

# THE MINERAL INDUSTRY OF

# PANAMA

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Mining accounted for about 0.25% of Panama's gross domestic product (GDP) of \$9.5 billion in 1999. The Panama Canal dominated the economy by generating about 30% of its GDP, with services that accounted for nearly all the remainder (Sierra, 2000, p. 3). Gold and silver were mined, as were industrial minerals, such as cement materials, clays, limestone, salt, and sand and gravel for domestic use (table 1). The country received control of the Panama Canal on December 31, 1999, as the result of the 1979 treaty between Panama and the United States. Because the U.S. dollar is Panama's currency, monetary policy is essentially determined by the United States, with fiscal policy the only macroeconomic policy instrument available to the Government of Panama.

The Panamanian constitution specifies that all mineral deposits are the property of the State. Updated in 1988 to modernize the code and to stimulate investment, Panama's mining law provides the following: foreign companies are allowed a 4-year exploration concession to prospect for minerals with two 2-year extensions; extraction concessions are granted for specific mineral classes for a period of 10 years for alluvial precious minerals, 20 years for nonalluvial precious minerals, and 25 years for all other minerals, and all are extendable; extraction concessions normally are granted if exploration is successful; mine production royalties have been reduced to 2% of gross production for base metals and nonalluvial precious metals and to 4% for placer precious metals; import duties on capital equipment are waived; and minerals produced may be exported freely, exempt from duties. No restrictions are placed on foreign ownership or repatriation of capital, other than a 10% tax on dividends or interest payable to foreign shareholders. Mining companies pay an income tax that is reduced by operating expenses, depletion allowance, and depreciation, which can be accelerated (Latin American Mining Institute, 1993, p. 17-24). Private companies operated most of the mineral industries in Panama, although the Government held 40% of Petroterminal de Panama, S.A., the owner of the crude oil transshipment and pipeline activities associated with the Canal (table 2). The United States was Panama's largest trading partner, and Panama was the third largest site of U.S. investment in Latin America, after Mexico and Brazil. Mineral-related exports consisted primarily of scrap metal and petroleum products.

Development of three large copper deposits, two in the Petaquilla-Botija district and one in the Cerro Colorado district, continued to be stalled pending recovery of world copper prices.

Petaquilla, which was among the world's five largest undeveloped copper-gold porphyry deposits, with the nearby and somewhat smaller Botija deposit, had reserves estimated to

be 495 million metric tons (Mt) at a grade of 0.53% copper and 0.124 gram per metric ton gold, at a 0.19% copper-equivalent cutoff. Owned by Adrian Resources Ltd. (52%) and Inmet Mining Corporation (Canada) (48%), Petaquilla and Botija, combined with eight other prospects in the concession, were projected by Adrian to include 3,840 Mt of ore that contains 31.8 billion pounds (about 14.4 Mt) of copper, "9.8 million ounces" (about 305 Mt) of gold, and 962 million pounds (about 436,400 t) of molybdenum. Teck Corporation (Canada) worked on a feasibility study with the object of buying half of Adrian's 52% ownership at the point of an expected mining decision in March 1997 (Rose Davidson, Adrian Resources Ltd., oral commun., 1997). Teck's work had to be extended into mid-1998 because of the effect that depressed copper prices had on the final and bankable feasibility of startup; at that time, Teck gave notice that the mining decision would be postponed until mid-1999. In anticipation of an eventual production decision, however, Minera Petaquilla, which was the joint operating company owned by Adrian, Inmet, and Teck purchased the land for a port site and posted a \$3 million performance bond with the Government to secure Minera Petaquilla's commitment to carry out the minimum investment of \$400 million required under the contract law (Adrian Resources Ltd., May 14, 1998, Adrian Resources update on Petaquilla project, Press Release, accessed May 15, 1998, at URL [http://biz.yahoo.com/bw/980514/adrian\\_res\\_1.html](http://biz.yahoo.com/bw/980514/adrian_res_1.html)). Although the final feasibility study projected an internal rate of return of 14.2% and a payback period of 4.8 years, the price of copper in the first half of 1999 was about 50% below the long-term price assumed in the study. Teck deferred the decision to proceed with development until mid-2000 (Northern Miner, 1999b).

Feasibility studies were completed by Kvaerner Metals' Davy Non-ferrous Division on the Pana Cobre S.A. Cerro Colorado copper property where a projected sulfide body comprised 1.75 billion metric tons of contained copper with an average grade of 0.64% copper with a cutoff grade of 0.5%. The study determined a mine life of about 12 years for solvent extraction-electrowinning treatment of the upper supergene cap to produce cathode copper at an average cost of \$0.49 per pound. Pana Cobre, which was a wholly owned subsidiary of Tiomin Resources Inc., had been granted a delay in project development by CODEMIN, which is the Government mining agency, owing to low copper prices (Tiomin Resources Inc., 1999). In return for providing Tiomin Resources with a \$2 million loan, Aur Resources Inc. (Canada) optioned the property from Pana Cobre in December 1998 for purchase within 26 months (Mining Journal, 1999). Aur evaluated copper prices closely for a decision on when to begin operations.

After bringing its Santa Rosa gold concession into production, Greenstone Resources Ltd. (Canada) had difficulties with rainwater dilution of its leach pad while producing gold at an operating cost of \$298 per ounce. The operation, which was located 1 kilometer south of Canazas, Veraguas Province, was suspended in early 1999 in the hope of higher gold prices. Late in the year, the Santa Rosa project was made available for negotiation of a buyout (Northern Miner, 1999a).

Manganese deposits were known in several areas in Panama. Caribbean Mining Company Inc. (United States) had a 25-year concession to mine at La Soledad in Colon where reserves were estimated to be 1 Mt. The company had been interested in negotiating a like concession at the Cerro Viejo Mine, which was northeast of Colon and contained an estimated 600,000 metric tons of reserves (U.S. Embassy, Panama City, Panama, 1993). No production has since been reported in either case.

Panama produced cement, clays, lime, limestone, marine salt, and sand and gravel in small operations. Cement was produced by Empresa Estatal de Cementos Bayano at Calzada Larga and by Cemento Panama, S.A., at Quebrancha. In 1994, the Government sold its 95% share in Cementos Bayano to Mexico's Cementos Mexicanos S.A. A 5% share was sold to employees as part of the country's new pension plan (Journal of Commerce, 1994).

Crude oil for Panama's refineries was imported from Ecuador, Mexico, Saudi Arabia, and Venezuela. Electrical capacity was rated at 935 megawatts (MW) nationally, about 70% of which was hydroelectric. Private companies were allowed to bid on a contract to build and operate a new 50-MW plant to supply electricity to the country's grid. A geothermal energy region in southwestern Panama of at least potential significance to energy supply has not been exploited.

Investment in mining was expected to offer strong opportunities for expansion of capital in Panama. The country was positioned not only to become a major producer of copper but also of gold as a coproduct of the copper. Production of manganese was likewise at least a possibility. In the meantime, however, the reversion of the Panama Canal to domestic control remained the focal point of principal commercial interest in Panama.

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## Major Sources of Information

- Direccion General de Recursos Minerales  
Ministerio de Comercio e Industrias  
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## Major Publications

- Direccion de Estadistica y Censo, Panama: Panama en Cifras, annual.
- Direccion General de Recursos Minerales, Ministerio de Comercio e Industrias, Panama: Panama, A Directory of Mineral Resources. Results from the National Mineral Inventory Project 1988-90, 1991, 11 p.; The Mining Sector of Panama, 1993.
- Latin American Mining Institute, Washington, DC: Mexico and Central America Investment and Mining Guide, annual.

TABLE 1  
PANAMA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995 e/	1996	1997	1998 e/	1999 e/
Cement	615,000 3/	647,000	700,000	750,000 3/	760,000
Clays:					
For cement	300,000	117,616	40,112	45,000	46,000
For products	7,000	5,170	7,217	7,200	7,400
Gold kilograms	1,100	834	1,202	1,500	1,500
Lime	2,000	6,767	3,246	3,500	3,500
Petroleum refinery products e/ thousand 42-gallon barrels	10,000	10,000	10,000	10,000	10,000
Salt, marine e/	22,000	22,000	22,000	22,500	22,500
Silver kilograms	175	1,307	2,178	2,000	2,000
Stone, sand and gravel: e/					
Limestone:					
For cement	700,000	550,798 3/	263,338 3/	270,000	275,000
For other uses	62,000	62,000	62,500	62,500	63,000
Sand and gravel thousand tons	3,000	3,000	3,000	3,000	3,000
Sand and silica	23,000	23,000 e/	--	--	--

e/ Estimated. -- Zero.

1/ Estimated data are rounded to no more than three significant digits.

2/ Includes data available through May 5, 2000.

3/ Reported figure.