THE MINERAL INDUSTRY OF

ZIMBABWE

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The Republic of Zimbabwe is a landlocked nation in southern Africa surrounded by Zambia to the north, Mozambique to the east, South Africa to the south, and Botswana to the west. It covers an area of 390,580 square kilometers (km^2) and supported a population of 11.34 million in 2000. For 1999 (the latest year for which data were available), the per capita gross domestic product was $2,400 based on 1999 purchasing power parity estimates. The mineral industry was diverse with more than 35 commodities produced from more than 1,000 mines, mostly small; the total value of mineral production exceeded $500[1] million per year and was equal to about 27% of export trade. An estimated 60,000 people are employed in mining. Gold was the most important commodity; output was valued at more than $194 million in 2000, which was down from $244 million in 1999 by value. Zimbabwe was a major contributor to the world supply of chrysotile asbestos, ferrochromium, and lithium minerals.

The year 2000 was a difficult one for Zimbabwe and its mining sector. The country had a second straight year of negative economic growth, high unemployment, a 60% inflation rate, and a decline in exports. The very high costs of domestic borrowing, a severe shortage of fuels and spare parts, and a foreign currency shortage had started to damage the operations and viability of the manufacturing and mining sectors severely, with several smaller mines forced to close during 2000. The Government's commitment of military support to the civil war in the Democratic Republic of the Congo [Congo (Kinshasa)] also was a sizable drain on extremely scarce national resources. The state-sanctioned involuntary expropriation of commercial farm lands threatened to spill over to the mining sector and sharply increased the political risk component of any new foreign investment (U.S. State Department, July 2000, Zimbabwe—Country commercial guide, accessed June 15, 2001, at URL http://www.state.gov/www/about_state/business/com_guides/2001/africa/zimbabwe_ccg2001.pdf).

In addition to economic and political difficulties, Zimbabwe had one of the highest incidences of HIV/AIDS infection in the world; 25% of the adult population between 15 and 49 years old was infected by the end of 1999. An estimated 160,000 deaths were attributed to AIDS in 1999, and since the beginning of the epidemic, more than 900,000 children have been orphaned (Joint United Nations Programme on HIV/AIDS, June 2000, Zimbabwe—Epidemiological fact sheet, accessed June 15, 2001, at URL http://www.unaids.org/hivaidsinfo/statistics/june00/fact_sheets/pdfs/zimbabwe.pdf). The HIV/AIDS epidemic has had a significant impact on mining by adding substantially to direct and indirect labor costs as a result of absenteeism, lost productivity, medical treatment, and skill replacement.

[1]Where necessary, values have been converted from Zimbabwe dollars (Z$) to U.S. dollars at the average exchange rate of Z$44.44=US$1.00 in 2000 and Z$38.31=US$1.00 in 1999.

Production and Trade

Declines in production between 1999 and 2000 were significant (from 17% to more than 60%) in nine major commodities (table 1). These were chromite, coal, copper, diamond, gold, iron ore, nickel, phosphate, and silver. On the positive side, production increases from 4% to 36% were noted in antimony, asbestos, ferrosilicon, graphite, pig iron, lithium, platinum-group metals, crude steel, and vermiculite.

International Monetary Fund data for 1999 indicated that mineral and manufactured metal exports accounted for $550.8 million out of total exports of $1.92 billion for the year. Major exports included gold ($230 million), ferroalloys ($166.5 million), nickel ($48.1 million), asbestos ($35.8 million), and iron and steel ($12.5 million). Export earnings have been progressively declining since 1995 when a total of $736.6 million in minerals and manufactured metals were exported, although this can be attributed in part to declining commodity prices over this period. In 1999, imports of electricity and fuels, including petroleum products were valued at $301.1 million or 14% of total imports valued at $2.21 billion. On a basis of percentage of trade, South Africa, the United Kingdom, Germany, Japan, and the United States were Zimbabwe's major trading partners. South Africa supplied 40% of all imported goods (International Monetary Fund, January 2001, Zimbabwe—Recent economic developments—Selected issues and statistical appendix, IMF Country Report 01/13, accessed June 15, 2001, at URL http://www.imf.org/external/pubs/ft/scr/2001/cr0113.pdf).

Structure of the Mineral Industry

All mining activities come under the Mines and Minerals Act (Chapter 165) (1961), amendments, and associated regulations. The Ministry of Mining, Environment, and Tourism is responsible for the mining sector. All mineral rights are vested in the state through the President of Zimbabwe. Investment projects are sanctioned by the Zimbabwe Investment Center. The Gold Trade Act gives the Reserve Bank of Zimbabwe a monopoly on purchasing and exporting all gold and silver produced in Zimbabwe. Minerals Marketing Corp. of Zimbabwe is responsible for marketing all other minerals and metal products for a commission of 0.875% of sales handled.

The state-owned mining company, Zimbabwe Mining Development Corp. (ZMDC), has an interest in a number of mining operations, conducts exploration and mining, and provides assistance to small-scale miners. The state-owned Industrial Development Corp. of Zimbabwe Ltd. has several subsidiary companies that operate in the industrial mineral sector.

Zimbabwe has a significant local mining industry. More than 500 gold mining operations are registered. Production from the large mines of Ashanti Goldfields Co. Ltd. of Ghana, Kinross

Gold Corp. of Canada, Lonrho Zimbabwe Ltd., and Rio Tinto Zimbabwe Ltd. dominate the gold sector, but the numerous medium- and small-scale producers contribute about 10% to the nation's formal gold production. Alluvial gold panning is Zimbabwe's rural alternative to subsistence farming. The Mining (Alluvial Gold) (Public Streams) Regulations (1991) authorize selective alluvial gold mining, but extensive riverbank erosion and stream siltation have resulted from uncontrolled mining activity. National Oil Co. of Zimbabwe (Noczim) is run as a state monopoly that constrains competition and free market pricing.

Commodity Review

Metals

Chromite.—Zimbabwe Mining and Smelting Company Private Ltd. (Zimasco) produced 621,305 metric tons (t) of chromite, which was an increase of 5% compared with that of 1999. Zimbabwe Alloys Ltd. (Zimalloys), which was the other major producer, produced 104, 053 t of chromite in 2000 compared with 49,943 t in 1999. Because of operating problems at its Inyala Mine since 1999, Zimalloys bought from 50% to 75% of its chromite ore feed for its ferroalloys plant from local independent miners (Robertson Economic Information Services, 2001, Mining tables—Zimbabwe's mine and mineral production figures, accessed January 15, 2002, at URL http://www.economic.co.zw/mining/tables/production.htm).

Copper.—Mhangura Copper Mines (owned by ZMDC) was near depletion and had been relying on an uncertain supply of toll concentrates to stay alive. The failure of the national copper company of Congo (Kinshasa) La Générale des Carrières et des Mines to honor a contract to supply 3,000 metric tons per month (t/mo) of copper concentrates to the Mhangura smelter further jeopardized operations (African Energy & Mining, 2000). After operating at a loss for 1999 and most of 2000, the mine was placed on a care-and-maintenance status, and 400 workers were laid off late in the year (Metal Bulletin, 2000b).

Munyati Copper Mines Ltd. was owned by Reunion Mining plc (75%) and ZMDC (25%) and produced at a rate of about 72,000 metric tons per year (t/yr) of contained copper. In March 2000, Munyati suspended operations following the withdrawal of Anglo American plc, which had acquired Reunion Mining in 1999, from the partnership. ZMDC was seeking a new partner to reopen the mine (Herald [Harare], July 3, 2000, ZMDC seeking strategic partner in Munyati Mines, August 16, 2000, accessed July 1, 2001, at URL http://qzwhre.africaonline.co.zw/herald/full.asp?articleid=3104&issue=303).

Gold.—The gold sector was one the most affected sectors of the industrial economy in 2000—three major mines and several small operations, which included the Connemara, the Eureka, and the Venice Mines, closed. All gold must be sold to the central Reserve Bank of Zimbabwe with payment in local currency at a fixed rate, which was lower than the rate at which the companies could buy foreign exchange. This has put the gold sector at a disadvantage to other companies whose commodities which can be exported for hard currency. For the first time in 20 years, gold production declined to 22.1 t in 2000 from 27.7 t in 1999.

In 2000, Ashanti Goldfields Co. Ltd. of Ghana produced a record 3,489 kilograms (kg) of gold at the Freda-Rebecca Mine compared with 3,396 kg in 1999. Underground production totaled 1.04 million metric tons (Mt) of ore at a head grade of 3.69 grams per metric ton (g/t) gold. Processed tonnage for 2000 was 1 Mt at a grade of 3.89 g/t gold with a recovery rate of 89.8% gold. The operation successfully recovered from a strike in February and mechanical failures at two semi-autogenous grinding mills despite problems with the lack of foreign exchange and the fixed exchange rate coupled with high inflation. Ashanti reported remaining measured and indicated mineral resources at Freda-Rebecca to be 15.8 Mt at a grade of 2.6 g/t gold, of which 5.8 Mt at a grade of 2.4 g/t gold was in the proved and probable ore reserve category. Ashanti was also exploring the RAN gold-copper property 5 kilometers (km) east of its Freda-Rebecca Mine and Bindura (Ashanti Goldfields Co. Ltd., March 2001, Ashanti Goldfields Co. Ltd. annual report for 2000, accessed July, 1, 2001, at URL http://www.ashantigold.com/download/ ashanti2000annualreport.pdf).

In 1998, Battlefield Minerals Corp. of Canada invested $425,000 to install a 720,000-t/yr carbon-in-pulp processing plant to treat tailings and open pit oxide ore at the Pickstone-Peerless gold mine. Production was at a rate of 622 kg of gold in 1999 from tailings and was forecast to be increased to 933 kg of gold with the subsequent startup of oxide mine production in 2000, which did not occur. Following operating losses from the tailings operation in the first half of 2000, Battlefield transferred title to 64 mining claims in the Pickstone-Peerless area to UDC Holdings Limited for sale by public tender in exchange for partial cancellation of Battlefield's indebtedness to UDC Holdings (Battlefield Minerals Corp., August 29, 2000, Battlefield transfers title to 64 mining claims to UDC, press release, accessed July 5, 2001, at URL http://www.infomine.com/index/pr/Pa051770.PDF).

Casmyn Corp. of the United States, which owned the Turk Mine and 18 other smaller gold mines, filed for bankruptcy in late 1999. In April 2000, the U.S. Bankruptcy Court approved its reorganization plan, and the company was subsequently reincorporated as Aries Ventures, Inc. (Aries Ventures, Inc., 2000, Aries Ventures—Key developments, accessed July 2, 2001, at URL http://www.business.com/directory/industrial_goods_and_services/materials/mining_and_minerals/minerals/aries_ventures/key_developments).

Cluff Mining plc acquired the Maligreen gold deposit located approximately 240 km southwest of Harare and other surrounding claims totaling 326 km² from Reunion Mining plc in July 1999. A gold resource of 2.6 Mt at a grade of 4.5 g/t gold was calculated by Reunion. During 2000, Cluff entered into a joint venture with Pan African Mining (Private) Limited whereby Pan African earned a 50% interest in the deposit by bringing the mine into production. First gold was poured in August 2000, and the mine attained full production during October 2000. A total of 18,346 t of oxide ore at a grade of 5.55 g/t gold was processed through the heap-leach and vat-leach facilities during the fourth quarter of 2000; gold production for the quarter totaled 101 kg. Exploration was ongoing to extend the life of the oxide resource from 2000 to 2001. Construction of further facilities for the treatment of the underlying sulfide resources was under consideration (Cluff Mining plc, July 2, 2001, Zimbabwe—Maligreen, accessed July 6, 2001, at URL http://www.cluff-mining.com).

Delta Gold Zimbabwe (Pvt.) Ltd. (100%) commissioned the processing plant at its $25 million Eureka gold project in December 1999 as scheduled. Unable to operate under the economic conditions prevailing in Zimbabwe, Delta suspended operations in June 2000 and placed the Eureka Mine on a care-and-maintenance basis until conditions improved (Delta Gold Ltd., 2001, Operations—Eureka, accessed July 6, 2001, at URL http://www.deltagold.com.au).

Falcon Gold Zimbabwe Ltd. (a subsidiary of Falcon Investments S.A. of Luxembourg) closed the Venice Mine and continued operations at the Dalny and the Golden Quarry Mines where production totaled 1,300 kg of gold in 2000. Consolidated Trillion Resources Ltd. of Canada sold its 50% interest in the Jena gold mine to its partner ZMDC and put its Ndarama gold mine up for sale. Total resources at the Jena Mine were estimated to be 1.7 Mt at a grade of 4.7 g/t gold; the mine produced more than 466 kg of gold in 1999 (Mbendi Information Services, May 15, 2001, Zimbabwe—Mining—Gold mining, accessed July 6, 2001, at URL http://www.mbendi.co.za/indy/ming/gold/af/zi/p0005.htm).

In August 2000, First Quantum Minerals Ltd. suspended operations at its Connemara gold mine pending an improvement in the economic fundamentals in Zimbabwe. Minimum staffing levels would be maintained to complete leaching of current ore pads and to ensure the integrity of the Connemara assets. The mine produced 671 kg of gold in 1999 from 663,200 t of ore at a grade of 2 g/t gold. Remaining resources at yearend 1999 were estimated to be 6.5 Mt at a grade of 2.43 g/t gold, of which 3.5 Mt at a grade of 2.53 g/t gold was in the reserves category (First Quantum Minerals Ltd., 2001, Gold operations—Connemara gold mine, accessed July 2, 2001, at URL http://www.first-quantum.com).

Kinross Gold Corp. of Canada owned (100%) and operated the Blanket underground gold mine and tailings-retreatment facility in the southwestern portion of the country. During 2000, the mill processed 208,350 t of underground ore at an average grade of 3.98 g/t gold and 497,450 t of tailings at an average grade of 1.11 g/t gold compared with 205,300 t and 1.04 Mt, respectively, in 1999. Gold production was 1,075 kg compared with 1,174 kg in 1999. The company was continuing with underground haulage development and shaft sinking in the Eroica ore zone during 2001 (Kinross Gold Corp., 2001, Operations—Mining—Blanket, accessed July 2, 2001, at URL http://www.kinross.com/op/min/bla.htm).

Lonmin plc of the United Kingdom operated six gold mines during 2000—Arcturus, How, Mazowe, Muriel, Redwing, and Shamva; the Tiger Reef Mine was sold in June. Production declined nominally to 5,879 kg of gold in 2000 from 6,003 kg in 1999; Lonmin noted that cash operating costs were highly distorted and increased by 40% to $260 per ounce owing to the prevailing macroeconomic conditions. Proved and probable underground reserves as of June 30, 2000, and based on a gold price of $280 per ounce were reported to contain more than 28,900 kg of gold at an average grade of 6.1 g/t gold. Exploration during 1999 and 2000 highlighted the expansion potential of the How and the Shamva Mines, in particular (Lonmin plc, Annual review for 2000, accessed July 6, 2001, at URL http://www.lonmin.com/files/Lonmin2000_Annual_Review.pdf).

Rio Tinto Zimbabwe had a 56% interest in and operated the Renco and the Patchway underground gold mines and the Cam dump gold retreatment plant. Total gold production in 2000 was 2,190 kg, which was only 1% less than that of 1999. Total underground reserves were reported to be 300,000 t at a grade of 9.49 g/t gold (Rio Tinto plc, 2001, Annual report for 2000, accessed July 5, 2001, at URL http://www.riotinto.com/library/Publications/AnnualReport.pdf).

Ferroalloys.—Zimalloys produced 24,967 t of ferrochrome and 19,631 t of ferrosilicon in 2000 compared with 32,902 t and 16,267 t, respectively, in 1999. Zimalloys, in which the Japanese companies Japan Metals and Chemicals Co. Ltd. and Mitsui and Co. Ltd. each held a 25% interest, operated a 40,000-t/yr low-carbon ferrochrome plant at Gweru. Affected by internal economic conditions and by weak world markets, Zimalloys suspended operations for 2 months during 2000. Zimasco, which was the largest ferrochrome producer, increased its output by 5% in 2000 to 221,357 t (Robertson Economic Information Services, 2001, Mining tables—Zimbabwe's mine and mineral production figures, accessed January 15, 2002, at URL http://www.economic.co.zw/mining/tables/production.htm).

Iron and Steel.—In an apparent effort to privatize its 83% ownership of the steel sector, the Government invited three companies—Ferrostaal AG of Germany, Shougang Corp. of China, and Voest-Alpine of Austria—that were involved in the rehabilitation of Zimbabwe Iron and Steel Co. (Zisco) to become equity partners in Zisco. Rehabilitation work has included refurbishment of blast furnace no. 4 and modernization of the 160,000-t/yr continuous bar and rod mill (Metal Bulletin, 2000a). The Zisco plant had the capacity to produce 800,000 t/yr of crude steel. Iron ore output in 2000 was 450,636 t.

Nickel.—Bindura Nickel Corp. (BNC) [owned by Anglo American (53.1%)] operated the Madziwa, the Trojan, and the Shangani nickel mines; a nickel smelter; and a nickel refinery. The Madziwa Mine was closed down at yearend 2000. The Trojan and the Shangani Mines had remaining mine lives of 14 and 5 years, respectively. Combined measured and indicated resources at BNC were estimated to be 12.3 Mt at a grade of 0.64% nickel, of which 1.9 Mt at grade of 0.56% nickel was classified as ore reserves (Anglo American plc, March 13, 2001, Annual report, accessed July 2, 2000, at URL http://www.angloamerican.co.uk/documents_v1/annualin/2000_ann/Report2000). Bindura Smelting & Refinery Ltd. produced 6,693 t of nickel from ore from its mines in Zimbabwe. Rio Tinto Zimbabwe, which operated the Empress nickel refinery that processed matte supplied from Botswana on a toll basis, toll refined 6,940 t nickel in 2000.

Platinum-Group Metals.—Compared with 1998 when the Hartley Mine was in full operation, national platinum-group metals (PGM) production in 2000 declined by around 80% to 366 kg of platinum, 505 kg of palladium, and 40 kg of rhodium. The only operating mine in 2000 was Zimasco's Mimosa Mine at the southern end of the Great Dyke. During 1999, BHP Minerals Zimbabwe (a subsidiary of BHP Ltd. of Australia) closed down the Hartley platinum complex and sold its 67% interest to Zimbabwe Platinum Mines Ltd. (Zimplats) for $3 million, along with its interest in the Mhondoro platinum project. Zimplats now controls all of the PGM assets in the Hartley, Ngezi, Mhondoro and Selous areas, with total resources estimated at 9.7 million kilograms (Mkg) of PGM

(three platinum-group elements plus gold), of which 5.1 Mkg was platinum (Zimbabwe Platinum Mines Ltd., 2001, Company overview, accessed June 29, 2001, at URL http://www.zimplats.com/documents/overview.htm).

Zimplats [owned by Delta Gold (51%)] continued to seek financing for its new $48 million Ngezi platinum project. The project would truck 180,000 t/mo of ore from a new open pit mine at Ngezi South, 77 km north to the Selous Metallurgical Complex at the closed Hartley Mine. The project would produce 3,350 kilograms per year (kg/yr) of platinum, 2,550 kg/yr of palladium, 250 kg/yr of rhodium, 370 kg/yr of gold, and minor byproduct nickel and copper. Subject to financing and the final transfer of BHP assets to Zimplats, construction on the project was expected to begin by mid-2001 (Tessel, 2001).

In September, Anglo American Corp. put a hold on investment in its proposed $70 million Unki Project near Shurugwi. The project would produce 3,670 kg/yr of PGM and 2,500 t/yr of copper and nickel (Darren Schuettler, Barney Online News, September 28, 2000, Anglo says eroding confidence halts Zim investment, accessed September 29, 2000, at URL http://www.barney.co.za/reuters/sep00/anglo28.htm).

Uranium.—Licon Mines (Pvt.) Inc. owned the rights to the Kanyemba sandstone uranium-vanadium deposit in the northeastern part of the country. The company was owned equally by Cassiar Mines and Metals Inc. (formerly Minroc Mines Inc.) and Cline Mining Corp., both of Canada. On the basis of Licon's 1998 estimate, $20 million would be required to develop an underground mine and processing facility to produce 453,600 kg/yr of uranium oxide and 793,800 kg/yr of vanadium oxide (Cassiar Mines and Metals Inc., September 8, 1998, Minroc acquires new uranium project, accessed July 2, 2001, at URL http://www.cassiarmagnesium.com/press.htm). A $3 million feasibility study began in 1999 and continued in 2000. Cassiar indicated in its 1999 annual report that a separate company would be incorporated in Canada to develop the Kanyemba project and that Cassiar would focus its efforts on a major magnesium development in northern British Columbia. Cline reported that resources have been calculated at 14 pounds per metric ton [7 kilograms per metric ton (kg/t)] of uranium oxide and 30 pounds per ton (15 kg/t) of vanadium oxide and that drilling through 2000 had identified 7 million pounds (3.2 Mkg) of uranium oxide and 15 million pounds (6.8 Mkg) of vanadium oxide. The companies will continue to refine the feasibility studies while awaiting an upturn in world uranium markets (Cline Mining Corp., April 2001, Annual report 2000, accessed July 6, 2001, at URL http://www.sedar.com/csfsprod/data24/filings/00347637/00000001/f:%5CDATA2%5CSEDAR%5C39527%5C2001agm%5CAnReport.pdf).

Industrial Minerals

Asbestos.—African Associated Mines (Pvt.) Ltd. produced chrysotile asbestos from its Gaths and Shabanie Mines and employed about 6,000 people. Production in 2000 was 145,203 t of asbestos valued at $60 million (Robertson Economic Information Services, 2001, Mining tables—Zimbabwe's mine and mineral production figures, accessed January 15, 2002, at URL http://www.economic.co.zw/mining/tables/production.htm).

Cement.—Cement production and sales were down for 2000 because as fuel shortages and heavy rains had a negative effect on construction. Portland Holdings Ltd. through United Portland Cement Manufacturing operated an 11-year-old cement plant at Bulawayo with the capacity to produce 420,000 t/yr. The 60-year-old cement clinker kiln with a capacity of 300,000 t/yr at Colleen Bawn was closed in 2000. Portland Holdings produced 743,700 t of cement in 1999 and 250,600 t during the first half of 2000. Circle Cement Ltd. was the other major producer out of Harare. The two companies had the capacity to produce about 1.44 million metric tons per year of cement, which was about 91% of internal demand. The Government's Industry and Trade Competitive Commission issued a report in which the two main companies were charged with restrictive trade practices that it claimed were creating distortions in supply and distribution of cement (Financial Gazette, April 6, 2000, Probe into cement industry reveals unfair practices, accessed May 22, 2000, at URL http://www.cyberplexafrica.com/fingaz/99/stage/archive/000405/companies17336.html).

In May, a consortium of local and foreign investors, which were incorporated as Gocha Cement Corp., announced plans to invest more than $110 million to build a new cement plant with a capacity of 730,000 t/yr of cement, primarily for local export, in Masvingo (Financial Gazette, May 18, 2000, Group to build cement plant in Masvingo, accessed May 22, 2000, at URL http://www.fingaz.co.zw//99/stage/archive/000517/companies4162.html). A smaller 270,000-t/yr cement plant, which was built by Chinese Building Materials Corp. and the state-owned Industrial Development for $45 million in Lalapanzi, was scheduled to be operational by September (Herald, 2000).

Diamond.— Rio Tinto Zimbabwe and Trans Hex International Ltd. were actively exploring for kimberlites in an area bordering the Limpopo River, east of Beit Bridge.

Granite.—Zimrock International (Pvt.) Ltd. (a Stone Holdings Group subsidiary) operated a granite cutting and polishing facility at Ruwe that was supplied with granite from the Mutoko Quarry. Stone Holdings was owned by the Marlin Corp. of South Africa (51%) and the Industrial Development (49%). Exports of polished granite to markets in Africa and Europe were expected to reach $100 million in 2000 (Financial Gazette, February 24, 2000, Ruwa-based granite firm expects US$100 million from exports, access May 22, 2000, at URL http://www.fingaz.co.zw//99/stage/archive/000223/companies749.html).

Mineral Fuels

Coal.—Wankie Colliery Co. Ltd. operated the country's only coal mine near Hwange. In 2000, production declined by 17% to 3.8 Mt and was valued at about $58 million. The Government was seeking buyers for its 40% interest in Wankie. Its two main customers were Zisco and the Zimbabwe Electric Supply Authority powerplant at Hwange. Rio Tinto Zimbabwe was conducting a feasibility study on developing the Gokwe North Coal project which would support a new 350-megawatt coal-fired powerplant to be built by the Government (Mbendi Information Services, May 15, 2001, Zimbabwe—Mining—Coal mining, accessed July 6, 2001, at URL http://www.mbendi.co.za/indy/ming/coal/af/zi/p0005.htm).

Petroleum.—Faced with continuing financial problems and heavy indebtedness to electricity suppliers in Mozambique and South Africa that resulted in severe fuel shortages, the Government announced its intention in November to end Noczim's monopoly on purchasing imported oil products. Noczim's role will be changed to that of a manager of a national strategic oil reserve. A new agency, the Single Procurement Agency, will be set up to increase the participation and competition among independent oil companies and buyers. During future shortages the Single Procurement Agency would buy oil from Noczim's strategic reserves for onward sale to oil companies (African Energy Intelligence, 2000). Fuel shortages were also driving up the demand for firewood as a fuel substitute and adding to deforestation and pollution problems.

Infrastructure

Most of landlocked Zimbabwe's bulk commodities were moved by rail on the state-owned National Railways of Zimbabwe (NRZ). All major cities and industrial centers were linked to Botswana, Mozambique, South Africa, and Zambia by the NRZ. Petroleum products were piped through Mozambique via the Beira pipeline to Feruka and then moved west via the Mutare-Harare pipeline or trucked on Zimbabwe's 85,784-km road network. Additional petroleum products were imported via railroad tanker cars through South Africa.

Outlook

The short-term outlook for the mining sector was not favorable. Excess Government intervention in the economy and in state-run industries has been a major contributor to the growing number of closed mines and suspended projects that are undermining the ability of the mining sectors to continue to generate more than 25% of Zimbabwe's foreign export earnings. External market forces and weak commodity prices have also had a serious impact on ferroalloys, gold, steel, and uranium developments. On the more positive side, Government efforts to privatize its interests in the energy, mining, and rail sectors and to loosen its foreign exchange rules should stimulate the economy and open competition and entrepreneurship. The natural resource endowment and a well-developed infrastructure remain in place. Officials are optimistic that in the longer term, mineral development will return to its key role in the economy.

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Major Sources of Information

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TABLE 1
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1996	1997	1998	1999	2000 e/
METALS						
Antimony, mine output, concentrate, Sb content		5	--	--	--	--
Chromite, gross weight	thousand tons	697	670 e/	605	641 3/	725 3/
Cobalt, metal 4/		106 3/	126	138	121 3/	126 3/
Copper:						
Mine output, concentrate, Cu content		10,000 e/	9,000 e/	6,000 r/ e/	4,511	2,104
Metal:						
Smelter output, blister/anode, primary e/		18,000 r/	18,000 r/	10,000 r/	10,000 r/	10,000
Refinery output, refined/cathode, primary		15,100 r/	13,000 r/	11,000 r/	10,000 r/	10,200
Gold	kilograms	24,699	24,156	25,175 r/	27,666 3/	22,070 3/
Iron and steel:						
Mine output, iron ore:						
Gross weight	thousand tons	324	479 r/	372 r/	599	451 3/
Fe content e/	do.	160	240	190	300	225 3/
Metal:						
Pig iron e/	do.	210	216	230	230	240
Steel, crude	do.	212	214	220	255 r/	269 3/
Ferroalloys:						
Ferrochromium	do.	243	233	247	244 r/	246 3/
Ferrosilicon chromium	do.	33	17	21	16 r/	20
Nickel:						
Mine output, concentrate, Ni content		11,561	12,963	12,872	11,164	8,160 e/
Refinery output, refined metal		9,694	10,300 5/	8,732	9,137 r/	6,693 3/
Platinum-group metals:						
Palladium	kilograms	120 e/	245	1,855	342	366 3/
Platinum	do.	100 e/	345	2,730	479	505 3/
Rhodium	do.	-- e/	27	177	37 r/	40
Selenium e/	do.	2,000	1,000	500	500	500
Silver	do.	9,982	5,923	6,681	5,181 r/	3,536 3/
Tin, mine output, Sn content e/		10	10	1	1	1
INDUSTRIAL MINERALS						
Asbestos	thousand tons	165	145	123	115	145 3/
Barite		-- e/	1,217	1,844	1,000 e/	1,000
Cement, hydraulic e/	thousand tons	1,000	1,100	1,100	1,000	1,000
Clays:						
Bentonite (montmorillonite)		185,953 r/	186,000 e/	135,785	140,000 e/	140,000
Other clays 6/		14,479	14,000 e/	2,818	3,000 e/	3,000
Diamond	carats	437,266	421,307	28,732	45,324	16,678 3/
Emerald	kilograms	1,080	1,000 e/	19	20	20
Feldspar		3,248	2,254	2,241	2,250	2,200
Graphite		7,691	12,779	13,806	11,405 r/	11,812 3/
Kyanite		141	1,113	3,780	4,000 e/	4,000
Lithium minerals, gross weight		30,929	49,833	28,055	36,671	41,957 3/
Magnesite		10,659	13,050	4,321	4,000 e/	4,000
Mica		1,500	30	1,309	1,300	1,300
Nitrogen, N content of ammonia e/		61,400	63,700	56,500	60,800 3/	58,400 3/
Phosphate rock, marketable concentrate	thousand tons	123	94	91	126 r/	110
Pigments, iron oxide		400 e/	-- e/	--	--	--
Stone, sand and gravel:						
Granite		109,268	109,903	125,576	130,000 e/	130,000
Limestone	thousand tons	1,425	1,027	1,473	1,500 e/	1,500
Quartz 7/	do.	96	52	10	10 e/	10
Sulfur						
Pyrite:						
Gross weight		59,831	48,101	52,908	48,793 r/	66,032
S content (32.6%)		19,500 r/	15,700 r/	15,250 r/	15,900 r/	21,500
Byproduct acid, metallurgical and coal process gas e/		5,000	5,000	2,500	2,500	2,500
Talc		1,076	1,023	1,039	1,000 e/	1,000
Vermiculite		10,249	14,841	14,804	13,898 r/	18,935

See footnotes at end of table.

TABLE 1--Continued
ZIMBABWE: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1996	1997	1998	1999	2000 e/
MINERAL FUELS AND RELATED MATERIALS						
Coal, bituminous	thousand tons	5,175	4,750	5,047	4,576 r/	3,808 3/
Coke, metallurgical e/	do.	600	600	600	600	600

e/ Estimated. r/ Revised. -- Zero.
1/ Table includes data available through June 2001.
2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.
3/ Reported figure.
4/ "Metal" includes metal content of compounds/salts and may include cobalt recovered from nickel-copper matte imported for toll refining.
5/ Excludes toll refined nickel.
6/ Includes fire clay.
7/ Includes rough and ground quartz, as well as silica sand.