



2006 Minerals Yearbook

UGANDA

THE MINERAL INDUSTRY OF UGANDA

Harold R. Newman

The East African country of Uganda was succeeding in attracting local and foreign investment interest in its mineral sector. To enhance the positive trend, the Government launched a project to improve geophysical survey capabilities and other Government services related to the mineral sector. The Government secured a \$7.8 million grant from the African Development Fund to finance this project. The grant was to be used to finance airborne geophysical surveys, which would include acquisition of airborne data, compilation of information on surface and subsurface geology, processing and interpretation of the data, quality control, and publication of the data. The grant monies would also be used to procure equipment needed to provide support services for mineral exploration and exploitation programs and to set up a rock sample laboratory and museum (Afrol News, 2006)

Minerals in the National Economy

Uganda produced cobalt, gold, iron ore, niobium (columbium), steel, tantalum, tin, and tungsten. The country also produced such industrial minerals as gypsum, kaolin and other clays, lime, salt, soapstone, and vermiculite, and such building materials as cement, limestone, and pozzolanic materials. Despite Uganda's long history of mineral production, however, many areas of the country that were thought to be highly prospective for minerals have received little or no exploration. The Kamwenge District has one of the richest mineral deposits in the country, including deposits of gold, lead, and limestone deposits, especially in the area around Kitata.

The mining and quarrying sector grew by 8.3% in fiscal year 2005-06 compared with 11.6% in fiscal year 2004-05. The change was attributable to decreased demand and decreased exports (Bank of Uganda, 2006, p. 46).

Production

Most of Uganda's aggregate, cobalt, columbite-tantalite, gold, and vermiculite production was exported; production of these commodities was dependant upon world market conditions. For cement, limestone, and pozzolanic materials, production and consumption depended primarily on the domestic construction sector. Data on mineral production are provided in table 1.

Structure of the Mineral Industry

Table 2 is a list of the major mineral industry facilities in Uganda. The table also provides the location and production capacities of these facilities.

Commodity Review

Metals

Cobalt and Copper.—Blue Earth Refineries Ltd. through its subsidiary Kasese Cobalt Company Ltd. engaged in cobalt refining in Uganda. The company operated a 1,000-metric-ton-per-year (t/yr) processing plant that recovered the cobalt contained in a pyrite stockpile from the former Kilembe copper mine.

Blue Earth planned to produce 720 t/yr of cobalt at a recovery rate of 70%. The metal refining operations included the bioleaching of the pyrite concentrate, solvent extraction of the dissolved cobalt, and recovery through electrowinning. The stockpile was expected to last for 7 years (Business Week, 2006).

Gold.—International Business Investments Corp. (IBI) announced the resumption of its gold exploration program. The program would be a key component of IBI's exploration and development program, which would concentrate on high-value mineral resources in Uganda. The gold exploration program would be conducted at the same time and along with the Ugandan Government's geophysical aerial surveys of highly prospective mineral targets (International Business Investments Corp., 2006).

Iron and Steel.—Sembule Steel Mills Ltd. was a leader in the construction steel industry. It manufactured and supplied wire and roofing products to customers in more than 10 countries in East and Central Africa. The wire division manufactured products derived from coils of steel wire, and the roofing division manufactured reinforcement, roofing, and walling products derived from coils of steel sheet. The steel rolling mill manufactured iron bars and coils used in the other two divisions (Sembule Steel Mills Ltd., 2006).

Tantalum.—Uganda Gold Mining Ltd. owned the Nyanga tantalite property in western Uganda. Columbite/tantalite mineralization was found in the form of lenses located adjacent to and on both sides of a 16-meter (m)-wide near-vertical quartz vein exposed on the surface for 50 m and open on strike. Samples were taken from one of the lenses and shipped to a smelter where a return in excess of 25% tantalum was reported. The next phase of exploration was to include underground development to determine the character of the mineralization (MBendi Information Services (Pty) Ltd., 2006).

Industrial Minerals

Clay and Shale.—Clay deposits suitable for the manufacture of bricks, pottery, and tiles are widely distributed throughout Uganda. Ball clay was mined at Mukono, and brick clay was mined at Kajansi. Muhindo Enterprises Ltd. was issued a license to mine and process kaolin at the Mutaka deposit, which was estimated to contain about 3 million metric tons (Mt) of 65%

kaolin material. The Mutaka project is located in the Bushenyi District (Muhindo Enterprises Ltd., 2006).

Stone, Crushed and Dimension.—Stone suitable for crushing was available in most parts of the country. Gneiss, granite, quartzite, and sandstone were widely distributed throughout areas of Precambrian basement. Agglomerates and volcanic lavas occur in the east and southeast areas of the country. Marble occurs extensively in the Moroto District.

The major limestone deposits at Hima and Tororo continued to provide the major raw materials for Uganda's cement industry. Limestone was quarried by Hima Cement Ltd., Kilembe Mines Ltd., and Tororo Cement Industry Ltd. The production of limestone increased to an estimated 600,000 metric tons (t) in 2006 from 540,756 t in 2005, and the production of pozzolanic materials increased to an estimated 140,000 t in 2006 from 138,933 t in 2005.

Vermiculite.—IBI announced that it had signed an agreement with Rio Tinto Uganda (a subsidiary of Rio Tinto plc of the United Kingdom) for the sale of IBI's Namekara vermiculite mine. The Namekara deposit is located on the southern ring of the 13-kilometer-diameter Bukusu carbonate complex in the Mbale District of southeast Uganda, close to the Kenya border. Reserves were estimated to be about 5 Mt, which would be sufficient to support more than 100 years of production. Rio Tinto agreed to pay IBI \$5 million for the project, as well as ongoing royalties (Mining Weekly, 2007).

Mineral Fuels and Other Sources of Energy

Petroleum.—In November 2006, Tullow announced that its Kingfisher-1 well had produced a stabilized flow rate of 4,120 barrels per day of oil in the upper zone. Tullow decided to sidestep the well and proceed with drilling to deeper primary objectives (Tullow Oil plc, 2006).

Renewable Energy.—A Government study stated that Uganda had a potential generation capacity of 1,250 megawatts (MW) of electricity from renewable energy sources, of which the potential capacity from geothermal sources was 450 MW, and peat resources, 800 MW; this new capacity would more than offset the country's 260-MW power deficit. The country was facing a power crisis, which had led to power rationing. The installed hydropower capacity at the Kiira and the Nalubaale power stations was 380 MW; only 1.05 terawatt hours (TWh) was generated in 2006. Thermal-generated power in 2006 totaled 0.74 TWh. This deficit forced the Government to rely on other power sources (Alexander's Gas & Oil Connections, 2006).

Outlook

The Uganda Ministry of Energy and Mineral Development predicted that Uganda's gross domestic product would grow

by 6.2% in 2006 and 6.1% in 2007. Most of Uganda's cobalt, columbite-tantalite, gold, and vermiculite production will continue to be exported; the outlook for these commodities depends heavily upon world market conditions. For cement, limestone, and pozzolanic materials, the outlook depends primarily upon the strength of the domestic construction sector. The aid provided to Uganda by the African Development Fund, the Nordic Development Fund, and the World Bank Group under the Sustainable Management of Mineral Resources Project could assist the country in increasing production and tax revenues from its mining sector. The continued unreliability of power supplies is expected to pose difficulties for mining and mineral processing operations (Uganda Ministry of Energy and Mineral Development, 2006).

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TABLE 1
UGANDA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2002	2003	2004	2005	2006 ^c
Beryllium, mine output, Be content	NA	-- ³	25	2	--
Cement, hydraulic	505,959	507,068	558,988	630,000 ^e	630,000
Clay:					
Kaolin	178	--	537	55	25
Other	44,790	44,000 ^e	44,000 ^e	51,000 ^e	50,000
Cobalt, refined	450 ^e	--	436	638	689 ³
Gold, mine output, Au content ⁴	3	40	1,447	46	22 ³
Gypsum	5	43	181	285	121 ³
Iron ore	--	--	--	209	100
Lime, hydrated and quick ^c	10,000	10,000	10,000	10,000	10,000
Limestone	140,022	226,408	228,776	540,756	425,610 ³
Niobium (columbium) and tantalum, ore and concentrate:					
Gross weight	6,463	6,240	376	273	275
Nb content	3,036	3,000	170 ^e	130 ^e	130
Ta content	1,736	1,700	100 ^e	70 ^e	70
Pozzolanic materials	12,388	65,587	134,644	138,933	213,639 ³
Salt ^c	5,000	5,000	5,000	1,500	1,500
Steel, semimanufactured ^c	7,000	7,000	7,000	-- ^r	--
Tin, mine output, Sn content	--	1	2	--	--
Tungsten, mine output, W content	16	1	52	45 ^r	95 ³
Vermiculite	664	1,724	2,688	2,574	2,600

^cEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. NA Not available. -- Zero.

¹Includes data available through October 31, 2007.

²In addition to the commodities listed, the following are presumably produced but information is inadequate to estimate output: corundum, lead, marble, sand and gravel, silica sand, and soapstone.

³Reported number.

⁴Does not include smuggled artisanal production.

TABLE 2
UGANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Cement	Tororo Cement Industries Ltd.	Tororo	394,000
Do.	Hima Cement Industries Ltd. (Bamburi Cement Ltd., 70%)	Kasese	350,000
Cobalt, refined	Kasese Cobalt Company Ltd. (Blue Earth Refineries Ltd., 75%, and Government, 25%)	do.	1,000
Gold kilograms	M/S Busitema Mining Company Ltd.	Tiira Mine near Busia	400
Lead, refined secondary	Uganda Batteries Ltd.	Kampala	1,000
Niobium (columbium) and tantalum	M/S Technical Support and Services Ltd.	Wampewo	11,000 ^e
Soapstone	African Minerals Ltd.	Moroto	NA
Steel: ¹			
Crude ²	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	Jinja	25,000
Do.	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	do.	21,000
Billet ²	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	do.	60,000
Rolled	do.	do.	101,200
Do. ²	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	do.	40,000
Do. ²	BM Technical Services Ltd.	Mbarara	20,000
Do.	Sembule Steel Mills Ltd.	Kampala	20,000
Stone, crushed	Hima Cement Industries Ltd.	Kasese District	NA
Do.	Kilembe Mines Ltd.	do.	NA
Do.	Tororo Cement Industries Ltd.	Tororo District	NA
Do.	Zzimwe Construction Ltd.	Mukono District	690,000
Tungsten ²	Krone Uganda Ltd.	Nyamurilo	115
Vermiculite	Canmin Resources Ltd. (subsidiary of International Business Investments Corp.)	Namekara	25,000

^eEstimated. NA Not available.

¹In addition to its crude, billet, and rolled steel facilities, Uganda has a galvanized steel plant with a capacity of 30,000 metric tons per year.

²Not operating in 2005 and 2006.