

Yukon Mining Incentives Program, 2002

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The Yukon Mining Incentives Program (YMIP) received 99 applications by this year's deadline of March 1, 2002. A total of \$982,000 was offered to 62 successful applicants. From these programs, 9 were approved under the Grassroots Prospecting and Grubstake modules, 36 proposals were part of the Target Evaluation module and 17 applicants were approved under the newly added Focused Regional module. Precious metal exploration under the program was down from last year with approximately 41% of applicants searching for gold and platinum group elements. Base metal exploration accounted for 45% of approved programs; the remaining 14% of programs involved exploration for gem stones and other commodities. Exploration programs were proposed for all four mining districts and were fairly evenly dispersed over the entire Territory. Although total exploration spending is down from last year, the number of property options by prospectors is up significantly. To date there have been nine options signed for properties that have been explored under YMIP.

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

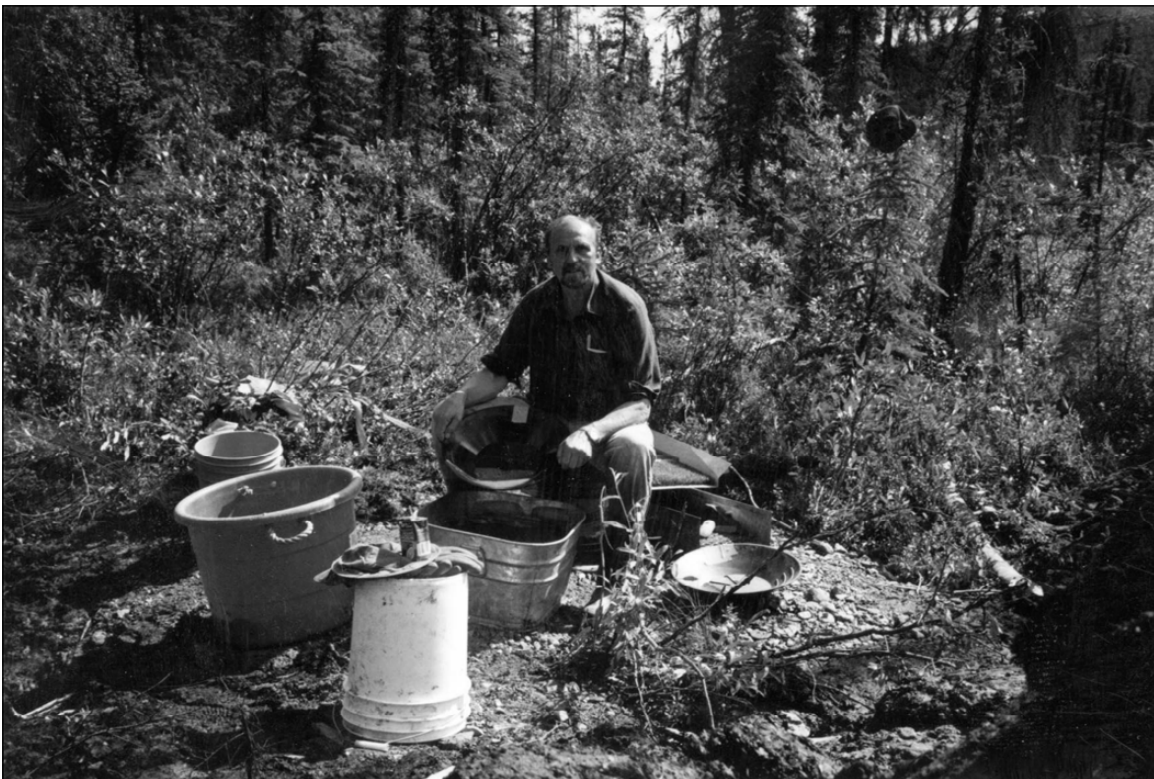


Figure 1. Erwin Kreft is seen here processing some of the pay gravels excavated on Little Blanche Creek located in the Klondike goldfields. Photo by Exilda Driscoll.

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showings through prospecting and geophysics. A number of significant exploration targets were found with the new Focused Regional module.

The following sections detail exploration highlights for selected YMIP projects.

LITTLE BLANCHE CREEK (TARGET MODULE)

Erwin Kreft (Fig. 1) had a successful season following up on previous auger drilling results on placer claims located on Little Blanche Creek, south of Dawson City. Previous drill programs outlined a pay streak averaging 6 ft (1.8 m) thick and 30 to 36 ft (9 to 11 m) wide. The best result from drilling was 5 ft (1.5 m) averaging 0.081 oz (2.5 g) of gold per bank yard from Auger Hole 2000-6. Test pitting of anomalous drill holes confirmed and enhanced results where target depths were reached. Hole #1, dug at the collar of drill hole 2000-6, returned 0.097 oz (3 g) of gold per bank yard or C\$47/yd³ at \$308/oz. Hole #2 encountered abundant ground water and failed to reach bedrock. Hole #3, excavated at the collar of Auger Hole 2001-2 (0.06 oz/yd³ over a 6-foot (1.8 m) interval), returned 0.109 oz (3.39 g) of gold per bank yard or C\$52.80/yd³. Little Blanche Creek placer gold has a purity of approximately 65%, so the number of crude ounces per bank yard is substantially more than reported.

IRON-OXIDE-COPPER-GOLD (FOCUSED-REGIONAL MODULE)

Prospector Bernie Kreft (Fig. 2) conducted a regional exploration project for Olympic Dam-type, iron-oxide-



Figure 2. Bernie Kreft is seen in the background of a large talus field that is 60-80% mineralized with pyrite, chalcopyrite and malachite. This is one of the new showings discovered this year during his program looking for IOCG targets.

copper-gold (IOCG) targets north of Mayo this season. Three new areas of mineralization were discovered with values up to 2.65 g/t Au, 2% Cu and 0.25% Co. These values were returned from brecciated intrusive and sedimentary rocks as well as quartz-siderite and ankerite veins (Fig. 3). Brick red alteration and specular hematite are common to all brecciated occurrences. Exploration indicates large anomalous areas coincident with the new showings.

SEVERANCE PROPERTY (TARGET EVALUATION MODULE)

The Severance property was explored by 4763 NWT Ltd. and is located north of the Klotassin River, 260 km northwest of Carmacks on NTS sheet 115J/7. The property is underlain by granodiorite of the Cretaceous Dawson Range Batholith, which is intruded by Tertiary quartz-



Figure 3. This sample of weakly brecciated pink to beige chert with disseminated and fracture-controlled chalcopyrite assayed 1.92% Cu.

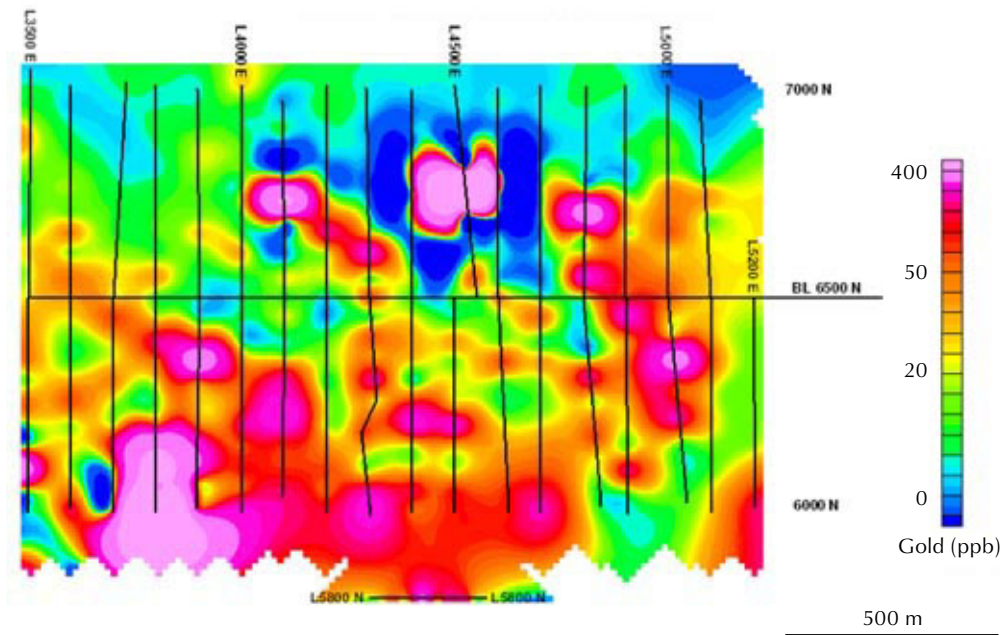


Figure 4. Gold-in-soil plot showing what appears to be a number of mineralized structures on the Severance property. Geochemical plot by Aurora Geosciences Ltd.

feldspar porphyry dykes. The area had been previously explored by Kennecott Canada Ltd. with reconnaissance stream sediment and soil sampling as a follow-up of an NGR (National Geochemical Reconnaissance) stream sediment anomaly of 280 ppb Au on a tributary of Somme Creek. Kennecott's program returned a number of samples anomalous in gold, bismuth and arsenic. In January 2002, 4763 NWT Ltd. staked the Severance property, covering the area of anomalous soils. This summer the company conducted an exploration program consisting of geological mapping, prospecting and soil sampling. A grid was established to cover an area measuring 1.7 by 1 km, and soil samples were collected at 50-m stations on lines spaced 100 m apart. The soil program returned some significantly anomalous values (Fig. 4) with 31 of 344 samples being greater than 100 ppb Au, including four samples with 600, 738, 1965 and 2680 ppb Au. Coincident with the gold are copper, molybdenum and arsenic anomalies. Rock sample results included a grab sample of silicified and quartz-veined granodiorite with 7% disseminated pyrite which assayed 1.2 g/t Au and 0.35% Cu.

YUKON OLYMPIC PROPERTY (TARGET EVALUATION/FOCUSED REGIONAL MODULES)

Shawn Ryan had a very successful year of exploration in the Dawson district. While prospecting by snow machine

in early April, he discovered a new showing off of his Hem property, located near Windy Pass on the Dempster Highway. The showing consists of a mineralized diorite dyke intruding an outcrop of hematite breccia immediately below a major unconformity (Fig. 5). Copper mineralization occurs as disseminated mineralization in the intrusive rock, as fracture fillings, with quartz-carbonate vein material, and as chalcopyrite-filled vesicles. In May, he was successful in optioning the Hem claims to Copper Ridge Explorations Inc. With assistance from the company, Shawn completed a large geophysical survey, including magnetics and gravity, over the claim block and



Figure 5. Shawn Ryan at his new copper showing on the Yukon Olympic property.

surrounding area. The survey revealed a very large and intense gravity anomaly to the north of the claims (Fig. 6). The gravity has a maximum amplitude of 6 milligals above background, a strike length of 8.2 km and a half amplitude width of 2.4 km. As with the Olympic Dam property in Australia, the gravity anomaly is related to, but not coincident with, a regional-scale magnetic anomaly. Additional staking to cover these targets has expanded the Yukon Olympic property to 377 claims. Copper Ridge subsequently optioned the property to Canadian Empire Exploration Corp. in September, 2002. Canadian Empire conducted a two-hole diamond drilling program in October and November, 2002. Results of the drill program are pending.

LUCKY JOE PROPERTY (GRASSROOTS PROSPECTING MODULE)

With the release of the initial Stewart River Multisensor Airborne Geophysical Surveys in 2001 (Shives et al., 2001), Mr. Ryan recognized a possible geophysical signature for the historic Lucky Joe copper-molybdenum property. He also realized that the size of this signature was very large and that the known mineralization was situated on the very edge of this anomaly. During the 2001 field season Shawn set out to test his theory with reconnaissance magnetic and soil surveys. Continued exploration during 2002 included test-pitting on some of the better geochemical anomalies, claim staking and expanded soil surveys. The property was optioned to Copper Ridge Explorations Inc. in June of 2002 and further staking and soil sampling ensued. The expanded property now covers much of the 6-km-wide and 16-km-long copper-in-soils anomaly that has been identified. A

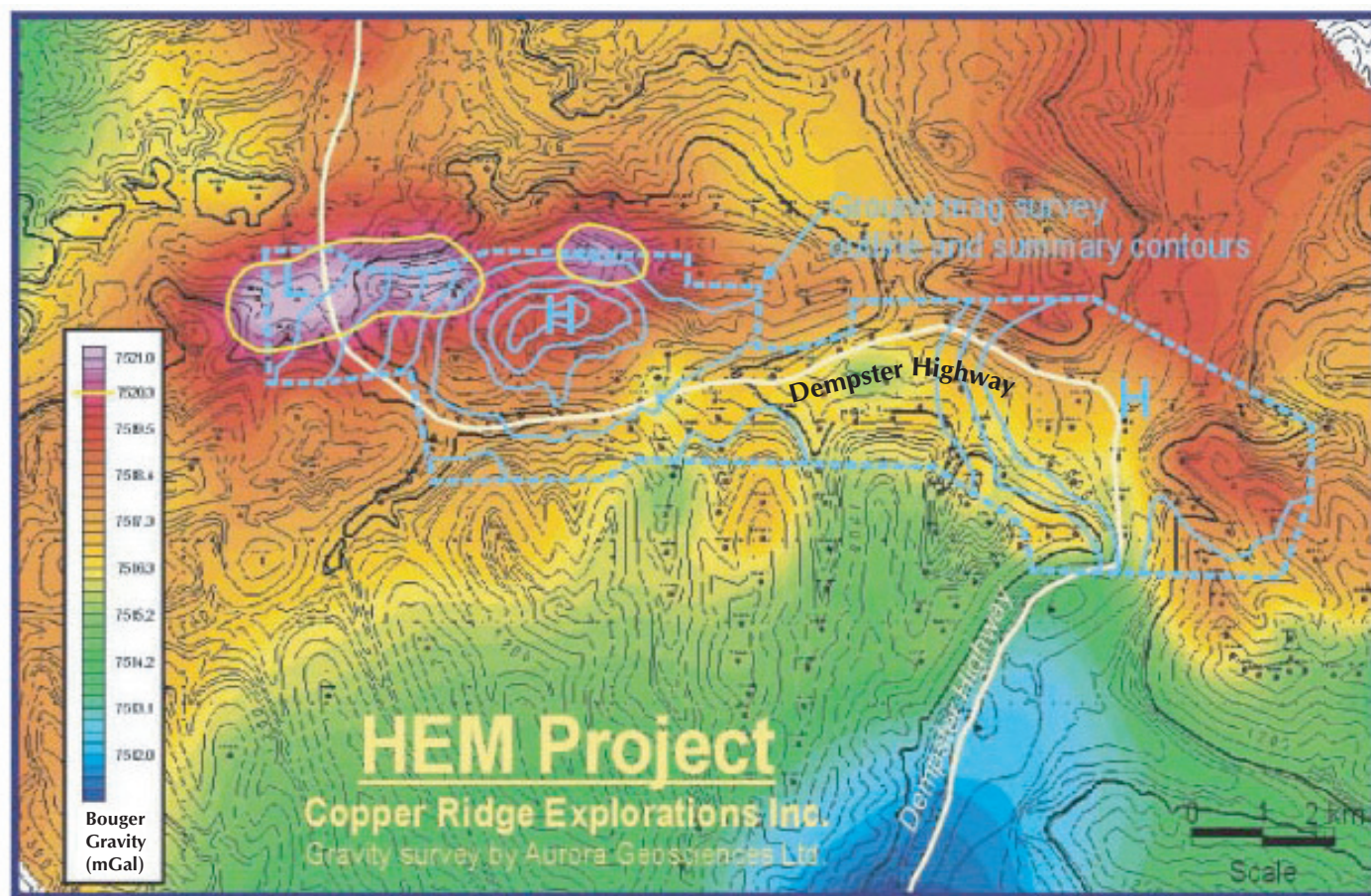


Figure 6. The large gravity anomaly found on the Yukon Olympic property is thought to comprise three discrete bodies, each with a density of 4. Modeling suggests that the two masses closest to the highway measure roughly 1 billion tonnes each; the eastern body is thought to be in the 5 to 6 billion tonne range, but situated slightly deeper. Geophysical plot by Aurora Geosciences Ltd. and taken from Copper Ridge's website at www.copper-ridge.com.



Figure 7. Shawn Ryan is seen here in a pit located on the Ryan Creek anomaly where C horizon soils returned values of up to 1.19% Cu.



Figure 8. Folded iron formation located on Shawn Ryan's Simba claims, located at the headwaters of Shell Creek, approximately 70 km northwest of Dawson City.

total of 1430 soil samples were collected from approximately 70 km of line and resulted in the discovery of two anomalous areas. The Bear Cub anomaly is 1750 m long, up to 1500 m wide and open in two directions. The core of the anomaly, 1500 m by 1000 m, averages greater than 225 ppm Cu and 10 ppm Mo, with many values in the 1000 to 4300 ppm Cu range. The Ryan Creek anomaly has a strike length of 3500 m, and an average width of 500 m using a threshold value of 60 ppm Cu, and is also open in two directions. Pits dug to date on the Ryan Creek grid revealed mineralization assaying up to 1.19% Cu in C-horizon soils (Fig. 7).

SHELL CREEK PROPERTY (TARGET EVALUATION/ FOCUSED REGIONAL MODULES)

The Simba claims were staked to cover the nose of a large banded iron formation unit situated just north of the Yukon River on Shell Creek, approximately 70 km northwest of Dawson City. The claims also cover a very small part of coincident regional-scale magnetic and gravity anomalies. Shawn Ryan conducted prospecting, and geophysical and geochemical surveys on the property this season looking for an Algoma-style banded iron formation gold target (Fig. 8). While prospecting an area to the northwest of the claims, a very large quartz-carbonate vein was found that parallels iron formation within what is believed to be Cambrian to Silurian Marmot Formation volcanic rocks. This vein was found to contain coarse visible gold for a strike length of over 2 km (Fig. 9). A number of copper showings have been found on the property, some of which are associated with visible gold.

CANYON GOLD GREW CREEK PROJECT (TARGET EVALUATION MODULE)

Al Carlos continued to explore his Canyon claims near the Eocene-aged Grew Creek deposit (geological resource of 773 012 tonnes grading 8.9 g/t Au and 33 g/t Ag). In 2000, Mr. Carlos conducted a 558-sample Enzyme Leach survey over the till-covered area approximately 1 km east of the deposit and over his Dozer claims to the west. Interpretation of the data was completed by Gregory T. Hill of Enzyme Laboratories, Inc. in Reno, Nevada. The Grew Creek survey revealed five anomalies. Anomalies A-D are oxidation anomalies aligned along what is thought to be a mineralized structure (Fig. 10). "Oxidation anomaly patterns tend to be characterized by oxidation halos where reduced material in the subsurface is undergoing very subtle oxidation. These halos flank the



Figure 9. Visible gold is found in large quartz-carbonate veins at Shell Creek. This flake of gold measures almost 1 mm in length. Photo by Mike Burke.

reduced body, and a “central low” is found over a “reduced chimney” located between the reduced body and the surface. The elements in these halos characteristically include at least part of the oxidation suite: Cl, Br, I, Mo, As, Sb, W, Re, V, Se, Te, U, Th”

(G.T. Hill, pers. comm., 2000). Anomaly B is unique in that bismuth was detected in the oxidation halo suggesting a buried intrusion or rhyolite flow dome complex. Anomaly E is a combination anomaly with a high-contrast apical anomaly surrounded by a well developed nested halo set (Fig. 11). “Apical anomaly patterns tend to form highs directly over the source of the anomaly rather than forming a halo around the source. The source of the anomaly can be a mineral body or it can be a fault, unconformity or other feature that facilitates the movement of the trace elements to the surface. Combination anomalies contain an apical anomaly at the center which is surrounded by a halo or set of nested halos” (G.T. Hill, pers. comm., 2000). Anomaly E shares nearly the same geochemical signature as a nearby mineralized outcropping of conglomerate. Results from a 2001 drilling program on anomaly E – 191 m in four holes – were inconclusive, so Mr. Carlos completed a further 415 m in six holes this past season to further test this target. Hydrothermal breccias were intersected in a number of the holes and results are pending. Anomalies A-D and the classic oxidation anomaly located on the Dozer claims (Fig. 12) remain untested and are excellent drill targets.

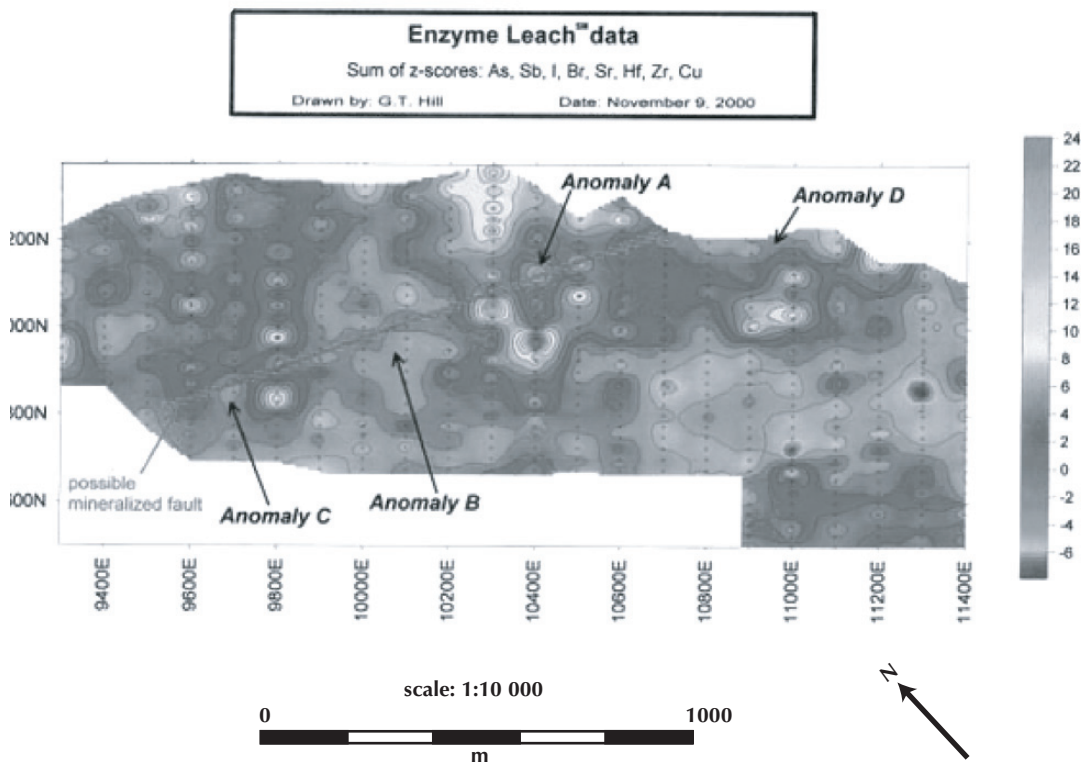


Figure 10. Oxidation anomalies A-D aligned on a possible mineralized fault on the Canyon claims of Al Carlos. Geochemical plot by Enzyme Laboratories Ltd.

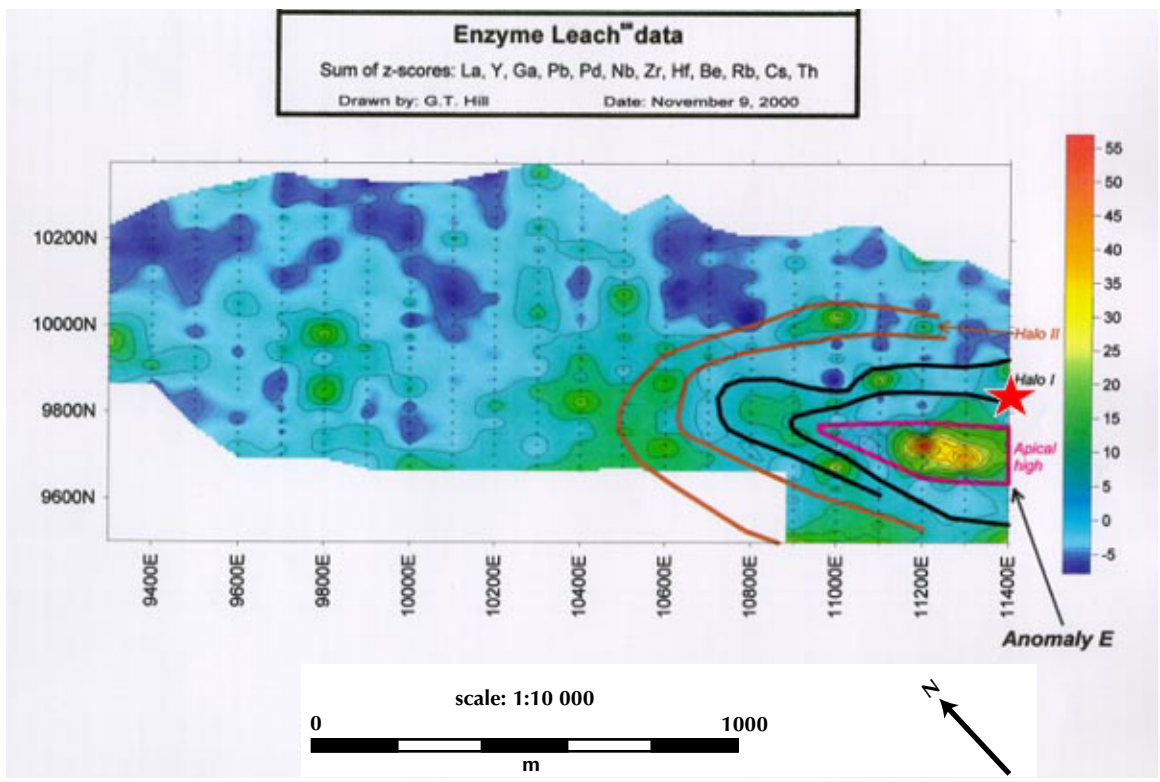


Figure 11. Apical anomaly E on the Canyon claims is shown in relation to the location of a mineralized outcrop of conglomerate. The outcrop assayed up to 2200 ppb Au in grab samples. Geochemical plot by Enzyme Laboratories Ltd.

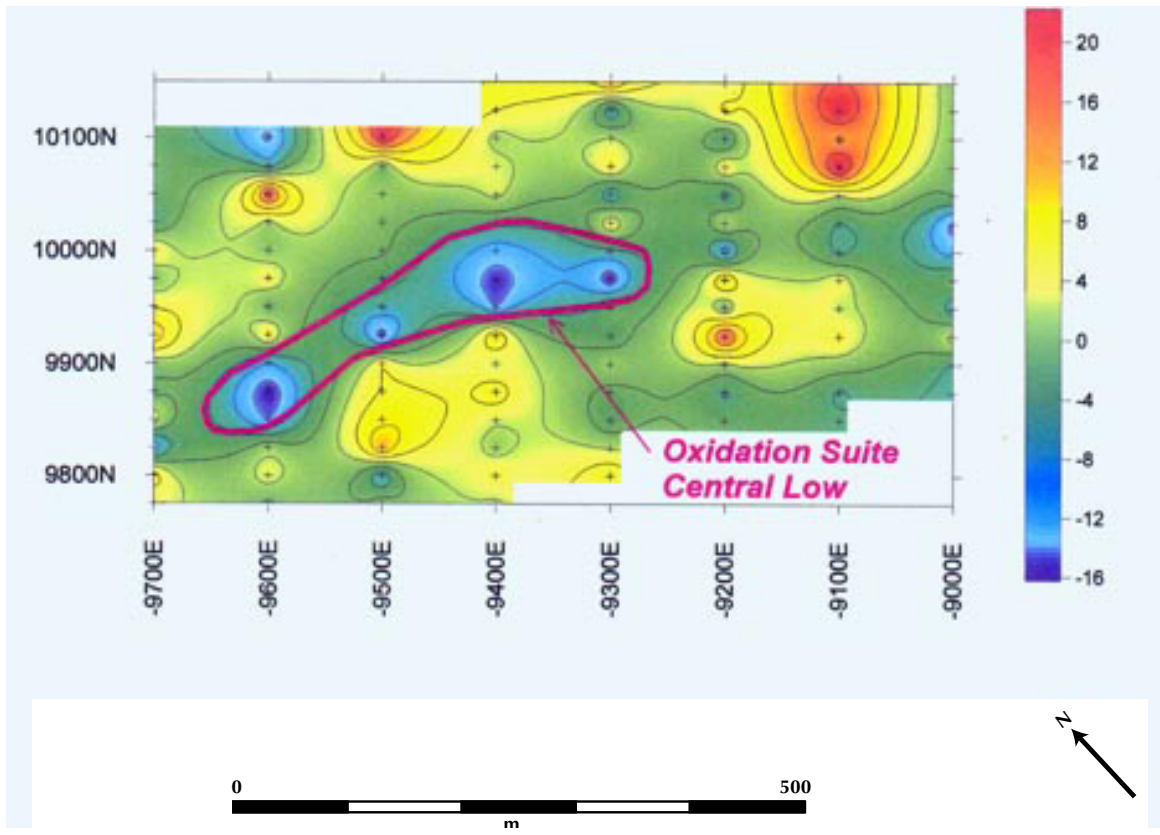


Figure 12. Data from the Dozer claims suggest that the most intense alteration and potential mineralization coincides with an inflection in the northwest-trending structure. Geochemical plot by Enzyme Laboratories Ltd.

REFERENCES

Shives, R.B.K., Carson, J.M., Ford, K.L., Holman, P.B., Grant, J.A., Gordey, S. and Abbott, G., 2001. Airborne Multisensor Geophysical Survey, Stewart River Area, Yukon, Phase 1. Geological Survey of Canada, Open File D4009, and Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Open File 2001-30D, Portable Document Format (PDF) Files on one CD-ROM.