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## DOMINICAN REPUBLIC

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**T**he economy of the Dominican Republic during 2003 was characterised by contrasting scenes. On the one hand the tourist and mineral industries showed strength. On the other hand the currency was very weak. In recent times the value of the peso has depreciated to more than 50 pesos to one US dollar from a former level of 17:1. This has generated a high rate of inflation, as many goods have to be imported, but salary levels have remained unchanged. There have been record high prices, not only for imports but also for locally manufactured goods, and most business activities have suffered badly. The tourist industry has remained active, however, and continues to grow. Dominican communities overseas, principally in the US, contribute heavily to the local economy by sending about US\$2.0 billion annually to their families in the country.

At the end of 2003, the Dominican Republic was preparing for the presidential elections, scheduled for May 16, 2004. Three principal political parties dominated the scene: the ruling PRD (Dominican Revolutionary Party), headed by President Hipolito Mejia; the PLD (Dominican Liberation Party), headed by former President, Leonel Fernandez (considered the favourite to win on May 16, 2004), and the PRSC (Social Christian Reformist Party), headed by Eduardo Estrella, a former senator and public works minister. Some 23 political parties and organisations were planning to participate, 11 having presidential nominees.

The mining of minerals, both metallic and non-metallic, is an important aspect of the economy. The dominant producer is Falconbridge Dominicana which mines nickel laterite deposits in the Bonao area of central Dominican Republic. Also important have been the feasibility studies carried out by Placer Dome for the development of the sulphide ore reserves at the Pueblo Viejo mine in the Cotui area, also in the central part of the republic. The Republic also has a very active mineral exploration sector.

### **Mining**

**Falconbridge Dominicana** mines nickel laterite and during 2003 it mined 3.8 Mt at an average grade of 1.19% Ni. Metal production was 27,227 t (60 Mlb) of nickel contained in ferronickel, 5.1% below the budgeted production of 63.3 Mlb. The shortfall was a result mainly of power shortages, operational problems caused by low SiO/MgO in the feed and repairs to the No 1 electric furnace. The amount of nickel contained in the ferronickel that was exported was 26,486 t (58.4 Mlb), 15% higher than 2002. After depreciation and taxes, the company realised net earnings of US\$26.8 million. The tax provision recorded was US\$29.6 million and total tax paid during the year was US\$10.1 million. The average metal price received by Falconbridge Dominicana during

2003 increased by 36%. Ferronickel was shipped to the US (31%), Europe (28%), South Korea (33%) and Japan (8%), and the average price received for nickel contained in ferronickel was US\$4.30/lb, compared with US\$3.17/lb in 2002.

A study was initiated to expand nickel production by 3,000-6,000 t/y. At third dryer was installed for treatment of the upgrading circuit rejects, and other process equipment installation is in progress. During the third quarter, the electricity available for sale increased after the start up of the Smart Predictive Line Controller (SPLC) for the electric furnaces.

### Development

In March 2002, **Placer Dome Dominicana** won the international bid tender for the development and mining of the sulphide ore reserves at the Pueblo Viejo gold-silver mine, and has continued with its feasibility studies. Placer has obtained a Special Lease Agreement and during the latter part of 2003 it announced that the results of the feasibility studies would be announced during 2004. The company has a four-year period in which to reach a production decision. It is anticipated that annual production will reach some 400,000 oz of gold, 2.2 Moz of silver and some 40,000 t of zinc, using conventional and bioleach ore processing. There is a potential for a 33-year mine life, extracting a total of some 14-27 Moz of gold, 130 Moz of silver and 2.2 Mt of zinc. Recoveries are expected to be of the order of 81% for gold, 80% for silver and 85% for zinc, and costs have been estimated to be about US\$190/oz of gold.

Placer Dome plans to spend US\$336 million to bring Pueblo Viejo into production. The Dominican Republic will receive a combination of net smelter returns, net profits interest and taxes according to profit levels. Between 1975 and 1992 the oxide parts of the deposit were mined, producing 5 Moz of gold and 22 Moz of silver.

### Exploration activity

TSX-Venture-listed **Linear Gold Corp** is evaluating a portfolio of properties formerly held by MIM Holdings Ltd, prior to the latter's takeover by Xstrata plc, which elected to withdraw from exploration in Central America. However, MIM Panama is the name still employed by Linear Gold in the Dominican Republic. The portfolio includes Ampliación Pueblo Viejo, a JV with Placer Dome Inc, and a number of other concessions. Previous work by MIM Panama included exploration at Loma Hueca on the eastern margin of the Cumani concession and the western margin of the Lovaton concession; also at Arroyo Cuance, Carpintero area, Cañada Sucia, Caño El Negro, Vicente, Vicente North, Loma el Mate, La Cueva, Arroyo Herradura and Arroyo Ceboruco.

Ampliación Pueblo Viejo was formerly the Fiscal Reserve won in an international bid by Newmont Mining Corp. Newmont decided not to proceed and notified the Dominican authorities in August 2001. The runner-up in the bidding, MIM Panama, was then awarded the area as an exploration concession in March 2002. The area surrounds the northern and western sides of the Pueblo Viejo deposits, and had been explored and held under

Fiscal Reserve status by state-owned Rosario Dominicana. Work included 61 shallow drillholes at the Lechoza prospect. MIM Panama has undertaken rock and soil sampling, geological mapping, trenching and diamond drilling. This has been followed by a dipole-dipole IP survey over an anomalous trend where mineralisation is associated with zones of high chargeability. The trend extends to the south and northwest. Gold and silver values, likewise, showed the same trend.

In December 2003, the company reached an agreement with Placer Dome for the exploration and development of the Ampliacion Pueblo Viejo property. Placer may earn a 52.5% interest by paying Linear Gold US\$775,000 and spending US\$4 million on exploration over the next 3.5 years. Placer has a further three-year option to increase its interest up to 62.5% by incurring all exploration costs to a feasibility stage and completion of a feasibility study. Linear Gold will be operator during the first year of exploration, with plans to delineate the oxide gold and oxide copper resources at La Lechoza and systematically explore remaining portions of the property for near-surface gold deposits

Late in 2003, Linear Gold signed a JV agreement with **Everton Resources** in respect of exploration at Linear's Loma El Mate property. The property covers 58 km<sup>2</sup> and is adjacent to the Pueblo Viejo deposits. The property has large zones of alteration. Everton has the option to acquire a 50% interest by spending US\$500,000 over two years and will issue to Linear 200,000 common shares. Linear Gold will manage the project.

Vancouver-based **Impact Minerals International** (IMI) is a Canadian mineral exploration and development company 46.72% owned by Energold Mining Ltd, an exploration group that has been active in the Dominican Republic for the past decade. Impact has established a portfolio of gold, silver, copper and zinc properties in five contiguous concessions covering a total of 21,727 ha.

Exploration is undertaken through two Dominican subsidiaries, Proyectos Mineros SA and Minera Monte Plata on the El Brujo, La Bruja, Baritina, La Culebra and Athena concessions. The properties have potential for high sulphidation epithermal gold and porphyry copper-gold systems, and are underlain by the early Cretaceous Los Ranchos Formation, host to the Pueblo Viejo deposits. In 1996, BHP Minerals International drilled 10 holes for a total of 2,222 m at a location 3 km to the southeast of El Brujo. The drilling intersected intense argillic alteration, and gold mineralisation averaging 0.97 g/t Au over 50 m was encountered. At nearby El Brujo, a grid has outlined a 600 m by 850 m soil anomaly with partially coincident copper, lead, arsenic and molybdenum surrounded by a peripheral zinc anomaly. Surface mapping and sampling has revealed widespread gossan. At Baritina, zones of gold-silver-zinc mineralisation are associated with the intersection of major faults. Trench and channel values include 5.59 g/t Au over 2 m at the North Caracol Creek zone and 5.35 g/t Au, 39.8 g/t Ag and 2.25% Zn over 2 m in the South Caracol Creek zone.

During 2004, trenching will be conducted to identify drill targets on the gossan zone, the vein zone, and newly-discovered prospects along the main structural trend will also be investigated. Minmet has options on El Brujo and La Bruja and must spend US\$1.5 million over two years to earn a 51% interest.

**Energold Mining Ltd** is a Canadian mining company that has been exploring for precious and base metals in the Dominican Republic since 1995 and has back-in rights or options to a large, prospective land package. It also owns a number of concessions including Longyear, Bacco y Ofir, Managua, Los Pedregones 1, Rey Midas, Majagual, Josefina, La Comadreja and Rey Salomon, plus a number of concessions underlain by the Maimon Formation which could host volcanic massive sulphides. These concessions include La Parcela, Winkie, Elsa, Aniana, Gopher, Lidia and Piedra Grande. In addition, Energold owns 50% of Kluane International Drilling which supplies lightweight portable drills to the exploration industry.

In December 2003, Energold announced a JV agreement with Dublin-based **MinMet plc** on the Longyear concession, which lies adjacent to the Pueblo Viejo mine. To date, soil sampling, trenching and the drilling of 20 shallow diamond drill holes have defined low-grade oxide and sulphide gold mineralisation. (Loma Trinchera is part of the area and was explored some years ago by Falconbridge Dominicana and by Rosario Dominicana. A very extensive gossan characterises the area. Old historical documents indicate that mining took place during the Spanish colonial period.)

Energold Mining is 100% owner of the Bacco y Ofir concession where it took some 327 rock samples of which 20 yielded greater than 1 g/t Au and 66 more than 0.1 g/t Au. The best sample yielded 9.56 g/t Au, 326 g/t Ag, 6.63% Cu and 2.7% Zn. In 2001, the concession was optioned by **Exploration & Discovery Latin America (Panama) Inc** (EDLA), the holding company of Minmet's Dominican Republic interests. EDLA must spend a total of US\$150,000 over a two-year period to earn a 51% interest. Late in 2003, EDLA initiated a programme of shallow drilling to test flat-lying high sulphidation replacement-style mineralisation in an area measuring 1,400 m by 700 m.

The 32 km<sup>2</sup>. Majagual concession is located 42 km west of Santo Domingo and trenching indicates consistent copper and gold mineralisation in what is interpreted as a leached cap of a porphyry system defined over an area of 800 m x 600 m. The geologic setting and alteration patterns are similar to other well-known porphyry deposits in the Caribbean, including Cerro Colorado in Panama and Tanama in Puerto Rico. Energold is seeking to delineate a porphyry copper-gold deposit. Detailed geological mapping and geophysics at the El Cinco zone, along with soil geochemistry, appear to confirm the existence of a porphyry copper-gold system. Exploration was continuing at year-end, with drill targets planned and environmental studies initiated.

Energold and Minmet plc have agreed to a JV exploration programme whereby Minmet must spend US\$1.25 million over the next two years to earn a 51% interest in Energold's Josefina, Winkie, Bacco y Ofir, La Comadreja, Rey Midas and Rey Salomon concessions. Rey Midas adjoins the Managua concession to the west and north. A mineral inventory of 6 Mt at 2.2 g/t Au, 5.67 g/t Ag and 0.81% Cu has been outlined in northwest-striking, steeply-dipping quartz veins at Managua. Surface work at Rey Midas has confirmed that these veins continue onto the property.

At La Parcela concession, volcanic massive sulphide mineralisation with precious-metal enrichment has been discovered within a 7 km by 1 km area of anomalous gold and copper geochemistry in soil and rock. Zinc, copper, silver and gold-bearing massive sulphides occur at the contact of footwall felsic pyroclastic rocks and hanging wall epiclastic rocks. The prospect has been intersected by nine diamond drill holes over a 400 m strike length.

Los Pedregones concession hosts multiple zones of structurally-hosted, low-sulphidation, precious-metals mineralisation. The grade, size and abundance of mineralised centres indicate that this property has the potential to host a multi-million ounce gold-silver deposit. Energold is actively seeking a JV partner to advance this project.

In recent developments, Energold has announced a further JV with Minmet in respect of El Higo (El Centenario). Previous exploration on this project by Energold and others has included 69 shallow drill holes totalling 4,248 m that outlined a zone of epithermal gold mineralisation. Drilling yielded intersections averaging up to 9.18 g/t Au over 23.1 m, including an interval of 13.8 g/t.

In March 2004, Minmet announced that it plans to spin off its gold exploration assets in the Dominican Republic as a separate listed company listed in Toronto. EDLA is to be sold to Toronto-based **GoldQuest Mining Corp** (formerly **Wellington Cove Explorations Ltd**) in return for 92% of the latter's share capital. Minmet will then issue 5 million shares in Wellington at C\$0.30/share for gross proceeds of C\$1.5 million, prior to listing the company on the TSX Venture Exchange. On completion, Minmet will own about 70% of the enlarged share capital of Wellington. In addition to its JV interests with Energold, EDLA holds licences for 21,671 ha of gold properties in the Dominican Republic and has identified a number of specific drilling targets.

**GlobeStar Mining Corp** is a mineral exploration company with advanced-stage exploration properties, and the company is also developing the Cerro de Maimon copper-gold mine in central Dominican Republic in the vicinity of the Pueblo Viejo deposits. Cerro de Maimon was discovered by Falconbridge Dominicana some years ago during exploration of the Quisqueya No.1 concession (where Falconbridge's nickel laterite deposits are located). Falconbridge defined a 4 Mt resource averaging 4% Cu. This was purchased by TWG Corp for US\$350,000, subject to a 2% royalty. In a separate agreement, TWG sold a 50% net profit's interest to 4-Star Group Inc of the US in exchange for a C\$1,100,000 private placement in the company at C\$0.40 per share and C\$2 million direct investment in the project. TWG



subsequently changed its name to GlobeStar Mining Corp. Cerro de Maimon consists of massive sulphides with an overlying oxide cap. The sulphide portion contains 3.36 Mt at 3.93% Cu, 1.93% Zn, 47.3 g/t Ag and 0.56 g/t Au.

Globestar possesses a number of other properties and concessions in the area, all of which have been subject to exploration. At Managua, for example, an inferred resource of 4.9 Mt at 2.0 g/t Au, 1.0% Cu and 5 g/t Ag has been outlined by drilling. GlobeStar has granted an option on these properties to Everton Resources, including the Bayaguana Group and the Cerro de Maimon properties. Everton can earn a 50% interest in the Bayaguana Group by providing a combination of cash, work commitments and shares. After paying US\$50,000 in cash Everton must spend US\$ 1.5 million on exploration during the first two years.

**Unigold Inc** is a junior explorer trading on the TSX venture exchange, and focussing on a number of gold properties in the Dominican Republic, namely its wholly-owned, 809 km<sup>2</sup> area of very favourable properties – Neita and Sabaneta – and an option on the contiguous 134 km<sup>2</sup> Los Guandules Concession.

The properties are located in the western extent of the Cretaceous volcanic belt close to the border with Haiti. The Neita property contains about 20 large hydrothermal alteration zones, as identified by an airborne magnetic and radiometric survey, which are partly coincident with gold in stream sediment anomalies that represent prime targets. A 22 km- long structural contact zone between mafic and felsic volcanics has also been shown to carry gold and copper mineralisation at three widely-spaced locations. This zone has seen very little previous work and is a high-priority exploration target.

Limited follow-up soil geochemistry, trenching and diamond drilling on three of the more than 20 alteration zones over the past six months has shown that there is significant gold in the geological system. Three zones with high IP chargeability have been located and partly tested by diamond drilling. All three are gold-bearing. The bulk of the area within these properties has seen minimal previous exploration.

At the main Neita target, Los Candelones, Unigold has thus far completed four diamond drill holes. These have encountered very encouraging alteration, silicification and mixed sulphide mineralisation over a minimum of 60 m to a maximum of 95 m of core length, and with grades of up to 2.2 g/t Au from surface to 61 m, including 3.1 g/t Au over 31 m. The Candelones West zone has a strike length of 350 m and is reported to be open along strike and down dip. IP surveying, which has outlined four parallel chargeability highs, three of which have been drilled, has also outlined chargeability targets over the Corozo and Montazo-Guano alteration zones, and these are in the process of being evaluated.

At Sabaneta, past work has included a joint mapping and exploration programme by the Dominican Directorate General of Mines (DGG) and Germany's BGR. Soil and rock geochemical sampling and trenching was included in the programme, and at Los Guandules, visible gold was encountered on the surface at one locality.