

THE MINERAL INDUSTRY OF

CUBA

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Cuba's gross domestic product increased 7.8% during 1996 (Fletcher, 1997). This is the largest increase since the economy began to contract almost to the point of collapse after the dissolution of the Soviet Union at the beginning of the decade. The country's trade deficit, however, continued to increase reaching \$1.7 billion.

The most important mineral commodity to the Cuban economy is nickel. Cuba is also among the top producers of cobalt, with an output of about 8% of the total world mine production. In addition, Cuba produces moderate amounts of ammonia, cement, chromite, gypsum, petroleum and petroleum products, salt, silica sand, steel, and sulfur as a byproduct of petroleum. (See table 1.) In 1994, Cuba began producing small quantities of gold.

In 1996, Cuba traded with 132 countries, although the main trading partners were Russia (10.7%), Spain (10.6%), and Canada (8.6%). A large portion of exports (59%) went to Europe, and 50% of imports originated from Latin America and the Caribbean. Tourism was the largest source of hard currency followed by sugar, family remittance, and nickel. Nickel earnings totaled \$417 million (Frank, 1997).

The Ministerio de Industria Básica (Ministry of Basic Industry) is the Government entity responsible for the mineral and petroleum sectors in Cuba. Although mineral production is dominated by the Government, changes in mining and foreign investment legislation in recent years have changed the nature of the industry. In 1993, Geominera S.A. was formed as a private company operating with Government capital. Geominera has worked with the foreign sector in joint ventures or with association agreements to prospect and explore for metals other than nickel. The company's involvement also includes technical research, feasibility studies, and all other aspects of the projects. Geominera's main interest is gold, followed by copper and other metals. In 1996, Geominera was working in projects with, among others, Joutel Resources, MacDonald Mines, Holmer Gold Mines, KWG Resources, CaribGold Mines, and Minería Siboney Goldfields (Minas Hoy, 1996c, p. 15). Most of the foreign investment in Cuba is by Canadian companies (Fletcher, 1996).

Gold production in Cuba began in 1994. The only producer in 1996 was the Castellanos open pit mine in Santa Lucia, Pinar del Río Province (Minas Hoy, 1996a, p. 49). Construction of the recovery plant was begun in 1993 and production in 1994 was 45 kilograms. The proven gold reserves are 5 tons, which will be exhausted by 2000. After the gold reserves are exhausted, plans are for the extraction of lead and zinc from the polymetallic ore. In 1996, however, no agreement had been

signed with interested parties for foreign participation in this project.

In 1996, Northern Orion Exploration, 53% owned by Miramar Mining Corp. of Canada, was working in joint venture in the Mantúa project and in association with Geominera in the Delita project (Minas Hoy, 1996b, p. 33). The Mantúa project, in the western part of the island, Pinar del Río Province, was in the preproduction stage with the banking feasibility and basic engineering studies completed. More-detailed engineering work was conducted in 1996, and gold production was expected to begin during the first 2 years of operation. Construction of a small heap-leaching plant designed to recover 80,000 ounces of gold in those 2 years from the deposit's gossan cap was scheduled to begin in 1997 (Mining Journal, 1997). The gossan estimated reserves total 2 million metric tons with 1.44 grams per ton of gold and 11 grams per ton of silver. Copper production from Mantúa was expected to begin by the third quarter of 1997.

Before the dissolution of the former Soviet Union, the now-defunct Council of Mutual Economic Assistance promoted extensive geological work in Cuba. With that information, the country was divided in 37 geologic zones covering 35 % of the national territory. At the beginning of 1996, all 37 geologic regions designated by the Government for development through foreign investment were under contract (Minas Hoy, 1996d, p. 21).

Sherritt International Corporation (Sherritt) has been instrumental in the recovery of Cuba's nickel production in the past 2 years. In 1996, production of nickel increased by 26%, to 51,289 tons. This output, more than twice that of 1994, represents only about 60% of Cuba's production capacity. Sherritt, the operator of a mine and processing plant in Moa, produced at full capacity of 24,000 tons of nickel (26,034 tons of nickel-cobalt sulfide). Under the joint-venture agreement with the Cuban Government's Compañía General de Níquel S.A., Sherritt's share of the production is 50%. The remaining 50% of the nickel-cobalt sulfide concentrate from this operation, which in addition to Sherritt's portion is also refined in Sherritt's Fort Saskatchewan, Alberta, Canada, refinery, and marketed by Sherritt, is the Government's share of production from this operation.

Sherritt planned to expand the Moa facilities to produce 46,000 tons of nickel-cobalt in sulfide by 2000 (Christiansen, 1996). Sherritt also planned to rehabilitate the Moa plant, including the construction of a new 1,500-metric-ton-per-day sulfuric acid plant to replace existing units, which was schedule for completion by yearend 1997.

In addition, the Government produces nickel oxide and sinter from two operations in the nearby area in Punta Gorda and Nicaro, in Holguín Province. Production of nickel (nickel content of oxide and sinter) from these two operations totaled 26,700 tons in 1996.

In early 1996, WMC Limited (formerly known as Western Mining Corporation Holdings Limited) signed a Heads of Agreement with the Cuban Government company Commercial Caribbean Nickel S.A. for a joint venture to develop the Pinares de Mayarí West nickel laterite deposit in Huguín Province. The deposit reportedly contains 200 million tons of ore with 1% nickel and 0.1 % cobalt (WMC Limited, 1997, p. 34). WMC can earn 65% equity in the operation if it finances further infill drilling and a feasibility study (Metal Bulletin, 1996). Drilling will be followed by metallurgical tests, and a pilot plant could possibly be built before a bankable feasibility determination is carried out.

Importation of Cuban nickel to the United States is prohibited under the Cuban Assets Control Regulations, 31 CFR, part 515. In March, the United States passed The Cuban Liberty and Democratic Solidarity Act of 1996 (Public Law 104-114), also known as the “Helms-Burton law.” Title III of this law, designed to discourage foreign investment in Cuba, gives U.S. citizens the right to sue in U.S. courts any foreign companies that use property expropriated by the Cuban Government on or after January 1, 1959. Under the law, officials of such companies may be denied entry into the United States. Two of the three nickel producers, Moa and Nicaro, were expropriated by the Government. The President of the United States postponed for 6 months enforcement of title III, which was scheduled to take effect on August 1, 1996.

In addition to its investment in Cuba’s nickel production, Sherritt is involved in Cuba’s agriculture, petroleum, and tourism sectors. Its participation in the petroleum sector involves exploration and production. Sherritt, through a subsidiary, holds 100% interest in four incremental production sharing contracts with the Government of Cuba. These contracts, which cover most of the existing oilfields in Cuba, require Sherritt to provide technical assistance, rework and augment the production from selected wells, or redrill for new wells in existing petroleum fields in exchange for a percentage of the incremental production resulting from those activities (Sherritt International Corporation, 1997, p. 14). In 1996,

Sherritt’s share of Cuba’s oil production was 3,920 barrels per day (1.43 million barrels per year) or about 14% of the country’s total production for the year.

In petroleum exploration, Sherritt, through a subsidiary, holds 100% working interest in three exploration blocks—Block 9, onshore southeast of Bay of Cárdenas; Block 10, covering the Bay of Cárdenas; and Block 23 onshore in south-central Cuba. In 1996, a subsidiary of Sherritt acquired a permit the right to earn a 22.5% interest in Blocks V, VI, and VII, offshore to the south of central Cuba. Other companies exploring in Cuba include CubaCan Exploration, MacDonald Oil Exploration, and British Borneo.

Cuba produced an estimated 10.5 million barrels in 1996. Still, the country imported 85% of its energy requirements (Frank, 1997). During the year, 12 wells were drilled, 1 less than in 1995. Production was from more than 300 producing wells. (World Oil, 1997). The value of oil imported in 1996 was \$1 billion. This total represents 26% of total imports of \$3.88 billion.

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TABLE 1
CUBA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1992	1993	1994	1995	1996
Cement, hydraulic	2,000,000	1,048,600 3/	1,081,100 3/	1,469,700 r/ 3/	1,453,100 3/
Chromite	50,000	10,354 r/ 3/	20,000 r/	28,000 r/	37,000
Cobalt 4/	1,357	1,255	1,139	1,851 r/	2,335
Copper, mine output, Cu content	2,000 r/	1,400 r/	2,900 r/	2,000 r/	2,000
Gas, natural:					
Gross	thousand cubic meters	36,000	36,000	37,000	37,000
Marketed	do.	4,000	4,000	4,000	4,000
Gold	kilograms	--	--	45 3/	184 3/
Gypsum	thousand tons	125	125	130	130
Iron and steel, steel, crude	do.	134 3/	91 3/	131 3/	231 3/
Lime	do.	160	180	170	180
Nickel:					
Mine output, Ni-Co content of oxide and sulfide		32,190 3/	30,227 3/	26,926 3/	42,696 r/ 5/
Metallurgical products, Ni content: 4/					
Granular oxide, oxide sinter, and powder		16,717	15,999	13,930	21,388 r/
Sulfide		14,116	12,973	11,857	19,457 r/
Total		30,833	28,972	25,787	40,845 r/
Nitrogen, N content of anhydrous ammonia	thousand tons	135	135	130	135
Petroleum:					
Crude	thousand 42-gallon barrels	5,870	7,320	9,320	10,200
Refinery products	do.	55,000	55,000	55,500	60,000
Salt	thousand tons	185	185	175	180
Silica (industrial sand and gravel)	do.	450	400	300	300
Sulfur, byproduct of petroleum	do.	5	5	4	5

r/ Revised.

1/ Table includes data available through Dec. 31, 1997.

2/ In addition to commodities listed, crude construction materials (marble, sand and gravel, stone, etc.) may also be produced. But data on such production are not available, and information is inadequate to make reliable estimates of output levels.

3/ Reported figure.

4/ The Government of Cuba reports figures of nickel-cobalt content of granular and powder oxide, oxide sinter, and sulfide production. By using an average cobalt content in these products of 0.9% in total granular and powder oxide, 1.1% in total oxide sinter, and 4.5% in total sulfide, the cobalt content of reported nickel-cobalt production was determined to be 1.16% of granular and powder oxide, 1.21% of oxide sinter, and 7.56% of sulfide. The remainder of reported figures would represent the nickel content.

5/ Derived from data reported to the International Nickel Study Group.

TABLE 2
CUBA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1996

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Empresa del Cemento (Government, 100%)	Mariel, Pinar del Río Province; Cienfuegos, Cienfuegos Province	3,500
Chromite	Ministerio de Industria (Government, 100%)	Mercedita Mine and plant, Holguín Province	60
Copper	Empresa Minera de Occidente (Government, 100%)	Mantúa, Matahambre, and Jucrad Mines, Pinar del Río Province Mina Grande, Santiago de Cuba Province	3
Nickel	Empresa Niquelífera Ernesto Ché Guevara (Government, 100%)	Punta Gorda, Holguín Province	30
Do.	Metals Enterprise (Government, 50%, Sherritt International Corporation, 50%)	Moa, Holguín Province	24
Do.	Empresa Niquelífera Comandante Rene Ramos Latour (Government, 100%)	Nicaró, Holguín Province	30
Petroleum:			
Crude	Empresa de Perforación y Extracción de Petróleo (Government, 100%)	Northern coast area between Havana and Cárdenas	12,000 1/
Refinery products	Instituto Cubano del Petróleo (Government, 100%)	Refineries at Cienfuegos, Havana, and Santiago de Cuba	160 1/
Steel	Antillana de Acero (Acinox, 100%)	Cotorro, Havana Province	600
Do.	Acinox (Government, 100%)	Las Tunas, Las Tunas Province	150

1/ Thousand barrels per year.