	1,100	1,100	1,100
Residual fuel oil	2,450	2,450	2,450	2,450	2,450
Other	700	700	700	700	700
Total	7,060	7,060	7,060	7,060	7,060
Salt	5,500	5,500	5,500	5,500	5,500
NIGER 10/					
Cement, hydraulic	29,251 4/	30,000	30,000	30,000	30,000
Coal, bituminous	140,000	150,000	145,000	168,000 r/ 4/	158,000 4/
Gold	1,000	1,000	1,000	1,000	1,000
Gypsum	1,800	1,800	2,000	1,502 r/ 4/	1,474 4/
Molybdenum concentrate, Mo content	10	10	10	10	10
Salt	3,000	3,000	2,000	2,000	2,000
Tin, mine output, Sn content	10	10	10	32 r/ 4/	22 4/
Uranium, U content	3,320 4/	3,497 4/	3,731 4/	2,916 r/ 4/	2,898 4/

r/ Revised. -- Zero.

1/ Table includes data available through October 22, 2001.

2/ Estimated data are rounded to no more than three significant digits.

3/ In addition to the commodities listed, granite, phosphate rock, sand and gravel, and other construction material are produced, but information is inadequate to make reliable estimates of output levels.

4/ Reported figure.

5/ In addition to the commodities listed, Mali produced clays, stone, and sand and gravel for local construction purposes in addition to diamond, marble, and tin, but information is inadequate to make reliable estimates of output levels.

6/ Excludes artisanal production, estimated to be about 2,000 kilograms per year.

7/ Estimated silver content of doré bullion.

8/ 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 Societe Arabe de Fer et d'Acier en Mauritanie produced rebar and wire, but available information is inadequate to make reliable estimates of output levels.

9/ Reported by National Industrial and Mining Company.

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

TABLE 2
SELECTED SIGNIFICANT GOLD DEPOSITS IN MALI IN 2000

Deposit	Company	Location	Production (kilograms)	Resources (kilograms)	Project life/status
Sadiola Hill	Société d'Exploration des Mines d'Or de Sadiola S.A. [Anglogold Ltd. of South Africa (38%), IAMGOLD Corp. of Canada (38%), the Government of Mali (18%), and International Finance Corp. (6%)]	80 kilometers southwest of Kayes	19,000	120,000	12 years.
Syama	Randgold Resources, Inc. (75%), Government of Mali (20%), World Bank's International Finance Corp. (5%)	75 kilometers southwest of Sikasso	8,000	196,000	Closed in early 2001.
Morila	Anglogold Ltd. (40%), Randgold Resources, Inc. (40%), and Government of Mali (20%)	180 kilometers southeast of Bamako	4,400	140,000	9 years.
Loulo	Randgold Resources, Inc., and Government of Mali	Western Mali	--	105,000	Development.
Yatela	Anglogold Ltd. (40%), IAMGOLD Corp. (40%), and Government of Mali (20%)	60 kilometers southwest of Kayes	--	43,500	6 years, starting in 2001.
Segala	Semafo Inc. (75%), Government of Mali (25%)	Western Mali	--	42,000	Development.
Alamoutala	Anglogold Ltd. (40%), IAMGOLD Corp. (40%), and Government of Mali (20%)	12 kilometers south of Yatela deposit	--	5,000	Do.

-- Zero.