

# THE MINERAL INDUSTRY OF MOZAMBIQUE

By George J. Coakley

Following nearly 30 years of fighting both prior to gaining independence from Portugal in 1974 and subsequently to resolve a prolonged internal civil war, 1994 finally brought peace and a freely elected government to Mozambique. Efforts since then to rebuild the economy have placed a major emphasis on mineral-resource development and regional economic integration. Development plans to date depend heavily on the energy potential of the underutilized Cabora Bassa hydroelectric dam; the Pande, Temane, and Buzi natural gas fields; and the country's coal resources at Moatize; along with modernization of the Indian Ocean export harbors at Beira, Maputo-Matola, and Nacala.

Official exports were dominated by bauxite, gemstones, gold, and marble. In addition to active exploration for gold and gemstones and the recent opening of new gold and graphite mines and a renovated marble mine, several major, large scale projects were in various stages of development planning. Billiton Plc's South African subsidiary, Alusaf, Ltd. in partnership with the Industrial Development Corp. (IDC) of South Africa has proposed to form Mozambique Aluminum Co., to be referred to as Mozal, to develop a \$1.1 billion, 245,000-metric-ton-per-year (t/yr) aluminum smelter 17 kilometers west of Maputo by 2000. JCI Ltd. of South Africa and Companhia Vale do Rio Doce of Brazil are planning a \$2 billion investment to develop 2.2 billion tons of coking coal at Moatize and an associated export facility. Enron Development Corp. of the United States plans to invest at least \$1 billion to develop the estimated 3 trillion cubic feet of reserves in the Pande gasfield and associated pipelines needed to feed other industrial projects. JCI Ltd. is looking at developing a \$0.55 billion, 2.6-million-metric-tons-per-year (Mt/yr), hot briquetted iron ore plant near the port of Beira, using iron ore from Brazil and Zimbabwe and Pande gas. IDC is examining the feasibility of combining Pande gas with stockpiled byproduct magnetite ore from the Palabora Copper Mine in South Africa to build a \$1-billion, 4-Mt/yr direct-reduced-iron plant near Maputo. An adjacent 3.4-Mt/yr slab steel plant is also being considered. In titanium developments, Gencor Ltd. of South Africa's Genbique subsid-

ary is planning to develop the Moebase/Tigen mineral sands project at a cost of \$450 million by 1999-2000; and BHP International Minerals of Australia and Kenmare Resources Plc. of Ireland planned to invest \$300 million to develop the Congolone titaniferous sands concession near Angoche. The Congolone project would produce 35,000 t/yr zircon, 418,000 t/yr ilmenite, and 8,000 t/yr rutile by 2000. Additional substantial investment is being made to upgrade or develop road, railroad, port capacity, and hydroelectric power infrastructure.

## Major Sources of Information

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TABLE 1  
MOZAMBIQUE: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1992	1993	1994	1995 e/	1996 e/
Bauxite	8,340	6,000	9,620	10,700	10,700
Cement, hydraulic e/	thousand tons	30	20	20	30
Clays, bentonite	20	100 e/	3,350	3,500	3,500
Coal, bituminous	48,000	48,400	58,190	60,610	60,600
Copper: Concentrate:					
Gross weight	--	--	1,240	--	--
Cu content e/	--	--	259	--	--
Gemstones: Semiprecious:					
Cut stones, all types	carats	8,450	7,690	6,450	6,000
Rough stones e/ 3/	kilograms	750	560	7,000	8,000
Gold 4/	do.	296	149	6,804 r/	6,800 r/
Graphite, concentrates	--	10	430	4,000 r/	5,000
Marble:					
Block	cubic meters	919	1,380	1,500	1,500
Slab	square meters	--	34	52,300	52,300
Salt, marine e/		30,000	35,000	40,000	40,000

e/ Estimated. r/ Revised.

1/ Data available through March 10, 1998.

2/ In addition to the commodities listed, modest quantities of unlisted varieties of crude construction materials (other clays, sand and gravel, and stone) presumably are produced, as is a small amount of natural gas. For these commodities, output is not reported quantitatively and information is insufficient to make reliable estimates.

3/ Artisanal production of rough gemstones include in order of importance: tourmaline, garnet, dumortierite, aquamarine, emerald, and morganite.

4/ Does not include artisanal gold, for which there were no data, but which the Government has estimated at about 4,000 kilograms per year.