# Yukon Mining Incentives Program, 2003

Ken Galambos<sup>1</sup>

Mineral Resources Branch, Yukon Government

Galambos, K., 2004. Yukon Mining Incentives Program, 2003. *In:* Yukon Exploration and Geology 2003, D.S. Emond and L.L. Lewis (eds.), Yukon Geological Survey, p. 31-36.

he Yukon Mining Incentives Program (YMIP) received 93 applications by this year's deadline of March 1. A total of \$987,000 was offered to 61 successful applicants. Nine of these were approved under the Grassroots-Prospecting module, 19 were part of the Focused Regional module, and 33 were approved under the Target Evaluation module.

With the increased price of gold on the world market, applicants were well poised with their exploration targets this season. Precious metal exploration under the program was up significantly; 56% of the applicants searched for gold and platinum group elements. Base metal exploration accounted for 30% of approved programs, while the remaining 14% of programs explored for gemstones and other commodities. Exploration programs were proposed for all four mining districts and were fairly evenly dispersed over the entire territory. This year there have been four option agreements signed for properties that have been explored under YMIP, with at least five more currently under negotiations.

Highlights for the year, for both placer and hard rock exploration programs, include the discovery of significant gold and pathfinder anomalies in both soils and rock, and the extension of known showings through prospecting and geophysics.

# **GRASSROOTS-PROSPECTING PROGRAMS**

#### NUR

Peter Ross staked the Nur property, on the flanks of Mt. Haldane, north of Mayo, to cover anomalous soil geochemistry identified from previous exploration. The claims cover prospective geology very similar to that at the nearby McQuesten and Aurex properties (Yukon MINFILE 2003,

105M 029, 060, Deklerk, 2003). Soil surveys conducted this summer confirmed and expanded previous anomalies. Fourteen percent of the soils taken returned anomalous values greater than 20 ppb and up to 63 ppb Au. Fifty-eight percent returned values greater than 500 ppm and up to 9785 ppm As. The survey identified anomalous trends up to 135 m wide and in excess of 1500 m in length.

#### SOUTH DAWSON

Shawn Ryan believes his south Dawson property (Yukon MINFILE 2003, 115O 011, 012, Deklerk, 2003) covers a mineralized system that is at least 2 km x 5 km in size. Samples from a flat-lying quartz vein (Fig. 1) with minor



*Figure 1.* Shawn Ryan indicates the apparent dip of a quartz vein containing visible gold. The vein returned values of 13.5 and 50 g/t Au.

<sup>1</sup>ken.galambos@gov.yk.ca



*Figure 2. Silicified and brecciated siltstone such as this, assayed up to 24 g/t Au.* 

tetrahedrite (?) and visible gold returned assays of 50 and 13.5 g/t Au. This vein is located at the top of a ridge line and is at least 1 m thick at this location. The base of the quartz vein was not exposed. Approximately 4.5 km from this location, silicified and hydrothermally brecciated sedimentary rocks (Fig. 2) and a rusty quartz breccia returned values of 24 g/t Au and 29 g/t Au, respectively.

# FOCUSED REGIONAL PROGRAMS

## HART RIVER

Bernie Kreft conducted further exploration on a large ironoxide-copper-gold (IOCG) target that he had discovered in 2002 on the Hart River property (Yukon MINFILE 2003, 116A 009, Deklerk, 2003). Previous sampling from a large mineralized talus field returned values of up to 2% Cu and 0.25% Co from brecciated intrusive and sedimentary rocks as well as quartz-siderite and ankerite veins. The talus was eroding from variably fractured and mineralized beds of chert and siltstone (Fig. 3) that were intruded by both diorite dykes and bodies of hematite breccia. Sampling of bedrock exposures returned values of up to 1.76% Cu and 2.4 g/t Au from grab samples and 0.83% Cu from a 3.2-m chip sample near the crest of the ridge (Fig. 4). Copper Ridge Explorations Inc. has recently optioned the property.

## GODDESS

Shawn Ryan staked the old Pluto property (Yukon MINFILE 2003, 116C 134, Deklerk, 2003) after researching assessment files. The property was explored from 1979-1982 by Cominco and Getty Canada Minerals



*Figure 3.* Variably mineralized beds shedding talus containing pyrite, chalcopyrite and various copper oxides.



*Figure 4.* Showing on the Hart River property which assayed 0.835 % Cu over 3.2 m.



*Figure 5.* Aquamarine (blue beryl) crystals from the Goddess property.

Ltd. for molybdenite and tungsten. Logs from diamond drill hole 80-2 made reference to 22 pegmatites, 11 of which contained beryl, intruding into the granitic host rock. In all, 10 to 14 kg of core containing the blue beryl (aquamarine) were sampled from this drill hole (Fig. 5). Drill logs of other holes on the property mentioned better intersections of beryl, but these specimens had previously been removed. Cominco geologists also noted quartztourmaline veins (+/- beryl) intruding into the surrounding altered ultramafic rocks.

# TARGET EVALUATION PROGRAMS

#### MARN

Canadian United Minerals restaked the Marn property (Yukon MINFILE 2003, 116B 147, Deklerk, 2002) as the Prune claims in January, 2002. They felt that there was good potential for high-grade gold-copper mineralization such as is found on the nearby Horn claims. Geological reserves (not National Instrument 43-101 compliant) for the Marn stand at 275 000 to 300 000 tonnes, grading 8.6 g/t Au and 1% Cu. The mineralization at the main showing trench is hosted in a dark green diopside skarn with only minor sulphide minerals. Shawn Ryan conducted nearly 22 km of magnetometer and soil geochemical surveys over the property, which revealed a 150 m x 400 m magnetic anomaly with coincident soil values of up to 200 ppm copper. A new zone of skarn mineralization was found in the valley bottom (Fig. 6) with initial rock samples returning values of up to 580 ppb Au, >10 000 ppm As and 0.6% Cu.

#### **INDIAN RIVER**

Pete Risby supervised the auger drilling of two large bench deposits of White Channel Gravel on the Indian River with the intention of determining the total value of the contained heavy metals. Preliminary estimates from surface sampling is that the upstream bench contains 265 million tonnes of material valued at US\$15.46/tonne. The projected metal content of the bench is over 10 million ounces (311 000 kg) gold, 73 million pounds (33 182 tonnes) of tin, 67 million pounds (30 455 tonnes) of titanium and 150,000 pounds (68.2 tonnes) of



*Figure 6.* A new skarn showing on the Prune claims (Marn property) was found; rock samples assayed 580 ppb Au, >10 000 ppm As and 6000 ppm Cu.



*Figure 7.* Brian Thurston supervised the auger drilling and sampling program on the Indian River property.

scandium. (No recovery estimates have yet been made on the material.) Figure 7 shows Brian Thurston screening the samples. Both the oversize and the -16 mesh material were weighed to facilitate reserve calculations. Results from the late season drilling program are pending.

#### MAHTIN

Shawn Ryan completed geophysical and geochemical surveys over the Mahtin property (Yukon MINFILE 2003, 115P 007, Deklerk, 2003) this past summer. He outlined three magnetic anomalies associated with skarn mineralization, two IP anomalies, as well as a 900 x 200 m gold-in-soils anomaly with values up to



*Figure 8.* Pyrrhotite skarn mineralization from the Mahtin property typically assayed between 1 and 4.3 g/t Au.

400 ppb Au. Rock sampling returned values of up to 4.3 g/t Au in pyrrhotite skarn (Fig. 8), and 6300 ppb Au and 948 ppm Bi in calc-silicate rocks.

#### **SCHEELITE DOME**

Copper Ridge Explorations Inc. completed 5.9 km of IP and 7.8 km of magnetometer surveys over the Tom zone located in the northwestern quadrant of the large Scheelite Dome property in the McQuesten River area (Yukon MINFILE 2003, 115P 033, Deklerk, 2003). The geophysical surveys were conducted in an effort to define drill targets for a Phase 2 drill program (Fig. 9). The program was successful in defining IP chargeability targets that correlate in part with the magnetic surveys and surface mineralization. Results from the follow-up drilling include 1.22 m of 5.06 g/t Au from Tom-1 and 6.4 m of 7.09 g/t Au (including 1.7 m of 24.42 g/t Au) and various other shorter intersections from Tom-2. Tom-4 intersected 2.55 g/t Au over 5.8 m, including 10.0 g/t over 1.37 m. Tom-5 encountered 3.35 g/t Au over 0.61 m at the collar of the hole. Tom-3 was abandoned before reaching its target depth.

#### ULTRA

Tom Morgan continued to explore the Ultra property (Yukon MINFILE 2003, 115B 008, Deklerk, 2003) near Haines Junction with a combination of geophysics, trenching and sampling this season. Max-min and magnetometer surveys over the Telluride showing revealed a number of good electromagnetic conductors



**Figure 9.** Golden Patriot Mining Inc. drilled five holes into the Tom zone on the Scheelite Dome property. The drill shown is setting up on Tom-3.

#### **GALAMBOS – YUKON MINING INCENTIVE PROGRAM**



*Figure 10.* Shaded relief magnetic anomalies and HLEM conductors, Ultra property. The geophysical plot shows the magnetic signature of the buried rock units with electromagnetic conductors, which may represent the source of the mineralized boulders exposed in Telluride Creek (approximate UTM coordinates).

uphill from massive sulphide boulders that are exposed in the toe of a terminal moraine (Fig. 10). The boulders appear to be from a volcanogenic massive sulphide (VMS) source and have returned assays up to 5.1% Zn and 2.1% Cu. The Froberg showing (Fig. 11) approximately 2.5 km to the southwest, appears to be hydrothermal mineralization related to a fault. Recent sampling returned values of 5.5 g/t platinum (Pt), 13.5 g/t palladium (Pd), 4% Cu and 1.7% Ni.

#### SHAMROCK

Amax Molybdenum Ltd. originally staked the Shamrock property, located 82 km west of Carmacks, in 1970 and identified a 1000 m x 1200 m copper soil anomaly and a +700 gamma magnetic anomaly immediately to the north. BQ holes drilled in 1976 intersected values up to 1960 ppm Cu and up to 240 ppb Au over widths up to 100 m. In 1985 Chevron Resources Ltd. identified an 800 x 2400 m soil anomaly, with values up to 1270 ppb Au coincident with the 1970 magnetic anomalies. This year, 4763 NWT Ltd. staked the property, re-established the grid and completed soil sampling and magnetometer surveys. The program identified a 1.7-km-long gold-in-soil anomaly that is open at both ends. A number of



**Figure 11.** Tom Morgan stands beside fracture-controlled mineralization at the Froberg showing. Trench samples from here assayed up to 5.5 g/t Pt, 13.5 g/t Pd, 4% Cu and 1.7% Ni.

#### MINERAL INDUSTRY

northwest and northeast anomalous trends are indicated by the soil and geophysical surveys (Fig. 12). Plans for next year are to extend the soil and magnetic grid and to trench a number of the identified anomalies.

#### ET

Peter Ross conducted an orientation survey on his ET claims (Yukon MINFILE 2003, 115P 042, Deklerk, 2003) this summer. He compared the results from an Enzyme Leach survey completed last year with those from a mobile metal ion (MMI) survey and a conventional inductively coupled plasma (ICP) soil survey. He found that the conventional ICP analysis gave him the best

response in the area. Eleven percent of his samples returned anomalous values over 20 ppb, to a high of 169 ppb Au. The soil survey identified a number of anomalous trends up to 90 m wide and at least 230 m in length. Soil data, in addition to -200 mesh silt sample values of up to 5770 ppb Au, lead him to believe that the property is a good one.

## REFERENCES

Deklerk, R. (compiler), 2003. Yukon MINFILE 2003 – A database of mineral occurrences. Yukon Geological Survey, CD-ROM.



*Figure 12.* Gold soil geochemistry and magnetic contours, Shamrock property. Soil sampling and magnetic surveys show strong northwest- and weaker northeast-trending anomalous zones, possibly related to faulting (from 4763 NWT Ltd., Aurora Geosciences Ltd.; approximate UTM coordinates).