Geological and Geochemical

Assessment Report

Undertaken on the

Gold Continue Soffice Emory Creek Property VANCOUVER, B.C.

Gord 1-4 and Emory 1a, 1b, 2, 3, 4, 6, 7

New Westminster Mining Division, British Columbia

Latitude: 49°30'

Longitude 121°30'

NTS: 92H, 5, 6, 11, 12

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Period of Fieldwork: August 28 - SeptemberLOCOTCAL SURVEY BRANCH ASSESSMENT FEPOPT

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SUMMARY AND RECOMMENDATIONS

Santoy Resources Ltd. completed \$19,200 (includes \$2,725 PAC) worth of work in 2001 to keep eleven mineral claims (192 units, 4,800 hectares) in southern British Columbia, in good standing. This work involved the collection of 42 rock samples, 14 silt samples and improving access to both the D.C Nickel and Victor Nickel occurrences. The claims are centered approximately 15 kilometres north-northwest of Hope and partially surround the past producing Giant Mascot Nickel Mine and cover approximately 10 kilometres of similar geology and Minfile occurrences to the north.

Giant Nickel is British Columbia's largest single past producer (1958-1974) of nickel, producing 26.8 million kilograms of nickel and 14 million kilograms of copper from 4.2 million tonnes of ore from 26 distinct pipe-like bodies. They maintained an average head grade of 0.77% Ni, 0.33% Cu, 0.68 g/t Au and 0.34 g/t platinum group elements (PGE's). Maximum ore grades were quoted as 2.6% Ni, 0.9% Cu, 1.0% Cr, 0.1% Co, 0.68 g/t Au, 2 g/t Pt and 7.2 g/t Pd. These pipe-like ore bodies are hosted by ultramafic peridotites, pyroxenites and hornblendites, which display cumulus textures and concentric zoning. Detailed studies have substantiated an origin via magmatic segregation and accumulation of an immiscible sulphide. These ultramafic rocks were originally considered to represent the earliest phase of the predominantly dioritic Spuzzum pluton. Recent work by government geologist Chris Ash and Robert Pinsent in 2001 however, has determined that "the ultramafic rocks hosting the Giant Mascot deposit are older than the mid-Cretaceous quartz-bearing diorites and diorites that surround and locally intrude them, ... the Spuzzum pluton cross cuts the ultramafic-clastic metasediment contact".

"Cu-Ni (PGE) mineralization is also consistently found only in ultramafic rocks of the Cogburn assemblage where they occur as xenoliths within the mid-Cretaceous Spuzzum intrusions" and "where not proximal to the younger intrusion, ultramafic rocks are devoid of Cu-Ni sulphide mineralization. This relationship lends itself to the possibility that Giant Mascot ore is not primary but related to metasomatic interaction where the older ultramafic is intruded by the younger felsic pluton."

Some of these government geologists conclusions from fieldwork in 2001 were some of the preliminary assumptions and rationale for Santoy Resources Ltd. to acquire portions of the Spuzzum pluton that were underlain by bodies/xenoliths? of ultramafics such as at DC Nickel and Victor Nickel.

Fieldwork in 2001 was concentrated at Victor Nickel, DC Nickel, west of Victor Nickel and on the Emory 6 claim, immediately west of the Giant Mascot "glory hole".

At the Victor showing, garnet-biotite schist hosts a small, concordant mass of ultramafic rocks containing nickeliferous pyrrhotite, pyrite and chalcopyrite with minor platinum and palladium also reported. A small exposure of quartz diorite has been mapped to the north and is believed to be related to the emplacement of the ultramafic mass. Indicated reserves based on nine holes drilled in 1971 were estimated at 145,120 tonnes grading 0.38% Ni and 0.12% Cu. Mineralization at the Victor occurrence is reported to be similar to that developed at the Giant Mascot Mine. The 2001 field program at the Victor showing consisted of detailed mapping and



Figure 1.

sampling (16 chip samples) and improving access. Sampling indicated enrichment in PGE's (Pt < 86 ppb, Pd < 65 ppb) and elevated Cu (< 1,137 ppm), Ni (< 510 ppm) but failed to return substantial results.

At DC Nickel disseminated grains and blebs of pyrrhotite, which contain inclusions of pentlandite, and lesser chalcopyrite and pyrite occur throughout the ultramafic rocks in the area. Trenching in 1935 outlined massive sulphide mineralization hosted by hornblende pyroxenite on a small tributary to Gordon Creek. A 20.4 metre adit, five x-ray holes (296.5 metres) were subsequently completed to test the diorite/pyroxenite contact zone. A 1.83 metre interval heavily mineralized with pyrrhotite, pyrite and altered garnetite returned 0.73% Ni, 0.10% Cu and 0.35% Cr_2O_3 . The 1987 work in the area returned a panned silt with 360 ppb Au and 340 ppb Pd, although no sampling was conducted at DC Nickel as it was held by others. The 2001 field program at the DC Nickel occurrence consisted of improving access trails, prospecting traverses in the area, the collection of 13 samples in and around the adit, and a visit by government geologist Robert Pinsent. One anomalous silt sample and the previous massive sulphides explored by the 1935 adit suggest that the D.C Nickel pyroxenite body may be favourable for hosting copper-nickel massive sulphides with anomalous PGE values.

Limited prospecting and sampling during 2001 were also conducted up the Yale Creek drainage on and west of the Gord 1 claim. This work resulted in the discovery (Victor West) of skarnified? gossanous metasediment near a diorite contact which returned values of up to 1,157 ppm Cu and 342 ppm Ni with elevated gold (68 ppb), platinum (30 ppb) and palladium (47 ppb). Although of limited size, it suggest that mineralization apparently similar to Victor Nickel can also be found.

The 2001 field program also discovered a highly tremolitized pyroxenite body (L.P Pyroxenite) approximately 3.0 kilometres east of the DC Nickel. Limited sampling indicates anomalous nickel (values to 1,802 ppm) and potentially significant magnesium (16.3% Mg).

More sampling was also conducted on the Emory 6 claim that possibly covers the northwest extension of the Giant Mascot. Sampling has confirmed previous work and, returned copper values to 7,747 ppm and nickel to 3,833 ppm ("9-11 Showing") but has only returned weakly anomalous PGM's, suggesting an imperfect correlation between PGE's and copper-nickel sulphides.

It is recommended that follow-up work be conducted in the northwest corner of the claims in the Yale Creek drainage, and more systematic work be conducted along the boundary with the Giant Mascot ground and in DC Nickel areas. This work should consist of detailed sampling and prospecting over the ultramafic body at both DC Nickel and Emory 6 claim.

CLAIM DETAILS

The Gord 1-4 and Emory 1A, 1B, 2-7 consist of a total of 212 units and range from the Emory Creek drainage in the south to the Gordon Creek drainage in the north. During the 2001 season it was decided that the Emory 5 claim should be allowed to lapse and thus reducing the property to 192 units. The details of the claims can be found in Appendix II and on Figure 2.



LOCATION AND ACCESS

The centre of the Emory Creek property is located approximately 15 kilometres north-northwest of the town of Hope, British Columbia (see attached Figure). Highway 1 (Trans Canada Highway) between Hope and the community of Yale provides access along the eastern margins of the claims. Logging roads, primarily up the Emory, Stulkawhits or Texas and Gordon Creek drainages provides further access. The Nickel Mine road up Stulkawhits or Texas Creek was the original access for the past producing Giant Nickel Mine and is used extensively by motorcycle enthusiasts to ride numerous trails in and around the mine tailings and claim area. Access up the Emory Creek drainage is gained by permission from the Camp Squeah members who hold the surface rights for the first 2 kilometres of the Emory Creek access road. The Emory Creek road was also used during the fall of 2001 for reclamation work at the Giant Mascot "glory hole". Permission for access up the Gordon Creek road is gained from a local landholder who similarly holds the surface rights on the initial portions of the roads. International Forest Products gratefully provided detailed logging road maps.

Generally, all primary logging roads climb out of the main Fraser River valley with a series of switchback roads and then continue along steep hillsides along the main creeks. Further access is provided by numerous secondary roads, which vary from nearly unrecognizable to well maintained. Many of these roads are only accessible by motorcycle or ATV and many also require brushing out of thick alder bushes, which quickly grow up on these roads. Although no current logging was taking place, it is noted that on several areas of the claims upgrading of roads and small logging areas are proposed. The flagging of these areas in field was noticed during our fieldwork (and is shown on the logging road maps), and would greatly add to the access. Of particular importance is proposed work in the area immediately east of the Victor Nickel showing, poor timber prices apparently have delayed this proposed work.

TOPOGRAPHY AND PHYSIOGRAPHY

Elevations within the areas of the claim group vary considerably from approximately 500 feet along the eastern portions of the claim group along the Fraser River valley to over 5,000 feet near the central portions of the claims, just south of the DC Nickel showing. The valley walls of Gordon Creek are very steep for most of the claim area, however become somewhat less steep approaching the tarn-like lake at its headwaters. The Emory Creek drainage near the eastern portions of the property forms spectacular canyons but for the most part from 2,000 to 3,000 feet, consist of till filled moderate slopes. These till covered lower slopes though, give way to cliffs and steep sided slopes and mountains. Stulkawhits or Texas Creek to the south of the claim group form spectacular canyons and steep sided slopes for most of its entire course.

Numerous logging roads traverse the claims in varying conditions. Many of the older roads having grown up with alders, that at times, makes traversing more difficult than walking in the second growth logging areas. The replanted areas generally consist of thick second growth timber, with underlying logging debris and thick underbrush making passage at times near impossible. The un-logged areas appear to offer better walking conditions, however they have generally remained un-logged due to their steeper slopes, which consist of numerous cliffs.

The marketable timber of fir, spruce and minor cedar is well situated to the wet, heavy precipitation coastal conditions. Temperatures for the most part though are generally above freezing for most of the year, especially at lower elevations. The combination of wet, moist air and cooler winters though can lead to considerable snow accumulations. During the staking in March 2000 approximately 1 metre of snow was noted at approximately 2,000 feet. Significantly more snow is expected to occur at higher elevations and can cause avalanches on the steep slopes.

PREVIOUS WORK

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Since the 1970's the area north of the Giant Mascot has received sporadic attention from various junior mining companies. In 1969 (Assessment Report 1791) Courageous Exploration Limited with the cooperation of Amax conducted a limited geological and geochemical examination of the Gold and Silver claim group, which covered an area of the Gord 2 and Gord 4 claims to the west and south of Yale in the Gordon Creek area. In later years, as road access improved, work was completed further to the west and north of Gordon Creek. In 1970-71, El Paso Mining and Milling Company completed geochemical (nickel) and magnetic surveys over 7 kilometres in the area of the Victor Showing (Assessment Report 3492).

In 1972, Starletta Mines completed work on their Morgan and Citation group of claims which occur in the Emory 4 and to the east of Emory 2, respectively. On the Citation group (east of Emory 2), two short drill holes reportedly intersected minor nickel and copper. At Morgan (north of Giant Mascot tailings), coincident magnetic, copper (to 400 ppm) and nickel (to 500 ppm) anomalies were noted. Further work was recommended but appears to have not been completed.

In 1973 the Victor Nickel showing was drilled (9 holes of which 5 totalled 176 m, Assessment Report 5030) by Dalton Resources Limited, who also completed a VLF-EM survey over the same grid. All work was directed towards the discovery of Cu-Ni sulphide deposits, with no records of assaying for gold and platinum metals.

In 1979, L. Sookochoff, who supervised the 1973 drilling at Victor Nickel, calculated a drill indicated reserve of 160,000 tons averaging 0.38% Ni and 0.12% Cu, with geological projections of a further 140,000 tons. Further work was completed over the Victor showing in 1979-83 by Bighorn Development Corporation (Don Coates). In 1979, Bighorn completed 2.5 kilometres of geochemical soil sampling on flagged compass lines at 50 m spacings and with 25 m soil sample intervals, with analysis for Ni, Cu, Ag and Au. A number of weakly anomalous soil values in copper and nickel were encountered, however were not plotted in a manner to be very useful.

The Bighorn Development Corporation claims were allowed to lapse and in 1986 Lacana staked a large block of claims that covers the areas north of Giant Mascot. The work completed by Lacana in September 1987 consisted of a preliminary examination, which included pan concentrates and silts from drainages and brief geological exams. The Lacana work recommended further work in the area north and east of the Victor showing (incidentally where new logging in 1987 was taking place), where mineralized shears with anomalous base and precious metal values have been discovered. The second area is in the southeastern area of the Greg claim (now Gord 3 and DC Nickel area), where an ultramafic unit is located. Numerous stream sediment anomalies in the area of the two showings and Santoy's Emory 7 claim also warrant further work.

In 2000, Santoy staked the Emory Property to cover an area very similar to that of Lacana's. Fieldwork resulted in the expenditure of \$25,200 worth of work in the area during the collection of 74 rock and 123 silt samples. This preliminary reconnaissance work formed the basis for this years program.

PREVIOUS WORK – DETAILED

It is clear from a review of the assessment reports that no systematic exploration for PGE's associated with the Cu-Ni sulphides as at Giant Mascot have been undertaken in the area. The work of Lacana in 1987 also notes this, however their short program recommending further work has never been followed up.

Assessment Report 26571

Santoy Resources completed work in the area during 2000, the first PGE focussed program since Lacana's work in 1987. A total of 74 rock and 123 silt samples were taken during this reconnaissance style program and resulted in the expenditure of \$25,200. This work recommended detailed rock chip sampling and mapping by conducted in the Victor Nickel and D.C Nickel areas as well as prospecting traverses in the Mt. Baird and Zofka Ridge areas upslope of anomalous sample sites.

Assessment Report 16,649 and 16,650:

These 1987 reports by Lacana are on the "North" and "South" groups but essentially form one report and property that cover much of the present day Santoy Resources "Emory Creek Property" claims. Lacana's property however does not cover Santoy's Puck claims to the SE of Giant Mascot or the Emory 6 to the west along trend of Giant Mascot.

The work completed by Lacana in September 1987 consisted of a preliminary examination, which included pan concentrates and silts from drainages, soils at the Victor Nickel and brief geological exams. This work recommended further work in the area north and east of the Victor Showing and the ultramafic body in the vicinity of the DC Nickel showing. Numerous stream sediment anomalies are noted particularly in the area of the showings and Santoy's Emory 7 claim, immediately north of Giant Mascot.

Assessment Report 9841:

Bighorn Development Corporation, 1981, a re-staking of the Gordon Creek property (Victor Nickel) and filing of the 1979 geochemical and geophysical data and correlation with detailed airphoto interpretation. A total of 455 samples were analyzed for nickel on 9.5 km of grid and 81 samples were analyzed for copper on 2.5 km of grid. The 2.5 km grid was also covered by an EM-16 VLF-EM survey.

The detailed magnetometer survey by El Paso in 1971 showed a maximum magnetic relief over the Gordon Creek zone (Victor Nickel) of 1000 gammas and most of the zone was only a few hundred gammas above background. Another ultrabasic (DC Nickel?), 2.5 km south of the Gordon Creek property similarly had no aeromagnetic expression. The aeromagnetic relief over the ultrabasic plugs covering the 4 km² area at Pride of Emory Mine is approximately 1000 gammas. The northeastern portion of Santoy's Gord 1 + Gord 2 should be explored carefully and the aeromag highs should be prospected.

The 110 metre long nickel-copper bearing ultrabasic body was well defined by weakly to moderately anomalous nickel soil values. The zone has been extended approximately 200 metres in a southwest direction, from which point it is "open", while only sporadic values define the zone for some 450 metres in a northeast direction.

A strong EM conductor flanks weakly anomalous Ni soil values on the northwest and a number of moderate air photo linears coincide wit this conductor.

A weak to moderate northeast trending linear coincides with the known Ni-Cu mineralized ultrabasic intrusive and coincident geochemical anomalies, the linear can be traced to the northeast for an additional 2 km.

Assessment Report 5030:

Dalton Resources completed an AQ diamond drill program at the Victor Nickel showing in 1973. From the numbering sequence (73-4 to 73-9) it appears as if 9 holes may have been drilled, however only 5 holes (the "pertinent" holes totalling 577 feet), were recorded. The sketch maps indicate only logging roads and, make correlation difficult at best.

The drill holes indicate "amphibolite" horizons with fair to good pyrrhotite and chalcopyrite mineralization in hole 73-4 (47.0 - 73.0 feet), hole 73-5 (79.0 - 88.5 feet), hole 73-7 (74.0-79.0 feet), hole 73-8 (88.0 - 112.0 feet) and hole 73-9 (94.0 - 107.0 feet). Unfortunately, no assays were reported, however later in 1979 L. Sookochoff who supervised the 1973 drilling at Victor Nickel calculated a drill indicated reserve of 160,000 tons averaging 0138% Ni and 0.12% Cu, with geological projects of a further 140,000 tons.

Assessment Report 4422:

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Starletta Mines, 1972, completed work in two blocks (Morgan and Citation), in the Emory 4-5 areas and east of the Emory 2. The claims are underlain by part of the Spuzzum Pluton composed of quartz diorite, intruded into sedimentary and volcanic rocks with altered phases of schists and amphibolites.

Magnetometer and geochemical surveys on the Morgan claims obtained strong, well-outlined anomalies, which showed good coincidence for copper and nickel. The report noted that these anomalous areas warrant further exploration by drilling. The magnetometer survey outlined three strong, linear-type south trending anomalies. The copper geochemistry outlined anomalous areas (with peaks to 400 ppm) coinciding with the magnetic anomalies. A strong nickel anomaly (peaks to 500 ppm Ni) is open to the south and coincides with the magnetic and copper anomalies.

On the Citation claims, two holes were drilled and returned up to 0.22% nickel over 5 feet.

Diamond drilling and expansion of the grid southward were recommended along with geological mapping at Morgan. At Citation, geological mapping, geochemistry and contingent drilling were recommended.

Assessment Report 3756:

Two maps from Dalton Resources Ltd. at the DC Nickel property indicate that line cutting was completed in the vicinity of the DC Nickel showing in 1971. However, no report appears to have been completed, as it is not available at either BCYCM or the Mining Recorder's office in Vancouver.

Assessment Report 3492:

El Paso Mining, 1972 completed geochemical and a ground magnetometer survey on the Victor claim group from October 19 to November 20 and was hindered by snow. Soil and magnetometer anomalies were small in aerial extent and no further work was recommended.

The report notes that the Victor Nickel occurrence consists of disseminated iron, nickel and copper sulphides in a small body of gabbro-pyroxenite. This ultramafic has an exposed length of 150 feet along a northeast direction and is approximately 10 feet wide. Nickel-copper mineralization was also noted along strike to the northeast, which may indicate a 300 foot mineralized length. Samples returned 0.22-0.55% nickel and 0.14-0.23% copper (PGE's not analyzed).

Three small magnetic anomalies were indicated with a maximum relief of 1000 gammas. Maximum relief occurs over the main showing and has a NE trend. The other two anomalies have a northerly trend.

The geochemical soil map was contoured using 50 ppm nickel as background and 300 ppm nickel as "definitely anomalous". Two or more anomalous areas occur over and immediately adjacent to the main mineral showing. Another anomaly is based solely upon a single unlikely 3600 ppm value "and therefore should be disregarded".

The geochemical trends generally correlate with trends of the magnetometer survey and is especially noticeable along a 600 foot northwest striking zone bounded by the main anomaly over the main showing and by one in the southwest corner of the survey area.

Assessment Report 1791:

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Courage Exploration and Amax, 1969, explored the area east and along the eastern boundary of the Gord 2 and Gord 4 claims. Reconnaissance geochemical soil, silt and rock chip sampling indicates the presence of anomalous amounts of nickel.

The claims are underlain by altered granite and serpentine and by argillaceous and chloritic schists. Quartz fragments and boulders are found as float. The serpentine rocks are light green and strongly altered by carbonate.

A total of 32 rock chip, 60 silt and soil samples, along with six water samples were collected. Grab samples along the logging roads returned up to 5000 ppm nickel with reconnaissance contour soils returning up to 1900 ppm Ni.

REGIONAL GEOLOGY

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The Hope area occurs within the "Coast Belt" which is one of the five-morphogeological belts of the Canadian segment of the North American Cordillera and includes both the physiographic Coast Mountains and Cascade Ranges.

The Coast Mountains and Cascade Ranges are composed primarily of Late Jurassic to early Tertiary granitic rocks which form a 100-200 kilometre wide from the Canada/US border north to 62°N, a distance of over 1,700 kilometres. The Coast Mountains lie within the domain of accreted terranes, which feature juvenile crust with low initial strontium ratios.

In the southern Coast Mountains (49°-51° N), Monger 1994 has further divided the Coast Mountains into southeastern and southwestern parts, based on the distribution of plutonic rocks, terranes and structures. The southwestern part is comprised mainly of Middle Jurassic to mid-Cretaceous plutons, which intrude supracrustal sequences ranging in age from Middle Triassic to Middle Jurassic of Wrangellia and Harrison Lake terranes and overlapping Jurassic-Cretaceous volcanic and sedimentary rocks. The western boundary is defined by the western limit of the intrusions and the eastern boundary delineated by the high grade, internal, metamorphic thrust nappes of the Coast Belt Thrust System (CBTS). This plutonic dominated crustal block thus acted as a foreland buttress during Late Cretaceous from west directed thrusting in the southeastern Coast Mountains.

In the southeastern portion, for the most part, mid-Cretaceous through early Tertiary plutonic rocks were emplaced within Bridge River (BR), Cadwallader (CA) and Methow (ME) terranes. This part of the Coast Mountains was the site of the most intense deformation and highest grade metamorphism in Late Cretaceous – early Tertiary time. The three terranes were founded on oceanic crust, with the BR consisting of pillow basalts, radiolarian cherts and alpine-type ultramafics, whereas the CA and ME terranes are predominantly of arc affinity. The long time span (190 million years) of the BR terrane suggests that it represents remnants of a former large ocean basin. The BR and overlying strata occur both as highly disrupted mélange and relatively coherent units. The BR terrane underwent no thermal perturbation until the Cretaceous when it was also variably metamorphosed and intruded. The BR terrane is now disposed in thrust slices structurally interleaved with Cadwallader amd Methow terranes.

In the Hope area the CBTS has been noted to be similar to classical fold and thrust belts developed in zones of large scale crustal shortening. It is characterized by a foreland belt in the southwestern Coast Mountains, in which rocks are detached from their basement by thrust fault (Thomas Lake, Ashulu Creek faults), a foreland-hinterland transition marked by an imbricate zone of high angle, out of sequence reverse faults (near Harrison Lake), and an exhumed hinterland belt of high grade thrust nappes that represent the deep crustal root of the fault system (east of Harrison Lake).



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Figure 4b. Updated Hope Area Geology



Figure 4c. Geology of the East Harrison Lake area

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Figure 4d. Schematic cross-sections through the central portion of the eastern Harrison Lake belt

In the vicinity of the claims (see attached figure), the quartz diorite Spuzzum Pluton mkqd) forms most of the western portions of the claims, with a minor component of Bridger River ultramafics (CJu), Cogburn Schist (MC) and older diorites and gabbros of the Yellow Aster Group (PPpy) comprising the rest. The central portions of the claims are underlain primarily by the Settler Schist (MSt), which is separated to the east by the north-south trending Hope fault (forms the Fraser Canyon) from the Custer Gneiss (KTgn). Further to the east of the Hope fault (and off the claims) the Hozameen Complex (CJH) of cherts, pelites, mafic volcanics, minor limestone and associated gabbro and ultramafic rocks are noted. Along the Hope Fault area also slices of the Paleocene and Eocene Allenby sediments and undivided ultramafic rocks. Intrusions east of the claims in the headwaters of Cogburn Creek, Late Tertiary granodiorite of the Chilliwack Pluton (Ogd) is also noted.

Fieldwork conducted in 2001 by government geologist Chris Ash on the "East Harrison Lake Belt" (EHCB), although mostly focussed to the west of the claim block, has arrived at some important revisions to previous work. These are:

- 1. The previous three-fold subdivision of Slollicum, Cogburn and Settler packages have now been separated into two lithotectonic packages. A package of remnant abyssal oceanic (ophiolitic) rocks termed the Cogburn assemblage which rests structurally above a succession of basinal marine, clastic sedimentary rocks.
- 2. The inclusion of the upper mafic volcanic component of the previously defined Slollicum as part of the Cogburn ophiolitic assemblage.
- 3. The recognition of continuity of the metasedimentary clastic unit across the EHLB. With the only notable variation being the higher degrees of metamorphism and increase in complexity in styles of ductile deformation towards the east.
- 4. The loss, or dissipation of the previously interpreted west verging, terrane bounding thrust faults, so well delineated by ultramafic belts south of Cogburn Creek. Changing structural styles and reductions in the amount of ophiolitic rocks towards the north are now interpreted.

REGIONAL MINERALIZATION

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The targeted mineralization is nickel-copper-cobalt-platinum group elements associated with ultramafic rocks in the area, in a similar setting to the past producing Giant Nickel Mine. A description of the Giant Nickel Mine is included below.

The Hope area has had a long history of mineral discoveries, which commenced, with the discovery of placer gold in 1858 in gravel bars of the Fraser River near Yale. Later a lode silver deposit was discovered in 1868 on Silver Peak, 6 miles south of Hope. This area was covered by the first crown-granted claims in British Columbia.

Exploration in the late 19th century and early years of the 20th century led to the discovery and subsequent exploitation of (a) lode gold from the Coquihalla Serpentine Belt, 12 miles northeast of Hope, (b) silver-lead deposits in the Summit Camp, 18 miles east-northeast of Hope, and (c) silver-copper-lead-zinc deposits in the Skagit River valley. However the most important discovery to date was made in 1923 when a nickel-copper deposit was discovered at the head of Stulkawhits Creek, 7 miles northwest of Hope at the Giant Nickel property.

Giant Nickel Mine

The Pride of Emory Mine is located at the head of Stulkawhits or Texas Creek, approximately 12 kilometres north of Hope on the west side of the Fraser River. Access is by mine road from the Trans Canada Highway. Discovered in 1923 and, subsequently developed by a number of different companies with the first ore shipments being made between 1933 and 1937. In 1936, 22.7 tonne bulk sample taken from the 488 metre crosscut averaged 2.74 g/t platinum and palladium and 0.68 g/t gold. Early records of samples of ore yielded 3.98 g/t platinum and palladium and 7.89 g/t Au. From 1937 to 1958 no ore was shipped although exploration and development continued sporadically. From 1958 – 1974, 4.3 mt of ore yielded 16,516 grams silver, 1,026 grams gold, 140,700 kilograms cobalt, 13,212,700 kilograms of copper and 26,573,090 kilograms of nickel. Ore graded approximately 0.77% Ni and 0.34% Cu with cobalt as a by-product. However chrome oxide, platinum, gold and silver are also present. The scattered nature of the mineralized zone and the fact that most of them were blind, forced closure of the mine. Combined (proven/probable) reserves in 15 zones are 863,000 tonnes grading 0.75% Ni, 0.3% Cu and 0.03% Co.

Through corporate mergers, Barrick Canada acquired title to the property and has been undertaking environmental remediation in order to return the claims back to the government.

The Giant Nickel property lies within an ultramafic complex between the southern tip of the Tertiary-Jurassic Coast Plutonic Complex and the northern end of a belt of intrusions termed the Chelan batholith. The intrusive rocks within this belt are granites, granodiorites and quartz diorites of Jurassic age and younger. They form the core of an uplifted block of regionally metamorphosed upper Paleozoic rocks which trend north and are bound by the Fraser River fault system on the east and on the west by somewhat less metamorphosed Mesozoic rocks. The ultramafic complex hosting the mineralized zones is composed of hypersthene diorite and quartz diorites, norites and ultramafic rocks, termed the Pacific Nickel Complex, which intrudes schists and earlier intrusive rocks. The older noritic rocks are found northwest and southwest of the ultramafic complex. The ultramafic complex has been dated from 120-95 million years ago. The ultramafite is truncated by diorite of the Late Cretacous Spuzzum intrusions (79-89 Ma). The ultramafic rocks of the Pacific Nickel Complex form an irregular stock-like mass approximately 3 kilometres across. The northeast half of the stock contains barren pyroxenites and peridoties which contain little or no hornblende. The southwest half of the stock is a highly variable, homblende rich assemblage of peridotites and pyroxenites which are mineralized and contain some 17 ore bodies associated with the mine. These ore bodies are scattered along a line trending approximately 285°. Ore is associated with pipe-like concentrations of enstatite, olivine and hypersthene containing in order of abundance: pyrrhotite, pentlandite, chalcopyrite, magnetite, pyrite and sphalerite with lesser amounts of chromite and cobalt. The ore bodies fall









into two types which grade into one another, zoned with gradational contacts and disseminated sulphides, and unzoned massive sulphides with sharp contacts. The zoned body is the most common with the sulphide present as interstitial grains between olivine and orthopyroxene. Sulphide concentration is the greatest in the core and decreasing outward to minor, patchy disseminations. Massive ore bodies exhibit consistent composition and grade and consist of orthopyroxene with olivine in a groundmass of sulphides. This type of ore body is generally irregular in plan and plunges steeply. The Pride of Emory ore body is composed of massive and zoned parts so that it appears the two types may grade into one another. Detailed studies of ore mineralogy, chemistry and textures (Aho, 1956, McLeod, 1975 and Muir, 1971) have substantiated an origin via segregation and accumulation of an immiscible sulphide melt. Faulting is widespread throughout the underground workings.

Recent work by government geologist Chris Ash and Robert Pinsent in 2001 however, has determined that "the ultramafic rocks hosting the Giant Mascot deposit are older than the mid-Cretaceous quartz-bearing diorites and diorites that surround and locally intrude them, ...the Spuzzum pluton cross cuts the ultramafic-clastic metasediment contact".

"Cu-Ni (PGE) mineralization is also consistently found only in ultramafic rocks of the Cogburn assemblage where they occur as xenoliths within the mid-Cretaceous Spuzzum intrusions" and "where not proximal to the younger intrusion, ultramafic rocks are devoid of Cu-Ni sulphide mineralization. This relationship lends itself to the possibility that Giant Mascot ore is not primary but related to metasomatic interaction where the older ultramafic is intruded by the younger felsic pluton."

Some of these government geologists conclusions from fieldwork in 2001 were some of the preliminary assumptions and rationale for Santoy Resources Ltd. to acquire portions of the Spuzzum pluton that were underlain by bodies/xenoliths? of ultramafics such as at DC Nickel and Victor Nickel.

PROPERTY GEOLOGY

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The 2001 field program was one of only minimum assessment work and, as such, only select areas were examined. These areas included the Victor Nickel, west of Victor Nickel, DC Nickel and Emory 6 claim. Although this program was limited, it, in combination with government geological programs in the area during 2001, has allowed a better understanding of the claims.

As noted under the Regional Geology section, most of the western portions of the claims are underlain by quartz diorites of the Spuzzum Pluton, the central portions by the Settler Schist and the Hope Fault, and Custer Gneiss occurring along the eastern claim boundary. Along the Hope Fault are also slices of the Paleocene and Eocene Allenby sediments and undivided ultramafic rocks. Mafic-Ultramafic rocks of many origins are the most important unit due to their association with copper-nickel-cobalt-platinum group elements. Although these have not been distinguished on the current regional mapping, they are discussed in detail below and also shown on the attached 1:20,000 map. Below is a brief description of the various units and their distribution within the claim group.



Intrusions

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Mid-Cretaceous Spuzzum Pluton – Quartz Diorite (mkqd)

This large quartz diorite intrusive body forms most of the western portions of the claims. It is made up of medium to coarsely crystalline quartz and plagioclase with substantial hornblende and minor biotite (Assessment Report 16,649). Composition however does vary considerably with sections becoming quite mafic. This was noted particularly along the western margins of the Emory 6 claim near the headwaters of Emory Creek. This mafic differentiation from the quartz diorite mass may explain the origins of the larger ultramafic bodies and associated mineralization at the past producing Giant Nickel Mine and other ultramafics in the area. The spatial association of these ultramafic bodies near the margins of the Spuzzum Pluton is also recognized. These more mafic phases of the Spuzzum Pluton have been explained by the 2001 government geological programs as due to the assimilation of Cogburn assemblage ultramafic xenoliths. This helps to explain the conflicting age relationships and erratic nature of diorites, gabbros, hornblendites, pegmatites and ultramafics observed on the claims. This is particularly noted on the Emory 6 claim, which may cover the previous axial trace of an ophiolite complex that has now been assimilated by the Spuzzum Pluton. Generally though, the unit is very massive, pale coloured and weakly altered. Pegmatitic float with coarse feldspars, muscovites and biotites were also noted in float during the 2000 field program.

Cogburn Assemblage (Ash, GLDFLDWRK 2001)

The term "Cogburn assemblage" was intruded by Ash 2001 to refer to an ophiolitic (oceanic crustal) package of variably deformed and metamorphosed chert-argilite, mafic volcanics, gabbros and ultramafic rocks.

Although these occur chiefly to the northwest of the Emory 6 claim and west of the main claim block they are discussed because of their economic significance. Ash and others have interpreted mafic-ultramafic phases of the Spuzzum pluton as xenoliths of varying degrees of assimilation of Cogburn ultramafics.

"Both the mafic and ultramafic igneous bodies display features characterizing their tectonic mode of emplacement. They are typically completely converted to retrograde schists while internally they are relatively massive and locally preserve remnant primary texture and mineralogy. A genetic association between these mafic and ultramafic rocks is supported by local variations in the gabbro that range from more mafic melanocratic phases to pyroxene dominant ultramafic phases suggesting the two are compositionally transitional."

Traditionally, this unit has been directly correlated with the Bridge River Terrane.

Chert & Argillite – chert and argillite units of the Cogburn Assemblage have been mapped near the head of Emory Creek and just west of the claims.

Metabasalt Unit – light to dark green schistose, chlorite unit has been noted to the west of the claims and is termed "greenschist". A similar unit was noted just west of the northwest corner of the Emory 6 claim in 2000.

Baird Metagabbro – light grey-green, medium grained equigranular rock with a weak to moderate foliation defined by alignment of secondary amphibole and chlorite. Near its tectonized margins it is converted to medium grained chlorite sericite schists. This unit has been mapped immediately northwest of the Emory 6 claim.

Ultramafic Rocks

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"The largest and most continuous exposures of ultramafic rocks in the East Harrison Lake Belt (EHLB) occur along opposite sides of Talc Creek to the west of the claim. They start in the west near Cogburn Creek and continue to the southeast where the Spuzzum Pluton near Mount Baird disrupts them. These cumulate ultramafic rocks range from diorite to peridotite and pyroxenite.

Massive diorite is dark green and weathers a characteristic dun brown. Where serpentinized, ultramafic rocks display characteristic light and dark grey mottled surface with a distinctive purple tinge. Orange brown rusty exposures typify talc-carbonate altered zones."

On the basis of level of preservation of primary textures and mineralogy, as well as spatial association with younger mid-Cretaceous quartz diorite intrusions, two distinctive styles of ultramafic rocks are identified. The first type are tabular bodies and lenses that parallel the local foliation, are in association with ophiolitic assemblage rocks and are variably serpentinized and no copper or nickel sulphides have been found in these ultramafic rocks.

The second type in contrast are usually devoid of penetrative fabric, are well preserved and occur almost exclusively as xenoliths or inclusions within the mid-Cretaceous Coast Plutonic Complex. The largest exposure of this type of ultramafic rocks that host Cu-Ni (platinum group element) mineralization are at the Giant Mascot Mine. This ultramafic body consists of cumulate pyroxenites and lesser peridotites and is contained largely within the Spuzzum Pluton.

Most significantly is that the ultramafic xenoliths associated with the younger mid-Cretaceous plutons always contain some sulphides.

Because of the marked contrast in style of preservation between the two types of ultramafic rocks, previous workers (this author included) thought that both types were genetically distinct, with the well preserved ultramafic rocks considered a phase of the Spuzzum Pluton.

Ash (2001) argues that at Giant Ascot Mine the Spuzzum Pluton displays a hornblende rich, banded margin in contact with metasomatically altered metasediments and the ultramafic body hosting the mine. In addition, small plugs of diorite intrude this ultramafic body and show identical contact features to those developed around its external margin. The ultramafic rocks hence must be older than the Spuzzum Pluton and the contact reactions argue against a co-genetic relationship between the ultramafic rocks and the Spuzzum Pluton.

The ultramafic rocks present in the Emory Creek valley on the Emory 6 claim represents the disruption of a once continuous belt of ultramafic rocks that have been engulfed by a younger intrusion.

Because Cu-Ni (PGE) mineralization is consistently found only in the ultramafic rocks of the Cogburn assemblage where they occur as xenoliths with the mid-Cretaceous Spuzzum Pluton, it

leads one to suggest that the ore from Giant Mascot is not primary but perhaps related to metasomatic interactions between the ultramafic rocks and the younger felsic plutons.

The author however is still puzzled how apparently magmatic looking sulphides in the ultramafics can be explained by secondary interactions with the felsic plutons unless there is a high degree of melting of the original ultramafics.

Stratified Rocks

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Paleocene-Eocene Allenby Formation (Ea)

Sandstone, shale, conglomerate, coal (includes Hat Creek and Coldwater beds) occur along the eastern margins of the claims along the Hope Fault. This unit was specifically noted in the eastern portion of the Puck 2 claim (now lapsed) along the BC Hydro access road.

Late Cretaceous-Tertiary Custer Gneiss (KTgn)

This unit occurs on the eastern side of the Hope Fault and as such only occurs on the claims at the Emory 5 claim (now lapsed). The Cluster Gneiss is comprised of pegmatitic granite gneiss, with pelitic schist and amphibolite derived from Mesozoic, Paleozoic(?) and Precambrian rocks, intruded and metamorphosed in the Late Cretaceous and Early Tertiary. Metamorphic grade ranges from amphibolite facies to retrograde greenschist facies. This unit was noted forming whitish weathered cliffs along Emory Creek and also further north near Gordon Creek. Just south of Gordon creek the highways department has utilized the sheared gneiss as it weathers to a sandy product.

Early Late Cretaceous-Late Cretaceous Settler Schist (MSt)

This unit underlies the majority of the claims and is bound by the Spuzzum Pluton in the west and the Hope Fault in the east. It consists of garnet-biotite, staurolite, dyanite and sillimanite schist, local amphibolite including meta-pillow basalt, siliceous schist. The protolith is wholly or in part derived from the Jurassic-Cretaceous Cayoosh Assemblage. This unit was metamorphosed in mid-early Late Cretaceous and Late Cretaceous. Mineral assemblages record both high pressure and intermediate to high temperature.

PROPERTY MINERALIZATION

At least three Minfile occurrences with the potential to host platinum group elements associated with mafic-ultramafic bodies are noted at Victor Nickel, DC Nickel and Morgan-Citation and are detailed below. Ultramafic rocks with sulphides (pyrrhotite, chalcopyrite and pentlandite) similar to the Giant Nickel Mine are targeted and have been noted at the three Minfile occurrences, along with trace sulphides at the Emory 6 claim. Several areas of anomalous platinum, palladium and gold were detected in 1987 in both silts and panned silts within the current claims. Newly lapsed claims held by Homestake to the west of the Giant Nickel property were acquired by the staking of the Emory 6 claim, it is thought that Homestake (now Barrick) who also holes the Giant Nickel property must of at least found mineralization worthy of staking.

Also noted within the claims are the Yale Creek and Gordon Creek Minfile occurrences of pelitic units within the Mesozoic Settler Schist, which contains up to 15% sillimanite, up to 12% garnet and up to 12% kyanite (Bartholomew, 1979). On Gordon Creek, near the northeast corner of the claim block, the Gordon Creek asbestos occurrence is noted. In the vicinity of Gordon Creek, a 150 metre wide slice of ultramafic rocks of unknown age occupies a short segment of the Hope fault. The ultramafic rocks are dominated by shattered serpentinite, described as being dense and black and hosting minor disseminated chromite. Asbestos, occurring as slip fibre, was reportedly developed in fracture planes within the serpentinite. Development work to 1911 consisted of several open cuts and a few tunnels.

Also discovered during the 2001 field program was a highly serpentinized and tremolitized 100 metre x 200 metre slice of ultramafics located approximately 3 kilometres east of DC Nickel and immediately west of the trace of the Hope Fault. This unit is termed the LP pyroxenite as it was noted on a thesis map by Lee Pigage, 1973 and provided by Robert Pinsent. This unit has returned values up to 0.18% Ni and 16.3% Mg from limited sampling.

DC Nickel (92HNW021): In 1935, a 20 metre adit along with 5 diamond drill holes were completed with massive sulphides in hornblende pyroxenite returning 0.73% Ni and 0.10% Cu. No evaluation for PGE has been completed with only a few silt samples taken in the area by Lacana in 1987. A panned silt taken in a parallel drainage to "adit creek" (Assessment Report 3756 – Map 1), returned 360 ppb Au and 340 ppb Pd. The extent of the ultramafic body appears to have never been evaluated (Assessment Report 16,649). Work during the 2000 season consisted of establishing access and re-discovery of the old adit along with taking a few samples.

Work during the 2001 field season consisted of brushing out and repairing a logging road suitable for 4×4 access for 4.5 kilometres from the powerline, then cutting a trail suitable for ATV access for a further 1 kilometre which was then followed by cutting a walking trail for 1.5 kilometres. This system of trails made it feasible to travel to and from, and work the DC Nickel pyroxenite body in one day.

Sampling (10 rocks, 3 silts) was conducted in and around the 1935 adit, which although partially collapsed at the portal, is still accessible.

Government geologist Robert Pinsent was also taken to the site of the DC Nickel adit.

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Victor Nickel (92HNW039): a number of geochemical and geophysical grids have been completed in the vicinity of the Victor Nickel occurrence, with the latest completed in 1987 by Lacana. Five diamond drill holes were also completed in 1972 by Starletta Mines with a "resource" of 145,1250 tons grading 0.38% Ni and 0.12% Cu calculated in 1979 based on the 1972 drilling. The 1987 work recommended that the area north and east of the Victor Showing be prospected and accurately mapped. The 1987 report also mentioned current logging, which may have created roads that have never been prospected. Apparently, Doublestar acquired an interest in the property in 1998 (Minfile), but the area was available for staking in 2000. Work in 2000 entailed preliminary sampling at the Victor Showing and confirmation of platinum group elements.

Work during the 2001 field season consisted of brushing out of 500 metres of road suitable for ATV access right to the showing. Detailed sampling (16 chips) was also conducted at the Victor Showing (see appended map). Reconnaissance sampling and prospecting was also undertaken to the west of DC Nickel and into the Yale Creek drainage.

Morgan: in 1972, Starletta Mines noted coincident magnetic anomalies and copper-nickel geochemistry, with grid extension and diamond drilling recommended. This work appears to have never been followed up and occurs approximately 1 kilometre northwest of the Giant Mascot tailings dam and along an access road. Sampling and evaluation needs to be completed to determine whether the anomaly is possibly related to transport from the tailings and/or ore movement along roads (although coincident mag seems to reduce this scenario). In the same report, the Citation just to the east of the claims north of Emory Creek is noted, where two short holes drilled to test one of these showings, intersected copper-nickel mineralization. The best assay, 0.22% nickel, came from Hole C-1 between 14.33 and 15.85 metres, low copper and zinc values were also reported (Assessment Report 4422). The 2000 field program consisted of the discovery of pyroxenite-hornblendite sills near the Morgan area and quartz-carbonate altered ultramafic near the Citation area. Anomalous copper and nickel values were returned, however platinum and palladium were low, except towards the Spuzzum Pluton.

No work was conducted in this area during 2001.

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<u>Stream Sediment Anomalies</u>: Previous stream sediment anomalies of Pt, Pd, Au and associated Cu+Ni have been reported by Lacana 1987 and Santoy 2000. These generally cluster around the Victor Nickel, DC Nickel, northern boundary of the Giant Mascot claims and the Emory 6 claim. During the 2001 field season government geochemist Ray Lett conducted a geochemical survey in the area of Cogburn-Stulkawhits Creek (see following figure). This work included the collection at three sample sites on Emory Creek and one on Texas/Stulkawhits Creek, downstream of Giant Mascot. This work has shown that relative concentration of the elements are generally concentrated and more reproducible in the finer fraction of moss mats (-230 mesh), then -80 mesh moss mats, followed by -230 mesh stream sediments and lastly by -80 mesh stream sediments.

This work has also shown that relative concentration of PGE's are quite low (especially in -80 mesh stream sediments), fortunately associated Cu-Ni sulphides should help prioritize areas.

A total of 15 silt samples were taken during the 2001 field program, primarily in the Yale Creek drainage west of Victor Nickel but also some re-sampling on the Emory 6 claim (see Rock and Silt Sampling Results).

Emory 6 claim: This claim was staked to cover lapsed two-post claims (Far 1-12), that were previously held by Homestake and to cover the possible westward strike continuation of the "mine trend". No assessment reports are shown in the area of the Emory 6 claim. During the staking it was noted that relatively recent logging had taken place in the area of the claims. The 2000 field program identified several areas of mafic differentiates in diorites and some with anomalous platinum group elements.

Stream sediment and moss mat sediment results for the -80 mesh fraction

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Sample	Stn.	Type	Ag ²	Au ¹	Au ²	Cr^2	Cu^2	Fe ²	La ²	Mg^2	Ni ²	Pd ¹	Pt ¹	Rh ¹
			ppb	ppb	ppb	ppm	ppm	%	ppm	%	ppm	ppb	ppb	ppb
107066 -80	19	Sed.	28	-1	0.6	37.4	29.65	1.58	4.1	1.53	79.4	-0.5	0.8	-0.05
107067 -80	19	Moss	24	-1	0.8	42.1	28.13	1.56	4.9	1.54	77.6	-0.5	0.3	0.50
107068 -80	20	Sed.	36	1	0.9	123.2	143.09	3.38	2.6	5.31	396.4	1.1	1.5	0.40
107069 -80	20	Moss	30	13	1.4	97.8	101.52	3.09	3.9	4.68	324.6	1.2	1.1	-0.05
107070 -80	21	Sed.	22	-1	0.4	37.3	30.82	1.55	3.2	2.02	101.5	-0.5	0.5	0.30
107071 -80	21	Moss	936	-1 24	91.7	46.0	31.76	1.71	4.2	1.98	102.0	-0.5	0.6	0.31
107072 -80	22	Sed.	31	- 1	0.2	33.7	41.70	1.32	5.2	0.63	83.1	-0.5	0.4	-0.05
107073 -80	22	Moss	55	-1	1.7	39.2	100.58	1.63	5.8	0.79	188.8	2.3	68.1	-0.05
Stream sediment and moss mat sediment results for the -230 mesh fraction														
Sample	Stn.	Туре	Ag ²	Au ²	Au	Cr ²	Cu ²	Fe ²	La ²	Mg ²	Ni ²	Pd ¹	Pt ¹	Rh
			ppb	ppb	ppb	ppm	ppm	%	ppm	%	ppm	ppb	ррЪ	ррЪ
107066 -230	19) Sed.	57	1.0	- 1	46.5	37.83	1.72	5.2	1.02	76.8	0.6	0.8	0.11
107067 -230	19) Moss	30	0.5	45	46.6	31.74	1.50	7.5	0.97	64.4	-0.5	7.2	0.11
107068 -230	20) Sed.	59	1.5	-l	133.4	175.01	3.48	4.9	3.70	419.2	0.8	1.9	0.38
107069 -230	20) Moss	41	2.0	9	111.7	136.59	3.14	6.8	3.50	348.1	1.1	4.2	0.13
107070 -230	21	l Sed.	40	0.4	-1	49.7	39.84	1.69	5.1	1.37	95.5	-0.5	4.4	-0.05
107071 -230	21	Moss	42	1.4	-1	56.7	41.35	1.80	6.7	1.37	94.5	-0.5	2.4	0.15
107072 -230	22	2 Sed.	34	1.0	-1	35.3	46.27	1.45	7.0	0.57	87.5	0.6	1.3	-0.05
107073 -230	22	2 Moss	41	3.7	13	43.5	84.96	1.70	8.8	0.66	132.0	10.0	89.2	2.02
1: 49° 36	21° 48'			7 15 5 7 13 5 6 Alason				THE WAR			P	ROPE	49° 36'	
		Lege Mineral C Sample s	end Occurre site	ince			F /					121° 24	49° 24'	

Figure 8. Stream sediment and moss mat sediment sample locations and results.

During the 2001 field program one day was spent following up some of the anomalous results of the 2000 program. These anomalous results plus the new recognition that the area of the Emory 6 claim may represent the disrupted zone of a once continuous belt of ultramafic rocks that have been engulfed by younger plutonic rocks, was impetus for the visit.

Highly anomalous copper, nickel and cobalt results have been returned from an area near the boundary with the Giant Mascot claim in an area now termed "9-11" after the September 11th attacks on the day of discovery (see Rock and Silt Sampling Results).

SAMPLING PROCEDURES – 2001 FIELD PROGRAM

Rock and silt sampling were used in the evaluation of the Emory Creek Property and were collected by trained geological staff to represent the rocks in that particular area. The rock samples were described and put into sealed plastic bags for eventual transfer to Acme Laboratories in Vancouver. Silt samples were collected on many of the creeks and usually consisted of sand to silt sized material. During the collection of the silt samples, notes were taken to the size, depth, speed of the creeks and geology of the underlying rocks and/or rock float.

All samples remained in Santoy Resources personnel possession and were later put into securely fastened 5-gallon plastic pails. Santoy personnel at the completion of the fieldwork personally delivered the samples to Acme Laboratories.

ROCK AND SILT SAMPLING RESULTS – 2001 FIELD PROGRAM

Trained geologists collected rock and silt samples and described them (see Appendix for sample descriptions). The sampling is described from north to south.

Yale Creek

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The northern portions of the Gord 1 & 2 and west of the claim block into Yale Creek were examined during the 2001 field program. These areas were relatively easy to access by ATV with logging roads although de-activated not yet overgrown. A total of 13 (9 silt, 4 rocks) were taken over a period of two days.

Silt sample 114060 taken approximately 1 kilometre north of the Victor Nickel occurrence contains elevated Pb (18 ppm), Zn (143 ppm), Ag (0.4 ppm_, Ni (74 ppm), Co (43 ppm), Au (10 ppb), Pt (3 ppb) and Pd (3 ppb). The area is underlain by metasediments intruded by dioritic sills, which may be causing the anomalous levels.

Silts taken further to the west generally did not return significant values, although occasional Pt and Pd above detection are noted (eg. 114062).

The four rock samples consisted of a well rounded gossanous dioritic float (114063) boulder in Yale Creek, a biotite altered pyroxenite float boulder (114064) and two grabs of "skarn" style mineralization (114069, 114070) all west of the claims, in currently un-staked ground. The

pyritized diorite float is anomalous in copper (500 ppm), the pyroxenite float is anomalous in Ni (127 ppm) and Cr (200 ppm) and the "skarn" style samples have returned values up to 1157 ppm Cu, 342 ppm Ni, 68 ppb Au, 30 ppb Pt and 47 ppb Pd. This new "skarn" style mineralized area is termed " Victor West".

Victor Nickel

Work during the 2001 field season consisted of brushing out of 500 metres of road suitable for ATV access right to the showing. Detailed sampling (16 chips) was also conducted at the Victor Showing (see appended map). Six sections of chip samples were taken over a strike length of 58 metres, with the widest section (4.7 m) of sampling occurring near the middle.

The highly gossanous and sheared nature of showing area made rock identification difficult. At least three rock types, diorite, pyroxenite and metasediment have been tentatively identified. It appears as if diorite and pyroxenite sills have intruded the metasediments at a shallow angle and the resulting interaction causing a high sulphidized environment.

The 16 chip samples (114073-114088) returned only modest copper (max. 1137 ppm), nickel (max. 510 ppm), chrome (max.1020 ppm) and only weakly anomalous platinum (max. 86 ppb) and palladium max. 67 ppb). A review of the sampling appears to show a correlation with sulphide content.

These results do not agree well with the "resource" of 145,1250 tons grading 0.38% Ni and 0.12% Cu calculated in 1979 based on the 1972 drilling. Although the Acme analytical procedure does not fully dissolve the nickel it cannot explain the discrepancy, perhaps surface leaching may help explain the difference.

L.P Pyroxenite

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"Discovered" during the 2001 field program was a highly serpentinized and tremolitized 100m x 200 m slice of ultramafics located approximately 3 kilometres east of DC Nickel and immediately west of the trace of the Hope Fault. It is centred on a small (~200 m) NNW trending ridge located at UTM 611460 E / 5488850 N, which also shows up as a weak magnetic high on the aeromagnetic maps. This unit is termed the LP pyroxenite as it was noted on a thesis map by Lee Pigage, 1973 and provided by Robert Pinsent.

This unit appears as a pale green, soft sometimes radiating to acicular mass that is assumed to be highly tremolitized pyroxenite which has returned values up to 0.18% Ni and 16.3% Mg from limited (4 samples 114093-114096) sampling.

A ridge along trend to the SSE and a larger magnetic expression suggest this zone may be larger and in light of Leader Mining's work on magnesium potential to the southwest at Cogburn Creek it may be worthy of further investigation

D.C Nickel

Work during the 2001 field season consisted of brushing out and repairing a logging road suitable for $4 \ge 4$ access for 4.5 kilometres from the powerline, then cutting a trail suitable for

ATV access for a further 1 kilometre which was then followed by cutting a walking trail for 1.5 kilometres. This system of trails made it feasible to travel to and from, and work the DC Nickel pyroxenite body in one day.

A total of ten rock samples (114051-114056, 114089-114092) and three silt samples (114057-114059) were collected in and around the D.C Nickel adit. The three silt samples were taken on "Adit Creek" upstream of the DC Nickel adit and also on one stream to the east. Sample 114058 located approximately 250 metres upstream of the DC Nickel adit returned anomalous platinum (7 ppb), palladium (4 ppb), and silver (0.4 ppm). Although copper and nickel values were low this sample might be indicative of a favourable environment for PGE's in the D.C Nickel pyroxenite body.

"9-11" Showing

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During the 2001 field program one day was spent following up some of the anomalous results of the 2000 program in the area of the Emory 6 claim located west of the Giant Nickel Mine. These anomalous results plus the new recognition that the area of the Emory 6 claim may represent the disrupted zone of a once continuous belt of ultramafic rocks that have been engulfed by younger plutonic rocks, was impetus for the visit.

Highly anomalous copper, nickel and cobalt results have been returned from an area near the boundary with the Giant Mascot claim in an area now termed "9-11" after the September 11th attacks on the day of discovery.

A total of 5 rock samples (114097-114101) were taken near the eastern claim boundary of the Emory 6 claim, south of Emory Creek. These sample results confirmed the 2000 sample (122456) results and returned values up to 0.77% Cu, 0.38% Ni, 1.4 g/t Ag, 0.09 % Co, 64 ppb Au but with only 10 ppb Pt and 13 ppb Pd. These results suggest that an imperfect correlation between copper – nickel and PGE's may exist.

Five samples (114102-114105) were also taken on the north side of Emory Creek on the Emory 6 claim.

Two of these samples were silt samples (114103B, 114104) that were re-taken at previously anomalous sites. Sample 114103B (previous sample 122061) returned a similar anomalous nickel (166 ppm), low copper (37 ppm) and a weakly anomalous palladium (3 ppb). Sample 114104 (previous sample 122060) returned very similar anomalous nickel (181 ppm), copper (66 ppm) and cobalt (25 ppm) but again with low detection platinum and palladium.

The three rock samples taken north of Emory Creek (114102, 114103A, 114105) returned anomalous copper (max. 309 ppm), nickel (max. 238 ppm), cobalt (93 ppm) and chrome (329 ppm), however only returned up to 3 ppb platinum and 6 ppb palladium.

DISCUSSION OF SAMPLING RESULTS –2001 FIELD PROGRAM

Although the 2001 field program was limited in nature this work combined with government geological programs in the area has allowed a better understanding of the claims. The 2001 field

program has resulted in the new discovery of copper-nickel values with albeit low but anomalous levels of PGE's in the Yale Creek drainage (Victor West) and Emory 6 claim ("9-11" Showing). Potential at Victor Nickel now appears limited for PGE's after the collection of 16 chip samples. Work at DC Nickel has shown that the pyroxenite body is relatively large (up to 0.75 km x 1 km?) and although no sulphide accumulations have been found to date from the limited work the small adit which explored a small massive sulphide body and one anomalous silt sample (114058) suggests that PGE enrichment associated with copper-nickel sulphides may occur in the body.

The discovery of a highly tremolitized pyroxenite with high (up to 16.3% Mg) magnesium values approximately 3 kilometres east of the DC Nickel also opens up other possibilities, such as those explored by Leader Mining at their Cogburn Project.

RECOMMENDATIONS AND CONCLUSIONS –2001 FIELD PROGRAM

The 2001 field program consisted of the collection of 42 rock samples and 14 silt samples along with improving access into both the D.C Nickel and Victor Nickel occurrences. The discovery of two new copper-nickel occurrences (Victor West and "9-11" Showing) with albeit low but anomalous PGE values should be considered encouraging. These areas along with the relatively underexplored D.C Nickel pyroxenite body are deserving of more work.

This work should consist of detailed sampling and prospecting upslope of the D.C Nickel, the Victor West, and "9-11" showings. Anomalous results have also not been fully evaluated along the north border of the Giant Nickel property and also in the NW corner of the Emory 6 claim.

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APPENDIX I

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Statement of Qualifications

CERTIFICATE OF QUALIFICATIONS

To Accompany Emory Creek Property Assessment Report, British Columbia, Canada, dated May 1, 2002.

I, Adam Travis, B.Sc., of 3579 Lansbury Court, Westbank, British Columbia, Canada, V4T 1C5 do hereby certify that:

- 1. I am a consulting geologist with an office at 3579 Lansbury Court, Westbank, B.C., V4T 1C5.
- 2. I am a graduate of the University of British Columbia (B.Sc. Major Geology, 1990).
- 3. I have practised my geological profession since 1986 in many parts of Canada, the United States, Mexico and Africa.
- 4. I was present and supervised all aspects of work on the Emory Creek property contained within this report.
- 5. I have gathered my information for this report from government publications, internal company memos, geological field notes and data that are believed to be reliable and accurate.
- 6. Based on company reports and information, an expenditures of \$19,200 (\$2,725 PAC withdraw) appears accurate for the 2001 work on the Emory Creek property.
- 7. I hold shares in Santoy Resources however this position has not changed based on this report.
- 8. I hereby grant my permission for Santoy Resources Ltd. to use this Geological Report for whatever purposes it wants, subject to the disclosures set out in this Certificate.
- 9. Signed in Vancouver, British Columbia this 1st day of June, 2002.

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Adam Travis, B.Sc.

APPENDIX II

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Claim Details

Tenure No.	Claim Name	Owner*	NTS	Good Standing Status**	Units	Tag No.
374960	Gord I	134616 100%	092H053	2003/03/11	20	237502
374961	Gord 2	134616 100%	092H053	2003/03/11	12	237503
374962	Gord 3	134616 100%	092H053	2003/03/11	20	237504
374963	Gord 4	134616 100%	092H053	2003/03/11	12	237505
374964	Emory 1A	134616 100%	092H053	2003/03/14	14	223408
374965	Emory 1B	134616 100%	092H053	2003/03/14	14	223409
374966	Emory 2	134616 100%	092H053	2003/03/12	20	234523
374967	Emory 3	134616 100%	092H053	2003/03/14	20	237508
374968	Emory 4	134616 100%	092H053	2003/03/13	20	234524
374970	Emory 6	134616 100%	092H043	2003/03/14	20	223420
374971	Emory 7	134616 100%	092H043	2003/03/14	20	237507
374972	Puck 1	134616 100%	092H043	2003/03/15	20	223421
374973	Puck 2	134616 100%	092H043	2003/03/15	20	223422

Emory Creek Property, New Westminster Mining Division

Note – Santoy Resources Ltd. FMC #134616
** if report approved.

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APPENDIX III

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Statement of Expenditures

STATEMENT OF EXPENDITURES

Labour (October 30, 2001 - November 16, 2001)			
Ron Nichols, Project Supervisor - \$400/day x 1 day Adam Travis, Senior Geologist - \$300/day x 16 day Clay Travis, Geological Assistant - \$225/day x 15 d	S	\$ 400.00 4,800.00 3,375.00	0
	Total Labour:	8,575.00	0
Geochemical Analysis (Acme Labs)			
42 rock samples @ \$22/rock		924.00	0
14 silt samples @ \$23/silt		322.00	0
	Total Geochemical Analysis:	1,246.00	<u>5</u>
Camp Costs			
Hotel		752.36	5
Food, groceries		857.06	5
Supplies (Deakin, etc.)		15.51	l
Hand Held Radio Rentals (\$5/day x 2 radios)		160.00	
Power Saw Rental (\$20/day)	_	300.00	
	Total Camp Costs:	2,084.93	3
Transportation			
Fuel		326.68	3
Truck, ATV Rental		1,600.00)
	Total Transportation:	1,926.68	3
Office and Reporting			
Ron Nichols, Project Supervisor		400.00)
Adam Travis, Senior Geologist, report preparation		1,500.00)
Terry Lee, drafting, computer		500.00)
Report copying, plotting, printing, etc.		242.39)
	Total Office and Reporting	2,642.39	,
	Total Expenditures:	16,475.00)
	PAC Withdrawl:	2,725.00)
	TOTAL:	19,200.00)
*Note: Physical portions = geological assistant x 10 days =	\$2 250 + \$1 225 (30% share of c	costs)	

Physical portions = geological assistant x 10 days = 2,250 + 1,225 (30% share of costs).

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APPENDIX IV

2001 Compiled Assay Results

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Sample ID	Easting	Northing	Cu	Pb	Zn	Ag	Ni	Со	Cr	Mg	Au**	Pt**	Pd**
		······	ppm_	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ррЬ	ppb
114051	608850	5488220	45	196	146	0.4	39	20	98	1.56	6	< 2	4
114052	608855	5488225	5 9	10	25	< .3	45	22	83	1.25	6	4	< 2
114053	608857	5466225	78	50	44	< ,3	30	19	38	1.42	2	< 2	< 2
114054	608860	5488228	3	49	49	< .3	6	4	21	0.43	2	2	2
114055	608875	5488195	7	20	36	< .3	16	13	54	1.52	< 2	3	4
114056	608865	5488165	219	38	53	< ,3	19	15	8	0.99	< 2	5	5
114063	605950	5489625	500	20	42	0.3	3	38	3	0.77	< 2	< 2	2
114064	606050	5490200	103	28	31	< .3	127	19	200	1.1	5	5	4
114069	606495	5489696	1157	38	46	0.9	342	51	12	0.21	6	15	11
114070	606653	5488960	828	75	110	< .3	226	36	16	0.08	68	30	47
114073	Victor Nicke	l Detailed	423	9	16	< .3	136	8	614	0.93	7	2 9	32
114074	Victor Nicke	l Detailed	712	6	32	< .3	510	25	1020	2.28	9	26	40
114075	Victor Nicke	l Detailed	370	11	51	< .3	393	31	705	2.52	< 2	9	17
114076	Victor Nicke	el Detailed	49	7	82	< .3	93	15	131	1.8	5	< 2	4
114077	Victor Nicke	el Detailed	28	7	70	< .3	45	11	12	0.83	3	< 2	< 2
114078	Victor Nicke	el Detailed	200	1 1	93	0.8	380	35	629	3.71	< 2	6	8
114079	Victor Nicke	el Detailed	377	< 3	8	< .3	114	4	460	0.5	5	81	65
114080	Victor Nicke	el Detailed	770	< 3	11	< .3	160	7	410	0.71	4	86	56
RE 114080	Victor Nicke	l Detailed	778	5	12	< 3	162	7	413	0.72	2	52	57
114081	Victor Nicke	el Detailed	565	< 3	10	0.3	107	4	446	0.78	< 2	48	71
114082	Victor Nicke	el Detailed	117	6	46	< 3	110	6	84	0.81	4	< 2	6
114083	Victor Nicke	el Detailed	1137	5	7	0.3	427	22	535	0.71	6	67	67
114084	Victor Nicke	el Detailed	93	3	34	< .3	38	9	66	1.33	< 2	< 2	3
114085	Victor Nicke	el Detailed	515	5	17	< 3	450	29	419	1.44	< 2	29	32
114086	Victor Nicke	el Detailed	55	6	36	< .3	13	10	62	1.13	6	2	< 2
114087	Victor Nicke	el Detailed	133	4	22	< .3	113	17	117	1.14	3	< 2	2
114088	Victor Nicke	el Detailed	46	5	42	< .3	101	15	76	1.18	7	2	3
114089	608920	5488400	138	4	35	< 3	8	25	5	1.1	9	3	< 2
114090	608420	5487975	46	4	24	< ,3	26	11	59	1.13	2	2	< 2
114091	608905	5488230	22	< 3	49	< .3	8	12	8	1.01	2	< 2	2

Santoy Resources Emory Creek Property - Compiled Rock Sampling Results - 2001 Program

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Sample ID	Easting	Northing	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Cr ppm	Mg %	Au** ppb	Pt** ppb	Pd** _ppb
114092	608905	5488230	12	4	20	< .3	27	16	129	1.58	< 2	< 2	2
114093	611430	5488850	6	< 3	7	< .3	267	11	182	0.51	5	11	2
114094	611460	5488860	5	< 3	9	< .3	1401	59	49	12.05	10	3	< 2
114095	611460	5488840	2	< 3	21	< .3	1802	86	208	16.31	5	3	< 2
114096	611460	5488790	< 1	< 3	11	< .3	73	6	105	0.89	2	2	4
114097	605370	5480140	501	11	12	< .3	478	108	85	0.75	17	< 2	4
114098	605370	5480130	207	4	12	< .3	577	45	131	1.35	64	10	5
114099	605360	5480130	1100	11	14	< .3	1108	106	149	0.88	7	4	4
114100	605341	5480130	7607	< 3	13	1.3	3779	867	188	0.99	18	< 2	13
RE 114100	605341	5480130	7747	< 3	13	1.4	3833	884	191	0.99	19	2	10
114101	605341	5480149	930	< 3	10	0.4	53 9	56	89	0.8	9	2	5
114102	604850	5481100	30	3	10	<.3	13	10	19	0.54	< 2	< 2	< 2
114103A	603480	5480930	309	3	20	< .3	235	93	329	2.93	< 2	3	5
114105	603400	5481100	156	< 3	9	< .3	238	64	294	1.58	< 2	2	6

Santoy Resources Emory Creek Property - Compiled Rock Sampling Results - 2001 Program

Sample ID	Easting	Northing	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Cr ppm	Mg %	Au** ppb	Pt** ppb	₽d** ppb
				- P P P P	PP	<u> </u>		ppin	6611		<u> </u>		
114057	608865	5487900	36	18	74	< .3	18	16	32	0.69	2	2	< 2
114058	608900	5487900	18	10	38	0.4	23	15	68	0.79	< 2	7	4
114059	609230	5488090	25	12	46	< .3	23	15	48	0.76	2	< 2	3
114060	610700	5491190	45	18	143	0.4	74	43	59	0.96	10	3	3
114061	605848	5489728	34	7	60	< .3	37	16	60	0.78	9	2	2
114062	605950	5489600	15	5	29	< .3	14	7	31	0.48	2	4	3
114065	606050	5490300	18	9	47	< .3	20	11	41	0.56	8	< 2	< 2
114066	606100	5490350	16	4	49	< .3	22	9	35	0.56	< 2	3	< 2
RE 114066	606100	5490350	18	5	51	< .3	20	9	34	0.55	8	< 2	< 2
114067	606831	5490824	30	3	60	< .3	34	13	48	0.82	4	< 2	2
114068	607150	5490305	15	3	42	< 3	18	7	27	0.47	3	< 2	< 2
114071	607696	5490703	23	3	51	< .3	31	11	42	0.64	< 2	2	< 2
114072	608107	5490826	16	5	32	< .3	26	8	33	0.57	< 2	2	< 2
114103B	603500	548095 0	37	11	46	< .3	166	23	62	1.03	< 2	2	3
114104	603400	5481100	66	7	68	< .3	181	25	79	2.11	4	< 2	< 2

Santoy Resources Emory Creek Property - Compiled Silt Sampling Results - 2001 Program

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APPENDIX V

2001 Rock and Silt Sample Descriptions

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Sample ID	Date	Location	UTM x	UTM y	Туре	Unit	Description
114051	5-Sep-01	Adit Creek	608850	5488220	grab	рух	sheared at face of adit
114052	5-Sep-01	Adit Creek	608855	5488225	grab	рух	mud from floor of adit
114053	5-Sep-01	Adit Creek	608857	5466225	grab	biotite	horizon halfway into adit
114054	5-Sep-01	Adit Creek	608860	5488228	grab	grdr	dyklet in adit
114055	5-Sep-01	Adit Creek	608875	5488195	grab	рух	30 m above adit, gossanous
114056	5-Sep-01	Adit Creek	608865	5488165	grab	gabbro	75 m above adit, tr py, cpy ?
114057	5-Sep-01	Adit Creek	608865	5487900	silt	рух	150 m into timber on Adit creek
114058	5-Sep-01	Adit Creek	608900	5487900	silt	рух	tributary to Adit Creek
114059	5-Sep-01	Adit Creek	609230	5488090	silt	msed	gulley west of log road
114060	6- Sep- 01	Victor Nickel	610700	5491190	silt	msed	100 m past turn-off to Vic. Ni
114061	7-Sep-01	Yale Creek	605848	5489728	silt	di	tributary to Yale Creek, just into timber
114062	7-Sep-01	Yale Creek	605950	5489600	silt	di,msed	main Yale Creek near end of log cut
114063	7-Sep-01	Yale Creek	605950	5489625	float	di	goss, well rounded, py, po
114064	7-Sep-01	Yale Creek	606050	5490200	float	рух	biotite alt'd, no visible sx
114065	7-Sep-01	Yale Creek	606050	5490300	silt	di	minor mafic float, mafic horizons above
114066	7-Sep-01	Yale Creek	606100	5490350	silt	di	sw flowing tributary to Yale Creek
114067	7-Sep-01	Yale Creek	606831	5490824	silt	đi	sw flowing tributary to Yale Creek
114068	7-Sep-01	Yale Creek	607150	5490305	silt	msed, peg	ne flowing tributary to Yale Creek
114069	7-Sep-01	Yale Creek	606495	5489696	grab	skarn	goss, msed near diorite
114070	7-Sep-01	Yale Creek	606653	5488960	grab	skarn	goss, msed near diorite
114071	7-Sep-01	Yale Creek	607696	5490703	silt	msed	ne flowing tributary to Yale Creek
114072	7-Sep-01	Yale Creek	608107	5490826	silt	di,msed	ne flowing tributary to Yale Creek
114073	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	msed	-5m section, 0-1.5 m, sil, py
114074	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	msed	-5m section, 1.5-3.0 m, sil,py
114075	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	msed	-5m section, 3.0-4.0 m, sheared, py
114076	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	msed	10 m section, 0-1.0 m, competent
114077	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	diorite	10 m section, 1.0-2.0 m, sill, Piotr's 122430
114078	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	msed	10 m section, 2.0-2.6 m, footwall
114079	8-Sep-01	Victor Nickel	Victor Nick	el Detailed	chip	pyx?	20 m section, 0-1.4 m, highly goss.
114080	8-Sep-01	Victor Nickel		el Detailed		pyx?	20 m section, 1.4-2.5 m, highly goss,
114081	8-Sep-01	Victor Nickel		el Detailed	•	pyx?	20 m section, 2.5-4.0 m, highly goss.
114082	8-Sep-01	Victor Nickel		el Detailed	•	msed	20 m section, 4.0-4.7 m, sheared footwall.
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Emory Creek Property Sampling September 2001

Sample ID	Date	Location	UTM x	UTM y	Туре	Unit	Description
114083	8-Sep-01	Victor Nickel	Victor Nicl	el Detailed	chip	pyx ?	35 m section, 0-1.5m, strongly goss.
114084	8-Sep-01	Victor Nickel		kel Detailed	•	diorite	45 m section, 0-1.5m, foliated
114085	8-Sep-01	Victor Nickel		kel Detailed	•	pyx ?	45 m section, 1.5-2.5 m, goss.
114086	8-Sep-01	Victor Nickel		kel Detailed	•	msed	53 m section. 0-1.5 m, hangingwall sed.
114087	8-Sep-01	Victor Nickel		kel Detailed	r	рух	53 m section. 1.5-3.0 m, fresh pyx
114088	8-Sep-01	Victor Nickel		kel Detailed		diorite	53 m section, 3.0-4.8 m, diorite sill
114089	9-Sep-01	DC Nickel	608920	5488400	float	gab-pyx	float in creek immediately east of Adit Creek
114090	9-Sep-01	DC Nickel	608420	5487975	float	gab-pyx	talus just above old road at end of traverse
114091	10-Sep-01	Adit Creek	608905	5488230	grab	diorite	dyke in Adit Creek , tr po,cpy
114092	10-Sep-01	Adit Creek	608905	5488230	grab	рух	tr po.cpy in creek
114093	10-Sep-01	LP Pyx.	611430	5488850	grab	рух	completely actinolite alt/d
114094	10-Sep-01	LP Pyx.	611460	5488860	grab	рух	partial act. Alt'd felds. Groundmass
114095	10-Sep-01	LP Pyx.	611460	5488840	grab	gabbro	less act. Alt'd, poss qtz dio ?
114096	10-Sep-01	LP Pyx.	611460	5488790	float	рух	relatively fresh pyx, float near ridge crest
114097	11-Sep-01	Emory 6	605370	5480140	float	gabbro	highly sulphidized diorite with 20 % po, 1-3% cp
114098	11-Sep-01	Emory 6	605370	5480130	float	gabbro	not as highly sulphidized as 97
114099	11-Sep-01	Emory 6	605360	5480130	float	gabbro	similar to 98
114100	11-Sep-01	Emory 6	605341	5480130	float	gab-pyx	highly sulphidized like 97
114101	11-Sep-01	Emory 6	605341	5480149	float	gabbro	net mesh textured ? Cpy, bo ?, gossanous
114102	11-Sep-01	Emory 6	604850	5481100	grab	gabbro	tr. Sulphide in gabbro-diorite
114103A	11-Sep-01	•	603480	5480930	float	рух	diss and blebby po, cpy in rounded float
114103B	11-Sep-01	Emory 6	603500	5480950	silt	gabbro	same creek as 122464
114104	11-Sep-01	Emory 6	603400	5481100	silt	msed, di	same creek as 122060
114105	11-Sep-01	Emory 6	603400	5481100	float	рух	well rounded, foliated pyx with trace sx

Emory Creek Property Sampling September 2001

APPENDIX VI

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2001 Acme Labs Assay Certificates

SAMPLE#						Ni ppm																										Pt** ppb	
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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

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APPENDIX VII

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2001 Acme Labs - Procedures

AA ACME LL ANALYTICAL LABORATORIES LTD.



852 East Hastings Street • Vancouver, British Columbia • CANADA • V6A 1R6 Telephone: (604) 253-3158 • Fax: (604) 253-1716 • Toll free: 1-800-990-ACME (2263) • e-mail: info@acmelab.com

METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1D & 1DX - ICP ANALYSIS - AQUA REGIA



Comments

Sample Preparation

Soils and sediments are dried (60°C) and sieved to -80 mesh (-177 im), rocks and drill core are crushed and pulverized to -150 mesh (-100 im). Vegetation is dried (60°C) and pulverized or dry ashed (550°C). Moss-mat samples are dried (60°C), pounded then sieved to recover -80 mesh sediment or ashed at 550°C then sieved to -80 mesh with potential loss by volatilization of Hg, As, Sb, Bi and Cr. Aliquots of 0.5 g are weighed into test tubes. Duplicate aliquots are taken from two samples in each batch of 34 samples to measure precision. An aliquot of sample standard STD C3 is added to each batch to monitor accuracy.

Sample Digestion

Aqua Regia is a 2:2:2 mixture of ACS grade conc. HCl, conc. HNO₃ and demineralized H₂O. Aqua Regia is added to each sample and to two empty reagent blank test tubes in each batch of samples. Sample solutions are digested for 1 hr in a boiling hot water bath (95°C).

Sample Analysis

Group 1D: sample solutions are aspirated into a Jarrel Ash AtomComp 800 or 975 ICP emission spectrograph to determine 30 elements: Ag. Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W. Zn.

Group 10X: sample solutions are aspirated into a Perkin Elmer Optima 3300 Dual View ICP emission spectrograph to determine 35 elements: Ag. Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe. *Ga, Hg*, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, *S*, Sb, *Sc*, *T*, Sr. Th, Ti, U, V, W, Zn.

Data Evaluation

Raw and final data from the ICP-ES undergoes a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

Occument Method and Specifications for Group 1D&1DX.doc

Prepared By: J. Gravel





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METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 3B - PRECIOUS METALS BY FIRE GEOCHEM

Analytical Process



Comments

Sample Preparation

Soils and sediments are dried (60°C) and sieved to -80 mesh ASTM (-177 tm). Rocks and drill core are crushed and pulverized to 95% -150 mesh ASTM (-100 μ m). Splits of 30 gm (client may select 50 gm option) are weighed into fire assay crucibles. Quality control samples comprising blanks, duplicates and reference materials Au-S, Au-R, Au-1 or FA-100S (in-house standard reference materials) added to each batch of 34 samples monitor background, precision and accuracy, respectively.

Sample Digestion

A fire assay charge comprising fluxes, litharge and a Ag inquart is custom mixed for each sample. Fusing at 1050°C for 1 hour liberates Au, Ag, Pt and Pd. For Rh > 10 ppb, a Au inquart is used. After cooling, lead buttons are recovered and cupeled at 950°C to render Ag \pm Au \pm Pt \pm Pd or Au \pm Pt \pm Pd \pm Rh dore beads. Beads are weighed then leached in hot, conc. HNO₃ to dissolve Ag leaving Au (\pm PGE) sponges. Concentrated HCl is added to dissolve the sponges. Au inquart beads (Rh analysis) are dissolved in Agua Regia.

Sample Analysis

Au, Pt, Pd and Rh are analysed in sample solutions by ICP-AES (Jarrel Ash AtomComp model 800 or 975). Rh can be determined quantifiably up to 10 ppb from a Ag inquart fusion digestion, however a Au inquart must be used to accurately determine higher concentrations.

Data Evaluation

Data is inspected by the Fire Assay Supervisor then undergoes final verification by a British Columbia Certified Assayer who signs the Analytical Report before release to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

Document: Methods and Specifications for Group 3B.doc

Prepared By J Gravel





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METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 6 - PRECIOUS METAL ASSAY



Comments

Sample Preparation

Rocks and drill core are crushed to 75% minus 10 mesh (-1.7 mm), a 250 g subsample is riffle split then putverized to 95% minus 150 mesh (-100 microns) or minus 200 mesh upon request. Reject and pulp duplicate splits are taken from two samples in every 34 to monitor sub-sampling variation related to sample inhomogeniety and analytical variation, respectively. One quarter (7.5 g) to two assay Ion (58.4 ±0.01g) splits are weighed. STD Au-1 (Au reference material), STD Ag-2 (Ag reference material) or STD FA-10R (Au, Pt. Pd, Rh reference material) and a blank are added to each analytical batch to monitor accuracy. Results are reported in imperial (oz/t) or metric (gm/mt) measure. For metallics testing, 500+ gm is pulverized and sieved through a 150 or 200 mesh screen. The oversize material on the screen is weighed and assayed in total. A 1 or 2 assay ton split of the undersize fraction is also assayed .

Sample Digestion

Sample split is mixed with fire-assay fluxes containing PbO litharge and a Ag inquart then heated at 1000°C for 1 hour to liberate Au + PGE. After cooling, lead buttons are recovered and cupelled at 950°C to render Ag \pm Au \pm Pt \pm Pd \pm Rh dore beads. Beads are weighed then leached in 1 mL of conc. HNO₃ at >95°C to dissolve Ag leaving Au \pm PGE sponges. A Au inquart is used for Rh assays where the concentration is likely to exceed 10 ppb. The sponge is dissolved by adding 6 mL of 50% HCl.

Sample Analysis

The solutions are analyzed by ICP-ES (Jarrel Ash Atom-Comp model 800 or 975) to determine Au, Pt, Pd and Rh. Au or PGEs over 1 oz/1 are determined by gravimetric finish. Ag is determined both by fire assay and wet assay. Ag over 10 oz/t is reported from the fire assay while concentrations <10 oz/t are reported from the wet assay. Metallics testing reports concentrations of Au \pm PGEs in the undersize fraction, the oversize fraction and the calculated weighted average of these fractions.

Data Evaluation

Raw and final data undergoes a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the ctient. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

Document Methods and Specifications for Group 6.doc

Date: May 2000

APPENDIX VIII

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2001 Geology and Sample Location Map



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