



2009 Minerals Yearbook

LESOTHO AND SWAZILAND

THE MINERAL INDUSTRIES OF LESOTHO AND SWAZILAND

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LESOTHO

The mining and quarrying sector, with the exception of diamond mining, did not play a significant role in Lesotho's economy and was a marginal contributor to the gross domestic product (GDP) in 2009. Although Lesotho was believed to have significant mineral deposits, attempts at exploitation continued to be limited owing to lack of infrastructure and investment. Commercial interest in the mineral resources of Lesotho was limited mainly to diamond. Known deposits of minerals included base metals, clays, diamond, dimension stone, sand and gravel, and uranium. Reserves of bituminous shale and coal had also been identified in several areas of the country.

Lesotho has been geologically mapped, and geologic maps have been published at scales of 1:50,000 and 1:100,000. A general map of the whole country was available in two sheets at a scale of 1:250,000. In 2009, the Department of Mines and Geology was in the process of digitizing all the country's geologic maps (Department of Mines and Geology, 2009b).

There is a high concentration of kimberlite intrusion in northern Lesotho. The Department of Mines and Geology has identified 405 kimberlite bodies made up of 39 pipes, 343 dykes, and 23 blows (dyke enlargements). There is about 1 kimberlite body for every 21 square kilometers. Other small kimberlite pipes range in size from 1 to 2 hectares (ha) (Department of Mines and Geology, 2009a).

The Mines and Minerals Act of 2005, the Mine Safety Act of 1981, as amended, the Precious Stones Order of 1970, as amended, and the Explosives Proclamation of 1958, as amended, provide the regulatory framework for the mining industry. Prospecting and mining may be undertaken only under the appropriate authority. The Ministry of Natural Resources through the Department of Mines and Geology is responsible for the regulation of the mining sector and for coordination of developmental and operational activities in the energy, mining, and water sectors. The Mines and Minerals Act of 2005 does not address issues of the environment; however, the Department of Mines and Geology includes general environmental provisions in leases for large mining claims. Lesotho is a participant in the international Kimberley Process Certification Scheme, which governs international trade in rough diamond and has approved regulations that guide international trade in rough diamond to avoid dealing in "conflict" diamond (Department of Mines and Geology, 2009c).

Production

Lesotho has a long history of diamond production, and diamond was the major economic mineral of the country. In 2009, diamond production contributed almost 7% of the GDP and employed about 1,300 people (Lekhetho, 2009).

Artisanal miners produced small amounts of agate, clay, sand and gravel, and stone (both crushed and dimension) for domestic consumption. Such mineral production, however, was not reported. Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of the major mineral processing facilities, their locations, and their capacities.

Commodity Review

Industrial Minerals

Diamond.—The World Federation of Diamond Bourses announced that it was acting as an advisor to the Government on the creation of a diamond bourse. The Government was seeking to maximize its diamond resource by moving into polishing and cutting for added value to the Government's diamond industry. Lesotho's two producing mines in 2009 were the Letšeng, which was the major producer, and the Liqhobong, which was the smaller producer. Three other prospective mines—the Kao pipe, the Kolo pipe, and the Mothae pipe—were attracting foreign investment interest (PolishedPrices, 2009).

Gem Diamonds Ltd. of the United Kingdom owned 70% of the Letšeng Mine in partnership with the Government, which owned the remaining 30%. The Letšeng Mine, which is located in the Maluti Mountains at an altitude of about 3,100 meters (m) above sea level, was the highest diamond mine in the world; it was also one of the coldest places in Africa. The Letšeng Mine was the seventh largest kimberlite mine in the world with an estimated 35 years of mine life from its two vertical kimberlite pipes. Letšeng was well known for producing large diamonds; it had the highest percentage of large diamonds (greater than 10.8 carats) and the highest average dollar value per carat (\$2,000 per carat) of any other kimberlite diamond mine. Letšeng's historic diamond production included the 603-carat Lesotho Promise, the 601-carat Lesotho Brown, the 493-carat Letšeng Legacy, and the 478-carat Leseli la Letšeng white diamond. The Letšeng Mine produced 4 of the world's 20 largest rough gem diamonds. Letšeng processed ore from two kimberlite pipes. The Letšeng facility had the capacity to treat about 5.6 million metric tons per year of ore, which could produce about 70,000 carats (Gem Diamonds Ltd., 2009).

Kopane Diamond Development plc of the United Kingdom was a diamond producer, developer, and explorer; its core project was located at Liqhobong. Kopane was granted a 20-year mining license in 2007 for the Liqhobong operation, which is located in northern Lesotho. At yearend 2009, Kopane announced an estimated increased resource grade of 34.3 carats per hundred metric tons (cpht) at its Main Pipe at Liqhobong.

This represented a 4.1% increase with respect to the 33 cph reported in mid-2009. The overall number of carats estimated to be contained in the Main Pipe was increased from 29.7 million carats to 31.5 million carats. The estimated in situ value of the Main Pipe was increased to \$2.7 billion. The Liqhobong operation was 75% owned by Kopane and 25% owned by the Government (Kopane Diamond Development plc, 2009).

In 2009, Global Diamond Resources plc of Gibraltar was continuing with exploration and development at its Kao Mine. Global Diamond stated that it believed that the proposed mine was one of the largest unexploited and potentially valuable diamond resources in the world. According to Global Diamond, production from the Kao Mine, which would have an estimated mine life of 20 years, was projected to be the Government's leading source of foreign earnings (Global Diamond Resources, 2009).

In 2009, Lucara Diamond Corp. of Canada was granted a 10-year diamond-mining lease for its Mothae project. The lease was approved after Lucara and the Government finalized a mining agreement under which the Government would hold 25% of the Mothae project and the rest would be owned by Lucara. The Mothae kimberlite is located 6.5 kilometers from the Letseng Mine in northeast Lesotho and has produced the world's highest value run-of-mine diamond. Mothae was a large 8.8-ha-surface-area low-grade kimberlite. A 100,000-metric-ton (t) bulk sample yielded an average diamond size of 0.44 carat and a sample grade of 4.7 cph. A diamond valuation exercise modeled a diamond value for Mothae of \$549 per carat. Lucara planned to test mine up to 770,000 t of kimberlite from the upper weathered zone of Mothae during a 24-month period in an effort to validate the diamond grade and value estimates. A processing facility upgrade was expected to be completed in 2010 (Hill, 2009).

Outlook

Diamond production in Lesotho is not likely to increase significantly until there is a recovery from the global economic crisis. The situation is expected to improve in 2010. The outlook for the remainder of Lesotho's mineral industry was for little change in the near future. Limited investment in the mineral sector and high rates of HIV/AIDS infection among Lesotho's population, coupled with capacity constraints in education, will hinder development into the foreseeable future.

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SWAZILAND

Mining has declined in importance in Swaziland in recent years. In 2009, the mineral industry was not a significant contributor to the country's GDP.

Some of Swaziland's minerals were of economic importance, including coal, diamond, gold, kaolin, and silica. Other minerals, such as arsenic, copper, nickel, manganese, and tin, either occur in small deposits or the quality was so low as to render them uneconomical to produce. Coal occurs in eastern Swaziland and was exploited at the Maloma Mine of Maloma Colliery Ltd. The Maloma Mine was Swaziland's only official mine in 2009 (Swaziland Investment Promotions Authority, 2009).

The Government announced that the Swaziland Electricity Co. was planning a 120-megawatt hydroelectric plant and had invited submissions from engineering firms for feasibility and pre-design studies (van der Merwe, 2009).

Production

Information on the mineral industry of Swaziland was not readily available. Production of anthracite coal decreased, although the reason for the decrease was not reported. Quarried stone production was estimated to be about the same as in 2008. The quarrying of stone was for domestic consumption, and production depended on local demand. Xstrata plc of Switzerland operated a ferrovanadium plant at Maloma with a capacity of 2,400 metric tons per year. Production of ferrovanadium in 2009 was estimated to be about the same as in 2008. Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of Swaziland's principal mining and mineral processing facilities with their locations and capacities.

Outlook

The outlook for Swaziland's mineral industry is for little change in the near future. The low level of exploration and the high rate of HIV/AIDS infection were expected to continue to constrain mineral resource development.

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TABLE 1
LESOTHO AND SWAZILAND: PRODUCTION OF MINERAL COMMODITIES¹

| Country and commodity | | 2005 | 2006 | 2007 | 2008 | 2009 ^e |
|--------------------------------------|---------------|---------|---------|---------|----------------------|----------------------|
| LESOTHO ² | | | | | | |
| Fire clay ^c | cubic meters | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Diamond | carats | 52,036 | 231,324 | 454,014 | 450,000 | 450,000 ³ |
| Stone, quarry products: ^c | | | | | | |
| Dimension | square meters | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Gravel and crushed rock | cubic meters | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 |
| SWAZILAND ⁴ | | | | | | |
| Coal, anthracite | metric tons | 222,000 | 310,570 | 241,283 | 174,807 ^r | 170,000 ³ |
| Ferrovandium | do. | 345 | 491 | 500 | 500 | 500 |
| Stone, quarry products | cubic meters | 567,000 | 534,688 | 207,535 | 240,997 ^r | 240,000 |

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. do. Ditto.

¹Table includes data available through May 31, 2010.

²Reported data from Lesotho Department of Mines and Geology.

³Reported figure.

⁴In addition to the commodities listed, modest quantities of crude construction materials (brick clay and sand and gravel), kaolin, pyrophyllite (talc), and soapstone are produced, but output is not reported quantitatively, and information is inadequate to make reliable estimates of output.

TABLE 2
LESOTHO AND SWAZILAND: STRUCTURE OF THE MINERAL INDUSTRIES IN 2009

(Metric tons unless otherwise specified)

| Country and commodity | | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|-----------------------|--------|--|----------------------------------|-----------------|
| LESOTHO | | | | |
| Diamond | carats | Gem Diamond Ltd., 70%, and Government 30% | Letšeng Mine, northern Lesotho | 100,000 |
| Do. | do. | Liqhobong Mining Development Co. (Kopane Diamond Developments, 75%, and Government, 25%) | Liqhobong Mine, northern Lesotho | 77,000 |
| SWAZILAND | | | | |
| Coal | | Maloma Colliery Ltd. | Maloma Mine at Maloma | 500,000 |
| Ferrovandium | | Swazi Vanadium (Pty) Ltd. (Xstrata plc, 75%, and Tibiyo Taka Ngwana, 25%) | Plant at Maloma | 2,400 |
| Do., do. | | Ditto. | | |

