



2008 Minerals Yearbook

MALAWI

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 mined and exported ornamental stone and such gemstones as amethyst, garnet, ruby, sapphire, and tourmaline. Malawi was not a globally significant producer or consumer of minerals.

Production

In 2008, limestone production for use in the cement industry increased by an estimated 76%, and cement, by an estimated 30%. In 2007 (the latest year for which reported data were available), the production of gemstones increased by 71%; ornamental stone, 42%; and aggregates, 18%. Lime output declined by 10% (table 1).

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 Nyala ruby and sapphire mine. Small-scale and artisanal miners produced aggregates, brick clay, gemstones, and lime (table 2).

Commodity Review

Metals

Copper and Nickel.—In 2008, Lisungwe plc of the United Kingdom carried out drilling at the Chimimbe Hill property in western Malawi. Lisungwe reported in late December that the Chimimbe Hill project was subeconomic at world nickel prices of \$10,000 per metric ton. The company indicated that higher nickel prices and lower production costs from mining domestic pyrite deposits to produce sulfuric acid could improve the outlook for the project. Lisungwe expected to obtain a resource estimate in January 2009 (Lisungwe plc, 2008).

In October 2008, MM Mining plc of the United Kingdom conducted a drilling program at the Ngala Hills copper prospect. MM Mining was also engaged in a joint venture with Albidon Ltd. of Australia to explore at the Mpemba Hill nickel-copper prospect (Ministry of Energy and Mines of Malawi, 2009c).

Niobium (Columbium), Tantalum, and Zirconium.—In March 2008, Globe Metals & Mining Ltd. of Australia estimated that resources at Kanyika were 56.4 million metric tons (Mt) at a grade of 0.48% zircon, 0.26% niobium pentoxide (Nb_2O_5), 0.012% tantalum pentoxide (Ta_2O_5), and 0.007% uranium oxide (U_3O_8). The company released the results of its scoping study in June (Globe Metals & Mining Ltd., 2008a; Ministry of Energy and Mines of Malawi, 2009b).

Globe was considering the development of a new mine and ferroniobium plant at Kanyika. In the company's scoping study, planned production was between 3,000 and 4,000 metric tons

per year (t/yr) of niobium contained in ferroniobium, between 44 and 59 t/yr of Ta_2O_5 , and between 8,500 and 13,700 t/yr of zircon. Initial capital costs were estimated to be between \$156 million and \$177 million. Globe started a prefeasibility study in September 2008. Depending on the results of the study, production could start in 2011 (Globe Metals & Mining Ltd., 2008a, b).

Industrial Minerals

Cement and Stone, Crushed.—Portland Cement Company Ltd. (a subsidiary of LaFarge S.A. of France) produced cement from imported clinker and gypsum. In 2008, LaFarge was engaged in a drilling program at the Chenkumbi Hills limestone deposits in the Machinga District. Depending on favorable results, LaFarge could open a new limestone quarry at Chenkumbi Hills in late 2010 or early 2011. Domestic cement prices could decline by between 15% and 20% because of the use of lower cost local raw materials (Chikoko, 2008).

Shayona Cement Corp. was producing at the rate of 55,000 t/yr of cement in late 2008. The company quarried limestone from Livwezi for use in its plant. By the end of 2009, Shayona planned to increase its cement output capacity to nearly 150,000 t/yr (Ministry of Energy and Mines of Malawi, 2009c).

Gemstones.—In July 2008, the Nyala Mine at Chimwadzulu Hill reopened after closing in early 2006. Production was nearly 4 kilograms per year (kg/yr) of gem-quality ruby and sapphire; between 5% and 10% of the mine's output was gem quality. Plans by Columbia Gem House Inc. of the United States to expand capacity to as much as 70 kg/yr of gem-quality ruby and sapphire were on hold because of the difficulties in obtaining credit during the global economic downturn (Ministry of Energy and Mines of Malawi, 2009a).

Phosphate Rock.—In mid-2008, Optichem Ltd. started trial mining at the Tundulu phosphate deposit in the Phalombe District. Optichem estimated that the use of locally mined phosphate rock could lower the price of fertilizers by at least 33%. Resources at Tundulu were estimated to be 2 Mt at a grade of 17.5% phosphorous pentoxide (P_2O_5) (Ministry of Energy and Mines of Malawi, 2009b).

Rare-Earth Elements.—Lynas Corp. Ltd. of Australia held the Kangankunde rare-earth deposit. Resources were estimated to be 2.53 Mt at a grade of 4.24% rare-earth minerals. Lynas planned to produce 5,000 t/yr of rare-earth minerals by 2012 at Kangankunde (Lynas Corp. Ltd., 2007; Curtis, 2008, p. 6).

Mineral Fuels and Related Materials

Uranium.—Paladin Resources Ltd. of Australia was engaged in the construction of a new open pit mine at the Kayelekera uranium deposit in northern Malawi. The life of the project was estimated to be 11 years; Paladin planned to produce about 1,500 t/yr of uranium oxide (U_3O_8) starting in the first quarter

of 2009. Reserves at Kayelekera were estimated to be 10.5 Mt at a grade of 0.109% U₃O₈. The Kayelekera Mine was expected to increase Malawi's exports by 25%, and the gross domestic product, by 10% (African Mining, 2008).

In 2008, Globe Metals & Mining Ltd. of Australia conducted a drilling program at Livingstonia; the company also held the Nthalire property. Globe was considering uranium production at the Kanyika project. Africa Energy Resources Ltd. of the United Kingdom completed geochemical rock chip and soil sampling at the Majete and the Rumphu properties in May. Mantra Resources Ltd. of Australia explored at Chikangawa, Chintheche, and Nanzeka. Oropa Ltd. of Australia engaged in exploration at the Chitunde and the Mzimba Northwest properties (Globe Metals & Mining Ltd., 2008a, b; Mantra Resources Ltd., 2008, p. 18-19; Oropa Ltd., 2008, p. 14-17).

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TABLE 1
 MALAWI: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2004	2005	2006	2007	2008 ^c
Cement, hydraulic	119,500	166,000	187,600	185,300	240,000
Coal, bituminous	40,891	51,870	60,408	58,550	60,000
Dolomite ^e	5,400	5,400	5,400	5,400	5,400
Gemstones kilograms	1,820	1,994	2,171	3,710	3,700
Kaolin ^c	660 ^r	790 ^r	920 ^r	1,000 ^r	1,000
Lime	23,095	22,733	21,147	18,965	19,000
Ornamental stone	320	72	126	179	180
Stone:					
Crushed for aggregate	168,600	171,284	191,968	226,351	230,000
Limestone, for cement	21,224	28,755 ^r	34,226 ^r	42,088 ^r	74,000

^cEstimated; estimated data are rounded to no more than three significant digits. ^rRevised.

¹Includes data available through August 12, 2009.

²In addition to commodities listed, modest quantities of brick clay, dimension stone, gypsum, phosphate rock, and salt were reportedly produced, but information is inadequate to make reliable estimates of output.

TABLE 2
 MALAWI: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Cement	Portland Cement Company Ltd. (LaFarge S.A., 75.17%)	Plant at Blantyre	200,000.
Do.	Shayona Cement Corp.	Plant at Livwezi	55,000.
Coal, bituminous	Mchenga Coal Mines	Mine at Mchenga	60,000.
Dimension stone	Ilomba Granite Company Ltd.	Mine at Ilomba Hill in Chitipa District	NA.
Do.	Granite Ltd.	Mine in Mzimba District	NA.
Fertilizer	Optichem Ltd.	Plant at Blantyre	40,000.
Limestone	Shayona Cement Corp.	Mine at Livwezi	74,000. ^c
Phosphate rock	Optichem Ltd.	Mine at Tundulu	NA.
Ruby and sapphire kilograms	Nyala Mines Ltd. (subsidiary of Columbia Gem House Inc.)	Nyala Mine at Chimwadzulu Hill	30 sapphire; 15 ruby. ^c

^cEstimated. Do. Ditto. NA Not available.