



# 2007 Minerals Yearbook

---

**MALI, MAURITANIA, AND NIGER**

---

# THE MINERAL INDUSTRIES OF MALI, MAURITANIA, AND NIGER

By Omayra Bermúdez-Lugo and Mowafa Taib

## MALI

Mali's mining sector was dominated by the production of gold. No other mineral commodities were produced in significant quantities in the country, with the exception of rock salt and semiprecious stones, such as amethyst, epidote, garnet, prehnite, and quartz. Diamond was produced in small quantities as a byproduct of the mining of gold, but information on diamond production was inadequate to make reliable estimates of output. The country's vast undeveloped mineral resources included bauxite, chromium, copper, diamond, granite, gypsum, iron ore, kaolinite, lead, lithium, manganese, marble, nickel, niobium, palladium, phosphate rock, rutile, silver, talc, thorium, tin, titanium, tungsten, uranium, and zirconium. The Government agency responsible for the mining sector in Mali is the Direction Nationale de la Géologie et des Mines, which is part of the Ministère des Mines de l'Énergie et de l'Eau.

### Production

In 2007, gold production decreased by about 15.6% to 43,850 kilograms (kg) from 51,957 kg in 2006. The decrease was mostly owing to a decrease in production at the Sadiola Mine that resulted from plant optimization activities aimed at improving the recovery of sulfide ores at the mine and the withholding of high-grade sulfide feed prior to the commissioning of a gravity circuit; the processing of stockpiled lower-grade ore at the Yatela Mine; and a decline in the recovered grade at the Loulo Mine and the Morila Mine (AngloGold Ashanti Ltd., 2009, p. 70-75). Data on mineral production are in table 1.

### Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Mali can be found in the 2005 and 2006 U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Africa and the Middle East, which are available on the World Wide Web at <http://minerals.usgs.gov/minerals/pubs/country>.

### Reference Cited

AngloGold Ashanti Ltd., 2009, 2008 annual financial statements: Marshalltown, South Africa, AngloGold Ashanti Ltd., 338 p.

## MAURITANIA

Mauritania's mineral sector was dominated by iron ore mining and beneficiation. Other mineral commodities produced in the country included cement, copper, gold, gypsum, petroleum, salt, and steel. The Ministère des Mines et de l'Industrie was

the Government agency responsible for enacting the Mining Code and for the coordination of all activities in the mining sector. The Direction des Mines et de la Géologie was the entity responsible for promoting the mineral sector and for providing geologic and mining information to potential investors; the Direction des Hydrocarbures was in charge of the development of the petroleum sector; and the Office Mauritanien des Recherches Géologiques was the Government entity responsible for evaluating areas of mineral potential for exploration. Société Nationale Industrielle et Minière (SNIM) was responsible for iron ore production and beneficiation.

In 2007, the total value of exports from Mauritania was estimated to be about \$1.5 billion. Excluding fish exports, which amounted to \$254 million, all the main export categories were either mining or hydrocarbon products. Iron ore exports, which were valued at \$575 million, represented about 38% of the country's total exports; crude oil exports were valued at \$339 million and accounted for 23%; copper exports were valued at \$184 million and accounted for about 13%; and gold exports were valued at \$59 million and accounted for 4% of total exports (International Monetary Fund, 2008, p. 24, 25).

### Production

All mineral commodity production increased during the year with the exception of crude petroleum, which decreased by about 51% to 5,487 thousand barrels compared with 11,168 thousand barrels in 2006. Cement production increased by 14.6% to 409,513 metric tons (t) compared with a revised 357,239 t in 2006. Gypsum production increased by 8.9%; iron ore production, by 6.8%; salt production, by about 35.5%; and crude steel production, by about 4.2%. The sharp increase in copper and gold production was owing to the opening of the Guelb-Moghrein Mine in late 2006. Data on mineral production are in table 1.

### Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Mauritania can be found in the 2005 and 2006 U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Africa and the Middle East, which are available on the World Wide Web at <http://minerals.usgs.gov/minerals/pubs/country>.

### Reference Cited

International Monetary Fund, 2008, Islamic Republic of Mauritania—2008 Article IV consultation and third review under the three-year arrangement under the poverty reduction and growth facility: Washington DC, International Monetary Fund, May 5.

## NIGER

Mineral commodities produced in Niger included cement, coal, gold, gypsum, limestone, salt, silver, tin, and uranium. The country did not produce petroleum and depended upon imports to meet its domestic petroleum requirements.

### Production

In 2007, gypsum production decreased by about 65% to 4,615 t compared with 13,043 t in 2006; uranium production

decreased by about 8.2% to 3,153 t compared with 3,434 t in 2006. Data on mineral production are in table 1.

### Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of Niger can be found in the 2005 and 2006 U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Africa and the Middle East, which are available on the World Wide Web at <http://minerals.usgs.gov/minerals/pubs/country>.

TABLE 1  
MALI, MAURITANIA AND NIGER: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Country and commodity	2003	2004	2005	2006	2007
MALI <sup>2</sup>					
Gold, mine output, gold content <sup>3</sup> kilograms	45,535	37,911	44,230	51,957	43,850
Salt <sup>c</sup>	6,000	6,000	6,000	6,000	6,000
Semiprecious stones <sup>4</sup>	NA	NA	NA	10,000	10,000 <sup>e</sup>
MAURITANIA <sup>5</sup>					
Cement	200,000 <sup>e</sup>	300,000	300,000	357,239 <sup>r</sup>	409,513
Copper in concentrate	--	--	--	5,031	28,911
Gold kilograms	--	--	--	311	1,694
Gypsum	34,264	38,940	43,266	45,222	49,229
Iron ore:					
Gross weight thousand metric tons	10,377	10,505	11,133	11,153	11,910
Iron content <sup>e</sup> do.	6,890	6,900 <sup>r</sup>	7,000 <sup>r</sup>	6,928 <sup>r,6</sup>	7,680
Petroleum, crude thousand 42-gallon barrels	--	--	--	11,168	5,487
Salt	15	20	20 <sup>c</sup>	310 <sup>r</sup>	420
Steel, crude	5,000 <sup>e</sup>	5,000 <sup>e</sup>	1,263	1,217	1,268
NIGER <sup>7</sup>					
Cement, hydraulic <sup>e</sup>	53,700	53,700	53,700	53,700	54,000
Coal, bituminous	183,000 <sup>e</sup>	183,000 <sup>e</sup>	182,060	176,320	171,296
Gold kilograms	30 <sup>e,8</sup>	684 <sup>8</sup>	4,962	2,615	2,625 <sup>p</sup>
Gypsum	17,700 <sup>e</sup>	17,700 <sup>e</sup>	17,417	13,043	4,615 <sup>p</sup>
Limestone	146,000	146,000	146,000	146,000	146,000
Salt <sup>c</sup>	2,000	2,000	1,269 <sup>6</sup>	1,300	1,300
Silver kilograms	NA	NA	201	100 <sup>r,e</sup>	100 <sup>e</sup>
Sulfuric acid: <sup>c</sup>					
Gross weight	67,000 <sup>6</sup>	70,000	70,000	70,000	70,000
Sulfur content	22,000	23,000	23,000	23,000	23,000
Tin, mine output, Sn content	11 <sup>e</sup>	3,100 <sup>e</sup>	14	13	11 <sup>p</sup>
Uranium, U content	3,143	3,282	3,093	3,434	3,153

<sup>c</sup>Estimated; data are rounded to no more than three significant digits. <sup>p</sup>Preliminary. <sup>r</sup>Revised. do. Ditto. NA Not available. -- Zero.

<sup>1</sup>Table includes data available through March 31, 2009.

<sup>2</sup>Mali also produced sand and gravel solely for domestic consumption, but information is inadequate to make reliable estimates of output.

<sup>3</sup>Excludes artisanal production, which is estimated to be about 4,000 kilograms per year.

<sup>4</sup>Artisanal production of semiprecious stones includes amethyst, epidote, garnet, prehnite, and quartz.

<sup>5</sup>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 is inadequate to make reliable estimates of output.

<sup>6</sup>Reported figure.

<sup>7</sup>In addition to the commodities listed, phosphate rock, tungsten ore, and a variety of construction materials (clays, sand and gravel, and stone) were produced but information is inadequate to make reliable estimates of output.

<sup>8</sup>Does not include production from artisanal miners.

TABLE 2  
MALI, MAURITANIA, AND NIGER: STRUCTURE OF THE MINERAL INDUSTRIES IN 2007

(Metric tons unless otherwise specified)

Country and commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
<b>MALI</b>			
Gold ore	Société de la Mine d'or de Kalana (Avnel Gold Mining, 80%, and Government, 20%)	Kalana Mine, 300 kilometers south of Bamako	60,000.
Do.	Société des Mines de Loulo (Randgold Resources Ltd., 80%, and Government, 20%)	Loulo Mine, 350 kilometers west of Bamako	2,400,000.
Do.	Morila S.A. [a subsidiary of Morila Limited of Mali, 80% (AngloGold Ashanti Ltd., 40%; Randgold Resources Ltd., 40%; Government, 20%)	Morila Mine, 180 kilometers southeast of Bamako	4,200,000.
Do.	Société d'Exploitation des Mines d'Or de Sadiola S.A. (AngloGold Ashanti Ltd., 38%; IAMGOLD Corp., 38%; Government, 18%; International Finance Corp., 6%)	Sadiola Hill Mine, 77 kilometers south of Kayes	5,300,000.
Do.	Société des Mines de Syama S.A. (Resolute Mining Ltd., 80%, and Government, 20%)	Syama Mine, 300 kilometers southeast of Bamako	Under development.
Do.	Société d'Exploitation des Mines d'Or de Yatela (AngloGold Ashanti Ltd., 40%; IAMGOLD Corp., 40%; Government, 20%)	Yatela Mine, 50 kilometers south-southwest of Kayes	2,500,000.
Do.	Nevsun Resources Ltd.	Tabakoto Mine, Kenieba Valley	On maintenance.
Do.	kilograms Artisanal miners	NA	4,000.
<b>MAURITANIA</b>			
Cement	Ciment de Mauritanie (Private Mauritanian investors, 90%, and Compañía Valenciana de Cementos Portland, 10%)	Nouakchott	545,000 cement and clinker.
Do.	Mauritano-Francaise des Ciments S.A.	do.	NA.
Copper concentrate	First Quantum Minerals Ltd., 80%, and Guelb Moghrein Mines d'Akjoujt S.A., 20%	Guelb-Moghrein copper-gold mine	32,000.
Gold	kilograms do.	do.	2,200.
Gypsum	Société Arabe des Industries Metallurgiques Mauritano-Koweitiennes	Sebkha N'dramcha	NA.
Iron ore	Société Nationale Industrielle et Minière (SNIM) (Government, 78% and Arab financial and mining investors, 22%)	Guelb El Rhein, Kedia d'Idjill, and M'Haoudat Mines	12,000,000 ore.
Do.	Sphere Investments Ltd., 50%, and Société Nationale Industrielle et Minière, 50%	Guelb el Aouj Mine (under development)	17,000,000 ore; 7,000,000 direct-reduced iron.
Salt	Société Mauritanienne des Industries du Sel (SOMISEL)	N'terert and d'Idjill brine pits	NA.
<b>NIGER</b>			
Coal	Société Nigérienne de Charbon (SONICHAR)	Anou Araren, central Agadez region	300,000.
Gold	kilograms Société des Mines du Liptako S.A. (SML) [African GeoMin Mining Development Corporation Ltd. (which is owned by Etruscan Resources Inc., 50%, and Semafo Inc., 50%), 80%, and Government, 20%]	Samira Hill Mine, 90 kilometers west of Niamey	3,000.
Uranium, U content	Compagnie Minière d'Akouta (COMINAK) [Areva NC, 34%; Government, 31%; Overseas Uranium Resources Development Co., 25%; ENUSA Industrias Avanzadas S.A., 10%]	Akouta underground mine, northern Niger	2,500.
Do.	Société des Mines de l'Air (SOMAIR) Areva NC, 63.4%, and Government, 36.6%	Arlit open pit mine, northern Niger	2,300.

Do., do. Ditto. NA Not available.

