



# 2005 Minerals Yearbook

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## UGANDA

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# THE MINERAL INDUSTRY OF UGANDA

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The East African country of Uganda was known to produce cobalt, columbium (niobium) and tantalum, gold, iron ore, steel, tin, and tungsten. Uganda 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 (table 1). The country also had resources of copper, phosphate rock, and silica sand.

Uganda's real gross domestic product (GDP) increased by 5.6% in 2005. The nominal GDP based on purchasing power parity was \$43.3 billion, and the per capita GDP based on purchasing power parity was about \$1,600. In fiscal year 2004-05, construction accounted for 9% of the GDP; manufacturing, 8%; electricity and water, 1%; and mining and quarrying, 1% (Bank of Uganda, undated, p. 146; International Monetary Fund, 2006, p. 184; 2006<sup>1</sup>).

The mining and quarrying sector grew by 16.9% in fiscal year 2004-05 compared with 5.4% in fiscal year 2003-04. Growth in the mining and quarrying sector was attributable to higher production of cobalt and limestone. The construction sector grew by 12.3%; manufacturing, 6.7%; and electricity and water, 6% (Bank of Uganda, undated, p. 149).

## Commodity Review

### Metals

**Cobalt and Copper.**—Kasese Cobalt Company Ltd. (Blue Earth Refineries Ltd., 75%) produced refined cobalt from the Kilembe stockpile. Production increased to 638 metric tons (t) in 2005 from 436 t in 2004; the value of production was \$17 million. In 2005, cobalt exports amounted to \$15.6 million, or 2% of total exports; cobalt was exported to countries that included China, Japan, and the United States (Bank of Uganda, 2005, 2006; Grace L. Nassuna, Principal Documentation Officer, Department of Geological Survey and Mines, written commun., July 25, 2006).

The Kilembe stockpile resources were estimated to be 515,000 t at a grade of 1.38% cobalt in mid-2005. Blue Earth planned to produce 720 metric tons per year (t/yr) of cobalt; at a recovery rate of 70%, the stockpile was expected to last for nearly 7 years. The company estimated that world market prices of nearly \$10 per pound of cobalt were necessary to produce at the rate of 720 t/yr (Blue Earth Refineries Inc., 2006, p. 21, 26).

In 2005, Uganda Gold Mining Ltd. (UGM) of Canada started exploration near the Kilembe copper-cobalt mine. The company could earn a 70% interest in the Kilembe Mine by conducting exploration and completing a feasibility study by January 2007 on restarting production. The mine has not produced since 1977. Resources at the mine were estimated to be 3.15 million metric

tons (Mt) at grades of 0.97% copper and 0.18% cobalt, and at the tailings dams, 5.2 Mt at grades of 0.18% copper and 0.12% cobalt (Uganda Gold Mining Ltd., 2004).

**Gold.**—In 2005, national gold production declined to 46 kilograms (kg) from 1,447 kg in 2004. M/S Busitema Mining Company Ltd. started open pit mining at the Tiira Mine near Busia in 2004. The Tiira Mine had a capacity of between 360 and 420 kilograms per year; production was inhibited by an unstable electricity supply. Busitema estimated that resources from the open pit section of the mine could last for 15 years. Gold production by Kisita Mining Company Ltd. was on hold in 2004 pending the installation of new equipment in March 2005 (African Mining, 2005; Uganda Ministry of Energy and Mineral Development, 2005, p. 46-47).

Canmin Gold Ltd. [a subsidiary of International Business Investments Corp. (IBI)] held the Busia and the Ibanda gold properties in southeastern Uganda near Lake Victoria and the Bugiri property in southwestern Uganda. In 2005, Canmin was awarded a new property adjacent to Bugiri. Glencar Mining plc of Ireland explored for gold at its property near the Tiira Mine.

In 2005, gold exports were \$73 million, or 9% of total exports. The majority of gold exports were reported to be reexports from Congo (Kinshasa). In June 2005, Metalor Technologies SA of Switzerland refused to purchase gold from Uganda for use in its refinery because of allegations that gold was illegally mined and exported from Congo (Kinshasa) by Ugandan military officers. The Government denied the allegations (Allio, 2005; Bank of Uganda, 2005, 2006).

**Iron and Steel.**—The Alam Group operated a small electric-arc furnace that produced steel from remelted scrap. In 2005, the Alam Group increased the capacity of its rolling mill at Jinja to at least 40,000 t/yr from 24,000 t/yr. The expansion was completed in August at a cost of \$5 million (Omony and Mugisha, 2005). Sembule Steel Mills Ltd. produced steel bars and coils for use by the company in the production of fencing, nails, and roofing sheets.

**Tungsten.**—Krone Uganda Ltd. mined tungsten at the Nyamuliro Mine in Kabale district. The company was forced to shut down in late 2004 because of theft from the mine. Production at Nyamuliro had also been inhibited by poor infrastructure. In February 2005, Krone was put under receivership after defaulting on payment of a loan. By July, Krone was involved in a dispute with Development Finance Company of Uganda Bank Ltd. over the rights to the mine; the latter company was accused of illegally mining at Nyamuliro. Reported tungsten production amounted to 36 t in 2005 (Nyanzi, 2005; Uganda Ministry of Energy and Mineral Development, 2005, p. 44).

### Industrial Minerals

**Cement.**—Uganda's cement production rose to 558,988 t in 2004 from 507,068 t in 2003 and 347,274 t in 1999. In 2004,

<sup>1</sup>A reference that includes a section mark (§) is found in the Internet Reference Cited section.

Tororo Cement Industries Ltd. completed construction of its new plant, which increased the company's capacity to 394,000 t/yr from 220,000 t/yr (table 2). In 2005, Hima Cement Industries Ltd. was conducting a feasibility study on the expansion of its plant, which had a capacity of 350,000 t/yr. Cement producers faced poor infrastructure and unreliable power supplies (Bank of Uganda, undated, p. 184; Olaki, 2005; Uganda Ministry of Energy and Mineral Development, 2005, p. 45).

**Clay and Shale.**—Ball clay was mined at Mukono, and brick clay, at Kajansi. Muhindo Enterprises Ltd. planned to start kaolin production in August 2005. The company planned to produce 150,000 t/yr of kaolin at a value of \$7.5 million; 50,000 t/yr of metakaolin at a value of \$5 million; and 30,000 t/yr of aluminum sulfate at a value of \$9 million. By July 2005, Muhindo had invested \$6 million in the project; the company planned to triple or quadruple its production in 10 to 15 years. Kaolin was expected to be consumed domestically in floor and wall tiles. Given the decline in reported kaolin production in 2005 (table 1), it is unclear whether Muhindo started mining operations (Ssonko, 2004, 2005).

**Stone, Crushed.**—Limestone was quarried by Hima Cement, Kilembe Mines Ltd., and Tororo Cement. The production of limestone rose to 540,756 t in 2005 from a revised 228,776 t in 2004, and the production of pozzolanic materials, to 138,933 t from 134,644 t. Higher limestone production was attributable to rapid growth in the construction sector. In 2005, the value of limestone production amounted to \$30 million, and pozzolanic materials, \$1.62 million (Grace L. Nassuna, Department of Geological Survey and Mines, Principal Documentation Officer, written commun., July 25, 2006).

**Vermiculite.**—Canmin Resources Ltd. (a subsidiary of IBI) produced vermiculite at the Namekera Mine. In 2005, a vermiculite processor in the United States signed an agreement with Canmin to purchase between 6,000 and 8,000 t/yr of vermiculite from Canmin starting in the first quarter of 2006. Vermiculite production declined to 2,574 t in 2005 from 2,688 t in 2004 (International Business Investments Corp., 2005).

### **Mineral Fuels**

**Petroleum.**—Uganda did not have production facilities for crude petroleum or petroleum products. In 2005, imports of refined petroleum products amounted to \$210.1 million, or 12% of total imports; reexports amounted to \$31.5 million, or nearly 4% of total exports (Bank of Uganda, 2005, 2006). Heritage Oil Corp. of Canada and its joint-venture partner Tullow Oil plc of the United Kingdom explored for crude petroleum at Block 3A on Lake Albert. In December 2005, Hardman Resources Ltd. of Australia and Tullow commenced drilling the Mputa-1 well on Block 2, which covered northern Lake Albert and the surrounding onshore area.

### **Infrastructure**

Uganda's electricity production increased to 1,896 gigawatt-hours (GWh) in 2004 from 1,757 GWh in 2003 and 1,342 GWh in 1999. Most domestic production came from hydroelectric power sources. In 2004, Uganda had a nominal

generating capacity of 303 megawatts (MW); peak demand was 265 MW of capacity. Exports of electricity amounted to \$3.9 million, or less than 1% of total exports in 2005 (Bank of Uganda, 2005, 2006; undated, p. 183).

By May 2005, prolonged drought across East Africa reduced Uganda's effective generating capacity to 215 MW; peak demand was estimated to be 330 MW of capacity. The resulting shortages of power led to load shedding and higher costs. To alleviate these problems, the Government signed an agreement in April 2005 with Aggreko International Power Projects to build a diesel-fired power station at Lugogo with a capacity of 50 MW (Biryabarema, 2005).

In May, the Government signed an agreement with a consortium led by Industrial Promotion Services (an affiliate of Aga Khan Development Network) to build the Bujagali hydropower project on the Nile River. Bujagali's planned capacity was 250 MW. The project was expected to be completed in about 5 years at a cost of \$500 million. An additional 100 MW of capacity could result from the construction of 15 rural electrification projects that included the Buseruka, the Kasese Cobalt, the Kisizi, and the WENRECO mini-hydropower stations, and the Kakira Sugar Works and the Lugazi cogeneration plants (Ampaire, 2005; Daily Nation, 2005).

### **Outlook**

The International Monetary Fund (2006, p. 184) predicted that Uganda's GDP would grow by 6.2% in 2006 and 6.1% in 2007. Most of Uganda's cobalt, columbite-tantalite, gold, and vermiculite production was exported; the outlook for these commodities depended heavily upon world market conditions. For cement, limestone, and pozzolanic materials, the outlook depended 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 unreliability of power supplies could pose serious difficulties for mining and mineral processing operations.

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TABLE 1  
UGANDA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity	2001	2002	2003	2004	2005
UGANDA <sup>2</sup>					
Beryllium, mine output, Be content	NA	NA	-- <sup>3</sup>	25	2
Cement, hydraulic	431,084	505,959	507,068	558,988 <sup>r</sup>	630,000 <sup>e</sup>
Clay:					
Kaolin	90	178	--	537 <sup>r</sup>	55
Other	73,505	44,790	44,000 <sup>c</sup>	44,000 <sup>c</sup>	51,000 <sup>e</sup>
Cobalt, refined	634	450 <sup>c</sup>	--	436	638
Columbium (niobium) and tantalum, ore and concentrate:					
Gross weight kilograms	11,092	6,463	16,240	376 <sup>r</sup>	273
Nb content do.	5,211	3,036	7,600	170 <sup>e</sup>	130 <sup>e</sup>
Ta content do.	2,979	1,736	4,400	100 <sup>e</sup>	70 <sup>e</sup>
Gold, mine output, Au content <sup>4</sup> do.	(5)	3	40	1,447 <sup>r</sup>	46
Gypsum	--	5	43	181 <sup>r</sup>	285
Iron ore	1,236	--	--	--	209
Lime, hydrated and quick <sup>e</sup>	10,000	10,000	10,000	10,000	10,000
Limestone	229,792	140,022	226,408	228,776 <sup>r</sup>	540,756
Pozzolanic materials	22,782	12,388	65,587	134,644 <sup>r</sup>	138,933
Salt <sup>e</sup>	5,000	5,000	5,000	5,000	5,000
Steel <sup>e</sup>	7,000	7,000	7,000	7,000	7,000
Tin, mine output, Sn content	18	--	1	2 <sup>r</sup>	--
Tungsten, mine output, W content	17	16	1	52 <sup>r</sup>	36
Vermiculite	200	664	1,724	2,688	2,574

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. -- Zero.

<sup>1</sup>Table includes data available through August 22, 2006.

<sup>2</sup>In 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.

<sup>3</sup>Reported exports.

<sup>4</sup>Does not include smuggled artisanal production.

<sup>5</sup>Less than 1/2 unit.

TABLE 2  
UGANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(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
Columbium (niobium) and tantalum	M/S Technical Support and Services Ltd.	Wampewo	11,000 <sup>c</sup>
Gold kilograms	M/S Busitema Mining Company Ltd.	Tiira Mine near Busia	400
Lead, refined secondary	Uganda Batteries Ltd.	Kampala	1,000
Steel: <sup>1</sup>			
Crude <sup>2</sup>	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 <sup>2</sup>	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	do.	60,000
Rolled <sup>2</sup>	do.	do.	101,200
Do.	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	do.	40,000
Do.	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
Soapstone	African Minerals Ltd.	Moroto	NA
Tungsten	Krone Uganda Ltd.	Nyamurilo	115
Vermiculite	Canmin Resources Ltd. (subsidiary of International Business Investments Corp.)	Namekara	25,000

<sup>c</sup>Estimated. NA Not available.

<sup>1</sup>In 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.

<sup>2</sup>Not operating in 2004; more recent information is not available.