



# 2006 Minerals Yearbook

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ZIMBABWE

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# THE MINERAL INDUSTRY OF ZIMBABWE

By Philip M. Mobbs

Domestic and foreign companies that produced minerals or manufactured mineral-based commodities struggled to continue operations in Zimbabwe. The negative effects of hyperinflation, which averaged 1,061% in 2006 compared with an average of 238% in 2005; frequent electrical power outages; lack of foreign currency to fund equipment imports; and chronic shortages of food, fuel, skilled manpower, and spare parts adversely affected production operations. Despite the difficulties, Zimbabwe's diverse mineral output included about 4% of the world's asbestos and chromite production, 2% of the platinum-group metals (PGM) and vermiculite production, and about 1% of the lithium production (George, 2007; International Monetary Fund, 2007; Ober, 2007; Papp, 2007; Potter, 2007; Virta, 2007).

## Minerals in the National Economy

Minerals and mineral-based commodities formed a more-significant segment of national exports than in past years because of the general increase in world mineral prices and the significant reduction of exports from Zimbabwe's deteriorated commercial agricultural sector. In general, because of the various problems that restrained mineral commodity output, the companies that exported their production and the Government were not able to benefit fully from the rise in world mineral prices. Nationally, about 40 minerals or mineral-based commodities were produced, chiefly from small- and medium-scale mines (World Bank Group, The, undated).

## Government Policies and Programs

The Ministry of Mines and Mining Development managed the mineral sector in accordance with the Mines and Minerals Act (chapter 21:05) and the Mining (General) Regulations, 1977. In 2006, the mineral sector remained constrained by uncertainties, which were caused by existing and proposed Government policies. The Government's foreign exchange policy often adversely affected mining and mineral-based commodity companies that exported production. In 2006, the Government proposed to amend the Mining Law to require the transfer of 51% ownership in all mining activities to the Government. The Gold Trade Act of 2006 mandated penalties for unlawful possession or trading of gold.

The Government reportedly entered into agreements to provide future mineral output as collateral for loans and to barter mineral output for goods. In May, the Reserve Bank pledged future nickel exports to European and South American banks in exchange for their setting up a \$50 million fund that would pay for refined petroleum imports. In June, the Government agreed to a \$1.3 billion deal to send chromite to China in return for the Chinese-funded development of additional coal-fueled electricity-generation plants, and cemented an agreement, which was valued at \$60 million, to send chromite to China in exchange for radio and television transmission equipment.

In 2006, the Government signed a Southern African Development Community (SADC) protocol on finance and investment that allowed the SADC's Regional Indicative Strategic Development Plan (RISDP) to progress. The RISDP proposal included the establishment of an SADC free trade area by 2008, an SADC common market by 2015, and a single SADC currency by 2018 (Salomão, 2007).

International sanctions in effect in 2006 included those of Australia, the European Union, and the United States. Sanctions primarily affected the foreign assets of and financial transactions of various Government officials of Zimbabwe.

## Production

In 2006, the volume of diamond production increased by a reported 316% compared with that of 2005; graphite, by 53%; phosphate rock, 44%; chromite, 14%; and platinum-group metals, 3%. The production of cement, refined nickel, and silver also was estimated to have increased. Commodities with a significant decline in production in 2006 included iron ore, 72%; vermiculite, 42%; pyrite, 33%; coal, 27%; asbestos, 20%; and gold, 19%. Steel production also was estimated to have declined in 2006.

## Structure of the Mineral Industry

Ownership of mining companies in Zimbabwe was dominated by domestic investment and mining companies and international cement and mining companies. Foreign investment was funneled primarily through the cement, diamond, gold, nickel, and PGM sectors. State-owned Zimbabwe Mining Development Corp. (ZMDC) maintained equity interest in closed copper mining and processing facilities, a diamond mining operation, and gold mines, some of which were active. Subsidiaries of state-owned Industrial Development Corp. of Zimbabwe Ltd. operated a secondary aluminum re-melt facility and produced some industrial minerals, such as clay, stone, and phosphate rock. Zimbabwe Iron and Steel Co. (ZISCO), in which the Government held majority interest, operated the crude steel plant, and a ZISCO subsidiary operated iron ore and limestone mines.

## Mineral Trade

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) marketed almost all mineral production in Zimbabwe. Gold and silver was sold to Fidelity Printers and Refiners, which was a subsidiary of the Reserve Bank of Zimbabwe. PGM concentrates and smelter matte were shipped to Impala Platinum Holdings Ltd. (Implats) processing facilities in South Africa.

## Commodity Review

### Metals

**Chromium and Copper.**—High international metal prices encouraged exploration activity in Zimbabwe. In 2006, ZMDC and a Russian firm formed Ruscole Investments to explore for chromium on the Great Dyke. Norinco International Cooperation Ltd. of China (60% interest), Zimbabwe Defense Industries (20% interest) and ZMDC (20% interest) also formed a company to explore for chromite in the Ngezi area on the Great Dkye. The Zimbao Mining Ventures was formed by Wambao Shinex of China (51% interest) and Zimbabwe Mining Development Corp. (49% interest) to evaluate the reopening of the Mhangura and the Sanyati copper mines and the Lomangundi smelter and refining complex.

**Gold.**—In 2006, gold accounted for about 26% of the value of mineral production in Zimbabwe. The Government remained concerned about the significant drop in gold deliveries to the Fidelity refinery from the mines and continued its crackdown on gold smuggling and illegal gold panning.

**Iron and Steel.**—In March 2006, Global Steel Holding Ltd. was awarded a 20-year contract to manage and rehabilitate ZISCO's facilities; by September, however, Global Steel had walked away from the project. A subsequent investigation by the National Economic Conduct Inspectorate, which was withheld from public release, ignited a media frenzy about alleged corruption, financial mismanagement, and looting of ZISCO funds by Government Ministers, Members of Parliament, other politicians, and senior company officials (Herald, The, 2006).

Steelmakers Zimbabwe (Pvt.) Ltd. commissioned a 54,000-metric-ton-per-year (t/yr)-capacity sponge iron plant in Masvingo. Output was shipped to Steelmakers' meltshop at Redcliff as a substitute for scarce steel scrap. Steelmakers planned to expand the capacity of the sponge iron plant to 108,000 t/yr, and eventually to 162,000 t/yr (Steelmakers Zimbabwe (Pvt.) Ltd., undated).

**Platinum-Group Metals.**—Two major platinum mines were operational on the Great Dyke; a third was pending final approval. At Ngezi, Zimplats Holdings Ltd. mined 1.1 million metric tons (Mt) of ore from the open pit and 912,000 metric tons (t) from the underground mine in 2006. The company milled about 2.06 Mt of ore and smelted 64,877 t of concentrate. About 5.5 t of PGM was recovered from the smelter matte in South Africa and sold. Zimplats planned to end open pit mining in late 2007 and to increase production from the underground mine. The initial phase of the company's proposed expansion program projected the development of two new underground mines by 2010 (Zimplats Holdings Ltd., 2006a, b, c; 2007).

At the Mimosa Mine, the joint venture of Aquarius Platinum Ltd. of Australia (50%) and Implats (50%) completed the Wedza Phase IV project, which increased the volume of ore milled at the Mimosa underground mine to 1.8 million metric tons per year (Mt/yr) of ore from 1.4 Mt/yr. In 2006, about 1.8 Mt of ore was mined. The concentrated ore was shipped to Impala Refining Services near Rustenburg, South Africa, for processing (Impala Platinum Holdings Ltd., undated).

In 2006, Anglo Platinum Ltd. of South Africa began digging the underground access declines at the Unki project near Gweru. Anglo's final decision to proceed with the Unki project was subject to Government fiscal and regulatory approvals and the uncertainties of costs owing to Zimbabwe's hyperinflation. It approved in early 2007, initial production could start in 2009.

### Industrial Minerals

**Diamond.**—According to statistics released by the Kimberley Process, diamond production in Zimbabwe increased to more than 1 million carats in 2006 compared with 248,262 carats in 2005. Because of differences in data gathering, Kimberley Process data does not match exactly production data received from Zimbabwe. Riozim Ltd. [a partner in Murowa Diamond (Pvt.) Ltd., which was the company that operated Zimbabwe's major commercial diamond mine near Zvishavane] reported that production of 240,026 carats in 2006 was lower than that of 2005 (251,152 carats) because of the depletion of the higher-grade open pit mine and frequent electrical power cuts. The Murowa partners began a feasibility study of a planned production capacity expansion program; the study was to take into account the potential loss of 51% of the Murowa project under the proposed amendments to the mining law (Standard, The, 2006; Antwerp Facets News Service, 2007; Kimberley Process, 2007).

A diamond rush flooded eastern Zimbabwe with informal miners in late 2006. The Exclusive Prospecting Order for the Marange area, which is located southwest of Mutare, that had been held by Kimberlitic Searches (a subsidiary of the De Beers Group), expired in March. Subsequently, African Consolidated Resources PLC (ACR) of the United Kingdom, which had several ongoing exploration programs for gold, nickel, and platinum in Zimbabwe, applied and was awarded diamond exploration and mining rights in the Marange area. By late September, when ACR announced that gem and industrial diamond had been recovered from the property, thousands of Zimbabweans were digging for diamond in the area. The MMCZ, which was the only legal diamond buyer and trader, had to compete with informal traders for the production. A significant volume of diamond was believed to have been smuggled out of the country. Up to 15,000 people had overrun the area before the Zimbabwe Army fenced off the area and removed the informal miners. In December, the Ministry of Mines cancelled ACR's title to the Marange deposit. The property was subsequently awarded to the MMCZ (African Consolidated Resources Plc, 2006).

The quality of diamond recovered from the Marange area was lower than that of diamond recovered from the Murowa and the River Ranch Mines. Despite the more than 300% increase in Zimbabwe's diamond output in 2006, the value of diamond production dropped by about 6%.

### Mineral Fuels and Related Materials

**Coal.**—Three mining operations accounted for most of Zimbabwe's domestic coal production. In western Zimbabwe, Hwange Colliery Co. Ltd. commissioned the Chaba open

pit mine in 2006. Hwange also produced coal for electricity generation plants and metallurgical facilities from the 3 Main underground mine. In anticipation of supplying coal for a long-proposed mine-mouth electricity-generating powerplant at Sengwa, Riozim resumed mining coal at its Sengwa Mine in late 2005. Beta Coal Ltd., which had operated the Sengwa Mine under contract to Riozim for 2 years, continued to process the mined coal for its brick-making plants. Steelmakers began coal production from a mine at Chiredzi. The coal was used at Steelmakers' sponge iron plant in Masvingo.

**Petroleum.**—The small oil refinery at Feruka near Mutare opened in 1965, but was closed in 1967 after United Nations Security Council Resolution 232 of December 16, 1966, imposed economic sanctions and prohibited the supply of crude oil to what was then Southern Rhodesia. In 2006, the Zimbabwe Government signed an agreement that authorized an organization affiliated with the Government of Iran to begin a feasibility study of the requirements to rehabilitate the remnants of the obsolete facility.

**Uranium.**—Bids were submitted to acquire the rights to develop the Kanyemba uranium deposit in the Zambezi Valley. The Mining Affairs Board approved the application of Lowenbrau Mining Services, which was a joint venture of OmegaCorp Ltd. of Australia and domestic investors. Exploration and development licenses for Kanyemba were pending at yearend awaiting additional Government approval.

## Outlook

Zimbabwe has abundant mineral resources and a well developed (but deteriorated) highway and railroad network. The short-term outlook for the mining sector, however, is not favorable. Zimbabwe's rampant inflation reached 1,281% in December, and the rate is expected to continue to increase rapidly in 2007. Escalating local costs and shortages of electrical power, fuel, and skilled employees are expected to continue to affect mineral sector operations adversely in 2007.

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TABLE 1  
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	2002	2003	2004	2005	2006 <sup>p</sup>
<b>METALS</b>					
Chromite, gross weight	749,339	637,099	668,391	614,720	700,001
Cobalt, metal content <sup>3</sup>	99	79	59	281	26
Copper:					
Mine output, concentrate, Cu content	2,502	2,767	2,383	2,570	2,581
Metal, refinery output, refined/cathode, primary <sup>c</sup>	7,200 <sup>4</sup>	3,000 <sup>r</sup>	2,000 <sup>r</sup>	2,000 <sup>r</sup>	2,000
Gold kilograms	15,469	12,564	21,330	14,024	11,354
Iron and steel:					
Mine output, iron ore:					
Gross weight thousand metric tons	272	367	283	377	104
Fe content <sup>c</sup> do.	136	184	140	185	52
Metal:					
Pig iron do.	122	182	125 <sup>r</sup>	129 <sup>r</sup>	70 <sup>c</sup>
Steel, crude do.	105	152	135 <sup>r</sup>	107 <sup>r</sup>	60 <sup>c</sup>
Ferroalloys:					
Ferrochromium	258,164	245,299	193,077	218,143	200,673
Ferosilicon chromium thousand metric tons	--	--	1	5	1
Nickel:					
Mine output, concentrate, Ni content	8,092	9,516	9,776	8,556	8,825
Refinery output, refined metal:					
Refined from domestic materials	6,765	9,500 <sup>r,e</sup>	9,700 <sup>r,e</sup>	7,500 <sup>r,e</sup>	5,500 <sup>c</sup>
Toll refined from imported materials <sup>5</sup>	10,812	7,300 <sup>r,e</sup>	6,000 <sup>r,e</sup>	5,700 <sup>r,e</sup>	9,000 <sup>c</sup>
Total refined nickel metal	17,577	16,800 <sup>r,e</sup>	15,700 <sup>r,e</sup>	13,200 <sup>r,e</sup>	14,500
Platinum-group metals:					
Palladium kilograms	1,943	3,449	3,564	3,879	4,022
Platinum do.	2,306	4,270	4,438	4,834	4,998
Rhodium do.	218	377	374	404	410
Ruthenium do.	178	322	300	317	317
Iridium do.	84	152	135	141	147
Osmium do.	NA	NA	NA	NA	NA
Total	4,729	8,570	8,811	9,575	9,894
Silver kilograms	1,711	747	3,216	187	500 <sup>c</sup>
Tantalum, mine output, Ta content	338	4	14	--	NA
<b>INDUSTRIAL MINERALS</b>					
Asbestos thousand metric tons	168	147	104	122	97
Cement, hydraulic <sup>c</sup> do.	600	400	500 <sup>r</sup>	600 <sup>r</sup>	700
Clays <sup>6</sup>	3,789	--	500 <sup>c</sup>	500 <sup>c</sup>	500 <sup>c</sup>
Diamond carats	--	--	44,454	251,152	1,046,000
Feldspar	591	246	1	--	--
Fluorspar	250	--	--	--	--
Gemstones:					
Amethyst kilograms	NA	NA	NA	NA	NA
Emerald do.	NA	NA	NA	NA	NA
Graphite	9,912	7,675	10,267	4,298	6,588
Kyanite	5,657	745	210	--	--
Lithium minerals, gross weight	33,172	12,131	13,710	37,499	NA
Magnesite	2,366	1,333	749	893	939
Nitrogen, N content of ammonia	60,900	56,300	47,500	45,000 <sup>c</sup>	40,000 <sup>c</sup>
Perlite <sup>c</sup>	5,000	5,000	4,000	4,000	4,000
Phosphate rock, marketable concentrate	107,854	95,496	83,391	45,705	65,838

See footnotes at end of table.

TABLE 1--Continued  
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	2002	2003	2004	2005	2006 <sup>p</sup>
<b>INDUSTRIAL MINERALS--Continued</b>					
Stone, sand and gravel:					
Granite, black	408,550	190,372	8,825	--	--
Limestone	3,169	922	41	84	50 <sup>e</sup>
Silica <sup>7</sup>	6,790	2,356	1	1	--
Sulfur:					
Pyrite:					
Gross weight	87,592	93,010	81,795	59,683	39,777
S content (32.6%)	28,560	30,320	26,670	19,500	13,000
Byproduct acid, metallurgical and coal process gas, S content <sup>e</sup>	2,000	2,000	1,900	1,500	1,000
Total <sup>e</sup>	30,600	32,300	28,600	21,000	14,000
Talc	911	196	--	--	--
Vermiculite	23,803	20,016	27,150	23,045	13,421
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Coal, bituminous	3,721	2,872	2,476	2,891	2,107
Coke, metallurgical <sup>e</sup>	224	228	180	200	160

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. -- Zero.

<sup>1</sup>Table includes data available through October 24, 2007.

<sup>2</sup>In addition to the commodities listed, secondary aluminum; corundum; such gemstones as aquamarine, iolite, and tourmaline; secondary lead; and ores of tin and tungsten may be produced, but information is inadequate to estimate output.

<sup>3</sup>Metal includes metal content of compounds and salts and may include cobalt recovered from nickel-copper matte imported for toll refining.

<sup>4</sup>Reported figure.

<sup>5</sup>Toll-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.

<sup>6</sup>Includes fire clay.

<sup>7</sup>Includes rough and ground quartz and silica sand.



TABLE 2  
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Asbestos	African Associated Mines (Pvt.) Ltd.		Shabanie Mine, Zvishavane	2,400,000
Do.	do.		Gaths Mine, Mashava	1,400,000
<b>Cement:</b>				
Clinker	Portland Holdings Ltd (Pretoria Portland Cement Ltd.)		Colleen Bawn, about 115 kilometers southeast of Bulawayo	1,000,000
Portland cement	do.		Bulawayo	800,000
Do.	Circle Cement Zimbabwe Ltd. (Lafarge, S.A., 76.4%)		Harare	400,000
Do.	Sino-Zimbabwe Cement		Gweru	300,000
Chromite	Zimbabwe Mining and Smelting Co. (Pvt.) Ltd. (Zimasco Consolidated Enterprises Ltd.)		Peak Mine, Shrugwi and Netherburn Mine, Lalapanzi	250,000
Do.	Local cooperatives		Mines on the southern Great Dyke	180,000
Do.	do.		Mines on the northern Great Dyke	120,000
Do.	Zimbabwe Alloys Ltd. [Benscore Investments (Pvt.) Ltd.]		Inyala Mine	60,000
Coal	Hwange Colliery Co. Ltd. (Government, 38%; Edwards Nominees (Pvt.) Ltd, 15.46%; Messina Investments Ltd., 12.6%)		3 Main Mine and Chaba Mine, Hwange	5,000,000
Do.	Riozim Ltd.		Sengwa Colliery, about 200 kilometers northeast of Kadoma	5,000,000 <sup>1</sup>
Do.	Steelmakers Zimbabwe (Pvt.) Ltd.		Chiredzi, about 130 kilometers southeast of Masvingo	1,200,000 <sup>2</sup>
<b>Cobalt:</b>				
Ore, cobalt content	Bindura Nickel Corp. Ltd. (Mwana Africa PLC, 53%)		Trojan Mine at Bindura and Shangani Mine, about 100 kilometers northeast of Bulawayo	800
Hydroxide	BSR Ltd. (Bindura Nickel Corp. Ltd., 100%)		Bindura	700
<b>Copper:</b>				
Ore, copper content	Bindura Nickel Corp. Ltd. (Mwana Africa PLC, 53%)		Trojan Mine at Bindura and Shangani Mine, about 100 kilometers northeast of Bulawayo	1,600
Refined	Empress Nickel Refinery (Riozim Ltd.)		Eiffle Flats, near Kadoma	6,000
Diamond	carats	Murowa Diamond (Pvt.) Ltd. (Rio Tinto plc, 78%, and Riozim Ltd, 22%)	Murowa Mine, near Zvishavane	252,000
Do.	do.	River Ranch Ltd. <sup>1</sup>	River Ranch Mine, near Beitbridge	NA <sup>2</sup>
Do.	do.	Zimbabwe Mining Development Corp. <sup>1</sup>	Marange area	100,000 <sup>e, 2, 3</sup>
Gold	kilograms	Mwana Africa PLC	Freda Rebecca Mine, Bindura	2,000 <sup>4</sup>
Do.	do.	Riozim Ltd.	Renco Mine, 75 kilometers south-southeast of Masvingo	1,000
Do.	do.	Numerous other mines and artisanal operations	Various locations	20,000
<b>Iron and steel:</b>				
Crude steel	Zimbabwe Iron and Steel Co. (Pvt.) Ltd.		Redcliff, near Gweru	72,000 <sup>5</sup>
Ferroalloys, ferrochromium	Zimbabwe Mining and Smelting Co (Pvt.) Ltd. (Zimasco Consolidated Enterprises)		Smelter at Kwekwe	180,000
Do.	Zimbabwe Alloys Ltd. [Benscore Investments (Pvt.) Ltd.]		Smelter at Gweru	45,000
Rolled steel	Lancashire Steel (Pvt.) Ltd. [Zimbabwe Iron and Steel Co. (Pvt.) Ltd.]		Wire rod mill at Kwekwe	120,000
Do.	Steelmakers Zimbabwe (Pvt.) Ltd.		Rolling mill at Redcliff	100,000
<b>Iron:</b>				
Iron ore, gross weight	Buchwa Iron Mining Co. [Zimbabwe Iron and Steel Co. (Pvt.) Ltd.]		Ripple Creek Mine, near Redcliff	600,000
Sponge iron	Steelmakers Zimbabwe (Pvt.) Ltd.		Masvingo	54,000
Lithium	Bikita Minerals (Pvt.) Ltd.		Bikita Mine, 60 kilometers east of Masvingo	33,000

See footnotes at end of table.

TABLE 2--Continued  
ZIMBABWE: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Nickel:			
Ore	Bindura Nickel Corp. Ltd. (Mwana Africa PLC, 53%)	Trojan Mine at Bindura and Shangani Mine, about 100 kilometers northeast of Bulawayo	80,000
Refined metal	BSR Ltd. (Bindura Nickel Corp. Ltd., 100%)	Bindura	15,600
Do.	Empress Nickel Refinery (Riozim Ltd.)	Eiffle Flats, near Kadoma	9,000
Phosphate	Dorowa Minerals (Pvt.) Ltd. (Chemplex Corp. Ltd., 100%)	Dorowa Mine, 90 kilometers west of Mutare	155,000
Platinum-group metals:			
Ore	Zimbabwe Holdings Ltd. (Impala Platinum Holdings Ltd., 86.9%)	Ngezi Mines	2,200,000
Do.	Mimosa Investments Ltd. (Aquarius Platinum Ltd., 50%, and Impala Platinum Holdings Ltd., 50%)	Mimosa Mine, east of Zvishavane	1,800,000
Do.	Anglo American Platinum Corp. Ltd.	Unki project	1,440,000 <sup>2</sup>
Concentrate	Zimbabwe Holdings Ltd. (Impala Platinum Holdings Ltd., 86.9%)	Selous concentrator	2,180,000
Do.	Mimosa Investments Ltd. (Aquarius Platinum Ltd., 50%, and Impala Platinum Holdings Ltd., 50%)	Mimosa concentrator, east of Zvishavane	1,900,000
Smelter matte	Zimbabwe Holdings Ltd. (Impala Platinum Holdings Ltd., 86.9%)	Selous smelter	72,000
Pyrite	Iron Duke Pyrites (Gat Investments)	Iron Duke Mine	NA
Vermiculite	Shawa Vermiculite (Pvt.) Ltd.	Shawa Mine, near Dorowa	39,000
Do.	Dinidza Vermiculite Mining Co. (Pvt.) Ltd.	Dinidza Mine, near Dorowa	10,000

<sup>6</sup>Estimated. NA Not available.

<sup>1</sup>Ownership disputed.

<sup>2</sup>Under development or redevelopment.

<sup>3</sup>Significantly more diamond was produced from the area in 2006 during the uncontrolled diamond rush.

<sup>4</sup>Operations suspended.

<sup>5</sup>Nominal capacity 1,000,000 t/yr. Blast furnaces need refurbishment.



