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The Mineral Industry of Uganda

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In 2013, the East African country of Uganda accounted for 4% of the world's mine production of pumice and pumicite. In recent years, the country also produced aggregates, brick clay, cement, refined cobalt, gold, iron ore, kaolin, refined lead, limestone, niobium (columbium), salt, steel, tantalum, tin, tungsten, and vermiculite. Other undeveloped resources included phosphate rock. Uganda was not a globally significant consumer of most minerals in 2013, although domestic consumption of pumice and pumicite was likely globally significant (Crangle, 2014).

The mineral sector of Uganda, except for the petroleum and natural gas subsector was governed by the Mining Act (2003). The petroleum and natural gas subsector was governed by the Petroleum (Exploration, Development, and Production) Bill 2012 (the Upstream Act) and the Petroleum (Refining, Gas Processing, Transportation, and Storage) Act 2012 (the Midstream Act). The Upstream Act and the Midstream Act, which replaced the Petroleum (Exploration and Production) Act of 1985, were enacted into law in March 2013 and July 2013, respectively. The laws established (a) a competitive bidding process for licenses in the upstream natural gas and petroleum subsector, (b) the Petroleum Authority to advise the Government and implement its regulations, and (c) a national oil company to manage the Government's commercial interests in natural gas and petroleum. Production-sharing agreements would have a Government interest of between 15% and 20% (Mosbacher, 2013; Wass and Musiime, 2013, p. 17–18).

The Ministry of Energy and Mineral Development was responsible for geologic mapping, issuing exploration and mining licenses, and administering the Mining Act (2003), the Midstream Act, the Upstream Act, and their accompanying regulations. In November 2012, the Government put the issuance of new mining licenses on hold because of the lack of financial and technical capacity of some license holders and the illegal issuance of some licenses (Duncan, 2013).

Minerals in the National Economy

In 2013, the manufacturing sector accounted for 7.7% of the gross domestic product, and the mining and quarrying sector, 0.3%. Petroleum products accounted for 5.5% of Uganda's total value of exports; cement, 4.3%; iron and steel, 3.9%; cobalt, 0.4%; and gold, 0.1%. All petroleum products and most gold exports were reexports. Petroleum products accounted for 22.5% of Uganda's total value of imports; iron and steel, 4.5%; nonmetallic mineral products, 2.5%; and fertilizers and crude minerals other than coal, gemstones, or petroleum, 1.3% (Uganda Bureau of Statistics, 2014, p. 200, 235, 245–246, 250–251).

Production

In 2013, vermiculite production decreased by 98%; refined gold, by an estimated 75%; cobalt metal, by 32%; tungsten, by an estimated 30%; and brick clay, by an estimated 13%. The production of aggregates increased by 437%, and cement, by 14%. Tin mining restarted in 2013 (table 1; Uganda Bureau of Statistics, 2014, p. 52, 176, 181).

Structure of the Mineral Industry

Most of Uganda's mining and mineral processing facilities were privately owned, including the cement and steel plants, the lead refinery, and the vermiculite mine. Artisanal miners produced pozzolanic materials in the Kabarole District and salt at Lake Katwe (table 2).

Commodity Review

Metals

Cobalt and Copper.—Kasese Cobalt Company Ltd. (KCCL) (MFC Industrial Ltd. of Canada, 75%) produced cobalt metal from a cobalt-rich pyrite stockpile from the Kilembe copper mine tailings near Kasese using a bioleaching and solvent extraction-electrowinning process. In 2013, production decreased to 376 metric tons (t) from 556 t in 2012 because of depletion of the stockpile (Cobalt Development Institute, 2014).

In July 2013, the Government awarded the concession for the Kilembe mines near the border of the Democratic Republic of the Congo [Congo (Kinshasa)] to Tibet Hima Industry Company Ltd. of China. The mines were abandoned in the 1980s because of lower copper prices on the global market and political instability. Tibet Hima and its joint-venture partners planned to invest about $175 million during the first 3 to 5 years of the project (Zambian Mining Magazine, 2013).

Tin.—In 2013, Starfield Metals Ltd. of Australia started mining cassiterite at its Kikagati project in southwestern Uganda. Starfield planned to produce about 390 t of tin in concentrate in fiscal year 2015 (which would run from July 1, 2014, to June 30, 2015), about 810 t in fiscal year 2016, about 920 t in fiscal 2017, and about 960 t in fiscal year 2018. The company also planned to start work on a resource estimate by November 2014 (Starfield Metals Ltd., 2013).

Tungsten.—In 2012, Krone Uganda Ltd. mined wolframite at the Bjordal Mines in western Uganda. The Bjordal Mines had a capacity of about 240 metric tons per year (t/yr) of wolframite, which had tungsten content of between 120 t/yr and 130 t/yr. Krone was considering an expansion to more than 600 t/yr of wolframite. By March 2013, only small amounts of artisanal production was taking place because of an ongoing dispute about ownership of the mine. It was unclear when the expansion would take place (Krone Uganda Ltd., 2012; Mugalu, 2013).

Industrial Minerals

Cement.—Uganda's cement production was 2.02 million metric tons (Mt) in 2013 compared with 1.78 Mt in 2012 and 1.16 Mt in 2009. Increased output in recent years was attributable to capacity expansions at Tororo Cement Industries Ltd. to 2.2 million metric tons per year (Mt/yr) from 1.1 Mt/yr, and at Hima Cement Industries Ltd., to 850,000 t/yr from 350,000 t/yr. In November 2012, DAO Group of Saudi Arabia started construction on a new plant in Baduka District with an initial capacity of about 270,000 t/yr (International Cement Review, 2013; Uganda Bureau of Statistics, 2014, p. 52).

Phosphate Rock.—In September 2013, the Government signed an agreement with Guangzhou Dongsong Energy Group of China for the development of the Sukulu phosphate rock deposit. Phosphate rock from Sukulu was expected to be consumed in the production of 300,000 t/yr of phosphate fertilizers. The Government also planned to build a sulfuric acid plant with a capacity of 200,000 t/yr. The capital costs of the project were estimated to be $560 million (Kisige, 2013).

Pumice and Pumicite.—Artisanal miners produced pozzolanic material at mines in the Kabarole District, especially in the Parishes of Bwanika and Nyantabooma in Kichwamaba Sub-County. Pozzolanic material was sold to Hima Cement for use in pozzolanic cement and to local construction companies. National production was 623,471 t in 2013 compared with 650,324 t in 2012 (Uganda Bureau of Statistics, 2014, p. 52, 176, 181).

Vermiculite.—In 2013, Gulf Industrials Ltd. of Australia produced 243 t of vermiculite at the Namekara Mine compared with 11,251 t in 2012. Mining was limited to samples for prospective buyers. Gulf put the mine on care-and-maintenance status in October 2012; the company that had exclusive purchasing rights for Namekara's vermiculite stopped purchases because of adverse economic conditions in Europe (Gulf Industrials Ltd., 2012; 2013, p. 2; 2014).

Mineral Fuels

Natural Gas and Petroleum.—China National Offshore Oil Corp. (CNOOC) of China, Total S.A. of France, and Tullow Oil plc of the United Kingdom each held a one-third share in the following exploration areas (EAs): EA–1, EA–1A, EA–2, and EA–3A on Lake Albert. Total was the operator of EA–1 and EA–1A; Tullow, of EA–2; and CNOOC, of EA–3A. In September 2013, the Government awarded CNOOC a production license for the Kingfisher oilfield in EA–3A. Production at Kingfisher was likely to be between 30,000 and 40,000 barrels per day (bbl/d), and that for all oilfields in EA–1, EA–1A, EA–2, and EA–3A, 250,000 bbl/d. The majority of the crude petroleum production at Lake Albert was expected to be exported. CNOOC could start production by 2017 or 2018 (Quinlan, 2013b).

In October 2013, the Government announced plans to build a new petroleum products refinery at Kabaale in Hoima District. The Government hoped to select a joint-venture partner to take a 60% interest in the refinery during the first half of 2014. The Government planned to start production at the refinery by 2017 or 2018. The refinery would have an initial capacity of 30,000 bbl/d and the refinery's capacity was planned to be expanded to 60,000 bbl/d. The estimated cost of the refinery, including the expansion, was $2.5 billion (Quinlan, 2013a, b).

Outlook

Uganda's mineral industry could expand in the next few years with increases in tin mining and the restart of cobalt, copper, and phosphate rock mining. The production of cement, limestone, and other construction materials is also likely to expand because of the increase in cement demand. In 2014, the growth of the mineral industry is likely to be limited by the closure of the Kasese cobalt plant.

Significant growth in the mineral industry could take place in the longer term depending on the viability of crude and refined petroleum production. High transportation costs because of long distances and poor road conditions and the inability to produce heavy-transport fuels could discourage international investment in the Kabaale refinery. The costs of the refinery and the export pipeline to the Indian Ocean also could be increased by the acidic and waxy nature of the Lake Albert crude petroleum (Quinlan, 2013a, b).

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TABLE 1
UGANDA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2009	2010	2011	2012	2013[e]
Aggregate, syenitic		14,027	14,338	9,765	20,472 [r]	109,906 [3]
Cement, hydraulic		1,162,241	1,347,327	1,666,235	1,780,000 [r]	2,023,000 [3]
Clay:						
Brick[e]		52,000	54,000	62,000	54,000	47,000
Kaolin		4,721	27,237	20,883	42,886 [r]	43,875 [3]
Cobalt, refined		673	624	661 [r]	556 [r]	376 [3]
Gold:						
Mine	kilograms	1	4	1	1	--
Refined[e]	do.	-- [3]	450 [r]	150 [r]	200 [r]	50
Iron ore		972	3,795	2,134	4,431 [r]	4,500
Lead, refined[e]		800	800	800	800	800
Limestone		588,945	634,674 [r]	932,348	936,264 [r]	922,372 [3]
Niobium (columbium) and tantalum, ore and concentrate:						
Gross weight	kilograms	50	10	10 [e]	-- [r]	--
Nb content[e]	do.	7	1	1	-- [r, 3]	--
Ta content[e]	do.	4	1	1	-- [r, 3]	--
Pozzolanic material		440,293 [r]	446,316	690,911	650,324 [r]	623,471 [3]
Salt[e]		15,000	15,000	15,000	15,000	15,000
Steel[e]		54,000 [r]	59,000 [r]	65,000 [r]	60,000 [r]	64,000
Tin, placer		--	32	-- [r]	--	20
Tungsten, mine output, W content		9	55	10	43 [r]	30
Vermiculite		--	2,475 [r]	8,426 [r]	11,251 [r]	243 [3]

[e]Estimated; estimated data are rounded to no more than three significant digits. [r]Revised. do. Ditto. -- Zero.

[1]Table includes data available through October 22, 2014.

[2]In addition to the commodities listed, corundum, lime, marble, sand and gravel, silica sand, and soapstone are presumably produced, but available information is inadequate to make reliable estimates of output.

[3]Reported figure.

TABLE 2
UGANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Tororo Cement Industries Ltd.	Tororo	2,200,000.
Do.	Hima Cement Industries Ltd. (Bamburi Cement Ltd., 70%)	Kasese	850,000.
Cobalt, refined	Kasese Cobalt Company Ltd. (KCCL) (MFC Industrial Ltd., 75%, and Government, 25%)	Plant at Kasese[1]	1,000.
Gold:			
Mine, placer kilograms	Artisanal miners	Burama Ridge, Isingiro and Ntungamo District	NA.
Refined do.	Victoria Gold Star Ltd.	Kampala	21,000.
Lead, refined secondary	Uganda Batteries Ltd.	do.	1,000.
Niobium (columbium) and tantalum	3T Mining Ltd.	Mine at Wampewo[1]	27 tantalum[e]; 5 niobium[e].
Pozzolanic material	Artisanal miners	Kabarole District	NA.
Salt	do.	Lake Katwe	15,000.
Soapstone	African Minerals Ltd.	Moroto	NA.
Steel:[2]			
Crude	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	Jinja	72,000.
Do.	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	do.	50,000.[e]
Billet	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	do.	72,000.[e]
Do.	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	do.	50,000.[e]
Rolled	Steel Rolling Mills Ltd. (subsidiary of Alam Group Ltd.)	do.	72,000.[e]
Do.	Steel Corp. of East Africa Ltd. (subsidiary of Madhvani Group)	do.	30,000.
Do.	BM Technical Services Ltd.	Mbarara	20,000.
Do.	Sembule Steel Mills Ltd.	Plant at Kampala[1]	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.
Tin	Starfield Metals Ltd.	Western Region	75.[e]
Tungsten content of wolframite	Artisanal miners	Bjordal Mine in Western Region	240 wolframite; 120 tungsten.
Vermiculite	Gulf Industrials Ltd.	Mine at Namekara[1]	30,000.

[e]Estimated. Do., do. Ditto. NA Not available.

[1]Not operating at the end of 2013.

[2]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.