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#### REPORT ON PHASE III GEOLOGY, LITHOGEOCHEMISTRY, SOIL GEOCHEMISTRY, IP SURVEYS AND DIAMOND DRILL PROGRAM

CONTACT 1-3 AU GROUP
FLORES ISLAND, B.C.
(Contact 1, Contact 2, Contact 3, Au Claims)
Alberni Mining Division

for PARALLAX DEVELOPMENT CORPORATION

NTS 92E/8E 49°17.6'N Lat., 126°04.4'W Long.

September 26, 1988

C. Naas, B.Sc.
Volume I of II

## Part 1 of 2 GEOLOGICAL BRANCH ASSESSMENT REPORT

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VANCOUVER, B.C.



#### SUMMARY

Phase III exploration on the company's 100% owned Contact and neighbouring 90% owned Au properties was successfully completed between May 1988 and July 1988. The Contact Au property is situated on Flores Island, off the west coast of Vancouver Island and consists of 31 claim units. The result of this work has demonstrated an improvement in gold grades and mineralization potential, thereby resulting in a further recommendation for another \$500,000 expenditure which, again, concentrates on further drilling.

Work by previous operators in the 1960's and 1970's resulted in the discovery of skarn and vein type mineralization hosted by Upper Paleozoic Sicker Group volcanics, Vancouver Group volcanics, Westcoast Complex and Westcoast dioritic intrusives.

Nineteen eighty-six and '87 work by Parallax Development Corporation resulted in the definition of the Main Grid and McNeil Peninsula skarn horizons. The Main Grid zone was shown to be 1 km in size, with surface results to 23.7 g/t (0.692 oz/ton) Au, 713.1 g/t (20.798 oz/ton) Ag, 26.24% Cu, 4.16% Zn, 60,939 ppm As, and drill results to 1.19 g/t (0.035 oz/ton) Au over 1.93 m (hole 6), and 0.78 g/t (0.023 oz/ton) Au over 1.83 m (hole 7). Drilling demonstrated that the zone was up to 14 m thick and consisted of magnetite, chalcopyrite, pyrite, sphalerite and arsenopyrite with high gold and silver values. Peninsula skarn horizon was also drilled and was shown to be 25 m and consisted of magnetite, chalcopyrite, sphalerite and arsenopyrite with the best intercept in hole 8 being 1.17 g/t (0.034 oz/ton) Au over 0.73 m. mineralization in quartz veins adjacent to the McNeil skarn horizon assayed up to 600 g/t (17.50 oz/ton) Au and 332.6 g/t (9.70 oz/ton) Aq.



(ii)

The work program of 1988 was divided between the Main Grid and the McNeil Peninsula Grid, as follows:

	Main Grid	McNeil Peninsula Grid	Total
Geology	2 km <sup>2</sup>	1 km <sup>2</sup>	\$ 32,530
Linecutting	-	5.17 line-km	4,672
Soil Geochemistry Survey	0.25 line-km	7.25 line-km	6,580
Induced Polarization Survey	-	4.05 line-km	15,668
Diamond Drilling	605.03 m	1039.06 m	241,498
Road Building	1.07 km	-	24,081
Consulting			19,184
Report Writing			25,557
Administration			30,230
			\$400,000 =====

The results of the 1988 work program have completed the geophysical picture on the McNeil Peninsula by further outlining the 20 to 150 msec chargeability and 20 to 800 Ohm-m resistivity anomalies along a strike of 700 m. The soil geochemistry has proved coincident, although spotty, anomalous values greater than 50 ppb Au, 150 ppm As, 20 ppm Co, 70 ppm Cu, 80 ppm Zn, and 0.85 ppm Ag in the same dimensions as that demonstrated by the Induced Polarization surveys. Geological mapping and surface sampling





have demonstrated skarn horizons also within these coincident geophysical/geochemical anomalies, with values up to 2.43 g/t (0.071 oz/ton) Au, 149.9 g/t (4.372 oz/ton) Ag, and 54,828 ppm Cu on the Main Grid and 7.13 g/t (0.208 oz/ton) Au and 702 g/t (20.475 oz/ton) Ag over 2 m from the McNeil Peninsula Grid. The skarn occurs at the limestone-limy volcanic/quartz diorite contact which consists of massive diopside, calc-silicates, recrystalized limestone and sulphide mineralization with high gold and silver values.

Drill testing of 1309.06 m in 13 holes using 6 setups on the McNeil Peninsula Grid has improved the results over the last program. The most significant intersections are as follows:

Drillhole	Interval (m)	Width (m)	g/t	Au (oz/ton)	Othe (pp	_	
CA88-6	54.15-54.82	0.68	0.96	(0.028)			
CA88-7	44.06-44.57	0.51	3.48	(0.102)			
	29.38-32.98 31.36-31.55			(0.018) (0.104)	4.3 Ag	986	Zn
	31.73-35.51 34.32-35.35			(0.067) (0.223)	6.6 Ag	974 86000	
CA88-10 incl.	16.41-19.37 17.19-17.72	2.96 0.53		(0.051) (0.108)		950 2164	
incl.	25.15-25.91 25.25-25.41	0.76 0.16		(0.051) (0.169)	7.6 Ag	2522	Cu
	53.95-54.67	0.72	1.22	(0.035)	26.1 Ag	7014	Cu
	72.92-73.55	0.63	0.99	(0.029)			
CA88-12	21.25-21.94	0.69	0.87	(0.026)			



Four other high grade quartz veins have been identified in addition to the other two that were already known, with surface results to 390 g/t (11.375 oz/ton) Au, and 278 g/t (8.108 oz/ton) Ag. The wallrock of these quartz veins returned up to 0.58 g/t (0.017 oz/ton) Au and 10.9 g/t (0.318 oz/ton) Ag over 15 cm.

Diamond drilling of 372.16 m in 3 holes from one setup on the Main Grid proved the flat-lying nature of the skarn horizon with intersections of 55 m of highly altered and mineralized rock containing pyrite, chalcopyrite, sphalerite and arsenopyrite mineralization. The best intersection was in hole CA88-16 with 890 ppb Au, 3.5 ppm Ag, 18,395 ppm As and 366 ppm Co over 0.51 m.

Of particular importance in results of the 1988 program is the demonstration of the flat-lying nature of the skarn horizons as well as the structural overprint that may control high-grade gold mineralization. This structural overprint strikes  $320^{\circ}$  with a  $50^{\circ}$ NE dip in a trend that may correlate between the Main Grid and the Peninsula high-grade quartz vein areas.

Based on encouraging results of the 1988 program, a further follow up of the Main Grid skarn zone and detailed drilling in the area of the most favourable results on the McNeil Peninsula skarn horizons is recommended at a cost of \$500,000.



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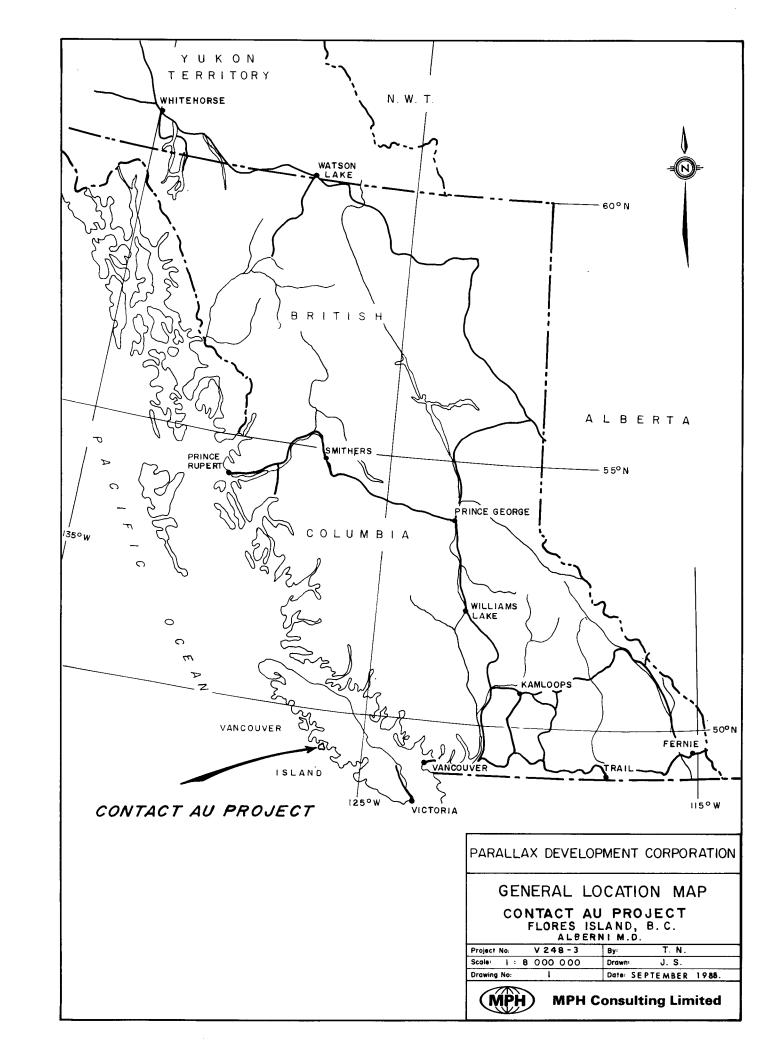
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#### 1.0 INTRODUCTION

This report documents the Phase III exploration program conducted between May 10, 1988 to July 19, 1988 at the request of R. Tsuida of Parallax Development Corporation.

The objectives, results and conclusions of the Phase III geologic mapping, rock sampling, diamond drilling, soil and IP surveys, and minor trenching program are included. The work was headed by the author, Mr. C. Naas, B.Sc., project geologist with MPH Consulting Limited. This work follows the encouraging results from the preliminary phase of work and the Phase I and II diamond drill program which concentrated in the area of the main grid on Flores Island (Hawkins, 1987, Ryback-Hardy, 1988).

Included within this report are discussions of the regional geology as well as previous work and economic setting of the area.

The Phase III program work concentrated in the area of the McNeil Peninsula and the sulphide bearing magnetite zone on Flores Island. The previous phase had focussed on the 'Main Grid' situated on the main part of Flores Island. The general distribution of the skarn zone was outlined by IP and diamond drilling. The majority of the geologic mapping and rock sampling was conducted along the coastline of the McNeil Peninsula and areas covered by grid. Particular attention was directed to the structural features which are most likely a controlling factor with regard to mineralization.





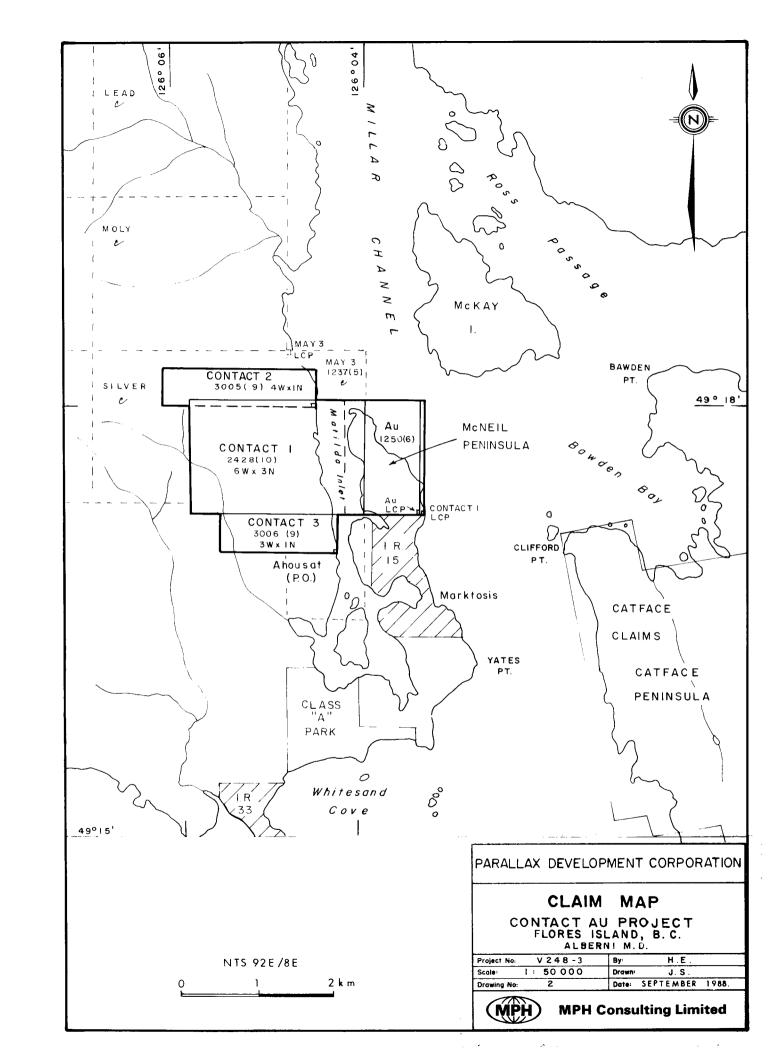
#### 2.0 LOCATION, ACCESS, TITLE

The Contact 1-3 Au Group of claims is located approximately 20 km northwest of Tofino on the southeastern portion of Flores Island, in the Alberni Mining Division of British Columbia. They are centred at approximately 49°17.6'N latitude, 126°04.4'W longitude on NTS mapsheet 92E/8E (Figures 1, 2).

From Port Alberni, Highway 4 runs westerly for approximately 120 km to Tofino, where access to the southeast portion of Flores Island is gained by float plane, helicopter or boat for a distance of approximately 20 km northwest. The property itself is located 2 km northwest of the small Indian village of Marktosis. The Legal Corner Post of the Contact 3 claim is located 50 m west of the end of the public dock in the village of Ahousat. A small boat is necessary to gain access to the eastern portion of the property located on the McNeil Peninsula which is separated from the rest of the property by Matilda Inlet.

Flores Island terrain is very rugged, with elevations ranging from sealevel to 850 m (Mt. Flores). The island is covered in forests of Douglas fir and western red cedar, as well as dense undergrowth (salal) and windfall. A network of trails leads to various old workings on the claims, however there are no driveable roads on the property.

Claim information is as follows:





Claim	Record No.	Units	Owners	Anniversary Date	Year Recorded
Contact 1	2428(10)	18	Parallax Development Corporation	Oct. 17, 1998	1984
Contact 2	3005 (9)	4	- 11	Sept. 12, 1998	1986
Contact 3	3006 (9)	3	tt	Sept. 12, 1998	1986
Au	1250(6)	_6	Au Resources	June 16, 1998	1981
	Total	31			

A Bill of Sale dated December 3, 1986 transferred 100% ownership of the Contact 1, 2, and 3 claims from Robert Tsuida, Walter Carlson and Robert Harvey Day to Parallax Development Corporation, which operates the claims.

On September 14, 1987, an agreement between Parallax Development Corporation and Au Resources Ltd. was signed. Parallax Development Corporation may purchase a 90% interest in the Au claim with an option to acquire the remaining 10%.

The 'Contact 1-3 Au Group' was grouped by Notice to Group number 1261 on November 27, 1987.



#### 3.0 PREVIOUS WORK

Government geological work in the area includes mapping by Hayrock and Webster of the Geological Survey of Canada beginning in 1902. Later work includes surveying in 1920 by Dolmage, and geological reconnaissance by M.F. Bancroft (1937). Jeletzky (1950, 1954) carried out detailed examinations of Mesozoic and Tertiary sediments to establish the stratigraphy of the area. Published annual reports from the British Columbia Department of Mines show records of investigations of mineral deposits in the region. The Ormond Showing (Cu, Ag, Au) was examined in 1928 and 1930, and followed up during the 1930's by trenching across the strike of the mineralized zone and driving an inclined shaft to intersect this zone at depth. A report on the geology and mineral deposits of the Nootka Sound map area by Muller, Cameron, and Northcote, for the Geological Survey of Canada, was published in 1981.

An IP survey conducted by Van West Minerals in 1962 resulted in the delineation of a good conductor associated with pyrrhotite mineralization, located in the most southeast portion of the Silver claim which is now the Contact 1 claim (Sutherland and Bell, 1962).

Soil and silt sample surveys were carried out by Falconbridge Nickel Mines Ltd. in the central and western portions of the Moly and Gold claims located just north and northwest of the Contact 1, 2, 3 claims, resulting in local anomalous copper concentrations.

A soil geochemical survey conducted by Western Mines Ltd. in 1972 on the May 1 and May 2 claims west of the Contact 1, 2, 3 Group did not uncover significant base metal concentrations to warrant further work at the time.



In 1974, Wesfrob Mines Ltd. mapped a small portion of the Moly claim (just north of Contact 2 claim) to assess the potential for copper mineralization, however only minor amounts of chalcopyrite were found.

The Gold and Copper claims, to the northwest of the property were staked by Clear Mines Ltd. in early 1979. Airborne geophysical work included magnetometer, VLF-EM and radiometric surveys by D.G. Mark and Associates in July 1979 (Mark, 1980).

The magnetic survey confirmed the 'Cliff Zone' base metal showing, in the form of a magnetic low, as well as aiding in differentiating lithologies. The radiometric data also outlined the Tertiary Intrusions due to the relatively high potassium content. Geophysical work was followed by soil sampling and subsequent rock sampling and examination of the gold showings. Grab samples taken from the Ormond Showing returned copper and silver concentrations up to 6.07% and 139.9 g/t (4.08 oz/ton) respectively.

During the summer of 1985, Parallax Development Corporation collected two rock samples from a trench on the central Contact 1 claim, which contained up to 205.0 g/t (5.98 oz/ton) Ag, and up to 3.29 g/t (0.096 oz/ton) Au. Another sample taken during the summer of 1986 from this trench returned values of 54.5 g/t (1.59 oz/ton) Au, 180.7 g/t (5.27 oz/ton) Ag, and 4.80% Cu. The most significant results however are from an old adit on the Contact 2 claim northeast of the Ormond Showing, from which concentrations of 334.3 g/t (9.75 oz/ton) Au, 397.4 g/t (11.59 oz/ton) Ag, 5.17% Pb, and 2.92% In were returned, from one sample.

From September 1, 1987 to February 15, 1988. Phase I and Phase II exploration programs were conducted on the Contact-Au property, under the direction of V. Ryback-Hardy, P.Eng., of MPH Consulting Limited.





The Phase I program entailed line cutting, soil sampling (460), geologic mapping and rock sampling, an IP survey (9.05 line km), trenching (7) and drill pad construction. Phase II diamond drilling (894 m in 10 diamond drillholes) followed.

The best intersections from drillholes include:

	Drillhole No.	Interval	Width of Zone	Au Concentration
Main Grid	DDH 88-6	5.12 - 7.05 m	1.93 m	0.035 oz/ton 1.19 g/t
	DDH 88-7	19.20 - 21.03 m	1.83 m	0.023 oz/ton 0.79 g/t
McNeil Peninsula	DDH 88-8	28.88 - 29.61 m	0.73 m	0.034 oz/ton 1.17 g/t
Grid	DDH 88-9	25.46 - 25.60 m	0.14 m	0.170 oz/ton 5.83 g/t

Further work was recommended to follow up anomalous results and to explore in more detail the mineral potential of the McNeil Peninsula.





#### 4.0 REGIONAL GEOLOGY

The west coast of Vancouver Island in the vicinity of Flores Island, is underlain primarily by metavolcanic and lesser metasedimentary rocks of the Westcoast Complex derived in part from Sicker Group rocks, and a variety of volcanics of the Bonanza Group. These rocks have been intruded by Tertiary age Catface Intrusions on and around Flores Island (Figure 3).

#### 4.1 Sicker Group (CPs)

Muller (1980a) proposed the following subdivision of the Sicker Group, from oldest to youngest: Nitinat Formation, Myra Formation, Sediment-Sill Unit, and Buttle Lake Formation.

In the Nootka Sound map area, the Sicker Group is represented by metamorphosed clastic sediments in roof pendants and along the Muchalat Batholith. It is difficult to determine the total thickness of the Sicker Group here because of intrusive contacts, but it is estimated to be between 300 and 600 m (Muller, Cameron, Northcote, 1981). They are generally in intrusive contact with granitoid rock and commonly interleaved with metabasaltic rocks. These metabasalts are perhaps sills that were emplaced later, possibly in conjunction with the eruption of Karmutsen Formation lavas, in Late Triassic time.

The sills in the roof pendant areas of Muchalat Batholith are massive greenish black, fine to medium grained amphibolite. Thin sections commonly show relict diabasic texture.





#### 4.2 Vancouver Group

The Karmutsen Formation (muTK) volcanic rocks unconformably to paraconformably overlie the Buttle Lake Formation limestone to form the base of the Vancouver Group. They are the thickest and most widespread rocks on Vancouver Island. The formation consists mainly of dark grey to black, or dark green, tholeittic pillow basalt, massive basalt, and pillow breccia. Flows are commonly aphanitic, feldspar porphyritic, and amygdaloidal. Pillow lavas generally occur toward the base of the section.

East of Flores Island, the Karmutsen Formation forms high peaks and mountain ranges, several of which form roof pendants within the Muchalat Batholith. Karmutsen Formation rocks are generally relatively undeformed compared to Sicker Group rocks and are dated Upper Triassic and older.

The Upper Triassic sediments (mainly limestone) of the Quatsino Formation (uTQ) are found to the north and east of Flores Island at the head of Tahsis Inlet and are truncated by the Muchalat Batholith. Most of the economic skarn deposits on Vancouver Island are hosted by Quatsino Formation limestone.

#### 4.3 Westcoast Complex

The Westcoast Complex (PMsv) comprises a variety of plutonic and metamorphic basic crystalline rocks including amphibolite, diorite, and quartz diorite with homogeneous, agmatitic or gneissic textures. Metamorphosed Karmutsen Formation and/or Sicker Group rocks grade locally into the complex and are believed to be its protolith, having undergone migmatization in



Early Jurassic time. The mobilized granitoid portion of the complex is believed to be the source of the Island Intrusions and, indirectly, the Bonanza Volcanics (Muller, 1981, 1982). Small bodies of recrystallized limestone within the complex are believed to be derived mainly from the Quatsino Formation, and to a lesser extent from the Buttle Lake Formation.

Isachsen (1984) reinterpreted the Westcoast Complex as a mixture of Jurassic intrusives and metamorphosed Karmutsen Formation/Sicker Group rocks. The intrusive component of the Complex Westcoast Diorite (PMdin) varies in composition from trondjhemite to gabbro and is believed to be derived from the mantle rather than Paleozoic/Mesozoic rocks. Consistent U-Pb isotopic dates of 176-189 Ma have been obtained. The Westcoast Diorite intruded the pre-existing Sicker Group and Karmutsen Formation rocks, which were contemporaneously metamorphosed into the Westcoast Amphibolite (PMsv).

The Westcoast Amphibolite is locally intimately mixed with Westcoast Diorite, producing Westcoast Migmatite. The Island Intrusions and Bonanza Group are considered to be higher level comagmatic differentiates of the Westcoast Diorite.

In the map area, the Westcoast Complex extends from Nuchatlitz Inlet south across Bligh and Flores Islands. The amphibolite unit consists of foliated metavolcanic rocks (flows, basaltic dykes, and sills) and metasediments (bedded to massive partly silicified carbonates and pelites). These low grade amphibolites exhibit local, generally northwest trending, isoclinal folding (Muller, et al, 1981).



#### 4.4 Island Intrusions

Island Intrusions (Jg) make up batholithic granodioritic and granitic rocks which along with migmatites quartz diorites and tonalites of the Westcoast Complex, comprise about 50% of exposed rocks in the Nootka Sound map area (Muller, et al, 1981). Island Intrusions are widely exposed in the area to the northwest of Flores Island but have not been mapped on the island itself. These intrusions have been assigned a Middle to Upper Jurassic age.

#### 4.5 Bonanza Group

The Bonanza Group (LJB) stratigraphy varies considerably, representing parts of several different eruptive centres of a volcanic arc. Basaltic, rhyolitic, and lesser andesitic and dacitic lava, tuff, and breccia with intercalated beds and sequences of marine argillite and greywacke comprise the Bonanza Group. The Bonanza Volcanics are considered to be early extrusive equivalents of the Island Intrusions and therefore of Early Jurassic age. Bonanza Volcanics are in fault contact with Westcoast Complex amphibolites on southwest Flores Island.

#### 4.6 Catface Intrusions (Tg)

Early Tertiary intrusive stocks composed mainly of quartz diorite are common on Vancouver Island. In the Nootka Sound map area they are generally southwest trending, cutting Jurassic and older rocks. K-Ar dating is almost essential to differentiate between certain intrusives as lithologies are similar. On Flores Island, the Tertiary intrusives form a 1.5 km wide belt through the middle of the island (Muller, et al, 1981), intruding amphibolites of the Westcoast Complex.





#### 4.7 Carmanah Group

Tertiary sediments of the Carmanah Group have been mapped on the southwest coast of Vancouver Island. Included in the Carmanah Group are the Escalante, Hesquiat and Sooke Formations.

The **Escalante Formation** (LTE) exposed from Flores Island to Tatchu Point to the northwest, is composed of mainly sandstone and minor conglomerate. Rocks of this formation are discontinuously exposed on Flores Island and typically contain little if any conglomerate within sandstone (50 m thick) (Muller, et al, 1981).

The Hesquiat Formation (LTH), striking northwesterly with a shallow southwest dip, underlies the coast and lowlands of Flores Island as well as almost the entire Hesquiat Peninsula, about 15 km northwest of Flores Island. Sequences of clastic rocks are composed of either mainly shale, or of alternating shale, and sandstone/conglomerate units, that overlie the Escalante Formation or are on the pre-Tertiary unconformity.

#### 4.8 Structure

The structure in the Flores Island area has generally resulted from block faulting. Bonanza Group and Island Intrusion rocks have been affected mainly by northerly and westerly trending faults. In the coastal areas, rocks are cut by predominantly northwesterly and, less importantly, northeasterly trending faults. Steep faults may have vertical as well as transcurrent offsets that are difficult to determine due to lack of marker beds. However, faulting is shown to be widespread in the entire





area based on supporting evidence of faulting in Tertiary sediments (Muller, et al, 1981). Young hydrothermal activity along structural trends is indicated by active hot springs at Matilda Inlet and at Hot Springs Cove northwest of Flores Island. Both appear to be associated with north-south structures.

#### 4.9 Economic Setting

Contact metasomatic (skarn) deposits, veins and shear zones, and porphyry deposits constitute the major metalliferous deposits in the vicinity of Flores Island. High to moderate mineral potential approximately coincides with areas where Quatsino Formation, Bonanza Formation and Sicker Group rocks are cut by Island Intrusions. Moderate potential for mineralization corresponds to areas underlain by Bonanza Volcanics and Catface Tertiary Intrusions (Muller, Cameron, Northcote, 1981).

Iron and copper skarns are promising targets where Island Intrusions cut Vancouver Group rocks or in the roof pendants of Sicker Group metasediments surrounded by Island Intrusions and Westcoast Complex rocks. Examples of two such deposits have reported limited production. The Glengarry, located at the head of Head Bay, milled 56,700 tonnes of ore which produced 22,680 tonnes of magnetite concentrate. The Indian Chief on Stewartson Inlet shipped 73,600 tonnes yielding 1,102,360 kg of Cu, 22,456 g of Au, and 1,707,400 g of Ag.

Tertiary pluton-associated copper and molybdenum occurrences found on Flores Island assay low copper and molybdenum, however, otherwise have many similarities to the Catface porphyry copper (molybdenum) deposit a few kilometres to the east.

The Catface porphyry copper deposit (Falconbridge) is closely associated with Tertiary intrusions. Its reserves are estimated



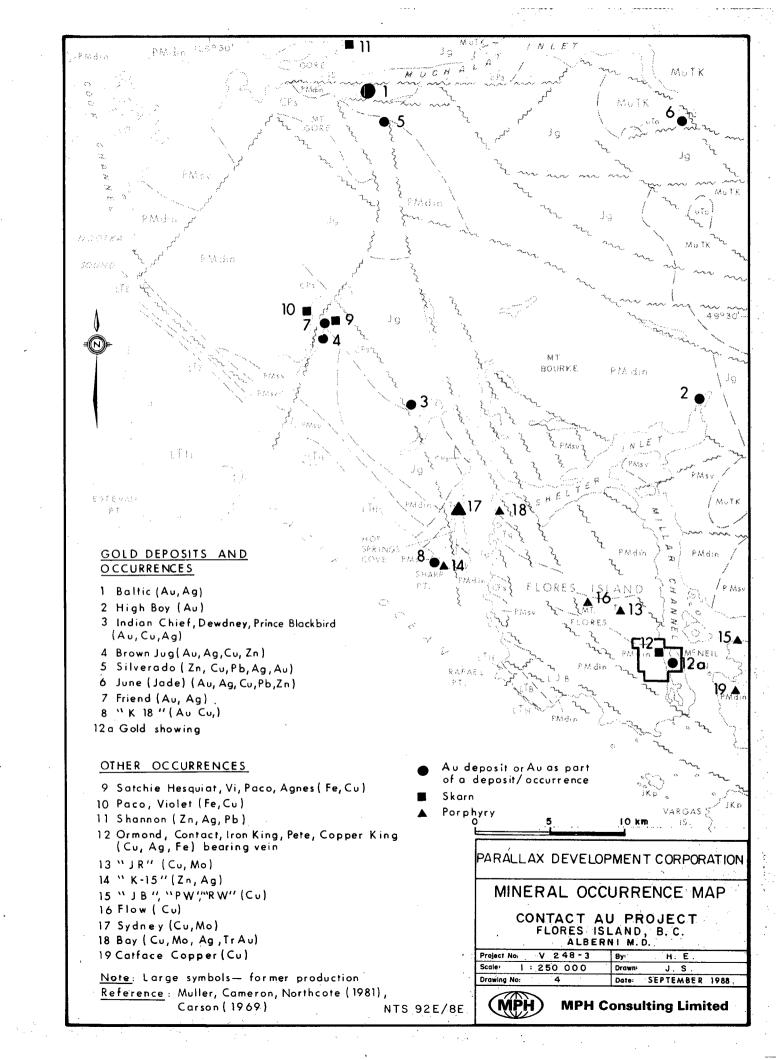
at 181,440,000 tonnes with 0.45 to 0.50% Cu (1971). Gold, silver and molybdenum occur in minor quantities. According to Northcote (1971), the geology comprises hornfelsic, foliated andesitic to basaltic tuffs of the Sicker Group which have been intruded by at least five separate phases. Two major northerly trending faults occur on either side of the Catface property with a large number of faults occurring between them. Northcote suggests that some of these intrusives were emplaced along fractures.

Chalcopyrite and bornite with some chalcocite occur as dry fracture coatings, in quartz-fllled fractures and as disseminations in the rock matrix. The best mineralization occurs within Sicker Group volcanic rocks and the younger porphyritic intrusive phases, though mineralization is not limited to nor consistently associated with these rock types. The top part of the section near the present erosional surface hosts higher grade mineralization.

The Ormond copper, silver, and iron showing (also known as the Contact showing) occurs on the west side of Matilda Inlet, on the western Contact 2 claim in brecciated shear zones cutting igneous rock. Chalcopyrite, pyrite and pyrrhotite occur in quartz(?) veins 1.2 to 2.4 m wide within a zone approximately 150 m long. Garnet, epidote, calcite and quartz are gangue minerals associated with this mineralized zone.

On the west side of Matilda Inlet there are reported mine workings totalling 1370 m with an ore grade of 103 g/t (3 oz/ton) Ag and 5% Cu. It is not clear whether this grade is representative of the entire workings, nor whether this is at the Ormond Showing location.

The reader is referred to the Hawkins (1987) report for a description of the individual mineral occurrences in the vicinity of Flores Island shown in Figure 4.







The Phase III exploration program commenced May 10, 1988 and continued through to July 21, 1988. The work was supervised by the author with the assistance of G. Yip, B.Sc., geologist with MPH Consulting Limited.

Geologic mapping and rock sampling was conducted on the McNeil Peninsula in the shoreline areas and the area underlain by the grid, at a 1:2500 scale. The Main Grid area was the focus of some geologic mapping and rock sampling in areas underlain by skarn zones and around old workings. A total of 76 surface rock samples was collected and analyzed by AA and ICP at Acme Labs in Vancouver, B.C.

The proposed 2.3 km road from Ahousat was constructed in part (1.07 km) to provide better access to the property. operator to complete the road was not found thus the road could not be completed.

Two trenches (totalling 20 m) were opened up to expose skarn zones on the McNeil Peninsula (PT-1 and PT-4). Grab and chip samples were collected from these as well as from hand dug trenches.

Soil sampling was conducted over two grids, the major one on McNeil Peninsula and a small grid over the Main Grid area of Flores Island. A total of 330 samples was collected from 7.5 line km of flagged grid. The McNeil Peninsula Grid lines trend east-west, are spaced 100 m and 50 m apart and were sampled at 25 m intervals. The Main Grid detail has northwest trending lines spaced 10 m with 10 m between sample sites.



An IP survey was conducted along cut lines of the McNeil Peninsula for a distance of 4.05 line km. The survey was conducted under the supervision of Mr. Kevin Lund, B.Sc., geophysicist with MPH Consulting Limited. He is also the author of Section 5.6 of this report.

Diamond drilling followed with 1641 m of NQ core recovered from 18 holes in 9 setups. Holes CA88-1 through CA88-13 were drilled on the McNeil Peninsula and holes CA88-14 through CA88-18 on Flores Island. Soil and drill core samples were analyzed at Acme Labs for Au by AA and by multi element ICP.

Structural analyses of data (Section 5.3) and petrographic studies from Phase II drill core (Appendix VI) are also included in this program.

#### 5.1 Property Geology

The Contact-Au property is underlain by rocks of the Westcoast Complex. Metamorphosed Karmutsen Formation and/or Sicker Group rocks locally grade into this complex and are believed to be its protolith having undergone migmatization in Early Jurassic time. The mobilized granitoid portion of the complex is believed to be the source of the Island Intrusions and, indirectly, the Bonanza Volcanics (Muller, 1981, 1982). Small bodies of limestone found within the complex are believed to be derived mainly from the Quatsino Formation and to a lesser extent from the Buttle Lake Formation.

The Westcoast Complex comprises (i) predominantly heterogeneous amphibolitic country rock (Westcoast Amphibolite); (ii) granitoids of trondhjemitic to gabbroic composition (Westcoast Diorite); and (iii) variable mixtures of these two components (Westcoast Migmatite) (Isachsen, 1987).



For the purpose of this program, the geology has been interpreted in accordance with the subdivisions introduced by Isachsen (Figures 5 and 6).

The Paleozoic to Mesozoic Westcoast Complex comprises Units 1 through 5. Unit 1 comprises metasediments which on the property include white to purplish-white limestone locally containing garnet. Overlying Unit 1 are metavolcanics fine-grained comprising andesitic tuff and ash tuff of Unit 2. Unit 3 dark fine-grained moderately foliated diorite medium- to intrudes the metavolcanics and metasediments which also appear as xenoliths within the diorite. Unit 4 is described as a dark grey to black, very fine-grained moderately foliated amphibolite. skarn zones, designated Unit 5, are gradational between lithologies described in Units 1 through 4. The skarn comprises pale green calc-silicates containing massive diopside (Unit 5a) with massive magnetite lenses. Garnet-rich zones occur locally. Sulphides associated with these zones include pyrite, pyrrhotite, arsenopyrite and chalcopyrite.

Tertiary(?) age feldspar porphyritic dykes designated FPD, crosscut the lithologic units described above. Diabasic dykes (DD) are probably Paleozoic in age, and correlative with diabasic dykes of the Sediment-Sill Unit of the Sicker Group.

A petrographic study was conducted using samples which were collected from drillcore recovered during the Phase II program on the Main Grid. A summary and individual descriptions are included in Appendix VI.

#### 5.1.1 Main Grid Geology

The geology of the Flores Island Main Grid area has been discussed in the previous Phase II report (Ryback-Hardy, 1988) as well as the initial report by Hawkins (1987).



Geologic mapping and rock sampling were conducted along the eastern shoreline and over portions of the property covered by the grid, in an attempt to delineate the surface extent of the massive magnetite-bearing zone which had been the main objective of the Phase II drill program.

The skarn horizon designated as Unit 5 on Figure 5 may be more extensive than previously interpreted. It occurs topographically beneath the metavolcanic unit and above the diorite. The skarn horizon is truncated to the north by an east-west striking lineament interpreted as a fault which would explain in part the fact that soil and geophysical (IP) anomalies end abruptly at the fault.

#### 5.1.2 McNeil Peninsula Geology

Surface geologic mapping at 1:2500 scale was conducted along the shoreline and cut grid lines of the McNeil Peninsula. Figure 6 is a plan map of surface geology, outcrop locations, rock sample locations superimposed on a screen topographic base map which includes the location of the grid, diamond drillholes, trenches and old adits. The distribution of the various lithologies is complicated due to the presence of large (several metres) xenoliths within the various diorite as well as volcaniclastic units which are comprised of fragments. Alteration as well as contact metasomatism has also destroyed original textures of the rocks. However the general distribution of the major lithologic units has been outlined.

The metasediments (Unit 1) occur as limestone on the southeastern shoreline of the McNeil Peninsula over a very small area. Metavolcanics (Unit 2) comprising mainly andesitic-appearing crystal and lithic as well as ash tuff occur over a large part of the central McNeil Peninsula as well as the shoreline.



The Westcoast diorite (Unit 3) occurs as large irregularly shaped bodies intruding the metasediments and metavolcanics, especially the eastern side of the peninsula where the On the western side of the McNeil Peninsula, the predominates. diorite occurs in smaller bodies. Toward the northern portion of the peninsula the diorite appears as an agmatitic and gneissic textured migmatite. Diorite was intersected in all drillholes on the peninsula and appears to become very fine grained at depth.

Examinations of thin sections of rocks collected during Phase II show that many of the fine-grained rocks are mineralogically similar to the diorite. Xenoliths of mafic volcanic composition commonly occur throughout the diorite and are up to several metres in outcrop. The diorite is weakly to moderately foliated, medium grained to fine grained. Very fine-grained, dark grey to black amphibolite occurs in the southwestern peninsula area. The amphibolite was mistaken for an argillite during Phase II mapping.

The skarn unit (Unit 5) occurs on the west side of the McNeil Peninsula. It comprises white and maroon limestone, pale green calc-silicate rocks, garnet-rich zones local to massive, with pyrite, pyrrhotite, chalcopyrite, arsenopyrite and magnetite. drill core massive diopside (Unit 5a) occurs within the skarn horizons. The limestone within the skarn does not contain fossils visible to the naked eye. A slight foliation is evident and locally the skarn zones contain units of cherty tuff, suggesting the interfingering irregular nature of the contacts. This skarn zone has been the major target of the Phase II drill program. The intrusive/limestone contact occurs to the south and west and to the north and west of the skarn horizon. phase of drilling should test whether a direct contact between intrusive diorite and limestone would be more favourable for mineralization.



Feldspar porphyritic dykes of Tertiary age are probably correlative with Catface intrusions. The feldspar porphyritic dykes (FPD) are from 0.25 m to 5 m thick. Euhedral feldspar crystals up to 2 cm are contained within a dark grey, finegrained matrix.

On the nearby Catface property the best mineralization occurs within Sicker Group volcanics and the younger porphyritic phases though mineralization is not limited to, nor consistently associated with these rock types.

#### 5.2 Mineralization

Gold occurs in both quartz veins and within skarn zones on the Contact-Au property. Higher gold grades are associated with the quartz veins, however the skarn zones are more widespread.

Auriferous quartz veins located along the western shoreline of McNeil Peninsula range from 1 cm to 5 cm in width, with a northwest strike and moderate to steep northwesterly dip. The blue-grey quartz vein, chip sampled across 10 cm, containing up to 390.6 g/t (11.39 oz/ton) Au, 278.1 g/t (8.1 oz/ton) Ag is hosted by metavolcanics (Sample 9011). This vein also contains highly anomalous lead, zinc and arsenic and anomalous copper in the form of galena, sphalerite, arsenopyrite and chalcopyrite. Samples 9010 and 9012 are chip samples collected from outcrop of the footwall and hanging wall of the auriferous quartz vein. These samples contained 2.1 g/t (0.068 oz/ton) and 2.9 g/t (0.085 oz/ton) gold respectively in addition to anomalous concentrations of Ag, As, Pb and Zn.



The majority of the quartz veins sampled in outcrop contained anomalous gold with the exception of those lacking or low in sulphides or those samples of quartz which do not appear to occur in veins. The following table summarizes the concentrations of base and precious metal elements which are associated with these quartz veins sampled during Phase III only. The assay results have been rounded off to three significant figures for concentrations expressed in grams per tonne.

Sample	Туре	Width (cm)	Sulphides	Au (ppb)	Ag (ppm)	As (ppm)	(ppm)	Other (ppm)
9004	Grab	2	2-3% Asp, Py, trace Cp	95	0.1	887	60	
9005	Grab	3	Sph, Asp, Py	2350	0.8	1.6%	26	870 Zn
9008	Chip	15-20	tr diss. Py	119	1.1	25	902	
9009	Chip	1 <del>-</del> 5	25% Py 5% Asp	50.3 g/t	<b>44.</b> 6 g/t	7.2%	612	1.1% Pb 2.0% Zn
9011	Chip	7-10	10% Asp 2-3% Py	390 g/t	278 g/t	2.0%	1212	1.6% Pb 0.8% Zn
9012	Chip	15	3% Cp 1% Po	0.58 g/t	10.9 g/t	2625	2252	1108 Co
9024	Grab	3	10-20% fine grained Sph, Gl, Py, minor Cpy	10.5 g/t	5.7 g/t	2.0%	194	3381 Pb 1504 Zn
9025	Grab	3	5-7% Asp, 1-2% Cp 2-3% Gl and Sph	120 g/t	105 g/t	10%	1325	1.3% Pb 5.3% Zn

Note: Percentages do not imply that assays were performed. These high grade quartz veins will be one of the major drill targets in the next phase of exploration. They will also be the focus of detailed mapping on the surface.



Contact metamorphism is evident on the main part of Flores Island as well as on the McNeil Peninsula. It occurs at the contact between limestone and volcanics and underlying diorite intrusive. Minerals associated with the skarn include magnetite, calcsilicates (mainly diopside), epidote and garnet, as well as rare graphite. Quartz-carbonate veins occur in these zones also. Diopside occurs in massive layers up to several metres thick as well as in banded form.

the contact skarn zones occur at between limestone (originally) or calcareous metavolcanics and Westcoast diorite underlies most of the McNeil Peninsula intersected at the end of each drillhole. Skarn zone contacts are gradational, and irregular extending up to 2 m into both the overlying metavolcanics and the diorite.

Sulphides appear to be concentrated in the massive diopside units in which gold is closely associated with arsenopryite. The recrystallized limestone does not appear to contain high percentages of sulphides.

The skarn horizon contains anomalous concentrations of Au, Ag, Cu, Zn, Co and As. The main skarn horizon strikes northwest 700 m, parallel to the regional structural trend, and includes layers of sulphide mineralized horizons ranging from less than 1 m to 18 m thick. It is approximately 200 m across in an east-west direction.

Magnetite (massive) occurs as lenses and pods locally throughout the skarn. Sulphides associated(?) with the massive magnetite include pyrite, pyrrhotite, chalcopyrite, arsenopyrite and sphalerite. Gold occurs locally within the massive magnetite however it appears to be associated with the sulphides present in



the magnetite. Both DDH CA88-10 and Trench MT-1 include samples of massive magnetite with anomalous gold. Anomalous cobalt occurs with skarn mineralization. Very little lead occurs with the skarn zones.

On the Main Grid on Flores Island, the skarn occurs over a 1  $\,\mathrm{km}^2$  area (to be proven by drilling) and may be up to 50 m thick. Detailed mapping and additional drilling is necessary to determine the orientation of the skarn horizon.

The lower contact of skarn zones on both the Main Grid and the McNeil Peninsula Grid are with diorite. The Main Grid has been interpreted as one continuous horizon yet the McNeil Peninsula Grid skarn may comprise several layers. The geology and predictability of skarn zones on the McNeil Peninsula are much more comlex and difficult.

The mineral assemblage of the skarn, the general lack of lead, the presence of anomalous cobalt and the dioritic composition of the intrusive closely resemble the 'calcic magnetite skarn' of Einaudi, et al. (1981).

#### Mineralization in Trenches

The PT-1 and PT-4 trenches were blasted open with minor hand trenching at L4+50N, 0+15W and L7+50N, 0+80W on the McNeil Peninsula.

PT-1, shown at an approximate 1:1000 scale in Figure 6, contains a zone of massive magnetite exposed over 4 m. Calcite veins occur in this zone. A 2 m wide section of chalcopyrite,





arsenopyrite and pyrite occurs at the base of this trench. Arsenopyrite occurs in euhedral crystals up to 2 cm in diameter. Rock sampling includes grab samples and chip samples across widths of 2 m. Results of analyses are as follows:

Sample	Type/Width	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Co
9070	massive sulphide (grab)	4.25 g/t	702 g/t	2705	89624	1034
9071	massive sulphide (grab)	94	34	333	7620	172
9072	massive magnetite (chip 2 m)	3.98 g/t	473 g/t	3174	79696	1060
9073	massive sulphide (chip 2 m)	0.38 g/t	14.1 g/t	3741	3410	988
9074	massive volcanics (chip 2 m)	107	3.4 g/t	335	704	_

Trench PT-4 is located at L7+50N, 0+80W and is plotted on Figure 6 at an approximate 1:1000 scale. Massive magnetite, with irregular calcite veining, occurs over 2 m, overlying an approximate 4 m wide calc-silicate unit. Underlying the calc-silicate unit is a 1 m section of pyrite, local chalcopyrite with widespread calcite veining. This zone includes up to 30-40% pyrite in greenish-grey volcanics, hosted by pale green calc-silicates.





### Sample results are as follows:

Sample	Type/Width	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)
9061	altered volcanics (2 m chip)	7.13 g/t	3.8	1856	21
9062	altered volcanics (grab)	37	0.4	68	9
9063	<pre>calcite stringers   (2 m chip)</pre>	1.71 g/t	0.8	652	29
9064	massive magnetite (grab)	131	0.4	160	18
9065	calcite stringers (grab)	18	0.3	36	15
9066	calcite vein (grab)	96	0.2	184	28
9067	altered volcanics (grab)	73	0.3	84	9
9068	massive sulphide/ magnetite (grab)	2.50 g/t	1.7	1671	150
9069	calcite stringers (grab)	1.68 g/t	0.6	1647	60

Trenching was not carried out in the Main Grid area, however some of the existing trenches were resampled with the following results:



Trench	Sample	Type/Width	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Zn (ppm)	Co (ppm)
<b>MT-1</b> TR2	9026 9027	massive sulphides (grab) altered volcanic	2.43 g/t	149.9	54828	142	1474	77
	9021	(grab)	8	2.5	352	13	-	7
MT-2 Adit D	9059	massive sulphides (grab)	22	2.1	719	85	_	79
MT-3 ?	9058	calc-silicate (grab)	15	5.7	674	330	-	29
<b>MT-4</b> TR7	9077 9078	skarn (grab) tuff (grab)	14 4	57.9 0.6	10407 581	155 75	21313	37 22
<b>MT-5</b> TR4	9051	massive magnetite (grab)	23	0.1	667	135	_	4
MI-2	9028 9029 9030	skarn (grab) skarn (grab) skarn (grab)	3 3 1	4.5 3.2 2.3	1208 511 737	165 153 23	- - -	4 12 29
MT-3 TR5,6	9079	massive magnetite (chip 2 m)	8	3.5	530	1620	-	88
Tom Adit	9080	gossanous magnetite (chip 2 m)	8	2.6	340	223	-	21
	9081 9082	<pre>altered volcanic(?)       (chip 3 m) altered volcanic(?)</pre>	5	2.6	212	419	-	13
	9083	(chip 3 m) altered volcanic(?)	3	1.7	272	323	-	26
	2003	(chip 3 m)	2	1.8	261	199		28

# 5.3 Structure

Large and small scale faulting and shearing occurs on the Contact-Au property. Measurements along the McNeil Peninsula shoreline and the eastern shoreline of Flores Island for (i) quartz vein, (ii) fault, (iii) joint and (iv) dyke orientations have been plotted on separate equal area stereograms (Plots 2a through 2d respectively).

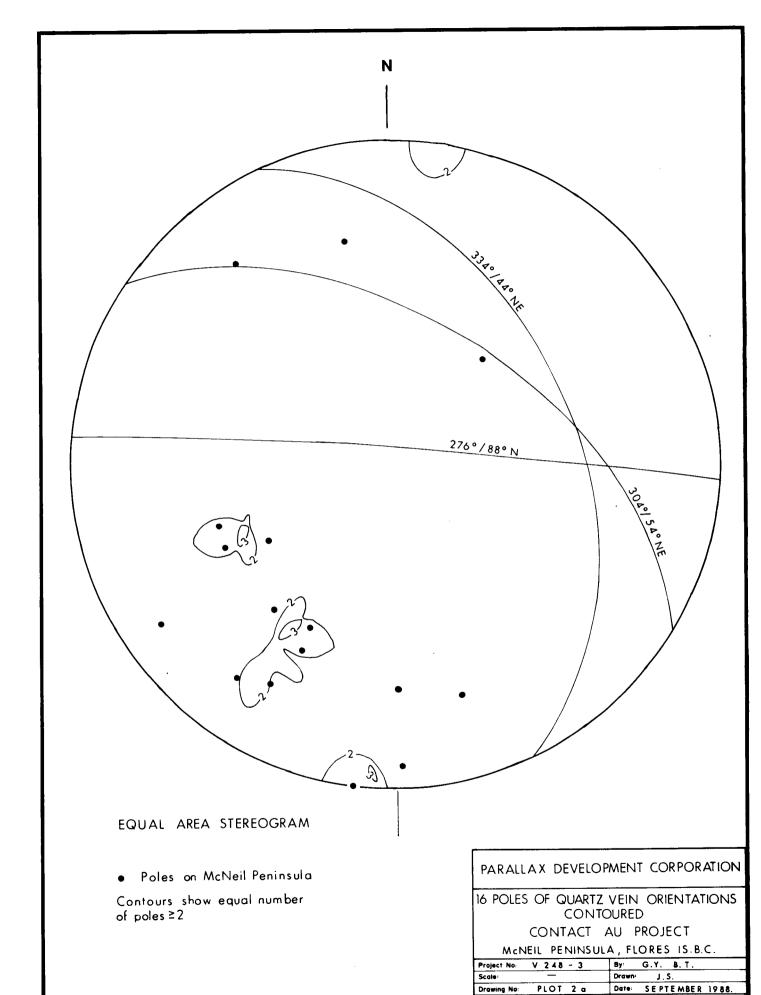


## (i) Quartz Veins

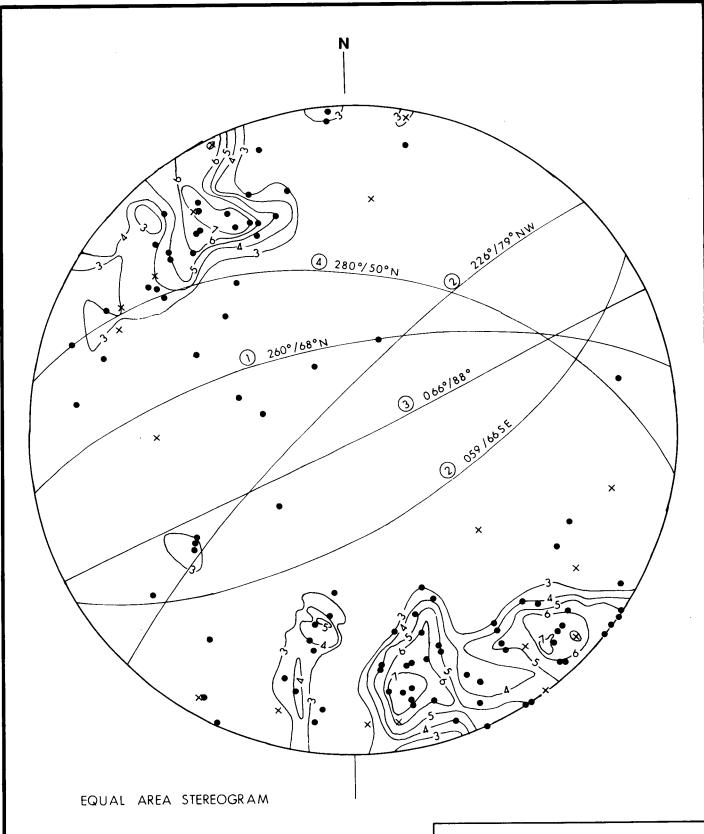
Quartz vein orientations (16) are plotted as poles in Plot 2a. The considerable amount of scatter suggests that the veins do not follow any one particular orientation. However, contouring has outlined three areas where at least three overlaps occur within a 1% area of the stereogram. The highest density of poles corresponds with a strike and dip of  $304^{\circ}/54^{\circ}NE$  and the second highest density with a  $334^{\circ}/44^{\circ}NE$ . Since poles do occur between these contoured areas, an average would be around  $320^{\circ}/50^{\circ}NE$ . The third highest density of poles corresponds with an orientation of  $276^{\circ}/88^{\circ}N$ . The quartz veins which contain highly anomalous gold, silver, copper, lead, zinc and arsenic in the southwest McNeil Peninsula grid area strike northwest with a moderate northeasterly dip.

# (ii) Faults

Poles to faults (116) are shown on Plot 2b. Equal numbers of poles greater than 3, within a 1% area of the stereogram were contoured. Although some scatter does exist, five main clusters of points are distinguishable. The mean taken for these areas of higher density indicates a predominant strike of  $260^{\circ}/68^{\circ}N$ . A second cluster of poles of the same density  $35^{\circ}$  from the first cluster, defines an orientation of  $226^{\circ}/79^{\circ}NW$ . It is possible that these represent a conjugate set of faults, however this would have to be confirmed by observing such a set in the field. The other area of high density corresponds with  $059^{\circ}/66^{\circ}SE$  which would lie between the two mentioned above in terms of strike, however, with a steep southeasterly dip. The average strike of the four main concentrations of poles is  $243^{\circ}$  dipping both steeply northwesterly and northeasterly. Another important



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Poles on McNeil Peninsula
 X Poles on Flores Island
 Contours show equal number of poles ≥ 3

# PARALLAX DEVELOPMENT CORPORATION

116 POLES TO FAULT ORIENTATIONS
CONTOURED
CONTACT AU PROJECT
McNEIL PENINSULA, FLORES IS. B.C.

Project No:	V 248-3	By: G.Y., B.T.
Scale:		Drawn: J.S.
Drawing No:	PLOT 2 b	Date: SEPTEMBER 1988.



**MPH Consulting Limited** 



cluster which may represent a separate episode of faulting corresponds with the '5 contour' of poles. The corresponding strike is  $280^{\circ}$  with a  $50^{\circ}$  northerly dip. An increase in poles however, from additional measurements may indicate that this cluster merges with the first set.

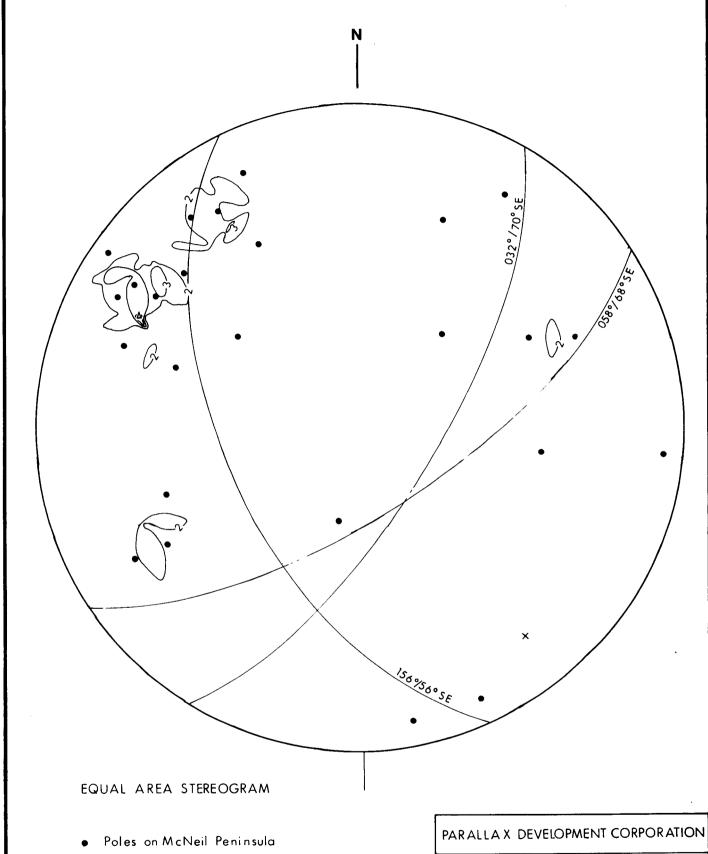
## (iii) Joints

Plot 2c shows 26 poles to joint orientations measured on the McNeil Peninsula and the main part of Flores Island. Contours show equal numbers of poles equal or greater than 2 within a 1% area. The highest concentration of poles corresponds with the great circle representing an orientation of  $032^{\circ}/70^{\circ}$ SE. Of equal importance is a cluster of poles corresponding with a strike of  $058^{\circ}/68^{\circ}$ SE (25° apart from the first cluster) which is defined by two areas of overlap of 3 poles. The average for these two orientations is  $045^{\circ}/70^{\circ}$ SE. A considerable amount of scatter occurs for the poles to joints and more measurements are necessary to be meaningful.

#### (iv) Dykes

Leucocratic dykes on the McNeil Peninsula are plotted as solid dots whereas diabasic dykes (may be sills) are plotted as crosses on Plot 2d. The leucocratic dykes are clustered in one area which corresponds with a  $263^{\circ}/55^{\circ}N$  orientation.

Bedding is apparent only in the limestone unit on the east coast of McNeil Peninsula where a recessive weathering pattern suggests the limestone is folded about a gently plunging northwest trending axis.



× Poles on Flores Island

Contours show equal number of poles ≥ 2

26 POLES TO JOINT ORIENTATIONS
CONTOURED

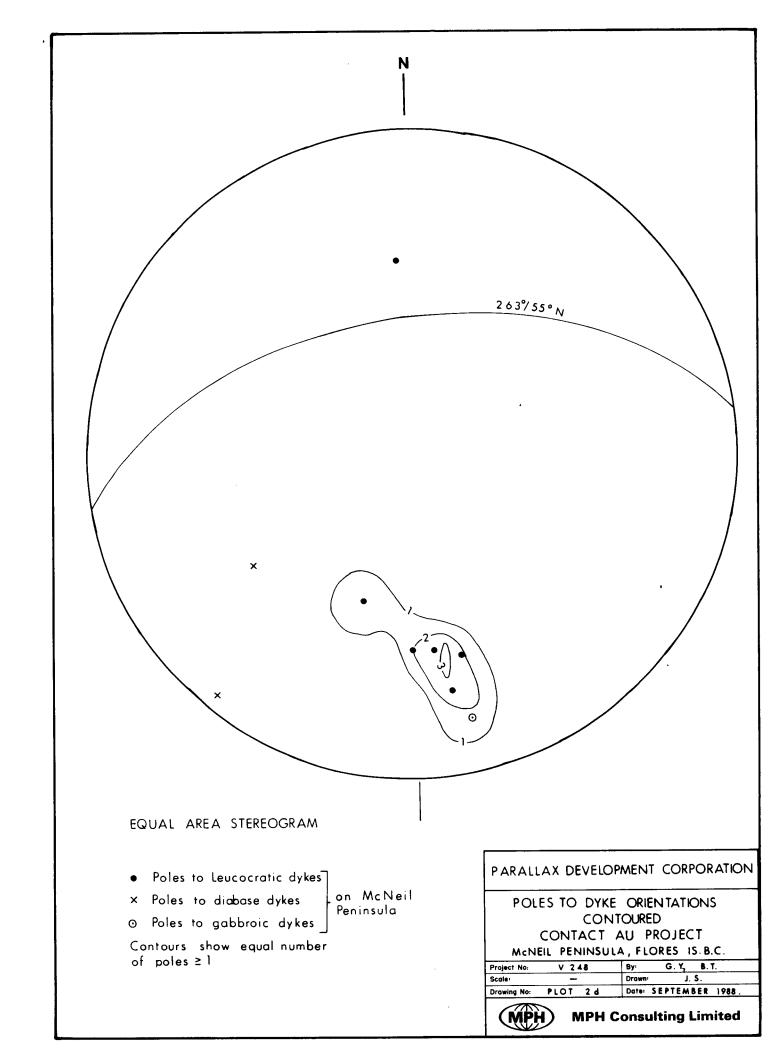
CONTACT AU PROJECT

McNEIL PENINSULA, FLORES IS. B.C.

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Drawing No:	PLOT 2 c	Date:	SEP	TE	MBER	1988.



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As mentioned in the geology section, an east-west trending fault is inferred from topography and abrupt truncation of an IP anomaly near DDH CA88-14, in the northwestern portion of the grid. Displacement along this fault was not observed, however airphoto lineaments indicate a sharp break in slope.

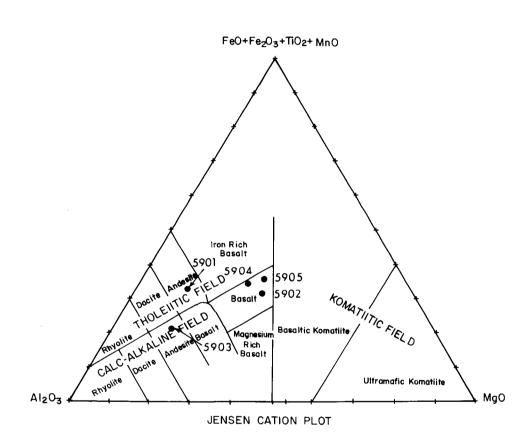
Another such break in slope occurs on the west coast of McNeil Peninsula, in the area of the high grade quartz veins, where a strong northwest trending lineament is indicated. Additional surface geological mapping is necessary to test the continuity of this structure and to determine whether any offset occurs.

# 5.4 Whole Rock Lithogeochemical Analysis

Five drillcore samples were analyzed for their chemical composition (Appendix III). The Jensen Cation Ternary Diagram (Plot 1) was used to aid in determining the original volcanic composition of the samples.

Dry weight percentages of the major element oxides were calculated from the wet weight percentages by subtracting the loss on ignition (LOI).

Sample	\$SiO2	Al <sub>2</sub> 0 <sub>3</sub>	$Fe_2O_3$	MgO	CaO	Na <sub>2</sub> 0	K <sub>2</sub> O	TiO2	MnO	Total
5901	55.1	18.0	10.2	3.9	7.9	3.1	0.6	1.0	0.1	99.9
5902	48.1	14.4	11.4	12.5	9.9	2.3	0.3	0.9	0.13	99.9
5903	50.5	20.3	6.5	4.6	14.8	2.3	0.6	0.4	0.1	100.1
5904	50.3	15.2	11.9	9.1	8.0	3.6	0.1	1.2	0.1	99.5
5905	48.1	13.9	11.9	11.5	11.1	1.6	1.0	0.7	0.1	99.9



# PARALLAX DEVELOPMENT CORPORATION

JENSEN CATION PLOT OF DRY WEIGHT PERCENT CONTACT AU PROJECT FLORES IS. B.C.

Project No:	V 248-3	By: G.Y.
Scale	N / A	Drawn J. S.
Drawing No:	PLOT 1	Date: SEPTEMBER 1988.



**MPH Consulting Limited** 



The ternary diagram plot data is as follows:

	Al <sub>2</sub> 0 <sub>3</sub>	MgO Fe	203+TiO2+MnO	Lithogeochemic	cal Composition
				From Jensen Cation Plot	Field Description
5901	54.2%	11.7%	34.0%	Andesite	Diorite
5902	36.6%	31.8%	31.6%	Basalt	Ash tuff
5903	63.6%	14.4%	21.9%	Andesite	Feldspar porphyry dyke
5904	40.5%	24.3%	35.2%	Basalt	Ash tuff
5905	36.5%	30.2%	33.3%	Basalt	Crystal lithic tuff

These dry weight percentages were plotted on the Jensen ternary diagram. All samples plot as andesites and basalts.

Sample 5901 collected from DDH CA88-1 between 27.89 and 28.05 m depth was described from hand specimen as a diorite. It plots within the tholeiitic field as an andesite, and contains over 55% silica, and 18% alumina.

Sample 5902, collected just below sample 5901 between 28.05 and 28.20 m is from the 'ash tuff' unit. It contains a high proportion of silica 48.1%, however it plots as a basalt within the calc-alkaline field. Perhaps the abundance of silica is in part due to the proximity to the diorite intrusion which may have introduced an excess amount of silica.





Sample 5903, is a feldspar porphyritic dyke collected from DDH CA88-11 between 8.00 and 8.23 m depth. It contains over 50% silica, is very high in alumina, and plots within the calcalkaline field as an andesite.

Both samples 5904 and 5905 plot as iron-rich basalts within the calc-alkaline field, yet very close to the tholeitic field boundary. Sample 5904 is described as an 'ash tuff' from 3.91 to 14.11 m depth in DDH CA88-16. Sample 5905 from the same hole at a depth of 6.5 to 6.65 m was described as a crystal lithic tuff.

# 5.5 Soil Geostatistics and Geochemistry

Soil surveys were conducted along two separate flagged grids totalling 7.5 line km during the Phase III exploration program. The grids are located on McNeil Peninsula and on the Main Grid area of the main part of Flores Island.

The McNeil Peninsula Grid was established following favourable soil geochemical results from the Phase I reconnaissance soil survey conducted along L3+00N, L4+00N and L8+00N. Soil samples (287) were collected from the McNeil Peninsula Grid from B-horizon (average 20 cm depth) when possible. Due to the nature of the soil however, it was necessary to collect about half the samples from the A-horizon (humus). This is unfortunate due to the fact that the A-horizon generally comprised of organics, tends to concentrate elements such as gold to a greater extent, as well as the fact that the B-horizon gives a more accurate representation of the underlying bedrock. The soil survey is thus not as accurate a depiction of the underlying lithogeochemistry.





The samples were collected at 25 m intervals from lines spaced 50 or 100 m apart for a total of 7.25 line km. The baseline of the grid trends north-south with east-west lines providing coverage of a good portion of the northern peninsula area. The grid was designed to crosscut the north to northwesterly trending structure and the skarn zone at approximate right angles.

The Main Grid Detail (0.25 line km) was established in the central L2+00N area between L3+00N and L1+00N. Northwest trending lines (9) are parallel to the Main Grid. The grid is centred on an extremely anomalous gold concentration (90,000 ppb and 147,000 ppb) encountered during the previous soil survey at L2+00N, 4+75W. The sample and line spacings are 10 m. The underlying geology is a possible extension of the skarn horizon inferred from a trench (MT-5) in the central Main Grid Detail area.

#### 5.5.1 Geostatistical Evaluation

The soil geochemical data was subjected to two statistical analyses for all the samples analyzed at Acme Labs in Vancouver (As, Cu, Zn, Ag, Co). The initial geostatistical program was run on the samples by Acme Labs, however the data from approximately 187 samples was unobtainable by the lab for reasons unknown. Also, the program used by Acme is not capable of plotting a logarithmic distribution. In many cases, will as demonstrated. data follow the appears to a logarithmic distribution rather than an arithmetic or linear distribution. The histograms from Acme Labs are included nevertheless in Appendix IV. The soil geochemcial data for Phases I and III geochemical surveys was processed by the Probplot (Stanley, 1987) program, for the elements Ag, Cu, Pb, Zn, As and Co. Gold





concentrations were plotted only for the Phase III (330 samples) survey because Phase I samples had been analyzed by Rossbacher Laboratories whose instruments have a 5 ppb detection limit rather than a 1 ppb limit of detection.

Appendix IV includes the statistics, histograms, and a plot of the class intervals. For details of this program and its limitations and assumptions, please refer to Stanley, 1987. Probplot has been designed to allow systematic evaluation of frequency data for any variable. The program is very flexible, allowing the data set to be manipulated to obtain the most meaningful data representation possible. Threshold and anomalous limits are as follows:

	Gold ppb	Arsenic ppm	Cobalt ppm	Copper ppm	Zinc ppm	Silver ppm	Pb ppm
Threshold	50	150	20	70	80	0.85	
Anomalous	90	270	35	120	130	1.40	
Mean	9.5	27.3	5	19.0	27.4	0.27	9.4
Standard Deviation	21.0	59.6	7.1	25.3	26.0	0.28	5.7
Population (No. of Samples)	(Phase I only) 324	751	756	752	751	763	756

Statistical data allows a systematic, relatively unbiased method for choosing contour intervals for the soil maps. The soil geochemical contours were calculated by exponentially increasing the anomalous values and rounding them off to the nearest ten.





# 5.5.2 McNeil Peninsula Grid Soil Survey

Soil geochemical concentrations for gold (ppb), silver (ppm) and arsenic (ppm) on the McNeil Peninsula are shown in Figure 7 with the anomalous and threshold values contoured. These elements were plotted together because they appear to have a strong association in soils as well as in lithogeochemistry. Copper, zinc and silver concentrations are plotted and contoured in Figure 8.

There are several spot soil anomalies which may be part of the same northwest trending structure extending from L2+00N to L9+00N.

The most significant gold in soil anomaly (I) occurs at L8+50N at 1+00W and 1+25W with concentrations of 1120 ppb and 127 ppb. At L7+50, 1+00W and 1+25W, concentrations of 830 ppb and 76 ppb occur and 89 ppb and 47 ppb on L7+00N. Although the L8+00N (sampled during the Phase II program) does not contain anomalous gold, there is a strong possibility that this zone is continuous. Anomalous arsenic occurs to the west of the L8+50N gold anomaly (up to 260 ppm) and coincident with the L7+50N and L7+00N anomalies (up to 476 ppm). Anomalous copper and zinc occur coincident with the second gold anomaly.

These two anomalies were the target of drillholes CA88-10, 11 and CA88-12, 13. They are coincident with chargeability Zone F and a corresponding resistivity low. These drillholes all intersected anomalous gold and arsenic within 'skarn' zones.



Soil anomaly II includes anomalous gold (335 ppb) at L4+50, 25W, within a broad zone defined by anomalous arsenic and a coincident northwest trending cobalt anomaly. Trenches PT-1 and PT-2 occur in this area and may in part be responsible for the downhill dispersion of anomalous arsenic concentrations. Figure 8 shows that anomalous copper, zinc and silver is coincident with this area also. This soil anomaly, coincident with a strong chargeability high (Zone A) was the target of drillholes CA88-8, 9 and the previous phase drillholes DDH88 4 and 5 which intersected gold bearing zones.

Southeast of soil anomaly II, at L3+00N, 1+00E and L2+50N, 0+75E, a gold in soil anomaly extends over 75 m with concentrations of 270 ppb and 670 ppb respectively. This zone is coincident with anomalous arsenic and cobalt over a smaller area as well as an isolated copper-silver in soil anomaly.

It appears from the map that soil anomalies II and IV are probably representative of a single northwest striking Au, As, Co, Cu + Zn, + Ag anomaly.

Soil anomaly III is a relatively broad gold anomaly defined by four anomalous gold concentrations (up to 113 ppb) over the western portion of L2+00N and L2+50N. Coincident anomalous arsenic concentrations occur at L2+00N, 0+75W and 1+00W (164 ppm and 232 ppm As). This area contains the high grade quartz veins which when sampled this year yielded up to 11.39 oz/ton Au.

#### 5.5.3 Main Grid Detail

A highly anomalous, confirmed, spot gold in soil anomaly (90,000 and 147,000 ppb) located at L2+00N, 4+75W of the Main Grid during the previous work phase, is the centre and main reason for

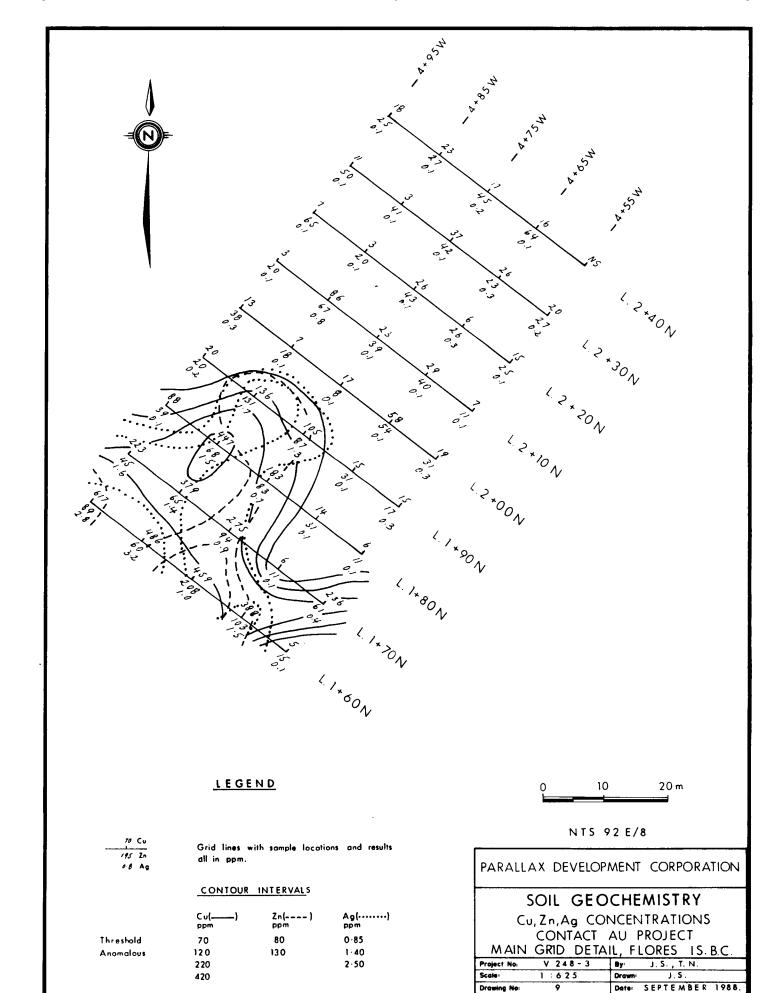




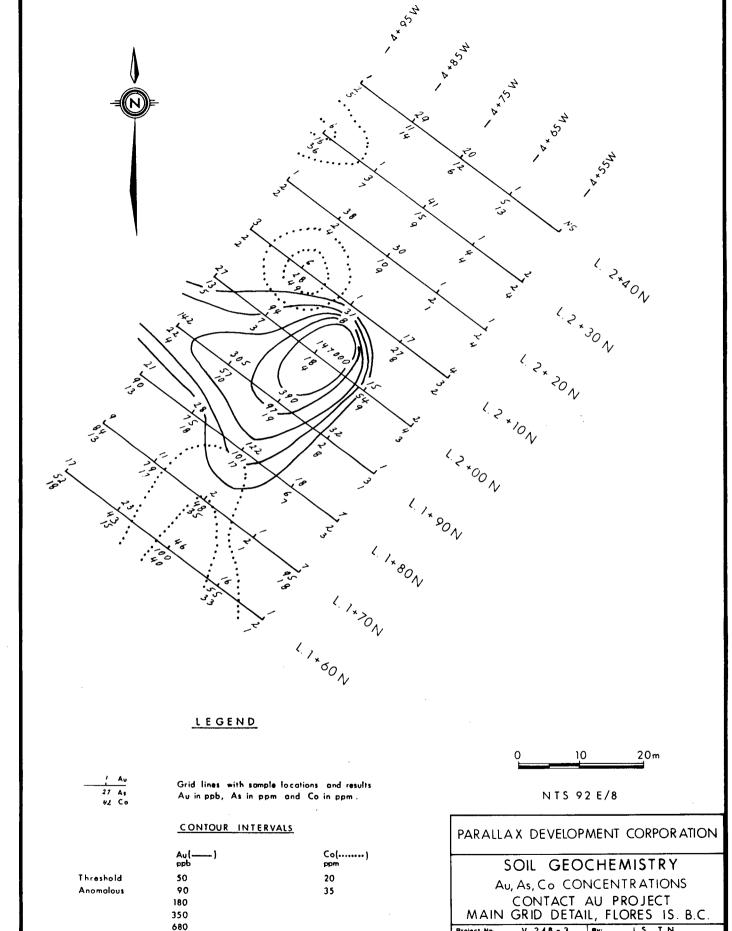
construction of the 'Main Grid' (Figures 9, 10). This flagged grid comprises four northwesterly trending lines to the grid north and south of L2+00N at 10 m line spacing, sampled at 10 m intervals. This grid was designed to confirm the presence and possible extent of this gold anomaly as well as possible associated elements. The 44 B-horizon soil samples were analyzed at Acme Labs for gold by AA and for 31 element ICP (Appendix IIId).

Figure 9 shows the gold concentrations plotted and contoured along with arsenic and cobalt. Anomalous gold concentrations occur within a zone which is approximately 30 m wide northeastapproximately 40 wide southwesterly and m southeasterly, narrowing toward the northwest extent of the grid. Within this zone are five anomalous gold concentrations ranging from 94 ppb to 147,000 ppb. Approximately coincident with this gold anomaly are anomalous copper concentrations, defining an open-ended anomaly to the grid south. Concentrations range from 88 ppm to 617 ppm Cu. Twelve samples are within the threshold to anomalous range, defining this copper in soil anomaly over at least a 30 m by 40 m area. Possibly associated with this copper anomaly are zinc and silver anomalies (shown in Figure 10). threshold to anomalous zinc concentrations occur within a narrow north- northeasterly trending zone at least 35 m long. Only two samples are considered anomalous (up to 208 ppm). Anomalous silver concentrations (more than 1.4 ppm) appear to increase towards the grid south extent, making this an open ended anomaly. samples anomalous in silver, define a zone generally coincident with the gold and copper anomalies.

The central to southwestern portion of this grid will be the target of prospecting, chip sampling, and possibly trenching followed by drill testing.



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Project No:	V 248-3	S., T. N.
Scale	1:625	Drawn: J. S.
Drawing No:	10	Date: SEPTEMBER 1988.
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# 5.6 Induced Polarization Survey

Between May 23 and May 29, 1988, an IP survey was conducted on the McNeil Peninsula by an MPH Consulting Limited geophysical crew of 4 men using a Huntec Mk IV receiver and a Phoenix IPT-1 3.0 Kw transmitter. The same time domain survey parameters utilized in Phase II, 'a' spacing equal to 25 metres and measuring 'n' values 1 to 4 were used. The IP survey totalled 4.2 line-km on 8 lines filling in information around the three lines of reconnaissance IP survey done in the Phase II program.

The measured primary voltage (Vp) and secondary voltage (Vs) were converted to apparent resistivity and total chargeability. The IP technique is further discussed in Appendix VII. The resulting values were plotted in standard pseudosection form at a scale of 1:1250 (Figures 22 to 29) in addition, contoured resistivity and chargeability values for n=1 at a scale of 1:2500 are shown in Figures 20 and 21.

The Phase III program was designed to follow up IP anomalies located during the Phase II program on the McNeil Peninsula. During the Phase II program, IP coverage on lines 3+00N, 4+00N, and 8+00N was completed. The Phase III program was intended to define the strike extent of the strongest chargeability response and to locate additional IP anomalies to be tested by diamond drilling.

The chargeability results obtained from the 8 line McNeil Peninsula grid, defined a strong anomalous zone along with six other anomalous zones. A total of 7 separate chargeability Zones (A through G) are outlined as seen on the compiled chargeability data for n=1 (Figure 20).



Chargeability Zone A is a moderate to strong chargeability response defined on L2+00N through L4+50N near the baseline. Zone A has an estimated intrinsic chargeability ranging from 25 to 150 msec and is coincident with resistivity low 'a'.

Zone A is interpreted as being caused by massive to semi-massive magnetite with accompanying sulphides which have a shallow dip to grid east.

Zone A is flanked to the west by anomalous gold in soil geochemistry which may also be related to the IP response.

Chargeability Zone B, defined on L4+00N to L2+00N near 2+00E is located east of Zone A. On L4+00N, Zone B is quite broad and difficult to distinguish from Zone A. Looking south, Zone B becomes more distinct from Zone A and has an estimated intrinsic chargeability ranging from 20 to 60 msec, to a depth of 10 to 30 metres. Zone B is coincident with resistivity low 'b' and interpreted to reflect disseminated sulphide mineralization.

Chargeability Zone C, defined on L2+00N and 2+50N near 3+50E, has a moderately strong intrinsic chargeability response ranging from 20 to 30 msec, at an estimated depth of 15 metres. Zone C is not related to any resistivity feature and is interpreted to reflect disseminated sulphides of a lesser concentration than the two zones described above.

Chargeability Zone D, is defined on L2+00N and L2+50N, near the eastern edge of the survey coverage. An estimated intrinsic chargeability of 30 to 35 msec at a depth of 10 metres is interpreted, however, due to lack of definition of Zone D, the strength and depth is tentatively estimated here.



Chargeability Zone F, defined on L8+50N near 1+25W has a complex response consisting of a near-surface feature grading to depth. This may reflect a shallow dipping structure to grid east. Zone F has an estimated intrinsic response ranging from 20 to 70 msec and is coincident with resistivity low 'f' also flanking is an anomalous gold soil geochemistry to the west. Zone F is interpreted to reflect massive to semi-massive magnetite with associated sulphide mineralization.

Chargeability Zone G, defined on L7+00N to L9+00N near the east end of the surveyed line has an estimated intrinsic chargeability of 20 to 40 msec appearing stronger and deeper along strike southward. A weak soil gold geochemical anomaly is observed flanking Zone G on L8+00N. Zone G is interpreted to reflect disseminated sulphide mineralization.

# Results and Conclusions

A total of six chargeability zones having varying correlation with resistivity lows and anomalous gold soil geochemistry were located during the Phase III program. The IP survey successfully delineated the rather variable geologic features which were poorly defined as to extent and attitude from the Phase II program.

Chargeability Zone A is the most persistent and dominant zone to be tested by diamond drilling along its strike. Zone B is the second feature outlined by the IP survey which should be tested by diamond drilling. Zone F is the third feature located on L8+50N which warrants testing by diamond drilling. These zones are coincident with resistivity lows and have coincident or flanking anomalous gold geochemistry.





# 5.7 Diamond Drill Program

The Phase III diamond drill program was conducted between July 7 and July 8, 1988. A total of 1644.1 m (NQ) was drilled from 18 holes on 9 set-ups. Drill core samples (sample numbers 5001-5847) total 847. These samples were analyzed by Acme Labs for gold by AA and for 31 element ICP. Assays were perfomed on samples containing gold in excess of 200 ppb. Samples anomalous in silver, copper, lead, zinc and arsenic were not assayed. The drill logs have been summarized in the following section. This section also contains significant intersections and calculated length weighted averages by the following method.

(Sample 1 length) x [concentration] + (Sample 2 length) x [concentration] etc.

Total length of interval

Drill sections are plotted for each hole in Figures 11 to 19. Locations for the holes on a plan map are on all 1:2500 scale figures including geology and soil geochemistry maps.

Figure 30 is a compilation map which shows the mineralized zones, results from previous work phases and significant drill intersections to date.



SUMMARY DDH : CA88-1

GRID : McNeil Peninsula

 COORDINATES: 3+50N, 1+15E
 ELEVATION: 57 m

 LENGTH: 69.19 m
 DIP: -55°
 AZIMUTH: 270°

 STARTED: 08/06/88
 STOPPED: 09/06/88
 CASING: 6.71 m

**LOGGED BY** : G. Yip (June 15-18/88)

**CORE SAMPLES:** 5001-5050

#### **OBJECTIVE:**

To test the chargeability Zone A, coincident resistivity low 'a' located near the baseline on L2+00N through L4+50N. A narrow gold in soil anomaly (370 ppb and 670 ppb) occurs over approximately 75 m in the area of DDH88-8 and 9. (Anomalous cobalt and arsenic in soil also occur in this area.) These holes were drilled during the previous phase of exploration and intersected a massive magnetite horizon containing pyrite with anomalous gold and arsenic. The most significant intersections from this zone was at 28.88 - 29.61 m: 1.18 g/t (0.034 oz/ton) Au over 0.76 m in DDH88-8 and 5.82 g/t (0.170 oz/ton) Au over 0.14 m at 25.46 m to 25.60 m in DDH88-9.

#### **GEOLOGY & MINERALIZATION:**

Alternating layers of medium- to fine-grained diorite and fine-grained metavolcanics were intersected from 6.71 m to 69.19 m. The diorite units are poorly to moderately foliated, and range in thickness from 1.90 to 11.74 m. Moderate to intense epidotization and silicification is local, as is chloritization of mafic minerals.

The dark green metavolcanics are either xenoliths and/or layers within the diorite, ranging from 0.09 to 8.57 m thick. Alteration products include: quartz, carbonate, epidote and chlorite.

Mineralization within the metavolcanics includes trace to 5% disseminated pyrite (locally up to 10% in masses and stringers), trace to 10% chalcopyrite, trace arsenopyrite, and trace to 10% massive magnetite. In the interval from 16.49 to 16.91 m, the volcanics have been carbonatized and contain up to 70% massive magnetite and 10% massive pyrite.

The diorite has been crosscut by quartz veins (up to 6 cm wide) with zones of chloritization of the wallrock adjacent to the veins, and fractures infilled with epidote. Trace to 5% disseminated pyrite occurs within veins and zones of alteration.

The source of IP Anomaly A appears to be a zone of metavolcanics containing massive magnetite (up to 70%), pyrite (up to 10%), + chalcopyrite (trace to 10%) from 15.7 to 19.1 m; the rock has been variably silicified (weak to intense, epidotized (moderate, chloritized (light), and carbonatized (weak to moderate).



Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Other
5019 5024 5036	19.10-19.80 23.17-23.30 41.20-41.36	0.70 0.13 0.16	133 128 960	1.4 3.4 0.2	341 751	1038 190	
		0.10	0.039 oz/ton (1.34 g/t)	0.2	64	,	
5038	45.35-45.55	0.20	205	0.2	89	3	





**GRID** : McNeil Peninsula

 COORDINATES: 3+50N, 1+15E

 LENGTH: 50.29 m
 DIP: -85°
 AZIMUTH: 270°

 STARTED: 09/06/88
 STOPPED: 09/06/88
 CASING: 3.05 m

LOGGED BY : G. Yip (June 22-23/88)

**CORE SAMPLES:** 5051-5080

#### **OBJECTIVE:**

To test the anomalies described for drillhole CA88-1 and the extent of the massive magnetite horizon and the gold bearing zones intersected by CA88-1.

#### **GEOLOGY & MINERALIZATION:**

Dark grey-green fine-grained andesite was intersected from 3.05 m to 15.05 m with trace to 3% pyrite disseminated and in very thin quartz and carbonated filled fractures. The andesite is locally weak to intensely epidotized and silicified and weakly carbonatized. Other mineralization includes: up to 10% magnetite from 14.10 to 14.37 m; and trace to 1% pyrrhotite from 14.37 to 14.97 m.

A unit of variably altered diorite, containing sporadic xenoliths of andesite (approximately 4 cm), was intersected from 15.05 to 38.85 m. The top portion of this unit (to 24.48 m) has been intensely epidotized and silicified, and weakly to moderately carbonatized; quartz and epidote also occur as fracture fill. Between 16.56 and 18.107 m are three shears (2 to 18 cm wide) oriented between  $35^{\circ}$  and  $49^{\circ}$  to core axis. Trace to 2% pyrite occurs disseminated through the diorite and locally as 3 to 4 mm pods in carbonate lenses.

Mineralization within the unaltered diorite includes trace to 5% pyrite and trace arsenopyrite locally disseminated through the diorite, within and adjacent to the xenoliths, and in quartz veins.

Between 38.85 to 50.29 m is a unit of dark green andesite with numerous fractures infilled by quartz, carbonate, epidote, and trace to 5% finely disseminated pyrite. The unit has also been silicified and chloritized.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	<b>Other</b>
5060	15.14-15.82	0.68	3	0.1	7	1335	
5065	20.40-20.92	0.52	315 0.009 oz/ton (0.309 g/t)	0.4	5	18	
5070	24.01-24.48	0.47	165	0.1	20	26	
5073	27.60-27.80	0.20	2	2.1	920	41	



SUMMARY DDH : CA88-3

**GRID** : McNeil Peninsula

COORDINATES: 2+45N, 1+90E

LENGTH: 81.38 m

DIP: -46°

STARTED: 10/06/88

CASING: 6.10 m

**LOGGED BY** : G. Yip (June 24-26/88)

**CORE SAMPLES:** 5081-5109

## **OBJECTIVE:**

To test the southern extent of chargeability Zone A, with coincident resistivity low 'a', and to test the extent of the possibly flat-lying massive magnetite and pyrite zone intersected in previous drillholes.

# **GEOLOGY & MINERALIZATION:**

Dark green to grey, fine- to medium-grained variably altered diorite are interlayered with units of dark green, fine-grained, altered andesitic tuff to feldspar porphyritic andesite (phenocrysts are up to 4 mm), which probably represent xenoliths within the diorite.

The diorite units range from 0.27 to 10.07 m wide, and are locally intensely epidotized and silicified, with mafic minerals altering to chlorite. Veins and fractures are infilled with quartz carbonate, iron-carbonate, and locally, epidote. The diorite unit from 74.10 to 81.38 m contains andesitic(?) xenoliths. Trace disseminated pyrite occurs in areas of alteration.

The andesite intervals are locally sheared and contain quartz and epidote veins and stringers. Alteration includes: locally intense epidotization and silicification, weak carbonatization, and moderate to intense chloritization. Trace pyrite occurs in areas of intense alteration.

Geochemical analysis of samples taken throughout the drillhole returned only background values for Au, Ag, Cu, and As.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (p <b>pm</b> )	Cu (ppm)	As (p <b>pm)</b>	0ther
5095	34.51-35.66	1.15	12	0.9	393	39	



SUMMARY DDH: CA88-4

**GRID** : McNeil Peninsula

**COORDINATES**: 2+45N, 1+90E **LENGTH**: 79.25 m **DIP**: -45<sup>O</sup> **ELEVATION**: 68 m **AZIMUTH**: 270<sup>O</sup>

LOGGED BY : C. Naas (July 17/88)

CORE SAMPLES: 5835-5839

#### **OBJECTIVE:**

To test chargeability Zone A in a westerly direction and the possible extent of the mineralized zone described in the objective for CA88-3.

# **GEOLOGY & MINERALIZATION:**

Fine- to medium-grained, slightly to moderately foliated diorite was intersected from the collar to 79.25 m. Locally, rare fine-grained, grey, volcanic xenoliths(?) occur through the drillhole. The diorite has been locally altered to epidote, quartz, and carbonate. Quartz, carbonate and epidote veins and stringers are common. Mineralization includes trace to 1% pyrite within both rock types.

# SIGNIFICANT INTERSECTIONS:

Geochemical analyses of the interval from 23.61 to 36.95 m returned only background values.



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SUMMARY DDH: CA88-5

GRID : McNeil Peninsula

 COORDINATES : 2+45N, 1+90E
 ELEVATION: 68 m

 LENGTH : 78.64 m
 DIP : -70°
 AZIMUTH : 270°

 STARTED : 12/06/88
 STOPPED: 13/06/88
 CASING : 1.83 m

LOGGED BY : C. Naas (July 17/88)

**CORE SAMPLES:** 5840-5842

#### **OBJECTIVE:**

Drilled from same set-up as CA88-3 and CA88-4 to test for source of the chargeability Zone A at a steeper angle  $(70^{\circ})$ .

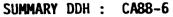
#### GEOLOGY & MINERALIZATION:

Medium- to fine-grained diorite was intersected from 1.83 m to the end of the hole. This unit is locally epidotized, silicified and carbonatized. Rare fine-grained volcanic xenoliths(?) appear throughout the hole. The rocks are slightly foliated. Trace to 1% pyrite occurs disseminated throughout the hole, and in areas of quartz veining and epidote alteration.

# SIGNIFICANT INTERSECTIONS:

Geochemical analysis of the interval from 24.00 to 31.07 m returned only background values.





GRID : McNeil Peninsula

COORDINATES: 3+55N, 2+90E

LENGTH: 81.38 m

DIP: -45°

STARTED: 13/06/88

CASING: 3.05 m

LOGGED BY : G. Yip (June 20/88)

**CORE SAMPLES:** 5110-5154

# **OBJECTIVE:**

To test the northern extent of chargeability Zone B from east to west at moderately steep angle.

#### GEOLOGY & MINERALIZATION:

Drilling intersected alternating layers of dark green, fine-grained, altered andesite and fine- to medium-grained, dark grey-green diorite. Smaller layers of andesite occurring within the diorite may be xenoliths; a layer of recrystallized limestone(?) (at 35.66 to 36.27 m) may also be a xenolith. Layers range from 0.20 to 55.81 m thick.

The diorite is variably epidotized, locally folded, and locally has a gneissose texture. Trace to 2% finely disseminated pyrite and trace to 3% chalcopyrite occurs within the diorite.

The andesitic units are locally porphyritic, with feldspar phenocrysts up to 4 mm. Alteration within these units is variable, with moderate to intense epidotization, silicification, and chloritization, and weak to intense carbonate alteration. Quartz, carbonate, and epidote commonly occur within veins and fractures. Locally, carbonates, silica, and epidote alteration is weakly banded (as from 43.89 to 44.49 m). Mineralization within the volcanics includes: trace to 5% disseminated pyrite, locally up to 10%; trace arsenopyrite; and trace to 5% pyrrhotite in pods up to 5 mm. A prominent zone of mineralization occurs between approximately 43 and 63 m.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Other
5129	49.27-49.51	0.24	8	1.6	559	229	4422 Zn
5136	54.15-54.82	0.68	775	0.6	73	5	
			0.028 oz/ton				
			(0.96 g/t)				
5140	57.70-58.34	0.64	1	4.8	1295	7	
5143	59.65-60.59	0.94	205	2.0	431	16	
5144	60.59-61.04	0.45	220	1.3	316	166	1088 Zn
5150	67.12-67.42	0.30	152	10.5	3126	113	757 Zn



SUMMARY DDH : CA88-7

GRID : McNeil Peninsula

 COORDINATES: 3+55N, 2+90E
 ELEVATION: 42 m

 LENGTH
 : 73.00 m
 DIP: -70°
 AZIMUTH: 270°

 STARTED
 : 15/06/88
 STOPPED: 16/06/88
 CASING: 3.05 m

LOGGED BY : G. Yip (July 5-6/88)

**CORE SAMPLES:** 5332-5393

# **OBJECTIVE:**

Drilled from same set-up as CA88-6 but drilled at a moderate angle to test northern extent and possible source of chargeability Zone B.

#### **GEOLOGY & MINERALIZATION:**

Dark green, fine-grained andesite was intersected from 3.05 m to 21.73 m, with trace to 3% finely disseminated pyrite. The andesite is locally porphyritic (feldspar crystals are up to 3 mm) and garnetiferous with alteration including chlorite, silica, epidote and carbonate. A layer(?) of recrystallized limestone (2.14 m), with 70% massive sulphides (90% massive pyrrhotite, 10% disseminated pyrite and trace arsenopyrite) was encountered. Between 23.87 and 32.92 m, alternating layers of altered andesite and diorite occur, ranging from 0.58 to 2.69 m wide. The diorites are fine- to mediumgrained, medium to dark green, with local epidote and iron-carbonate alteration and alteration of the feldspars to epidote, and with trace pyrite. A second unit of andesite (with similar characteristics to the first) was intersected between 32.92 and 55.62 m. Within this unit is an approximately 15 m wide zone of mineralization with trace to 7% pyrite (locally to 15%). A speck of gold was observed between 44.06 and 44.23 m in carbonate altered intrusives(?) in association with trace pyrrhotite. Diorite occurs from 55.62 to 73.00 m, with a small layer of andesite (1.39 m wide) within alternating layers of andesite and diorite. Andesite layers likely represent xenoliths.

#### SIGNIFICANT INTERSECTIONS:

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	<b>Other</b>
5358	43.50-44.06	0.56	84	0.1	5	11	
5359	44.06-44.23	0.17	3570 0.096 oz/ton (3.29 g/t)	0.3	9	2	
5360	44.23-44.33	0.130	480 0.014 oz/ton (0.48 g/t)	0.2	60	4	
5361	44.33-44.57	0.24	6655 0.142 oz/ton (4.87 g/t)	0.1	57	10	
5362	44.57-44.81	0.24	71	0.6	497	11	

#### Calculated Length Weighted Average

44.06-44.57 0.51 0.102 oz/ton (3.497 g/t)





SUMMARY DDH: CA88-8

**GRID** : McNeil Peninsula

 COORDINATES : 4+45N, 0+75E

 LENGTH : 77.42 m
 DIP : -70°
 AZIMUTH : 278°

 STARTED : 16/06/88
 STOPPED: 17/06/88
 CASING : 0.61 m

LOGGED BY : G. Yip (July 14/88)

**CORE SAMPLES:** 5155-5190

#### **OBJECTIVE:**

Drilled from east to west to test the magnetite and sulphide bearing horizons at PT-1 and PT-2 as well as a coincident small gold (335 ppb) anomaly with broader associated arsenic and cobalt and copper anomalies.

# **GEOLOGY & MINERALIZATION:**

Drilling intersected alternating units of dark green, fine-grained, altered andesite and fine- to medium-grained, medium- to dark-green diorite. The units range from 0.61 to 27.87 m wide. The diorite units have been variably epidotized and silicified, with minor carbonate and chlorite alteration pyrite, locally. Trace to 2% disseminated trace to 1% and trace pyrrhotite occurs throughout the arsenopyrite, Alteration within the andesite units include: chloritization of the mafic minerals, epidotization of feldspars, silicification, carbonate and ironcarbonate alteration. Mineralization in the metavolcanics includes: trace to 5% disseminated pyrite (locally to 10%); trace to 5% disseminated pyrrhotite; locally, 10-20% massive magnetite; trace to 1% arsenopyrite; trace to 2% disseminated chalcopyrite; and locally, trace sphalerite. Alternating units of andesite; probably represents xenoliths within the diorite.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	0 <b>th</b> er
5170	29.38-29.78	0.40	215 0.006 oz/ton (0.206 g/t)	16.4	1333	298	337 Zn
5171	29.78-30.14	0.36	305 0.008 oz/ton (0.274g/t)	7.3	977	2578	410 Zn
5172	30.14-30.68	0.54	147	1.7	199	356	
5173	30.68-31.00	0.32	250 0.006 oz/ton (0.206 g/t)	2.8	484	527	
5174	31.00-31.36	0.36	710 0.025 oz/ton (0.857 g/t)	8.8	1758	2752	1253 Zn
5175	31.36-31.55	0.19	3750 0.104 oz/ton (3.57 g/t)	3.0	296	2551	986 Zn 187 Co





Sample	Interval (m)	Length (m)	Au (ppb)		Cu p <b>pm</b> )	As (ppm)	<b>Other</b>
5176	31.55-32.43	0.88	925 0.026 oz/ton (0.891 g/t)	0.4	33	214	
5177	32.43-32.98	0.55	205 0.008 oz/ton (0.274 g/t)	0.4	17	74	
5179	33.81-34.15	0.34	315 0.009 oz/ton (0.309 g/t)	5.1 0.11 oz/ton (3.77 g/t)	975	762	13582 Zn 481 Co

# Calculated Length Weighted Average

29.38-32.98	3.60	0.018 oz/ton	4.25	0.09%
		(0.603  g/t)		





SUMMARY DDH: CA88-9

GRID : McNeil Peninsula

 COORDINATES:
 4+45N, 0+75E
 ELEVATION:
 44 m

 LENGTH:
 71.63 m
 DIP:
 -45°
 AZIMUTH:
 278°

 STARTED:
 17/06/88
 STOPPED:
 18/06/88
 CASING:
 3.65m(?)

LOGGED BY : G. Yip (July 14/88)

CORE SAMPLES: 5191-5229

# **OBJECTIVE:**

Drilled at same set-up as CA88-8 at same azimuth at a  $45^{\circ}$  angle to test the extent and dip of the mineralized zones intersected in the previous hole.

# **GEOLOGY & MINERALIZATION:**

Dark-grey, fine-grained variably altered andesite was intersected to 26.15 m. The andesite is locally cut by quartz/carbonate stringers and altered by quartz, epidote, chlorite and iron-carbonate. Trace to 2% pyrite is disseminated in this unit. From 26.15 to 71.63 m, drilling intersected alternating layers of dark-grey, fine-grained, variably altered andesite and fine-grained, black and white diorite (with occasional epidote alteration).

A zone of mineralization occurs between 31.39 and 36.06 m, and includes: trace to 10% disseminated pyrite, locally to 15%; up to 5% pyrrhotite, locally to 20%; up to 3% arsenopyrite, locally to 70%; 10-20% massive magnetite, locally to 75%; and trace to 3% chalcopyrite.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Other
5209	31.73-32.09	0.36	245	0.4	27	1930	
5210	32.09-32.65	0.56	520 0.013 oz/ton (0.446 g/t)	0.5	59	517	
5212	33.53-34.32	0.79	455 0.011 oz/ton (0.377 g/t)	0.9	124	4047	
5213	34.32-34.86	0.54	7860 0.236 oz/ton (8.09 g/t)	3.0	279	99999	236 Co
5214	34.86-35.19	0.33	9050 0.256 oz/ton (8.78 g/t)	3.4	316	99999	100 Co





# **SIGNIFICANT INTERSECTIONS** (continued)

Sample	<pre>Interval   (m)</pre>	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	<b>Other</b>
5215	35.19-35.35	0.16	3270	20.1	4678	13343	160 Co
			0.114 oz/ton (3.91 g/t)	0.74 oz/ton (25.4 g/t)		(1.3%)	
5216	35.35-35.51	0.16	847	10.5	2446	1970	
			0.022 oz/ton (0.754 g/t)	0.33 oz/ton (11.3 g/t)			

# Calculated Length Weighted Averages

31.73-35.51 3.78 0.066 oz/ton (2.27 g/t) Au, 1.68 ppm Ag 34.32-35.35 1.03 0.223 oz/ton (7.66 g/t) Au





GRID : McNeil Peninsula

 COORDINATES: 7+55N, 0+25E

 LENGTH: 97.56 m
 DIP: -45°
 AZIMUTH: 255°

 STARTED: 19/06/88
 STOPPED: 21/06/88
 CASING: 4.57 m

LOGGED BY : G. Yip (June 27-July 5/88)

CORE SAMPLES: 5230-5331

#### **OBJECTIVE:**

To test chargeability Zone F (weak to moderate), coincident resistivity low and a four sample gold anomaly with concentrations up to 830 ppb with accompanying anomalous arsenic. Trench PT-4 uncovered a zone of magnetite and pyrite with anomalous gold, silver and arsenic (sample 8061 - 7.13 g/t Au, 3.8 ppm Ag and 1856 ppm As).

#### **GEOLOGY & MINERALIZATION:**

Drilling intersected units of fine- to medium-grained variably altered diorite interlayered with units of dark-green, fine-grained altered andesitic tuff to feldspar porphyritic andesite (phenocrysts are up to 17 mm). Smaller layers of andesite may be xenoliths within the diorite. Layers range from 0.21 to 6.37 m at the top of the hole (to 35.66), followed by an interval of altered volcanics to the end of the hole.

Diorite has been variably altered by silica, epidote, chlorite and locally by carbonate and iron-carbonate. Trace disseminated pyrite occurs within the diorite.

Alteration within the andesitic units is variable, with moderate to intense epidotization and silicification, locally chloritization, and light to moderate carbonate and iron-carbonate alteration. Quartz, carbonate and epidote occur within veins and fractures.

Three main zones of mineralization occur within the altered volcanics. Mineralization within the first zone, from 16.13 to 27.61 m, includes: trace to 10% pyrite, trace to 1% chalcopyrite, trace to 10% massive magnetite locally to 30%), up to 1% arsenopyrite and up to 5% pyrrhotite, in altered andesites(?)/calc-silicates(?). Gold assays average 1.749 g/t (weighted average) over 2.96 m in the zone.

The second zone of mineralization (not as strong as the first), from 49.00 to 57.44 m, contains trace to 5% disseminated pyrite, up to 3% chalcopyrite, trace arsenopyrite, and up to 4% disseminated pyrrhotite. Weighted average for gold calculated over 0.72 m equals 1.22 g/t, as well as 26.1 g/t Ag and 7014 ppm Cu over the same interval. This zone of altered volcanics is crosscut by quartz-carbonate stringers and veins.

The third zone of mineralization, from 70.27 to 84.39 m, contains trace to 5% disseminated pyrite, up to 1% chalcopyrite, trace arsenopyrite, and up to 1% pyrrhotite (locally to 5%), in garnetiferous altered volcanic(?)/calc-silicate(?) rocks.





Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	<b>Other</b>
5233	16.41-16.55	0.14	225 0.005 oz/ton	1.6	567	125	
5234	16.55-16.86	0.31	(0.171 g/t) 1990 0.045 oz/ton	3.3	1274	313	182 Co
5235	16.86-16.97	0.11	(1.54 g/t) 1355 0.040 oz/ton	0.4	100	216	112 Co
5236	16.97-17.19	0.22	(1.37 g/t) 605 0.018 oz/ton	1.3	84	285	184 Co
5237	17.19-17.72	0.53	(0.617 g/t) 3450 0.108 oz/ton	0.5	135	3501	2164 Co
5238	17.72-17.88	0.16	(3.70 g/t) 1502 0.047 oz/ton	2.1	990	2495	1483 Co
5239	17.88-18.46	0.58	(1.61 g/t) 1750 0.072 oz/ton	0.6	78	1459	761 Co
5240	18.46-18.63	0.17	(2.47 g/t) 1620 0.045 oz/ton	0.4	21	3079	1951 Co
5241	18.63-18.89	0.26	(1.54 g/t) 1085 0.033 oz/ton	0.7	52	2009	1218 Co
5242	18.89-19.37	0.48	(1.13 g/t) 350 0.010 oz/ton	0.3	92	716	466 Co
5246	20.34-20.44	0.14	(0.343 g/t) 420 0.012 oz/ton	1.4	154	35	
5249	25.15-25.25	0.10	(0.411g/t) 930 0.025 oz/ton	1.1	222	44	
5250	25.25-25.41	0.16	(0.857 g/t) 5135 0.169 oz/ton	7.6	25 22	174	136 Co
5251	25.41-25.91	0.50	(5.79 g/t) 610 0.019 oz/ton	1.1	318	25	
5254	26.62-26.95	0.33	(0.651g/t) 495 0.016 oz/ton (0.549 g/t)	0.2	12	26	



# SIGNIFICANT INTERSECTIONS (continued)

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	0ther
5255	26.95-27.41	0.46	225 0.005 oz/ton	0.1	10	19	
5270	49.88-50.16	0.28	(0.171 g/t) 540 0.015 oz/ton	3.2	1069	147	
5273	51.39-51.52	0.13	(0.514 g/t) 1850 0.050 oz/ton	4.1	1066	745	
5275	51.80-52.12	0.32	(1.71 g/t) 490 0.012 oz/ton	2.3	1057	167	
5280	53.95-54.20	0.25	(0.411 g/t) 325 0.009 oz/ton	21.1	5725	89	
5281	54.20-54.51	0.31	(0.309 g/t) 1225 0.027 oz/ton	11.2	3506	172	
5282	54.51-54.62	0.11	(0.926 g/t) 4460 0.118 oz/ton	81.0	22136	410	895 Zn
5283	54.62-54.67	0.05	(4.05 g/t) 1610 0.040 oz/ton	8.0	1944	185	
5306	72.92-73.09	0.17	(1.37 g/t) 1910 0.062 oz/ton	1.7	429	195	
5307	73.09-73.19	0.10	(2.13 g/t) 920 0.027 oz/ton	1.7	661	127	
5308 5309	73.19-73.28 73.28-73.55	0.09 0.27	(0.926 g/t) 255 440 0.017 oz/ton (0.583 g/t)	2.0	747 562	80 24	

# Calculated Length Weighted Averages

16.41-19.37	2.96	0.051 oz/ton	
		(1.749 g/t)	
25.15-25.91	0.76	0.051 oz/ton	
		(1.76 g/t)	
53.95-54.67	0.72	0.0355 oz/ton 26.1 ppm	.70% Cu
		(1.22 g/t)	
72.92-73.55	0.63	0.028 oz/ton	
		(0.975 g/t)	



66.

SUMMARY DDH : CA88-11

GRID : McNeil Peninsula

COORDINATES: 7+55N, 0+25E

LENGTH: 94.49 m

DIP: -70°

STARTED: 21/06/88

BLEVATION: 35 m

AZIMUTH: 255°

CASING: 3.05 m

**LOGGED BY** : G. Yip (July 15-16/88)

CORE SAMPLES: 5395-5465

### **OBJECTIVE:**

Drilled from the same set-up as CA88-10, at the same azimuth but a  $70^{\circ}$  dip, to test the extent of the anomalous gold and sulphide bearing horizons intersected in the previous hole (CA88-10).

### **GEOLOGY & MINERALIZATION:**

From 3.05 m to 17.30 m, drilling intersected alternating layers of dark green altered andesite and fine- to medium-grained, greyish-white diorite, ranging in width from 1.71 to 4.69 m. A 34.53 m wide unit of grey, variably altered diorite was encountered to 51.83 m. At 32.07 m, the diorite becomes more intensely altered and metamorphosed, with intense'silica flooding', resulting in a loss of original textures to the bottom of the unit. Drilling intersected a light-green to dark-grey andesite from 51.83 to 94.49 m, with locally intense epidotization and silicification, and minor chloritization and carbonate alteration. Locally within the unit, garnet and diopside was noted.

Mineralization within the hole is generally sparse, with two zones of concentration. The first zone, from approximately 13.5 to 17.3 m, contains trace to 4% pyrite, trace to 5% magnetite, up to 1% chalcopyrite, and trace to 5% pyrrhotite. The second zone (52.7 to 58.0 m) includes trace to 3% disseminated pyrite, trace to 1% disseminated chalcopyrite, and trace disseminated pyrrhotite. Both zones of mineralization occur in light green, intensely altered volcanic(?)/calc-silicate(?) rocks.

Sample			Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	0 <b>th</b> er
5404	14.77-15.07	0.30	420 0.012 oz/ton	10.1	2885	223	
5406	15.49-16.32	0.83	(0.411 g/t) 325 0.011 oz/ton	0.4	66	55	
5443	56.78-57.27	0.49	(0.377 g/t) 360 0.008 oz/ton	15.1	3541	105	300 Zn
5449	61.01-61.28	0.27	(0.274 g/t) 640 0.014 oz/ton	0.4	128	18	
5455	62.36-62.71	0.25	(0.480 g/t) 250 0.009 oz/ton	1.7	540	43	
5456 5457	66.20-66.75 66.75-67.12	0.55 0.37	(0.309 g/t) 12 147	5.3 29.3	2275 12264	31 230	





SUMMARY DDH : CA88-12

GRID : McNeil Peninsula

 COORDINATES : 8+55N, 0+65W
 ELEVATION: 32 m

 LENGTH : 93.57 m
 DIP : -45°
 AZIMUTH : 260°

 STARTED : 22/06/88
 STOPPED: 23/06/88
 CASING : 1.52 m

LOGGED BY : G. Yip (July 16/88)

**CORE SAMPLES:** 5527-5582?

### **OBJECTIVE:**

To test a moderate to strong, possibly northern extension of chargeability Zone F which has associated resistivity lows. A small weak arsenic in soil anomaly occurs in this area also. A 'mineralized zone' occurs within an adit (PT-5) located between lines 9+00N and 8+50N at 1+75W. This drillhole would test a possible extension of this zone.

### **GEOLOGY & MINERALIZATION:**

Predominantly fine- to medium-grained, dark green to grey, variably altered diorite, with 0.98 to 2.13 m wide layers(?) of fine-grained, medium green andesitic tuffs, were intersected from 1.52 m to 93.57 m. (The andesitic layers may be xenoliths within the diorite.) The diorite has been altered by chlorite, epidote, quartz, and locally by carbonate and iron-carbonate. Locally, stringers of quartz, carbonate and epidote crosscut the rock. Trace to 3% pyrite and localized traces of pyrrhotite occur throughout the drillhole.

# SIGNIFICANT INTERSECTIONS:

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Other
5534	21.25-21.51	0.26	830 0.028 oz/ton (0.960 g/t)	0.4	215	239	
5535	21.51-21.94	0.43	665 0.024 oz/ton (0.823 g/t)	0.1	52	142	

### Length Weighted Average





**GRID** : McNeil Peninsula

COORDINATES: 8+55N, 0+65W

LENGTH: 91.14 m

DIP: -70°

STARTED: 23/06/88

CASING: 1.83 m

**LOGGED BY** : G. Yip (July 17-18/88)

**CORE SAMPLES:** 5466-5526

### **OBJECTIVE:**

Drilled from the same set-up as CA88-12 in the same direction but at a  $70^{\circ}$  angle, to test the extent of the anomalous gold zone intersected in the previous hole between 21.25 and 21.94 m.

# **GEOLOGY & MINERALIZATION:**

Dark-grey to medium-green, fine- to medium-grained altered diorite was intersected from 1.83 m to 91.14 m (end of hole). The diorite is locally intensely altered by quartz and epidote to the point that original textures are not visible. From 27.62 m to the bottom of the drillhole, the diorite is moderately foliated, giving the rock a banded appearance. The rock is locally cut by quartz carbonate and epidote stringers, and is locally brecciated. Trace to 5% pyrite occurs disseminated throughout. From 27.62 to 28.11 m is a unit of medium- to dark-grey, fine-grained, intensely silicified volcanic(?) with trace to 1% pyrite and chalcopyrite. At 78.01 to 78.96 m is a medium green, fine-grained feldspar porphyritic dyke.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	Other
5472	27.76-27.89	0.13	230 0.009 oz/ton (0.309 g/t)	1.8	835	178	



SUMMARY DDH : CA88-14
GRID : Main Grid

 COORDINATES: 4+40N, 1+80E
 ELEVATION: 100 m

 LENGTH
 : 133.20 m
 DIP
 : -45°
 AZIMUTH
 : 128°

 STARTED
 : 25/06/88
 STOPPED: 29/06/88
 CASING
 : 4.88 m

LOGGED BY : C. Naas (July 16/88)

CORE SAMPLES: 5827-5834

### **OBJECTIVE:**

To test the extent of the anomalous gold and sulphide bearing massive magnetite intersected during the previous phase in DDH88-6 and 7.

# **GEOLOGY & MINERALIZATION:**

Medium- to coarse-grained migmatitic diorite, with agmatitic texture, was intersected from 4.88 m to 133.20 m, with localized areas of finer-grained, rock resembling volcanics(?). Crystals within the diorite form a crude foliation between  $40^{\circ}$  and  $50^{\circ}$  to core axis. Small shears and faults are common throughout the unit, as are quartz and epidote alteration and veining. Trace pyrite is found disseminated locally within the unit. A layer of intensely altered migmatitic diorite was encountered between 33.29 and 36.74 m; textures are locally nonexistent. The diorite has been flooded with quartz and carbonate, and contains epidote, quartz and carbonate filled veins.

From 107.89 to 108.01 m, a medium-grained quartz-biotite dyke cuts the diorite, and contains 2% euhedral tourmaline crystals with 1% pyrite. A layer of andesitic ash tuff occurs from 109.21 to 112.88 m and 117.50 to 120.70 m, with quartz and carbonate stringers common throughout.

### SIGNIFICANT INTERSECTIONS:

Geochemical analysis of samples taken throughout the drillhole returned only background values for Au, Ag, Cu, and As.





SUMMARY DDH : CA88-15

GRID : Main Grid

COORDINATES: 3+90N, 1+45W

LENGTH: 99.67 m

DIP: -50°

STARTED: 29/06/88

STOPPED: 01/07/88

ELEVATION: 110 m

AZIMUTH: 055°

CASING: 12.19 m

LOGGED BY : G. Yip (July 18/88)

CORE SAMPLES: 5843-5847

# **OBJECTIVE:**

This hole was drilled from the same set-up as DDH88-1, 2 and 3 during the previous phase of exploration which were drilled at  $310^{\circ}$ ,  $310^{\circ}$  and  $130^{\circ}$  respectively. CA88-15 was drilled in a northeastern direction to test the possible continuity and extent of the massive magnetite horizon encountered in DDH88-6 and 7.

### **GEOLOGY & MINERALIZATION:**

Medium- to fine-grained, light to medium-grey and white migmatite was intersected from 12.19 m to 32.56 m, with a feldspar porphyritic interval between 21.17 and 23.47 m. The migmatite has been locally epidotized and contains areas of intense silicification where original textures are obscured. Stringers of carbonate and quartz occur randomly throughout the unit.

From 32.56 to 56.71 m is a unit of dark green, fine-grained diorite cut by carbonate, quartz, and epidote filled stringers. Locally, the diorite has been intensely altered (quartz? and epidote?), with no original textures remaining and contains trace disseminated pyrite.

The final migmatitic unit to 99.67 m has the same characteristics as the migmatite at the top of the drillhole.

### SIGNIFICANT INTERSECTIONS:

Geochemical analysis of samples taken throughout the drillhole returned only background values for Au, Ag, Cu, and As.



SUMMARY DDH : CA88-16
GRID : Main Grid

 COORDINATES
 : 0+15S, 1+30W
 ELEVATION: 225 m

 LENGTH
 : 124.05 m
 DIP
 : -50°
 AZIMUTH
 : 100°

 STARTED
 : 02/07/88
 STOPPED: 05/07/88
 CASING
 : 1.52 m

**LOGGED BY** : C. Naas (July 18, 1988)

CORE SAMPLES: 5583-5697

#### OBJECTIVE:

To test the downward extent of the skarn zones within the trenches located in the area between L0+00 and L1+00S near the baseline as well as gold and arsenic in soil anomaly.

### GEOLOGY & MINERALIZATION:

Overburden (1.52 m) overlies a 33 m interval of grey to green-grey volcaniclastic rock comprising mainly andesitic(?) ash tuff and crystal (feldspar) lithic tuff. Epidote, quartz and carbonate stringers are common throughout. A 4-cm wide quartz vein cuts the volcaniclastic units at 4.54 to 4.83 m however it contains no anomalous values.

Underlying the volcaniclastic unit is a 48.7 m zone termed 'skarn'. The 'skarn' layer is gradational into the contacts above and below by a few metres. Original lithic textures are not discernible. The skarn appears to be predominantly limestone and diopside with possible limy volcanic interbeds. Trace to 1% pyrite occurs throughout. Arsenopyrite blebs appear to occur with the diopside. A zone of quartz-carbonate veins including purple quartz (possibly amethyst) and up to 15% garnet, occurs from 76.31 to 79.76 m. From 79.7 m to 82.51 m calcareous volcanics(?) are cut by quartz and rare amethyst(?) Up to 2% disseminated pyrite occurs in a zone where up to 10% purple quartz was noted. Anomalous gold was not contained within this sample however.

Medium-grained grey diorite occurs from 82.51 to 124.05 m (end of hole). At the upper contact, the diorite is finer grained and extremely altered. Purple quartz, carbonate and epidote occur within 0.5 m of the upper contact. The diorite becomes medium-grained and locally migmatitic and contains stringers of quartz and epidote. Only local to rare epidote and carbonate alteration occur toward the end of the hole. Two 1-cm wide quartz veins occur (i) within the interval 89.02 to 89.24 m and (ii) within the interval 91.26 to 91.46 m. The first one contains anomalous gold (101 ppb), arsenic (319 ppm) and cobalt (149 ppm). The location of the second quartz vein and its sample number is not certain from the drill log, but it does not appear to carry anomalous concentrations of these elements.

The highest gold concentrations occur in the interval from 48.87 to 54.00 m. Here trace to 3% arsenopyrite and up to 1% pyrrhotite and pyrite occur in diopside and purplish-white limestone which contains up to 10% garnet.





Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	<b>Other</b>
5610 5634 5635 5642	19.81-20.15 39.81-40.81 40.81-41.08 49.97-50.27	0.34 1.00 0.27 0.30	1 1 623 0.019 oz/ton	7.0 6.5 2.6 3.4	18 481 138 12	19 544 556 13324	1467 Zn 522 Zn 332 Co
5643	50.27-50.48	0.21	(0.651 g/t) 1272 0.038 oz/ton (1.30 g/t)	3.7	6	25 638	415 Co
5644 5679 5690	50.48-51.20 80.16-81.86 89.02-89.24	0.72 1.70 0.22	45 54 101	0.1 0.4 1.0	1 103 180	1366 286 319	149 Co
Calcula	ted Length We	ighted Av	erage:				
	49.97-50.48	0.51	890	3.5	-	18395	366 Co





SUMMARY DDH : CA88-17 GRID : Main Grid

 COORDINATES:
 0+15S, 1+30W
 ELEVATION:
 225 m

 LENGTH:
 133.20 m
 DIP:
 -70°
 AZIMUTH:
 100°

 STARTED:
 05/07/88
 STOPPED:
 06/07/88
 CASING:
 2.13 m

LOGGED BY : C. Naas (July 19/88)

**CORE SAMPLES:** 5698-5765

### **OBJECTIVE:**

Drilled from the same setup as CA88-16 at a  $-70^{\circ}$  angle to test the extent of the mineralized zone intersected at 49.97 to 50.48 m in the previous hole.

# **GEOLOGY & MINERALIZATION:**

Underlying 2.13 m of overburden is the volcaniclastic unit intersected in the upper DDH CA88-16. At 8.23 m, a 9 cm wide quartz vein with 1% pyrite cuts the tuffaceous unit however no anomalous concentrations of base or precious metals occur in the sample.

The 'skarn' horizon occurs from 26.50 to 81.97 m and appears to be the same interval intersected in DDH CA88-16. Trace to 1% pyrite occurs as well as local pyrrhotite, arsenopyrite and garnet which is associated with weakly anomalous (28 ppb) gold and arsenic in one of the samples (5717).

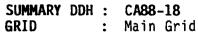
The anomalous gold occurs within a 'massive diopside' interval which contains trace to 1% pyrite and pyrrhotite and up to 3% arsenopyrite. Anomalous copper and cobalt as well as weakly anomalous silver occurs locally in this zone from 62.63 to 65.71 m.

Medium-grained diorite occurs from 81.97 to 133.20 m with zones resembling migmatites. Zones of quartz, carbonate and epidote alteration occur throughout to the end of the hole.

Near the upper contact of the diorite at 80.81 to 81.64 m anomalous gold (53 ppb), 1778 ppm As and 546 ppm Zn occur just below an interval rich in purple quartz.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (p <b>pm</b> )	<b>Other</b>
5737	62.63-63.47	0.84	14	0.1	11	1870	
5738	63.47-63.77	0.30	45	0.1	3	4242	
5739	63.77-64.23	0.46	234	1.8	524	37424	266 Co
5740	64.23-65.23	1.00	8	0.2	63	2031	
5741	65.23-65.71	0.48	17	0.8	243	1190	
5759	80.81-81.64	0.83	53	0.8	212	1778	546 Zn





 COORDINATES
 : 0+15S, 1+30N
 ELEVATION: 225 m

 LENGTH
 : 114.91 m
 DIP
 : -90°
 AZIMUTH
 : n/a

 STARTED
 : 06/07/88
 STOPPED: 08/07/88
 CASING
 : 1.52 m

LOGGED BY : C. Naas (July 20/88)

**CORE SAMPLES:** 5766-5826

# **OBJECTIVE:**

Drilled vertical from the same set-up as CA88-16 and 17 to test the extent and dip of the skarn horizon.

# **GEOLOGY & MINERALIZATION:**

Volcaniclastic rock as intersected in the two previous holes was intersected from 1.52 to 27.25 m (see description in summary for CA88-16). The skarn zone occurs from 27.25 m to 82.18 m. A massive diopside interval from 27.90 m to 28.99 m containing 1 to 2% pyrite, 2 to 3% pyrrhotite contains anomalous gold (59 ppb) and 732 ppm Zn (sample 5767).

Massive diopside with faint 'banding' and 1% pyrite, 2 to 3% arsenopyrite at 51.95 to 52.47 m contains anomalous gold (99 ppb), arsenic (15007 ppm) and 234 ppm Co over 0.52 m.

Medium-grained grey diorite occurs from 82.18~m to the end of the hole at 124.05~m. Zones of quartz-epidote alteration occur over narrow widths within the diorite.

Sample	Interval (m)	Length (m)	Au (ppb)	Ag (ppm)	Cu (ppm)	As (ppm)	0ther
5767	27.90-28.99	1.09	59	0.3	18	296	732 Zn
5768	28.99-29.35	0.36	22	0.1	2	445	
5770	29.67-30.22	0.55	20	1.2	5	226	
5778	41.89-42.79	0.90	14	0.2	76	2505	
5788	51.95-52.47	0.52	99	1.5	131	15007	234 Co





### 6.0 PROPOSED WORK PROGRAM

# 6.1 Plan

The following is an outline of the Phase IV recommended exploration program. On the Main Grid, it will include 4.2 line km of soil sampling, 15.0 line km of magnetometer survey and 1.5 km of road building.

A total of 510 m is to be drilled on the Main Grid area in the following holes:

Station	Azimuth	Dip	Length
L2N 5+00 L2N 5+00	090 090	-50 -80	80 m 80 m
L1+50N 2+25W	057	-80	150 m
New Grid			<u>200</u> m
Tota	al Length		510 m

These holes are to test the extension of the skarn horizon which was intersected in DDH's CA88-16, 17 and 18. The DDH's located at L2N 5+00W are to test the coincident Au geochemistry anomaly, IP anomaly, and massive magnetite outcrop.

On the McNeil Peninsula a 6.0 km magnetometer survey is intended to cover the existing grid. A skid trail will be constructed northwest across the skarn horizon from L3+50N to L8+50N, to speed up the drill moves.





Drill targets are as follows:

Station	1	Azimuth	Dip	Lengt	th
L8+50N	1+15W	270	-50	80	m
11		-	-90	80	m
L8+00N	0+75W	270	-45	80	m
11		270	-70	80	m
L7+00N	0+00	270	-45	80	m
11		270	-70	80	m
L6+50N	0+00	270	-45	80	m
#		270	-70	80	m
L6+00N	0+25E	270	-45	80	m
11		270	-70	80	m
L5+50N	0+40E	270	-45	80	m
11		270	<del>-</del> 70	80	m
L5+00N	0+50E	270	-45	80	m
11		270	<del>-</del> 70	80	m
L2+50N	1+40E	270	-45	80	m
71		270	-70	80	m
L2+00N	0+75W	200	-45	100	m
11		200	-70	100	m
	Total	Length		1480	m

The objective of these DDH's is to define in detail the extent of the skarn horizon which contained gold values of up to 7.66 g/t Au over 1.03 m. The DDH's at L2+00, 0+75W are to test the strike, dip and width of the quartz veins which contained up to 390.6 g/t Au and 278.1 g/t Ag.



# 6.2 Budget

Total Cost, say	\$500.000
Contingency, 15%	61,435
Administration, 15%	40,000
Report Preparation	14,000 31,160
Analyses Consulting	25,870
Road Building	30,000
Drilling	200,000
Equipment Rental	9,675
Transportation, Communication, Supplies	1,900
Support Costs	11,660
	59,300
Personnel	•
Mobilization/Demobilization	\$ 15,000

# 6.3 Schedule

WEEK	1	2 ]]]]]]]]	3	111111	5	6	7	8	9	10	11	12	13	14
Mobilization													111111	
Road Building				_										
Soil Survey		_												
Magnetometer Survey														
Drill Prep														
Geology		_												
Drilling														
Demobilization										_				
Report														





### 7.0 CONCLUSIONS

- 1. The Contact-Au property is underlain by Upper Paleozoic Sicker Group volcanics and sediments, Vancouver Group volcanics intruded by Westcoast Diorite and metamorphosed during Mesozoic time to form the Westcoast Crystalline complex. Feldspar porphyritic dykes crosscutting the rocks of this complex are probably of Tertiary age.
- 2. Gold occurs in both quartz veins and in skarn horizons.

  The quartz veins are located in the southwest portion of McNeil Peninsula. The skarn horizons are located on both the Main Grid and McNeil Peninsula.
- 3. The high grade quartz veins are narrow, discontinuous, sulphide bearing which strike northwesterly with a moderate northeasterly dip. They contain up to 390.6 g/t Au, 278.1 g/t Ag, 20899 ppm As, 16577 ppm Pb, and 7978 ppm Zn.
- 4. Grab samples from the skarn horizon on McNeil Peninsula returned up to 4.25 g/t Au, 702.2 g/t Ag, 89624 ppm Cu, 970 ppm Pb and 2705 ppm As. From the Main Grid, grab samples returned up to 6.6 g/t Au, 149.9 g/t Ag, 54,828 ppm Cu, 21,313 ppm Zn, 13,089 ppm As, and 1147 ppm Co.
- 5. The soil survey on both the Main Grid Detail and the McNeil Peninsula Grid outlined multi-element anomalies including gold and arsenic. On McNeil Peninsula, the soil anomalies corresponded well with the chargeability highs + resistivity lows. These coincident anomalies line up along a northwest trend from L2+00N, 1+00E to L9+00N, 1+50W.



6. Drill testing of these coincident geophysical and soil geochemical anoamlies was successful in most cases as sulphide bearing skarn horizons were intersected. Significant intersections from the Phase III drill program on McNeil Peninsula include:

Drillhole	Interval (m)	Width (m)	g/t	Au (oz/ton)		Other (ppm)		
CA88-6	54.15-54.82	0.68	0.96	(0.028)				
CA88-7	44.06-44.57	0.51	3.48	(0.102)				
CA88-8 incl.	29.38-32.98 31.36-31.55	3.60 0.19		(0.018) (0.104)	4.3	Ag	986	Zn
	31.73-35.51 34.32-35.35	3.78 1.03		(0.067) (0.223)	6.6	Ag	974 86000	
CA88-10 incl.	16.41-19.37 17.19-17.72	2.96 0.53		(0.051) (0.108)			950 2164	
incl.	25.15-25.91 25.25-25.41	0.76 0.16		(0.051) (0.169)	7.6	Аg	2522	Cu
	53.95-54.67	0.72	1.22	(0.035)	26.1	Ag	7014	Cu
	72.92-73.55	0.63	0.99	(0.029)				
CA88-12	21.25-21.94	0.69	0.87	(0.026)				

Drillhole CA88-7 contained visible gold within a 3 cm zone of massive diopside.

7. Factors possibly controlling gold mineralization appear to be (i) large scale northwest structures such as the lineament which parallels the high grade quartz veins in the southwest McNeil Peninsula Grid area, (ii) sulphide bearing skarn horizons especially within massive diopside and calc-silicates, and (iii) Tertiary intrusives.



- 8. The presence of anomalous levels of gold is accompanied by anomalous levels of arsenic. Arsenic does, however, occur independently from gold.
- 9. Massive magnetite occurs within the skarn horizon but appears to be pod-like in shape. Locally, anomalous levels of gold have been returned from samples taken from the massive magnetite which are located on both the Main Grid and McNeil Peninsula.
- 10. A structural analysis of orientations of quartz veins, faults, joints and intrusions indicate that the average strike of quartz veins  $320^{\circ}/50^{\circ}$ NE which is the general strike of the auriferous quartz veins on southwest McNeil Peninsula.

The average strike of faults is approximately 243° with both northwest and southeast dips. A separate episode is interpreted to strike 280° with a 50° northerly dip which approximately parallels the high grade quartz veins. Leucocratic dykes are approximately parallel with the regional structural trend.

- 11. Whole rock analyses indicate that the tuffaceous units are basaltic in composition.
- 12. The geological environment where gold occurs on the Contact-Au property is similar to the Indian Chief deposit located 20 km to the northwest. The Indian Chief deposit is in a skarn resulting from Tertiary plutonism. It is in Sicker Group limestone and volcanic rocks, intruded by granodiorite and by mafic dykes. Mineralization occurs at limestone/granodiorite contacts. Average assay values are 1.5% Cu, 0.3 g/t Au, and 23.3 g/t Ag. Total production before 1981 was 73,593 t, with 1,102,388 kg Cu, 22,456 g Au, and 1707 kg Ag (Muller, et al., 1981).

81.



### 8.0 RECOMMENDATIONS

The following recommendations are based on conclusions and favourable results from work done on the Contact-Au property during previous phases:

- 1. The Main Grid should be extended in a westerly direction to 12+00W along lines 1N, 0, 1S, 2S, 3S and 4S. The extended grid will provide additional coverage to the west side of the property which may host skarn mineralization continuous with the main zone.
- 2. The extended Main Grid be covered by geologic mapping, prospecting, rock sampling and a magnetometer survey. The magnetometer survey would be an accurate cost-effective method for outlining magnetite bearing skarn horizons, and should be run over the entire existing grid. The extended grid lines should also be soil sampled at 25 m intervals. A magnetometer survey is also recommended for the McNeil Peninsula Grid.
- 3. The 2.3 km road, now approximately half completed, from Ahousat to the Main Grid area, must be completed in order to provide better property access.
- 4. The coincident Au, Ag, Cu, Zn, Co anomaly of the Main Grid Detail should be drill tested, in view of the presence of massive magnetite and a possible projection of the skarn horizon. The extent of the skarn zone beneath the volcanics between lines 1N and 2N should be tested.
- 5. A skid trail should be constructed on the McNeil Peninsula over the skarn horizon in a northwest direction. This will provide fresh outcrop exposure in addition to easy access for drillsite construction.



- 6. Infill drilling between existing holes, especially on lines 5N, 6N and 7N, will test the extent of the mineralized horizons between CA88-8, 9, and CA88-10, 11, on the McNeil Peninsula. A drill should be set up 50 m west of CA88-12, 13, and a shallow hole drilled west to test the soil and IP anomalies and the magnetite bearing skarn horizon, targeted in CA88-12 and 13. It is also recommended that a drill pad be constructed just north of L2+50, 0+75W and one or more holes be drilled at an azimuth of approximately 200°, to intersect the high grade guartz veins at depth.
- 7. The lineament which trends in a northwesterly direction should be traversed and closely examined for potential association mineralization as it strikes parallel to the high grade quartz veins.
- 8. The Teritiary(?) leucocratic dykes should be closely examined in areas where they cut the skarn horizons as they may be associated with gold mineralization. Tertiary dykes are an important control in terms of gold mineralization and are the focus of exploration in many areas on Vancouver Island.
- 9. The cost estimate for the proposed Phase IV program is \$500,000.

Respectfully submitted

MPH Consulting Limited

C. Naas, B.Sc.

Vancouver, B.C.

September 26, 1988



#### CERTIFICATE

- I, C. Naas, do hereby certify:
- 1. That I presently hold the position of Project Manager/ Geologist with MPH Consulting Limited.
- 2. That I am a graduate in geology of Dalhousie University (B.Sc., 1984).
- 3. That I have practised geology in mineral exploration since 1981.
- 4. That the opinions, conclusions and recommendations contained herein are based on field work carried out on the claims by myself and other MPH Consulting Limited personnel.
- 6. That I own no direct, indirect, or contingent interest in the subject property or shares or securities of Parallax Development Corporation or associated companies.

C. Naas, B.Sc.

Vancouver, B.C. September 26, 1988



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Appendix I

LIST OF PERSONNEL

and

STATEMENT OF EXPENDITURES



# LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

The following expenses have been incurred on the Contact Au property as defined in this report for the purposes of mineral exploration, between May 10 and July 26, 1988.

# Personnel:

T.G. Hawkins, PGeol., Consulting	Geologist S10,800.00
•	310,800.00
C. Naas, BSc., Project Manager	00 560 50
81.5 days @ 375	30,562.50
T. Hayes, Field Coordinator	
13.5 days @ 350	4,725.00
K. Lund, BSc., Geophysicist	
12.2 days @ 350	4,270.00
R. Lindholm, Operator	
10 days @ 350	3,500.00
G. Yip, BSc., Geologist	
88.5 days @ 250	22,125.00
B. Thomae, BSc., Geologist	·
1.25 hrs @ 35	43.75
21.75 days @ 350	7,612.50
G. Charlie, Field Assistant	,,0.2.50
24 days @ 150	3,600.00
J. Lang, Field Assistant	3,000.00
	1 250 00
9 days @ 150	1,350.00
T. Styan, Field Assistant	1 075 00
8.5 days @ 150	1,275.00
A. van Volsen, Field Assistant	4 000 00
8 days @ 150	1,200.00
J. Zackodnik, Field Assistant	
22 days @ 150	3,300.00
K. Clarke, Field Assistant	
10 days @ 150	1,500.00
S. Blacquiere, Office Assistant	
0.75 hrs @ 20	15.00
J. Getsinger, PhD., Geologist	
9 days @ 350	3,150.00
J. Adams, Faller	
1 day @ 150	150.00
T. Huebner, Faller	
1.25 days @ 150	187.50
S. Clarke, Field Assistant	230
28 days @ 150	4,200.00
L. Carlson, Field Assistant	.,200100
45.5 days @ 150	6,825.00
73.3 days & 130	0,023.00



Personnel cont.	•
R. Bonnar, Field Assistant	
32.5 days @ 150 \$ 4,875.00	
T. Neale, BSc., Geologisit	
1 hr @ 50 50.00	
10 days @ 350 3,500.00	
P. Prevost, Field Assistant	
3 days @ 150 450.00 G. Lorenzetti, BSc., Geologist	
1.5 hrs @ 35 52.50	
9 days @ 250 2,250.00	
	\$120,693.75
	\$120,000.75
Food & Accommodation	20 504 25
519.75 mandays @ \$55 (including 133 mandays for	28,586.25
drilling crew)	
diffing crew)	
Transportation (truck rental, gas,	
airfares, ferry, etc.)	5,563.07
Equipment Rental	14,991.26
D' 1 D '11'	10/ 022 67
Diamond Drilling	124,933.67
Helicopter	29,290.14
nerroopeer	20,200011
Road Building Equipment	14,141.50
Miscellaneous (supplies, phone, courier,	
freight, etc.)	5,623.73
. 1	
Analyses:	
330 soils (Au, ICP) @ 11.60 \$ 3,828.00 76 rocks (Au, ICP) @ 13.75 1,045.00	
5 rocks (whole rock @ 9.00 45.00	
by ICP)	
2 rocks (thin section)@ 103.75 207.50	
870 core (Au, ICP) @ 13.75 11,962.50	
16 (Au + Ag assay) @ 12.00 192.00	
65 (Au assay) @ 8.50 552.50	
1 (Ag assay) @ 7.00 7.00	
5 (Ag assay) @ 8.50 <u>42.50</u>	
	17,882.00
Report Costs (Typing, Drafting,	
Copying, etc.)	7,082.59
Administration	30,229.59
	\$399,892.25
	0000,002.20



Appendix II

ROCK SAMPLE DESCRIPTIONS

and

LITHOGROCHEMICAL RESULTS

Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu pp <b>m</b>	Other ppm
9001	Location: Sample Type: Rock Type:	PT-2, Contact 1 claim Chip from outcrop, approx. 1 m wide Altered tuff	640 Au assay		1042 oz/ton 7 g/t)	220	36.84% Fe
	10% pyrite in are numerous	een, altered, fine-grained tuff(?) with masses ranging from 2 to 10 mm. There voids lined with a rusty brown residue. I surface varies from black to rusty ted.					
9002	Location: Sample Type: Rock Type:	75 m S of L8+50N on E side of peninsula; Contact l claim Grab from outcrop Tuff	1	0.1	2	23	
	green subangu	ne-grained tuff with approx. 10% dark lar lithic fragments in a medium green to 7% disseminated pyrite throughout.					
9003	Location: Sample Type: Rock Type:	5 m N of L3+50N on W side of peninsula; Contact l claim Grab from outcrop Tuff (basic(?))	3	0.2	18	89	
	3 to 5% black approx. 1.0 mblebs 1 to 3	eained, dark grey-black ash tuff(?) with a mafic fragments ranging from <0.5 mm to mm. There are numerous "flowy" whitish mm in size, and a trace of finely chalcopyrite(?).	·				
9004	Location: Sample Type: Rock Type:	McNeil Peninsula; shoreline at L2N Grab from outcrop Quartz vein	95	0.1	887	60	
	vuggy. Dark 0.2 cm wide,	quartz vein. Middle of quartz vein is grey lines in middle of quartz vein are there are 2 to 3% fine-grained sulphides					

of arsenopyrite, pyrite and trace chalcopyrite.



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9005	Location: NcNeil Peninsula; shoreline near Sample Type: Grab from outcrop Rock Type: Quartz vein		0.8 assay 0.07 (2.4	16480 1 oz/ton 3 g/t)	26	870 Zn
	A 3 cm wide quartz vein. Middle and edges are grey, ranging from 3 to 5 mm thick of fine-graisulphides. Sulphides include sphalerite, arsenand pyrite. Inside quartz vein weathers rusty	ned opyrite,				
9006	Location: 53 m N of boy on peninsula; Contaclaim	ct l l	0.1	2	136	
	Sample Type: Grab from outcrop Rock Type: Ash tuff (basic(?))					
	Dark grey-black ash tuff with approx. 5% black angular mafic crystal fragments. Several cross and subparallel fractures (<0.5 mm) filled with milky white quartz. Traces of pyrite(?) and arpyrite(?) as fracture fill and disseminated grawithin the host.	cutting massive seno-				
9007	Location: 24 m N of Ll+00 on the W side of peninsula, Contact l claim	the 9	0.1	8	41	
	Sample Type: Chip from outcrop, approx. 25 cm Rock Type: Quartz vein	wide				
	Massive, grey-green quartz with crosscutting from (approx. 0.5 mm) some of which are filled with Epidote also occurs as blebs (0.5 to 1.0 mm). a trace of very finely disseminated pyrite.	epidote.				



Sample Number		Description	Au ppb	Ag ppm	As pp=	Cu pp <b>m</b>	Other ppm
9008	Location: Sample Type: Rock Type:	137 m N of L1+00N on the W side of the peninsula, Contact 1 claim Chip from outcrop, 15 to 20 cm wide Quartz vein	119	1.1	25	902	
	(hanging wall to fracture s altered dark ation (approx	essive quartz with approx. 30% wall rock  ). Quartz appears to be layered parallel surface. Wall rock appears to be an green tuff(?). Patches of epidote alter-  1.5 cm) within quartz vein. Traces of sinated pyrite in both the vein and wall					
9009		7 m N of L2+00N on W side of peninsula; Contact 1 claim Chip from outcrop; approx. 1.5 cm wide Quartz vein and white with approx. 25% massive pyrite % disseminated masses of arsenopyrite.		46.3 say 1.468 (50.3 say 1.30 (44.5	612	11009 Pb 20337 Zn 127 Cd 103 Sb	
9010	to be foliate dark green fi white quartz approx. 7 mm	2 to 7 m N of L2+00 on W side of peninsula; Contact 1 claim Chip from outcrop; approx. 10 cm wide Tuff(?)  ack, very fine-grained tuff. Rock appears ad. The foliation is defined by light and ne-grained fragments and elongated grey- blebs. There is one white quartz stringer wide. Traces of very finely disseminated ite(?). Chip of approx. 10 cm from vein	2470 Au ass	•	2037 3 oz/ton 3 g/t)	233	1375 Pb 4543 Zn



Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu ppm	Ot F
9011	silicified wa	13 m N of L2N on W side of peninsula; Contact l claim Chip from outcrop; 7 to 10 cm wide Quartz vein rtz vein with approx. 50% altered and 11 rock(?) fragments (1 to 2 cm) approx. ite and 2 to 3% pyrite(?).	Au ass	ay 11.38 (390. ay 8.11	20889 8 oz/ton 45 g/t) oz/ton 06 g/t)	1212	165 79
9012	Contains 20 t and 20 to 25% fine-grained epidote-carbo	Crystal lithic tuff  m hanging wall 30 cm from sample 9011. o 25% white <1.5 mm feldspar crystals <1 mm mafic clasts in a dark green matrix. Sample contains numerous nate stringers ranging from <0.5 mm Contains trace fine-grained dissem-	3210 Au ass	1.3 ay 0.085 (2.91	1443 oz/ton g/t)	121	422 6
9013	epidote, carb ranging from within quartz	McNeil Peninsula; shoreline at L2N Grab from outcrop Altered volcanics  e green, extremely altered volcanics to conate and quartz. Quartz stringers 3 to 8 mm are common. Dark grey lines veins are fine-grained sulphides of calena, pyrite, chalcopyrite and arseno-	3250 Au ass	2.2 ay 0.085 (2.91	9987 oz/ton g/t)	155	5 17



Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9014	Location: Sample Type: Rock Type:	71 m N of L4+5N on W side of peninsula; Contact 1 claim Grab from outcrop Tuff		(1.40		3164	101 Co
	mafic fragmen	ack, fine-grained tuff with 10% angular its (approx. 0.5 mm) and 3% epidote in Epidote also as masses (<0.5 to 10 mm). occurs as fracture fill (approx. 3%) and ed grains.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3, -7		
9015	Location: Sample Type: Rock Type:	71 m N of L4+5N on W side of peninsula; Contact l claim Grab from outcrop Tuff	112	17•1	288	3744	255 Zn 138 Co
	blebs of whit 3 to 5% angul fractures (0.	ery fine-grained tuff with approx. 5% ish quartz, ranging from 0.5 to 5 mm and ar mafic fragments. Few crosscutting 5 to 1.0 mm) filled with quartz. Contains minated chalcopyrite.					
9016	Location: Sample Type: Rock Type:	76 m N of L4+5N on W side of peninsula; Contact l claim Chip from outcrop, approx. 15 cm wide Quartz vein		(0.58 y 0.32		2252	1108 Co 365 W
	chalcopyrite	green massive quartz carbonate with 3% in masses (1 to 10 mm) and 1% pyrrhotite s. Contains 5 to 7% host rock.		,	o, −,		



Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu pp=	Other ppm
9017	Location: Sample Type: Rock Type:	76 m N of L5 stn l+00W; Contact l claim Chip from outcrop, approx. 15 cm wide Altered tuff(?)	1130 Au assay	0.7 y 0.029 (0.99		544	414 Co
	with several	ack, very fine-grained altered tuff(?) whitish blebs of quartz (<1.0 cm). Contite in masses ranging from 0.5 to 25 mm. #9016).					
9018	Location: Sample Type: Rock Type:	184 m N of L7+5N stn l+15W on peninsula; Contact l claim Grab from outcrop Tuff	32	0.2	26	499	
	angular fragm fractures fil	een, fine-grained tuff. Contains 1% mafic(?) ments and 1% whitish flecks. Subparallel led with quartz and minor amounts of epidote. finely disseminated arsenopyrite and chalco-					
9019	Location: Sample Type: Rock Type:	18 m S of LlON stn O+74E; Contact 1 claim Grab from outcrop Altered tuff(?)	55	0.1	122	28	
	epidote with	and grey tuff(?). Intensely altered to parallel whitish veins of quartz-carbonate 15% finely disseminated pyrite parallel to					
9020	Location: Sample Type: Rock Type:	72 m N of L9N stn l+56E on peninsula; Contact l claim Grab from outcrop Altered tuff(?)	87	1.2	169	273	
	vein. Tuff i quartz portio	een altered tuff(?) and grey-white quartz is black and altered to epidote. The on contains angular tuff(?) fragments a and 1 to 2 mm sized patches of epidote.					1

Contains 3% finely disseminated pyrite throughout.



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9021	Location: East side of McNeil Peninsula Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	2	1.1	16	504	
	Light blue-green altered volcanic(?). Very intensely silicified, no original textures visible. With 3 to 5% disseminated pyrite. Weathered surface is rusty brown. Sample taken from shear at 046/66°S.					
9022	Location: East side of McNeil Peninsula Sample Type: Grab from outcrop Rock Type: Altered volcanic	6	0.2	2	177	
	Dark grey-brown altered volcanic(?). Very intensely silicified, no original textures visible. With hairline fractures with rusty halos and 3 to 5% disseminated pyrite. Weathered surface is orange-brown in colour. Sample taken from fault at 099/80°N.					
9023	Location: East side of McNeil Peninsula Sample Type: Chip from outcrop, 15 cm wide Rock Type: Altered volcanic	5	0.1	2	122	
	Medium grey-blue, altered, fine-grained volcanic with wispy blebs of grey-white quartz and the host has been altered to chlorite. Contains 1 to 2% finely disseminated pyrite throughout. Sample taken from 15 cm shear at $050/60^{\circ}N$ .					
9024	Location: Shoreline of McNeil Peninsula at L2N Sample Type: Grab from outcrop Rock Type: Quartz vein	5960 Au assa		19763 6 oz/ton 49 g/t)	194	3381 Pb 1504 Zn

A 3 cm wide quartz vein. Middle of quartz vein is vuggy. Dark grey lenses in middle of quartz vein are 0.5 cm thick and are 10 to 20% fine-grained sulphides of sphalerite, galena and pyrite with minor chalco-

pyrite.



Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9025	canics. Cont pyrite, 2 to	McNeil Peninsula, shoreline near L2N Grab from outcrop Quartz vein  uartz vein hosted in green altered volains 5 to 7% arsenopyrite, 1 to 2% chalco-3% galena and sphalerite. Sample differs artz in the area in that the sulphides grained.		say 3.08	.75 g/t)	1325	12712 Pb 53253 Zn 296 Cd 141 Sb
9026	massive magne	Showing on main grid, MT-1 L4+67N, stn 1+25 W Grab from outcrop Massive sulphides ck massive sulphides. Contains 70% tite, 5 to 10% disseminated chalco- 20% disseminated pyrite and a trace	2890 Au as	149.9 ssay 0.07 (2.4	142 1 oz/ton 3 g/t)	54828	1474 Zn 116 W
9027	No original to weathered surpatches (3 to in light and disseminated	Showing on main grid, MT-1, L4+67N, stn 1+25W Grab from outcrop Altered volcanic(?)  ite, very intensely altered volcanic(?). extures visible. On margins near faces, alteration occurs in orange 5 mm). In the core, alteration occurs dark grey patches. Trace of finely pyrite in hairline fractures. Weathered ange to dark brown in colour.	8	2.5	13	352	



Sample Number	Description	Au ppb	Ag pp <b>n</b>	As ppm	Cu ppm	Other ppm
9028	Location: Adit on main grid, LO+40N, stn O+62W Sample Type: Grab from outcrop Skarn	3	4.5	165	1208	
	Light green intensely altered carbonate. Host is moderately epidotized. Contains 2 to 3% sphalerite(?) in patches throughout (1.0 to 5.0 mm). Weathered surface is orange in colour. Approx. 12 m into adit.					
9029	Location: Adit on main grid, LO+40N, stn O+62N Sample Type: Grab from outcrop Rock Type: Skarn	3	3.2	153	511	
	Medium grey altered volcanic(?). No original textures visible. Epidote alteration and minor carbonatization. Contains 3 to 5% finely disseminated pyrite and sphalerite(?). Weathered surface orange to rusty brown. Approx. 12 m into adit.					
9030	Location: Adit on main grid, L0+40N, stn 0+62N Sample Type: Grab from outcrop Rock Type: Skarn	1	2.3	23	737	
	Medium grey-brown, fine-grained, altered volcanic(?). Epidote alteration of host. Contains 5% disseminated pyrite, trace of chalcopyrite and 5 to 7% disseminated magnetite. Weathered surface is rusty brown and purple. Approx. 12 m into adit.					
9031	Location: Main grid, baseline at LlN Sample Type: Grab from outcrop Rock Type: Calc-silicate	6805 Au ass		13089 5 oz/ton 9 g/t)	14	1147 Co
	Sample is massive, fine-grained, pale green diopside					

with 10 to 20% carbonate. Carbonate stringers are common. Original textures are non-existent. Contains 4 to 5% arsenopyrite as fine grains and clusters up to

5 mm wide.



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu pp <b>m</b>	Other ppm
9032	Location: Main grid on baseline at L0+13S Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)  Light green, fine-grained, intensely altered volcanic(?). Intensely epidotized and silicified with little of original textures visible. Numerous vugs (<0.5 mm) coated with an orange oxide. Trace to 2% finely disseminated pyrite. Weathered surface is orange to dark blue in colour.	21	0.1	1485	22	
9051	Location: Main grid, trench @ L2+00N, stn 4+60W Sample Type: Grab from outcrop Rock Type: Massive magnetite  Black, vesicular, massive, fine-grained magnetite. Minor green chlorite, quartz and rusty brown crystalline (?) up to 2 mm in size (?) forms <3 mm wide veins parallel to magnetite veins. Outcrop has magnetite vein >1 cm striking approx. 090° with a 54°N dip. Veins are irregular in shape.	23	0.1	135	667	125 Co
9052	Location: Main grid on baseline between L1S and L0 Sample Type: Grab from outcrop Rock Type: Tuff  Dark green to grey andesite tuff. Contains 15% white, rounded feldspar crystals <1.5 mm, 10% dark grey to green mafic clasts in a fine-grained green matrix. Slight lineation defined by dark green mafic clasts. Contains 1 to 2% fine-grained disseminated pyrite. Surface weathers rusty brown.	2	0.1	38	91	



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9053	Location: Main grid on baseline @ L0+28S Sample Type: Grab from outcrop Rock Type: Metavolcanic	1	0.3	82	30	
	Dark grey metamorphosed andesite(?). Lineations throughout sample are defined by <0.5 mm white feldspar bands. Contains 3 to 5% fine-grained disseminated pyrite, trace calcium carbonate. Surface weathers rusty brown.					
9054	Location: Main grid on baseline @ L3+00N Sample Type: Grab from outcrop Rock Type: Altered andesite-basalt	5	0.1	38	10	
	Pale green, fine-grained altered audesite(?). Alteration is epidote, minor calcium carbonate and iron carbonate. Contains hairline fractures filled with pyrite. Trace fine-grained disseminated pyrite. Surface weathers rusty brown, locally coated with thin layer of hematite.					
9055	Location: Main grid, baseline at L3+50N Sample Type: Grab from outcrop Rock Type: Calc-silicate	12	0.2	46	123	
	Sample is 70 to 80% massive, fine-grained diopside with 20 to 25% fine-grained quartz, carbonate and chlorite. Original textures are non-existent. Trace to 1% fine-grained disseminated pyrite.					
9056	Location: Main grid, L3+30N at baseline Sample Type: Grab from outcrop Rock Type: Massive sulphides	72	1.9	232	512	
	Sample contains 60 to 70% massive black fine-grained magnetite, 10 to 15% chalcopyrite and pyrite with 10 to 20% altered greyish-green volcanics.					



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9057	Location: Main grid, 20 m S of MA-2 Sample Type: Grab from outcrop Rock Type: Altered volcanic	31	2.9	224	311	
	Pale green, altered ash tuff(?). Contains 40 to 50% epidote with chlorite, carbonate and quartz. Several fractures throughout sample which are filled with pyrite and trace chalcopyrite. Contains 1 to 2% finegrained disseminated pyrite.					
9058	Location: Main grid, L0+60N, stn 0+58W, trench MT-3 Sample Type: Grab from outcrop Rock Type: Calc-silicate	15	5.7	330	674	
	Pale green, fine-grained calc-silicate. Rock is composed mostly of epidote + diopside with 10 to 20% mafic minerals. Contains 2 to 3% pyrite.					
9059	Location: Main grid, L1+25N, stn 0+40W, trench MT-2 Sample Type: Grab from outcrop Rock Type: Massive sulphides	22	2.1	85	719	
	Sample is 50% massive magnetite, 30% fine-grained pyrrhotite, 10% fine-grained pyrite and 5% altered grey volcanics(?) and 5% fine-grained chalcopyrite. Sample weathers dark reddish brown.					
9060	Location: Main grid, L1+25N, stn 0+40W, trench MT-2 Sample Type: Grab from outcrop Rock Type: Calc-silicate	1	0.6	25	116	
	Sample is extremely altered. Contains 40-50% fine-grained pale green diopside + epidote(?), 30 to 40% milky white to brown carbonate and 5 to 10% quartz. Numerous fractures throughout sample. Sample weathers rusty brown. Contains 2 to 3% pyrite as fracture filling.					



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9061	Location: McNeil Peninsula, trench PT-4 Sample Type: Chip from outcrop, 2 m wide Rock Type: Altered volcanics	11700 Au assa	3.8 y 0.208 (7.13		21	
	Sample is a chip across 2 m along bottom (western) part of trench. Sample is composed mostly of greenish-grey volcanics with 30% calcite stringers of various directions and up to 40% fine-grained pyrite from within volcanics. Calcite stringers contain 1 to 2% pyrite.	3				
9062	Location: McNeil Peninsula, trench PT-4 Sample Type: Grab from outcrop Rock Type: Altered volcanics	37	0.4	68	9	
	Pale green, altered volcanic. Alteration products include epidote, carbonate and quartz comprising 40% of the sample. Sample rocks host skarn mineralization found in trench. Contains trace to 1% pyrite.					
9063	Location: McNeil Peninsula, trench PT-4 Sample Type: Chip from outcrop, 2 m wide Rock Type: Calcite stringers	1510 Au assa	0.8 y 0.050 (1.71		29	
	Sample is 60% smoky white calcite, 20 to 30% greenish-grey mafics and 10 to 15% massive, fine-grained to 2 mm euhedral cubes of pyrite. Sample is 2 m chip across trench, covering massive sulphide areas.					
9064	Location: McNeil Peninsula, trench PT-4 Sample Type: Grab from outcrop Rock Type: Massive magnetite	131	0.4	160	18	
	Sample is 90% massive, fine-grained magnetite with 5 to 10% dark green mafics and 1 to 3% fine-grained					

disseminated pyrite.



Sample Number		Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9065	Location: Sample Type: Rock Type: Calcite strin	McNeil Peninsula, trench PT-4 Grab from outcrop Calcite stringers gers in euhedral crystal form ranging	18	0.3	36	15	
		5 mm, hosted in greenish-grey volcanics(?). te. Trace fine-grained disseminated					
9066	Location: Sample Type: Rock Type:	McNeil Peninsula, trench PT-4 Grab from outcrop Calcite vein	96	0.2	184	28	
	striking 170° of the vein i 4 mm in size.	alcite vein ranging from 10 to 15 cm wide, with a 30° dip to the east. The centre s vuggy with euhedral crystals of up to Trace fine-grained disseminated pyrite. ein is hosted in massive magnetite.					
9067	Location: Sample Type: Rock Type:	McNeil Peninsula, trench PT-4 Grab from outcrop Altered volcanics	73	0.3	84	9	
	with alterati quartz, carbo are non-exist inated pyrite	ensely altered, pale green volcanic(?) on products of epidote, diopside(?), nate and chlorite. Original textures ent. Contains trace fine-grained dissem Sample is wall rock of mineralized te and pyrite (sample 9063).					
9068	Location: Sample Type: Rock Type:	McNeil Peninsula, trench PT-4 Grab from outcrop Massive sulphides	2310 Au assa	•	1671 oz/ton g/t)	150	

Sample is 70 to 80% massive, fine-grained magnetite, with 20 to 25% massive, fine-grained pyrite and 1 to

5% fine-grained dark green mafics.



Sample Number	Description	Au ppb	Ag ppm	As pp <b>m</b>	Cu pp <b>m</b>	Other ppm
9069	Location: McNeil Peninsula, trench PT-4 Sample Type: Grab from outcrop Rock Type: Calcite stringers  Greenish-grey, fine-grained volcanics(?) containing calcite stringers of up to 1 cm wide in various directions. Contains 40% massive pyrite in altered volcanics with 1 to 2% pyrite in calcite stringers.	1460 Au assa	0.6 y 0.049 (1.68		60	
9070	Location: McNeil Peninsula, trench PT-1 Sample Type: Grab from outcrop Rock Type: Massive sulphides  Massive chalcopyrite, magnetite and pyrite. Sample contains 60% chalcopyrite, 25% magnetite, 5% pyrite and 10% altered volcanics with trace malachite.	4080 2 Au assa Ag assa	(4.25 y 20.48	g/t)		970 Zn
9071	Location: McNeil Peninsula, trench PT-1 Sample Type: Grab from outcrop Rock Type: Massive sulphides  Sample is 30 to 35% chalcopyrite, 20 to 25% magnetite, 5 to 10% pyrite, 5% calcite and 20 to 30% grey altered fine-grained volcanics(?).	94 Au assa		333 oz/ton 2 g/t)	7620	172 Co
9072	Location: McNeil Peninsula, trench PT-1 Sample Type: Chip from outcrop, 2 m wide Rock Type: Massive magnetite  Sample is 60 to 70% massive, fine-grained magnetite with 20 to 30% dark green mafics and 5% fine-grained disseminated pyrite.	2530 3 Au assa Ag assa	(3.98 y 13.79	g/t)		851 Zn 1060 Co



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9073	Location: Main grid on Ll+00S, stn 3+00W, trench MA-3 Sample Type: Chip from outcrop, 3 m wide Rock Type: Massive sulphides  Sample is dark grey, 60 to 70% massive magnetite with 2 to 3% fine-grained disseminated pyrite and trace of chalcopyrite with 30 to 35% dark green, fine-grained mafics.		(0.3 ay 0.41	3741 1 oz/ton 77 g/t) oz/ton 06 g/t)	3410	988 Co
9074	Location: McNeil Peninsula, trench PT-1 Sample Type: Chip from outcrop, 3 m wide Rock Type: Altered volcanics(?)  Sample is 10 to 20% massive, fine-grained magnetite, 5 to 10% calcite stringers ranging from <1 mm to 3 mm, 60 to 70% fine-grained dark green mafics and 5% fine-	107	3.4	335	704	
9075	grained disseminated pyrite.  Location: Shoreline at L2N - McNeil Peninsula	12	0.1	44	81	
	Sample Type: Grab from outcrop Rock Type: Altered volcanics  Pale green, altered volcanics. Alteration products are epidote, quartz, chlorite comprising entire rock. Sample is wall rock from hanging wall, 25 cm from sample 9011. Contains trace fine-grained disseminated pyrite.	·				
9076	Location: Main grid S of drill pad 10 Sample Type: Grab from outcrop Rock Type: Skarn(?)	42	0.1	596	7	
	Medium green-grey, fine-grained, intensely altered volcanic(?). No original textures visible. Numerous vugs (0.5 to 1.5 mm) with rusty brown coatings.					,

Weathered surface is orange-brown to black in colour.



Sample Number	Description	Au ppb	Ag ppm	As pp <b>m</b>	Cu pp <b>m</b>	Other ppm
9077	Location: Main grid, trench on L1+00S stn 2+54W Sample Type: Grab from outcrop Rock Type: Skarn	14	57.9	155	10407	21313 Zn
	Rusty brown to black, massive magnetite with angular fragments of altered host(?) with 10 to 15% disseminated pyrite. Weathered surface is rusty brown to black in colour.					
9078	Location: Main grid; trench at L1+00S stn 2+54W Sample Type: Grab from outcrop Rock Type: Tuff	4	0.6	75	581	
	Dark blue-grey, fine-grained ash tuff with angular mafic fragments, altered to chlorite. Numerous patches (approx. 1.0 mm) of epidote alteration. No visible mineralization. Weathered surface is rusty brown.					
9079	Location: Main grid, adit @ Ll+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Massive magnetite	8	3.5	1620	530	
	Massive, purple magnetite with magnetite fragments supported by an off-white mineral with a feathery habit. Trace amounts of disseminated pyrite. Weathered surface is rusty brown to purple.					
9080	Location: Main grid, adit @ Ll+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Gossanous magnetite	8	2.6	223	340	
	Rusty brown gossanous magnetite with numerous vugs ranging from 1.0 to 3.0 mm. Weathered surface is rusty brown in colour.					·



Sample Number	Description	Au ppb	Ag ppm	<b>As</b> pp <b>m</b>	Cu ppm	Other ppm
9081	Location: Main grid, adit @ L1+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	5	2.6	419	212	
	Medium grey-yellow, fine-grained altered volcanic(?). Intensely silicified and with patchy epidote alteration. Numerous vuggy fractures (0.5 to 1.5 mm) with rusty coloured coatings. Weathered surface is yellow to black in colour.					
9082	Location: Main grid, adit @ L1+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	3	1.7	323	272	
	Light brown, fine-grained, altered volcanic(?). Intensely silicified with patchy epidote alteration. No original textures visible. Sub-parallel hairline fractures with rusty coloured coatings. Weathered surface is rusty brown in colour.					
9083	Location: Main grid, adit @ L1+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	2	1.8	199	261	
	Medium brown, fine-grained, altered volcanic(?). Intensely silicified. No original textures visible. Numerous crosscutting fractures (0.5 to 1.0 mm) coated with a rusty brown residue. Weathered surface is orange to black in colour.					



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
9084	Location: Main grid, adit @ L1+00S, stn 3+00W Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	4	7.3	227	508	
	Orange-brown, gossanous, fine-grained volcanic(?). Intensely silicified with localized epidote alteration. Numerous sub-parallel and crosscutting fractures (vuggy) with rusty coloured coatings. Trace to 1% disseminated pyrite. Weathered surface orange to brown-black in colour.					
7 <b>Y3</b> –1	Location: Contact l claim NW of main grid Sample Type: Grab from outcrop Rock Type: Foliated volcanic	i	0.1	8	342	
	Dark green, fine-grained, altered, foliated volcanic with patches (1.0 to 3.0 mm) of chlorite parallel to foliation. Also localized patches of quartz (2 to 25 mm). No visible mineralization. Weathered surface is brown to green in colour.					
7 <b>Y3</b> –2	Location: Contact l claim NW of main grid Sample Type: Grab from float Rock Type: Altered volcanic(?)	1	0.1	26	88	
	Off-wite, altered volcanic(?). Very intensely altered (silicified). No original textures visible. Numerous buff-brown patches separated by crosscutting fractures (<0.5 mm). Traces of finely disseminated pyrite. Weathered surface brown to pink in colour.					



Sample Number	Description		Au ppb	Ag ppm	As ppm	Cu ppm	Other ppm
<b>7</b> ¥3-3	Location: Contact 1 claim NW of Sample Type: Grab from outcrop Rock Type: Altered volcanic	f main grid	12	0.1	8	14	210 Zn 2067 Mn
	Brownish-green, very intensely silvolcanic(?) with numerous vugs coaresidue. No visible mineralizations dark brown.	ted with a rusty brown					
7 <b>Y3</b> -4	Location: Contact l claim NW of Sample Type: Grab from outcrop Rock Type: Altered volcanic	f main grid	4	1.6	156	1002	
	Dark greenish-brown, fine-grained intensely silicified. Original to No visible mineralization. Weather in colour.	xtures not visible.					
7¥3–5	Location: Contact 1 claim NW of Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)	f main grid	1	0.1	8	16	
	Brownish-green, intensely silicificity volcanic(?). No original textures small 'pits' (<0.5 mm) coated with residue. No visible mineralization surface is purple to rusty orange.	visible. Numerous a a rusty brown on. Weathered					
7¥3-6	Location: Contact 1 claim NW of Sample Type: Grab from outcrop Rock Type: Altered andesite	f main grid	8	9.5	213	5161	881 Zn
	Dark green, fine-grained, altered	andesite. Intensely					

silicified, with localized patches of quartz. Contains 1 to 2% finely disseminated pyrite. Weathered surface

is dark brown in colour.



Sample Number	Description	Au ppb	Ag ppm	As ppm	Cu pp <b>m</b>	Other ppm
7 <b>Y3</b> -7	Location: Contact 1 claim NW of main grid Sample Type: Grab from outcrop Rock Type: Altered volcanic(?)  Medium green, very fine-grained volcanic(?). Very intensely silicified; no original textures visible	1	0.1	7	10	
	with sub-parallel fractures (<1.0 mm) filled with iron carbonate. Traces of finely disseminated pyrite throughout. Weathered surface is buff-brown in colour.					
7 <b>Y3</b> -8	Location: Contact l claim NW of main grid Sample Type: Grab from outcrop Rock Type: Massive magnetite	7	0.3	39	25	36.88% Fe 24 W
	Black massive magnetite with patches of brownish quartz (approx. 1.0 cm). Weathered surface is black to rusty brown in colour.					
7¥3 <b>-9</b>	Location: Contact l claim NW of main grid Sample Type: Grab from outcrop Rock Type: Quartz	1	0.2	55	36	2076 Mn 73 W
	Medium-grained, sugary, brown quartz with subhedral to anhedral quartz crystals, 15 to 20%; patches of magnetite. Weathered surface is buff-brown in colour.					
7¥3-10	Location: Contact l claim NW of main grid Sample Type: Grab from outcrop Rock Type: Massive quartz	2	0.1	45	6	
	Brownish-grey, massive quartz with numerous vuggy patches (1.0 to 4.0 mm) coated with a rusty brown residue. No visible mineralization. Weathered					

surface is dark brown in colour.





Appendix III

CERTIFICATES OF ANALYSIS



# A. ROCK SAMPLES

(i) Assays

(ii) Au (AA)

(iii) ICP

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#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MW FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: ROCK AU\* ANALYSIS BY AA PROM 10 GRAM SAMPLE.

MPH CONSULTING PROJECT-V2483 File # 88-1643 SAMPLE Zn Ag Ni Co Ma 7e λs U Au Th Sr Cd Sb Bi V Ca P La CÌ Mg Ba 71 ł PPH PPH PPH PPH PPK PPK PPM PPK PPM PPK PPN PPH PPH 1 PPK PPM ŧ PPK 1042 N 9001 51 1124 36.84 152 .07 .032 .14 19 2.16 23 498 3.16 2 5 ND 76 2 3 93 1.63 .071 2 # 9002 23 5 1 19 1.27 14 .15 60 840 3.82 18 5 ND 36 104 .76 .051 13 2.28 N 9003 2 9 .17 3 2.29 60 37 20 37 1684 3.03 887 5 ND 26 2 2 83 1.35 .061 6 .18 7 M 9004 1 2 . 02 391 .50 .04 95 M 9006 69 10 30 676 5.09 2 5 MD 27 3 131 1.32 .272 17 2.02 3 .22 # 9007 212 .96 .015 . 36 12 1.05 14 . 1 2 M 9008 4 31, 1.1 29 23 312 2.09 25 5 ND 4 96 1 3 46 .98 .021 3 15 .71 4 .14 6 1.23 .04 1 119 3 612 11009 20337 46.3 ¥ 9009 7 1 127 11.82 72182/ 5 44 1 10 127 103 2 10 .26 .005 2 15 . 09 3 .01 3 .49 .06 7 49200 1 233 1375 4543 5.3 27 25 1095 5.92 2037 5 2 1 22 25 2 2 105 1.06 .068 2 64 2.38 ¥ 9010 11 . 16 4 2.28 .06 1 2470 ¥ 9011 1 1212 16577/ 7978 204.4 / 18 13 153 11.09 20889 / 5 346 1 26 40 36 29 .13 .045 2 21 . 28 10 .08 4 .60 .04 1 285200 -N 9012 1 121 4241 665 1.3 36 20 882 6.00 1443 2 19 125 .50 .097 50 2.07 9 .20 4 2.26 . 05 1 3210 221 H 9014 1 3164 121 182 10.9 35 101 1553 9.37 5 MD 1 13 2 2 66 2.63 .045 2 28 1.07 .11 71 1.98 .10 1 1575 28 ¥ 9015 255 17.1 54 138 824 5.61 288 5 MD 30 2 59 .71 .042 2 19 1.48 6 .12 22 1.80 112 46 15.52 .014 N 9016 1 2252 17 143 11.7 46 1108 2884 5.08 2625 5 3 1 81 1 2 2 2 14 .70 1 .01 10 1.28 .01 . 02 365 590 923 .24 .031 M 5017 2 544 10 .7 17 414 2313 25.82 10 107 3 32 1.94 3 .03 7 4.54 .06 1130 152 1.44 .108 # 9018 42 513 4.26 26 5 1.87 32 N 9019 1 28 45 4 35 660 5.08 122 5 MD 1 340 1 2 5 170 4.65 .056 2 2 1.49 3 . 35 12 2.81 .05 55 169 18 51 19 1062 7.17 5 MD. 1 2 3 31 2.38 .021 2 1 1.07 .06 4 1.85 **1 9**020 273 1 19 .16 87 16 ND. 297 # 9021 1 504 51 1.1 62 47 297 5.75 5 1 2 2 47 2.85 .024 2 18 .81 30 .08 10 5.30 .58 2 51 25 627 2 56 111 3.03 .025 2 52. 2.14 29 .13 # 9022 18 4.42 26 2.16 16 7.00 H 9023 1 122 56 19 24 632 5.20 2 187 5.06 .055 2 .20 .33 36 125 1432 43.26 135 2 17 51 .43 . 026 2 .30 .02 # 9051 10 8 38 20 91 41 45 11 276 2.29 5 MD 2 1 2 2 49 .87 .103 4 1 .45 19 . 23 15 .91 . 05 N 9052 .1 5 2 N 9053 30 12 58 . 3 68 16 1593 8.38 82 6 HD 78 1 2 2 281 3.69 .428 8 52 . 41 19 .06 119 1.69 1 .16 39 16 1.73 N 9054 15 7 1179 2.28 38 RD .099 5 .14 13 .06 M 9055 37 142 2.67 46 53 33 .71 .072 .10 39 14 5 .11 N 9056 12 512 5 65 1.9 18 96 834 34.78 232 5 ND 3 5 5 2 41 1.59 .035 2 į. .11 11 .02 77 . 28 . 62 .06 72 ¥ 9057 1 311 26 113 2.9 30 34 222 5.99 224 5 ND 45 1 2 65 1.02 .048 2 . 31 2 .22 2 .88 .03 .01 31 2 330 ND 22 2 104 2.05 .165 6 21 .36 .07 .79 M 9058 16 674 54 131 5.7 30 29 1788 14.63 5 1 14 13 .01 15 79 624 25.09 # 9059 1 719 6 31 2.1 24 85 5 ND 28 3.48 .027 2 .04 N 9060 116 3 16 - 1 2 195 7.06 25 5 ND 1 97 1 2 3 34 1.48 .048 2 .11 В .18 3 . 99 .02 .02 53 40 136 8.0 70 31 1162 4.11 39 24 20 15 20 60 .50 .099 61 .97 192 .08 STD C/AU-R 21 64 39 41

-ASSAY REQUIRED FOR CORRECT RESULT -

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ACME ANALYTICAL LABORATORIES LTD.
                                                                                              PHONE(604)253-3158 FAX(604)253-1716
                                          852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
                                GEOCHEMICAL ANALYSIS CERTIFICATE
                           ICP - .500 GRAM SAMPLE IS DIGESTED WITH SML 3-1-2 HCL-EMOS-H2O AT 95 DEG. C FOR DME HOUR AND IS DILUTED TO 10 ML WITH WATER.
                           THIS LEACH IS PARTIAL FOR MN PH CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS I PPM.
                           - SAMPLE TYPE: ROCK AD' AWALYSIS BY ACID LEACH/AR FROM 10 CH SAMPLE.
                                                                  ASSAYER. ... . ... D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS
                            DATE REPORT MATLED: France 15/86
DATE RECEIVED: JUN 10 1988
                                         MPH CONSULTING PROJECT-V2483
                                                                           File # 88-1869
    SAMPLET
                     Pb In Ag Ni Co bu
                                             Fe As V As 7th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Wa
                                            $ PPM PPM PPM PPM PFM PPM EPM PPM $ $ PPM PPM $ PPM
                 SAN SAN SAN SAN SAN SAN SAN
                                                                                                          $ P2K
             1 54828 J 16 1474 149.9 74 77 332 38.12 142
    ¥ 9026
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                     5 99 2.5
                                7 7 1153 2.37 13
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                                                                                                     6 .17 6 1.63 .01 .01
   N 9027
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                                                                                          5 17 .25
   ¥ 9028
                     2 58 4.5
                                3 4 1933 5.64 165
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                                                        NO.
                                                            1 23
                                                                    1 2 3 10 9.70 .139
                                                                                           4 5 .11
                                                                                                     6 .02 4 .74 .01 .02
   # 9029
                    25 44 3.2 11 12 1633 5.39 153
                                                     5 ND
                                                            1 21
                                                                    1 3 9 23 6.40 .113
                                                                                           4 9 .23 17 .04 7 .95 .01 .04
                                                                                                                            17 3
    N 903B
                      3 114 2.3 11 29 1276 12.41 23
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                                                                    1 2 2 61 3.16 .181
                                                                                          4 26 .12 28 .02
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                     11 16 .5 41 1147 330 9.36 13089
                                                            2 23
   N 9031
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    N 9081
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    # 9082
              4 272
                     24 2592 1.7 18
                                     26 1135 20 81 323
                                                     5 MD
                                                             2 16
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                                                                           2 54 2.99 .058
                                                                                           3 5 .27
                                                                                                      24 .15 9 1.31 .05 .22
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    K 9083
                     29 132 1.8 40 28 1884 21.03 199
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                                                                            2 38 2.50 .049
                                                                                          2 35 .54 14 .05 19 1.20 .02 .04
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                     87 1248 7.3
                                8 13 2461 11.59 227
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                                                                           7 42 10.05 .044
                                                                                          3 7 .11 26 .62 5 .78 .01 .64 20
             19
                 63 40 132 7.3 73 31 1138 4.15 42 19 8
                                                            40
                                                               53 20 16 18 60 .50 .691 49 64 .91 183 .07 35 1.42 .07 .16 13 515
    STD C/AU-R
                                                 * ASSAY REQUIRED FOR CORRECT RESULT -
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89:43 131 •

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### GEOCHEMICAL ANALYSIS CERTIFICATE

1CP - .500 GRAN SAMPLE IS DIGESTED WITH 3ML 3-1-2 MCL-BRO3-R2O AT 95 DIGES FOR ONE MOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE CA F LA CR MG BA TI B W AND LIMITED FOR A FEW AND AL. AN ONTESTION LIKET BY ICP IS 3 PPM.

- SAMPLE TIPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SAMPLE <b>}</b>	No PPN	Cu PPM	Pb PPM	Za PFM	Ag PPM	Ni PPM	Co PPM	Ma 199	Pe	As PPM	U PPK	Au PPM	Th PPM	81 82M	Cđ PPM		8i PPM	V PPd	Ca Ł	P 2	La PPM	Cr PPN	Ng L	Ba FPN	7i 3	B PPH	y ş	Na Z	K &	PPK	Au* PPB
											_	_				9	_									_					
N 9005	1	26	113	870		- 2	1	27	1.85	15480	,	3	1	3	•	Ţ,	2	4	. 05	.001		1	.01	8	.01	2	.12	.01	. 06		2356
N 9013	i	155	598	1736	2.2	12	8	314	3.39	9987	3	3	3	•	8	13	2	35	.25	.050	Z	13	.71	13	.07	3	1.00	.01	. 14	1	3259
N 9024	1	194	3381	1504	5.7	2	ı	15	2.23	19763	•	ł	1	3	7	10	3	3	. 61	.032	2	1	.01	11	.01	2	.07	. 61	. 05	1	5960
N 9025	ł	1325	12712			ş	16	151	15.14	99999	11	78	3	á	296	141	4	5	٤٥.	.005	Z	Lo	. 43	4	.01	3	.12	.01	.10		40400
# 5061	5	21	15	51	3.8	9	10	780	20.12	1856	5	9	4	1	ì	2	2	107	.36	. 025	2	13	.87	3	.01	2	1.71	.01	. 04	ı	11700
N 9962	1	9	15	92	.4	19	4	1673	4.34	68	5	мD	2	89	1	2	Z	68	1.27	.651	2	76	1.74	ì	. 09	2	2.14	.01	.01	1	37
N 9063	ŕ	29	23	146	. 8	10	11	2411	12.28	652	5	2	2	45	1	2	2	110	4.16	062	2	15	1.57	1	. 62	2	3.31	.01	. 62	1	1510
K 9064	4	12	ÌŠ	213	. 4	10	12	1222	34.40	160	5	ND	5	2	1	2	2	115	.15	.030	2	10	.99	11	.02	18	2.01	.03	.04	1	131
N 9065	2	15	7	25	.3	4	4	797	2.07	36	5	NO	1	1	1	2	2	16	.17	.004	2	3	.22	5	.01	7	.35	.01	. 02	1	18
N 9068	1	26	17	62	. 2	6	3	661	3.44	184	5	NU	1	1	1	2	2	22	.03	. 003	2	ł	.28	3	.61	2	.41	.01	.02	i	96
N 9067	ì	g	6	156	. 3	12	6	127	1.09	84	5	NO	1	62	1	2	2	21	2.60	. 036	2	50	. 39	1	.07	6	. 11	. 91	.02	1	73
N 9068	3	150	13	61	1.7	7	8	577	37.51	1671	5	MD	5	3	1	2	6	94	. 22	. 049	2	8	.50	ş	. 82	17	1.27	.01	.04	1	23101
N 9069	5	60	12	121	. 6	13	12	1305	23.97	1647	5	NO	3	2	1	2	2	154	.11	.033	ì	12	1.50	2	.02	5	3.29	.01	. 03	1	1460
N 9070	15	89624	4	910	255.3	244	1034	391	30.22	2705	5	HD	5	1	17	2	2	24	. 16	.040	2	í	. 38	2	.01	6	.74	.01	. 03	1	1080
N 9071	31	7620	4	257	34.0	60	172	2781	18.62	333	\$	ND	3	44	3	2	2	84	7.45	.094	2	16	1.29	4	.03	4	2.89	.01	. 05	1	94
N 9072	22	19696	2	851	314.6	217	1060	825	25.17	3174	5	2	2	10	13	2	13	33	2.45	.033	2	ŝ	.53	2	.02	6	.93	. 61	. 04	i	2530 -
# 9073	18	3410	6	222	15.1	106	988	2030	25.72	3711	5	ND	4	22	2	2	2	82	2.79	.079	2	32	1.64	6	. 03	15	2.47	.01	. 05	1	340-
H 9074	15	704	9	244	3.4	25	á7	2642	19.05	335	5	ND	2	8	1	2	2	111	. 87	.057	2	47	1.97	8	. 03	6	3.80	.01	.02	i	107
¥ 9075	1	81	14	83	.1	42	21	636	4.32	14	5	ND	2	175	1	2	2	92	1.90	. 055	2	74	1.99	2	. 31	2	2.61	.02	. 03	1	12
STD C/AU-R	18	60	40	132	6.8	69	30	1086	4.ûó	38	25	8	36	49	18	16	19	61	.49	.085	46	57	. 94	180	. 37	32	1.78	. 08	-13	11	520

- ASSAY REQUIRED FOR CORRECT RESULT For Gu Pb Ac >14000 ppm
201 > 20,000 ppm
Ag > 38 ppm

ROME LABS

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#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HHO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MW FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU\* AMALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED:	JULY	07 198	6	DATE	RE	PORT	г ма	ILEC	): <i>j</i>	July	1 <sup>12</sup> /	/88	į	ASSA	YER	<u>C</u> .	Lev	ŋ.	.D.1	OYE	OR	C.L	EON	3, C	ERT	IFIE	D B.	c. :	ASSI	AYERS
						ŀ	1PH	CONS	ULTI	NG	LTD.	PR	OJE	CT-V	2483	3	File	#	88-2	498										
asuntai u-	•	93	•-	١	***	0.	<b>.</b> _	•.		17	<b>3</b>	=1	0=	0.3	ck	D.i	.,	0.		1.	Λ-	N.	ъ.	• :	ъ	11	นา		u	1111

Sample <b>)</b>	No PPM		Pb PPN	Zn PPN	Ag PPH	PPK	Co PPM	Na PPN	Fe }	) PPK	U PPM	66K ya	Th PPK	ST PPM	Cd PPN	Sb PPM	Bi PPM	V PPM	Ca Ł	P	La PPM	CT PPN	Ng \$	Ba PPM	Ti	B PPM	Al 3	Na Ł	K Ł	PPK	Au* PPB	
773-1	1	342	7	46	.1	50	15	254	2.90	B	5	ND	1	109	1	2	2	73	1.25	.028	2	83	3.49	44	. 07	4	4.33	.17	.13	1	1	
713-2	1	88	4	49	.1	1	5	652	1.61	26	5	KD	1	17	1	2	2	31	2.32	.040	4	10	.25	12	.10	2	1.09	.03	.02	1	1	
713-3	1	14	7	210	.1	27	16	2067	2.96	B	5	ND	1	81	1	3	3	36	3.47	.035	5	23	.73	5	.07	5	2.28	.01	.01	1	12	
713-4	3	1002	7	156	1.6	6	9	245	1.58	156	5	ND	1	76	1	2	2	21	1.16	.079	3	i	. 20	22	.09	10	1.29	.10	. 06	1	4	
773-5	1	16	3	53	.I	13	7	671	1.23	8	5	MD	1	14	1	2	2	21	2.16	.048	5	21	.13	6	.06	15	. 87	. 01	.01	1	1	
713-6	2	5161	20	881	9.5	6	21	600	4.07	213	5	KD	1	96	4	2	3	33	1.26	.035	2	1	.46	16	.12	31	1.87	.10	.04	1	8	
713-7	1	10	3	95	.1	13	10	1287	1.85	7	5	ND	1	67	1	2	2	35	1.68	.049	2	8	.31	7	.07	21	1.03	.02	.01	1	1	
713-8	7	25	19	64	.3	13	11	1450	36.88	39	5	ND	3	2	1	3	2	47	4.45	.005	2	4	.07	4	.01	6	.36	.01	.01	24	7	
713-9	2	36	10	29	. 2	7	6	2076	17.77	55	5	MD	2	1	1	2	2	39	8.98	.007	6	4	. 07	2	.01	7	.51	. 03	.01	73	1	
773-10	1	6	4	63	.1	17	20	1838	2.95	45	5	ND	1	24	i	2	2	25	1.50	.083	2	23	. 24	13	.06	34	.73	.01	.01	1	2	
570 C/3H_B	16	5.8	36	125	7 1	68	27	999	3 <b>8</b> 3	3.6	17	2	15	45	16	16	19	53	46	nr.	37	52	87	162	86	31	1 86	26	13	11	498	

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

JUL 18 1988

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

1. D. TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING PROJECT-V2483 FILE = 38-1889R

SAMPLE = AU\*\* 02/5

N 9016 .071 N 9031 .195

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JUN 15 1988 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED: 27.88

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AG\*\* & AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT-V2483 File # 88-1643R

SI	AMPLE#	AG**	AU**
		oz/t	oz/t
λŤ	9001	_	.018
		_	
N	9003	1.30	1.468
N	9010	-	.068
N	9011	8.11	11.388
N	9012	-	.085
N	9014	.28	.041
N	9016	.32	.017
N	9017	-	.029

ACME ANALYTICAL LABORATORIES LTD. DATE 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 DATE RECEIVED: JUN 16 1988

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AG\*\* & AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

D. TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT-V2483 File # 88-1730R

SAMPLE#	AG**	AU**
	oz/t	oz/t
N 0005	_	.071
N 9005	_	
и 9013	-	.035
N 9024	-	.306
N 9025	3.08	3.522
N 9061	-	.208
и 9063	-	.050
N 9068	-	.073
N 9069		.049
N 9070	20.43	.124
N 9071	1.01	-
N 9072	13.79	.116

# B. DRILL CORE SAMPLES

(i) Assays

(ii) Au (AA)

(iii) ICP

#### GEOCHEMICAL ANALYSIS CERTIFICATE

1CP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: COTE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

MPH CONSULTING PROJECT-V2483 File # 88-1978 V Ca N i Th ST Cđ Sb Bi P La Cr Ma Ba Ŧi SAMPLE λg Co MA Рe λs λu & PPN PPK PPH PPK PPK 1 \$ PPM PPM Ł PPM 1 PPN 233 1.18 .113 15 2.38 .22 N 5001 B 115 30 1190 8.02 3 2 2.64 44 2460 10.03 115 ND 79 2 93 5.24 .043 2 82 2.06 10 .10 2 3.52 N 5002 148 .1 46 5 2 86 35 6 1411 5.28 7 5 ND 1 83 1 2 2 62 4.17 .047 2 54 1.64 1 .14 2 2.31 .01 .01 1 N 5003 .1 19 707 2.95 19 5 ND 1 89 2 2 34 2.33 .038 2 19 .78 1 . 09 2 1.77 .01 N 5004 52 . 2 41 1 7 1.55 35 18 571 2.35 18 5 ND 89 2 2 25 2.73 .053 2 9 .59 1 .07 .01 .1 N 5005 12 1.55 N 5006 .1 19 1062 3.00 37 62 27 3.86 .032 2 20 .95 13 .07 .01 15 791 2.37 57 70 30 1.97 .018 21 . 97 29 1.62 K 5007 5 53 .1 17 5 ND 1 1 2 2 2 45 . 07 .06 . 07 30 N 5008 112 .1 38 17 1568 6.28 8 5 ND 1 1 2 2 76 2.25 .070 2 141 2.28 4 .15 2 2.66 .01 45 43 MD 1 N 5009 4 58 .1 - 11 11 1094 10.14 5 43 4.64 .052 2 47 .90 1 .09 2 1.46 .01 .01 16 79 #D 48 34 6.87 .059 10 . 81 .05 2 1.42 .01 .01 52 4 18 1183 6.46 5 2 1 33 K 5010 3 .1 N 5011 .5 22 10 1529 17.27 123 55 33 14.77 .024 2 .47 .01 5 .17 .01 12 43 5 ND 6 3 42 54 25 1189 34.02 2 10 .62 .03 # 5012 1 172 73 1.1 209 5 ND 61 5.29 .017 10 24 1.37 73 N 5013 57 7 95 .1 21 12 1954 10.18 72 5 ND 1 56 2 123 7.20 .034 2 23 1.56 2 . 07 2 2.28 .01 .01 21 1 45 E 5014 9 31 .1 B 15 1001 3.34 49 5 MD 1 2 2 23 5.09 .046 2 6 .75 1 .02 4 .75 .01 23 N 5015 .4 12 5 952 2.88 17 5 ND 2 37 4.83 .069 2 5 .57 2 . 05 2 .97 .01 ¥ 5016 19 . 2 2 125 1.96 17 5 52 40 4.10 .058 11 .34 1 .08 3 1.16 .01 . 02 21 ND 69 12 N 5017 8 2 561 2.50 9 5 1 2 33 3.61 .057 2 .45 1 .08 7 1.13 .01 28 5 41 M 5018 2 54 .1 5 1188 5.01 37 ND 2 52 5.21 .041 2 8 .80 1 .06 2 1.39 .01 .01 10 N 5019 1 341 6 224 1.4 45 77 788 3.80 1028 5 MD 74 41 3.84 .067 2 23 .85 1 .09 10 1.35 .01 .03 1 133 # 5020 35 .1 16 14 535 2.20 33 5 ND 123 36 2.77 .068 2 12 .71 1 .17 4 1.68 .01 .03 N 5021 1 17 2 118 .1 91 30 1250 4.87 74 5 ND 28 1 2 2 65 1.33 .084 2 154 2.32 15 .16 2 2.44 .01 .01 N 5022 1 407 18 126 3.2 33 53 942 3.54 101 5 ND 2 133 1 6 10 58 3.87 .082 4 106 1.15 2 .23 5 2.05 .01 .06 1 49

19 16 18

61 .49 .088

41 60 .93 181 .07

34 1.78 .05 .15

STD C/AU-R

18 62

37 133

6.9 72 30 1062 4.10

40 19

7 38 52

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JULY 12 1988 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

MHP CONSULTING LTD. PROJECT-V2483 File ± 88-2006R

SAMPLE# AU\*\*

oz/t

5036 .039 ✓

#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 MCL-MMO3-M20 AT 95 DEG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR ME FE CA P LA CR MG BA TI B W AND LIMITED FOR ME K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: COTE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 16 1988 DATE REPORT MAILED: June 20/88 ASSAYER....D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT-V2483 File # 88-2006

SAMPLE#	PPK No	Cu PPM	Pb PPM	ZE PPN	Ag PPM	Ni PPN	Co PPM	MD PPM	Fe 1	As PPN	U PPN	Au PPM	Th PPN	ST PFN	Cd PPM	Sb PPM	B1 PPM	V PPK	Ca }	P	La PPM	CT PPM	Ng L	Ba PPM	Ti 3	B PPM	λl	Na Ł	I t	W PPM	Au* PPB
N 5023	1	13	10	83	1.4	25	50	1089	3.90	54	5	MD	1	114	1	2	5	50	4.14	. 244	6	50	1.28	A	.14	14	2.17	.01	.01	1	3
H 5024	i	751	Q.	230	3.8	18	62	836		190	5	ND	i	88	i	Ž	i	30		.121	5	22	.12	i	.14		1.55	.01	.01	i	128
N 5025	1	32	á	80	1.1	16	34	772		50	į	ND	;	110	ī	2	2	33		. 107	3	21	.81	i	.14		1.76	.01	. 01	ì	13
N 5026	i	9	وَ	34	.8	6	A	396	1.54	21	5	ND	i	133	i	3	2	30	3.71	. 089	i	i	.34	i	. 25		1.66	.01	.01	ž	2
N 5027	i	2	i	73	.5	B	12	431		139	5	ND	1	102	i	2	2	22		.060	3	15	.36	i	. 09		1.38	.01	.01	ž	22
N 5028	1	2	1	21	1.0	13	26	291	1.55	43	5	ND	1	128	1	3	4	31		.028	2	13	. 28	1	-11		1.81	.01	.01	1	21
N 5029	1	1	6	29	1.2	13	19	395	1.77	30	5	ND	1	99	1	2	2	35	2.23	.025	2	25	. 53	1	.15	6	1.59	.01	.01	1	1
N 5030	1	1	5	33	.1	17	28	452	1.91	41	5	KD	1	110	1	2	2	35	2.70	.061	3	19	. 62	1	.18	2	1.74	. 01	.01	1	47
N 5031	1	277	6	729	1.5	27	23	577	3.22	44	5	ND	1	54	1	3	2	67	2.60	. 056	2	41	1.22	22	.21	4	2.35	. 05	.07	1	6
N 5032	1	67	2	69	.5	84	19	754	3.43	26	5	ND	1	28	1	2	2	68	1.93	.080	2	166	2.48	16	.20	2	2.35	.04	. 04	1	1
N 5033	1	29	8	195	.3	15	8		2.86	14	5	ND	19	25	1	2	2		1.14	. 033	8	30	.96	17	.19		1.71	.03	.07	1	1
N 5034	1	68	9	41	.4	12	13		1.93	360	5	ND	5	78	1	5	2		1.85	.026	5	24	.72	6	.10		2.13	.02	. 05	2	15
N 5035	1	35	11	41	. 1	10	9			5	5	ND	1	104	1	2	2	70		. 029	3	21		18	. 16		3.55	. 19	. 05	1	1
K 5036	1	64	11	6 B	. 2	13	9	599	3.21	7	5	ND	15	49	1	2	2	58	1.82	.026	4	15	1.34	17	.22	8	2.08	.03	.07	1	960
N 5037	1	32	7	52	. 2	7	17	596	3.93	9	5	ND	1	138	1	5	2	81	2.04	.088	2	20	1.86	28	. 20	2	3.04	. 13	.12	2	1
# 5038	1	89	12	35	. 2	9	9		2.58	3	5	ND	2	112	1	2	6		2.17	.030	3		1.05	23	.13		3.50	. 24	. 05	1	205
N 5039	1	107	2	39	.2	25	19	458	3.18	7	5	ND	1	98	1	2	2	74		1079	2		1.46	46	.17		2.43	.17	.07	ì	3
N 5040	1	15	2	20	. 1	10	7		1.56	3	5	ND	1	85	1	2	2	57	1.55	.018	2	25	.74	2	.17		1.48	.01	.01	1	89
N 5041	1	61	8	55	.1	17	11	552	3.36	4	5	ND	1	99	1	2	2	88	1.96	033	2		1.60	44	. 15		3.60	. 20	.04	1	2
N 5042	1	35	5	55	.2	21	11	531	3.28	2	5	ND	2	24	1	2	6	64	. 60	.060	3	37	1.68	9	. 19	2	1.95	. 03	.04	1	1
N 5043	1	9	6	45	.1	29	11		3.36	2	5	ND	1	120	1	2	2		2.46	. 053	2	56	1.76	2	. 22		2.46	.02	.01	1	1
N 5044	I	172	8	32	. 4	7	10		3.23	5	5	ND	1	110	1	3	2		1.94	.048	3	15	.98	28	.15		2.92	. 24	. 05	2	2
N 5045	1	75	6	24	. 2	8	12	345	4.84	2	5	ND	1	101	1	2	2		2.05	. 057	3	16	. 86	26	. 18		3.00	.27	. 05	1	1
N 5046	1	85	5	24	.1	11	21	344	4.38	8	5	ND	1	37	1	2	2	131	1.28	.081	2	16	. 79	15	. 18		1.13	.08	. 05	1	2
N 5047	1	96	6	29	.3	14	19	428	4.18	B	5	ND	1	28	1	2	2	115	1.34	. 083	3	18	1.01	12	.21	2	1.39	. 07	. 06	1	1
N 5048	1	103	4	26	.3	11	22	394	4.34	11	5	ND	1	21	1	2	2	124	1.32	.088	3	19	1.14	12	. 23	5	1.47	. 07	. 06	2	1
N 5049	1	182	4	33	.3	8	11	338	3.48	5	5	ND	1	168	1	2	2	104	2.49	.043	2	16	. 58	10	.14	2	2.97	. 99	. 03	1	1
STD C/AU-R	18	57	38	129	6.9	67	27	1014	3.90	35	17	8	35	47	17	17	18	56	. 45	. 086	36	55	. 82	170	.07	30	1.80	.06	.13	13	470

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 JULY 12 1988

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulb AG\*\* & AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT-V0433 File = 88-0140R

SAMPLE= AG\*\* AU\*\* | oz/t | bz/t

5136 - .028 .14 -- .028 5140

SAMPLE#	No PPM	Cu PPM	Pb PPM	Za PPM	Ag PPM	Ni PPK	Co PPM	Ko PPM	ře t	As PPM	U PPM	Au PPM	Th PPM	ST PPM	Cd PPH	Sb PPM	Bi PPH	V PPM	Ca Ł	P	La PPK	PPM	Ng 1	Ba PPH	Ti 1	B PPM	Al t	Na ł	Į,	V PPM	Au* PPB
¥ 5116	1	382	12	141	1.1	46	38	646	5.89	45	5	ND	1	12	1	2	2	138	1.15	.074	2	49	1.26	9	.20	5	1.76	.03	.03	1	6
N 5117	1	148	15	122	. 5	30	24	1386	5.73	29	5	MD	1	72	1	2	2	180	1.73	.115	5	10	1.59	8	.28	5	2.45	.01	.03	1	22
N 5118	1	179	11	588	.5	24	19	646	5.90	17	5	ND	1	58	2	2	2	247	1.84	.124	6	12	. 83	30	. 21	7	1.81	. 07	.06	1	1
N 5119	1	152	17	74	.5	24	28	539	5.15	36	5	ND	1	62	1	2	2	119	1.29	.091	5	8	1.31	35	.17	3	2.49	.10	.04	1	1
N 5120	5	117	6	68	.1	19	20	451	4.53	37	5	MD	1	39	1	2	2	99	1.08	.050	3	11	1.07	20	.15	3	2.01	.04	.03	1	ł
N 5121	15	102	2	9	. 2	3	2	427	. 67	7	5	ND	1	466	1	2	3		29.11	.006	2	2	.06	1	.01	6		.01	.01	1	1
N 5122	2	602	4	447	1.8	29	12	500	2.21	36	5	ND	1	58	2	2	2	28	3.39	.017	2	4	.31	1	. 09	4	. 90	.01	. 01	1	1
N 5123	1	409	6	817	1.3	46	21	666	3.60	55	5	ND	1	62	4	2	2	39	2.14	.026	2	14	.96	11	.09	1	1.68	.03	.02	1	6
N 5124	1	101	16	609	.4	20	14	463	2.85	60	5	ND	1	41	3	2	2	55	1.34	.022	2	14	.83	27	. 13	5	1.90	.11	. 06	1	2
N 5125	1	244	13	240	1.0	37	24	457	5.37	71	5	ND	1	38	1	2	2	49	.96	.022	2	12	. 86	21	.10	3	1.72	.06	.04	1	1
N 5126	1	214	13	164	.7	41	23		5.27	110	5	ND	1	25	1	2	2	57	.93		2	16	1.29	14	.12		1.82	.05	. 03	1	1
H 5127	1	107	10	87	. 6	31	16	462	3.09	348	5	ND	1	14	1	2	4	54	. 94	.030	2	14	. 99	17	.10	6	1.30	.03	.04	ł	4
¥ 5128	1	406	16	63	1.5	64	44		8.18	156	5	ND	1	32	1	2	2	52	.75	.030	2	14	1.07	5	.10		1.79	.03	.03	1	19
¥ 5129	1	559	15	4422	1.6	60	60		1.38	229	5	ND	1	34	23	2	3	59	. 86	.026	2	16	1.09	2	.10	2	1.76	.02	.03	1	8
¥ 5130	1	262	8	800	. 9	33	21	342	4.20	101	5	ND	1	41	3	2	2	39	.96	.024	2	11	.77	6	. 08	4	1.39	.02	. 92	1	5
N 5131	. 1	44	7	142	. 3	10	8		2.97	60	5	ND	1	57	1	2	2		3.56		2	9	. 80	5	.10	27	1.53	.01	.01	1	1
N 5132	1	160	11	1067	. 7	29	17		4.31	76	5	ND	1	41	5	2	2	48	1.70		2	12	.91	16	.10	4		. 02	. 05	1	1
¥ 5133	1	265	13	47	. 9	41	37		6.67	139	5	MD	1	30	1	2	2	57	. 96	.028	2	14	1.13	9	.12	5	1.77	.03	.03	2	7
N 5134	2	100	9	48	. 3	29	11	2568		15	5	ND	1	41	1	2	2		8.97		3	9	.40	17	.02	253	.47	.01	. 05	1	10
N 5135	1	291	8	23	.4	42	19	1503	7.72	6	5	ND	1	21	1	2	2	6	4.41	.138	2	4	.22	31	.01	162	.20	.01	.06	1	1
W 5136	2	73	5	22	. 6	1		1331		5	5	ND	1	24	1	2	2		4.46		4	7	.29	26	.01	91	.36	. 02	. 05	2	175
# 5137	3	12	2	16	.2	6	13	588	1.64	855	5	MD	1	46	1	5	4		2.80		5	3	.11	5	. 05	140	. 82	. 01	.02	1	1
N 5138	1	89	- 1	27	.1	11	7	1765		16	5	ND	4	23	1	2	2	9	3.85		5	3	.14	26	. 05	809	.56	.01	.03	2	1
<b>≡</b> 5139	3	126	9	56	. 6	19	12		3.08	113	5	ND	ı	41	1	2	4		2.70		1	6	.34	8	.07	207	.96	.01	.01	1	2
N 5140	2	1295	2	66	4.8	17	5	1052	2.06	7	5	MD	1	39	1	2	. 2	13	4.25	.064	3	4	.22	24	.06	383	. 59	.01	. 03	1	1
N 5141	3	654	8	50	2.6	44	9		2.82	31	5	MD	1	37	1	3	4		3.57		7	6	.15	4	.04	329	.57	.01	.01	1	2
N 5142	6	210	4	69	.1	29	5	729	2.14	16	5	ND	1	46	1	5	4		2.99	.128	5	6	.22	10	. 05	250	.78	.01	.02	1	1
N 5152	1	224	10	47	. 9	39	39		6.92	176	5	ND	1	29	1	2	2	56	.86	.032	2	17	1.34	6	.10		1.90	.02	.03	2	15
STD C/AU-R	17	59	40	132	6.5	68	28	1041	4.03	12	18	1	36	47	17	15	19	57	. 46	.084	40	56	.94	177	. 06	33	1.90	.06	. 14	12	515

#### GEOCHEMICAL ANALYSIS CERTIFICATE

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR NM FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TIPE: CORE AUF ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

				SAMPLE						BY ACID		1		GH SAI	PLE.	1	7	<i>P</i>												
DATE RECEIVED:	JUN 2	2 1988		DATI	E RE	POR	T MA	ILE	D: 7	fun	29	1/88	,	ASS.	AYE	٠.٠.			D .	TOYE	OR	C.I	EON	G, (	CERT	IFIE	D B	.c.	ASS	AYERS
					M	(PH	CONS	ULT	ING	LTD.	PR	OJE	CT-V	248	3	File	e #	88-2	2140		Pag	<b>e</b> 1								
SAMPLE# NO PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPN	Ni PPM	Co PPN	Hn PPM	Ie 1	As PPH	U PPK	Au PPM	Th PPM	ST PPM	Cd PPM	Sb PPM	Bi PPM	PPR	Ca }	P	La PPM	CT PPM	Ng Z	Ba PPM	71 1	B PPK	Al t	Ha t	K Ł	¥ PPK	Au* PPB
N 5050 1	472	7	58	.9	20	18	386	3.40	73	5	MD	3	30	1	2	3	46	1.56	. 029	3	21	. 85	42	.12	14	2.08	. 08	.18	1	10
N 5081 1	256	10	94	. 9	10	22	646	4.23	41	5	ND	1	100	1	2	2	110	2.36	.036	2	10	1.73	20	.15	7	3.70	.08	.03	1	3
N 5082 1	10	5	40	.1	13	26	554	3.35	21	5	ND	1	86	1	2	2	84	2.24	.032	2		1.66	ê	. 19	7	2.19	.05	.03	1	1
N 5083 1	4	6	30	.2	19	17	406	2.31	22	5	MD	1	106	1	2	5	67		.030	2		1.12	4	.17		2.12	.04	.02	i	1
N 5084 1	121	4	31	.1	16	19	369	2.22	30	5	ND	1	115	1	2	5	76	1.98	. 046	2	12	.93	20	.13	7	2.47	. 15	.03	2	1
N 5085 1	108	8	62	.4	18	34	556	3.60	48	5	ND	1	134	1	2	2	93	2.44	.045	2	12	1.33	14	.12	10	3.27	.12	.03	1	3
N 5086 1	213	6	50	. 9	10	17	518	2.96	21	5	ND	1	181	1	2	2	86	2.76	.045	2	16	1.16	26	.14	14	3.66	.13	. 05	1	3
N 5087 1	118	6	46	.1	16	17	477	2.76	21	5	ND	1	204	1	2	2	85	2.02		2		1.28	11	.14		3.06	.16	.01	1	1
N 5088 1	85	3	56	. 3	10	14	404	2.45	17	5	ND	1	640	1	2	2	76	3.61	.041	2	12	.97	23	.09		5.73	. 38	. 03	1	1
N 5089 1	168	8	73	.4	16	19	422	2.50	32	5	ND	1	245	1	2	2	11	3.38	.039	2	13	1.00	24	.09	7	5.12	. 28	.03	1	1
¥ 5090 1	76	8	52	.1	9	11	454	2.65	10	5	MD	1	232	1	2	2	86	3.09	.040	2	9	1.12	65	.11	8	4.64	. 29	.02	1	1
я 5091 1	274	9	69	. 6	20	36	638	4.64	58	5	MD	1	175	1	2	2	124	1.90	.045	2	10	1.90	10	.17	19	3.82	.29	.04	1	1
N 5092 1	142	10	57	.3	13	17	535	3.36	9	5	MD	1	278	1	2	2	75	2.14	.041	2	8	1.54	21	.11	7	3.88	.33	.04	2	1
N 5093 1	256	8	60	.6	19	22	576	3.95	20	5	MD	1	206	1	2	2	104	2.29	.046	2	8	1.74	52	.16	1	4.12	. 28	.03	1	2
N 5094 1	24	5	44	.1	11	14	637	3.60	2	5	ND	1	33	1	2	2	91	1.96	.037	2	13	1.82	7	.14	7	2.74	.06	.04	1	5
<b>x</b> 5095 1	393	11	100	. 9	16	28	908	5.01	39	5	ND	1	74	1	2	2	132	2.65	.026	2	16	2.15	1	.17	24	3.96	.01	.02	1	12
N 5096 1	33	6	72	.1	22	21	822	4.48	15	5	ND	1	57	1	2	2	130	2.89	.027	2		2.18	18	.15		4.05	. 05	.03	1	6
и 5097 1	43	5	46	.1	12	14	655	3.50	9	5	ND	1	49	1	2	2	144	1.31		2		1.52	23	. 15		2.36	. 08	.04	1	2
N 5098 1	102	5	131	.1	31	34	1038	6.50	29	5	ND	1	97	1	2	2	131	1.79		2		3.33	2	.16		4.66	.01	.01	1	2
<b>N</b> 5099 1	84	3	36	. 2	13	23	449	3.59	11	5	ND	1	21	1	2	2	102	1.78	.082	2	. 12	1.06	11	. 19	5	1.74	.12	.05	1	1
N 5100 1	58	7	23	.1	10	11	328	2.47	3	5	ND	1	93	1	2	2	64	2.03	.031	2	11	.99	39	. 10	5	2.86	. 26	.05	1	1
N 5101 1	70	3	70	.1	30	17	637	3.73	2	5	ND	1	69	1	2	2	60	1.69	.067	2	45	2.14	5	.17	7	2.90	.01	.01	1	1
N 5102 1	161	4	61	.1	26	41	545		16	5	ND	1	60	1	2	2	45	2.09	.050	2	22	1.60	1	.16	8	2.52	.01	.01	1	1
N 5103 1	1	6	55	.1	21	22	619	1.34	24	5	ND	1	105	1	2	2	57	2.46	.066	2	37	1.63	1	. 18	6	2.56	.01	.01	1	1
N 5104 2	11	6	47	.1	19	28	495	2.77	48	5	ND	1	97	1	2	3	34	2.28	. 051	2	17	1.16	1	.12	10	1.91	.01	.01	1	4
N 5105 1	23	12	101	.1	19	20	770	4.33	10	5	ND	1	88	1	3	2	90	1.92	.033	2	18	2.31	6	.14	13	3.58	.06	.01	2	ı
N 5106 1	171	11	383	.4	23	30	886		13	5	ND	1	58	2	2	2	85		.020	2	16	2.75	1	. 15	8	3.40	.01	.01	1	4
N 5107 1	42	6	106	.1	21	21	980		9	5	ND	1	74	1	2	2		1.25	.035	2	20	3.16	11	.15	10	4.07	.06	.03	1	1
N 5108 1	2	8	64	.1	30	54	664		33	5	ND	1	53	1	2	2	68	1.77		2		2.21	14	. 16		2.67	.03	.01	1	1
N 5109 1	17	4	70	.1	10	17	699		3	5	ND	1	122	1	2	2	111	1.75	.020	2	15	2.07	10	.17	11	3.54	.11	.01	1	1
N 5110 1	19	7	49	2.7	35	16	511	3,00	16	5	ND	1	57	1	3	4	60	1.47	. 033	2	37	1.20	1	. 19	12	1.68	. 02	.01	3	5
N 5111 1	53	8	63	. 2	40	25	162		33	5	ND	i	39	i	2	3	122		.044	2	60	.74	ž	. 29		1.18	. 05	.01	i	3
N 5112 1	29	12	49	.2	39	18	461		10	5	ND	1	45	i	2	2	179		.049	2	97	.90	4	.21		2.40	.07	.10	1	1
N 5113 1	ï	5	14	. 2	27	17	292		49	Š	ND	2	129	i	2	2	53		. 052	3	24	. 48	1	. 26		1.16	.01	.01	i	1
N 5114 1		8	80	. 8	49	18	310		19	5	ND	1	127	1	2	2	136	2.88	.045	2	77	. 46	31	.24	6	3.36	.20	. 05	1	ß

44 132 6.9 70 30 1062 4.12 45 16 7 38 49 18 15 19 59 .47 .083 41 58 .96 179 .07 33 1.98 .06 .15 12 490

STD C/AU-R

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JUL 18 1988

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT V2483 FILE = 33-1178R

SAMPLE = AU\*\* oz,'t N 5065 .009 N 5143 .005 N 5144 .007

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

					-	SAMPL	E TYPE	: Core	,	U* ANA	LYSIS	BY ACII	LEAC	H/AA P	RON 10	GH SAI		$\mathcal{C}$	Ĺ	» » ~~	n	mov.	· · ·	D C	T EON	10	CEDI	DT ET	en i		A C	SAYERS
DAT	E RECEIV	VED:	JUN	23 198	8	DAT	E RI	врон Мрн	CON	SULT	id: UNG	Jan LTD	. PI	// <sup>SO</sup> ROJE	CT-\	. ASS 7248		r.F. File		V				ge 1	LEUI	10,	CER.	IIFI	נ עם		AU.	MIERO
	SAMPLE#	Mo PPM	Cu	Fb PPM	Zn PPN	Ag PPN	Ni PPK	Co PPN	Nn PPK	le 1	As PPN	U PPM	Au PPK	Th PPM	ST PPN	Cd PPM	Sb PPM	Bi	V PPK	Ca 3	P	La PPM	Cr PPM	Mg &	Ba PPM	Ti \$	B PPM	Al	Na Ł	I.		Au* PPB
	N 5051 N 5052 N 5053 N 5054 N 5055	1 1 1 1	91 14 30	22 13 10 17	111 123	.1 .4 .1 .1	18 26 55 40 17	24 18 18	1710		8 32 55 24 22	5 5 5 5	ND ND ND ND	2 1 4 1 2	94 81 66 46 89	1 1 1 1	2 2 2 2 2	3 4 3 2 4	51 61 44	2.79 5.39 5.53 3.93 5.27	.024 .035 .070	2 2 2 4 3	30 62 96	2.49 1.60 2.01 1.56 1.09	25 2 2 5 3	.08	50 121 181	3.29 2.74 3.17 2.28 2.34	.05 .01 .02 .02	.07 .05 .08 .04	1 1 1 1	1 21 4 78 3
	N 5056 N 5057 N 5058 N 5059 N 5060	1 3 1 1 2	52 71 19	19 23 8 7 7	155 95 47 17 33	.1 .2 .2 .2 .2	30 7 10 5 15	13 8 3	1095 874	8.33 30.72 5.59 2.38 2.20	3 9 33 9 1335	5 5 5 5	ND ND ND	2 5 5 5	55 30 47 68 49	1 1 1 1	2 2 4 7 4	2 16 2 4 7	51 28 26	5.21 3.58 4.95 5.06 2.08	.038 .054 .047	2 2 5 3 4	152 17 10 7 13	2.50 .88 .60 .31	3 7 1 1 18	. 05	26 18 27	3.74 1.65 1.45 1.35 1.39	.02 .03 .02 .01	.04 .06 .04 .02	1 1 1 1	1 1 16 24 3
	N 5061 N 5062 N 5063 N 5064 N 5065	1	50 146	7 14 16 9 5	133	.2 .1 .2 .1	10 16 10 6 5	8 16 17 21 14	600 781 653	1.81 3.07 2.75 4.26 1.68	78 61 23 23 18	5 5 5 5 5	ND ND ND ND	2 3 3 1 2	45 16 99 79 107	1 1 2 1 1	2 2 2 2 2	2 4 2 3 2	65 37 55	1.62 2.07 3.25 .82 2.53	.063 .073 .080	4 4 3 3 2	25 14 9	.68 1.21 1.24 1.56 .55	14 9 38	.15 .17 .14 .15	11 7 6	1.52 2.34 2.24 2.20 1.59	.03 .04 .02 .06	.05 .07 .05 .06	1 1 1 1	1 1 2 2 315
	N 5066 N 5067 N 5068 N 5069 N 5070	1 1 1 2	3 2 10 380 20	11 10 7 11 13	34 43 35 55 80	.1 .1 .6	20 24 17 32 25		506		10 7 2 59 26	5 5 5 5 5	ND ND ND ND	1	128 110 129 78 70	1 1 1 1	2 2 2 2 2	5 2 2 6 3	32 35 46	2.96 2.65 3.45 1.54 2.67	.069 .153 .103	3 6 5 2	9 18 26	.77 .99 .59 1.03	1 1 20	.15 .10 .09 .08	2 2 8	2.15 2.25 2.00 1.83 2.73	.01 .01 .01 .05	.01 .01 .01 .04	1 1 1 1	32 2 5 2 165
	N 5071 N 5072 N 5073 N 5074 N 5075	1 1 2 1	38 920 60	5 11 9 8 8	46 43 66 73 67	.1 .2 2.1 .1 .2	15 16 24 18 11				15 2 41 9 34	5 5 5 5 5	ND ND ND ND		179 152 86 102 37	1 1 1 1	2 2 2 2 4	2 6 2 2 5	61 63 62	1.71 3.59 1.46 2.08 1.49	.023 .071 .068	3 2 4 3 7	31 16	1.25 1.23 1.05 1.16 .14	61 37	.14 .14 .16 .16 .08	2 5 8	2.32 5.14 1.95 2.26 1.00	.07 .34 .10 .07	.09 .11 .11 .08 .06	2 1 1 1	5 1 2 1 2
	N 5076 N 5077 N 5078 N 5079 N 5080	2 1 1 1	23 57	14 4 9 14 9	183 21 32 70 60	.4 .2 .3 .3	21 11 7 87 2	11 4 27		1.58 1.47 4.19	63 92 8 26 7	5 5 6 5 5	ND ND ND	1 12 17 2 1	63 25 29 29 87	1 1 1 1	5 2 2 2 2	3 2 2 2 2	35 21 90	2.82 1.35 1.21 1.67 1.53	.062 .016 .097	4 6 14 3 2	16 11 206	.28 .55 .54 2.81 1.99	7	.08 .14 .06 .17	9 9 2	1.08 1.34 1.37 2.81 2.69	.02 .03 .03 .05	.02 .06 .09 .06	1 1 1 1	3 1 1 4 1
	N 5143 N 5144 N 5145 N 5146 N 5147	1			54 1088 81 71 219	2.0 1.3 .2 .3	19 20 16 22 8	28 7	236 185	6.78 1.26	16 166 45 58 23	5 5 5 5 5	ND ND ND ND	1 1 15 1 5	53 45 19 77 16	1 7 1 1	2 2 6 3 2	3 3 2 6 3	39 10 37	5.63 3.75 .94 2.55 1.62	.090 .017 .347	9 6 10 14 5	11 16 21 17 8	.35 .64 .24 .11	12 1 14 1 14	.04	311	1.00 1.42 .58 .99	.01 .01 .03 .01	.02 .01 .02 .01		205 220 1 1
	N 5148	2	164	7	89	. 8	13	19	582	2.80	45	5	ND	i	58	1	2	2	27	3.32	.045	2	7	.54	1	. 09	19	1.52	. 01	. 01	1	2

STD C/AU-R 18 60 40 132 6.7 68 29 1053 4.08 42 15 8 37 48 18 15 23 59 .47 .087 41 59 .94 182 .07 35 1.97 .07 .14 12 495

SAMPLE #		Cu PPM	Pb	Zn PPM	•	Ni PPM		Mn PPM			U PPM			ST PPW			Bi PDM		Ca %			CT PPM	Mg 1	Bá PPM	<b>7</b> 1	B PPH		Na 2	ž Ž		Au* PPB
	: ra	III			111		***		•			110					111		•	•		***	•		٠		•	•	•	•••	•••
N 5149	4	161	7	139	.5	17	13	359	2.08	36	5	ND	1	61	1	3	3	50	1.84	. 057	4	5	.60	27	. 16	5	1.36	.07	.04	1	31
N 5150	3	3126	9	757	10.5	53	36	620	2.75	113	5	ND	1	53	5	3	2	29	2.71	.080	3	11	. 56	3	. 07	131	1.20	. 01	.01	1	152
N 5151	4	73	B	170	. 5	13	10	605	2.88	22	5	ND	1	53	1	4	4	46	2.79	.051	2	8	.94	2	.10	3	1.61	.01	.02	1	15
N 5153	1	66	1	34	.1	8	3	253	1.59	9	5	KD	14	38	1	2	2	28	1.20	.016	8	13	.52	21	.08	12	1.04	.03	. 10	1	6
N 5154	1	62	5	59	.3	16	8	383	2.39	10	5	ND	13	66	1	3	2	49	1.90	.033	8	23	.92	34	.15	14	1.65	. 05	.15	1	2
STD C/AU-R	18	59	42	132	6.5	69	28	1041	4.07	42	18	7	37	47	17	16	20	57	.46	.087	40	58	.94	179	.07	35	1.90	.06	.14	11	490

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JUL 18 1988

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

, D. TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V2483 FILE = 38-2202R

SAMPLE=	AU**
N 5170 N 5171 N 5173 N 5174 N 5175	.006 .008 .006 .025
N 3173 N 5177	.025 .008

#### GEOCHEMICAL ANALYSIS CERTIFICATE

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: COTE AUP ANALYSIS BY ACID LEACH/AA PROM 10 GM SAMPLE.

10

16.4

55 1065 11.55 298

ASSAYER. ... , D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS June 30/83 DATE REPORT MAILED: DATE RECEIVED: JUN 24 1988 MPH CONSULTING LTD. PROJECT-V2483 File # 88-2202 V Aus SAMPLE Ag Ni Co Ma Fe As IJ λu Th Sr Cd Sb Bi V Ca La CT Μq PPN \$ PPH PPH PPM PPK PPN PPN PPN PPN PPN 3 PPK PPK 1 PPN Ł PPK PPM PPB PPM PPM PPK PPN PPK 1 PPM PPM 23 1.84 .027 25 1.24 5 .13 9 1.64 .06 26 497 3.66 37 N 5155 75 410 10.83 5 ND 2 36 2 72 1.09 .026 2 27 1.14 7 .12 6 1.99 .08 N 5156 1 564 48 1.2 85 79 1 3 55 28 13 439 2.72 36 5 ND 1 1 2 2 72 1.75 .027 2 20 1.19 15 . 15 5 1.95 .13 1 1 N 5157 81 10 94 .4 63 41 470 4.29 539 5 ND 2 27 3 2 2 61 1.46 .025 2 19 1.00 16 .12 8 1.40 .06 1 1 H 5158 290 1.4 .22 6 291 5 226 1.3 53 16 491 2.23 93 5 ND 2 34 2 73 3.56 .015 3 18 10 1.46 .01 N 5159 21 1.21 12 .17 16 1.46 .07 N 5160 46 . 4 23 466 2.51 23 5 21 2 2 76 1.47 .027 2 5 ND 20 2 2 38 1.39 .013 2 13 . 54 12 .11 5 1.06 . 3 28 11 250 1.23 60 N 5161 8 39 419 4.36 203 5 ND 1 47 2 2 2 45 1.55 .031 2 17 . 81 15 .12 2 1.54 .07 2 N 5162 1 261 18 133 1.2 47

32 54 5 ND 1 54 5 2 4 47 3.93 .048 2 14 .83 1 .13 4 1.50 .01 .01 1 1 1491 10 574 6.5 32 9 965 4.04 N 5163 1 122 9 167 .7 28 11 739 3.23 85 5 ND 67 3 2 37 2.69 .024 2 20 . 84 13 .11 19 1.93 . 05 11 N 5164 1.49 .030 N 5165 12 274 1.4 40 20 411 3.10 45 5 ND 60 39 2 20 .78 15 .11 3 1.72 .09 55 2.94 .024 39 1.69 .06 5 2 2 2 52 2 28 2 3.35 . 05 .08 N 5166 1 103 11 124 . 5 33 25 1920 6.68 700 ED. 1 1 7 2 39 2.60 46 3943 19.25 126 5 ND 4 1 2 2 100 1.57 .047 1 .04 19 6.46 .01 2 72 N 5167 10 17 257 . 3 14 ND 2 25 2 2 99 2.68 .075 2 37 2.49 1 .04 2 5.87 .01 1 21 15 29 3714 17.41 80 5 M 5168 10 16 232 . 2 12 3583 2.16 107 ND 1 104 14 B 42.73 .003 2 1 .21 1 .01 2 .54 .01 .01 2 86 5 2 N 5169 70 12 55 3.3 4

18

17 410 7.3 9 66 831 9.29 2578 5 ND 1 16 5 2 21 13 4.12 .022 11 .32 1 .01 2 .70 .01 1 305 N 5171 1 977 42 36 13.94 .020 .74 2 147 5 ND 2 2 2 11 1 .01 2 1.76 .01 1 199 9 114 1.7 6 22 2287 7.80 356 1 4 H 5172 74 2.8 3 21 3033 15.37 527 5 MD 2 71 3 2 7 47 14.57 .045 2 12 .63 1 .01 2 1.60 .01 4 250 N 5173 HD 3 66 35 5.19 .061 2 17 .88 .03 18 3.17 .01 1 710 5 9 2 8 9 N 5174 1 1758 22 1253 8.8 21 73 2461 14.40 2752 35 1.35 .06 2 2.35 1 3750 187 1926 6.30 2551 70 2 12 45 5.73 .073 2 N 5175 1 296 23 986 3.0 15 5 3 33 2 43 2.34 .086 3 25 1.05 .09 2 1.57 .04 .04 1 925 M 5176 97 .4 12 28 883 2.97 214 5 2 18 1 205 5 ND 51 2 2 28 2.58 .071 2 20 .79 . 05 33 1.51 .02 17 11 21 784 2.43 1 N 5177 2 12 86 .4 5 MD 68 2 2 3 32 1.63 .056 2 23 . 80 33 .07 29 1.60 .04 .12 1 64 2 18 10 198 .4 14 36 612 2.13 966 1 N 5173 42 59 36 133 7.0 68 30 1085 4.02 41 16 8 39 49 17 16 20 61 .51 .096 58 . 92 180 .07 31 2.08 .07 13 525 18 STD C/AU-R

5 2 70

23 3.95 .025

2 14 .60

1 .01

2 1.24

.01

N 5170

1 1333

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JULY 12 1988

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

July : 6/88.

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AG\*\* & AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

ASSAYER: المجيراً.. D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT-V2483 File ≠ 88-1242R

SAMPLE=	<b>AG**</b> ⊙Z/ 5	AU** 0Z/ 1
N 5179 N 5210 N 5212 N 5213 N 5214	.11	.009 .013 .011 .238
N 5215 N 5216 N 5221	.74 .33	.114

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#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HH03-H20 AT 95 DEG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: Core AU\* AMALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DEPENDEN III F

					•	SARPLI	i tipi:	core	A	U- AMA	F1919 B	/ ACID	LEACH	/AA EK! /	JR 1V	JAAC BE	bh.	1	1														
DATE	RECEIVE	ED:	JUN 2	7 1986	1	DAT	E RI	POR	T M	AILE	D: 9	ful	1 1/	88		ASSA			• • •		•		OR	C.I	LEON	G, (	CERT	IFIE	D B	.c.	ASS	AYERS	<b>;</b>
							M	(PH	CON	SULT	ING	LTD.	PR	OJEC	T-V	2483	I	ile	#	88-2	2242		Pag	e 1									
	SAMPLE!	No PPN	Cu PPM	Pb PPN	Zn PPM	Ag PPK	Ni PPK	Co PPN	Na PPK	Fe 3	As PPH	PPK	Au PPH	Th PPM	ST PPN	Cđ PPM	Sb PPN	Bi PPM	PPK	Ca %	P	La PPN	Cr PPM	Hg Ł	Ba PPM	Ti 3	B PPM	Al 1	Na Ł	K k	W PPM	Au* PPB	
	N 5179	1	975	15	13582	5.1	19	481	1353	2 81	762	5	ND	,	44	70	2		21	3.74	649	2	21	. 53	1	. 06	578	1.21	.02	.01	1	315 6	1,009
	N 5180	ž	157	1	54	.3	31	13	354		27	5	ND	i	246	i	2	2			.101	i	14	. 32	52	.05		2.41	.09	.03	i	1	
	N 5181	2		9	107	.3	29	• • •		1.53	74	5	ND	1	253	i	2	2		3.27	.079	3	10	.43	54	.07		3.00	.15	.06	i	9	
	N 5182	i	41	6	35	.1	ii	ģ		2.03	4	5	ND	11	40	i	ž	2		1.07	.029	5	17	.87	11	.10		1.80	.07	.03	i	í	
	N 5183	i	90	10	50	.1	24	36		2.64	63	5	ND	1	120	1	3	2		2.32		2			3	. 20		2.47	.02	.01	i	i	
	# 5184	1	84	9	56	.1	17	16	567	3.91	2	5	MD	1	109	1	2	2	64	1.59	.037	2	20	1.79	21	.11	2	3.62	.15	.04	1	1	
	N 5185	1	9	7	55	.1	25	15	566	3.07	2	5	NĐ	1	83	1	2	2	79	2.75	.070	3	30	1.45	16	.21	8	2.38	.04	.05	1	1	
	N 5186	1	11	3	13	.1	3	5	117	. 81	5	5	ND	1	18	1	2	2	8	1.02	.002	2	2	. 25	1	.04	4	. 86	.01	.01	1	3	
	N 5187	1	17	8	52	.1	- 4	22	523	3.59	2	5	ND	1	162	1	2	2	82	1.93	.046	2	1	1.77	2	.16	9	2.76	.02	.01	1	1	
	N 5186	1	1	5	19	.1	9	4	267	1.55	2	5	ND	1	157	1	2	2	35	2.73	.038	2	13	. 55	1	. 12	2	1.58	.02	.01	1	1	
	N 5189	1	73	12	42	. 2	7	91	380	2.62	5	5	ND	1	243	1	2	2	81	2.77	.042	2	3	. 88	17	.07	2	4.61	.37	. 05	1	1	
	¥ 5190	1	2	4	20	.1	8	4		1.42	2	5	ND	1	91	1	2	2			.011	2	9	.64	2	. 15		1.70	.01	.02	1	1	
	¥ 5191	1	132	5	41	.1	25	. 16		6.83	2	5	MD	1	23	1	2	2	258	. 88	. 055	2		1.01	14	.19		1.42	.07	.04	1	1	
	# 5192	1	41	8	36	.1	1	12		6.62	2	5	ND	1	29	1	2	2			.054	2	4	.56	15	.14		1.17	. 09	.05	1	2	
	N 5193	2	7	9	48	.1	27	16	517	3.46	2	5	ND	1	213	1	2	2	51	2.03	.067	2	32	2.08	21	. 18	2	3.42	. 03	.01	1	1	
	N 5194	1	230	8	71	. 8	20	9	576	3.99	2	5	¥D.	1	52	1	2	2	147	1.89	.077	2	69	1.07	16	. 15	2	2.26	.15	.05	1	2	
	N 5195	1	65	8	44	.4	15	15	567	5.23	2	5	ND	1	26	1	2	2	201	1.76	.119	2	11	. 89	12	.21	10	1.59	.09	. 05	1	1	
	N 5196	1	65	1	65	.1	32	12	518	2.94	10	5	ND	1	45	1	2	2	57	1.57	.064	2	46	1.31	17	.14	5	2.29	.14	.04	1	1	
	N 5197	3	138	7	17	. 1	35	16	459	3.23	12	5	ND	1	33	1	2	2	60	1.38	. 054	2	36	1.40	11	.15	3	2.29	.13	.04	1	1	
	N 5198	1	88	3	37	.3	10	8	399	1.50	11	5	ND	1	80	1	2	2	20	2.60	.039	2	. 1	.37	14	.11	14	1.38	.06	.02	1	2	
	N 5199	1	51	2	61	.3	8	5	788	1 38	18	5	ND	1	266	1	2	2	7	23.27	014	2	2	. 07	4	. 01	15	.47	.01	.01	3	1	
	N 5200	i	53	i	60	.2	17	11	568		51	5	ND	1	66	i	2	į			.026	2	i	.54	i	.07		1.21	.01	.01	i	i	
	N 5201	i	148	4	130	1.7	43	22	371		63	5	ND	i	54	i	2	2		2.76		2	13	.54	i	.08	3	.84	.01	.01	i	i	
	N 5202	i	1	į	15	.i	6	3	235		2	5	ND	i	46	i	2	2			.028	ž	5	. 36	3	.15	11		.01	.01	i	6	
	N 5203	1	458	7	49	.7	59	64	258		30	5	ND	1	24	1	2	2	38		.040	2	8	.63	ì	.08		1.24	.07	. 03	i	ĭ	
	N 5204	1	495	7	40	. 6	59	71	253	9.25	6	5	MD	1	30	1	2	2	60	.87	.030	2	12	.13	7	.11	2	1.42	.09	. 03	1	2	
	N 5205	1	341	6	150	.4	49	33		6.40	16	5	ND	1	31	1	2	2	56	.98	.024	2	10	. 69	7	.13	6	1.08	.07	.03	1	1	
	N 5206	1	392	8	76	1.2	60	68	371	5.20	71	5	ND	1	53	1	2	2	56	1.53	.032	2	8	.87	10	.11	2	1.82	.13	.05	1	1	
	N 5207	1	15	3	16	.1	17	36	780	2.06	74	5	ND	1	49	1	3	2	73	5.41	.040	2	7	. 24	1	. 09	16	1.01	.01	.01	1	1	
	N 5208	1	37	17	181	.3	11	19	2562	11.01	127	5	ND	1	32	i	2	2	96	4.57	.037	2	11	1.84	4	.05	2	4.56	.01	.02	1	113	
	¥ 5209	1	27	6	65	.4	5		2320		193	5	ND	1	53	1	2	2		14.98		2	1	.58	1	.01		1.55	.01	.01		245	. 1
	N 5210	1	59	18	161	. 5	9		3418		517	5	HD	1	40	1	2	2		9.59	.018	2		1.41	1	.01		4.11	.01	.01	1	350	.013
	N 5211	1	24	20	228	. 3	4		3634		339	5	ND	1	30	2	2	2			.051	2		2.15		.04		5.78	.01	, 01	1	36	
	N 5212	1	124	10	105	. 9	5		3210		4047	5	MD	1	14	1	2	2		14.14	.019	2	3	. 98	1	.01		2.72	.01	.01		155 O	
	N 5213	1	279	20	57	3.0	8	236	1531	23.38	99999	5	5	2	42	1	2	20	22	6.00	.012	2	3	.43	2	.01	2	1.00	. 01	.02		7860 p-	
	N 5214	1	316	19	61	3.4	13	160	1923	23.46	99999	5	8	3	26	2	2	20	26	5.74	.014	2	3	.62	3	.01	2	1.44	.01	.03	1 9	1050 D-	256
	STD C/AU-R	18	59	43		6.9	69		1069		42	18	7	36	50	18	17	18	58		.084	40	57	.92	179	.07	31	2.00	.08	.14	12		

SAMPLE#		Cu PPM			-				ře 1	As PPN													•									
N 5215	2	4670	10	105	20 1	3.0	160	1314	23.93	12243	5	,	,	11	1	,	,	5.6	1 60	DES	,	20	. 86	2	۸1	,	2 44	01	0.2	1	3276	0.114
	-																															
N 5216	5	2446	19	74	10.5	26	60	673	36.16	1970	•	ND	3	15	1	3	2	37	1.54	.037	Z	Ó	.30	1	.01	42	. 86	.02	.02	1	847	0.022
¥ 5217	1	582	8	47	2.6	14	14	1807	7.78	1431	5	ND	2	29	1	2	2	50	8.39	.071	2	7	.36	2	.04	6	1.66	.02	. 02	2	88	
# 5218	1	57	5	21	.4	9	7	980	2.60	347	5	MD	2	35	1	3	2	35	4.39	. 053	3	8	.14	2	. 07	21	1.04	.01	.02	1	105	
N 5219	1	496	34	505	2.2	47	28	648	4.68	193	5	ND	1	143	2	2	2	73	1.29	.047	2	54	1.54	34	.09	4	2.86	.11	. 05	1	41	
N 5220	1	339	36	1110	1.7	35	26	642	3.59	148	5	ND	1	45	5	2	2	56	1.51	.042	2	48	1.43	6	.10	6	2.23	.02	.04	1	29	
¥ 5221	2	1016	31	548	4.3	46	32	635	5.74	187	5	MD	1	55	2	2	2	81	1.01	.039	2	59	1.55	23	.11	9	2.43	.09	. 05	1	22	
N 5222	2	382	44	466	2.5	46	68	766	4.57	355	5	ND	1	24	2	2	3	60	1.26	.041	2	46	1.48	13	.06	2	2.05	.01	.04	1	21	

ACME ANALYTICAL LABORATORIES LTD. DATE 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 JULY 12 1988 DATE RECEIVED:

PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

AU\*\* AND AG\*\* BY FIRE ASSAY FROM 1/2 A.T.

. D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT-V2483 File # 83-2281R

SAMPLE ±	$A_{\mathbf{J}^{\times \times}}$	**### T\20
N 5273 N 5275 N 5279 M 5280 N 5231	.22 .21 .35	.050 .012 - .009 .027
N 5282 N 5283 N 5306 N 5307 N 5309	2.43	.118 .040 .062 .027

#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR WA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: CORE AUP ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

name pecety	ED.	JUN :	76 1988	l	דאמ	יות אי	EPOF	STIM	ATLE	D:	Sul	2 يى	188		ASS.	AYER	Ć		Lin	1.D	. TOY	E O	RС.	LEON	IG.	CER	rifi	ED F	3.C.	ASSAVER	s
MPH CONSULTING LTD. PROJECT-V2483 File # 88-2281 Page 1																															
SAMPLE#	Mo PPM	Cu PPM	Pb PPN	Zn PPM	AG PPH	Ni PPN	Co PPN	AN PPN	Fe 1	As PPM	U PPN	Au PPK	Th PPM	ST PPM	CQ PPH	Sb PPN	Bi PPM	PPH V	Ca %	P %	La PPM	CT PPN	Ng L	Ba PPN	Ti	B PPM	Al Ł	¥a {	Į.	PPK PPB W Au*	
¥ 5272	1	155	4	76	.1	36	13	1147	3 43	33	5	ND	1	105	1	2	2	47	10.27	. 050	2	48	1.57	6	.09	7	2.16	. 02	. 02	i 11	
# 5273		1066	14	76	4.1	30			8.31	745	5	MD	2	42	i	ž	2			.014	ž		2.25	2	.02		2.42	.03	.01		a.05 <sub>0</sub>
¥ 5274		1185	9	88	3.9	17			5.14	127	5	ND	2	42	1	2	2		5.24		2		1.54	1	.02		1.69	. 02	.01	1 203	
# 5275		1057	10		2.3	17			6.53	167	5	ND	1	52	1	2	2		6.11		2		2.04	1	.06		2.50	. 02	.01	1 490 .	0.012
N 5276	1	1682	3	95	3.4	14	14	1083	5.03	18	5	ND	1	69	i	2	2	53	4.21	. 031	2	5	1.42	1	.08	7	2.25	.01	. 01	1 95	
¥ 5277	1	1331	5	50	2.6	9	16	770	3.20	46	5	ND	1	30	1	2	2	22	3.18	.041	2	8	.76	1	.02	2	.87	.01	.61	1 2	
¥ 5278	1	521	2	54	1.4	8	22		2.43	51	5	ND	1	46	1	2	2	10	5.93	.044	2	3	. 63	1	.01	5	. 29	. 02	.01	1 29	
N 5279		1909	9		5.4	15	29		4.05	67	5	MD	1	22	1	2	3			. 035	2	12	. 83	1	. 05		1.05	.01	. 01	1 117	
¥ 5280		5725	3		21.1	13	38		4.65	89	5	MD	1	25	2	2	5		3.97		2	3	. 81	1	.01	5	.78	.02	.01	1 325	•
¥ 5281	1	3506	3	117	11.2	10	26	427	4.00	172	5	ND	1	12	1	2	2	1	2.08	.012	2	1	.73	1	. 01	13	.45	. 02	.01	1 1225	0.027
N 5282		22136	2		81.0	19			11.04		5	5	1	32	8	2	12		9.56		2		.47	1		2		.01	.01	1 4460 0	
N 5283		1944	6	85	8.0	9		1237		185	5	. ş	1	76	1	2	2			.007	2	-	1.19	1	.01	-	1.12	.02	. 02	1 1610 C	040
N 5284		874	3	29	3.0	5	26		2.59	101	5	MD	1	21	1	2	2		3.74		2	1	.54	1	.01	6	.24	. 02	.01	1 215	
N 5285		878 696	4	197 39	2. <del>9</del> 2.5	3	15 19		2.26 2.56	93 146	5	ND ND	1	5 12	1	2	4 2		1.10 2.13		2	2 13	.36 .58	1 1	.01 .01	6 12	.07 .31	.01 .02	.01 .01	1 83 1 250	
И 5286	,	020	,	13	2.3	,	13	170	2.00	110	,	=0		12	٠	4	•	•	2.13			13	. 30		.01	12	.31	. 72	. 41	1 230	
# 5287		538	4	60	. 9	12	24		4.64	63	5	ND	1	25	1	2	2			.033	2	9	. 64	1	.04		1.19	.02	.01	1 91	
N 5288		217	4	24	. 2	12	10		1.28	12	5	MD	1	71	1	2	2		3.72		2	19	.31	1	.14	_	. 98	.01	.01	1 72	
и 5289	i	61	4	12	.1	5	3		1.00	5	5	ND	1	87	1	2	2	_		.060	2	19	.19	1	.16		1.07	.01	.01	1 14	
N 5290	2		2	9	.1	4	3		1.04	4	5	ND	1	87	1	2	2		2.57		2	18	.17	1	.12		1.06	.01	.01	1 6	
# 5291	1	24	2	15	.1	1	1	253	1.26	9	5	ND	1	93	ı	2	2	28	3.29	.096	2	11	.31	2	.09	,	1.15	.01	.01	1 74	
¥ 5292	1	59	2	16	.1	7	4	249	1.50	7	5	ND	1	54	1	3	2	20	2.23	. 109	2	11	.27	1	. 07	8	.96	. 01	. 91	1 1	
# 5293	2	19	3	13	.1	4	3		1.25	11	5	ND	1	57	1	2	2	17	2.11	.097	2	12	.21	2	.09	2	1.01	.01	.01	1 1	
W 5294	1	6	9	34	.1	9	9		1.77	3	5	MD	1	12	1	2	2		1.53		2		1.01	4	.15		1.61	.03	.02	1 1	
N 5295	1	3	5	29	.1	•	8		1.87	5	5	ND	1	106	1	2	2		2.28		2	3	.93	5	. 20		1.55	.01	.02	1 132	
N 5296	2	3	3	13	.1	2	6	181	1.77	12	5	ND	1	164	1	2	2	48	3.08	. 191	3	2	.42	1	.24	17	1.51	.01	.01	1 5	
N 5297	1		4	11	.2	4	3		1.19	1	5	ND	2	91	1	2	2		3.02		2	11	.29	1	,09		1.14	.01	.01	1 7	
N 5298		335	2	14	.5	5	4		1.34	3	5	ND	2	91	1	2	3		3.05		2	13	. 27	2	.08		1.13	.01	.01	1 55	
N 5299		616	3	14	.8	6	5		1.20	10	5	ND ND	1	109	1	2	2			.243	3	15	.17	1	.10		1.08	.01	.01	1 32	
¥ 5300		1588 369	5 3	33 25	3.4	10	9		1.56	11	5 5	ND ND	1	79 92	1	2 2	2 2		3.01		3	11	.23	1	.14		.97	.01	.01	1 108	
и 5301	1	303	,	43	.,	3	,	213	1.20		,	av		74	٠	4	2	40	3.01	. 120	3	9	.28	1	.14	,	1.00	.01	.01	1 52	
N 5302		187	6	31	.2	1		1353		17	5	ND	1	31	1	2	2			.008	2	. 5	.30	1	.06		1.95	.01	.02	1 49	
N 5303	1		11	53 18	1.0	11	17 5		2.88 5.91	5 <b>6</b> 12	5 5	ND ND	5 1	66 12	1	2	2 2			.057 .006	2	17	.32	1	. 06		1.11	.01	. 02	1 235	
н 5304 н 5305	1		12	25	1.2	6	13		4.01	34	5	ND	4	53	1	2	2			.014	2	11	. 23	1 1	.04 .05		1.76	.01 .01	.01 .01	1 35 1 240	
N 5306	-	429	21	31	1.7	25	87		6.81	195	5	2	ì	55	ì	3	5		6.52		2	6	.31	2	.07		.86	.01	.02	2 1910 0	.062
												-					-				_	·									
N 5307	-	661	30	36	1.7	17	54		4.16	127	5	ND	3	67	1	3	2			. 020	2	6	.56	1	.06	3	.92	.03	. 02	1 920 0	1,02 t
STD C/AU-R	18	58	38	132	6.5	67	23	1054	1.00	43	18	9	36	47	18	18	19	31	. 47	. 684	39	57	.93	172	.06	11	1.89	.06	. 13	12 495	

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ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JULY 12 1988 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AG\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT-V2483 File # 88-2284R

SAMPLE# AG\*\*
oz/t
N 5324 .29
N 5325 .35

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V1483 FILE # 38-2134R

SAMPLE = AU\* "

0Z, 5

N 5325 .006

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND-AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

N 5346

			-	SAMPLE					LYSIS B	Y ACID	LEAC	•	ION 10	GK SAI				NO PER	(		D1 10									
DATE RECEIVED:	: Jek	28 198	8	DAT	E RI	POR	T M	AILE	: ם	Tu	Ly	2/8	8	ASS.	AYEF	· //~	IJL.1	c.a. (	γ. D.	TOYE	OR	C.I	EON	G, (	CERT	IFIE	D B	.c.	ASS.	AYERS
									ING							1/		88-2			Pag									
	MO CU PM PPM	Pb PPM	In PPK	Ag PPM	Ni PPN	Co PPN	Ma PPM	Fe %	As PPH	U PPM	PPH	Th PPN	Sr PPN	Cđ PPN	SD PPM	BÍ PPM	PPM	Ca t	P	La PPM	Cr PPN	Ng	Ba PPN	ti t	B PPN	Al 3	Ha 1	E t	W PPM	Au* PPB
N 5312 N 5313 N 5314	1 210 1 6 1 45 1 23 1 91	5 5 5 4 4	25 18 20 14 15	.7 .4 .4 .1	7 10 9 6	4 3 3 3 2	206 225 161	1.17 1.33	6 2 3 6 3	5 5 5 5 5	ND ND ND	2 1 2 1 2	115 85 99 113 75	1 1 1 1	2 2 2 2 2 2	2 2 2 2 2	32 27 29 19	2.37	.034 .029 .007	2 2 2 2 2	6 17 15 11 10	.40 .44 .41 .19 .20	1 1 1 1 2	.14 .15 .13 .10	6 4 7	1.13 1.13 1.28 1.26 .94	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1	13 4 7 5 17
и 5317 и 5318 и 5319	1 83 1 6 2 52 1 19 1 188	6 4 28 5 5	22 16 13 6 8	.4 .1 1.3 .1 .5	11 11 11 4 4	5 7 9 3 7	324 198 192 97 429	1.65 1.27 .86	8 27 13 10	5 5 5 5	ND ND ND ND	2 1 2 2 1	103 57 143 108 86	1 1 1 1	2 2 2 2 2	3 2 2 2 2	25 25 41 37 25	3.82 1.10 3.07 2.00 3.99	.039 .032 .022	2 2 2 2 3	16 11 9 10 9	.48 .93 .40 .16	1 1 1 1	.08 .09 .19 .18	10 11 9	1.18 1.30 1.19 .90 1.02	.02 .01 .03 .01	.01 .02 .01 .01	1 1 1 1	31 1 33 15 125
H 5322 N 5323 N 5324	1 18 1 1115 1 174 5 4579 12 11909	5 9 5 10 17		.2 3.0 .6 11.0 28.5	2 10 4 16 36	5 2 5	2481 959 1127 2541 2879	5.39 4.81 9.02	6 40 3 35 56	5 5 5 5 5	ND ND ND ND	1 2 2 3 2	6 3 4 3 8	1 1 1 2 3	2 2 2 2 2	3 2 2 2 3	27 25 24 28 35	9.62 7.05 7.45 9.72 8.61	.032 .023 .017	2 2 2 2 2	3 6 4 6	.11 .07 .10 .09	1 1 1 1	.04 .03 .03 .02	1 6	1.58 1.06 1.35 1.20 1.31	.01 .01 .01 .01	.01 .01 .01 .01	5 1 1 25 5	1 138 9 90 203
M 5327 N 5328 M 5329	1 110 1 71 4 22 1 50 1 4	3 2 3 6 4	8 13 20 35 13	.4 .4 .2 .2 .1	2 4 7 98 16	7 4 5 14 5	277	.89 1.34 2.34	7 8 11 8 7	5 5 5 5	ND ND ND ND	3 2 1 1	57 39 74 19 91	i 1 1 1 1	2 2 2 3 2	2 2 2 2 3	17 22 61	2.49 2.69 3.11 2.40 2.58	.244 .093 .018	10 2 2 2	4 7 9 257 18	.16 .42 .53 1.93 .71	1 1 1 8	.07 .09 .07 .11	11	.63 .46 .92 2.05 1.06	.01 .01 .01 .04	.01 .01 .01 .07	1 1 1 1	41 6 59 4
N 5332 N 5333 N 5334	1 8 1 72 1 3 1 48 1 43	3 4 5 9	5 27 33 56 13	.3 .2 .3 .5	8 42 23 2 20	2 26 5 14 6	119 338 389 445 827	2.24 6.42	3 44 10 16 22	5 5 5 5	ND ND ND ND	1 1 1 2	70 48 66 57 38	1 1 1 1	2 2 2 2 2	3 2 2 2 2	26 61 49 221 66	2.51 2.70 1.87 1.53 6.64	.056 .041 .075	2 2 2 2 2	15 26 26 3 35	.27 .66 1.00 .60	1 1 1 22	.13 .25 .23 .14			.01 .01 .01 .13	.01 .01 .01 .06	1 1 1 1	1 5 1 1 5
ж 5337 ж 5338 ж 5339	1 144 1 1201 1 19 1 15 1 13	11 24 3 2 2	67 71 4 26 4	.7 3.4 .3 .5	14 91 2 2	18 147 2 2 1	619 425 704 534 500		17 39 5 6	5 5 5 5	ND ND ND ND		69 30 695 933 1347	1 1 1 1	2 2 2 2 2	3 4 2 2 2	1	1.54 5.27 38.57 39.94 39.19	.003 .003 .003	2 2 2 2 2	7 1 1 1	1.33 .08 .03 .03	16 2 1 1 1	.15 .01 .01 .01	12 3 26 18 7	2.31 .10 .02 .02 .03	.12 .01 .01 .01	.07 .01 .01 .01	1 1 4 4 3	1 7 1 1
Ж 5342 Ж 5343 N 5344	5 14 1 3 4 26 1 289 1 103	6 9 8 11 6	142 78 56 106 47	.2 .1 .1 1.3 .5	5 26 12 42 18		628 1101 568 479 684	4.28 3.40 4.05	50 20 10 55 23	5 5 5 5	Д О И И И И О	1 2 3 1 1	132 75 26 58 60	1 1 1 1	2 3 2 2 3	2 2 2 3 2	18 45 71 67 37	6.23 3.14 1.70 1.41 5.32	.046 .079 .030	2 2 3 2 2	11	.56 1.37 1.40 1.16 .45	1 1 12 18 3	.08 .12 .21 .12 .10	6 10 4	.94 2.20 2.07 1.65 1.19	.01 .01 .06 .09	.01 .01 .07 .08	1 1 1 2	5 12 1 2 1

1 7 7 35 .1 7 2 523 1.81 7 5 ND 1 66 1 2 2 55 3.44 .001 2 15 .42 9 .14 6 1.33 .01 .01 2 3

STD C/AU-R 18 60 42 132 7.3 70 30 1041 4.04 43 22 8 40 51 19 17 22 60 .49 .086 38 59 .93 179 .07 31 1.95 .08 .16 13 520

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SAMPLE #	-	Cu PPM		In PPM	PPK PPK		Co PPM	Ma PPM	re 1	As PPN	U PPN	Au PPN		ST PPM	Cd PPM	SD PPM	Bi PPK	V PPN	Ca 1		La PPM		•	Ba PPM	Ti t	B PPK	al t	Na Ł	I t	_	Au* PPB
N 5347	,	398	10	241	1.0	61	37	410	6.95	32		ND	,	97	1	2	,	62	1 02	.023	2	24	1.34	20	. 16	,	4.00	21	.03	1	2
	_		10												•		•													•	:
N 5348	I	1317	6	93	2.7	63	64	421	8.78	67	•	ND	1	11	1	2	2	84	.81	.037	Z	11	1.16	3	.15	,	1.62	.01	. 05	1	1
N 5349	1	604	7	76	1.2	38	29	446	5.55	23	5	ND	1	12	1	2	2	134	1.52	.045	2	21	1.24	11	. 20	4	1.63	.07	. 09	1	1
N 5350	1	1000	1	201	2.8	40	39	393	5.40	43	5	KD	1	15	1	2	2	89	1.09	.046	2	13	.92	1	.17	8	1.36	.03	. 04	1	1
N 5351	1	922	10	213	3.4	33	43	369	5.21	42	5	ND	1	23	1	3	3	69	1.08	.044	2	10	.81	7	.14	10	1.31	.02	.03	1	3
N 5352	1	75	3	61	. 2	6	6	182	1.07	8	5	ND	1	45	1	2	2	23	2.04	.085	3	4	. 28	15	.06	19	1.55	.07	.06	1	1
N 5353	1	5	3	60	. 2	4	3	609	1.64	8	5	ND	i	48	1	2	2	29	6.00	.042	2	6	. 48	1	. 09	64	1.10	.01	.01	1	1
STD C/AU-R	17	58	41	132	7.2	67	29	991	4.05	42	15	7	37	49	17	17	18	58	.49	.081	40	56	.92	178	. 07	36	1.89	.06	.14	12	470

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: JUL 18 1988

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

July 21/83

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT V1483 FILE = 38-1139R

SAMPLE = AUTH J = 1 9 5230 H 3204 . : : : 5 . 40 N 3208 M 3006 .013 N 5137 .047 170. N 3118 29 3239 N 5240 11 3241 ..30 H 5242 N 5246 .025 N 5243 N 3250 .169 N 5251 .019 N 5154 .018 N 3135 N 3135 M 5270

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#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR NN FE CA P LA CR HG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPN.

- SAMPLE TYPE: CORE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

									5000				1 1		/			/	('	_/													
D	ATE	RECEIV	ED:	JUNE	28 198	8	DAT	E R	EPOR	T M	AILE	): <u> </u>	July	17	188		ASSA	YER	.·	: !:	or	.ם.	TOY	OR	C.I	EON	G, (	CERT	IFIE	D B	.c.	ASS	AYERS
								ı	MPH	CON	SULTi	NG	/ // LTD.	PR	OJEC	T-V:	2483	1	File	#	88-	289		Page	e 1								
																							:	_									
	\$	SAMPLE#	Mo	Cu	Pb PPN	Zn	Уď	Ni	Co PPN	AN HSS	le 1	As PPH	U PPN	Au PPM	Th PPH	Sr PPN	Cd PPM	Sb PPM	Bi PPK	V PPN	Ca %	P	L <b>á</b> PPM	CT PPN	Ng Ł	Ba PPN	Ti 1	B PPN	Al 1	Na 1	I 1	PPK	Au* PPB
			PPH	PPM	rra	PPM	PPN	PPH	rrn	ren	•	ttu	rrn	rra	tra	rrn	IIA	rra	rrn	rrn	•	•	1111	rrn	•	ıın	•	IIA	,	•	•	iin	***
	3	1 5223	1	473	19	229	1.5	38	27	563	4.14	77	5	ND	1	38	1	2	2	73		.054	į		1.33	24	.12		1.93	.07	.07	1	5
		1 5224	2	77	7	62	. 2	27	16	233	1.14	38	5	ND	1	132	1	2	2		2.24	.096	1	15	. 23	24	. 05		1.93	.06	.05	1	2
		1 5225	1	27	3	37	.1	26	19	246	1.00	55	5	ND	1	21	1	2	2		1.69		3	14	.14	.7	. 07		. 82	.02	. 02	1	1.
		1 5226	2	108	7	40	.2	19	11	287	1.26	35 10	5 5	ND ND	1	107 44	1	4 2	2		4.23 1.32		25 2	11	.19	13 20	.04		1.41	.04 .08	.02 .08	2	1 5
	j	5227	1	218	9	55	.7	15	23	549	3.43	16	,	ИV	1	11		2	4	103	1.32	.010		21	1.12	20	.18	۰	1.83	. 05	. 08	1	,
	N	5228	1	5	7	51	.1	6	11	604	3.13	2	5	ND	1	56	2	2	2	78	2.60	.054	ź	50	1.64	15	.14	6	2.55	.13	.09	2	3
	3	\$ 5229	1	155	7	36	.4	10	27	416	2.61	20	5	MD	1	63	2	2	2	73	1.76	.074	1	22	1.16	18	.14		2.11	.14	.06	1	4
	¥	5230	1	3	15	27	.3	11	6	332	1.53	4	5	ND	1	66	2	2	2			.038	2	16	.97	3	.12		2.95	. 05	.06	1	4 .
		1 5231	1	3	30	39	. 6	18	59	504	1.87	96	5	ND	1	93	1	2	2		2.47	.036	2		1.07	11	.09		2.89	.19	.06	1	83
	ì	5232	1	11	8	27	. 3	10	1	350	1.87	7	5	ND	1	69	1	2	2	19	2.56	.077	2	21	. 67	1	.11	1	1.55	.01	.01	1	5
	1	N 5233	1	567	9	39	1.6	8	47	490	3.43	125	5	ND	1	51	1	2	4	23	3.19	.091	2	24	. 63	2	. 09	7	1.24	.01	.01	1	225
		1 5234		1274	11	113	3.8	9	182		28.66	313	5	HD	4	8	1	2	18	8	2.75	.014	2	13	.14	6	.01	19	.26	.01	.03	2	1990
		1 5235	1	100	22	154	.4	7	112	385	43.16	216	5	ND	6	10	1	2	2	12	.97	.026	2	10	. 15	9	.01	28	.23	.02	.03	1	1355
		5236	1	84	16	169	1.3	12	184		25.26	285	5	4	3	35	1	2	2		3.74	.032	2	27	.50	15	.04	22	.93	.01	.06		605
	1	1 5237	1	135	13	37	. 5	28	2164	293	14.43	3501	5	4	5	6	1	3	2	10	.70	.007	2	109	.11	13	.01	49	.14	.02	.03	149	3450
	1	1 5238	. 1	990	19	43	2.1	. 39	1483	686	29.05	2495	5	3	3	14	1	2	2	7	3.34	.007	2	76	.25	4	.01	18	.22	.01	.02	85	1502
		N 5239	i	78	21	17	. 6	12			35.17		5	ND	5	12	1	2	2	19	1.31	.014	Ž	46	.41	15	.01	56	.56	.02	.03	56	1750
		1 5240	i	21	8	44	.4		1951	694	12.43	3079	5	ND	1	20	1	2	2	17	2.52	.014	2	97	.51	3	.01	19	.44	.02	.03	1	1620
	1	¥ 5241	1	52	4	39	.7	4	1218	655	9.03	2009	5	2	1	15	2	2	2			.011	2	60	.35	2	.01	9	.21	.01	.02		1085
	j	5242	1	92	5	41	.3	2	466	1000	9.66	716	5	ND	1	17	1	2	2	15	4.90	.016	2	27	. 39	2	.01	5	. 29	.01	.01	6	350
	,	N 5243	1	295	4	52	. 9	4	376	692	6.20	558	5	MD	1	20	1	2	2	16	2.33	.019	i	28	.62	3	. 02	8	.65	.01	. 02	2	75
		1 5244	i	1954	8	103	7.0	3	132	698	12.57	202	5	ND	1	11	1	2	5	15	2.96	.013	2	13	.31	3	.01	10	. 25	.01	.01	73	60
		N 5245	1	440	7	36	1.6	3	29	529	8.74	52	5	ND	1	7	1	2	5	12	1.86	.018	Ź	6	.28	4	.01	12	.19	.01	.01	1	72
	)	1 5246	1	154	5	39	1.4	2	10		11.61	35	5	ND	1	11	1	2	2		2.94		2	6	. 27	4	.01	7	. 30	.01	.01	1	420
	1	N 5247	1	17	3	37	. 3	13	25	783	2.89	28	5	ND	1	69	1	3	2	46	3.48	.017	1	33	2.16	2	. 13	8	2.15	.02	.03	1	36
	ì.	1 5248	1	19	6	49	.1	14	19	477	2.83	31	5	ND	1	208	1	2	2	66	2.89	.031	2	30	1.14	2	.17	4	2.30	.02	.01	1	6
		N 5249	i	222	8	47	1.1	В	29	705	4.12	44	5	ND	1	30	1	3	5		3.89	.052	2	8	. 65	18	.02	5	1.06	.06	.11	5	930
		5250	1	2522	8	37	1.6	5	136	416	4.28	174	5	4	1	8	1	2	10	8	3.31	.034	2	12	.37	5	.01	9	. 35	.02	.04	1	5135
		¥ 5251	1	318	8	21	1.1	2	15	1493	6.75	25	8	ND	1	4	1	2	2	19	11.52	.008	2	3	.14	1	.01	2	.50	.01	.01	6	610
	ĭ	1 5252	1	475	2	25	1.4	1	18	357	3.55	41	5	ND	1	3	1	2	5	18	1.73	.007	2	5	. 23	1	.01	8	. 25	.01	.01	2	73
	,	N 5253	1	31	5	19	.1	1	11	590	8.21	19	5	DK	1	3	1	2	2	33	2.84	.008	2	4	. 15	3	.01	3	.32	.01	. 01	6	59
		N 5254	1	12	8	14	. 2	i		1946	8.10	26	5	ND	i	5	ž	ž	3		13.37		2	ż	.15	ž	.01	ž	.73	,01	.01	á	195
		N 5255	i	10	4	12	.1	i	13	1034	5.31	19	5	ND	i	7	ī	2	4		10.26		Ž	4	. 20	1	.01	3	.47	.01	.01	3	225
		1 5256	i	552	5	25	1.4	4	15	404	2.64	29	5	HD	1	46	ı	2	2		2.69		2	9	.57	2	.06	5	.81	.03	.02	2	48
		N 5257	1	240	2	96	.9	10	54	279	2.04	89	5	ND	1	109	1	2	2			.065	2	15	. 62	1	.09	11	1.27	.02	.01	1	92
	ı	1 5253	1	53	14	15	.4	10	93	288	1.52	149	5	ND	1	102	1	2	2	37	2.62	023	2	16	.66	1	.13	9	1.20	. 02	. 01	!	52
	,		*	33	**										•								•						4 44	• • •		.:	

STD C/AU-R 16 59 38 129 7.6 67 28 1029 3.77 36 17 7 36 47 17 16 19 53 .44 .081 36 53 .87 173 .06 33 1.88 .06 .13 11 475

SAMPLE!	No PPN		Pb PPM	Zn PPM	Ag PPM	Ní PPK	CO PPM	Ha PPN	Fe \$	As PPM	U PPM	Au PPH	Th PPM	Sr PPM	Cd PPH	Sb PPN	Bi PPM	V PPN	Ca %	P	La PPN	Cr PPN	Ng Ł	Ba PPN	Ti Ł	B PPM	Al t	Na ł	K t	S S K	Au* PPB
N 5259	1	3	7	17	.1	5	6	153	1.07	4	5	ND	1	87	1	2	2	35	2.15	. 056	2	21	.68	2	.14	17	1.06	. 02	.01	1	3
N 5260	1	25	7	44	.1	16	16	306	3.12	2	5	ND	1	57	1	3	2	80	2.02	.045	2	31	2.40	12	.12	2	3.91	.17	.04	2	1
N 5261	1	2	4	27	.1	23	16	253	2.93	2	5	ND	1	68	1	2	2	38	1.13	.062	2	34	1.92	2	.13	7	2.31	.01	.01	1	1
N 5262	1	3	8	27	.1	17	19	288	2.90	7	5	ND	1	10	1	3	2	40	1.20	.064	2	33	2.21	4	. 18	1	2.65	.01	.03	1	1
N 5253	1	36	7	56	. 3	25	12	529	3.43	20	5	ND	1	63	1	2	3	56	2.18	.049	2	44	1.97	2	.18	13	2.89	.03	.03	1	29
N 5264	1	6	4	30	.3	9	8	246	1.64	9	5	ND	i	42	1	2	2	32	1.53	.042	2	20	.88	1	.10	15	1.51	.01	. 07	1	7
N 5265	1	396	8	112	.7	76	14	962	5.28	53	5	MD	1	31	1	2	2	69	7.06	.029	2	128	2.30	6	.11	4	2.91	.01	. 09	1	460
N 5266	1	38	7	69	. 1	19	12	529	2.88	11	5	ND	1	45	1	3	2	59	2.45	.066	2	31	1.84	8	. 16	2	2.24	.02	. 09	1	16
¥ 5267	1	6	5	90	. 1	21	14	725	3.63	4	5	ND	1	41	1	2	2	55	2.09	.068	2	34	2.29	13	.12	3	2.67	. 02	.12	1	2
N 5268	1	4	4	55	.1	15	9	442	2.15	4	5	ND	1	51	1	2	2	38	2.05	.055	2	24	1.53	8	.11	6	1.98	. 02	.09	1	2
N 5269	1	38	2	70	.1	18	10	710	3.78	31	5	ND	1	58	1	2	2	40	3.34	.053	2	20	1.64	3	. 09	2	2.08	.01	. 05	1	32
N 5270	1	1069	7	143	3.2	24	20	1301	6.17	147	5	ND	1	87	1	3	4	62	11.30	.049	2	20	1.90	1	.03	4	2.32	.01	.01	1	540
N 5271	1	1094	3	55	2.6	17	17	603	3.39	52	5	ND	1	53	1	2	3	44	4.84	.048	2	20	1.40	1	.03	3	1.41	.02	.01	1	96
STD C/AU-R	18	60	42	132	6.7	70	29	1042	4.03	42	23	8	38	49	17	17	19	61	.47	.094	42	60	.91	179	.07	38	1.93	.07	.15	12	480

ACME ANALYTICAL LABORATORIES LTD.

BATE RECEIVED: JUL 18 1988

BERNALL ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

. D. TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V2483 FILE # 88-2340R

AU\*\* SAMPLE# oz/t N 5359 .096 N 5360 .014 N 5361 .142 N 5404 .012 N 5406 .011

18 8 37 47 18 16 21 59 .47 .086 40 59 .93 181 .07 34 1.96 .06 .15 12 510

- (

40 132 6.6 68 30 1057 4.14 38

PERSONAL MERCHANIST

# GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

					•	SAMPL	E TYPE	: Core	Å	u= ana	LYSIS	BY ACID	LEAC	I/AA Z				P	٩		, ,,,,,,			,,		••••							
DAT	E RECEIV	ED:	JUNE	29 198	18 I	DATE	REI	PORT	MA	LED	: J	nlj	"	/88	F	SSA	YER.	<u>(</u> .	Lev		.D.1	COYE	OŔ	C.L	EONG	, C	ERT:	IFIE	DВ.	c.	ASS	AYERS	i
												LTD			CT-V	7248	3	File	e #	8 k -	2340	)	Pa	ge 1									
	Sample#	No PPN	Cu PPM	Pb PPN	Zn PPN	Ag PPM	Ni PPH	Co PPN	Ma PPM	Fe }	As PPM	O PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	PPK V	Ca 3	P	La PPN	Ct PPN	Ng L	Ba PPK	Ti	B PPN	Al 4	Na Z	Į į	PPH	Au² PPB	
	N 5354 N 5355 N 5356 N 5357 N 5358	1 2 1 1	17 6 5 7 5	3 8 4 5	47 11 8 7 14	.2 .2 .1 .1	4 3 3 4 5	2 2 2 2 3	578 337 635	1.71 1.56 1.29 1.68 2.05	26 4 4 8 11	5 5 5 5	ND ND ND	3 2 1 1	60 67 97 71 67	1 1 1 1	3 2 2 2 2	4 2 2 2 2 2	22 26 15	5.06 3.99 2.92 3.77 6.63	.054 .092 .034	2 5 2 2 3	B 3 7 6 11	.24 .20 .14 .23 .29	1 2 2 7 1	.11 .14 .13 .08	10 13 2	1.14 1.05 1.21 1.32 1.14	.01 .01 .01 .01	.02 .02 .01 .01	1 1 1 1	12 48 23 44 84	
	N 5359 N 5360 N 5361 N 5362 N 5363	1 1 1 10 3	9 60 57 497 230	7 11 9 2 15	19 45 43 43 36	.3 .2 .1 .6	5 23 5 29 20	7 4 61	896 1377 1417 1109 1738	5.49 3.32 20.65	2 4 10 11 33	5 5 5 5	ND ND ND	3 3 1 5	80 80 45 34 68	1 1 1 1	2 2 2 2	2 2 2 2 2	38 52 60	7.71 7.57 14.63 6.91 15.21	.058 .060 .155	5 3 2 3 2	13 25 10 28 24	.34 .56 .30 .25 .40	1 1 1 1	.13 .05 .04 .01	11 43 7	1.34 1.62 .83 .01 1.09	.01 .01 .01 .01	.02 .02 .03 .03	1	3570 \ 480 6655 71	/.G.
	N 5364 N 5365 N 5366 N 5367 N 5368	7 1 7 17 2	91 53 44 18 5	10 13 7 5 5	37 62 27 18 18	.2 .3 .1 .1	12 14 21 9	7 8 6	1971 1370 2648 2039 961	4.21 6.48 4.08	6 49 24 99 20	5 5 5 5 5	ND ND ND ND	2 3 1 2 2	75 57 59 61 59	1 1 1 1	2 2 2 5 6	2 2 3 2 2	41 44 14	13.08 5.60 10.68 6.98 3.80	.076 .136 .071	4 3 5 5	45 56 23 13 5	.59 .55 .34 .59	1 7 71 60 18	.03 .09 .03 .05	20 145 22	1.37 1.21 .74 1.03 1.09	.01 .01 .02 .01	.01 .04 .09 .10	1 1 2 1	93 4 77 29 64	
	N 5369 N 5370 N 5371 N 5372 N 5373	3 4 3 5	10 93 46 126 49		18 811 591 374 1143	.1 .4 .1 .4	16 14 12 18 10	7 7 9	241	1.61 1.19 1.36	25 34 36 35 20	5 5 7 5	ND ND ND ND	2 2 1 1 2	67 37 54 89 37	1 4 3 2 4	5 2 2 3 2	2 2 2 2 2	22 22 27	6.26 4.77 4.44 3.05 11.29	.079 .102 .108	9 5 7 9	11 8 6 7	.43 .18 .11 .13	18 1 1 1 1	.04 .09 .08 .11	11 15	1.04 1.11 .96 1.04	.01 .01 .01 .01	.06 .01 .01 .01	1 1 1 1	105 8 4 6	
	N 5374 N 5375 N 5376 N 5377 N 5378	1 1 3 2 7	28 9 84 354 170	4 2 4 5 7	689 422 750 121 873	.1 .3 1.0	5 8 16 26 28	2 7 9 17 8	207 453	.90 .78 1.41 3.62 1.94	7 24 31 59 35	5 5 5 5	ND ND ND	1 6 1 1	15 59 77 41 50	3 2 3 1 3	2 2 2 2 3	3 2 2 2 2	14 20 21	10.22 4.20 3.45 7.31 7.87	.030 .057 .070	2 4 4 5 7	\$ \$ \$ 1	.06 .04 .05 .09	1 1 1 1	.03 .07 .09 .07	12	.61 .83 .79 1.02	.01 .01 .01 .01	.01 .02 .01 .01	1 1 1 1	1 1 1 11 3	
	N 5379 N 5380 N 5381 N 5382 N 5383	4 2 3 5 115	137 293 54 94 11	6 9 2 4 11	77 47 39 89 62	.3 .7 .4 .3	29 32 10 27 47	16 22 3 8 6	224 157	3.89 5.94 1.44 1.19 1.72	49 75 12 47 68	5 5 7 5 5	ND ND ND ND	1 1 3 15 1	40 32 88 60 123	1 1 1 1	2 2 3 3 3	5 2 4 2 6	32 28 9	1.45 1.35 2.17 1.23 3.96	.064 .084	4 3 5 8 4	10 10 8 4 13	.31 .48 .24 .15	43 48 1 49	.08 .08 .12 .04	6 7 5		.02 .02 .01 .02	.02 .01 .01 .01	1 1 1 1	3 8 1 1	
	N 5384 N 5385 N 5386 N 5387 N 5388	3 2 5 3 1	72 4 107 190 389	5 2 5 8 10	98 27 74 69 212	.7 .2 .3 .8 1.5	9 13 34 15	5 3 6 6 29	407 310	2.08 2.07	101 23 23 29 68	5 5 5 5 5	MD MD DN DN	2 3 1 1 6	51 41 64 63 50	1 1 1 1	5 2 4 4 2	2 2 3 3 2	18 20 37	2.75 3.13 2.20 2.77 2.57	.071 .095 .063	4 6 4 3	9 14 4 11	.23 .38 .31 .46	1 1 52 1 3	.10 .05 .06 .15	12 14 15		.01 .01 .02 .01	.03 .01 .01 .01	1 2 1 1	1 1 1 8 20	
	N 5389	-	17		24	. 2	9		165		3	5 10	ND	16	24	1	2	4 21		.44	.009	10	20	. 12		.04	1	.74	. 05		1	1	

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPN	Ag PPM	Ni PPM	Co PPM	Mn PPM	Pe k	As PPM	U PPM	Au PPM	Th PPM	Sr PPH	Cd PPH	Sb PPM	Bi PPM	V PPH	Ca i	P	La PPM	CT PPM	Ng L	Ba PPN	Ti Ł	B PPM	Al	Na t	Į.	PPM	Au* PPB
N5390	1	126	2	36	. 2	14	8	426	2.80	2	8	ND	6	23	1	2	2	56	1.12	.041	4	29	. 97	33	. 15	13	1.59	.06	.14	1	34
N5391	1	56	3	211	.3	30	32	556	3.41	44	5	ND	1	39	2	2	2	69	1.30	.076	2	92	1.72	17	.22	7	2.07	.05	. 05	1	2
N5392	1	40	2	61	.1	15	23	499	3.10	28	6	ND	13	37	1	2	2	49	.88	.034	4	28	1.18	25	.12	4	2.00	.06	.06	1	1
N5393	1	10	2	317	. 3	12	11	354	1.89	10	5	ND	1	45	2	3	2	40	1.38	.060	2	25	.73	1	.15		1.31	. 02	. 02	1	1
N5394	1	2	4	22	.2	8	5	326	1.39	ó	5	ND	1	56	1	2	2		3.61		2	12	.77	10	.10		1.90	.03	.06	1	5
N5395	1	3	2	37	.1	21	20	323	1.47	30	5	MD	1	93	1	2	2	35	2.97	.014	2	29	1.13	13	.07	9	3.47	.17	.06	1	2
N5356	1	5	7	35	. 2	8	6	431	1.98	6	5	ND	1	58	1	2	2	64	2.46	.065	2	17	1.14	8	.12	10	2.51	.08	. 05	1	2
N5397	1	536	5	57	1.9	9	68	946	3.83	111	5	ND	1	21	1	2	2	22	2.12	.039	2	11	1.15	23	. 03	11	1.36	. 08	.14	1	56
N5398	1	1277	6	80	5.2	18	443	527	2.46	720	1	ND	1	5	1	3	2	4	2.22	.026	2	25	. 26	4	.01	8	. 18	.02	.03	1	30
M5399	1	422	8	18	2.1	4	15	484	5.26	11	5	ND	1	4	1	6	2	4	2.06	.022	2	4	. 25	3	.01	5	.21	.02	.03	1	41
<b>35400</b>	1	108	3	21	.4	2	10	582		54	5	ND	1	17	1	3	3		2.51		2	8	. 49	4	.03	3	.58	.03	.03	1	13
N5401	1	21	4	20	. 1	7	9	328	1.35	19	5	MD	1	70	1	2	2	23	2.11	.096	2	21	. 34	2	.11	1	.98	.01	.01	1	13
N5402	1	253	4	27	.7	2	21	1369	4.76	33	5	#D	1	- 4	1	2	2	8	6.16		2	5	.27	4	.01	3	.53	.02	.02	3	2
N5403	1	790	2	37	2.8	2	27	988	4.85	49	5	ND	1	1	i	2	3		1.42	.007	2	6	. 28	3	.02	10	.60	. 02	.02	2	15
N5404	1	2885	9	129	10.1	2	70	740	12.70	223	5	MD	1	3	1	2	5	10	4.02	.004	2	6	.23	2	.01	2	.38	.01	.01	10	420
N5405	1	62	2	14	. 2	1	6		3.84	29	5	ND	1	3	1	2	2		4.30		2	3	. 22	3	.01	1	.30	.01	.01	1	71
N5406	1	66	4	11	. 4	1	49	1475	7.18	55	5	MD	1	3	ł	2	2		11.12	.005	2	2	. 10	1	.01	3	. 36	.01	.01	4	325
N5407	1	26	2	14	. 2	1	11	247	1.09	8	5	ND	1	25	i	2	2	7	. 99	.023	2	6	. 36	6	.01	6	.47	.02	.03	1	32
N5408	1	717	4	71	1.9	3	6	209	1.31	11	5	MD	1	82	1	2	2		2.07		2	8	.22	2	. 12	7	1.02	.01	.02	1	23
H5409	1	6	9	40	.1	16	12	500	2.63	2	5	ND	1	91	1	2	2	66	2.44	.031	2	68	2.34	12	.12	6	3.38	.16	.08	I	1
W5410	1	8	3	36	.1	10	9	507	2.96	8	5	MD	1	177	1	2	2		4.49		2		1.76	2	.17		2.38	.06	.02	1	1
M5411	1	63	13	39	.2	15	7	305	1.67	3	5	ND	1	190	1	2	2		2.25	. 032	2	35	1.16	6	.10	8	2.89	. 20	.04	1	1
N5412	1	384	6	37	1.4	2	40	313	2.41	75	5	MD	1	3	1	2	3	-	2.20	.018	2	5	.21	6	.01	6	.23	. 02	. 03	1	41
STD C/AU-R	16	58	39	127	7.1	68	27	1058	3.73	38	19	7	36	48	16	16	20	54	.45	.085	36	55	. 87	172	.06	34	1.85	.06	.13	13	510

DATE RECEIVED: JUL 18 1988 ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V2433 FILE = 88-2353R

SAMPLE = AU\*\* oz/t N 5443 .008 N 5449 .014.009 N 5455 N 5472

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DBG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: COTE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

				_	DARI D				av AMA	71717	.1	í	1/10	AUN 10	OR JA.	nt 60.		) [													
DATE RECEIVE	ED:	JUNE	30 198	8	DAT	E RI	SPOR	TM	AILE	D:	gni	yε	3/88		ASS	AYE	R. ⊱.		701	[··D	. TOY	E O	R C.	LEON	IG,	CER'	TIFI	ED I	в.с.	AS	SAYERS
						1	(PH	CON	SULT	ING	LTD	. PI	ROJE	CT-V	1248	3	Fil	e #	88-	2363	3	Pag	ge 1								
SAMPLE#	No PPM	Cu PPM	Pb PPN	Zn PPK	Ag PPM	Ni PPK	Co PPN	AN 1999	Te 1	As PPH	U PPM	Au PPN	Th PPN	ST PPN	Cđ PPM	SP PPM	Bi PPM	PPK	Ca }	P	La PPM	Cr PPM	Ng 1	Ba PPM	Ti t	B PPM	Al 1	Na }	Į,	W PPK	Au* PPB
N 5413 N 5414 N 5415 N 5416 N 5417	1 1 1 1	78 3 4 5 7	6 2 5 8 5	86 45 31 36 54	.1 .1 .1 .1	15 12 7 7 10	10 8 8 7 12	469 293 376	3.01 2.41 1.83 2.38 2.49	9 8 9 10 8	5 5 5 5 5	ND ND ND	1 1 1 1	77 71 72 80 44	1 1 1 1	2 2 2 2 2	2 2 2 2 2	68 50 72		.080 .037 .040 .053 .050	2 2 2 2 2	26 11 13	1.81 1.47 .89 1.26 1.36	27 4 4 3 6	.16 .18 .12 .17	17 12 11	3.11 2.82 1.95 2.36 2.47	.13 .08 .05 .04	.07 .04 .02 .02	1 1 1 1	4 1 2 1 35
M 5418 M 5419 M 5420 M 5421 M 5422	1 1 1 1	4 4 4 15	3 6 5 2 2	32 48 18 21 21	.1 .1 .1 .1	13 15 8 11 7	13 7 5 10 27	440 183 265	2.86 2.05 1.07 1.81 1.43	3 6 4 16 39	5 5 5 5	ND ND ND ND	1 1 1 1	52 57 49 94 105	1 1 1 1	2 2 2 2 2	2 2 2 3 3	33 19 39	4.97 1.69 3.46	.053 .026 .023 .181 .096	2 2 2 2 2		1.75 1.05 .59 .92 .41	4 5 3 1	.10 .12 .10 .12 .10	6 7 16	2.30 1.89 1.19 1.46 1.34	.01 .01 .01 .03	.01 .06 .01 .01	2 2 1 1	1 3 1 8 2
M 5423 M 5424 M 5425 M 5426 M 5427	2 2 2 1	193 212 20 3 1	2 3 2 6 2	36 78 28 17 25	.4 .6 .1 .2	9 10 5 7 8	68 42 7 6	245 202 220	1.27 1.14 1.22 1.29 1.36	96 65 12 3 3	5 5 5 5	ND ND ND ND	1 1 1 1	45 72 96 79 80	1 1 1 1	2 2 2 2 2	2 2 2 2 2	23 30 24	3.00 2.75	.027 .076 .058 .039 .055	2 2 2 2 2	13 16 15 15 17	.39 .40 .34 .58	1 1 1 6	.05 .07 .11 .11	15 3	.70 1.00 1.26 1.25 1.49	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1 2	9 4 1 1 2
N 5428 N 5429 N 5430 N 5431 N 5432	1 1 1 1	4 6 1485 3 22	4 5 4 5 6	8 46 33 10 16	.1 .1 3.5 .1	4 11 16 4	3 10 10 8 5	276 120	.93 1.84 1.98 .99 1.31	3 2 10 9	5 5 5 5	ND ND ND ND	1 1 1 1	62 56 39 44 27	1 1 1 1 1	2 2 2 2 2	3 2 2 2 4	48 31 14	1.57 .94	.020 .053 .058 .019	2 2 2 2 2		.20 1.42 1.26 .43 .48	2 9 5 1	.07 .13 .12 .07		.92 2.26 1.44 .98 .79	.01 .12 .02 .01	.01 .04 .02 .01	1 1 2 1	1 2 1 1 22
N 5433 N 5434 N 5435 N 5436 N 5437	1 1 1 1	34 35 44 92 6	7 3 6 2 3	41 16 33 26	.1 .1 .1 .1	4 4 5 2 5	22 13 24 13 4	212 314 245	5.95 2.72 4.89 1.95 1.16	82 19 33 13 6	5 5 5 5 5	ND ND ND	1 1 1 2	48 89 47 87 101	1 1 1 1	2 2 2 2 2	3 2 2 2 2	46 108 42	1.25 1.62	.092	2 2 2 2 2	8 10	2.51 .88 2.43 1.00 .21	7 4 33 2 2	.21 .21 .24 .21	10 6 11	3.03 1.63 2.70 1.54 1.21	.02 .01 .05 .01	.03 .01 1.01 .04	2 2 2 1 1	1 2 1 1
N 5438 N 5439 N 5440 N 5441 N 5442	1 1 2 1	50 101 91 31 46	5 7 4 2 2	29 23 25 34 19	.2 .3 .1 .2	13 6 7 8 6	10 7 8 8 10	291 252	1.87 1.75 1.70 1.56 1.17	34 17 18 15 16	5 5 5 5 5	ND ND ND	1 1 1 1	65 72 95 92 75	1 1 1 1	2 2 2 2 3	2 2 2 2 4	29 33 33	3.46 3.54	.058 .103	2 2 3 2 2	16 12 13 11	1.07 .71 .53 .68 .43	1 1 1 1	.05 .10 .14 .11	9 3	1.26 1.32 1.52 1.43	.02 .01 .01 .01	.01 .01 .01 .01	2 1 1 2 1	26 15 17 8 5
N 5443 N 5444 N 5445 N 5446 N 5447	3 8 7	3541 147 984 150 186	3 5 5 2 7	300 32 62 30 18	15.1 .6 3.3 .5 .7	37 8 17 8 4	31 9 25 15 2	581 369 236	3.36 2.85 2.29 1.37 5.06	105 38 43 22 8	5 5 5 6	ND ND ND	1 1 1 1	60 39 63 81 50	2 1 1 1	3 3 2 2	8 2 6 2 2	34 25 21	5.47 3.25 2.78	.208 .020 .022 .358	3 2 2 2 3	14 19 18 13 8	.47 .32 .29 .24 .13	1 1 1 1	.06 .11 .09 .11	8 6 5	1.05 1.41 1.17 1.07 1.25	.01 .01 .01 .01	.01 .01 .01 .01	2 2 1 2	360 37 85 27 8
N 5448 STD C/AU-R	1 17	129 58	6 41	10 132	.4 6.8	4 67	2 29	119 1054		4 41	6 17	ND 8	1 38	125 47	1 16	2 16	2 19		2.47	.058 .090	2 39	28 57	.13 .91		.15 .07		1.26 1.97	.01 .07	.01 .14	1 13	3 495

SAMPLE!	No PPM	Cu PPM	Pb PPM	Zn PPN	Ag PPN	Ni PPM	Co PPN	Ma PPM	Fe %	As PPN	PPK	Au PPH	Th PPM	Sr PPM	Cd PPH	Sb PPM	Bi PPM	V C		La PPM	Cr PPM	Ng L	Ba PPM	Ti 1	B PPK	Al L	Na Z	K Ł	PPN	Au* PPB
N 5449 N 5450	1	128 123	2	19 19	.4	6	13	276 1070	2.66	18 7	5	ND ND	1	56 29	1	2	4 2	24 2.96 65 11.74		2 2	9 20	.18	1	.04 .04	2	.71	.01	.01	4	640
N 5451	1	235	6	17	.6	•	3		6.21	11	5	ND	1	26	1	2	2	73 9.50		3	30	.15	1	.03	2	.90 .77	.01 .01	.01 .01	10 9	8 17
N 5452	i	199	7	16	.4	5	3	424		11	5	ND	i	24	i	ž	2	41 4.07		5	23	.18	i	.01	15	.45	.01	.01	,	11
N 5453	1	187	11	19	. 5	3	2	1102	6.96	6	5	ND	1	25	1	2	2	102 11.28		4	47	.13	1	.02	2	. 85	.01	.01	11	i
N 5454	1	223	10	16	. 6	5	2	1333	7.71	6	5	ND	1	19	1	2	2	137 12.83	.092	3	35	.13	1	. 02	10	.98	.01	.01	9	10
И 5455	1	540	9	70	1.7	15	24	563	3.67	43	5	ND	1	57	1	4	2	34 5.51	.016	2	13	.22	1	. 04	11	. 97	. 01	. 01	2	250
N 5456		2275	16	168	5.3	56		1585		31	5	ND	1	48	2	2	4	122 4.15	.028	2	.54	2.64	12	.12	4	3.89	.01	. 09	1	12
N 5457		12264	23	320	29.3	193		1451		230	5	ND	1	28	3	2	2	134 3.09		2	148	2.91	6	.08	2	4.20	.01	. 05	1	147
N 5458	191	484	8	26	1.5	24	11	320	2.13	10	5	ND	i	32	1	2	6	32 2.10	.006	2	65	. 86	3	.07	36	1.04	.03	.02	1	10
N 5459	1	39	7	36	.1	77	13	328	2.56	2	5	ND	1	22	1	2	2	73 1.43	.016	2	218	2.66	4	.14	5	2.42	.05	.05	1	3
N 5460	1	8	12	31	.1	56	12	271	2.19	6	5	ND	l	51	1	2	2	63 2.88	.028	2	65	1.74	7	.15		2.40	.15	.06	1	ı
N 5461	1	8	5	34	.1	59	10	251	2.01	2	5	MD	1	62	1	2	2	54 1.39	.017	2	56	1.68	6	.11	2	2.45	.20	.04	1	1
N 5462	1	2	3	29	.1	79	11		2.05	14	5	MD	i	24	1	2	4	48 1.55	.013	2	279	1.67	5	.09	2	1.78	. 05	. 05	1	14
N 5463	1	3	8	19	.1	69	8	169	1.36	2	5	ND	1	49	1	2	2	31 1.35	.011	2	177	1.37	13	. 05	7	2.16	. 19	.10	1	1
N 5464	1	3	8	19	. 2	53	8	181	1.31	ć	5	ND	1	35	2	2	3	31 3.79	.013	2	141	1.07	1	.08	4	2.07	.03	.04	1	3
N 5465	1	1	8	55	.1	122	18	340	2.93	8	5	ND	1	30	1	2	2	57 2.26	.024	2	263	3.04	1	.14	4	2.98	.03	.03	1	4
N 5466	1	8	4	33	.1	15	8	253	2.38	3	5	ND	2	47	1	2	2	70 2.13	.044	2	30	1.31	10	.17	8	2.27	.06	.12	1	51
N 5467	1	25	10	28	.1	14	10	235	2.59	3	5	ND	1	126	1	2	2	70 3.39	.044	2	25	1.27	5	. 19	3	2.80	.07	. 07	2	6
N 5468	1	3	9	31	.1	26	11	242	2.80	4	5	ND	1	102	1	2	4	65 2.19	.058	2	36	1.53	12	.19	17	2.82	.10	.07	1	3
¥ 5469	1	15	9	23	.1	31	7	160	1.65	4	5	MD	1	78	1	2	2	55 2.36	.048	5	58	.97	5	.20	10	2.23	.10	. 09	1	1
N 5470	1	1	8	11	.2	8	5	140	1.74	3	5	MD	1	140	1	3	4	49 3.46	.032	2	20	.64	3	.13	12		.02	.03	2	i
N 5471	1	4	15	45	. 2	21	23	396	4.50	58	5	ND	1	61	1	2	2	136 5.79	.032	2	35	2.41	2	.20		4.61	. 02	.06	3	49
# 5472	1	835	18	48	1.8	21	30	497	6.56	178	5	ND	1	49	1	2	2	175 2.14	.124	2	20	2.48	4	.29		2.99	.02	.04	1	230
N 5473	1	40	11	37	.1	11	19	377	4.23	24	5	ND	1	80	1	2	2	100 1.96	. 057	2	28	2.01	13	.24	9	2.65	.04	.07	1	11
N 5474	1	1	5	10	.2	12	1	125	1.57	56	5	ND	1	109	1	2	2	32 2.47	.045	2	18	.57	1	.18	1	1.50	. 01	. 01	1	86
N 5475	1	3	6	15	.1	17	13	162		3	5	ND	ì	11	ī	2	2	38 1.15		2		1.53	i	. 22		1.94	.01	.01	i	2
N 5476	1	5	4	14	.1	14	13	160		2	5	MD	ž	140	i	Ž	Ž	40 1.73		2		1.32	i	.19		2.16	.01	.01	i	102
N 5477	1	2	4	10	.1	9	7		1.66	3	5	MD	i	134	1	2	2	35 1.86		2	20	.11	ī	. 20		1.80	.01	.01	i	3
STD C/AU-R	16	63	44	132	6.9	69	29	1042	4.07	44	18	9	38	49	19	16	19	60 .47	.091	39	59	.92	179	.07	36		.07	.15	14	505

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HHO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: CORE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GH SAMPLE.

DATE RECEIVED:	JULY 01 1988 DATE REPORT MAILED:	: Inly 1/88 ASSAYER.	D. TOYE OR C. LEON	G, CERTIFIED B.C. ASSAYERS
	MPH CONS	SULTING LTD. PROJECT-V2483	File # 88-2388	

								PIE II	CON	DOD!	THG	1111	J. 5	1001	- 1 -	V 2 3 C	,,	LI.	re 4	, 00.	-236	0										
SAMPLE	Mo PPM	Cu PPN	Pb	Za PPN	Ag PPM	Ni PPK	Co PPN	Ma PPM	Fe t	A5 PPN	PPK	86R yr	Th PPM	ST PPM	Cd PPM	Sb PPN	Bi PPN	V PPN	Ca %	P	La PPN	Cr PPM	Ng L	Ba PPM	Ti 1	B PPM	Al Ł	Na Ł	K %	¥ PPN	Au* PPB	
¥ 5478	1	31	2	39	. 2	13	13	483	4.04	22	5	ND	2	34	1	3	2	87	1.84	. 058	2	30	1.92	15	.18	1	2.35	. 02	. 06	,	15	
N 5479	1	128	3	35	. 4	13	13		2.84	Š	5	ND	ì	66	1	2	ì			051	,		1.57	12	. 20		2.12	.09	. 05	,	3	
N 5480	1	19	3	44	.1	12	10	370	2.93	10	5	ND	i	70	ī	,	,		3.29		,		1.61		. 18		2.73	.04	. 05	1	3	
N 5481	ż	11	6	42	.3	14	10		2.70		í	MD	•	55	•	;	,		1.42		,		1.51	23	.17						,	٠
N 5482	i	325		67	. 6	12	13	558		ž	,	ND	1	62	1	,	•		2.00		•						2.16	.07	.13	1	i	
# 2492	•	323	u		. 4	12	13	210	1.00	,	•	au.		0.2		4	4	/1	2.00	.050	4	19	1.95	12	.18	0	3.15	.11	. 07	1	,	
N 5483	1	11	4	37	.1	9	9	323	2.52	5	5	ND	1	68	1	4	2	52	2.01	.053	2	19	1.16	11	.18	14	2.21	.07	. 06	1	1	
N 5484	1	5	6	28	. 2	12	13		2.96	3	5	ND	1	97	1	2	2		1.39		2		1.85	3	. 15		2.49	.01	. 03	i	i	
N 5485	1	1	21	79	.1	2	3		1.19	5	5	ND	1	124	3	2	2		2.50		;		.33	ĭ	.13		1.61	.01	.02	i	•	
N 5486	1	3	7	38	.1	7	9			i	5	ND	1	116	1	,	,		2.25		,	13	1.32	i	.11		2.28	.01	.04	1	1	
N 5487	i	i	3	11	.1	· 1	•		1.34	i	5	ND	i	159	i	,	,		2.88		,	11	.33	,	.10		1.92	.01	.01	1		
2 710.	•	•	•	••	••	•	•	***	4.51	•	•	пv	•		•	-	•	30	2.00	.411	•	9		4	. 10	,	1.32	.01	.01			
N 5488	1	1	2	9	.2	2	2	134	1.03	3	5	ND	1	120	1	2	2	29	2.57	.089	3	6	.14	19	. 15	11	1.48	.01	.06	1	1	
N 5489	1	1	2	1	.2	2	1	130	.97	2	5	MD	2	134	1	2	2		2.57		3	6	.12	19	.14		1.55	.01	.05	i	i	
N 5490	1 .	2	4	4	.1	1	1	101	. 96	2	5	ND	1	142	1	2	2		2.59		,	5	.04	19	.14		1.57	. 01	. 04	i	;	
N 5491	1	1	i	5	1	1	1	91	.86	2	4	ND	1	131	i	į	;		2.29	.039	i	ĕ	.07	17	.09		1.47	.01	.04	1	•	
N 5492	i	i	5	ā	.1	5	3	118	1.13	,	5	ND	i	123	i	;	,			.039	2	i	.24	17	.10		1.54	.01	.04	•	•	
	•	•	•	•	••	•	•	•••		•	•	***	•	114	•	•	٠	.,	1.11	. 533			.41	17	. 10	,	1.31		.04		ı	
N 5493	1	1	8	7	.1	1	1	108	.99	2	. 5	ND	1	136	1	2	2	29	2.22	.024	2	4	.11	13	.08	8	1.55	.01	.03	1	1	
N 5494	1	2	3	30	.1	10	6	259	1.93	2	5	MD	1	126	1	2	2		2.17		2	12	. 80	1	.10		2.02	.01	.02	i	i	
# 5495	i	2	2	29	.1	10	6		1.94	Ĭ	5	ND	i	130	i	ž	3		2.35	,050	2	ii	.88	3	.12		2.11	.01	.01	1	,	
N 5496	i	48	ā	69	.2	10	11	656	3.69	3	Š	ND	;	36	i	,	,		1.85		•		1.52	12	.15		1.95	.04	.05	1	2	
STD C/AU-R	16	57	39	134	7.1	67	28	1092		39	18	4	36	49	16	16	18	55	.47	. 086	38	55	.91	176	.06					14	530	
SIN CINO'S		3,	3,	341	,	• 1		1072	1.14	4,			30	43	1.6	10	7.0	"	. 41	. 404	30	33	. 31	116	. VQ	37	1.90	.06	.13	14	520	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: COTE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

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SAMPLE Ni Co Ko Гe As U Au Th sr Cd Sb Bi ٧ Ca P La cr Mg Ba PPM 1 PPR PPR PPR PPR PPR PPR PPR PPR PPR \$ PPH PPH PPM PPM PPM PPN 1 PPN PPN ł PPK Ł PPM 483 4.04 22 87 1.84 .058 N 5478 30 1.92 15 .18 3 2.35 N 5479 35 .4 13 13 295 2.84 5 5 66 70 1.87 .051 30 1.57 2 2 12 .20 14 2.42 .09 19 12 370 2.93 70 67 3.29 .053 N 5480 3 10 10 5 ND 1 2 2 2 20 1.61 8 .18 4 2.73 .04 N 5481 2 11 6 42 . 3 14 10 376 2.70 6 5 8 55 1 2 2 62 1.42 .047 2 30 1.51 23 .17 6 2.16 .07 .13 N 5482 1 325 12 13 558 4.00 5 62 74 2.00 .050 2 19 1.95 12 .18 6 3.15 .11 .07 5 N 5483 37 9 9 323 2.52 5 5 68 52 2.01 .053 2 19 1.16 11 .18 14 2.21 . 2 12 13 332 2.96 3 5 97 2 2 47 1.39 .054 2 19 1.85 N 5484 3 .15 8 2.49 .01 N 5485 21 79 .1 2 3 146 1.19 5 ND 1 124 3 2 2 31 2.50 .054 2 6 .33 4 .13 4 1.61 .01 .02 3 N 5486 7 38 .1 7 325 2.30 5 1 116 1 2 2 39 2.25 .055 4 2.28 9 ND 2 13 1.32 4 .11 .01 .04 159 36 2.88 .033 N 5487 3 147 1.34 5 . 33 2 .10 9 1.92 .01 N 5488 134 1.03 120 29 2.57 . 089 19 .15 11 1.48 130 .97 5 134 30 2.57 N 5489 2 1 2 2 .092 3 .12 19 .14 11 1.55 .01 101 .96 2 142 2 2 32 2.59 .086 .04 N 5490 1 1 2 5 19 .14 6 1.57 N 5491 91 .86 2 5 ND 1 131 1 28 2.29 .039 2 17 1 2 2 6 .07 .09 10 1.47 .01 .04 N 5492 5 118 1.13 5 1 123 29 2.11 .039 3 2 2 2 .24 17 .10 9 1.54 N 5493 .99 136 29 2,22 .024 N 5494 30 .1 10 6 259 1.93 2 5 ND 1 126 1 2 2 32 2.17 .038 2 12 .80 4 .10 6 2.02 .01 .02

1 2 3

1 2

16

16

36 2.35 .050

79 1.85 .050

55 .47 .086

2

18

2 11

3

38

.88

55 .91 176 .06

23 1.52

3 .12

12 .15

6 2.11

5 1.95

32 1.90

.01 .01

1 2

14

.04 .05

5

5 ND

18

MD

1 130

2 36

36 49

4

3

39

# 5495

¥ 5496

STD C/AU-R

2

69 .2 10

10

6

11

251 1.94

656 3.69

28 1092 4.10

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED:

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU\*\* BY FIRE ASSAY FROM 1/2 A.T.

D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V2483 FILE # 88-2442R

SAMPLE = AU\*\*

02/5

N 5534 .028

N 3535 .024

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#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SE CA P LA CE MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: COTE AU\* AWALTSIS BY ACID LEACH/AA FROM 10 GK SAMPLE.

				_	JARE L		. cute		W- WWW	rioio (	1	,	/ 60	KVA IV	OR DIL	IF DS.															
DATE RECEIVE	D:	JOLY	05 196	8	DAT	E RI	SPOR	T M	AILE	D:	Jul	y 9	/88		ASS	AYEI	R.Y.	: /-	إجبع	D	. TOY	E O	R C.	LEO	NG,	CER	TIFI	ED I	3.C.	AS:	SAYERS
						ŀ	(PH	CON	SULT					CT-V	/248	3	Fil	e #	88	244	2	Pa	ge 1								
SAMPLE #	No PPM	Cu PPM	Pb PPM	Zn PPM	PPK Ag	Ni PPM	Co PPN	PPK Ko	Fe	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPN	Sb PPN	Bi PPM	V PPN	Ca		La PPN	Cr PPM	Ng L	Ba PPM	Ti	B PPM	Al t	Na Ł	Į,	W PPM	Au* PPB
N 5497	1	14	10	48	.2	3	13	519	1 97	2	5	MD	1	59	1	2	2	99	1.28	066	2	5	1.43	36	. 23	11	2.16	.10	.13	1	2
N 5498	i	26	11	131	.2	30		1514		4	5	ND	i	78	i	ž	ž		5.04		ž		2.50	37	.14		3.55	.02	.13	i	i
N 5499	1	40	6	82	.5	4	17		4.03	3	5	MD	1	62	1	2	2		2.55		2		1.33	38	.13		2.29	.02	.12	1	1
N 5500	1	98	14	123	.3	9		1345		6	5	MD	1	35	1	2	2		3.09		2		1.86	40	.19		2.91	.04	.18	1	2
¥ 5501	1	74	11	108	.3	7	20	1277	5.38	7	5	ND	1	45	1	2	2	62	2.19	.061	2	3	1.72	37	. 15	3	2.80	.02	.12	1	1
# 5502	i	22	13	104	.5		25	1474	5.12	15	5	MD	1	41	1	2	2	65	3.60	.057	3	4	1.69	40	.13	1	2.76	.01	.19	1	4
¥ 5503	1	30	13	105	. 5	8	27	1393		10	5	MD	1	31	1	2	2		3.39		3	6	1.82	46	. 19	2	2.82	.02	. 20	1	6
<b>x</b> 5504	1	58	7	104	. 2	6		1523		3	5	MD	1	48	1	2	3		4.43		3		1.76	40	.16		2.78	.02	.17	1	46 *
N 5505	1	189	13	123	. 9	ı	17	1526		5	5	ND	1	35	1	2	2		2.83		3		1.99	32	.15		3.05	. 02	.15	1	1
N 5506	1	229	14	127	. 8	1	15	1601	3.51	2	5	ND	ı	34	1	2	2	11	3.09	.058	3	1	1.97	25	.14	2	3.07	.01	.13	1	5
N 5507	1	18		102	.2	1	15	1490	4.87	2	5	MD	1	37	1	2	2	65	4.18	. 059	3	5	1.74	28	.14	2	2.72	.01	.15	1	1
N 5508	1	92	10	112	.3	8	20	1450	5.27	2	5	MD	1	31	1	2	2	73	2.71	.060	3	7	1.83	32	. 15	6	2.41	.01	.15	1	33
N 5509	1	22	7	126	.2	24		1565		4	5	ND	1	21	1	2	2		2.55		2		2.18	38	.11		3.34	.01	. 16	1	1
N 5510	1	25	12	113	.1	20		1480		1	5	ND	5	29	1	2	2		2.93		2		1.91	42	.15		3.01	.01	.20	1	1
¥ 5511	1	30	10	107	.5	22	15	1545	4.97	3	5	MD	1	41	1	2	2	67	3.97	.048	3	43	1.79	41	.12	2	2.80	.02	.17	2	1
¥ 5512	1	30	15	92	.1	24	28	1165	4.81	5	5	ND	1	31	1	2	2	79	2.45	.058	2	45	1.87	37	.16	9	2.65	.04	.13	1	1
¥ 5513	1	16	10	102	.3	21		1262		10	5	MD	1	30	1	2	2	92	3.21	. 054	2	46	1.87	20	. 20	11	2.68	.03	.11	1	1
<b>₩</b> 5514	1	23	15	84	.4	19		1267		11	5	MD	1	45	1	3	2		3.74		3		1.67	28	. 19		2.46	.04	.18	1	24
¥ 5515	1	11	17	89	.8	15		1264		61	5 5	ND ND	1	26	1	2	2		3.72		2		1.67	18	.11		2.66	.01	.13	2	108
и 5516	1	6	13	92	.4	15	31	1323	3.31	48	3	HD.	1	29	1	4	2	74	4.90	. 048	3	21	1.55	20	.13	2	2.79	.01	.15	1	89
N 5517	1	14	14	109	. 2	20	24	1392	5.70	27	5	ND	1	29	1	2	2	80	3.27	. 059	3	32	1.93	16	. 18	4	3.40	. 02	.14	1	21
¥ 5518	1	10	10	78	.4	18	26		4.26	44	5	KD	1	32	i	2	2		3.63	.048	2		1.31	15	.14	2	3.12	.04	.15	1	2
¥ 5519	1	•	15	79	.5	22		1192		55	5	MD	1	27	1	2	2		3.65		2		1.44	19	.13		2.57	.02	.14	1	11
¥ 5520	1	3	1	78	.4	15		1409		28	5	ND	1	46	1	3	2		9.08	.037	3		1.00	16	.07		1.85	.01	.14	1	15
¥ 5521	1	5	8	52	.5	17	20	1116	1.33	85	5	MD	ī	32	1	2	2	34	4.83	. 036	2	19	.96	28	. 07	Z	1.69	.01	.20	2	5
¥ 5522	1	2	7	57	.2	11	29	1723	3.68	28	5	ND	1	58	1	2	2	41	10.29	.038	2	16	1.10	29	.08	2	1.86	.01	.21	1	1
¥ 5523	ì	5	11	94	. 3	20		1790		7	5	ND	1	37	1	2	2		6.70	.049	4	35	1.78	30	.13	2	2.79	.01	.22	2	1
# 5524	1	5	9	83	.3	16		1444		1	5	ND	1	33	1	2	2		4.81		2		1.59	34	.12		2.46	.01	.23	ı	1
¥ 5525	1	12	11	71	.1	16	17		3.91	3	5	ND	1	37	1	2	3		2.01		2		1.72	19	.19		2.26	.04	.14	2	1
N 5526	1	36	10	83	.4	8	16	1202	1.08	2	5	ND	1	42	1	2	2	87	3.56	.058	3	14	1.62	21	.15	Z	2.33	.03	.15	1	3
N 5527	1	7	9	55	.1	24	17		3.49	8	5	MD	1	67	1	2	2				2		2.43	3	.14	4	3.89	. 03	. 05	1	26
N 5528	1	4	9	61	.1	19	20	531		14	5	ND	1	73	1	2	2		2.37		2		2.53	9	.21		3.66	.10	.06	1	1
N 5529	1	14	10	38	.1	18	14		3.06	5	5	ND	1	237	1	2	2		3.27	.034	2		1.41	1	.21		2.55	.01	.02	2	10
N 5530	ļ	143	. 4	15	.3	11	. 8		2.15	7	5	ND	1	89	1	3	2		2.25	.042	2		.80	6	.15		2.04	.01	. 05	1	1
и 5531	1	76	12	39	.4	61	16	שצכ	3.58	29	5	MD	1	45	1	2	2	93	3.59	. 061	2	189	2.08	10	. 15	7	2.90	. 07	. 07	1	22
и 5532	1	80	14	38	.4	23	23	670	4.32	34	5	ND	1	33	1	1	2	157	1.23	.048	2	43	3.00	12	. 22	2	3.58	.05	.08	3	29

STD C/AU-R 18 58 38 132 6.6 68 31 1097 4.12 41 20 7 37 47 18 17 19 58 .46 .086 39 58 .92 175 .06 34 1.97 .06 .14 14 530

SAMPLE	Mo	Cu	Pb	In	λg	¥i	Co	Ma	?e	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	CT	Mg	Ba	Ti	B	Al	Ka	K	W	Aus
	PPM	PPK	PPM	PPK	PPM	PPM	PPK	5 b M	ł	PPH	PPM	PPM	PPN	PPM	PPK	PPM	PPM	PPK	ł	ł	PPM	PPR	1	PPH	•	PPH	*	1	*	PPM	PPB
N 5533	1	1	13	48	.1	22	20	722	4.39	16	5	ND	1	26	1	2	2	161	3.76	.018	2	36	3.23	8	.22	3	3.99	.02	.08	1	14
H 5534	1	215	15	39	.4	24	21	633	4.39	239	5	MD	1	20	1	2	2	152	5.50	.062	3	38	2.18	4	.15	3	3.52	.01	.06	1	830
N 5535	1	52	17	34	.1	16	14	510	3.11	142	5	KD	ì	32	1	2	2	109	11.37	. 049	2	27	1.44	1	.10	5	3.48	. 01	. 04	1	665
N 5536	1	4	16	46	.1	23	19	735	4.37	21	5	MD	i	22	1	2	2	142	5.74	.031	2	43	2.56	4	.17	3	3.58	.01	.06	1	37
¥ 5537	1	5	11	42	.1	21	16	647	3.90	31	5	ND	1	21	1	2	2	145	4.57	.071	2	37	2.35	3	.16	2	3.08	.01	. 05	1	33
N 5538	1	38	20	43	.3	23	18	632	4.13	75	5	ND	1	27	1	2	2	133	3.93	.037	2	33	2.54	4	.13	2	3.52	. 03	.04	1	101
N 5539	1	8	10	33	.1	23	15	449	3.03	29	5	ND	2	37	1	2	2	81	3.90	.042	2	36	1.86	3	.18	2	2.55	. 01	.03	2	32
# 5540	1	330	10	38	.3	29	24	534	3.43	43	5	MO	1	59	1	2	2	94	6.71	. 055	2	46	1.88	9	.16	2	2.77	.07	.07	2	43
¥ 5541	1	30	10	27	.1	22	17	391	3.09	13	5	ND	1	90	1	3	2	75	5.02	.064	2	29	1.77	3	.17		2.67	.02	. 05	1	2
¥ 5542	1	20	13	33	.1	12	15	432	3.34	27	5	ND	2	52	1	2	2	78	2.84	.048	2	22	1.57	13	.15		2.91	.07	.08	1	16
N 5543	1	68	13	42	.1	15	18	547	4.16	26	5	ND	2	29	1	2	2	100	1.48	.054	2	25	1.96	11	.18	3	3.04	.03	.10	1	29
N 5544	1	41	4	25	.1	12	12	304	2.60	3	5	HD	2	53	i	2	2	54	3.51	.050	3	21	1.36	6	.15	6	2.33	.03	.05	1	3
N 5545	1	1	3	17	.1	13	12	256	2.53	2	5	ND	1	99	i	2	2	39	1.55	.041	2	17	1.49	2	. 15	7	2.28	.01	.01	1	1
N 5546	1	131	6	26	.1	15	15	271	2.83	5	5	MD	1	37	1	2	2	56	1.14	. 053	2	21	1.54	9	.17	6	2.07	.06	.06	1	2
N 5547	1	52	7	29	.1	14	14	322	2.90	3	5	MD	2	49	1	2	2	75	1.28	. 056	3	23	1.37	25	.21	4	2.14	.11	.12	1	1
¥ 5548	1	17		21	.1	12	11	302	3.00	4	5	ND	2	122	1	2	2	55	1.86	. 052	3	21	1.32	10	.16	6	2.47	. 02	.04	1	1
N 5549	1	19	8	22	.1	13	13	290	2.93	5	5	MD	1	131	1	2	2	53	1.97	.046	2	18	1.41	10	.14	7	2.74	.04	.03	1	2
N 5550	1	146	9	32	.1	17	19	387	3.75	3	5	KO	1	90	i	2	Z	76	1.76	.060	3	28	2.05	7	.18	2	3.29	. 03	. 05	1	1
N 5551	1	13	10	38	.1	18	17	406	3.60	4	5	MD	2	117	1	2	2	70	1.61	.060	3	29	2.01	11	.16	5	2.92	.04	.04	1	1
STD C/ASI-R	1.8	62	41	133	6.7	70	29	1163	4.15	41	16		37	46	18	17	1.6	57	.46	.082	39	57	. 93	176	.06	33	1.47	.06	.14	12	495

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ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

#### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: COTE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

							TYPE:			U* ANAI				,	ROM 10	GH SAI	(PLE.		)	1												
DATE RECE	IVED:	J01	¥ 14	1988		DAT	E RE	POR	T M	AILE	D: -	ynl	1 19	1/88		ASS.	AYE	ب.	·: !	جمب	J D	. TOY	E O	R C.	LEON	₹G,	CER	TIFI	ED I	в.с.	ASS	SAYERS
							M	(PH	CON	SULT	ING	LTD	, Pr	, OJE	CT'-V	248	3	Fil	e #	88	l <sub>268</sub> :	3	Pa	ge 1								
																			-					-								
SAMPLE	MC PPM			Pb Pk	Zn PPH	AG PPM	Ni PPM	CO P <b>PN</b>	Mn PPM	Fe 1	As PPM	U PPN	Au PPM	Th PPM	ST PPM	Cd PPN	SD PPM	Bi PPM	V PPN	Ca %	P	La PPN	Cr PPM	Ng 1	Ba PPM	Ti k	B PPN	Al 1	Na 1	ĭ	PPM	Au* PPB
N 5552	1	-		7	46	. 2	10	7		2.97		5	ND	1	30	1	2	2			.050	2	L	1.45	8	. 19		2.16	.03	. 05	1	12
N 5553	ļ		; 5	3	46	.1	10 10	8		2.92	3	5	ND ND	I	49 73	1	2	2		2.37		2		1.45	5 4	.19		2.21	.02	.04	1	4
N 5554 N 5555	1		-	11	38 44	.1	9	7 10		2.51	6	5	MD	1 2	63	1 1	2	2		1.26	.052	2		1.31	9	.16 .16		1.87	.01 .05	.02 .07	1	1 13
N 5556			5	4	51	.1	10	10		2.77	8	5	ND	1	45	i	2	2			.053	2		1.84	5	.17		1.86	.03	.03	1	7
N 5557	1		,	4	22	.1	1	7	141	1.92	i	5	ED.	1	118	1	2	2	20	2.21	021	2	16	.94	1	.12	,	1.75	.01	.01	1	2
N 5558			3	1	53	.1	13	12		3.16	il	5	HD	3	66	1	2	2		1.27		2		2.27	5	.20		2.35	.02	.03	1	3
N 5559	i			10	23	.1	6	6		1.98	5	5	ND	i	109	i	3	ž		1.83		2	17	.99	í	.14		1.80	.01	.01	i	1
N 5560	Ì		3 '	5	15	.1	4	3		1.23	2	5	ND	i	58	i	3	2		1.28		2	10	.54	2	.07		1.12	.01	.01	i	i
N 5561	i		?	8	32	.1	10	7		2.28	5	5	MD	1	151	ī	4	ž		2.86		2		1.18	ī	.16		2.23	.01	.01	ž	5
N 5562	1		3	6	22	.1	10	6		2.16	2	5	MD	1	124	1	2	2		2.08		2		1.14	1	.16		2.11	.01	.01	1	2
N 5563	. 1			10	45	1	26	14		3.42	2	5	ND	1	92	1	2	2		1.50		2	_	2.33	3	. 16		2.96	.04	.02	1	1
N 5564	1			3	45	.1	6	8		2.81	2	5	ND	1	57	1	3	2		2.13		2		1.10	13	. 14		2.88	. 19	. 06	2	1
# 5565	1			8	50	. 2	17	15		3.85	10	5	ND	1	66	i	2	2		1.08		2		2.21	l	.15		2.70	.01	.01	1	2
N 5566	1		5	2	51	.1	16	22	333	4.32	13	5	ND	1	68	1	2	2	93	1.26	. 0 / 4	2	73	2.82	6	.19	14	3.31	.04	.01	2	2
N 5567	1			11	38	.1	16	16		3.43	4	5	ND	1	69	1	2	2		1.26		2		2.14	10	.16		2.91	.04	.02	1	1
N 5568	1		•	2	19	.1	19	1		2.15	4	5	MD	1	99	1	3	2		1.89		2	32	.12	18	.15		1.68	. 02	. 02	1	1
N 5569	1			8	95	. 8	7	32		6.69	37	5	ND	1	17	1	2	2		1.43		2		2.07	11	.18		3.06	.03	. 05	1	55
N 5570					57	. 2	6	12		4.13	5	5	MD MD	6 2	25 24	1	2	2		1.15		3		1.31	27	.17		2.10	.06	.14	1	5
и 5571	1	11	•	2	14	. 5	1	22	103	5.88	4	5	KU.	2	41	1	2	2	97	. 83	.067	3	41	1.67	21	.21	0	2.43	. 06	.08	1	3
¥ 5572	1			11	62	. 3	7	22		5.10	12	5	MD	1	27	1	2	2	85	.98	.069	2		1.53	25	.18		2.46	.08	.11	1	5
¥ 5573	1			3	14 12	. 5	6	17		5.29	12	5	ND ND	4	61 39	1	2	2		1.35		2		1.59	15	.17		3.51	.14	.04	1	8
N 5574 N 5575	1 2		-	8 5	64	.5 .3	8 1	24 20		5.82 5.09	123 74	5	ND	11	36	1 1	2	1		1.65		2		1.71	18 15	.20 .17		2.67	.03 .02	.09 .07	1 1	11 8
и 5576 и 5576		20			148	. 9	7	27		5.69	70	5	ND	5	22	1	2	2		1.93		2		1.61	13	.18		2.88	.02	.07	1	12
N 5577	1	39	, ,	20	120	2.3	7	45	020	1.35	143	5	ND	2	24	1	2	19	0.7	1.35	060	2	20	1.74	28	.13		2.96	. 02	,,	1	37
и 5578 И 5578	1			3	54	.3	'n	12		4.03	7	5	ND	1	21	1	2	2		1.15		2		1.38	31	.13		2.30	.02	.11 .11	2	31
N 5579	i			-	107	1.0	10		1077		745	5	ND	i	16	i	2	3		1.25		2		2.17	34	.12		3.31	.02	.09	i	28
N 5580	i	•			208	1.2	22		2133		114	5	ND	i	33	i	2	3		2.41		2		3.61	13	.11		5.57	.01	.07	i	26
N 5581	i			8	68	. 2	9	19		5.56	50	5	ND	i	23	i	2	ž		1.23		ž		1.89	18	.10		2.72	. 05	.08	3	10
				-																		-									-	
N 5582	1			3	40	.1	7	11		3.15	3	5	ND	1	35	1	2	2		1.56		2		1.28	48	.24		2.21	.10	.19	2	1
N 5583	1				146 38	2.5	110	33		2.59	áį	5 5	ND ND	1	52 45	1	2	2 2			.028	2		1.19	9	.11		2.03	.12	.03	1	2
N 5584 N 5585	1	-		9	35 56	. 2 . 8	27 34	10 26		1.46 3.18	5 21	5 5	ND	1	46 32	1	2	2		1.59		3 2		.70 2.20	2 <b>4</b> 5	.10 .14		1.76 2.55	.09 .10	.10 .03	2	1
n 5586 N 5586	1			a 10	31	1.2	54 65	27		2.28	21 28	5	ND ND	1	17	1	3	2	38		.028	2		1.22	6	.11		1.49	. 05	.03	1	1
	1	7.7				***											,	4				•			v	1	1	17		.02	J	
N 5587	1	(		2	14	.1	14	11	148	1.09	3	5	HD	1	37	1	3	2	30	1.13	. 051	2	44	. 43	:	.10	11	1.34	. 31	. 31	1	2

STD C/AU-R 19 57 37 130 3.5 67 27 1046 3.96 19 19 T 36 48 17 17 19 55 .48 .051 37 36 .92 174 .06 37 1.36 .06 .13 12 530

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SAMPLE;	Mo Mag	Cu PPM	Pb PPM	Za PPM	Ag PPH	N1 PPM	Co PPH	Ma PPM	Fe 1	As PPM	U PPM	Au PPN	Th PPM	ST PPN	Cd PPN	PPK Sb	Bi PPM	V P <b>P</b> M	Ca %	P	La PPM	Cr PPM	Ng Ł	Ba PPN	Ti \$	B PPM	Al L	Na %	Į	W PPM	Au* PPB
N 5588	1	21	5	1	.1	7	7	144	1.08	3	5	ND	1	144	1	2	2	39	1.84	. 050	,	38	.21	2	.14	q	1.30	.01	. 01	1	,
N 5589	1	74	1	25	. 2	37	11		2.32	3	5	ND	1	44	i	ì	;		1.09		ž	109	1.06	5	.18		1.55	.03	.02	ì	í
N 5590	i	115	13	107	.4	45	18			7	5	ND	i	66	i	,	i	76			2	87	1.59	14	.17		2.77	.16	.07	1	•
N 5591	1	69	20	143	3	38	25		3.27	18	5	ND	1	15	1	;	3	118	.97	.071	,		1.42	7	. 25		1.63	. 16	.04	i	ž
N 5592	i	28	7	43	.1	23	26			15	5	ND	i	30	i	3	3	105	1.15		2	85	1.14	8	.25		1.55	.07	.03	1	1
																														•	•
N 5593	1	37	5	51	. 1	32	26	529	3.52	14	5	ND	1	46	1	2	2	115	1.52	.066	2	90	1.44	12	. 23	7	2.15	.12	.04	1	1
N 5594	1	125	5	30	. 4	13	23	444	5.59	13	5	ND	1	10	1	2	2	171	1.34	.101	2	25	. 83	10	.32	6	1.14	. 07	.06	1	1
N 5595	1	108	9	38	. 4	20	24	459	6.03	17	5	ND	1	8	1	2	2	217	1.29	. 109	3	54	. 72	10	. 33	11	. 95	.06	.05	1	2
N 5596	1	35	14	35	. 2	9	26	459	3.23	14	5	MD	1	16	1	2	2	104	1.41	.100	2	22	. 95	9	.33	10	1.28	. 05	. 05	1	1
N 5597	1	47	6	25	.1	7	12	334	3.21	5	5	ND	1	61	1	2	2	111	1.79	.103	2	20	. 55	25	.31	9	1.50	.10	.06	1	1
N 5598	1	91	В	37	.4	12	21		4.52	14	5	NĐ	1	13	1	2	2		1.27		2	28	1.05	11	. 31	3	1.39	.07	.06	1	1
N 5599	i	66	8	43	.3	15	12		3.49	33	5	ND	1	13	1	2	2	122		.102	2	40	.61	6	. 32	4	. 92	.05	.03	1	2
N 5600	1	98	3	38	. 4	22	17		3.84	41	5	ND	1	15	1	2	2		1.49		2	53	. 95	6	.31		1.31	.06	.04	1	1
N 5601	ı	48	6	35	. 2	23	11			4	5	ND	1	39	1	2	2		1.62	.074	2	77	1.06	26	. 25	2	1.88	.11	.06	1	1
N 5602	1	26	4	33	.1	17	10	519	6.78	5	5	MD	1	8	1	2	2	256	1.11	.107	3	57	. 78	14	. 32	2	1.00	. 05	.04	1	1
N 5603	1	12	11	31	.1	15	14	433	4.36	12	5	ND	1	13	1	,	,	178	1.36	.106	,	46	. 57	10	. 35	6	.94	. 05	.03	1	
N 5604	i	34	6	28	. 2	17	6		4.41	A	5	ND	i	24	i	3	÷		1.42		,	47	.51	. 5	.39	•	1.07	.04	.03	1	1
N 5605	i	19	5	33	.3	16	16		6.95	22	,	ND	i	12	i	3	÷		1.15	.116	;	57	.79	14	.29		1.18	.06	.05	2	;
N 5606	i	16	ž	34	.1	13	11		5.88	10	5	ND	i	11	i	j	,	208		.101	2	45	. 80	11	. 28		1.22	.05	. 05	1	,
N 5607	i	37	8	86	.4	16	16		4.32	38	5	ND	i	12	i	ž	2		1,33	.109	ž	43	.13	10	.31		1.07	.06	.04	i	1
															•	-	•		•		-	••		••		•	•••			•	•
N 5608	1	18	18	56	. 3	11	11	753	4.35	7	5	MD	1	17	1	2	2	120	1.14	.100	2	17	1.99	7	.24	7	2.27	. 05	. 04	1	1
N 5609	1	7	5	39	.3	5	4	498	2.64	2	5	ND	1	54	1	2	2	76	2.42	.077	2	10	1.06	11	. 20		1.76	.04	.03	1	1
¥ 5610	1	18	120	194	7.0	113	22	780	3.93	91	5	ND	1	26	1	2	2	73	1.68	.045	2	37	2.02	3	.18	9	2.15	. 02	.01	1	1
STD C/AH-R	17	58	40	131	6.6	68	78	1057	4.00	41	22	8	37	47	1.6	17	19	56	4.8	043	3.9	56	42	173	0.7		1 96	46	11	12	495

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#### 032 B. IMBIINGS SI. VANCOUVER B.C. VON INC

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE SA CA F LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

GEOCHEMICAL ANALYSIS CERTIFICATE

					SAMPLI					LYSIS	BY ACID	LEAC	I/AA FI	ROM 10	GK SAN		P	AND A	ъ. МУ	DRIBCI	IUM LI	MII DI	icr is	) J III	1.						
DATE RECEIV	JED:	JUL	16 19	88	DATE	RE	PORT	' MA	ILEI	):	Jul	12	ı J88	3	ASSA	YER	<u>. (</u>	·h	. إجبريا	. D. 1	OYE	OR	C.L	EONG	, c	ERTI	FIE	э в.	c. <i>i</i>	ASSA	YERS
						1	мрн	CON	SULT	•	•	,			/2483	3	Fil	e #	88-	2723		Pag	e 1								
SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Za PPM	Ag PPM	N1 PPM	Co PPM	Na H49	Fe 1	As PPM	U PPM	Au PPM	Tb PPM	ST PPM	Cđ PPM	Sb PPN	B1 PPH	7 P. F.	Cā 1	P	La PPN	Cr PPM	¥g ₹	Ba PPN	Ti }	B PPM	Al 3	Na Z	K Ł	¥ PPM	Au* ?PB
N 5511 N 5612 N 5613 N 5614 N 5615	1 1 1 1	11 21 34 12 7	10 10 17 10 6	53 100 176 67 39	.2 .1 .1 .1	56 11 15 11 11	19 14 27 8 5	337 635 527	1.87 2.13 3.89 2.97 2.80	20 7 7 7 2	5 5 5 5	ND ND ND ND	1 1 1 1	24 37 73 13 37	1 1 1 1	2 2 2 2 2	2 2 2 2 2	123 89	1.63 1.29 2.01 2.20 1.66	.086 .072 .081	2 2 3 2 2	6	.80 .75 1.45 1.28 1.27		.46 .23 .26 .19 .25	17 11	.93 1.15 2.55 2.15 1.70	.01 .01 .01 .05	.06 .03 .02 .04	3 i 1 1	1 1 1 1 2
N 5616 N 5617 N 5613 L 5615 N 5620	1 1 1 1	61 51	10 20 15 11 10	34 62 38 37 32	.1 .7 .5 .2	9 21 18 12 14	5 26 25 17 34	426 603 581	2.38 3.17 4.75 6.02 1.98	3 53 47 19 74	5 5 5 5	ND ND ND ND	1 1 1 1	58 28 15 10 12	1 1 1 1	2 2 2 2 2	2 2 2 2 2	96 158 197	1.64 1.52 1.59 1.38 1.73	.081 .111 .113	2 2 4 3 3	8	1.10 .92 1.05 .90 .79	8	.16 .29 .41 .32 .37	16 11 13	1.53 1.38 1.47 1.28 1.12	.14 .11 .08 .06 .38	.08 .07 .06 .06	1 1 2 2 2	1 2 1 1
N 5621 N 5622 N 5623 N 5624 N 5625	1 ! 1 1	90 86 55 24 92	12 31 13 16	32 97 68 76 28	. 6 . 3 . 2 . 2 . 3	14 44 62 28 10		668 598 538		62 35 24 29 6	5 5 5 5	DE DE DE DE DE	1 1 1 1	40 22 24 14 41	1 1 1 1	2 2 2 2 2 2	2 2 2 2 2	123 109 90	1.64 1.58 1.07 1.43 2.53	.051 .048 .040	3 3 3 2 3	143	.78 1.81 2.02 1.19 .57	35 36 12	.34 .35 .35 .22	8 9 13	1.35 2.37 2.30 1.41 2.14	.08 .08 .09 .12	.08 .11 .11 .07	1 1 1 1	2 1 3 2 1
N 5626 N 5627 N 5628 N 5629 N 5630	1 1 1 2 5	11 186 2 9 77	7 9 7 13 21	19 77 21 47 137	.1 .5 .1 .2 1.1	10 14 13 11 7	3		2.55	2 59 223 204 97	5 5 5 5	ND ND ND ND	1 1 1 1 2	98 31 101 105 50	1 1 1 1	2 2 2 2 2	2 2 2 2 2	68 31 29	3.16 1.58 2.52 5.45 9.63	.070 .025 .034	2 2 2 2 3	6 7 8 8	.41 1.01 .41 .69	8 15 5 2 2	.21 .23 .12 .09	15 8 5	1.42 1.40 1.52 1.77 1.28	.05 .11 .02 .01	.04 .03 .01 .04	1 1 1 2 9	1 1 1 1
N 5631 N 5632 N 5633 N 5634 N 5635	1 5 5 3 7	9 26 481	8 6 6	114 59 59 1467 522	.7 .3 6.5	60 6 16 43 12	3 11	933 663	1.13	68 61 642 544 556	5 5 5 5	ND ND ND ND	1 1 1 1	55 84 100 130 84	1 1 7 3	2 2 3 5 2	2 2 2 9	35 80 37	21.55 21.29 8.65 3.27 2.83	.112 .095 .076	2 4 3 3 2	6 12 20 34 12	.17 .13 .15 .31	1 1 1 2 3	.03 .05 .08 .13		.61 .81 .85 1.41 1.11	.01 .01 .01 .02 .03	.01 .01 .02 .01	3 2 1 1 2	7 3 1 1
N 5636 N 5637 N 5638 N 5639 N 5640	3 11 7 6	22 13 14 134 59	8 1 19	199 82 205 27 36	.4 .3 .4 1.7	11 7 17 9 4	3		.17 .14 .23 5.91 3.52	7 5 27 132 64	5 5 5 5	DN DN DN DN DN DN	1 1 1 2	240 285 314 34 60	10 3 3 1	2 2 2 2 2 2	2 2 2 2 2	30 72 154	28.30 29.49 32.95 7.82 22.30	.058 .035 .054	3 2 3 2 3	13 7 5 21 14	.07 .05 .36 .42 .14	4 1 2 3 1	.01 .01 .01 .11 .32	721 72 1051 20 29	.42 .26 .19 .57	.02 .01 .03 .02 .01	.01 .01 .01 .01	2 2 1 2: 1	1 1 1 1
N 5641 N 5642 M 5643 N 5644 N 5645	1 1 1	315 12 6 1	14 44 6 5	193 38 12 15	4.1 3.4 3.7 .1	11 51 54 7 2	332 415 33	1722 1539 604	8.41 6.05 6.43 1.54 1.21	13324 25638 1366	\$ 5 5 5	ND ND ND ND	1 1 2 1 1	19 30 36 100 63	2 1 1 1	2 4 5 2 6	3 21 42 2 2	17 13 16	10.70 7.39 9.89 1.72 2.68	.064 .112 .157	3 2 5	7 4 5 2 4	.22 .23 .17 .17 .40	7 3 2 1 1	.03 .02 .01 .10	69 47 20	1.16 .78 .51 1.31 .93	.02 .01 .03 .02	.01 .01 .01 .01	34 23 15	21 623 1270 45 14
3 5646	1	1		13	. 1	8		229	1.20	536	5	ND	i	116	1	2	2	21	3.17	.146	ń	:	.14	1	.13	:4	1.32	.01	. 02	1	3

STD 0, AU-R 17 57 42 132 6.6 68 25 1055 4.04 39 23 7 35 47 17 19 56 .49 .668 36 56 .91 172 .66 39 1.87 .06 .14 11 475

SAMPLE									Fe 1																						Au* PPB
N 5647	2	19	9	168	.3	7	8	417	1.42	199	5	ND	2	58	1	2	2	20	2.66	.159	5	8	. 27	3	.06	10	.94	.01	.01	1	5
N 5648	2	6	5	13	.1	1	7	231	1.02	374	5	ND	1	77	1	2	2	20	1.82	.078	3	7	.15	2	.63	10	. 90	.01	.01	•	1
N 5649	1	1	3	8	.1	6	5	207	.93	363	5	ΔK	2	88	1	2	2	25	2.44	.091	2	7	.10	1	.11	32	1.00	.01	.01	1	3
N 5650	2	1	2	5	. 2	4	4	170	.91	299	5	ND	2	65	1	2	3	17	1.64	.085	3	7	.07	1	.06	8	. 31	. 01	.01	1	1
N 5651	1	10	5	39	.1	12	5	1279	2.13	2 <b>5</b> 7	7	NO	2	41	1	2	2	15	4.11	.108	4	10	.17	25	.06	42	.93	.01	.04	2	2
N 5652	3	21	3	71	. 3	25	13	1423	2.60	350	1	ND	1	43	1	2	3	21	5.15	.157	7	16	. 21	22	. 05	10	1.09	. 02	. 02	1	6
N 5653	3	15	3	11	.1	12	8	422	1.19	454	5	MD	2	59	1	2	2	15	2.46	.055	5	12	.06	8	. 05	9	.84	.01	.01	1	3

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MM FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: CORE AU\* ANALYSIS BY ACID LEACE/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 21 1988 DATE REPORT MAILED: July 28/88 ASSAYER......D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING LTD. PROJECT V2483 File # 88-2886

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Sample#	Жо	Cu	Pb	Zn	Ag	Ni	Co	Ma	Fe	ÀS	U	λű	76	Sr.	Cd	SD	Bi	¥	Ca	?	La	Cr	Ng	Ba	71	8	Al	Ne	I	¥	Au*
	PPM	PPM	PPM	PPH	PPN	PPM	PPH	PPM	ł	PPM	PPM	PPN	PPM	PPM	PPM	PPM	PPE	PPM	ŧ	ì	PPM	PPM	3	PPN	1	PPN	ŧ	ł	3	PPM	PPB
N 5654	2	13	5	21	.1	11	5	2038	3.93	55	5	ND	1	34	1	2	2	17	7.22	.083	6	12	. 15	47	.04	20	. 83	. 01	. 07	11	1
N 5655	4	10	8	34	.1	30	13	888	1.69	451	5	MD	1	52	1	3	2		2.81	.093	6	5	.11	26	. 05	10		.01	.04	1	10
N 5656	3	20	9	30	.1	25	7	1324	3.17	137	5	ND	1	26	1	2	2		5.26	.075	5	11	.13	26	.06	17	1.09	.01	.04	3	1
¥ 5657	11	161	15	95	.1	43	1	961	2.13	509	5	ND	1	41	1	3	2	23	3.94	. 269	8	9	.07	26	.06	14	.91	.01	.03	1	2
N 5658		127	9	75	1.0	34	9	1147	2.30	962	5	ND	1	38	1	2	2		3.92		8	9	.14	30	. 05	13	.97	.01	. 05	1	ĩ
N 5659	9	255	7	98	1.3	29	7	930		122	5	MD	1	55	1	2	2		4.68		5	12	. 28	13	.06	78	. 92	.01	.03	i	2
N 5660	1	1	11	14	.1	16	31	596	1.27	857	5	RD	1	54	1	4	2	28	2.53	.022	2	10	. 29	2	.16	89	1.16	.01	.01	1	1
N 5661	1	6	16	56	. 2	10	14	948	1.90	101	5	ND	1	18	1	2	2	12	3.87	.024	2	17	. 65	2	. 19	91	1.26	. 01	.01	1	1
N 5662	5	62	5	33	. 4	21	3	1213	1.92	128	5	KD	1	24	1	5	2	34	1.06	. 222	6	15	.21	14	. 05	1342	.98	. 01	. 02	3	1
N 5663	3	66	12	68	.3	15	3	2068	3.48	107	5	ND	1	44	1	2	2	27	7.94	.149	6	24	.48	14	.04	47	1.27	.01	.06	3	1
w ECC1	,	56	•	33		15		751	1.51		£	ND	1	37			,	17	1 05	011	£	۵	12		46			41			
N 5664	3		1		.5		8			45	,		1		1	•	1		4.06		•	9	.13	20	.06	63	. 80	.01	. 02	i	1
N 5665	,	61	.,	18	.3	20	٠	896	1.54	83	,	ND		25					5.41		•	11	.04	20	.03		.56	.01	.04		
N 5666	3	359	10	38	1.4	28	•		1.73	61	,	MD		22		,	4		3.87	. 092	,	12	.03	19	.05	_ ;	. 62	.01	.04	•	2
N 5667	3	14	3	25	. 6	22	,		1.62	60	;	MD		27		4	4		5.23	.071	•		.06	14	.03	49	. 53	.01	.04	· l	1
N 5668	3	62	3	27	. 1	16	3	604	1.50	12	,	ND	1	30	1	4	4	11	3.07	.097	7	8	.03	11	.04	13	. 55	.01	.02	2	1
N 5669	2	316	16	11	1.0	27	47	461	7.85	209	5	ND	2	177	1	2	3	16	1.50	. 086	4	1	.28	27	.05	17	1.39	. 09	.05	1	1
N 5670	3	78	2	35	. 5	11	6	590	2.02	9	5	ND	2	33	1	2	2		3.54	.090	7	10	.06	11	. 06	14	. 84	. 01	. 02	2	1
N 5671	5	101	2	39	. 8	16	5		1.76	13	5	ND	1	28	1	3	2			.091	10	6	. 09	18	. 05	24	.62	.01	.04	ī	ī
N 5672	4	232	ĩ	60	1.2	22	14		3.22	26	5	ND	2	38	1	3	2		3.12	.089	6	10	.21	12	.08	23	.90	. 02	.04	ž	ī
STD C/AU-R	19	60	10	132	1.2	12	30	1049		41	17	8	37	47	17	17	17	60	. 48	.092	40	60	.93	179	. 08		2.03	. 06	.16	13	475
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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: CORE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED	D: J	UL 26	1988	I	ATE	RE	PORT	MA	ILEI	): /	Ang	1/	8E		ASSA	YER	.C.,	. L.	إبنه	.D.T	OYE	OR	C.LI	EONG	, C	ERTI	FIE	э в.	c. 1	ASSA	YERS
						м	PH	CON	SULT	ING	LTD	, . PF	ROJE	CT V	72483	3	File	e #	88-3	3006		Pag	e 1								
	MO C PH PP		<b>b</b>	Zo PPM	Ag PPN	Ni PPH	Co PPM	AN N9S	Fe 1	As PPM	U PPM	Au PPM	Th PPH	Sr PPM	Cđ PPN	Sb PPM	Bi PPM	V PPM	Ca %	?	La PPN	Cr PPN	Ng L	Ba PPH	Ti 1	B PPM	Al 1	Na %	ĭ	W PPM	
N 5674 N 5675 N 5676	1 7 2 25 3 15 1 13 1 4	7 1 6 1 2 2	7 6	277 118 299 103 645	.3 .6 .7 .5	19 25 13	16 22 20 12 7	235 329 451	3.75 5.15 3.19 2.72 1.31	62 24 33 83 10	5 5 5 5 5	OK CN DN DN	1 1 1	268 462 153 359 463	1 1 1 1 2	2 3 2 3 2	3 5 2 4 2	98 53 24 29 22	1.57 2.15 2.19 2.67 2.02	.032 .063 .103 .079	2 2 4 3 2	9 9 11 8 4	1.23 .70 .47 .48 .25	50 35 20 13	.15 .10 .10 .08 .10	6 33 32	2.98 3.62 1.42 2.72 2.74	.23 .35 .13 .28	.15 .06 .05 .03	1 1 1 1	1 1 1 4 1
M 5579 M 5680 M 5682	5 16 5 10 7 8 4 4 4 7	3 2 1 1 8 1	3 5 1 0	23 168 26 72 48	.5 .4 .3 .3	37 36 32 16 29	19 16	661 1038 713 1716 2958	4.90 2.84 2.53	24 256 31 11 8	5 6 5 6	ND ND ND	1 1 1 1	68 29 36 44 25	1 1 1 1	2 2 2 2 2	2 2 2 2 2	23 20 15 28 24	3.72 6.67 5.47 5.53 5.24	.070 .103 .119	7 5 8 8 3	11 16 19 23 21	.20 .33 .31 .60	16 12 8 8	.05 .04 .04 .07	26 22 235	1.07 .79 .59 1.18 1.10	.05 .01 .01 .01	.04 .04 .03 .03	1 1 1 2 2	5 54 10 12 4
N 5685 N 5686 N 5687	2 4 1 8 1 5 2 12 1 6	3 5 1 3 1	7 3 4 6 7	77 112 67 54 49	.2 .3 .6	7 5 11 34 12	9 47 13 35 71	460 437	2.60 2.47 2.61 3.42 2.85	15 76 19 79 257	5 5 5 5	D D D D D D D	1 1 1 1	25 36 46 25 30	1 1 1 1	2 2 2 2 2	4 2 2 2 2 2	37 28 40 46 71		.090	4 2 3 3 2	12 10 12 27 17	.76 .74 .70 .81	14 11 31 15 28	.10 .12 .11 .19 .19	42 22 9	1.15 1.32 1.35 1.19 1.30	.02 .02 .07 .03	.04 .03 .05 .03 .07	1 1 1 1	2 28 1 13 22
N 5690 N 5691 N 5692	1 1 18 1 7 1 12 1 10 10 10 10 10 10 10 10 10 10 10 10 1	0 1 5 2 1	0	70 197 174 208 240	.2 1.0 .3 .5	14 34 4 9 23	19 149 8 10	1530 431 625	3.96 5.17 1.38 3.10 1.99	30 319 9 21 31	5 5 5 5	ND ND ND ND	1 1 10 1	105 54 24 53 111	1 3 1 1	3 2 2 2 3	2 2 2 2 2	139 109 59 80 39	3.29 4.43 2.72 3.34 2.31	.064 .033 .042	2 2 2 2 2 2	30 10	1.74 1.75 .82 1.24 .71	27 19 19 16 2	.20 .09 .17 .21 .19	5 5	2.78 2.53 1.67 2.44 1.93	.12 .06 .02 .05	.06 .08 .07 .06 .01	2 2 1 1	3 101 18 35 2
и 5695 и 5696 и 5697	1 3: 1 22 1 4: 3 18: 1 13:	i 1 i 5	1 5 0 7 8 9	945 92 98 53 27	.2 .6 .1 .5	21 12 16 53 34	11 7 22 25 14	257 753 400	3.66 1.78 3.64 2.84 1.70	19 13 27 19 14	5 5 5 5	ND ND ND ND	1 1 1 1 3	38 129 34 92 11	5 1 1 1 1	2 2 2 2 2	2 2 2 2 2	91 32 81 52 29	3.16	.075	2 2 3 2 3	11 38	2.03 .63 1.66 1.39 .81	7 2 17 3	.19 .16 .21 .16	3 4 7	2.22 1.68 1.92 2.30 1.04	.02 .01 .01 .01	.03 .01 .08 .02	1 1 1 1	10 4 5 1
M 5700 M 5701 M 5702	1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	1 3 7 8 7	58 23 28 89 228	.4 .1 .1 .1	28 3 13 15 4	24 10 39 7 5	32E 382 762	3.94 2.56 2.49 3.41 2.48	34 4 31 7 8	6 5 5 5	ND ND ND ND	1 1 1 1 3	9 11 7 31 21	1 1 1 1	2 2 2 2 2	2 2 2 2 2	137 86 93 75 62	1.16 1.15 3.17	.079	2 2 3 5		1.40 .67 .74 1.78 1.28	5 9 9 12 10	.22 .22 .26 .20	2 4 2	1.56 .90 .89 1.99	.03 .06 .06 .32	.03 .04 .05 .05	1 1 1 1	2 1 1 4 1
M 5705 N 5706 N 5707 1	i 3 4 3 2 3 10 2 6	1 5 1		16 28 77 218 39	.1 .1 .1 .1	3 12 23 10	5 9 3 3	350	1.03 1.14 1.34 .93	534 5 9	5 5 5 5	NC NC NC ND	1 1 1 1	28 56 213 205 204	1 1 8 1	2 2 2 2 2	2 2 2 2 2 2	14 15 164	1.16 2.40 32.82 28.77 32.56	.097 .140 .136	3 3 5 5 3	6 8 31 20	.30 .21 .20 .48 .29	8 9 7 5 3	.14 .18 .02 .02	7 15 6 10 6	.88 1.26 .59 .76 .96	.03 .01 .01 .01	.03 .02 .04 .01	1 1 4 3 3 3	1 7 1 1
	10 16 5		4 9 :	3 <b>6</b> 132	.1 6.6	16 63	4 29	195 1067	.46 4.25	5 42	5 2 <b>4</b>	ND 7	1 37	133 47	1 18	2 20	2 17	65 58	20.61	.159 .095	6 41	20 57	. 06 . 96	2 17 <b>6</b>	.02 .07		1.21 2.05	.02 .06	.01 .14	2 11	2 475

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SAMPLE#	Mo PPM	Cu PPM	Pb P <b>PN</b>	Zn PPM	Ag PPM	Ni PPN	Co PPM	Ma PPM	?e	As PPN	U PPM	Au PPM	Th 2PM	Sr PPM	Cd PPM	SD PPM	Bi PPM	V C	a P k k	La PPM	Cr PPM	Ng Ł	Ba PPM	Ti t	B PPN	Al 1	Na Ł	K }	PPM W	Au* PPB
N 5710 N 5711 N 5712 N 5713 N 5714	7 6 3 8 2	17 13 69 197 22	5 12 13 3	51 98 1001 326 88	.1 .1 .3 .8	16 8 5 14 2	1 4 1	285 67 215 232 108	.64 .08 .48 .69	15 7 15 15	5 6 6 5	ND ND ND ND	1 1 1 1	154 325 60 133 240	3 4 5 4 1	2 2 2 2 2	2 2 2 2 2	81 24.69 18 28.3 10 11.79 43 15.99 3 30.79	7 .050 5 .128 1 .155	2 2 4 5 3	12 3 3 15 1	.23 .04 .12 .55	4 2 2 5 6	.01 .03 .01	3 311 362 38 135	.83 .25 .44 .67	.02 .01 .01 .01	.06 .01 .31 .91	1 1 1 1	1 1 1 1
N 5715 N 5716 N 5717 N 5718 N 5719	3 3 1 2	16 4 2 226 5	4 3 4 30 3	44 11 8 313 12	.1 .1 .1 1.3 .1	9 2 5 4 1	4 2 15 13	353 929 510 439 315	.72 2.23 1.32 1.39 .79	164 103 1400 1000 66	7 5 5 5 5	ND ND ND ON ON	1 1 1 1	103 20 60 52 60	1 1 1 1	2 2 2 2 2	2 2 2 3 2	8 12.6 14 4.76 13 2.9 39 1.55 15 1.75	301 1 .151 3 .070	7 6 5 2 3	5 11 6 9	.07 .10 .10 .41	3 6 2 1	.03 .04 .06 .15	82 14 9 6 27	.53 .72 .97 .95 .83	.01 .01 .01 .01	.01 .01 .01 .01	3 7 1 1	2 1 28 1 1
N 5720 N 5721 N 5722 N 5723 N 5724	1 1 4 9 2	5 12 4 9 712	2 3 6 4 11	14 10 40 27 1321	.1 .1 .1 .1 2.7	18 33 14 46	1 7 23 5 8	817 934	1.12 1.79 2.04 1.45 1.23	25 92 2802 630 825	5 5 5 5	ND ND ND ND	1 1 2 1 1	39 40 58 45 61	1 1 1 1 8	3 2 2 2 2	2 2 2 -2 2	16 3.48 27 9.73 17 4.66 33 4.73 12 7.46	.438 .234 .502	6 10 8 9	11 23 8 19 7	.07 .06 .11 .08	4 7 3	.07 .06 .05 .05	8	.73 1.25 1.15 1.05	.01 .01 .01 .01	.01 .01 .01 .02	1 3 2 1	1 1 3 1 2
N 5725 N 5725 N 5727 N 5728 N 5729	1 11 1 3 1	183 398 207 195 107	16 36 26 18 11	597 363 719 341 141	.6 1.8 1.1 .9	25 31 23 31 15	4 5 9 8 14	426 542 363	1.76 1.90 3.64 1.44 2.07	35 86 114 111 653	5 5 5 5	ND ND ND RG	1 1 1 1	57 37 42 45 69	2 1 3 1	2 2 2 2 3	2 3 2 2 2	29 1.32 22 1.10 42 .99 18 1.65 40 1.56	.096 .084 .130	2 4 3 6 2	21 10 13 12 13	.58 .43 .71 .25 .64	20 22 19 8	.10 .08 .10 .07	6 11 13	1.19 .78 1.45 .79 1.76	.05 .04 .07 .02 .11	.03 .04 .05 .01	1 1 1 1	1 1 1 2 5
N 5730 N 5731 N 5732 N 5733 N 5734	7 9 14 12 6	89 78 198 223 51	4 2 7 7 8	29 93 45 65 184	.5 .4 1.1 .9 .3	9 13 42 24 11		388		22 14 31 429 113	5 5 5 5	ND D D D D D	1 1 1 1	28 24 24 30 32	2 2 1 1 2	3 2 2 5 4	2 3 2 2 2	35 4.81 42 4.21 134 5.00 58 2.08 17 3.46	.252 .162 .028	3 5 5 2 4	11 12 19 13 8	.08 .05 .08 .14 .07	7 5 9 10 5	.07 .05 .05 .13 .07	137 179 50 18 18	.78 .65 .65 .94	.01 .01 .01 .01	.01 .01 .03 .02	1 1 13 1	1 1 1 3
N 5735 N 5736 N 5737 N 5738 N 5739	4 3 3 4	38 46 11 3 524	2 2 5 4 7	19 26 16 10 34	.4 .1 .1 .1	17 14 25 37 124	3 4 20 25 266	676 790 786	1.61 1.06 1.86 1.66 4.03	41 59 1870 4242 37424	5 5 5 5	ND ND ND ND	1 1 1 1	23 19 16 46 19	1 2 1 1	2 2 2 6 11	2 2 2 2 3	21 4.69 12 3.09 14 3.68 19 3.71 14 3.57	.112 .076 .082	5 6 6 4	14 11 14 .8	.04 .03 .04 .04	7 7 1 9 3	.06 .04 .03 .04	55 14 11 73 14	.72 .69 .58 .76 .45	.01 .01 .01 .01	.01 .01 .01 .01	1 1 2 1	2 1 14 45 234
N 5740 N 5741 N 5742 N 5743 N 5744	2 3 5 3	63 243 65 11 45	5 5 2 4 2	20 19 19 11 35	.2 .9 .2 .1	22 27 22 16 20	20 13 10 6 5	763 1001 692	1.68 1.91 1.77 1.33 1.28	2031 1190 698 135 152	5 5 5 5 5	ND ND ND ND	1 1 1 1	23 19 19 20 32	1 1 1 1	2 2 2 2 2	2 2 2 2 2	14 3.44 17 5.96 21 3.51 13 2.98 8 2.34	.107 .126 .123	6 6 6 7	13 19 16 12 7	.04 .02 .07 .03	7 4 11 7 13	.04 .04 .04 .04	10 9 9 5	.62 .63 .64 .64	.01 .01 .01 .01	.01 .01 .02 .01	2 3 1 1 1	8 17 1 1
N 5745 STD C/AU-R	3 18	111 60	2 41	233 132	.4 6.7	16 70	3 29	703 1129	1.60 4.27	77 43	5 16	ND 8	1 38	23 48	2 19	2 16	3 20	13 2.76 59 .49		5 41	8 60	.04 .95	12 176	.05 .07	14 39	.79 2.03	.01 .06	.02 .15	1 12	1 530

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SAMPLE:	Mo Mo	Cu PPH	PPM PPM	Zn PPM	Ag PPM	Ni PPM	Co PPH	Kn PPN	Fe 1	As PPM	U PPN	Au PPM	Th PPM	St PPM	C1 PPH	Sb P <b>PM</b>	Bí PPN	V PPH	Ca Ł	P	La PPM	Cr PPM	Hg L	Ba PPM	7i	B ?PM	λl t	Na 1	ž	PPM	Au* PPB
H 5746 N 5747 N 5748 N 5749 N 5750	3 5 4 5	147 177 100 80 46	10 3 5 2 2	238 125 73 20 14	.5 .3 .4 .3	20 22 16 2? 27	8 8 5 7	685	2.59 2.72 2.33 2.05 2.48	299 114 35 12 25	5 5 5 5	ND ND ND ND	1 1 1 1	35 22 34 23 20	1 1 1 1	2 2 2 2 2	5 2 2 5 2	16 17 18 18 44	3.19 3.70 3.08 3.64 3.84		7 7 8 9 7	8 13 11 14 17	.04 .07 .07 .04	17 12 13 8 5	.07 .07 .03 .06	23 2 8 5 2	1.04 .98 1.01 .92 .94	.01 .02 .01 .01	.02 .01 .02 .31	1 1 1	5 1 1 1 1
M 5751 N 5752 N 5753 N 5754 N 5755	9 2 5 4 2	35 174 38 112 100	3 9 2 4 6	38 155 16 16 81	.1 .6 .1 .5	18 17 12 37 24	17 5 12 16	601 590 529	2.06 3.57 1.99 3.96 4.40	25 49 14 19 35	5 5 5 5	DH DH CK CK CK	1 1 1 1	32 37 32 27 81	1 1 1 1	2 2 4 2 2	2 2 2 2 2 2	25 31 15 9 61	3.29 2.14 3.27 4.27 1.93	.134 .063 .077 .047 .061	3 7 3 3	11 6 11 11 11	.06 .37 .14 .12 .78	3 10 4 2 29	.06 .11 .06 .03 .12	29 7 17 22 11	. 73	.01 .03 .01 .01	.01 .03 .02 .02 .05	1 1 1	1 3 1 1
N 5756 N 5757 N 5758 M 5759 N 5760	4 1 3 7 3	146 11 79 212 11	10 4 8 19 3	104 131 126 546 84	.2 .2 .2 .8 .1	17 3 32 38 57	7 3 17 62 28	237 1043 1495	2.17 .85 1.73 6.93 1.16	14 6 46 1778 150	5 5 5 5	ND ND ND	1 1 2 1 1	34 88 35 18 91	1 1 2 1	2 2 2 3 2	3 2 2 2 2	15 27 13 9 24	2.48 2.09 1.65 5.57 1.98	.072 .074 .069 .087 .072	6 3 3 5	11 5 11 12 50	.14 .06 .13 .17	2 4 1 2 94	.06 .14 .06 .03	24 16 173 139 75	.75 1.10 .74 .47 1.12	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1	1 2 1 53 1
N 5761 N 5762 N 5763 N 5764 N 5765	2 1 2 1	49 60 33 45 96	6 8 2 12 5	68 28 14 69 58	.1 .2 .1 .1	32 11 9 36 42	17 18 3 11 12	145 143 471	2.16 1.98 1.06 3.24 3.05	49 31 19 19 28	5 5 5 5	CN DN DN DN	2 1 1 1	66 44 22 23 100	1 1 1 1	2 2 2 2 3	2 6 3 2 2	34 22 25 31 59	1.11 1.18 1.12 1.26 2.58	.050 .087 .056 .069	3 3 2 2 2		.69 .29 .27 2.05 1.54	34 12 20 4 2	.09 .14 .16 .25 .16	10 15 3	1.41 .97 .71 2.07 2.19	.07 .06 .03 .03	.04 .03 .04 .03	1 1 1 1	1 1 1 1
N 5766 N 5767 N 5768 N 5769 N 5770	2 8 3 4 5	3 18 2 7 5	3 10 6 5	13 732 19 120 56	.1 .3 .1 .1	17 5 8 3	48 6 22 1	523	1.60 2.16 5.10 .23 .61	105 296 445 18 226	5 5 5 5	ND ND ND	1 1 1 1	67 46 20 239 101	1 3 1 2 1	2 5 2 2 2	2 2 2 2 12	24	3.36 2.67 10.76 33.91 16.10	.152 .157 .153 .085	3 3 5 4 3	18 6 12 4 7	.20 .15 .06 .05	4 4 5 1 1	.22 .10 .07 .01	12	1.29 .90 1.22 .16 .36	.01 .01 .01 .01	.01 .01 .01 .01	2 1 5 2 3	4 59 22 4 20
и 5771 и 5772 и 5773 и 5774 и 5775	6 17 9 19	11 30 38 13 237	2 5 3 3	189 621 161 14 314	.2 .4 .1 .1 .1	5 13 19 29 10	2 2 2 7 9	192 539 121 476 434	.05 .76 .45 1.06 1.63	28 29 4 267 252	5 5 5 5 5	ND ND ND ND	1 1 1 1 1	269 46 209 44 53	3 2 7 1	2 2 2 5 4	4 3 2 2 2	103	35.16 14.09 26.41 6.00 4.17	.044 .415 .128 .238 .069	3 7 5 5 2	9 22 12 27 15	.02 .02 .05 .10	1 1 2 1 3	.01 .02 .02 .05	104 71 235 11 10	.14 .52 .53 .49	.01 .01 .01 .01	.01 .01 .01 .01	1 4 1 4 13	1 1 1 3 2
N 5776 N 5777 N 5778 N 5779 N 5790	10 7 3 2 2	654 17 76 62 251	2 26 6 13 32	190 14 16 13 1025	3.1 1.4 .2 .9 2.2	9 25 6 8 7	3 14 26 6 11	252 690 142	1.08 .98 1.62 .81 1.31	96 256 2505 558 658	5 5 5 5 5	CR CR CR CR CR	1 1 1 1	48 62 45 71 67	1 1 1 1 4	11 2 4 2 2	2 20 3 3 3	44 58 14 19 22	2.39 3.22 3.35 1.74 1.92	.084 .108 .102 .112 .135	3 2 3 4 6	19 23 8 15	.10 .07 .11 .07	2 3 3 1 3	.14 .10 .05 .08	13 26 26 8 9	.86 .91 .76 .96	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1	2 12 14 1
N 5731 STD C/AU-R	4 18	85 60	21 39	389 132	1.0	11 70	6 30	255 1036	.82 4.27	228 44	5 18	ND 3	1 39	44 48	1 17	2 17	3 21	13 60	1.73	.155 .093	7 39	6 60	. 13 . 95	á 180	. 05 . 67	5 32	.72 2.05	.01	.02	1 12	1 485

SAMPLES	Mc PPM	Cu PPM	Pb PPM	Zo PPM	Ag PPM	Ni PPM	CO PPN	Ma PPH	ie 1	As PPM	U PPM	Au PPH	Th PPH	Sr PPM	Cd PPM	SD PPH	Bi PPM	PPK V	Ca %	P }	La PPH	Cr PPM	Mg L	Ba PPM	Ti 1	56# 8	Al 3	Na Ł	I ì	W PPM	Au* PPB
N 5782 N 5783 N 5784 N 5785 N 5786	3 2 5 1	2 23 42 10 2	3 7 20 2 4	7 8 9 33 6	.1 .1 .1 .1	4 4 3 8 6	2 4 2 4 7	235 144 234 705 261	.65 .79 .98 1.15 1.19	233 694 462 70 21	5 5 5 5	ND ND ND ND	1 1 1 1 12	40 59 62 41 141	1 1 1 1	3 2 10 5 2	2 2 2 2 2	13 16 16	1.41 1.43 1.65 3.17 2.60	.085 .078 .081	3 3 3 18	1 3 7 10 5	.11 .08 .09 .10	5 2 3 2 2	.04 .07 .08 .08	4 2 8 26 6	.63 .77 .99 .89	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1	1 4 6 1
N 5787 N 5788 N 5789 N 5790 N 5791	2 1 4 17 72	17 131 59 9	9 13 4 2 4	32 123 13 25 13	.2 1.5 .3 .2 .2	13 35 9 58 74	234 7 12	1428 965 1032 1579 1162	3.86 1.50 2.34	625 15007 333 449 141	6 5 5 5 5	ND ND ND ND	1 1 1 1	20 10 27 36 28	1 2 1	2 13 2 5 3	2 38 2 2 2	26 36 185	6.83 6.48 5.89 6.26 4.11	.355 .109 .483 .453	6 7 10 6	21 24 23 34 26	.14 .05 .06 .16	14 6 3 4 7	.09 .05 .07 .08	3 33 26	1.68 1.44 1.52 1.74 1.40	.01 .01 .01 .01	.02 .01 .01 .01	4 5 3 6 3	8 99 3 3
N 5792 N 5793 N 5794 N 5795 N 5796	12 3 5 - 3 3	2 57 46 10 8	6 4 2 2 2	29 22 13 17 15	.1 .4 .2 .1	9 22 15 9 14	1	811 1536	2.08 1.34 1.79 2.47 1.53	650 75 223 20 257	5 5 5 5	DE DE DE DE DE DE DE DE DE DE DE DE DE D	1 1 1 1	27 28 16 22 18	1 1 1 1	2 2 2 2 2 2	2 2 2 2 3	13 11 20	3.54 7.59 3.80 7.52 3.26	.097 .100 .089 .261 .089	2 4 7 4 5	8 11 10 11 11	.15 .03 .05 .10	22 2 6 10 15	.06 .04 .04 .05	162 17	1.09 .59 .79 1.05 .82	.01 .01 .01 .01	.02 .01 .01 .01	1 4 2 4 1	3 15 3 3
N 5797 N 5798 N 5799 N 5800 N 5801	2 3 9 21 4	20 55 239 46 397	2 5 5 2 6	15 22 33 30 77	.1 .2 .9 .4 1.3	18 29 24 20 26	10	959 1300 1333	1.30 1.67 1.97 1.67 2.83	107 155 431 61 38	5 5 5 5	ND ND ND	1 1 1 1	24 29 18 18 23	1 1 1 1	2 2 2 2 2	2 2 2 2 2 2	12 32 32	3.56 3.55 3.78 4.21 4.82	.099 .152 .111 .083 .112	5 7 5 3 4	10 11 14 14 15	.04 .05 .05 .05	11 17 17 19	.04 .04 .05 .05	6 7 8 25 127	.70 .71 .94 .85	.01 .01 .01 .01	.01 .02 .02 .02 .02	1 1 2 2 4	1 2 1 1
N 5802 N 5803 N 5804 N 5805 N 5806	3 4 2 4	65 226 8 8 199	3 6 6 8 7	51 111 81 37 116	.3 .7 .2 .1	18 16 16 15 12	3	1568 1061	2.44	218 928 663 80 12	5 5 5 5	ND ND ND ND	1 1 1 1	36 21 20 24 23	1 1 1 1	2 2 2 2 2	2 2 2 2 2	19 24 20	3.82 3.54 3.85 3.57 4.40	.193 .100 .103 .089 .112	7 8 6 6	15 16 20 14 14	.04 .08 .14 .10	10 14 25 13 28	.04 .06 .06 .05	168 145	.30 1.00 1.08 .93 1.27	.01 .01 .01 .01	.01 .02 .03 .02 .03	3 1 1 1 2	1 10 1 2
N 5807 N 5808 N 5809 N 5810 N 5811	4 2 4 3 1	103 85 295 19	5 5 25 2 12	88 89 184 54 166	.4 .2 1.3 .1	11 10 12 11 33	2 4 5 4 14	626 395 258	1.62 1.11 1.95 1.05 4.04	14 269 149 223 148	5 5 5 5	D D D D D D D D D D D D D D D D D D D	1 1 1 1	34 44 64 55 71	1 1 1 1 1	2 2 5 7 2	2 2 2 2 2	11 10 11	4.30 3.07 2.42 2.83 1.03	.161 .100 .181 .056 .036	10 7 8 4 2	14 8 6 5 34	.09 .06 .08 .04	11 3 3 2 29	.07 .05 .06 .07	159 181 22	1.00 .82 .81 1.03 2.00	.01 .01 .01 .01	.01 .01 .01 .01	1 1 1 1	1 2 1 1
N 5812 N 5813 N 5814 N 5815 H 5815	_	172 407 2103 1347 660	8 4 15 15 13	52 51 191 138 49	.7 1.5 7.4 5.3 3.6	6 11 28 17 30	3 4 3 2 4	825 496 578	1.18 2.09 2.27 2.42 2.28	13 283 84 37 12	5 5 5 5	Д Б Б Б Б Б Б Б Б Б Б Б Б Б Б Б Б Б Б Б	1 1 1 1 1	55 32 46 41 40	1 2 1 1	5 2 5 3	2 2 2 2 3	27 17 16	2.29 6.02 4.98 4.11 3.58	.038 .080 .068 .219 .231	3 4 3 11 11	11 9 6 11	.11 .09 .06 .09	4 4 2 4	.12 .08 .09 .05	43 56	1.03 1.15 .81 1.04	.01 .01 .01 .01	.01 .01 .01 .01	1 2 1 1	1 8 1
N 5017 STD C/AU-R	- 5 18	457 60	18 39	46 132	1.8	32 70	6 29	346 1076	2.10 4.10	29 42	5 18	ND 8	1 38	15 48	1 18	2 17	2 20	10 59	2.29	.096 .097	6 39	8 58	.05 .97	2 183	.04	6 35	.71 2.08	.01 .06	.01 .15	1 12	1 490

SAMPLE#	No PPN	Cu PPM	Pb PPN	Zn P?K	Ag PPH	Ni PPM	CO PPM	Ha PPK	Fe }	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	ed PPM	PPH	Bi PPM	V PPM	Ca 1	P	La PPM	Cr PPM	Hg L	Ba PPM	Ti }	B PPM	Al }	Na 1	ĭ	Y PPH	Au* PPB
N 5818	3	101	13	12	.3	18	3	269	.90	19	5	ND	1	17	1	2	2	9	1.37	.101	5	7	.10	6	.06	21	.57	. 02	.02	i	3
N 5819	9	104	14	47	. 5	23	4	516	1.41	18	5	ND	1	16	1	2	2	8	1.68	.097	6	9	.01	1	.03	6	. 49	.01	.01	2	1
N 5826	11	187	13	82	. 4	20	3	418	1.71	31	5	ND	1	32	1	2	2	27	1.94	.146	6	9	. 28	12	.10	31	. 95	.03	. 03	1	1
N 5921	1	57	17	145	.2	32	17	405	2.24	84	5	ND	1	213	1	2	2	59	2.00	.060	4	42	1.06	27	.12	17	2.82	. 19	.06	1	4
N 5821	3	44	12	73	.1	19	Ó	928	1.42	16	5	ND	1	12	1	2	2	15	2.05	.076	5	11	. 97	2	.08	265	.67	.01	.01	1	1
N 5823	3	22	1	20	.1	14	3	528	1.63	17	5	ND	1	14	1	2	2		3.30		6	10	.05	2	.06	1	. 73	.61	.11	ı	2
N 5824	6	52	10	40	.1	21	4	598	1.72	16	5	ND	1	13	1	3	3		2.98		6	12	. 05	3	.05	11	.72	.01	.01	1	1
H 5825	1	135	5	94	. 4	10	14	214		153	5	ND	1	49	1	2	2		3.36		3	5	.16	9	.10	10	. 84	.07	.03	1	4
N 5826	1	7	5	13	.1	17	9	253		18	5	ND	1	59	1	3	2		4.03		2	29	.64	4	.24		2.18	.01	. 05	2	12
H 5327	1	55	8	42	.1	2	14	531	5.15	3	ž	ND	ı	44	1	2	2	110	1.58	.139	1	9	1.69	48	.19	2	2.60	.16	.14	1	1
N 5828	i	27	2	25	.1	5	9	313	2.32	4	5	MD	1	71	1	2	2	34	1.33	.075	2	11	1.18	4	.13	4	1.86	.01	.01	1	1
N 5823	1	10	3	30	.1	B	11		2.39	4	5	HD	1	9á	1	2	2		1.49		2		1.46	3	.16		2.28	.01	.01	1	i
N 5830	i	155	4	25	. 4	5	12	369	2.53	ó	5	ND	1	66	1	3	2		1.17	.059	2	14	1.10	6	.13		1.92	. 03	.02	1	1
N 5331	1	3	3	31	.1	8	11	401	3.14	2	5	ND	1	100	i	2	2	12	1.51		2		1.53	5	.14		2.33	.01	.01	i	i
N 5832	1	4	3	6	.1	5	3	153	1.13	2	5	ND	1	72	1	2	2	28	1.45	.033	2	29	.33	3	.10	3	1.14	.01	.01	1	2
N 5833	1	273	į	38	.3	5	23		4.53	23	5	ND	i	41	i	2	2		1.44		2		2.19	20	.22		2.53	.04	.06	2	1
N 5834	1	74	10	41	. i	3	32		3.90	25	5	ND	1	41	1	2	2				2		1.39	30	. 19		2.05	. 09	.12	1	1
N 5835	1	19	3	25	. 1	1	10	253	1.81	Ĵ	5	HD	10	70	l	2	2	30	.98	.018	3	13	1.07	78	.07		1.91	. 06	.02	1	4
N 5836	1	163	3	205	.3	19	29			43	5	ND	1	65	1	2	2		1.25	.045	2		2.49	8	.13		3.47	. 05	.02	1	1
N 5937	1	136	2	90	. 4	14	22	805	4.77	31	5	ND	2	99	1	3	2	90	1.95	.043	2	17	2.08	20	.13	4	3.70	.11	.03	1	5
N 5838	1	9	2	17	.1	19	23	848	4.86	27	5	ND	5	36	1	2	2	89	.83	.048	4	16	2.47	10	.15	4	2.97	.03	.04	1	1
# 5839	1	122	9	159	.4	28	57	1370	6.88	53	5	ND	1	33	1	2	2	93	1.23	.070	2	17	3.31	3	.14	4	3.83	.02	.02	1	2
N 5840	1	29	2	12	.1	2	5	165	1.28	3	5	MD	1	127	1	2	2	65	1.87	.026	2	5	. 29	1	.15	3	1.52	.01	.01	1	1
N 5841	1	22	6	45	.1	10	21	516	3.34	21	5	ND	4	81	1	3	2	49	1.53	.021	2	18	1.47	1	.14	6	2.38	.01	.01	2	1
N 5842	1	8	7	55	.1	32	36	588	3.85	50	5	ND	4	75	1	2	2	52	1.21	.042	2	74	2.39	1	.13	5	2.79	.01	.01	1	1
N 5843	1	107	4	21	.5	5	4	280	1.66	5	5	ND	1	105	1	5	2		2.60	.053	2	11	.41	15	.12		2.11	. 09	.04	1	1
N 5844	2	2	3	13	.1	5	3		1.46	2	5	ND	1	121	1	2	2		1.96	.028	2	15	. 49	10	.10		1.73	.01	.07	1	2
N 5845	1	3	3	11	.1	2	5	218	1.34	5	5	ND	1	111	1	2	2		1.56	.032	2	8	.41	15	.07		1.75	. 05	.02	1	i
N 5846	1	146	7	31	.2	1	1	291	2.72	5	5	ND	1	40	1	3	2		1.86	.095	2	8	.88	25	.16		2.16	.06	.11	1	3
# 5847	1	88	2	11	.1	2	25	508	5.96	17	5	ND	1	51	1	2	2	81	1.50	.349	2	9	2.70	27	.15	4	3.43	.07	.05	1	I
STD C/AU-R	18	59	36	132	6.8	69	29	1074	4.30	45	17	8	38	48	18	16	17	59	. 49	.092	40	60	.96	180	.07	33	2.03	.06	.15	13	475

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ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716 DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp Au\*\* BY FIRE ASSAY FROM 1/2 A.T.

MPH CONSULTING LTD. PROJECT-V2483 FILE # 88-2723R

SAMPLE# AU\*\*

oz/t

N 5642 .019 N 5643 .038 C. LABORATORY PROCEDURES



#### ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6 Telephone: 253-3158

## GEOCHENICAL ANALYSES - Rocks and Soils

### Group 1 Digestion

.50 gram sample is digested with 3 mls 3-1-2 HCI-HW03-H2O at 95 deg.C for one hour and is diluted to 10 ml with water. This leach is near total for base metals, partial for rock forming elements and very slight for refractory elements. Solubility limits Ag, Pb, Sb, Bi, W for high grade samples.

#### Group 1A - Analysis by Atomic Absorption.

Blement	Detection	Element	Detection	Blement	Detection
Antimony* Bismuth*	Z opa	Copper	0.01 Ppm	Holybdenum Nickel	l ppa
Cadmium* Chromium	0.1 ppm 1 ppm	Lead Lithium	2 ppm	Silver Vanadium	0.1 ppm
Cobalt	î ôpm	Hanganese	Z opm 5 ppm	Zinc	Z ppm 2 ppm

First Blement \$2.25

Subsequent Blement \$1.00

<u>Group 15</u> - <u>Hydride</u> generation of volatile elements and analysis by <u>ICP</u>.

This technique is unsuitable for sample grading over 1 all or Cu.

Slement Detection

VERSEUTC	U.I	D OW
Antimony	0.1	pom
Bismuth	O.I	pom
Germanium	0.2	ppm
Selenium	0.2	ppm
Tellurium	0.3	pom

First Element \$4.25 All Elements \$5.50

Group 1C - Ha

Detection limit - 5 ppb

Price \$2.50

Hg in the solutions are determined by cold vapour AA using a F 0 J scientific Hg assembly. The aliquots of the extract are added to a stannous chloride/hydrochloric acid solution. The reduced Hg is swept out of the solution and passed into the Hg cell where it is measured by AA.

## Group 1D - ICP Analysis, same digestion

<u>Blement</u>	Detection
Ag Cu, Mn, Mo, M1, Sr, Zn As, Au, B, Ba, B1, La, Pb, Sb, Th, V, W	J.I ppm
As, Au, 8, 8a, 81, La, 2b, 3b, 7h, V, W	l ppm. 2 ppm
U λl,Ca,Fe,K,Mg,Ha,P,Ti	0.01 ppm

Any 2 elements \$3.25 5 elements 4.50 10 elements 5.50 All 30 elements 6.25

Group IE - Analysis by ICP/MS

 Slement
 Detection

 Ca,Ge
 1
 ppm

 Au,Bi,Cd,Hg,In,Ir,Os,Re,Rh,Sb,Te,Th,Tl,U
 0.1
 ppm

All Elements

15.00

(minimum 20 samples per batch or \$15.00 surcharge)

38.00

## Hydro Geochemical Analysis

Natural water for mineral exploration

F by Specific Ion Slectrode - detection 20 ppb \$3.75 U by UA3 - detection .01 ppb 5.00 pH 1.50

\* Hinimum 20 samples or \$5.00 surcharge for ICP or AA and \$15.00 surcharge for ICP/MS. All prices are in Canadian Dollars D. SOIL SAMPLES

#### \_\_\_\_\_

# GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE SR CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SQIL. ANY AWALYSIS BY ACTO LEACH/AA FROM 10 GM SAMPLE.

- SAMPLE TYPE: SOIL AND ANALYSIS BY ACID LEACH/AA PROM 10 GM SAMPLE.																															
DATE RECEIVE	D:	JOLY 1	0 1988		DATE	RE	PORT	AM 7	ILEC	): '	July	1 15	-  88	,	ASSA	YER	. <u>C</u> .	: h	orn	.D.	TOYE	OR	c.1	EON	G, C	CERT	IFIE	D B	.c.	ASS.	AYERS
MPH CONSULTING LTD. PROJECT-V248-3 File # 9														88	-255	6	Pag	ge 1													
SAMPLE	Mo PPM	Cu PPM	Pb PPM	2n PPM	Ag PPM	Ni PPM	Co PPN	Mn PPM	Fe	As PPM	U PPM	Au PPM	Th PPM	ST PPM	Cd PPN	SD PPN	Bi PPM	V PPN	Ca &	P	La PPM	Cr PPM	Ng 3	Ba PPM	Ti	B PPM	Al 1	Na Ł	K t	W PPN	Au* PPB
L2+40N 4+95W L2+40N 4+85W L2+40N 4+75W L2+40N 4+65W	1 1 1	18 23 17 16	14 20 15	25 27 45 64	.1 .1 .2 .1	2 5 4 16	6	3165	2.90	2 11 12 5	5 5 5	ND ND ND	1 1 1 1	13 12 24 15	1 1 1	6 2 4 2	2 2 2 2	218 156 105 109	. 31	.017 .043 .041 .058	2 2 2 2	49 37 25 74	.10 .14 .17	7 10 18 9	.29 .24 .27	2	.92 1.44 .80 3.32	.01 .01 .01	.01 .04 .03	1 1 2 1	1 29 20 1
L2+30N 4+95W	i	11	14	50	.1	6		3001		16	5	MD	1	23	1	6	2	88		.053	2	32	.22	13	.16	i	. 55	.01	.03	2	6
L2+30N 4+85W L2+30N 4+75W L2+30N 4+65W L2+30N 4+55N L2+20N 4+95W	1 1 1 1	3 37 26 20 7	15 13 10 10	41 42 23 27 65	.1 .1 .3 .2 .1	9 10 3 4 3	7 9 4 4 2	799 251 250	1.94 5.10 3.17 1.64 .48	3 15 4 2 2	5 5 5 5 5	ND ND ND ND	1 1 1 1	28 14 12 12 17	1 1 1 1	3 2 4 3 2	2 2 2 2 3	71 114 137 90 13	.22 .26 .22	.022 .031 .023 .026	2 3 2 2 2	45 64 35 22 3	.33 .32 .13 .12	11 12 7 6	.17 .19 .32 .19	4	.74 2.89 1.74 .96	.01 .01 .01 .01	.03 .02 .03 .02	1 1 1 1	1 41 1 2 1
L2+20N 4+85W L2+20N 4+75W L2+20N 4+65W L2+20N 4+55W L2+10N 4+95W	1 1 1 1	3 26 6 15 3	13 16 11 10 9	20 43 26 25 20	.1 .1 .3 .1	3 9 2 3 1	4 9 1 4 2		2.37 3.33 .65 .88 .67	2 10 2 2 2	5 5 5 5 5	ND ND ND ND	1 1 1 1	14 18 16 32 18	1 1 1 1	3 2 2 2 2	2 2 2 2 2	132 111 51 60 78	.32 .24 .26	.021 .031 .015 .026	2 3 2 2 2	34 42 12 14 7	.11 .39 .09 .15	7 13 2 7 6	.19 .21 .16 .17		1.10 1.20 .26 .62	.01 .01 .02 .01	.02 .02 .03 .02 .03	1 1 1 1	38 30 1 1 3
L2+10N 4+85W L2+10N 4+75W L2+10N 4+65W L2+10N 4+55W L2+00N 4+95W	1 1 2 1	86 23 29 7 13	18 10 12 7 11	67 39 40 11 38	.8 .1 .1 .1	2 2 5 1 1	8 8 8 2 5	421 90	3.26	28 31 27 3 13	5 5 5 5	ND ND ND ND	1 1 1 1	28 21 14 14 15	1 1 1 1	2 5 2 3 6	4	112 106 125 123 123	.40 .63 .24	.043 .028 .033 .009	2 2 3 2 2	10 11 26 14 12	.20 .15 .10 .10	8 7 9 2 5	.25 .25 .18 .24	6 8 3 3	.83 .82 1.21 .52	.01 .01 .01 .01	.02 .02 .02 .01	1 2 1 1	6 1 17 4 27
L2+00N 4+85W L2+00N 4+65W L2+00N 4+55W L1+90N 4+95W L1+90N 4+85W	1 2 1 1 4	7 58 19 20 136	8 11 9 7 21	18 54 31 20 131	.1 .3 .2 1.7	2 4 5 3 7	3 9 3 4 10	395 117 306	2.10 6.45 1.82 3.70 9.92	7 54 4 22 57	5 5 5 5	ND ND ND ND	1 2 1 1 2	15 11 9 15 10	1 1 1 1	4 2 2 2 2 2	3 2 3 3 2		.64 .96 .15 1.65 1.19	.043 .020	2 3 2 2 3	15 36 14 17 40	.07 .22 .14 .08	9 7 9 4 9	.21 .16 .10 .25 .22	6 4 3	.92 3.30 1.14 .97 2.28	.01 .01 .01 .01	.01 .02 .03 .01	1 5 1 1	94 15 2 142 305
L1+90N 4+75H L1+90N 4+65H L1+90N 4+55H L1+80N 4+95N L1+80N 4+85H	6 1 1 6 13	105 15 15 88 447	26 13 11 21 16	87 31 17 39 68	1.3 .1 .3 .1 1.5	4 10 2 2 4	19 8 1 13 18	840 : 325 43 988 1643 :	5.14 .19 13.02	97 2 3 90 75	5 5 5 5	ND ND ND	2 1 1 1 2	7 17 20 7 6	1 1 1 1	2 2 2 2 2	2	169 146 3 326 313	.32 .11 3.52	.028 .027 .034	3 2 2 2 3	43 63 1 36 38	.12 .28 .16 .09	6 5 6 4	.19 .66 .01 .22	2 2	2.44 3.21 .12 1.66 2.07	.01 .01 .02 .01	.02 .01 .02 .02	1 1 1 6	390 32 1 21 28
L1+8GN 4+75W L1+8GN 4+65W L1+8GN 4+55W L1+7GN 4+95W L1+7GN 4+85W	7 1 1 6 10	183 14 6 223 379	22 17 12 13	83 31 11 45 65	.7 .1 .1 1.6 1.4	4 9 2 4 8	17 7 3 13 17	828 541 153 837 1136	2.84 16.25	101 6 2 84 79	5 5 5 5	ND ND ND ND	2 2 1 2 2	7 22 10 7 5	1 1 1 1 1	2 6 5 2 2	2 2 2 2 2	191 168 128 315 258	.38 .23 3.19	.033 .009 .027	3 2 2 3 3	51 78 46 30 52	.11 .29 .13 .12 .20	4 7 5 5 5	.20 .61 .32 .22	8	2.72 1.13	.01 .01 .01 .01	.03 .01 .01 .01	3 1 1 4 7	122 18 7 9
11+70N 4-75W STD C/AU-5	14 17	27 <b>5</b> 58	11 40	9 <b>4</b> :32	.9 7.1	8 66		2184 1059		48 37	5 16	ND 7	2 3 <b>5</b>	1 17	1 17	2 16		155 57	.72		4 39	62 56	.28 .92	7 174	. 14	5 32		.01 .06	. 32	3 12	2 53

SAMPLE#		Cu PPM	Pb PPN	Zn PPM	Ag PPK	Bi PPM	Co PPN	Na PPN	Fe \$	As PPM	U PPK	Au PPH	Th PPH	Sr PPM	Cd PPN	Sb PPM	Bi PPM	PP4 V	Ca 1	P	La PPN	Cr PPM	Ng t	Ba PPM	Ti Ł	B PPN	Al 1	Na 1	I t	W PPK	Au* PPB
1+70N 4+65W	1	6	19	11	.1	1	1	93	.46	2	5	ND	1	7	1	2	2	78	. 19	.006	2	8	.04	3	. 20	8	.41	.01	.02	1	1
1+70N 4+55W	15	236	14	61	.4	5	18	1220 1	3.61	95	5	ND	1	5	1	2	2	276	2.75	.051	2	48	.13	4	.15	8	2.18	.01	.03	10	7
1+60M 4+95W	7	617	26	89	2.8	7	18	921 1	1.02	52	5	ND	3	7	1	2	2	154	.71	. 055	4	69	. 33	6	.17	4	5.92	.01	.03	1	17
1+60N 4+85W	7	486	24	60	3.2	6	15	787 1	0.65	43	5	ND	2	7	1	2	2	161	.65	.048	3	61	.21	5	.17	6	4.51	.01	.01	2	23
1+60N 4+75W	14	459	21	208	1.0	17	40	3197 1	2.41	100	5	MD	1	5	1	2	2	159	1.15	.074	3	55	.85	7	.06	2	4.86	.01	.94	4	46
1+60M 4+65W	16	188	20	103	1.5	11	33	3858 1	0.67	55	5	ND	2	7	1	2	2	154	. 89	.059	3	50	. 40	5	.11	6	3.17	.01	. 62	6	16
1+60N 4+55W	1	5	12	15	.1	4	i	80	1.91	2	5	ND	1	10	1	2	2	66	. 19	.010	2	g	.08	7	.27	5	. 96	.01	.02	1	ı
STD C/AU-S	17	60	44	131	7.1	68	27	1052	4.11	39	16	7	36	47	17	16	18	56	. 47	.086	38	56	.91	171	.06	34	1.94	.06	.14	12	52

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR WA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

THIS LEACH IS PARTIAL FOR MN FE CA P LA CE MG BA TI B W AND LIMITED FOR WA E AND AL. AND DETECTION LIMIT BY ICP IS 3 PPM.  - SAMPLE TIPE: SOIL AU* ANALYSIS BY AA PROM 10 GRAM SAMPLE.  DATE RECEIVED: NAI 19 1988 DATE REPORT MAILED: May 26/88 ASSAYER																															
DATE RECEIVED:	KAT	19 19	88	DA	TE R	EPOI	RT M	IATL	ED:	M	ay o	26/0	88	AS	SAYE	R.C	:.!	Live	r	OT.	YE O	R C	. LEC	NG,	CER	TIF	ED	в.с	. AS	SAYI	ERS
	MPH CONSULTI							PRO	JECT	r-V2	483	F	ile	# 8	8-1	566	. 1	age	1												
SAMPLE#	No PPM	Cu PPM	Pb PPM	In PPH	Ag PPN	Ni PPM	Co PPN	Ma PPM	Fe }	As PPN	U PPM	Au PPM	Th PPM	ST PPM	Cd PPM	SD PPM	Bi PPM	V PPM	Ca %	P	PPK La	CT PPM	Ng L	Ba PPM	Ti 1	B PPM	Al 3	Ya t	ĭ	PPM	Au* PPB
V2483 L10+00M 2+75W V2483 L10+00M 2+56W V2483 L10+00M 2+25W V2483 L10+00M 2+00M V2483 L10+00M 1+75W	1 1 1 1	5 13 8 4 11	6 10 5 5 9	12 24 23 11 12	.1 .2 .1 .1	3 8 8 3 5	2 3 4 2 2	140 143 170 87 71	1.32 3.74 2.48 .90 .63	2 2 2 2 2	5 5 5 5 5	ND ND ND ND	1 1 1 1	9 16 12 7 8	1 1 1 1 1	2 2 2 2 2	2 2 2 2 2	113 170 183 86 52	.18 .42 .47 .26 .28	.007 .024 .017 .009 .018	3 2 2 2 2	21 26 19 42 22	.08 .21 .34 .12	9 11 8 3 3	.25 .36 .35 .25	2 3 2 2 7	.77 .60 .89 .40	.01 .01 .01 .01	.02 .04 .04 .01	1 1 1 1	2 26 6 33 2
Y2483 L10+00M 1+50M Y2483 L10+00M 1+25W Y2483 L10+00M 1+00M Y2483 L10+00M 0+75W Y2483 L10+00M 0+50W	1 1 1 1	5 8 10 11 9	6 8 8 11	13 19 15 24 24	.1 .1 .1 .2	3 6 3 4	1 3 1 2 2	83 87 105	1.12 1.67 1.37 1.57 1.36	2 2 2 2 2	5 5 5 5	ND ND ND ND	1 1 1 1	10 14 12 12 16	1 1 1 1	2 2 2 2 2	2 2 2 2 2	94 73 134 134 108	.35 .26 .24	.022 .039 .017 .024 .025	2 2 2 3 2	15 64 21 20 34	.10 .14 .11 .12 .13	5 7 7 9	.19 .12 .32 .29 .22	2 4 2 3 2	.53 .30 .96 1.00	.01 .01 .01 .01	.02 .04 .02 .05	1 2 1 1	1 1 2 4 1
V2483 L10+00M 0+25M V2483 L10+00M 0+25M V2483 L10+00M 0+50M V2483 L10+00M 0+74M V2483 L9+00M 2+75W	1 1 1 1 4	7 4 5 4 44	3 6 5 8 18	17 17 28 27 55	.1 .1 .1 .1	15 5 1 3 5	4 2 4 1 3	93 163 65	3.98 1.27 5.00 .80 2.14	2 2 2 2 6	5 5 5 5	ND ND ND ND	1 1 1 1 2	9 16 13 36 30	1 1 1 1	2 2 2 2 2	2 2 2 2 2	191 95 214 47 87	.24 .28 .27 .55 .36	.013 .020 .025 .043 .070	2 2 2 2 3	100 28 5 15	.33 .14 .16 .12 .10	3 7 11 10 15	.13 .19 .14 .08	2 3 2 4 4	.81 .89 .63 .31	.01 .01 .01 .01	.04 .03 .04 .05	1 1 1 1	1 1 1 1
V2483 L9+00N 2+50W V2483 L9+00N 2+25W V2483 L9+00N 2+00H V2483 L9+00N 1+75W V2483 L9+00N 1+50W	2 1 1 3 3	101 20 8 18 25	8 4 3	58 16 19 17 16	.3 .2 .3 .1	8 4 6 4 3	2 2 2 2 2	66 68 88	2.29 1.51 .89 4.22 2.11	8 10 5 7 5	5 5 5 5	ND ND ND	1 1 2 1	25 24 13 12 13	1 1 1 1	2 3 2 2 2	2 2 2 2 2	90 125 75 168 170	.34 .52 .28 .30 .47	.044 .013 .009 .018	2 2 2 2 3	16 12 22 18 19	.12 .08 .12 .17	20 8 4 8	.20 .24 .15 .28 .30	2	1.03 .76 .42 1.37	.01 .01 .01 .01	.03 .02 .05 .03	1 2 1 1	8 105 1 7 6
V2483 L9+00N 1+25W V2483 L9+00N 0+75W V2483 L9+00N 0+75W V2483 L9+00N 0+50W V2483 L9+00N 0+25W	1 1 2 1	2 1 2 1	8 6 11 3 5	15 23 26 18 11	.5 .3 .1 .3 .1	1 1 3 6 2	2 2 3 2 1	205 178 128	1.32 2.88 5.60 3.38 1.63	2 2 2 2 2	5 5 7 5	ND ND ND ND	3 1 2 3 1	23 20 10 9 12	1 1 1 1 1	2 2 2 2 2	2 2 2 2 2	142 263 444 142 125	.36 .20 .34	.012 .016 .015 .014	2 2 2 2 3	6 11 25 31 9	.10 .08 .10 .25	5 5 6 8 7	.32 .32 .46 .18		.43 .45 1.14 1.04 .94	.01 .01 .01 .01	.05 .04 .03 .06	1 2 1 1	2 3 1 1
V2483 L9+00N 0+25E V2483 L9+00N 0+50E V2483 L9+00N 0+75E V2483 L9+00N 1+00E V2483 L9+00N 1+25E	1 1 1 3 1	3 1 2 4 3	6 4 15 5 6	17 8 23 15 25	.4 .4 .1 .5	2 1 3 6 12	1 1 2 3 3	125	.49 .46 2.30 3.44 2.22	2 2 2 1 2	5 5 5 5	ND ND ND ND	1 2 2 1 2	11 10 17 22 18	1 1 1 1	2 2 2 2 2	3 2 2 3 2	45 41 164 238 131		.017 .008 .006 .016	2 2 3 2 2	9 3 14 25 75	.10 .04 .24 .13	8 8 8	.08 .10 .34 .37	2 2 2 2 2	.45 .35 1.69 .82 .71	.01 .01 .01 .01	.04 .05 .03 .05	2 1 1 1 2	2 1 1 1 2
V2483 L9+00N 1+50K V2483 L8+50N 2+65N V2483 L8+50N 2+50N V2483 L8+50N 2+25N V2483 L8+50N 2+00N	2 1 2 1 2	16 17 15 12 15	6 6 6 11	40 25 26 9 26	.2 .2 .3 .1	15 6 6 2 3	7 2 3 1 3	50 86 49	5.07 .79 5.53 .90 6.37	2 2 2 2 167	5 5 5 5 5	ND ND ND	1 1 4 1 2	33 26 14 16 23	1 1 1 1	2 2 2 2 2	2 2 2 2 4	90 24 139 60 259	.63 .34 .22 .28 .37	.077 .022 .045 .011 .021	2 3 3 4	46 11 26 5 20	.16 .10 .16 .06	21 24 13 15	.09 .06 .24 .11	2 2 2	1.71 .65 1.50 .73 1.83	.02 .01 .01 .01	.06 .06 .07 .04	2 2 1 1	1 1 2 5 23

3 30 6 25 .3 5 4 195 6.30 213 8 MD 4 22 1 2 3 188 .62 .019 3 21 .26 14 .37 2 1.61 .01 .06 1 1

20 63 42 134 7.2 72 31 1080 4.17 39 19 8 40 54 19 17 22 60 .49 .091 39 61 .93 185 .07 34 1.88 .05 .14 14 49

STD C/ASU-S

V2483 L8+50N 1+75W

SAMPLE#	MO PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPH	Co PPN	Mn PPK	Ie 1	As PPM	U PPM	PP# Au	Tb PPK	Sr PPN	Cd PPM	Sb PPH	Bi PPM	PPM	Ca }	P	La PPM	CT PPM	Ng L	Ba PPM	Ti L	PPK PPK	Al t	Na t	Į,	PPH	Au* PPB
V2483 L8+50W 1+50W	2	7	12	20	.1	2	2	211	6.56	260	5	ND	1	23	1	2	7	224	.77	.024	2	17	. 07	7	. 35	2	1.07	. 02	.03	1	26
V2483 L8+50N 1+25W	1	19	9	15	.1	2	1	72	2.93	64	5	ND	1	36	1	2	4	118	.84	.010	2	9	.08	3	.32	4	.95	. 02	.01	1	4
V2483 L8+50W 1+00W	2	18	9	29	.1	4	5	181	5.54	50	5	ND	1	22	1	2	3	127	.56	.018	2	30	.30	8	. 20	3	2.16	.04	. 02	2	127
V2483 L8+50W 0+75W	3	46	8	18	.1	5	2	92	5.51	38	5	ND	1	14	i	2	2	181	.38	.010	3	38	.16	9	.37	2	2.40	.02	.02	1	1120
V2483 L8+50N 0+50W	1	12	10	41	.1	6	4	217	2.92	2	5	ND	1	26	1	3	2	138	.51	.017	2	16	.50	20	.22	3	1.66	.04	. 05	1	16
V2483 L8+50N 0+25W	1	8	6	27	.1	4	4		7.45	2	5	ND	1	32	1	2	2	328	.45	. 025	2	41	. 35	5	. 33		2.81	.04	.01	1	5
V2483 L8+50N 0+25R	2	19	6	18	.1	4	3	103	6.02	3	5	ND	2	15	1	2	2	252	.27	.016	2	32	.20	8	. 31		2.74	. 01	. 02	1	2
V2483 L8+50N 0+50K	1	6	2	14	.1	4	1	53	.72	2	5	ND	1	10	1	2	2	44	. 27	.012	2	64	.11	2	.07	4		.04	.02	1	1
V2483 L8+50N 0+75R	2	10	4	16	.1	3	2	87	5.93	4	5	ND	1	13	1	2	3	255	.22	.016	2	37	.12	4	. 39		1.21	. 02	. 02	1	1
V2483 L8+50N 1+00E	1	1	10	19	.1	1	1	134	2.40	2	5	ND	ì	12	1	2	2	327	.23	.009	3	9	. 07	5	.56	2	1.05	. 02	.03	1	16
V2483 18+50N 1+25E	2	1	9	22	.1	2	3	128	5.33	2	5	ND	1	15	1	2	6	450	.28	.019	2	10	.15		.12		1.16	.03	. 03	1	1
V2483 L8+50N 1+50K	16	8	9	25	.1	2	1		2.22	4	5	ND	1	18	1	2	2	181	. 28	.023	2	6	. 09	8	.31	6	.67	. 04	. 04	1	2
V2483 LB+50N 1+75N	1	- 1	7	32	.2	1	1	24	.36	2	6	MD	2	16	1	2	2	20	. 35	.035	2	1	.08	•	. 05	11	.23	.04	.11	2	1
V2483 L8+50N 2+00E	1	4	5	27	.1	1	1	32	.45	2	5	ND	1	13	1	2	2	35	.22	.031	2	3	. 05	10	. 05	3	.48	.02	. 05	1	1
V2483 18+50N 2+25K	1	3	4	19	.1	2	1	28	. 55	2	5	ND	1	14	I	2	2	48	.20	. 020	2	21	.10	1	.11	5	. 30	.01	. 05	1	11
V2483 L7+50N 1+15W	2	30	7	53	.3	18	8	278	2.61	28	5	ND	1	43	1	2	2	50	.74	.144	5	33	.78	9	.10	12	2.61	.11	. 05	1	76
V2483 L7+50W 1+00W	7	70	18	65	.5	13	21	2051	15.31	476	5	ND	1	13	1	2	2	114	1.35	.081	5	39	. 53	12	.10		2.42	.01	. 03	2	830
V2483 L7+50H 0+75W	3	14	9	24	.1	- 4	5		5.54	110	5	ND	1	14	i	2	2	182	.21	.021	3	34	.13	11	. 32		1.29	.02	.02	2	10
V2483 L7+50W 0+50W	2	3	10	23	.1	5	3		1.26	2	5	ND	1	26	1	2	2	147	.68	.018	3	13	.23	16	.30		2.93	.01	.02	1	1
V2483 L7+50W 0+25W	1	6	1	17	.1	3	3	160	. 85	2	5	ND	1	19	ĩ	2	2	11	.43	.022	2	17	.11	8	.20		1.13	.04	.03	1	6
V2483 L7+50N 0+25E	2	123	8	46	.2	17	ı	240	8.31	10	5	ND	2	13	1	1	2	226	.25	.051	8	86	. 43	13	.65	3	7.90	.04	. 03	4	21
V2483 L7+50# 0+50#	1	14	3	33	.1	5	3	419	6.08	2	5	HD.	1	26	1	2	2	225	.46	.019	3	30	.22	9	. 38	2	1.67	. 05	.03	1	1
V2483 L7+50N 0+75E	1	5	5	14	.1	3	1	77	1.13	2	5	ND	1	,	1	2	2	89	.24	.013	2	37	.10	5	.23	2	. 55	.01	.02	1	15
V2483 L7+50N 1+00K	2	2	10	10	.1	1	1	21	.42	2	5	HD	1	9	1	2	2	59	.12	.014	1	10	. 03	11	.14	2	1.08	.03	. 04	1	1
V2483 L7+50N 1+25E	1	1	4	9	.1	2	1	26	.42	2	5	ND	1	11	1	2	2	39	.17	.010	2	4	.03	6	. 07	4	.43	.02	. 05	1	1
V2483 L7+50N 1+50E	6	2	9	18	.1	2	2		8.32	2	5	MD	2	12	1	2	2	234	.19	.014	3	24	.16	9	. 36	2	2.59	.03	.03	1	1
V2483 L7+50N 1+75E	1	1	2	17	.1	1	1	14	.56	2	5	ND	1	11	1	2	2	29	.24	. 012	2	3	. 02	4	. 05	7	.23	.01	. 05	1	1
V2483 L7+50N 2+00E	1	i	4	13	.1	1	1	25	. 59	2	5	ND	1	7	1	2	2	30	.13	.014	2	1	.04	6	. 06	3	. 34	.01	.04	1	1
V2483 L7+50N 2+25K	1	1	2	9	.1	1	1	29	. 19	2	5	ND	1	7	1	2	2	29	. 09	.017	2	1	. 02	5	.04	3	.54	. 02	. 05	1	1
V2483 L7+50N 2+50K	1	4	6	20	.2	1	1	64	.42	2	5	ND	1	12	1	2	2	29	. 22	.024	2	1	.06	1	. 07	5	. 46	.01	.06	1	1
V2483 L7+50N 2+75E	4	3	7	25	. 2	2	1	1Ô	.27	2	5	ND	1	8	1	2	2	24	.11	.028	2	14	.04	10	. 98	3	.56	. 02	.07	1	1
V2483 L7+50K 3+00K	4	1	10	11	.1	1	1	21	. 26	2	5	ND	1	12	1	2	2	41	.21	.015	2	6	.03	8	.16	3	. 66	.02	.01	1	1
V2483 L7+50N 3+25E	1	4	5	15	.1	3	1		1.07	2	5	ND	1	12	1	2	2	93	.19	.008	3	18	. 07	6	.20	2	.61	.01	.03	1	4
V2483 L7+50N 3+50K	1	4	7	23	.2	2	1	89	1.06	2	5	ND	1	15	1	2	2	92	.22	.011	3	17	.08	7	.19	2	. 59	.02	.06	1	6
V2483 L7+00N 1+10N	3	77	15	151	.4	14	22	1698	4.70	192	5	ND	1	56	2	2	2	114	2.75	.080	8	32	.34	7	.06	10	1.19	.01	.04	1	89
V2483 L7+00N 1+00N	2	22	31	363	.3	16			3.33	206	5	ND	1	12	5	2	2	186	2.78	.063	11	42	.10	6	.06	11	.91	.01	.01	1	47
STD C/AU-S	19	62	39	130	7.1	71	30	1070	4.09	43	17	8	40	52	19	17	20	59	. 50	.089	41	61	. 87	179	. 07	34	1.89	. 07	. 15	14	51

SAMPLE#	No PPN	Cu PPM	Pb PPH	Zn PPM	Ag PPK	Ni PPM	Co PPM	MA PPN	fe 1	As PPM	U PPK	Au PPK	Th PPH	ST PPM	Cd PPM	Sb PPN	Bi PPM	PPM	Ca 1	P	La PPM	Cr PPM	Ng Ł	Ba PPN	Ti	B PPK	Al t	Na Ł	1	W PPM	Au* PPB
V2483 L7+00N 0+75W	3	4	7	60	.3	2	3	608	4.73	37	5	ND	1	10	1	2	2	331	3.68	. 043	4	62	.03	3	.19		1.36	.01	. 02	1	15
V2483 L7+00N 0+50W	3	22	5	35	. 5	4	4	135	8.90	18	6	ND	2	23	1	2	2	226	. 52	.029	4	37	.13	10	. 39			. 03	. 03	1	2
V2483 L7+00N 0+25W	2	11	6	25	.3	5	3	115	3.66	8	5	ND	1	25	1	2	2	139	. 39	. 029	3	27	. 19	7	. 32		1.26	. 03	. 05	1	1
V2483 L7+00N 0+25E	1	4	3	14	.2	2	1	109	. 81	2	5	ND	1	15	1	2	2	59	. 28	.016	3	16	.09	1	.15	8	.43	.03	. 05	1	1
V2483 L7+00N D+50R	1	4	1	14	.1	3	2	89	.98	2	5	ND	1	25	1	2	2	75	. 34	.011	2	15	. 15	8	. 20	6	. 80	. 01	. 04	1	1
V2483 L7+00H 0+75E	9	55	12	36	.5	8	4		4.86	9	5	ND	1	18	1	2	2	161	. 26	.029	6	44	.27	20	. 24		3.12	. 02	.03	1	1
V2483 L7+00N 1+00E	6	23	8	31	.5	6	5		13.08	8	6	ND	5	10	1	2	2	293	. 15	. 023	5	62	.18	12	. 43		4.40	.01	. 07	1	1
V2483 L7+00N 1+25K	1	1	2	12	.1	1	1	16	.68	2	5	ND	1	8	1	2	2	43	.15	.008	2	4	. 02	7	.07	4	.43	.03	.02	1	1
V2483 17+00N 1+50E	3	5	9	20	.1	2	2		7.53	15	5	ND	2	16	1	2	2	216	. 24	.024	4	33	.11	10	.32	2		. 03	. 02	1	1
V2483 L7+00N 1+75E	1	4	4	19	.2	2	2	85	2.35	2	5	MD	1	16	1	2	2	90	.27	.022	3	10	.12	10	.19	2	1.10	.02	.07	1	1
V2483 L7+00# 2+00#	2	2	6	29	.1	2	2		1.31	2	5	ND	1	27	1	2	2	66	.37	.011	3	4	.13	9	.25	3	.87	.01	. 05	1	1
V2483 L7+00H 2+25H	2	2	9	14	.3	1	1		2.26	2	5	ND	2	16	1	2	2	90	. 25	. 009	4	6	. 08	å	.17	-	1.22	. 02	.07	1	1
V2483 L7+00N 2+50E	1	3	5	15	.1	10	2		2.19	2	•	ND	2	11	1	2	2	130	. 28	.011	3	39	. 24	12	. 20		1.00	. 02	.06	1	46
V2483 L7+00N 2+75E	2	2	9	14	.1	1	1	30	.50	2	5	ND	1	9	1	2	2	62	.12	. 025	3	6	.04	10	.11	3	.84	.02	.04	1	1
V2483 L7+00M 3+00E	6	13	6	25	.3	3	3	85	7.50	4	5	ND	3	14	1	2	2	182	. 19	.019	3	36	.13	10	. 29	4	2.74	.04	. 05	1	1
V2483 L7+00M 3+25E	1	2	2	13	.2	1	1	15	.31	2	5	ND	1	5	1	2	2	20	.09	.010	2	3	.02	8	. 05	6	.26	.01	.06	1	1
V2483 L7+00N 3+50R	1	2	3	24	.1	5	2		2.28	2	5	ND	2	10	1	2	2	94	. 23	.015	3	22	. 26	9	. 19	5	1.54	.03	.06	1	1
V2483 L7+00N 3+75K	1	2	7	16	. 2	4	2		1.90	2	8	KD	2	11	1	2	2	113	.22	.019	3	12	. 15	9	.16	3	. 88	.01	.08	1	1
V2483 17+00H 4+00K	1	1	12	11	.1	2	1	30	. 69	2	5	ND	1	1	1	2	2	62	.10	.011	2	10	. 07	ı	. 20	3	1.00	. 03	. 04	1	1
V2483 L7+00# 4+25#	1	1	2	7	.1	1	1	12	. 33	2	5	ND	1	5	1	2	2	18	.07	.010	2	5	. 02	4	.03	6	.16	.02	.01	1	4
V2483 17+00N 4+50E	1	2	4	14	.2	1	1	27	. 49	3	6	ND	2	6	1	2	3	25	. 09	.017	2	9	. 06	6	. 05	4	.24	. 01	. 06	1	1
V2483 L7+00H 4+75H	1	2	2	28	.1	i	1	16	.21	2	5	ND	1	27	1	2	2	10	.08	.019	2	4	.12	28	.02	9	. 20	.02	. 04	i	1
V2483 17+00N 5+00K	2	3	7	40	.1	2	1		4.84	4	5	ND	1	35	1	2	2	136	.34	. 038	3	21	. 16	9	.20		1.43	.01	.04	1	1
V2483 L7+00N 5+25K	1	2	3	62	.1	1	1	37	.07	2	5	ND	1	93	1	2	2	2	. 36	.047	2	1	.30	24	.01	8	.07	.04	.02	1	1
V2483 L4+50N 1+00W	1	6	2	46	.1	1	1	5	.04	2	5	ND	1	75	1	2	2	1	.70	.043	2	1	.23	13	.01	6	. 07	. 05	. 05	1	1
V2483 L4+50N 0+75W	1	5	6	38	.2	3	2	29	. 38	3	7	MD	1	83	1	2	2	15	.37	.043	2	9	.16	27	.03	7	. 29	.04	.08	1	1
V2483 14+50N 0+50W	1	31	5	65	.3	11	7		3.91	10	5	ND	1	87	1	2	3	88	. 65	.078	2	23	. 63	45	.18		2.65	. 06	. 05	2	1
V2483 L4+50W 0+25W	3	50	10	60	. 6	9	23		2.67	234	5	ND	1	22	1	2	2	72	.51	.067	4	22	.17	22	. 15		1.99	.01	. 04	1	335
V2483 L4+50N 0+25E	1	100	2	121	.3	38	14	292		22	5	ND	1	16	1	2	2	55	. 22	.041	5	46	.75	25	.15		4.99	. 01	. 05	1	16
V2483 L4+50N 0+50E	3	13	9	24	. 2	4	4	91	10.05	10	6	ND	1	10	1	3	2	289	. 19	.015	3	53	.13	1	.47	2	1.50	.01	. 03	1	1
V2483 L4+50N 0+75E	2	15	5	32	. 2	8	4		8.20	18	5	ND	2	10	1	2	2	227	. 21	.018	2	87	.21	8	.30		3.78	. 05	.01	1	1
V2483 L4+50N 1+00E	2	41	2	39	.3	8	4		7.12	15	5	ND	1	19	1	3	2	153	.31	. 026	3	49	. 28	14	.31		3.87	.01	. 03	1	1
V2483 L4+50N 1+25B	2	18	5	34	.1	7	4		5.98	13	5	ND	1	16	1	2	2	180	.34	.019	2	41	.30	15	.31		4.46	.02	. 02	1	3
V2483 L4+50N 1+50B	1	3	6	16	. 2	5	3		1.10	2	5	ND	1	10	1	3	3	105	. 28	.012	2	30	.12	3	. 25	11	.37	. 05	.04	1	2
V2483 L4+50N 1+75E	3	4	12	23	.1	5	2	85	2.47	2	5	ND	1	13	1	2	2	207	.22	.017	2	19	.13	9	.42	4	. 76	.01	.02	1	11
V2483 L4+50N 2+00E	11	50	10	39	.1	1	4	115		10	5	ND	1	15	1	2	2	228	. 26	.037	2	91	.25	7	. 62		3.99	.01	.01	1	1
STD C/AU-S	20	62	39	132	7.1	72	30	1079	4.15	43	21	7	39	53	20	15	19	60	. 51	. 091	42	61	. 87	181	. 07	34	1.90	. 07	. 14	14	53

SAMPLE:	No PPN	Cu PPN	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPK	PPK	Fe 3	PPK	U PPM	PPM	Th PPN	ST PPM	Cq PPK	Sb PPM	Bi PPM	PPN	Ca	P	La PPN	Cr PPM	Mg L	Ba PPM	Ti	B PPM	Al Ł	Na Ł	K Ł	PPH	Au* PPB
V2483 L4+50N 2+25E	1	7	6	19	.4	5	3	46	1.16	2	5	ND	2	8	1	2	2	58	.16	. 020	3	17	.11	7	.11	5	. 58	.01	. 07	2	3
V2483 L4+50N 2+50R	1	3	3	36	.3	1	1	19	. 54	2	6	ND	1	11	1	2	2	27	. 99	.022	2	3	.05	8	. 05	8	. 26	.03	. 09	2	1
V2483 L4+50W 2+75B	33 L4+50W 2+75B 1 1 7 15 .1 1 1 54 .39 2 6 MD 1 9 1 2 2 60 .15 .005 3 4 .03 6 .14 3 .69 .03 .04 1 1 34 4+50W 3+00B 1 2 2 19 .2 1 1 39 1.16 2 5 MD 2 8 1 2 2 46 .16 .012 2 4 .05 3 .06 6 .18 .03 .08 1 1																														
V2483 L4+50N 3+00K	1	2	2	19	. 2	1	1	39	1.16	2	5	ND	2	8	1	2	2	46	.16	.012	2	4	.05	3	.06	6	.18	.03	.08	1	1
V2483 L4+50N 3+25E	1	3	6	15	. 6	1	2	33	.99	2	5	ND	3	12	1	2	2	69	.15	.011	3	3	.06	8	. 13	4	. 69	.01	. 13	2	1
V2483 L4+50N 3+50E	1	8	7	23	.1	1	2	75	1.02	2	7	MD	1	22	1	2	2	41	.20	.019	2	2	.16	12	. 09	6	.58	.01	.07	1	1
V2483 L4+50N 3+75E	2	9	9	22	.1	1	1	39	.76	2	5	ND	1	10	1	2	2	50	.13	.023	5	11	. 05	12	. 11	-	1.58	.03	. 06	1	1
V2483 L4+50K 4+00K	2483 L3+50N 0+25K 1 1 8 30 .2 4 1 211 .74 3 8 ND 1 26 1 4 2 63 .46 .016 3 13 .08 9 .15 12 .51 .02 .05 1 12																														
V2483 L3+50N 0+25E	1	1	8	30	. 2	4	1	211	.74	3	B	MD	1	26	1	4	2	63	. 46	.016	3	13	.08	9	. 15			.02	. 05	1	12
V2483 L3+50N O+50E	1	4	6	19	.1	16	3	132	3.53	25	5	ND	1	17	1	2	2	144	.30	.013	2	76	.34	13	.30	3	1.08	. 01	.04	1	1
V2483 L3+50N 0+75K	7/2483 L3+50N 0+75K 2 13 11 29 .2 4 3 122 5.61 8 5 ND 2 13 1 2 2 206 .28 .015 3 37 .21 12 .38 2 2.79 .01 .06 1 2 12483 L3+50N 1+00K 1 5 8 25 .2 7 3 136 2.93 4 8 ND 1 36 1 2 2 125 .34 .027 2 38 .26 13 .26 5 .76 .01 .08 1 1 1/2483 L3+50N 1+25K 1 12 6 56 .4 14 7 410 5.80 2 7 ND 1 14 1 2 2 199 .30 .037 2 75 .36 9 .22 3 1.26 .01 .04 1 1																														
V2483 L3+50K 1+00K	1	5	8	25	.2		3	136	2.93	4	8	ND	1		1	2	2			.027	2			13		5	.76			-	-
V2483 L3+50N 1+25E	1	12	6	56	.4	14	7	410	5.80	2	7	ND	1	14	1	2	2			.037	2	75	.36	9	. 22			.01	. 04	1	1
V2483 L3+50N 1+75K	2	22	10	37	.4	5	3	144	7.67	6	5	KD	3	14	1	2	2	239	. 25	.026	4	51	.14	7	. 46	2	2.53	.01	. 04	2	6
V2483 L3+50N 2+00E	1	13	8	44	.2	7	4	217	2.91	2	5	ND	2	15	1	2	2	97	. 33	.032	2	25	.23	11	.15	5	1.03	.01	.08	1	1
V2483 L3+50M 2+25E	2	24	9	43	. 2	9.	3	155	7.19	7	7	ND	2	15	1	2	2	239	.27	.019	3	67	.12	6	.55	2	2.07	. 02	.03	1	3
V2483 L3+50N 2+50R	3	7	8	54	.1	2	2	79	6.23	2	5	ND	2	19	1	2	2	180	. 29	.029	3	29	.12	15	. 28	3	2.07	.01	.04	1	1
V2483 L3+50N 2+75R	2	17	10	60	. 2	11	4	247	3.72	6	7	MD	2	16	1	2	2	116	.32	.028	3	34	.21	28	. 20	3	1.74	.01	. 05	1	1
V2483 L3+50N 3+00R	1	6	10	11	. 5	6	2	69	1.58	2	5	MD	3	11	1	3	2	158	.24	.010	3	25	. 05	3	. 33	3	. 37	.03	. 08	1	72
V2483 L3+50W 3+25E	i	1	6	19	.1	9	2	87	1.11	2	5	ND	1	5	1	2	2	43	. 30	.016	2	66	.17	4	. 05	3	.30	.02	.05	1	1
V2483 L3+50N 3+50K	1	4	4	27	.1	5	2	73	1.60	2	5	MD	1	12	1	2	2	17	. 22	.009	2	93	.06	5	. 86	4	.31	.04	. 04	1	36
V2483 L3+50N 3+75E	1	3	5	9	. 2	7	2	15	.73	2	6	MD	3	9	1	3	2	33	. 23	.009	2	63	.13	3	. 05	4	.23	. 01	.07	1	1
V2483 L3+50N 4+00E	2	B	11	36	.1	5	1	73	2.36	2	7	ND	1	13	1	2	2	153	.22	.020	4	25	.06	9	. 31	3	.90	. 01	. 64	1	2
V2483 L2+50W A1+25W	1	6	10	45	.1	3	1	48	.96	2	5	ND	1	44	1	2	2	58	.78	.038	2	8	.14	29	.10	6	.31	.01	. 06	1	1
V2483 L2+50N A1+00N	12	33	4	31	.1	8	4	131	6.34	39	5	ND	3	18	1	2	2	168	.23	.021	5	37	.34	13	.30	7	4.01	.01	. 87	1	1
V2483 L2+50N A0+75N	5	1	7	31	.1	4	3	112	4.60	28	5	ND	1	24	1	2	2	152		.018	3	13	.22	16	.28		1.57	.01	.04	1	3
V2483 L2+50W A0+50W	2	19	6	32	.1	5	3		5.60	2	6	MD	2	22	1	2	2	160	. 26	.027	3	32	. 20	15	.27	3	2.61	. 02	.04	1	93
V2483 L2+50N A0+25W	3	38	3	43	.1	7	5	148	5.32	3	5	MĐ	2	34	1	2	2	161	. 35	. 032	3	30	.28	18	. 24		3.44	.01	.05	1	18
V2483 L2+50N A0+25E	2	13	10	31	.1	4	3	237	4.45	5	5	KD	1	29	1	2	2	139	.44	.032	4	24	. 19	12	. 32	2	2.47	. 01	. 03	2	5
V2483 L2+50N A0+50E	2	8	12	22	.1	3	2	127	3.42	8	5	KD	1	21	1	3	2	128	.34	.019	4	17	.08	9	.21	2	1.28	.01	.02	1	32
V2483 L2+50N A0+75E	1	10	10	27	.1	3	2		2.71	3	5	ND	1	27	1	2	11	112	.40	. 027	3	9	.12	11	.22		1.16	.01	.04	1	670
V2483 L2+50H A1+00H	1	3	9	17	.1	3	1	74	2.36	2	5	ND	1	18	1	2	2	146	.27	.014	3	15	. 06	1	. 31	3	. 87	.03	.01	1	4
V2483 L2+50N A1+25E	2	12	10	34	. 2	4	3	298	3.28	3	6	ND	1	21	1	2	2	141	. 45	.034	3	18	.17	14	. 26	3	1.35	.01	. 05	1	21
V2483 L2+50N A1+50E	3	9	11	27	.2	5	3	184	3.66	2	5	MD	1	25	1	2	2	227	.61	.026	3	16	.14	9	. 37	2	1.33	.01	.05	1	1
V2483 L2+50N A1+75E	3	50	1	45	. 2	7	6		6.38	24	5	MD	2	18	1	2	2	192	.46	.036	3	40	.23	12	.33	9	3.70	.02	.04	1	1
V2483 L2+50N A2+00B	1	42	4	60	.5	13	1		7.37	38	5	ND	6	17	1	2	2	240		.038		62	. 35	6	.37		5.90	.01	.03	1	9
STD C/AU-S	20	62	39	132	7.0	72	31	1082	4.11	41	20	8	40	53	20	17	21	60	.51	.091	41	61	.96	181	. 97	34	1.92	.06	.15	12	52

SAMPLE#	No PPN	Cu PPN	PPK	Za PPM	55K yg	Ni PPH	Co PPM	Ma PPM	Fe 1	As PPM	PPK U	Au PPH	Th PPM	Sr PPN	Cđ P <b>PN</b>	Sb PPN	Bi PPM	PPM	Ca	P	La PPM	CT PPM	Mg L	Ba PPM	Ti	B PPM	Al t	Na 1	I.	PPM	Au* PPB
V2483 L2+50N A2+25R V2483 L2+50N A2+50N V2483 L2+50N A2+75R V2483 L2+50N A3+00R V2483 L2+50N A3+25R	6 1 2 2 3	20 16 7 22 7	15 3 12 9 6	47 58 27 46 30	.9 .9 .3 .5	8 3 3 6 7	6 3 3 4 4	280 109 126	8.01 2.61 7.04 6.75 3.18	25 15 15 35 17	5 5 5 5 5	ND ND ND ND	3 3 6 3	13 21 14 14 50	1 1 1 1	2 2 2 2 3	2 2 2 2 2	255 113 223 156 169	.59 1.07 .33 .33 .86	.038 .024 .016 .029	8 2 4 6 3	31 10 15 66 15	.12 .10 .17 .24 .45	11 10 9 8 3	.33 .18 .46 .32 .47	7 3 5	2.47 .45 1.37 4.46 1.13	.01 .02 .01 .01	.07 .09 .05 .06	3 1 1 4 1	2 1 1 24 1
V2483 L2+50M A3+50M V2483 L2+50M A3+75M V2483 L2+50M A4+00M V2483 L2+50M A4+25M V2483 L2+50M A4+50M	2 3 1 1	70 63 3 3 5	5 6 12 8 7	195 26 33 14 60	.8 .3 .1 .1	26 6 3 2 7	76 8 2 1 3		8.09 6.88 1.29 .95	18 11 2 2 2	5 5 5 5	ND ND ND ND	3 2 1 2	37 14 29 9 23	3 1 1 1	2 3 3 2 2	2 2 2 2 2	112 380 119 72 52	1.65 .35 .50 .23 .41	.072 .016 .019 .011	12 2 6 4 2	31 11 11 14 20	.06 .15 .08 .06	166 6 17 7 12	.07 .51 .25 .21	3 2 8 2 12	9.25 .89 .46 .84 .19	.01 .02 .01 .01	.04 .04 .07 .04	3 2 2 1 1	1 1 1 1
V2483 L2+50M A4+75E V2483 L2+50M A5+00E V2483 L2+50M A5+25E V2483 L2+50M A5+50E V2483 L2+00M 0+85W	1 5 1 1 10	9 90 3 3 3	10 3 4 57	26 79 25 11 39	.1 .2 .1 .1	4 11 1 2 6	6 22 6 2 4	182 23	3.47 8.99 7.00 .70 4.54	2 2 2 2 164	6 5 6 5	ND ND ND	1 1 2 1 4	16 14 21 13 10	1 1 1 1	2 2 2 2 2	2 2 2 2 2	185 303 374 49 96	.46 .27 .29 .15	.015 .047 .010 .022 .051	2 6 2 2 6	15 103 10 11 55	.18 .25 .09 .08	5 13 6 1 12	.35 .38 .32 .09	2 2 2 2 2	.46 5.02 .41 .18 8.74	.01 .01 .01 .02 .01	.05 .04 .04 .06 .03	1 1 1 1 1	1 1 1 1 113
V2483 L2+00M 0+75M V2483 L2+00M 0+50M V2483 L2+00M 0+25M V2483 L2+00M 0+25B V2483 L2+00M 0+50B	8 2 3 1	19 4 21 10 11	24 11 10 6	56 26 59 25 19	.2 .1 .1 .1	5 3 9 4	3 2 5 1 2	98 134	1.42	232 2 3 2 2	5 5 5 5	ND ND ND	3 2 2 1 3	20 25 25 28 18	1 1 1 1	2 3 2 2 2	2 2 2 2 2 2	189 184 132 47 137	.20 .33 .28 .24	.034 .016 .044 .021	4 4 5 3 5	29 19 22 10 24	.17 .17 .23 .09	24 14 26 22 7	.28 .38 .20 .09 .15	3 5 7	3.06 1.35 2.18 .79 1.44	.01 .01 .01 .01	.05 .05 .05 .04 .06	1 1 1 2 1	72 94 2 1
V2483 L2+00M 0+75E V2483 L2+00M 1+00E V2483 L2+00M 1+25E V2483 L2+00M 1+50E V2483 L2+00M 1+75E	1 1 2 1	9 8 11 8 7	6 6 12 9	21 56 23 55 25	.1 .1 .1 .1	2 4 3 2 3	2 2 2 2 2	91 97 84	4.64 .94 4.80 .58 1.48	2 2 2 2 2	5 5 5 7	ND ND ND ND	2 1 2 1 2	18 41 14 31 27	1 1 1 1	2 2 2 2 2	2 2 2 2 2	140 26 172 22 87	.27 .38 .24 .54	.022 .040 .015 .060	5 2 5 2 3	23 9 23 3 8	.13 .21 .15 .17 .12	7 29 10 14 11	.16 .06 .24 .04	4	1.49 .45 2.01 .30 .86	.02 .01 .01 .02 .01	.06 .06 .05 .15	1 1 1 1	2 1 75 1
V2483 L2+00M 2+00M V2483 L2+00M 2+25M V2483 L2+00M 2+50M V2483 L2+00M 2+75M V2483 L2+00M 3+00M	2 1 1 2 1	2 3 5 9	10 9 9 8 11	22 22 16 27 41	.1 .1 .1 .1	4 2 2 4 2	1 1 1 2 2		3.06 1.07 .84 6.85	2 2 2 2 2	5 5 5 5 5	ND ND ND	1 1 1 3 1	17 15 18 13 26	1 1 1 1	2 2 2 2 2	2 3 3 2 2	164 115 98 211 49	.27 .26 .30 .22	.020 .015 .017 .024 .042	4 3 3 4 2	15 6 5 26 3	.11 .08 .09 .13	12 5 7 8 13	.28 .20 .17 .27	3 2	1.13 .64 .57 2.16 .63	.02 .01 .01 .01	.06 .02 .05 .05	1 1 1 1	3 12 3 19
V2483 L2+00N 3+25K V2483 L2+00N 3+50K V2483 L2+00N 3+75K V2483 L2+00N 4+00K V2483 L2+00N 4+25K	1 1 1 1	8 3 8 10 2	7 8 7 5	43 17 41 16 21	.1 .1 .1 .1	1 1 3 2 1	2 2 3 3	100 264 332 162 105	1.10	2 2 2 2 2	5 5 5 5	ND ND ND ND	1 1 1 1	34 11 9 26 19	1 1 1 1	2 2 2 2 2	2 2 2 2 2	64 132 81 106 138	.34 .32 .25 .38 .20	.023 .011 .028 .011	2 3 2 2 4	2 5 4 4 10	.12 .17 .21 .18	12 8 6 6 6	.12 .27 .12 .21 .26	3 3 7 3 2	.58 .71 .48 .86	.01 .01 .01 .01	.06 .04 .04 .04	3 1 2 1	1 1 2 4
V2483 L2+00N 4+50K STD C/AU-S	1 20	3 63	7 39	15 133	.1 7.0	4 74	2 31	184 1087	.92 4.31	2 43	5 20	ND 7	1 39	12 54	1 20	2 17	3 18	89 60	.27 .52	.012 .092	2 40	63	.08 .95	5 183	.19 .07	3 33	.56 1.80	.02 .07	.03 .13	1 13	3 49

Sample#				In PPK	•		Co PPM	Mo PPM	le 1	As PPN	IJ PPM				Cđ PPM			V RPN			La PPM		Ng L	Ba PPM	Ti Ł	B PPM	Al Ł	Na t	I.	PPK	Au² PPB
V2483 L2+80N 4+75E	1	5	6	15	. 3	2	2	83	.88	2	5	MD	1	10	1	2	2	77	. 18	.013	2	4	. 08	5	. 13	4	. 59	. 22	.04	1	2
V2483 L2+00M 5+00B	i	i	-	54		16	5		. 82													16	. 35	_		-				_	ī
V2483 L2+00W 5+25E	4	48	6	36	.2	6	5	110	9.69	2	5	ND	4	10	1	2	2	197	. 14	. 821	3	50	.26	14	. 26	5	7.19	.01	.04	1	1
V2483 L2+00# 5+50#	5	58	12	157	.3	12	42	1834 1	4.20	27	5	ND	4	6	1	2	5	216	.12	.047	6	58	. 20	14	. 25	6	9.24	.01	.03	1	1
STD C/AU-S	19	61	41	132	7.3	71	30	1049	4.20	39	21	B	40	52	19	18	22	60	. 52	. 090	40	61	.92	178	. 07	33	1.91	.08	.16	11	50

RECEIVED MAY

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STD C/AU-S

37 132 70

31 1048 4.08

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14

1 39

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-BH03-B20 AT 95 DEG. C FOR OME HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

AU\* ANALYSIS BY AA FROM 10 GRAM SAMPLE. - SAMPLE TYPE: SOIL

DATE REPORT MAILED: May 25/88 ASSAYER . . . DATE RECEIVED: MAY 19 1988

MPH CONSULTING PROJECT-V2483 File # 88-1509 Page 1 Cd Sb W Aus Co Fe Àβ λu Th Sr Вi ٧ Ca P La CT Мg Ba Ti В λl SAMPLE ΧO Cu Pb ZD λq Ni Mn PPK PPM PPM PPN PPM PPM PPM PPM PPM PPM PPH PPM PPM PPB PPM PPK PPK PPM PPN PPM Ł 19 1.75 20 .40 .018 5 42 1.05 27 . 20 5 2.36 .01 .07 L6+00N 0+25W 12 21 547 25 .23 9 19 6 2 69 1.33 12 5 ND 15 2 2 90 .22 .019 3 28 9 .23 2 1.84 .01 .01 16+00N 0+25K .1 16+00N 0+50E .3 2 46 2.15 4 5 ND 12 1 2 2 154 .21 .012 2 45 . 15 10 .26 2 .64 . 03 .05 17 3 ND 3 2 68 .18 .009 3 .12 10 .62 .01 .06 L6+00M 0+75R 3 40 1.10 5 2 19 .13 2 ND 2 21 2 99 . 18 .015 20 . 25 13 . 89 21 L6+00N 1+00E .3 5 2 65 1.56 4 5 2 3 .17 3 .02 . 10 .06 .005 L6+00N 1+25E 18 1.69 67 2 13 . 02 3 .03 . 14 . 02 .04 . 027 16+00N 1+50E 54 . 91 46 . 24 .14 10 .06 2 .45 .01 .04 .1 L6+00N 1+75E 7 . 2 i 1 41 .37 5 7 ND 2 í 2 2 65 . 12 .007 3 j .03 6 . 10 2 . 58 .02 .04 L6+00N 2+00E 12 20 .2 3 2 72 6.04 7 5 ND 3 11 2 2 180 .15 .020 3 28 .13 9 . 25 2 3.17 .01 .04 1 16+00N 2+25E 58 2 202 .13 .015 22 .08 .02 6.02 3 7 .24 2 1.72 .01 L6+00N 2+50E 33 . 85 46 .14 . 025 . 04 11 . 05 2 . 49 .02 .05 L6+00M 2+75E 16 .12 3 5 2 2 28 .07 .011 2 2 .02 7 .05 3 . 20 .03 .02 L6+00M 3+00E 30 .34 ND 2 21 .13 .016 2 2 .05 6 2 . 20 .04 .01 .03 16+00N 3+25E 12 13 .1 1 1 58 3.47 5 5 ND 2 10 2 2 190 .16 .008 3 10 .07 1 .30 2 1.04 .04 .03 L6+00N 3+50R 10 .2 34 1.63 2 5 ND 2 11 2 2 112 .14 .009 9 .06 10 .21 .02 . 05 2 . 80 L6+00N 3+75E .11 . 27 .08 13 .01 .10 .02 .09 L6+00N 4+00E 49 .22 6 5 ND 15 2 17 . 22 .018 2 . 05 . 04 .23 2 8 4 . 02 .02 L5+00M 1+00W 35 .1 i 2 .05 3 5 ID 1 63 2 2 .41 .036 2 .22 7 14 .06 1 2 .01 .03 .06 1 L5+00M 0+75W 34 7 55 .1 23 11 352 3.38 12 5 ND 2 32 2 2 83 .54 .031 40 1.27 32 .24 3 2.65 .01 .09 2 L5+00N 0+50W 12 158 . 9 30 68 1415 6.76 238 26 .56 .080 48 1.27 37 .15 4 3.53 .01 35 L5+00N 0+25W 35 .1 15 6 199 2.51 19 18 94 .23 .019 5 .60 16 . 19 2 2.19 .01 . 07 49 L5+00N 0+25E .1 14 13 17 2 .33 .030 .57 266 3.51 123 37 21 .18 2 2.30 .03 L5+00N 0+50R 5 55 11 41 .1 17 9 305 5.27 15 5 ¥D 3 15 2 2 135 .22 .013 53 .68 22 .30 2 3.57 .01 .04 2 1 L5+00N 0+75E 39 35 . 2 13 6 149 8.44 15 5 MD 11 2 5 192 .17 .020 65 .41 16 2 4.47 8 4 .42 .02 .05 1 L5+00N 1+00E 15 . 25 .1 3 117 3.47 5 5 ND 163 .012 3 26 .34 11 .22 2 1.46 .01 .03 L5+00H 1+25E 29 10 178 8.57 13 10 214 . 16 .032 81 . 18 9 .41 2 5.32 .01 .03 L5+00N 1+50K 7 6 17 . 2 5 82 5.22 10 254 .22 51 7 .87 3 6 5 ND 3 2 2 .013 2 .15 .44 2 .01 .06 1 18 L5+00N 1+75E 68 .63 5 5 13 1 2 2 . 24 .013 2 12 . 32 11 .1 ND. 64 .02 4 .14 2 .01 .03 2 L5+00N 2+00E .1 3 159 .97 5 14 51 .29 .011 3 .31 7 .13 2 . 68 . 02 .01 3 1 L5+00W 2+25E 11 52 1.43 14 2 85 .17 .025 3 5 .06 13 .13 2 . 69 .01 .05 L5+00N 2+50R .022 76 6.36 171 .12 3 25 .14 . 19 2 5.76 .02 .01 L5+00N 2+75E 19 .33 40 .11 .009 2 2 .03 5 . 05 5 .43 . 02 .01 L5+00N 3+00E 58 1.58 2 5 ND 12 2 112 . 19 .005 .1 2 3 10 .04 6 .12 2 .54 .02 .02 1 L5+00M 3+25K 34 11 22 2 71 6.87 6 5 ND. 9 2 187 .1 3 1 2 .13 .019 3 49 .16 9 . 28 2 5.85 .01 .03 1 L5+00% 3+50% 11 271 .13 66 .014 28 .14 9 .36 2 3.40 .02 .02 L5+00N 3+75E 12 11 24 91 5.53 . 3 11 146 .15 .020 44 . 24 9 . 24 2 4.98 . 05 4 . 04 5 11 L5+00N 4+00E 4 19 . 1 2 2 71 6.82 В 5 ND 2 9 2 2 237 . 13 .013 4 22 .10 11 .32 1 2 2.19 .01 .01 1 1

52

19 17 20 60 .48 .088 41 60 .96 179

.07

34 1.80

.15

. 08

### MPH CONSULTING PROJECT-V2483 FILE # 88-1509

SAMPLE#	Ho	Cu	Pb	Zn	λg	Ni	Co	Ma	?e	λs	Ü	λü	Th	Sr	Cd	Sb	B1	V	Ca	P	La	Cr	Ng	Ba	Ti	В	Al	Na	I	<b>₽</b>	Àu*
	PPM	PPH	PPN	PPN	PPN	PPM	PPM	PPM	1	PPM	PPM	PPM	PPK	PPM	PPK	PPM	PPH	PPK	1	ŧ	PPK	PPM	ŧ	PPK	ŧ	PPK	1	ŧ	ł	PPK	PPB
L1+00N 1+00W	1	64	4	255	.5	9	4	4758	.92	11	5	ND	1	808	7	2	2	23	21.45	2.086	2	9	.24	53	.02	6	.72	.10	. 05	1	1
L1+00N 0+75W	i	63	5	92	.4	13	11	1006	1.45	5	5	ND	1	187	3	3	2	19	2.78	. 226	4	14	. 26	136	. 02	6	1.78	.01	.01	1	2
L1+00N 0+50W	10	30	7	39	1.1	10	6	188	8.12	27	7	NĐ	2	28	1	2	2	264	. 45	.027	4	57	.33	13	.72	3	2.13	.01	.03	1	1
L1+00N 0+25W	4	16	10	21	.4	4	2	107	2.94	4	5	ND	1	23	1	2	2	138	. 38	.027	3	12	.17	19	. 29	4	.91	.01	.03	1	2
L1+00N 0+25E	3	8	5	17	.1	3	2	85	2.26	6	5	ND	1	22	1	2	2	127	.31	.011	3	13	.13	13	.22	3	1.04	.01	. 02	1	1
L1+00N 0+50E	2	8	5	16	. 2	2	2	71	2.26	2	5	ND	2	21	1	2	2	128	.29	.011	4	12	.11	13	.22	4	. 95	.01	.03	1	1
L1+00N 0+75E	1	B	6	20	.1	2	1	64	.94	•	5	ND	1	24	1	2	2	48	. 26	.014	2	10	.11	15	.10	4	.50	.02	. 03	1	1
L1+00N 1+00E	1	8	7	33	. 2	3	2		1.32	5	5	ND	1	21	1	2	2	65	. 38	.029	2	B	.18	19	.12	4	. 64	.02	.06	1	1
L1+00N 1+25E	2	6	6	22	.4	3	2	74	2.82	4	5	ND	1	13	1	2	2	121	.22	.017	3	11	.16	9	.18		1.29	.01	. 03	1	1
L1+00N 1+50E	3	12	5	28	. 4	5	2	71	5.96	10	5	ND	2	9	1	2	2	142	.15	.034	3	41	.16	9	.22	4	3.76	.02	. 04	2	ı
L1+00N 1+75E	1	4	5	15	.1	2	1	53	.93	5	5	MD	1	14	1	2	2	45	. 19	.026	2	10	.06	12	. 05	12	.32	.02	.02	1	1
L1+00N 2+00E	1	1	2	11	.1	2	1	30	. 48	5	5	MD	1	11	1	2	2	56	. 15	.006	2	5	.04	3	.11	3	. 49	.01	. 03	1	1
L1+90N 2+25E	1	4	3	12	.3	2	2	53		2	5	MĐ	1	20	1	3	2	83	. 22	.013	2	13	.08	10	. 13	3	.67	.01	.01	1	1
L1+00N 2+50B	1	10	3	20	.3	4	3	103	3.33	4	5	MD	1	23	1	2	2	149	. 25	.022	2	19	.13	9	.13	4	.91	.03	.03	1	1
11+00N 2+75E	1	5	4	18	.2	5	3	115	2.82	2	5	ND	1	17	1	2	2	154	.21	.017	2	33	. 09	9	. 07	6	.43	.02	. 03	1	1
L1+00N 3+00R	2	37	16	70	. 2	16	12	474	3.19	16	5	MĐ	1	39	1	3	2	88	.50	.066	3	17	. 33	38	.15	7	1.34	.01	.03	1	1
L1+00N 3+25E	1	9	4	32	.1	4	4	114	1.45	4	5	ND	1	27	1	. 2	2	59	.27	.030	2	23	.14	12	. 04	4	. 50	.01	.04	1	1
L1+00N 3+50E	1	6	11	17	.3	1	1	59	. 90	2	5	ND	1	10	1	2	2	73	. 13	.024	3	7	.04	13	.09	2	1.00	.01	. 04	1	1
L1+00N 3+75E	1	2	5	11	.1	2	2		2.85	2	5	MD	1	9	1	2	2	128	.17	.009	3	15	.06	4	.17	2	. 75	.01	.01	1	1
L1+00N 4+00E	1	5	12	22	.4	4	3	101	3.07	2	5	ND	i	19	1	2	2	201	.22	.019	2	11	. 21	1	.21	2	1.19	.01	.06	i	ì
L1+00N 4+25E	1	3	3	16	. 2	1	2		2.69	2	5	ND	1	17	1	2	2	212	.30	.012	2	6	.08	5	.22	9	.54	.01	.03	1	1
L1+00M 4+50E	1	3	6	18	.1	2	3	125	. 79	3	5	ND	1	13	1	2	2	45	. 24	.016	2	5	.14	5	. 09	6	.46	.01	.03	1	1
L1+00N 4+75E	1	3	7	19	.1	1	1	93	.51	6	5	ND	1	11	1	2	2	41	.21	.013	3	3	.06	8	. 09	7	. 37	. 02	. 03	1	1
L1+00N 5+00E	3	11	9	24	.3	3	2	89	8.20	3	5	ND	- 1	12	1	2	2	226	.19	.023	3	43	.11	8	. 25	2	5.51	.01	.03	1	1
L1+00N 5+25B	1	2	11	12	.1	1	1	66	.48	3	5	ND	1	7	1	2	2	70	.08	. 020	3	5	.03	1	. 15	2	.82	. 02	.03	1	1
L1+00N 5+50E	1	9	9	35	.1	2	3	142	. 85	2	5	MD	1	18	1	2	2	46	. 36	.030	2	2	.18	10	. 07	8	.42	.01	. 05	i	1
STD C/AU-S	19	62	39	130	7.3	72	30	1062	4.15	42	16	8	40	53	19	17	21	59	.51	.090	41	61	.91	180	.07	34	1.93	.06	.15	13	50

### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 RCL-HM03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MM FE CA P LA CR MG BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

				SAMPLE					LYSIS						OR MA	/ NAU	1°	NU DE	ECITO	, PINII	D1 10	, 13 J	IIA.							
DATE RECEIVED:	: KAY	13 19	88 I	ATE	REF	ORT	MA:	ILED	٠ /	lay	19	/88	A	SSAY	ÆR.	·	Lin	J	. D. 1	OYE	OR	C.L	EONG	, C	ERTI	FIE	В.	c. 1	ASSA	YERS
						M	рн с	ONS	JLTI	NG P	ROJ	ECT-	V24	33	Fi]	le #	88	-142	23	Pa	ge	1								
Sample# No PPH			Zn PPM	Ag PPN	Ni PPM	Co PPM	MG PPM	Ie 1	As PPM	U PPM	Au PPM	Th PPK	ST PPM	Cd PPM	Sb PPH	Bi PPM	V PPM	Ca Ł	P	La PPK	CT PPM	Ng 1	Ba PPM	Ti L	B PPK	Al Ł	Na Ł	K	PPK	Au* PPB
3+50N 0+25W 2	1 4 9 12 6 11 2 6 2 6	2 11 10 13 9	33 35 35 20 19	.1 .4 .3 .1	1 4 4 2 4	1 3 5 3 2	120 412	.06 3.43 2.82 1.36 2.06	3 44 88 105 7	5 5 5 5 5	ND ND ND ND	1 1 1 1	33 16 20 23 13	1 1 1 1	2 2 2 2 2	4 3 2 2 2	2 106 89 59 151	.89		2 4 3 2 2	2 15 12 6 21	.25 .32 .24 .07 .21	18 22 29 20 10	.01 .26 .21 .17	6 108	.06 1.44 1.25 .64 1.23	.04 .02 .01 .01	.03 .06 .06 .02	2 2 2 1 2	1 1 1 24 1
BL 9+75M 1 BL 9+50M 3 BL 9+25M 2 BL 9+00M 2 BL 9+75M 3	3 13 2 5 2 3	11 11 4 10	24 38 21 18 23	.1 .1 .1 .1	3 5 5 2 3	3 3 1 2	104 110 70	2.48 2.83 2.11 .93 2.53	6 8 6 4 23	5 5 5 5	ND ND ND	1 1 1 1	19 14 12 13 14	1 1 1 1	2 2 2 2 2	6 2 2 2 2 2	223 177 155 96 149	. 26 . 35 . 25	.012 .049 .012 .017 .022	2 3 3 4	20 19 22 10	.19 .22 .24 .10	7 11 9 10 12	.49 .40 .33 .17	2 2	1.18 1.14 1.11 1.15 2.93	.01 .02 .01 .01	.02 .05 .03 .03	1 1 1 1 2	1 1 1 1 9
BL 8+50M 1 BL 8+25M 3 BL 8+00M 1 BL 7+75M 3 BL 7+50M 2	22	7 6 13 10 7	17 30 18 22 35	.1 .2 .1 .1	3 4 3 4 14	2 4 2 4 7	135 82 104	3.97 7.59 1.34 6.80 7.40	8 24 9 25 21	5 5 5 5 5	ND ND ND	1 2 1 1 2	17 17 22 19 14	1 1 1 1	2 2 2 2 2	3 2 2 5 2	216 252 115 299 278	.32 .39 .35	.011 .021 .015 .023 .027	2 2 2 3 5	21 32 14 24 53	.19 .29 .15 .17	5 10 10 8 12	.29 .34 .31 .70	4 2 2	1.14 2.60 1.03 1.72 4.45	.01 .01 .01 .01	.02 .03 .02 .03	1 1 1 1	1 5 18 14 4
BL 7+25M 1 BL 7+00M 3 BL 6+75M 2 BL 6+50M 6 BL 6+25M 2	3 29 2 26 3 11	4 6 2 7 9	17 23 27 22 17	.1 .1 .1 .1	5 7 7 11 7	4 6 4 6	101 79 160	4.52 9.54 7.14 4.24 2.84	8 14 17 17 4	5 5 5 5	ND ND ND ND	1 2 2 1 1	12 10 14 14 20	1 1 1 1	2 2 2 6 2	2 2 2 2 3	222 403 290 201 167	.24 .24 .29	.019 .043 .043 .006	2 3 3 3 2	35 67 41 54 26	.20 .29 .22 .39	5 5 9 10 5	.51 .84 .57 .50 .24	2 4	1.24 3.12 1.70 1.60	.01 .01 .01 .01	.02 .03 .04 .02	1 1 1 2 1	2 1 1 5
BL 6+00M 8 BL 5+75M 11 BL 5+50N 2 BL 5+25M 7 BL 4+75N 3	31 20	14 6 10 7	47 26 21 34 114	.1 .1 .1 .1	14 9 5 11 30	9 4 3 6 43	125 100	3.92 2.17 3.97 4.25 4.62	22 16 10 16 89	5 5 5 5 5	ND ND ND	1 1 1 1	20 14 11 17 26	1 1 1 1	2 2 4 2 2	2 3 2 4 2	242 118 172 162 111	.22 .23 .29	.020 .020 .027 .028 .064	4 4 3 4	40 27 29 50 49	.54 .35 .19 .54 1.03	24 21 9 18 37	.49 .25 .40 .33 .22	2 4 3	2.95 1.63 1.28 2.98 3.49	.01 .01 .01 .01	.03 .03 .03 .03	1 1 1 2 1	1 51 2 2 27
BL 4+50N 4 BL 4+25N 7 BL 4+00N 4 BL 3+75N 3 BL 3+50N 2	141 93 63	12 11 12 12 9	80 157 210 193 36	.2 1.2 1.0 .9	10 26 17 13 4	122 160 117	1219 3737 6770 3759 225	4.65 6.89 6.21	137 1309 276 227 590	5 5 5 5	ND ND ND	1 1 3 3	16 16 12 13 20	1 1 1 1	3 2 2 2 6	2 2 2 2 4	165 75 94 96 128	.51 .30 .25	.049 .103 .080 .113 .037	3 7 6 7 2	26 54 49 39 18	.23 .27 .16 .11	19 36 28 28 12	.32 .14 .17 .13 .32	13 9 13	1.89 6.95 8.95 8.83 2.94	.02 .01 .01 .01	.04 .03 .02 .02	1 1 1 1	5 38 14 8
BL 3+25N 3 BL 3+00N 2 BL 2+75N 2 BL 2+50N 2 EL 2+25N 1	14 12 24	11 7 7 7 16	40 20 17 33 14	.5 .1 .1 .1	3 4 3 5	7 3 3 4 2	109 97 120	9.02 4.68 3.91 8.79 3.04	1441 29 16 25 22	5 5 5 5	ND ND ND	1 1 2 2 1	24 17 19 11	1 1 1 1	9 4 2 3 5	9 3 4 2 2	183 162 167 235 206	.21 .23 .17	.035 .021 .012 .042 .023	3 4 4 3	13 23 17 43 18	.12 .18 .17 .21	23 16 18 15	.40 .33 .30 .30	2 2 2	1.25 1.34 1.57 3.54 1.05	.01 .01 .01 .01	.02 .02 .02 .03	1 1 1 1	33 13 16 9 18
D: 2.00H	E 0	10	20	,	,		111	/ 01	•		ND.	•	1.6				167	21	010		25	10	• •	44	•	C 20		0.3		

20 62 37 132 7.5 73 31 1092 4.08 43 25 8 40 47 19 20 21 60 .48 .099 40 62 .97 182 .08 35 1.81 .07 .14 15 52

1 8 4 167 .21 .029 5 35 .18 15 .31 2 6.29 .01 .03 1 55

4 58 10 36 .1 6 4 123 6.81 2 5 ND

BL 2+00N

STD C/AU-S

## MPH CONSULTING PROJECT-V2483 FILE # 88-1423

SAMPLE:	BBR	Cu PPM	PD PPM	Zn PPM	AÇ PPX	Ni PPK	Cc PPX	HE Pen	Fe %	As PPK	U PPN	Au PPM	Th PPM	ST PP#	Câ PPM	SD PPM	E: PPM	V PPN	Ca å	P	la PPM	Cr PPM	NÇ }	ba PPM	1:	B Pen	Al \$	Kā *	Ę.	PPM	Au' PPB
BL 1+75%	2	20	ŧ	32	.:	4	4	134	4.85	10	5	ND	1	28	1	2	2	147	.35	.016	5	20	. 25	24	.27	É	1.85	.01	.11	1	:
3L 1+50K																															
BL 1-25N	2	34	5	30	.:	7	33	715	4.16	5	5	ND	1	19	1	2	2	100	.23	.032	4	15	. 20	23	.17	4	2.69	.03	. 02	1	5
D: 1./00	•	1.5	6	22	•		1	0.4	1 37	2	Ę	nu.	2	19	1	2	7	144	27	513	•	21	1.1	† C	. 24	4	1 79	.03	0.5	1	1



# Appendix IV

GEOSTATISTICAL EVALUATION OF

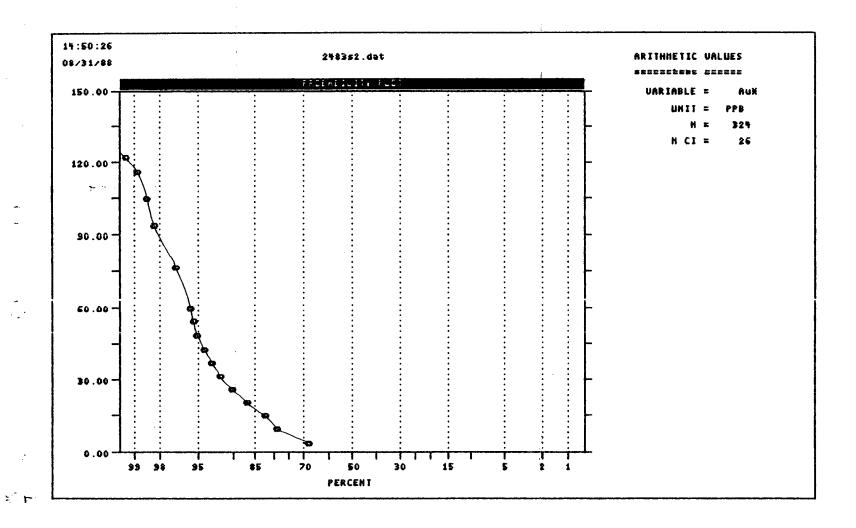
MPH SOIL SAMPLE SURVEYS

PHASES I THROUGH III

Variable =	Au+	Unit	=	PPB		<b>#</b> =	324
						Quartile =	
Std. Dev. =							
CV % =	219.965	Skevness	=	3.721	3r d	Quartile =	6.000
						bin size =	
0.00 0.15				<b></b>			********
57.90 67.85	3,820		****				> 110
11.11 78.92 3.70 92.62 4.32 86.92 3.09 90.00	9.460	+	****	******	*****		
3.70 82.62	15.100	+	****				
4.32 86.92	20.740		****	•			
3.09 90.00	26.380	+	*****				
2.16 92.15	32.020	+	****				
1.23 93.38	37.660	+	14				
0.93 94.31	43.300	+	•				
0.93 95.23	48.940	4	•				
0.31 95.54	54.580						
0.31 95.54 0.31 95.85 0.00 95.85	60.220		}				
0.00 95.85	65.860						
0.00 95.85							
1.23 97.08	77.140	•	5 7				
0.00 97.08	82.780						
0.00 97.08	88.420		l				
1.23 98.31 0.00 98.31	94.060	1	B d				
0.00 98.31	99.700						
0.31 98.62							
0.00 98.62							
0.31 98.92							
0.31 99.23	122.260						
0.31 99.54	127.900						
0.00 99.54 0.00 99.54	133.540						
0.00 99.54	139.180						
0.31 99.85	144.820						

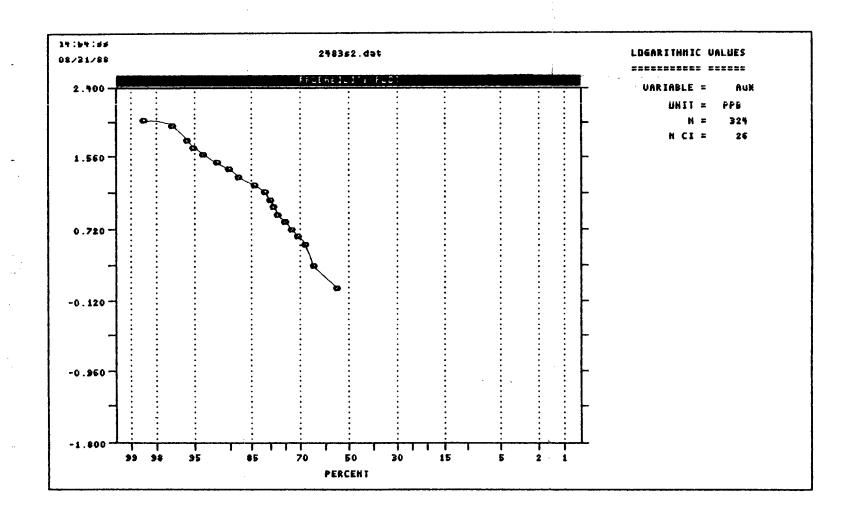
Each \*\* represents approximately 2.0 observations.

0 i 2 3 4



```
SUMMARY STATISTICS and HISTOGRAM
                                      LOGARITHMIC VALUES
Variable = Au*
                    Unit =
                            PPB
                                          # = 324
          0.4356
                           0.0000
   Mean =
                    Min =
                                 1st Quartile =
                                              0.0000
Std. Dev. =
          0.6016
                    Max =
                           2.1523
                                      Median =
                                              0.0000
   CV % = 138.0966 Skevness =
                           1.1632
                                 3rd Quartile =
                                              0.7782
     Anti-Log Mean =
                    2.727 Anti-Log Std. Dev. : (-)
                                              0.682
                                          (+)
                                             10.896
I cum I antilog cls int (# of bins = 26 - bin size = 0.0861)
0.00 0.15
           0.906 -0.0430
54.94 54.92
         0.00 54.92
         1.346 0.1291
         1.641 0.2152
0.00 54.92
         2.001 0.3013 ****************
9.88 64.77
0.00 64.77
         2.440 0.3874
0.00 64.77
         2.975 0.4735
3.09 67.85
           3.627 0.5596 *****
         4.423 0.6457 ****
3.09 70.92
2.16 73.08
         5.392 0.7318 ****
2.16 75.23
           6.575 0.8179 ****
2.47 77.69
         8.016 0.9040 ****
          9.774 0.9901 ##
1.23 78.92
1.23 80.15
          11.916 1.0761 **
1.54 81.69
          14.529 1.1622 **
          17.714 1.2483 ****
2.78 84.46
          21.598 1.3344 *****
3.70 88.15
1.85 90.00
          26.334 1.4205 ***
2.16 92.15
          32.107 1.5066 ***)
1.85 94.00
          39,147
                1.5927 ***
1.23 95.23
         47.729 1.6788 ##
0.62 95.85
          58.194 1.7649
0.00 95.85
          70.953 1.8510
          86.509 1.9371 **
1.23 97.08
1.54 98.62
         105.475 2.0232 **
0.93 99.54
         128.600 2.1092 **
0.31 99.85
         156.796
               2.1953
                                            3
                             i
                                    2
```

Each "\*" represents approximately 2.0 observations.

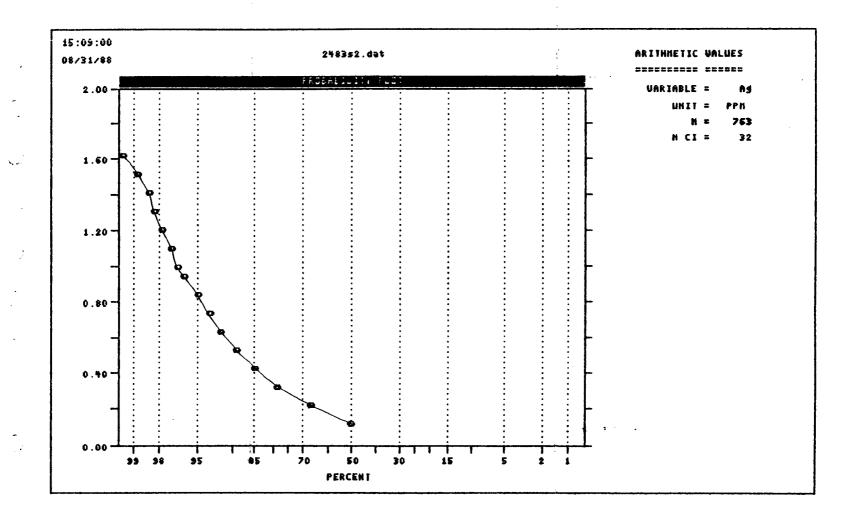


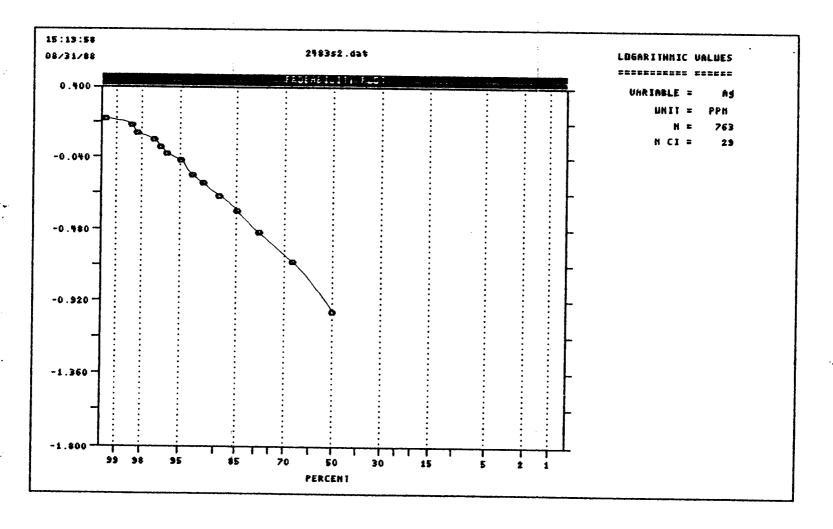
.

Varia	ble =	Ag	Unit		PPM		ı	<b>( =</b>	763	
×	lean =	0.266	Nin	7	0.100	iet	Quartile		0.1	100
•		0.281			1.700		Mediar			100
		105.459								300
_	_									
	cum Z	cis int		(# of	bins = :	32 - 	bin siz		0.( 	)52) 
	0.07	0.074								
	50.07	0.126	•	*****	********	****	*******	****	>	135
0.00		0.177						- 1		
16.64		0.229		#####	********		*******	*****	<b></b> >	45
	66.69	0.281							7	
	78.73	0.332	•	*****	*******	****	*******		"	
	78.73 84.89	0.384								
	84.88	0.435 0.487		*****	********					
	89.07	0.539	:	*****						
	89.07	0.539								
	91.95	0.642	;	*****						
	91.95	0.694								
1.57		0.745	:	****						
0.00	93.52	0.797		1						
1.44	94.95	0.848	;	***						
0.00	94.96	0.900								
	96.27	0.952	;	****						
	96.79	1.003	į							
	96.79	1.055								
	97.32	1.106	1	ŧ						
	97.32	1.158		_						
0.52		1.210	,	ŧ						
0.00	77.84 98.23	1.261								
	98.23	1.365	1	ŧ						
	98.49	1.416								
	98.49	1.468		-						
	98.89	1.519	1							
	98.89	1.571								
	99.28	1.623	i							
	99.28	1.674								
	99.93	1.726								

Each "=" represents approximately 2.8 observations.

......





i

Each "" represents approximately 2.8 observations.

2

1

0.00 98.87

0.13 99.00

0.27 99.27

0.13 99.40

0.40 99.80

0.00 99.80

0.13 99.93

300.597

312.306

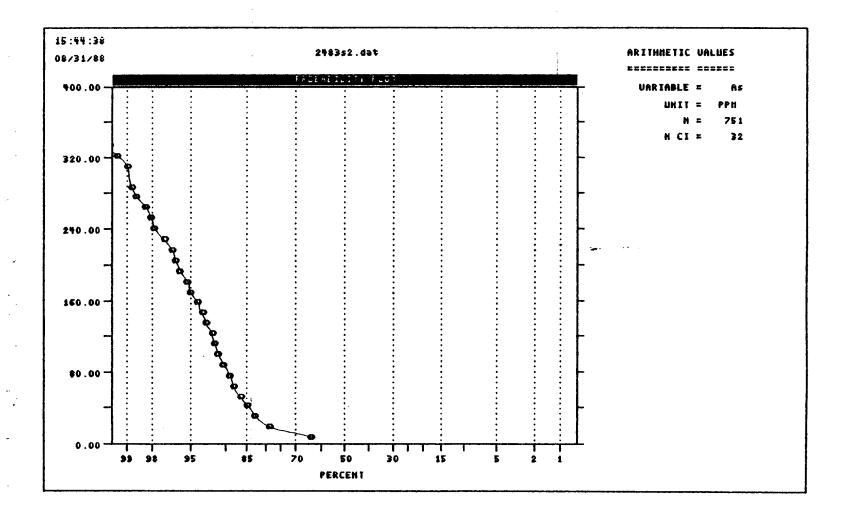
324.016

335.726

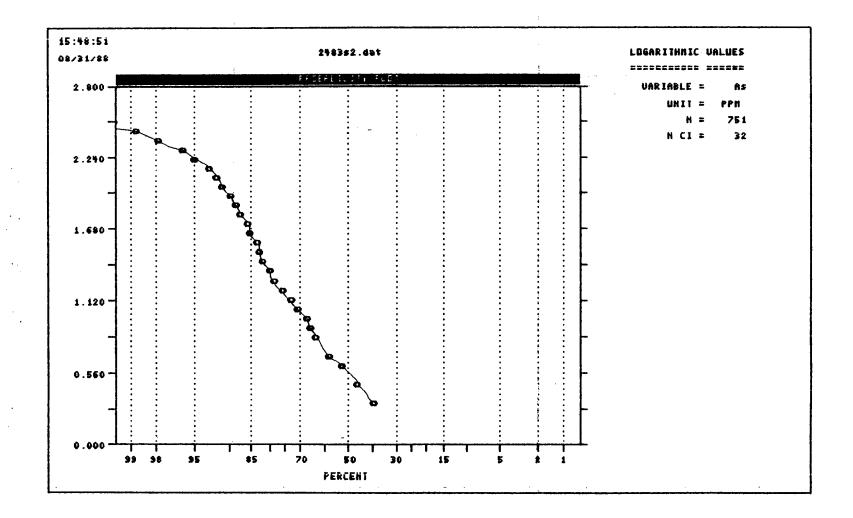
347.435

359.145

370.855



Each """ represents approximately 2.8 observations.



Each "#" represents approximately 2.8 observations.

2

1

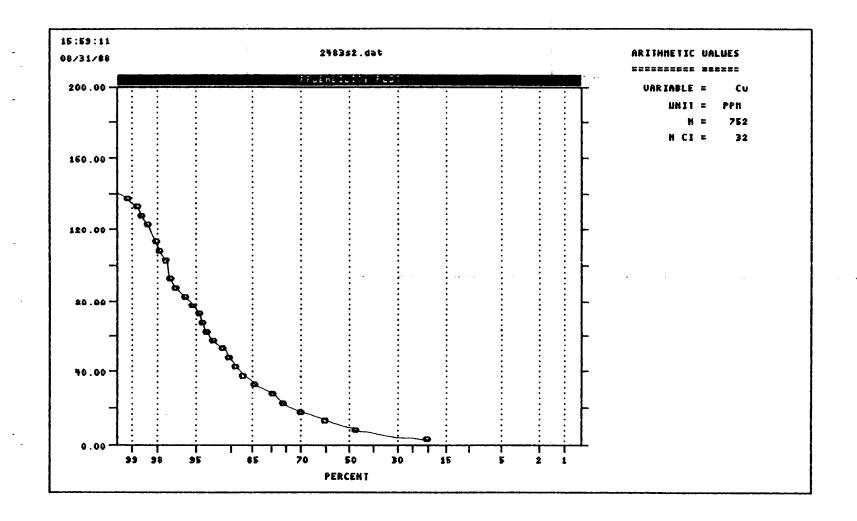
0.00 99.54

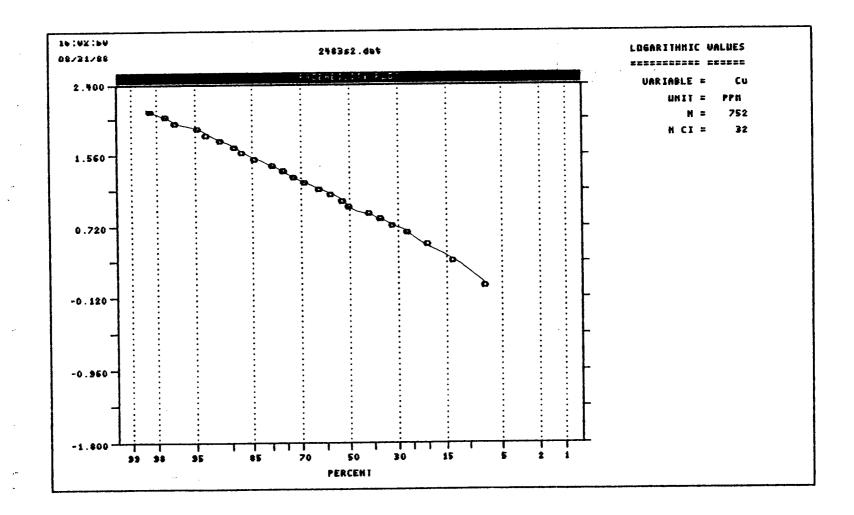
0.13 99.67

0.27 99.93 158.500

148,500

153.500





0.26 99.01

0.00 99.01

0.40 99.41

0.26 99.57

0.26 99.93

31.274

32,339

33.403

34.468

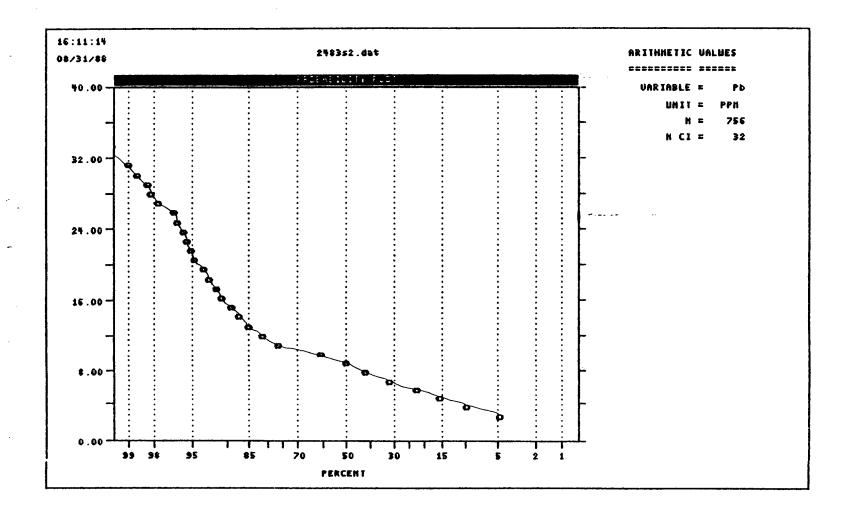
35.532

0

Each "%" represents approximately 2.8 observations.

2

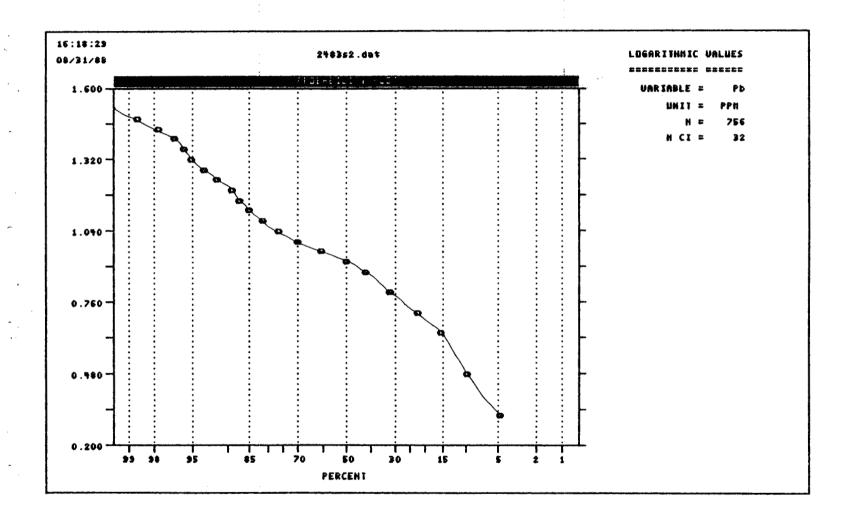
3



```
SUMMARY STATISTICS and HISTOGRAM
                                         LOGARITHMIC VALUES
Variable = Pb
                              PPN
                     Unit =
                                            N = 756
   Mean =
           0.9009
                     Min =
                            0.3010
                                   ist Quartile = 0.7782
           0.2563
Std. Dev. =
                     Max =
                           1.5441
                                        Median =
                                                 0.9542
   EV % = 28.4506 Skeyness = -0.2607
                                   3rd Quartile =
                                                 1.0414
      Anti-Log Mean =
                     7.961 Anti-Log Std. Dev. : (-) 4.412
                                            (+) 14.364
% cum % antilog cls int (% of bins = 32 - bin size = 0.0401)
0.00 0.07
            1.910
                  0.2810
4.76 4.82
           2.094
                  0.3211 **********
0.00 4.82
           2.297
                  0.3612
0.00 4.82
           2.519 0.4013
0.00 4.82
           2.763 0.4414
4.89 9.71
           0.00 9.71
           3.323 0.5216
0.00 9.71
           3.645 0.5617
0.00 9.71
           3.997
                  0.6018
5.95 15.65
           4.384
                  0.6419
0.00 15.65
           4,808
                 0.6820
6.75 22.39
           5.273
                 0.7221
0.00 22.39
           5.783
                  0.7622
9.79 32.17
           6.342
                 0.8023
0.00 32.17
           6.956
                 0.8424
9.52 41.68
         7.629 0.8825
8.33 50.00
         8.367
                 0.9225
10.58 60.57
         9.176
                 0.9626
           10.063 1.0027
9.39 69.95
6.75 76.68
         11.037
                1.0428
4.89 81.57
           12.104
                 1.0829
2.38 97.52
          14.559
                1.1631 ******
1.46 88.97
         15.967
                 1.2032 ****
2.78 91.74
         17.512 1.2433 ******
1.85 93.59
         19.206
                 1.2834 ****
1.59 95.18
          21.063 1.3235 ****
0.79 95.97
          23.101
                 1.3636
0.79 96.76
          25.335
                 1.4037 ##
1.06 97.82
          27,786 1,4438 ***
0.93 98.75
           30.473 1.4839 **
0.66 99.41
          33.421
                 1.5240
                        ##
                 1.5641 #
0.53 99.93
           36.654
```

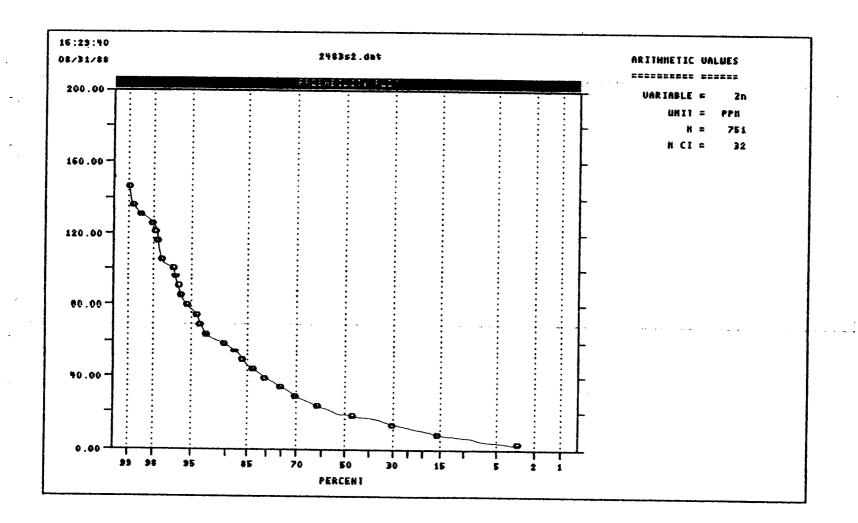
Each "s" represents approximately 2.8 observations.

1



```
SUMMARY STATISTICS and HISTOGRAM
                                        ARITHMETIC VALUES
   Variable = In
                     Unit = PPM
                                          N = 751
      Hean =
           27.441
                      Min =
                           1.000 1st Quartile =
                                               12.000
  Std. Dev. = 25.956
                      Max = 160.000
                                       Median = 20.000
     CV I = 94.588 Skewness = 2.440 3rd Quartile =
                                               34.000
  I cum I cls int
                        (0 of bins = 32 - bin size =
   0.00 0.07
           -1.565
                        ******
  3.06 3.13
           3.565
  12.78 15.89 8.694
                        ******************************
  14.65 30.52 13.823
                        ******************************
  16.25 46.74
           18.952
                        14.91 61.64
                        24.081
                        8.66 70.28 29.210
   5.33 75.60
           34.339
                        **********
           39.468
   5.19 80.78
                        *********
   3.20 83.98
           44.597
                        *******
   2.53 86.50
           49.726
                        ******
   1.73 88.23
           54.855
                        *****
           59.984
   2.13 90.36
                        *****
   2.93 93.28
                        ******
           65.113
           70.242
   0.80 94.08
   0.40 94.48
           75.371
   1.07 95.55
           80.500
   0.53 96.08
           85.629
   0.27 96.34
           90.758
   0.27 96.61
           95.887
   0.13 96.74 101.016
   0.80 97.54
           106.145
   0.00 97.54
           111.274
   0.27 97.81
           116.403
   0.13 97.94 121.532
   0.13 98.07
           126.661
   0.53 98.60
           131.790
   0.27 98.87
           136.919
   0.00 98.87
           142.048
   0.13 99.00 147.177
   0.40 99.40 152.306
   0.27 99.67 157.435
   0.27 99.93 162.565
                              1
                                     2
```

Each "" represents approximately 2.8 observations.



Each "\*" represents approximately 2.8 observations.

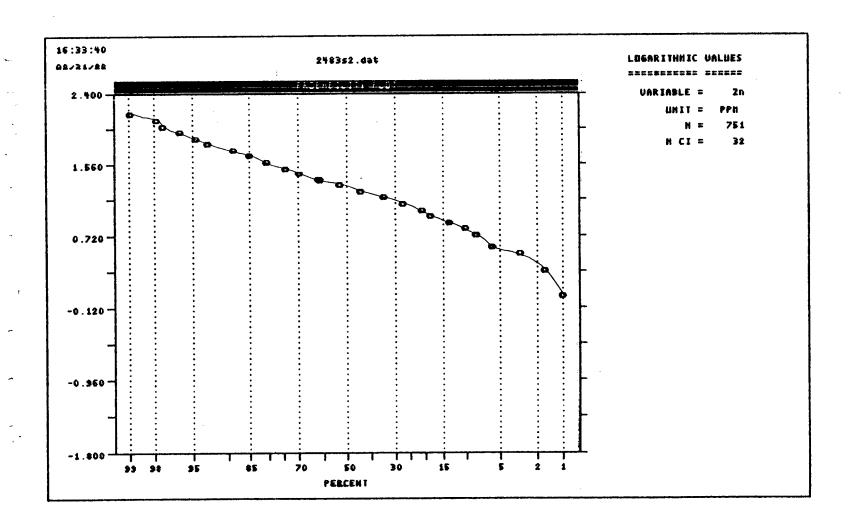
248352.dat

08/31/88

LOGARITHMIC VALUES

16:32:56

SUMMARY STATISTICS and HISTOGRAM

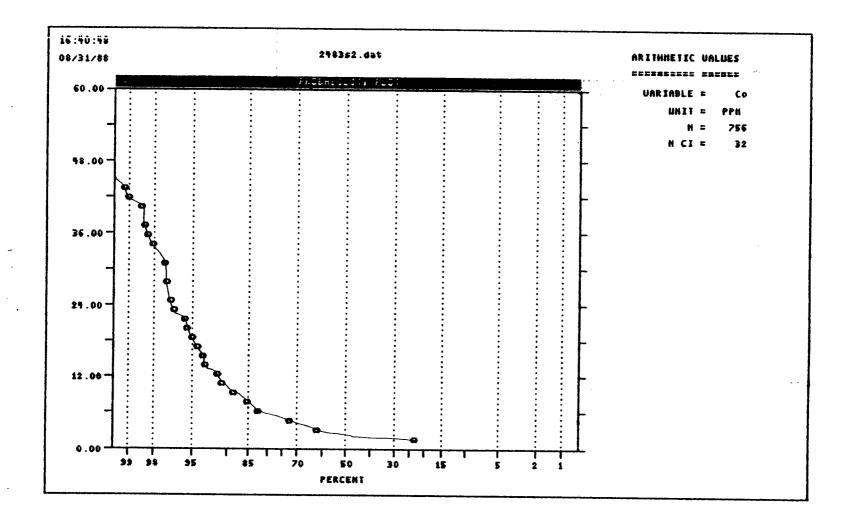


```
SUMMARY STATISTICS and HISTOGRAM
                                                 ARITHMETIC VALUES
Variable = Co
                         Unit =
                                   PPM
                                                    N = 756
              5.004
                                  1.000 ist Quartile =
    Hean ≠
                          Min =
                                                           2,000
Std. Dev. =
              7.123
                          Max =
                                  49.000
                                               Hedian =
                                                           3.000
    CV I =
            142.355
                                   3.658
                                          3rd Quartile =
                     Skevness =
                                                           5.000
 Z cum Z cls int
                            (# of bins = 32 - bin size =
9.00 0.07
              0.226
22.75 22.79
              1.774
                                                             61
39.15 61.89
            3.323
10.71 72.59
            4.871
                            ************************
10.19 82.76
              6.419
2.78 85.54
             7.968
3.17 88.71
             9.516
2.12 90.82
             11.065
0.79 91.61
             12.613
1.85 93.46
             14.161
0.40 93.86
             15.710
0.66 94.52
             17.258
             18.806
0.53 95.05
0.53 95.57
             20.355
0.26 95.84
             21.903
0.93 96.76
             23.452
0.26 97.03
             25.000
0.00 97.03
             26.548
0.26 97.29
             28.097
0.00 97.29
             29.645
0.13 97.42
             31.194
0.00 97.42
             32.742
             34.290
0.66 98.08
0.26 98.35
            35.839
0.13 98.48
             37.387
0.00 98.48
             38.935
0.13 98.61
            40.484
0.40 99.01
             42.032
0.13 99.14
            43.581
0.26 99.41
             45.129
0.13 99.54
             46.677
0.25 99.80
             48.226
0.13 99.93
             49.774
```

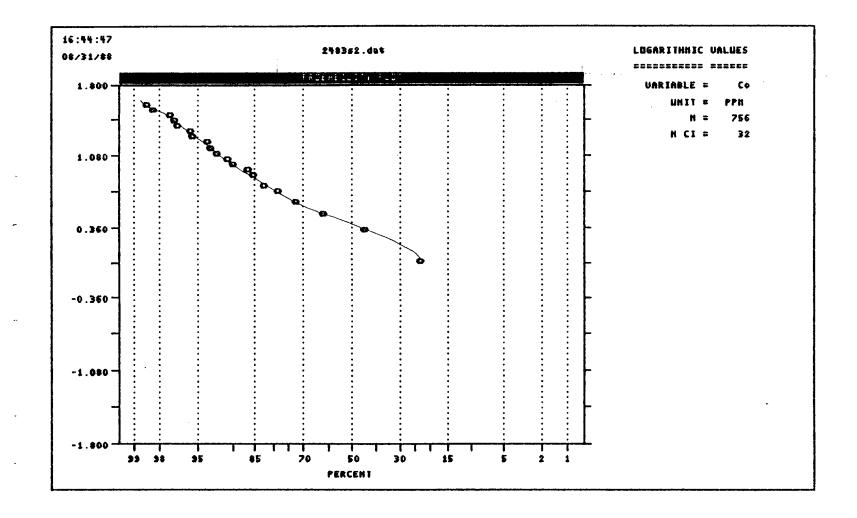
Each "" represents approximately 2.8 observations.

1

3



Each "F" represents approximately 2.8 observations.



As(PPM) 5 ( 347) 10 ( 55) 15 ( 31) 20 ( 24) 25 15) ( 30 9) 35 2) 40 7) 45 5) 50 ( 2) 55 ( 4) 60 3) 65 3) 70 0) 75 ( 3) 2) 80 85 ( 2) 90 ( 5) 95 ( 100 ( 2) 105 ( 2) 110 ( 2) 115 ( 0) 120 2) 125 0) 130 ( 2) 135 ( 2) 140 ( 1) 145 ( 0) 150 ( OOver 42) 0 75 150 225 300 375 Number of Samples 1707 Mean: 576 Samples Maximum: Median: Minimum: Standard Deviation: 149

43

```
Cu
  (PPM)
         126)
          97)
          81)
          46)
    15
          39)
    18
          22)
    21
          20)
   24 (
          17)
   27
           8)
          15)
   30
   33 (
          15)
   36 (
           4)
   39 (
           7)
                42 (
           5)
   45 (
                3)
   48 (
           4)
   51 (
           7)
   54
           2)
   57
           4)
   60 (
           5)
   63 (
           4)
   66 (
           3)
   69 (
           2)
   72 (
           2)
   75 (
78 (
           1)
           3)
   81 (
           0)
   94 (
           1)
   87 t
           2)
   90 (
           3)
   93 (
           2)
Over
          26)
                0
                            40
                                       80
                                                  120
                                                             160
                                                                         200
                                Number of Samples
                576 Samples
                                  Maximum:
                                                 617
                                                                          Mean:
                                  Minimum:
                                                                        Median:
```

25

58

Standard Deviation:

```
Pb
  (PPM)
         33)
         29)
    4 (
         38)
    5 (
         48)
    5
        62)
        48)
    8 (
        40)
    9 (
        51)
   10 (
         54)
        36)
   12 (
         29)
   13 (
         20)
   14 (
        12)
   15 (
         9)
   16 (
        10)
   17
          5)
   18 (
          9)
          5)
   19 (
   20 (
          6)
   21 (
          3)
   22 (
          1)
   23 (
          2)
   24 (
          3)
   25 (
          2)
          5)
   26 (
   27 (
          2) 🔟
              28 (
          2)
   29 (
          O)
   30 (
          2)
   31 (
          2)
   32 (
          0)
Over (
          8)
                         20
                                                       80
                                                                 100
                                   40
                             Number of Samples
```

376 Samples

Maximum: Minimum:

140

Mean: Median:

Standard Deviation:

10 8

```
Zn
  (PPM)
    5 (
          58)
   10
          62)
   15
          82)
   20
          91)
   25
          59)
   30
          38)
   35
          37)
   40
          26)
   45
          20)
   50
      (
          10)
   55
          12)
   60 (
          16)
   65
          13)
   70
                (
           4)
   75 (
           1)
   80 (
           6)
   85
               2)
   90 (
           2)
               95 (
           2)
  100 (
           O)
  105 (
           2)
  110 (
           1)
  115 (
           1)
  120
           0)
  125
           1)
  130 (
           1)
  135 (
           2)
  140
           0)
  145
           0)
  150 (
           1)
Over
          16)
                0
                           20
                                      40
                                                  60
                                                            80
                                                                       100
                                Number of Samples
                576 Samples
                                  Maximum:
                                                363
                                                                         Mean:
                                  Minimum:
                                                                      Median:
                                                         Standard Deviation:
```

31

20

38

```
A_{\mathcal{F}}
  (PPM)
  0.1 (277)
  0.2 ( 102)
  0.3 (
         73)
  0.4 (
         33)
               0.5 (
        26)
               0.5 (
         15)
               0.7 (
               9)
  0.8 (
          7)
  0.9 (
          8)
  1.0 (
          2)
  1.1 (
           2)
  1.2 (
           3)
  1.3 (
          1)
  1.4 (
           2)
  1.5 (
           3)
  1.6 (
           2)
  1.7 (
           3)
  1.8 (
          1)
  1.9 (
           O)
  2.9 (
          0)
  2.1 (
           1)
  2.2 (
          0)
  2.3 (
          0)
  2.4 (
           1)
  2.5 (
          0)
  2.6 (
           0)
  2.7 (
           0)
  2.8 (
           1)
  2.9 (
           0)
Over (
          4)
                          75
                                    150
                                                         300
                                                                    375
                              Number of Samples
```

576 Samples

Maximum: 7.9 Minimum: 0.1

Median: Standard Deviation:

Mean:

0.3

0.0

0.5

```
Co
  (PPM)
    1 (135)
      (128)
    3 (103)
          62)
    5
          28)
    õ
         18)
               17)
    8 (
          10)
    9
          7)
   10 (
               4)
   11 (
           5)
   12 (
           3)
   13 (
           4)
               14 (
           4)
   15 (
           1)
   16 (
           0)
   17
           4)
   18 (
           3)
   19 (
           3)
               20 (
           0)
   21
           1)
   22 (
           2)
   23 (
           3)
   24
           1)
   25
           1)
   26 (
           0)
   27
           0)
   28 (
           1)
   29 (
           0)
   30 (
           0)
   31 (
           0)
Over
          28)
                                                           160
                                                                      200
                                               120
                           40
                                      80
                               Number of Samples
```

Maximum:

Minimum:

160

1

Mean:

3

15

Median:

Standard Deviation:

576 Samples



# Appendix V

PHASE III DRILL LOGS

DDH CA88-1 TO CA88-18



# ABBREVIATIONS USED IN DRILL LOGS

# Colors Textures

dark	dk	medium	med
grey	дХ	moderately	mod
green light	grn lt	subangular rounded	sub-ang rdd
brown	brn	subrounded	sub-rdd
black	blk		

### Minerals Other

quartz	qtz, qz	veinlets	vnlts
carbonate	carb	core axis	CA
pyrite	ру	altered	alt'd
pyrrhotite	po	fractures	frcts
arsenopyrite	asp, apy	trace	tr
sphalerite	sp	disseminated	dis
chalcopyrite	ср	minor	mnr
visible gold	VG	cross cutting	x-ctg
magnetite	mt, mag	brecciated	bx'd
		massive	mass
		contact	ctc



MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 69.19

Dip : -55° Azimuth : 270° Core Size : NQ

Casing : 6.71 m

Grid: McNeil Peninsula L3+50N, 1+15E

Collar elev.: 57 m
Remarks: Sample nos.
5001 to 5050

Drilled: June 8-9/88 Contractor : Burwash Logged by : G. Yip

Date logged: June 15/88

Objective: See drill hole CA88-1 summary in text of report.

Page 1 of 15 Hole No.: CA88-1

Hole Survey Type: None
Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 6.71	Casing										
6.71 - 11.01	Dark green, fine-grained, vol- canic(?) with localized qtz-carb filled frcts and epidote alt'n. Mineralization occurs as dis py ranging from a tr to 5%. Approx. 3 mm masses of chlorite.										
	7.09 - 7.41 m. Volcanic(?), as above, with 10% blebs of qtz ranging from <0.5 to 4 mm. Hairline frcts @ 28° to CA are filled with qtz and/or epidote. Py (approx. 3%) occurs as dis masses and as frct fill.	chlorite, qtz & mnr epidote	Broken core. Frcts @ 28° to CA. 3% py.		7.09-7.41	0.32	6	0.2	136	69	
	7.92 - 8.32 m. Volcanic(?), as above. Vugs are coated with a rusty brown residue.										
	8.57 - 9.29 m. Volcanic(?), as above. Intensely carb and epidotized. Carb veins (1-2 mm) @ 45° & 20° to CA. Py (3-5%) occurs as finely dis grains, masses (1-5 mm) and as fret fill.	epidote & carb.	Broken core. Carb veins @ 45° & 20° to CA. Py dis, masses & frct fill.	5002	8.57-9.29	0.72	31	0.1	3	. 115	
	9.29 - 9.49 m. Volcanic(?), as above. Intensely epidotized and moderately carb. Epidote alt'n appears to be orientated @ 30° to CA. 3% finely dis py and mnr amounts of frct fill.	epidote & carb.	Broken Core. Alt'd 30° to CA. 3% finely dis py and frct fill.	5003	9.29-9.49	0.20	1	0.1	2	7	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 15, 1988 Hole No.: CA88-1 Page 2 of 15

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.71 - 11.01 (cont.)	10.28 - 10.36 m. Sphalerite(?) and carb. Fault @ 46° to CA.										
(cont.)	10.76 - 10.92 m. Chlorite appears to be orientated @ 35° to CA.		Chlorite @ 35° to CA.								
11.01 - 12.48	Dk grn and white, med-grained, alt'd gneiss. Contact between intrusives and volcanic(?) @ 19° to CA. All original textures are lost. Feldspars (40%) have been sheared, along with chlorite (20%) (alt'd mafics?) to define the foliation @ 16-19° to CA. Localized epidote alt'n; lower contact is more epidotized than upper.	chlorite and epidote	Contact @ 19° to CA.								
12.48 - 21.05	Dk grn, fine-grained, alt'd vol- canic(?). Contact between gneiss and alt'd volcanic(?) @ 41° to CA. Locally, moderate to intense epidotization, chlorite alt'n and swirly qtz masses. Mineralization includes massive mt and py.		Contact @ 41° to CA.								
	12.91 - 14.01 m. Alt'd volcanic(?) as above. Gy-grn to buff, fine-grained alt'd volcanic. Intensely epidotized and silicified. Mnr carbonatization. 3-5% finely dis py.	epidote and qtz	Broken core. 3-5% dis py.	5004	12.91-14.01	1.10	1	0.2	2	19	
	14.01 - 14.25 m. Alt'd volcanic(?) as above. Grnish-buff. Intensely epidotized, silicified. Carbonate filled frcts (0.5 mm). 3-5% dis py on frct surfaces.	epidote and qtz	Broken core. 3-5% dis py.	5005	14.01-14.25	0.24	1	0.1	3	18	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 15, 1988 Hole No.: CA88-1 Page 3 of 15

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppma	As ppm	Other ppm
12.48 - 21.05 (cont.)	14.25 - 14.79 m. Volcanic(?), as above. Gy-grn in color. Mod epidotization and mnr carb with patches of chlorite and sub-ang mafic mineral fragments (1-2 mm). Tr to 3% finely dis py.	epidote, carb and chlorite	Broken core. Tr to 3% py.	5006	14.25-14.79	0.54	2	0.1	1	37	
	14.79 - 15.29 m. Alt'd volcanic(?) as above. Light gy-grn. Intensely silicified and epidotized. Qtz-epidote veins (2 mm) @ 55°, 37° and 25° to CA. Blebs of qtz tend to be parallel to CA. Tr of finely dis py. Mnr carbonatization.	qtz, epidote and carb	Tr of py. Veins @ 55°, 37° & 25° to CA.	5007	14.79-15.29	0.50	3	0.1	5	57	
	15.29 - 15.74 m. Volcanic(?) as above. Dk grn. Cut by qtz-carb-epidote vein (3 mm) @ 50° to CA and epidote or carb filled veins (1 mm) @ 75° to CA. Tr of dis py in veins.	epidote and qtz	Veins @ 50° & 75° to CA. Tr of py.	5008	15.29-15.74	0.45	2	0.1	3	8	
	15.74 - 16.14 m. Volcanic(?) as above. Dk grn. Hairline frcts filled with epidote. Lightly carb. Py (5%) occurs in masses 2-5 mm in size.	epidote, carb and chlorite	Broken core. 5% py masses.	5009	15.74-16.14	0.40	16	0.1	4	43	
	16.14 - 16.49 m. Volcanic(?) as above. Dk grn, mod epidotized and carbonatized stringers. 5% py masses (1-4 mm) and 10% mt.	epidote and carb	Broken core. 5% py and 10% mt.	5010	16.14-16.49	0.35	33	0.1	3	79	
	16.49 - 16.91 m. Blk and white, massive mt with carb (15%) and py masses, all of which define a banding @ 40-42° to CA. Localized patches of epidote also parallel to fabric. Nt in places appears to be feathery. 7-10% py and 70% mt. 3 mm carb vein @ 120° to CA.	epidote	70% mt, 7-10% py, fabric 40-42° to CA.	5011	16.49-16.91	0.42	12	0.5	81	123	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.48 - 21.05 (cont.)	16.91 - 17.14 m. Blk and white massive mt with 7% carb blebs and 10% cp define a foliation @ 33-36° to CA. Py occurs in masses ranging from 1-5 mm.	epidote	Foliation 33-36° to CA. 10% py, 10% cp, mass mt.	5012	16.91-17.14	0.23	73	1.1	172	209	
	17.14 - 17.34 m. Volcanic(?) as above. Med grn. Lightly to mod epidotized. Locally intensely, silicified and chlorite alt'n. Tr to 3% cp masses (1-3 mm). No original textures visible.	epidote, qtz and chlorite	Broken core. Tr to 3% cp.	5013	17.14-17.34	0.20	21	0.1	57	72	
	17.34 - 17.70 m. Alt'd volcanic(?) as above. Lt gy-grn. Intensely silicified and moderately carb. Frets @ 20° and 37° to CA are filled with carb. 5% py occurs in masses 1-3 mm in and adjacent to frets. Epidotization and no original textures visible.	gtz, carb and epidote	Frets @ 20° and 37° to CA. 5% py.	5014	17.34-17.70	0.36	23	0.1	9	49	
	17.70 - 17.95 m. Alt'd volcanic as above. Intensely silicified, mildly carb and epidotized. Hair-line frcts roughly parallel @ 45°-49° to CA are filled with carb. 3% dis py in and adjacent to veins. No original textures visible.	gtz, carb and epidote	Frcts @ 45-49° to CA. 3% py.	5015	17.70-17.95	0.25	1	0.4	11	17	
	17.95 - 18.20 m. Alt'd volcanic(?) as above. Intensely silicified, mod epidotized and carb. Hairline frcts @ 30-39° to CA filled with carb. Tr to 3% py in the host and in frcts. No original textures visible.	qtz, epidote and carb	Frets 30-39° to CA. Tr to 3% py.	5016	17.95-18.20	0.25	2	0.2	12	17	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.48 - 21.05 (cont.)	18.20 - 18.78 m. Alt'd volcanic(?) as above. Lt grn. Intensely silicified and epidotized. Numerous x-ctg frcts (<0.5 mm) filled with carb. Approx. 5% py in frcts and a tr to 10% massive mt. No original textures visible.	qtz, epidote and chlorite	5% py, tr to 10% mt.	5017	18.20-18.78	0.58	2	0.1	8	9	
	18.78 - 19.10 m. Alt'd volcanic(?) as above. Med grn; intensely silicified, epidotized and mod carb.  3 mm frct @ 23° to CA. Numerous other x-ctg frcts (<0.5 mm). Frcts are filled with carb and have margins of chlorite. 15% massive mt, 3% dis py in frcts and the host. No original textures visible.	qtz, epidote and chlorite	Frets 23° to CA. 15% massive mt, 3% dis py.	5018	18.78-19.10	0.32	10	0.1	28	37	
	19.10 - 19.80 m. Alt'd volcanic(?) as above. Lt to med grn. Intensely silicified and epidotized, mod to 1t carb and chloritization.  Locally, epidote appears in swirls. Contains 3-52 py in masses ranging from 0.5-1.5 mm and as fret fill. No original textures visible.	qtz, epidote, carb and chlorite	3-5% ру.	5019	19.10-19.80	0.70	133	1.4	341	1028	
	19.80 - 20.34 m. Alt'd volcanic as above. Lt grn. Shear (3 mm) parallel to CA. Hairline frcts filled with carb. Tr to 3% py as frct fill. Minor carbonatization. No original textures visible.	gtz, epidote and carb	Lineation parallel to CA. Tr to 3% py.	5020	19.80-20.34	0.54	1	0.1	2	33	
	20.48 - 20.69 m. Volcanic as above. Dk gy-grn. 3 mm frct filled with gy-white qtz-carb with epidote margins @ 28° to CA. 5-7% chlorite.	epidote and chlorite	Frct @ 28° to CA.	5021	20.48-20.69	0.21	5	0.1	17	74	



MPH CONSULTING LIMITED

From - To

21.05 ~

22.95 ~

27.89

22.95

metres

Lithology

Blk and white, med to fine-grained

qtz diorite with 30-35% subhedral to anhedral mafics (1-5 mm), 45-50%

(1-3 mm). Several frcts (1-3 mm) are filled with milky white massive

qtz, some with halos of epidote @

36°, 24° and 47° to CA. Upper ctc

@ 35° to CA. Lower ctc @ 30° to CA. Poorly developed foliation within 10 cm of lower ctc @ approx. 24-30° to CA. Tr to 1% finely dis py. Chlorite alt'n of mafics.

Med to 1t pale grn alt'd intrusive.

Very intensely epidotized and sili-

22.95 - 22.99 m. Alt'd volcanic(?)

22.99 - 23.17 m. Alt'd volcanic(?).

in ctc with dk grn fine-grained

Blue-grn and very fine-grained.

Intensely silicified and epidotized. Patches of chlorite (3-5 mm) and of carb (2-3 m). Contains 1-2% very finely dis py and a tr of asp.

vnlt.

tuff with 10% chlorite patches @ 63° to CA. Ctc is defined by 2 mm carb vnlt. Tr to 3% dis py within

cified. Very little of original textures still remain. Numerous (10%) subhedral to anhedral mafic grains(?) ranging from 0.5-2 mm. Tr to 5% very finely dis py and pyritic masses (<3.0 mm).

anhedral plagioclase crystals

Project: Contact Au

1-2% py, tr asp.

chlorite

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Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
epidote and chlorite	e Frcts @ 24°, 36° and 47° to CA. Upper ctc @ 55° to CA. Lower ctc @ 30° to CA. Foliation 24-30° to CA. Tr to 1% dis py.								
epidote and qtz	Broken core. Tr to 5% py.								
epidote and qtz	Ctc and vnlt @ 63° to CA. Tr to 3% py.	5022	22.95-22.99	0.04	49	3.2	407	101	
epidote, qtz and	Broken core.	5023	22.99-23.17	0.18	3	1.4	13	54	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
22.95 - 27.89 (cont.)	23.17 - 23.30 m. Alt'd intrusive(?). Blue-grn with blk anhedral to subhedral mafic grains (approx. 10%) (1-2 mm). Contains 5 mm veins of gy-white qtz-carb @ 27° and 35° to CA. Intensely epidotized and silicified. 5% dis and massive py within the veins. Tr in host.	epidote and qtz	Broken core. Tr to 5% py.	5024	23.17-23.30	0.13	128	3.4	751	190	
	23.30 - 23.90 m. Alt'd intrusive. Med to lt grn. Intensely silicified, and epidotized with a 10 cm wide, very intensely alt'd zone @ 62° to CA. Contains 10% dk grn angular spots of chlorite, some with carb cores (0.5-2.5 mm). Tr to 5% dis, pods (0.5-1.5 mm) and fret filled py.	epidote and qtz	Alt'n zone @ 62° to CA. Tr to 5% py.	5025	23.30-23.90	0.60	13	1.1	32	50	
	23.90 - 24.30 m. Alt'd intrusive. Lt grn. Intensely epidotized and silicified. Mnr carb with 5-10% dk grn fragments (0.5-1.5 mm) of chlorite and qtz(?). Frct surfaces are oxidized; rusty orange in color. Tr to 5% dis py.	epidote, qtz and chlorite	Broken core. Tr to 5% py.	5026	23.90-24.30	0.40	2	0.8	9	21	
	24.30 - 24.69 m. Alt'd intrusive. Lt grn. Intensely epidotized and silicified. Mod carb. Contains 10% dk grn angular flakes of chlorite (0.5-1.5 mm), 12 cm alt'n zone with frcts (<05 mm) @ 13°, 34° and 30°. Tr to 3% finely dis py.	qtz, epidote and carb	Frets @ 13°, 34° and 30° to CA. Tr to 3% py.	5027	24.30-24.69	0.39	22	0.5	2	139	



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From - To

metres 22.95 -

27.89

(cont.)

27.79 ~

28.07

Project:

24.69 - 25.19 m. Alt'd intrusive

tensely epidotized and silicified.
5-7% dk grn rdd to sub-rdd spots (0.51.5 mm), some of which are chlorite
and others qtz(?). Poorly defined
banding @ approx. 26° to CA. (Defined by lt and dk alt'n; 5 cm.)
Randomly oriented frcts (0.5-2 mm)
filled with gy-white qtz-carb. Tr

25.19 - 26.31 m. Alt'd intrusive. Lt grn with 5-7% dk grn sub-ang speckles (0.5-1.5 mm) of chlorite

and qtz(?). Intensely silicified and epidotized. Frct surfaces contain off-white qtz-carb. Tr to 5%

26.31 - 27.65 m. Alt'd intrusive.

Top 8 cm has appearance of a feld-

spar porphyry (dk grn) (2 to 4 mm). Then speckled intrusive; intensely silicified and epidotized (lt grn) with 3-5% dk grn sub-ang to sub-rdd spots of chlorite and qtz. Hairline frets filled with off-white qtz-carb. Tr to 3% finely dis py on fret surfaces.

27.65 - 27.79 m. Dk grn, very fine-

27.79 -27.89 m. Intrusive is med-

grained diorite, containing 30-35% feldspars, 50-60% dk grn mafics; alt'd to chlorite & 5-10% qtz. Ctc between dk grn volcanic(?) and intrusive @ 49° to CA with 2.5 cm wide

alt'n zone of epidote and grn-white qtz. Tr of dis py in alt'n zone & a tr to 3% dis py in the diorite.

as above. Lt grn in color. In-

to 1% finely dis py.

dis py on frct surfaces.

grained volcanic(?).

Lithology

Contact Au

Logged by: G. Yip

Mineralization

Broken core. Tr

Broken core. Tr

Broken core. Tr

to 3% dis py.

Tr py in alt'd

py in diorite.

zone. Tr to 3%

5031

27.79-27.89

0.10

to 5% dis py.

to 1% dis pv.

Alteration

gtz and epidote

qtz, epidote and

qtz, epidote and

chlorite

chlorite

chlorite and

epidote

Dat	e: June 16,	1988	Hole N	o.: CA8	8-1	Page	8 of 1
Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
5028	24.69-25.19	0.50	21	1	2	43	:
						-	,
50 <b>29</b>	25.19-26.31	1.12	1	1.2	1	30	
5030	26.31-27.65	1.34	47	0.7	1	41	

227

1.5

724 Zn



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Ot her
28.07 - 29.29	Dk grn, very fine-grained volcanic(?) with 7-10% chlorite spots (approx. 1 mm) and milky-white qtz-carb stringers (1-2 mm) @ 70°, 58°, 35° and 45° to CA. Ctc with diorite @ 70° to CA. Some veins have margins of epidote. Tr amounts of dis py. Mnr carb.										
	28.79 - 29.29 m. Volcanic as above with milky-white qtz stringers @ 58°, 35° and 75° to CA. Tr of finely dis py.	chlorite and carb	Qtz stringers @ 58°, 35° and 75° to CA. Tr of dis py.	5032	28.79-29.29	0.50	1	0.5	67	26	
29.29 - 36.41	Fine-grained, grn and white diorite with 60% dk grn, euhedral mafic grains (alt'd to chlorite) 1-3 mm in size, 35% euhedral feldspars (1-4 mm) and euhedral qtz grains (1-2 mm). Ctc between volcanic and intrusive @ 47° to CA. Cut by massive milky-white qtz veins (1-4 mm) @ 45°, 40°, 56° and 25° to CA. Tr amounts of dis py. Note: of the 60% mafics, 15-20% are biotite(?).		Ctc @ 47° to CA. Tr dis py.								
	29.64 - 29.70 m. Massive milky-white qtz vein @ 45° to CA (3 cm wide) with 3% py in 1-2 mm masses.		Vein @ 45° to CA. 3% py.	5050	29.64-29.70	0.06	10	0.9	472	73	
	30.88 - 30.94 m. Qtz vein @ 44° to CA (4 cm). Massive milky-grey qtz with alt'd (chlorite) fragments of host (approx. 1 mm) and epidote in hairline frcts. Tr to 2% dis py.		Vein @ 44° to CA. Tr to 2% dis py.	5033	30.88-30.94	0.06	1	0.3	29	14	
	32.48 - 32.61 m. Massive milky- white qtz vein @ 52° to CA (5 cm). Tr of finely dis py.		Vein @ 52° to CA. Tr dis py.	5034	32.48-32.61	0.13	15	0.4	68	360	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
36.41 -	Dk grn, very fine-grained tuff(?) with 3 mm shear @ 67° to CA with epidote, qtz and a tr to 1% dis py. Ctc between diorite and volcanic(?) @ 70° to CA.										
36.50 <b>-</b> 43.69	Fine-grained, grn and white diorite with 65% dk grn anhedral mafic grains (alt'd to chlorite). Contains 1-3 mm, 7% anhedral qtz grains (1-1.5 mm) and 28% anhedral plagioclase grains (1-4 mm). Approx. 10% of the dk grn mafics are biotite and qtz veins @ 32°, 20°, 37° and 45° to CA (1-15 mm). Tr of finely dis py.										
	39.01 - 39.26 m. Intrusive as above. Dk grn and fine-grained with bands (approx. 12 mm) of white qtz that have 3% chlorite (0.5-2 mm) @ 52° and 58° to CA. Epidote margins around qtz veins. Tr to 3% finely dis py.	chlorite and epidote	Banding @ 52° and 58° to CA. Tr to 3% dis py.	5035	39.01-39.26	0.25	1	0.1	35	5	
	41.20 - 41.36 m. Massive milky- white gtz vein @ 42° to CA.	epidote and chlorite	Vein @ 42° to CA. Tr dis py.	5036	41.20-41.36	0.16	960	0.2	64	7	
	Approx. 6 cm wide with fragments of wall rock (5 cm) and epidote alt'n. Wall rock is alt'd to chlorite. Tr of finely dis py in regions of epidote alt'n.		<del></del> •/·		Au assay 0.0	39 oz/to	on (1.3	4 g/t)			
43.69 - 44.12	Drk grn, very fine-grained tuff(?) with 10% dk grn ang mafic fragments (alt'd to chlorite). Ctc between diorite and volcanic @ 73° to CA Randomly oriented hairline frcts filled with milky-white qtz. Tr of dis py in and adjacent to frcts. Bottom ctc is epidotized.		Ctc @ 73° to CA. Tr dis py.	5037	43.69-44.12	0.43	1	0.2	32	9	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
44.12 - 47.52	Grn and white, med to fine-grained diorite (see 36.50-43.69 m) with milky-white qtz stringers (1-2 mm) @ 10° and 18° to CA. Tr of finely dis py.	chlorite and epidote									
	45.35 - 45.55 m. Dk grn diorite as above with milky-white qtz veins @ 15° and 19° to CA (3-5 mm). Tr to 5% finely dis py.	·	Veins @ 15° and 19° to CA. Tr to 5% dis py.	5038	45.35-45.55	0.20	205	0.2	89	3	
47.52 - 47.75	Dk grn, very fine-grained sheared intrusive(?) with 70% 1t grn ang clasts of feldspars (<0.5 mm) and 30% dk grn ang clasts (<0.5 mm) alt'd to chlorite. Ctc between diorite and sheared(?) intrusive 6 69° to CA. Tr of finely dis py.		Ctc @ 69° to CA. Tr dis py.								
47.75 - 48.56	Dk grn, fine-grained diorite, 5% anhedral white qtz (1-2 mm), 45% grn-white, anhedral plagioclase feldspars (1-3 mm) and 50% dk grn anhedral mafics (1-5 mm) alt'd to chlorite. Tr of very finely dis py. Qtz-epidote stringers @ 14°, 55° and 40° to CA.	chlorite	Qtz-epidote string- ers @ 14°, 55° and 40° to CA. Tr dis py.								
48.56 - 49.14	Dk grn, very fine-grained sheared intrusive(?) with lenticular patches of chlorite @ 77° to CA and hairline frcts filled with milky-white qtz, some with epidote margins. Numerous sub-rdd qtz clasts(?) in most cases associated with finely dis py (tr).		Chlorite orient @ 77° to CA. Tr dis py.	5039	48.56-49.14	0.58	3	0.2	107	7	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
49.14 - 59.49	Med to fine-grained, dk grn and white diorite with 50-60% dk grn anhedral crystals of mafics (85%) and biotite (15%) ranging from 0.5-2 mm. Contains 20-30% white andhedral plagioclase masses ranging from 0.5-4 mm, and approx. 10% andhedral qtz grains (0.5-1.5 mm). Locally intensely epidotized and silicified. Qtz-carb and epidotized veins 0.5-3 mm @ 38°, 17° and 77° to CA. Tr of finely dis py throughout.	epidote and chlorite									
	50.52 - 50.98 m. Lt grn alt'd diorite as above. Intensely epidotized and silicified. X-ctg frcts @ 53°-54°, 43° and 23° to CA. Feldspars have alt'd to epidote; 5 cm shear @ 47° to CA with 3 mm porphyroblasts of ? (alt'd to chlorite). Within the shear is a 3.5 cm lens of epidote. Tr to 3% dis py on frct surfaces.	epidote and qtz	Frets @ 53°, 43° and 23° to CA. Tr to 3% py.	5040	50.52-50.98	0.46	89	0.1	15	3	
	53.95 - 54.15 m. Dk grn, fine-grained diorite as above with milky-white qtz veins @ 73° and 53° to CA (approx. 3 mm). Most veins have epidote margins and small amounts of epidote within the veins. No visible mineralization.	chlorite	Veins @ 73° and 53° to CA.	5041	53.95-54.15	0.20	2	0.1	61	4	
	56.39 - 56.41 m. Lt brn fault gouge(?), 70% clay, 20% silt and 10% sand. Upper and lower boundaries are bound by poorly foliated (sheared) intrusives @ 25-30°.		Foliation @ 25-30° to CA.								



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
49.14 - 59.49 (cont.)	57.58 - 59.49 m. Poorly developed foliation @ 24-25° to CA.	chlorite	Foliation @ 24-25° to CA.								
(Cont.)	59.31 - 59.49 m. Blk and white fine-grained diorite cut by epidote filled stringers @ 40° and 12° to CA. Tr of finely dis py.		Stringers @ 40° and 12° to CA. Tr dis py.	5042	59.31-59.49	0.18	1	0.2	55	2	
59.49 - 61.19	Dk grn, very fine-grained volcanic. Ctc with diorite not visible. How- ever, region about the ctc is intensely epidotized and cut by numerous x-ctg hairline frcts filled with epidote.										
• • • • • • • • • • • • • • • • • • •	59.56 - 59.81 m. Dk grn, alt'd fine-grained sheared intrusive(?). Epidote alt'n (possible shear?) @ 58° to CA with pods of carb parallel to shear direction (3 mm). Tr of finely dis py.	epidote and chlorite	Shear @ 58° to CA. Tr dis py.	5043	59.46-59.81	0.25	1	0.1	9	2	
61.19 - 65.36	Dk grn and white diorite (see 49.14-59.49) with frcts filled with qtz and epidote @ 47°, 57°, 34° and 14° to CA. Ctc between intrusive(?) and diorite @ 76°-82° to CA.		Ctc @ 76-82° to CA.								
di 61 wi 1 61 wi (0 63 wi	$61.50 - 61.54$ m. Shear @ $64^{\circ}$ to CA with bands of epidote and qtz (0.5 - 1 mm).										
	$61.77 - 61.81$ m. Shear $@60^{\circ}$ to CA with 1 cm band of epidote and qtz $(0.5-1$ mm).										
	63.19 - 63.28 m. Shear @ 54° to CA with small qtz clasts perpendicular to CA (1-3 mm).										



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
61.19 - 65.36 (cont.)	64.53 - 64.59 m. Diorite as above. Contains 1 cm wide shear @ 63° to CA. Several x-ctg frcts filled with qtz and epidote, 3% py in masses (0.5-2 mm).		3% py in masses.	5044	64.53-64.59	0.06	2	0.4	172	5	
	65.12 - 65.26 m. Fine-grained diorite as above, but cut by a very fine-grained, dk grn-gy dyke @ 33° to CA (2.8 cm wide). Dyke is composed of mt with tr of finely dis cp in the diorite and mt.		Ctc @ 33° to CA. 5-10%(?) dis mt. Tr of cp.	5045	65.12-65.26	0.14	1	0.2	75	2	
65.36 - 69.19	Dk grn, very fine-grained andesite with randomly orientated frcts (0.5-1 mm) filled with milky-white qtz some of which have epidotized margins. Localized alt'n zones of epidote. Ctc between diorite and volcanic @ 64° to CA. Tr to 2% finely dis py. Note: magnetic.		Ctc @ 64° to CA. 5-10%(?) dis mt. Tr to 2% dis py.								
f 6 a u t p	65.51 - 66.14 m. Dk grn andesite as above with hairline frcts of milky-white qtz @ 78°, 63° and 34° to CA. Contains 1-2% finely dis py as frct fill and in host @ approx. 60° to CA.		Vnlt @ 78°, 63° and 34° to CA. Py line- ation @ 60° to CA. 1-2% dis py.		65.51-66.14	0.63	2	0.1	85	8	
	66.14 - 66.83 m. Dk grn andesite as above with a 1 cm wide epidot-ized alt'n zone @ 69° to CA. Contains 2% dis py throughout; some pods are orientated @ 42° to CA.		Alt'd zone @ 69° to CA. 2% dis py @ 42° to CA.	5047	66.14-66.83	0.69	1	0.3	96	8	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 18, 1988 Hole No.: CA88-1 Page 15 of 15

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppna	As ppm	Other ppm
65.36 - 69.19 (cont.)	67.62 - 68.30 m. Dk grn andesite as above, with hairline frcts @ 64°, 56° and 30° to CA. Filled with off-white qtz. Contains 2% finely dis py in host and as frct fill. Slightly magnetic.		Frcts @ 64°, 56° and 30° to CA. 2% dis py.	5048	67.62-68.30	0.68	1	0.3	103		
	69.30 - 69.49 m. Andesite as above, 1 cm fault @ 52° to CA with a shear zone parallel to fault. Chlorite alt'n.										
	68.49 - 68.74 m. Lt grn alt'd andesite(?). Intensely epidot-ized and silicified. Orientation of alt'n @ 36° to CA. Chloritized. Contains 1-22 finely dis py.	epidote, qtz and chlorite	Alt'd zone 36° to CA. 1-2% dis py.	5049	68.49-68.74	0.25	1	0.3	182	5	
	68.74 ~ 68.86 m. Foliated (sheared) andesite @ 38° to CA.		Foliation @ 38° to CA.								



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MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 50.29

Dip : -85° Azimuth : 270° Core Size : NQ

Casing : 3.05 m

Grid: McNeil Peninsula L3+50N, 1+15E Collar elev.: 57 m Remarks: Sample nos.

5051 to 5080

Drilled: June 9, 1988 Contractor : Burwash Logged by : G. Yip Date logged: June 22/88 Objective: See drill hole CA88-2 summary in text of report.

Hole No.: CA88-2 Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 3.05	Casing										
3.05 - 15.05	Dk gy-grn, fine-grained andesite. Cut by frcts filled with qtz-carb and epidote @ 19°, 70° and 75° to CA. Locally very alt'd to epidote.										
	11.60 - 12.03 m. Andesite with qtz-carb-epidote vnlts @ 72° and 20° to CA. Tr of finely dis py.	qtz and epidote	Veins @ 72° and 20° to CA. Tr dis py.	5051	11.60-12.03	0.43	1	0.1	64	8	
	12.03 - 12.38 m. Alt'd andesite. Intensely epidotized and silicified. Contains 3 mm qtz vein @ 17° to CA. Tr to 1% dis py.	epidote and qtz	Vein @ 17° to CA. Tr to 1% dis py.	5052	12.03-12.38	0.35	21	0.1	91	32	
	12.38 - 12.80 m. Alt'd andesite. Qtz-carb vnlt @ 43° to CA. Tr to 3% finely dis py.	epidote and qtz	Broken core. Tr to 3% dis py.	5053	12,38-12.80	0.42	4	0.4	14	55	
	12.80 - 13.20 m. Alt'd andesite. Tr of dis py throughout. Up to 3% on frct surfaces.	epidote, qtz and chlorite(?)	Tr to 3% dis py.	5054	12.80-13.20	0.40	78	0.1	30	24	
	13.20 - 13.84 m. Alt'd andesite. Locally epidotized. Vnlts @ 54° and 55° to CA filled with qtz-carb or epidote. Tr of finely dis py.	qtz and epidote	Broken core. Tr dis py.	5055	13.20-13.84	0.64	3	0.1	12	22	
	13.84 - 14.10 m. Andesite. Mnr epidotization and silicification. No visible mineralization.	epidote and qtz	Broken core.	5056	13.84-14.10	0.26	1	0.1	14	3	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 22, 1988 Hole No.: CA88-2

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	lnterval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
3.05 - 15.05	14.10 - 14.37 m. Andesite. Mnr epidotization and carb. Contains 10% massive mt.	epidote and carb	Broken core. 10% mt.	5057	14.10-14.37	0.27	1	0.2	52	9	
	14.37 - 14.50 m. Fault(?) gouge.										
	14.37 - 14.97 m. Andesite. Patchy epidote alt'n and silicification. Tr to $1%$ patches $(1-3  mm)$ of po.	epidote and qtz	Tr to 1% po.	5058	14.37-14.90	0.53	16	0.2	71	33	
15.05 - 38.85	14.90 - 15.14 m. Alt'd diorite(?). Intensely epidotized and silicified. Mnr carb. Tr of dis py.	epidote, qtz and carb	Tr py.	5059	14.90-15.14	0.24	24	0.2	19	9	
	15.14 - 15.82 m. Alt'd diorite(?) with qtz-epidote veins @ 17°, 47° and 73° to CA (approx. 4 mm). Tr amounts of finely dis py.	epidote	Veins @ 17°, 47° and 73° to CA. Tr dis py.	5060	15.14-15.82	0.68	3	0.1	7	1335	
	15.82 - 16.42 m. Alt'd diorite(?) with qtz-epidote filled frcts @ 42° and 63° to CA (2-18 mm). Tr of finely dis py.	epidote	Frcts @ 42° and 63° to CA. Tr dis py.	5061	15.82-16.42	0.60	1	0.2	31	78	
	16.56 - 16.58 m. Shear @ 35° to CA.		Shear @ 35° to CA.								
	17.57 - 17.75 m. Shear @ 49° to CA.		Shear @ 49° to CA.								
	17.97 - 18.07 m. Shear @ 44° to CA.		Shear @ 44° to CA.								
	18.65 - 25.59 m. Poorly developed fabric @ approx. 37° to CA.		Foliation @ approx. 37° to CA.								
	19.02 - 19.23 m. Alt'd and sheared diorite @ 45-50° to CA. Epidote and qtz occur in thin wispy bands. Tr of dis py.	epidote	Banding @ 45-50° to CA. Tr dis py.	5062	19.02-19.23	0.21	1	0.7	104	61	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 22, 23/88 Hole No.: CA88-2 Page 3 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
15.05 - 38.85 (cont.)	19.63 - 20.08 m. Alt'd diorite(?). Intensely epidotized and silicified with xenoliths(?) (1.5-3 cm). Tr of finely dis py.	qtz, epidote and chlorite	Tr dis py.	5063	19.63-20.08	0.45	2	0.2	50	23	424 Zn
	20.24 - 20.92 m. Diorite with xenoliths. Locally intensely epidotized. Tr to 2% finely dispy.	epidote	Tr to 2% dis py.	5064	20.24-20.92	0.68	2	0.1	146	23	
	20.40 - 20.92 m. Alt'd diorite(?) with xenoliths(?). Intensely sili-	qtz and epidote	Broken core. Tr	5065	20.40-20.92	0.52	315	0.4	5	18	
	cified. Tr to 2% dis py in 1-3 mm groupings.		to 2% dis py.		Au assay 0.0	09 oz/to	on (0.3	309 g/t)			
2 1 C	20.92 - 22.36 m. Alt'd diorite(?). Intensely epidotized and silicified. Qtz-carb on frct surfaces. Tr of finely dis py.	qtz and epidote	Broken core. Tr dis py.	5066	20.92-22.36	1.44	32	0.1	3	10	
	22.36 - 22.86 m. Alt'd diorite(?). Intensely silicified and epidotized. Mod carbonatized. Tr of finely dis py throughout and in 3-4 mm pods associated with carb lenses.	qtz, epidote and carb	Broken core. Tr dis py.	5067	22.36-22.86	0.50	2	0.1	2	7	
	22.86 - 23.81 m. Alt'd diorite(?). Intensely silicified and epidotized. Tr to 2% finely dis py.	qtz and epidote	Broken core. Tr to 2% dis py.	5068	22.86-23.81	0.95	5	0.1	10	2	
	23.81 - 24.01 m. Alt'd(?). Intensely silicified and epidot- ized. Lt carb. Original textures are lost. Tr of finely dis py.	qtz and epidote	Tr dis py.	5069	23.81-24.01	0.20	2	0.6	380	59	
	24.01 - 24.48 m. Alt'd diorite and xenoliths(?). Banding of alt'n @ 52-55° to CA. Offset by frcts @ 64° to CA. Tr of finely dis py and as frct fill in offsetting frcts.	epidote and qtz	Contact @ 89° to CA. Banding of alt'n @ 52-55° to CA. Frets @ 64° to CA. Tr dis py.	5070	24.01-24.48	0.47	165	0.1	20	26	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: June 23, 1988 Hole No.: CA88-2

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
15.05 - 38.85 cont.)	24.48 m. Ctc with unaltered dior- ite @ 89° to CA.										
cont.)	24.88 - 25.30 m. Diorite with shears filled with qtz @ 18° and 30° to CA. Mnr amounts of epidote in shears (6-9 mm). Tr of finely dis py.		Shears @ 18° and 30° to CA. Tr dis py.	5071	24.88-25.30	0.42	5	0.1	49	15	
	25.76 - 25.91 m. Diorite, dk gy- blk. Tr to 2% finely dis py.		Tr to 2% dis py.	5072	25.76-25.91	0.15	1	0.2	38	2	
	27.60 - 27.80 m. Foliated (poorly) diorite and a xenolith(?). Foliation @ 45° to CA. Mineralization is in and adjacent to xenolith. Contains 3-5% dis py.		Foliation @ 45° to CA. 3-5% dis py.	5073	27.60-27.80	0.20	2	2.1	920	41	
2 1 3 w P 2 ( 2 1 w h c 0	28.32 - 29.06 m. Diorite with xenoliths (@ 28.96 m) ranging from 2 - 3 cm. Mineralization associated with xenoliths. Contains 2-3% dispy.		2-3% dis py.	5074	28.32-29.06	0.74	1	0.1	60	9	
	29.22 - 29.34 m. Massive qtz vein (6 cm wide) @ 55° to CA. Contains 2% dis py.		Vein @ 55° to CA. 2% dis py.	5075	29.22-29.34	0.12	2	0.2	80	34	
	29.34 - 30.58 m. Alt'd diorite(?). Intensely epidotized and silicified with mnr amounts of carb. Alt'n has banded appearance @ 34-50° to CA. Tr to 3% finely dis py. Note: local chlorite alt'n. Lower ctc with diorite @ 40° to CA @ 30.54 m.	epidote, qtz, carb and chlorite	Banding @ 34-50° to CA. Tr to 3% dis py.	5076	29.34-30.58	1.24	3	0.4	132	63	
	31.90 - 32.07 m. Qtz vein in dior- ite @ 46° to CA (>3 cm). Mnr epi- dote alt'n @ ctc. Tr of dis asp.	epidote	Broken core. Vein @ 46° to CA. Tr	5077	31.90-32.07	0.17	1	0.2	29	92	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 23, 1988 Hole No.: CA88-2 Page 5 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
15.05 - 38.85 (cont.)	33.82 - 34.02 m. Massive qtz vein in diorite @ 38° to CA. Mnr epidote alt'n within and adjacent to vein. Tr to 2% finely dis py.		Tr to 2% dis py.	5078	33.82-34.02	0.20	1	0.3	23	8	
	38.78 m. Fault @ 45° to CA.										
38.85 - 50.29	38.85 - 39.85 m. Fine-grained, dk grn andesite(?) with 5-7% chlorite spots (1-3 mm). Silicified. Locally, numerous frcts filled with qtz-carb or epidote (<1.0 mm). Tr to 2% finely dis py. Lower ctc sheared @ 48° to CA.	chlorite and qtz	Tr to 2% dis py. Lower ctc @ 48° to CA.	5079	38.85-39.85	1.00	4	0.3	57	70	
	42.40 - 42.46 m. Shear @ 33° to CA.		Shear @ 33° to CA.								
	44.30 - 44.80 m. Ctc @ 49° to CA. Dk grn, fine-grained andesite(?) (see 38.85-38.95 m). Locally, numerous hairline frcts @ 57° to CA filled with qtz. Contains 3-5% very finely dis py on frct surfaces. Lower ctc sheared(?) @ 43° to CA.		Ctc @ 49° to CA. Frcts @ 57° to CA. 3-5% dis py on frcts. Lower ctc @ 43° to CA.	5080	44.30-44.80	0.50	1	0.1	18	7	
50.29	EOH										



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MPH CONSULTING LIMITED Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 81.38 Dip : -46° Azimuth : 093°

Casing : 6.10 m

Core Size : NQ

Grid: McNeil Peninsula L2+45N, 1+90E

Collar elev.: 68 m Remarks: Sample nos. 5081 to 5109 Drilled: June 10-11/88 Contractor : Burwash Logged by : G. Yip Date logged: June 24/88 Objective: See drill hole CA88-3 summary in text of report.

Hole No.: CA88-3
Hole Survey Type: None
Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 6.10	Casing										
6.10 - 12.90	Gr to dk grn, med to fine-grained diorite. Cut by qtz-carb veins @ 17°, 24° and 45° to CA. Locally intensely epidotized.										
	9.23 - 9.86 m. Dk grn fine-grained andesite. 45° to CA.		Upper and lower ctc @ 45° to CA.								
	10.82 - 11.19 m. Alt'd(?) dk grn diorite with a 2.5 cm wide shear filled with gy-white qtz @ 28° to CA. Tr of finely dis py. Ironcarb in veins also(?).		Vein @ 28° to CA. Tr dis py.	5081	10.82-11.19	0.37	3	0.9	256	41	
	12.20 m. Fault @ 55° to CA.		Fault @ 55° to CA.								
12.91 - 23.42	Andesite porphyry(?) (subvolcanic).										
~ 3 4 7 6	12.72 - 13.34 m. Alt'd diorite/ andesite porphyry. Dk gy grn in color. Locally intensely epidot- ized and silicified; lightly (iron?) carb. Tr of py in areas of intense alt'n.	epidote, qtz and carb	Tr py.	5082	12.72-13.34	0.62	1	0.1	10	21	
	14.25 - 14.65 m. Subvolcanic(?). Dk grn in color. Intensely silicified and epidotized with mnr (iron?) carb. Alt'n zone @ 12° to CA. No visible mineralization.	epidote, qtz and carb		5083	14.25-14.65	0.40	1	0.2	4	22	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: June 24, 1988 Hole No.: CA88-3 Page 2 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.91 - 23.42 (cont.)	15.17 - 15.83 m. Dk grn alt'd and sheared(?) subvolcanic(?) with veins filled with epidote and qtz @ 18° and subparallel to CA (2-3 mm). Tr to 2% finely dis py. Iron-carb alt'n(?).		Veins @ 18° to sub- parailel to CA. Tr to 2% dis py.	5084	15.17-15.83	0.66	1	0.1	121	30	
	16.06 - 16.36 m. Sheared and alt'd subvolcanic(?) contains 2.7 cm wide epidote alt'n zone @ 14° to CA with the shear @ approx. 30° to CA. Tr of dis py in alt'n zone.	epidote	Alt'n zone @ 14° to CA. Shear @ 30° to CA. Tr dis py.	5085	16.06-16.36	0.30	3	0.4	108	48	
	17.14 - 17.63 m. Dk grn alt'd subvolcanic(?) with epidote-qtz-carb filled veins @ 45° and 18° to CA. Tr of dis py in veins (1-5 mm).		Veins @ 45° and 18° to CA. Tr dis py.	5086	17.14-17.63	0.49	3	0.9	213	21	
	17.89 - 18.53 m. Dk grn subvolcanic(?). Numerous stringers of yellow-white qtz @ 4°, 13° and 22° to CA. Tr of dis py, associated with stringers. Size of stringers 1-3 mm.		Stringers @ 4°, 13° and 22° to CA. Tr dis py.	5087	17.89~18.53	0.64	1	0.1	118	21	
	18.53 - 18.77 m. Alt'd dk grn sub- volcanic(?). Stringers @ 17° and 24° to CA (<0.5-3 mm). Tr of finely dis py and po; associated with veins. Veins filled with gy- white qtz and iron-carb(?).		Stringers @ 17° and 24° to CA. Tr py	5088	18.53-18.77	0.24	1	0.3	85	17	
	18.77 - 19.44 m. Dk grn alt'd sub- volcanic. Stringers @ 30° and 82° to CA of qtz and iron-carb(?). Tr of py adjacent and in veins.		Stringers @ 30° and 82° to CA. Tr py.	5089	18.77-19.44	0.67	1	0.4	168	32	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: June 26, 1988 Hole No.: CA88-3

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.91 - 23.42 (cont.)	19.44 - 19.84 m. Dk grn alt'd subvolcanic(?) with stringers @ 32° to CA (approx. 3 mm). Tr of dis py in veins.		Stringers @ 32° to CA. Tr dis py.	5090	19.44-19.84	0.50	1	0.1	76	10	
	20.30 m. Fault(?) subparallel to CA.										
	22.12 - 22.37 m. Alt'd subvolcanic (grn) with blebby qtz veins and patches of iron-carb @ approx. 33° to CA. Contains 2-3% dis py throughout and 1% po in veins.		Veins @ 33° to CA. 2-3% dis py, 1% cp.	5091	22.12-22.37	0.25	7	0.6	274	58	
	22.37 - 22.87 m. Dk grn andesite with feldspar phenocrysts. Randomly orientated hairline frcts filled with qtz and iron-carb. Fault @ 30° to CA. Tr of finely dis py in frcts.		Fault @ 30° to CA. Tr dis py.	5092	22.37-22.87	0.50	1	0.3	142	9	
	22.87 - 23.42 m. Dk grn andesite with feldspar phenocrysts. Stringers @ 15° to CA filled with qtz and epidote. Foliation @ 32° to CA. Locally, tr to 3% dis py, dominantly parallel with foliation.		Stringers @ 15° to CA. Foliation @ 32° to CA. Tr to 3% dis py.	5093	22.87-23.42	0.55	2	0.6	256	20	
23.42 - 24.63	Dk grn, med to fine-grained, alt'd diorite with veins of qtz and iron-carb @ 12° to CA (approx. 4 mm).  Mafic minerals have alt'd to chlorite. Contact @ 26° to CA.		Ctc @ 26° to CA.								
24.63 - 29.30	Dk grn, fine-grained, andesite with qtz, carb and iron-carb filled veins @ 27°, 70°, 89° and 24° to CA. Fault @ 35° to CA.										·



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 26, 1988 Hole No.: CA88-3 Page 4 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
24.63 - 29.30 (cont.)	27.15 - 27.36 m. Dk grn andesite. Intensely alt'd; silicified and epidotized. Gy qtz vein @ 54° to CA. Tr of finely dis py.	qtz and epidote	Vein @ 54° to CA. Tr dis py.	5094	27.15-27.36	0.21	5	0.1	24	2	
29.30 - 29.57	Dk grn, fine-grained diorite with qtz-carb filled stringers and patchy epidote alt'n. Contact @ 65° to CA.		Ctc @ 65° to CA.								
29.57 - 57.66	Dk grn, fine-grained andesite with whitish grn feldspar phenocrysts (euhedral-subhedral) ranging from 1-3.5 mm. Contact @ 59° to CA. Frcts (1-3 mm) @ 31°, 37°, 21° and 70° to CA.		Ctc @ 59° to CA.								
	34.51 - 35.66 m. Alt'd andesite. Chlorite and patchy-intense epidote alt'n. Veining @ 37° to CA (3 to 10 mm) filled with epidote and qtz. Locally up to 5% py in masses (10 mm) in epidote alt'd veins.	chlorite and epidote	Veining @ 37° to CA. Up to 5% py in alt'd zones.	5095	34.51-35.66	1.15	12	0.9	393	39	
	36.08 - 36.67 m. Alt'd diorite(?).										
	37.09 - 37.44 m. Andesite with feldspar phenocrysts(?). Gy qtz vein (13 mm) @ 26° to CA with mnr amounts of epidote alt'n. Mnr qtz-carb veins @ 44° to CA (1-3 mm). Tr to 2% dis py on frct surfaces.	epidote	Vein @ 26° to CA. Stringers @ 44° to CA. Tr to 2% dis py.	5096	37.09-37.44	0.35	6	0.1	33	15	
	37.44 - 37.79 m. Andesite porphyry with 12 mm vein of qtz and iron-carb @ 20° to CA. Tr of dis py in vein.		Vein @ 20° to CA. Tr dis py in vein.	5097	37.44-37.79	0.35	2	0.1	43	9	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: June 26, 1988 Hole No.: CA88-3

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
29.57 - 57.66 (cont.)	38.73 - 39.07 m. Alt'd andesite(?). Epidotized and silicified. Vein (3 cm) @ 38° to CA. Alt'n is parallel to vein orientation. Tr of dis py in areas of alt'n.		Broken core. Vein @ 38° to CA. Tr dis py.	5098	38.73-39.07	0.20	2	0.1	102	29	
	39.07 - 39.30 m. Alt'd diorite.										
	39.30 - 39.81 m. Foliated diorite @ 24° to CA.		Foliation @ 24° to CA.								
	39.81 - 57.66 m. Andesite with feldspar phenocrysts. Contact @ 26° to CA.										
	46.79 m. Fault @ 6° to CA.										
	48.53 - 50.35 m. Dk grn, fine- grained andesite; no phenocrysts. Numerous hairline frcts @ 16°, 42°, 36° and 45° to CA. Patchy epidote alt'n. Tr to 3% finely dis py mostly as frct fill. Silicified.	epidote and qtz	Frets @ 16°, 42°, 36° and 45° to CA. Tr to 3% py.	5099	48.53-50.35	1.82	1	0.2	84	11	
	50.75 - 51.36 m. Alt'd diorite(?).		Shear @ 12° to CA.								
	53.67 - 53.80 m. Andesite feldspar porphyry sheared @ 12° to CA with large (1-3 cm) pockets of qtz. Tr of finely dis py.		Tr dis py.	5100	53.67-53.80	0.13	1	0.1	58	3	
	53.91 ~ 53.96 m. Fault @ 53° to CA.										
57.66 - 67.73	Med to fine-grained, alt'd, grn diorite. Contact @ 17° to CA. Poorly developed foliation @ approx. 30° to CA. Veins (2-4 mm) @ 45°, 12° and 52° to CA filled with qtz and iron-carb(?).		Ctc @ 17° to CA. Foliation @ 30° to CA.								



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 26, 1988 Hole No.: CA88-3 Page 6 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
57.66 - 67.73	65.62 - 65.58 m. Fault @ 26° to CA.		Fault 26° to CA.								
(cont.)	66.61 - 67.61 m. Alt'd diorite. Intensely epidotized with veins @ 40° and 12° to CA (approx. 4 mm) filled with qtz and epidote. Tr of dis py in alt'd regions of rock.	epidote	Veins @ 40° and 20° to CA. Tr dis py.	5101	66.61-67.61	1.00	1	0.1	70	2	
67.73 - 74.10	Alt'd andesite feldspar porphyry. Intensely epidotized and silicified with veins @ 36°, 20° and 30° to CA (3-5 mm) filled with epidote and carb-qtz veins.										
	67.73 - 68.75 m. Alt'd andesite(?). Intensely epidotized and silicified. Veins of epidote and qtz-carb @ 23°, 15° and 8° to CA. Qtz-carb occurs in blebs 1-4 cm in size. Tr of finely dis py.	epidote and qtz	Veins @ 23°, 15° and 8° to CA. Tr dis py.	5102	67.73-68.75	1.02	1	0.1	161	16	
	69.19 - 69.95 m. Alt'd andesite porphyry. Intensely epidotized, silicified and chloritized with epidote veins @ 15°, 34° and 44° to CA. Tr of finely dis py.	epidote, qtz and chlorite	Veins @ 15°, 34° and 44° to CA. Tr dis py.	5103	69.19-69.95	0.76	1	0.1	1	24	
	69.95 - 70.37 m. Alt'd andesite feldspar porphyry. Intensely silicified, and epidotized. Moderately chloritized. Tr to 3% py masses (2-3 mm) and cubic py (1 mm).	qtz and epidote	Tr to 3% py masses and cubes.	5104	69.95-70.37	0.42	4	0.1	11	48	
	70.37 - 71.74 m. Alt'd andesite. Locally, intensely epidotized and silicified; with numerous x-ctg hairline frcts. Tr amounts of dispy.	epidote and qtz	Tr dis py.	5105	70.37-71.74	1.37	1	0.1	20	10	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 26, 1988 Hole No.: CA88-3 Page 7 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
67.73 - 74.10 (cont.)	71.74 - 72.24 m. Alt'd andesite. Intensely epidotized and silicified. Qtz-carb vein (6 mm) parallel to CA. Approx. 3% py masses within vein (2-3 mm) and a tr of cp.	qtz and epidote	Vein parallel to CA. 3% py masses. Tr dis cp.	5106	71.74-72.24	0.50	4	0.4	171	13	383 Zn
	72.24 - 73.10 m. Alt'd andesite porphyry. Locally intensely epidotized and silicified. Moderate chloritization. Veining @ 12° to CA. Tr of dis py.	epidote, qtz and chlorite	Vein @ 12° to CA. Tr dis py.	5107	72.24-73.10	0.86	1	0.1	42	9	
74.10 - 81.38	Ctc @ 20° to CA. Med to fine- grained, grn diorite, with dk grn fine-grained volcanic(?) xenoliths. Frcts; filled with qtz-carb and/or epidote @ 33°, 55° and 49° to CA.										
	79.12 - 79.32 m. Alt'd diorite. Locally epidotized and silicified. Cut by 3-4 mm qtz-carb veins @ 45° and 10° to CA. Tr of dis py in veins.	epidote and qtz	Tr dis py.	5108	79.12-79.32	0.20	1	0.1	2	33	
	79.75 - 80.24 m. Grn, fine-grained, xenolith(?).										
	79.95 - 80.05 m. Contains 4.5 cm wide vein @ 40° to CA filled with qtz and patches of epidote (0.5 - 4 cm). Tr of dis py.		Vein @ 40° to CA. Tr dis py.	5109	79.95-80.05	0.10	1	0.1	17	3	

81.38 E

EOH



MPH CONSULTING LIMITED Project: Contact Au

Project: Contact Ad Project No.: V248-3 Client: Parallax Development Corp. Length (m): 79.25 Dip : -45° Azimuth : 270°

Core Size : NQ

Casing : 1.83 m

Grid: McNeil Peninsula L2+45N, 1+90E

L2+45N, 1+90E Collar elev.: 68 m Remarks: Sample nos.

5835 to 5839

Drilled: June 11-12/88 Contractor : Burwash Logged by : C. Naas

Date logged: July 17/88

Objective: See drill hole CA88-4 summary in text of report.

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Hole No.: CA88-4

Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 1.83	Casing										
1.83 - 79.25	Diorite. Med-grained diorite to fine-grained slightly more mafic diorite with slight to mod foliation. Diorite is locally alt'd to epidote, qtz, and carb. Epidote, qtz, and carb stringers and veins are common. Rare volcanic xenoliths(?) are gy, fine-grained tuffs/flows(?). Tr py is common throughout, especially in the volcanic rocks.										
	23.61 - 24.21 m. Otz vein @ 25° to CA.	qtz and carb	Tr py.	5835	23.61-24.21	0.60	4	0.1	19	3	
	28.91 - 29.41 m. Qtz, epidote and carb stringers.	qtz, carb and epidote	Tr to 1% py.	5836	28.91-29.41	0.50	1	0.3	183	43	
	34.18 - 34.36 m. Qtz, epidote and carb stringers.	qtz, carb and epidote	1% py.	5837	34.18-34.36	0.18	5	0.5	136	31	
	35.76 - 36.21 m. Qtz, epidote and carb stringers.	qtz, carb and epidote	1% py.	5838	35.76-36.21	0.45	1	0.1	9 .	27	
	36.21 - 36.96 m. Qtz, epidote and carb stringers.	qtz, carb and epidote	1% py.	5839	36.21-36.96	0.75	2	0.4	122	53	
79.25	ЕОН										



MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 78.64

Dip : -70° Azimuth : 270° Core Size : NQ

Casing : 1.83 m

Grid: McNeil Peninsula L2+45N, 1+90E

Collar elev.: 68 m Remarks: Sample nos. 5840 to 5842 Drilled: June 12-13/88 Contractor : Burwash

Logged by : C. Naas Date logged: July 17/88 Objective: See drill hole CA88-5 summary in text of report.

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Hole No.: CA88-5

Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu PPm	As ppm	Other ppm
0 - 1.83	Casing										
1.83 - 78.64	Med-grained diorite to fine-grained slightly more mafic diorite. Diorite is locally alt'd to epidote, qtz and carb. Epidote, qtz and carb veining is common. Volcanic xenoliths(?) are rare. Xenoliths(?) are grn, fine-grained tuff/flow(?). Tr py is common, especially in the volcanic clasts. Both the diorite and volcanics show a slight to mod foliation.										
	24.00 - 24.35 m. Extreme qtz + epidote alt'n of diorite. Pale grn diorite has no original textures.			5840	24.00-24.35	0.35	1	0.1	29	3	
	29.02 - 29.32 m. Qtz vein accompanied by intense epidote and carb stringers. Sulphides found in qtz vein. Qtz vein 10 cm wide at 60° to CA.		Tr to 1% py.	5841	29.02-29.32	0.30	1	0.1	22	21	
	30.72 - 31.07 m. Same as above.		Tr to 1% py.	5842	30.72-31.07	0.35	1	0.1	8	50	

78.64

EOH



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MPH CONSULTING LIMITED Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 81.38 Dip : -45° Azimuth : 270°

Casing : 3.05 m

Core Size : NQ

Grid: McNeil Peninsula L3+55N, 2+90E

Collar elev.: 42 m
Remarks: Sample nos.

5110 to 5154

Drilled: June 13-15/88 Contractor: Burwash Logged by: G. Yip Date logged: June 20/88 Objective: See drill hole CA88-6 summary in text of report.

Hole No.: CA88-6 Hole Survey Type: None Depth Dip Azi

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 <del>-</del> 3.05	Casing										
3.05 - 6.29	Alt'd dk gy-grn folded diorite. Intensely epidotized.		Broken. Foliation 17° to CA.								
6.29 - 62.10	Dk gy, very fine-grained speckled andesite(?). Locally porphyritic with subhedral - euhedral feldspars ranging from 1-4 mm, intensely epidotized, qtz-carb-epidote vnlts @40°, 25° and 58° to CA, shears @32°, 42° and 45° to CA. Within are pockets of med to fine-grained intrusive with a poorly developed gneissic fabric. Locally may contain xenoliths (>15 cm) 40-60% anhedral - euhedral feldspars ranging from 1-4 mm, 30-50% dk grn anhedral mafics ranging from 0.5 - 2.5 mm (generally alt'd to chlorite) and a maximum of 10% anhedral qtz grains <1.5 mm.										
	4.53 - 4.83 m. Dk gy, alt'd, fine-grained diorite(?) as above. Cut by epidote-carb filled frcts @ 35° and 45° to CA (1-3 mm). Chlorite alt'n of host. Tr of dis py within epidotized rock.	epidote and chlorite	Broken. Tr of dis	5110	4.53-4.83	0.30	5	2.7	19	18	
	6.29 - 7.12 m. Fault @ 35° to CA also contact between diorite (see 4.53 - 4.83) and a dk gy speckled, porphyritic andesite(?).										•

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MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 20, 1988 Hole No.: CA88-6 Page 2 of 12

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 cont.)	7.60 - 7.61 m. Shear(?) @ 61° to CA with massive gy-grn qtz-carb and epidotized margins. Fewer porphyrys.										
	7.03 - 8.23 m. Alt'd and foliated andesite as above. Intensely epidotized and silicified. Lightly carbonatized. Epidote filled frcts @ 17°, 23°, 44°, 35° and 55° to CA (0.5-2.5 mm). Tr to 5% finely dispy. Foliation @ approx. 20° to CA.	epidote, qtz and carb	Frcts @ 17°, 23°, 35° and 44° to CA. Foliation @ 20° to CA. Tr to 5% dispy.	5111	7.03-8.23	1.20	3	0.2	53	33	
teett 1 aa 3 1 F f M i 1 aa 1 c e	10.27 - 11.28 m. Foliated diorite with xenoliths and randomly orientated hairline frcts filled with epidote. Foliation approx. 2-3° to CA. Chlorite alt'n of mafics.	chlorite	Foliation @ 2-3° to CA.								
	11.28 - 11.88 m. Grading into andesite contact not visible, with 3-5% feldspar porphyrys.		Broken core.								
	12.72 - 12.77 m. Shear @ 44° to CA. Fewer porphyrys.		Broken core. Shear @ 44° to CA.								
	14.20 - 14.81 m. Med grn, alt'd fine-grained andesite(?) as above. Mod epidotized and intensely chloritized. Tr to 2% finely dis py.	epidote and chlorite	Broken core. Tr to 2% dis py.	5112	14.20-14.81	0.61	1	0.2	29	10	
	14.81 - 15.31 m. Med to light grn alt'd fine-grained andesite(?). Intensely epidotized and mod chloritized. Weak banding of epidote alt'n and carb @ 12° to CA. Tr of finely dis py.	epidote and chlorite	Banding @ 12° to CA. Tr dis py.	5113	14.81-15.31	0.50	1	0.2	1	49	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	17.19 - 18.59 m. Dk grn, fine- grained, porphyritic andesite with 5-7% feldspar phenocrysts.										
1 1 8 2 2 8 8 2 8 8 8 8 8 8 8 8 8 8 8 8	18.29 - 18.74 m. Andesite as above. Med to lt grn, alt'd andesite. Mod intensely epidotized and intensely silicified. Frcts (approx. 2 mm) @ 23° to CA. Filled with gy-white qtz-carb; walls of host are alt'd to chlorite and/or epidote. Tr of finely dis py.	epidote and qtz	Frcts @ 23° to CA. Tr dis py.	5114	18.29-18.74	0.45	8	0.8	235	19	
	18.59 - 21.67 m. Dk gr fine-grained andesite.										
	20.31 - 20.65 m. Lt grn epidotized andesite.										
	20.72 - 20.75 m. Shear @ 61° to CA with 12 mm patches of qtz and mnr amounts of chlorite.										
	21.37 - 21.69 m. Gy-grn alt'd andesite(?) as above. Very intensely carb. Mod epidotized and silicified. Mineralization occurs along the boundary between the very intensely carb andesite (gy-white) and the mod carb andesite (grn). Contains 3-5% dis py.	carb, epidote and qtz	3-5% dis py.	5115	21.37-21.69	0.32	2	0.7	161	19	
	20.75 - 22.32 m. Porphyritic andesite with a poorly defined foliation.										



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length	Au ppb	Ag ppm	Cu ppm	As ppm:	Other ppm
6.29 - 62.10 (cont.)	22.32 - 22.70 m. Sheared andesite(?) with 2.5 cm pockets intrusive. Shear @ 50-63° to CA. Mod chlorite alt'n and mnr epidotization.										
	22.70 - 24.20 m. Med grn aphanitic andesite as above. Mnr foliation defined by patches of chlorite (3 mm) @ 52° to CA.										
	24.20 - 24.59 m. Medium-grained diorite(?) with fine-grained, rounded xenoliths (up to 5 cm).										
2 2 2 2 2 3 1 1 1	24.59 - 37.38 m. Med grn, fine- grained andesite as above.										
	26.66 - 27.04 . Dk grn andesite as above. Mnr amounts of chlorite and epidote alt'n. Contains 5-7% dis py on frct surfaces.	chlorite and epidote	5-7% dis py.	5116	26.66-27.04	0.38	6	1.1	382	45	
	27.88 - 28.32 m. Med grn andesite as above with numerous hairline frcts filled with epidote. Host is chloritized and locally intensely epidotized. Banding of alt'n @ 64° to CA. Contains 3-5% dis py in host and as frct fill.	epidote and chlorite	Alt'n @ 64° to CA. 3-5% dis py in fret and host.	5117	27.88-28.32	0.44	<b>22</b>	0.5	148	29	
	28.64 - 29.30 m. Med grn andesite as above. Patchy epidote alt'n of host, and silicification. Frcts (<0.5 mm) are filled with epidote @ 74°, 46° and 29° to CA. Tr to 3% dis py with approx. 5% dis py in frcts.	epidote and qtz	Frcts @ 74°, 46° and 29° to CA. Tr to 3% dis py in host; 5% dis py in frct.	5118	28.64-29.30	0.56	1	0.5	179	17	588 2



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	30.73 - 32.49 m. Med grn andesite as above. Silicified and locally epidotized. Hairline frcts filled gy qtz and/or epidote and localized patches of chlorite (0.5-2 mm). Contains 2-3% dis py.	qtz and epidote	Broken core. 2-3% dis py.	5119	30.73-32.49	1.76	1	0.5	152	36	
	32.49 - 33.85 m. Alt'd andesite as above. Silicified, carb, epidotized and patchy chloritization. All is localized, to various degrees. Contains 3-5% dis and cubic py throughout.	qtz, carb, epidote and chlorite	Broken core. 3-5% dis & cubic py.	5120	32.49-33.85	1.36	ì	0.1	117	37	
	34.35 - 34.84 m. Andesite as above with $1-2$ mm patches of chlorite.										
3 a t. f. 3 d. L. t. c. 3 a 8	35.24 - 35.66 m. Intensely alt'd, gy-white andesite(?).										
	35.66 - 36.27 m. Gy-white recryst- alized limestone/intense carb. Con- tact @ 44° to CA. Contains 2-3% finely dis py.	carbonate	Contact @ 44° to CA. 2-3% dis py.	5121	35.66-36.27	0.61	1	0.2	102	7	
	36.27 - 36.63 m. Medium-grained dioritie as above. Contact with Limestone @ 20°. Foliation @ 15° to CA.		Contact @ 20° to CA. Foliation @ 15° to CA.								
	36.63 - 37.66 m. Med grn, fine-grained andesite as above.										
	37.66 - 37.83 m. Med grain diorite as above.										
	37.83 m. Contact @ 65° to CA.		Contact @ 65° to CA.								
:	37.83 - 38.36 m. Aphanitic andesite as above.										



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10	38.36 m. Contact @ 34° to CA.		Contact @ 34° to CA	•							
(cont.)	38.36 - 39.07 m. Med-grained diorite as above.										
	39.07 - 40.08 m. Med grn andesite as above.										
	39.16 m. Fault @ 65° to CA.		Fault @ 65° to CA.								
	40.08 - 40.68 m. Medium-grained dioritic intrusive, in the form of non-descriptive masses within the andesite (5-10 cm).										
4 a w e	40.68 - 62.02 m. Med to dk grn andesite as above. Locally alt'd with increasing number of qtz and epidote stringers.										
	43.89 - 44.79 m. Med to dk gy-grn alt'd andesite(?). Intensely silicified and locally mod to intensely epidotized. Alt'n is banded(?) @ 37-49° to CA. Contains 7-10% finely dis py and pyritic masses (1-5 mm).	qtz and epidote	Banding 37-49° to CA. 7-10% dis & masses of py.	5122	43.89-44.79	0.90	1	1.8	602	36	447 Zn
	44.79 - 45.83 m. Dk gy alt'd andesite(?) as above. Intensely epidotized and silicified. Locally feldspar fragments(?) alt'd to epidote (1-9 mm) and blebs of qtz with diffuse boundaries (2-5 mm). Contains 5-7% finely dis py.	epidote and qtz	5-7% dis py.	5123	44.79-45.83	1.04	6	1.3	409	55	817 Zn



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Date: June 20, 1988 Hole No.: CA88-6 Page 7 of 12

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m_	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	46.49 - 52.57 m. Dk gy andesite as above with 3-5% greenish-white euhedral to subhedral feldspar phenocrysts (1-18 mm) and blebs of grey-white qtz (1-3 mm).										
	46.76 - 46.92 m. Dk gy andesite with feldspar phenocrysts as above (see 46.49-52.57 m). Cut by hairline frcts @ 76° and 64° filled with greenish-white qtz or epidote. Tr to 3% finely dis py; generally associated with phenocrysts.	epidote	Frets 76° and 64° to CA. Tr to 3% dis py.	5124	46.76-46.92	0.16	2	0.4	101	60	609 Zn
	47.17 - 47.84 m. Dk gy, alt'd andesite with feldspar phenocrysts (see 46.49-52.57 m). Alignment of phenocrysts (2-3 mm) @ approx. 30° to CA. Contains 2-3% finely dis py and locally up to 5% po in masses. Mnr silicification.	epidote and qtz	Phenocrysts aligned @ 30° to CA. Veins @ 47° to CA. 2-3% dis py. Locally 5% po.	5125	47.17-47.84	0.67	1	1.0	244	71	
	47.84 - 48.32 m. Dk gy andesite as above with feldspar phenocrysts. Mod to intensely epidotized and silicified. Qtz-carb-epidote vein Q 45° to CA (3-4 mm). Contains 3-5% finely dis py and up to 7% on frct surfaces.	epidote and qtz	Vein @ 45° to CA. 3-5% dis py. Up to 7% on fret surfaces.	5126	47.84-48.32	0.48	1	0.7	214	110	
	48.32 - 48.55 m. Dk gy andesite as above with feldspar phenocrysts. Frcts (3-5 mm) filled with qtz-epidote; randomly orientated. Contains 3-5% finely dis py, 3% po and a tr of asp in qtz-epidote filled frcts.	<b>epidote</b>	3-5% dis py, 3% po, tr asp.	5127	48.32-48.55	0.23	1	0.7	214	110	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 20, 1988 Hole No.: CA88-6 Page 8 of 12

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	48.55 - 49.27 m. Dk gy alt'd andesite(?) as above. Very intensely silicified. Mod to intensely epidotized. Fault @ 35° to CA and a vein @ 42° to CA (3 mm). Contains 7-10% finely dis py and a tr to 2% po.	gtz and epidote	Fault 35° to CA. Vein @ 42° to CA. 7-10% dis py, tr to 2% po.	5128	48.55-49.27	0.72	19	1.5	406	156	
	49.27 - 49.51 m. Med to dk grn alt'd andesite(?) as above. Intensely epidotized. Contains 3-5% dis py; tr to 3% po blebs (3 mm); up to 10% py on frct surfaces.	epidote	Broken core. 3-5% dis py, 3% po, tr sp.	5129	49.27-49.51	0.24	8	1.6	559	229	4422 Zn
	49.51 - 50.12 m. Dk gy andesite as above, grading into feldspar phenocrysts with patches of granodiorite(?) (4-5 cm). Intensely silicified and mod epidotized. Contains 5-7% dis py and a tr to 3% po (locally).	qtz and epidote	5-7% dis py, tr to 5% po.	5130	49.51-50.12	0.61	5	0.9	262	101	800 Zn
	50.12 - 50.55 m. Dk gy-grn andesite with feldspar phenocrysts and blebs of qtz. Intensely silicified and carb. Frcts (1-3 mm) filled with epidote @ 65°, 54° and 60° to CA. Locally 3-5% dis py and py cubes.	epidote and qtz	Frcts @ 64°, 54° and 60° to CA, 3-5% dis & cubic py.	5131	50.12-50.55	0.43	1	0.3	44	60	
	50.55 - 51.00 m. Dk gy andesite as above with feldspar phenocrysts. Frets filled with qtz, carb and epidote. Contains 5% dis py; locally 3% dis po.	qtz and epidote	Broken core. 5% dis py. Locally 3% dis po.	5132	50.55-51.00	0.45	1	0.7	160	76	1067 Zn



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: June 20, 1988 Hole No.: CA88-6 Page 9 of 12

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	51.00 - 52.43 m. Dk gy andesite(?) as above with feldspar phenocrysts. Epidote filled frcts @ 54° and 78° to CA (1-2 mm). Intensely silicified with patchy epidote alt'n (approx. 3 mm). Contains 5-7% finely dis py throughout.		Broken core. Frcts @ 54° and 78° to CA. 5-7% dis py.	5133	51.00-52.43	1.43	7	0.9	265	139	
	52.43 - 53.04 m.		Pebbly								
	53.16 - 53.80 m. Med grn andesite as above. Intensely silicified and mod epidotized and carbonatized. Qtz-carb vnlts @ 23°, 36° and 43° to CA (1-3 mm). Approx. 3% dis poin host and as frct fill and tr py.	qtz and epidote	Vnlts @ 23°, 36° & 43° to CA. 3% dis po, tr py.	5134	53.16-53.80	0.64	10	0.3	100	15	
	53.80 - 54.15 m. Med grn, alt'd andesite(?) as above. Intensely silicified, mod epidotized with mnr amounts of carb. Contains 3% po in masses (approx. 1-25 mm).	qtz, epidote and carb	3% po in masses.	5135	53.80-54.15	0.35	1	0.4	291	6	
	54.15 - 54.82 m. Med grn, alt'd	qtz, epidote and	Banding @ 47-55°	5136	54.15-54.82	0.68	775	0.6	73	5	
	andesite(?). Intensely silicified, epidotized and locally carb. Alt'n appears to be banded @ 47-55° to CA. Contains 3% dis py and a tr of asp.	carb	to CA. 3% dis py, tr asp.		Au assay 0.0	028 oz/to	on (0.9	6 g/t)			
	54.82 - 55.97 m. Alt'd. Intensely epidotized, silicified and local-ized carbonatization. Randomly orientated hairline frcts. Contains 2% asp and tr of py.	qtz, epidote and carb	Broken core. 2% asp, tr py.	5137	54.82-55.97	1.15	1	0.2	12	855	
	55.97 - 56.76 m. Alt'd andesite(?). Intensely silicified and epidotized. Contains 3-5% po in masses ranging 1-5 mm.	qtz and epidote	3-5% po.	5138	55.97-56.76	0.79	1	0.4	89	16	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
6.29 - 62.10 (cont.)	56.76 - 57.70 m. Alt'd andesite(?). Banding defined by epidote alt'n and qtz layers @ 52° to CA. Contains 3% po in masses, approx. 3% py as layers in banding (mm scale).	epidote and qtz	Broken core. Banding @ 52° to CA. 3% py, 3% po.	5139	56.76-57.70	0.94	2	0.6	126	113	
	57.70 - 58.34 m. Alt'd andesite(?). Alt'n and mineralization occurs in bands @ 52° to CA. Contains 3% poin masses (1-9 mm). Tr amounts of cp (banding in mm scale).	epidote, qtz and carb	Banding @ 52° to CA. 3% po, tr cp.	5140	57.70-58.34 Ag assay 0.1		1 n (4.8	4.8 g/t)	1295	7	
	58.34 - 59.00 m. Alt'd andesite(?). Banding of alt'n @ 60° to CA (mm scale). Trace amounts of dis asp and cp. Contains 2% po in masses (approx. 3 mm) and 3% dis py.	epidote, qtz and carb	Banding @ 60° to CA. Tr asp & cp, 2% po in masses, 3% dis py.	5141	58.34-59.00	0.66	2	2.6	654	31	
	59.00 - 59.65 m. Alt'd andesite(?). Banded (mm scale) @ 58° to CA. Contains 2-3% finely dis py.	qtz, epidote and carb	Banding @ 58° to CA. 2-3% dis py.	5142	59.00-59.65	0.65	1	0.7	210	16	
	59.65 - 60.59 m. Alt'd andesite(?). Banding (mm scale) @ 65° to CA. Contains 3% po in masses (1-5 mm), tr amounts of dis py and cp.	qtz, epidote and carb	Banding @ 65° to CA. 3% po in masses, tr dis cp and py.	5143	59.65-60.59	0.94	205	2.0	431	16	
	60.59 - 61.04 m. Andesite. Locally epidotized 3-4% po in masses (1-6 mm), approx 3% dis and cubic py in host and as frct fill. Tramounts of cp.	epidote, qtz and carb	3-4% po, 3% dis and cubic py, tr cp.	5144	60.59-61.04	0.45	220	1.3	316	166	1088 Zn
62.10 - 66.92	Med to fine-grained diorite with gneissic textures and locally epidotized. Tr of finely dis py.	epidote	Foliation @ 37° to CA.								



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
62.10 - 66.92 (cont.)	62.19 - 62.36 m. Massive gy-white qtz vein @ 37° to CA. Random hairline frcts with epidote. Contains 1-2% dis py and tr of cp.	epidote	Vein @ 37° to CA. 1-2% dis py, tr cp.	5145	62.19-62.36	0.17	1	0.2	73	45	
	62.73 - 62.85 m. Alt'd andesite. Med grn with 2-3% dis py and a tr of cp. Epidote and qtz alt'n.	epidote and qtz	2-3% po, tr cp.	5146	62.73-62.85	0.12	1	0.3	75	58	
	62.85 - 62.97 m. Massive gy-white qtz vein @ 39° to CA. Contains l-2% cubic (approx. 1 mm) py along contact (3.5 cm wide).	epidote	Vein @ 39° to CA. 1-2% cubic py.	5147	62.85-62.97	0.12	1	0.1	82	23	
	63.81 - 64.31 m. Massive qtz veins @ 43° and 37° to CA (approx. 6 cm wide). Tr of dis py.	epidote	Vein @ 43° & 37° to CA. Tr dis py.	5148	63.81-64.31	0.50	2	0.8	164	45	
	64.94 - 65.00 m. Alt'n zone @ 45° to CA.		Alt. zone 45° to CA	•							
66.92 - 67.12	Alt'd andesite with numerous frcts (1-3 mm) filled with epidote. Tr to 2% dis py.	epidote and qtz	Broken core. Tr to 2% dis py.	5149	66.92-67.12	0.20	31	0.5	161	36	
	66.03 - 67.12 m. Dk gy andesite(?). Contact(?)/alt'n zone @ 29° to CA.		Contact @ 29° to CA	•							
67.12 - 68.08	67.12 - 67.42 m. Alt'd andesite(?) with blebs of dioritic intrusive. Contains 2-3% cp and tr of py in masses (1-3 mm).	epidote and qtz	2-3% cp, tr py.	5150	67.12-67.42	0.30	152	10.5	3126	113	757 Zn
	67.75 - 68.08 m. Alt'd andesite(?). Numerous randomly orientated vnlts filled with qtz-carb. Tr to 3% finely dis py.	qtz and epidote	Tr to 3% dis py.	5151	67.75-68.08	0.33	15	0.5	73	22	•

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Date: June 20, 1988

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
68.08 - 81.38	Med to fine-grained diorite with andesite packages (gneissose).										
	73.80 - 73.84 m. Shear @ 50° to CA.		Shear @ 50° to CA.								
	74.35 - 74.38 m. Shear @ 70° to CA.	•	Shear @ 70° to CA.								
	74.40 m. Foliation @ 60° to CA.		Foliation @ 60° to CA.								
	74.97 - 75.29 m. Qtz vein; size(?). Tr of finely dis py.		Broken core. Vein @ 44° to CA. Tr py.	5152	74.97-75.00	0.03	15	0.9	224	176	
	75.00 - 75.29 m. Refer to sample 74.97 - 75.29 m.		Broken core. Veins @ 44° to CA. Tr	5153	75.00-75.29	0.29	6	0.1	66	9	
	77.78 - 77.83 m. Qtz vein, 2.2 cm wide, @ 53° to CA. Tr of finely dis py.		Vein @ 53° to CA. Tr dis py.	5154	77.78-77.83	0.05	2	0.3	62	10	
31.38	ЕОН										



MPH CONSULTING LIMITED Project: Contact Au

Project: Contact Au
Project No.: V248-3
Client: Parallax
Development Corp.

Length (m): 73.00

Dip : -70° Azimuth : 270° Core Size : NQ

: 3.05 m

Casing

Grid: McNeil Peninsula L3+55N, 2+90E

Collar elev.: 42 m Remarks: Sample nos.

5332 to 5342, 5344 to 5393

Drilled: June 15-16/88 Contractor: Burwash

Logged by : G. Yip Date logged: July 5/88 Objective: See drill hole CA88-7 summary

in text of report.

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Hole No.: CA88-7

Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 3.05	Casing	•									
3.05 - 21.73	Dk grn, fine-grained andesite. Locally porphyritic with feldspar phenocrysts (1-3 mm). Stringers are generally epidotized. Mafics have generally alt'd to chlorite and feldspars to epidote. Some frcts are filled with carb.										
	6.62-7.10 m. Alt'd andesite. Dk grn; chloritized. Numerous x-ctg hairline frcts filled with epidote. Contains 2-3% finely dis py.	chlorite and epidote	2-3% dis py.	5332	6.62-7.10	0.48	5	0.3	72	44	
	8.70 - 8.82 m. Alt'd andesite. Med grn. Localized epidote alt'n in stringers @ 49° to CA. Chlor- ite alt'n of host.	epidote and chlorite	Veins @ 49° to CA. Tr dis py.	5333	8.70-8.82	0.12	1	0.2	3	10	
	17.58 - 17.90 m. Andesite. Dk grn with spotty epidote alt'n and stringers filled with epidote. Qtz vein (3 mm) @ 40° to CA with an epidote halo. Chlorite alt'n and silicification of host. Tr to 2% dis py.	epidote, chlorite and qtz	Vein @ 40° to CA. Tr to 2% dis py.	5334	17.58-17.90	0.32	1	0.3	48	16	
	18.79 - 19.12 m. Alt'd andesite. Greenish-brn. Intensely epidotized and silicified with garnet growth. Mildly carb. Tr of dis py.	epidote, qtz and garnet	Tr dis py.	5335	18.79-19.12	0.33	5	0.5	43	22	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
3.05 - 21.73 (cont.)	20.28 - 20.56 m. Andesite porphyry. Dk grn with subhedral feldspar phenocrysts (2-3 mm). Localized epidote alt'n, silicification and chloritization of host. Contains 2-3% dis py.	epidote, chlorite and qtz	2-3% dis py.	5336	20.28-20.56	0.28	1	0.7	144	17	
21.73 - 23.87	21.73 - 22.09 m. Recrystallized limestone, and 70% massive sulphides - skarn. Contains 90% massive po, 10% dis py and a trof asp(?).		90% massive po, 10% dis py, tr asp.	5337	21.73-22.09	0.36	7	3.4	1201	39	
	22.09 - 22.51 m. Recrystallized limestone. Dk gy and sugary. Tr of dis po, and to a lesser extent, py.		Tr dis po and py.	5338	22.09-22.51	0.42	1	0.3	19	5	
	22.51 - 22.79 m. Recrystallized limestone. Dk gy and sugary. Tr of dis po(?).		Tr dis po.	5339	22.51-22.79	0.28	1	0.5	15	6	
	23.51 - 23.87 m. Recrystallized limestone. Dk gy and sugary. Tr of finely dis py.		Tr dis py.	5340	23.51-23.87	0.36	1	0.3	13	4	
23.87 - 25.59	Andesite as above (see 3.05-21.73). Contact @ 90° to CA.										
	23.87 - 24.10 m. Alt'd andesite. Contact @ 90° to CA. Epidotized, chloritized and silicified. Mod carb. Tr to 2% finely dis py.	chlorite, epidote, qtz, and carb	Contact @ 90° to CA. Tr to 2% dis py.	5341	23.87-24.10	0.23	5	0.2	14	50	
25.59 - 27.22	Medium-grained diorite. Contact @ 25° to CA. Approx. 25% mafics (alt'd to chlorite) and 75% feld-spars. Tr of finely dis py.										



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
27.22 - 29.91	Dk grn, fine-grained andesite with qtz stringers (<0.5 mm) locally alt'd to epidote. Contact @ 51° to CA.										
29.91 - 30.49	Medium-grained diorite as above. Feldspars are alt'd to epidote and the mafics to chlorite. Contact @ 62° to CA.										
	29.91 - 30.28 m. Alt'd diorite. Feldspars have alt'd to epidote and the mafics to chlorite. Randomly orientated frcts (1-3 mm) filled with epidote. Tr of finely dis py.	epidote and chlorite	Tr dis py.	5342	29.91-30.28	0.37	12	0.1	3	20	
30.49 - 31.89	Dk grn, fine-grained andesite (see $3.05 - 21.73 \text{ m}$ ).										
31.89 - 32.92	Medium-grained diorite (see 25.59 to 27.22 m). Contact @ 35° to CA.										
32.92 - 55.62	Dk grn, fine-grained andesite (see 3.05 - 21.73 m) but with localized blebs of chlorite.										
	34.63 - 35.11 m. Dk grn andesite with qtz-carb vnlts @ 57°, 69° and 71° to CA. Chlorite alt'n and silicification. Contains 2-5% finely dis py on frct surfaces.	chlorite and qtz	Veins @ 57°, 69° and 71° to CA. 2-5% dis py.	5344	34.63-35.11	0.48	2	1.3	289	55	
	35.66 - 36.58 m. Lt grn, alt'd andesite(?). Broken core. Intensely epidotized and chloritized. Mod carb. Tr to 3% finely dis py.	epidote, chlorite and carb	Broken core. Tr to 3% dis py.	5345	35.66-36.58	0.92	1	0.5	103	23	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32-92 - 55.62 (cont.)	36.58 - 36.79 m. Gy-grn, alt'd andesite(?). Epidotized, silicified and mod carb. Tr of finely dis py.	epidote, carb and qtz	Tr dis py.	5346	36.58-36.79	0.21	3	0.1	7	7	
	37.03 - 37.46 m. Gy andesite porphyry with subhedral feldspar phenocrysts (1-5 mm). Lineation @ 61° to CA. Contains 4% finely dis py, parallel to lineation. Silicified.	qtz	Lineation @ 61° to CA. 4% dis py.	5347	37.03-37.46	0.43	2	1	398	32	
	38.19 - 38.37 m. Gy fine-grained, silicified andesite. Lineation @ 30° to CA. Contains 7% finely dispy.	qtz	Lineation @ 30° to CA. 7% dis py.	5348	38.19-38.37	0.18	1	2.7	1317	67	
	38.37 - 38.85 m. Gy silicified andesite. Contains 7-10% finely dis py.	qtz	7-10% dis py.	5349	38.37-38.85	0.48	1	1.2	604	23	
	38.85 - 39.22 m. Gy silicified andesite. Epidote filled stringers @ 52° and 65° to CA. Contains 7 to 10% finely dis py.	qtz	Stringers @ 52° and 65° to CA. 7-10% dis py.	5350	38.85-39.22	0.37	1	2.8	1000	43	
	39.22 - 39.61 m. Gy silicified andesite. Contains 3-5% dis py in clumps (1-6 mm).		3-5% dis py.	5351	39.22-39.61	0.39	3	3.4	922	42	
	40.00 - 40.28 m. Alt'd volcanic(?) with a blob of massive qtz; mafics alt'd to chlorite. Tr of finely dis py.	chlorite	Tr dis py.	5352	40.00-40.28	0.28	1	0.2	75	8	
	40.43 - 41.05 m. Lt grn alt'd volcanic. Epidotized and silicified. Carb filled frct @ 13° to CA. Tr of finely dis py.	epidote and qtz	Frets @ 13° to CA. Tr dis py.	5353	40.43-41.05	0.62	1	0.2	5	8	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm		
32.92 - 55.62 (cont.)	41.76 - 42.43 m. Gy-grn, alt'd volcanic. Epidotized, silicified and moderately carbonatized with localized chlorite alt'n. Tr of finely dis py.	epidote, qtz and carb	Tr dis py.	5354	41.76-42.43	0.67	12	0.2	17	26			
	42.43 - 43.03 m. Lt grn, alt'd volcanic. Intensely silicified and epidotized with localized chlorite alt'n. Mod to intensly carb. Tr of finely dis py.	qtz, epidote, carb and chlorite	Tr dis py.	5355	42.43-42.75	0.32	48	0.2	6	4			
	42.75 - 43.02 m. Alt'd medium- grained diorite. Feldspars alt'd to epidote and mafics to chlorite. Tr of finely dis py.	epidote and chlorite	Tr dis py.	5356	42.75-43.02	0.27	23	0.1	5	4			
	43.02 - 43.50 m. Lt grn, alt'd volcanic. Epidotized and silicified, locally intensely silicified. Mod to intensely carb. Tr of finely dis py.	epidote, qtz and carb	Tr dis py.	5357	43.02-43.50	0.48	44	0.1	7	8			
	43.50 - 44.06 m. Lt grn, alt'd intrusive. Epidotized and chlor-itized. Lt carb. Tr of finely dis py.	epidote, chlorite and carb	Tr dis py.	5358	43.50-44.06	0.56	84	0.1	5	11			
	44.06 - 44.23 m. Med grn, alt'd intrusive(?). Epidotized and chlor-	epidote, chlorite		5359	44.06-44.23	0.17	3570	0.3	9	2			
	itized. Mod carb. Tr of dis py. Visible gold.	and Card	patches <0.3 m.		Au assay 0.0	)96 oz/to	on (3.2	19 g/t)					
	44.16 - 44.33 m. Med grn, alt'd	epidote, chlorite	• •	5360	44.23-44.33	0.10	480	0.2	60	4			
	intrusive(?). Epidotized, chlor- itized and carb. Contains 3% dis po and a tr of py.	• •	- and carb py		ру•		Au assay 0.0	)14 oz/to	on (0.4	8 g/t)			



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32.92 - 55.62 cont.)	44.33 - 44.57 m. Carbonate with localized epidote and chlorite alt'n - skarn(?). Contains 2% finely dis po.	epidote and chlorite	2% dis po.	5361	44.33-44.57 Au assay 0.1	0.24 42 oz/to		0.1 7 g/t)	57	10	
	44.57 - 44.81 m. Dk gy carb. Contains 10-15% dis masses of po and a tr of py - skarn(?).		10-15% po, tr py.	5362	44.57-44.81	0.24	71	0.6	497	11	
	44.81 - 44.90 m. Dk gy carbonate. Locally epidotized. Contains 5% dis masses of po.	epidote	5% dis po.	5363	44.81-44.90	0.09	15	0.3	230	33	
	44.90 - 44.99 m. Dk gy, alt'd volcanic. Chloritized and locally epidotized. Contains 3-5% dis pomasses. Mod carb.	chlorite and epidote	3-5% dis po.	5364	44.90-44.98	0.08	93	0.2	91	6	
	44.99 - 45.29 m. Dk grn alt'd intrusive(?). Epidotized and chloritized. Mod carb. Contains 2% finely dis po.	epidote, chlorite and carb	2% dis po.	5365	44.98-45.28	0.30	4	0.3	53	49	
	45.29 - 45.33 m. Dk grn, alt'd volcanic. Banded @ 63° to CA. Silicified and carb. Locally epidotized. Contains 2% dis po.	qtz, carb and epidote	2% dis po.	5366	45.28-45.53	0.25	77	0.1	44	24	
	45.53 - 45.79 m. Dk gy-grn, alt'd volcanic. Epidotized and silicified. Numerous hairline frcts, some of which are filled with carb. Tr to 2% finely dis po.	epidote and qtz	Tr to 2% dis po.	5367	45.53-45.79	0.26	29	0.1	18	99	
	45.79 - 46.24 m. Lt grn, alt'd volcanic with blebs of qtz and numerous hairline frcts. Intensely epidotized and silicified. Tr of dis po.	epidote and qtz	Tr dis po.	5368	45.79-46.24	0.45	64	0.1	5	20	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32.92 - 55.62 (cont.)	46.24 - 47.52 m. Lt grn bx'd volcanic. Epidotized angular clasts with carb filling the interstices. Tr of finely dis po.  NB: Missing core.	epidote	Broken core. Tr dis po.	5369	46.24-47.52	1.28	105	0.1	10	25	
	47.71 - 47.99 m. Lt gy-grn alt'd volcanic. Intensely silicified and lightly carb. Numerous hairline frcts; some filled with carb. Contains 2-3% finely dis py.	qtz and carb	2-3% dis py	5370	47.71-47.99	0.28	8	0.4	93	34	811 Zı
	47.99 - 48.46 m. Lt grn-white alt'd volcanic(?). Very intensely silicified with vein @ 28° to CA (17 mm). Tr to 3% finely dis py. Possible iron-carb(?).	qtz and iron- carb(?)	Vein @ 28° to CA. Tr to 3% dis py.	5371	47.99-48.46	0.47	4	0.1	46	36	591 Zn
	48.46 - 49.12 m. Lt grn-yellow alt'd volcanic(?). Intensely silicified, iron-carb and patchy epidote alt'n. Qtz occurs as massive blebs. Tr to 2% finely dis py. Commonly associated with qtz blebs.	qtz, iron-carb and epidote	Tr to 2% dis py.	5372	48.46-49.12	0.66	6	0.4	126	35	374 Zı
	49.12 - 49.60 m. Lt gy-grn, alt'd volcanic(?). Intensely silicified. Contains 1-2% dis py.	qtz	1-2% dis py.	5373	49.12-49.60	0.48	10	0.4	49	20	1143 Zr
	49.60 - 49.93 m. Lt gy-grn, alt'd volcanic(?). Intensely silicified, iron-carb and patchy chlorite alt'n. Contains 2-3% dis py. Locally, mod carb.	qtz, iron-carb and chlorite	2-3% dis py.	5374	49.60-49.93	0.33	1	0.1	28	7	689 Zı



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32.92 - 55.62 (cont.)	49.93 - 50.00 m. Lt grn-gy, alt'd volcanic(?). Very intensely silicified. Host is alt'd to epidote. Locally carb. Tr of finely dis py.	qtz, epidote and carb	Tr dis py.	5375	49.93-50.00	0.07	1	0.1	9	24	422 Zn
	50.00 - 50.44 m. Lt grn, alt'd volcanic(?). Intensely silicified, locally carb, and patchy epidote alt'n. Tr to 3% dis py.	gtz, epidote and carb	Tr to 3% dis py.	5376	50.00-50.44	0.44	1	0.3	84	31	750 Zn
	50.44 - 50.78 m. Lt grn, alt'd volcanic(?). Very intensely silicified, mod epidotized and locally carb. Possible banding. Tr to 2% dis py; locally up to 5% dis py.	qtz, epidote and carb	Tr to 2% dis py, locally 5% py.	5377	50.44-50.78	0.34	11	1	354	59	
	50.78 - 51.02 m. Gy-white alt'd volcanic(?). Intensely silicified with localized epidote alt'n. Localized carb alt'n. Possible banding (mm scale) @ 39° to CA. Tr of finely dis py.	qtz, epidote and carb	Banding @ 39° to CA. Tr dis py.	5378	50.78-51.02	0.24	3	0.7	170	35	873 Zn
	51.02 - 51.85 m. Dk grn alt'd volcanic(?). Intensely silicified, chloritized. Banding; small scale folding(?). Mineralization follows banding @ 56° to CA. Tr to 4% finely dis py.	gtz and chlorite	Broken core. Banding @ 56° to CA. Tr to 4% dis py.	5379	51.02-51.85	0.83	3	0.3	137	49	
	51.85 - 52.01 m. Dk grn alt'd vol- canic(?). Intensely silicified, chloritized and locally epidotized. Localized banding @ 41° to CA. Con- tains 5% finely dis py throughout.	gtz, chlorite and epidote	Banding @ 41° to CA. 5% dis py.	5380	51.85-52.01	0.16	8	0.7	293	75	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32.92 - 55.62 (cont.)	52.01 - 52.47 m. Gy-grn alt'd volcanic. Intensely silicified and epidotized. Localized chlorite alt'n. Banding @ 55° to CA. Numerous hairline frcts perpendicular to banding. Tr to 2% finely dis py.	qtz, epidote and chlorite	Banding @ 55° to CA. Tr to 2% dis py.	5381	52.01-52.47	0.46	1	0.4	54	12	
	52.47 - 52.62 m. Massive qtz vein @ 56° to CA (11.4 cm). Iron-carb alt'n along margins. Hairline frcts are locally epidotized. Contains 2-3% dis py in and adjacent to frcts. Tr of dis py in qtz.	iron-carb and epidote	Vein @ 56° to CA. 2-3% dis py in frcts. Tr dis py in vein.	5382	52.47-52.62	0.15	1	0.3	94	47	
	52.62 - 53.24 m. Alt'd intrusive. Lt grn. Intensely silicified, epidotized and chloritized. Con- tains 3-5% dis py in masses (1- 2.5 mm).	qtz, epidote and chlorite	Broken core. 3-5% dis py in masses.	5383	52.62-53.24	0.62	1	0.5	11	68	
	53.24 - 53.39 m. Alt'd volcanic. Lt gy. Intensely silicified. Localized epidote and iron-carb alt'n. Tr of finely dis py.	qtz, epidote and iron-carb	Tr dis py.	5384	53.24-53.39	0.15	1	0.7	72	101	
	53.60 - 54.08 m. Alt'd volcanic. Lt grn-white. Very intensely sili- cified and epidotized. Locally carb. Tr to 3% finely dis py.	qtz, epidote and carb	Tr to 3% dis py.	5385	53.60-54.08	0.48	1	0.2	4	23	
	54.13 - 54.45 m. Gy-yellow alt'd diorite. Contact @ 50° to CA.										
	54.50 - 54.99 m. Alt'd volcanic. Med gy and banded @ 55° to CA (mm scale). Intensely silicified and epidotized. Contains 3-5% dis py in 1-2 mm layers parallel to banding.	qtz and epidote	3-5% dis py.	5386	54.50-54.99	0.49	1	0.3	107	23	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 5-6/88 Hole No.: CA88-7 Page 10 of 11

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
32.92 - 55.62 (cont.)	54.99 - 55.28 m. Alt'd volcanic. Intensely silicified, epidotized and chloritized. Banding @ 83° to CA (mm scale). Tr of dis py.	qtz, epidote and chlorite	Banding @ 83° to CA. Tr dis py.	5387	54.99-55.28	0.29	8	0.8	190	29	
55.62 - 65.92	Fine to medium-grained, med to dk grn diorite. Mafics alt'd to chlorite and feldspars to epidote. Contact @ 72° to CA.		Contact @ 72° to CA.								
	63.39 - 63.47 m. Contains 2 cm wide qtz vein @ 55° to CA. Patchy epidote alt'n. Tr of finely dis py.	epidote	Vein @ 55° to CA. Tr dis py.	5388	63.39-63.47	0.08	20	1.5	389	68	
65.92 - 67.31	Dk grn, fine-grained andesite with lenticular masses (1-2 mm) of chlorite @ 51° to CA. Fault @ 42° to CA.										
	66.16 - 66.27 m. Qtz vein @ 61° to CA. Spotty chlorite and epi-dote alt'n. Tr of finely dis py.	chlorite and epidote	Vein @ 61° to CA. Tr dis py.	5389	66.16-66.27	0.11	1	0.2	17	3	
67.31 - 73.00	Ned to fine-grained, gy-grn diorite. Mafics have alt'd to chlorite.										
	69.80 - 69.90 m. Contains 2 cm wide qtz vein @ 51° to CA. Local-ized chlorite alt'n and a tr of finely dis py.	chlorite	Vein @ 51° to CA. Tr dis py.	5390	69.80-69.90	0.10	34	0.2	126	2	
	70.34 - 70.42 m. Diorite with a 2 cm band of volcanics @ 49° to CA. Epidote alt'n of volcanics. Tr of finely dis py.	epidote	Band @ 49° to CA. Tr dis py.	5391	70.34-70.42	0.08	2	0.3	56	44	
	70.59 - 70.67 m. Contains 4.2 cm wide qtz vein @ 62° to CA. Epidote and iron-carb alt'n. Tr of finely dis py.	epidote and iron- carb	Vein @ 62° to CA. Tr dis py.	5392	70.59-70.67	0.08	1	0.1	40	28	٠

**MPH** 

MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 5-6/88 Hole No.: CA88-7 Page 11 of 11

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As pp⊞	Other ppm
67.31 - 73.00 (cont.)	71.13 - 71.27 m. Alt'd diorite. Intensely epidotized. Tr of finely dis py.	epidote	Tr dis py.	5393	71.13-71.27	0.14	1	0.3	10	11	317 2n
73.00	ЕОН										



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MPH CONSULTING LIMITED Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 77.42 Dip : -70° Azimuth : 278°

Casing : 0.61 m

Core Size : NQ

Grid: McNeil Peninsula L4+45N, 0+75E

Collar elev.: 44 m Remarks: Sample nos. 5155 to 5190, 5193 Drilled: June 16-17/88 Contractor : Burwash Logged by : G. Yip

Date logged: July 14/88

Objective: See drill hole CA88-8 summary in text of report.

Hole No.: CA88-8
Hole Survey Type: None
Depth Dip Azi

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	C11 ppm	As ppm	Other ppm
0 - 0.61	Casing										
0.61 - 7.36	Dk grn, fine-grained andesite. Anhedral mafic crystals (<0.5 mm) have alt'd to chlorite. Localized patches of medium-grained diorite. Again mafics have alt'd to chlorite. Feldspars have patchy epidote alt'n. Occassional stringers of qtz-carb.										
7.36 -	Med to dk grn, fine-grained diorite. Contact @ 73° to CA. Feldspars occur in unalt'd anhedral masses (1-6 mm). Mafics occur in anhedral to subhedral masses (1-3 mm).										
9.79 - 10.40	Dk grn, fine-grained andesite. Contact @ 34° to CA. Locally epi- dotized. (See 0.61-7.36 m.)										
10.40 - 12.73	Med grn diorite. Contact @ 57° to CA. Locally epidotized. (See 7.36 to 9.79 m.)										
12.73 - 31.36	Dk grn fine-grained andesite, locally with subhedral, l-2 mm, feldspar phenocrysts. Non-defined contact										
	14.75 - 15.14 m. Dk grn andesite.	chlorite and qtz	l-2% dis py, tr dis po.	5155	14.75-15.14	0.39	1	0.5	80	37	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 14, 1988 Hole No.: CA88-8 Page 2 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.73 - 31.36 (cont.)	15.14 - 16.30 m. Dk grn andesite.	chlorite, carb and qtz	10% dis py, 15-20% massive mt.	5156	15.14-16.30	1.16	2	1.2	564	79	
(cone.)	16.30 - 16.65 m. Dk grn andesite.	epidote and chlorite	Tr dis po, and tr dis py.	5157	16.30-16.65	0.35	ı	0.4	81	36	
	16.65 - 17.23 m. Dk grn andesite.	epidote, chlorite and carb	Tr to 1% dis po, tr dis py.	5158	16.65-17.23	0.58	7	1.4	307	539	
	17.23 - 17.81 m. Lt gy-grn alt'd andesite.	epidote, carb, chlorite and iron-carb	Broken core. Tr to 2% dis py.	5159	17.23-17.81	0.58	3	1.3	291	93	
	17.81 - 18.39 m. Dk grn andesite.	iron-carb, epidote and chlorite	Tr po, tr py.	5160	17.81-18.39	0.58	1	0.4	46	23	
1	18.39 - 18.62 m. Dk grn andesite. Localized iron-carb alt'n.	chlorite, iron- carb and epidote	Tr py.	5161	18.39-18.62	0.23	3	0.3	8	60	
	18.62 - 19.13 m. Dk grn andesite.	chlorite, epidote, and iron-carb	3-5% dis po.	5162	18.62-19.13	0.51	2	1.2	261	203	
	19.89 - 20.28 m. Med grn alt'd andesite. Mineralization associated with alt'n.	<b>epi</b> dote	2-3% po, tr py and cp.	5163	19.89-20.28	0.39	32	6.5	1491	54	574 Zn
	20.54 - 20.84 m. Med grn andesite.	epidote	Tr dis py.	5164	20.54-20.84	0.30	11	0.7	122	85	
	20.76 - 28.31 m. Andesitic feld- spar porphyry. Med to dk grn sub- hedral phenocrysts (1-11 mm).										
	24.04 - 24.27 m. Med grn andesite (ie. feldspar porphyry).	epidote, chlorite and iron-carb	3% dis po, tr dis py.	5165	24.04-24.27	0.23	3	1.4	257	45	
	27.84 - 28.31 m. Med grn andesitic feldspar porphyry.	epidote and chlorite	Tr to 2% dis py, and tr asp.	5166	27.84-28.31	0.47	6	0.5	103	700	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 14, 1988 Hole No.: CA88-8 Page 3 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.73 - 31.36 (cont.)	28.31 - 28.75 m. Med grn andesite.	chlorite and carb	Broken core. 3% dis py.	5167	28.31-28.75	0.44	72	0.3	10	126	
(conc.)	28.75 - 29.11 m. Med grn andesite.	chlorite, epidote and carb	Tr to 2% dis py.	5168	28.75-29.11	0.36	21	0.2	. 10	80	
	29.11 - 29.38 m. Mineralized zone. Massive white carb.	chlorite	Tr to 3% dis py.	5169	29.11-29.38	0.27	86	3.3	70	107	
	29.38 - 29.78 m. Mineralized zone. Altered volcanic(?).	chlorite and carb	3-5% dis po, 2-3% dis py, tr dis cp.	5170	29.38-29.78 Au assay 0.0	0.40 06 oz/to		16.4 206 g/t)	1333	298	337 Zn
	29.78 - 30.14 m. Mineralized zone. Altered volcanic(?).	chlorite and carb	3-5% dis po, 3-5% dis py, tr dis cp, tr to 1% asp.	5171	29.78-30.14 Au assay 0.0	0.36 08 oz/to	305 on (0.2	7.3 !74 g/t)	977	2578	410 Zn
	30.14 - 30.68 m. Mineralized zone. Dk grn-white alt'd volcanic.	carb and chlorite	2-3% dis py and po.	5172	30.14-30.68	0.54	147	1.7	199	356	
	30.68 - 31.00 m. Mineralized zone. Dk grn-white alt'd volcanic.	carb and chlorite	10% massive mt, 5% dis py, & tr po.	5173	30.68-31.00 Au assay 0.0		250 on (0.2	2.8 206 g/t)	484	527	
	31.00 - 31.36 m. Mineralized zone. Med to lt grn alt'd volcanic.	epidote, carb and chlorite	3-5% dis po, 2% dis cp, 2% dis py, and 1% asp.	5174	31.00-31.36 Au assay 0.0		710 on (0.8	8.8 357 g/t)	1758	2752	1253 Zn
31.36 - 32.98	31.36 - 31.55 m. Mineralized zone. Med to dk grn diorite(?).	epidote, chlorite and carb	Tr to 2% dis py, l% asp.	5175	31.36-31.55 Au assay 0.1			3.0 57 g/t)	296	2551	986 Zn 187 Co
	31.55 - 32.43 m. Gy-grn diorite(?).	epidote and chlorite	Tr dis py.	5176	31.55-32.43 Au assay 0.0	0.88 126 oz/to	925 on (0.8	0.4 391 g/t)	33	214	
	32.43 - 32.98 m. Fine-grained grn diorite.	epidote and chlorite	Tr dis py.	5177	32.43-32.98 Au assay 0.0	0.55 008 oz/to	205 on (0.2	0.4 274 g/t)	17	74	
32.98 - 34.38	32.98 - 33.48 m. Med grn andesite. Patches of purple qtz.	epidote and chlorite	Tr dis asp.	5178	32.98-33.48	0.50	64	0.4	18	966	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: July 14, 1988 Hole No.: CA88-8 Page 4 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppma	Other ppm
32.98 - 34.38 (cont.)	33.81 - 34.15 m. Lt grn andesite. Bands of purple qtz.	epidote and carb	Tr sp, tr cp.	5179	33.81-34.15 Au assay 0.0 Ag assay 0.1				975	762	13582 Zn 481 Co
34.38 - 49.55	Med gy-white diorite.										
	34.80 m. Fault @ 38° to CA.		Fault @ 38° to CA.								
	38.64 - 39.23 m. Med grn alt'd diorite(?).	qtz and garnet	Banding @ 53° to CA. Tr dis po, tr dis py.	5180	38.64-39.23	0.59	1	0.3	157	27	
	39.23 - 39.67 m. Med grn alt'd diorite(?).	epidote, garnet and qtz	Banding @ 56° to CA. Tr py.	5181	39.23-39.67	0.44	9	0.3	118	74	
	49.39 - 49.50 m. White qtz vein, 5.2 cm wide.		Vein @ 40° to CA.	5182	49.39-49.50	0.11	1	0.1	41	4	
49.55 - 77.42	Med grn andesite.										
//.42	49.63 - 49.73 m. Med to 1t grn alt'd andesite.	epidote, chlorite and iron-carb	Tr dis py.	5183	49.63-49.73	0.10	l	0.1	90	63	
	49.99 - 50.51 m. Med grn andesite.	iron-carb, chlor- ite and qtz	Tr dis py, tr dis po.	5184	49.99-50.51	0.52	1	0.1	84	2	
	51.17 - 51.29 m. Gy-grn alt'd diorite, 6.6 cm wide.	iron-carb, qtz and chlorite	Alt'd zone @ 64° to CA. Tr dis py.	5193	51.17-51.29	0.12	1	0.1	7	2	
	57.99 - 58.04 m. Lt grn, alt'd diorite.	epidote and qtz	Contact @ 77° to CA. Tr dis py.	5185	57.99-58.04	0.05	1	0.1	9	2	
	58.04 m. Dk grn, fine-grained andesite.										
	61.62 - 62.78 m. Massive white qtz vein(?).	epidote and chlorite	Vein @ 85° to CA. Tr dis py.	5186	61.62-62.78	1.16	3	0.1	11	5	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: July 14, 1988 Hole No.: CA88-8

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppo	Other ppm
49.55 - 77.42	63.77 - 63.95 m. Med grn andesite.	carb and epidote	Tr dis py.	5187	63.77-63.95	0.18	1	0.1	17	2	
(cont.)	66.39 - 66.83 m. Lt grn alt'd andesite.	iron-carb, carb, qtz and epidote	Tr to 1% dis py.	5188	66.39-66.83	0.44	1	0.1	1	2	
	70.79 - 71.18 m. Dk gy-white feldspar porphyritic andesite.	epidote and iron- carb	Tr dis py.	5189	70.79-71.18	0.39	1	0.2	73	5	
	72.24 - 72.85 m. Yellow-gy, alt'd andesite.	epidote and iron- carb	Tr dis py.	5190	72.24-72.85	0.61	1	0.1	2	2	
77.42	ЕОН										



MPH CONSULTING LIMITED

Length (m): 71.63 : -45°

Grid: McNeil Peninsula L4+45N, 0+75E

Drilled: June 17-18/88 Contractor : Burwash

Objective: See drill hole CA88-9 summary Page 1 of 5

Project: Contact Au

Project No.: V248-3 Client: Parallax

Dip Azimuth : 278° Core Size : NQ

Collar elev.: 44 m Remarks: Sample nos. 5191, 5192, 5194 to Logged by : G. Yip Date logged: July 14/88 in text of report.

Hole No.: CA88-9 Hole Survey Type: None Depth Dip Azim

Development Corp.

Casing : 3.65 m

5229

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe ppm
0 <del>-</del> 3.65	Casing										
3.65 - 26.15	Dk gy, fine-grained andesite.  Locally cut by qtz-carb stringers some of which are partially alt'd to epidote.										
	8.38 - 9.13 m. Dk gy andesite with anhedral mafic phenocrysts.		Tr py, tr po.	5191	8.38-9.13	0.75	1	0.1	132	2	
	9.13 - 9.27 m. Dk gy andesite and 9 mm wide qtz vein.	quartz	Vein @ 38° to CA. Tr dis py.	5192	9.13-9.27	0.14	2	0.1	41	2	
	9.85 - 10.24 m. Dk gy andesite.	epidote and chlorite	Tr dis py.	5194	9.85-10.24	0.39	2	0.8	230	2	
	11.63 - 11.94 m. Dk gy andesite.	epidote	2% dis py.	5195	11.63-11.94	0.31	t	0.4	65	2	
	13.77 - 14.33 m. Dk gy andesite with patches of coarse-grained diorite(?).	epidote and chlorite	1% dis py.	5196	13.77-14.33	0.55	1	0.1	65	10	
	14.33 - 14.60 m. Dk gy andesite.	chlorite	Lineation @ 36° to CA. 1-2% dis py.	5197	14.33-14.60	0.27	t	0.4	138	12	
ه 1	14.60 - 14.88 m. Dk gy andesite with 3.9 mm wide alt'n zone.	epidote and iron- carb	Alt'n @ 23° to CA. 1-2% dis py.	5198	14.60-14.88	0.28	2	0.3	88	11	
	15.19 - 15.75 m. Gy-white recrystallized limestone.	epidote	1-2 <b>%</b> dis py	5199	15.19-15.75	0.56	1	0.3	51	18	
	15.73 m. Lower contact of lime-		Contact @ 36° to CA	•							

stone with andesite.



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 14, 1988 Hole No.: CA88-9 Page 2 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
3.65 - 26.15	17.89 - 18.50 m. Lt grn alt'd volcanic(?).	epidote, carb and qtz	Tr to 1% dis py.	5200	17.89-18.50	0.61	t	0.2	53	51	
(cont.)	19.42 - 19.65 m. Med to dk grn alt'd andesite.	epidote and carb	Tr dis py, tr cp.	5201	19.42-19.65	0.23	1	1.7	448	63	
	19.78 - 20.01 m. Dk gy locally alt'd andesite. No visible mineralization.	epidote, iron-carb, and chlorite		5202	19.78-20.01	0.23	6	0.1	7	2	
	20.31 - 20.30 m. Dk gy andesite and intrusive(?).	epidote, chlorite and qtz	7% dis py, 5% dis po, tr cp.	5203	20.31-20.80	0.49	1	0.7	458	30	
	20.80 - 21.46 m. Dk gy andesite.	epidote, qtz and chlorite	Lineation @ 39° to CA. 7-10% dis po, 7-10% dis py, tr cp.	5204	20.80-21.46	0.66	2	0.6	495	6	
	21.46 - 21.85 m. Dk gy andesite.	qtz and epidote	10% dis po, 5-7% dis py, tr cp.	5205	21.46-21.85	0.39	1	0.4	341	16	
	22.84 - 23.07 m. Dk gy andesite.	qtz	5-7% dis py, 3% dis po, tr cp.	5206	22.84-23.07	0.23	1	1.2	392	77	
26.15 - 30.54	Medium to fine-grained diorite. Locally porphyritic andesite with subhedral feldspar phenocrysts (up to 8 mm). Occassional epidote alt'n zones.		Contact @ 64° to CA.								
	27.11 - 27.77 m. Lt grn alt'd vol- canic with purple qtz.	epidote and qtz	Tr to 1% dis py.	5207	27.11-27.77	0.66	1	0.1	15	74	
30.54 - 36.17	Dk gy, fine-grained andesite.										
30.17	31.39 - 31.73 m. Mineralized zone. Massive gy-white carb with frag- ments of volcanics.	chlorite	Broken core. 1% dis py.	5208	31.39-31.73	0.34	113	0.3	37	127	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 14, 1988 Hole No.: CA88-9 Page 3 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
30.54 - 36.17 (cont.)	31.73 - 32.09 m. Mineralized zone. Bx'd; volcanic fragments supported by gy-white carb.	chlorite	1% dis po, 5-7% dis py.	5209	31.73-32.09	0.36	245	0.4	27	193	
	32.09 - 32.65 m. Mineralized zone. Dk gy-grn alt'd volcanics with carb.	chlorite and carb	5% dis py, tr asp.	5210	32.09-32.65 Au assay 0.0	0.56 0.56 oz/to	520 on (0.4	0.5 46 g/t)	59	517	
	32.65 - 33.53 m. Mineralized zone. Dk grn andesite with carb	chlorite	Broken core. 2-3% dis py, tr cp.	5211	32.65-33.53	0.88	36	0.3	24	3	
	33.53 - 34.32 m. Mineralized zone. Breccia(?) of dk gy volcanic and carb.	chlorite and carb	5-7% dis py, 2-3% dis asp, 5% dis po.	5212	33.53-34.32 Au assay 0.0	0.79 01 oz/to		0.9 377 g/t)	124	4047	
	34.32 - 34.86 m. Mineralized zone. Silver-gy, massive sulphides.	carb	70% massive asp, 10-15% dis mt, 10% dis po, 5% dis py, tr cp.	5213	34.32-34.86 Au assay 0.2			3.0 99 g/t)	279	99999	236 Co
	34.86 - 35.19 m. Mineralized zone. Dk silver-gy massive sulphides and carb.		35% mass asp, 15- 20% mass mt, 15- 20% po, 5-10% dis py, tr cp.	5214	34.86-35.19 Au assay 0.2	0.33 56 oz/to		3.4 '8 g/t)	316	99999	100 C
	35.19 - 35.35 m. Mineralized zone. Dk gy and white fine-grained volcanic and qtz-carb.	carb	10-15% mass py, 5-7% mass po, 5-7% mas asp, 1-2% dis cp.	5215	35.19-35.35 Au assay 0.1 Ag Assay 0.7		on (3.9	1 g/t)	4678	13343	160 C
	35.35 - 35.51 m. Mineralized zone. Blk-brn massive magnetite.		75% mass mt, 10- 15% dis py, 3% dis cp, 5-7% dis po.	5216	35.35-35.51 Au assay 0.0 Ag assay 0.3	22 oz/to		54 g/t)	2446	1970	
	35.51 - 35.85 m. Brownish-grey alt'd(?) volcanic. Garnetiferous zone.	garnet and carb	1-2% dis py, 1% asp, tr cp.	5217	35.51-35.85	0.34	88	2.6	582	1431	
	35.85 - 36.06 m. Gy-brn alt'd volcanic(?). Garnetiferous zone.	garnet, epidote and qtz	l-2% dis py, tr asp.	5218	35.85-36.06	0.21	105	0.4	57	347	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: July 14, 1988 Hole No.: CA88-9 Page 4 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppma	Cu ppm	bbw. Ya	Other ppm
36.17 - 38.64	Fine-grained blk and white diorite. Locally alt'd.										
38.64 - 40.36	38.64 - 38.97 m. Gy-grn fine- grained volcanic(?)	epidote	1-2% dis py, tr cp.	5219	38.64-38.97	0.33	41	2.2	496	193	505 Zn
	38.97 - 39.47 m. Gy-grn fine-grained volcanic(?).	epidote and chlorite	Broken core. Tr to 1% dis py.	5220	38.97-39.47	0.50	29	1.7	339	148	1110 Zn
	39.47 - 39.96 m. Gy-grn fine-grained volcanic(?).	qtz and epidote	3-5% dis py, 1-2% dis po, tr of cp.	5221	39.47-39.96 Au assay 0.12	0.49 2 oz/ton	22 1 (4.1	4.3 g/t)	1016	187	548 Zn
	39.96 - 40.15 m. Gy-grn alt'd fine-grained volcanic(?).	epidote and qtz	1-2% dis py.	5222	39.96-40.15	0.19	27	2.5	382	355	466 Zn
	40.15 - 40.41 m. Dk gy fine-grained volcanic(?).	epidote and chlorite	1-2% dis py.	5223	40.15-40.41	0.26	5	1.5	473	77	
40.36 - 45.62	Med to fine-grained blk and white diorite with dk gy fine-grained xenoliths.		Contact @ 36° to CA	•							
45.62 - 48.25	<pre>Gy-grn fine-grained, alt'd vol- canic(?).</pre>										
	46.17 - 46.95 m. Gy-grn alt'd volcanic(?). Reddish brn patches of garnet(?).	epidote and qtz	Tr dis py	5224	46.17-46.95	0.78					
	47.12 - 47.52 m. Gy-white alt'd volcanic(?). Banded alt'n.	epidote, iron- carb and qtz	Alt'n @ 10° to CA. Tr to 1% dis py.	5225	47.12-47.52	0.39					
	47.52 - 48.25 m. Gy-grn alt'd volcanic(?).	epidote and qtz	Banding @ 10° to CA. Veins @ 35° to CA. Tr to 1% dis po.	5226	47.52-48.25	0.73					



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip

Date: July 14, 1988 Hole No.: CA88-9 Page 5 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
48.25 - 51.32	Med to fine-grained gy-white diorite with stringers filled with epidote and iron-carb. Occassional xenoliths		Contact @ 37° to CA. Foliation @ 28° to CA.								
51.32 - 51.89	<pre>Fine-grained, gy-grn volcanic(?) with mafic phenocrysts(?) (1 mm.)</pre>	chlorite	Contact @ 60° to CA (sheared?).								
51.89 - 57.45	Med to fine-grained foliated dior- ite. Locally alt'd to epidote or to a dk gy colour.		Foliation @ 41° to CA.								
57.45 - 57.88	Dk gy, fine-grained volcanic(?) with epidote vein filling.		Contact @ 65° to CA.								
57.88 - 58.77	Gy-white, fine to med-grained diorite with veins filled with qtz and epidote.	epidote	Contact @ 76° to CA.								
58.77 - 58.98	Dk gy, fine-grained volcanic(?) with epidote filled veins.										
	58.77 - 59.04 m. Volcanic(?) as above.	epidote	Contact @ 29° to CA. Tr py.	5227	58.77-59.04	0.27	5	0.7	218	10	
58.98 - 63.16	Med to fine-grained, foliated whitish-gy diorite. Localized epidote alt'n.	epidote	Contact @ 75° to CA. Foliation @ 53° to CA.								
63.16 - 63.79	Gy, fine-grained volcanic(?) with angular mafic fragments 1-2 mm.		Contact @ 23° to CA.								
	63.43 - 63.53 m. Qtz vein within dk gy volcanics, ll mm wide.	epidote and chlorite	Vein @ 55° to CA. Tr dis py.	5228	63.43-63.53	0.10	3	0.1	5	2	
63.79 - 71.63	Foliated, fine-grained diorite. Gy-white to dk gy in colour. Locally epidotized.		Contact @ 60° to CA. Foliation 30° to CA.								
	63.94 - 64.11 m. Diorite and gy fine-grained volcanic-sheared.	epidote	Sheared @ 32° to CA. Tr py.	5229	63.94-64.11	0.17	4	0.4	155	20	
71.63	ЕОН										



MPH CONSULTING LIMITED

Length (m): 97.56

Grid: McNeil Peninsula

Objective: See drill

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Project: Contact Au Project No.: V248-3 Client: Parallax

Development Corp.

: -45° Dip Azimuth : 255° Core Size : NQ

Casing : 4.57 m

L7+55N, O+25W Collar elev.: 35 m Remarks: Sample nos.

5230 to 5331

Contractor : Burwash Logged by : G. Yip Date logged: June 27/88

Drilled: June 19-21/88

hole CA88-10 summary in text of report.

Hole No.: CA88-10 Hole Survey Type: None bepth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 4.57	Casing										
4.57 - 4.78	Gneissic intrusive(?).		Broken core								*
4.78 - 6.84	Dk grn, fine-grained andesite feldspar porphyry. Contains 3-5% subhedral-euhedral feldspar phenocrysts (up to 2 mm). Greenishwhite stringers (0.5-3 mm) @ 18°, 32° and 47° to CA.		Broken core								
32 5.84 – Me 9.05 Lo Ve CA	Med to fine-grained diorite. Locally intensely silicified. Veins @ 22°, 25°, 32° and 14° to CA (1-3 mm) filled with qtz-carb.		Broken core								
	7.64 - 8.08 m. Alt'd diorite. Locally intensely epidotized. Mafic minerals have been alt'd to chlorite. Qtz-carb veins @ 19° and 24° to CA (1-3 mm). Tr of finely dis py.	epidote and chlorite	Veins @ 19° and 24° to CA. Tr dis py.	5230	7.64-8.08	0.44	5	0.4	155	4	
9.05 - 11.83	Dk gy andesite feldspar porphyry with up to 10% feldspar phenocrysts ranging from 1-17 mm. Contact @ 53° to CA. Locally intensely epidotized. Cut by veins @ 26° and 54° to CA (1-3 mm) filled with qtz or epidote.		Contact @ 53° to CA		;						



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 27, 1988 Hole No.: CA88-10 Page 2 of 18

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval 1 m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
11.83 - 14.83	Med to fine-grained diorite. Contact @ 30° to CA. Locally epidotized. Veins @ 19°, 41° 50° and 34° to CA filled with qtz and epidote.	epidote	Contact @ 30° to CA.								
14.83 - 20.81	Dk gy fine-grained andesite. Contact @ 22° to CA. Qtz-carb and epidote filled veins @ 46° and 50° to CA. Locally porphyritic with feldspar phenocrysts 1-3 mm.										
	15.17 - 15.44 m. Andesite cut by greenish-white qtz-carb @ 50°, 17° and 42° to CA. No visible mineralization.			5231	15.17-15.44	0.27	83	0.6	3	96	
	16.13 - 16.41 m. Alt'd andesite(?). Intensely silicified and epidotized. Yellow-green in color. Tr of dispy.	epidote and qtz	Tr dis py.	5232	16.13-16.41	0.28	5	0.3	11	7	
	16.41 - 16.55 m. Alt'd andesite(?). Intensely epidotized and silicified. 8 mm wide area of massive py (3%).	epidote and qtz	3% py, tr cp.	5233	16.41-16.55 Au assay 0.00			1.6 1 g/t)	567	125	
	16.55 - 16.86 m. Massive, brn mt with patches of qtz-carb (1-2.5 cm) with laths of chlorite (up to 1.6 cm). Contains 5% dis py in 1-5 mm masses.		5% dis py, 1% cp, massive mt.	5234	16.55-16.86 Au assay 0.04			3.8 g/t)	1274	313	182 C
	16.86 - 16.97 m. Massive brn mt. Contains 5% dis py masses (1-7 mm) with minor amounts of fret fill.		5% dis py, massive mt.	5235	16.86-16.97 Au assay 0.040			0.4 g/t)	100	216	112 C
	16.97 - 17.19 m. Massive mt with blue grn bands. Bands contain less mt @ approx. 74° to CA. Contains 7-10% py masses parallel to banding. Layers contain qtz-carb.		Banding @ 74° to CA. 7-10% py in bands, massive mt.	5236	16.97-17.19 Au assay 0.010			1.3 7 g/t)	84	285	184 C



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: June 27, 1988 Hole No.: CA88-10 Page 3 of 18

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
14.83 - 20.81 (cont.)	17.30 - 17.72 m. Massive mt with gy-grn patches of chlorite and carb. Contains approx. 7% dis py masses (0.5-2 mm).		7% dis py masses, 1% asp, massive mt.	5237	17.19-17.72 Au assay 0.1			0.5 g/t)	135	3501	2164 Co
	17.72 - 17.88 m. Massive mt with a band of qtz-carb with chlorite laths on the margins. Contains 5% po in masses (4-40 mm) with 3-5% py masses (2-4 mm) and a tr of cp.		5% po, 3-5% py, tr cp, massive mt.	5238	17.72-17.88 Au assay 0.0			2.1 g/t)	990	2495	1483 Co
	17.88 - 18.46 m. Massive mt with patches of grn chlorite and carb(?) (1-7 mm). Locally 3% py masses (2-9 mm).		Tr py, 1% asp, massive mt.	5239	17.88-18.46 Au assay 0.0			0.6 g/t)	78	1459	761 Co
	18.46 - 18.63 m. Alt'd volcanic(?). Chloritized and carbonatized host with approx. 30% mt.	chlorite and carb	30% mt, 1% asp.	5240	18.46-18.63 Au assay 0.0			0.4 g/t)	21	3079	1951 Co
	18.63 - 18.89 m. Alt'd volcanic(?). Chlorite laths (1-3 mm) with 10% dis mt grains and tr of dis py. Minor carbonatization.	chlorite and carb	10% dis mt, tr py, tr asp.	5241	18.63-18.89 Au assay 0.0			0.7 g/t)	52	2009	1218 Co
	18.89 - 19.37 m. Lt grn, alt'd volcanic(?) breccia with intensely carb and silicified rounded clasts (1-26 mm). Interstices are filled with mt. Contains 3-5% py masses (1-5 mm), 5% mt.	epidote, qtz and carb	3-5% py masses, 5% mt, tr asp.	5242	18.89-19.37 Au assay 0.0			0.3 3 g/t)	92	716	466 Co
	19.37 - 19.99 m. Lt grn, alt'd volcanic(?). Intensely carb and silicified with hairline frcts filled with mt. Minor amounts of epidotization. Contains 3% dis	epidote, qtz and carb	3% dis py, 5% mt.	5243	19.37-19.99	0.62	75	0.9	295	558	376 Co

py throughout, 5% mt.



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
14.83 - 20.81 (cont.)	19.99 - 20.14 m. Lt grn, alt'd volcanic(?). Intensely carb and silicified with laths of chlorite(?). Hairline frcts filled with 7% dis mt and 2-3% dis py.	carb and qtz	2-3% dis py, 7% dis mt, 1% cp.	5244	19.99-20.14	0.15	60	7.0	1954	202	132 Co
	20.14 - 20.34 m. Lt grn, alt'd volcanic(?). Intensely silicified and carb. Patchy epidote alt'n (localized). Contains approx. 7% dis mt as frct fill and throughout, and 3% cubic py (2-7 mm).	qtz, carb, and epidote	7% dis mt, 3% cubic py.	5245	20.14-20.34	0.20	72	1.6	440	52	
	20.34 - 20.44 m. Lt grn, alt'd volcanic(?). Intensely silicified and carb. Patchy epidote alt'n. Contains approx. 10% dis mt as fret fill and throughout, 2-3% dis masses of py and a tr of dis cp.	qtz, carb and epidote	10% dis mt, 2-3% dis py, tr dis cp.	5246	20.34-20.44 Au assay 0.0	0.14 12 oz/to	420 n (0.41	1.4 1 g/t)	154	35	
	20.44 - 20.91 m. Alt'd diorite(?). Epidote alt'n of feldspars and chlorite alt'n of mafics. Tr of finely dis py.	epidote and chlorite	Broken core. Tr dis py.	5247	20.44-20.91	0.47	36	0.3	17	28	
20.81 - 25.15	Fine-grained diorite. Feldspar is alt'd to epidote and the mafics to chlorite. Locally intensely epidotized and silicified. Qtz-carb veins @ 22°, 47°, 38° and 50° to CA.										
	24.78 - 24.97 m. Alt'd and sheared diorite(?). Intensely epidotized and silicified. Foliation @ 64° to CA. Small lenses of carb parallel to foliation. No visible mineralization.	epidote and qtz	Foliation @ 64° to CA.	5248	24.96-25.15	0.19	6	0.1	19	31	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
25.15 - 29.29	Dk grn, fine-grained alt'd andesite.										
27.27	25.15 - 25.25 m. Alt'd andesite(?) with a 2.8 cm wide epidotized and silicified zone @ 55° to CA. Contains approx. 3% dis py in and adjacent to alt'd zone.	qtz and epidote	Approx. 3% dis py.	5249	25.15-25.25 Au assay 0.0	0.10 25 oz/to	930 on (0.8	1.1 357 g/t)	222	44	
	25.25 - 25.41 m. Lt grn, alt'd andesite. Intensely silicified and lightly carb. Numerous randomly orientated frcts. Contains 3% py as frct fill.	qtz and carb	3% py fret fill, 1% ep.	5250	25.25-25.41 Au assay 0.1	0.16 69 oz/to		7.6 '9 g/t)	2522	174	136 Cc
	25.41 - 25.91 m. Alt'd andesite. Intensely silicified and lightly carb. All original textures lost. Numerous hairline frcts. Tr of dis py in brn alt'n.	qtz and carb	Tr dis py.	5251	25.41-25.91 Au assay 0.0			1.1 551 g/t)	318	25	
	25.91 - 26.32 m. Lt blue-grn andesite(?). Intensely silicified with numerous laths of chlorite. Contains 3% mt in patches and a tr of dis py.	qtz	3% mt, tr dis py.	5252	25.91-26.32	0.41	73	1.4	475	41	
	26.32 - 26.62 m. Alt'd andesite(?). Very intensely silicified with mnr carb. Tr of dis py.	qtz and carb	Tr dis py.	5253	26.32-26.62	0.30	59	0.1	31	19	
	26.62 - 26.95 m. Alt'd andesite. Intensely silicified with minor amounts of epidote. Contains 2-3% finely dis py.	qtz and epidote	2-3% dis py.	5254	26.62-26.95 Au assay 0.0	0.33 16 oz/to	495 on (0.5	0.2 649 g/t)	12	26	
	26.95 - 27.41 m. Alt'd andesite. Intensely silicified with qtz-carb vnlt @ 9° to CA (2-3 mm). Tr amounts of dis py and as frct fill.	qtz	Tr dis py and fret fill.	5255	26.95-27.41 Au assay 0.0	0.46 05 oz/to	225 on (0.1	0.1 71 g/t)	10	19	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
25.15 - 29.29 (cont.)	27.41 - 27.61 m. Alt'd andesite(?). Intensely silicified, locally epidotized. No visible mineralization.	qtz and epidote	Tr cp.	5256	27.41-27.61	0.20	48	1.4	552	29	
	28.12 - 28.46 m. Alt'd andesite(?). Intensely silicified and epidotized. Tr to 2% finely dis py.	qtz and epidote	Tr to 2% dis py.	5257	28.12-28.46	0.34	92	0.9	240	89	
	28.46 - 28.64 m. Alt'd andesite(?). Intensely silicified and epidotized. Qtz-carb vein (approx. 2 mm) @ 40° to CA. No visible mineralization.	qtz and epidote		5258	28.46-28.64	0.18	52	0.4	53	148	
29.29 - 35.66	Gy, fine-grained diorite with dk, gy-grn, fine-grained xenoliths(?). Locally intensely epidotized. Contact @ 54° to CA. Veins @ 39°, 50°, 47° and 14° to CA. Mafics have alt'd to chlorite. Feldspars alt'd to epidote.	epidote									
	31.70 - 31.90 m. Alt'd diorite and xenolith(?). Lt grn in color. Intensely silicified. Numerous hairline frets with epidote halos. Sporadic lenses of carb. Chlorite alt'n. Tr of dis py.	qtz, epidote and chlorite	Tr dis py.	5259	31.70-31.90	0.20	3	0.1	3	4	
35.66 - A 65.36 i c	Alt'd volcanic(?). Intensely silicified and epidotized, localized chlorite alt'n. Numerous carb and qtz veins @ 42°, 56°, 23° and 32° to CA.										
	35.72 - 36.35 m. Alt'd volcanic(?). Silicified, epidotized, and chloritized. Numerous patches of qtz (1-4 mm). Tr of finely dis py.	qtz, epidote and chlorite	Tr dis py.	5260	35.72-36.35	0.63	1	0.1	25	2	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
35.66 - 65.36	36.75 - 36.95 m. Volcanic breccia.										
(cont.)	36.52 - 36.90 m. Gy-grn, alt'd volcanic(?). Poorly defined foliation @ 50° to CA. Silicified and epidotized. Several stringers of carb. Tr of finely dis py.	qtz and epidote	Tr dis py.	5261	36.52-36.90	0.38	1	0.1	2	2	
	38.71 - 38.79 m. Massive qtz vein (4.5 cm) @ 46° to CA. Crosscutting frcts (<0.5 mm) with patches of chlorite and epidote. Tr of dis py.	chlorite and epidote	Vein @ 46° to CA. Tr dis py.	5317	38.71-38.79	0.08	1	0.1	6	8	
	40.89 - 41.35 m. Gy-grn, alt'd volcanic(?). Silicified and epidotized. Patches of chlorite. Carb filled frcts @ 12° to CA (approx. 1 mm). Tr of finely dispy.	qtz, epidote and chlorite	Frcts @ 12° to CA. Tr dis py.	5262	40.89-41.35	0.46	1	0.1	3	7	
	45.03 - 45.23 m. Volcanic bx(?). Lt gy-grn; sub-ang to sub-rdd feld-spar fragments (0.5-6 mm), some alt'd to epidote. Sub-rdd lithic fragments alt'd to epidote and chlorite (1-20 mm) and rdd blebs of carb (1-4 mm) all supported by a massive fine-grained matrix. No visible mineralization. Fault @ 42° to CA is 5 cm wide @ 45.18 m.	epidote, chlorite and qtz	Fault @ 42° to CA.	5263	45.03-54.23	0.20	29	0.3	36	20	
	45.39 - 45.85 m. Alt'd volcanic(?). Lt grn, intensely silicified. Cut by qtz-carb vnlts @ 30°, 49° and 50° to CA. Epidote alt'n with localized chlorite alt'n. No visible mineralization.	qtz, epidote and chlorite	Veins @ 30°, 49° and 50° to CA.	5264	45.39-45.85	0.46	7	0.3	6	9	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
35.66 - 65.36	47.51 - 47.74 m. Bx'd qtz-carb veins @ 46° to CA (4.1 & 10.5 cm)	qtz, chlorite and epidote	Veins @ 46° to CA. 2-3% dis py masses.	5265	47.51-47.74	0.23	460	0.7	396	53	
(cont.)	in a grn, fine-grained andesite. Silicified and chloritized. Angular fragments (1-25 mm) of wall rock orientated parallel to vein. Alt'n to chlorite with spots of	· -	, and and p, and and a		Au assay 0.0	12 oz/to	on (0.4	11 g/t)			
	epidote. Contains 2-3% dis py masses (1-9 mm).										
	47.85 m. Fault @ 39° to CA.										
	48.20 - 48.52 m. Alt'd volcanic(?). Intensely silicified moderately chloritized, patchy iron-carb and spotty epidotization. Qtz-carb vnlts @ 24°, 40° and 48° to CA. Tr of dis py in veins.	qtz, chlorite, iron-carb and epidote	Veins @ 24°, 40° and 48° to CA. Tr dis py.	5266	48.20-48.52	0.32	16	0.1	38	11	
	48.67 - 49.02 m. Alt'd andesite(?). Mod silicified, and chloritized. Patchy iron-carb alt'n. Qtz-carb veins @ 35° and 90° to CA (1-3 mm). Blebs of qtz (2-12 mm). Tr of dis py.	qtz, chlorite and iron carb	Veins @ 35° and 90° to CA. Tr dis py.	5267	48.67~49.02	0.35	2	0.1	6	4	
	49.02 - 49.66 m. Alt'd volcanic(?). Intensely silicified, patchy chlorite and iron-carb alt'n, minor epidotization. Tr of dis py.	qtz, chlorite, iron-carb and epidote	Tr dis py.	5268	49.02-49.66	0.64	2	0.1	4	4	
	49.66 - 49.88 m. Alt'd volcanic. Intensely silicified, epidotized and mod chloritized. Qtz-carb vein @ 71° to CA (approx. 6 mm). Tr to 5% dis py on frct surfaces.	qtz, epidote and chlorite	Vein @ 71° to CA. Tr to 5% dis py.	5269	49.66-49.88	0.22	32	0.1	38	31	•



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From - To

metres

35.66 -

65.36

Intensely silicified and epidot-

ized with carb veins @ 34° and 27°

to CA (4 & 16 mm). Contains 2-3%

50.16 - 50.79 m. Alt'd volcanic.

and lightly carb. Patchy epidote alt'n. Laths of chlorite visible (<2 mm). Tr of dis py, locally up

50.79 - 51.39 m. Alt'd volcanic.

Lt to med grn, intensely silicified

and epidotized with qtz-carb veins

(3-8 mm) @ 37°, 48°, 52°, 34° and 65° to CA. Chlorite alt'n occurs in halos about the veins. Tr to 1% finely dis py in veins and on

Dk gy-grn. Bx'd with epidotized

patchy dis py (<3 mm).

Contains 2% dis py.

as frct fill.

angular clasts (1-19 mm); mod carb

and chloritization. Contains 3-5%

51.52 - 51.80 m. Alt'd volcanic.

stringers. Mod carb and intensely chloritized. Patchy epidote alt'n.

51.80 - 52.12 m. Alt'd volcanic.

itized, epidotized and silicified. Carb veins @ 35° and 17° to CA (1-3 mm). Contains 2-3% dis py

Med to dk grn. Intensely chlor-

Dk grn with numerous qtz-carb

Dk grn, silicified, chloritized

dis py throughout.

to 5% dis py.

frct surfaces.

Lithology

Project: Contact Au

49.88 - 50.16 m. Alt'd volcanic(?). gtz and epidote

51.39 - 51.52 m. Alt'd volcanic(?). epidote, chlorite

Logged by: G. Yip

Mineralization

to CA. 2-3% dis

5% dis py, 1% cp.

Veins @ 34-65° to

CA. Tr to 1% dis

tr cp, tr asp.

2% dis py, 1% cp.

1% cp.

2-3% dis py, tr to 5275

ру.

ру, 1% ср.

Alteration

atz, chlorite and

gtz, epidote and

epidote

chlorite

and carb

chlorite, carb

chlorite, epidote

and epidote

and qtz

Page 9 of 18 Date: June 29-July 4 Hole No.: CA88-10 Sample Interval Length Au Ag Cu As Other No. ppb ppm TD. ppm ppm ppm Veins @ 34° and 27° 5270 49.88-50.16 0.28 540 3.2 1069 147 Au assay 0.015 oz/ton (0.514 g/t)96 2.6 1094 52 Tr dis py, locally 5271 50.16-50.79 0.63 155 5272 50.79-51.39 0.60 11 0.1 33 51.39-51.52 0.13 1850 1066 745 3-5% patchy dis py, 5273 Au assay 0.050 oz/ton (1.71 g/t) Ag assav 0.22 oz/ton (7.54 g/t)5274 203 3.9 1185 127 51.52-51.80 0.28

51.80-52.12 0.32 490

Au assay 0.012 oz/ton (0.411 g/t)

2.3



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 4, 1988 Hole No.: CA88-10 Page 10 of 18

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
35.66 - 65.36 (cont.)	52.12 - 52.75 m. Alt'd volcanic. Med to dk grn. Intensely silicified, epidotized and chloritized. Cut by qtz-carb veins @ 47° and 35° to CA (1-4 mm). Tr to 2% finely dis py.	qtz, epidote and chlorite	Veins @ 47° & 35° to CA. Tr to 2% dis py, tr cp.	5276	52.12-52.75	0.63	95	3.4	1682	18	
	52.75 - 53.05 m. Alt'd volcanic(?). Dk to med grn. Large patches of chlorite alt'n and silicification. Contains 2-3% dis py.	chlorite and qtz	2-3% dis py.	5277	52.75-53.05	0.30	2	2.6	1331	46	
	53.05 - 53.38 m. Alt'd volcanic. Med grn, with carb stringers @ 20°, 34° and 45° to CA. Chloritized and silicified. Contains 3% cubic and dis py.	chlorite and qtz	Veins @ 20°, 34° and 45° to CA. 3% cubic and dis py.	5278	53.05-53.38	0.33	29	1.4	521	51	
	53.38 - 53.95 m. Alt'd volcanic. Med grn. Chloritized and mod sili- cified, with patchy epidotization. Contains 2% dis py.	chlorite and qtz	2% dis py, tr cp.	5279	53.38-53.95 Ag assay 0.2			5.4 g/t)	1909	67	
	53.95 - 54.20 m. Alt'd volcanic. Dk grn, chloritized, mod silicified, and lightly carb. Tr to 2% finely dis py and 4% dis po.	chlorite, qtz and carb	Tr to 2% dis py, 4% dis po, 1-2% cp.	5280	53.95-54.20 Au assay 0.0 Ag assay 0.6	09 oz/to	n (0.			89	
	54.20 - 54.51 m. Dk grn alt'd volcanic. Chloritized and silicified. Hairline frcts, randomly orientated. Contains 2% dis py as frct fill and tr amounts of cp.	chlorite and qtz	2% dis py, tr cp.	5281	54.20-54.51 Au assay 0.0 Ag assay 0.3	27 oz/to	n (0.9	926 g/t	3506	172	
	54.51 - 54.62 m. Dk gy alt'd volcanic. Slightly carb and silicified. Contains 1% dis py, 3-4% po and 3% cp.	carb and qtz	1% dis py, 3-4% dis po, 3% dis cp.	5282	54.51-54.62 Au assay 0.1 Ag assay 2.4	18 oz/to	n (4.0	)5 g/t)	22136	410	895 Zı



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
35.66 - 65.36 (cont.)	54.62 - 54.67 m. Bx'd volcanic(?). Dk gy and white. Angular clasts of carb with the interstices filled with chlorite. Contains 3% dis py and 1% cp.	chlorite	3% dis py, 1% cp.	5283	54.62-54.67 Au assay 0.0 Ag assay 0.2	40 oz/t	on (1.3		1944	185	
	54.67 - 55.08 m. Med grn alt'd volcanic. Intensely chloritized and silicified, with patches of carb (0.5-1 mm). Contains 2-5% finely dis and cubic py.	chlorite, qtz and carb	2-5% dis & cubic py.	5284	54.67-55.08	0.41	215	3.0	874	101	
	55.08 - 55.61 m. Alt'd volcanic. Med grn; intensely chloritized and silicified. Contains 2-3% finely dis py (some as frct fill) and a tr of po.	chlorite and qtz	2-3% dis py, tr po.	5285	55.08-55.61	0.53	83	2.9	878	93	
	55.61 - 56.26 m. Alt'd volcanic. Med grn; intensely chloritized and silicified. Tr to 2% dis py.	chlorite and qtz	Tr to 2% dis py.	5286	55.61-56.26	0.65	250	2.5	696	146	
	56.26 - 56.67 m. Alt'd volcanic. Med to lt grn. Locally, intensely chloritized and silicified along with patchy epidotization. Con- tains 3% dis py.	chlorite, qtz and epidote	3% py.	5287	56.26-56.67	0.41	91	0.9	538	63	
	56.67 - 57.44 m. Alt'd volcanic. Lt grn, intensely silicified, locally chloritized and with patchy epidotization. Tr amounts of dispy.	qtz, epidote and chlorite	Tr dis py.	5288	56.67-57.44	0.77	72	0.2	217	12	
	57.44 - 57.91 m. Alt'd volcanic. Lt grn; intensely silicified, epi- dotized and locally chloritized. Tr amounts of dis py.	qtz, epidote and chlorite	Tr dis py.	5289	57.44-57.91	0.47	14	0.1	61	5	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
35.66 - 65.36 (cont.)	57.91 - 58.58 m. Alt'd volcanic. Lt grn; intensely silicified and epidotized. Locally chloritized. Tr of dis py.	qtz, epidote and chlorite	Tr dis py.	5290	57.91-58.58	0.67	6	0.1	63	4	
	59.38 - 59.67 m. Lt to med grn, alt'd volcanic. Intensely silicified and epidotized. Tr to 2% finely dis py.	qtz and epidote	Tr to 2% dis py.	5291	59.38-59.67	0.29	74	0.1	24	9	
	61.58 - 61.87 m. Alt'd andesite. Patch chlorite and epidote alt'n with numerous blebs of qtz. Tr of finely dis py. Silicified.	epidote, chlorite and qtz	Tr dis py.	5292	61.58-61.87	0.29	1	0.1	59	7	
	62.47 - 62.80 m. Alt'd volcanic. Med to lt grn, intensely silici- fied and epidotized. Tr of finely dis py.			5293	62.47-62.80	0.33	1	0.1	19	11	
	63.05 - 65.36 m. Andesite.										
65.36 - 67.66	Sheared, fine-grained diorite @ 19° to CA. Contact @ 63° to CA. Locally, intensely epidotized, and mafics chloritized, with qtz-carb veins @ 10° and 37° to CA.										
	66.54 - 66.63 m. Alt'd diorite; lt grn and sheared(?). Qtz vein (12 mm) @ 35° to CA. Mafics have alt'd to chlorite. Tr of dis py.	chlorite	Shear @ 35° to CA. Tr py.	5294	66.54-66.63	0.09	1	0.1	6	3	
67.66 - 97.56	67.66 - 67.84 m. Med grn alt'd volcanic. Silicified and epidotized. Patchy chloritization. No visible mineralization.	qtz, epidote and chlorite		5295	67.66-67.84	0.18	132	0.1	3	5	4



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
67.66 - 97.56 (cont.)	67.84 - 68.62 m. Med grn alt'd volcanic. Intensely silicified and epidotized. Localized chlorite alt'n. Tr of finely dis py on frct surfaces.	epidote, qtz and chlorite	Tr dis py.	5296	67.84-68.62	0.78	5	0.1	3	12	
	69.85 - 70.27 m. Alt'd intrusive; lt grn with dk grn speckles (alt'd mafics?). Intensely silicified and epidotized. Tr of finely dis py.	qtz and epidote	Tr dis py.	5297	69.85-70.27	0.42	7	0.2	<b>9</b> 9	4	
	70.27 - 70.84 m. Lt grn alt'd intrusive(?). Intensely epidotized and locally intensely silicified. Qtz-carb veins @ 50°, 55° and 75° to CA (<1 mm). Tr of finely dispy.	epidote and qtz	Veins @ 50°, 55° & 75° to CA. Tr dis py.	5298	70.27-70.84	0.57	55	0.5	335	3	
	70.84 - 71.12 m. Lt grn alt'd volcanic(?). Intensely silicified and epidotized. Vein (approx. 3 mm) @ 65° to CA filled with blk-grn mineral. Tr to 1% dis py throughout and in vein.	qtz and epidote	Tr to 1% dis py, tr cp.	5299	70.84-71.12	0.28	32	0.8	616	10	
	71.12 - 71.55 m. Lt and dk grn alt'd volcanic(?). Intensely epidotized and silicified. Lightly carb. Tr to 2% finely dis py; associated with blk-grn patches.	epidote, qtz and carb	Tr to 2% dis py, tr to 1% cp.	5300	71.12-71.55	0.43	108	3.4	1588	11	
	71.55 - 71.65 m. Qtz vein. Massive milky white qtz vein @ 47° to CA (52 mm) in lt grn alt'd volcanic. Tr of finely dis cp. Volcanic is intensely epidotized and silicified. Large (2-20 mm) blebs of qtz. Tr of finely dis py in qtz.	epidote and qtz	Vein @ 47° to CA. Tr dis cp, tr dis py.	5301	71.55-71.81	0.26	52	0.7	369	3	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As .ppm	Other ppm
67.66 - 97.56 (cont.)	71.81 - 71.92 m. Very fine-grained alt'd volcanic(?). Intensely silicified with patchy epidote alt'n. Greenish brn in color. Tr to 1% py and asp.	qtz and epidote	Tr to 1% dis py and asp.	5302	71,81-71.92	0.11	49	0.2	187	17	
	71.92 - 72.44 m. Lt grn-brn alt'd volcanic(?). Intensely silicified and epidotized. Contains 3-5% dis py in a zone @ 10° to CA.	qtz and epidote	Band @ 10° to CA. 3-5% dis py.	5303	71.92-72.44	0.52	235	1.0	486	56	
	72.44 - 72.57 m. Alt'd vol- canic(?), pinkish brn in color. Original textures not visible. Tr to 3% dis py.	qtz	Tr to 3% dis py.	5304	72.44-72.57	0.13	35	0.1	77	12	
	72.57 - 72.92 m. Greenish-pink alt'd volcanic(?). Intensely epidotized and silicified with pink patches (garnet?). Contains 4% dis and massive py.	epidote and qtz	4% dis & massive py•	5305	72.57-72.92	0.35	240	1.2	607	34	
	72.92 - 73.09 m. Alt'd volcanic(?). Greenish-gy in color. Intensely epidotized and silicified. Contains 5% massive py.	epidote and qtz	5% massive py.	5306	72.92-73.09 Au assay 0.0	0.17 062 oz/to		1.7 g/t)	429	195	
	73.09 ~ 73.19 m. Lt to med grn alt'd volcanic(?). Epidotization and silicification gives rock a swirly appearance, with blebs of qtz. Tr of dis py.	epidote and qtz	Tr dis py.	5307	73.09-73.19 Au assay 0.0	0.10 27 oz/to	920 on (0.92	1.7 6 g/t)	661	127	
	73.19 - 73.28 m. Med grn alt'd volcanic(?). Epidotized and silicified with a (10.5 cm) mass of qtz-carb. Contains 3-5% py on fret surfaces.	epidote and qtz	3-5% py.	5308	73.19-73.28	0.09	255	2.0	747	80	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
67.66 - 97.56 (cont.)	73.28 - 73.55 m. Gy-grn alt'd volcanic. Silicified with patchy epidote alt'n. Blebs of qtz-carb. Contains 3% dis py, generally on frct surfaces.	gtz and epidote	3% dis py.	5309	73.28-73.55 Au assay 0.0		440 on (0.5	l.1 83 g/t)	562	24	
	73.55 - 73.92 m. Lt grn alt'd volcanic(?). Intensely epidotized and silicified. Random frcts filled with carb. Contains 1% dis py.	epidote and qtz	1% dis py.	5310	73.55-73.92	0.37	62	0.9	502	14	
	73.92 - 74.10 m. It grn alt'd volcanic. Epidotized and silicified with wavy bands of gy white qtz. Tr of finely dis py within qtz.	epidote and qtz	Tr dis py.	5311	73.92-74.10	0.18	13	0.7	210	6	
	74.10 - 74.70 m. Lt grn alt'd volcanic(?). Intensely epidotized and silicified with numerous crosscutting frets filled with qtzcarb. Tr of finely dis and massive py on fret surfaces.	epidote and qtz	Tr dis py.	5312	74.10-74.70	0.60	4	0.4	6	2	
	74.70 - 75.21 m. Lt grn alt'd volcanic(?). Intensely epidotized and silicified. Qtz-carb veins (2 - 3 mm) @ 47° and 34° to CA. Tr of finely dis py.	qtz and epidote	Veins @ 47° & 34° to CA. Tr dis py.	5313	74.70-75.21	0.51	7	0.4	45	3	
	75.21 - 75.50 m. Lt grn alt'd volcanic(?). Intensely epidotized and silicified with frctd mass (5-7 cm) of qtz @ 31° to CA. Frcts filled with epidote. Tr of finely dis py and cp within qtz.	epidote and qtz	Vein(?) @ 31° to CA. Tr dis py & cp.	5314	75.21-75.50	0.29	5	0.1	23	6	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
67.66 - 97.56 (cont.)	75.78 - 76.11 m. Lt grn alt'd volcanic(?). Epidotized and silicified. Approx. 3% of rock is massive qtz with patches of epidote. Tr of finely dis py.	epidote and qtz	Tr dis py.	5315	75.78-76.11	0.33	17	0.4	91	3	
	76.60 - 77.14 m. Lt grn, alt'd volcanic. Epidotized and silicified with poorly defined lt and dk grn banding. Tr of finely dis py.	epidote and qtz	Tr dis py.	5316	76.60-77.14	0.54	31	0.4	83	8	
	78.03 - 78.82 m. Broken core.		Broken core.								
	78.73 - 78.91 m. Lt to med grn alt'd volcanic. Intensely epidotized and silicified with blebs of qtz-carb. Frcts @ 52° and 35° to CA. Hairline frcts are filled with carb. Tr of dis and massive (smeared?) py on frct surfaces.	epidote and qtz	Broken core. Tr dis & massive py.	5318	78.73-78.91	0.18	33	1.3	52	27	
	79.27 - 79.69 m. Gy-grn alt'd volcanic. Silicified; locally epidotized with gy areas not epidotized. Region of massive fretd qtz with epidote in frets. Numerous hairline fres. No visible mineralization. Gy areas diopside(?).	epidote and qtz	Broken core.	5319	79.27-79.69	0.42	15	0.1	19	13	
	80.49 - 80.84 m. Lt grn and red alt'd volcanic(?). Intensely epidotized and silicified with numerous blebs of qtz-carb. Localized red areas may be garnet(?). Tr of dispy and cp on frct surfaces.	epidote, qtz and garnet(?)	Tr dis py & cp.	5320	80.49-80.84	0.35	125	0.5	188	10	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
67.66 - 97.56 (cont.)	80.84 - 81.21 m. Reddish-brn alt'd volcanic(?). Intensely silicified. Red is possible garnet. Numerous crosscutting hairline frcts. No visible mineralization.	qtz and garnet(?)		5321	80.84-81.21	0.37	1	0.2	18	6	
	81.21 - 81.70 m. Red to gy alt'd volcanic. Red is garnet(?) with localized gy areas of qtz(?). Contains 2-3% dis py and a tr to 1% dis po on frct surfaces.	garnet and qtz	2-3% dis py, tr to 1% dis po, tr cp.	5322	81.21-81.70	0.49	138	3	1115	40	
	81.70 - 82.06 m. Reddish-gy alt'd volcanic(?) (see 81.21-81.70 m) with patches of epidote alt'n (1-3 mm). Contains 2-5% finely dis py on frct surfaces.	garnet(?), qtz and epidote	Broken core. 2-5% dis py.	5323	81.70-82.06	0.36	9	0.6	174	3	
	82.06 - 82.49 m. Reddish-brn alt'd volcanic(?). Garnetiferous(?) with numerous crosscutting hairline frcts. Contains 2-3% finely dis py and locally up to 5% finely dis po.	garnet	2-3% dis py, 5% dis po, tr to 1% cp.	5324	82.06-82.49	0.43	90	11.0	4579	35	
	82.49 - 83.03 m. Reddish-brn alt'd volcanic. Silicified with garnet. Patchy epidote alt'n. Locally 3-5% dis py and 3% dis po.	qtz, garnet and epidote	3-5% dis py, 3% dis po, 1-2% cp.	5325	82.49-83.03 Au assay 0.0	0.54 06 oz/to	203 on (0.2	28.5 06 g/t)		56	
	83.40 - 83.76 m. Lt gy-grn alt'd volcanic(?). Alternating bands of epidote and gy intensely silicified rock. Tr to 3% dis py, dominantly on fret surfaces.	epidote and qtz	Tr to 3% dis py.	5326	83.40-83.76	0.36	41	0.4	110	7	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe: ppm
67.66 - 97.56 (cont.)	83.76 - 84.01 m. Lt gy alt'd vol- canic(?). Intensely silicified with localized epidote alt'n. Tr of finely dis py in hairline frcts.	qtz and epidote	Tr dis py.	5327	83.76-84.01	0.25	8	0.4	71	8	
	84.04 - 84.39 m. Gy-grn alt'd volcanic(?). Intensely epidotized and silicified. Numerous blebs of qtz. Contains 3% finely dis py throughout.	qtz and epidote	3% dis py.	5328	84.04-84.39	0.35	59	0.2	22	11	
	84.39 - 97.56 m. Sheared dk grn andesite @ 59° to CA.										
	87.47 - 87.66 m. Foliated andesite. Dk grn with randomly orientated carb stringers. Sheared @ 56° to CA. Chlorite alt'n of host. Contains 2-3% finely dis py orientated parallel to foliation.	chlorite	Foliation @ 56° to CA. 2-3% dis py.	5329	87.47-87.66	0.19	4	0.2	50	8	
	93.23 - 93.42 m. Dk to med grn alt'd andesite. Intensely silicified and epidotized with qtz veins (1-2 m) @ 35° and 47° to CA. Tr to 2% finely dis py on frct surfaces.	qtz and epidote	Veins @ 35° & 47° to CA. Tr to 2% dis py.	5330	93.23-93.42	0.19	1	0.1	4	7	
	93.42 - 93.93 m. Alt'd volcanic with 50% massive qtz. Intensely epidotized and silicified. Patches of epidote alt'n within qtz. Tr of finely dis py.	epidote and qtz	Tr dis py.	5331	93.42-93.93	0.51	1	0.3	8	3	

97.56 EOH



MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 94.49 Dip : -70° Azimuth : 255°

: 3.05 m

Core Size : NQ

Casing

Grid: McNeil Peninsula L7+55N, O+25E

Collar elev.: 35 m Remarks: Sample nos. 5395 to 5465 Drilled: June 21-22/88 Contractor : Burwash Logged by : G. Yip Date logged: July 15/88 Objective: See drill hole CA88-ll summary in text of report.

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Hole No.: CA88-11 Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au pp b	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 3.05	Casing										
3.05 - 4.76	Dk gy-grn alt'd andesite. Numerous stringers of qtz and iron-carb alt'd to epidote.										
4.76 - 7.57	Med to fine-grained gy-white dior- ite. Locally epidotized; qtz-carb vnlts.		Contact @ 74° to CA.								
7.57 - 10.71	Med to dk gy porphyritic andesite with subhedral feldspar phenocrysts up to 1.2 cm. Locally alt'd.		Contact @ 24° to CA.								
	7.81 - 8.11 m. Gy porphyritic andesite.	epidote and chlorite	Tr dis py.	5395	7.81-8.11	0.30	2	0.1	3	30	
	9.29 - 10.74 m. Gy-grn, fine-grained andesite with subhedral to euhedral feldspar phenocrysts (1-2 mm).										
	10.15 - 10.31 m. Dk gy, fine-grained andesite.	chlorite and epidote	Tr dis py.	5396	10.15-10.31	0.16	2	0.2	5	6	
10.71 - 12.61	Med to fine-grained diorite. Locally alt'd by epidote and iron-carb. Contains angular xenoliths of a dk gy fine-grained volcanic.		Contact @ 45° to Ca.								



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.61 - 17.30	Med gy, fine-grained andesite. Locally porphyritic with subhedral to euhedral feldspar phenocrysts (1-3 mm). Qtz-carb and epidote filled veins.		Contact @ 29° to CA.								
	13.28 - 13.41 m. Gy-grn alt'd volcanic(?).	chlorite and carb	Tr to 1% dis py.	5397	13.28-13.41	0.13	56	1.9	536	111	
	13.41 - 13.70 m. Gy-grn alt'd volcanic(?).	chlorite, qtz and carb	3% dis py, 1% cp.	5398	13.41-13.70	0.29	30	5.2	1277	720	443 (
	13.70 - 13.97 m. Lt gy-grn alt'd volcanic(?).	chlorite	2-3% dis po, 2-3% dis py.	5399	13.70-13.97	0.27	41	2.1	422	77	
	13.97 - 14.12 m. Lt grn alt'd volcanic(?).	chlorite and qtz	Tr dis mt, 1-2% dis po.	5400	13.97-14.12	0.15	13	0.4	108	54	
	14.12 - 14.33 m. Lt gy-grn alt'd volcanic(?).	epidote, carb and qtz	Broken core. Tr py.	5401	14.12-14.33	0.21	13	0.1	21	19	
	14.33 - 14.53 m. Lt blue-grn alt'd volcanic(?) with red patches.	qtz	Broken core. 2% dis po, 1% dis py.	5402	14.33-14.53	0.20	2	0.7	253	33	
	14.53 - 14.77 m. Dk grn alt'd volcanic(?).	chlorite	1-2% dis po.	5403	14.53-14.77	0.24	15	2.8	<b>79</b> 0	49	
	14.77 - 15.07 m. Lt blue-grn alt'd volcanic(?).	chlorite and qtz	5% dis po, 3-5% dis mt, 3% dis py, 1% cp.	5404	14.77-15.07 Au assay 0.01			10.1 (11 g/t)	2885	223	
	15.07 - 15.31 m. Lt gy-grn, alt'd volcanic(?). Intensely silicified.	qtz	3-4% dis py.	5405	15.07-15.31	0.24	71	0.2	62	29	
	15.49 - 16.32 m. Lt greenish-brn volcanic(?). Intensely silicified.	qtz	1-2% dis mt, 3-5% dis py.	5406	15.49-16.32 Au assay 0.03	0.83 ll oz/to		0.4 377 g/t)	66	55	
	16.32 - 16.64 m. Lt gy-grn intensely alt'd volcanic(?). No original textures visible.	qtz	Broken core. Tr to 1% dis py.	5412	16.32-16.64	0.32	41	1.4	384	75	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
12.61 - 17.30 cont.)	16.64 - 16.89 m. Lt gy alt'd volcanic(?). Intensely silicified.	qtz	1-2% dis py.	5407	16.64-16.89	0.25	32	0.2	26	8	
cont.	16.89 - 17.30 m. Lt grn alt'd volcanic(?).	epidote and qtz	Tr dis py, tr cp.	5408	16.89-17.30	0.41	23	1.9	717	11	
17.30 - 51.83	Med to fine-grained, gy-grn dior- ite. Locally alt'd by iron-carb, chlorite and epidote.										
d 8 2 8 0	20.64 - 20.72 m. Fine-grained diorite. No visible mineralization.	epidote, iron-carb and chlorite		5409	20.64-20.72	0.08	1	0.1	6	2	
	21.37 - 21.59 m. Bx composed of alt'd diorite and volcanics, with carb alt'n.	epidote and chlorite	Tr dis py.	5410	21.37-21.59	0.22	1	0.1	8	8	
	22.35 - 22.56 m. Fine-grained, dk gy alt'd diorite.	epidote, iron-carb and chlorite	Broken core. Tr dis py.	5411	22.35-22.56	0.21	1	0.2	63	3	
	28.81 - 28.94 m. Lt gy to dk grn alt'd diorite. No visible mineralization.	epidote, chlorite and iron-carb		5413	28.81-28.94	0.13	4	0.1	78	9	
	29.39 - 29.55 m. Lt to med grn alt'd diorite.	epidote and chlorite	Tr dis py.	5414	29.39-29.55	0.16	1	0.1	3	8	
3 1 3 8	30.25 - 30.40 m. Lt to med grn intensely alt'd diorite.	epidote	Tr dis py.	5415	30.25-30.40	0.15	2	0.1	4	9	
	30.75 - 30.97 m. Lt grn intensely alt'd zone in diorite.	epidote and qtz	Alt'n zone @ 35° to CA. Tr dis py.	5416	30.75-30.97	0.22	1	0.1	5	10	
	35.80 - 36.12 m. Lt to med grn alt'd diorite(?) bx zone with carb in interstices.	epidote, qtz and chlorite	Zoning @ 29° to CA. Tr dis py.	5417	35.80-36.12	0.32	35	0.3	7	8	



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From - To metres	Lithology	Alteration	Mineralizat	ion	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
17.30 - 51.83 cont.)	32.07 - 51.83 m. Diorite(?) becoming increasingly alt'd and metamorphosed(?). Lt gy-grn in color. Original textures vanishing. Flooding of silica(?).											
	39.50 - 39.62 m. Strongly alt'd lt grn diorite(?). No visible mineralization.	epidote, chlorite and qtz			5418	39.50-39.62	0.12	1	0.1	4	3	
	41.45 - 41.72 m. Lt grn, strongly alt'd, bx'd diorite.	epidote and qtz	Broken core. to 1% dis py.		5419	41.45-41.72	0.27	3	0.1	4	6	
	41.72 - 42.21 m. Lt gy-grn strongly alt'd diorite; bx'd(?).	epidote and qtz	Broken core. to 1% dis py.	Tr	5420	41.72-42.21	0.49	1	0.1	4	4	
	42.67 - 42.89 m. Lt grn, strongly alt'd diorite(?). No original textures visible.	epidote and qtz	1-2% dis py.		5421	42.67-42.89	0.22	8	0.1	4	16	
	43.08 - 43.62 m. Lt grn, intensely alt'd diorite(?). No original textures visible.	epidote and qtz	Broken core. py.	Tr	5422	43.08-43.62	0.54	2	0.1	15	39	
	43.83 - 44.02 m. Med grn, intensely alt'd diorite.	epidote, qtz and chlorite	1-2% dis py.		5423	43.83-44.02	0.19	9	0.4	193	96	
	44.02 - 44.64 m. Med to lt grn intensely alt'd diorite(?).	epidote, qtz and chlorite.	1-2% dis py.		5424	44.02-44.64	0.62	4	0.6	212	65	
	44.64 - 45.01 m. Med to lt grn intensely alt'd diorite(?).	epidote, qtz and chlorite	Broken core. dis py.	1-2%	5425	44.64-45.01	0.37	1	0.1	20	12	
	45.01 - 45.50 m. Lt grn, intensely alt'd diorite(?). No original textures visible. Bx'd.	epidote, qtz and chlorite	Broken core. dis py.	Tr	5426	45.01-45.50	0.49	1	0.2	3	3	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
17.30 - 51.83 (cont.)	45.50 -45.73 m. Med gy-grn intensely alt'd diorite(?).	epidote and qtz	Broken core. Tr dis py.	5427	45.50-45.73	0.23	2	0.1	1	3	
Conce	47.73 - 47.80 m. Lt gy-grn intensely alt'd diorite. Bx'd. Diorite becoming less alt'd.	qtz and epidote	Tr dis py.	5428	47.73-47.80	0.07	1	0.1	4	3	
	47.96 - 48.05 m. Contains 1 cm wide qtz vein in fine-grained alt'd diorite.	epidote	Vein @ 55° to CA. Tr dis py.	5429	47.96-48.05	0.09	2	0.1	6	2	
	48.87 - 49.00 m. Lt grn strongly alt'd diorite(?). No original textures visible.	epidote, qtz and carb	Broken core. Tr cp, tr to 1% dis py.	5430	48.87-49.00	0.13	1	3.5	1485	10	
	51.51 - 51.58 m. Massive qtz mass in fine-grained alt'd diorite(?).	qtz and epidote	Tr dis py.	5431	51.51-51.58	0.07	1	0.1	3	9	
51.83 - 94.49	Dk gy to lt grn andesite. Locally intensely epidotized and silicified.										
<b>34.4</b> 7	52.12 - 52.20 m. Gy-grn qtz vein in andesite.	epidote	Vein @ 76° to CA. Tr dis py.	5432	52.12-52.20	0.08	22	0.1	22	17	
	52.67 - 52.79 m. Dk grn andesite.	epidote	1-2% dis py.	5433	52.67-52.79	0.12	1	0.1	34	82	
	52.95 - 53.05 m. Lt grn-gy alt'd andesite.	epidote	2-3% dis py.	5434	52.95-53.05	0.10	2	0.1	35	19	
	53.21 - 53.35 m. Dk gy andesite.	epidote	2-3% dis py.	5435	53.21-53.35	0.14	1	0.1	44	33	
!	53.40 - 53.76 m. Lt grn alt'd andesite.	chlorite, epidote and qtz	Tr to 1% dis py.	5436	53.40-53.76	0.36	1	0.1	92	13	
	55.20 - 55.47 m. Lt grn intensely alt'd diorite(?).	epidote and chlorite	Tr to 1% dis py.	5437	55.20-55.47	0.27	1	0.1	6	6	
	55.77 - 56.06 m. Lt grn intensely alt'd diorite(?). Diopside present.	epidote and carb	Tr dis py.	5438	55.77-56.06	0.29	26	0.2	50	34	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
51.83 - 94.49 (cont.)	56.06 - 56.16 m. Lt grn intensely alt'd volcanic(?). Diopside(?).	carb, epidote and qtz	Tr dis py.	5439	56.06-56.16	0.10	15	0.3	101	17	
(cont.)	56.26 - 56.37 m. Lt grn intensely alt'd volcanic(?) with diopside.	epidote and carb	Tr dis py.	5440	56.26-56.37	0.11	17	0.3	91	18	
	56.37 - 56.50 m. Gy-grn alt'd volcanic(?). Tr of diopside.	epidote and carb	Tr dis py.	5441	56.37-56.50	0.13	8	0.1	31	15	
	56.50 - 56.59 m. Lt gy-grn intensely alt'd volcanic(?).	epidote, qtz and carb	Tr dis py.	5442	56.50-56.59	0.09	5	0.2	46	16	
	56.78 - 57.27 m. Med gy to 1t grn alt'd volcanic(?).	epidote and carb	2-3% dis py, tr to 1% dis cp.	5443	56.78-57.27 Au assay 0.0			15.1 274 g/t)	3541	105	300 Zn
	57.27 - 57.46 m. Lt gy-grn alt'd volcanic(?) with diopside.	epidote and carb	Tr py, tr po.	5444	57.27-57.46	0.19	37	0.6	147	38	
	57.46 - 57.80 m. Lt gy-grn intense- ly alt'd volcanic(?) with diopside(?)		l-2% dis py, tr dis po, tr dis cp.	5445	57.46-57.80	0.34	85	3.3	984	43	
	57.80 - 58.03 m. Lt grn, intensely alt'd volcanic. Garnet(?).	epidote and carb	Tr dis py.	5446	57.80-58.03	0.23	27	0.5	150	22	
	60.48 - 60.67 m. Lt greenish-red intensely alt'd volcanic(?). Garnet.	epidote	Tr dis py.	5447	60.48-60.67	0.19	8	0.7	180	8	
	60.67 - 61.01 m. Lt grn, intensely alt'd volcanic(?). Garnet.	epidote	Tr dis py.	5448	60.67-61.01	0.34	3	0.4	129	4	
	61.01 - 61.28 m. Lt grn-gy intensety alt'd volcanic(?).	epidote and carb	Tr dis py.	5449	61.01-61.28 Au assay 0.0		640 n (0.4	0.4 80 g/t)	128	18	
	61.28 - 61.49 m. Med gy-grn intensely alt'd volcanic(?) with orange patches. Garnet(?). Diopside.	epidote and carb	Tr dis py.	5450	61.28-61.49	0.21	8	0.3	123	7	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
51.83 - 94.49 (cont.)	61.49 - 61.76 m. Med gy-grn intensely alt'd volcanic(?). Diopside.	epidote and carb	Tr dis py.	5451	61.49-61.76	0.27	17	0.6	235	11	
	61.76 - 61.92 m. Blue-gy intensely alt'd volcanic(?) with orange patch of garnet(?).	carb and qtz	l-2% dis py.	5452	61.76-61.92	0.16	4	0.4	199	11	
	61.92 - 62.08 m. Orange-grn intensely alt'd volcanic(?). Garnet.	gtz and carb		5453	61.92-62.08	0.15	1	0.5	187	6	
	62.08 - 62.36 m. Blue-gy intensely alt'd volcanic(?). Garnet(?).	epidote, qtz and carb	Tr dis py.	5454	62.08-62.36	0.28	10	0.6	223	6	
	62.36 - 62.71 m. Dk gy-grn intensely alt'd volcanic(?).	epidote	3% dis py.	5455	62.36-62.71 Au assay 0.0	0.25 009 oz/to	250 n (0.)	1.7 309 g/t	540	43	
	66.20 - 66.75 m. Med gy-grn andesite.	epidote and carb	Broken core. Tr cp, 2-3% dis py.	5456	66.20-66.75	0.55	12	5.3	2275	31	
	66.75 - 68.12 m. Med grn andesite.	epidote	Broken core. 1-2% cp, 2-5% dis py.	5457	66.75-67.12	0.37	147	29.3	12264	230	
	68.35 - 68.57 m. Dk gy, locally alt'd andesite. Bx'd.	epidote and carb	1-2% dis py.	5458	68.35-68.57	0.22	10	1.5	484	10	
	69.25 - 69.53 m. Dk gy-grn andesite with carb filled stringers.	chlorite	Tr dis py.	5459	69.25-69.53	0.28	3	0.1	39	2	
	71.66 - 71.94 m. Dk grn andesite with bands of qtz-carb.	chlorite and epidote	Banding @ 64° to CA. Tr dis py.	5460	71.66-71.94	0.28	1	0.1	8	6	
	75.11 - 75.36 m. Dk gy, foliated andesite with bands of qtz-carb.	epidote and chlorite	Foliation @ 43° to CA. Tr dis py.	5461	75.11-75.36	0.25	1	0.1	8	2	
	79.41 - 79.64 m. Dk gy-grn ande- side. No visible mineralization.	chlorite and epidote		5462	79.41-79.64	0.23	14	0.1	2	14	

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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
51.83 - 94.49 (cont.)	82.83 - 82.92 m. Contains 1.9 cm wide qtz vein in dk grn andesite. No visible mineralization.	chlorite		5463	82.83-82.92	0.09	1	0.1	3	2	
	85.91 - 86.20 m. Dk to lt grn intensely alt'd andesite with qtz vein (6.5 cm).	chlorite and carb	Vein @ 45° to CA. Tr dis py.	5464	85.91-86.20	0.29	3	0.2	3	6	
	86.66 - 86.93 m. Med to dk grn alt'd andesite.	chlorite and epidote	Tr dis py.	5465	86.66-86.93	0.27	4	0.1	1	8	
	90.97 - 91.74 m. Dk grn and white foliated andesite.		Foliation @ 62° to CA.								
94.49	ЕОН										



MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 93.57 : -45° Azimuth : 260°

Core Size : NQ

Grid: McNeil Peninsula L8+55N, 0+65W

Collar elev.: 32 m Remarks: Sample nos. Casing : 1.52 m 5527 to 5582

Drilled: June 22-23/88 Contractor : Burwash

Logged by : G. Yip Date logged: July 16/88 Objective: See drill

hole CA88-12 summary in text of report.

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Hole No.: CA88-12 Hole Survey Type: None Dip Depth Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 1.52	Casing										
1.52 - 19.12	Med to fine-grained, dk gy-grn diorite with localized qtz-carb stringers; occassional epidote in filling. Mafics have generally alt'd to chlorite.										
	6.21 - 6.85 m. Lt gy diorite. Locally bx'd with carb infilling. No visible mineralization.	carb, chlorite and epidote	Broken core.	5527	6.21-6.85	0.64	26	0.1	7	8	
	7.32 - 7.51 m. Lt grn alt'd diorite.	epidote and iron- carb	Tr to 2% dis py.	5528	7.32-7.51	0.19	l	0.1	4	14	
	8.52 - 8.91 m. Lt gy-grn intensely alt'd diorite(?).	epidote, carb and qtz	Tr dis py.	5529	8.52-8.91	0.39	10	0.1	14	5	
	16.38 - 16.53 m. Lt grn intensely alt'd diorite.	epidote and qtz	Tr dis py.	5530	16.38-16.53	0.15	1	0.3	143	7	
19.12 - 21.25	Fine-grained, med grn andesite; chloritized and carb. Locally intensely carb. Lineation @ 31° to CA. Mafics alt'd to chlorite. Localized epidote alt'n.										
	20.35 - 20.69 m. Dk gy alt'd volcanic(?).	chlorite and carb	Tr to 1% py.	5531	20.35-20.69	0.34	22	0.4	76	29	
	20.69 - 20.85 m. Med gy alt'd volcanic(?).	carb and epidote	Tr dis py.	5532	20.69-20.84	0.15	29	0.4	80	34	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm:	Other ppm
19.12 - 21.25 cont.)	20.84 - 21.25 m. Med to 1t gy intensely alt'd volcanic(?).	carb	Broken core. Tr dis py.	5533	20.84-21.25	0.41	14	0.1	i	16	
21.25 - 24.85	Dk grn, alt'd, med to fine-grained diorite. Locally chloritized and epidotized; original textures are lost.										
	21.25 - 21.51 m. Gy white alt'd diorite.	carb	Tr dis py.	5534	21.25-21.51 Au assay 0.0		830 n (0.96	0.4 50 g/t)	215	239	
	21.51 - 21.94 m. Lt gy, alt'd diorite and vuggy carb. Lots of iron oxide.	carb		5535	21.51-21.94 Au assay 0.0	_	665 on (0.82	0.1 23 g/t)	52	142	
	22.21 - 22.49 m. Med gy alt'd diorite.	epidote and qtz	Tr dis py.	5536	22.21-22.49	0.28	37	0.1	4	21	
	22.49 - 22.91 m. Med gy alt'd diorite. No visible mineraliz-ation.	epidote, carb, iron-carb and chlorite		5537	22.49-22.91	0.42	33	0.1	5	31	
	22.91 - 23.00 m. Med to 1t gy alt'd diorite.	qtz and chlorite	1-2% dis py.	5538	22.91-23.37	0.46	101	0.3	38	75	
	24.12 - 24.42 m. Lt to med gy-grn alt'd diorite(?); foliated.	epidote, qtz, carb and chlorite	Foliation @ 42° to CA. Tr to 1% dis	5539	24.12-24.42	0.30	32	0.1	8	29	
	24.60 - 24.98 m. Dk grn alt'd diorite and volcanic with carb veins (14-18 mm).	chlorite and epidote	Broken core. 1-2% dis py.	5540	24.60-24.98	0.38	43	0.3	330	43	
24.85 - 26.56	Dk grn, fine-grained andesite cut by qtz-carb and epidote filled stringers. Chlorite alt'd and locally intensely epidote alt'd.										



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
26.56 - 28.15	Med to fine-grained, gy to grn diorite. Mafics alt'd to chlorite, localized epidote alt'n.										
	26.97 - 27.33 m. Med grn intensely alt'd diorite.	epidote, chlorite and carb	Broken core. Tr	5541	26.97-27.33	0.36	2	0.1	30	13	
28.15 - 29.35	Med grn, fine-grained andesite. Numerous stringers of epidote with patches of a brn material.										
29.35 - 87.49	Med to fine-grained, gy-grn alt'd diorite with vuggy carb stringers.										
	31.39 - 31.93 m. Lt grn-gy foli- ated diorite.	qtz	Broken core. Foliation @ 55° to CA. Tr dis py.	5542	31.39-31.93	0.54	16	0.1	20	27	
	31.93 - 32.48 m. Med gy, fine- grained diorite cut by vuggy carb stringers (2-3 mm).	chlorite and qtz	Broken core. Veins @ 27° to CA.	5543	31.93-32.48	0.55	29	0.1	68	26	
	34.58 - 34.75 m. Gy-grn, intensely alt'd fine-grained diorite(?).	qtz and epidote	Tr dis py.	5544	34.58-34.75	0.17	3	0.1	47	3	
	36.27 - 36.55 m. Gy-grn, intensely alt'd diorite(?).	qtz and epidote	Tr dis py.	5545	36.27-36.55	0.28	1	0.1	7	2	
	38.71 - 38.89 m. Fine-grained, lt gy-grn alt'd diorite.	qtz and chlorite	Tr to 1% dis py.	5546	38.71-38.89	0.18	2	0.1	131	5	
	41.37 - 41.51 m. Fine-grained, med gy diorite.	chlorite and epidote	Tr dis py.	5547	41.37-41.51	0.14	1	0.1	52	3	
	42.05 - 42.16 m. Fine-grained, 1t grn-gy alt'd diorite	qtz and iron-carb	Broken core. Tr	5548	42.05-42.16	0.11	1	0.1	17	4	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
29.35 - 87.49 (cont.)	45.20 - 45.61 m. Fine-grained, 1t grn, alt'd diorite. Locally, loss of original textures.	epidote and qtz	Tr dis py.	5549	45.20-45.61	0.41	2	0.1	19	5	
	46.13 - 46.22 m. Lt gy, fine- grained diorite and fault gouge. No orientation taken, broken core. No visible mineralization.	chlorite	Broken core.	5550	46.13-46.22	0.09	1	0.1	146	3	
	46.47 - 46.60 m. Blue-gy alt'd fine-grained diorite.	epidote and qtz	Tr dis py.	5551	46.47-46.60	0.13	1	0.1	13	4	
	53.21 m. Fault gouge(?) in diorite subparallel to CA.		Broken core.								
	53.81 - 53.95 m. Lt gy-grn in- tensely alt'd diorite.	qtz and epidote	Tr dis py.	5552	53.81-53.94	0.14	12	0.2	42	4	
	55.04 - 55.18 m. Lt gy-grn intensely alt'd diorite(?).	epidote, carb and qtz	Broken core. 1-2% dis py.	5553	55.04-55.18	0.14	4	0.1	19	3	
	56.38 - 56.61 m. Lt blue-gy alt'd diorite.	qtz and epidote	Tr dis py.	5554	56.38-56.61	0.23	1	0.1	5	3	
	57.25 - 57.26 m. Lt gy alt'd diorite.	qtz and epidote	Tr dis py.	5555	57.25-57.56	0.31	13	0.2	2	5	
	57.77 - 57.99 m. Gy-grn, fine-grained, alt'd diorite. No visible mineralization.	qtz and epidote		5556	57.77-57.99	0.22	7	0.2	5	8	
	58.07 - 58.34 m. Lt gy to off- white, very intensely alt'd diorite. Original textures not visible.	qtz and epidote	Tr py.	5557	58.07-58.34	0.27	2	0.1	3	4	
	58.52 - 58.66 m. Lt gy-grn alt'd diorite(?).	qtz, epidote and carb	Tr dis py.	5558	58.52-58.66	0.14	3	0.1	3	11	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
29.35 - 87.49 (cont.)	59.28 - 59.60 m. Lt gy to off-white, intensely alt'd diorite(?). Original textures lost.	qtz	Broken core. Tr dis py.	5559	59.28-59.60	0.32	1	0.1	3	5	
	59.60 - 60.09 m. Lt gy-grn, very intensely alt'd diorite(?). Original textures lost.	qtz and epidote	Tr dis py.	5560	59.60-60.09	0.49	1	0.1	3	2	
	60.09 - 60.62 m. Same as interval from 59.60 to 60.09 m.	qtz and epidote	Tr dis py.	5561	60.09-60.62	0.53	5	0.1	2	5	
	60.62 - 60.88 m. Same as interval from 59.60 to 60.09 m.	qtz and epidote	Tr dis py.	5562	60.62-60.88	0.26	2	0.1	3	2	
	64.50 - 64.76 m. Med gy alt'd diorite.	qtz and epidote	Tr dis py.	5563	64.50-64.76	0.26	1	0.1	3	2	
	67.16 - 67.32 m. Foliated, fine- grained, gy diorite. Contains a 9 mm qtz vein.	epidote and qtz	Vein @ 33° to CA. Foliation @ 51° to CA. Tr dis py.	5564	67.16-67.32	0.16	4	0.1	55	2	
	69.98 - 70.13 m. Gy-grn, intensely alt'd diorite(?). No original textures visible.	qtz	Tr dis py.	5565	69.89-70.13	0.24	2	0.2	49	10	
	70.53 - 70.93 m. Lt gy-grn intensely alt'd diorite(?).	qtz	Tr dis py. Foli- ation @ 43° to CA.	5566	70.53-70.93	0.40	2	0.1	5	13	
	70.93 - 71.23 m. Lt blue-gy intensely alt'd diorite(?). Original textures not visible. No visible mineralization.	qtz		5567	70.93-71.23	0.26	1	0.1	5	4	
	71.92 - 73.27 m. Lt blue-grn in- tensely alt'd diorite(?). Orig- inal textures not visible.	epidote and qtz	Alt'n @ 21° to CA. Tr dis py.	5568	71.92-73.27	0.35	1	0.1	8	4	
	76.74 - 76.90 m. Med gy, alt'd, fine-grained diorite.	epidote	3% dis py.	5569	76.74-76.90	0.16	55	0.8	388	37	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
29.35 - 87.49 cont.)	83.17 - 83.67 m. Med gy, fine- grained, foliated diorite.	epidote	Foliation @ 35° to CA. Tr to 1% dis py.	5570	83.17-83.72	0.55	5	0.2	88	5	
	83.72 - 84.04 m. Dk gy, alt'd, fine-grained diorite.	qtz	Tr to 1% dis py.	5571	83.72-84.04	0.32	3	0.5	117	4	
	84.04 - 84.43 m. Same as interval from $83.72$ to $84.04$ m.	qtz and epidote	Tr dis po.	5572	84.04-84.43	0.39	5	0.3	107	12	
	84.43 - 84.55 m. Lt gy, fine-grained, locally alt'd diorite.	epidote and qtz	Tr dis po.	5573	84.43-84.55	0.12	8	0.5	294	12	
	84.55 - 84.77 m. Lt gy, alt'd, fine-grained diorite.	qtz, carb and epidote	Tr dis py.	5574	84.55-84.77	0.22	11	0.5	102	123	
	84.77 - 85.08 m. Same as interval from 84.55 to 84.77 m.	qtz and epidote	Tr dis py.	5575	84.77-85.08	0.31	8	0.3	91	74	
	85.08 - 85.41 m. Same as interval from 84.55 to 84.77 m.	qtz	Broken core. Tr to 1% py.	5576	85.08-85.41	0.33	12	0.9	203	70	
	85.41 - 85.98 m. Med to dk gy alt'd diorite.	qtz and epidote	Tr dis py.	5577	85.41-85.71	0.30	37	2.3	397	143	
	85.71 - 85.97 m. Same as interval from 85.41 to 85.98 m.	qtz	Tr dis py.	5578	85.71-85.97	0.26	3	0.3	65	7	
8 f	85.97 - 86.08 m. Same as interval from 85.41 to 85.98 m.	qtz	Tr to 1% dis py.	5579	85.97-86.08	0.11	28	1.0	459	745	
	86.31 - 86.54 m. Dk gy, fine-grained alt'd diorite(?).	qtz and carb	1-2% dis py.	5580	86.31-86.54	0.23	26	1.2	563	114	
	87.25 - 87.35 m. Dk gy, fine- grained diorite and 2 mm qtz-carb vein. No visible mineralization.	epidote	Vein @ 3° to CA.	5581	87.25-87.35	0.10	10	0.2	116	50	

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Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.		Contact @ 56° to CA								
Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.		Contact @ 76° to CA.								
91.87 - 92.06 m. Fine-grained, gy diorite with a 6 mm qtz epidote vein.	ep1dote	Vein @ 20° to CA.	5582	91.87-92.06	0.19	1	0.1	44	3	
	phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy diorite with a 6 mm qtz epidote	phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote	phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated Contact @ 76° to CA. diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote Vein @ 20° to CA. diorite with a 6 mm qtz epidote	No.  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote  No.  Contact @ 56° to CA.  Contact @ 76° to CA.	No. m  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote	No. m m  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote  No. m m  Contact @ 56° to CA.  Contact @ 76° to CA.  Vein @ 20° to CA. 5582 91.87-92.06 0.19	No. m m ppb  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote  No. m m ppb  Contact @ 56° to CA.  Contact @ 76° to CA.  Vein @ 20° to CA. 5582 91.87-92.06 0.19 1	No. m m ppb ppm  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote  No. m m ppb ppm  Contact @ 56° to CA.  Contact @ 76° to CA.  Vein @ 20° to CA. 5582 91.87-92.06 0.19 1 0.1	No. m m ppb ppm ppm  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote	No. m m ppb ppm ppm  Dk gy, fine-grained feldspar por- phyritic volanic. Phenocrysts, 1-3 mm, are subhedral.  Fine-grained, med gy foliated diorite cut by qtz-carb and epidote filled stringers.  91.87 - 92.06 m. Fine-grained, gy epidote diorite with a 6 mm qtz epidote  No. m m ppb ppm ppm  Contact @ 56° to CA.  Contact @ 76° to CA.  Vein @ 20° to CA. 5582 91.87-92.06 0.19 1 0.1 44 3



MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp.

Length (m): 91.14 : -70° Dip Azimuth : 260°

Core Size : NQ

Grid: McNeil Peninsula L8+55N, O+65W

Collar elev.: 32 m Remarks: Sample nos.

Casing : 1.83 m 5466 to 5526 Drilled: June 23-24/88

Contractor : Burwash Logged by : G. Yip

Date logged: July 17/88

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Hole No.: CA88-13

Objective: See drill

hole CA88-13 summary in text of report.

Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Çu ppm	As ppm	Other ppm
) - 1.83	Casing										
1.83 - 27.62	Dk gy to med grn, fine to med- grained, alt'd diorite. Locally very intensely alt'd (epidote and qtz); no original textures visible. Also cut by qtz-carb and epidote filled stringers.										
	9.63 - 9.78 m. Med grn, alt'd diorite with a 1 cm qtz vein.	chlorite, epidote and qtz	Vein @ 25° to CA. Tr dis py.	5466	9.63-9.78	0.15	54	0.1	8	3	
	11.96 - 12.14 m. Med grn, fine- grained diorite.	epidote and qtz	Tr to 2% dis py.	5467	11.96-12.14	0.18	6	0.1	25	3	
	12.93 - 13.09 m. Med grn, fine-grained, alt'd diorite.	epidote and chlorite	Tr dis py.	5468	12.93-13.09	0.16	3	0.1	3	4	
	16.46 - 16.56 m. Fine-grained diorite. Contains a 3.5 cm alt'd zone.	qtz and epidote	Alt'n @ 42° to CA. Tr dis py.	5469	16.46-16.56	0.10	1	0.1	15	4	
	21.68 - 21.79 m. Very intensely alt'd fine-grained, med grn diorite(?). No original textures visible.	epidote and qtz	Alt'n @ 42° to CA. Tr dis py.	5470	21.68-21.79	0.11	4	0.2	1	3	
	23.72 - 23.85 m. Gy-grn, intensely alt'd diorite(?). Bx'd.	epidote, carb and iron-carb	Tr dis py.	5471	23.72-23.85	0.13	49	0.2	4	58	
	26.56 - 26.70 m. Med gy, foliated diorite.	qtz	Foliation @ 70° to CA. 1% dis py.	5473	26.56-26.70	0.14	11	0.1	40	24	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 17-18/88 Hole No.: CA88-13 Page 2 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
27.62 - 28.11	Dk to med gy, fine-grained, alt'd volcanic(?). Intensely silicified with oxidation stains.										
	27.76 - 27.89 m. Med gy-grn, fine-grained volcanic.	qtz	Broken core. Tr to 1% dis py, tr cp.	5472	27.76-27.89 Au assay 0.0		230 n (0.3	1.8 09 g/t)	835	178	
28.11 - 78.01	Med to dk gy, fine-grained, alt'd, foliated diorite. Locally very intensely silicified; no original textures visible. Cut by stringers filled with qtz-carb and epidote.										
	29.90 - 30.03 m. Blue-grn intensely alt'd diorite(?). Original textures not visible.	qtz	3-5% dis py.	5474	29.90-30.03	0.13	86	0.2	7	56	
	30.03 - 30.25 m. Same as above.	qtz and epidote	1-2% dis py.	5475	30.03-30.25	0.22	2	0.1	3	3	
	30.25 - 30.40 m. Lt blue-grn intensely alt'd diorite(?).	qtz and chlorite	Tr to 2% dis py.	5476	30.25-30.40	0.15	102	0.1	5	2	
	32.19 - 32.65 m. Lt blue-gy intensely alt'd fine-grained diorite.	qtz	Broken core. Tr dis py.	5477	32.19-32.65	0.46	3	0.1	2	3	
	33.44 - 33.71 m. Med gy-grn, alt'd, fine-grained, foliated, diorite.	qtz and epidote	Foliation @ 71° to CA. Tr dis py.	5478	33.44-33.71	0.27	15	0.2	31	22	
	39.80 - 39.99 m. Med grn, intensely alt'd diorite(?). Original textures not visible.	qtz and epidote	Tr dis py.	5479	39.80-39.99	0.19	3	0.4	128	5	
	39.44 m. Fine-grained, blue-grn diorite is foliated and cut by numerous stringers of qtz, carb and epidote.		Foliation @ 60° to CA. Veins @ 60°, 82° & 51° to CA.								
	41.31 - 41.50 m. Med to lt grn, intensely alt'd diorite(?).	qtz and epidote	Alt'n @ 47° to CA. Tr dis py.	5480	41.31-41.50	0.19	3	0.1	19	10	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 18, 1988 Hole No.: CA88-13 Page 3 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
28.11 - 78.01 cont.)	45.44 - 45.88 m. Med grn intensely alt'd diorite(?).	qtz and epidote	Tr dis py.	5481	45.44-45.88	0.44	1	0.3	11	6	
cont.	49.21 - 49.49 m. Med blue-grn intensely alt'd diorite.	qtz and epidote	Tr dis py, tr cp.	5482	49.21-49.49	0.28	5	0.6	325	4	
	50.22 - 50.35 m. Med blue-grn alt'd diorite.	qtz and epidote	Tr dis py.	5483	50.22-50.35	0.13	1	0.3	11	5	
	52.66 m. Foliated, blue-grn, fine-grained diorite.		Foliation @ 61° to CA.								
	55.86 - 56.09 m. Med gy, intensely alt'd diorite(?). No visible mineralization.	qtz and epidote	Alt'n @ 23° to CA.	5484	55.86-56.09	0.23	1	0.2	5	3	
	58.83 - 59.16 m. Off-white, very intensely alt'd diorite(?). No original textures visible.	qtz	Broken core. Tr dis py.	5485	58.83-59.16	0.33	3	0.1	1	5	
	59.70 - 59.91 m. Lt blue-grn, intensely alt'd diorite(?). No original textures visible. No visible mineralization.	gtz and carb		5486	59.70-59.91	0.21	1	0.1	3	4	
	63.42 63.72 m. Lt gy to off- white, very intensely alt'd dior- ite(?). Original textures lost.	qtz	Tr to 1% dis py.	5487	63.42-63.72	0.30	1	0.1	1	4	
	64.34 - 70.61 m. Bleached out diorite(?). Very intenesly alt'd, silicified. No original textures visible. Tr of finely dis py.										
	65.64 - 65.98 m. Same as interval 63.42 - 63.72 m.	qtz	Tr dis py.	5488	65.64-65.98	0.34	1	0.2	1	3	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
28.11 - 78.01 (cont.)	66.23 - 66.76 m. Yellow to off-white, very intensely alt'd, fine-grained diorite(?). No original textures visible; massive.	qtz	Tr dis py.	5489	66.23-66.76	0.53	1	0.2	1	2	
	67.88 - 68.19 m. Lt gy to off-white. Same as above.	qtz	Broken core. Tr	5490	67.88-68.19	0.31	2	0.1	2	2	
	68.16 - 68.58 m. Off-white. Same as above.	qtz	Broken core. Tr	5491	68.19-68.58	0.39	1	0.1	1	2	
	69.19 - 69.49 m. Same as above.	qtz	2-3% dis py.	5492	69.16-69.49	0.33	1	0.1	1	2	
	69.49 - 69.69 m. Same as above.	qtz	Tr dis py.	5493	69.49-69.69	0.20	1	0.1	1	2	
	71.41 - 71.58 m. Lt blue-grn alt'd, fine-grained diorite(?).	qt z	Tr dis py.	5494	71.41-71.58	0.17	1	0.1	2	2	
	71.79 - 71.98 m. Lt gy-grn alt'd fine-grained diorite. No visible mineralization.	qtz and epidote		5495	71.79-71.98	0.19	2	0.1	2	4	
	73.36 - 73.49 m. Massive gy qtz vein (2.4 cm) in med gy, fine-grained diorite.	epidote	Vein @ 14° to CA. Tr py.	5496	73.36-73.49	0.13	2	0.2	48	3	
	77.50 - 77.78 m. Dk gy, fine-grained.	chlorite and epidote	Tr to 2% dis py.	5497	77.50~77.78	0.28	2	0.2	14	2	
78.01 - 78.96	Med grn, fine-grained feldspar porphyry dyke. Feldspar pheno- crysts 1-2 mm are subhedral and altering to epidote.		Contact @ 88° to CA	۸.							
	78.39 - 78.47 m. Gy-grn, fine-grained, alt'd dyke(?).	epidote	1-2% dis py.	5498	78.39-78.47	0.08	1	0.2	26	4	



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From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval M	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
78.96 - 91.14	Fine-grained, foliated, med gy, diorite, cut by stringers of qtz, carb and epidote.		Foliation @ 57° to CA.								
	79.04 - 79.26 m. Alt'd, fine- grained med gy diorite.	qtz and epidote	1-2% dis py.	5499	79.04-79.26	0.22	1	0.5	40	3	
	79.62 - 79.74 m. Alt'd fine- grained blue-gy diorite.	qtz and epidote	Tr to 1% dis py.	5500	79.62-79.74	0.12	2	0.3	98	6	
	80.06 - 80.47 m. Gy alt'd diorite.	epidote and qtz	3-5% dis py.	5501	80.06-80.47	0.39	1	0.3	74	7	
	80.47 - 80.68 m. Blue-gy alt'd diorite.	qtz and epidote	Tr dis py.	5502	80.47-80.68	0.21	4	0.5	22	15	
	80.68 - 80.91 m. Med gy, alt'd, fine-grained diorite.	qtz and epidote	Tr to 1% dis py.	5503	80.68-80.91	0.23	6	0.5	30	10	
	80.91 - 81.38 m. Same as above.	qtz and epidote	Tr dis py.	5504	80.91-81.38	0.47	46	0.2	58	3	
	81.38 - 81.64 m. Same as above.	qtz	Tr dis py.	5505	81.38-81.64	0.26	1	0.9	189	5	
	81.64 - 81.88 m. Same as above.	qtz and epidote	3-5% dis py, tr cp.	5506	81.64-81.88	0.24	5	0.8	229	2	
	81.88 - 82.28 m. Bx'd, blue-gy alt'd diorite(?). Original tex-tures lost; carb infills the interstices.	qtz	Broken core. Tr dis py.	5507	81.88-82.28	0.40	1	0.2	18	2	
	82.85 - 83.33 m. Alt'd, gy, fine-grained diorite(?) with qtz-carb veins (8 and 38 mm).	qtz	Veins @ 30° & 36° to CA. Tr to 1% dis py.	5508	82.85-83.33	0.48	33	0.3	92	2	
	83.33 - 83.73 m. Alt'd med gy fine-grained diorite.	qtz	Tr dis py.	550 <b>9</b>	83.33-83.73	0.40	1	0.2	22	4	
	83.73 - 84.04 m. Same as above.	qtz and carb	2-3% dis py.	5510	83.73-84.04	0.31	1	0.1	25	7	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 18, 1988 Hole No.: CA88-13 Page 6 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe: ppm
78.96 - 91.14 (cont.)	84.04 - 84.43 m. Same as interval 83.33 - 83.73 m.	qtz	Broken core. Tr dis py.	5511	84.04-84.43	0.39	1	0.5	30	3	
cont.)	84.43 - 84.89 m. Same as above.	qtz	Foliation @ 53° to CA. Tr to 2% dis py.	5512	84.43-84.89	0.46	1	0.1	30	5	
	84.89 - 85.31 m. Same as above. No visible mineralization.	qtz and epidote	Foliation @ 55° to CA.	5513	84.89-85.31	0.42	1	0.3	16	10	
	85.31 - 85.44 m. Same as above.	qtz	1-2% dis py.	5514	85.31-85.44	0.13	24	0.4	23 .	11	
	85.44 - 86.08 m. Sheared and alt'd, gy, fine-grained diorite. Unconsolidated.	carb	Shearing sub- parallel to CA. Unconsolidated core. 3-5% dis py.	5515	85.44-86.08	0.64	108	0.8	11	61	
	86.08 - 86.33 m. Same as above.	qtz and carb	Unconsolidated core. Tr dis py.	5516	86.08-86.33	0.25	89	0.4	6	48	
	86.33 - 86.82 m. Same as above.	qtz and carb	Unconsolidated core. 2-3% dis py.	5517	86.33-86.82	0.49	21	0.2	14	27	
! ! !	86.82 - 87.48 m. Same as above.	qtz and carb	Unconsolidated core. 2-3% dis py.	5518	86.82-87.48	0.66	2	0.4	10	44	
	87.48 - 87.82 m. Same as above.	qtz and carb	Unconsolidated core. 2-3% dis py.	5519	87.48-87.82	0.34	11	0.5	6	55	
	87.82 - 88.03 m. Med gy fine- grained, alt'd diorite; carb bx.	qtz and carb	Tr to 1% dis py.	5520	87.82-88.03	0.21	15	0.4	3	28	
	88.03 - 88.39 m. Same as above.	qtz and carb	2-3% dis py.	5521	88.03-88.39	0.36	5	0.5	5	85	
	88.39 - 88.78 m. Same as above.	qtz and carb	Tr to 1% dis py.	5522	88.39-88.78	0.39	1	0.2	2	28	
	88.78 - 88.94 m. Med gy, fine- grained diorite and carb bx.	qtz and carb	Tr dis py.	5523	88.78-88.94	0.16	1	0.3	5	7	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 18, 1988 Hole No.: CA88-13 Page 7 of 7

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
78.96 ~ 91.14 (cont.)	88.94 - 89.21 m. Med gy alt'd fine-grained diorite.	qtz, epidote and carb	Tr to 1% dis py.	5524	88.94-89.21	0.27	1	0.3	5	7	
,,	89.21 - 89.56 m. Med gy alt'd diorite.	qtz and epidote	Broken core. Tr dis py.	5525	89.21-89.56	0.35	1	0.1	12	3	
	89.56 - 89.74 m. Same as above.	qtz	Broken core. 2-3% dis py.	5526	89.56-89.74	0.18	3	0.4	36	2	
91.14	EOH										



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MPH CONSULTING LIMITED Project: Contact Au Project No.: V248-3

Development Corp.

Client: Parallax

Length (m): 133.2 Dip : -45° Azimuth : 128°

: 4.88 m

Core Size : NQ

Casing

Grid: Main Grid L4+40N, 1+80E Collar elev.: 100 m Remarks: Sample nos.

5827 to 5834

Drilled: June 25-29/88 Contractor : Burwash Logged by : C. Naas Date logged: July 16/88 Objective: See drill hole CA88-14 summary in text of report.

Hole No.: CA88-14
Hole Survey Type: None
Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 4.88	Casing										
4.88 - 33.29	Diorite is metamorphosed into migmatite with agmatitic texture. Diorite ranges from med to coarse-grained to very fine-grained. Locally, the fine-grained areas resemble volcanics on a macroscopic scale. Contacts between med and fine-grained areas are both sharp and gradational. Crystals within the diorite form a crude foliation of approx. 40° to 50° to CA. Small shears and faults are common.	qtz and epidote alt'n with vein- ing is common throughout	Rock is very blocky throughout. Locally tr py is found.								
	25.33 - 25.48 m. Gy migmatitic diorite. Crystals range from 2 mm to <0.5 mm. Sample is 40% med-grained diorite and 60% finegrained diorite. Vnlts of qtz and epidote are common.	epidote	Tr to 1% py.	5827	25.33-25.48	0.15	1	0.1	55	3	
33.29 - 36.74	Strongly alt'd pale grn diorite. Migmatitic diorite has been flooded with qtz and carb. Locally, tex- tures are non-existant. Epidote, qtz and carb veining.	epidote, qtz and carb	Tr py.								
	33.29 - 33.58 m. Pale grn alt'd diorite.	epidote, qtz and carb	Tr py.	5828	33.29-33.58	0.29	1	0.1	27	4	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 16, 1988 Hole No.: CA88-14 Page 2 of 3

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
33.29 - 36.74 (cont.)	34.03 - 34.53 m. Pale grn alt'd diorite.	epidote, qtz and carb	Tr py.	5829	34.03-34.53	0.50	1	0.1	10	4	
(conc.)	35.66 - 35.90 m. Pale grn alt'd diorite.	qtz, epidote and carb	Tr py.	5830	35.66-35.90	0.24	1	0.4	155	6	
	36.16 - 36.74 m. Pal grn alt'd diorite.	qtz, epidote and carb	Tr py.	5831	36.16-36.74	0.38	1	0.1	3	2	
36.74 - 133.20	Diorite is metamorphosed into mig- matite with agmatitic texture. Diorite ranges from med-grained to very fine-grained. Locally the fine-grained areas resemble vol- canics on a mesoscopic scale. Con- tacts between med and fine-grained areas are both sharp and grada- tional. Crystals within diorite form a crude foliation approx. 40° to 50° to CA. Small shears and faults are common.	qtz and epidote alt'n with veining is common through- out									
	85.28 - 85.51 m. Pale grn alt'd diorite.	gtz and carb	Tr py.	5832	85.28-85.51	0.23	2	0.1	4	2	
] d	101.31 - 101.51 m. Gy migmatitic diorite. Amphibole vein, 1 cm, with qtz, containing py and po, at 40° to CA.		12 po, 12 py in blebs up to 3 mm.	5833	101.31-101.51	0.20	1	0.3	273	23	
	107.89 - 108.01 m. Grnish-white med-grained qtz-biotite dyke. Biotite is alt'd to chlorite. Dyke is at 70° to CA. Contains 2% euhedral tourmaline crystals up to 4 mm long. Py is found within tourmaline clusters. Not as alt'd as diorite.	chlorite	1% py, 2% tourma- line.	5834	107.89-108.01	0.12	1	0.1	74	25	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 16, 1988 Hole No.: CA88-14 Page 3 of 3

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	ppb	Ag ppm	Cu ppm	As ppm	Other ppm
36.74 - 133.20 cont.)	109.21 - 112.88 m. Gy fine-grained andesitic ash tuff. Qtz and carb stringers are common throughout. Several 10-15 cm wide grnish-white qtz-biotite dykes cut tuff at 30° to 70° to CA.										
	117.50 - 120.70 m. Gy fine-grained andesite ash tuff. Qtz and carb stringers common.										



Page 1 of 2

MPH CONSULTING LIMITED Project: Contact Au

Project No.: V248-3 Client: Parallax

Length (m): 99.67 : -50° Dip

Azimuth : 055°

Grid: Main Grid L3+90N, 1+45W Drilled: June 29 - July 1 Objective: See drill Contractor : Burwash

hole CA88-15 summary in text of report.

Hole No.: CA88-15 Hole Survey Type: None Depth Dip Azim

Development Corp.

Core Size : NO Casing : 12.19 m 5843 to 5847

Collar elev.: 110 m Remarks: Sample nos.

Logged by : G. Yip Date logged: July 18/88

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 12.19	Casing										
12.19 - 21.17	Med to 1t gy and white, med and fine-grained migmatite. Local-ized epidote alt'n. Stringers of carb and qtz at random orientations and areas of intense silicification where original textures are not visible.										
21.17 - 23.47	Med gy, feldspar porphry. White anhedral feldspar phenocrysts (1-4 mm) in a fine-grained matrix. Locally, feldpsars have alt'd to epidote.										
23.47 - 32.56	Lt gy migmatite (see 12.19-21.17 m). Locally intensely silicified.										
32.56 - 56.71	Dk grn, fine-grained diorite cut by carb, qtz and epidote filled stringers. Locally very intensely alt'd with no original textures visible.		Contact @ 39° to CA	١.							
	34.06 - 34.20 m. Med grn intensely alt'd diorite. No original textures visible.	epidote	Alt'n @ 21° to CA. Tr dis py.	5843	34.06-34.20	0.16	1	0.5	107	5	
	56.32 - 56.71 m. Lt grn to off- white, intensely alt'd diorite(?). No original textures visible.	qtz	Tr dis py.	5844	56.32~56.71	0.39	2	0.1	2	2	



MPH CONSULTING LIMITED Project: Contact Au Logged by: G. Yip Date: July 18, 1988 Hole No.: CA88-15 Page 2 of 2

Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.		Contact @ 67° to CA	۸.							
67.92 - 68.28 m. Lt gy, very intensely alt'd migmatite(?). No original structures visible.	qtz	Tr dis py.	5845	67.92-68.28	0.36	1	0.1	3	5	
77.92 - 78.33 m. Med to dk gy, med to fine-grained migmatite. Patchy alt'n.	epidote	Tr to 1% dis py.	5846	77.92-78.33	0.41	3	0.2	146	5	
95.36 - 95.96 m. Med gy, fine- grained alt'd migmatite.	qtz	Tr to 2% dis py.	5847	95.36-95.96	0.60	1	0.1	2	17	
	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epi- dote stringers.  67.92 - 68.28 m. Lt gy, very intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine-	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epi- dote stringers.  67.92 - 68.28 m. Lt gy, very qtz intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz	Lt to med gy, med-grained migmatite.  Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py.	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 med to fine-grained migmatite. Patchy alt'n.	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 0.36 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 0.41 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96 0.60	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 0.36 1 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 0.41 3 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96 0.60 1	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 0.36 1 0.1 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 0.41 3 0.2 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96 0.60 1 0.1	Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epidote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 0.36 1 0.1 3 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 0.41 3 0.2 146 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96 0.60 1 0.1 2	No. m m ppb ppm ppm ppm ppm  Lt to med gy, med-grained migmatite. Locally intensely epidotized and silicified. No original textures visible. Cut by qtz + carb + epi- dote stringers.  67.92 - 68.28 m. Lt gy, very qtz Tr dis py. 5845 67.92-68.28 0.36 1 0.1 3 5 intensely alt'd migmatite(?). No original structures visible.  77.92 - 78.33 m. Med to dk gy, epidote Tr to 1% dis py. 5846 77.92-78.33 0.41 3 0.2 146 5 med to fine-grained migmatite. Patchy alt'n.  95.36 - 95.96 m. Med gy, fine- qtz Tr to 2% dis py. 5847 95.36-95.96 0.60 1 0.1 2 17



MPH CONSULTING LIMITED Project: Contact Au

Project: Contact Au Project No.: V248-3 Client: Parallax Development Corp. Length (m): 124.05 Grid: Main Grid Dip : -50° LO+15S, 1+

: 1.52 m

Azimuth : 100°

Core Size : NQ

Casing

L0+15S, 1+30W Collar elev.: 225 m

Remarks: Sample nos.

5583 to 5697

Drilled: June 22-23/88 Contractor: Burwash

Logged by : C. Naas Date logged: June 22/88 Objective: See drill

hole CA88-16 summary in text of report.

Page 1 of 8

Hole No.: CA88-16 Hole Survey Type: None Depth Dip Azi

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 1.52	Casing										
1.52 - 34.51	Volcaniclastic rocks. Rock varies from andesitic ash tuff up to several metres thick, to crystal and crystal lithic tuff up to 2 m thick. The ash tuff is more dominant. Contacts between crystal and crystal lithic units are gradational. Contacts between crystal, crystal lithic tuffs and the ash tuffs are both gradational and sharp. Sequences are both fining up and down. The crystal tuffs are composed of feldspar crystals ranging from <0.5-2 mm and comprise from 10-30% of the rock. All units are gy to grnish gy with local alt'n of epidote, qtz and carbonate. Epidote-qtz-carbonate stringers are common.										
	3.91 - 4.31 m. Andesite ash tuff with 10-20% qtz-carbonate-epidote stringers of up to 3 mm wide. Micro faults in various directions.	qtz, carb and epidote	1% py in stringers. Sample 5904 for whole rock.	5583	3.91-4.31	0.40	2	2.5	920	61	
	4.54 - 4.83 m. Contains a 4 cm wide qtz vein @ 50° to CA.		Tr py.	5584	4.54-4.83	0.29	1	0.2	42	5	
	5.18 - 5.38 m. Same as interval 3.91 - 4.31 m.			5585	5.18-5.38	0.20	1	0.8	245	21	•



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 2 of 8

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe ppm
1.52 - 34.51 cont.)	5.63 - 5.87 m. Same as interval 3.91 - 4.31 m.			5586	5.63-5.87	0.24	1	1.2	431	28	
conce	6.46 - 7.34 m. Crystal lithic tuff		Sample 5905 for	5587	6.46-6.76	0.30	2	0.1	6	3	
	with 10-20% qtz-carb-epidote		whole rock	5588	6.76-7.01	0.25	2	0.1	21	3	
	stringers up to 4mm.		analysis.	5589	7.01-7.34	0.33	1	0.2	74	3	
	7.80 - 8.06 m. Same as interval 6.46 - 7.34 m.			5590	7.80-8.06	0.26	1	0.4	115	7	
	8.73 - 8.89 m. Andesite ash tuff. Slight foliation @ 50° to CA. Rare qtz-carb-epidote stringers.		1% py found within foliation fabric.		8.73-8.89	0.16	(not	analyze	d)		
	9.12 - 9.22 m. Contact between andesite ash tuff with crystal lithic tuff. Contact is sharp.	moderate alt'n of feldspars to epidote. Rare qtz-epidote stringers <0.5 mm wide			9.12-9.22	0.10	possi	analyze ble thi graphic	n secti	lon and	
	9.42 - 9.55 m. Crystal lithic tuff.	moderate epidote			9.42-9.55	0.13	(not	analyze	d)		
	9.77 - 10.07 m. Andesite ash tuff. Moderate foliation of 40° to CA defined by qtz $\pm$ epidote blebs.	qtz and epidote	1% py associated with qtz.	5591	9.77-10.07	0.30	2	0.3	69	18	
	10.07 - 11.21 m. Andesite ash tuff,	qtz, carb and	1% py in	5592	10.07-10.36	0.43	1	0.1	28	15	
	with few qtz-carb-epidote stringers	epidote	stringers.	5593	10.36-10.67	0.31	ī	0.1	37	14	
	up to 5 mm wide.			5594	10.67-10.89	0.22	1	0.4	125	13	
				5595	10.89-11.21	0.33	2	0.4	108	17	
	12.00 - 20.15 m. Fine-grained	qtz, carb and	1-3% py in	5596	12.00-12.45	0.45	1	0.2	35	14	
	crystal tuff (<1 mm) to ash tuff.	epidote	stringers.	5597	12.45-12.79	0.34	1	0.1	47	. 5	
	Slight foliation defined by feld- spar crystals @ 40° to CA. Qtz-			5598	12.79-13.07	0.28	1	0.4	91	14	
	carb-epidote stringers range from			5599	13.28-13.65	0.37	2	0.3	66	33	
	<0.5-4 mm wide.			5600	13.65-13.96	0.31	ī	0.4	98	41	
							_				
				5601 5602	13.96-14.46	0.50 0.34	1 1	0.2 0.1	48 26	4 5	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 3 of 8

rom - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe ppm
.52 - 4.51				5604	16.22-16.55	0.33	1	0.2	34	8	
ont.)				5605	16.95-17.35	0.40	2	0.3	49	22	
				5606	17.54-18.29	0.65	2	0.1	16	10	
				5607	18.72-19.25	0.53	1	0.4	37	38	
				5608	19.25-19.52	0.27	i	0.3	18	7	
				5609	19.52-19.65	0.13	1	0.3	7	2	
				5610	19.81-20.15	0.34	1	7.0	18	91	
		qtz, carb and	1% py.	5611	20.15-20.66	0.51	1	0.2	11	20	
	ous and carbonatized, pale grn	epidote	••	5612	20.66-20.86	0.20	1	0.1	21	7	
	ash tuff(?).	-•		5613	20.86-21.00	0.14	1	0.1	34	7	
				5614	21.00-21.40	0.40	1	0.1	12	7	
	21.40 - 21.86 m. Same as interval			5615	21.40-21.68	0.28	2	0.1	7	2	
	12.00 - 20.15 m.			5616	21.68-21.86	0.18	1	0.1	23	3	
	21.86 - 34.51 m. Crystal, crystal	moderate alt'n	Tr to 2% py in	5617	21.86-22.32	0.46	2	0.7	112	53	
	lithic and ash tuff which has	to epidote with	stringers.	5618	22.32-22.57	0.25	1	0.5	61	47	
	been locally intensely sheared.	gtz and carb		5619	22.57-22.88	0.31	1	0.2	51	19	
	*Feldspar crystals, in sheared			5620	22.88-23.21	0.33	ì	0.9	125	74	
	areas, are elongated and define foliation of 40° to CA. Qtz-carb-			5621	23.21-23.47	0.26	2	0.6	90	62	
	epidote stringers are common.			5622	23.73-24.68	0.95	1	0.3	86	35	
•	*original textured in sheared			5623	25.08-25.36	0.28	3	0.2	55	24	
	areas are nonexistent.			5624	25.71-26.16	0.45	2	0.2	24	29	
				5625	27.61-27.94	0.33	1	0.3	92	6	
				5626	32.61-32.76	0.15	1	0.1	11	2	
				5627	33.73-34.09	0.36	1	0.5	186	59	



9 204

MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 4 of 8

and diopside(?)

pale grn crystal tuff.

5629

34.95-35.80 0.85



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 5 of 8

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
34.51 - 82.21 (cont.)	35.80 - 48.87 m. Purplish-white limestone with layers and/or xenoliths of pale grn to gy cherty volcanics(?) of <20 cm thick.	volcanics are alt'd to diopside with qtz-carb, chlorite and diopside	Tr to 1% py in diopside layers.	5630	35.80-36.52	0.72	1	1.1	77	97	
	36.70 - 36.97 m. Massive lime- stone with mnr diopside layers.	diopside and carb	Tr py.	5631	36.70-36.97	0.27	7	2.8	526	68	
	37.81 ~ 38.36 m. Same as interval 36.70 - 36.97 m.			5632	37.81-38.36	0.55	3	0.7	9	61	
	38.80 - 39.55 m. Massive diopside with mnr limestone.	diopside, carb, qtz and chlorite	Tr to 1% py.	5633	38.80-39.55	0.75	1	0.3	26	642	
	39.81 - 41.08 m. Same as interval 38.80 - 39.55 m.			5634 5635	39.81-40.81 40.81-41.08	1.00 0.27	1	6.5 2.6	481 138	544 556	1467 Zn 522 Zn
	42.61 - 48.87 m. Same as interval 36.70 - 36.97 m.			5636 5637	42.61-42.91 42.91-44.40	0.30 0.49	1 2	0.4 0.3	22 13	7 5	
				5638	45.72-47.85	2.13	1	0.4	14	27	
				5639	48.02-48.87	0.85	1	1.7	134	132	
	48.87 - 54.00 m. Massive diopside with qtz and carb. Original textures are non-existent. Mnr amounts of purplish-white limestone and up to 10% garnet(?) in diopside areas.	diopside, qtz, carb and garnet(?)	Tr to 3% asp, tr to 1% po, py.	5640 5641 5642 5643 5644 5645	48.87-49.49 49.49-49.97 49.97-50.27 50.27-50.48 50.48-51.20 51.20-51.91 51.91-54.00	0.62 0.48 0.30 0.21 0.72 0.71 0.09	1 21 623 1272 45 14 8	0.9 4.1 3.4 3.7 0.1 0.1		64 412 13324 25638 1366 171 536	332 Co 415 Co
	54.00 - 76.31 m. Alt'd pale grn to gy, limy volcanics(?). Banded diopside, qtz, carb and epidote(?) occur for the most part with bands ranging from <1-4 cm. Bands are @ 45° to CA. Locally, massive diop- side, qtz and carb occur. Micro faults in various directions are common.	diopside, qtz, carb and epidote	Mineralization is parallel to bands but also occurs as small blebs (<1 cm) and in diopside, qtz and carbonate stringers and frct fillings.								



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 6 of 8

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe: ppm
34.51 -	54.00 - 56.85 m. Banded diopside,		Tr py.	5647	54.00-55.34	0.34	5	0.3	19	199	
83.21	qtz and carb.		**	5648	55.34-56.17	0.83	1	0.1	6	374	
cont.)			41	5649	56.17-56.85	0.68	3	0.1	1	363	
	56.85 - 59.11 m. Massive diopside,		Tr py.	5650	56.85-57.55	0.70	1	0.2	1	299	
	little or no banding.		••	5651	57.55-57.93	0.38	2	0.1	10	267	
			•	5652	57.93-59.11	0.18	6	0.3	21	850	
	59.11 - 59.36 m. Banded diopside, qtz and carb.		Tr py.	5653	59.11-59.36	0.25	3	0.1	15	454	
	59.36 - 61.75 m. Massive diopside.		Tr py.	5654	59.36-60.22	0.86	1	0.1	13	55	
	little or no banding.		# <sup>*</sup>	5655	60.22-60.79	0.57	10	0.1	10	451	
	_		**	5656	60.79-61.75	0.96	1	0.1	20	137	
	61.75 - 65.02 m. Banded diopside,		Tr py.	5657	61.75-62.95	1.20	2	0.7	161	509	
	qtz and carb.		••	5658	62.95-64.07	1.12	1	1.0	127	962	
			••	5659	64.07-65.02	0.95	2	1.3	255	122	
	65.02 - 66.48 m. Diopside, qtz		Tr py.	5660	65.02-65.24	0.22	1	0.1	7	857	
	and carb without texture.		<del>-</del>	5661	65.24-65.70	0.46	1	0.2	6	101	
			•	5662	65.70-66.48	0.78	1	0.4	62	128	
	66.48 - 76.31 m. Banded diopside,		Tr py.	5663	66.48-67.46	0.98	1	0.3	66	107	
	qtz and carb.		<b>.</b>	5664	67.46-68.24	0.78	1	0.5	56	45	
			•• ••	5665	68.24-69.41	1.17	1	0.3	61	83	
				5666	69.41-70.62	1.21	2	1.4	359	61	
			2% py.	5667	70.62-71.62	1.00	1	0.6	74	60	
			2% py.	5668	71.62-72.91	1.29	1	0.4	62	12	
	72.91 - 73.70 m. Mottled texture.		5% py.	5669	72.91-73.70	0.79	1	1.0	316	209	
			2% py.	5670	73.70-74.52	0.82	1	0.5	78	9	
			Thin section.	5671	74.52-75.59	1.07	1	0.8	101	13	
			2% py.	5672	75.59-76.31	0.72	1	1.2	232	26	
	76.31 - 79.76 m. Massive qtz	gtz, carb and	Tr to 1% py.								

76.31 - 79.76 m. Massive qtz flooding. Original textures are non-existent. Garnet throughout. Locally, areas are diopside + qtz + carb banded. Irregular veining of purple qtz (amethyst[?]).

qtz, carb and diopside

Tr to 1% py.



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 7 of 8

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
34.51 - 83.21 (cont.)	76.31 - 76.88 m. Extremely silice-ous with 5% garnet.	qtz-garnet	Tr py.	5673	76.31-76.88	0.57	1	0.3	78	62	
(cont.)	76.88 - 77.23 m. Extremely siliceous with 15% garnet.	qtz-garnet	Tr py.	5674	76.88-77.23	0.35	1	0.6	257	24	
	77.23 - 77.60 m. Same as interval 54.00 - 56.85 m, with irregular purple qtz veins up to 1 cm wide.	qtz-carb- diopside	2% py in qtz and frct.	5675	77.23-77.60	0.37	1	0.7	156	33	
	77.60 - 79.76 m. Extremely silice-ous.	qtz-carb	1% py. 1% py.	5676 5677	77.60-78.28 78.28-79.76	0.68 1.48	4 1	0.6 0.1	132 45	83 10	645 <b>Z</b> n
	79.76 - 82.51 m. Alt'd pale grn to gy, limy volcanics(?). Banded diopside, carb and qtz layers @ 75° to CA. Bands range from <1-4 cm. Irregular purple qtz veins range from 1-2 cm. Rare banded purple qtz.	diopside, qtz, carb and epidote(?)	1-4% dis py, po, parallel to bands and as fret fillings and in blebs up to 2 cm wide.								
	79.76 - 80.16 m. Banded unit.		1% py.	5678	79.76-80.16	0.40	5	0.5	169	24	
	80.16 - 81.86 m. Contains a 1 cm wide fret in unit.		4% py, po in frct.	5679	80.16-81.86	1.70	54	0.4	103	286	
	81.86 - 81.73 m. Same as interval 79.76 - 80.16 m.		2% py dis & in fret.	5680	81.06-81.73	0.67	10	0.3	81	31	
	81.73 - 82.26 m. Same as interval 79.76 - 80.16 m.		1% py dis & in fret.	5681	81.73-82.26	0.53					
	82.26 - 82.51 m. Banded unit with 10% purple qtz.		2% dis py & in qtz.	5682	82.26-82.51	0.25	12	0.3	48	11	
	82.51 - 83.21 m. Extremely alt'd, grn, fine-grained diorite. Mottled texture with purple qtz, carb and epidote.	diopside, qtz, carb, chlorite and epidote	1% po, 2% py, dis and as fret filling.	5683	82.51-83.21	0.70	4	0.3	75	8	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 18, 1988 Hole No.: CA88-16 Page 8 of 8

rom - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
3.21- 24.05	Med-grained, gry diorite. Diorite is locally migmatitic in texture. Microfaults in various directions are common. Qtz-epidote stringers up to 2 mm wide throughout. Intense qtz-epidote alt'n is rare.										
	83.21 - 84.76 m. Slightly mottled,	qtz, carb,	1% py, po dis.	5684	83.21-83.66	0.45	2	0.2	45	15	
	textured fine- to med-grained	chlorite and	12 py, po 010:	5685	83.66-84.00	0.34	28	0.2	83	76	
	diorite. Locally alt'd to epidote	epidote		5686	84.00-84.43	0.43	1	0.3	55	19	
	Mnr qtz-epidote stringers.	,		5687	84.43-84.76	0.33	13	0.6	123	79	
	86.41 - 86.87 m. Same as interval 83.21 - 84.76 m.			5688	86.41-86.87	0.46	22	0.4	60	257	
	88.68 - 88.86 m. Med-grained, gy diorite with areas of pale grn alt'n to epidote.	qtz, carb, chlorite and epidote	Тт ру.	5689	88.68-88.86	0.18	3	0.2	14	30	
	89.02 - 89.24 m. Contains a 1 cm wide qtz vein @ 30° to CA.			5690	89.02-89.24	0.22	101	1.0	180	319	149
	91.26 - 91.46 m. Contains a 1 cm wide qtz vein @ 40° to CA.			5691	91.26-91.46	0.20	18	0.3	76	9	
				5692	96.62-96.82	0.20	35	0.5	122	21	
				5693	102.08-102.20	0.12	2	0.4	108	31	
				5694	103.08-103.28	0.20	10	0.2	38	19	945
				5695	107.11-108.39	1.28	4	0.6	224	13	
				5696	109.85-110.13	0.28	5	0.1	44	27	
				3070	20,000 110010		-		. •		
				5697	111.30-111.56	0.26	1	0.5	185	15	

124.05

EOH



MPH CONSULTING LIMITED Project: Contact Au

Project No.: V248-3 Client: Parallax Development Corp. Length (m): 133.20 Grid: Main Grid : -70° Azimuth : 100°

: 2.13 m

Core Size : NQ

Casing

LO+15S, 1+30W

5698 to 5765

Collar elev.: 225 m Remarks: Sample nos. Drilled: June 5-6/88 Contractor : Burwash Logged by : C. Naas

hole CA88-17 summary in text of report. Date logged: July 19/88

Objective: See drill

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Hole No.: CA88-17

Hole Survey Type: None Depth Dip Azim

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
0 - 2.13	Casing										
2.13 - 26.50	Volcaniclastic rocks. Rock varies from andesitic ash tuff (to several metres in thickness) to crystal and crystal lithic tuff (up to 2 m thick). The ash tuff is predominant. Contacts between crystal and crystal lithic units are gradational. Contacts between crystal, crystal lithic and the ash tuffs are both gradational and sharp. Sequences are both fining up and down. The crystal tuffs are composed of feldspar crystals ranging from \$\leq 2\$ mm and comprise from 10-30% of the rock. All units are gy to grnish gy with local alt'n to epidote, qtz and carb, where the rock becomes pale grn in colour. Epidote, qtz and carb stringers are common.										
	5.28 - 5.50 m. Grnish gy epidote alt'd crystal lithic tuff.		l cm wide py vein @ 50° to CA.	5698	5.28-5.50	0.22	1	0.5	130	14	
	8.23 - 8.37 m. Contains a 9 cm wide qtz vein @ 55° to CA.		1% py.	5699	8.23-8.37	0.14	2	0.4	50	34	
	14.12 - 14.57 m. Ash tuff with qtz epidote stringers.		1% py in stringers.	5700	14.12-14.57	0.45	1	0.1	13	4	,



Other

ppm

Cu

ppm

40

15

As

ppm

31

7

MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 19, 1988 Hole No.: CA88-17 Page 2 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm
2.13 - 26.50 (cont.)	20.49 - 21.10 m. Ash tuff with qtz and qtz-epidote stringers @ 30° to CA.		1% py in qtz.	5701	20.49-21.10	0.61	1	0.1
	26.00 - 26.50 m. Ash tuff with qtz and qtz-epidote stringers @ 30° to CA and qtz blebs up to 4 mm wide.		l% py in qtz.	5702	26.00-26.50	0.50	4	0.1
26.50 - 81.97	Skarn. Rock is extrememly alt'd with alt'n products of qtz, carb, epidote (rare), chlorite and diopside. Original textures are nonexistant. The skarn is mostly alt'd limestone and interbedded(?) limestone with volcanics(?). The top part of the skarn extends into the volcanic unit of crystal tuffs and at the bottom into diorite. These extensions are not more than a couple of metres. The limestone is purplish-white, recrystallized, with no visible fossils. Within the limestone unit are xenoliths of cherty(?) volcanics, not more than 20 cm in size. The limy volcanics are defined by the presence of diopside. The diopside occurs both as massive units of up to 2 m thick or as banded layers with chlorite, carb, qtz and epidote(?). These layers range in thickness from <1 to 4 cm. Sulphides appear to be primary since they are consistantly	qtz, carb, diop- side, chlorite and epidote(?)						

parallel to foliation in the banded areas. In areas of massive diop-side, asp is common, and sulphides tend to occur as blebs of up to 1 cm wide. Sulphides do not occur in areas of massive limestone.



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 19, 1988 Hole No.: CA88-17 Page 3 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
26.50 - 81.97 (cont.)	29.59 - 30.50 m. Strongly alt'd pale grn crystal tuff.	qtz, carb, chlorite and epidote	1% py.	5704 5705	29.59-29.97 29.97-30.50	0.38 0.53	1 7	0.1 0.1	2 34	8 534	
	30.50 - 43.09 m. Purplish-white limestone with layers and/or xeno-		Tr py. Tr to 1% py.	5706 5707	30.50-31.73 31.73-32.58	1.23 0.85	1 1	0.1 0.1	35 24	5 9	
	liths of pale grn to gy cherty volcanics(?) of <20 cm thick.		Tr py. Tr py. Tr py.	5708 5709 5710	32.58-33.65 33.65-34.35 34.35-35.70	1.07 0.70 1.35	1 2 1	0.1 0.1 0.1	8 7 17	4 5 15	
			Tr py. Tr po, 1% py.	5711 5712	39.28-40.42 40.42-41.13	1.14	1	0.1	13 69	7 15	1001 Zn
			Tr py. Tr py.	5713 5714	41.13-41.76	0.63	i 1	0.8	197 22	15	326 Zn
	43.09 - 47.54 m. Massive diopside with qtz and carb. Original textures are non-existant. Mnr amounts of purplish-white limestone. Mnr bandings of diopside, carb, chlorite and qtz.	diopside, qtz and carb									
	43.09 - 44.72 m. Banded unit.			5715 5716	43.09-44.12 44.12-44.72	1.03	2 1	0.1	16 4	164 103	
	44.72 - 47.54 m. Massive diopside.	1% garnet(?)	1% py, po, asp.	5717 5718 5719	44.72-45.62 45.62-46.57 46.57-47.54	0.90 0.95 0.97	28 1 1	0.1 1.3 0.1	2 226 5	1400 1000 66	313 Zn
	47.54 - 53.31 m. Alt'd pale grn to gy, limy volcanics(?). Banded diopside, qtz, carb and epidote(?) occurs for the most part with bands ranging from ≤4 cm. Bands are @ 50-80° to CA. Locally, massive diopside, qtz and carb occurs.	diopside, qtz, carb, epidote and garnet	Mineralization is parallel to bands but also occurs as small blebs (<1 cm) and in diopside, qtz, carb stringers and in frcts.								



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 19, 1988 Hole No.: CA88-17 Page 4 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
26.50 -	47.54 - 48.17 m. Mottled texture.		1% py, 1% po.	5720	47.54-48.17	0.63	1	0.1	5	25	
81.97	48.17 - 49.42 m. Banded unit.	5% garnet in bands		5721	48.17-49.42	1.25	1	0.1	12	92	
(cont.)	49.42 - 50.55 m. Massive diopside.	qtz, diopside and carb	1% py.	5722	49.42-50.55	1.13	3	0.1	4	2802	
	50.55 - 51.63 m. Banded unit.			5723	50.55-51.63	1.08	1	0.1	9	630	
	51.63 - 52.25 m. Massive diopside.			5724	51.63-52.25	0.62	2	2.7	712	825	1321 Zn
	52.25 - 53.31 m. Banded unit.			5725	52.25-53.31	1.06	1	0.6	183	35	597 Zn
	53.31 - 55.67 m. Massive qtz and	qtz, carb and	2-3% py and po.	5726	53.31-54.15	0.84	1	1.8	398	86	363 Zn
	carb flooding. Original textures	diopside	2-3% py and po.	5727	54.15-54.69	0.54	1	1.1	207	114	719 Zn
	are non-existant. Contains 40% qtz and carb.		2-3% py and po.	5728	54.69-55.67	0.98	2	0.9	195	111	341 Zn
	55.67 - 57.00 m. Gy to pale grn alt'd crystal lithic tuff. Locally strongly alt'd to massive diopside, qtz and carb. Strongly foliated @ 70° to CA.	qtz, carb, chlorite, diop- side and epidote	1-3% py, po in foliation and in epidote/qtz/carb /diopside stringers.	5729	55.67-57.00	0.37	5	0.4	107	653	
	57.00 - 81.97 m. Alt'd pale grn	diopside, qtz,	Tr py.	5730	57.00-58.05	1.05	1	0.5	89	22	
	to gy limy volcanics(?). Banded	carb and epidote(?)	1% py, po.	5731	58.05-58.95	0.90	1	0.4	78	14	
	diopside, carb and qtz layers @		1-2% py, po.	5732	58.95-59.45	0.50	1	1.1	198	31	
	50-70° to CA. Bands range from		Tr py.	5733	59.45-60.22	0.77	3	0.9	228	429	
	1-2 cm. Rare banded purple qtz.		1-2% py, po, tr asp.		60.22-61.15	0.93	1	0.3	51	113	
	Sulphides found within bands, in		1-2% py, po.	5735	61.15-61.55	0.40	2	0.4	88	41	
	qtz/carb/diopside stringers and		Tr py.	5736	61.55-62.63	1.08	1	0.1	46	59	
	as blebs up to 1 cm wide. Rare frct filling.		1% py.	5737	62.63-63.47	0.84	14	0.1	11	1870	
	63.47 - 63.77 m. Massive diopside.		Tr py, 1% asp.	5738	63.47-63.77	0.30	45	0.1		4242	
	·		1-3% asp, 1% py, po.	5739	63.77-64.23	0.46	234	1.8		37424	266 Co
			1% py, po.	5740	64.23-65.23	1.00	8	0.2	63	2031	
			1% py, po.	5741	65.23-65.71	0.48	17	8.0	243		
			Tr py.	5742	65.71-66.79	1.08	1	0.2	65	698	
			Tr to 1% py, po.	5743	66.79-67.81	1.02	1	0.1	11	135	
			Tr to 1% py, tr po.	5744	67.81-69.19	1.38	1	0.1	45	152	•
			Tr py.	5745	69.19-70.19	1.00	1	0.4	111	77	
			1-2% py, po.	5746	70.19-71.23	1.04	5	0.5	147	299	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 19, 1988 Hole No.: CA88-17 Page 5 of 5

rom - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
26.50 - 31.97 cont.)	74.18 - 75.29 m. Contains 5%		1-3% py, tr po. 1-2% py, tr po. 1-2% py, tr po. Tr to 1% py.	5747 5748 5749 5750	71.23-72.23 72.23-73.38 73.38-74.18 74.18-75.29	1.00 1.15 0.80 1.11	1 1 1	0.3 0.4 0.3 0.1	177 100 80 46	114 35 12 25	
	purple qtz.		1-3% py, tr po. 2-3% py, tr po. 1-2% py, tr po. 2-3% py, tr po. 2-3% py, tr po. 2-3% py, tr po.	5751 5752 5753 5754 5755 5756	75.29-76.37 76.37-76.95 76.95-77.68 77.68-78.40 78.40-79.00 79.00-79.78	1.08 0.58 0.73 0.72 0.60 0.78	1 3 1 1 1	0.1 0.6 0.1 0.5 0.3	85 174 38 112 100 146	25 49 14 19 38 14	
	80.45 - 80.88 m. Contains 1% purple qtz.		2-3% py, tr po. 2-3% py, tr po. 4-5% py, po. 1-2% py, po.	5757 5758 5759 5760	79.78-80.45 80.45-80.81 80.81-81.64 81.64-81.97	0.67 0.36 0.83 0.33	2 1 53 1	0.2 0.2 0.8 0.1	11 79 212 11	6 46 1778 156	546
31.97 - 33.20	Medium-grained gy diorite. Diorite is locally migmatitic in texture. Microfaults in various directions throughout. Qtz-epidote stringers up to 2 mm wide are common. Intense qtz-epidote alt'n is rare.										
	81.97 - 83.80 m. Extremely alt'd fine-grained, pale grn diorite. Original textures are non-existant. Mottled texture defined by purple qtz, carb, diopside and epidote. Qtz, epidote, diopside stringers are common.	diopside, qtz, carb, chlorite and epidote	Tr to 1% py.	5761 5762	81.97-82.61 82.61-83.80	0.64	1	0.1	49 60	49 31	
	85.42 - 85.72 m. Qtz-epidote alt'd pale grn diorite.	qtz, carb and epidote	Tr py.	5763	85.42-85.72	0.30	1	0.1	33	19	
	98.32 - 99.06 m. Same as interval 85.42 - 85.72 m.			5764	98.32-99.06	0.74	1	0.1	45	19	
	114.30 - 115.05 m. Same as interval 85.42 - 85.72 m.			5765	114.30-115.05	0.75	1	0.2	96	28	
33.20	ЕОН										



Other

ppm

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MPH CONSULTING LIMITED

Project: Contact Au Project No.: V248-3

Client: Parallax Development Corp. Length (m): 114.91 Grid: Main Grid

Dip : -90° Azimuth : 100° Core Size : NQ

Casing : 1.52 m

LO+15S, 1+30W Collar elev.: 225 m Remarks: Sample nos.

Alteration

5766 to 5826

Drilled: June 6-8/88

Contractor : Burwash Logged by : C. Naas Date logged: July 20/88

Mineralization

Sample

No.

Objective: See drill hole CA88-18 summary

Interval Length Au

in text of report. Depth

ppb

Ag

ppm

Hole No.: CA88-18 Hole Survey Type: None D1p Azim

Cu

ppm

As

ppm

From - To metres	Lithology
0 - 1.52	Casing
1.52 - 27.25	Volcaniclastic rocks. Rock varies from andesitic ash tuff (to several metres thick) to crystal and crystal lithic tuff (up to 2 m thick). The ash tuff is predominant. Contacts between crystal and crystal lithic units are gradational. Contacts between crystal, crystal lithic tuffs and the ash tuffs are both gradational and sharp. Sequences are both fining up and down. The crystal tuffs are composed of feld-spar crystals ranging from <2 mm and comprise from 10-30% of the rock. All units are gy to grnish gy with local alt'n of epidote, qtz and carb. Epidote-qtz-carb stringers are common.
27.25 - 82.18	Skarn. Rock is intensely alt'd with alt'n products of qtz, carb, epidote (rare), chlorite and diopside. Original textures are non-existent. The skarn is mostly alt'd limestone and interbedded(?) limestone with volcanics(?). The top part of the skarn extends into the volcanic unit of crystal tuffs and at the bottom into the diorite.



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 20, 1988 Hole No.: CA88-18 Page 2 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
27.25 - 82.18 cont.)	These extensions are not more than a couple of metres. The limestone is purplish-white, recrystallized with no visible fossils. Within this limestone unit are xenoliths of cherty(?) volcanics, not more than 20 cm in size. The limy volcanics are defined by the presence of diopside. The diopside occurs both as massive units up to 2 m thick or as banded layers with chlorite, carb, qtz and epidote(?). These bands range in thickness from <1 to 4 cm. Sulphides appear to be primary, since they are consistantly parallel to foliation in the banded areas. In the areas of massive diopside, asp is common, and sulphides tend to occur as blebs up to 1 cm wide. Sulphides do not occur in areas of massive limestone.										
	27.25 - 41.89 m. Massive diopside with qtz and carb. Original textures are non-existant. Massive limestone with cherty volcanic xenoliths.	diopside, qtz and carb									
	27.25 - 29.35 m. Massive pale grn diopside.		1% py, po, asp. 1-2% py, 2-3% po. 1% py, po.	5766 5767 5768	27.25-27.90 27.90-28.99 28.99-29.35	0.65 1.09 0.36	4 59 22	0.1 0.3 0.1	3 18 2	105 296 445	732 Z
	29.35 - 32.88 m. Massive purplish-white limestone, locally with diopside and rare banded diopside, qtz and carb.		1% py in diopside.  Tr py in banded unit.  Tr to 1% in diopside.	5769 5770 5771 5772 5773 5774	29.35-29.67 29.67-30.22 30.22-31.07 31.07-31.38 31.38-32.53 32.53-32.88	0.32 0.55 0.85 0.31 1.15 0.35	20 1 1 1	0.1 1.2 0.2 0.4	7 5 11 30 38 13	18 226 28 29 4 267	62 <u>1</u> Z



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 20, 1988 Hole No.: CA88-18 Page 3 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	lnterval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
27.25 - 82.18 (cont.)	33.03 - 34.66 m. Massive diopside unit.		Tr py. Tr py.	5775 5776	33.03-33.49 33.49-34.66	0.46 0.17	2 2	1.2	237 654	252 96	314 Zn
(cont.)	34.66 - 41.82 m. Massive limestone.										
	41.89 - 57.00 m. Massive diopside		Tr py.	5778	41.89-42.79	0.90	14	0.2	76	2505	
	with faint banded layers. Banding		Tr to 1% py.	5779	42.79-43.81	1.02	1	0.9	62	558	
	is very faint compared to other areas of banded units.		1% py, po.	5780	43.81-44.59	0.78	1	2.2	251	658	1025 Zn
			Tr py.	5781	44.81-46.24	0.43	1	1.0	85	228	389 Zn
			Tr py.	5782	46.24-47.11	0.87	1	0.1	2	233	
			Tr py.	5783	47.11-48.09	0.98	4	0.1	23	694	
			Tr to 1% py.	5784	48.09-49.30	1.21	6	0.1	42	462	
			Tr py.	5785	49.30-50.24	0.94	1	0.1	10	70	
			Tr py.	5786	50.24-50.77	0.53	1	0.1	2	21	
			Tr to 1% py.	5787	50.77-51.95	1.18	8	0.2	17	625	
			1% py. 2-3% asp.	5788	51.95-52.47	0.52	99	1.5	131	15007	234 Co
			1% py, 1-2% asp.	5789	52.47-53.49	1.02	3	0.3	59	333	
	53.49 - 54.41 m. Mottled texture with diopside and graphite.		30% graphite.	5 <b>79</b> 0	53.49-54.41	0.92	3	0.2	9	449	
	, , ,		Tr to 1% py, tr to 1% asp.	5791	54.41-54.91	0.50	1	0.2	4	141	
			Tr to 1% py, asp.	5792	54.91-55.86	0.95	3	0.1	2	650	
			Tr to 1% py.	5793	56.20-57.00	0.80	15	0.4	57	75	
	57.00 - 65.38 m. Alt'd pale grn to gy limy volcanics(?). Banded diopside, carb and qtz layers @ 50-80° to CA. Bands range from <1-4 cm. Irregular purple qtz veins, as well as in bandings, ranging from 1-2 cm, are rare.			5794	57.00-58.02	1.02	3	0.2	46	223	
	58.02 - 58.35 m. Contains 3 cm wide qtz vein breccia @ 50° to CA.		4-5% py in qtz vn.	5795	58.02-58.35	0.33	3	0.1	10	20	

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MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 20, 1988 Hole No.: CA88-18 Page 4 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Othe ppm
27.25 -			1-2% py, tr asp.	5796	58.35-59.20	0.85	1	0.1	8	257	
82.18			Tr to 1% py.	57 <b>9</b> 7	59.20-59.87	0.67	1	0.1	20	107	
cont.)			Tr py.	5798	59.87-61.49	1.62	2	0.1	55	156	
,			Tr to 1% py.	57 <b>9</b> 9	61.49-62.73	1.02	1	0.2	239	431	
			Tr to 1% py.	5800	62.73-63.49	0.76	1	0.4	46 -	61	
				5801	63.49-64.21	0.78	1				
		•	1% py, tr asp.	5802			-	1.3	397	38	
			1-2% py, po.		64.21-64.72	0.51	1	0.3	65	218	
			1-2% py, po.	5803	64.72-65.38	0.66	10	0.7	226	928	
	65.38 - 74.49 m. Same as interval	increase in purple	Tr py.	5804	65.38-66.62	1.24	1	0.2	8	663	
	41.89 - 57.00 m. Rocks are a	qtz and carb (up	Tr py.	5805	66.62-67.18	0.56	2	0.1	8	80	
	little more bleached and brecciated.	to 20%)	1% py.	5806	67.18-67.96	0.78	1	0.7	199	12	
			1-2% py, tr po.	5807	67.96-69.44	1.48	1	0.4	103	14	
			1% py, po.	5808	69.44-70.34	0.90	2	0.2	85	269	
			3 cm band of po @	5809	70.34-70.90	0.56	1	1.3	295	149	
			80° to CA.								
			Tr py, po.	5810	70.90-71.75	0.85	1	0.1	19	223	
			5% po, 1% py.	5811	71.75-72.23	0.48	1	0.6	150	148	
			Tr to 1% py, po.	5812	72.23-72.91	0.68	ī	0.7	172	13	
			Tr to 1% py, po.	5813	72.91-73.84	0.93	ī	1.6	407	283	
			Tr to 1% py, po.	5814	73.84-74.49	0.65	8	7.4	2103	84	
	74.49 - 80.35 m. Same as interval	30-40% carb,	2 cm po vn @ 85°	5815	74.49-75.29	0.80	1	5.3	1347	37	
	65.38 - 74.49 m, but greater amounts	3% garnet	to CA.								
	of carb (iron(?)). Minor amounts		5-8% po.	5816	75.29-76.03	0.74	1	3.0	660	12	
	of garnet with bandings. Less		2-3% po, py.	5817	76.03-76.83	0.80	1	1.8	457	29	
	purple qtz.		3-4% py, po.	5818	76.83-77.42	0.59	3	0.3	101	19	
			4-5% py, po.	5819	77.42-78.20	0.78	1	0.5	104	18	
			4-5% py, po.	5820	78.20~78.78	0.58	1	0.4	107	31	
		10% garnet	4-5% py, po.	5821	78.78-79.62	0.84	4	0.2	57	84	
		-	4-5% py, po.	5822	79.62-80.35	0.73	1	0.1	44	16	
	80.35 - 82.18 m. Pale grn to gy		Tr to 1% py.	5823	80.35-80.96	0.61	2	0.1	22	17	
	banded unit similar to interval 57.00 - 65.38 m.		Tr to 1% py.	5824	80.96-82.18	1.22	1	0.1	52	10	



MPH CONSULTING LIMITED Project: Contact Au Logged by: C. Naas Date: July 20, 1988 Hole No.: CA88-18 Page 5 of 5

From - To metres	Lithology	Alteration	Mineralization	Sample No.	Interval m	Length m	Au ppb	Ag ppm	Cu ppm	As ppm	Other ppm
82.18 - 114.99	Medium-grained gy diorite. Diorite is locally migmatitic in texture. Micro faults in various directions throughout. Qtz-epidote stringers up to 2 mm wide are common. Intense qtz-epidote alt'n is rare.										
	83.41 - 83.66 m. Qtz-epidote alt'd pale grn diorite.	qtz, carb and epidote		5825	83.41-83.66	0.25	4	0.4	139	153	
	103.77 - 103.94 m. Same as interval 83.41 - 83.66 m.			5826	103.77-103.94	0.17	12	0.1	7	18	

124.05 EOH



# Appendix VI

SUMMARY OF

## PETROGRAPHY AND PETROGRAPHIC REPORTS

FROM THIN SECTIONS



## SUMMARY OF PETROGRAPHY

CONTACT PROPERTY

Flores Island, B.C. for

## PARALLAX DEVELOPMENT CORPORATION

July 6, 1988 J.S. Getsinger, Ph.D.



#### SUMMARY OF PETROGRAPHY

# CONTACT PROJECT Flores Island, B.C.

Eleven rock samples from the Contact 1 claim on Flores Island were selected for petrographic analysis. Four are from grab samples on the Main Grid, whereas seven are from drill core. The drill core samples are representative of the rock types intersected by DDH's 88-1, 88-2, and 88-3. No significant geochemical results came from any sample in these 3 drillholes.

The samples were selected by V. Ryback-Hardy, P.Eng., in order to confirm field identification of rock types.

Most of the rock samples investigated in thin section represent some form of diorite. Many show alteration and contact effects. Many share a similar history of alteration.

Plagioclase is sericitized and saussuritized; mafic minerals are altered to chlorite and fine-grained iron-oxide(?) dust. Epidote alteration and quartz-epidote veins are common. Metamorphic or hydrothermal actinolitic hornblende is introduced along dark green veinlets in association with quartz and/or minor blue-green tourmaline.

Where diorite is in contact with epidote skarn or finer-grained metavolcanic rock, magnetite may be concentrated. Pyrite appears to be associated with silicification.

A brief summary of the highlights for each sample are given below, with more detailed descriptions for each in the following pages.

Sample V248-1400, collected on the Main Grid at 0+25S, 0+40W, is a silicified calc-silicate skarn with arsenopyrite (<1%). It is composed mainly of quartz, epidote, and diopside. The protolith could have been a calc-silicate rock, or it could be entirely the result of alteration. The high percentage of calcium suggests presence of some carbonate or calc-silicate rock nearby. The quartz appears to be from secondary silicification.

Sample V248-22743, from Main Grid, 5+00N, 2+05E, is a dioritic intrusive with a pod of magnetic hornfels consisting of actinolitic hornblende, biotite, plagioclase, epidote, and magnetite (10-15%). Contact-related magnetitebearing rocks are not shown on the geological map in this location.

Sample V248-L7N, 1+75E is an altered diorite with a hornblende-tourmaline veinlet. The hornblende may be distinguished from the tourmaline by pleochroic formula and appearance. In tourmaline the blue-green direction is fast and parallel to the length as well as to the E-W polarizer, whereas in hornblende, the blue-green direction is slow and at an angle of about 14° to the length as well as to the N-S polarizer. Tourmaline is sparse, but clearly related to amphibole-bearing veins.

Sample V248-L4N, 1+50E is also from the Main Grid. It is a diorite in contact with epidote "skarn". At the contact, a 0.5 cm band of dark magnetic rock has formed, including 10% magnetite, and 20-30% sericite (replacing feldspar). Weak foliation is parallel to the contact.

Rock samples from drillholes DDH-88-1 to 3 show a certain amount of cataclastic deformation as evidenced by microfaults within plagioclase grains, kink-bands, disrupted twins, and the larger, rounded shape of plagioclase compared with other, recrystallized minerals. Alteration types are similar to the ones mentioned above, mainly a result of hydration (but otherwise isochemical), with some metasomatism of silica and/or boron.

Three samples were taken from DDH-88-1, at 29.5 m, 36.3 m, and 60.2 m. All are identified as "feldspar porphyry" in drill logs, but V248-1-29.5 and V248-1-60.2 are closer to a somewhat porphyritic-textured, coarse-grained diorite. However, sample V248-1-36.3 appeares to be a metamorphosed mafic volcanic or volcaniclastic rock with intrusive xenoliths, rather than an intrusive rock. Cataclastic deformation is recorded in the weak foliation and deformation textures in the feldspar.

The single sample from DDH-88-2, V248-2-39.0, is a deformed, altered quartz dioritic feldspar porphyry. It is generally coarse-grained, with 50% subhedral plagioclase. Alteration minerals included chlorite, epidote, and

3



amphibole. Some tourmaline is present in amphibole veins. Calcite is associated with chlorite alteration. Hydrothermal alteration followed cataclasis.

Three samples were collected from DDH-88-3. Sample V248-3-28.0 is an altered, fine-grained biotite diorite, and sample V248-3-133.4 is also an altered diorite, but clearly shows incipient silicification. The most interesting sample is V248-3-57.0 P.T.S., a polished thin section with 10-15% pyrite and 2-3% arsenopyrite. The rock looks like a quartz vein until inspected more closely, where it can be seen that the dominant mineral is feldspar. The rock is composed primarily of plagioclase (40-50%), quartz (15-20%), muscovite (10-15%), and pyrite (10-15%), with lesser chlorite and arsenopyrite. The quartz appears to be secondary, at least in part. The rock resembles a pyritic quartz diorite or granodiorite, but is probably a hydrothermally altered and silicified diorite. Unfortunately, no significant geochemical values are associated with this very interesting pyritic silicified zone.

MPH

PETROGRAPHIC REPORT by J.S. Getsinger, PhD f. f. Setsinger

For Parallax Development Corporation Date 87-11

Project V248 - Contact Project Collector Ted Hayes(?)

Sample V248-1400 Date Collected 87-11

Location: Flores Island, Contact 1 claim, Main Grid, 0+25S, 0+40W.

Rock Type: Silicified calc-silicate skarn with arsenopyrite(?).

Hand Specimen: Rusty brown-weathering, whitish to pale green rock. Very fine-grained to aphanitic, even-textured rock is crosscut by irregular, discontinuous to lensoidal veinlets (typically <0.5 mm wide by <1 cm long) filled with greyish-white and green material (quartz + epidote(?)). Locally veinlets include silvery sulphides (pyrite + arsenopyrite(?)) (<0.5 mm), with cube-like shapes. Prismatic greenish crystals (epidote) project into veinlets and vugs; prisms are <0.5 mm long and very thin. No reaction to HCl. There are several episodes of fracturing and veining.

THIN SECTION (Polished No ):

## \* (Approx.) MINERALS

- 40-50% Quartz Fine to coarser-grained; groundmass and veinlets; surrounds clinopyroxene; is intergrown with epidote.
- 20-25% Epidote Pale dirty yellowish pleochroic; med.-high releif; finegrained massive aggregate in stringers and radiating subhedral prismatic in quartz veinlets.
- 30-40% Clinopyroxene (Diopside(?)) Med. high relief, colourless to dirty tan; biref. = 0.027; Z' to c = 45°; fine-grained aggregate of equant grains in granular quartz groundmass.
  - Opaques Angular to squarish grains, probably pyrite (+ arsenopyrite(?)).

Rock Textures/Structures: Epidote veinlets crosscut clinopyroxene aggregate; quartz veinlets contain euhedral epidote, and crosscut clinopyroxene and epidote; in some places epidote appears to crosscut quartz.

Protolith: Calc-silicate rock(?)

Alteration/Mineralization: Silicification and epidote veining of calc-silicate rock; sulphide mineralization accompanied veining.

**Conditions of Formation:** Contact metamorphism of calc-silicate rock to form diopside, then silicification and epidote veining.



PETROGRAP	HIC REPORT	by J.S. Getsi	nger, PhD	1.1.	Getsinger
For Par	allax Development C	Corporation	Date	87-11	<i>0</i>
Project	V248 - Contact F	Project	Collector	T€	ed Hayes(?)
Sample _	V248-22743		Date Collec	cted	87-11
Location:	Contact claims, E	Flores Island,	B.C., Main Gri	id, 5+00N	N, 2+05E.
Rock Type	: Contact between	intrusive (dio	rite?) and mag	gnetite s	skarn
rock h size i chlori rock ( abunda rock,	imen: Whitish and as weak foliation of s about 1 mm. C.I. te(?), and whitish 4 cm across) is intent magnetite. Some along with dissemination of the control	defined by inci = 40 to 50, w feldspar. A r tersected by the magnetite als hated pyrite (5	pient composition dark green ounded lens of e section. It o occurs disse	tional sen n amphibo f finer-o t is magr eminated	egregation. Grain ole(?) + grained, darker netic, indicating in the intrusive
2 (Annroy	.) MINERALS				
	trusive				
50%	Feldspar - Turbio		ericite, sauss	surite.	Albite twins
5%	indicate plagi Quartz - Small, o		interstitia	l grains.	_
10%	Hornblende - Ligh	-	to pale yello	ow, most]	
tr	Tourmaline - E =	<del>-</del>			
20%	Chlorite - After			Light gr	reen to pale
5%	Epidote (Pistacit	. is anomalous te) - Med. to h ains, also radi	igh relief, b	iref.; ye	ellowish; as
5-10%	Opaques - Abundar	•		ns, inclu	ding magnetite.
B) In	clusion				
10-15%	Plagioclase - Alb	oite twinning;	largely seric	itized	
15%	Biotite - Brown t				
25-30%	Hornblende/actino				_
		Abundance of			sections and cut perpendicular
		nic lineation.			
		Y = olive green			
	-	occurs in vei		,	
5-10%	Epidote - In veir				

Sericite - Pseudomorphing altered feldspar, and enclosing finely

(2) Areas of very finely disseminated grains in sericitized

Opaques - (1) Disseminated grains of magnetite;

feldspar grains.

disseminated opaques.

20%

10-15%



## P.2 Sample V248-22743 continued

## Rock Textures/Structures:

- A) Weak metamorphic foliation in a granular texture overall.
- B) Texture is hornfelsic, with metamorphically recrystallized biotite, hornblende.

#### Protolith:

- A) Diorite
- B) Mafic volcanic(?)
- Alteration/Mineralization: Alteration in both types is mainly due to hydration and low-grade metamorphism, that is, chlorite, sericite, etc. Timing of magnetite mineralization is unknown.
- Conditions of Formation: Dioritic intrusive came in contact with finergrained, mafic volcanic(?) and both were subsequently hydrothermally altered and somewhat metamorphosed. Biotite and magnetite may be contact (skarn) effects.



by J.S. Getsinger, PhD PETROGRAPHIC REPORT 87-11 Date For Parallax Development Corporation V248 - Contact Project Collector Victor Ryback-Hardy Project 87-11 V248-L7N, 1+75E Date Collected Sample Location: Flores Island, Contact 1 claim, Grid location L7N, 1+75E Rock Type: Altered diorite with hornblende-tourmaline veinlet Hand Specimen: Dark green and white, medium to coarse-grained (1 to 3 mm) plutonic rock with colour index about 60. Dark green minerals are amphibole (hornblende) altered to chlorite and epidote. White mineral shows local cleavage, and is probably plagioclase. Pyrite (+ chalcopyrite?) occurs as disseminated blebs (<0.5 mm; <3%). Dark veinlet (<5 mm wide) across chip is composed of dark green to black, minute elongate grains, possibly amphibole. No reaction to HCl or magnet.

THIN SECTION (Polished No ):

## \* (Approx.) MINERALS

20-30%	Plagioclase (Oligoclase) - Albite twinning; 50% saussuritized or sericitized; "dirty"-looking in plane light. In an a-normal section, X' to c = 9°.
25-30%	Amphibole (Hornblende) - Large grains, blocky, may be pseudomorphous after pyroxene. Biref. = 0.025; Z' to c = 14°; X = greenish yellow; Y = green to olive green; Z = bluish-green; Z \( \sum Y \) X; (-)2V = 80-85°; locally poorly developed amphibole cleavage. Locally strained, twisted, bent, pulled apart.
2- 4%	Opaques - Sparse, blocky to equant, skeletal; minor red hematite.
<5%	Quartz - Colourless, clear, interstitial
(?)	(?) - Greenish yellow, low biref.
5+%	Chlorite - Pale green with opaques + leucoxene(?)
5%	Epidote - Occurs in veinlets and as replacement of amphibole
<1%	Tourmaline - In locally altered patches; with minor red hematite.
10-15%	Sericite - Very fine-grained, in altered feldspar
5%	Sphene (+ Leucoxene?) - Brownish, high relief grains, especially as

#### Veinlet:

50-60%	Amphibole (Sodic(?) Hornblende) - Zoned from pale green to bluish
	green with darker rims. X = colourless to pale yellowish green;
	Y = green; Z = colourless to deep bluish green. Z > Y > X. Z' to
	$c = 14^{\circ}$ . Biref. = 0.030. Random, acicular needles.

- 1- 2% Tourmaline Sparse but coarse-grained radiating clusters intergrown with random blue-green amphibole. Pleochroic formula: O = dark teal blue, E = pale yellowish green to tan; O > E. Associated with minor hematite.
- 10-15% Epidote Elongate rectangular prisms; very pale yellow; biref. = 0.030.
  - <2% Sphene High relief, brownish grains

inclusions in chlorite

- <<1% Opaques Very minor, small grains
- 10-15% Plagioclase Similar to quartz, twinned; saussuritized in part
- 5-10% Quartz Low biref., low relief, clear



### P.2 Sample V248-L7n, 1+75E continued

Rock Textures/Structures: Granoblastic texture has been somewhat obscured by alteration of feldspar and amphibole; some amphibole shows local deformation features. Vein is recrystallized, with random-textured amphibole, tourmaline.

Protolith: Diorite

Alteration/Mineralization: Saussuritization/sericitization of plagioclase; recrystallization of amphibole (metamorphic?); tourmaline plus second-phase amphibole in veinlet.

Conditions of Formation: Intermediate intrusive has been metamorphosed to amphibolite facies(?) and hydrothermally altered, with influx of water, minor boron, and possibly extra sodium.

MPH

PETROGRAPHIC REPORT by J.S. Getsinger, PhD J.S. Setsinger

For Parallax Development Corporation Date 87-11

Project V248 - Contact Project Collector Victor Ryback-Hardy

Sample V248-L4N, 1+50E Date Collected 87-11

Location: Flores Island, Contact 1 claim.

Rock Type: Diorite in contact with epidote skarn

Hand Specimen: Whitish, light green, and brown-rusty weathering rock with fine to medium grain size. Cut surface shows somewhat foliated intrusive rock (dioritic) with alteration to epidote, in contact with a finer-grained, green rock which appears to be composed primarily of epidote. At the contact is a black band 0.5 cm thick which is magnetic, therefore containing magnetite. Disseminated metallic minerals (<2%) are probably dominantly pyrite. No reaction to HCl.

THIN SECTION (Polished No ):

## % (Approx.) MINERALS

#### Intrusive

- Quartz Clear; associated with plagioclase, but more near the contact; in elongated lenses parallel to foliation.
- 50% Feldspar Plagioclase; sericitized, saussuritized; Carlsbad twins, vague albite twins.
- 15-20% Amphibole Hornblende mainly altered to epidote + chlorite.
  - 5% Epidote Pistacite Med. to high biref.; an alteration mineral.
  - tr Sphene Small, high relief grains.
- 10-15% Chlorite Light green; anomalous blue-brown biref.
  - <2% Opaques Mainly associated with chlorite, some disseminated grains.</p>

#### Black band

- 10% Opaques Magnetite disseminated
- 20-30% Sericite Replacing feldspar(?)
  - 20% Quartz Anhedral, subangular grains
  - 10% Hornblende Green grains, near intrusive contact
- 15-20% Epidote Pistacite small, rounded, high relief grains
  - 10% Chlorite Light green, extremely low biref.

## Epidote skarn

- 40% Epidote Pistacite Bright birefringence, yellow pleochroism.
  Patchy, skeletal, with altered plagioclase cores.
- 40-45% Quartz Interstitial to epidote; large grain size; irregular, anhedral.
  - Opaques Sparsely disseminated, blocky grains with rusty haloes
    (pyrite(?))
- 10-15% Plagioclase Anhedral masses surrounded by epidote; turbid areas are sericitized, saussuritized feldspar
  - <5% Sphene As inclusions in epidote



# P.2 Sample V248-L4N, 1+50E continued

Rock Textures/Structures: Weak foliation is parallel to contact in all parts. Epidote is secondary. Foliation may be related to intrusion; although it may be due to deformation, it is not a clear case.

Protolith: Diorite

Alteration/Mineralization: Feldspar is sericitized and saussuritized; mafic minerals are altered to chlorite; epidote alteration is extensive, and associated with quartz. Magnetite is clearly related to the intrusive contact.

**Conditions of Formation:** Diorite has been hydrothermally altered, with addition of quartz-epidote alteration.

Petrographic Report by J.S. Getsinger, PhD J.S. Metsinger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector Victor Ryback-Hardy

Sample V248-1-29.5 Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C. DDH-88-1, depth 29.5 m.

Rock Type: Deformed diorite

Hand Specimen: Foliated chloritic intrusive(?). Drillcore sample (BQ; <8 cm long). White and green, medium-grained, foliated rock may be diorite altered to chloritic assemblage. Feldspar (with cleavage) makes up about 50%. Other minerals are chlorite, epidote(?), and sericite(?). Non-magnetic. Pale green, crosscutting veinlets (<0.5 mm) may contain very fine-grained quartz and epidote. No reaction to HCl. Sparkly surfaces are probably mica or chlorite, not metallic minerals.

THIN SECTION (Polished No ):

# \* (Approx.) MINERALS

- 50% Feldspar Plagioclase Turbid, with vague albite twinning. In some grains the twins are bent, indicating deformation. Altered extensively to sericite and saussurite.
- 10-15% Quartz Anhedral, irregular boundaries
  - Prehnite Med. biref., med. relief, colourless, parallel extinction,
    high (+)2V; occurs along veinlets, along with some vein feldspar.
- 15-20% Chlorite Pale green pleochroic; anomalous brown biref.
  - 5% Epidote Very pale yellow pleochroism; colourful biref.; elongate infoliation; locally zoned.
- 2- 3% Clinopyroxene(?) Altered; elongate, med. high relief mineral.

  Slow = brown, fast = tan; Z' to c = 43°, associated with chlorite.

  Med. biref.
  - Opaques Fine-grained opaques occur along foliation surfaces with chlorite; may include sphene or leucoxene

Rock Textures/Structures: Weak foliation, defined by chlorite and finergrained quartz and feldspar surrounding larger, rounded feldspar grains. Bent twins as well as foliation imply cataclastic deformation.

Protolith: Diorite

Alteration/Mineralization: Alteration is basically hydration: plagioclase to sericite + saussurite; mafics to chlorite + epidote. Opaques appear to be products of hydration reactions.

**Conditions of Formation:** Dioritic intrusive has been sheared cataclastically with some recrystallization, and hydrothermal alteration.

PETROGRAPHIC REPORT by J.S. Getsinger, PhD 88-06 Parallax Development Corporation Date V248 - Contact Project V. Ryback-Hardy Collector 88-02

Date Collected

Location: Contact 1 claim, Flores Island, B.C., DDH-88-1, depth 36.3 m.

Rock Type: Altered mafic metavolcanic or volcaniclastic(?) rock

Hand Specimen: Volcanic greenstone with epidote + chlorite veins, gypsum(?). Drill core sample (BQ; <10 cm long). Dark green, fine to medium-grained metavolcanic or volcaniclastic(?) rock. Evenly fine-grained andesitic to basaltic matrix surrounds xenoliths or clasts of medium-grained dioritic intrusive up to 2-3 cm across. Identifiable minerals are chlorite and epidote. apparently related to veining. White veinlets (up to 1 to 2 mm) include quartz, but also a soft, tabular crystalline material which could be gypsum (no reaction to HCl). Other white vein mineral, as well as grey, altered plagioclase, does react in HCl, indicating presence of calcite alteration. Calcite-bearing veins crosscut epidote-bearing veins. Overall texture of rock is fine-grained granular rather than porphyritic.

THIN SECTION (Polished No ):

V248-1-36.3

# % (Approx.) MINERALS

Sample

- 50% Feldspar - Fine-grained, anhedral, altered to about 50% sericite. Angular to subangular grains.
- Quartz Does not occur in main mass of rock, unless as grains tr(?) indistinguishable from feldspar.
- Actinolitic Hornblende Occurs as small prisms throughout, and as 15-20% larger, blocky grains, possibly pseudomorphous after pyroxene, with fine-grained exsolved opaques. Amphibole also occurs in a set of veins. Z = pale bluish-green, Y = light olive green, X = colourless to pale yellow; Z = Y > X. Z' to  $c = 16^{\circ}$ . (-)2V >
- 15-20% Chlorite - Anomalous brown to purple biref., light green to yellow pleochroism.
- Epidote Pistacite Mainly in veins, also as an alteration mineral. 5-10% The epidote veins are made up of fine-grained epidote and epidote aggregate clasts.
  - Opaques Fine-grained, disseminated; may include sphene and/or <5% leucoxene in semi-opaque masses in chlorite.

# Veins

Calcite - High biref. carbonate, reacts in HC1 Sulphate(?) Vein mineral - Prismatic (terminating face at 70° to prismatic faces), low biref. (<0.010), inclined extinction; negative relief; (-)2V about 45 to 70°; resembles gypsum except for negative optic sign.



# P.2 Sample V248-1-36.3 continued

Rock Textures/Structures: Evenly fine-grained granular, not porphyritic. No intrusive xenoliths are cut by the thin section. There are at least 3 stages of veining shown in thin section. Granular texture may be evidence of hornfelsing. It may also be derived from an originally clastic texture, as most grains are angular.

Protolith: Intermediate to mafic volcanic or volcaniclastic rock.

Alteration/Mineralization: Vein order: Epidote, amphibole, sulphate(?)  $\pm$  calcite.

Conditions of Formation: Volcanic or volcaniclastic rock was either metamorphosed to greenschist facies or hydrothermally altered. Veins of dominantly (1) epidote, (2) amphibole, and (3) sulphate(?) + calcite were emplaced during (1,2) and after (3) hydrothermal alteration (or metemorphism).



PETROGRAPHIC REPORT by J.S. Getsinger, PhD J. Letsinger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector V. Ryback-Hardy

Sample V248-1-60.2 Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C., DDH-88-1, depth 60.2 m.

Rock Type: Altered quartz diorite

Hand Specimen: Diorite(?) with epidote veins. Drill core sample (BQ; <12 cm long). Medium-grained (1 mm) intrusive rock consists of mainly plagioclase (with cleavage), mafic minerals (now chlorite), and minor quartz. Quartz is associated with epidote alteraion. The section chip is crosscut by an epidote alteration band about 1 cm wide, with lesser quartz. Minor chloritic zones are developed along discontinuous trends, breaking up the even granular texture of the rock.

THIN SECTION (Polished No ):

# % (Approx.) MINERALS

- 40-45% Plagioclase Albite twinning, rare; grains are larger than quartz, much altered to sericite. Oligoclase(?).
- 10-15% Quartz Anhedral
- 15-20% Chlorite Light green pleochroic
- 10-15% Amphibole Actinolitic hornblende, zoned from lighter to darker green. Occurs in veins, mainly, and in small amounts within the rock.
- 5-10% Epidote Pistacite yellow pleochroic, individual grains, also in veins.

### Vein material

Quartz - Large grains, straight boundaries with triple junctions; quartz vein crosscuts epidote vein.

Epidote - Subhedral pistacite, comb texture in apidote vein.
Amphibole - Needle-like in quartz vein; coarser in small amphibole veins.

Rock Textures/Structures: Random texture, with alteration minerals as overgrowths; veins form crosscutting features.

Protolith: Quartz diorite

- Alteration/Mineralization: Alteration assemblage of epidote, chlorite, and amphibole is consistent with greenschist facies metamorphism and/or hydrothermal alteration. Plagioclase is altered to sericite.
- Conditions of Formation: Intermediate intrusive rock has been hydrothermally altered, and veined, with epidote veins followed by amphibole and quartz veins. Conditions are possibly greenschist facies metamorphic, but lack of deformation textures suggests dominantly alteration.



PETROGRAPHIC REPORT by J.S. Getsinger, PhD J.J. Sletsinger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector V. Ryback-Hardy

Sample V248-2-39.0 Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C., DDH-88-2, depth 39.0 m.

Rock Type: Deformed, altered quartz dioritic feldspar porphyry

Hand Specimen: Intrusive porphyry(?). Drill core sample (BQ; 10 to 12 cm long). Coarse-grained (2 to 4 mm), white and green intrusive rock has more of a porphyritic than granular texture. White, subrounded to rectangular subhedral plagioclase (up to 4 mm) makes up about 60%, with interstitial dark green chlorite (+ possible amphibole). A dark green to black, chloritic(?) veinlet (<0.5 cm) crosscuts section chip; it hosts sulphide grains up to 2 mm long (pyrite). Other pyrite grains in the host rock are within 1 cm of the dark green vein. Non-magnetic. Vein contains tiny acicular crystals which may be amphibole (hornblende) in addition to chlorite. Tiny crosscutting veinlets and white areas associated with chloritic clots react in HCl, indicating calcite alteration. Feldspar is locally partly altered to epidote and/or calcite.

THIN SECTION (Polished No ):

# \* (Approx.) MINERALS

Plagioclase - Abundant albite twinning shows a variety of deformation textures, such as bent and fractured grains, kink-bands, twinned and untwinned patches in same grain, irregular crystal boundaries, etc. Altered somewhat, to sericite, saussurite. Feldspar grains were originally large and subhedral.

10% Quartz - Larger grains have been partly recrystallized as smaller grains. Boundaries are irregular. Undulose extinction is common. Some quartz may be in veins; rest is interstitial to plagioclase.

5-10% Amphibole - Actinolitic hornblende. Occurs mainly in dark green vein, dominantly amphibole, in random mat-like texture.

15-20% Chlorite - Pale green pleochroic; anomalous purple biref. Irregular alteration of former mafic minerals, with exsolution of iron oxides (now opaque dust).

5-10% Epidote - Weakly yellow pleochroic. Clinozoisite to pistacite.

<1% Sphene - Associated with chlorite and opaques, as accessory mineral.</p>

2- 4% Carbonate - Associated with chlorite alteration, and in quartz veins.

Tourmaline - Associated with amphibole near edge of green vein; light greenish tan (E) to dark blue-green (O); O > E. Grains are large and skeletal, anhedral.

Opaques - Fine-grained opaque dust, arranged around altered minerals, in curved or odd-shaped stringers, especially associated with chlorite (as altered mafics). Also occurs in sparse larger grains, possibly pyrite.



# P.2 Sample V248-2-39.0 continued

Rock Textures/Structures: Deformation textures in feldspar, unusual textures in chlorite indicate some cataclastic deformation rather than regional penetrative deformation. Large, subhedral feldspar indicates intrusive porphyritic texture.

Protolith: Quartz dioritic feldspar porphyry.

Alteration/Mineralization: Plagioclase is sericitized, saussuritized.

Chlorite + iron oxides + sphene + calcite replace mafic minerals. Amphibole occurs in veins, along with tourmaline. Epidote is a common alteration mineral. Mineralization is limited to a few grains of pyrite.

Conditions of Formation: Intermediate intrusive porphyry has been broken up and sheared somewhat, followed by hydrothermal alteration involving influx of water, common alteration to chlorite, formation of tourmaline-bearing amphibole veins.

MPH

PETROGRAPHIC REPORT by J.S. Getsinger, PhD J. J. Setsinger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector V. Ryback-Hardy

Sample V248-3-28.0 Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C., DDH-88-3, depth 28.0 m.

Rock Type: Altered fine-grained diorite

Hand Specimen: Hornfels or volcanic(?). Drill core sample (BQ; <10 cm long).

Medium-grained (0.5 to 1 mm) granular rock is mainly even-textured, with white veinlets (0.1 mm thick), and irregular chloritic fractures with pyrite grains <0.5 mm. Rock appears weakly foliated. Whitish minerals (30%) are rounded, and look bluish-grey on core surface, and show cleavage on cut surface (plagioclase). Texture is actually granular, although the felsic minerals (feldspar) are apparently coarser-grained than the mafic minerals (chlorite?). Discontinuous quartz-epidote stringers occur locally. Pyrite blebs are anhedral and irregularly disseminated (<3%). Could be interpreted as fine-grained diorite.

THIN SECTION (Polished No ):

# % (Approx.) MINERALS

- 45-50% Plagioclase Grains are subhedral to anhedral, clumped together.

  Albite twinning is discontinuous and patchy. Feldspar is cloudy with products of sericitization and saussuritization.
  - 5% Quartz Uniaxial(+), mainly occurring in veinlets
  - 5% Amphibole Blue-green actinolitic hornblende; as an alteration mineral
- 5-10% Biotite Green mica; med. to high biref.; mainly altered to chlorite
- 15-20% Chlorite Light green, low birefringent phyllosilicate
  - 10% Epidote Pistacite As grains among biotite and chlorite around feldspar
    - <1% Sphene(?) High relief, biref.
    - 5% Opaques Pyrite (<0.5 mm); also opaque material associated with chlorite alteration
      - Gypsum(?) Vein mineral, low relief, biref.

Rock Textures/Structures: Interlocking granular texture. Irregular twinning in feldspar indicates some cataclastic deformation. Micaceous minerals are ragged.

Protolith: Biotite diorite

- Alteration/Mineralization: Feldspar to sericite, saussurite; biotite to chlorite <u>+</u> iron oxides; amphibole. Mineralization appears limited to minor development of pyrite.
- Conditions of Formation: Intermediate rock has cooled more quickly than its coarser-grained equivalent. Hydrothermal alteration brings in amphibole, chlorite alteration, possibly pyrite.



PETROGRAPHIC REPORT by J.S. Getsinger, PhD J. S. Sutvinger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector V. Ryback-Hardy

Sample V248-3-57.0 PTS Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C., DDH-88-3, depth 57.0 m.

Rock Type: Pyritic meta-quartz diorite(?)

Hand Specimen: Pyrite in silicified rock. Drill core sample (BQ, cut in half lengthwise, <10 cm long). Coarse-grained (2-6 mm) grey quartz and feldspar (with cleavage) make up >80%. Disseminated pyrite (<<0.5 mm) (+ sericite?) is sparkly (10%). Milky-whitish areas and veinlets may be altered feldspar or clay minerals. Local dark areas are not magnetic; may be altered mafic minerals. Texture looks somewhat cataclastic: large, rounded grey grains are surrounded by irregular fractures defining a weak foliation perpendicular to drill core. Whitish veinlets cut obliquely to drill core. No reaction to HC1.

THIN SECTION (Polished No ):

# % (Approx.) MINERALS

15-20%	<pre>Quartz - Colourless, clear, in smaller-grained aggregates around feldspar; could be secondary, in part.</pre>
40-50%	<pre>Feldspar - Plagioclase - Albite twinning; intracrystalline     microfaults; turbid, large grains</pre>
10-15%	Muscovite - Associated with pyrite; colourless mica, med. to high biref., surrounds plagioclase.
<5%	Chlorite - Very pale green pleochroic
trace	Rutile - Semi-opaques, brown, high relief mineral
10-15%	Pyrite - Anhedral (<1 mm), disseminated
2- 3%	Arsenopyrite(?) - Silvery-metallic, smaller than pyrite.

Rock Textures/Structures: Textures include intrusive granular texture, alteration of feldspar, growth of muscovite. Foliation appears somewhat metamorphic, with incipient crystallization foliation defined by muscovite.

Protolith: Quartz diorite or granodiorite

Alteration/Mineralization: Alteration: Plagioclase is sericitized, but also muscovite is widespread, indicating loss of iron from biotite (to pyrite?) or originally more felsic composition. Pyrite mineralization is significant.

# Conditions of Formation:

- 1) Diorite has been deformed, hydrothermally altered with introduction of potassium, sulphur, and silica  $\underline{OR}$
- 2) Granodiorite has been deformed, hydrothermally altered with introduction of pyrite and recrystallization of quartz and muscovite.

The first interpretation is preferred, that a dioritic rock has been silicified and mineralized with pyrite.

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PETROGRAPHIC REPORT by J.S. Getsinger, PhD J. Littunger

For Parallax Development Corporation Date 88-06

Project V248 - Contact Project Collector V. Ryback-Hardy

Sample V248-3-133.4 Date Collected 88-02

Location: Contact 1 claim, Flores Island, B.C., DDH-88-3, depth 133.4 m.

Rock Type: Altered diorite

Hand Specimen: Foliated intrusive. Drill core sample (BQ; 10 cm). Medium-grained (1 to 2 mm) white and green (diorite?) intrusive rock is weakly foliated subparallel to drill core axis. Foliation is defined by alignment of black micaceous mineral as well as incipient compositional segregation. Black veinlets (<2 mm) may contain fine-grained hornblende. White veinlets (<1 mm) have soft, radiating, prismatic white mineral, like gypsum, or possibly a zeolite. Milky-white feldspar (plagioclase, with cleavage and striations) is subhedral, and locally altered to epidote or clay(?) minerals, as well as calcite (minor reaction to HCl). Interstitial clear material may be quartz (up to 10%). Mafic minerals (originally hornblende + biotite) are altered to chlorite and some epidote. A few grains of pyrite were noted.

THIN SECTION (Polished No ):

# % (Approx.) MINERALS

- Plagioclase Turbid, sericitized, saussuritized. Albite twinning is obscure. Large subhedral to anhedral, rectangular grains.
- 10% Quartz Occurs in polycrystalline, rounded aggregates within weakly foliated granular texture. Rounded apophyses of quartz appear to crosscut chloritic cleavage as if blebs of quartz were replacing the intrusive rock.
- 15% Chlorite Light green pleochroic; anomalous blue-purple biref.; trails of opaques along cleavage (iron oxide?).
- 10-15% Hornblende Blue-green to green, twinned, altered to chlorite and epidote
- 5-10% Epidote Subhedral, disseminated grains of pistacite are associated with other iron-bearing minerals (hornblende, chlorite).
  - Sphene + leucoxene Possibly present in high relief, turbid areas of feldspar, and in chlorite grains.
  - <5% Opaques Pyrite(?), anhedral grains</pre>

Rock Textures/Structures: Rounded blebs of secondary(?) quartz in a regular granular (intrusive) matrix of plagioclase and mafics.

Protolith: Diorite

Alteration/Mineralization: Sericitization, saussuritization of feldspar. Chlorite after mafics. Quartz is apparently secondary (silicification). Mineralization is limited to a small amount of pyrite.

Conditions of Formation: Intermediate to mafic intrusion has been hydrated and subsequently silicified by hydrothermal alteration.

# MICROSCOPIC DESCRIPTIONS OF SAMPLES Y2483-MT1 and Y2483-PT1

For MPH Consulting Limited By C. L. Soux, BSc. (July, 1988)

# MINERALOGRAPHIC REPORT

by	C.	L.	Soux	
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For:

MPH Consulting Limited

Project:

Sample: V2483-MT1

Location:

Collector:

J. Getsinger

Date Analyzed: July 18'1988

# MACROSCOPIC DESCRIPTION:

Hand specimen contains abundant chalcopyrite and other sulphide minerals.

# MICROSCOPIC ANALYSIS IN POLISHED THIN SECTION

Abr.	Mineral	Chem. Formula X		
Cpy.	Chalcopyrite	Cu Fe S2	36	
Py.	Pyrite	Fe S2	3	
Sph.	Sphalerite	Zn S	1	
Apy.	Arsenopyrite	Fe As S	<b>((1</b>	
Act.	Actinolite		25	
Ep.	Epidote		35	

## **TEXTURES AND DESCRIPTION:**

- -Chalcopyrite and other sulphides are interstitial between intergrown actinolite and epidote grains. Narrow fractures are filled with pyrite and chalcopyrite.
- -Sphalerite does not contain inclusions and is replaced in part by chalcopyrite.
- -Some of the pyrite is spheroidal and shows rhythmic banding, possibly a product of colloidal deposition.
- -A few discrete grains of arsenopyrite were observed.
- -Actinolite is fibrous and shows green pleochroism.
- -Epidote and actinolite are intimately intergrown.

# MINERALOGRAPHIC REPORT

by C. L. Soux...

For:

MPH Consulting Limited

Location:

Flores Is. B.C.

Project: Contact **Sample:** V2483-PT1 Collector:

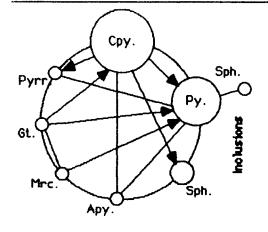
J. S. Getsinger Date Analyzed: July 15'88

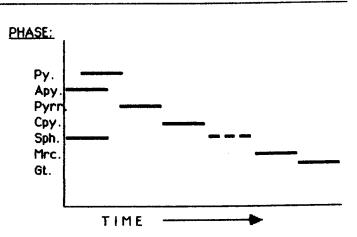
# MACROSCOPIC DESCRIPTION:

Sample of vein material containing abundant sulphides and quartz. In order to establish the average mineralogy, the sample was ground to <2mm. After homogenizing, a briquette of a representative subsample was prepared.

# MICROSCOPIC ANALYSIS IN POLISHED SECTION

Abr.	Mineral	Chem. Formula 🕱		Description	
Cpy.	Chalcopyrite	Cu Fe S2	55	Associated mainly with Py. and Sph.	
Py.	Pyrite	Fe S2	30	Replaced by Gt. and Mrc.	
Sph.	Sphalerite	Zn S	5	As inclusions in Py.; replaced by Cpy	
Apy.	Arsenopyrite	Fe As S	<1	Associated with Py, and Cpy.	
GL.	Goethite	H Fe 02	1	Alteration product of Py. and Cpy.	
Mrc.	Marcasite	Fe S2	∢1	Replaces Py.	
Pyrr.	Pyrrhotite	Fe S	<1	Associated with Py, and Cpy.	
Mol.	Molybdenite	Mo S2	<<1	Discrete particles.	
Gg.	Gangue		8	Composed mainly of quartz.	





Yandeveer Diagram

Tentative Paragenetic Sequence

## **TEXTURES AND DESCRIPTION:**

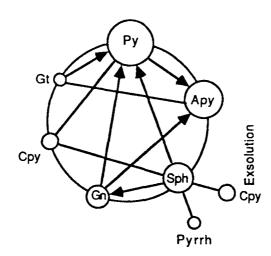
- -Chalcopyrite is present associated mainly with pyrite and sphalerite. In most cases, chalcopyrite and sphalerite show mutual boundaries. Where chalcopyrite is seen replacing sphalerite, caries texture is observed.
- -Sphalerite is devoid of inclusions and occurs as idiomorphic grains partly replaced by chalcopyrite. A few idiomorphic grains of sphalerite in pyrite were observed, indicating an earlier deposition of sphalerite.
- -Narrow fissures in arsenopyrite and pyrrhotite are filled with chalcopyrite.
- -Pyrite is replaced by marcasite and goethite-jarosite?
- --Chalcopyrite shows alteration to jarosite?

# EXPLANATION ON THE USE OF THE VANDEVEER DIAGRAM

# A NEW DIAGRAMATIC SCHEME FOR PARAGENETIC RELATIONS OF THE ORE MINERALS

The ore minerals are arranged on the circumference of a circle and represented by smaller circles. Lines connect each pair of minerals which are observed to be in contact. An arrowhead points toward the mineral replaced where replacement textures are represented. The absence of arrows indicates simultaneous deposition. Minerals formed by exsolution are attached to the primary minerals by a line to the exsolution mineral point, which is outside the hypogene ore mineral circle. Supergene minerals are arrranged on an outer arc and connected by lines to the hypogene minerals which are replaced. The density of the connecting lines in the diagram indicates semiquantitatively the relative replaceability of the host minerals.

After Forbes Robertson and Paul L. Vandeveer
Department of Geology,
Montana School of Mines,
October 16, 1951.



Example: (Above diagram)

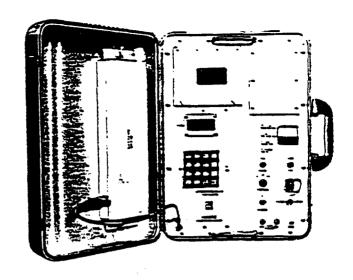
Pyrite is replaced by sphalerite, galena and goethite. Arsenopyrite is replaced by galena and pyrite. Galena is replaced by sphalerite. Chalcopyrite is in contact with pyrite and sphalerite, but there is no evidence of replacement. Goethite and arsenopyrite are observed to be in contact. Sphalerite contains exsolution blebs of chalcopyrite and pyrrhotite.



# Appendix VII

IP INSTRUMENTATION SPECIFICATIONS

# M-4 Induced Polarization Receiver



### DESCRIPTION

The Huntec M-4 is a microprocessor based receiver for time and frequency domain IP and complex resistivity measurement. It is

Easy to operate. One switch starts a measurement, of up to 29 quantities simultaneously. The optional Cassette DataLogger records them all in seconds. Calibration, gain setting and SP buckout are all automatic.

Reliable. Using advanced digital signal processing techniques, the M-4 delivers consistently accurate data even in noisy, highly conductive areas. For mechanical reliability it is packaged in a rugged aluminum case for backpack or hand carrying.

Versatile. The operator may adjust delay and integration times, operating frequency and other measurement parameters, to adapt to a wide range of survey conditions and requirements. An independent reference channel facilitates drillhole and underground work, and guarantees transmitter-receiver synchronization in high-noise conditions.

Highly accurate. With a frequency bandwidth of 100 Hz and noise-cancelling digital signal stacking, the M-4 delivers very precise results. The details are summarized in a table overleaf.

Sensitive. The same features that make the M-4 accurate allow detection of very weak signals. The Hunter receiver requires lower transmitter power than any other, for a given set of operating conditions. Automatic correction for drifts in self-potential and gain allow long stacking times for significant signal-to-noise improvements.

Intelligent. Under the control of a powerful 16-bit micro-processor, the M-+ calibrates and tests itself between measurements. Coded error messages, flashed onto the display, inform the operator of any malfunction.

The M-4 Receiver is complemented by Hunter's new M-4 ransmitters, which offer precisely timed constant-current output and both time and frequency domain waveforms, compati-

ble with the receiver's accuracy and multi-mode measurement capabilities. The RL-2 Reference Isolator connects any IP transmitter to the receiver's reference channel. The GeoDataBase field computer reads, stores and processes data from M—I cassettes.

Contact Huntec for more information on the benefits differed by the  $M\!\to\!1$  product line.

#### **FEATURES**

- Time and Frequency domain IP and Complex Resistivity
- Simultaneous Time domain and Complex Resistivity measurement
- Automatic calibration

gain setting SP cancellation fault diagnosis filter tuning

- Independent reference channel for drillhole and underground work
- 33 quantities, displayable on large 3½ digit low-temperature liquid-crystal readout
- Analogue meter for source resistance measurement
- 10° onms differential input resistance
- 8 hours continuous operation with replaceable, rechargeable nickel-cadmium battery pack (2 supplied)
- Optional Cassette DataLogger fits inside case, has read-afterwrite error checking. Up to 350 stations per tape.
- · Conveniently packaged for backpacking or hand carrying
- 100 Hz bandwidth, fine time-resolution
- Advanced digital signal stacking
- Delivers reliable, accurate data in noisy, highly conductive





SPECIFICATIONS

inguts

Signal Channel

Range:

5 x 10<sup>-1</sup> to 10 volts. Automatic ranging.

Overload indication

Resistance:

Greater than 10° ohms differential

Bandwidth:

100 Hz

SP Cancellation:

-5 to +5 volts (automatic)

Protection:

Low-leakage diode clamps, gas discharge surge arrestors, replaceable fuses.

Reference Channel

Levei:

500 mV minimum, 10 voits peak max-

imum, overload indication 2 x 10° ohms differential

Controls and Functions **Operating Controls** 

Keypad:

Resistance:

16 keys, calculator format, function

associated with each key.

Reference

Registers:

Keypad may be used to store up to ten 31/2 digit numeric values with floating decimal point, to represent station number, line number, operator, time, date, weather, transmitter current, etc. for recording on

cassette.

Programming Controls

Sub-panel:

All programming controls are on a covered sub-panel, not accessible during

normal operation.

Thumbwheel Switches:

Select delay time to in milliseconds. chargeability window t, in milliseconds; operating frequency; PFE frequency

Displayable Quantities

Time domain:

Primary voltage: self-potential: chargeability (total or each of 10 windows of equal width); phases of odd harmonics 3 to 15; amplitudes of odd harmonics 1 to 15: cycle count repeating display of polarization potential and total

chargeability.

Freq.domain:

Primary amplitude: Percent Frequency Effect: seif-potential: cycle count.

Complex Resistivity: Phases of odd harmonics 3 to 15; amplinudes of odd harmonics I to 15: fundamental phase (with ref. input); cycle

COUNT.

Any mode:

Battery voitage, Frequency error.

Outputs

Displays

Digital Display:

31/2 digit, low-temperature liquid crystal display. Indicates measurement results

and diagnostic error messages.

Analogue Meter:

Ohms scale for source resistance: also gives qualitative indication of signal-to-

noise ratio.

Cassette DataLogger (Optional)

Description:

Accommodated within M-4 chassis. If not acquired with receiver, may be retrofitted by user at any time. Two recording

Partial:

All sub-panel settings, measurement resuits, and contents of reference registers are recorded (2 seconds recording time).

Fuil:

As in partial mode, but also recorded is one cycle of averaged signal waveform (28 seconds recording time). If external

reference is used, one cycle of reference waveform is also recorded (60 seconds recording times. Extra memory and soft-

ware available to average and store the reference waveform for advanced offline

resistivity computation.

Format:

ANSVECTIVISO standard for saturation recording: 80 bytes/record, all data re-

corded in ASCII code.

Verification:

Read-after-write data verification (auto-

Mechanical

M-4 Receiver with

battery pack:

45 cm x 33 cm x 14 cm, 10.0 kg M-4 Receiver

with battery pack and Cassette

OataLogger:

Dimensions as above, IT.0 kg

Replaceable Battery pack:

33 cm x 11 cm x 4.5 cm, 3 kg

Environmental

Temperature:

Humidity:

Operation: -20°C to +55°C

Storage: -40°C to +70°C Moisture-proof, operable in light drizzle.

Altitude: Shock Vibration: -1,525 m to +4,775 m

Suitable for transport in bush vehicles:

# **OUTPUT ACCURACY AND SENSITIVITY**

-	منهجلا	<b>10/86</b>	-c#8	-	>FCDF406	
	2 Mariin	1% 40Hz 2% to 80Hz	±1%	21%	0.17423	(1,1743) full rease
_	0.01	10"" volts	10	10-,	10 <sup>-1</sup> seconds	0.001% full scale

1) Frequency domain moderat harmonic frequencies up to 15 Hz, increases to not more than 5 milliradians at 80 Hz.

> Time domain moderat harmonic frequencies up to 7.5 Hz. increases to not more than 5 milliradians at 30 Hz.

21 of total OFF time

3) Full scale defined as 100% PFE.

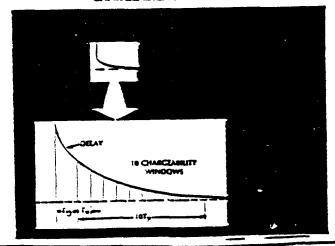
Cassette Data: recorded in ASCII, 9 digits with decimal point fixed for four decimal digits.

Display Data: 31/2 digits, iloating decimal point

Resolution of averaged waveform limited by A/D convener to one part or 4096 x (square root of cycle count).

Resolution of reference waveform (not averaged) limited by available memory to one part in 256. Additional memory and averaging software available as option.

## CHARGEABILITY WINDOWS



# NOTES ON IP/RESISTIVITY SURVEYS

# General

Induced Polarization (IP)/resistivity surveys are commonly conducted in the time domain and frequency domain, and less frequently, as spectral or complex resistivity measurements. There are a variety of geometrical arrays that can be employed.

The present survey employed time-domain measurements using the dipoledipole array. Measurements were made with the Huntec Mk TV receiver and 2.3 km transmitter.

The following discussion sets out in some detail the principles and procedures of the IP method as related to the present survey.

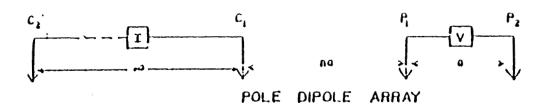
# Time Domain Method

As shown in Figure I, in the time domain a modified, square-wave current consisting of "on/off/on/off" cycles of equal duration is transmitted into the ground through a pair of electrodes (current dipole). The primary  $(V_p)$  and secondary  $(V_s)$  voltages generated in the ground are measured at another pair of electrodes (potential dipole). The primary voltage, measured during the "on" current cycles, is a function of the electrical resistivity of the ground. The secondary voltage, measured during "off" current cycles, is the IP affect which teffects the amount of polarizable minerals, such as metallic sulphides, graphite, etc., in the ground.

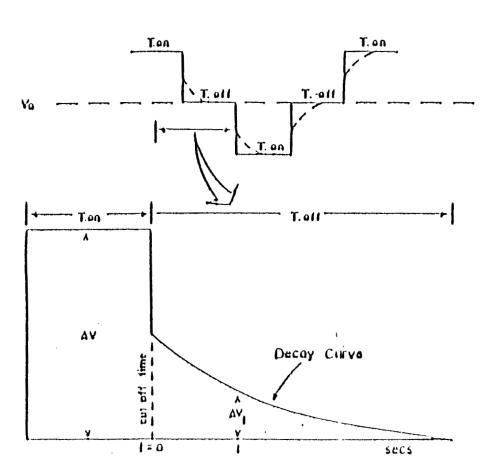
The apparent resistivity of the ground is not directly measured, but is obtained by a mathematical formula utilizing the primary voltage value, the current output from the transmitter at the same instant and a geometrical constant dependent on the array type being used:

$$Q_{a} = \frac{v_0}{1} x a E$$





Apparent Resistivity  $\rho_0 = \frac{V}{L}$ , G where G is a geometrical factor dependant on survey array



— Transmitter waveform
— Signal "seen" at reclever

T.on = 2 secs. T.off = 2 secs.

Chargeability at time 1  $M_1 = \frac{\Delta V_1}{\Delta V}$ 

PRINCIPLE OF TIME DOMAIN LP.

Figure 1

where: Pa = apparent resistivity in ohm-meters

Vp = primary voltage (volts)

I = transmitted current (amps)

a - electrode spacing in meters

F = geometrical factor depending on the electrode array used.

The Huntac Mk IV system measures the secondary voltage or IP effect at 10 time intervals of equal width. The width of the time window (Tp) and the length of the delay (Td) between the start of an "off" cycle and the beginning of the IP measurement are adjustable to suit the conditions of the survey. In the present survey, these were set at 100 psec and 100 msec, respectively, and the IP effect was recorded for each of five individual time windows ( $M_1$ ,  $M_3$ ,  $M_5$ ,  $M_7$  and  $M_9$ ) and for the total decay voltage ( $M_{\rm T}$ ). The secondary voltage divided by the primary voltage yields the parameter chargeability in milliseconds.

The decay curve constructed from the ten chargeability observations is generally in the form of an exponential decay curve. It frequently can be split into two portions — an early fast decay portion and a later slow decay portion. The fast decay portion is generally due to inductive effects, while the later slow decay predominantly reflects true polarization effects. In theory chargeability is the value of the slow decay extrapolated backwards to the instant of transmitter shut—off.

## Survey Arrays

A number of different arrays are available for carrying our IP measurements. The ones generally used in mineral exploration are the dipole-dipole, pole-dipole and the gradient array, shown graphically in Figure 2, and described further below.

# (1) Dipole-Dipole Array

This array is one of the most commonly used arrays in IP and is the

only one used with time-domain, frequency-domain and spectral surveys.

The system employs four moving electrodes with a layout as shown in Figure 2. The two current electrodes  $C_1$  and  $C_2$  and the two potential or measuring electrodes  $P_1$  and  $P_2$  have the same separation, called the 'a' spacing. The interval between the current and potential pair is generally some fixed multiple 'a' of this 'a' spacing. Measurements with the dipole-dipole array are plotted at the mid-point of the array.

As the 'a' value is increased, (i.e., as the current and potential dipoles are moved farther and farther apart), this has the effect of increasing the depth of exploration. While this is typically quoted as being one half of the total array length, actual depth of exploration is strongly dependent on the distribution of resistivity in the ground and is often much less than half the array length, particularly if conductive overburden is present.

# Advantages

- 1. The system has low inductive coupling because the current wires and reading wires can be kept separated.
- 2. Anomalies are symmetrical.
- Sensitivity and resolution are good where 'a' and 'a' are chosen appropriately relative to the target dimensions and depth.

# Disadvantages

1. Operations can be slow since all four electrodes are moved along the survey line.

# DIPOLE - DIPOLE cz c, Pı PZ ₫ aa Œ Slation Location POLE - DIPOLE $c_2$ <sub>2</sub> ΩŒ $\boldsymbol{\sigma}$ Station Location GRADIENT Ξ C2 P2 20a ₫ 20a Station Location A,B = extent of survey

LP ARRAYS

- Electrical contact can be especially difficult in areas with highly resistive surficial materials, such as dry sand, permafrost or exposed bedrock.
- 3. Primary  $(V_p)$  and secondary  $(V_s)$  voltages are lower than with other arrays which can cause measurement difficulties and lack of penetration in areas of high surface conductivity.

# (2) Pole-Dipole Array

The pole-dipole (or three electrode) array is frequently used, most often in the time-domain.

Electrodes  $C_1$  and  $P_1-P_2$  move along the survey line. While  $C_2$ , the remote current electrode, can be anywhere in the area provided it is at a large distance from the station being measured (In highly conductive ground the actual location of  $C_2$  may be critical as current paths may be adversely distorted). The separation between  $C_1$  and  $P_1P_2$  can be increased, usually at integral intervals, to achieve varying depths of exploration. Readings are plotted in several conventions between the potential dipole and the factive (moving) current electrode.

# Advantages

- 1. Faster than the double-dipole array since only three electrodes are moved.
- 2. In areas of bad contact, i.e. dry, frozen or outcrop areas, it is easier to use than dipole-dipole since only one current electrode has to be moved.
- 3. Better depth of exploration than the double-dipole array.
- 4. Fairly sensitive and fairly good resolution.

# Disadvantages

- Yields asymmetrical anomalies with the anomaly peak seldom directly over the polarizable source. The anomaly shape is dependent on the direction of C2.
- 2. More wire is needed because of the array length; this leads to logistical problems (moose, rabbits, etc.).
- 3. EM coupling is higher than with the dipole-dipole array-

# Gradient Array

In the gradient array, normally only run in the time domain, two current electrodes are placed a large, fixed distance 'D' apart. The potential electrode pair are held at a constant separation 'a' and move along survey lines parallel to the line joining C<sub>1</sub> and C<sub>2</sub>. The separation between P<sub>1</sub> and P<sub>2</sub> is not rigidly specified but should not be greater than D/10. Greater resolution is attained with a shorter 'a' spacing, but at the cost of lower primary and secondary voltages.

Generally, survey coverage is restricted to an area comprising the middle 1/3 of  $C_1C_2$ . The measurement is placted at the midpoint of the potential dipole.

# Advantages

- 1. Depth of exploration is good whilst retaining high resolution for small bodies; least susceptible to the masking effect of conductive overburden.
- Production is fast since only two electrodes are moved; two
  or more receivers can be used simultaneously.
- Lass hazardous since current electrodes are not handled in moving stations.

- 4. Least affected by topographic variations.
- 5. Useful in areas of high resistivity or in frozen terrain, since fixed current electrodes can be located where electrical contact is good, or carefully built to achieve good contact.
- 6. Can indicate dip of simple targets.

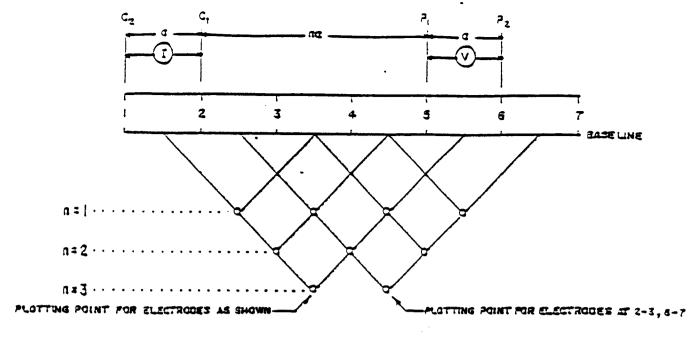
# - Disadvancages

- Not practical where long profiles are desired or where survey lines are a long way apart.
- 2. Low  $V_p$  and  $V_s$  make the method difficult to impossible in areas of high conductivity.
- 3. High inductive effect is created by large current dipole.
- 4. Narrow conductive bodies in conducting environment can sometimes produce false resistivity highs.
- 5. Not readily amenable to detailed interpretation as to depth of source.

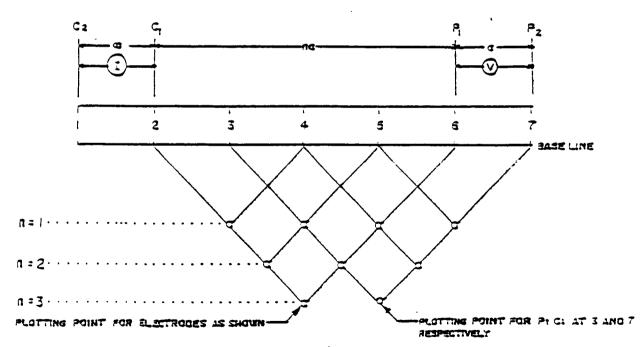
The relative performance of the different arrays in terms of various survey and target parameters is summarized in Table 1.

# Presentation

Induced Polarization/resistivity data taken with a multi-spaced dipola-dipole array are generally plotted as pseudosections with each measurement plotted at the intersection of a 45° diagonal drawn from the center of the transmitting and receiving dipoles for each value of the separation, as seen in Figure 1. Plotting in this manner builds up a vertical section of data points. The term pseudo-



# DIPOLE DIPOLE ARRAY



POLE DIPOLE ARRAY

PLOTTING POINTS FOR VARIOUS ARRAYS