COSTA RICA

By Michael Seaward and Tim Coates

After starting the year with high hopes for progress on Costa Rica's two advanced mining projects - Bellavista (Wheaton River Minerals Ltd of Canada) and Cerro Crucitas (Vanessa Ventures Ltd, also of Canada) - the downward drag of gold and silver prices proved too much. Nevertheless, the government published the new mining regulations in March as anticipated, but the lack of improvement in the gold price made it almost a 'non-event'. Meanwhile, the upcoming Presidential election in early 2002 has introduced a new uncertainty in Costa Rica, as neither of the leading candidates is known for his pro-mining inclination.

Vanessa spent most of the year waiting for approval of its request for an exploitation concession over Cerro Crucitas, and Wheaton River, through its local subsidiary Rio Minerales, was forced to wait out the year waiting for better metal prices, even though its Environmental Impact Study had been approved by the Environmental Technical Secretariat (SETENA).

Further development of Bellavista will depend on an improvement in the gold price. As previously announced, Wheaton River would prefer to hedge a significant portion of the gold production at a price not less than US$350/oz before beginning construction.

Construction costs at Bellavista are estimated to be US$28 million, not including pre-production and financing costs, or working capital. Based on the feasibility study completed in April 1999, the Bellavista mine is projected to produce an average of 60,000 oz/y of gold over an estimated 7.3 year mine life with total cash operating costs, including royalties, of US$179/oz. The feasibility study recommends that Bellavista be developed by open-pit mining and agglomeration heap-leach processing of crushed ore at the rate of 5,750 t/d of ore. Local community support for the project is reported to be high, although certain members of the town council have been reported as being against any mine development.

Vanessa Ventures' Crucitas gold project is a bulk-tonnage, multi-million ounce gold deposit, and over US$32 million has already been spent on exploration and development (primarily by Placer Dome). The deposit is situated in northeastern Costa Rica and is accessible by road, being 105 km north of the capital, San Jose, and 16 km northeast of the small town of Coopevega.

In January, 2002, Vannessa obtained an exploitation permit from the Government of Costa Rica, and an Environmental Impact Study (EIS) was submitted to SETENA in March 2002. Approval from SETENA is the last essential requirement for mine construction to go ahead and is expected before year-end.

The Crucitas deposit comprises a gold-bearing saprolite (weathered oxidised soil) and a gold-bearing hard-rock resource. The most recent independent estimate of the entire deposit was completed by Independent Mining Consultants Inc., which calculated a total measured and indicated gold resource of 1.44 Moz consisting of 29.6 Mt averaging 1.51 g/t Au and 3.41 g/t Ag, based on a 0.8 g/t Au cut-off grade. Inferred resources are 10.1 Mt at 1.56 g/t Au and 2.93 g/t Ag. Additional inferred resources at the nearby Conchudita concession are 3.2 Mt averaging 4.56 g/t Au. The combined resource estimate of 2.37 Moz of contained gold is based on exploration and development work completed by Vannessa and previous owners. The database includes more than 31,000 gold assays from 385 diamond and auger drill holes totaling over 36,000 m.

The granting of an environmental permit will allow Vannessa to proceed with its plan to mine initially the near-surface, gold-bearing saprolite resources at an estimated rate of 80,000 oz/y. Based on an independent estimate of the near-surface resources by Dr Giles Peatfield, and John Zbeetnoff, a measured and indicated resource of approximately 723,000 oz (10.34 Mt at 2.17 g/t Au) and 180,000 oz of inferred resource (2.95 Mt at 1.89 g/t Au) have been outlined to date. Considerable scope also exists to increase the near surface gold resource. A saprolite mining scoping study by BGC Engineering Ltd of Vancouver demonstrated that mining the saprolite would be economic at today's gold prices (estimated operating cash cost is US$130/oz) and offers significantly lower capital costs, higher grades and fewer water and waste management challenges.

Construction costs for the initial phase of mining are estimated to be US$27 million. The Crucitas gold project has received considerable attention from banks and other financial institutions interested in project financing. Vannessa is currently evaluating a number of term sheets for the financing of the Crucitas Gold Project.

In other developments, Inversiones Valle Columbia commenced processing at its 50 t/d plant in its La Luz concession in April 2001 after obtaining an operating permit in 2000. Mill feed varies from 10-12 g/t Au and a 90% recovery is reported from the CIL circuit. Small doré bars are produced. La Luz is located 2 km north of Juntas de Abangares in the centre of the historic gold district that has hosted such mines as Tres Hermanos, El Recio and San Martín. Production is coming from the Pita Vein on the Mora level. A total of 46 people are employed on sites. Inversiones Valle Columbia is seeking investors or partners to enable the full potential of the vein systems to be realised.

Novontar SA, the Costa Rican subsidiary of Lyon Lake Mines Ltd, completed final closure of the Beta Vargas Project in December 2001. Closure began in May 2000, and an estimated US$250,000 has been spent to complete the closure, according to company officials. Beta Vargas began production in 1997 and the first ore was placed on the leach pads in October of that year. Extraction from the pit was suspended in June 1998, and leaching stopped in the following October because of agglomeration problems and a drop in the price of gold. Final production was reported as 2,670 oz of gold and 857 oz of silver.

La Union, owned by Steve Lamb, was worked by a new investor under the guidance of Costa Rican geologist Adrian Villegas. Veins and wall-rock were sampled and mined, with a test sample of approximately 1,000 t.

At the Chassoul mine, 4 km east of Miramar, a plant to process approximately 10,000 t/y of old mill tailings averaging 8 g/t Au has been permitted and is in the final stages of construction. Also, underground exploration of the six known vein-systems on the property has yielded promising results, with bonanza gold grades of up to 100 g/t. A ball mill with a capacity of 50 t/d has been purchased to process selectively mined underground ore.

Tierra Colorada SA's Santa Rosa property is located 19 km southeast of Juntas de Abangares. In the Envidia vein which strikes northwest and dips 65º northeast, some 206 m of development on three levels have outlined a measured resource of 4,150 t at 12.0 g/t Au. An exploitation permit has been applied for and is currently under review by the government.

At its Lilas property, located 50 km northeast of Liberia, Tierra Colorada has outlined measured resources of 3 Mt averaging 0.53 g/t Au in a silica cap, and 700,000 t averaging 5.42 g/t Au in a steeply-dipping quartz-stockwork structure. A feasibility study has been prepared and submitted to the government as part of the normal Exploitation Permit application process. In October 2001, three diamond drillholes by Consolidated Serena Resources tested the western extension of the structure, established the depth continuity of higher grade mineralisation and obtained core samples for geotechnical studies.

Activity in the Juntas de Abangares District is summarised, by deposit, below:

With the fall of gold price, mining work at Tres Hermanos (Exp.96) and El Recio (Exp. 878), under lease to Ariel Resources Ltd was abandoned and mineral rights reverted to owner Compañía Minera del Guanacaste SA and El Recio SA, respectively. A suspension of work pending higher metal prices was filed at the Mines Directorate in 2001. The most recent in situ geological resources estimate for Tres Hermanos, prepared by TC & A Geological Consultants in November 1997, totalled 177,000 t at a grade of 6.8 g/t Au.

The most recent 'undiluted geological mineral reserves' estimate for El Recio (Exp. 878), prepared by Strathcona Mineral Services Ltd in 1990, gave 'surface reserves' of 241,100 t at 2.7 g/t Au, 'underground reserves above drift level' of 144,200 t at 7.5 g/t Au and 'below drift level' 82,200 t at 9.0 g/t Au.

Exploration targets, which could increase the resources, exist in the northern part of the Tres Hermanos property on the extension of the Ramal Oeste and Tres Hermanos veins, and in the Palo Negro sector of El Recio.

San Martin (Exp. 95) was briefly exploited by open-pit methods in 1997 by Ariel Resources but is currently dormant. The most recent resource estimate by TC & A Geological Consultants is 1.5 Mt at 2.0 g/t Au. Ariel Resources did limited underground development work, which left in reserves approximately 10,000 t of ore at 9 g/t Au in the Fortuna sector.