

## THE MINERAL INDUSTRY OF

# URUGUAY

By Pablo Velasco

The Republic of Uruguay, which is located in southern South America bordering the South Atlantic Ocean between Argentina and Brazil, has an area of about 176,220 square kilometers (km<sup>2</sup>). In July 1999, the population was 3.3 million, with a gross domestic product (GDP) of \$28.4 billion (1998 estimate) based on purchasing power parity (U.S. Central Intelligence Agency, 1999, Uruguay—World factbook 1999, accessed March 28, 2000, at URL <http://www.odci.gov/cia/publications/factbook/uy.html>).

Uruguay had a strong domestic economy, but its small size and geographic location made it susceptible to the economic downturns of its larger neighbors Argentina and Brazil. Trade with these countries accounted for a large share of the Uruguayan economy. From 1992 to 1998, Uruguay's real GDP growth averaged 4.2% per year. The devaluation and accompanying economic difficulties in Brazil and the downturn in Argentina, however negatively impacted Uruguay's GDP growth for 1999, which resulted in a 2% contraction. Growth was predicted to exceed 3% for 2000 (U.S. Energy Information Administration, February 2000, Uruguay—General background—Country analysis briefs, accessed March 28, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/uruguay.html>).

Reasons for the decline in the GDP in 1999 include reduced Uruguayan export competitiveness in Brazil after the devaluation of Brazil's currency, the real, and reduced economic activity in Argentina and Brazil. Uruguay's inflation rate decreased from 130% in 1990 to 8.6% in 1998. In 1999, the inflation rate was estimated to be about 4%.

In 1998, exports increased by a modest 1.4% to \$2.8 billion, and imports (f.o.b.) rose by 2.8% to \$3.6 billion. Traditionally, a substantial percentage of Uruguay's trade has been with neighboring Argentina and Brazil, and this increased even more with integration into the Mercado Común del Cono Sur [Southern Cone Common Market (Mercosur)]. Trade with Argentina and Brazil accounted for more than 50% of Uruguay's overall trade. The United States was the fourth largest exporter to Uruguay after Brazil, Argentina, and the European Union. Mercosur faced several problems in late 1998 and early 1999 that affected the trade flows among its partners—the devaluation of Brazil's real, lack of effective macroeconomic coordination in Mercosur, political problems in Paraguay, and the imposition of trade-restrictive measures in Argentina and Brazil. In the long run, however, Mercosur has performed well for Uruguay's interests. Mercosur's integration has fostered trade among its members. Exports to Mercosur partners (\$1.5 billion) have grown to 55% of total exports, and imports from Mercosur partners (\$1.6 billion) remained a stable 43% of total imports. Since 1992, Uruguay's trade with Mercosur countries has doubled and trade with the United

States grew by 56% (U.S. Embassy, Montevideo, Uruguay, 1999, p. 7).

The Uruguayan mining sector has traditionally been based on the exploitation of nonmetallic minerals for the construction industry, the glass and ceramics industries, and other industrial applications. The following commodities are important: clay, bentonite, broken stone, dolomite, feldspar, gravel, gypsum, limestone, pebbles, quartz, sand, and talc. Ornamental rocks, such as flagstone, granite, and marble, were also exploited as were semiprecious stones for jewelry, such as agate and amethyst. The ongoing extraction projects operating with these minerals exceeded 350 facilities, most of which were small scale.

In the past few years, the Uruguayan mining scenario has started to change with the revival of minerals prospecting and exploitation that had been idle for many years. In 1999, diamond exploration was added to this list. The country has opened its doors to foreign investment as a result of changes in national legislation that have improved the business environment. Mining output, which only accounted for 0.2% of the GDP, has grown at a yearly pace of almost 4% during the past 5 years. In 1998, a gold mine and a cement plant began production.

The San Gregorio Mine began production of gold during the first half of 1997 and had a production capacity of about 2,200 kilograms per year (70,000 ounces per year). Production was expected to continue at the same levels for the next 5 years based on indicated resources of 21,100 kilograms (kg) (680,000 ounces); this included about 13,000 kg (420,000 ounces) of minable reserve (Mining Journal, 1997).

In late 1998, Vancouver-based Crystallex International Corp. agreed to buy the San Gregorio assets of Rea Gold (which filed for bankruptcy in late 1997), which consisted of an operating gold mine and 1,500 km<sup>2</sup> of mineral properties. Crystallex reported that gold production at its San Gregorio Mine during the first quarter of 1999 exceeded 622 kg (20,000 ounces) at a cash cost of \$198—a 17% increase in output and 32% reduction in cash costs compared to the first quarter of 1998 (Metals & Minerals Latin America, 1999).

In mid-1999, Crystallex agreed to form a joint venture with Toronto-based Southern Era Resources Inc. to explore for diamond. Targets were identified by airborne magnetic and electromagnetic geophysical surveys. Crystallex will be the operator of the joint venture, and Southern Era will market all diamond production (Mining Journal, 1999).

Because Uruguay has no fossil fuel resources and only a small amount of hydroelectric power, the country must rely heavily on imports to meet its energy needs. More than 50% of total energy consumption came from imported oil. The possibility of building more hydroelectric dams is limited

because of the large number of dams on Uruguay's rivers. Integration, which included that of the region's energy sectors, was on the rise throughout the region. For these reasons, the country was planning to change its energy outlook and balance radically. The use of natural gas was to be increased greatly as part of a wider regional trend and was to be used in homes, as well as for thermal generation in existing or new powerplants (U.S. Energy Information Administration, February 2000, Uruguay—Energy—Country analysis briefs, accessed March 28, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/uruguay.html>).

Because Uruguay has no known oil resources, it must import 38,000 barrels per day (bbl/d) of crude for consumption. La Administración Nacional de Combustibles, Alcohol y Portland (ANCAP) is the state oil company. It owned Uruguay's only refinery, the 37,000-bbl/d La Teja refinery in Montevideo (U.S. Energy Information Administration, February 2000, Uruguay—Oil—Country analysis briefs, accessed March 28, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/uruguay.html>).

The first natural gas pipeline to connect Argentina and Uruguay was inaugurated in late 1998 and ran from Entre Rios, Argentina, to Paysandu, western Uruguay. This \$8 million, 19.3-kilometer (km) pipeline will serve western Uruguay. Construction on the Cruz del Sur pipeline from Buenos Aires to Montevideo began in mid-1999. This 214-km pipeline was expected to cost \$135 million and to carry as much as 15 million cubic meters per day of gas. The gas will be supplied from fields in the western Neuquen and the southern Austral Basins of Argentina (U.S. Energy Information Administration, February 2000, Uruguay—Gas—Country analysis briefs, accessed March 28, 2000, at URL <http://www.eia.doe.gov/emeu/cabs/uruguay.html>).

The production of minerals for the construction industry has been economically significant in Uruguay. Among these materials, limestone, which is used in the manufacture of portland cement, had vast possibilities for export growth. In 1998, Uruguayan output of limestone was 1.5 million metric

tons (Mt), which was an increase of 22% compared with that of 1998. In 1999, it decreased to 1,471 metric tons (t) (3.4%). In 1998, the Spanish consortium of Cementos Mullins S.A. and Cementos Uniland S.A. built the most modern plant in Uruguay at a cost of \$60 million; the plant had a 470,000-t capacity. Additionally, ANCAP was evaluating the possibility of entering into partnership with private capitals to enhance the output of its two cement-producing facilities and to increase their export markets. Uruguay exported up to 300,000 t of cement to Mercosur in 1999. Production of cement during the past few years has remained stable at more than 800,000 metric tons per year (t/yr), but expectations for 1999 were estimated to be more than 1.0 Mt, which was well above capacity limits. Uruguay has three cement companies—ANCAP (510 t/yr, two plants), Compañía Uruguaya de Cemento Portland (450 t/yr, two plants), and Compañía Nacional de Cementos (55 t/yr, one plant) (International Cement Review, 1998).

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### Major Source of Information

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TABLE 1  
URUGUAY: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995 e/	1996	1997	1998	1999 e/
Aluminum, secondary e/	45	45	45	45	45
Barite	15	15 e/	40	65	144
Bentonite	--	58	60	60 e/	55
Cement, hydraulic	600,000	685,000	781,000	960,000	1,000,000
Clays, unspecified	150,000	40,796	59,434	41,371	38,192 3/
Coke, gashouse e/	8,000	8,000	6,000	6,000	5,000
Corundum	45	--	--	--	--
Feldspar	3,000	2,100 r/	3,229	2,240 r/	1,556 3/
Gemstones, semiprecious:					
Agate	100	154	74	270 r/	362
Amethyst	90	67	62	48 r/	45
Gold kilograms	900	1,000	2,177 r/	1,985	2,400
Gypsum	145,000	130,175	942,755	1,123,376	1,049,597 3/
Iron and steel:					
Iron ore	5,000	845	5,527	8,618	3,837 3/
Metal:					
Ferroalloys, electric-furnace ferrosilicon crust e/	200	200	200	200	200
Steel, crude	39,957 3/	33,555	39,070	51,000 r/ e/	50,000
Semimanufactures	36,569 3/	28,376	35,120	47,000 r/ e/	48,000
Lime e/	12,000	12,000	12,000	10,000	10,000
Petroleum refinery products:					
Liquefied petroleum gas thousand 42-gallon barrels	350 3/	427	400 e/	425 e/	395
Gasoline do.	2,175 3/	2,099	2,250 e/	2,100 e/	2,150
Kerosene do.	411 3/	617	460 e/	500 e/	525
Distillate fuel oil do.	3,048 3/	4,500	3,100 e/	4,200 e/	4,150
Residual fuel oil do.	3,437 3/	3,964	3,450 e/	3,600 e/	3,620
Unspecified do.	234 3/	288	240 e/	260 e/	280
Total do.	9,655 3/	11,895	9,900 e/	11,100 e/	11,100
Sand and gravel:					
Sand, common thousand metric tons	1,500	1,775	2,135	2,753	2,506 3/
Gravel	500	17,700	40,109	40,192	49,887 3/
Stone:					
Flagstone	--	3,795	4,502	4,000 e/	4,100
Granite:					
Dimension	10,000	7,552	77,281	22,955 r/	6,397 3/
Crushed and broken, alum schist	10,000	389,000 r/	418,200 r/	450,000 e/	440,000
Dolomite	20,000	21,930	21,847	17,440	8,439 3/
Limestone thousand metric tons	750	789	1,240	1,523 r/	1,471 3/
Marble:					
Onyx, in blocks and broken	--	39	123	100 e/	119
Travertine, in blocks and broken	--	10	11	11 e/	15
Other, unspecified, in blocks and broken	--	134	141 r/	340	192
Marl	10,000	23,909	44,775	68,810	33,387 3/
Quartz	500	23	49	52	260
Other, including ballast thousand metric tons	2,000	2,104	2,852 r/	2,690 e/	2,500
Sulfur, elemental, byproduct e/	2,000	2,000	2,000	2,874 r/	3,119 3/
Talc, soapstone, pyrophyllite	1,000	898	1,133	972	2,905 3/
Tuff, tufa	3,500	975,929	691,151	865,860	800,000

e/ Estimated. r/ Revised. -- Zero.

1/ Includes data available through March 17, 2000.

2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

3/ Reported figure.