



2005 Minerals Yearbook

ZIMBABWE

THE MINERAL INDUSTRY OF ZIMBABWE

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The Republic of Zimbabwe is a landlocked nation in southern Africa that covers an area of 390,580 square kilometers and supported a population estimated to range from 11 million to more than 13 million. About 5% of the workforce was engaged by the formal mining industry, and minerals accounted for about 4.5% of the gross domestic product (GDP). In 2005, the GDP based on purchasing power parity was estimated to be about \$30.6 billion,¹ and the GDP per capita based on purchasing power parity was \$2,607. In 2005, the rate of real GDP growth, which declined for the seventh year in a row, fell by 6.5% and followed a revised 3.8% decline in 2004 and a 10.4% decline in 2003 (Herald, The, 2006§²; International Monetary Fund, 2006§; U.S. Central Intelligence Agency, 2006§; World Bank Group, 2006§).

Domestic and foreign companies that produced minerals or manufactured mineral-based commodities managed to continue operations despite Zimbabwe's hyperinflation, which declined to 238% in 2005 compared with 350% in 2004 and 365% in 2003. The inflation significantly increased domestic costs of such items as electricity, fuel, and wages. With varying success, mineral operations in Zimbabwe coped with the negative effects of routine electrical power outages; the lack of foreign currency to fund equipment imports; and shortages of food, fuel, skilled manpower, spare parts, and tires. Foreign investment, which was primarily funneled through the cement, diamond, gold, and platinum-group metals (PGM) sectors, helped to stave off the collapse of the mineral industry, which produced about 40 minerals or mineral-based commodities chiefly from small- and medium-scale mines. In 2005, several commodities, which included asbestos, coal, cobalt, copper, diamond, ferroalloys, limestone, lithium minerals, magnesite, and PGM, posted production increases (Timberg, 2005; International Monetary Fund, 2006§).

The mineral sector was subject to uncertainty caused by Government policies. The Government's foreign exchange policy often adversely affected mining and mineral-based commodity companies that exported production. The Government's often-violent program to redistribute the ownership of agricultural land that began in 2000 quickly decimated the commercial farming sector, which had been the nation's major source of exports and foreign exchange. By 2003, the value of mineral exports had surpassed that of agricultural goods. In 2004, draft versions of an amendment to the mining law proposed that private mining companies transfer between

25% and 50% of the equity shares of their Zimbabwe operations to historically disadvantaged persons. In 2005, the Government reportedly indicated that while it had no intention to nationalize the mineral industry, it did plan to take some equity interest in privately operated mines. Various organizations informed the Government of the potential negative effects on international investor interest in the mining sector of the proposed seizures of mining company shares and, because of the agricultural land grabs, the perceived reduction of property rights. At yearend, multinational mining companies, especially those in the PGM sector, continued negotiations on the proposed transfer of Zimbabwe mining equity with the Government (Mining Journal, 2004; Reuters, 2004§; News24.com, 2005§).

Commodity Review

Metals

Chromium.—In 2005, Anglo American plc of the United Kingdom sold its 100% interest in Zimbabwe Alloys Ltd. to Bencore Investments (Pvt.) Ltd. of Zimbabwe for \$10 million. The Financial Gazette (2005§) reported that a subsidiary of Anglo American planned to focus its attention on the development of the Unki PGM resources. Also in 2005, a Chinese consortium proposed to build a high-carbon ferrochrome smelter at Selous.

Gold.—Gold accounted for about 50% of the value of total mineral production in Zimbabwe. By law, all gold produced in Zimbabwe had to be sold to Fidelity Printers and Refiners (a subsidiary of the Reserve Bank of Zimbabwe). The Government was concerned with the significant drop in gold deliveries from the small-scale mines and cracked down on gold smuggling and illegal gold panners (an estimated 300,000 to 1 million artisanal gold miners worked in Zimbabwe). Several metric tons of gold were estimated to bypass official export channels annually. After investigations of small- and medium-scale mines by the Ministry of Mines and Mineral Development, several small gold mines were closed for failure to keep proper production records or for alleged sales of gold on the black market. In August, the Zimbabwe Revenue Authority announced a new tax on small-scale gold production; registered gold buyers were required to withhold 5% of gross proceeds from gold sales by small-scale miners. The National Export Strategy, which was disseminated at yearend, sought to more-closely monitor mining sector production and exports (Herald, The, 2005a§, b§).

Metallon Corp. of South Africa had acquired Independence Gold Ltd. from Lonmin plc of the United Kingdom in 2002. Metallon's Zimbabwean subsidiary, Metallon Gold, produced about 35% of official Zimbabwean gold output from the Arcturus, the How, the Mazowe, the Redwing, and the Shamva Mines (Metallon Corp., 2005).

In July, the Government-owned Zimbabwe Mining Development Corp. reopened the Elvington Mine, which it

¹Where necessary, values have been converted from Zimbabwe dollars (Z\$) to U.S. dollars (US\$) at the average rate of Z\$21,621=US\$1.00 for 2005 (the interbank exchange rate started the year about Z\$5,500=US\$1.00 and reached Z\$82,902=US\$1.00 at yearend); the official rate was Z\$824=US\$1.00 and the average auction rate was Z\$5,300 for 2004. In 2003, the official exchange rate was Z\$55=US\$1.00 until March and Z\$824=US\$1.00 for the remainder of the year.

²References that include a section mark (§) are found in the Internet References Cited section.

had placed on care and maintenance status in 2003. In July, the partnership of Mmakau Mining (Pty) Ltd. of South Africa (75%) and Shaft Sinkers (Pty) Ltd. of South Africa (25%) acquired Alpha Resources of Zimbabwe from Placer Dome South Africa (Pty) Ltd. Alpha Resources held the rights to the Eureka Mine where the sinking of a 780-meter shaft was initiated in October when the partnership began the conversion of the former open pit operation to an underground mine. Initial underground production was scheduled for mid-2006; mine design called for an 800-metric-ton-per-day (t/d) ore-hoisting capacity [Mmakau Mining (Pty) Ltd., 2005].

In 2005, Duration Gold Ltd. of China (an affiliate of Mandarin Goldfields Inc. of Canada) acquired the Wanderer Mine, which had operated from 1899 to 1946, and agreed to acquire the Athens, the Durban, the Gaika, the Queens, the Sunace, and the Umviga Mines. Duration also acquired partial interest in the Hope Fountain Project, where it started exploration drilling. Joint venture exploration operations at Tafuna Hill were suspended in 2005 because of site access problems. In November, Duration began milling 200 t/d of tailings from the Athens Mine.

In January, Cluff Gold plc of the United Kingdom acquired Cluff Mining (Zimbabwe) Holdings Ltd., which held 50% interest in the Maligreen Mine (where operations had been suspended in 2002), from the Ridge Mining Group. In April, Mwana Africa Holdings (Pty) Ltd. completed the acquisition of the Freda Rebecca gold mine from AngloGold Ashanti Ltd. of South Africa. In September, African Gold plc of the United Kingdom, which held 100% interest in the Inez Mine, acquired Mwana Africa Holdings; the combined enterprise, which was based in the United Kingdom, was renamed Mwana Africa plc. In December, Mwana Africa plc acquired Cluff Mining from Cluff Gold.

Iron and Steel.—Government negotiations with Shougang International Trade and Engineering Corp. of China on a proposed \$200 million investment in exchange for an equity interest in Zimbabwe Iron and Steel Co. (ZISCO) floundered in early 2005. The talks reportedly were scuttled by Shougang's dismay with ZISCO's chronic problems with coal and electricity supply and rail transportation of raw materials and finished product. Published estimates of ZISCO's debts ranged from \$30 million to \$126 million; major creditors included Hwange Colliery Co. Ltd. of Zimbabwe, National Railways of Zimbabwe, and the Zimbabwe Electricity Supply Authority (Njini, 2005§; Zimdaily.com, 2005§; Muleya, 2006§).

Platinum-Group Metals.—In 2005, Impala Platinum Mines Ltd. (Implats) sold its 30% interest in Makwiro Platinum Mines (Pvt.) Ltd. to Makwiro's majority equity-interest holder, Zimbabwe Platinum Mines Ltd.; in return Implats received additional equity interest in Zimbabwe Platinum Mines Ltd.; for a total of 86.9% interest in the company. In July, Zimbabwe Platinum Mines Ltd. changed its name to Zimplats Holdings Ltd. and changed the name of the operating company [Makwiro Platinum Mines (Pvt.) Ltd.] to Zimbabwe Platinum Mines (Pvt.) Ltd.

At Ngezi, Makwiro and Zimbabwe Platinum Mines (Pvt.) Ltd. mined 1.844 million metric tons (Mt) of ore from the open pit and 474,000 metric tons (t) from the underground mine in 2005.

The company milled about 2.03 Mt of ore and smelted 69,330 t of concentrate. More than 5.2 t of PGM (about 2.7 t of platinum, about 2.3 t of palladium, and about 250 kilograms of rhodium) were recovered and sold. Zimplats proposed a \$2 billion expansion program, which would increase the total mine output of ore to 10 million metric tons per year (Mt/yr). The expansion plans included eight additional underground mines at Ngezi and three new concentrators (Makombe, 2005§).

In 2005, Mimosa Investments Ltd. of Mauritius, which was a partnership between Aquarius Platinum Ltd. of Australia (50%) and Implats (50%), proposed the Wedza Phase IV project, which would increase the volume of ore milled at the Mimosa underground mine to 1.8 Mt/yr of ore from 1.4 Mt/yr. Mine output was expected to be increased by about 25% to 5.2 t/yr of PGM in concentrate (Aquarius Platinum Ltd., 2005§).

Anglo Platinum Ltd. of South Africa (which was known as Anglo American Platinum Corp. Ltd. prior to May 30, 2005) began underground infrastructure development at its Unki project, which was located near Gweru. Anglo studied the feasibility of expanding the mine's ore output to 1.4 Mt/yr from the original 1-Mt/yr design capacity (Anglo Platinum Ltd., undated§).

Industrial Minerals

Diamond.—Near Zvishavane, Murowa Diamond (Pvt.) Ltd. operated Zimbabwe's only commercial diamond mine. Murowa had developed an open pit and an underground mine in the three-kimberlite deposit that had been discovered in 1997. In 2005, production at Murowa averaged about 21,000 carats per month. SouthernEra Diamonds Inc. of Canada formed a joint venture with Rockover Resources Ltd to explore for kimberlites on the Tsholotsho diamond prospect, which was located northwest of Bulawayo.

River Ranch (Pvt.) Ltd. emerged from bankruptcy and, in 2004, proposed to resume diamond production at its old River Ranch Mine. In 1998, River Ranch had closed the mine because of low diamond prices and Buby Minerals (Pvt.) Ltd. had been appointed by bankruptcy officials to rehabilitate the equipment and to reprocess the mine dump. River Ranch's planned restart of kimberlite mining operations was sidetracked in January 2005 when the Ministry of Mines and Mineral Development transferred the rights to mine diamonds at River Ranch Mine to Buby. Legal proceedings ensued. There was no resolution by yearend.

Outlook

The short-term outlook for the mining sector in Zimbabwe is not favorable. Zimbabwe's rampant hyperinflation, which had averaged 238% during 2005, rose rapidly at yearend; inflation reached an annualized rate of 411% in October, 502% in November, and 586% in December. The rate is not expected to decline in 2006. Escalating local costs are expected to continue to impact mineral sector operations adversely in 2006. Side effects of the hyperinflation, which included reduced equipment maintenance and deferred development exploration, will effectively shorten the potential operating lives of mines.

Government intervention in the economy and in state-run industries (such as fuel importation; electricity generation, importation, and distribution; and railway transportation) has resulted in a number of mine closures and suspended projects, which undermines the ability of the mining sector to continue to generate foreign export earnings. Currency regulations make it difficult for Zimbabwean mineral companies to benefit from the global increase in commodity prices (Mugari, 2005§; Mail & Guardian Online, 2006§; Reuters, 2006§).

The significant impact of the Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) epidemic, which was estimated to affect about 25% of the adult population in Zimbabwe, is expected to haunt the remaining workforce for years to come (Coorey and others, 2005, p. 6).

The country has abundant mineral resources and a well-developed (but deteriorated) infrastructure network. Under the expectation that the economic and political climate will eventually improve, the Zimbabwe mineral sector remains attractive in the long term, especially for small- and medium-scale gold mining companies.

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Major Sources of Information

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TABLE 1
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2001	2002	2003	2004	2005 ^p
METALS					
Chromite, gross weight	780,150	749,339	637,099	668,391	614,720
Cobalt, metal ²	95	99	79	59	281
Copper:					
Mine output, concentrate, Cu content	2,057	2,502	2,767	2,383	2,570
Metal:					
Smelter output, blister/anode, primary ^c	2,160	--	--	--	--
Refinery output, refined/cathode, primary	8,000	7,200	7,200	7,000 ^e	7,000
Gold kilograms	18,050	15,469	12,564	21,330	14,024
Iron and steel:					
Mine output, iron ore:					
Gross weight thousand metric tons	361	272	367	283	377
Fe content ^c do.	180	136	184	140	185
Metal:					
Pig iron do.	156	122	182 ^r	145 ^r	125
Steel, crude do.	149	105	152	150 ^r	119
Ferroalloys:					
Ferrochromium	243,534	258,164	245,299	193,077	218,143
Ferrosilicon chromium thousand metric tons	17	--	--	1	5
Nickel:					
Mine output, concentrate, Ni content	10,120	8,092	9,516	9,776	8,556
Refinery output, refined metal:					
Refined from domestic materials	7,440	6,765	9,517	9,520 ^e	9,500 ^e
Toll refined from imported materials ³	12,084	10,812	3,140	2,500 ^{r,e}	2,500 ^e
Total refined nickel metal	19,524	17,577	12,657	12,200 ^e	12,000 ^e
Platinum-group metals:					
Palladium kilograms	371	1,943	3,449	3,564	3,879
Platinum do.	519	2,306	4,270	4,438	4,834
Rhodium do.	42	218	377	374	404
Ruthenium do.	NA	178	322	300	317
Iridium do.	NA	84	152	135	141
Osmium do.	NA	NA	NA	NA	NA
Total	932	4,729	8,570	8,811	9,575
Silver kilograms	3,449	1,711	747	3,216	187
Tantalum, mine output, Ta content	21	338	4	14	--
INDUSTRIAL MINERALS					
Asbestos thousand metric tons	136	168	147	104	122
Barite	7,464	--	--	--	--
Cement, hydraulic ^c thousand metric tons	800	600	400	400	400
Clays ⁴	2,247	3,789	--	500 ^e	500 ^e
Diamond carats	--	--	--	44,454	251,000
Feldspar	1,055	591	246	1	--
Fluorspar	--	250	--	--	--
Gemstones:					
Amethyst kilograms	840	NA	NA	NA	NA
Emerald do.	57	NA	NA	NA	NA
Graphite	11,836	9,912	7,675	10,267	4,298
Kyanite	9,682	5,657	745	210	--
Lithium minerals, gross weight	36,103	33,172	12,131	13,710	37,499
Magnesite	2,439	2,366	1,333	749	893
Nitrogen, N content of ammonia	57,500	60,900	56,300	47,500	45,000 ^e
Perlite ^c	5,000	5,000	5,000	4,000	4,000
Phosphate rock, marketable concentrate	86,611	107,854	95,496	83,391	45,705

See footnotes at end of table.

TABLE 1--Continued
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2001	2002	2003	2004	2005 ^p
INDUSTRIAL MINERALS--Continued					
Stone, sand and gravel:					
Granite, black	385,532	408,550	190,372	8,825	--
Limestone	3,799	3,169	922	41	84
thousand metric tons					
Silica ⁵	28	6,790	2,356	1	1
do.					
Sulfur:					
Pyrite:					
Gross weight	98,037	87,592	93,010	81,795	59,683
S content (32.6%)	31,960	28,560	30,320	26,670	19,500
Byproduct acid, metallurgical and coal process gas, S content ^e	2,000	2,000	2,000	1,900	1,500
Total ^e	34,000	30,600	32,300	28,600	21,000
Talc	1,273	911	196	--	--
Vermiculite	11,632	23,803	20,016	27,150	23,045
MINERAL FUELS AND RELATED MATERIALS					
Coal, bituminous	4,064	3,721	2,872	2,476	2,891
thousand metric tons					
Coke, metallurgical ^c	245	224	228	180	200
do.					

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^pPreliminary. ^rRevised. NA Not available. -- Zero.

¹Table includes data available through October 24, 2006.

²Metal includes metal content of compounds and salts and may include cobalt recovered from nickel-copper matte imported for toll refining.

³Toll-refined data includes part of the output from the Bindura Refinery and all the production from the Empress Refinery, which processes imported nickel matte from Botswana.

⁴Includes fire clay.

⁵Includes rough and ground quartz and silica sand.