



# 2006 Minerals Yearbook

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MALAWI

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# THE MINERAL INDUSTRY OF MALAWI

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Malawi was a producer of cement, coal, crushed stone, dolomite, kaolin, lime, and limestone for domestic consumption. The country also produced and exported dimension stone and gemstones. Malawi was not a globally significant producer or consumer of minerals.

## Production

In 2006, the reported production of gemstones and coal increased by 34% and 7%, respectively; cement production was estimated to have increased by 25%, and limestone production for use in the cement industry, by 22% (table 1). Lime output was estimated to have declined by 4% in 2006. The mining of ornamental stone was stopped in 2005.

## Structure of the Mineral Industry

Most of the mining and mineral processing operations in Malawi were privately owned, including the cement plants, the Mchenga coal mine, and the Chimwadzulu Hill ruby and sapphire mine. Small-scale and artisanal miners produced crushed stone, gemstones, and lime (table 2).

## Commodity Review

### Metals

**Gold, Nickel, and Platinum-Group Metals.**—Lisungwe plc of the United Kingdom explored at the Chimwadzulu Hill property for nickel and platinum-group metals (PGM); the Choma Hill, for gold; and at the Likudzi, for gold and PGM. These properties are located in the Ntcheu District. Albidon Ltd. of Australia explored for nickel and PGM at its Mpemba project near Blantyre (Lisungwe plc, 2006).

**Titanium and Zirconium and Hafnium.**—Allied Procurement Agency and Mineral Sands Ltd. of South Africa started a pilot project for mining rutile and zircon at Chipoka Bay on the west side of Lake Chilwa in 2006. The companies planned to start large-scale mining by November 2007. Contained resources of zircon and rutile at Chipoka Bay amounted to 6.7 million metric tons (Mt) and 3.6 Mt, respectively. Garnet and ilmenite resources were not economic because of transportation costs (Malawi Nation, 2006; Industrial Minerals, 2007).

Millennium Mining Ltd. of Australia was considering the development of the Makanjila and the Salima Bay mineral sands deposits. The company planned to produce 500,000 metric tons per year (t/yr) of ilmenite from Makanjila and Salima, which would be smelted at Chipoka. Development of the smelter, which was expected to produce 250,000 t/yr of titanium slag, depended on Millennium's ability to obtain power supplies from Mozambique (Mining Review Africa, 2005).

## Industrial Minerals

**Cement.**—Portland Cement Company Ltd. (a subsidiary of Lafarge S.A. of France) operated a cement plant with a capacity of 200,000 t/yr; the company's market share amounted to about 75% in 2006. Shayona Cement Corp. planned to increase its cement production to 110,000 t/yr from 37,000 t/yr in 2006; it is unclear whether the expansion actually took place (Malunga, 2006; Lafarge S.A., 2007, p. 29).

**Rare-Earth Elements.**—Rare Earths Company planned to produce at least 6,000 t/yr of rare-earth minerals from the Kangankunde deposit in central Malawi. In May 2005, the company suspended the project because of an inability to find joint-venture partners (Chimwala, 2005).

## Mineral Fuels and Related Materials

**Uranium.**—Paladin Resources Ltd. of Australia was engaged in a bankable feasibility study of the Kayelekera uranium project in northern Malawi. The cost of the project was estimated to be about \$130 million. Paladin planned to produce 1,000 t/yr of uranium oxide ( $U_3O_8$ ) starting in mid-2008 if the feasibility study yields favorable results. Uranium could become Malawi's second ranked export if the project proceeds. Resources at Kayelekera were estimated to be 18.7 Mt at a grade of 0.08% uranium (Phiri, 2006; Resource Information Unit, 2007).

In December 2005, Red Rock Resources plc of the United Kingdom acquired the Chintheche and the Machinga properties, which are located on the western shore of Lake Malawi and north of Zomba, respectively. Red Rock planned to start exploration in 2007. In March 2006, Globe Uranium Ltd. of Australia acquired the Kanyika and the Livingstonia properties, which are located northeast of Kasungu and south of Chilumba, respectively. The company engaged in exploration in October (Resource Information Unit, 2007).

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

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	2002	2003	2004	2005 <sup>c</sup>	2006 <sup>c</sup>
Cement, hydraulic	109,300 <sup>r</sup>	161,000 <sup>r</sup>	119,500	160,000 <sup>r</sup>	200,000
Coal, bituminous	43,372	47,037	40,891	44,900 <sup>r,3</sup>	48,000 <sup>3</sup>
Dolomite <sup>e</sup>	4,394 <sup>3</sup>	5,400	5,400	5,400	5,400
Gemstones kilograms	2,305	2,297	1,820	1,620 <sup>r,3</sup>	2,171 <sup>3</sup>
Kaolin <sup>e</sup>	636 <sup>3</sup>	800	800	800	800
Lime	6,776	18,877	23,095	22,000 <sup>r</sup>	21,147 <sup>3</sup>
Ornamental stone	120	450	320	20	--
Stone:					
Crushed for aggregate	113,992	159,954	168,600	170,000 <sup>r</sup>	170,000
Dimension, crude and partly worked	130	100 <sup>e</sup>	--	--	--
Limestone, for cement	86,234	23,965	21,224	28,000	34,226 <sup>3</sup>

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through November 15, 2007.

<sup>2</sup>In addition to commodities listed, modest quantities of gypsum and salt and unlisted varieties of crude construction materials (clays, and gravel and other stone) may also be produced, but information is inadequate to make reliable estimates of output.

<sup>3</sup>Reported figure.

TABLE 2  
MALAWI: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Cement	Portland Cement Co. Ltd. (Lafarge S.A., 75.17%)	Plant at Blantyre	200,000.
Do.	Shayona Cement Corp.	Plant at Livwezi	37,000.
Coal, bituminous	Mchenga Coal Mines	Mine at Mchenga	60,000.
Dimension stone	Ilomba Granite of Blantyre <sup>1</sup>	Mine at Ilomba Hill	NA.
Fertilizer	Optichem Ltd.	Plant at Blantyre	40,000.
Limestone	Shayona Cement Corp.	Mine in Kasungu Province	NA.
Ruby and sapphire kilograms	Agricola Resources plc	Mine at Chimwadzulu Hill	420 sapphire <sup>e</sup> ; 180 ruby. <sup>e</sup>

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

<sup>1</sup>Not operating in 2006.