

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 for less than 1% of its estimated gross domestic product (GDP) of about \$9.4 billion in 1999. Bank lending rates rose to more than 22%, and only remittances from more than 1 million Salvadorans in the United States helped keep the fiscal deficit in check (Financial Times, 2000). Approximately 40% of the labor force accounted for the 15% of GDP represented by the agricultural sector, which in turn contributed about two-thirds of total exports.

A Mining Chamber of Commerce was established in El Salvador during the year to assist in development of the industry as a whole and to lobby for reform of the Salvadoran mining law. In particular, the Chamber hopes to have the mining law revised to allow for 5-year, rather than the present 3-year, exploration license; the present 1-year extension would be retained. Tax laws would be modified from the present 4% royalty on gross ore value and 25% corporate tax rates, which are an obstacle to mining, according to the Chamber (Metal Bulletin, 1999b).

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 throughout the 1980's and until after the 1992 peace agreement between the FMLN and the Government. Investment and exploration, as well as interest in reopening old mines, have begun to come back. In roughly the northern one-half of this east-west oriented country, old Government maps show about a dozen gold-silver prospects, particularly in the easternmost Department of La Union, but also in Morazan and San Miguel Departments west of La Union, evidently in epithermal quartz veins intersecting older volcanic rocks (Servicio Geologico Nacional, written commun., [undated]).

The historic El Dorado gold mine near San Isidro, which is about 50 kilometers (km) east-northeast of San Salvador, was under redevelopment by Canada's Mirage Resource Corp. After estimating a resource of 5.2 million metric tons at a grade of 6.29 grams per ton (g/t) gold and 46 g/t silver in three distinct vein systems in 1995, Mirage announced that drilling results involving intercepts of 4.8 meters (m) at a grade of 30.39 g/t gold and 243 g/t silver, 6.62 m at a grade of 26.82 g/t gold and 209 g/t silver, and 7.63 m at a grade of 10.96 g/t gold and 52.44 g/t silver, all represented true widths in three different holes (Northern Miner, 1996). Prefeasibility studies and an environmental impact assessment have been initiated, but the entire project has been slowed by low gold prices. Kinross Gold Ltd., which was a Canadian company, owned 51% 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. At San Sebastian itself, the Conseb-Commerce Group joint venture concentrated on developing an open pit mine over previous workings centered on the main gold zone.

About 15 km west of San Sebastian, the Aldea El Zapote property, which has been known for showing attractive gold values, was drilled by Intrepid Minerals Corporation (Canada). At their Cerro Colorado target, preliminary results of bonanza-style silver values warranted further exploration (Metal Bulletin, 1999a).

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 its 240,000-t/yr Cemento Maya S.A. plant near Metapan to Cementos de El Salvador, S.A. (CESSA), which operated a 640,000-t/yr plant near Metapan. Capacity of the two plants operating jointly increased to about 1.25 million metric tons per year (Mt/yr) and was projected to increase to 2.05 Mt/yr by the end of 1999 with the closure of three older kiln lines and the addition of one new kiln line (Global Cement Report, 1998). The company had negotiated a loan of \$103 million through the World Bank for modernization and environmental upgrading of existing facilities. CESSA was owned by about 450 Salvadorans, of which 6 leading business groups collectively owned more than 50%.

Another significant private sector operation was the Refineria Petrolera Acajutla S.A., which had a charge capacity of 20,000 barrels per calendar day; the company was owned by Exxon Corp. (60%) and Royal Dutch Shell Corp. (40%). Prices for refinery products and portland cement were set by the Government.

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

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Northern Miner, December 2, p. B4.

Major Source of Information

Direccion de Recursos Mineros

a Avenida Norte No. 233
San Salvador, El Salvador

Major Publications

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Lorenz, W., Industriemineralien, Steine und Erden in der Republik
El Salvador, Mittelamerika. Geologisches Jahrbuch, Reihe D.
Bundesanstalt für Geowissenschaften und Rohstoffe
Hannover, 1986, 90 p.

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

(Metric tons unless otherwise specified)

Commodities 3/	1995	1996	1997	1998	1999
Aluminum, metal including alloys, semimanufactures	2,500	2,550	2,600	2,650	2,650
Cement thousand tons	890 4/	948 4/	1,016 4/	1,065 4/	1,134
Fertilizer materials:					
Phosphatic	12,500	13,000	13,500	13,500	13,700
Other mixed chemical	55,000	56,000	56,000	56,500	56,500
Gold kilograms	--	--	110 4/	93 4/	100
Gypsum	5,300	5,400	5,500	5,600	5,600
Steel, secondary	28,000 4/	42,000 4/	45,000 4/	46,000	46,000
Limestone thousand tons	2,800	3,000	3,000	3,000	3,200
Petroleum refinery products thousand 42-gallon barrels	6,100	6,200	6,200	6,300	6,300
Salt, marine	30,000	31,000	95,335 4/	88,948 4/	90,000
Silver kilograms	--	--	23 4/	39 4/	40

--Zero.

1/ Estimated data are rounded to three significant digits.

2/ Includes data available through April 1, 2000.

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.