2016 Minerals Yearbook

ZIMBABWE

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

December 2021

The Mineral Industry of Zimbabwe

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Zimbabwe's real gross domestic product (GDP) increased by 2.3% in 2016 compared with a 0.6% rate of growth in 2015. The real GDP at market prices was about $14.2 billion in 2016. Zimbabwe's mineral output included an estimated 7.8% of the world's platinum production, an estimated 5.7% of the world's palladium output, and about 1.7% of the world's diamond production (by weight). The country was the world's third-ranked producer of platinum, fifth-ranked producer of palladium, and eighth-ranked producer of diamond. Zimbabwe had the world's third largest platinum-group-metal (PGM) reserves (Kimberley Process Certification Scheme, 2017; Zimbabwe National Statistics Agency, 2017, p. 21; Loferski, 2018).

Minerals in the National Economy

In 2016, the mining and quarrying sector accounted for about 9.9% of real GDP. Owing to higher prices, real GDP growth in the mining and quarrying sector was 8.2%, making the sector the second highest performing sector in the country. In 2015 (the most recent year for which data were available), minerals accounted for about 55% of the total value of exports; gold, PGMs, nickel, and diamond accounted for about 20%, 17%, 8%, and 5%, respectively, of the total value of exports, and such fuel products as diesel and gasoline were projected to account for a combined 19% of total imports. For 2016, the formal mining and quarrying sector accounted for an annual average of about 36,300 employees (Reserve Bank of Zimbabwe, 2015; Zimbabwe National Statistics Agency, 2017, p. 13, 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, although the country was not producing petroleum. 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. A notable exception was PGMs. Mining companies that produced PGM concentrates and smelter matte in Zimbabwe shipped the PGM concentrates and matte directly to processing facilities in South Africa. Corporate income taxes ranging from 15% to 25% and mining royalties of 1% to 15%, which were based on the value of minerals or mineral-bearing products that were shipped from mine sites, were payable to the Zimbabwe Revenue Authority (Ministry of Mines and Mining Development, 2004, 2016; Chamber of Mines of Zimbabwe, 2017b).

Production

In 2016, production for a number of mineral commodities increased owing largely to higher global prices, including production of nitrogen, which increased by 167%; PGMs, 21%; cement and cobalt, 15% each; gold and silver, 14% each; copper, 11%; and nickel in concentrate, 10%. Production decreased for the following mineral commodities: coal (bituminous), by 62%; coke, 50%; diamond (gem and industrial), 40%; ferrochromium, 32%; and graphite, 12%. Reported and estimated production for the other commodities produced was relatively unchanged. 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 in 2016. 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 Ferroalloys.—In 2011, the Government reinstated its ban on the export of chromite ore, including briquets and concentrate. The ban was instituted to encourage the construction of new smelters, which would allow Zimbabwe to export value-added ferrochromium instead of chromite ore. In June 2015, the Government lifted the ban owing to the adverse effect that it was having on artisanal producers and because it did not generate new domestic smelting operations. Additionally, the Government removed a 20% export tax on chromite. As a result, chromite production in 2016 was estimated to have increased to 225,000 metric tons (t) from 208,328 t in 2015. Ferrochromium production decreased sharply as a result of low prices on the world market. The low price for ferrochromium caused Zimbabwe Mining and Smelting Co. (Zimasco), which was Zimbabwe's leading ferrochromium producer, to be deeply in debt, and it was placed under judicial management in June. A court-appointed judicial manager was in the process of reviewing the business and operations of Zimasco to restructure the company (table 1; Chidakwa, 2015; Lovemore and Mangisi, 2015; Mhlanga, 2016; Zimbabwe Independent, 2016; Chamber of Mines of Zimbabwe, 2017a, p. 29).

Copper and Nickel.—In 2016, Zimbabwe's copper production increased to 9,101 t of copper in concentrate from 8,218 t in 2015 and nickel production to 17,743 t of nickel in concentrate from 16,109 t in 2015, which was an increase of about 10%. Most of Zimbabwe's copper and nickel production came from the Trojan Mine which was owned by Bindura Nickel Corp. Ltd. (a subsidiary of ASA Resources Group PLC of the United Kingdom). The Trojan Mine is located about 100 kilometers (km) northeast of Bulawayo. Copper and nickel were also produced as joint products of PGM production. Bindura Nickel attributed the increased production to a new mining strategy at Trojan, which consisted of mining higher grade ore at lesser amounts (table 1; ASA Resource Group PLC, 2017a, p. 6, 42–43; 2017b).

Platinum-Group Metals.—In 2016, the increase in platinum-group metal (PGM) production was in large part attributed to higher prices for the metals. Palladium production was 12,222 kilograms (kg) compared with 10,055 kg in 2015, and platinum production was 15,110 kg compared with 12,564 kg in 2015. Zimbabwe had the third largest PGM reserves in the world, after Russia and South Africa. Two notable advanced-stage projects were underway that could increase the country's PGM production. In November, Zimplats Holdings Ltd. (Zimplats), which was a subsidiary of Impala Platinum Holdings Ltd. of South Africa, announced that it was developing the Mupani Mine in northern Zimbabwe in Mashonaland West Province. Zimplats completed a bankable feasibility study for the development of the $264 million mine, which was expected to reach full production in 2025. The mine was expected to produce 2.2 million metric tons per year of ore during 25 years of operation. Also in November, Great Dyke Investments (Pvt) Ltd. (GDI), a joint venture of JSC Afrommet of Russia (50%) and Peneast Mining Company (Pvt) Ltd. (50%), completed a bankable feasibility study on the Darwendale integrated PGM project located about 65 km west of Harare in Mashonaland West Province. GDI reported that the total resource of the deposit was approximately 1,550 t of PGMs (table 1; Great Dyke Investments (Pvt) Ltd., 2014a, b; Impala Platinum Holdings Ltd., 2016).

Tungsten.—In June, Premier African Minerals Ltd. (Premier) of the British Virgin Islands restarted operations at the RHA Tungsten open pit and underground mine located about 270 km northwest of Bulawayo. The mine was jointly owned by the National Indigenisation and Economic Empowerment Fund (51%) and RHA Tungsten Ltd., which was a wholly owned subsidiary of Premier, (49%). In October, Premier reported that, at 40,000 metric tons per month (t/mo) of ore, the RHA Tungsten Mine would produce between 10,000 and 11,500 t/mo of tungsten trioxide equivalent. The level of production would be sufficient to maintain operations for 3 years (Premier African Minerals Ltd., 2017, p. 6, 29).

Industrial Minerals

Diamond.—In 2016, diamond production decreased by 40% compared with that of 2015 to just over 2.1 million carats. The decrease followed a 26% decrease in production in 2015. During the past several years, the alluvial diamond in the surface and near-surface reserves had been rapidly extracted from the Marange diamond field. Diamond remained in the underlying conglomerate rock; however, some companies mining in the field had shut down operations, as extraction of most of the diamond was no longer economically feasible. In October 2015, the Government declared all licenses in the Marange diamond field expired. This was done as part of the Government's efforts to consolidate the diamond-mining companies to increase economies of scale and enable continued and more efficient production of diamond. The consolidation would merge all diamond producers into the Zimbabwe Consolidated Diamond Corp. (ZCDC). In February 2016, through the ZCDC, the Government took full control of all Marange diamond mining operations. As a result, many of the mines were not producing throughout 2016 (table 1; Zimnisky, 2014; Mangudhla, 2015; Marawanyika, 2016; Kazunga, 2017).

Outlook

Zimbabwe has abundant mineral resources and a well-developed transportation system. The country could benefit from the additional PGM output of the Mupani and the Darwendale mining projects currently under development, as well as from the resumption of diamond production at the Marange diamond field. Additional rehabilitation of the mineral industry and the expansion of production could be a basis for the growth of Zimbabwe's GDP; however, mineral sector activities are expected to continue to be constrained by ongoing political issues that were discouraging investment; export taxes on chromium, diamond, and platinum; and bans on exports of raw minerals. Shortages of electrical power, fuel, and skilled employees also are expected to continue to adversely affect mineral sector operations in the near term.

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TABLE 1

ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons, gross weight, unless otherwise specified)

Commodity[2]		2012	2013	2014	2015	2016
METALS						
Chromite, mine production		408,475	355,142	408,422 r	208,328	225,000 e
Cobalt, mine production, Co content		195	319	358	355	409
Copper:						
Mine production, concentrate, Cu content		6,300 e	8,285	8,261	8,218	9,101
Metal, refinery production, primary, refined and cathode		2,869	3,360 e	3,300 e	--	--
Gold, mine production, Au content	kilograms	14,745	14,001	15,385	20,023	22,747
Ferroalloys, ferrochormium		137,543 r	150,060	214,110	115,586	78,200 e
Lithium, petalite, lepidolite[e]		53,000	50,000	50,000	50,000	50,000
Nickel:						
Mine production, concentrate, Ni content		7,899	12,962	16,633	16,109	17,743
Metal, refinery production, refined from imported materials		1,754	2,845	2,915	617	--
Platinum-group metals, mine production, primary:						
Iridium	kilograms	412	520	544	507	598
Palladium	do.	8,136	10,153	10,138	10,055	12,222
Platinum	do.	10,524	13,066	12,483	12,564	15,110
Rhodium	do.	891	1,146	1,140	1,128	1,322
Ruthenium	do.	787	1,012	983	977	1,174
Total	do.	20,750	25,897	25,288	25,231	30,426
Silver, mine production, Ag content[e]	do.	600	590	650 r	840 r	960
Tungsten, mine production, concentrate, W content		--	--	--	NA 3	NA 3
INDUSTRIAL MINERALS						
Asbestos, primary		30	377	--	--	--
Cement, hydraulic	thousand metric tons	1,480 r	1,190 r, e	1,300 e	1,300 e	1,500 e
Clay and shale, common clay[e]		700	700	700	700	700
Diamond, gem and industrial	carats	12,060,163	10,411,818	4,711,637 r	3,490,881	2,102,873
Graphite		7,022	6,934	6,853	6,362	5,622
Mica		1,000	1,000	1,000	1,000	1,000
Nitrogen, ammonia, N content[e]		25,000	27,000	22,000 r	15,000	40,000
Perlite[e]		1,000	1,000	1,000	1,000	1,000
Phosphate rock:						
Concentrate, marketable[e]		20,000	6,100	9,000	9,000	9,000
P_2O_5 content		7,600	2,300	3,420	3,420	3,420 e
Sulfur compounds, sulfuric acid, metallurgical and coal process gas, S content		1,000	1,100	1,100	800	--
Vermiculite, elemental content		21,625	28,808	29,500 e	10,000 e	10,000 e
MINERAL FUELS AND RELATED MATERIALS						
Coal, bituminous	thousand metric tons	3,500 e	3,114	5,783	4,336	1,636
Coke, including metallurgical[e]	do.	370	200	550	400	200

[e]Estimated. [r]Revised. do. Ditto. NA Not available. -- Zero.

[1]Table includes data available through January 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, secondary aluminum and lead; corundum; feldspar; such gemstones as amethyst, aquamarine, emerald, iolite, and tourmaline; kaolin; kyanite; and ores of antimony, tantalum, and tin may have been produced in Zimbabwe, but available information was inadequate to make reliable estimates of output.

[3]Production commenced at the RHA Tungsten Mine in June 2015, but production data were not available.

TABLE 2
ZIMBABWE: 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
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, about 115 kilometers southeast of Bulawayo	1,000,000
Portland	Lafarge Cement Zimbabwe Ltd. (LafargeHolcim, S.A.)	Harare	450,000
Do.	Portland Holdings Ltd. [Pretoria Portland Cement Company Ltd. (PPC)]	Bulawayo	800,000
Do.	Sino-Zimbabwe Cement Company Ltd. (China Building Material Industrial Corporation for Foreign Econo-Technical Cooperation and Industrial Development Corp.)	Gweru	250,000
Chromite	Local cooperatives and small-scale miners	Mines on the southern Great Dyke[1]	340,000
Do.	do.	Mines on the northern Great Dyke[1]	230,000
Do.	Zimbabwe Alloys Ltd. (Zim Alloys)	Inyala Mine[1]	60,000
Do.	Zimbabwe Mining and Smelting Co. (Private) Ltd. (Zimasco) [Zimasco Consolidated Enterprises Ltd. (ZCE)]	Mining operations near Darwendale, Lalapanzi, Mutorashanga, Ngezi, and south of Shurugwi[1]	300,000
Coal	Chilota Colliery	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, 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.)	Sengwa Colliery Mine,[1] about 200 kilometers northeast of Kadoma	5,000,000
Do.	South Mining	Hwange	144,000
Do.	Tulicoal (Private) Ltd. [Senzile Mining (Private) Ltd.]	Chiredzi, about 130 kilometers southeast of Masvingo	1,200,000
Cobalt:			
Ore, Co content	Bindura Nickel Corp. Ltd. (Asa Resources 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 (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, east of Zvishavane	88
Do.	Unki Mines (Private) Ltd. (Anglo Platinum Ltd.)	Unki Mine, southeast of Shurugwi	NA
Do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi Mine, 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)	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 2016

(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.]	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. (Asa Resources 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 (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, east of Zvishavane	3,000
Do.		Unki Mines (Private) Ltd. (Anglo Platinum Ltd.)	Unki Mine, southeast of Shurugwi	1,000
Do.		Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi Mine, 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)	3,000
Refined		RioZim Ltd.	Empress Nickel Refinery, Eiffel Flats, near Kadoma[1]	6,000
Diamond		Zimbabwe Consolidated Diamond Co. (ZCDC)	Marange deposit in the Chiadzwe area	NA
Do.		do.	do.	NA
Do.		DTZ-OZGEO (Private) Ltd. (Development Trust of Zimbabwe and JSC Zarubezhgeologia)	Chimanimani	NA
Do.		Zimbabwe Consolidated Diamond Co. (ZCDC)	Marange deposit in the Chiadzwe area	NA
Do.		do.	do.[2]	NA
Do.		do.	do.	NA
Do.		do.	do.	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.		Limpopo Minerals Resources Ltd. (Rani Investment LLC, 80%, and Khupukile Resources Ltd., 20%)	River Ranch Mine,[1] near Beitbridge	NA
Do.		Zimbabwe Consolidated Diamond Co. (ZCDC)	Marange deposit in the Chiadzwe area	NA
Gold	kilograms	Artisanal miners, including small-scale miners and syndicates	Various locations	3,000 [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]
Do.	do.	DTZ-OZGEO (Private) Ltd. (Development Trust of Zimbabwe and JSC Zarubezhgeologia)	Placer mining operations at Penhalonga, about 15 kilometers northwest of Mutare	400 [e]

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: 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
Gold—Continued	kilograms	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.	do.	Dalny Complex,[1] about 33 kilometers northwest of Chegutu	250 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. (ZMDC)]	Jena Mine	400 e
Do.	do.	John Mack and Co.	Golden Valley Mine	500 e
Do.	do.	Matebeland Minerals (Private) Ltd.	Turk Mine	600 e
Do.	do.	Metallon Gold Zimbabwwe (Private) Ltd. (Metallion 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.	do.	Mimosa Holdings (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, east of Zvishavane	NA
Do.	do.	Asa Resource Group PLC	Freda Rebecca Mine, Bindura	3,700 e
Do.	do.	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.	Renco Mine, 75 kilometers south-southeast of Masvingo	1,000 e
Do.	do.	Sabi Gold Mines [Zimbabwe Mining Development Corp. (ZMDC)]	Sabi Mine	200 e
Do.	do.	Unki Mines (Private) Ltd. (Anglo Platinum Ltd.)	Unki Mine, southeast of Shurugwi	NA
Do.	do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi Mine, 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)	NA
Graphite		Zimbabwe German Graphite Mines (Private) Ltd. [Graphite Kropmühl division of AMG Advanced Metallurgical Group N.V., 50%, and Zimbabwe Mining Development Corp. (ZMDC), 50%]	Lynx Graphite Mine, Karoi	NA
Iron and steel:				
Ferroalloys, ferrochromium		CINA	Smelter at Gweru	5,000 e
Do.		Jin An 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. (Zim Alloys)	do.	45,000
Do.		Zimbabwe Mining and Smelting Co. (Private) Ltd. (Zimasco) [Zimasco Consolidated Enterprises Ltd. (ZCE)]	Smelter at Kwekwe	180,000
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	54,000

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: 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
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. (Zisco)]	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	55,000
Nickel:				
Ore		Bindura Nickel Corporation Ltd. (Asa Resources 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 (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, east of Zvishavane	3,000
Do.		Unki Mines (Private) Ltd. (Anglo Platinum Ltd.)	Unki Mine, southeast of Shurugwi	1,000
Do.		Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi Mine, 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)	4,000
Refined metal		BSR Ltd. (Bindura Nickel Corporation 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 (PGMs):				
Ore, PGM content	kilograms	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi Mine, 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)	5,100,000
Do.	do.	Mimosa Holdings (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa Mine, east of Zvishavane	2,400,000
Do.	do.	Unki Mines (Private) Ltd. (Anglo American Platinum Ltd.)	Unki Mine, southeast of Shurugwi	1,600,000
Concentrate	do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Ngezi concentrator, Ngezi Mine	3,400,000
Do.	do.	do.	Selous concentrator, Selous Metallurgical Complex	2,180,000
Do.	do.	Mimosa Holdings (Private) Ltd. (Impala Platinum Holdings Ltd., 50%, and Sibanye-Stillwater, 50%)	Mimosa concentrator, east of Zvishavane	1,900,000
Smelter matte	do.	Zimbabwe Platinum Mines (Private) Ltd. (Zimplats Holdings Ltd.)	Selous smelter, Selous Metallurgical Complex	72,000
Pyrite		Iron Duke Pyrites (GAT Investments (Private) Ltd.)	Iron Duke Mine	NA

See footnotes at end of table.

TABLE 2—Continued
ZIMBABWE: 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
Tungsten (WO_3 content)	National Indigenisation and Economic Empowerment Fund, 51%, and RHA Tungsten Ltd. (Premier African Minerals, Ltd.), 49%	RHA Tungsten Mine, 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.