

THE MINERAL INDUSTRY OF

COSTA RICA

By George A. Rabchevsky¹

The Republic of Costa Rica in Central America had a relatively prosperous economy but lacked a large mineral industry. The production of minerals in the country contributed less than 1% to the Nation's gross domestic product.

The principal legislation governing mining was Law 6797 of 1982. The Ministerio de Recursos Naturales, Energia y Minas was responsible for the control and development of Costa Rica's mineral resources through the Direccion de Geologia Minas y Hidrocarburos, the Minera Nacional, S.A. (MINASA), and the National Environmental Commission. The Government-owned Rafinadora Costarricense de Petroleo, S.A. (RECOPE) controlled all oil-refining operations. Almost all operating companies in Costa Rica were privately owned. The new hydrocarbon law was approved in May 1994. Under the law, the Government promoted exploration and exploitation of hydrocarbons directly through negotiated contracts. Exploration contracts would last for up to 3 years, with three 1-year renewal options. Once the contract is signed and, beginning in the second year, at least one well would have to be drilled annually. Nonrenewable production contracts may last for 20 years before expiration.²

An Institutional Development Facility, approved in May 1994 by the Government to strengthen environmental management, was a basis for the preparation of an Environmental Action Plan. Fines had to be paid by those who damaged Costa Rica's natural resources.³

Gold was the primary metallic mineral mined in the country from the Golfo Dulce placer gold field in the south and from underground mines in the northwest. Silver was the only other metallic mineral produced as a byproduct of gold mining. Industrial minerals production included cement, clays, diatomite, lime, pumice, salt, sand and gravel, and crushed stone. (See table 1.).

Crude oil was imported for the production of petroleum products in domestic refineries from Mexico and Venezuela under the San Jose Petroleum Accords, as well as from Colombia and Ecuador. However, the majority of petroleum products had to be imported from the Netherlands Antilles and the United States.

In 1994, Costa Rica joined the Association of Caribbean States in promoting free trade. All seven Central American countries, along with Colombia, Cuba, Mexico, Venezuela and 13 Caribbean countries joined the pact.⁴

MINASA was responsible for the coordination of mineral

industry activities between other Government agencies and the private sector. It also assessed and developed mineral resources. RECOPE operated the country's oil refinery. Cement plants were owned by the Government and by private firms. Canadian and U.S. companies were primarily involved in a number of gold and silver exploration and mining operations. (See table 2.)

Gold and silver production in Costa Rica was primarily in the Central Gold Belt of the Tilaran Cordillera in the northwest, in Abangares District. One of Costa Rica's major gold producers was the Tres Hermanos underground mine, 110 kilometers (km) northwest of San Jose. The mine was operated by El Valiente Ascari A.S., a subsidiary of Ariel Resources Ltd. of Vancouver, Canada. Ariel also operated the San Martin underground mine and the Matapalo Mill. Ariel became the largest gold producer in Costa Rica in the last few years, with 335 kilograms (kg) of gold in 1994.⁵ According to Ariel's 1993 reports, gold reserves of the mine were at 320,000 metric tons (mt) grading 0.01 grams per metric ton (g/mt). The Matapalo mill, 12 km southwest of the mine, had a capacity of 300 mt/d.

The San Martin gold mine was purchased by Ariel in 1993 from the state-owned Minas de Sierra Alta S.A. This underground mine is 15 km north from the Matapalo mill and adjacent to the Tres Hermanos property. Ariel also acquired three other gold properties, known as the Ano Nuevo, Boston, and Gongolona, just northeast of San Martin Mine.⁶

The El Recio small gold deposit in the Abangares gold mining district was held by Greenstone Resources Ltd., Ontario, Canada. In June 1993, Greenstone entered into an agreement with USA Gold Inc., a private U.S. company, that allowed USA Gold to earn a 50% interest in the El Recio property by putting the project into production by the fourth quarter of 1994. USA Gold had also committed to spending \$250,000 per year on surrounding exploration targets. Underground reserves include the Santa Ana deposit with more than 250,000 mt grading 7.9 g/mt of gold and the Palo Negro deposit containing 45,000 mt at 10.3 g/mt of gold. Low-grade open pit reserves at Recio Norte totaled 650,000 mt at 1.7 g/mt and included 70,000 mt at 5.1 g/mt of gold.⁷

Minera Rayrock Inc., Toronto, Canada, was developing a gold mine on the Bellavista property, northwest of San Jose. Reportedly, the Bellavista Mine has 23,000 kg of proven and probable gold reserves.⁸ Other companies exploring for gold in Costa Rica included Lyon Lake Mines Ltd., Quebec, Canada, and Green Line Business Stores Ltd., Toronto,

Canada. Lyon's Beta Vargas gold concession had a geological reserve of 1.5 million metric tons grading 1.37 g/mt of gold in the probable category.⁹

Breckenridge Resources Ltd. of Vancouver, Canada, signed an agreement in mid-1994 to acquire 100% of the shares of Mudiesa Internacional S.A., a private Costa Rican company operating alluvial gold concessions on the Osa Peninsula. The peninsula was already well known for gold since the 1970's.¹⁰

Costa Rica produced bentonite, cement, crushed rock, diatomite, lime, limestone and sandstone, sand and gravel, and pumice. Except for clays, fertilizers, and lime, most commodities were consumed internally. The largest producer of fertilizers in Central America was Costa Rica's Fertilizantes de Centro America S.A. Salt was produced by the solar evaporation of brine, primarily around the Golfo de Nicoya.

Limestone was quarried primarily for the use in the manufacture of cement by Cementos del Pacifico S.A. and Industria Nacional de Cemento S.A. (INCSA). About 20% of the limestone was used to produce aggregate, dimension stone, and lime. Cementfabrik Holderbank AG, a Switzerland-based cement producer, was the largest shareholder (44%) in the INCSA, and had about 290 employees. Holderbank also had a 65% interest in the concrete producer Productos de Concreto S.A., San Jose, with 1,160 employees.¹¹

The 13 known diatomite deposits occurred in a belt stretching from Liberia to Cartago. The most productive diatomite quarries were in the north, including Loma Camastro and Canas Dulces deposits. Only the Loma Camastro deposit, northeast of Liberia, was being mined.

Costa Rica imported most of its oil requirements from Colombia, Ecuador, Mexico, the United States, and Venezuela. Several U.S. and Canadian companies were engaged in exploratory and prospecting work. The only company in Costa Rica producing petroleum products was RECOPE at the Moin refinery, Limon Province.

Costa Rica has a well-developed transportation network. More than 7,000 km of roads were paved, another 7,000 km of gravel roads, and about 1,400 km dirt roads. There is 950 km of railroad tracks, linking the Puerto Limon on the Caribbean coast with Puntarenas Port on the Pacific coast. Petroleum was unloaded at the Moin oil refinery complex. RECOPE distributed petroleum products across the country by a 348-km pipeline network.

Electric power service in Costa Rica was governed by Law 257 of 1941. Costa Rica's total installed electrical capacity was 1,043 megawatts (MW), 969-MW of which was operated by the Government-owned Instituto Costarricense de Electricidad; the remaining capacity was owned by private companies. Hydropower accounted for more than 75% of energy generated. The construction of the 55-MW Miravalles geothermal plant continued. Preliminary work began on the 90-MW Toro hydroelectric complex. Two other installations include the 157-MW Arenal and the 174-MW Corobisi plants.

Foreign investors were encouraged to explore for gold deposits, modernize old mines, open new mines, and explore for oil deposits. The Government expected to continue implementation of its structural reforms, including the improvement of the infrastructure and environmental management. Costa Rica was unlikely to seek early membership in the North American Free Trade Agreement, because the Government is against privatizing its energy, telecommunications and insurance industries, all state monopolies. The Government's privatization program is expected to advance with divestments of several major state companies. The two largest companies slated to be privatized are the Fertilizantes de Centroamerica S.A. and Cementos del Pacifico S.A., both holdings of the government-owned Corporacion Costarricense de Desarrollo S.A.

¹Text prepared Apr. 1995.

²World Oil (Houston, Texas): Aug. 1994, p. 36

³International Bank for Reconstruction and Development (Washington, DC): SecM94-688, July 15, 1994, p. 842.

⁴U.S./Latin Trade (Miami, Florida): Sept. 1994, p. 16.

⁵Ariel Resources Ltd. (Vancouver): News Release, June 8, 1994, Aug. 19, 1994. The Northern Miner (Toronto): Mar. 14, 1994, p. 11.

⁶Ariel Resources Ltd. (Vancouver): Quarterly Report, Mar. 1994. Latin American Mining Record (London): Apr. 5, 1994, p. 17. The Northern Miner (Toronto): Mar. 14, 1994, p. 11. Mining Journal (London): June 24, 1994, p. 460.

⁷Greenstone Resources Ltd. (Toronto): 1993 Annual Report. Latin American Mining Letter (London): July 9, 1993. Mining Journal (London): June 11, 1993, p. 426. The Northern Miner (Toronto): June 21, 1993, p. 2.

⁸Mining Journal (London): June 24, 1994, p. 461.

⁹The Northern Miner (Toronto): Apr. 11, 1994, p. B10.

¹⁰Latin American Mining Letter (London): July 15, 1994, p. 7; Mining Journal (London): July 15, 1994, p. 36.

¹¹Cementfabrik Holderbank (Celigny): 1992 Annual Report.

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 y Hidrocarburos

Apartado 10104, Zona 1000

San Jose, Costa Rica

Telephone: (506) 33-2360

Rafinadora Costarricense de Petroleo S.A.

Apartado 4351, Zona 1000

San Jose, Costa Rica

Telephone: (506) 33-0333, Fax: (506) 23-2748

Major Publications

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	1990	1991	1992	1993	1994
Cement	620,000 3/	700,000	700,000	750,000 r/	780,000
Clays, common	305,000	399,000	400,000	401,000	401,000
Diatomite	4,400	12,000	12,000	12,000 r/	12,000
Gold kilograms	460	550	550	600	650
Iron and steel: Semimanufactures	91,400 3/	89,800 3/	85,000	86,000 r/	87,000
Lime	12,700	8,660 3/	9,000	9,500	9,500
Petroleum refinery products thousand 42-gallon barrels	4,500	2,500	3,000	4,000	4,000
Pumice	4,900	8,000	8,000	8,000	8,000
Salt, marine	40,000	50,000	50,000	45,000	45,000
Silver kilograms	200	370	400	450	450
Stone:					
Crushed rock and rough stone thousand tons	1,450	944 3/	1,000	1,000 r/	1,200
Limestone and other calcareous materials do.	1,600	1,300	1,300	1,500 r/	1,700
Sand and gravel do.	1,020 3/	1,050 3/	1,100	1,200 r/	1,400
Sandstone	650	650	650	700 r/	800

e/ Estimated. r/ Revised.

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits.

2/ Table includes data available through Mar. 31, 1995.

3/ Reported figure.

TABLE 2
COSTA RICA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Industria Nacional de Cemento, S.A. (INCSA) (private, 100%)	Aguas Calientes, Cartago, Cartago Province	425
Do.	Cementos del Pacifico, S.A. (CEMPASA) (subsidiary of Corporacion Costarricense de Desarrollo, S.A., Government, 100%)	Near Colorado, Guanacaste Province	400
Clay	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	305
Do. do.	Minera Macona, Ltd. (Equinox Resources, Ltd., 100%)	Santa Clara Mine, Puntarenas Province	160
Limestone	INCSA	La Chilena Quarry, near Cartago, Cartago Province	550
Do.	CEMPASA	Cerro Peña Blanca Quarry, Guanacaste Province	300
Petroleum products thousand 42-gallon barrels	Refinadora Costarricense de Petróleo, S.A. (RECOPE)	Moin Refinery, Limón Province	5,760