

THE MINERAL INDUSTRY OF

COSTA RICA

By David B. Doan

The production of minerals in Costa Rica contributed less than 1% to that nation's gross domestic product (GDP), but there were signs that the mining contribution might improve. The country's GDP was projected to increase from \$9.5 billion in 1997 to \$9.9 billion in 1998, with an overall growth rate of about 4.5%. Total exports climbed from \$3 billion in 1997 to about \$3.4 billion in 1998, while imports likewise increased from \$4.1 billion in 1997 to about \$4.4 billion in 1998 (U.S. Department of State, 1998).

Mining was governed by law 6797 of 1982. The Ministerio de Recursos Naturales, Energía y Minas was responsible for the control and development of Costa Rica's mineral resources through the Dirección de Geología Minas e Hidrocarburos, the Minería Nacional, S.A. (MINASA), and the National Environmental Commission. MINASA coordinated mineral industry activities between Government agencies and the private sector.

The Government-owned Refinadora Costarricense de Petróleo, S.A. (RECOPE), controlled oil-refining operations, but exploration companies were mostly privately owned. A 1994 law promoted exploration and production of hydrocarbons through negotiated contracts, good for 3 years plus three 1-year renewal options. Nonrenewable production contracts could last for 20 years before expiration (World Oil, 1994). An "Environmental Action Plan," newly promulgated by the Government, included fines for violations of its management policies.

Production of gold, with silver as a byproduct, was primarily in the Abangares district of Guanacaste Province, from the Central Gold Belt of the Tilarán Cordillera in the northwest. The major gold producer was the Tres Hermanos Mine, a small underground operation 110 kilometers northwest of San José, operated by El Valiente Ascari S.A., a subsidiary of Ariel Resources Ltd. of Vancouver, Canada. Ariel also operated the San Martín underground mine and the Matapalo mill. The company reported that gold production should reach about 2.5 metric tons per year (80,000 ounces) by 2000 (Northern Miner, 1996). The El Recio deposit in the Abangares gold mining district, held by Greenstone Resources Ltd. of Canada, was sold to Ariel for shares of Ariel and a net-profits interest of 10%, expandable to 30% after certain conditions were met (Ariel Resources Ltd., 1995).

In the far northwest San Carlos Province, near the Nicaraguan border, Placer Dome Inc. of Canada, explored the Cerro Crucitas and Cerro Conchudita properties and conducted metallurgical tests. Late in the year, Lyon Lake Mines Ltd. (Canada) acquired the two properties from Placer Dome (Northern Miner, 1998). Meanwhile, in midyear, Lyon Lake

announced the suspension of operations at its Beta Vargas Mine pending a recovery in gold prices (Metals Economics Group, 1998, p. 32).

Long regarded by many as the "Switzerland of Central America" because of its uninterrupted century of democracy, isolating itself from the wars and upheaval of neighboring countries, Costa Rica became one of the first targets for exploration by foreign companies. Beginning in the early 1990's, however, Costa Rica became a focal point for the international environmental movement, diminishing its attractiveness to mineral exploration and persuading some companies to put their development plans in abeyance (Mining Journal, 1997, p. 296). Gold exploration and development, in particular, were affected.

In November 1996, Ariel Resources received permission to begin open pit extraction at the San Martín Mine, subject to an early payment of a restoration deposit required by the Government. Minería Rayrock, however, was denied approval of its environmental impact statement submitted for the Bellavista gold project. Rayrock reportedly was disappointed with this action in that it had worked closely with the Government and addressed all its concerns (Mining Journal, 1996). Seeking to cut its losses, Rayrock sold the property to Wheaton River Minerals Ltd., who pressed ahead with exploration in 1998.

Industrial mineral production included cement, clays, diatomite, lime, pumice, salt, sand and gravel, and crushed stone. (See table 1.) Of 13 known diatomite deposits stretching from Liberia to Cartago, only the Loma Camastro deposit, northeast of Liberia, was being mined. About 20% of mined limestone was used to produce aggregate, dimension stone, and lime. Cementfabrik Holderbank AG, a cement producer, based in Switzerland, was the largest shareholder (44%) in the Industria Nacional de Cemento S.A. (INCSA), which had about 290 employees. Holderbank also had a 65% interest in the concrete producer Productos de Concreto S.A., San José, with 1,160 employees (Cementfabrik Holderbank, 1992). Limestone was quarried primarily for the use in the manufacture of cement by Cementos del Pacífico S.A. and INCSA. Fertilizers were produced by Fertilizantes de Centro América S.A., the largest producer in Central America. Salt was produced by the solar evaporation of brine, primarily around the Golfo de Nicoya.

Crude oil for domestic refining was imported from Mexico and Venezuela, under the San José Petroleum Accords, as well as from Colombia, but most petroleum products were imported from the Netherlands Antilles and the United States. RECOPE operated the country's oil refinery. Cement plants were owned

by the Government and by private firms.

Canadian and U.S. companies were involved in a number of gold and silver exploration and mining operations. (*See table 2.*) Foreign investors were encouraged to explore for gold, modernize old mines, open new mines, and to explore for petroleum. The Government expected to continue its improvement of infrastructure and environmental management, as well as divestment of several major state-owned companies.

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Major Sources of Information

- Instituto Costarricense de Electricidad
Sabana Norte, San Jose, Costa Rica
Telephone: (506) 20-7720
Fax: (506) 20-1555
- Minera Nacional, S.A.
Apartado 5298, Zona 1000
San Jose, Costa Rica
Telephone: (506) 53-7555
Fax: (506) 57-0697
- Ministerio de Recursos Naturales, Energia y Minas
Direccion de Geologia, Minas e Hidrocarburos
Apartado 10104, Zona 1000
San Jose, Costa Rica
Telephone: (506) 33-2360
- Refinadora Costarricense de Petroleo S.A.
Apartado 4351, Zona 1000
San Jose, Costa Rica
Telephone: (506) 33-0333
Fax: (506) 23-2748

Major Publication

- Latin American Mining Institute, Washington, DC: Mexico and Central America Investment and Mining Guide; annual.

TABLE 1
COSTA RICA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1994	1995	1996	1997	1998
Cement	940,000	865,000 3/	830,000 3/	940,000 r/ 3/	1,085,000 3/
Clays, common	401,000	410,000	410,000	412,000	415,000
Diatomite	4,000 r/	2,000 r/	2,000 r/	1,194 r/ 3/	1,595 3/
Gold kilograms	358 3/	400	510	502 r/ 3/	483 3/
Iron and steel, semimanufactures	87,000	89,000	88,000	88,000	89,000
Lime	9,500	9,800	9,800	9,800	9,800
Petroleum refinery products thousand 42-gallon barrels	4,000	4,400	4,500	4,500	4,500
Pumice	8,000	8,000	8,000	8,000	8,000
Salt, marine	31,700	32,200	37,000	37,000	37,000
Silver kilograms	150 r/	150 r/	200 r/	100 r/	69 3/
Stone, sand and gravel:					
Crushed rock and rough stone thousand tons	1,200	1,300	1,350	1,350	1,060 3/
Limestone and calcareous materials do.	1,500	1,500	1,500	1,500	1,600
Sand and gravel do.	1,400	1,500	1,400	1,400	1,640 3/
Sandstone	800	1,000 r/	2,000 r/	2,500 r/	3,262 3/

r/ Revised.

1/ Estimated data are rounded to three significant digits or less.

2/ Table includes data available through April 1999.

3/ Reported figure.

TABLE 2
COSTA RICA: STRUCTURE OF THE MINERAL INDUSTRY IN 1998

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity e/
Cement	Industria Nacional de Cemento S.A. (INCSA) (private, 100%)	Aguas Calientes, Cartago, Cartago Province	550
Do.	Cementos del Pacifico S.A. (CEMPASA) (subsidiary of Corporacion Costarricense de Desarrollo, S.A., Government, 100%)	Near Colorado, Guanacaste Province	545
Clays	CEMPASA	Tajo Finca, near Platanar, Guanacaste Province	100
Gold kilograms	El Valiente Ascari, S.A. (Ariel Resources Ltd., Canada, 100%)	Tres Hermanos Mine, Las Juntas, Guanacaste Province San Martin mine, Matapalo mill Las Juntas, Guanacaste Province	500
Do.	do. Lyon Lake Mines Ltd. (90%), Government of Costa Rica (10%).	Beta Vargas Mine, Guanacaste Province	160
Do.	do. Lyon Lake Mines Ltd.	Cerro Crucitas, Cerro Conchudita projects, San Carlos Province.	4,000
Limestone	INCSA	La Chilena Quarry, near Cartago, Cartago Province	550
Do.	CEMPASA	Cerro Pena Blanca Quarry, Guanacaste Province	300
Petroleum products thousand 42-gallon barrels	Refinadora Costarricense de Petroleo, S.A. (RECOPE)	Moin Refinery, Limon Province	5,760

e/ Estimated.