

ON THE GROUND: CANADA

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BY ED SCHILLER

TAKE almost any geologically-prospective country, on any continent, and you are likely to find a French-Canadian diamond driller from Quebec, a plane or helicopter flying a Canadian geophysical survey or a geochemist wearing a Maple Leaf on his backpack.

The Americans might be better at baseball, the British at soccer and certainly the Aussies are at cricket. Canadians are no longer the best at curling, and although still usually the best at ice hockey, this can no longer be relied upon. What Canada can be proud of, however, is its leadership in mineral exploration.

South America has been a happy hunting ground for Canadians, and their efforts have brought mutual benefit to all concerned. A Central American country that recently caught my eye (by way of a mining conference in Vancouver last January) was Guatemala.

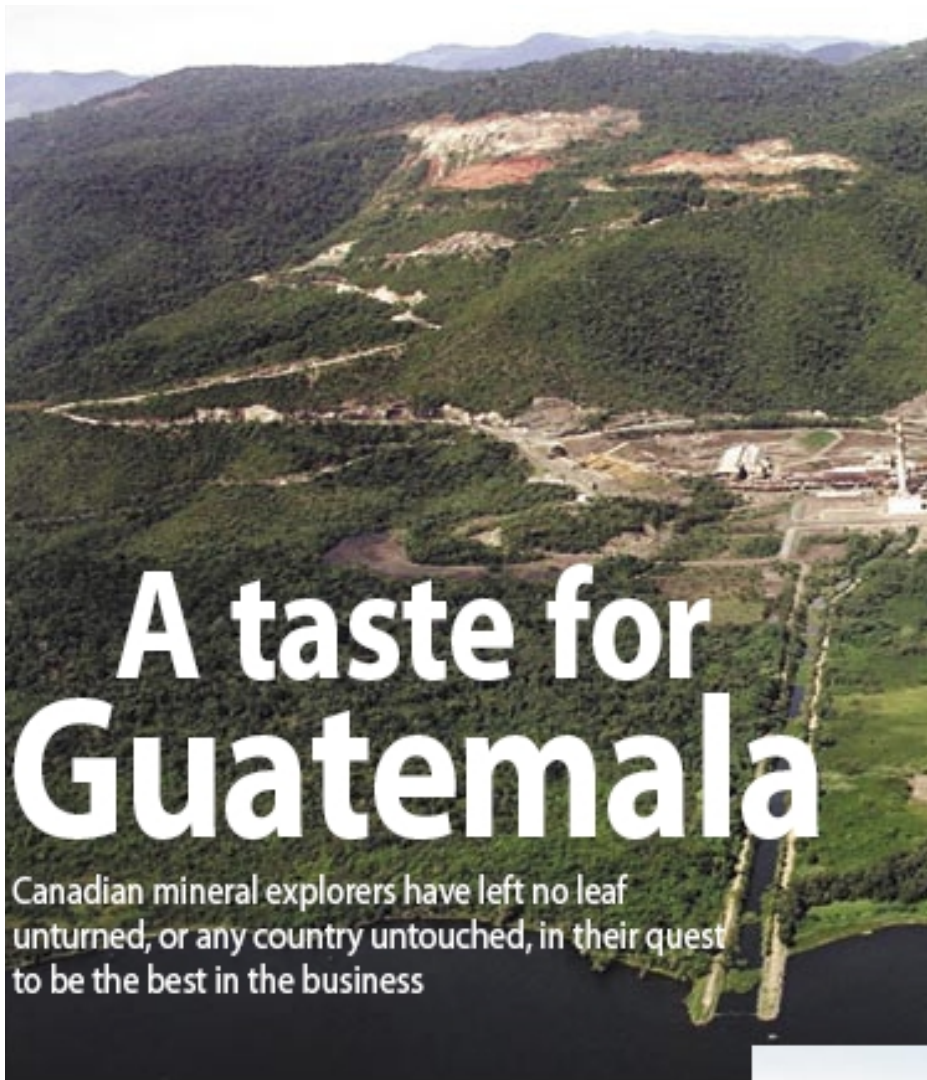
A 36-year civil conflict ended in December 1996 with the signing of a peace accord that covered a broad range of topics, including human rights, socioeconomic issues and constitutional reform. With the election of President Oscar Berger, Guatemala cleaned up its act and became an investor-friendly country.

The geology of Guatemala is one of tectonic instability owing to the juncture of the Cocos, Caribbean and North American lithospheric plates and the deposition and emplacement of diverse rock units (including a basement metamorphic complex), with widespread volcanic activity and intrusive igneous bodies of granitic to ultra-basic composition. Earthquakes are common.

Glamis Gold Ltd was the first Canadian company to identify Guatemala's potential by securing two properties - Cerro Blanco near Asuncion in 1998 and Marlin near Huehuetenango in 2002. Mining commenced in December 2005 at a rate of 5,000 t/d, at 4.83 g/t Au and 74.7 g/t Ag, at Marlin's combined open-pit and underground operation. Annual production is expected to reach 250,000 oz gold and 3.6 Moz silver. Proven and probable reserves are 16.43 Mt at an average grade of 4.6 g/t Au and 76.0 g/t Ag (based on US\$400/oz Au and US\$7.00/oz Ag). In addition, measured and indicated resources (based on US\$500/oz Au) amount to 18.8 Mt at 3.96 g/t Au and 63.4 g/t Ag.

Cerro Blanco is a high-grade, 'bonanza'-type gold deposit which is related to hot springs activity. Drilling is currently under way to expand the measured and indicated resources of 2.52 Mt at 15.64 g/t Au and 72 g/t Ag (based on US\$500/oz Au).

Goldex Resources Corp (previously called Python Oil & Gas Corp) acquired El Pato near Chiquimula from Compañía Minería el Cóndor SA (CMEC) in 2004. A geochemical stream-sediment survey, directed at copper,



zinc and molybdenum, had been undertaken by the UNDP in the 1960s, and elevated gold and silver levels were observed.

A Japanese Government geochemical stream-sediment survey of the area in 1979-81 identified an anomalous area of precious metals. Between 1985 and 1990, the Guatemala Department of Mines conducted a drilling programme, and estimated that El Cerrito Trend (which incorporates El Pato) contains a resource of over 0.6 Mt at 11.1 g/t Au and 11.4 g/t Ag. From 1989-91, the United Nations completed additional drilling and trenching within an expanded area, and reported a resource estimate of 2.1 Mt at 7.0 g/t Au in the Agua Zarca zone. These estimates do not conform, however, to NI 43-101.

In 2000, CMEC undertook a complete review of the previous work and completed some detailed soil geochemical surveys. In 2004-05, Goldex completed detailed geological and geochemical surveys, and an extensive trenching programme. This work led to the discovery of new gold occurrences with surface samples in the 7-15 g/t Au range.

El Pato is underlain by the Cretaceous to Tertiary age Chiquimaula Pluton, ranging from granitic to gabbroic in composition. The mineralisation has been interpreted to be characteristic of epithermal deposits common to Central America, such as Cerro Blanco, and also El Limon in Nicaragua and San Martin in Honduras. The company recently completed a US\$4 million financing which will fund a drilling programme that commences this month.

Firestone Ventures' Tonion Hill: a rare example of a zinc oxide deposit



PROPER DUE DILIGENCE

It took a young lady geologist from Edmonton, Lori Walton of Firestone Ventures Inc, to properly identify the potential of Guatemala. Following a worldwide study of ore deposits, Guatemala

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FIRESTONE'S TORLON HILL ASSAYS

Firestone Ventures Inc 's diamonddrilling at the Torlon Hill oxide zinc property in Guatemala has intersected high-grade mineralisation hosted by dolostone breccia.

| Hole | From (M) | Int (M) | Zn (%) | Pb (%) |
|-----------|----------|---------|--------|--------|
| THO6 - 7 | 35.1 | 14.6 | 5.0 | 0.7 |
| THO6 - 12 | 36.6 | 24.4 | 5.0 | 0.0 |
| THO6 - 13 | 0.0 | 51.8 | 10.2 | 1.7 |
| THO6-14 | 0.0 | 46.7 | 12.5 | 0.4 |

topped Ms Walton's list of under-explored countries with mineral potential. Her criteria for choosing Guatemala were based on:

- economic geology - a varied lithology, with known undeveloped mineral occurrences
- mining law - support for foreign participants
- politics - a democratic government that functioned fairly
- supporting services - availability of legal, accounting and geological expertise
- accessibility - the country can be reached from western Canada in one day for about C\$1,000.

After concluding an option arrangement with La Cooperativa de Producción Industrial Juventud Minera RL (which comprises 52 families in the Torlon area), Ms Walton organised a drilling programme which led to the expansion of previously-defined zinc mineralisation. The Torlon deposit consists of zinc and lead-sulphide mineralisation within limestone that has been oxidised to smithsonite and other zinc and lead oxide minerals. Deposits of this unusual type include the Skorpion mine in Namibia, and the Shaimerden and Jamali deposits in Kazakhstan and Yemen, respectively. Firestone's drilling programme in January 2006 confirmed the high-grade nature and continuity of the oxide zinc mineralisation, including 33.0 m of 22% Zn (latest results p12).

Radius Gold Inc can claim credit for a variety of accomplishments in Guatemala. These started in 2001 with a grass-roots gold discovery on the Tambor project area, and the subsequent delineation of indicated and inferred resources containing some 274,000 oz of gold. A second acquisition, at Banderas, was identified as a low-sulphidation epithermal gold-silver vein system, which returned values as high as 28 g/t Au and 553 g/t Ag in trenches. The property was optioned to Glamis Gold in late 2004.

Gold Ore Resources Ltd, led by geologist Bob Wasylshyn, is spearheading the search for uranium by uniting two prominent Vancouver-based companies, Santoy Resources Ltd (led by Ron Netolitzky) and Pathfinder Resources Ltd (headed by Vic Tanaka). An exploration programme has commenced on two recently-acquired mineral concessions—El Rincon and El Incienso. Samples collected by the syndicate from boulders of petrified wood returned values of up to 0.22% U₃O₈.

Nickel laterite deposits identified in the Lake Izabel region in the 1950s and 1960s led to the production of nickel sulphide matte by Inco Ltd from 1977. The mine and smelter at Eximbal were shut in 1980. Skye Resources Inc subsequently acquired the project (renamed Fénix) in 2004 and a feasibility study for a 50 Mlb/y ferronickel project was initiated utilising a sulphating atmospheric-leach process (MJ, December 22, 2005, p11). Testing conducted in Canada has been successful in recovering over 85% Ni and almost 85% Co from ore through production of a mixed hydroxide product.

Aurogin Resources Ltd has completed detailed engineering and commenced heap-leach pad construction at its El Sastre Main Zone project, 30 km northeast of Guatemala City. Initial production is expected to yield 20,000 oz/y, with the first gold pour expected in the December quarter of this year. Indicated gold resources are estimated at 370,000 t at 4.14 g/t, and there are 1.17 Mt of inferred resources at 3.13 g/t. In addition, 13.0 Mt of inferred resources, at 1.25 g/t, are present in the Lupita Zone, some 600 m to the west of El Sastre.

The Sechol nickel-cobalt property (and other exploration licences in northeastern Guatemala) was held until recently by Jaguar Nickel Inc, but these assets were sold by the company's Jaguar SA subsidiary to BHP Billiton for C\$19 million in cash. Concurrent with the closing of this transaction, Jaguar Nickel entered into an exploration alliance with BHPB for nickel, cobalt and PGM in Canada, the US and Greenland. Jaguar Nickel this week announced that it has entered into a letter of agreement to merge with First Nickel Inc.

With a population of 11.4 million, Guatemala is the biggest country in Central America. It has the region's largest economy, with a GDP of US\$22.2 billion, and it is the only oil-producing country in Central America. Although the country also has substantial potential in agriculture and tourism, there are exceptional opportunities in the mining sector – Canadian miners are already on the scene.

Ed Schiller is a consulting geologist based in Kelowna, British Columbia