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2019 Minerals Yearbook

ZIMBABWE [ADVANCE RELEASE]

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The Mineral Industry of Zimbabwe

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Zimbabwe's real gross domestic product (GDP) decreased by 6% in 2019 compared with a revised increase of 5.5% in 2018. The nominal GDP at market prices was about $19.1 billion[1] in 2019. Zimbabwe's mineral output included 7.3% of the world's platinum production, 5% of the world's palladium output, about 1.5% of the world's diamond production (by weight), and 1.4% of the world's lithium production (excluding United States production). The country was the world's third-ranked producer of platinum, fifth-ranked producer of palladium, sixth-ranked producer of lithium, and eighth-ranked producer of diamond. Zimbabwe had the world's third-largest platinum-group-metal (PGM) reserves, accounting for 1.7% of world reserves (Kimberley Process Certification Scheme, 2020; Ncube, 2020, p. 52; Schulte, 2020, 2021; Jaskula, 2021).

Minerals in the National Economy

In 2019, real GDP in the mining and quarrying sector decreased by 12.4%. In 2018 (the latest year for which data were available), the sector accounted for 6.7% of real GDP. In 2019, Zimbabwe's total exports were valued at $4.66 billion. Mineral commodities accounted for the majority of the total value of Zimbabwe's exports, of which gold accounted for 25%; nickel ores and concentrates, 17%; nickel matte, 11%; ferroalloys, 5%; diamond, 3%; and coke and semicoke, chromium ores and concentrates, and unwrought and semimanufactured forms of platinum, 1% each. The value of Zimbabwe's total imports was $4.52 billion. Imported mineral commodities included petroleum oils, which accounted for 27% of the total value of imports; nitrogenous fertilizers, 2%; and 1% each for rolled iron and nonalloy steel, and petroleum gas and other hydrocarbons. In 2019, 208,979 people were employed in the mining and quarrying sector, 184,745 of which were employed in the informal sector (predominantly artisanal and small-scale miners), and the remaining 24,234 were employed in the formal sector (Ministry of Finance and Economic Development, 2020, p. 57, 59; Ncube, 2020, p. 229; Zimbabwe National Statistics Agency, 2020a, p. 60, 151; 2020b, p. 21).

The Ministry of Mines and Mining Development manages the mineral sector in accordance with the Mines and Minerals Act (chapter 21:05); the Mining (General) Regulations, 1977; and their amendments. Licensing and regulation of the petroleum industry are covered under the Petroleum Act of 2001. Mining operations are regulated by numerous other acts, amendments, regulations, statutory instruments, and general notices. In accordance with the Minerals Marketing Corp. of Zimbabwe Act [as modified by the Minerals Marketing Corp. (Exemption) Regulations, 1983, and the Precious Stones Trade Act, 1978], state-owned Minerals Marketing Corp. of Zimbabwe (MMCZ) officially marketed much of the mineral production of Zimbabwe. Corporate income taxes are 15% for holders of special mining leases (as defined by Part IX of the Mines and Minerals Act) and 25% for all other mining leases. Mining royalties are based on the value of minerals or mineral-bearing products at the mine sites and are payable to the Zimbabwe Revenue Authority. Royalties for diamond are 15%; other precious stones and platinum, 10% each; gold, 5% for large-scale miners [defined as greater than 0.5 kilograms (kg) of gold]; other precious metals, 4%; base metals, coalbed methane, and industrial metals, 2%; and coal and small-scale gold miners, 1%. A company is entitled to a full rebate of the royalty paid on any mineral or mineral-bearing product used entirely for domestic consumption (Ministry of Mines and Mining Development, 2016a, b; Chamber of Mines of Zimbabwe, 2019).

Production

In 2019, iridium was the only mineral commodity that had a notable increase in production (by 42%). Mineral commodities with notable decreased production included nitrogen, for which production decreased by an estimated 69%; phosphate rock concentrate and estimated P_2O_5 content, 50%; bituminous coal, 38%; diamond, 35%; ruthenium, 34%; lithium, 25%; coke, 19% (estimated); gold, 16%; vermiculite, 16% (estimated); ferrochromium, 15%; mined chromite, 12%; and rhodium, 10%. Data on mineral production are in table 1.

Structure of the Mineral Industry

Domestic and international investment companies, domestic and international mining companies, Government-owned companies, mining cooperatives, multinational cement companies, and small-scale miners conducted mineral operations in Zimbabwe. With some negotiated exceptions, ownership of mineral operations in Zimbabwe by domestic or international nonindigenous corporations or people was limited by statute. State-owned companies involved in the mineral sector included MMCZ, Zimbabwe Mining Development Corp. (ZMDC) and its subsidiaries, and subsidiaries of the state-owned Industrial Development Corp. of Zimbabwe, which produced industrial minerals and mineral-based commodities. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Chromium and Ferrochromium.—In 2019, Zimbabwe produced 1,550,064 metric tons (t) of chromite and 311,500 t of ferrochromium compared with 1,756,126 t (revised) and 365,000 t, respectively, in 2018. The decrease in chromite production was attributed to a variety of factors, including lower, but recovering, prices for chrome on the world market

[1] Where necessary, values have been converted from Zimbabwean dollars (ZWL) to U.S. dollars (US$) at the annual average exchange rate of 8.5ZWL=US$1.00 for 2019.

in the first half of the year, a weak Zimbabwean dollar, fuel shortages, and frequent electric outages. In September, African Chrome Fields Ltd. (a subsidiary of the Moti Group (Pty) Ltd. of South Africa) shut down its mining operations owing to the current economic situation in the country (table 1; Reserve Bank of Zimbabwe, 2019a, p. 19–20; 2020b, p. 18; Economic News Network, 2020).

The Zimbabwe Mining and Smelting Co. (Zimasco, which was a subsidiary of Sinosteel Group Corp. Ltd. of China) and AfroChine Smelting (Pty) Ltd. (a subsidiary of Tsingshan Iron and Steel Co. Ltd., of China) formed a joint venture to build a ferrochromium smelting complex in Neta in Midlands Province. The Neta complex would include four smelters and have a capacity to produce 140,000 metric tons per year (t/yr) of ferrochromium. The first smelter was planned to commence production in 2021, and all four were planned to be in operation by 2023. In addition, a sixth smelter would be added to Zimasco's current ferrochromium operations in Kwekwe in 2024, adding 55,000 t/yr of ferrochromium production capacity to the existing capacity of 180,000 t/yr (Kadzere, 2019).

Copper and Nickel.—In 2019, Zimbabwe's copper production decreased by 7% to 8,452 t of copper in concentrate from 9,077 t in 2018, and nickel production decreased by 7% to 16,593 t of nickel in concentrate from 17,850 t. The decrease in nickel and copper production was attributed to the same causes affecting the mineral sector in general, which included power shortages and supply shortages owing to the weak Zimbabwean dollar in foreign exchange markets. Most of Zimbabwe's copper and nickel production came from the Trojan Mine, which was owned by Bindura Nickel Corp. Ltd. (BNC), a subsidiary of ASA Resource Group PLC of the United Kingdom. The Trojan Mine is located about 100 kilometers (km) northeast of Bulawayo (tables 1, 2; Reserve Bank of Zimbabwe, 2020a, p. 13).

Platinum-Group Metals.—In 2019, palladium production was 11,399 kg compared with 12,094 kg in 2018, and platinum production was 13,546 kg compared with 14,703 kg in 2018. Zimplats Holdings Ltd. (Zimplats), a subsidiary of Impala Platinum Holdings Ltd. of South Africa, owned the Ngezi mines, which were located about 150 km southwest of Harare and together were the leading PGM producer in Zimbabwe. Zimplats's total PGM production in 2019 was 16,350 kg, of which 8,012 kg was platinum, 6,767 kg was palladium, 691 kg was rhodium, 607 kg was ruthenium, and 274 kg was iridium. The Mimosa Mine, located 150 km east of Bulawayo, was owned by Mimosa Holdings (Pty) Ltd. (a subsidiary jointly owned by Impala Platinum Holdings Ltd. and Sibanye-Stillwater Ltd., both of South Africa). In 2019, Mimosa produced 7,739 kg of total PGMs, including 2,865 kg of palladium and 3,636 kg of platinum. Anglo American Platinum Ltd. of South Africa owned the Unki Mine, located 60 km southeast of Gweru. In 2019, total production of PGMs plus gold at Unki was 6,274 kg, including 2,463 kg of palladium and 2,781 kg of platinum (table 1; Impala Platinum Holdings Ltd., 2019, p. 127; 2020a, b; Zimplats Holdings Ltd., 2019; 2020a, p. 98; 2020b; Anglo American Platinum Ltd., 2020a; 2020b, p. 80).

In August, Great Dyke Investments (Pvt) Ltd. (GDI), a joint venture between JSC Afromet of Russia (50%) and Landela Mining Venture (Pvt) Ltd. (50%), announced that construction would commence on the Darwendale integrated PGM project in the second quarter of 2020. Darwendale was located about 65 km west of Harare in Mashonaland West Province. GDI reported a measured resource estimate of 171,000 kg of palladium, 267,000 kg of platinum, and 16,000 kg of rhodium (Herald, The, 2019; Great Dyke Investments, 2020a, b).

Industrial Minerals

Diamond.—In 2019, Zimbabwe produced 2,108,261 carats of diamond compared with 3,255,079 carats in 2018. In addition to the adverse economic conditions and power shortages which hindered most mineral production in Zimbabwe, diamond production was adversely affected by Cyclone Idai, particularly in the Chimanimani mining area. In December, PJSC ALROSA of Russia established a joint-venture agreement with the Government of Zimbabwe for prospecting and exploring diamond deposits. Under the agreement, ALROSA's subsidiary company, ALROSA (Zimbabwe) Ltd., would be 70% owned by ALROSA and 30% owned by the Government. The joint venture would explore both greenfield deposits, as well as existing diamond fields in the Chimanimani area (table 1; Mining Journal, 2019; PJSC ALROSA, 2019; Reserve Bank of Zimbabwe 2019a, p. 19; 2019b, p. 17; 2019c, p. 18; 2020b, p. 17–18).

Lithium.—In 2019, Zimbabwe produced an estimated 60,400 t of lithium compared with 80,000 t in 2018 owing to a decrease in the price of lithium on the global market. In December, Prospect Resources Ltd. of Australia announced the results of an updated definitive feasibility study (DFS) for the Arcadia lithium project located 38 km east of Harare. According to the DFS, Arcadia would produce 173,000 t/yr of spodumene and 122,000 t/yr of petalite during the 15.5-year life of the mine. In addition, Prospect Resources planned to recover saleable tantalite concentrate at 25% Ta_2O_5. Proven and probable ore reserves were estimated to be 37.4 million metric tons at a grade of 1.22% Li_2O and contained 4,500 t of Ta_2O_5. The DFS outlined an 18-month construction period, and commissioning could take place as early as 16 months after commencement of construction (table 1; Prospect Resources Ltd., 2019, p. 3, 4, 9, 10, 17).

Outlook

Zimbabwe outlined measures in its 2020 budget statement to increase productivity in the mining sector with a goal of achieving a $12 billion per year industry by 2023. Those measures include requirements on mineral claimholders to show activity on those claims or risk losing them, amending the Mines and Minerals Act, and adding gold-milling service centers near large gold-producing areas in an effort to empower and further legitimize artisanal and small-scale miners. However, Zimbabwe's economic situation is projected to worsen in 2020 owing to the adverse global economic effects of the coronavirus disease 2019 (COVID-19) pandemic. Real GDP is projected to decrease by 10.4% in 2020 before increasing by 4.2% in 2021. Although power shortages have had a negative effect on the mineral industry, several energy projects were either under development or budgeted in an effort to improve the energy supply. Beyond 2020, Zimbabwe is likely to benefit from the development of several projects, including increasing ferrochrome production through the addition of several smelters, the development of the Arcadia lithium project, and potential additional PGM production from the Darwendale project (Ncube, 2019, p. 28, 64, 73, 74, 139; Zimbabwe Mining, 2019; International Monetary Fund, 2020, p. 147).

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TABLE 1

ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons, gross weight, unless otherwise specified)

Commodity[2]		2015	2016	2017	2018	2019
METALS						
Chromium, mine, chromite		267,000 r	735,822 r	1,673,996 r	1,756,126 r	1,550,064
Cobalt, mine, Co content[3]		355	409	445	403	400 e
Copper, mine, concentrates, Cu content		8,218	9,101	8,839	9,077	8,452
Ferroalloys, ferrochromium		115,586	78,200	142,800	365,000	311,500
Gold, mine, Au content	kilograms	20,023	22,747	23,929	35,054	29,386
Nickel, Ni content:						
Mine, sulfide ore, concentrate		16,109	17,743	16,617	17,850	16,593
Metal, refined from imported materials[4]		617	--	--	--	--
Platinum-group metals, mine, primary:						
Iridium, Ir content	kilograms	507	598	619	586	833
Palladium, Pd content	do.	10,055	12,222	11,822	12,094	11,399
Platinum, Pt content	do.	12,564	15,110	14,257	14,703	13,546
Rhodium, Rh content	do.	1,128	1,322	1,283	1,334	1,199
Ruthenium, Ru content	do.	977	1,174	1,102	1,155	768
Total	do.	25,200	30,400	29,100	29,900	27,700
Silver, mine, Ag content	do.	1,212	1,463	1,480	1,542	1,493
INDUSTRIAL MINERALS						
Asbestos		--	--	--	--	2,500 e
Cement, hydraulic	thousand metric tons	1,510	1,190 r	1,210 r	1,440 r, e	1,470 e
Diamond, gem and industrial[5]	carats	3,490,881	2,102,873	2,507,604	3,255,079	2,108,261
Graphite, crystalline flake		6,362	5,622	1,577	--	--
Lithium, petalite, lepidolite[e]		50,000	50,000	40,000	80,000	60,400
Mica[e]		1,000	1,000	500	500	500
Nitrogen, ammonia, N content[e]		23,000	4,000	12,000	13,000 r	4,000
Phosphate rock:						
Concentrate, marketable		25,000 e	26,000 e	64,000 e	54,000 e	27,148
P_2O_5 content[e]		9,000	10,000	24,000	20,000	10,045
Sulfur, compounds, sulfuric acid, S content, acid, metallurgical and coal process gas		800	--	--	--	--
Vermiculite[6]		30,868	29,020	23,302	33,161	28,000 e
MINERAL FUELS AND RELATED MATERIALS						
Coal, bituminous	thousand metric tons	4,336	1,636	2,928	3,348	2,078
Coke, including metallurgical[6]	do.	99	51	90	103	83 e

[e]Estimated. [r]Revised. do. Ditto. -- Zero.

[1]Table includes data available through November 17, 2020. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

[2]In addition to the commodities listed, secondary aluminum and lead; common clay, corundum; feldspar; such gemstones as amethyst, aquamarine, emerald, iolite, and tourmaline; kaolin; kyanite; perlite; pyrite; and ores of antimony, tantalum, and tin may have been produced, but available information was inadequate to make reliable estimates of output.

[3]Production reported by the Zimbabwe National Statistics Agency.

[4]Data represent production from matte imported from Botswana and nickel sulfate imported from South Africa.

[5]About 10% gem quality and 90% industrial quality.

[6]Sales.

TABLE 2
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Asbestos	African Associated Mines (Private) Ltd.	Shabanie Mine,[1] Zvishavane	2,400,000
Do.	do.	Gaths Mine, Mashava	1,400,000
Cement:			
Clinker	Portland Holdings Ltd. [Pretoria Portland Cement Company Ltd. (PPC)]	Colleen Bawn plant, about 115 kilometers southeast of Bulawayo	1,000,000
Portland	Lafarge Cement Zimbabwe Ltd. (LafargeHolcim, S.A.)	Plant in Harare	450,000
Do.	Portland Holdings Ltd. [Pretoria Portland Cement Company Ltd. (PPC)]	Plant in Bulawayo	800,000
Do.	Sino-Zimbabwe Cement Company Ltd. (China Building Material Industrial Corporation for Foreign Econo-Technical Cooperation and Industrial Development Corp.)	Plant in Gweru	250,000
Chromite	African Chrome Fields Ltd. [Moti Group (Pty) Ltd.]	Alluvial mines[1] in the Great Dyke region of the Mashonaland and Midlands Provinces	360,000
Do.	Local cooperatives and small-scale miners	Mines on the southern Great Dyke	340,000
Do.	do.	Mines on the northern Great Dyke	230,000
Do.	Zimbabwe Alloys Ltd.	Inyala Mine, about 200 kilometers southeast of Bulawayo	60,000
Do.	Zimbabwe Mining and Smelting Co. (Private) Ltd. (Sinosteel Group Corp. Ltd.)	Mining operations near Darwendale, Lalapanzi, Mutorashanga, Ngezi, and south of Shurugwi[1]	300,000
Coal	Chilota Colliery	Mine in Hwange	1,800,000
Do.	Coal Brick (Private) Ltd.	Coal Brick Mine, Hwange	500,000
Do.	Coal Zimbabwe (Private) Ltd. [Steelmakers Zimbabwe (Private) Ltd.]	Chiredzi mine, about 130 kilometers southeast of Masvingo	1,200,000
Do.	Hwange Colliery Company Ltd. (Government, 36.77%; Messina Investments Ltd., 16.468%; Mittal Steel African Investments, 9.68%; National Social Security Authority, 6.23%; Hamilton and Hamilton Trustees LTD–NNR, 5.13%)	3 Main Underground Mine, plus the Chaba open pit mine and the JKL open pit mine, Hwange	5,000,000
Do.	Makomo Resources (Private) Ltd.	Entuba coalfields, near Hwange	2,400,000
Do.	Sengwa Colliery (Private) Ltd. [RioZim Ltd., 50%, and RZ Murowa Holding (Private) Ltd., 50%]	Sengwa Colliery Mine,[1] about 200 kilometers northeast of Kadoma	5,000,000
Do.	South Mining	Mine in Hwange	144,000
Do.	Tulicoal (Private) Ltd. [Senzile Mining (Private) Ltd.]	Sengwa Colliery Mine,[1] about 200 kilometers northeast of Kadoma	1,200,000
Cobalt:			
Ore, Co content	Bindura Nickel Corp. Ltd. (ASA Resource Group PLC, 74.73%, and common shares, 25.27%)	Trojan Mine at Bindura and Shangani Mine,[1] about 100 kilometers northeast of Bulawayo	800
Do.	Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater Ltd., 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	88
Do.	Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, southeast of Shurugwi	NA
Do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi mines, which includes the Ngwarati Mine (also known as Portal 1), the Rukodzi Mine (Portal 2), the Mupfuti Mine (Portal 3),[2] and the Bimha Mine (Portal 4), 150 kilometers southwest of Harare	NA
Hydroxide	BSR Ltd. (Bindura Nickel Corp. Ltd., 100%)	Bindura smelter and refinery, Bindura[1]	700
Do.	RioZim Ltd.	Empress Nickel Refinery, Eiffel Flats, near Kadoma[1]	NA

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Coke		Hwange Coal Gasification Company (Private) Ltd. [Taiyuan Sanxing Coal Gasification Co., Hwange Colliery Company Ltd., and Stoat Mining (Private) Ltd.]	Coking plant in Hwange	144,000
Do.		Hwange Colliery Company Ltd. (Government, 36.77%; MessinaInvestments Ltd., 16.468%; Mittal Steel African Investments, 9.68%; National Social Security Authority, 6.23%; Hamilton and Hamilton Trustees LTD–NNR, 5.13%)	do.	230,000
Copper:				
Ore, Cu content		Bindura Nickel Corp. Ltd. (BNC) (ASA Resource Group PLC, 74.73%, and common shares, 25.27%)	Trojan Mine at Bindura and Shangani Mine,[1] about 100 kilometers northeast of Bulawayo	NA
Do.		Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	3,000
Do.		Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, 60 kilometers southeast of Gweru	1,000
Do.		Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi mines, which includes the Ngwarati Mine (also known as Portal 1), the Rukodzi Mine (Portal 2), the Mupfuti Mine (Portal 3),[2] and the Bimha Mine (Portal 4), 150 kilometers southwest of Harare	3,000
Refined		RioZim Ltd.	Empress Nickel Refinery, Eiffel Flats, near Kadoma[1]	6,000
Diamond		DTZ-OZGEO (Private) Ltd. (Development Trust of Zimbabwe, 50%, and JSC Zarubezhgeologia, 50%)	Chimanimani Mine, about 150 south of Mutare	NA
Do.		Limpopo Minerals Resources Ltd (Rani Investment LLC, 80%, and Khupukile Resources Ltd., 20%)	River Ranch Mine,[1] near Beitbridge	NA
Do.	carats	Murowa Diamonds (Private) Ltd. (RZ Murowa Holdings Ltd., 77.8%, and RioZim Ltd., 22.2%)	Murowa Mine, near Zvishavane	403,000
Do.		Zimbabwe Consolidated Diamond Co.	Marange deposit in the Chiadzwe	NA
Ferroalloys, ferrochromium		African Chrome Fields Ltd. [Moti Group (Pty) Ltd.]	Smelter[1] at Kwekwe	12,000
Do.		AfroChine Smelting (Pty) Ltd. (Tsingshan Iron and Steel Co. Ltd.)	Smelter at Selous	50,000
Do.		CINA	Smelter at Gweru	5,000 [e]
Do.		Jinan Corp. and Xin Yu Mining Corp.	do.	5,000 [e]
Do.		Maranatha Ferrochrome (Private) Ltd.	Smelter[1] at Eiffel Flats	28,000
Do.		MonaChrome	Smelter[1] at Chegutu	5,000 [e]
Do.		Oliken Ferro Alloys (Private) Ltd.	Smelter[1] at Kwekwe	25,000
Do.		Wel Mining	Smelter[1] at Gweru	5,000 [e]
Do.		Zimbabwe Alloys Ltd.	do.	124,000
Do.		Zimbabwe Mining and Smelting Co. (Private) Ltd. (Sinosteel Group Corp. Ltd.)	Smelter at Kwekwe	180,000
Gold	kilograms	Artisanal miners, including small-scale miners and syndicates	Various locations	3,000 [e]
Do.	do.	ASA Resource Group PLC	Freda Rebecca Mine, Bindura	3,700 [e]
Do.	do.	Bilboes Holding (Private) Ltd.	The Bubi, the Isabella, the McCays, and the When Mines	10 [e]
Do.	do.	Blanket Mine (1983) (Private) Ltd. [Caledonia Mining Corp., 49%; National Indigenisation and Economic Empowerment Fund, 16%; Fremiro Investments, 15%; Blanket Employee Trust Services (Private) Ltd., 10%; Gwanda Community Share Ownership Trust, 10%]	Blanket Mine, about 140 kilometers south of Bulawayo	1,300 [e]
Do.	do.	Casmyn Mining Zimbabwe (Private) Ltd. (New Dawn Mining Corp.)	Turk-Angelus Mine, 56 kilometers northeast of Bulawayo	550 [e]

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold—Continued	kilograms	DTZ-OZGEO (Private) Ltd. (Development Trust of Zimbabwe, 50%, and JSC Zarubezhgeologia, 50%)	Placer mining operations at Penhalonga, about 15 kilometers northwest of Mutare	400 e
Do.	do.	Duration Gold Ltd. (Clarity Capital Group)	Vubachikwe Mine, near Gwanda	200 e
Do.	do.	do.	Athens Mine, Mvuma	100 e
Do.	do.	do.	Gaika Mine, Kwe Kwe	30 e
Do.	do.	do.	Sunace Mine, about 31 kilometers north of Bulawayo	5 e
Do.	do.	Falcon Gold Zimbabwe Ltd. (New Dawn Mining Corp.)	Golden Quarry Mine, about 7 kilometers north of Shurugwi	300 e
Do.	do.	F.A. Stewart (Private) Ltd.	Jessie Mine, east of Gwanda	150 e
Do.	do.	Jena Mine (Private) Ltd. (Zimbabwe Mining Development Corp.)	Jena Mine, Silobela	400 e
Do.	do.	John Mack and Co.	Golden Valley Mine near Kadoma	500 e
Do.	do.	Matebeleand Minerals (Private) Ltd.	Turk Mine, Inyati	600 e
Do.	do.	Metallon Gold Zimbabwe (Private) Ltd. (Metallon Corp.)	Arcturus Mine,[1] 32 kilometers east of Harare	500
Do.	do.	do.	How Mine, about 24 kilometers southeast of Bulawayo	1,300 e
Do.	do.	do.	Mazowe Mine, Mazowe	400 e
Do.	do.	do.	Redwing Mine, Penhalonga	200 e
Do.	do.	do.	Shamva Mine, Shamva	700 e
Do.		Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater Ltd., 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	NA
Do.	kilograms	Olympus Mines Ltd. (Central African Gold Ltd.)	Camperdown Mine, north of Shurugwi	50 e
Do.	do.	do.	Old Nic Mine, Bulawayo	100 e
Do.	do.	Pan Reef Mining Company (Private) Ltd.	Indarama Mine,[3] Kwekwe	50 e
Do.	do.	RioZim Ltd.	Cam and Motor Mine, Kadoma, 130 kilometers southwest of Harare	1,500
Do.	do.	do.	Dalny Complex, about 33 kilometers northwest of Chegutu	250 e
Do.	do.	do.	Renco Mine, 75 kilometers south-southeast of Masvingo	1,000 e
Do.	do.	Sabi Gold Mines (Zimbabwe Mining Development Corp.)	Sabi Mine, Zvishavane	200 e
Do.		Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, 60 kilometers southeast of Gweru	NA
Do.		Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi mines, which includes the Ngwarati Mine (also known as Portal 1), the Rukodzi Mine (Portal 2), the Mupfuti Mine (Portal 3),[2] and the Bimha Mine (Portal 4), 150 kilometers southwest of Harare	NA
Graphite		Zimbabwe German Graphite Mines (Private) Ltd. (Graphite Kropmühl division of AMG Advanced Metallurgical Group N.V., 50%, and Zimbabwe Mining Development Corp., 50%)	Lynx Graphite Mine, Karoi	NA
Iron and steel:				
Iron:				
Iron ore, gross weight		NewZim Minerals Private Ltd. (Essar Africa Holdings Ltd., 80%, and Government, 20%)	Ripple Creek Mine,[1] near Redcliff	600,000
Sponge iron		Steelmakers Zimbabwe (Private) Ltd. (Steelmakers Ltd.)	Masvingo Mine, near Masvingo	54,000

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Iron and steel:—Continued			
Steel:			
Raw steel	NewZim Steel Private Ltd. (Essar Africa Holdings Ltd., 53.4%, and Government, 35.6%)	Blast furnace[1] at Redcliff, near Gweru	72,000
Do.	Steelmakers Zimbabwe (Private) Ltd. (Steelmakers Ltd.)	Electric arc furnace at Redcliff	15,000
Rolled steel	Lancashire Steel (Private) Ltd. [Zimbabwe Iron and Steel Company (Private) Ltd.]	Wire rod mill at Kwekwe	120,000
Do.	Steelmakers Zimbabwe (Private) Ltd. (Steelmakers Ltd.)	Rolling mill at Redcliff	36,000
Lithium	Bikita Minerals (Private) Ltd.	Bikita Mine, 60 kilometers east of Masvingo	80,000 [e]
Nickel:			
Ore	Bindura Nickel Corp. Ltd. (BNC) (ASA Resource Group PLC, 74.73%, and common shares, 25.27%)	Trojan Mine at Bindura and Shangani Mine,[1] about 100 kilometers northeast of Bulawayo	500,000 [e]
Ore, Ni content	Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater Ltd., 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	3,000
Do.	Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, 60 kilometers southeast of Gweru	1,000
Do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi mines, which includes the Ngwarati Mine (also known as Portal 1), the Rukodzi Mine (Portal 2), the Mupfuti Mine (Portal 3),[2] and the Bimha Mine (Portal 4), 150 kilometers southwest of Harare	4,000
Refined metal	BSR Ltd. (Bindura Nickel Corp. Ltd., 100%)	Bindura Smelter and Refinery, Bindura[1]	15,600
Do.	RioZim Ltd.	Empress Nickel Refinery, Eiffel Flats, near Kadoma[1]	9,000
Nitrogen (ammonium nitrate)	Sable Chemical Industries Ltd. [TA Holdings Ltd., 51%; Chemplex Corporation Ltd., 36%; Yara Zimbabwe (Private) Ltd., 12%)	Electrolysis plant north of Kwekwe	240,000
Phosphate:			
Rock	Dorowa Minerals (Private) Ltd. (Chemplex Corporation Ltd.)	Dorowa Mine,[1] 90 kilometers west of Mutare	155,000
Fertilizer	Zimbabwe Phosphate Industries Ltd. (Chemplex Corporation Ltd.)	Msasa plant, Harare	45,000
Platinum-group metals:			
Ore, gross weight	Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater Ltd., 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	2,400,000
Do.	Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, 60 kilometers southeast of Gweru	1,600,000
Do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi mines, which includes the Ngwarati Mine (also known as Portal 1), the Rukodzi Mine (Portal 2), the Mupfuti Mine (Portal 3), the Bimha Mine (Portal 4), and the Mupani Mine (Portal 5), 150 kilometers southwest of Harare	5,100,000

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Platinum-group metals:—Continued			
Concentrate	Mimosa Holdings (Pty) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater Ltd., 50%)	Mimosa Mine, 150 kilometers east of Bulawayo	1,900,000
Do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 87%)	Ngezi concentrator, Ngezi Mine, 150 kilometers southwest of Harare	3,400,000
Do.	do.	Selous concentrator, Selous Metallurgical Complex	2,180,000
Smelter matte	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd., 100%)	Selous smelter, Selous Metallurgical Complex	192,000
Pyrite	Iron Duke Pyrites (GAT Investments (Private) Ltd.)	Iron Duke Mine, near Glendale	NA
Tungsten (WO_3 content)	RHA Tungsten Ltd. (National Indigenisation and Economic Empowerment Fund, 51% and Premier African Minerals, Ltd., 49%)	RHA Tungsten Mine,[1] 270 kilometers northwest of Bulawayo	480,000
Vermiculite	Samrec Vermiculite Zimbabwe (Private) Ltd. (Imerys Group)	Shawa Mine, near Dorowa	39,000
Do.	Dinidza Vermiculite Mining Co. (Private) Ltd.	Dinidza Mine, near Dorowa	10,000

[e]Estimated. Do., do. Ditto. NA Not available.
[1]Operations suspended.
[2]Under development or redevelopment.
[3]Ownership disputed.