

BOTSWANA

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The Republic of Botswana is a landlocked nation in southern Africa surrounded by Namibia to the west, South Africa to the east and south, and Zambia and Zimbabwe to the north. It covers an area of 600,379 square kilometers and supported a population of 1.6 million in 2002. The per capita gross domestic product (GDP) based on purchasing power parity was estimated to be \$9,500.¹ The per capita GDP level was one of the highest in Africa and placed it in the category of middle-income countries. During 2002, the economy had a GDP real growth rate of 6.0%, and inflation averaged 8.1%. The mining sector was dominated by diamond production, which continued to be the mainstay of the economy; it accounted for about 36% of the GDP and about 50% of Government revenues. The mining industry employed more than 13,000 workers in 2002; this was down from more than 15,000 in 1998. Botswana was the world's largest producer of diamond by value. Copper, nickel, and soda ash production also played significant though smaller roles in the national economy (Republic of Botswana, 2003a§, 2 b§; U.S. Central Intelligence Agency, 2003§).

The value of mineral exports in 2002 was approximately \$2.1 billion, of which diamond accounted for \$1.98 billion, or 94%; copper-nickel-cobalt were valued at \$76.5 million; and soda ash, \$42.5 million. The values of coal and salt production were \$4.8 million and \$10.3 million, respectively. For the major commodities, the value of production was approximately equal to the value of mineral exports. Diamond production increased by 8% to 28.4 million carats as the Orapa Mine reached full production levels following its 2002 expansion; the new Damtshaa Mine, which was commissioned in November 2002 also contributed. All diamond production came from mines operated by Debswana Diamond Co. (Proprietary) Ltd., which was a 50-50 joint partnership between De Beers Centenary AG and the Government. Debswana's Orapa Mine had a life of mine expectancy of about 26 years at a rate of 12 million to 13 million carats per year; the Jwaneng Mine, 36 years at a rate of 11 million to 12 million carats per year; the Letlhakane Mine, 13 years at a rate of 1 million carats per year; and the Damtshaa Mine, 32 years at a rate of 700,000 carats per year. Mineral production statistics are listed in table 1 (Debswana Diamond Co. (Proprietary) Ltd., 2001§; Bank of Botswana, 2003§).

In a major consolidation in the nickel-copper industry in May 2002, Anglo American plc sold its 23% interest in Bamangwato Concessions Ltd. (BCL) and its 43.35% interest in Tati Nickel Mining Co. (Pty.) Ltd to LionOre Mining International Ltd. of

Canada. The Government retained a 35% minority interest in BCL and a 15% interest in Tati Nickel.

At Tati Nickel, the new Phoenix Mine expansion was completed; mine production capacity was increased to 3.2 million metric tons per year (Mt/yr) from 1.7 Mt/yr. During 2002, nickel production increased by 6.4% to 23,896 metric tons (t), and copper, by 12.4% to 21,590 t of metal contained in copper-nickel matte (Minesite.com, 2002§; LionOre Mining International Ltd., 2003§).

Gallery Gold Limited of Australia, in which Lion Selection Group Limited of Australia held a 43% interest, completed a bankable feasibility study on its Mupane gold deposit, which is located about 30 kilometers (km) southwest of Francistown. Mupane contained a resource of 12.5 million metric tons (Mt) at a grade of 3.07 grams per metric ton (g/t); this included reserves of 5.36 Mt at a grade of 3.4 g/t contained in four open pittable deposits. Construction on the \$28 million Mupane gold project was expected to begin in October 2003 with the first pour planned for mid-to-late 2004. Mupane was expected to produce 3,100 kilograms per year of gold during a 5-year mine life (Lion Selection Group Limited, 2003§).

Revenues from diamond mining and cutting are expected to continue to be the mainstay of the economy for the foreseeable future; Debswana's identified diamond resources will be sufficient to maintain 2002 production levels for at least 25 to 30 years. Nickel and copper, which were jointly mined, earned the second largest amount of foreign exchange. Although they have a more limited life, they should continue to provide around 25,000 to 30,000 metric tons per year of nickel until 2011. The end-of-life of the BCL Ltd. operations at Pikwe-Selebi was expected in 2011, and that of the Tati operations, in 2017 at the earliest. The country's favorable geologic environment, mineral investment climate, political stability, and low tax rates should continue to make Botswana a target for foreign mineral investment. Incentives provided in the new Mining Law of 1999 were aimed at helping the Government diversify the national economy and reduce its reliance on the diamond industry.

Additional information about the mineral industry of Botswana can be found in the 2000 and 2001 Minerals Yearbook, volume III, Mineral Industries of Africa and the Middle East.

Internet References Cited

- Bank of Botswana, 2003, Annual report 2002— Statistical section, accessed November 22, 2003, at URL <http://www.bankofbotswana.bw/Statstables02.pdf>.
- Debswana Diamond Co. (Proprietary) Ltd., 2001, Operations, accessed November 23, 2003, at URL <http://www.debswana.com/homePage/dbHomePage.asp>.

¹Where necessary, values have been converted from the Botswana pula (BWP) to U.S. dollars at the rate of BWP6.238=US\$1.00 for 2002 and BWP5.814=US\$1.00 for 2001.

²References that include a section mark (§) are found in the Internet References Cited section.

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Major Sources of Information

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Major Publications

Carney, J.M., Aldiss, D.T., and Lock, N.P., 1994, The geology of Botswana: Gaborone, Botswana, Geology Survey Department, 113 p.

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 Annual report.
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TABLE 1
 BOTSWANA: PRODUCTION OF MINERAL COMMODITIES ¹

(Metric tons unless otherwise specified)

Commodity ²	1998	1999	2000	2001	2002	
Coal, bituminous	928,100	945,316	946,900	930,374	953,081	
Cobalt, smelter output, Co content of matte ^{3,4}	335	331	308	325	269	
Copper:						
Mine output, Cu content of ore milled	25,043	37,604	22,218	20,355	21,182	
Smelter output, Cu content of matte ^{3,4}	22,124	20,960	18,722	19,209	21,590	
Diamond ⁵	thousand carats	19,772	22,898	24,635	26,416	28,397
Gemstones, semiprecious ⁶	kilograms	38,000 ³	84,000	80,000 ^e	76,000 ^f	127,000
Gold ⁷	do.	1	2	4	2	8
Nickel:						
Mine output, Ni content of ore milled	21,700	33,733	20,286	18,585	20,005	
Smelter output, matte, gross weight ³	56,732	60,500	48,420	50,999	56,625	
Smelter output, Ni content of matte ⁴	22,851	22,898	21,446	22,454	23,896	
Salt ⁸	214,700	233,069	184,753	178,646	315,259	
Sand and gravel	cubic meters	997,244	1,466,100	1,070,000	2,140,523	3,602,257
Soda ash, natural	189,700	233,643	191,043	251,231	283,197	

^eEstimated. ^fRevised.

¹Table includes data available through October 2003.

²In addition to commodities listed, clay (for brick and tile) and silver were produced, but information was inadequate to estimate output.

³Smelter product was granulated nickel-copper-cobalt matte.

⁴Included some product from direct smelting ore; that is, ore not reported as milled.

⁵Assumed to contain about 70% gem and near gem.

⁶Principally agate; reported as sales.

⁷Reported as bullion; historically included silver estimated to be about 2%.

⁸Byproduct of natural soda ash production.

Source: U.S. Geological Survey Minerals Questionnaires completed by Botswana Department of Mines.