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2016 Minerals Yearbook

TANZANIA [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

August 2021

The Mineral Industry of Tanzania

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In 2016, Tanzania played a significant role in the global production of gold and pozzolanic materials, accounting for more than 1% each of the world's gold mine and pozzolanic materials output. The country was also the world's only producer of tanzanite. Other domestically significant mining and mineral-processing operations included production of cement and natural gas. Tanzania was not a globally significant consumer of minerals or mineral fuels in 2016 (Bank of Tanzania, 2017a, p. 34; Crangle, 2018; George, 2018).

Minerals in the National Economy

In 2016, the manufacturing sector accounted for 5.1% of the gross domestic product, and mining and quarrying, 4.8%. The value of output in the mining sector increased by 11.5% in 2016 compared with 9.1% in 2015. Large-scale gold, diamond, and tanzanite mines employed a total of 6,501 workers in 2016. As many as 1.5 million artisanal miners were estimated to produce bauxite, building materials, colored gemstones, copper, diamond, gold, tin, and other mineral commodities (Bank of Tanzania, 2017a, p. 23, 29; Tanzania Minerals Audit Agency, 2017, p. 32; Zavala, 2017).

In 2016, minerals accounted for 30.4% of Tanzania's reported exports and at least 38% of its imports. Gold exports increased in value to $1.45 billion in 2016 from a revised $1.18 billion in 2015. The share of gold in total recorded exports was 28% in 2016; diamond, 1.5%; and colored gemstones, copper, silver, and other minerals combined, 0.9%. Imports of petroleum products increased in value to $3.17 billion in 2016 from a revised $2.76 billion in 2015. Petroleum products accounted for 36.6% of the value of total imports, and fertilizers, 1.4% (Bank of Tanzania, 2017b, p. 21–22).

Tanzania is a signatory to the Kimberley Process Certification Scheme, which is a certification system established to reduce the trade in conflict diamond. The mining sector is governed by the Mining Act of 2010 and the Tanzania Extractive Industries (Transparency and Accountability) Act, 2015. Upstream natural gas and petroleum exploration and production are governed by the Petroleum Act 2015.

The Minerals Division, which is part of the Ministry of Energy and Minerals (MEM), is responsible for mine inspections, licensing and mineral rights, and the regulation and promotion of artisanal and small-scale mining. The Energy Division, which also is part of the MEM, is responsible for regulating natural gas and petroleum exploration and production.

Production

In 2016, tanzanite production increased by an estimated 67%; salt, by 58%; cement, by 39%; limestone, by 31%; raw steel, by 19%; silver, by 16%; and natural gas, by 11%. The production of kaolin decreased by 69% in 2016; bauxite, by 64%; pozzolanic materials (pumice and pumicite), by 33%; tin, by 22%; and gypsum, by 11%. Cement production increased because of the opening of new plants and the expansion of existing plants. The increase in limestone production may be attributable to increased use in cement. Data on mineral production are in table 1.

Structure of the Mineral Industry

Most of Tanzania's gold mines were privately owned; the cement plants, the natural gas operations, the Minjingu phosphate mine, and the Nyanza salt mine were also owned by private investors. The Government-owned State Mining Corp. (Stamico) operated the Biharamulo gold mine. The Government also had a 50% share in the large-scale tanzanite mining operations at Block C at Merelani and minority interests in the privately owned Ngaka coal mine and the Williamson diamond mine. Artisanal miners accounted for most of the country's colored gemstone production; crushed stone, diamond, and gold were also produced by artisanal miners. Capacity, location, ownership, and production information was not readily available for many artisanal mining operations. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Gold and Silver.—In 2016, Acacia Mining plc of the United Kingdom produced 11,771 kilograms (kg) of gold at the North Mara Mine compared with 8,933 kg in 2015 because of increased output from the Gokona Underground operations. At the Bulyanhulu Mine, output increased to 9,002 kg in 2016 from 8,508 kg in 2015 because of higher ore grades and recovery rates. Production decreased at the Buzwagi Mine to 5,033 kg in 2016 from 5,324 kg in 2015; decreased ore grades more than offset the increased volumes of ore mined. Sales of silver from Bulyanhulu were 5,858 kg in 2016; from Buzwagi, 4,138 kg; and North Mara, 1,685 kg (Acacia Mining plc, 2017, p. 34–39; Tanzania Minerals Audit Agency, 2017, p. 13).

Acacia planned to produce between about 26,000 and 28,000 kg of gold at Bulyanhulu, Buzwagi, and North Mara combined in 2017. Production was likely to increase by about 40% at Buzwagi and to decrease at North Mara by as much as 10%. Bulyanhulu's output was expected to remain nearly unchanged. Production from stockpiles was expected to continue at Buzwagi for at least 2 years after the shutdown of open pit mining at the end of 2017 (Acacia Mining plc, 2017, p. 20, 37).

Geita Gold Mining Ltd. (a subsidiary of AngloGold Ashanti Ltd. of South Africa) produced about 15,200 kg of gold at the Geita Mine in 2016 compared with 16,400 kg in 2015. Decreased ore grades more than offset the increased volumes of ore processed. In 2016, silver sales from Geita were 1,886 kg (AngloGold Ashanti Ltd., 2017, p. 99–100; Tanzania Minerals Audit Agency, 2017, p. 13).

Shanta Gold Ltd. of the United Kingdom produced 2,728 kg of gold and 3,937 kg of silver at the New Luika Mine in 2016; production was 2,547 kg of gold and 3,785 kg of silver in 2015. Planned production at New Luika, located in Mbeya Region, was between 2,500 and 2,600 kg of gold in 2017. Shanta planned to maintain gold production at an average of 2,600 kilograms per year (kg/yr) until 2020. The company also planned to start pilot production at its Singida project in Singida Region in the second quarter of 2017 (Shanta Gold Ltd., 2017).

Stamigold Co. Ltd. (a subsidiary of Stamico) restarted mining at the Biharamulo Mine in August 2014. The company planned to produce about 1,100 kg in 2016 by acquiring new machinery. The company exported 669 kg of gold in 2016 (Rugonzibwa, 2016; Tanzania Minerals Audit Agency, 2017, p. 13).

Gold was also produced by small-scale miners. In 2016, at least 1,450 kg of gold was recovered from tailings by 65 plants in Geita Region, Mbeya Region, and Mwanza Region (Tanzania Minerals Audit Agency, 2017, p. 22).

In 2016, Tanzanian Royalty Exploration Corp. of Canada and its joint-venture partner Stamico engaged in pilot heap-leaching operations at its new mine at the Buckreef project. The companies also received a renewed 10-year mining license in 2016. At yearend, Tanzanian Royalty was engaged in a new feasibility study on large-scale mining at Buckreef (Tanzanian Royalty Exploration Corp., 2016).

In August 2016, OreCorp Ltd. of Australia completed a scoping study of a new mine at the Nyanzaga project with favorable results. The company planned to complete a prefeasibility study by the first quarter of 2017 and a feasibility study by the end of 2017. Depending on the results of the studies, production could be nearly 5,700 kg/yr during the estimated 13-year life of the mine. In the first 5 years of mining, planned output was about 6,800 kg/yr. OreCorp and joint-venture partner Acacia could start construction in 2018. Resources were estimated to be more than 100 metric tons (t) of contained gold (Andrews, 2017).

In early 2015, Kibo Mining plc of Ireland completed a preliminary economic assessment on a new mine at its Imweru Gold project. Initial planned production in the study was about 1,600 kg/yr; the estimated life of the mine was between 7 and 10 years. The company planned to complete prefeasibility and feasibility studies on a new mine at Imweru in 2017. Depending on the results of the study, construction could start by early 2018, and mining, by late 2018 or early 2019 (Kibo Mining plc, 2016; 2017, p. XII).

Iron and Steel, Iron Ore, Titanium, and Vanadium.—State-owned National Development Corp. (NDC) and Sichuan Hongda Company Ltd. of China were engaged in a joint venture to develop the Liganga iron ore deposits, which also contained titanium and vanadium. NDC and Sichuan Hongda planned to produce 2.9 million metric tons per year (Mt/yr) of iron ore for consumption in a new steel plant; crude steel output was likely to be 1 Mt/yr. The mine and plant were expected to start production in 2018 or 2019. Construction was planned to start in March 2017; previous plans to start construction were postponed because of power supply problems and delays in starting railway and road construction (Ihucha, 2016; Ministry of Finance and Planning, 2016, p. 20–21, 135).

Niobium.—In April 2016, Cradle Resources Ltd. of Australia completed a feasibility study on a new mine at the Panda Hill carbonatite deposit, which is located 35 kilometers southwest of Mbeya. The company planned to mine niobium, which would be processed into ferroniobium. Planned production during the estimated 30-year life of the mine was 8,200 metric tons per year (t/yr) of ferroniobium with a niobium content of about 66%. Mining was expected to start in the second quarter of 2018, and Cradle planned to produce at full capacity starting in 2022 (Cradle Resources Ltd., 2016, p. 1, 9, 30).

Titanium and Zirconium.—In the first quarter of 2016, Strandline Resources Ltd. of Australia completed a scoping study on a new mine at the Fungoni mineral sand deposit near Dar es Salaam. Planned production in the study was 25,000 t/yr of ilmenite, 12,000 t/yr of zircon, and 2,000 t/yr of rutile. The titanium dioxide content of the ilmenite was expected to be between 55% and 60%. The estimated life of the mine was between 3 and 4 years. Strandline also estimated that resources at its Tariji North deposit were 40 million metric tons (Mt) at grades of 2.1% ilmenite, 0.21% rutile, 0.15% zircon, and 0.06% leucoxene. Resources at the Tariji South deposit were estimated to be 19 Mt at grades of 3.3% ilmenite, 0.61% rutile, 0.31% zircon, and 0.31% leucoxene (Andrews, 2016b, c).

Industrial Minerals

Cement.—Tanzania's cement production increased to nearly 4.36 Mt in 2016 from 3.14 Mt in 2015 and 2.41 Mt in 2011 because of the opening of new plants and the expansion of existing plants. In February 2016, Dangote Cement plc of Nigeria started production at its new plant, which had a capacity of 3 Mt/yr, at Mtwara in southern Tanzania. The company sold 600,000 t of cement by yearend. In 2016, Mbeya Cement Company Ltd. (LaFargeHolcim Ltd. of Switzerland, 61.5%) completed the expansion of its plant's capacity to 1.1 Mt/yr from 350,000 t/yr that it announced in October 2015. Tanga Cement Company Ltd. increased its clinker capacity to 1.25 Mt/yr in August (Global Cement, 2015, Dangote Cement plc, 2017, p. 62; International Cement Review, 2017; LaFargeHolcim Ltd., 2017, p. 16).

Lake Cement Ltd. of India operated a plant with a capacity of 500,000 t/yr at Kimbiji. The company planned to start construction of a new plant with a capacity of 1.4 Mt/yr in mid-2017 and to start production in mid-2018. In 2016, Mamba Cement Ltd. of South Africa signed an agreement with CNBM International Engineering Company Ltd. of China and FLSmidth Pvt. Ltd. of India to build a new cement plant at Bagamoyo. The plant, which had a planned capacity of 900,000 t/yr, was expected to have a construction period of 30 months (Global Cement, 2016; International Cement Review, 2016, 2017).

Diamond.—Petra Diamonds Ltd. of the United Kingdom operated the open pit Williamson Mine, which accounted for most of the diamond produced in Tanzania. The company produced 226,599 carats from open pit and alluvial operations in 2016 compared with 196,256 carats in 2015. Petra planned to increase production to nearly 340,000 carats per year by mid-2018. Resources at Williamson were estimated to be 39 million carats

(Petra Diamonds Ltd., 2017; Tanzania Minerals Audit Agency, 2017, p. 17).

Gemstones.—Tanzania produced a variety of gemstones that included alexandrite, amethyst, aquamarine, cordierite, garnet, ruby, sapphire, spinel, tanzanite, and tourmaline. In recent years, tanzanite accounted for a majority of the value of domestic gemstone mining.

Merelani, which is located near Arusha, was the world's only source of tanzanite. Artisanal and small-scale miners operated in Blocks B and D of the Merelani deposit. TanzaniteOne Mining Ltd. (Sky Associates Group Ltd., 50%, and Stamico, 50%) mined tanzanite in Block C. In 2016, TanzaniteOne produced 1,976 kg of rough tanzanite compared with 365 kg in 2015 (Tanzania Minerals Audit Agency, 2017, p. 19).

Tsavorite, which is a green grossular garnet that obtains its color from trace amounts of chromium and vanadium, was mined near Merelani. The Mundarara Mine near Longido was the leading ruby producer in Tanzania. Ruby and sapphire also were produced by artisanal miners at Kibuko, Kiswila, Songea, Tunduru, Winza, and other locations. Since 2009, ruby and sapphire production has been at relatively low levels in Tanzania because of the discovery of the Montepuez ruby deposits in Mozambique (Pardieu and Vertriest, 2016).

Graphite.—In April 2016, Magnis Resources Ltd. of Australia completed a feasibility study on Nachu. The revised production target was 220,000 t/yr of concentrate at a grade of between 97% and 99% graphite during the estimated 15-year mine life. Production was planned to be 240,000 t/yr during the first 12 years. Mining could start in 2018. Reserves were estimated to be 76 Mt at a grade of 4.8% graphite. Magnis expected to sell about 140,000 t/yr to the spherical graphite and lithium battery markets, 77,000 t/yr to the jumbo-flake and expandable graphite markets, and 22,000 t/yr to the super-jumbo-flake and aerospace markets (Magnis Resources Ltd., 2016, p. 3, 18; Washbourne, 2016b).

In July 2015, Kibaran Resources Ltd. of Australia completed a feasibility study on a new mine at the Epanko project with favorable results. Kibaran planned to produce 40,000 t/yr of concentrate at a grade of 96% graphite. Estimated capital costs for a 15-year project life were nearly $78 million. The company had planned to start mining in 2016 or 2017. At yearend, Kibaran was engaged in a study on expanding production to 60,000 t/yr. Kibaran had offtake agreements for 44,000 t/yr of production from Epanko (Piper, 2015a, b; Washbourne, 2017b).

Walkabout Resources Ltd. of Australia started drilling at its Lindi Jumbo project, which was located to the west of Mtwara, in October 2015. In 2016, the company estimated that resources at Lindi Jumbo were 11.7 Mt at a grade of 11.9% graphite. Walkabout was considering the development of a new mine that could produce about 30,000 t/yr. At yearend, the company was engaged in a feasibility study (Andrews, 2016a; Piper, 2016; Daly, 2017).

In November 2015, Indiana Resources Ltd. of Australia completed a prefeasibility study on a new mine at its Chilalo graphite project. Depending on the results of a feasibility study, production could be nearly 70,000 t/yr. The estimated life of the mine was 10 years. Resources at the Shimba deposit at Chilalo were estimated to be 25.1 Mt at a grade of 6% graphite, and reserves, 4.7 Mt at a grade of 11% graphite. In June 2016, Chilalo was spun off into a new company called Graphex Mining Ltd. of Australia. Graphex received a mining license for Chilalo in November; the company planned to update resources at Shimba (Washbourne, 2016a, 2017a).

Black Rock Mining Ltd. of Australia planned to complete a prefeasibility study on a new mine at its Mahenge project by the first quarter of 2017. Planned production in the first stage of mining was 60,000 t/yr, and in the second stage, 120,000 t/yr. Black Rock also planned a scoping study on increasing production to 220,000 t/yr in the third stage of mining. In December 2016, resources at Mahenge were estimated to be 203 Mt at a grade of 7.8% graphite (Black Rock Mining Ltd., 2016).

Volt Resources Ltd. of Australia (formerly Mozambi Resources Ltd.) completed a prefeasibility study on a new mine at its Namangale project in December 2016. The company planned to complete a feasibility study in 2017. Depending on the results of the study, construction could start in 2018, and mining, by the third quarter of 2019. Planned production was 170,000 t/yr of concentrate at a grade of 95% graphite during an estimated 22-year mine life. Jumbo- and large-flake graphite were expected to account for about 45% of production (Volt Resources Ltd., undated).

Rare-Earth Elements.—Peak Resources Ltd. of Australia completed a prefeasibility study on a new mine at the Ngualla Rare Earth project in 2014; the company planned to complete a feasibility study in 2016. Depending on the results of the study, production could be 10,000 t/yr of rare-earth oxides, of which 245 t/yr would be heavy rare earths. Mining could start in the second half of 2018. Peak Resources did not plan to recover cerium oxide during the production process because of low world market prices for cerium. The estimated life of the mine was 58 years. At yearend, the completion of the feasibility study was deferred until March or April 2017 (Cornish, 2015; Peak Resources Ltd., 2015; Washbourne, 2017c).

Mineral Fuels and Related Materials

Coal.—Intra Energy Corporation Ltd. of Australia and its joint-venture partner National Development Corp. (NDC) (owned by the Government of Tanzania) operated a coal mine at the Ngaka coalfield in Ruvumu District. Production increased in 2016 to 278,701 t from a revised 255,884 t in 2015 (Tanzania Minerals Audit Agency, 2017, p. 19).

NDC and Sichuan Hongda planned to build a new mine at the Mchuchuma coal deposits in western Tanzania that would produce 3 Mt/yr of coal. The companies also planned to build a new coal-fired power station with a capacity of 600 megawatts (MW) at Mchuchuma. About 300 MW each would be allocated to the Liganga iron ore and steel project and the national grid. The mine was expected to start production in 2018 or 2019, and the plant, in 2020. The total estimated capital cost of Liganga and Mchuchuma was $2.7 billion. Construction was expected to start in March 2017; previous plans to start construction were postponed because of power supply problems and delays in starting railway and road construction (Ihucha, 2016; Ministry of Finance and Planning, 2016, p. 20–21, 137, 209).

In March 2015, Edenville Energy plc of the United Kingdom completed a feasibility study on a new coal-fired power station. As of December 2016, the company was evaluating proposals for power stations with a capacity of between 120 and 135 MW. Edenville planned to supply the power station with coal from a new mine at its Mkomolo deposit; small-scale mining was expected to start in early 2017 (Edenville Energy plc, 2016).

Kibo was considering the development of a new mine and coal-fired power station at the Mbeya Coal to Power project in southwestern Tanzania. In 2016, the company completed feasibility studies on the mine and power station. The initial planned capacity of the power station was 300 MW; the capacity could be expanded to 600 MW. The initial planned coal consumption was about 1.5 Mt/yr of coal. Construction could start in 2017, and production, in 2019. The estimated life of the mine was more than 30 years (Kibo Mining plc, 2017, p. VIII).

Helium.—Helium One Ltd. explored for helium at its Rukwa project in southwestern Tanzania. In June 2016, the company announced an initial resource estimate of 1.5 billion cubic meters of helium under Lake Rukwa (Moore, 2016).

Natural Gas.—In 2016, Orca Exploration Group Inc. produced 848 million cubic meters of natural gas from Songo Songo Island compared with 892 million cubic meters in 2015. Gas-fired power stations and cement plants were the leading consumers of gas from Songo Songo. The capacity of Orca's gas-processing plant was 1.14 billion cubic meters per year, and the pipeline, 1.05 billion cubic meters per year. At yearend, the capacity of the gasfields was 1.6 billion cubic meters per year (Orca Exploration Group Inc., 2017, p. 10, 12, 14).

BG Group plc of the United Kingdom, Statoil ASA of Norway, and their joint-venture partners were considering the development of a liquefied natural gas (LNG) plant near Mtwara that would use natural gas from offshore Blocks 1, 2, and 4. In February 2016, BG was purchased by Royal Dutch Shell plc of the Netherlands. The plant near Mtwara would have a capacity of at least 10 Mt/yr of LNG, which was equivalent to 13.8 billion cubic meters per year of natural gas. BG and Statoil had planned to make an investment decision by the second half of 2016, with production starting by 2021 depending on the results. As of November, the investment decision was postponed until 2021; production could start by 2026 (Musarra, 2014; Binala, 2016; Houreld, 2016).

Uranium.—Uranium One Inc. of Canada (Rosatom State Nuclear Energy Corp. of Russia, 100%) planned to start mining at the Mkuju River project by late 2018. A previous feasibility study estimated that Mkuju River could support a new mine with average production of 1,900 t/yr of uranium oxide (U_3O_8) during an estimated 12-year mine life (Thompson, 2011; Kamndaya, 2016).

Outlook

Tanzania's production of cement, coal, diamond, gold, and natural gas is expected to increase. Cement output is likely to increase from 2017 through 2023 because of the recent opening of new plants and the expansion of existing plants. Coal production is expected to increase from 2017 through 2022. Diamond production is likely to increase from 2017 through 2019. The outlook for natural gas production is to increase from 2017 through 2020. Gold output is likely to increase between 2018 and 2021 as the startup of the Buckreef, Imweru, and Nyanzaga Mines more than offsets the closure of the Buzwagi Mine.

New Tanzanian mines are likely to have substantial effects upon world markets for graphite, niobium, and rare earths. Graphite production could restart in 2018; total planned production was at least 670,000 t/yr. World graphite production was estimated to be between 1.1 and 1.2 Mt in 2016. Niobium production could start in 2018 and increase to about 5,400 t/yr. World niobium production was estimated to be nearly 64,000 t in 2016. Rare-earths production could start in 2018 or 2019 and increase to about 10,000 t/yr. World rare-earths production was estimated to be nearly 130,000 t in 2016 (Gambogi, 2018; Olson, 2018; Polyak, 2018).

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TABLE 1

TANZANIA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons, gross weight, unless otherwise specified)

Commodity[2]		2012	2013	2014	2015	2016
METALS						
Bauxite		59,030	33,940	25,641	204,956 r	73,000
Copper, mine, Cu content		8,800	15,400	16,400 r	16,800 r	17,400
Gold, mine, Au content	kilograms	40,650	42,534	40,964 r	43,725 r	45,799
Iron and steel:						
Raw steel e		200,000	180,000	190,000	210,000 r	250,000
Products, rolled		133,299 r	121,362	129,555	142,970	159,657
Silver, mine, Ag content	kilograms	11,227	12,159 r	14,493	15,569	18,000
Tin, mine, Sn content		48 3	-- 3	79 3	179 3	140
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	2,581	2,346	2,809	3,135	4,355
Clay and shale, kaolin		1,422 r	907 r	3,809	1,953	610
Diamond, gem and industrial[4]	carats	127,124	179,633 r	252,875	216,491 r	238,000
Gemstones, excluding diamond:[5]						
Alexandrite	kilograms	--	13	1	1	1
Amethyst e	do.	160	180	180	180	180
Aquamarine	do.	470	1,222	1,540	1,500 e	1,500 e
Garnet e	do.	10,000	11,000	11,000	11,000	11,000
Ruby e	do.	1,600	1,700	1,700	1,700	1,700
Sapphire e	do.	800	900	900	900	900
Tanzanite	do.	3,000	3,115 6	4,065 6	2,396 6	4,000 e
Tourmaline e	do.	9,600	10,000	10,000	10,000	10,000
Other, unspecified e	do.	1,200,000 r	1,600,000 r	3,000,000 r	1,800,000 r	1,800,000
Gypsum, including anhydrite, crude		91,610 r	171,567 r	200,179	239,302 r	213,700
Lime e		85,000	120,000	140,000	140,000	140,000
Phosphate rock:						
Gross weight		19,984	30,000 r, e	30,000 r, e	-- r	--
P_2O_5 content		5,800 r, e	9,000 r, e	9,000 r, e	--	--
Pumice and pumicite		75,193	79,452 r	68,925	342,628 r	230,046
Salt, all types		34,016	36,032 r	54,757	92,158 r	146,000
Stone, sand, and gravel:						
Sand, construction		NA	9,488,291 r	7,283,177 r	9,000,000 e	9,000,000 e
Stone, crushed, limestone		1,224,475	3,899,151	1,116,827	3,174,700	4,170,000
Stone, size and shape unspecified:						
Calcite		NA r	NA r	NA r	NA r	NA
Marble		2,153	10,719	11,000 e	11,000 e	11,000 e
MINERAL FUELS AND RELATED MATERIALS						
Coal, bituminous		78,672	128,920	254,556	255,884 r	278,701
Natural gas, marketable	million cubic meters	1,045	1,018	958	1,053	1,173

eEstimated. rRevised. do. Ditto. NA Not available. -- Zero.

[1]Table includes data available through March 2, 2018. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits; may not add to totals shown.

[2]In addition to the commodities listed, calcite, smelter copper and modest quantities of crude construction materials, including brick clay, may have been produced in Tanzania, but available information was inadequate to make reliable estimates of output.

[3]Reported exports.

[4]Estimated to represent 85% gem-quality and 15% industrial-quality stones. Does not include smuggled artisanal production.

[5]Other precious and semiprecious stones produced include chrysoprase, kyanite, moonstone, opal, peridot, quartz, and spinel. Does not include smuggled artisanal production.

[6]Reported sales by TanzaniteOne Mining Ltd.

TABLE 2
TANZANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement		Dangote Cement plc	Plant at Mtwara	3,000,000
Do.		Tanzania Portland Cement Company Ltd. (TPCC) (Scancem International DA, 69.3%)	Plant at Wazo Hill	2,200,000
Do.		Tanga Cement Company Ltd. [Afrisam Consortium (Pty) Ltd., 62.5%]	Plant at Tanga	1,800,000
Do.		ARM Cement Ltd.	Plant at Dar es Salaam	1,600,000
Do.		Mbeya Cement Company Ltd. (LaFargeHolcim Ltd., 61.5%)	Plant at Mbeya	1,100,000
Do.		Lake Cement Ltd.	Plant at Kimbiji	500,000
Coal, bituminous		Intra Energy Corp. Ltd., 70%, and National Development Corp. (NDC), 30%	Ngaka Mine	420,000
Copper, mine		Artisanal miners	Mine at Mbesa	12,000 e
Do.		Acacia Mining plc (Barrick Gold Corp., 63.9%)	Buzwagi Mine	4,200
Do.		do.	Bulyanhulu Mine near Kahama	3,200
Diamond	carats	Williamson Diamonds Ltd. (Petra Diamonds Ltd., 75%, and Government, 25%)	Williamson Mine near Shinyanga	220,000
Do.	do.	El Hillal Minerals Ltd.	Near Shinyanga	17,000 e
Do.	do.	Artisanal miners	do.	12,000 e
Gemstones:				
Emerald		do.	Mines at Lake Manyara	NA
Garnet		do.	Mines at Merelani	NA
Ruby and sapphire		do.	Mines at Songea	NA
Do.		do.	Mines at Tunduru	NA
Do.		do.	Mines at Winza	NA
Tanzanite	kilograms	TanzaniteOne Mining Ltd. [Sky Associates Group Ltd., 50%, and State Mining Corp. (Stamico), 50%]	Mine at Merelani, Block C	2,000 e
Do.		Tanzanite Africa Ltd. (IPP Media Ltd.)	Mine at Merelani, Block D Extension	NA
Do.		Kilimanjaro Mines Ltd.	Mine at Merelani, Block A	NA
Do.	kilograms	Small-scale and artisanal miners	Mines at Merelani, Blocks B and D	7,500 e
Gold	do.	Geita Gold Mining Ltd. (AngloGold Ashanti Ltd., 100%)	Geita Mine near Nyakabale	16,500
Do.	do.	Acacia Mining plc	Bulyanhulu Mine near Kahama	12,600
Do.	do.	do.	North Mara Mine in Tarime District	10,100
Do.	do.	do.	Buzwagi Mine	6,200
Do.	do.	Shanta Gold Ltd.	New Luika Mine	3,600
Do.	do.	Stamigold Co. Ltd. [State Mining Corp. (Stamico)]	Biharamulo Mine	1,200 e
Do.	do.	Buckreef Gold Company Ltd. (Tanzanian Royalty Exploration Corp., 55%, and State Mining Corp. (Stamico), 45%]	Buckreef Mine	NA
Do.	do.	Small-scale miners	At least 65 plants in various locations	1,500 e
Iron and steel, steel:				
Rolled		Aluminum Africa Ltd.	Plant at Dar es Salaam	70,000 e
Do.		MM Integrated Steel Mills Ltd.	do.	36,000 e
Galvanized		Aluminum Africa Ltd.	do.	70,000
Do.		MM Integrated Steel Mills Ltd.	do.	36,000
Lime		Neelkanth Lime Ltd.	Plant at Tanga	180,000
Do.		Athi River Mining Ltd. (ARM)	do.	40,000
Natural gas	million cubic meters	Etablissements Maurel et Prom SA, 48.06%, and Wentworth Resources Ltd., 31.94%	Gasfield at Mnazi Bay	2,170
Do.	do.	Orca Exploration Group Inc.	Gasfield on Songo Songo Island	1,140
Phosphate rock		Minjingu Mines and Fertilizers Ltd. (Mac Group of Companies)	Mine at Minjingu	100,000
Salt		Nyanza Mines (Tanganyika) Ltd. (Mac Group of Companies)	Nyanza Mines at Uvinza	60,000
Silver	kilograms	Acacia Mining plc	Bulyanhulu Mine near Kahama	8,900
Do.	do.	Shanta Gold Ltd.	New Luika Mine	4,800
Do.	do.	Acacia Mining plc	Buzwagi Mine	4,300 e
Do.	do.	Geita Gold Mining Ltd.	Geita Mine near Nyakabale	2,300 e
Do.	do.	Acacia Mining plc	North Mara Mine in Tarime District	1,300 e

eEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.