



2017–2018 Minerals Yearbook

UGANDA [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF UGANDA

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Note: In this chapter, information for 2017 is followed by information for 2018.

In 2017, Uganda's share of the world's production of pumice and pumicite was 4%, and vermiculite, 1%. The country also produced aggregates, beryl, brick clay, cement, refined cobalt, mined and refined gold, iron ore, kaolin, refined lead, limestone, niobium (columbium), salt, steel, tantalum, tin, tungsten, and vermiculite. Uganda was not a globally significant consumer of most minerals in 2017. Domestic consumption of pumice and pumicite (including pozzolanic materials) in cement production and other construction uses was globally significant (Crangle, 2019; Tanner, 2019).

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) Act 2012 (the Upstream Act) and the Petroleum (Refining, Conversion, Transmission, and Midstream Storage) Act 2012 (the Midstream Act). The Midstream Act and the Upstream Act were enacted into law in 2013.

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 all accompanying regulations. At the end of the third quarter of 2017, 715 licenses were in operation, of which 365 were exploration licenses; 150, prospecting licenses; 86, mineral dealers' licenses; 71, location licenses; 39, mining leases; and 4, retention licenses (Uganda Ministry of Energy and Mineral Development, 2018, p. 66–67).

Minerals in the National Economy

In 2017, the manufacturing sector (which included cement, refined lead, and steel production) accounted for 8.7% of the gross domestic product (GDP), and the mining and quarrying sector, 0.6%. The value of output in the mining and quarrying sector increased by 5.9% in 2017 compared with an increase of 1.1% in 2016 (Uganda Bureau of Statistics, 2018a, p. 234–235).

In 2017, the production of bricks was estimated to employ nearly 200,000 artisanal and small-scale miners; aggregates, nearly 170,000; gold in Buhweju and Mubende Districts, a total of at least 70,000; dimension stone, 30,000; and other construction materials, 11,000. Employment in gold mining decreased by about 85% with the closure of the mines in Mubende District in August (Ssekika, 2017; ACP–EU Development Minerals Programme, 2018, p. 30).

The total value of Uganda's exports was \$3.34 billion in 2017, of which gold and gold compounds accounted for 14.4%; petroleum products, 4.2%; iron and steel, 2.3%; and cement, 1.4%. All petroleum products exports were reexports. Total imports were valued at \$5.6 billion in 2017, of which petroleum products accounted for 18.2%, and fertilizers, 1.3% (Uganda Bureau of Statistics, 2018a, p. 272, 282–283).

Production

In 2017, the output of tungsten increased by 51%; vermiculite, by 25%; kaolin, by 20%; raw steel, by an estimated 18%; and crushed syenite, by 15%. Marble production decreased by an estimated 75% in 2017; gold, by an estimated 40%; and niobium (columbium) and tantalum, by an estimated 11% each. Beryl and copper mining stopped in 2016 (Uganda Bureau of Statistics, 2018b). Data on mineral production are in table 1.

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 brick clay, construction sand, crushed stone, dimension stone, gold, pozzolanic materials, and salt. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Copper.—Tibet Hima Industry Company Ltd. of China held the mining license for the Kilembe Mines near the border of the Democratic Republic of the Congo [Congo (Kinshasa)]. In September 2017, the Government canceled Tibet Hima's mining license because of the company's reported failure to pay concession fees and implement procedures for worker safety. The Government had previously shut down the mining operations because of environmental concerns regarding tailings storage in April 2016 (Mines & Petroleum Magazine, 2016c; Abdallah, 2018).

Gold.—Artisanal miners produced gold at the rate of about 3,000 kilograms per year (kg/yr) until August 2017, when the Government evicted at least 60,000 artisanal miners from the mines in Mubende District. The miners were evicted because they were operating on the exploration license granted to AUC Mining Uganda Ltd. At least 10,000 artisanal miners were still employed in the Buhweju District as of October; the miners were engaged in a legal dispute with Hubei Jiu Zhou Geological Exploration Company Ltd. of China regarding mining rights (Global Witness, 2017, p. 28; Ssekika, 2017).

In 2017, African Gold Refinery (AGR) produced 9,330 kilograms (kg) of refined gold at its refinery in Entebbe compared with 9,000 kg in 2016 and 1,200 kg in 2015. The refinery had a capacity of 70,000 kg/yr. AGR planned to source gold from artisanal miners in Congo (Kinshasa), South Sudan, Tanzania, Uganda, and West African countries (Mines & Petroleum Magazine, 2016b, 2017a; Sentry, The, 2018, p. 38).

Iron and Steel and Iron Ore.—Guangzhou Dongsong Energy Group of China planned to mine iron ore at the Sukulu carbonatite complex for use in a new steel mill with a capacity of 300,000 metric tons per year (t/yr). The first phase of production was expected to start in the first quarter of 2018. Resources at Sukulu were estimated to be 61.8 million metric tons (Mt) grading 30.1% iron (Mines & Petroleum Magazine, 2016a; Kahungu, 2017).

Niobium (Columbium) and Tantalum.—In 2015, 3T Mining Ltd. started production at its Wampero Mine in Waksio District. The company produced 11,187 kg of columbite-tantalite in 2017 compared with 12,635 kg in 2016 (Uganda Bureau of Statistics, 2018b).

Industrial Minerals

Cement.—Uganda's cement production was 2.51 Mt in 2017, which was nearly unchanged from that of 2016. Tororo Cement Ltd. planned to complete an expansion of its plant to 3 million metric tons per year (Mt/yr) from 1.8 Mt/yr by the end of 2017. Hima Cement Ltd. planned to complete an expansion to 1.7 Mt/yr from 900,000 t/yr by the first quarter of 2018. National Cement Company Ltd. of Kenya planned to complete the construction of a new plant at Tororo with a capacity of 1 Mt/yr by the end of 2017. At yearend, neither National Cement's nor Tororo Cement's projects were completed (International Cement Review, 2017; 2018a, b; Uganda Bureau of Statistics, 2018a, p. 77).

Clay and Shale.—In fiscal year 2016 (the latest year for which data were available), Uganda's production of brick clay was estimated to be about 10.8 Mt (based on an average brick size of 2 kg). Artisanal miners accounted for about 95% of production, and large-scale mining companies, about 5%. The majority of clay production was near Kampala; production was concentrated in the Bushenyi, the Mityana, the Mubende, and the Ntungamo Districts (ACP–EU Development Minerals Programme, 2018, p. 10, 111).

Graphite.—Consolidated Africa Ltd. of Australia planned to start pilot production of nearly 220,000 t/yr of ore at the Kitgum graphite deposit by mid-2018. Resources were estimated to be 200 Mt at a grade of 8% graphite (Mines & Petroleum Magazine, 2017b).

Phosphate Rock and Sulfur.—Uganda last produced small amounts of phosphate rock in the 1990s. Guangzhou Dongsong planned to mine 2 Mt/yr of low-grade ore for use in a new phosphate fertilizer plant with a capacity of 300,000 t/yr at the Sukulu carbonatite complex. The company also planned to produce 200,000 t/yr of sulfuric acid at Sukulu. The first phase of production was expected to start in the first quarter of 2018. Phosphate rock resources at Sukulu were estimated to be 62.5 Mt grading 11.3% phosphorous pentoxide (Mines & Petroleum Magazine, 2016a; Kahungu, 2017).

Pumice and Pumicite.—National production of pozzolanic materials was 792,564 metric tons (t) in 2017 compared with 846,604 t in 2016 and 650,324 t in 2012. Tororo Cement produced pozzolanic materials in the Kapchorwa District for consumption in its cement plant. Large-scale mining companies and artisanal miners in the Kabarole District sold their production to Hima Cement and Kampala Cement Company Ltd.

In fiscal year 2016 (which started on July 1, 2015, and ended on June 30, 2016), large-scale mines accounted for about 98% of national output of pozzolanic materials and artisanal miners accounted for the remainder (ACP–EU Development Minerals Programme, 2018, p. 11, 111; Uganda Bureau of Statistics, 2018b).

Sand, Construction.—In fiscal year 2016, Uganda's production of construction sand was estimated to be about 3.5 Mt, of which artisanal miners accounted for about 90% and large-scale mining companies, about 10%. A total of 346 sand pits were located within 150 kilometers (km) of Kampala, not all of which were active. The Districts in which sand was produced included Buikwe, Jinja, Masaka, Mayuge, Wakiso, and others (ACP–EU Development Minerals Programme, 2018, p. 10, 111).

Stone, Crushed.—In fiscal year 2016, Uganda's production of aggregates was estimated to be nearly 6.8 Mt, of which artisanal miners accounted for about 90% and large-scale mining companies, about 10%. At least 316 aggregate quarries were located within 150 km of Kampala (ACP–EU Development Minerals Programme, 2018, p. 11, 111).

Stone, Dimension.—Artisanal miners produced substantial amounts of dimension stone, most of which was a coproduct of aggregate production. Most artisanal dimension stone production was sold domestically without further processing to tiles or slabs (ACP–EU Development Minerals Programme, 2018, p. 11, 111).

DAO Marble Ltd. had produced marble from its quarries in the Moroto District at a rate of 18,000 t/yr in 2016. The company planned an expansion that could double production by late 2018. DAO Marble's operations shut down because of nonpayment of debt, rent, and wages by late April 2017 (Mines & Petroleum Magazine, 2016d; Mbanga, 2017).

Mineral Fuels

Natural Gas and Petroleum.—At the end of 2016, China National Offshore Oil Corp. Ltd. (CNOOC), 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-3 on Lake Albert. Total was the operator of EA-1 and EA-1A; Tullow, of EA-2; and CNOOC, of EA-3. In January 2017, Total and Tullow signed an agreement in which Total would purchase a 21.57% share in the joint venture from Tullow. CNOOC subsequently exercised its right to purchase 50% of the share to be transferred from Tullow to Total (Abdallah, 2017).

As of December 2017, CNOOC and Total were engaged in a dispute regarding which company would operate EA-2. Depending on the resolution of the dispute, CNOOC and Total could start production at Lake Albert by 2020. Production could be as much as 300,000 barrels per day (bbl/d) of crude petroleum (Abdallah, 2017; Smith, 2018).

The Governments of Tanzania and Uganda planned to build a new crude petroleum pipeline with a capacity of 216,000 bbl/d from Lake Albert to the Tanzanian Port of Tanga. That route for the pipeline was chosen instead of a route to the Kenyan Port of Lamu because of security concerns. The pipeline to Tanga could be completed by 2021 (Karakire, 2018; Smith, 2018).

In July 2017, the Government signed an agreement with the Albertine Graben Refinery Consortium (AGRC) for the development of a new petroleum products refinery in the Hoima District. The initial expected capacity was 30,000 bbl/d, with a possible expansion to 60,000 bbl/d. The Government planned to start production by 2020 (Kampala Dispatch, 2017).

MINERAL INDUSTRY HIGHLIGHTS IN 2018

In fiscal year 2018 (which started on July 1, 2017, and ended on June 30, 2018), the GDP was \$27.4 billion. The mining and quarrying sector accounted for 0.4% of the GDP. In 2018, the principal mineral exports were (in decreasing order of value) gold, petroleum products, base metals and products, and cement (Uganda Bureau of Statistics, 2018a, p. 224; Bank of Uganda, 2019, p. 8).

Production

In 2018, iron ore production increased by 353% compared with that of 2017; tungsten by an estimated 158%; vermiculite, by an estimated 75%; refined gold, by an estimated 29%; niobium, by an estimated 17%; tantalum, by an estimated 16%; and pozzolanic materials, by an estimated 11%. Mined gold production decreased by an estimated 78% in 2018 compared with that of 2017; tin, by an estimated 61%; kaolin, by an estimated 51%; limestone, by an estimated 34%; crushed syenite, by an estimated 15%; brick clay and cement, by an estimated 12%; each; sand, by an estimated 11%; and aggregates other than syenite, by an estimated 10%. Marble production shut down in 2017 (table 1; Uganda Bureau of Statistics, 2018b).

Mined gold production decreased in 2018 because of the closure of most of the mines in Mubende District. Aggregate and sand output decreased because of lower cement consumption.

Commodity Review

Tibet Hima appealed the cancellation of its mining license at the Kilembe Mines to the High Court of Uganda. In April 2018, the High Court ruled against Tibet Hima's application for an injunction to prevent the Government from taking over the Kilembe Mines (Abdallah, 2018).

Based on AGR's total exports of at least 31,200 kg since its plant's opening in 2015, the company's production increased to an estimated 12,000 kg of refined gold in 2018 from 9,330 kg in 2017. AGR sourced gold from Congo (Kinshasa), Kenya, Rwanda, Tanzania, and Uganda (Sentry, The, 2018, p. 2, 7, 38; Goethals, 2019).

At yearend, iron ore mining had not started at Sukulu. The opening of the steel plant was delayed until July 2019. The plant's machinery was still under construction in China in October 2018, and shipping the machinery to Uganda could require as much as 6 months (Odyek, 2018).

3T Mining produced an estimated 13,000 kg of columbite-tantalite in 2018 compared with 11,187 kg in 2017. The company's output had a tantalum pentoxide content of between 20% and 35% and a niobium pentoxide content of between 5% and 7% (3T Mining Ltd., 2017; Uganda Bureau of Statistics, 2018b).

In 2018, Uganda's cement production decreased to an estimated 2.2 Mt from 2.51 Mt in 2017 because of power outages. In May, Hima Cement started production at a new grinding station that increased its capacity to 1.7 Mt/yr from 900,000 t/yr. Simba Cement Uganda Ltd. (a subsidiary of National Cement Company Ltd. of Kenya) opened a new plant at Tororo with a capacity of 1 Mt/yr. Uganda's cement consumption was 2.22 Mt in 2018 compared with 2.5 Mt in 2017 and 1.75 Mt in 2013 (Global Cement, 2018a, b; Kezaabu, 2018; Uganda Bureau of Statistics, 2018a, p. 77; 2019).

In November 2018, Guangzhou Dongsong announced plans to start phosphate fertilizer production at Sukulu in early December. Initial planned output was 50,000 t/yr with a subsequent expansion to 100,000 t/yr; fertilizers from Sukulu could be exported to other African countries. As of yearend, production had not started (East African Business Week, 2018; Musisi, 2018; Ngwomoya, 2019).

National production of pozzolanic materials increased to an estimated 880,000 t in 2018 from 792,564 t in 2017 and 623,471 t in 2013. In October, the Government suspended the use of excavators to mine pozzolanic materials in the Harugongo and Kicwamba subcounties in Kabarole District because the limit on capital expenditures for location licenses was about \$2,700 or less under the Mining Act (2003) (Ashaba and Basiime, 2018; Uganda Bureau of Statistics, 2018b).

In 2018, Rwenzori Rare Metals Ltd. was engaged in a prefeasibility study on a new rare-earths mine at its Makuutu Clays project. Depending on the results of the prefeasibility and feasibility studies, mining could start in 2021. In the company's preliminary resource estimate, resources were estimated to be 321 Mt at a grade of nearly 0.076% rare-earth oxides (Rwenzori Rare Metals Ltd., 2018).

Guangzhou Dongsong planned to start glass production at Sukulu in July 2019. The company planned to use silica sand from the shores of Lake Victoria as raw material (Odyek, 2018; Musisi, 2018).

Vermiculite production at the Namekara Mine increased to an estimated 7,200 t in 2018 from 4,119 t in 2017. In June, Black Mountain Resources Ltd. sold the mine to Namekara Mining Company Ltd. (Uganda Bureau of Statistics, 2018b).

The startup of crude petroleum production was delayed until 2021 and refined petroleum production, until 2023. AGRC's expected costs for the planned new refinery with a capacity of 60,000 bbl/d were between \$3 billion and \$4 billion. The Government's approval of the new crude petroleum pipeline through Tanzania was expected to be in 2019 (Stoddard, 2018).

Outlook

Uganda's mineral industry could expand in the next few years with the restart of phosphate rock mining, the expansion of cement production and iron ore mining, and the opening of downstream processing plants for phosphate fertilizers and steel. Further growth could take place depending on the viability of crude and refined petroleum production. The costs of the Kabaale refinery and the pipeline to the Indian Ocean could be increased by long distances, poor road conditions, and the acidic and waxy nature of the Lake Albert crude petroleum (Quinlan, 2013).

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TABLE 1
UGANDA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2014	2015	2016	2017	2018	
METALS						
Beryl	--	--	14	--	-- ^e	
Copper, mine, Cu content	--	--	550 ^e	-- ^e	--	
Gold:						
Mine, Au content ^e	kilograms	3,000	3,000	3,000	1,800	400
Refinery	do.	--	1,200 ^r	9,000 ^r	9,330	12,000 ^e
Iron ore, mine:						
Gross weight		41,959	9,000	2,163	2,320	10,500
Fe content		27,000	5,800	1,400	1,500	6,700
Iron and steel, raw steel		100,000 ^{r,e}	120,000 ^{r,e}	140,000 ^{r,e}	165,000	170,000 ^e
Lead, refinery, secondary ^e		800	800	800	800	800
Niobium and tantalum, mine, ore and concentrate:						
Gross weight	kilograms	--	4,589 ^r	12,640 ^r	11,187	13,000 ^e
Nb content	do.	--	190 ^{r,e}	530 ^{r,e}	470 ^e	550 ^e
Ta content	do.	--	1,000 ^{r,e}	2,800 ^{r,e}	2,500 ^e	2,900 ^e
Tin, mine, Sn content		33 ^r	135	63 ^r	66	26 ^e
Tungsten, mine, concentrate, W content		63	36	41 ^r	62	160 ^e
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	2,141	2,331 ^r	2,494	2,511	2,200 ^e
Clay:						
Brick clay ^e		9,800,000 ^r	10,300,000 ^r	10,800,000 ^r	11,100,000	9,800,000
Kaolin		46,286	34,697 ^r	45,909	55,317	27,000 ^e
Lime ^e		180,000	190,000	190,000	190,000	190,000
Pumice and related materials, pozzolanic materials		742,423 ^r	762,768	846,604	792,564	880,000 ^e
Salt ^e		15,000	15,000	15,000	15,000	15,000
Stone, sand, and gravel, construction:						
Sand and gravel, sand ^e		2,900,000 ^r	3,200,000 ^r	3,490,000 ^r	3,600,000	3,200,000
Stone:						
Crushed:						
Aggregates ^e		5,700,000	6,200,000	6,770,000	6,900,000	6,200,000
Limestone		1,090,240	1,166,741	1,203,074	1,231,926	810,000 ^e
Syenite		64,604	82,716	81,413	93,639	80,000 ^e
Dimension, marble		12,000 ^{r,e}	18,000 ^{r,e}	18,000 ^e	4,500 ^e	--
Vermiculite		2,620 ³	1,118	3,294 ^r	4,119	7,200 ^e

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through January 6, 2020. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²In addition to the commodities listed, unspecified dimension stone was produced, but available information was inadequate to make reliable estimates of output.

³Sales.

TABLE 2
UGANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2018

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Cement	Tororo Cement Ltd.		Plant at Tororo	1,800,000.
Do.	Hima Cement Ltd. (Bamburi Cement Ltd., 70%)		Plant at Kasese	900,000.
Do.	do.		Plant at Tororo	800,000.
Do.	Kampala Cement Company Ltd.		Plant at Namataba	1,200,000.
Do.	Simba Cement Uganda Ltd. (subsidiary of the National Cement Co. Ltd.)		Plant at Tororo	1,000,000.
Clay:				
Brick	Artisanal miners		Mines in various locations	12,000,000. ^c
Kaolin	Muhindo Enterprises Ltd.		Mine in Buhweju District ¹	50,000. ^c
Copper, mine	Kilembe Mines Ltd. (Government, 100%)		Mine in Kasese District ¹	7,200.
Gold:				
Mine	kilograms	AUC Mining Uganda Ltd.	Mines in Mubende District	2,900. ^{a,2}
Do.	do.	do.	Mine in Buhweju District	500. ^c
Refined	do.	African Gold Refinery (AGR)	Entebbe	70,000. ^c
Iron and steel, steel, crude	Tembo Steel Ltd.		Plant at Lugazi	100,000.
Do.	do.		Plant at Iganga	60,000.
Do.	Pramukh Steel Ltd.		Plant at Njeru	40,000.
Iron ore	Kamuntu Investment Ltd.		Mine in Kabale District	10,000. ^c
Lead, refined secondary	Uganda Batteries Ltd.		Kanungu District	1,000.
Lime	Small-scale producers		Various locations including Kasese and Tororo Districts	210,000. ^c
Niobium (columbium) and tantalum, columbite-tantalite ore and concentrate	3T Mining Ltd.		Wampero Mine in Waksio District	120 concentrate; 28 ^c tantalum; 5 ^c niobium.
Pozzolanic material	Tororo Cement Ltd.		Kapchorwa District	460,000. ^c
Do.	Industrial Minerals Ltd.		Rubirizi District	130,000. ^c
Do.	Seahorse International Ltd.		Kabarole District	65,000. ^c
Do.	Hillmarks Ltd.		do.	40,000. ^c
Do.	Royal Transit Ltd.		do.	39,000. ^c
Do.	Artisanal miners		do.	18,000. ^c
Salt	do.		Lake Katwe	15,000.
Sand, construction	do.		Mines in various locations	3,500,000. ^c
Stone:				
Crushed:				
Limestone	Hima Cement Ltd.		Mines in Kasese District	760,000. ^c
Do.	do.		Mine in Kamwenge District	140,000. ^c
Do.	Tororo Cement Ltd.		Mines in Moroto District	310,000. ^c
Do.	do.		Mines in Tororo District	88,000. ^c
Do.	Artisanal miners		Mines in various locations	330,000. ^c
Unspecified	do.		do.	6,900,000. ^c
Dimension:				
Marble	DAO Marble Ltd.		Mines in Moroto District ¹	18,000. ^c
Do.	do.		Plant in Kampala ¹	18,000.
Unspecified	Artisanal miners		Mines in various locations	1,700,000. ^c
Tin	African Panther Resources (U) Ltd.		Mine in Isingiro District	23. ^c
Tungsten, wolframite and W content	KISR Minerals International		Nyamurilo Mine in Rubanda District	240 wolframite; 120 ^c tungsten.
Do.	3T Mining Ltd.		Buyaga Mine in Lyantonde District	72 wolframite; 36 ^c tungsten.
Vermiculite	Namekara Mining Company Ltd.		Namekara Mine in Manafwa District	30,000.

^cEstimated. Do., do. Ditto. NA Not available.

¹Not operating at the end of 2018.

²Only 100 kilograms per year of the capacity was estimated to be operating at the end of 2018.