# 2010 Minerals Yearbook

## CUBA [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

May 2012
[Revised August 2012]

# The Mineral Industry of Cuba

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Nickel was the most important mineral commodity to the Cuban economy, followed by cobalt, which was produced as a byproduct of the mining of nickel. Other minerals produced in the country included asphalt, bentonite, cement, chromite, clay, crushed stone, feldspar, gypsum, iron ore, lime, limestone, marble, salt, sand, steel, sulfuric acid, volcanic ash, and zeolites. Cuba also produced ammonia, natural gas, petroleum, petroleum products, and sulfur as a byproduct of the refining of petroleum.

## Production

Production of most industrial minerals, with the exception of gypsum, hydraulic cement, and lime, decreased during the year. Production of gypsum increased by 42% to 111,000 metric tons (t) and that of lime increased by 8% to 49,700 t; the increase in the production of hydraulic cement was not significant. Production of kaolinite decreased by 95% to 100 t; bentonite, by 66% to 228 t; feldspar, by 40% to 2,800 t; silica sand, by 32% to 11,100 cubic meters; marble, by 17% to 4,300 t; and limestone, by 10% to 2.6 million metric tons (Mt). In the mineral fuels sector, the most significant increase in production was that of petroleum coke, which increased by 120% to 41,000 barrels, followed by liquefied petroleum gas (28.6%), lubricants (25.9%), gasoline (15.4%), and crude petroleum (10.7%). Data on mineral production are in table 1.

Cuba's Oficina Nacional de Estadísticas [National Statistics Office] stopped reporting cobalt and nickel production in 2007; consequently, production of cobalt and nickel for 2009 and 2010 are estimated.

## Structure of the Mineral Industry

The Ministerio de la Industria Básica was the Government entity responsible for the mineral and petroleum sectors. Unión Geológico Minera S.A. was the company in charge of prospecting, exploration, and mining of all metallic and nonmetallic minerals with the exception of cobalt and nickel. The production of chromite, cobalt, and nickel was overseen by Grupo Empresarial Cubaníquel S.A. Petroleum prospecting, exploration, marketing, and refining were overseen by Cubapetróleo S.A. Table 2 is a list of major mineral industry facilities.

## Commodity Review

### *Metals*

**Cobalt and Nickel.**—Cuba (51%) in joint venture with the Government of Venezuela (49%) was in the process of refurbishing the 68,000 metric-ton-per-year (t/yr) Las Camariocas ferronickel plant at a cost of $700 million. Las Camariocas plant was located in the city of Moa in Holguin Province. Construction of the plant had been undertaken by Czechoslovakia in 1983 through the then Council for Mutual Economic Assistance, but the project was never completed. Cuba and Venezuela planned to ship the ferronickel produced at Las Camariocas to a 500,000-t/yr stainless steel plant in Venezuela, which was also jointly owned by the two Governments. The plant was expected to be operational by 2013 (China Daily, 2010; CubaStandard.com, 2010; El Universal, 2010).

Sherritt International Corp.'s Moa operation produced a total of 33,972 t of nickel and 3,706 t of cobalt in 2010. Sherritt operated the Moa facility in joint venture with the Government (each owned a 50% interest). Production from Moa was processed in a refinery located in Fort Saskatchewan, Alberta, Canada. The company planned to review options for the completion of an expansion at Moa and the construction of a sulfuric acid plant (Sherritt International Corp., 2011, p. 8–9).

### *Mineral Fuels*

**Petroleum.**—Sherritt held an indirect working interest that varied from 40% to 100% in various petroleum production-sharing contracts in Cuba. The company produced petroleum from near-shore reservoirs off the northern coast of Cuba, which were explored and developed from land-based drilling locations. The average gross working-interest production of oil and gas in Cuba was approximately 21,204 barrels per day in 2010.

More extensive coverage of the mineral industry of Cuba can be found in the 2008 U.S. Geological Survey Minerals Yearbook, volume III, Area reports—International—Latin America and Canada, which is available on the World Wide Web at http://minerals.usgs.gov/minerals/pubs/country.

## References Cited

China Daily, 2010, Cuba, Venezuela to build joint ferronickel plant: Xinhua, China, China Daily, June 29. (Accessed June 22, 2011, at http://www.chinadaily.com.cn/world/2010-06/29/content_10034948.htm.)

CubaStandard.com, 2010, Venezuela ferro-nickel venture on track: Tampa, Florida, CubaStandard.com, February 23. (Accessed June 22, 2011, at http://www.cubastandard.com/2010/02/23/venezuelan-ferro-nickel-venture-on-track/.)

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Sherritt International Corp., 2011, 2010 annual report: Toronto, Ontario, Canada, Sherritt International Corp., 124 p.

TABLE 1

CUBA: PRODUCTION OF MINERAL COMMODITIES[1, 2]

(Metric tons unless otherwise specified)

| Commodity[3] | | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|
| Asphalt | | 49,900 | 55,900 | 61,600 | 80,200 | 86,900 |
| Bentonite | | 355 | 401 | 382 | 670 | 228 |
| Cement, hydraulic | | 1,704,700 | 1,805,300 | 1,705,200 r | 1,625,700 | 1,631,400 |
| Chromite | | 27,900 | -- | -- | -- | -- |
| Cobalt, mine output, Co content:[4] | | | | | | |
| Oxide, oxide sinter, sulfide, ammoniacal liquor precipitate | | 6,081 | 5,029 | 3,597 | 4,000 r, e* | 4,100 e* |
| Sulfide and ammoniacal liquor precipitate | | 5,602 | 4,540 | 3,175 | 3,500 r, e* | 3,600 e* |
| Feldspar | | 5,500 | 5,600 | 4,300 | 4,700 | 2,800 |
| Gypsum[e] | thousand metric tons | 73 | 80 | 110 | 78 | 111 |
| Iron ore: | | | | | | |
| Gross weight | | 7,800 | 3,300 | -- | -- | -- |
| Fe content[e] | | 3,500 | 1,500 | -- | -- | -- |
| Kaolinite | | 1,700 | 2,000 | 2,000 e | 2,000 e | 100 |
| Lime | | 36,300 | 42,800 | 49,900 | 46,000 | 49,700 |
| Limestone | thousand metric tons | 1,700 | 1,400 | 1,500 | 2,900 | 2,600 |
| Marble | cubic meters | 5,500 | 4,200 | 3,800 | 5,200 | 4,300 |
| Natural gas, marketed | thousand cubic meters | 1,090,600 | 1,217,900 | 1,161,000 | 1,155,300 | 1,072,500 |
| Nickel, Ni content:[4] | | | | | | |
| Mine output, oxide, oxide sinter, sulfide, ammoniacal liquor precipitate | | 73,371 | 73,934 | 67,265 | 70,000 e | 71,000 e |
| Metallurgical products: | | | | | | |
| Granular oxide, oxide sinter, powder | | 39,121 | 39,911 | 34,478 | 35,000 e | 35,500 e |
| Sulfide | | 30,967 | 31,116 | 32,465 | 32,500 e | 33,000 e |
| Ammoniacal liquor | | 3,283 | 2,907 | 322 | 300 e | 300 e |
| Total | | 73,371 | 73,934 | 67,265 | 67,800 e | 68,800 e |
| Nitrogen, N content of ammonia | | 42,300 | 47,400 | 41,700 | 27,200 | 36,000 |
| Petroleum: | | | | | | |
| Crude[5] | thousand 42-gallon barrels | 18,702 | 18,734 | 19,367 | 17,614 | 19,507 |
| Refinery products:[6] | | | | | | |
| Petroleum coke | do. | 78 | 76 | 34 | 19 | 41 |
| Gasoline, motor | do. | 2,707 | 3,345 | 6,109 | 4,197 | 4,844 |
| Kerosene | do. | 973 | 536 | 325 | 182 | 2 |
| Liquefied petroleum gas | do. | 719 | 681 | 651 | 536 | 689 |
| Lubricants | do. | 316 | 350 | 360 | 263 | 330 |
| Naphtha | do. | 690 | 496 | 490 | 1,376 | 736 |
| Total | do. | 5,483 | 5,484 | 7,969 | 6,572 | 6,642 |
| Salt | thousand metric tons | 266 | 141 | 157 | 266 | 272 |
| Sand, calcareous | thousand cubic meters | 1,977 | 2,730 | 1,827 | 1,693 | 1,686 |
| Silica sand | cubic meters | 9,000 | 21,400 | 29,100 | 16,400 r | 11,100 |
| Stone, crushed | thousand cubic meters | 3,044 | 3,815 | 3,568 | 3,416 | 3,234 |
| Steel | | 257,200 | 262,400 | 273,800 | 265,800 | 277,600 |
| Sulfuric acid | thousand metric tons | 406 | 428 | 412 | 423 | 423 |
| Volcanic ash | | 3,500 | 38,000 | 34,600 | 62,100 r | 72,300 |
| Zeolites | | 14,000 | 16,200 | 20,400 | 25,800 | 30,900 |

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised. do. Ditto. -- Zero.

[1]Table includes data available through December 31, 2011.

[2]Statistical data reported by the Cuban Government in Anuario Estadístico de Cuba, unless otherwise specified.

[3]In addition to commodities listed, crude construction materials (sand and gravel, and so forth) may also be produced, but data on such production are not available and information is inadequate to make reliable estimates of output.

[4]The Government of Cuba reports figures of nickel-cobalt content of granular and powder oxide, oxide sinter, and sulfide production. The cobalt content of reported nickel-cobalt production was determined to be 1.16% of granular and powder oxide, 1.21% of oxide sinter, 7.56% of sulfide, and 33% of ammoniacal liquor. The remainder of reported figures represent the nickel content.

[5]Production has been converted from metric tons to barrels by using the U.S. Energy Information Administration's factor of 6.449 barrels per metric ton (bbl/t) of crude petroleum.

[6]Production has been converted from metric tons to barrels by using the U.S. Energy Information Administration's factor of 5.51 bbl/t for petroleum coke; 8.53 bbl/t for gasoline; 7.73 bbl/t for kerosene; 11.63 bbl/t for liquefied petroleum gas; 7.00 bbl/t for lubricants; and 8.22 bbl/t for naphtha.

*Correction posted August 9, 2012.

TABLE 2
CUBA: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

| Commodity | | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|---|---|---|---|---|
| Cement | | Cementos Cienfuegos S.A. (Government, 50%, and Las Pailas de Cemento S.A., 50%) | Cienfuegos | 1,500 |
| Do. | | Fábrica de Cemento 26 de julio | Nuevitas | 600 |
| Do. | | Fábrica de Cemento Mártires de Artemisa | Artemisa | 600 |
| Do. | | Cementos Curazao N.V. | Barrio Mujica, Mariel Province | 1,110 |
| Do. | | Fábrica de Cemento Siguaney | Sancti Spiritus | 300 |
| Chromite | | Grupo Empresarial Cubaníquel S.A. (Government, 100%) | Moa, Holguin Province | 30 |
| Cobalt | | Metals Enterprise S.A. (Government, 50%, and Sherritt International Corp., 50%) | do. | 3 |
| Gold | kilograms | Oro-Barita Mine (Government 100%) | El Cobre, Santiago[1] | NA |
| Nickel | | Empresa Niquelífera Ernesto Che Guevara | Ernesto Che Guevara Mine Punta Gorda, Holguin Province | 33 |
| Do. | | Moa Nickel S.A. (Government, 50%, and Sherritt International Corp., 50%) | Pedro Soto Alba Mine, Holguin Province | 37 |
| Do. | | Empresa Niquelífera Comandante René Ramos Latour (Government, 100%) | Rene Ramos Latour Mine, Nicaro Holguin Province | 12.4 |
| Petroleum: | | | | |
| Crude: | thousand 42-gallon barrels | Empresa de Perforación y Extracción de Petróleo del Centro (Government, 100%) | Northern coast between Havana and Cardenas | 12 |
| Do. | | Sherrit International Corp. (indirect working interests vary from 40% to 100% in 10 production-sharing contracts with the Government) | Near shore oilfields located at Yumuri, Varadero, Canasi, and Puerto Escondido | 7,000 |
| Refinery products | thousand 42-gallon barrels | PDV-Cupet S.A. (Government, 51%, and Petróleos de Venezuela S.A., 49%) | Cienfuegos refinery, Cienfuegos, 250 kilometers from Havana | 23,725 |
| Do. | do. | Hermanos Díaz | Santiago de Cuba | 8,000 |
| Do. | do. | Ñico López Refinery (Government, 100%) | Havana | NA |
| Sand | | Algaba quarry | Sancti Spiritus | 50 |
| Do. | | Malabe quarry | NA | 32 |
| Do. | | Cajobabo | Imias | NA |
| Steel | | Grupo Metalúrgico Acinox (Government, 100%), including: Antillana de Acero | Cotorro, Havana Province | 600 |
| Do. | | Empresa de Aceros Inoxidables | Las Tunas, Las Tunas Province | 370 |
| Do. | | 4 other steel plants | NA | NA |
| Zeolite | | Empresa Geominera Oriente | Holguin Province | 58 |

Do., do. Ditto. NA Not available.
[1]Under development.