

# THE MINERAL INDUSTRY OF EL SALVADOR

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With an economy based largely on agrarian production and exports, El Salvador's mineral production accounted (Latin American Economy & Business, 1996) for less than 1% of its estimated gross domestic product (GDP) of nearly \$10 billion<sup>1</sup> in 1996. Approximately 40% of the labor force accounts for the 24% of GDP represented gricultural sector, which in turn contributes 66% of total exports, mainly coffee, sugarcane, and shrimp (World Factbook, 1995). In an effort to hold the exchange rate at 8.79 to the dollar, its ratio during 1994-95, the Central Bank of El Salvador tightened monetary policy in 1996 to counter the threat of inflation (ibid.).

Although gold and silver have been mined in the past, civil strife and economic upheaval associated with hostilities between the Government and the Frente Farabundo Marti de Liberacion Nacional (FMLN), a revolutionary movement, discouraged exploration and mining operations until after the 1992 peace agreement between FMLN and the Government. Investment and exploration have begun to come back, as well as interest in reopening old mines. In roughly the northern one-half of this east-west oriented country, old Government maps (Servicio Geologico Nacional, undated) show about a dozen gold-silver prospects, particularly in the easternmost Department of La Union, but also in Morazan and San Miguel Departments on the west side of La Union, evidently in epithermal quartz veins intersecting older volcanic rocks.

The venerable El Dorado Mine near San Isidro, about 50 kilometers (km) east-northeast of San Salvador, has been reinvestigated by Canada's Mirage Resources. After projecting a resource of 5.2 million metric tons grading 6.29 grams per ton (g/t) of gold and 46 g/t of silver in three distinct vein systems in 1995, Mirage announced (Northern Miner, 1996) new drilling results involving intercepts of 4.8 meters (m) grading 30.39 g/t gold and 243 g/t silver; 6.62 m grading 26.82 g/t gold and 209 g/t silver; and 7.63 m grading 10.96 g/t gold and 52.44 g/t silver, all three representing true widths in three different holes. Drilling continued at the end of the year. Kinross Gold Ltd., a Canadian company, owned 48% of Mirage.

Some mining activity and trade, by small local entrepreneurs, took place in the vicinity of the old San Sebastian gold mine near Santa Rosa de Lima, where mercury was used for amalgamation recovery of gold from gangue.

A 50-50 joint venture between Focal Resources Ltd. and High River Gold Mines Ltd., both Canadian, acquired a total of

250 square kilometers concessions including historic gold-silver or lead-zinc-silver mines, one of them about 15 km west of San Sebastian. This property, called Aldea El Zapote, included a 2-m zone whose channel samples (Abbott, C. C., 1996) showed values of 0.5 ounces of gold per ton (14.11 g/t) and 40 ounces of silver per ton (1.45 kilograms per ton).

Despite efforts to foster gold production in El Salvador, cement dominated the mineral industry in terms of size, with domestic limestone production for its raw material, as shown in table 1. With an estimated capacity of about 925,000 metric tons per year (t/yr), the private sector controlled the industry. The Government sold the 240,000-t/yr Cemento Maya S.A. plant to Cemento de El Salvador S.A. (CESSA), which also operated a larger 640,000-t/yr plant near Metapan. CESSA is owned by about 450 Salvadorans, of which 6 leading business groups collectively own more than 50% (World Bank, 1996). The company negotiated a loan of \$103 million through the World Bank for modernization and environmental upgrading of existing facilities.

Another significant private-sector operation was the Refineria Petrolera Acajutla S.A., having a capacity of about 5.8 million barrels per year, owned by Exxon Corp. (60%) and Royal Dutch Shell (40%). Prices for both refinery products and portland cement were set by the Government

El Salvador was the first Central American country to construct and utilize geothermal electric powerplants. The many volcanoes in the country suggest that other geothermal energy sources may be available.

## References Cited

- Abbott, C. C., 1996, Focal acquires major position in Central America, company announcement by president and CEO of Focal Resources Ltd., Canada Newswire, June 25, 1996, 2 p.
- Latin American Economy & Business, 1996, El Salvador—Steady growth, LAEB-96-03, March, p. 10.
- Northern Miner, 1996, Drilling confirms high-grade gold for Mirage, December 2, p. B4.
- Servicio Geologico Nacional, undated, Mapa Geologico Preliminar de El Salvador, scale approximately 1:400,000, ozalid draft.
- World Factbook 1995, El Salvador, Central Intelligence Agency, Washington, DC 20505, p. 127.
- World Bank, 1996, Corporate Relations Unit, report on project no. 03564, Cemento de El Salvador, S.A. (CESSA), (Accessed November 21, 1996 on the World Wide Web at URL <http://www.Worldbank.0...pic/ifcspi/svs3564.txt>).

## Major Source of Information

Direccion de Recursos Mineros  
4a Avenida Norte No. 233

<sup>1</sup>Where necessary, values have been converted from El Salvador Colons (C) to U.S. dollars at the rate of C8.75=US\$1.00.

San Salvador, El Salvador

**Major Publications**

Siderurgia Latinoamericana, monthly.

Lorenz, W. Industriemerale, Stein und Erden in der Republik El Salvador, Mittlameric. Geologisches Jahrbuch, Reihe D. Hannover, 1986, 90 p.

TABLE 1  
EL SALVADOR: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodities 3/	1992	1993	1994	1995 e/	1996 e/
Aluminum: Metal including alloys, semimanufactures	2,301	2,000 e/	2,400 e/	2,500	2,550
Cement	419,378	861,424	850,000	875,000	880,000
Fertilizer materials:					
Phosphatic e/	10,515 4/	10,000	12,000	12,500	13,000
Other mixed chemical	47,926	48,000 e/	54,000 e/	55,000	56,000
Gypsum e/	4,500	5,000	5,000	5,300	5,400
Iron and steel: Metal:					
Steel, crude	28,000	37,000	40,000	10,000 4/	12,000
Semimanufactures	45,016	56,021	56,100 e/	57,000	58,000
Limestone	2,200	2,600	2,600 e/	2,800	3,000
Petroleum refinery products	6,033	6,000 e/	6,100 e/	6,100	6,200
Salt, marine	20,000 e/	30,000	30,000 e/	30,000	31,000

e/ Estimated.

1/ Estimated data are rounded to three significant digits.

2/ Includes data available through Apr. 1, 1997.

3/ In addition to commodities listed, construction materials (clays, gravel, miscellaneous rock, sand, and weathered tuffs) were presumably produced. Available information is inadequate to make reliable estimates of output levels of these commodities.

4/ Reported figure.