ARIS SUMMARY SHEET

District Geologist, Victoria — Off Confidential: 90.01.09

ASSESSMENT REPORT 18693 — MINING DIVISION: Alberni

PROPERTY: Giant Bear
LOCATION: LAT 49 10 15 LONG 125 25 30
UTM 10 5449058 323238
NTS 092F03W

CAMP: 025 Tofino - Kennedy River Area

CLAIM(S): Giant Bear,Captain Hook
OPERATOR(S): Golden Spinnaker Min.
AUTHOR(S): Pawliuk, D.J.
REPORT YEAR: 1989, 96 Pages
COMMODITIES
SEARCHED FOR: Gold,Silver,Copper
KEYWORDS: Triassic,Karmutsen Formation,Volcanics,Quatsino Formation
Limestone,Faults,Skarns,Quartz veins,Sulphides,Gold,Silver
WORK
DONE: Drilling,Geological,Geophysical,Geochemical
DIAD 908.0 m 17 hole(s);NBD
Map(s) - 15; Scale(s) - 1:200
EMGR 3.0 km; VLF
Map(s) - 1; Scale(s) - 1:1250
GEOL 6.0 ha
Map(s) - 1; Scale(s) - 1:200
IPOL 5.0 km
Map(s) - 5; Scale(s) - 1:1250
MAGG 3.0 km
Map(s) - 1; Scale(s) - 1:1250
SAMP 170 sample(s) ;CU,AG,AU
RELATED
REPORTS: 15935

DRILLING, GEOLOGY AND GEOPHYSICAL SURVEYS

ON THE

GIANT BEAR MINERAL CLAIM

AND THE

CAPTAIN HOOK MINERAL CLAIM

FOR

GOLDEN SPINNAKER MINERALS CORPORATION

AND

NATIONWIDE GOLD MINES CORPORATION

NTS 92 F/3 W
ALBERNI MINING DIVISION
BRITISH COLUMBIA

NORTH LATITUDE: 49 DEGREES 10' 15"
WEST LONGITUDE: 125 DEGREES 25' 30"

February 1989 David J. Pawliuk, P. Geol.

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Mag. and EM-VLF data presentation incomplete.

T.K.

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SUMMARY

From August to December 1988 a program of grid surveying, induced polarization (IP) surveying, very low frequency electromagnetic (VLF-EM) surveying, rock trenching, rock sampling, geological mapping, rotary hammer drilling and diamond drilling was performed on Giant Bear mineral claim held by **Golden Spinnaker Minerals Corporation** and on Captain Hook mineral claim held by **Nationwide Gold Mines Corporation.**

Giant Bear and Captain Hook mineral claims are situated approximately 35 km northeast of Ucluelet, British Columbia. Triassic Karmutsen Formation volcanic rocks and Quatsino Formation limestone occur on the property. The volcanic rocks have locally been altered to skarn. Tertiary gold- and silver-bearing quartz-sulphide veins are found primarily along faults within the area.

The quartz-sulphide Shack (Shack II) Vein is emplaced along a northeasterly trending fault which is probably a splay of Mine Fault. The vein dips about 60 degrees to the northwest and extends for 160 m along strike. Thirty-eight diamond saw channel samples and two continuous chip samples of the vein on surface contain a weighted average assay of 0.643 oz/ton gold and 1.57 oz/ton silver across 40 cm.

The results of VLF-EM surveying show that conductors are present along the surface trace of Shack Vein structure, and along the surface trace of the presumed fault underlying the logging road. Fault structures at Giant Bear and Captain Hook mineral claims are detectable by VLF-EM surveying.

Fault structures at Giant Bear and Captain Hook mineral claims are not detectable by magnetometer surveying.

Rocks cored in three diamond drill holes testing IP anomalies approximately coincident with Shack and Shack II Vein structure do not contain enough sulphide minerals to be the probable source of the IP anomalies. The source of these anomalies is unknown.

The results of drilling on the Shack (Shack II) Vein structure show that the vein structure extends to a depth of 122 m down dip. Fourteen diamond drill holes which tested Shack (Shack II) Vein structure have established the continuity of the vein structure to a depth of 55 m down dip. The results of rotary hammer drilling show that Shack Vein structure extends to a depth of 122 m down dip. The vein structure is open at depth and along strike at both ends.

Shack Vein assays up to 4.778 oz/ton gold, 6.84 oz/ton silver and 2.60 per cent copper across 20 cm. This interval is within an intersection with a weighted average assay of 1.21 oz/ton gold, 2.98 oz/ton silver and 1.27 per cent copper

across an estimated true width of 59 cm in hole SH-88-11. The 14 diamond drill holes testing Shack (Shack II) Vein structure contain a weighted average assay of 0.332 oz/ton gold and 2.26 oz/ton silver across an estimated true width of 48 cm.

Vein wallrock contains up to 0.072 oz/ton gold and 0.12 oz/ton silver across 59 cm.

Preliminary ore reserve estimates for Shack (Shack II) Vein have been calculated based on the results of surface sampling and diamond drilling. Shack (Shack II) Vein contains an estimated 37,920 to 42,015 metric tonnes of probable or possible ore at a grade ranging from 0.560 to 0.701 ounces gold per metric tonne.

Bulk sampling with pilot plant testing, diamond drilling and geological mapping should be performed at Giant Bear mineral claim. This work is estimated to cost $224,000.00.

Bulk sampling and pilot plant testing of Shack Vein material should be performed at Captain Hook mineral claim. This work is estimated to cost $188,000.00.

INTRODUCTION

A program of grid surveying, induced polarization (IP) surveying, very low frequency electromagnetic (VLF-EM) surveying, rock trenching, rock sampling, geological mapping, rotary hammer drilling, and diamond drilling was performed on Giant Bear mineral claim held by **Golden Spinnaker Minerals Corporation** (100%) and on Captain Hook mineral claim held by **Nationwide Gold Mines Corporation** (100%). The exploration work was performed between August and December 1988. The author worked at Giant Bear and Captain Hook mineral claims from August to December 1988.

The purpose of this exploration program was to test the gold- and silver-bearing Shack (Shack II) Vein structure and a copper-, gold- and silver-bearing skarn by diamond drilling. Geophysical surveys were performed over the Shack II and Shack vein areas to assist in designing the drilling program. Shack Vein was also tested by rotary hammer drill holes.

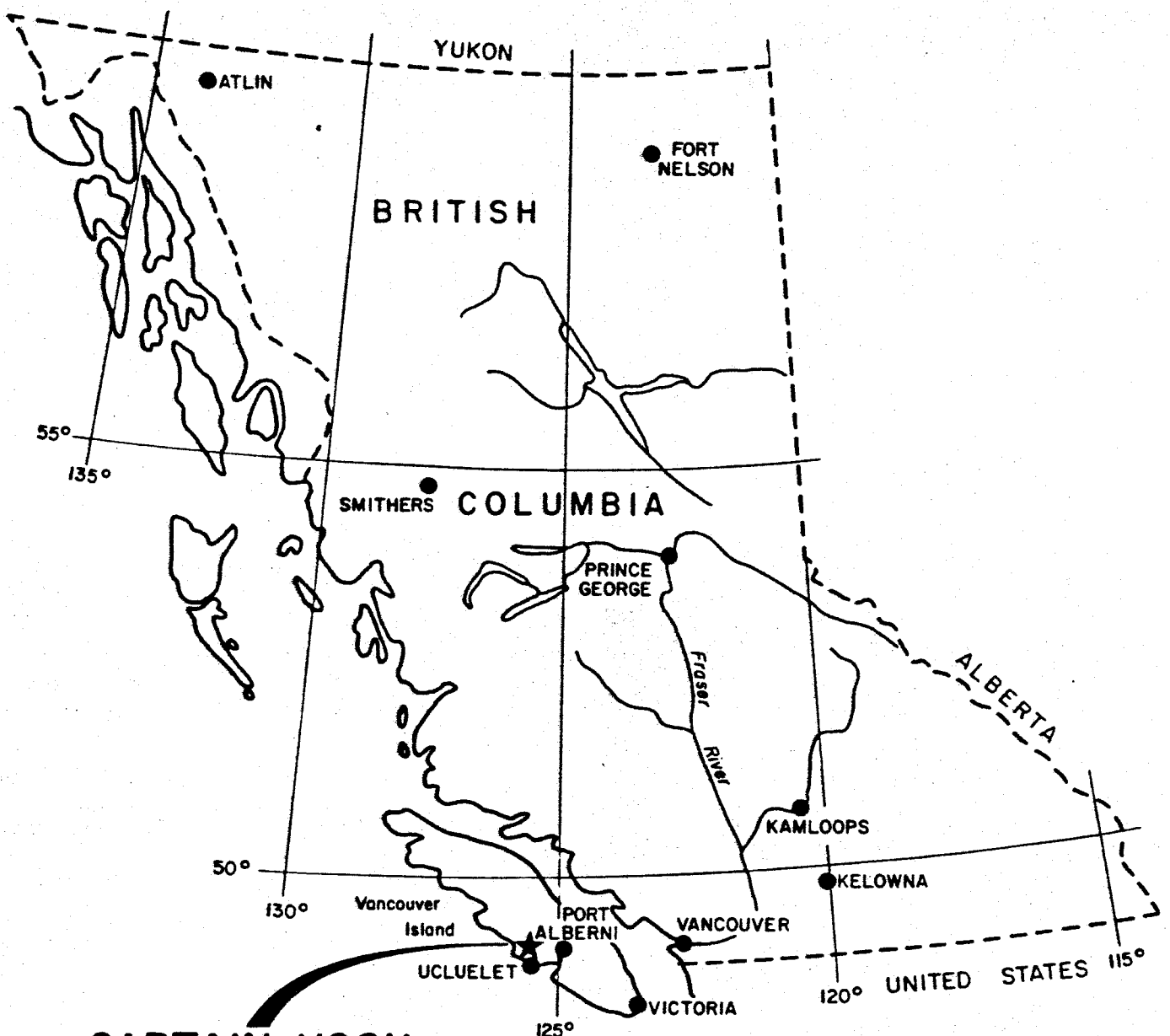
LOCATION AND ACCESS

Giant Bear and Captain Hook mineral claims are situated approximately 35 km northeast of Ucluelet, British Columbia within N.T.S. map-area 92F/3W (Figure 1). The mineral claims are 65 km west of Port Alberni along the paved highway between Port Alberni and Tofino. This highway passes about 150 m southeast of the southeastern corner of Captain Hook mineral claim (Figure 2). A logging road accessible from the highway extends through the central part of the mineral claims (Figure 4). A hydro-electric powerline parallels the Port Alberni - Tofino highway.

The topography of the mineral claims is rugged with elevations ranging from 30 to 1110 m a.s.l. Abundant water is available from Kennedy River and from small creeks on the property. Casing was left in the rotary hammer drill holes drilled during December 1988 on the property; the driller estimated that about 227 litres (50 gallons) of water per minute can be pumped from each drill hole. The climate of the area is mild with little snow at lower elevations, permitting year-round exploration work. Most of southern Giant Bear and Captain Hook mineral claims has been logged, including the Shack II, Shack and TB vein areas.

PROPERTY STATUS

Giant Bear mineral claim, record number 2862, is recorded in the Alberni Mining Division of Vancouver Island (Figure 2). The property comprises twelve units and is held by **Golden Spinnaker Minerals Corporation** (100%).



CAPTAIN HOOK AND GIANT BEAR MINERAL CLAIMS

N

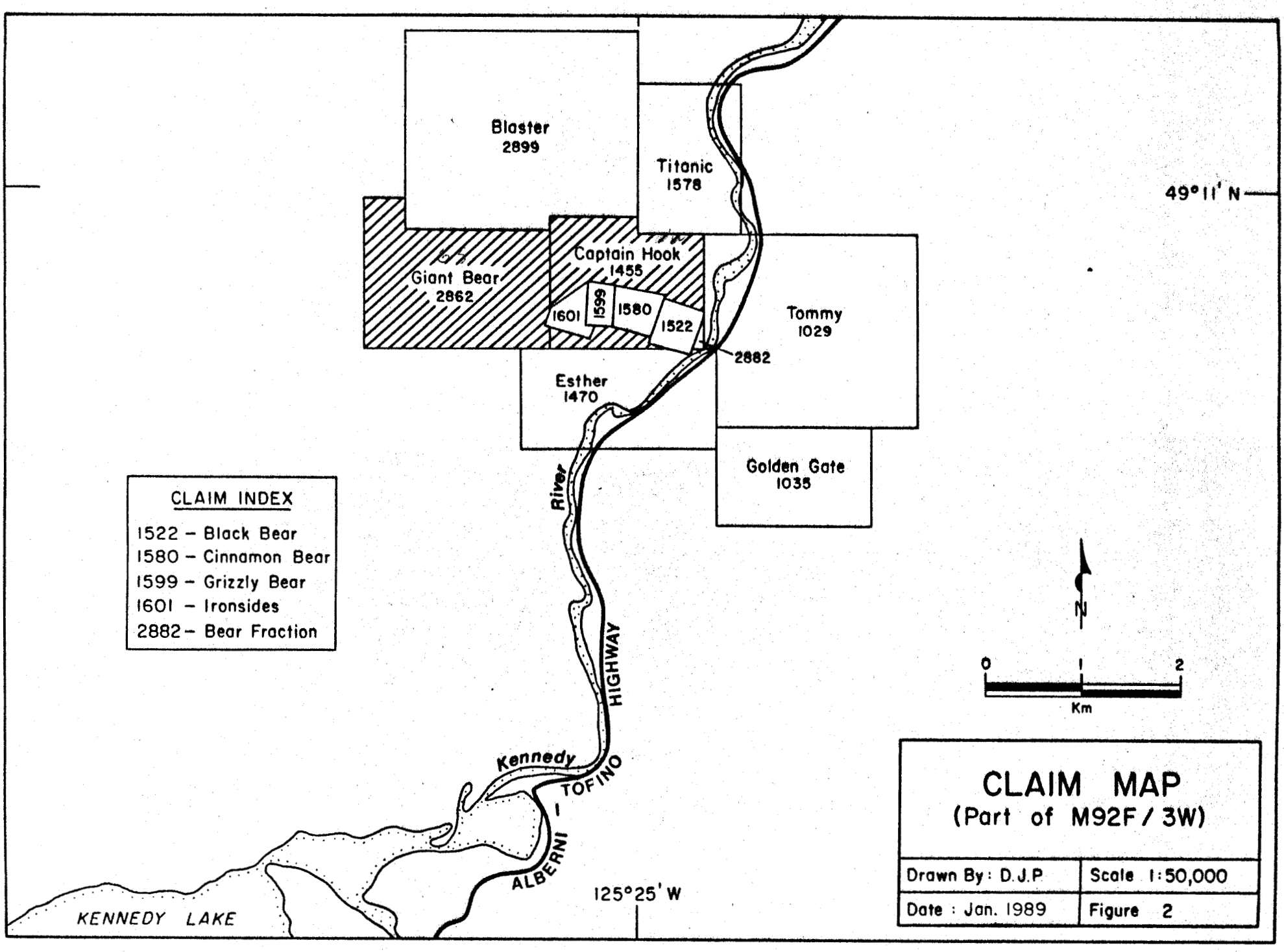
0 100 200 300 400 500
Kilometres

NATIONWIDE GOLD MINES CORPORATION / GOLDEN SPINNAKER MINERALS CORPORATION

PROPERTY LOCATION

Drawn By : D.J.P.	
Date : Jan. 1989	Figure 1

To accompany a report by David J. Pawliuk, P. Geol.


Blaster
2899
Titanic
1578
49°11' N
Captain Hook
1455
Giant Bear
2862
1601
1599
1580
1522
Tommy
1029
2882
Esther
1470
Golden Gate
1035
River
HIGHWAY
Kennedy
TOFINO
ALBERNI
KENNEDY LAKE
125°25' W
CLAIM INDEX
1522 – Black Bear
1580 – Cinnamon Bear
1599 – Grizzly Bear
1601 – Ironsides
2882 – Bear Fraction
N
0
1
2
Km
CLAIM MAP
(Part of M92F/3W)
Drawn By: D.J.P
Scale 1:50,000
Date : Jan. 1989
Figure 2

Captain Hook mineral claim, record number 1455, is recorded in the Alberni Mining Division of Vancouver Island (Figure 2). The property comprises nine units and is owned by **Nationwide Gold Mines Corporation** (100%).

TB Vein may lie within Ironside reverted crown grant, record number 1601, which is 100 per cent owned by **International Coast Minerals Corporation.** The boundaries between Giant Bear mineral claim and Ironside reverted crown grant, and between Captain Hook mineral claim and Ironside reverted crown grant, have not been surveyed.

PREVIOUS EXPLORATION

Gold was discovered within Kennedy River district at the turn of the centry.

Giant Bear Mineral Claim

The gold- and silver-bearing Shack II (lower Shack) Vein was discovered within Giant Bear mineral claim during 1987. Henneberry (1987f) examined, sampled and described this vein after it was exposed by excavator trenching.

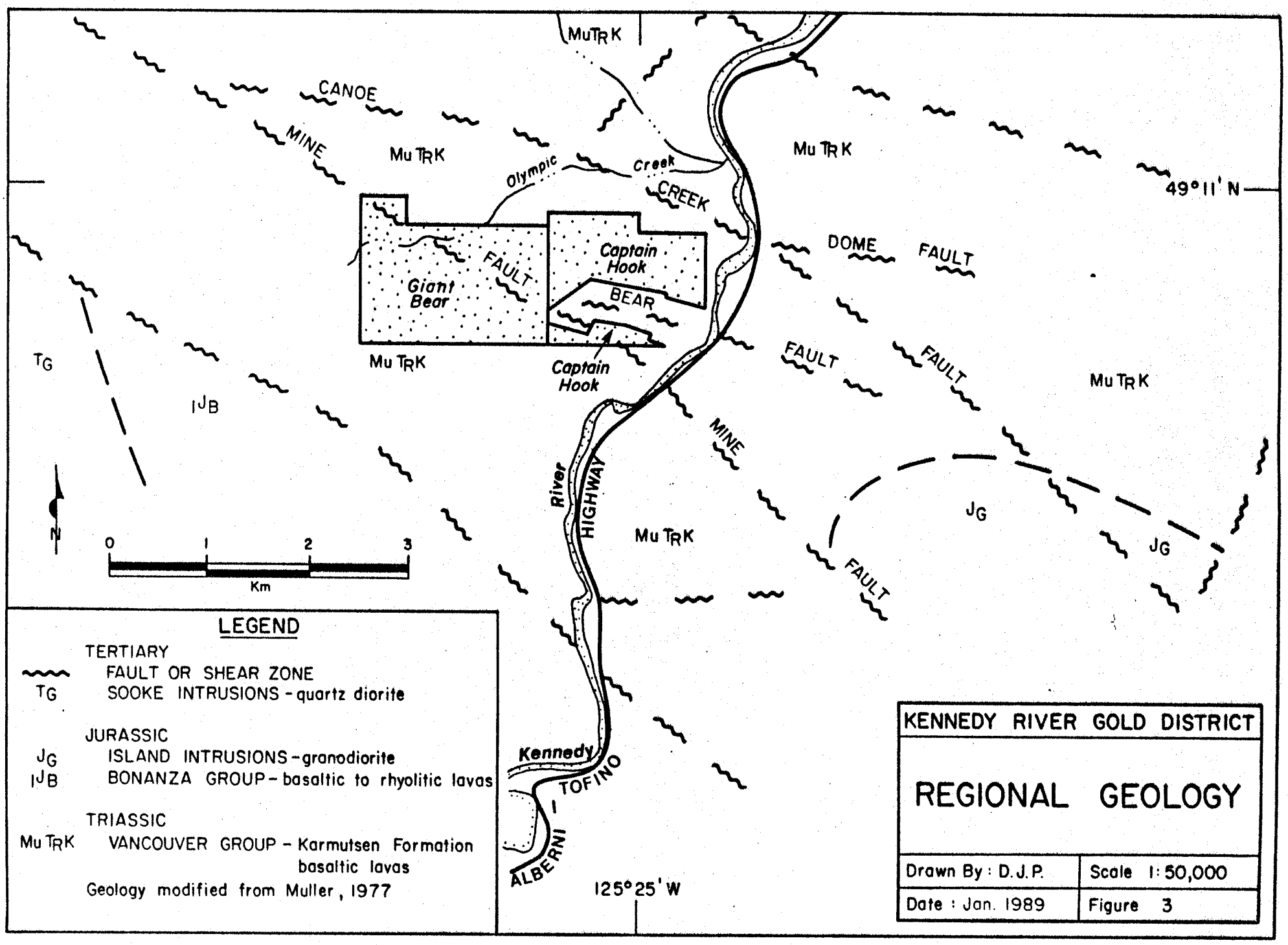
Diamond saw channel sampling and geological mapping of Shack II Vein were performed by Pawliuk (1988a). Nineteen diamond saw channel samples of the vein contain a weighted average of 0.630 oz/ton gold and 1.15 oz/ton silver across 46 cm; the vein is discontinuously exposed for 18 m and is open along strike at both ends (Pawliuk, 1988a).

Captain Hook Mineral Claim

The silver- and gold-bearing Shack and TB veins were discovered within Captain Hook mineral claim during 1987. Henneberry (1987 a,b,c,d,e,f,g) examined, sampled and described these veins.

Geochemical soil sampling was performed at Captain Hook mineral claim during 1987 (Henneberry, 1987e). Geochemical soil sampling did not detect the TB Vein; geochemical soil sampling was not performed at Shack Vein (Henneberry, 1987h).

From July 1987 to May 1988 VLF-EM and magnetometer surveying, trenching, sampling and geological mapping were performed at Captain Hook mineral claim (Pawliuk, 1988b). The VLF-EM survey detected the Shack Vein structure. Twenty-one Shack Vein samples contained a weighted average assay of 0.607 oz/ton gold and 1.97 oz/ton silver across 37 cm. The vein is discontinuously exposed for 73 m along strike.


MuTRK
CANOE
MINE
MuTRK
Olympic
Creek
CREEK
MuTRK
49°11' N
DOME
FAULT
Captain Hook
Giant Bear
FAULT
BEAR
TG
MuTRK
Captain Hook
FAULT
FAULT
MuTRK
IJB
MINE
River
HIGHWAY
JG
MuTRK
JG
FAULT
N
0
1
2
3
Km
Kennedy
TOFINO
ALBERNI
125°25' W
LEGEND
TERTIARY
FAULT OR SHEAR ZONE
TG SOOKE INTRUSIONS - quartz diorite
JURASSIC
JG ISLAND INTRUSIONS - granodiorite
IJB BONANZA GROUP - basaltic to rhyolitic lavas
TRIASSIC
MuTRK VANCOUVER GROUP - Karmutsen Formation basaltic lavas
Geology modified from Muller, 1977
KENNEDY RIVER GOLD DISTRICT
REGIONAL GEOLOGY
Drawn By : D.J.P.
Scale 1:50,000
Date : Jan. 1989
Figure 3

REGIONAL GEOLOGY

Giant Bear and Captain Hook mineral claims lie within a tectonically active part of Vancouver Island (Figure 3). Triassic Karmutsen Formation volcanic rocks and Quatsino Formation limestone of the Vancouver Group and Jurassic Bonanza Group volcanic rocks have been intruded by granitic rocks. These granitic rocks are the Jurassic Island Intrusions granodiorite, and the Tertiary Sooke Intrusions quartz diorite (Muller, 1977). Contacts between the intrusives and the wallrocks are usually discrete; the contacts are faulted in few places. The rocks have been transected by west-northwesterly to westerly trending, generally steeply dipping faults. Most of these faults are of Tertiary age (Henneberry, 1987h). Certain of the larger faults, such as the Mine Fault, are probably older and may have been active since Jurassic time. Mine Fault has a strike length of 45 km. Gold-bearing quartz-sulphide veins within the district are found primarily along faults, therefore the veins are likely of Tertiary age.

1988 EXPLORATION PROGRAM

PROPERTY GEOLOGY

Interbedded Triassic Karmutsen Formation volcanic rocks and Quatsino Formation limestone exist at southeastern Giant Bear mineral claim and at southwestern Captain Hook mineral claim (Figure 4). In places the volcanic rocks have been altered to skarn. All of these rocks have been faulted.

Shack Vein

Shack (Shack II) Vein is emplaced along a northeasterly trending fault which is probably a splay of Mine Fault. This gold- and silver-bearing quartz-sulphide vein averages 40 cm in width on surface and dips 60 to 67 degrees to the northwest. Thirty-eight diamond saw channel samples and two continuous chip samples of Shack Vein contain a weighted average assay of 0.643 oz/ton gold and 1.57 oz/ton silver across 40 cm (Figure 4; Appendix H). These assay results havew already been reported by Pawliuk (1988 a,b).

The Shack Vein extends for 160 m along strike and to a depth of 122 m down-dip (Figures 4 and 22). The vein is open at depth and along strike at both ends.

Shack Vein is composed of off-white to pale grey, locally brecciated quartz which is usually banded over a few cm near vein margins. Much of the vein quartz is coarsely crystalline. Subhedral to euhedral quartz crystals up to 9 mm wide and 45 mm long are present. The quartz crystals locally have smokey rims. The vein often contains wispy, lensoid wallrock andesite xenoliths that usually contain 5 or 10 per cent disseminated pyrite.

Damond drill cores of Shack Vein contain an average of up to 2 or 3 per cent pyrite, 3 per cent pyrrhotite, 4 per cent chalcopyrite and up to 2 per cent sphalerite (Appendix C). The sulphide mineral content of the vein in diamond drill cores averages about 2 or 3 per cent. The sulphides occur as finely disseminated blebs within bands parallel vein margins, as irregular masses up to about 7 cm by 5 cm across filling cavities, and as hairline veinlets along irregular fracture surfaces. Pyrite in the central part of Shack Vein in diamond drill hole SH-88-2 occurs as subhedral cystals up to 5 mm across. Vein quartz is locally corroded and invaded by sulphides.

Shack Vein in rotary hammer drill hole SH-88-A contains 3 per cent carbonate. Shack Vein in diamond drill hole SH-88-1 contains about 1 per cent carbonate within 2 cm of both hangingwall and footwall contacts. In the other drill holes Shack Vein contains no carbonate or only trace amounts. The carbonate content of Shack Vein therefore appears to increase with depth.

Traces of greenish grey, wispy chlorite? locally line fracture surfaces within Shack Vein quartz.

The contact between Shack Vein and the wallrocks is usually faulted with approximately 2 mm of grey mud and finely broken core present. In some places the contact is discrete.

Vein Wallrock

Shack Vein intrudes Karmutsen Formation rocks and skarn at Giant Bear and Captain Hook mineral claims (Figures 4, 8 to 21; Appendix C). These wallrocks are generally fine grained, well cemented and competent except within a few cm of the vein contacts where the wallrocks are usually sheared and schistose.

Two or 3 per cent, locally up to 10 per cent, disseminated pyrite is usually present in wallrock within about 50 to 80 cm of vein margins.

The wallrock is often weakly to moderately silicified within about 0.5 m to 2 m of vein margins.

Karmutsen Formation andesite locally contains up to 5 per cent kaolinite along hairline fractures within a few metres of vein margins.

Hangingwall andesite in diamond drill hole SH-88-7 assays 0.026 oz/ton gold and 0.02 oz/ton silver across 56 cm

(Appendix C). Footwall andesite in diamond drill hole SH-88-2 assays 0.034 oz/ton gold and 0.11 oz/ton silver across 50 cm; footwall andesite in hole SH-88-8 assays 0.072 oz/ton gold, 0.12 oz/ton silver and 0.02 per cent copper across 59 cm (Appendix C). In hole SH-88-11 footwall andesite assays 0.016 oz/ton gold, 0.09 oz/ton silver and 0.02 per cent copper (Appendix C).

Skarn

Karmutsen Formation andesite and felsic volcanic rock have locally been altered to garnet-magnetite-diopside skarn at Giant Bear and Captain Hook mineral claims (Figure 4; Appendix C). Skarn occurs most commonly along fractures or as irregular patches and bands within the volcanic rocks. Skarn alteration is most pervasive near faults and along the margins of limestone beds. Skarn locally contains epidote, pyrite, chalcopyrite, pyrrhotite, hematite, malachite, azurite and quartz veinlets. Magnetite in skarn occurs as disseminated crystals, irregular masses and as bands up to about 20 cm wide. Pyrite and pyrrhotite are usually disseminated within skarn. Chalcopyrite in skarn occurs as irregular, lensoid masses and as veinlets. Chalcopyrite is most abundant near the quartz veinlets intruding skarn at 1508 W / 227 S.

Skarn at 1508 W / 227 S contains up to 0.068 oz/ton gold, 0.28 oz/ton silver and 2.78 per cent copper across 43 cm (Figure 4; Appendix I). A selected skarn sample from 1442 W/200 S assays 0.042 oz/ton gold, 1.18 oz/ton silver and 10.53 per cent copper (Figure 4; Appendix I).

Geochemical analyses were performed on 23 skarn samples (Appendix J). These samples contain up to 40.5 parts per million (ppm) silver, greater than 10 per cent copper and 2,860 ppm zinc. No gold was detected by these analyses.

GEOPHYSICAL SURVEYS

Delta Geoscience Limited of Tsawwassen, British Columbia performed VLF-EM, magnetometer and IP surveying over Shack Vein area at southeastern Giant Bear mineral claim and at southwestern Captain Hook mineral claim from August to November, 1988 (Figures 5 to 7e). Readings were taken at 10 m intervals along grid lines established by hipchain-and-compass surveying. Lines 1475 W, 1500 W and 1525 W on the figures lie within Giant Bear mineral claim and lines 1450 W, 1425 W and 1400 W lie within Captain Hook mineral claim. The boundary between Giant Bear mineral claim and Captain Hook mineral claim lies at approximately 1457 W (Figure 4).

VLF-EM Survey

VLF-EM survey results are shown on Figure 5. VLF-EM conductors are present along the surface trace of Shack Vein structure

and along the surface trace of the presumed fault underlying the logging road at about 260 S on the surveyed grid (Figure 5).

Magnetometer Survey

Magnetometer survey results are shown on Figure 6. The total field magnetic profiles show that the magnetic field is fairly constant with flat profiles except at 310 S on line 1450 W where a narrow magnetic high or spike is present. Lower magnitude magnetic highs are present at 1525 W/355 S, 1450 W/355 S and at 1425 W/340 S.

IP Survey

IP survey results for both Schlumberger and gradient arrays are depicted on Figures 7a to 7e. The Schlumberger array (Figure 7e) was designed for an optimum depth penetration of about 30 m, and the gradient array (Figures 7a,b,c,d) for a depth of about 120 m.

Giant Bear Mineral Claim

The IP survey results for both Schlumberger and gradient arrays show that an anomalous zone of sulphide-bearing rock with high chargeability and coincident low resistivity occurs between 330 S and 355 S on line 1525 W. This anomaly is centred about 33 m north of the surface trace of the northwesterly dipping Shack Vein II (Figure 4). The Schlumberger and gradient array survey responses, for depths of 30 m and 120 m respectively, are nearly coincident on line 1525 W indicating that the source of the anomaly or sulphide-bearing rock unit is steeply dipping. However, the chargeability profile for the gradient array shown on Figures 7b and 7d slopes to the south indicating that the sulphide-bearing rock unit causing the anomaly dips to the south.

Diamond drill hole SH-88-7 was drilled to test both the IP survey anomaly on line 1525 W and to test Shack Vein (Appendix C; Figures 4 and 10). Andesite intervals in hole SH-88-7 often contain 1 to 3 per cent disseminated pyrite; greywacke from 68.71 to 72.96 m depth contains about 8 to 10 per cent disseminated pyrite. Shack Vein in hole SH-88-7 contains up to 2 per cent disseminated pyrite.

Captain Hook Mineral Claim

IP survey results for the gradient array show that a broad zone of high chargeability exists at 310 S on lines 1450 W and 1425 W (Figure 7b). This zone extends to 310 S on line 1400 W where it has a lower chargeability than on lines 1425 W and 1450 W. Survey results for the gradient array depicted on

Figure 7e show that an anomalous zone of high chargeability with coincident low resistivity exists at 310 S on line 1450 W. The Schlumberger and the gradient array survey responses, for depths of 30 m and 120 m respectively, both occur at 310 S on line 1450 W indicating that the source of the anomaly or sulphide-bearing rock unit is steeply dipping. However, the chargeability profile for the gradient array slopes to the south indicating that the sulphide-bearing rock unit causing the anomaly dips to the south (Figure 7b).

Diamond drill hole SH-88-4 was drilled to test both the IP survey anomaly on line 1450 W and to test for the presence of Shack Vein below and south of Shack Vein cored in drill hole SH-88-2 (Figures 4, 17 and 18). Andesitic tuff with local greywacke bands in hole SH-88-4 from 26.62 to 27.58 m depth contains 10 per cent disseminated pyrite; greywacke from 28.64 to 32.41 m depth contains 2 to 4 per cent disseminated pyrite. Andesite and greywacke from 42.12 to 44.14 m depth contain 8 per cent disseminated pyrite (Appendix C). A sample of feldspar porphyry and andesite from 44.10 to 44.60 m depth with 3 per cent disseminated pyrite contains no gold or silver and 0.01 per cent copper (Appendix C).

Diamond drill hole SH-88-8 was drilled to test both the IP anomaly on line 1450 W and to test Shack Vein (Figures 4 and 19). Andesite in hole SH-88-8 from 4.50 to 9.60 m depth contains about 3 per cent disseminated pyrite; Shack Vein from 9.60 to 10.48 m depth contains 4 per cent chalcopyrite, 3 per cent pyrite, 2 per cent pyrrhotite and 1 per cent sphalerite (Appendix C). Andesite in hole SH-88-8 from 10.48 to 11.07 m depth contains 5 per cent finely disseminated pyrite. A ?greywacke interval from 67.83 to 72.47 m depth contains 3 per cent disseminated pyrite; greywacke from 72.47 to 73.11 m depth in hole SH-88-8 contains 5 per cent disseminated pyrite (Appendix C). Neither of the above two greywacke intervals were assayed.

DIAMOND DRILLING

Drilcor of Delta, British Columbia performed a total of 908.0 m of diamond drilling in 17 holes at Giant Bear and Captain Hook mineral claims between September 21 and December 19, 1988. A diamond drill custom built by Drilcor was used to recover NDB (56 mm diameter) core. Drill core was lithologically logged; the drillhole logs are included as Appendix C. The drill core is stored at Ucluelet, British Columbia. Core selected for assay was sawn in half lengthwise. One half of the sawn drill core was sent for assay; the remaing half was stored at Ucluelet. Fire assays and geochemical analyses of the drill cores were performed by Vangeochem Lab Limited, Vancouver, British Columbia. Assay certificates form Appendix D. Geochemical analysis certificates form Appendix E.

Giant Bear Mineral Claim

Drilcor performed a total of 445.5 m of diamond drilling in nine holes at Giant Bear mineral claim between October 15 and December 19, 1988.

Diamond drill hole SH-88-5 was drilled to test southwestern Shack II Vein (Figure 4). The quartz-sulphide Shack II Vein was cored over an interval of 19 cm in hole SH-88-5 (Figure 8). Not all of the Shack II Vein may have been recovered from the drill hole because of ground core over the interval containing the vein. The vein contains 2 per cent pyrite as disseminated masses of cubes up to 0.5 mm across along irregular fractures. The vein assays 0.036 oz/ton gold and 0.02 oz/ton silver across 19 cm (Appendix C).

Diamond drill hole SH-88-6 was drilled to test southwesten Shack II Vein (Figure 4). The quartz-sulphide Shack II Vein was cored over an interval of 33 cm in hole SH-88-6 (Figure 9). The vein contains 2 per cent disseminated pyrite along wispy fractures parallel the vein margins near both the hangingwall and footwall contacts, and 2 per cent chalcopyrite with a trace of pyrrhotite in the central part of the vein. The vein contains no gold or silver and 0.03 per cent copper.

Diamond drill hole SH-88-7 was drilled to test an IP anomaly and also to test Shack II Vein down dip of drill hole SH-88-6 (Figures 4, 7a to 7e, 22). The quartz-sulphide Shack II Vein was cored over an interval of 31 cm (Figure 10). The vein contains traces of disseminated pyrite throughout and also 10 per cent lensoid andesite xenoliths. The vein contains no gold or silver, but the hangingwall andesite assays 0.026 oz/ton gold and 0.02 oz/ton silver across 56 cm (Appendix C).

Diamond drill hole SH-88-10 was drilled to test the southwestern end of Shack Vein (Figure 4). The quartz-sulphide Shack Vein was cored over an interval of 190 cm in hole SH-88-10 (Figure 11). The vein contains 3 per cent pyrrhotite, 2 per cent chalcopyrite, 1 per cent pyrite and 0.5 per cent sphalerite (Appendix C). Weighted assay results are 0.560 oz/ton gold, 4.80 oz/ton silver and 1.91 per cent copper across an estimated true width of 152 cm.

Diamond drill hole SH-88-11 was drilled to test Shack Vein to the southwest of drill hole SH-88-10 (Figure 4). The quartz-sulphide Shack Vein was cored over an interval of 88 cm (Figure 12). The vein contains 3 per cent chalcopyrite, 2 per cent pyrite and 10 percent sphalerite over 2 cm in its central part. The vein contains a weighted average of 1.21 oz/ton gold, 2.98 oz/ton silver and 1.27 per cent copper across an estimated true width of 59 cm (Appendix C; Figure 12).

Diamond drill hole SH-88-13 was drilled to test for Shack II Vein between SH-88-6 and SH-88-11 (Figures 4 and 22). The quartz-sulphide Shack II Vein was cored over an interval of 37 cm (Figure 13). The vein contains an average of about 2 or 3 percent pyrite. The vein contains a weighted average of 0.002 oz/ton gold and 0.004 oz/ton silver across an estimated true width of 28 cm (Appendix C).

Diamond drill hole SH-88-15 was drilled to test an occurrence of quartz veinlets, chalcopyrite and pyrite within skarn (Figure 4). Skarn cored within this hole contains no quartz veinlets nor chalcopyrite and only traces of disseminated pyrite; no skarn was assayed (Figure 14; Appendix C).

Diamond drill hole SH-88-16 was drilled to test Shack Vein down dip of hole SH-88-11 (Figures 4 and 22). The quartz-sulphide Shack Vein was cored over an interval of 52 cm (Figure 12). This vein contains local traces disseminated pyrite throughout, and 5 per cent pyrite, 1 per cent chalcopyrite, 0.5 per cent sphalerite and a trace of pyrrhotite over 11 cm in the central part of the vein (Appendix C). The vein contains a weighted average of 0.10 oz/ton gold, 0.29 oz/ton silver and 0.08 per cent copper across an estimated true width of 26 cm (Figure 12).

Diamond drill hole SH-88-17 was drilled to test Shack Vein to the southwest of SH-88-16 (Figures 4 and 22). A healed fault zone with 5 to 7 per cent disseminated pyrite includes an interval 11 cm wide with 10 per cent carbonate vein lenses and 5 per cent quartz vein lenses (Appendix C). This interval likely comprises the Shack Vein structure in this hole, and contains no gold and 0.01 oz/ton silver (Figure 15).

The eight diamond drill holes testing Shack II (Shack) Vein structure at Giant Bear Mineral claim contain a weighted average of 0.454 oz/ton gold and 2.60 oz/ton silver across an estimated true width of 44 cm.

Captain Hook Mineral Claim

Drilcor performed a total of 462.5 m of diamond drilling in eight holes at Captain Hook mineral claim between September 21 and November 20, 1988.

Diamond drill hole SH-88-1 was drilled to test the central part of Shack Vein (Figure 4). The quartz-sulphide Shack Vein was cored over an interval of 43 cm in hole SH-88-1 (Figure 16). The vein contains about 0.5 per cent pyrrhotite, about 0.5 per cent pyrite and local traces chalcopyrite; it also contains about 1 per cent carbonate within 2 cm of both

hangingwall and footwall contacts. The vein assays 0.026 oz/ton gold and 0.15 oz/ton silver across 43 cm (Appendix C).

Diamond drill hole SH-88-2 was drilled to test southwestern Shack Vein and to test part of the IP anomaly on line 1450 W (Figures 4 and 7b). The quartz-sulphide Shack Vein was cored over an interval of 260 cm in hole SH-88-2 (Figure 17). The vein contains 3 per cent pyrrhotite, 3 per cent chalcopyrite and 2 per cent pyrite. The vein has a weighted average assay of 0.221 oz/ton gold, 3.17 oz/ton silver and 1.72 per cent copper across an estimated true width of 126 cm (Appendix C). The vein hangingwall contains about 10 per cent pyrite across 216 cm (Appendix C). Intensely brecciated andesite from 15.80 to 16.30 m depth contains 16 ppm copper, 230 ppm zinc, 0.1 ppm silver and no gold (Appendix E).

Diamond drill hole SH-88-3 was drilled to test both Shack Vein down-dip of drill hole SH-88-2 and also to test the IP anomaly on line 1450 W (Figures 4, 7b and 17). The quartz-sulphide Shack Vein was cored over an interval of 65 cm in hole SH-88-3 (Figure 17). The vein contians 2 per cent chalcopyrite and traces to locally 2 per cent pyrite (Appendix C). The vein contains 5 per cent pyrrhotite in the uppermost 20 cm, and 2 per cent sphalerite in its central part (Appendix C). The vein has a weighted average assay of 0.093 oz/ton gold and 0.40 oz/ton silver across an estimated true width of 46 cm (Figure 22). The results of geochemical analyses of Shack Veing in hole SH-88-3 show that the vein contains up to 4,829 ppm copper and 1,351 ppm zinc (Appendix E).

Diamond drill hole SH-88-4 was drilled to test the IP anomaly on line 1450 W and to test for the presence of Shack Vein below and south of Shack Vein cored in drill hole SH-88-2 (Figures 4, 7b, 6, 17 and 18). No quartz-sulphide vein was cored in this hole (Appendix C; Figure 18). Andesite from 26.62 to 27.58 m depth in hole SH-88-4 contains 10 per cent disseminated pyrite; greywacke from 28.64 to 32.41 m depth contains 2 to locally 4 per cent disseminated pyrite. Andesite and greywacke from 42.12 to 44.14 m depth contain 8 per cent disseminated pyrite (Appendix C). A sample of feldspar porphyry and andesite from 44.10 to 44.60 m depth with 3 per cent disseminated pyrite contains no gold or silver and 0.01 per cent copper (Appendix C).

Diamond drill hole SH-88-8 was drilled to test both the Shack Vein and to test the IP anomaly on line 1450 W (Figures 4, 7b and 19). The quartz-sulphide Shack Vein was cored over an interval of 88 cm (Figure 19). This vein contains 4 per cent chalcopyrite, 3 per cent pyrite, 2 per cent pyrrhotite and 1 per cent sphalerite. Andesite was cored over an interval of 59 cm in the footwall of Shack Vein, and below this andesite, a quartz-sulphide vein 20 cm wide was cored (Appendix C). Shack Vein combined with the underlying andesite and quartz-sulphide vein contains a weighted average assay of

0.395 oz/ton gold, 2.22 oz/ton silver and 0.85 per cent copper across an estimated true width of 66 cm (Figures 19 and 22).

Andesite from 4.50 to 9.60 m depth contains about 3 per cent disseminated pyrite. ?Greywacke from 67.83 to 72.47 m depth contains 3 per cent disseminated pyrite. Greywacke from 72.47 to 73.11 m depth contains 5 per cent disseminated pyrite.

Diamond drill hole SH-88-9 was drilled to test Shack Vein down-dip of the vein cored in drill hole SH-88-8 (Figure 4). The quartz-sulphide Shack Vein was cored over an interval of 317 cm (Figure 19). This vein contains 0.5 per cent pyrite, 0.5 per cent chalcopyrite and 1 to 2 per cent chlorite? throughout (Appendix C). The vein contains 4 per cent pyrite and 2 per cent chalcopyrite in the uppermost 30 cm, and 2 per cent pyrite, 1 per cent pyrrhotite and 1 per cent chalcopyrite across 21 cm in the central part of the vein (Appendix C). The vein contains a weighted average assay of 0.042 oz/ton gold, 0.40 oz/ton silver and 0.16 per cent copper across an estimated true width of 50 cm (Figure 22).

Diamond drill hole SH-88-12 was drilled to test Shack Vein down-dip and west of drill hole SH-88-9 (Figure 4). A carbonate vein was cored over an interval of 42 cm from 18.46 to 18.88 m depth (Appendix C). Shack Vein was expected at a depth of about 49 m in drill hole SH-88-12. No vein quartz was cored near this depth in hole SH-88-12 except for a few wormy quartz and carbonate veinlets from 35.80 to 41.81 m depth (Figure 20; Appendix C). The Shack Vein structure in hole SH-88-12 is probably represented by a weakly silicified, locally intensely brecciated interval from 41.81 to 43.56 m depth. This interval was not sampled for assay.

Diamond drill hole SH-88-14 was drilled to test northeastern Shack Vein (Figure 4). The quartz-sulphide Shack Vein was cored over an interval of 9 cm in hole SH-88-14 (Figure 21). This vein contains 2 per cent pyrite, 2 per cent sphalerite and 1 per cent chalcopyrite (Appendix C). The vein contains 0.034 oz/ton gold and 0.10 oz/ton silver across an estimated true width of 4 cm.

The above six diamond drill holes which cored Shack Vein structure at Captain Hook mineral claim contain a weighted average assay of 0.195 oz/ton gold and 1.88 oz/ton silver across an estimated true width of 52 cm.

All of the 14 diamond drill holes testing Shack (Shack II) Vein structure at Giant Bear mineral claim and at Captain Hook mineral claim contain a weighted average assay at 0.332 oz/ton gold and 2.26 oz/ton silver across an estimated true width of 48 cm.

ROTARY HAMMER DRILLING

Ken Fyfe of Qualicum, British Columbia performed a total of 281.9 m of rotary hammer drilling on two holes at Giant Bear and Captain Hook mineral claims between November 26 and December 5, 1988. A rotary hammer drill built by Koehring in Oklahoma, U.S.A. mounted on a Crane Carrier Canada Limited chassis was used to recover the drill cuttings. The drill cuttings were lithologically logged; the logs are on file at the offices of **Golden Spinnaker Minerals Corporation** and **Nationwide Gold Mines Corporation.** The rotary hammer driller's logs form Appendix F. Drill cuttings are stored at Giant Bear and Captain Hook mineral claims. Fire assays and geochemical analyses of selected drill cuttings were performed by Vangeochem Lab Limited, Vancouver, British Columbia. Assay certificates form Appendix G; geochemical analysis certificates form Appendix H.

Part of the rock within the rotary hammer drill return was finely ground during the drilling process. Some finely ground sulphides, possibly containing associated gold, were washed away during the drilling process and could not be collected for assay. The assays of the drill return rock samples therefore are probably lower than assays of diamond drill core samples of the same interval would be.

Giant Bear Mineral Claim

Rotary hammer drillhole SH-88-B was drilled to test for the presence of Shack Vein structure down dip of diamond drill hole SH-88-11 (Figures 4, 12 and 22). Shack Vein was likely intersected from 132.2 m to 133.8 m depth in hole SH-88-B because this interval is about 20 per cent vein quartz and 80 per cent andesite; the vein quartz contains 0.5 to 1 per cent pyrite. Three rock samples from this interval contain up to 0.005 oz/ton gold and 0.03 oz/ton silver (Appendix G). The results of geochemical analyses of these same three rock samples show that the Shack Vein interval contains up to 24 ppm copper and up to 107 ppm zinc (Appendix H).

Captain Hook Mineral Claim

Rotary hammer drillhole SH-88-A was drilled to test for the presence of Shack Vein structure down dip of diamond drill hole SH-88-9 (Figures 4, 19 and 22). Shack Vein was likely intersected from 98.4 to 99.1 m depth in hole SH-88-A because this interval is about 95 per cent vein quartz, 3 per cent calcite, 1 to 2 per cent andesite and 0.5 to locally 1 per cent pyrite. Four rock samples from this 70 cm interval contain up to 0.010 oz/ton gold and up to 0.01 oz/ton silver (Appendix G). The results of geochemical analyses of these same four rock samples show that the Shack Vein contains up to 87 ppm copper and up to 55 ppm zinc (Appendix H).

CONCLUSIONS

Shack (Shack II) Vein contains high gold and silver concentrations across a narrow width at Giant Bear and Captain Hook mineral claims. The vein extends for 160 m along strike and to a depth of 122 m down dip. It is open at depth and along strike at both ends. Shack Vein wallrock locally contains low gold and silver concentrations.

The results of VLF-EM surveying show that a moderately strong conductor parallels the surface trace of Shack Vein fault structure. The source of this conductor is likely the fault structure which hosts the vein.

A weak VLF-EM conductor parallels the surface trace of the presumed fault underlying the logging road. The source of this conductor is likely a fault structure underlying the logging road. This fault structure may host a gold- and silver-bearing quartz-sulphide vein.

Fault structures at Giant Bear and Captain Hook mineral claims are detectable by VLF-EM surveying.

The results of magnetometer surveying show that fault structures at Giant Bear and Captain Hook mineral claims are not detectable by magnetometer surveying. Local magnetic highs are likely caused by magnetite occurrences within skarn.

The results of IP surveying at Giant Bear mineral claim show that an anomaly with high chargeability and coincident low resistivity occurs between 330 S and 355 S on line 1525 W. The source of this anomaly is either steeply dipping or dips to the south; Shack II Vein at this locale dips to the northwest. The rocks cored in a diamond drill hole to test this IP anomaly do not contain enough sulphide minerals to be the probable source of the IP anomaly. The source of this anomaly is unknown.

The results of IP surveying at Captain Hook mineral claim show that an anomaly with high chargeability exists at 310 S on lines 1450 W, 1425 W and 1400 W. The source of this anomaly is either steeply dipping or dips to the south; Shack Vein at this locale dips northwesterly. The rocks cored in diamond drill holes SH-88-4 and SH-88-8, drilled to test this anomaly, do not contain enough sulphide minerals to be the probable source of the IP anomaly. The source of this anomaly is unknown.

The results of drilling on the Shack (Shack II) Vein structure at Giant Bear and Captain Hook mineral claims show that the vein structure extends to a depth of 122 m down dip. The 14 diamond drill holes established the continuity of the vein structure to a depth of 55 m down dip. The two rotary hammer drill holes show that the vein structure extends to a depth of

122 m. The vein structure dips at about 60 degrees to the northwest and is open at depth.

Gold, silver and associated sulphide minerals are erratically distributed within Shack (Shack II) Vein making it difficult to evaluate by drilling. Vein samples from drill cores and from rotary hammer drill return generally do not contain as much gold as vein samples from surface, but this is likely due in part to the erratic distribution of gold within the vein.

Ore Reserve Estimates

Preliminary ore reserve estimates for Shack (Shack II) Vein have been calculated based on the results of surface sampling and diamond drilling. Shack (Shack II) Vein contains from 37,920 to 42,015 metric tonnes of probable or possible ore at a grade ranging from about 0.560 to 0.701 ounces gold per metric tonne (Appendix K).

RECOMMENDATIONS

Giant Bear Mineral Claim

Bulk sampling, geological mapping and diamond drilling should be performed at Giant Bear mineral claim. The recommended work is outlined below and can be performed at an estimated cost of $224,000.00. A detailed cost estimate is included in Appendix A.

Shack II (Shack) Vein material should be bulk sampled. Bulk sampling and pilot mill testing will provide a more accurate grade estimate than can be obtained from channel samples and drill hole intersections because gold, silver and associated sulphide minerals are erratically distributed within the vein. Pilot mill testing of the vein material will help to establish the metallurgical properties of the ore.

At least three short diamond drill holes should be drilled to test the presumed fault structure underlying the logging road; this fault structure may host a gold- and silver-bearing quartz-sulphide vein.

Systematic, detailed geological mapping should be performed southwest of the area presently mapped within Giant Bear mineral claim. The area west and north of the presently mapped area should also be mapped in an attempt to identify any fault structures which could host gold- and silver-bearing quartz-sulphide veins.

Contingent upon favourable results from the bulk sampling and pilot plant testing of Shack II (Shack) Vein, about ten diamond drill holes totalling about 1300 m should be drilled to extend the known limits of Shack II (Shack) Vein structure down dip and to the southwest of present drill holes. An estimated extra cost of $200,000.00 would incurred for this drilling.

Captain Hook Mineral Claim

Bulk sampling should be performed at Captain Hook mineral claim at an estimated cost of $188,000.00 (Appendix A).

Shack Vein material should be bulk sampled. Bulk sampling and pilot mill testing will provide a more accurate grade estimate than can be obtained from channel samples and drill hole intersections because gold, silver and associated sulphide minerals are erratically distributed within the vein. Pilot mill testing of the vein material will help to establish the metallurgicalproperties of the ore.

Contingent upon favourable results from the bulk sampling and pilot mill testing of Shack Vein, about four diamond drill holes totalling about 300 m should be drilled to extend the known limits of Shack Vein structure down dip and to the northeast of present drill holes. An estimated extra cost of $50,000.00 would be incurred for this drilling.

Respectfully submitted at Vancouver, British Columbia

David J. Pawliuk, P. Geol.

REFERENCES

Henneberry, R.T. (1987a) Captain Hook; unpublished, private memorandum dated June 18, 1987.

Henneberry, R.T. (1987b) Captain Hook Property Visit of July 11, 1987; unpublished, private memorandum to **Nationwide Gold Mines Corporation** dated July 12, 1987.

Henneberry, R.T. (1987c) Geological Summary of the Titanic and Captain Hook Properties; unpublished, private memorandum to **Nationwide Gold Mines Corporation** dated July 23, 1987.

Henneberry, R.T. (1987d) Captain Hook Property Visit July 19, 1987; unpublished, private memorandum to **Nationwide Gold Mines Corporation** dated August 3, 1987.

Henneberry, R.T. (1987e) Geological, Geochemical and Geophysical Surveys on the NGM Group (Titanic-1578, Captain Hook-1455), Alberni Mining Division, British Columbia; unpublished report for **Nationwide Gold Mines Corporation** dated August 10, 1987.

Henneberry, R.T. (1987f) Giant Bear Excavator Trenching; unpublished, private memorandum to Waldo W. Ejtel dated October 19, 1987.

Henneberry, R.T. (1987g) Captain Hook Excavator Trenching; unpublished, private memorandum to **Nationwide Gold Mines Corporation** dated October 19, 1987.

Henneberry, R.T. (1987h) Economic Potential of the Kennedy River Valley Gold Camp, Vancouver Island, British Columbia; unpublished report for **International Coast Minerals Corporation, Nationwide Gold Mines Corporation** and **Golden Spinnaker Minerals Corporation** dated November 10, 1987.

Muller, J.E. (1977) Geology of Vancouver Island; Open File 463, Geological Survey of Canada.

Pawliuk, D.J. (1988a) Sampling, Geology and Geophysical Surveys on the Giant Bear Mineral Claim; unpublished, private memorandum to Waldo W. Ejtel, President, **Golden Spinnaker Minerals Corporation**

Pawliuk, D.J. (1988b) Geology and Geophysical Surveys on the Captain Hook Mineral Claim; unpublished report for **Nationwide Gold Mines Corporation** dated August, 1988.

APPENDIX A

COST ESTIMATE

COST ESTIMATE

GIANT BEAR MINERAL CLAIM

Drill and heavy equipment rental for bulk sampling	$10,000.00
Bulk sample processing (500 tonnes @ $250.00/tonne)	125,000.00
Explosives	2,500.00
Supplies	2,500.00
Assays 250 samples @ $20.00 each	5,000.00
Transportation, telephone, shipping	2,500.00
Diamond Drilling	
Drillsite preparation	1,000.00
Mobilization / Demobilization	2,500.00
Drilling 100 m @ $120.00/m to test fault underlying logging road	12,000.00
Personnel	
Geologist 25 days @ $350.00/day	8,750.00
Blaster - trencher 25 days @ $275.00/day	6.875.00
Assistant 25 days @ $180.00/day	4.500.00
Accomodation - 75 days @ $60.00/day	4,500.00
Report	
Geologist 15 days @ $300.00/day	4,500.00
Drafting, typing, printing	2.500.00
SUBTOTAL:	194,625.00
CONTINGENCY:	29,375.00
TOTAL:	$224,000.00

APPENDIX B

CERTIFICATE

CERTIFICATE

I, David J. Pawliuk of the Municipality of Delta in the Province of British Columbia, do hereby certify:

I) I am a consulting geologist residing at 4820 - 48th Avenue, Delta, British Columbia, V4K 1V1. 946-0810

II) I graduated in 1975 from the University of Alberta, Edmonton, Alberta, and hold a Bachelor of Science degree with Specialization in Geology.

III) I am a registered member, in good standing, of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

IV) I have practiced my profession continuously since graduation.

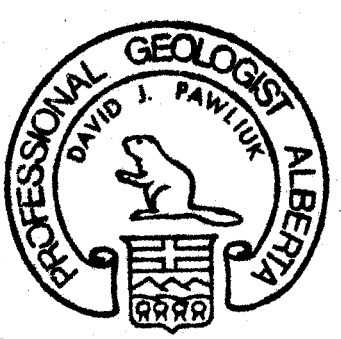
V) This report is based upon field work performed by myself from August to December 1988, upon field work performed by Delta Geoscience Limited and others from August to December 1988, and upon a study of published and unpublished data.

VI) I hold no direct nor indirect interest in the property, or in any securities of **Golden Spinnaker Minerals Corporation**, nor do I expect to receive any such interest.

VII) This report may be utilized by **Golden Spinnaker Minerals Corporation** for inclusion in a Prospectus or Statement of Material Facts.

VIII) I hold no direct nor indirect interest in the property, or in any securities of **Nationwide Gold Mines Corporation**, nor do I expect to receive any such interest.

IX) This report may be utilized by **Nationwide Gold Mines Corporation** for inclusion in a Prospectus or Statement of Material Facts.



David J. Pawliuk

David J. Pawliuk, P. Geol.

February 24, 1989

Date

APPENDIX C

DIAMOND DRILL HOLE LOGS

Abbreviations used in diamond drill hole logs

c.a.	core axis
carb	carbonate
cp	chalcopyrite
F/W	footwall
H/W	hanging wall
po	pyrrhotite
py	pyrite
sp	sphalerite

GIANT BEAR

MINERAL CLAIM

LOCATION: 1535.2 W / 354.4 S
HOLE STARTED: OCTOBER 15, 1988
HOLE COMPLETED: OCTOBER 17, 1988
CORE RECOVERY: 99 %
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 196.63 m LENGTH: 37.5 m
AZIMUTH: 147° INCLIN.: - 58°
DIP TESTS: - 58° AT 37.5 m
HOR. PROJ.: 19.5m VERT. PROJ.: 32.4 m

BJECTIVE: TEST SOUTHWESTERN END SHACK II VEIN.

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.50	CASTING							
	(1.14 - 1.50) DARK GREENISH GREY, FINE GRAINED ANDESITE.							
1.50 - 2.63	ANDESITE - DARK GREYISH GREEN, CLASTIC WITH BLACK ANDESITE CLASTS TO FEW mm IN FINE GRAINED ANDESITIC TUFF(?) MATRIX. COARSER GRAINED THAN USUAL ANDESITE. TRACES PY AS BLEBS.							
	(2.30 - 2.63) MODERATELY BROKEN CORE. 3% QUARTZ AS OFF-WHITE IRREGULAR VEINLETS TO 3 mm WIDE.							
	(2.63) GREENISH WHITE QUARTZ (60%) - CARB (40%) VEIN 11 mm WIDE AT 20° TO C.A. WITH SMEAR OF MUD ON UPPER CONTACT. NO SULPHIDES SEEN.							
2.63 -15.00	FELDSPAR PORPHYRY - LIGHT GREYISH GREEN; SUBROUND GREENISH CREAM FELDSPAR PHENOCRYSTS AVERAGE 1.5 mm ACROSS COMPRISE ABOUT 45% OF ROCK VOLUME; FINE GRAINED MATRIX. MATRIX NOT AS FINE GRAINED AS IN PORPHYRIES FROM PREVIOUS 4 HOLES. FEW QUARTZ VEINLETS TO 5 mm WIDE AT 40° TO 60° TO C.A. QUARTZ VEIN AT 28° TO C.A. ALONG CONTACT WITH OVERLYING ANDESITE.							
	(3.20 - 5.05) LOCALLY FAINTLY BLEACHED.							
	(4.30 - 7.06) SOMEWHAT BROKEN CORE.							
	(10.50 - 12.70) LOCALLY FAINTLY BLEACHED IN PATCHES AND BANDS TO 8 cm ACROSS.							
	(13.20 - 13.60) MODERATELY BROKEN CORE.							
	(13.50 - 15.00) MODERATELY FRACTURED CORE; FRACTURES MAINLY AT ABOUT 45° TO C.A.							
15.00-20.01	GREYWACKE - GREY TO GREENISH GREY, GENERALLY VERY FINE GRAINED MODERATELY TO INTENSELY BRECCIATED THROUGHOUT. 2% (AVERAGE)							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	TO LOCALLY 6% DISSEMINATED PY. ROUNDED QUARTZ GRAINS UP TO 3 mm ACROSS. 2% TO LOCALLY 20% CHLORITE AS WISPY BANDS AND LENSES. CONTACT WITH OVERLYING FELDSPAR PORPHYRY DISCRETE AT 57° TO C.A.							
	(16.61 - 16.83) FAULT. MODERATELY TO FINELY BROKEN CORE. MUD 1 mm THICK ON FRACTURE AT 45° TO C.A.							
	(17.78 - 17.91) BAND OF BLEACHED, MODERATELY BRECCIATED ANDESITE AT 61° TO C.A.							
	(17.91 - 18.88) FAULT. FINELY TO MODERATELY BROKEN CORE. 2% IRREGULAR DISCONTINUOUS QUARTZ VEINLETS TO 1 mm WIDE 20 mm LONG. 2 mm OF MUD ON FRACTURE AT ABOUT 15° TO C.A. SLICKENSIDES ON THIS FRACTURE AT ABOUT 20° TO C.A.							
	(18.35) PY 10% AS VEINLETS TO 2 mm WIDE.	10749	18.00	18.50	.5	NOT ASSAYED		
	(19.45) CARB(70%) - QUARTZ(30%) VEIN 13 mm WIDE AT 10° TO C.A. RARE TRACES PY.	10750	19.27	19.50	.23	NOT ASSAYED		
		10751	19.50	20.01	.51	NOT ASSAYED		
	(19.50 - 21.00) GROUND CORE; 75% RECOVERY.							
	(19.89 - 20.01) MODERATELY SILICIFIED; 5% FINELY DISSEMINATED PY.							
20.01-20.20	SHACK (?) QUARTZ VEIN - MODERATELY BROKEN CORE. OFF-WHITE VEIN QUARTZ WITH 2% PY AS DISSEMINATED MASSES OF CUBES UP TO 0.5 mm ALONG IRREGULAR FRACTURES. TRACE CARB ALONG UPPER CONTACT. UPPER CONTACT PROBABLY AT ABOUT 48° TO C.A.; LOWER CONTACT NOT MEASUREABLE. BECAUSE OF GROUND CORE OVER INTERVAL CONTAINING SHACK(?) VEIN, NOT ALL OF THE VEIN MAY HAVE BEEN RECOVERED.	10852	20.01	20.20	.19	.036	.02	
20.20-23.72	ANDESITE -- GREYISH GREEN TO DARK GREEN CLASTIC WITH BLACK ANDESITE CLASTS TO 4 mm IN MATRIX OF ANDESITIC TUFF. ABOUT 3% OFF-WHITE QUARTZ VEINLETS TO 6 mm WIDE MAINLY ORIENTED AT ABOUT 50° TO C.A. RARE TRACE CARB.	10853	20.20	21.00	.8	NOT ASSAYED		
		10854	21.00	21.24	.29	NOT ASSAYED		
	(20.20 - 21.24) INTENSELY TO MODERATELY BRECCIATED, PY 5% FINELY DISSEMINATED, WEAKLY SILICIFIED.							
	(21.24 - 21.53) FELDSPAR PORPHYRY AT 59° TO C.A.							
	(23.72) LOWER CONTACT DISCRETE AT 65° TO C.A.							
23.72-30.45	FELDSPAR PORPHYRY - LIGHT GREEN TO GREYISH GREEN, SUBROUND FELDSPAR PHENOCRYSTS UP TO 6 mm ACROSS (AVERAGE 1.0 mm) COMPRISE 40% ROCK VOLUME. LOCAL PATCHES WHERE ROCK BLEACHED PALE CREAMY GREEN THROUGHOUT.							
	(24.00 - 24.42) MODERATELY BROKEN CORE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(24.90 - 25.50) MODERATELY BROKEN CORE.							
	(25.14 - 25.42) ANDESITE AS FOR 20.20 - 23.72.							
	(27.22 - 28.18) MODERATELY BROKEN CORE.							
	(27.33) OFF-WHITE QUARTZ(80%) - CARB (20%) VEIN 8 mm WIDE AT 62° TO C.A.							
30.45-37.50	ANDESITE - DARK GREYISH GREEN, VERY FINE GRAINED, MODERATELY FRACTURED WITH PALE GREEN SKARN(80%), CARB(15%) AND QUARTZ(5%) LINING FRACTURES AND FORMING VEINLETS UP TO 20 mm WIDE. CONTACT WITH OVERLYING UNIT NOT MEASURABLE.							
	(30.45 - 30.57) WELL DEVELOPED FOLIATION AT 40° TO C.A.; 10% PALE GREEN SKARN, 5% DISSEMINATED PY.	10855	30.45	30.75	.3	NOT ASSAYED		
37.50	END OF HOLE							

LOCATION: 1521.5 W / 355.6 S
HOLE STARTED: OCTOBER 19, 1988
HOLE COMPLETED: OCTOBER 21, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 197.78 m LENGTH: 25.5 m
AZIMUTH: 142° INCLIN.: - 60°
DIP TESTS: - 59° AT 23.7 m
HOR. PROJ.: 13.0 m VERT. PROJ.: 21.9 m

BJECTIVE: TEST NORTHEASTERN SHACK II VEIN

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.50	CASING							
1.50 - 2.80	SKARN - PALE BROWN TO PALE GRASS GREEN TO MAROON-BROWN, MEDIUM TO COARSE GRAINED, MASSIVE ROCK COMPOSED OF ABOUT 90% GARNET AVERAGE 2-3 mm DIAMETER. DENSE HARD ROCK. NO SULPHIDES SEEN.							
	(2.14) BANDING AT 31° TO C.A.							
	(2.80) CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 80° TO C.A. MINOR FAULT SUBPARALLEL C.A. HAS DISPLACED SKARN/ANDESITE CONTACT 4 cm.							
2.80 - 9.11	ANDESITE - GREY TO GREENISH GREY GENERALLY FINE GRAINED, WEAKLY TO LOCALLY MODERATELY FRACTURED. LOCAL PATCHES PALE GREEN SKARN.							
	(2.80 - 3.92) CLASTIC INTERVAL. CLASTS TO 9 mm ACROSS IN MATRIX OF ANDESITIC TUFF.							
	(2.95 - 3.52) 2% DISSEMINATED PY.							
	(4.50 - 5.95) 1% DISSEMINATED PY, 4% MAROON HEMATITE.	10856	4.50	5.00	.5	NOT ASSAYED		
	(5.42 - 5.83) MODERATELY BROKEN CORE.							
	(8.36) FRACTURES AT 29° TO C.A.							
9.11 -11.91	GREYWACKE - LIGHT GREY TO GREEN-GREY, GENERALLY FINE GRAINED WITH A FEW CLASTS UP TO 5 mm ACROSS. POORLY SORTED; BEDDING AT ABOUT 55-70° TO C.A. CONTACT WITH OVERLYING ANDESITE AT 50° TO C.A.; LOWER CONTACT PROBABLE HEALED MINOR FAULT AT 37°.							
	(9.11 - 10.26) MODERATELY FRACTURED; 5% GREEN SKARN; COMPOSITION 20 TO 60% ANDESITE.							
	(10.16 - 11.91) 2 TO 4% VERY FINELY DISSEMINATED PY (AND PO?)	10857	10.16	10.66	.5	NOT ASSAYED		

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
	(11.79) CARB VEINLET ABOUT 4 mm WIDE AT 75° TO C.A.							
11.91-19.50	ANDESITE - DARK GREYISH GREEN TO GREY-GREEN, GENERALLY VERY FINE GRAINED AND MASSIVE ROCK. MODERATELY FRACTURED WITH PALE GREEN SKARN ABOUT 2% ROCK VOLUME AS VEINLETS LINING FRACTURES AND BANDS UP TO 2.5 cm WIDE AT 43° TO 53° TO C.A. (12.56 - 14.62) CLASTIC INTERVAL; ANGULAR CLASTS UP TO 11 mm ACROSS. GENERALLY MODERATELY BRECCIATED. 1% DISSEMINATED PY (13.62 - 13.97) INTENSELY BRECCIATED. (14.53) Cp MASS 2 BY 3 mm. (19.22 - 19.50) GREY, MODERATELY SILICIFIED WITH 3 TO LOCALLY 10% FINELY DISSEMINATED SULPHIDE. Py IDENTIFIED.	10858	19.00	19.50	.5	<.005	<.01	.01
19.50-19.83	SHACK II QUARTZ VEIN - WHITE, COARSELY CRYSTALLINE VEIN. FAINT WISPY, DISCONTINUOUS BANDS OF WALLROCK INTRUSIONS WITHIN UPPERMOST 2 cm AND LOWERMOST 5 cm. UPPER CONTACT FAULT WITH 2 mm GREY MUD ON FRACTURE AT 60° TO C.A.; LOWER CONTACT FAULT WITH 3 mm FINELY BROKEN CORE AND MUD ON FRACTURE AT 62° TO C.A. NO CARB WHERE TESTED. (19.50 -19.52) Py 2% DISSEMINATED ALONG WISPY FRACTURES PARALLEL VEIN MARGIN. (19.71) Cp 2% DISSEMINATED, TRACE po. (19.79 - 19.83) Py 2% DISSEMINATED AND 0.5% GREEN CHLORITE(?) ALONG WISPY FRACTURES PARALLEL VEIN MARGIN.	10859	19.50	19.83	.33	<.005	<.01	.03
19.83-25.50	ANDESITE - GREYISH GREEN, FINE GRAINED, SOMEWHAT PORPHYRITIC. MODERATELY TO WEAKLY FRACTURED. ABOUT 0.5% PERVASIVE AND VEINLET CARB THROUGHOUT. (19.83 - 21.10) WEAKLY SILICIFIED. 3% VERY FINELY DISSEMINATED SULPHIDE. (21.72 - 24.00) MODERATELY BROKEN CORE. (22.40) QUARTZ (95%) - CARB (5%) VEINLET 3 mm WIDE AT 41° TO C.A. NO SULPHIDES SEEN. (22.98) QUARTZ (99%) - CARB (1%) VEINLET 6 mm WIDE AT 52° TO C.A. OFFSET 1 cm BY MINOR FAULT SUBPARALLEL C.A. NO SULPHIDES SEEN	10860	19.83	20.33	.5	<.005	<.01	.01
25.50	END OF HOLE							

PROJECT: SHACK
D.D. HOLE #: SH-88-7

LOCATION: 1527.0 W /356.6 S
HOLE STARTED: OCTOBER 23, 1988
HOLE COMPLETED: OCTOBER 30, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 198.13 m LENGTH: 105.0 m
AZIMUTH: 003° INCLIN.: - 80°
DIP TESTS: - 83° AT 105.0 m
HOR. PROJ.: 16.0 m VERT. PROJ.: 103.6 m

OBJECTIVE: TEST IP ANOMALY AND SHACK II VEIN

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.50	CASING							
	(0.92 - 1.50) FELDSPAR PORPHYRY AS BELOW.							
1.50 - 3.06	FELDSPAR PORPHYRY - LIGHT GREENSIH GREY, MASSIVE, CREAM COLOURED BLOCKY TO SUBROUND FELDSPAR PHENOCRYSTS UP TO 5 mm ACROSS (AV. 1 mm) IN FINE GRAINED MATRIX.							
	(1.50 - 1.94) OFF-WHITE TO PALE GREY QUARTZ VEIN 10 mm WIDE SUBPARALLEL C.A., LEACHED IN UPPER HALF, 1% DISSEMINATED PY, 2% DISSEMINATED PY IN WALLROCK.	10861	1.50	1.94	.36	NOT ASSAYED		
	(2.12 - 2.90) OFF-WHITE QUARTZ VEIN 10 mm WIDE AT 5° TO C.A.	10862	2.12	2.50	.38	NOT ASSAYED		
	CONTAINS TRACES DISSEMINATED PY; LOCAL 3% PY IN WALL ROCK	10863	2.50	2.90	.40	NOT ASSAYED		
3.06 - 3.37	SKARN - PALE GREEN, FINE GRAINED, DENSE, MOSTLY GARNET; HARD. CONTACT WITH OVERLYING PORPHYRY AT ABOUT 15° TO C.A.; LOWER CONTACT AT 50°. NO SULPHIDES SEEN.							
3.37 -18.47	ANDESITE - GREY-GREEN TO GREY WITH LOCAL MAROON INTERVALS. GENERALLY FINE GRAINED. MAINLY CLASTIC WITH SUBANGULAR TO SUBROUND ANDESITE CLASTS UP TO 36 mm ACROSS (AV. 1.5 mm) IN ANDESITIC MATRIX; LOCAL GREYWACKE INTERBEDS TO 20 cm. CONTACT WITH UNDERLYING GREYWACKE AT 10° TO C.A. TRACE TO LOCALLY 10% MAGNETITE.							
	(3.37 - 7.02) 5 TO 10% MAROON HEMATITE; WEAKLY TO MODERATELY BRECCIATED.							
	(4.11 - 4.34) QUARTZ (95%) - CARB (2%) - CHLORITE (3%) VEINLET 4 mm WIDE SUBPARALLEL C.A. NO SULPHIDES SEEN.							
	(5.36 - 5.62) PY 3% AS SUBHEDRAL CRYSTALS TO 3 mm.	10864	5.35	5.65	.30	NOT ASSAYED		
	(5.70 - 7.30) SOMEWHAT BROKEN CORE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(6.77 - 7.80) COARSE GRAINED GREYWACKE; 60% SUBROUND CLASTS 1 - 7 mm ACROSS.							
	(7.11) BEDDING AT 53° TO C.A.							
	(8.07 - 12.35) CLASTIC ANDESITE. ANGULAR CLASTS AND SHARDS GENERALLY UP TO 13 mm (MAX. 37 mm) ACROSS IN MATRIX OF FINE-GRAINED ANDESITIC TUFF. ROCK MAGNETIC; 5% MAGNETITE ON AVERAGE							
	(10.31 - 10.40) PY 2% DISSEMINATED WIHIN SKARN BANDS AV. 1 mm WIDE AT 69° TO C.A.							
	(10.31 - 11.98) CLASTIC ANDESITE 2% ALTERED TO SKARN AS WISPY PATCHES.							
	(10.70 - 10.95) 30% SKARN, 5% PY DISSEMINATED AND AS SUBROUND MASSES TO FEW mm ACROSS.	10865	10.70	10.95	.25	NOT ASSAYED		
	(12.35) LOWER CONTACT OF CLASTIC INTERVAL AT 52° TO C.A.							
	(12.40 - 13.42) OFF-WHITE QUARTZ VEINLETS TO 4 mm WIDE AT 5° TO C.A.							
	(13.02 - 13.47) ABOUT 8% DISSEMINATED PY. 25% OF INTERVAL MODERATELY SILICIFIED.	10866	13.00	13.50	.5	NOT ASSAYED		
	(13.90 - 14.31) MODERATELY BROKEN CORE.							
	(15.10 - 16.60) ORANGE LIMONITE COATS FRACTURES SUBPARALLEL C.A.; GENERALLY MODERATELY BROKEN CORE.							
	(15.30) QUARTZ (97%) - CARB (3%) VEINLET 4 mm WIDE AT 25° TO C.A., TRACE PY.							
	(16.97 - 18.47) IRREGULAR, OFF-WHITE CARB (70%)-QUARTZ (30%) VEINLETS SUBPARALLEL C.A.; ROCK 5 - 10% ALTERED TO PALE GREEN SKARN.							
18.47-19.93	GREYWACKE - LIGHT GREENISH TO BROWNISH GREY, HARD, SILICEOUS ROCK. ANGULAR CLASTS MAINLY OF GREEN ANDESITE TO 14 mm WITHIN FINE GRAINED MATRIX. 3% DISSEMINATED PY.							
	(18.61 - 19.93) OFF-WHITE TO PALE GREY TO BRASSY YELLOW QUARTZ	10867	18.60	19.10	.5	NOT ASSAYED		
	(90%) - PYRITE (9%) - CARB (1/%) VEINLET 7 mm WIDE SUBPARALLEL	10868	19.10	19.60	.5	NOT ASSAYED		
	C.A.	10869	19.60	20.10	.5	NOT ASSAYED		
	(19.93) CONTACT WITH UNDERLYING BRECCIATED ANDESITE AT 34° TO C.A.							
19.93-52.79	ANDESITE - GREY-GREEN TO GREENISH BLACK, VERY FINE GRAINED, GENERALLY WEAKLY TO MODERATELY FRACTURED ROCK. FRACTURES IRREGULAR AND RANDOMLY ORIENTED AND LINED BY PALE GREEN SKARN MINERALS.							
	(19.93 - 24.96) GREY-GREEN COARSE GRAINED CLASTIC INTERVAL							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	AVERAGE 3-4% DISSEMINATED PY. 5% PERVASIVE SKARN AS FAINT PATCHES AND LINING FRACTURES.							
	(20.13 - 20.40) MODERATELY BROKEN CORE; POSSIBLE FAULT.							
	(21.62 - 22.50) QUARTZ (87%) - PY (10%) - CARB (3%) VEINLET	10870	21.62	22.12	.5	NOT ASSAYED		
	6 mm WIDE SUBPARALLEL C.A.	10871	22.12	22.50	.30	NOT ASSAYED		
	(23.47) BANDING (BEDDING ?) AT 50° TO C.A.							
	(24.96 - 39.75) GREENISH BLACK VERY FINE GRAINED ANDESITE OR BASALT, OFTEN CONTAINING 1 OR 2 % MAGNETITE.							
	(34.89) VEIN OF PALE YELLOW-GREEN SKARN (85%) - QUARTZ (11%)	10872	34.80	34.93	.13	NOT ASSAYED		
	- PY (4%, ALONG MARGINS) 4.4 cm WIDE AT 51° TO C.A.							
	(37.40 - 38.72) LOCAL 2 TO 5% PY AS IRREGULAR VEINLETS TO 4 mm WIDE							
	(39.75 - 42.39) GREYISH GREEN MODERATELY TO LOCALLY INTENSELY BRECCIATED; AVERAGE 2 TO 5% DISSEMINATED PY. GENERALLY MODERATELY BROKEN CORE.							
	(40.61 - 40.93) 15% FINELY DISSEMINATED PY	10873	40.61	40.93	.32	NOT ASSAYED		
	(42.39 - 51.44) GREEN, FINE GRAINED, LOCALLY WEAKLY BRECCIATED ANDESITE.							
	(51.44 - 51.98) LIGHT GREEN FELDSPAR PORPHYRY; PHENOCRYSTS TO 4 mm ACROSS; UPPER CONTACT DISCRETE AT 49° TO C.A.							
	(51.98 - 52.79) GREYISH GREEN CLASTIC INTERVAL WITH LOCAL 2% DISSEMINATED PY.							
	(52.79) DISCRETE CONTACT WITH UNDERLYING PORPHYRY AT 75° TO C.A.							
52.79-54.88	FELDSPAR-PORPHYRY - LIGHT GREEN WITH 5 - 10% GREENISH CREAM SUBANGULAR FELDSPAR PHENOCRYSTS TO 4 mm ACROSS (AVERAGE 1.5 mm) MODERATELY FRACTURED THROUGHOUT WITH IRREGULAR DISCONTINUOUS HAIRLINE FRACTURES.							
	(54.14) QUARTZ (95%) - CARB (3%) - PY (2%) VEIN 15 mm WIDE AT 21° TO C.A.	10874	54.00	54.50	.5	NOT ASSAYED		
	(54.41) QUARTZ (95%) - CARB (5%) VEINLET 8 mm WIDE AT 15° TO C.A.							
54.88-54.95	QUARTZ VEIN - OFF-WHITE, COARSELY CRYSTALLINE, CARB 3%, 3% XENOLITHS OF WALLROCK PORPHYRY. UPPER CONTACT AT 25° TO C.A.; LOWER AT 43°. LOWER CONTACT PROBABLE MINOR SLIP; SMEAR OF MUD ALONG CONTACT. TRACES PY ALONG LOWER CONTACT.	10875	54.50	55.05	.55	<.005	.01	-
54.95-58.01	FELDSPAR PORPHYRY - AS FOR 52.79 - 54.88							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(54.98) QUARTZ VEINLET 7 mm WIDE AT 20° TO C.A. CONTAINS TR PY.							
	(55.13 - 55.61) QUARTZ VEINLET 12 mm WIDE AT ABOUT 5° TO C.A. CONTAINS 5% CARB. NO SULPHIDES SEEN.							
	(56.00 - 57.12) MODERATELY BROKEN CORE.							
	(56.22 - 58.01) 1% QUARTZ VEINLETS TO 3 mm WIDE USUALLY AT ABOUT 10° TO C.A.; SERICITE (?) ALONG VEINLET MARGINS.							
58.01-58.57	ANDESITE - GREEN, FINE GRAINED, INTENSELY BRECCIATED. WEAKLY TO LOCALLY MODERATELY SILICIFIED. 5% DISSEMINATED PY FROM 58.01 - 58.37; 10% DISSEMINATED PY 58.37 - 58.57. ROCK ABOUT 25% ALTERED TO LIGHT GREEN SKARN ALONG FRACTURES. CONTACT WITH UNDERLYING QUARTZ VEIN MINOR FAULT; SMEAR OF MUD ON FRACTURE AT 20° TO C.A.	10951	58.01	58.57	.56	.026	.02	
58.57-58.88	SHACK QUARTZ VEIN - OFF-WHITE TO PALE GREY, COARSELY CRYSTALLINE. ROCK CONTAINS 10% LENSOID XENOLITHS OF ANDESITE WALLROCK. XENOLITHS 5 TO 30% PY. TRACES DISSEMINATED PY THROUGHOUT; PY 1-2% 58.62 - 58.70. LOWER CONTACT FAULT; 2 mm OF PALE GREY MUD AND FINELY BROKEN CORE ALONG FRACTURE AT 27° TO C.A.	10952	58.57	58.88	.31	<.005	<.01	
58.88-68.71	ANDESITE - DARK GREENISH GREY TO BLACK TO DARK BROWNISH GREY GENERALLY VERY FINE GRAINED, MODERATELY FRACTURED WITH PALE GREEN SKARN (90%) AND OFF-WHITE QUARTZ VEINLETS (10%) ALONG FRACTURES. GENERALLY 2% DISSEMINATED PY.	10953	58.88	59.38	.5	<.005	<.01	
		10954	59.38	59.88	.5	NOT ASSAYED		
	(58.88 - 59.85) 5 TO 7% FINELY DISSEMINATED PY AS SPECKS; PY BLEBS TO 3 mm ACROSS; PY AS DISCONTINUOUS VEINLETS TO 1 mm WIDE.							
	(60.22) CARB (90%) - QUARTZ (10%) VEINLET 9 mm WIDE AT 40° TO C.A.							
68.71-72.96	GREYWACKE - LIGHT BROWN-GREY, FINE GRAINED. AVERAGE ABOUT 8 - 10% DISSEMINATED PY THROUGHOUT. LOCAL WISPY BANDING AVERAGE APPROX. 50° TO C.A. CONTACT WITH OVERLYING ANDESITE GRADATIONAL OVER 15 cm. OCCASSIONAL CARB - QUARTZ VEINLETS UP TO 5 mm WIDE AT 6 TO 20° TO C.A. GRIT- AND GRANULE - SIZE SUBROUND CLASTS UP TO 7 mm ACROSS. CONTACT WITH UNDERLYING ANDESITE AT 32° TO C.A.; UNITS HERE INTERBANDED OVER 16 cm.	10955	68.71	69.21	.5	NOT ASSAYED		
72.96-74.87	ANDESITE - DARK GREENISH GREY TO BLACK, MODERATELY FRACTURED WITH IRREGULAR, DISCONTINUOUS RANDOMLY ORIENTED HAIRLINE FRACTURES THROUGHOUT. LOCAL 1-2% MAGNETITE. HARD, SILICEOUS. ROCK CONTAINS 10% SUBROUND FELDSPAR PHENOCRYSTS AVERAGE 1 mm MAX 3mm							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	ACROSS. 3% DISSEMINATED PY THROUGHOUT.							
74.87-86.22	FELDSPAR PORPHYRY - AS FOR 52.79 - 54.88 EXCEPT ONLY WEAKLY FRACTURED. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 25° TO C.A.							
86.22-105.0	ANDESITE - LIGHT GREYISH-GREEN TO GREY-GREEN, FINE GRAINED, WEAKLY TO LOCALLY MODERATELY FRACTURED. OFTEN CONTAINS 1 OR 2% DISSEMINATED PY. LOCAL MINOR GREYWACKE INTERBEDS TO 20 cm.							
	(88.64 - 88.92) MODERATELY TO FINELY BROKEN CORE; PROBABLE FAULT. ORIENTATION NOT MEASURABLE.							
	(94.50 - 94.93) CONGLOMERATIC, SUBROUND PEBBLES AVERAGE 7 mm ACROSS.							
	(98.03 - 98.20) MODERATELY BROKEN CORE; POSSIBLE FAULT.							
	(98.23) PALE GREY BANDED CARB VEIN 11 mm WIDE AT 21° TO C.A. CONTAINS 3% DISSEMINATED PY	10956	98.00	98.55	.35	NOT ASSAYED		
	(99.09 - 99.49) 5% DISSEMINATED PY.							
	(99.60 - 100.08) WEAKLY BRECCIATED.							
	(101.11 - 101.75) 5 - 10% PALE GREEN SKARN.							
	(101.32 - 105.00) QUARTZ- CARB VEINLETS TO 5 mm WIDE FROM 20° TO SUBPARALLEL C.A. FORM ABOUT 4% ROCK VOLUME.							
105.00	END OF HOLE							

LOCATION: 1464.7 W, 316.7 S
HOLE STARTED: NOVEMBER 9, 1988
HOLE COMPLETED: NOVEMBER 10, 1988
CORE RECOVERY: 98.9%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 203.36 m LENGTH: 43.5 m
AZIMUTH: 132° INCLIN.: - 78°
DIP TESTS: - 78° AT 21.0 m; -76° AT 43.5 m
HOR. PROJ.: 9.6 m VERT. PROJ.: 42.4 m

OBJECTIVE: TEST SHACK VEIN

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 3.00	CASING							
3.00 - 3.60	LIMESTONE - LIGHT GREY.							
3.60 - 4.53	SKARN - LIGHT GREEN TO GREYISH GREEN TO BROWN, FINE GRAINED. CONTACT WITH OVERLYING LIMMESTONE DISCRETE AT ABOUT 70° TO C.A.							
	(3.00 - 4.50) GROUND CORE; 69% RECOVERY.							
	(3.60 - 4.18) GARNETITE.							
	(4.18 - 4.53) ANGULAR INCLUSIONS OF BLACK ANDESITE TO 20 mm ACROSS.							
4.53 -11.95	ANDESITE - DARK GREYISH GREEN TO LIGHT GREY-GREEN TO MAROON, FINE GRAINED, MODERATELY FRACTURED ROCK. GRADATIONAL CONTACT OVER 10 cm WITH OVERLYING SKARN AT 35° TO C.A.; DISCRETE CONTACT WITH UNDERLYING QUARTZ VEIN AT 33° TO C.A. PALE GREEN SKARN MINERALS LINE FRACTURES.							
	(4.45 - 7.65) 2-5% MAGNETITE.							
	(8.97 - 11.95) AVERAGE 4% MAROON HEMATITE.							
	(9.07 - 11.95) MODERATELY TO LOCALLY INTENSELY BRECCIATED.	10976	9.40	9.70	.3	NOT ASSAYED		
	(9.44 - 9.58) 7% DISSEMINATED PY.							
	(10.10) OFF-WHITE CARB - QUARTZ VEINLET 9 mm WIDE AT 20° TO C.A.; NO SULPHIDES SEEN.							
	(10.30 - 10.81) MODERATELY BROKEN CORE; FAULT ZONE.							
	(10.40) FAULT. 20 mm OF GOUGE AND FINELY BROKEN CORE ON FRACTURE AT 27° TO C.A.							
	(10.50) FAULT AT 30° TO C.A. - (10.66) FAULT AT 27° TO C.A.							
	(10.80) FAULT AT 65° TO C.A.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
	(11.22 - 11.33) MODERATELY BROKEN CORE.							
	(11.71) OFF-WHITE QUARTZ VEIN 14 cm WIDE AT 55° TO C.A. CONTAINS 5% PY AS BLEBS TO 3 mm.	10977	11.45	11.95	.5	NOT ASSAYED		
	(11.87) FAULT. 3 mm GREY MUD ON FRACTURE AT 29° TO C.A.							
11.95-12.10	QUARTZ VEIN - OFF-WHITE TO PALE GREY, FAINTLY BANDED. 5% XENOLITHS OF WALLROCK ANDESITE. 2% PY, 1% CP.	10978	11.95	12.10	.15	.262	.20	.10
12.10-16.12	ANDESITE - DARK GREYISH GREEN, FINE GRAINED, MODERATELY FRACTURED. WEAKLY TO MODERATELY SILICIFIED, MODERATELY	10979	12.10	12.60	.5	NOT ASSAYED		
	BRECCIATED, LOCAL 1% DISSEMINATED PY BELOW 14.22.	10980	15.62	16.12	.5	<.005	<.01	.01
	(15.92 - 16.12) PY 3% DISSEMINATED AND ALONG SHORT (< 1 cm) FRACTURES AT 20° TO C.A.							
16.12-18.02	SHACK QUARTZ VEIN - OFF-WHITE TO PALE GREY WITH BROWN AND BRASSY YELLOW PATCHES WHERE PO AND CP ABUNDANT. CONTACT WITH	10981	16.12	16.50	.38	.910	7.13	2.76
	OVERLYING ANDESITE DISCRETE AT 30° TO C.A.; POSSIBLE MINOR	10982	16.50	16.82	.32	.112	4.73	2.99
	FAULT; SMEAR OF PALE GREY MUD ALONG CONTACT. PO 3%, CP 2%,	10983	16.82	17.15	.33	.050	2.29	1.79
	PY 1%, SP 0.5%. SULPHIDES OCCUR MAINLY (ABOUT 90%) AS	10984	17.15	17.47	.32	1.502	8.33	1.80
	MASSES FILLING CAVITIES WITHIN QUARTZ VEIN, AND ABOUT 2% LINE	10985	17.47	17.70	.23	.046	2.87	.75
	FRACTURES. VEIN QUARTZ COARSELY CRYSTALLINE; SUBHEDRAL TO	10986	17.70	18.02	.32	.552	2.53	.91
	EUHEDRAL CRYSTALS UP TO 9 mm WIDE AND 45 mm LONG PRESENT. SP MOST ABUNDANT 17.12 - 18.02.							
	(16.12 - 16.22) FAINT BANDS PARALLEL VEIN MARGIN.							
	(17.60) ANDESITE XENOLITH ? FORMS 30% ROCK VOLUME OVER 15 cm.							
	(17.68 - 17.83) SOMEWHAT LEACHED; ORANGE- BROWN LIMONITE ALONG FRACTURE SURFACES. HORNBLENDE (?) CRYSTALS UP TO 20 mm LONG AND 5 mm WIDE LOCALLY FORM 10% ROCK VOLUME.							
	(18.00 - 18.02) ANDESITE XENOLITHS COMPRISE 15% VOLUME OF VEIN.							
	(18.02) CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 21° TO C.A.							
18.02-20.49	ANDESITE - BROWNISH GREEN TO GREYISH GREEN, VERY FINE GRAINED, GENERALLY MODERATELY BRECCIATED AND WEAKLY SILICIFIED, 2 - 4%	10987	18.02	18.52	.5	.006	.09	.22
	FINELY DISSEMINATED PY.							
	(18.02 - 18.45) 7% DISSEMINATED PY.							
	(18.45 - 19.09) MODERATELY BROKEN CORE.							
	(19.00 - 19.50) IRREGULAR DISCONTINUOUS QUARTZ (60%) - CARB (40%) VEINLETS FORM 10% ROCK VOLUME.							
	(19.39 - 19.56) PY 10% DISSEMINATED							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(20.24 - 20.49) FAULT. FINELY TO MODERATELY BROKEN CORE AND MUD ON FRACTURE AT 33° TO C.A. AT 20.49	10988	19.94	20.49	.5	NOT ASSAYED		
20.49-20.66	QUARTZ VEIN - PALE GREY TO OFF-WHITE QUARTZ 65%. GREY, SCHISTOSE, SHEARED ANDESITE 35%. RARE TR PY. VEIN QUARTZ CONTAINS ANDESITE XENOLITHS UP TO 30 mm LONG BY 6 mm WIDE. (20.60) FAULT. 3 cm OF PALE GREY MUD AND FINELY BROKEN CORE ALONG FRACTURES AT ABOUT 40° TO C.A.	10989	20.49	20.66	.17	NOT ASSAYED		
20.66-43.50	ANDESITE - GREY-GREEN, FINE GRAINED, MODERATELY FRACTURED. PY 1-2% DISSEMINATED. LOCALLY CLASTIC. (20.80) BANDING AT 44° TO C.A. (21.42-21.96) MODERATELY BROKEN CORE; ORANGE-BROWN LIMONITE ON FRACTURE SURFACES. (23.50 - 29.80) MODERATELY BROKEN CORE	10990	20.66	21.16	.5	NOT ASSAYED		
	(28.80 - 29.35) LIGHT GREY TO OFF-WHITE BANDED QUARTZ(50%) VEIN ABOUT 20 mm WIDE AT 5° TO C.A.; FAULTED CONTACTS WITH WALLROCK. LOCAL TR PY.	11004	28.50	29.00	.5	NOT ASSAYED		
		11005	29.00	29.50	.5	NOT ASSAYED		
		11006	29.50	30.00	.5	NOT ASSAYED		
	(29.80 - 30.64) 15% FINELY DISSEMINATED PY. BROWN, DENSE CLASTIC GREYWACKE? (32.16 - 32.41) 7% PY. (34.52) BAND OF PALE GREEN SKARN 18 mm WIDE AT 9° TO C.A. (34.79- 43.50) BLACK TO DARK GREENISH GREY ANDESITE. ABOUT 3% MAGNETITE. (39.30) PY BAND 4 mm WIDE AT 82° TO C.A. (39.46) PY BAND 5 mm WIDE AT 63° TO C.A.							
43.50	END OF HOLE							

LOCATION: 1475 W, 317.8 S
HOLE STARTED: NOVEMBER 11, 1988
HOLE COMPLETED: NOVEMBER 12, 1988
CORE RECOVERY: 99%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 203.55 m LENGTH: 30.00 m
AZIMUTH: 180° INCLIN.: - 78°
DIP TESTS: - 76° AT 30.00 m
HOR. PROJ.: 6.6 m VERT. PROJ.: 29.0 m

UJECTIVE: TEST SHACK VEIN TO WEST OF SH-88-10

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
.00 - 1.50	CASING (0.97 - 1.50) ANDESITE; SEE BELOW.							
.50 - 7.43	ANDESITE - GREENISH GREY TO MAROON, FINE GRAINED CLASTIC ROCK WITH SUBANGULAR CLASTS AND SHARDS 2 TO 8 mm ACROSS. WEAKLY FRACTURED THROUGHOUT. 1 - 2 % MAGNETITE THROUGHOUT (0.97 - 1.97) LIGHT GREYISH GREEN, BLEACHED INTERVAL WITH LOCAL LIMONITE ALONG FRACTURE SURFACES. (4.42 - 4.59) PY 4%. (5.81 - 6.29) PY 2% DISSEMINATED (6.38 - 7.43) MAROON; 20% HEMATITE.							
.43 -11.91	FELDSPAR PORPHYRY - LIGHT GREENISH GREY; LOCALLY WEAKLY FRACTURED WITH WISPY, DISCONTINUOUS FRACTURES. PALE GREY FELDSPAR-PHENOCRYSTS WITH FAINT BOUNDARIES AVERAGE 0.5 - 2.0mm ACROSS AND FORM 4% ROCK VOLUME. ROCK GENERALLY WEAKLY SILICIFIED AND HARD. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 42° TO C.A.							
1.91-14.58	ANDESITE - GREENISH MAROON, FINE TO MEDIUM GRAINED CLASTIC VOLCANIC ROCK. WEAKLY FRACTURED. CLASTS TO 9 mm ACROSS. 15-20% HEMATITE. LOCAL FAINT SKARN PATCHES TO 20 cm ACROSS. CONTACT WITH UNDERLYING PORPHYRY DISCRETE AT 70° TO C.A.							
4.58-19.50	FELDSPAR PORPHYRY - AS FOR 7.43 - 11.91 EXCEPT SOMEWHAT BROKEN CORE THROUGHOUT. (15.00 - 16.50) GROUND CORE; 87% RECOVERY. (16.90 - 17.10) FAULT. MODERATELY TO FINELY BROKEN CORE WITH FEW mm OF CREAM COLOURED MUD AT 17.00. ORIENTATION NOT MEASURABLE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(19.45 - 19.50) BROKEN CORE; CONTACT WITH UNDERLYING ANDESITE NOT MEASUREABLE.							
19.50-24.80	ANDESITE - DARK GREY TO MEDIUM BROWNISH GREY TO GREENISH GREY, FINE GRAINED, MODERATELY FRACTURED WITH OFF-WHITE TO CREAM COLOURED CARBONATE FORMING VEINLETS UP TO 13 mm WIDE ALONG ABOUT 80% OF FRACTURES. REMAINING FRACTURES LINED BY PALE BROWNISH GREEN SKARN. VEINLETS MAINLY AT 55° TO C.A.; OTHERWISE RANDOMLY ORIENTED.							
	(19.50 - 20.25) CLASTIC, SUBROUND CLASTS TO 6 mm DIAMETER.							
	(22.50) CARB VEINLET 7 mm WIDE AT 19° TO C.A.							
	(22.93 - 24.22) 5 - 10% CARB AS WISPY, LENSOID VEINLETS AND PATCHES.							
	(23.30 - 24.00) 3 - 5%, LOCALLY TO 10%, FINELY DISSEMINATED PY.							
	(23.39) CARB VEIN 24 mm WIDE AT 22° TO C.A.; NO SULPHIDES SEEN WITHIN VEIN.	11015	23.20	23.80	.6	NOT ASSAYED		
	(23.51 - 24.00) SHEARED, BANDED AT ABOUT 60° TO C.A.	11007	23.80	24.30	.5	<.005	<.01	.01
	(24.24) FAULT. 1 cm GREY GOUGE ON FRACTURE AT 65° TO C.A.	11008	24.30	24.80	.5	.006	.03	<.01
	(24.24 - 24.80) MODERATELY BROKEN CORE.							
	(24.60) FAULT. GREY GOUGE AND FINELY BROKEN CORE ON FRACTURE SURFACES, ORIENTATION NOT MEASURABLE.							
24.80-25.68	SHACK QUARTZ VEIN - OFF-WHITE TO PALE GREY WITH BROWN AND BRASSY YELLOW PATCHES WHERE SULPHIDES PRESENT. MODERATELY FRACTURED WITH DARK GREENISH GREY CHLORITE? LINING FRACTURES WHICH ARE IRREGULAR AND DISCONTINUOUS. CP 3%, PY 2% SP 10% OVER 2 cm AT 25.35. PO 2% AT 24.84. SULPHIDES OCCUR AS IRREGULAR MASSES AND BANDS UP TO 25 mm ACROSS FILLING CAVITIES AND ALSO LINING HAIRLINE FRACTURES. VEIN QUARTZ OFTEN SMOKEY AND DARK GREY WITHIN 2 OR 3 mm OF SULPHIDE MASSES. MODERATELY BROKEN CORE THROUGHOUT. UPPER CONTACT AT ABOUT 19° TO C.A.; LOWER CONTACT DISCRETE AT 21°.	11009	24.80	25.10	.3	.040	1.96	1.17
		11010	25.10	25.30	.2	.378	2.78	.89
		11011	25.30	25.50	.2	4.778	6.84	2.60
		11012	25.50	25.68	.18	.132	.59	.36
25.68-30.00	ANDESITE - GREYISH GREEN TO LIGHT GREY TO BLACK, FINE GRAINED, GENERALLY MODERATELY BRECCIATED.	11013	25.68	26.18	.5	.016	.09	.02
	(25.68 - 26.48) PORPHYRITIC, HARD, SILICEOUS; HORNBLENDE PHENOCRYSTS TO 3 mm LONG IN APHANITIC MATRIX; 2% DISSEMINATED PY AS SUBHEDERAL TO EUHEDRAL CUBES TO 4 mm.	11014	26.18	26.90	.72	.005	.04	.01
	(25.84) FAULT. 5 mm OF GREENISH GREY GOUGE; ORIENTATION NOT MEASUREABLE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(26.70 - 26.82) FAULT. MODERATELY TO FINELY BROKEN CORE; ORIENTATION NOT MEASUREABLE.							
	(27.99 - 30.00) PY 2 - 3% DISSEMINATED.							
30.00	END OF HOLE							

LOCATION: 1505.0 W / 333.1 S
HOLE STARTED: NOVEMBER 16, 1988
HOLE COMPLETED: NOVEMBER 18, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 201.15 m LENGTH: 37.50 m
AZIMUTH: 142° INCLIN.: - 70°
DIP TESTS: - 68° AT 37.50 m
HOR. PROJ.: 13.5 m VERT. PROJ.: 34.9 m

BJECTIVE: TEST FOR NORTHEASTERN EXTENSION SHACK II VEIN

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 3.00	CASING							
	(2.73 - 3.00) LIMESTONE.							
3.00 - 3.73	LIMESTONE - LIGHT GREY WITH FAINT MEDIUM GREY BANDS TO 2 mm WIDE THROUGHOUT. SOMEWHAT BROKEN CORE.							
	(3.43 - 3.73) WEAKLY BRECCIATED.							
3.73 - 5.63	QUARTZ DIORITE - PALE GREYISH GREEN TO PALE PINK, MEDIUM TO FINE GRAINED, MASSIVE. FELDSPAR PHENOCRYSTS AVERAGE 2 - 3 mm ACROSS. CONTACT WITH OVERLYING LIMESTONE 10 cm WIDE, PALE GREENISH ORANGE CHILLED ? MARGIN AT ABOUT 50° TO C.A.							
	CONTACT WITH UNDERLYING SKARN AT 75° TO C.A.							
5.63 -11.43	SKARN - LIGHT GREY-GREEN TO PALE ORANGE-PINK, FINE GRAINED, MASSIVE.							
	(5.90 - 6.33) 2% PY DISSEMINATED AND AS WISPY MASSES.							
	(8.39) BANDING AT 49° TO C.A.							
	(8.67) PALE GREY QUARTZ-CARB VEINLET 5 mm WIDE AT 25° TO C.A.							
	(11.43) CONTACT WITH UNDERLYING ANDESITE AT 75° TO C.A.							
11.43-32.67	ANDESITE - DARK GREEN TO GREY, MAINLY VERY FINE GRAINED AND MASSIVE. MODERATELY FRACTURED THROUGHOUT WITH VERY PALE GREEN SKARN MINERALS AND PALE GREY CARB LINING FRACTURES.							
	LOCAL GREY, FINE GRAINED GREYWACKE INTERBEDS TO 25 cm WIDE.							
	(12.03 - 12.48) RED-BROWN; 5 - 7% HEMATITE.							
	(13.09 - 14.91) MODERATELY BRECCIATED, WEAKLY SILICIFIED, PY 2 TO LOCALLY 5% AS IRREGULAR MASSES ALONG FRACTURES.	11028	14.30	14.70	.32	NOT ASSAYED		
	(14.03 - 14.91) MODERATELY BROKEN CORE.							
	(14.91 - 15.33) GREYWACKE; LOWER CONTACT AT 82° TO C.A.							

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
	(15.59 - 15.68) CONGLOMERATIC; CLASTS TO 20 mm ACROSS.							
	(18.09 - 19.61) GREYWACKE WITH 5% DISSEMINATED PY.							
	(19.61 - 19.83) MODERATELY BRECCIATED; MODERATELY BROKEN CORE.							
	(19.83) FAULT. 3 mm OF ORANGE-GREEN GOUGE ON FRACTURE AT 34° TO C.A.							
	(19.91 - 21.00) MODERATELY BRECCIATED.							
	(21.90) LOCAL TRACES MAGNETITE.							
	(22.61 - 22.96) MODERATELY BRECCIATED.							
	(29.68 - 32.67) WEAKLY TO MODERATELY BRECCIATED; BRECCIATION INCREASING WITH DEPTH.							
	(30.09 - 32.67) 1 - 2% DISSEMINATED PY.							
	(31.24 - 32.39) WEAKLY SILICIFIED.							
	(31.93) INTENSELY BRECCIATED; HEALED FAULT TO 50° TO C.A.							
	(32.39 - 32.67) MODERATELY SILICIFIED.	11029	32.17	32.67	.5	.006	.01	-
	(32.64) QUARTZ VEINLET 6 mm WIDE AT 45° TO C.A. CONTAINS 5% PY.							
	(32.67) CONTACT WITH UNDERLYING SHACK QUARTZ VEIN AT ABOUT 50° TO C.A.							
32.67-33.04	SHACK QUARTZ VEIN - OFF-WHITE WITH WISPY GREY TO BROWN-GREY	11030	32.67	32.82	.15	.006	.01	-
	BANDS LOCALLY UP TO 3 mm WIDE, COMPOSED OF PY AND WALLROCK,	11031	32.82	33.04	.22	<.005	<.01	-
	SUBPARALLEL VEIN MARGINS AND ALONG IRREGULAR FRACTURES. LOCAL TRACES DISSEMINATED PY WITHIN VEIN QUARTZ. TOTAL PY AVERAGE ABOUT 2 - 3%. VEIN QUARTZ LOCALLY WEAKLY BRECCIATED.							
	(32.82) MINOR FAULT; SMEAR OF GREY GOUGE ON FRACTURE AT 56° TO C.A.							
33.04-35.39	ANDESITE - GREY-GREEN TO BLACK, VERY FINE GRAINED, GENERALLY	11032	33.04	33.54	.5	<.005	<.01	-
	MODERATELY BRECCIATED. CONTACT WITH OVERLYING SHACK VEIN FAULT AT 62° TO C.A.; SUBHEDRAL QUARTZ CRYSTALS PROJECT ABOUT 3 mm INTO FAULT GOUGE FROM LOWER SHACK VEIN MARGIN.							
	(33.04 - 33.08) FAULT. 25% VEIN QUARTZ PIECES WITHIN SOFT, INTENSELY BRECCIATED CORE AND GOUGE. FRACTURES AT 40° AND 55° TO C.A.							
	(33.08 - 33.47) PY 2 TO LOCALLY 4% DISSEMINATED.							
	(34.67 - 35.39) 10% SKARN; PY 2-3% DISSEMINATED AND ALONG IRREGULAR FRACTURES.							
35.39-36.42	GREYWACKE - GREY TO BROWN-GREY, CONGLOMERATIC WITH SUBROUND PEBBLES UP TO 22 mm ACROSS. PY 3 TO LOCALLY 5% DISSEMINATED AROUND RIMS OF PEBBLE-SIZE CLASTS. ABOUT 2% PERVASIVE SKARN							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	ALTERATION. UPPER CONTACT AT ABOUT 44° TO C.A.; LOWER CONTACT AT ABOUT 55°.							
	(35.72 - 35.86) PY 5%.	11033	35.70	36.00	.3	NOT ASSAYED		
	(36.24 - 36.42) PY 5%.							
36.42-37.50	ANDESITE - DARK GREYISH GREEN, VERY FINE GRAINED. LOCALLY WEAKLY BRECCIATED.							
	(36.70 - 36.96) PY 5 - 10%; SKARN 5%.							
37.50	END OF HOLE							

LOCATION: 1524.6 W / 250.4 S
HOLE STARTED: NOVEMBER 21, 1988
HOLE COMPLETED: NOVEMBER 23, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 213.25 m LENGTH: 69.00 m
AZIMUTH: 041° INCLIN.: - 46°
DIP TESTS: NONE TAKEN
HOR. PROJ.: 47.6 m VERT. PROJ.: 49.7 m

OBJECTIVE: TEST CP SHOWING IN SKARN

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
0.00 - 3.00	CASING							
3.00 - 7.97	SKARN - PALE GREYISH GREEN TO PALE ORANGE-BROWN, FINE TO LOCALLY MEDIUM GRAINED, MODERATELY FRACTURED ROCK. GREEN ANDESITE INCLUSIONS TO 29 cm WITHIN SKARN ABOVE 6.67 m; SKARN FORMED BY ALTERATION OF VOLCANIC. TRACES FINELY DISSEMINATED PY. CONTACT WITH UNDERLYING LIMESTONE DISCRETE AND IRREGULAR AT ABOUT 12° TO C.A.							
	(5.62 - 5.80) LIMESTONE BAND AT 54° TO C.A.							
7.97 -13.22	LIMESTONE - OFF-WHITE, WEAKLY BRECCIATED, CRYSTALLINE.							
	(11.03 - 11.22) LIMESTONE 5% ALTERED TO PALE GREEN AND PALE BROWN SKARN.							
	(11.90 - 12.00) GREEN, SOMEWHAT ALTERED LIMESTONE.							
	(13.22) CONTACT WITH UNDERLYING QUARTZ DIORITE DISCRETE AT 65° TO C.A.							
13.22-13.58	QUARTZ DIORITE - OFF-WHITE TO LIGHT GREEN-GREY, MEDIUM TO FINE GRAINED. CONTACT WITH UNDERLYING LIMESTONE DISCRETE AT 51° TO C.A.							
13.58-19.47	LIMESTONE - PALE GREY TO OFF-WHITE, COARSELY TO LOCALLY FINELY CRYSTALLINE, GENERALLY WEAKLY BRECCIATED.							
	(16.40) FAINT BANDS (RELICT BEDDING?) AT 40° TO C.A.							
19.47-20.45	ANDESITE - DARK TO MEDIUM GREEN, FINE GRAINED, MASSIVE, SOMEWHAT PORPHYRITIC IN UPPERMOST AND LOWERMOST 20 cm. UPPER CONTACT DISCRETE AT 35° TO C.A.; LOWER DISCRETE AT 49°.							
20.45-23.68	LIMESTONE - OFF-WHITE, GENERALLY COARSELY CRYSTALLINE.							
	(22.62 - 23.33) WEAKLY BRECCIATED.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(23.33 - 23.68) VERY FINELY CRYSTALLINE, BANDED AT ABOUT 45° TO C.A., PROBABLE SHEAR.							
	(23.68) FAULT. 3 mm PALE BROWN MUD ON FRACTURE AT 35° TO C.A.							
23.68-28.86	SKARN - AS FOR 3.00 - 7.97.							
	(24.12 - 24.48) MODERATELY BROKEN CORE.							
	(24.68 - 24.98) GREY-GREEN ANDESITE WITH SKARN ALTERATION ALONG FRACTURES.							
	(25.63 - 26.07) GREY COARSE GRAINED ANDESITE WITH 2% DISSEMINATED PY.							
	(26.58 - 26.92) AS ABOVE.							
	(28.86) CONTACT WITH UNDERLYING LIMESTONE DISCRETE AT 68° TO C.A.							
28.86-41.75	LIMESTONE - OFF-WHITE, COARSELY CRYSTALLINE, MASSIVE. LOCALLY WEAKLY BRECCIATED.							
	(37.53 - 41.75) PALE GREY, MEDIUM CRYSTALLINE.							
	(38.41) 3 cm WIDE BAND AT 40° TO C.A. CONTAINS 2% DISSEMINATED PY ALONG FRACTURE SURFACES; POSSIBLE HEALED SHEAR.							
	(41.75) CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 79° TO C.A.							
41.75-42.72	ANDESITE - GREYISH GREEN TO GREEN TO BROWN, VERY FINE GRAINED, MODERATELY FRACTURED. 30% ALTERED TO GARNET SKARN. AVERAGE ABOUT 1% DISSEMINATED PY. CONTACT WITH UNDERLYING LIMESTONE DISCRETE AT 51° TO C.A.							
	(42.15) QUARTZ VEINLET 2 mm WIDE AT 5° TO C.A. CONTAINS 5% PY ALONG MARGINS.							
	(42.33 - 42.38) 2% DISSEMINATED PO.	11030	42.10	42.40	.3	NOT ASSAYED		
	(42.38) TRACE CP.							
42.72-65.39	LIMESTONE - OFF-WHITE TO PALE GREY TO LIGHT GREY MEDIUM TO COARSELY CRYSTALLINE. CONTACT WITH UNDERLYING QUARTZ DIORITE AT 67° TO C.A.							
	(51.16) PY 1% PO(?) 1% ALONG STYLOLITE AT 38° TO C.A.							
	(57.24 - 58.78) FAINT BANDS AT 75° TO C.A.							
	(60.18) PY 5% WITHIN BAND 4 mm WIDE AT ABOUT 50° TO C.A.; BAND OFFSET UP TO 12 mm BY FAULTS AT 35° - 45° TO C.A.							
65.39-65.89	QUARTZ DIORITE - LIGHT GREY, FINE GRAINED, SOMEWHAT PORPHYRITIC. PY 1% ALONG BOTH UPPER AND LOWER CONTACTS.							
	(65.78 - 65.89) ROCK 20% SKARN.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
	(65.89) CONTACT WITH UNDERLYING LIMESTONE DISCRETE AT 65° TO C.A.							
65.89-67.81	LIMESTONE - AS FOR 42.72 - 65.39. CONTACT WITH UNDERLYING FELDSPAR PORPHYRY DISCRETE AT 50° TO C.A.							
67.81-69.00	FELDSPAR PORPHYRY - DEEP GREEN, APHANITIC MATRIX. ROCK ABOUT 2% PALE GREENISH CREAM FELDSPAR PHENOCRYSTS UP TO 2 mm LONG. MODERATELY SILICIFIED HARD ROCK. MODERATELY BROKEN CORE THROUGHOUT. TRACES DISSEMINATED PY.							
69.00	END OF HOLE							

LOCATION: 1475.3 W / 313.3 S
HOLE STARTED: DECEMBER 14, 1988
HOLE COMPLETED: DECEMBER 16, 1988
CORE RECOVERY: 98.4 %
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 203.95 m LENGTH: 48.00 m
AZIMUTH: - INCLIN.: - 90°
DIP TESTS: NO - TUBE BROKEN BY DRILLER
HOR. PROJ.: - VERT. PROJ.: 48.00

OBJECTIVE: TEST SHACK DOWN DIP OF SH-88-11

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 2.00	CASING							
	(1.70 - 2.00) LIMESTONE AS BELOW.							
2.00 - 3.36	LIMESTONE - LIGHT GREY TO PALE GREY TO MEDIUM GREY, GENERALLY FAINTLY BANDED AT 80° TO 85° TO C.A. LOCALLY WEAKLY BRECCIATED. CONTACT WITH UNDERLYING SKARN DISCRETE AT 33° TO C.A.							
	(2.43 - 2.61) BROWN-GREEN PYRITIC (3% DISSEMINATED) SKARN	11039	2.40	2.70	.3	NOT ASSAYED		
3.36 - 4.64	SKARN - LIGHT GREYISH GREEN TO PALE BROWN TO BRIGHT PALE GREEN, 80% GARNET, 10% DIOPSIDE, LOCALLY UP TO 3% PY. IRREGULAR CONTACT WITH UNDERLYING ANDESITE AT ABOUT 60° TO C.A.							
4.64 -18.79	ANDESITE - DARK GREYISH GREEN TO MAROON, FINE GRAINED, GENERALLY WEAKLY FRACTURED WITH PALE GREEN SKARN MINERALS LINING FRACTURES. PREDOMINANTLY CLASTIC ROCK. CONTACT WITH UNDERLYING PORPHYRY DISCRETE AT 54° TO C.A.							
	(5.70) FRACTURES AT 14° TO C.A.							
	(7.30 - 13.44) 1-2%, LOCALLY 5%, MAGNETITE.							
	(7.78 - 9.27) CLASTIC; CLASTS TO 4 mm.							
	(9.27 - 10.33) DARK GREYISH MAROON WITH 5% HEMATITE.							
	(9.62 - 10.30) MODERATELY BROKEN CORE.							
	(10.33 - 18.79 CLASTIC.							
	(12.17) BANDING AT 52° TO C.A.							
	(12.17 - 12.80) PY 4-5% DISSEMINATED AND AS IRREGULAR MASSES. WEAKLY SILICIFIED.	11040	12.17	12.80	.63	NOT ASSAYED		
	(13.33) BAND PALE GREEN SKARN 2.8 cm WIDE AT 35° TO C.A.							
	(18.20 - 18.59) MODERATELY BROKEN CORE.							
18.79-33.43	FELDSPAR PORPHYRY - LIGHT GREENISH GREY, MASSIVE, LOCALLY							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	WEAKLY FRACTURED. PALE GREENISH CREAM COLOURED FELDSPAR PHENOCRYSTS AVERAGE 2 mm LONG IN APHANITIC MATRIX. PHENOCRYSTS FORM 5-7% ROCK VOLUME. GENERALLY SOMEWHAT BROKEN CORE BELOW 23.57.							
	(24.63 - 24.80) MODERATELY BROKEN CORE.							
	(31.80 - 33.43) MODERATELY FRACTURED.							
	(32.80 - 33.43) MODERATELY BROKEN CORE.							
	(33.00 - 34.50) GROUND CORE; 50% RECOVERY.							
33.43-37.91	ANDESITE - GREYISH GREEN TO DARK GREY, FINE GRAINED, WEAKLY TO MODERATELY FRACTURED, 0.5 - 2% DISSEMINATED PY.							
	(33.43 - 34.50) MODERATELY BROKEN CORE.							
	(36.37) CARB VEIN 17 mm WIDE AT 21° TO C.A. EMPLACED ALONG MINOR FAULT.	11041	36.10	36.50	.4	NOT ASSAYED		
	(37.62 - 37.91) BLEACHED PALE GREY-GREEN.	11042	37.41	37.91	.5	<.005	<.01	-
	(37.91) CONTACT WITH UNDERLYING QUARTZ VEIN DISCRETE AT 19° TO C.A.							
37.91-38.43	SHACK QUARTZ VEIN - OFF-WHITE WITH LOCAL GREENISH GREY LAMINAE SUBPARALLEL VEIN MARGINS. LOCAL TRACES DISSEMINATED PY.	11043	37.91	38.15	.24	.022	.05	.03
		11044	38.15	38.26	.11	.408	1.20	.30
	(38.15 - 38.26) PY 5%, CP 1%, SP 0.5%, PO TRACE.	11045	38.26	38.43	.17	.005	<.01	.01
	(38.15) FAULT. 2 mm GREY GOUGE ON FRACTURE AT 34° TO C.A.							
	(38.43) FAULT. 2 mm OF FINELY BROKEN CORE AND GOUGE ON FRACTURE AT 30° TO C.A.							
38.43-49.00	ANDESITE - DARK GREEN, FINE GRAINED, MASSIVE, MODERATELY FRACTURED WITH PALE GREEN SKARN ALONG FRACTURES ABOVE 43.30. GREENISH GREY, FINE GRAINED, CLASTIC, APPROACHING GREYWACKE IN COMPOSITION BELOW 43.30.	11046	38.43	38.93	.5	<.005	<.01	-
	(39.00 - 39.47) MODERATELY BROKEN CORE.							
	(46.53 - 46.69) WEAKLY CARBONATIZED AND SILICIFIED.							
	(47.62 - 48.00) MODERATELY CARBONATIZED, WEAKLY SILICIFIED, 5-10% DISSEMINATED PY.	11047	47.60	48.00	.4	<.005	<.01	-
48.00	END OF HOLE							

LOCATION: 1485.8 W, 315.6 S
HOLE STARTED: DECEMBER 17, 1988
HOLE COMPLETED: DECEMBER 19, 1988
CORE RECOVERY: 100 %
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 203.23 m LENGTH: 49.50 m
AZIMUTH: - INCLIN.: - 90°
DIP TESTS: -88.5° AT 49.50 m
HOR. PROJ.: 0.7 m VERT. PROJ.: 49.50 m

OBJECTIVE: TEST SHACK VEIN

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 3.00	CASING							
	(2.70 - 2.91) PALE GREY FINELY CRYSTALLINE LIMESTONE.							
	(2.91 - 3.00) PALE BROWNISH GREEN SKARN							
3.00 - 3.25	SKARN - PALE PINKISH BROWN, FINE GRAINED, MASSIVE. CONTACT WITH UNDERLYING PORPHYRY DISCRETE AT ABOUT 60° TO C.A.							
3.25 -20.80	FELDSPAR PORPHYRY - GREYISH GREEN; PALE GREENISH CREAM FELDSPAR PHENOCRYSTS AVERAGE 1.5 mm ACROSS FORM ABOUT 6% ROCK VOLUME. APHANITIC MATRIX. LOCALLY WEAKLY FRACTURED. LOCAL TRACE PY.							
	(3.25 - 6.45) GENERALLY MODERATELY BROKEN CORE; LOCAL 5% ALTERATION OF FELDSPARS TO CLAY MINERALS.							
	(17.88 - 20.44) MODERATELY FRACTURED							
	(20.44-- 20.80) INTENSELY FRACTURED; WEAKLY SILICIFIED.							
	(20.80) CONTACT WITH UNDERLYING ANDEISTE DISCRETE, IRREGULAR AT ABOUT 64° TO C.A.							
20.80-41.35	ANDESITE - DARK GREEN TO GREYISH GREEN, FINE GRAINED, GENERALLY WEAKLY FRACTURED WITH PALE GREEN SKARN LINING FRACTURES. CLASTIC FROM 20.80 - 25.30. FLOW FROM 25.30-41.35.							
	(22.40 - 23.43) MODERATELY FRACTURED AT ABOUT 20° TO C.A.							
	(30.96 - 33.63) MAGNETITE 2% DISSEMINATED.							
41.35-42.89	GREYWACKE(?) - LIGHT GREENISH TO BROWNISH GREY, FINE GRAINED, SILICEOUS, GENERALLY MODERATELY BRECCIATED. 2% RANDOMLY ORIENTED, DISCONTINUOUS QUARTZ VEINLETS. AVERAGE 3% DISSEMINATED PY. CONTACT WITH OVERLYING ANDESITE AT 22° TO C.A.; CONTACT WITH UNDERLYING ANDESITE AT 60°.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(41.81 - 42.11) HEALED FAULT. 5 TO 7% DISSEMINATED PY. WISPY BANDS AT 52° TO C.A.	11048	41.31	41.81	.5	<.005	<.01	-
	(41.81 - 41.92) 10% CARB VEIN LENSES; 5% VEIN QUARTZ LENSES. LIKELY SHACK VEIN ZONE.	11049	41.81	41.92	.11	<.005	.01	-
		11050	41.92	42.42	.5	<.005	<.01	-
42.89-49.50	ANDESITE - GREYISH GREEN TO DARK GREEN, FINE GRAINED FLOW. 1% DISSEMINATED PY. MODERATELY FRACTURED WITH PALE GREEN SKARN LINING FRACTURES.							
	(47.48 - 48.43) INTENSELY BRECCIATED; LIKELY HEALED FAULT. INTERVAL 15% PALE GREEN SKARN ALONG FRACTURES. ALSO 2% PY, 5% QUARTZ, 5% CARB. FAULT(?) AT ABOUT 15° TO C.A.							
49.50	END OF HOLE							

CAPTAIN HOOK
MINERAL CLAIM

PROJECT: SHACK
D.D. HOLE #: SH-88-1

LOCATION: 1435.8 W / 271.1 S
HOLE STARTED: SEPTEMBER 21, 1988
HOLE COMPLETED: SEPTEMBER 27, 1988
CORE RECOVERY: 98%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 209.55 m LENGTH: 80.5 m
AZIMUTH: 167° INCLIN.: - 47°
DIP TESTS: - 47° AT 80.5 m
HOR. PROJ: 54.90 m VERT. PROJ: 58.80 m

OBJECTIVE: TEST SHACK VEIN

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00- 2.70	CASING							
2.70-10.00	LIMESTONE - MOTTLED PALE GREY TO LIGHT GREY, LOCAL OFF-WHITE INTERVALS. CRYSTALLINE; CRYSTALS AVERAGING 1-2 mm ACROSS. LOCALLY WEAKLY TO MODERATELY FRACTURED WITH ABOUT 20% OF FRACTURES AT 35° TO C.A. AND REMAINDER RANDOMLY ORIENTED. OCCASSIONAL POORLY DEVELOPED STYLOLITES.							
	(3.00 - 3.37) MODERATELY BROKEN CORE.							
	(3.00 - 4.50) GROUND CORE; 43% RECOVERY.							
	(4.50 - 6.00) GROUND CORE; 61% RECOVERY.							
	(5.64) PALE GREY QUARTZ VEINLET 8 mm WIDE AT 15° TO C.A.; NO SULPHIDES SEEN.							
	(10.42 - 10.72) IRREGULAR PALE GREY VEIN QUARTZ COMPRISES ABOUT 35% OF ROCK VOLUME. DISCRETE CONTACTS BETWEEN VEIN QUARTZ AND LIMESTONE. LOCAL 3% PY OVER 3 cm LOCAL 1% PO, LOCAL TRACES CP. OFF-WHITE TO PALE GREY QUARTZ VEIN 2.5 cm WIDE AT 40° TO C.A. AT 10.72.	10701	10.40	10.90	.50	.006	.03	-
	(10.72 - 10.82) MODERATELY BROKEN CORE.							
	(12.40) WISPY BANDS TO FEW mm WIDE AT 50° TO C.A.							
	(13.45) BAND OF DARK GREEN SKARN 8 mm WIDE AT 35° TO C.A.							
	(14.10 - 14.42) PALE GREY TO OFF-WHITE INTERVAL.							
	(15.00 - 15.35) PALE GREY TO OFF-WHITE INTERVAL.							
	(15.48 - 17.00) PALE GREY TO OFF-WHITE INTERVAL.							
	(17.43 - 17.94) MODERATELY FRACTURED.							
	(18.35 - 18.72) PALE GREY TO OFF-WHITE INTERVAL.							
	(18.88) CONTACT WITH UNDERLYING SKARN DISCRETE AT 86° TO C.A.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
18.88-21.37	**SKARN** LIGHT TO MEDIUM GREEN, LOCAL LIGHT BROWN PATCHES. OCCASIONAL DARK GREY SECTIONS. DENSE ROCK. GARNETITE; FINE GRAINED, MASSIVE. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 51° TO C.A. ABOUT 0.5% CARB THROUGHOUT AS IRREGULAR WISPY, OFF-WHITE VEINLETS UP TO 2 mm WIDE. LOCAL TR PY.	10702	18.88	19.38	.5	<.005	.06	-
		10703	19.38	19.88	.5	.012	.05	-
		10704	19.88	20.38	.5	.005	.06	-
		10705	20.38	20.88	.5	<.005	.04	-
		10706	20.88	21.37	.49	<.005	.02	-
	(18.88 - 18.91) MODERATELY BRECCIATED; SKARN FRAGMENTS TO 8 mm ACROSS IN APHANITIC DARK GREY MATRIX.							
	(18.86 - 19.94) AS ABOVE; FRAGMENTS TO 15 mm. PROBABLY HEALED FAULT.							
	(21.10 - 21.30) PORPHYRY. ROCK 60% FELDSPAR WITH OFF-WHITE PHENOCRYSTS TO 5 mm, 30% QUARTZ, 8% GARNET, 2% MAFICS. UPPER CONTACT AT ABOUT 18° TO C.A. DYKE?							
21.37-22.03	**ANDESITE** - DARK TO MEDIUM GREEN, VERY FINE GRAINED, FAINTLY BANDED, 5% DISSEMINATED PY.	10707	21.37	21.87	.5	<.005	.05	-
22.03-29.04	**FELDSPAR PORPHYRY** - GREYISH GREEN, MASSIVE. AVERAGE ABOUT 10% CREAM COLOURED, SUBROUND TO BLOCKY FELDSPAR PHENOCRYSTS TO 7 mm ACROSS (AV. 3 mm). GREENISH BLACK HORNBLENDE? PHENOCRYSTS TO 6 mm LONG OFTEN RIMMED BY HALO OF LIGHT GREEN MINERAL 0.5 mm WIDE; THIS LIGHT GREEN MINERAL ALSO OCCURS WITHIN THE CORES OF THESE PHENOCRYSTS. UPPER CONTACT DISCRETE AT 43°; LOWER HEALED FAULT AT 67°. LOCAL CALCITE VEINLETS TO 1 mm WIDE.							
	(22.80 - 23.50) CORE BROKEN INTO PIECES 5 - 10 cm LONG.							
	(25.97 - 26.48) MODERATELY BROKEN CORE.							
	(26.72) QUARTZ (50%) - CARB (50%) VEINLET AT 75° TO C.A.							
	(28.58 - 29.04) ROCK 5% PALE GREY QUARTZ (95%) - CARB (5%) VEINLETS TO 4 mm WIDE, RANDOMLY ORIENTED.							
29.04-35.57	**ANDESITE** - GREYISH GREEN, VERY FINE GRAINED MASSIVE. WEAKLY TO MODERATELY FRACTURED THROUGHOUT. FRACTURES WISPY, HAIRLINE AND RANDOMLY ORIENTED FOR THE MOST PART. FRACTURES FILLED BY PALE GREEN SKARN (80%), CALCITE (15%) AND BY QUARTZ (5%). SKARN CONTENT GREATEST IN BOTTOM HALF OF INTERVAL. 1 - 2% COMBINED DISSEMINATED PY AND PO.							
	(29.04 - 29.52) 5% COMBINED DISSEMINATED PO AND PY.	10708	29.04	29.52	.48	<.005	.04	-
	(29.04 - 29.08) INTENSELY BRECCIATED; PY 10%; HEALED FAULT AT 60° TO C.A.							
	(30.47 - 30.75) MODERATELY BROKEN CORE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(31.41 - 32.20) PY, PO 7% COMBINED DISSEMINATED ALONG FRACTURES	10709	31.50	32.00	.5	<.005	.02	-
	(34.02) PALE CREAMY GREEN SKARN (70%) QUARTZ (25%) CARB (5%) BAND 2.2 cm WIDE AT 37° TO C.A.							
	(34.15 - 34.56) 5 TO 7% DISSEMINATED PY AS BLEBS TO 4mm ACROSS.	10710	34.15	34.56	.41	<.005	.04	-
	(35.22 - 35.57) MEDIUM GREY-GREEN WITH WELL DEVELOPED FOLIATION AT 45° TO C.A.	10711	35.07	35.57	.5	<.005	.04	-
35.57-36.00	**SHACK QUARTZ VEIN** - OFF-WHITE QUARTZ WITH CAVITIES UP TO 10 mm DIAMETER LINED BY EUHEDRAL QUARTZ CRYSTALS TO FEW mm LONG. VEIN CONTAINS ABOUT 1% CARB WITHIN 2 CM OF BOTH H/W AND F/W CONTACTS. PO AND PY AVERAGE ABOUT 0.5%. LOCAL TR CP. CONTACT WITH OVERLYING ANDESITE AT 60° TO C.A.; LOWER CONTACT NOT MEASUREABLE BECAUSE CORE BROKEN. MODERATELY BROKEN CORE THROUGHOUT.	10712	35.57	36.00	.43	.026	.15	-
	(35.78) WEDGE-SHAPED ANDESITE XENOLITH 5 cm BY 2 cm CONTAINS 10% DISSEMINATED PY.							
36.00-80.50	**ANDESITE PORPHYRY, ANDESITE** - GREYISH GREEN, FINE GRAINED MASSIVE. FELDSPAR PHENOCRYSTS, WHICH COMPRISE ABOUT 5% OF ROCK VOLUME IN PORPHYRITIC INTERVALS, ARE SUBANGULAR AND UP TO 4 mm (AVERAGE 1.5 mm) ACROSS. CONTACTS BETWEEN ANDESITE AND ANDESITE PORPHYRY GRADATIONAL OVER ABOUT 20 cm. INTERVAL ABOUT 65% ANDESITE POROHYRY, 35% ANDESITE. WEAKLY TO LOCALLY MODERATELY FRACTURED WITH PALE GREEN SKARN (80%), CALCITE (15%) AND QUARTZ (5%) LINING FRACTURES.	10713	36.00	36.50	.50	<.005	.04	-
	(36.00 - 36.23) GREENISH GREY, PYRITIC (10-15% DISSEMINATED) WEAKLY FOLIATED INTERVAL IN VEIN F/W.							
	(36.43) OFF-WHITE CARB (65%) - QUARTZ (35%) VEINLET 7 mm WIDE AT 70° TO C.A. VEINLET DISPLACED 1.5 cm BY HAIRLINE FAULT AT 55° TO C.A.							
	(37.38) PALE GREY QUARTZ (75%) - CARB (25%) VEINLET 13mm WIDE AT 63° TO C.A.							
	(38.27 - 38.82) 10% FINELY DISSEMINATED PY THROUGHOUT MODERATELY FRACTURED INTERVAL.	10714	38.27	38.82	.55	.005	.02	-
	(39.53) PATCHY PALE GREEN SKARN BAND 1.0 TO 2.5 cm SIDE AT 31° TO C.A.							
	(41.25 - 42.24) 5% PY DISSEMINATED AND AS IRREGULAR MASSES; MODERATELY BRECCIATED; ABOUT 3% IRREGULAR CARB VEINLETS TO 4 mm WIDE.	10715	41.60	42.10	.5	<.005	.05	-

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(43.27 - 43.64) AS ABOVE.							
	(47.85 - 48.82) VOLCANIC ALTERED 2 - 3% TO DARK GREEN SKARN AS IRREGULAR MASSES TO 1.5 cm LONG.							
	(49.20 - 49.70) AS FOR 36.00 - 36.23							
	(55.03 - 59.39) ABOUT 7% FINELY DISSEMINATED PY. LOCALLY MODERATELY BRECCIATED.							
	(58.34) CREAMY WHITE QUARTZ (90%) - CARB (10%) VEINLET 5 mm WIDE AT 25° TO C.A.	10716	58.00	58.50	.50	<.005	.06	
	(58.80 - 59.26) MODERATELY BRECCIATED; ANDESITE ABOUT 30% BLEACHED PALE GREYISH GREEN. LOCAL VEIN QUARTZ INFILLING CAVITIES BETWEEN BRECCIA FRAGMENTS. CAVITIES TO FEW mm WIDE, 30 mm LONG, IRREGULAR. GENERALLY FINELY DISSEMINATED PY ALONG BORDERS OF QUARTZ MASSES. QUARTZ ABOUT 3% ROCK VOLUME.	10717	58.80	59.30	.5	<.005	.03	
	(61.50 - 61.59) PROBABLE HEALED FAULT. MODERATELY BRECCIATED WITH 20% VEIN QUARTZ. BANDING AT 55° TO C.A.							
	(63.28) PALE GREY CARB (80%) - QUARTZ (20%) VEINLET 12 mm WIDE AT 68° TO C.A.							
	(68.92 - 68.99) PROBABLE HEALED FAULT. MODERATELY BRECCIATED. PALE GREY CARB (65%) - QUARTZ (35%) VEIN FORMS 75% OF ROCK VOLUME; ROCK 25% ANGULAR ANDESITE FRAGMENTS. BANDING AT 42° TO C.A.							
	(72.72) OFF-WHITE QUARTZ (80%) - CARB (20%) VEINLET 13 MM WIDE AT 40° TO C.A. CONTAINS TRACES DISSEMINATED PY. 5% PY IN WALLROCK WITHIN 1 cm OF VEINLET MARGINS.							
	(72.89 - 73.10) ROCK 30% BLEACHED PALE GREEN SKARN(?).	10718	72.70	73.10	.4	<.005	.05	
	(73.07) QUARTZ VEINLET 7 mm WIDE AT 34° TO C.A.							
	(78.64) OFF-WHITE QUARTZ (75%) - CARB (25%) VEIN 14 mm WIDE AT 42° TO C.A. CONTAINS TR PY.							
80.50	END OF HOLE							

LOCATION: 1451.2 W / 309.3 S
HOLE STARTED: SEPTEMBER 28, 1988
HOLE COMPLETED: OCTOBER 1, 1988
CORE RECOVERY: 98%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 204.84 m LENGTH: 27.0 m
AZIMUTH: 203° INCLIN.: - 61°
DIP TESTS: - 60° AT 27.0 m
HOR. PROJ: 13.20 m VERT. PROJ: 23.50 m

OBJECTIVE: TEST SHACK VEIN NEAR IP ANOMALY LINE 1450W

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00- 6.00	**CASING** - NO CORE RECOVERED							
6.00- 6.17	**GRAVEL** - SUBROUND TO SUBANGULAR PEBBLES OF VARIOUS LITHOLOGIES							
6.17- 9.13	**LIMESTONE** - PALE GREY TO LIGHT GREY; MODERATELY FRACTURED; FAINTLY BANDED AND MOTTLED THROUGHOUT. OCCASSIONAL POORLY DEVELOPED STYLOLITES BELOW 8.37. (6.00 - 7.50) GROUND CORE; 64% RECOVERY. (7.13 - 8.36) MODERATELY BROKEN CORE.							
9.13-10.33	**SKARN** - LIGHT GREEN TO BRIGHT MEDIUM GREEN TO PALE CREAMY BROWN, WEAKLY TO LOCALLY MODERATELY BRECCIATED, FINE GRAINED DENSE ROCK. UPPER CONTACT AT 40° TO C.A.; LOWER DISCRETE AT 60°. THE BRIGHT MEDIUM GREEN MINERAL WITHIN THE SKARN, WHICH GIVES THE ROCK A MOTTLED APPEARANCE, IS PROBABLY DIOPSIDE.							
10.33-10.48	**ANDESITE** - LIGHT GREEN, FINE GRAINED, MODERATELY BRECCIATED.							
10.48-10.86	**FELSITE DYKE** - CREAMY WHITE, FINE TO MEDIUM GRAINED, MASSIVE, MOTTLED APPEARANCE. ABOUT 75% FELDSPAR, 23% QUARTZ, 2% GREEN MAFIC MIERALS. UPPER CONTACT DISCRETE AT 82° TO C.A.; LOWER AT ABOUT 50°.							
10.86-20.98	**ANDESITE** - DARK GREEN TO GREYISH GREEN, VERY FINE GRAINED, MODERATELY TO WEAKLY FRACTURED. FRACTURES IRREGULAR, RANDOMLY ORIENTED, HAIRLINE, LINED BY PALE GREEN SKARN(?). 10CAL tr CARB AS VEINLETS. Tr DISSEMINATED py THROUGHOUT. (11.12 - 14.11) MODERATELY BRECCIATED, OFTEN CRUDELY DEVELOPED FOLIATION AT ABOUT 70° TO C.A.							
	(13.62 - 13.69) Py 5% DISSEMINATED AND AS ELONGATE MASSES TO 2 BY 8 mm.	10732	13.50	13.90	.4	.006	.03	

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu pp
	(13.69 - 13.81) DARK MAROON TO GREY, DENSE, WEAKLY MAGNETIC INTERVAL CONTAINING ABOUT 10% VERY FINELY DISSEMINATED PO.							
	(14.11 - 14.70) CONGLOMERATIC; ROUNDED PEBBLES TO 2 cm DIAMETER							
	(14.70 - 20.98) MODERATELY TO LOCALLY INTENSELY BRECCIATED.							
	(15.45 - 16.82) INTENSELY BRECCIATED WITH ABOUT 10% DARK BROWN, FINE GRAINED, LOCALLY WEAKLY MAGNETIC HEMATITE(?) WITH PO(?)	10733	15.8	16.3	.5	<.005	<.01	16
	(16.60 - 16.78) FAULT. MODERATELY TO FINELY BROKEN CORE INCLUDING PIECES OF WHITE QUARTZ VEINLET 2 mm WIDE. FAULT ORIENTATION NOT MEASURABLE.							
	(18.21 - 18.52) 5% PALE GREY CARB (60%) - QUARTZ (40%) VEINLETS TO 7 mm WIDE AT 20° - 40° TO C.A.							
	(18.82 - 20.98) GREEN-GREY, INTENSELY BRECCIATED, MODERATELY WELL DEVELOPED FOLIATION AT ABOUT 32° TO C.A.; GENERALLY MODERATELY SILICIFIED. DENSE; ABOUT 10% PY BOTH FINELY DISSEMINATED AND AS WISPY LAMINAE PARALLEL FOLIATION.	10719	20.48	20.98	.5	.005	.04	-
20.98-23.58	**SHACK QUARTZ VEIN** - MOTTLED OFF-WHITE AND PALE GREY WITH SULPHIDES FORMING PALE BROWN, BRASSY YELLOW AND BROWN PATCHES. VEIN COMPOSED OF APPROXIMATELY 92% QUARTZ, 3% PO, 3% CP AND 2% PY. GENERAL SEQUENCE OF FORMATION: QUARTZ FOLLOWED BY PY THEN PO THEN CP. NO CARB WHERE TESTED. VEIN OFTEN WEAKLY FRACTURED LOCALLY MODERATELY FRACTURED, USUALLY WITH SULPHIDE FORMING HAIRLINE VEINLETS UP TO 1 mm WIDE ALONG FRACTURES. ABOUT 3% OF THE SULPHIDES OCCUR ALONG FRACTURES, 5% OCCUR AS DISSEMINATED BLEBS UP TO A FEW mm ACROSS, AND ABOUT 92% OF THE SULPHIDES OCCUR AS IRREGULAR, BRANCHING MASSES INFILLING CAVITIES LINED BY EUHEDRAL TO SUBHEDRAL, STUBBY QUARTZ CRYSTALS. THESE QUARTZ CRYSTALS RANGE UP TO 9 mm WIDE AND 15 mm LONG AND OFTEN HAVE SMOKEY RIMS, ESPECIALLY BETWEEN 21.89 AND 22.88. THE SULPHIDE MINERALS ARE ABOUT 85% CP, 10% PO AND 5% PY FROM 20.98-22.20. SULPHIDES ARE ABOUT 80% PO, 15% PY AND 5% CP FROM 22.20-23.22. FROM 23.22 - 23.58 THE SULPHIDE MINERALS ARE ABOUT 90% CP, 8% PY AND 2% PO. THE CP MASSES BETWEEN 20.98 AND 22.20 OFTEN HAVE PO RIMS ABOUT 1.5 mm WIDE, AS WELL AS LOCAL FAINT PO INCLUSIONS TO 2 mm ACROSS. BETWEEN 22.20 AND 23.22 PY MAINLY OCCURS AS SUBHEDRAL CUBIC CRYSTALS AVERAGING 1.5-3 mm(MAX 5 mm) ACROSS WITHIN PO, ESPECIALLY NEAR THE MARGINS OF THE PO MASSES.							

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
	THE SULPHIDE MASSES WITHIN SHACK VEIN GENERALLY ARE ABOUT 2 cm BY 1 cm ACROSS, AND ARE LARGEST WITHIN THE CENTRAL THIRD OF THE VEIN WHERE THEY RANGE UP TO ABOUT 7 cm BY 5 cm. UPPER CONTACT WITH ANDESITE DISCRETE AT 29° TO C.A.; LOWER AT ABOUT 32° DEGREES. VEIN QUARTZ LOCALLY CORRODED AND INVADED BY SULPHIDES.							
	(21.08) GREEN FELTED MINERAL (CHLORITE?) OCCURS ALONG RIM OF CP MASSES.							
	(21.27) SUBHEDRAL PY CRYSTALS TO 12 mm ACROSS							
	(22.50 - 24.00) GROUND CORE 96% RECOVERY.							
	(23.14 - 23.58) FEW WISPY LAMINAE LIKELY COMPOSED OF ANDESITE WALLROCK SUBPARALLEL LOWER VEIN CONTACT.							
	10720: CP 6%, PY 5%, PO 1%	10720	20.98	21.34	.36	.762	6.83	2.89
	10721: CP 12%, PY 1%, PO 3%	10721	21.34	21.51	.17	.226	11.00	6.90
	10722: CP 9%, PY TR, PO 4%	10722	21.51	21.68	.17	.026	4.56	2.67
	10723: CP 2%, PY -, PO 2%	10723	21.68	21.92	.24	.016	1.91	1.56
	10724: CP 5%, PY -, PO 1%	10724	21.92	22.13	.21	.016	2.93	2.00
	10725: CP 1%, PY 9%, PO 6%	10725	22.13	22.40	.27	.016	.66	.42
	10726: CP 3%, PY 2%, PO 10%	10726	22.40	22.70	.30	.016	1.60	1.07
	10727: CP 1%, PY 2%, PO 15%	10727	22.70	22.95	.25	.146	2.28	.99
	10728: CP 1%, PY 2%, PO 2%	10728	22.95	23.20	.25	.406	1.37	.49
	10729: CP 2%, PY 1%, PO TR	10729	23.20	23.58	.38	.274	.87	.52
23.58-27.00	**ANDESITE** - GREY-GREEN, VERY FINE GRAINED, MODERATELY WELL DEVELOPED FOLIATION AT ABOUT 30° TO C.A. FROM 23.58 - 25.12. ANDESITE MODERATELY SILICIFIED FROM 23.58 - 24.73 WITH WISPY LENSES OF VEIN QUARTZ UP TO 3 mm WIDE AND 15 mm LONG SUBPARALLEL FOLIATION. PY 4%, PO TR, CP TR FROM 23.58-24.25, MAINLY WITHIN ANDESITE.	10730	23.58	24.00	.42	.010	.07	-
		10731	24.00	24.50	.50	.034	.11	-
								Cu ppm
		10743	24.50	25.00	.50	.020	.61	25
	(23.78 - 24.28)OFF-WHITE QUARTZ VEIN 2cm WIDE SUBPARALLEL C.A.	10744	25.00	25.50	.50	<.005	.07	29
	(24.00 - 24.28) ROCK 75% QUARTZ, 25% GREY ANDESITE.							
	(24.28) FAULT. GREY MUD 6 mm THICK ON FRACTURE AT 30° TO C.A.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(24.28 - 26.44) MODERATELY BROKEN CORE.							
	(24.77) FAULT. GREY MUD 8 mm THICK ON FRACTURE AT ABOUT 30° TO C.A.							
	(25.46) CARB- QUARTZ VEINLET 3 mm WIDE SUBPARALLEL C.A.							
	(26.01 - 26.61) ROCK 75% STAINED BROWN AS IF WEATHERED NEAR SURFACE; PALE BROWN MUD TO FEW mm THICK WITHIN INTERVAL.							
27.00	END OF HOLE							

LOCATION: 1447.2 W / 301.1 S
HOLE STARTED: OCTOBER 2, 1988
HOLE COMPLETED: OCTOBER 6, 1988
CORE RECOVERY: 99.8%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 205.34 m LENGTH: 48.0 m
AZIMUTH: 200° INCLIN.: -60°
DIP TESTS: -58° AT 42.0 m
HOR. PROJ: 24.90 m VERT. PROJ: 41.00 m

OBJECTIVE: TEST SHACK VEIN AND IP ANOMALY BELOW SH - 88 - 2

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
0.00 - 3.00	CASING							
3.00 - 3.80	BOULDERS (?) - LIGHT GREY GRANODIORITE 50%, GREY LIMESTONE 40% GREEN ANDESITE 10%							
	(3.00 - 4.50) GROUND CORE; 93% RECOVERY.							
3.80 - 5.13	LIMESTONE - MEDIUM GREY WITH PALE GREY BANDS UP TO ABOUT 7 mm WIDE AT 35° TO C.A. FINELY CRYSTALLINE. MODERALTELY BROKEN CORE. CONTACT WITH UNDERLYING SKARN DISCRETE AT 13° TO C.A.							
5.13 - 5.32	SKARN - PALE GREEN-BROWN, FINE GRAINED, INTENSELY BRECCIATED. LOCAL TR CARB. ROCK 3% IRREGULAR PALE GREY QUARTZ VEINLETS. DENSE. LOCAL 2% PY.							
5.32 - 5.44	ANDESITE - LIGHT GREEN, FINE GRAINED, MASSIVE. CONTACT WITH UNDERLYING LIMESTONE DISCRETE AT 43° TO C.A.							
5.44 - 5.96	LIMESTONE - AS FOR 3.80 - 5.13 EXCEPT PALE GREY BANDS AT 10 - 15° TO C.A.							
	(5.61) OFF-WHITE, IRREGULAR QUARTZ VEIN ABOUT 1 cm WIDE - NO SULPHIDES SEEN.							
	(5.60 - 5.70) SKARN 15%, LIMESTONE 85%.							
5.96 -10.32	SKARN - PALE BROWN TO PALE GREEN, DENSE, MEDIUM TO FINE GRAINED, MASSIVE GARNETITE. CRYSTALS UP TO 4 mm (AV. 1.5 mm) DIAMETER MODERATELY FRACTURED; GENERALLY WEAKLY BRECCIATED. UPPER CONTACT DISCRETE, AND STYLOLITIC IN APPEARANCE WITH SKARN INVADING LIMESTONE, AT 15° TO C.A. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 44°. ROCK 96% GARNET, 2% CARB, 2% GREY-GREEN VERY FINE GRAINED CHLORITE? NO SULPHIDES SEEN BELOW 6.20.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(5.96 - 6.20) PY 1%, CP 0.5% ALONG LIMESTONE/SKARN CONTACT.							
	(7.20) CARB (80%) - CHLORITE? (20%) VEINLET 3 mm WIDE AT ABOUT 10° TO C.A.							
10.32-11.14	**ANDESITE** - DARK GREY TO LOCALLY GREEN, APHANITIC TO VERY FINE GRAINED, WEAKLY BRECCIATED.							
	(10.62 - 10.92) MODERATELY BROKEN CORE.							
11.14-12.63	**SKARN (?)** DARK MAROON TO LIGHT GREEN TO REDDISH BROWN, FINE GRAINED, WEAKLY TO MODERATELY BRECCIATED. INTERVAL ABOUT 43% REDDISH BROWN TO PALE GREEN GARNET, 3% BRIGHT GREEN DIOPSIDE(?) 45% MAGNETITE, 1% PY, 3% CHLORITE, 5% HEMATITE.							
	(11.14 - 11.42) DARK MAROON, STONGLY MAGNETIC AND MAGNETITE- AND HEMATITE-RICH INTERVAL.	10734	11.14	11.64	.5	<.005	<.01	.13
	(11.92) CONTACT BETWEEN UPPER GARNETITE AND LOWER MAGNETITE-HEMATITE ROCK DISCRETE AT 34° TO C.A.							
	(11.32 - 11.42) DISSEMINATED PY 5% AND HEMATITE 1%.							
	(11.92 - 12.39) AS FOR 11.14 - 11.42.							
	(12.10) DIOPIDE BANDS.							
12.63-21.66	**ANDESITE** - GREYISH GREEN TO DARK GREEN, GENERALLY VERY FINE GRAINED, MODERATELY FRACTURED ROCK. MODERATELY WELL DEVELOPED FOLIATION AT 35° TO C.A. MODERATELY SILICIFIED AND MODERATELY BRECCIATED BELOW 20.78.							
	(12.63 - 14.20) MODERATELY BROKEN CORE.							
	(12.81) PALE PINK - GREEN, ALTERED QUARTZ DIORITE? DYKE 3 cm WIDE AT 37° TO C.A.							
	(13.88 - 17.64) CLASTIC INTERVAL; DARK, ANGULAR SHARDS TO 15 mm ACROSS (AVERAGE 2 mm) WITHIN ANDESITIC MATRIX. LOCAL 1% PY.							
	(17.90 - 18.33) MODERATELY BROKEN CORE.							
	(19.11 - 21.00) MAROON HEMATITE 5 - 20%.							Cu ppm
	(20.72 - 21.00) PY 5% DISSEMINATED.	10735	20.66	21.16	.5	NOT ASSAYED		
	(21.00 - 21.66) PY 3% DISSEMINATED.	10736	21.16	21.66	.5	.005	.01	694
	(21.66) CONTACT WITH UNDERLYING QUARTZ VEIN DISCRETE AT 42°.							
21.66-22.31	**SHACK QUARTZ VEIN** - OFF-WHITE WITH LOCAL GREENISH GREY LAMINAE PARALLEL VEIN MARGINS. BROWN (PO) AND BRASSY YELLOW (CP) PATCHES UP TO FEW cm ACROSS. CP 2% THROUGHOUT AS IRREGULAR MASSES UP TO 15 mm BY 5 mm ACROSS; PO 5% IN TOPMOST 20 cm AS IRREGULAR MASSES UP TO 20 mm ACROSS. SULPHIDES ABOUT 95% AS IRREGULAR MASSES, 5% DISSEMINATED WITHIN BANDS PARALLEL VEIN	10737	21.66	22.00	.34	.052	.02	4029
		10738	22.00	22.31	.31	.138	.82	2966

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu ppm
	MARGINS AND AS HAIRLINE VEINLETS ALONG FRACTURES. TRACES TO 0.5% PY THROUGHOUT.							
	(21.72 - 21.86) PY 2%.							
	(22.04) SP 2% DISSEMINATED.							
	(22.10 - 22.31) MODERATELY BROKEN CORE.							
	(22.31) LOWER VEIN CONTACT FAULT; 3mm GREEN-GREY MUD ON FRACTURE AT 40° TO C.A.	10739	22.31	22.81	.5	.006	.06	113
		10740	22.81	23.39	.58	.005	.02	70
22.31-43.98	**ANDESITE** - GREEN TO DARK GREEN TO GREENISH GREY, GENERALLY SLIGHTLY PORPHYRITIC WITH FELDSPAR PHENOCRYSTS 1-3 mm IN APHANITIC TO FINE GRAINED MATRIX. MODERATELY TO WEAKLY FRACTURED WITH FRACTURES MAINLY AT 29° AND ALSO RANDOMLY ORIENTED.							
	(22.31 - 23.39) INTENSELY TO MODERATELY BRECCIATED; MODERATELY SILICIFIED; PY 3 TO 10% FINELY DISSEMINATED; ROCK ABOUT 10% BLEACHED LIGHT PINKISH GREY.							
	(22.46 - 22.50) FAULT. FINELY BROKEN CORE AND GREYISH GREEN MUD. ORIENTATION NOT MEASUREABLE.							
	(24.17) QUARTZ (80%)- CARB (20%) VEINLET 9 mm WIDE AT 23° TO C.A.; NO SULPHIDES SEEN.							
	(29.97 - 34.00) DARK GREEN TO LOCALLY BLACK CLASTIC INTERVAL WITH ANGULAR ANDESITE SHARDS TO 12 mm ACROSS. 2-3% DISSEMINATED PY THROUGHOUT.	10741	32.20	32.70	.5	NOT ASSAYED		
	(32.33 - 32.51) MODERATELY SILICIFIED AND BRECCIATED.							
	(34.93 - 36.90) PY 3 TO LOCALLY 8% FINELY DISSEMINATED.	10742	35.80	36.20	.4	NOT ASSAYED		
43.98-46.60	**FELDSPAR PORPHYRY** - GREYISH GREEN WITH PALE CREAM-GREEN SUBROUND FELSPAR PHENOCRYSTS ABOUT 15 - 20% OF ROCK VOLUME. VERY FINE GRAINED MATRIX. PHENOCRYSTS 1.5 TO 8 mm ACROSS. MODERATELY FRACTURED. UPPER CONTACT DISCRETE AT 25°; LOWER DISCRETE AT 22°.							
46.60-48.00	**ANDESITE** - AS FOR 22.31 - 43.98							
48.00	**END OF HOLE**							

LOCATION: 1449.0 W, 326.3 S
HOLE STARTED: OCTOBER 7, 1988
HOLE COMPLETED: OCTOBER 14, 1988
CORE RECOVERY: 99.9%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 203.72 m LENGTH: 70.5 m
AZIMUTH: 340° INCLIN.: - 71°
DIP TESTS: - 71° AT 68.5 m
HOR. PROJ: 23.00 m VERT. PROJ: 66.50 m

BJECTIVE: TEST IP ANOMALY.

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.50	CASING - NO CORE RECOVERY.							
1.50 -16.94	ANDESITE DARK GREYISH GREEN, GENERALLY FINE GRAINED AND MASSIVE. SLIGHTLY PORPHYRITIC WITH ABOUT 0.5% PALE GREEN CREAMY FELDSPAR PHENOS TO 3 mm. WEAKLY FRACTURED WITH FRACTURES PREDOMINANTLY AT ABOUT 15° TO C.A., OTHERWISE RANDOMLY ORIENTED. FRACTURES ABOUT 95% LINED BY PALE GREEN SKARN MINERALS, 3% BY PALE GREY CARBONATE, 2% BY OFF-WHITE QUARTZ. TRACES DISSEMINATED PY THROUGHOUT.							
	(1.50 - 3.00) GROUND CORE; 93% RECOVERY.							
	(2.50 - 3.03) MODERATELY BROKEN CORE.							
	(5.52 - 6.23) INTENSELY BRECCIATED AND FRACTURED, LIGHT GREY-GREEN COLOUR. PROBABLE HEALED FAULT AT 5.98 AT ABOUT 15° TO C.A.							
	(7.52 - 14.54) CLASTIC INTERVAL WITH ANGULAR CLASTS OF BLACK ANDEISTE (80%) AND VARIOUS OTHER LITHOLOGIES (20%) IN A MATRIX OF FINE GRAINED ANDESITIC TUFF. CLASTS UP TO 9 mm ACROSS, AVERAGE 2 mm.							
	(7.52 - 8.09) MODERATELY BRECCIATED.							
	(9.10 - 9.19) MODERATELY BRECCIATED; POSSIBLE HEALED FAULT AT 40° TO C.A.							
	(10.45) QUARTZ (90%) - ADULARIA? (8%) - CARB (2%) VEIN 3 cm WIDE AT 30° TO C.A. WITH TR PY.	10745	10.10	10.60	.5	NOT ASSAYED		
	(10.92 - 11.71) DARK REDDISH GREY-GREEN INTERVAL WITH ABOUT 3% HEMATITE.							
	(11.69 - 12.67) MODERATELY BROKEN CORE.							
	(12.31) FAULT. FINELY BROKEN CORE AND MUD 8 mm THICK ON FRACTURE							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	AT ABOUT 15° TO C.A.							
	(12.01 - 12.09) PY 10% DISSEMINATED							
	(16.94) CONTACT WITH UNDERLYING PORPHYRY DISCRETE AT 17° TO C.A.							
16.94-24.57	FELDSPAR PORPHYRY - GREYISH GREEN TO CREAMY GREEN, MASSIVE, SUBROUND TO SUBANGULAR, GREENISH CREAM COLOURED FELDSPAR PHENOCRYSTS AVERAGE 2.5 mm ACROSS (MAX. 20 mm) COMPRISE ABOUT 20% OF ROCK VOLUME. OFF-WHITE CARB-QUARTZ VEINLETS TO 3 mm WIDE AT ABOUT 5° TO C.A. LOCAL FAINTLY BLEACHED PATCHES IN UPPER HALF OF UNIT. UPPER CONTACT DISCRETE AT ABOUT 15° TO C.A.; LOWER DISCRETE AT 20°.							
24.57-28.64	ANDESITE - LIGHT GREEN TO DARK GREENISH GREY, MAINLY VERY FINE GRAINED, WEAKLY TO MODERATELY FRACTURED. LOWER CONTACT DISCRETE AT 26°.							
	(24.57 - 26.16) POPHYRITIC WITH GREENISH CREAM, ACICULAR TO SUBANGULAR FELDSPAR PHENOCRYSTS AVERAGE ABOUT 1.5 mm LONG.							
	(26.16 - 27.50) CLASTIC. ANDESITE AND QUARTZ CLASTS TO 5 mm IN MATRIX OF ANDESITIC TUFF WITH LOCAL GREYWACKE BANDS TO FEW mm WIDE.							
	(26.62 - 27.50) 10% DISSEMINATED PY.	10746	26.62	27.12	.5	NOT ASSAYED		
	(28.13 - 28.64) AS FOR 24.57 - 26.16.							
28.64-32.41	GREYWACKE - BROWNISH GREY, FINE GRAINED, FAINTLY BEDDED. LOCALLY WEAKLY TO MODERATELY BRECCIATED. HARD, SILICEOUS; QUARTZ GRANULES AVERAGE 1.5 mm (MAX 4 mm) ACROSS. 2 TO LOCALLY 4% DISSEMINATED PY THROUGHOUT. OFF-WHITE, IRREGULAR QUARTZ VEINLETS TO 3 mm WIDE. LOWER CONTACT DISCRETE AT 36°.							
	(32.33) PY 10% DISSEMINATED IN WISPY BANDS.	10747	31.91	32.41	.5	NOT ASSAYED		
32.41-44.14	ANDESITE - DARK GREENISH GREY TO GREY, FINE GRAINED, MODERATELY FRACTURED THROUGHOUT. OFTEN CLASTIC WITH ANDESITE CLASTS TO FEW mm IN MATRIX OF ANDESITIC TUFF.							
	(36.22 - 36.61) ROCK 30% PALE GREEN SKARN; 3% DISSEMINATED PY.							
	(37.58 - 44.14) OCCASSIONAL WISPY BANDS OF DISSEMINATED PY UP TO 3 mm WIDE AND 4 CM LONG COMPRISE 3% ROCK VOLUME.							
	(42.12 - 44.14) 40% GREYWACKE, 60% ANDESITE; CLASTS TO 8 mm. PY 8% DISSEMINATED.							
44.14-70.50	FELDSPAR PORPHYRY - LIGHT GREEN-GREY, MASSIVE. CREAM COLOURED FELDSPAR PHENOCRYSTS TO 5 mm (AVERAGE ABOUT 1 mm ACROSS) AND GREEN-BLACK ACICULAR HORNBLENDES TO 3 mm LONG WITHIN APHANITIC							

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
	TO VERY FINE GRAINED MATRIX. LOCAL HAIRLINE FRACTURES; NOT AS FRACTURED AT OVERLYING ROCK UNITS. ALONG UPPER CONTACT PORPHYRY HAS INTRUDED OVERLYING ANDESITE; APOPHYSES OF PORPHYRY INVADE ANDESITE.							
	(44.14 - 44.83) PY AVERAGE 3% AS DISSEMINATED EUHEDRAL TO SUBHEDRAL CUBES TO 4 mm; PY CONTENT DECREASES AWAY FROM CONTACT WITH OVERLYING ANDESITE.	10748	44.10	44.60	.5	<.005	<.01	.01
	(46.80 - 48.00) MODERATELY BROKEN CORE.							
	(49.87 - 51.02) MODERATELY BROKEN CORE.							
	(65.18 - 66.52) MODERATELY BROKEN CORE.							
	(69.00 - 69.55) MODERATELY BROKEN CORE.							
70.50	END OF HOLE							

LOCATION: 1450 W/ 314.3 S
HOLE STARTED: OCTOBER 30, 1988
HOLE COMPLETED: NOVEMBER 5, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 202.94 m LENGTH: 80.0 m
AZIMUTH: - INCLIN.: - 90°
DIP TESTS: NONE TAKEN
HOR. PROJ.: 0 VERT. PROJ.: 80.0

BJECTIVE: TEST SHACK VEIN AND IP ANOMALY

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.5	CASING							
	(1.10 - 1.50) LIMESTONE							
1.5 - 2.87	LIMESTONE - PALE GREY WITH LIGHT GREY TO MEDIUM GREY FAINT BANDS AT 23° TO 35° TO C.A. LOCALLY WEAKLY BRECCIATED. CONTACT WITH UNDERLYING SKARN DISCRETE AT 47° TO C.A.							
2.87 - 4.13	SKARN - PALE GREEN-BROWN, MASSIVE GARNETITE. GARNETS UP TO 4 mm ACROSS. NO SULPHIDES SEEN. CONTACT WITH UNDERLYING VOLCANIC GRADATIONAL ACROSS 20 cm.							
	(3.23) FAULT. 18 mm OF FINELY BROKEN CORE AND PALE BROWN MUD BETWEEN FRACTURES AT 88° TO C.A.							
	(3.97) BANDING AT 53° TO C.A.							
4.13 - 9.60	ANDESITE - DARK GREEN TO MAROON-GREEN TO LIGHT GREYISH GREEN, FINE GRAINED, MODERATELY TO WEAKLY BRECCIATED. ABUNDANT IRREGULAR, DISCONTINUOUS, RANDOMLY ORIENTED FRACTURES USUALLY LINED BY PALE GREEN SKARN MINERALS. GENERALLY WEAKLY SILICIFIED. ABOUT 3% DISSEMINATED PY FROM 4.50 - 9.60. INTERVAL AVERAGE ABOUT 3-5% HEMATITE.	10957	4.50	5.00	.5	NOT ASSAYED		
		10958	5.00	5.50	.5	NOT ASSAYED		
		10959	5.50	6.00	.5	NOT ASSAYED		
		10960	6.00	6.50	.5	NOT ASSAYED		
		10961	6.50	7.00	.5	.005	.01	.01
		10962	7.00	7.50	.5	.020	.01	<.01
	(5.10 - 6.50) MODERATELY BROKEN CORE.	10963	7.50	8.00	.5	<.005	.05	<.01
	(6.75 - 7.15) MODERATELY BROKEN CORE.	10964	8.00	8.50	.5	<.005	<.01	<.01
	(6.75 - 7.62) PY 5%.	10965	8.50	9.10	.6	<.005	<.01	<.01
	(7.25) QUARTZ VEIN 12 mm WIDE AT 18° TO C.A. CONTAINS 5% PY AS SUBHEDRAL CUBES UP TO 5 mm ACROSS.	10966	9.10	9.60	.5	.014	.05	.12
	(7.37 - 7.62) PY VEINLET 1 mm WIDE AT 7° TO C.A.							
	(9.60) CONTACT WITH UNDERLYING QUARTZ VEIN DISCRETE AT 23° TO C.A.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
9.60 -10.48	**SHACK QUARTZ VEIN** - OFF-WHITE WITH BRASSY YELLOW AND BROWN SPOTS. FAINTLY BANDED AT 20°-25° TO C.A.; BANDS PARALLEL VEIN MARGINS. CP 4%, PY 3%, PO 2%, SP 1%. SULPHIDES MAINLY OCCUR AS IRREGULAR MASSES FILLING CAVITIES WITHIN VEIN QUARTZ; ALSO DISSEMINATED AND LINING HAIRLINE FRACTURES. SP AND PO MOST ABUNDANT IN CENTRAL HALF OF VEIN. CP AND PY MORE OR LESS EVENLY DISTRIBUTED. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 16°.	10967	9.60	9.82	.22	1.950	10.24	2.41
		10968	9.82	10.13	.31	.060	.19	1.30
		10969	10.13	10.48	.35	.392	2.94	.77
10.48-11.07	**ANDESITE** - GREEN-GREY, FINE GRAINED MODERATELY SILICIFIED, WEAKLY BRECCIATED, 5% FINELY DISSEMINATED PY. CONTACT WITH UNDERLYING QUARTZ VEIN DISCRETE AT 30°.	10970	10.48	11.07	.59	.072	.12	.02
11.07-11.27	**QUARTZ VEIN** - OFF-WHITE TO PALE GREY. 10% ANDESITE XENOLITHS AS BROKEN, DISCONTINUOUS BANDS SUBPARALLEL VEIN MARGINS. CP 3%, PY 1.5%, PO ABUNDANT WITHIN 5 cm OF VEIN MARGINS. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 26° TO C.A.	10971	11.07	11.27	.20	.150	1.45	.93
11.27-15.54	**ANDESITE** - GREYISH GREEN, FINE GRAINED, WEAKLY TO LOCALLY MODERATELY BRECCIATED. TRACES DISSEMINATED PY. FEW QUARTZ VEINLETS UP TO 5 mm WIDE.	10972	11.27	11.77	.5	.005	.01	.01
		10973	11.77	12.27	.5	.005	.01	.01
	(11.27 - 13.92) CONGLOMERATIC; SUBANGULAR CLASTS UP TO 15 mm ACROSS.	11018	12.77	13.27	.5	<.005	<.01	.01
		11019	13.27	13.77	.5	<.005	<.01	.01
	(11.27 - 12.63) 1 - 3% DISSEMINATED PY; WEAKLY SILICIFIED.							
	(12.00 - 15.54) MODERATELY BROKEN CORE.							
	(12.04) PROBABLE FAULT. FINELY BROKEN CORE AND MUD 3 mm WIDE ON FRACTURE AT 20° TO C.A.							
	(14.63 - 15.54) MODERATELY TO INTENSELY BRECCIATED.							
	(15.54) FAULT. FINELY BROKEN CORE AND MUD ABOUT 5 mm THICK ON A FRACTURE; ORIENTATION NOT MEASUREABLE.							
15.54-56.92	**FELDSPAR PORPHYRY** GREEN-GREY, VERY FINE GRAINED; CREAM COLORED FELDSPAR PHENOCRYSTS UP TO 3 mm ACROSS (AV. 1 mm) FORM ABOUT 4% OF ROCK VOLUME. GENERALLY SOMEWHAT BROKEN CORE ABOVE 41.6 m. LOCAL 1% DISSEMINATED PY ACROSS 2-3 cm. FAULTED CONTACT WITH OVERLYING ANDESITE.							
	(27.00 - 27.91) FAULT. MODERATELY TO LOCALLY FINELY BROKEN CORE. LOCALLY MODERATELY BRECCIATED ROCK.							
	(27.33) QUARTZ VEINLET 13 mm WIDE, GREEN-GREY MUD AND FINELY BROKEN CORE 5 mm WIDE. ORIENTATION NOT MEASUREABLE.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(27.57) AS FOR 27.33; VEINLET 6 mm WIDE.							
	(27.91) FINELY BROKEN CORE AND MUD ON FRACTURE AT 13° TO C.A.							
	(36.69) OFF-WHTE QUARTZ (99%) - CARB (1%) VEIN 4 cm WIDE AT 25° TO C.A. NO SULPHIDES SEEN.							
	(47.34) PALE GREY TO CREAM COLOURED QUARTZ (40%) - CARB (60%) VEINLET 10 mm WIDE AT 12° TO C.A.							
	(56.56 - 56.92) MODERATELY BRECCIATED.							
	(56.92) CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 19° TO C.A							
56.92-72.47	**ANDESITE** - DARK GREY-GREEN TO BLACK, VERY FINE GRAINED, WEAKLY FRACTURED WITH CREAM COLOURED TO PALE GREEN SKARN MINERALS LINING FRACTURES. OFTEN CLASTIC WITH LARGEST CLASTS UP TO FEW mm ACROSS.							
	(56.92 - 59.28) MODERATELY FRACTURED WITH IRREGULAR QUARTZ-CARB VEINLETS TO 4 mm WIDE SUBPARALLEL C.A. NO SULPHIDES SEEN.							
	(66.00 - 67.32) 15% PALE GREEN SKARN AS PATCHES AND ALONG FRACTURES.							
	(66.04 - 66.35) PY 4% ALONG FRACTURES.							
	(67.83 - 72.47) BLACK, HARD, SILICEOUS, LOCALLY FAINTLY BANDED VERY FINE GRAINED, 3% DISSEMINATED PY. ? GREYWACKE INTERVAL.							
	(68.67) BANDING AT 47° TO C.A.							
	(69.27 - 69.49) PY 5%.	10974	69.20	69.50	.3	NOT ASSAYED		
72.47-73.11	**GREYWACKE** - LIGHT BROWNISH GREY, FINE TO MEDIUM GRAINED WITH CLASTS AVERAGING ABOUT 0.5 mm ACROSS. 5% FINELY DISSEMINATED PY.	10975	72.47	73.11	.64	NOT ASSAYED		
73.11-77.83	**ANDESITE** - BLACK TO DARK GREEN, VERY FINE GRAINED, MODERATELY FRACTURED. MODERATELY BROKEN CORE THROUGHOUT.							
	(76.15) WHITE CARB VEIN 14 mm WIDE AT 31° TO C.A. NO SULPHIDES SEEN.							
77.83-80.00	**FELDSPAR PORPHYRY** - LIGHT GREY-GREEN, MASSIVE, MODERATELY FRACTURED. PALE BROWNISH GREEN, SOMEWHAT ACICULAR FELDSPAR PHENOCRYSTS LONG IN APHANITIC MATRIX. CONTACT WITH OVERLYING ANDESITE DISCRETE AT 12° TO C.A. MOD. BROKEN CORE THROUGHOUT.							
80.00	**END OF HOLE**							

LOCATION: 1450 W, 314.4 S
HOLE STARTED: NOVEMBER 5, 1988
HOLE COMPLETED: NOVEMBER 8, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 202.94 m LENGTH: 50.00 m
AZIMUTH: 345° INCLIN.: - 69°
DIP TESTS: - 67° AT 50.0 m
HOR. PROJ: 18.80 m VERT. PROJ: 26.40 m

OBJECTIVE: TEST SHACK VEIN DOWN DIP OF SH-88-8

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 2.00	CASING							
	(1.88 - 2.00) LIMESTONE							
2.00 - 5.26	LIMESTONE - LIGHT GREY TO PALE GREY, FINELY CRYSTALLINE. MODERATELY FRACTURED THROUGHOUT WITH FAINT, DISCONTINUOUS RANDOMLY ORIENTED FRACTURES THROUGHOUT. DISCRETE CONTACT WITH UNDERLYING SKARN AT ABOUT 61° TO C.A.							
5.26 - 6.51	SKARN - PALE BROWNISH GREEN, MASSIVE, FINE TO MEDIUM GRAINED GARNETITE. CONTACT WITH UNDERLYING ANDESITE AT 49° TO C.A.							
	(5.58 - 5.81) MAGNETITE 15%, PY 3%.	11016	5.50	5.90	.4	NOT ASSAYED		
6.51 -33.20	ANDESITE - GREENISH GREY TO DARK GREY, VERY FINE GRAINED, WEAKLY TO MODERATELY FRACTURED. OFTEN CLASTIC WITH ANGULAR CLASTS TO FEW mm ACROSS.							
	(8.41 - 9.96) MAGNETITE 5%.							
	(11.70) QUARTZ (99%) - CARB (1%) VEINLET 4 mm WIDE SUBPARALLEL C.A.							
	(12.48 - 15.12) 2% DISSEMINATED PY.							
	(15.20 - 17.18) MEDIUM TO FINE GRAINED CLASTIC INTERVAL WITH 5% HEMATITE. UPPER CONTACT AT 8° TO C.A. LOWER AT 40°.							
	(18.44 - 21.08) 3% HEMATITE							
	(21.77 - 22.12) CONGLOMERATIC; SUBROUND CLASTS UP TO 14 mm ACROSS FORM 20% ROCK VOLUME.							
	(22.82 - 24.13) INTENSELY TO MODERATELY FRACTURED WITH PALE GREEN SKARN MINERALS LINING FRACTURES WHICH ARE MAINLY AT 11° TO C.A. POSSIBLE HEALED FAULT AT 23.00.							

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	(25.03 SUBROUND QUARTZ PEBBLE 13 mm ACROSS.							
	(26.16 - 26.53) INTENSELY BRECCIATED AND FRACTURED WITH PALE BROWNISH GREEN SKARN LINING FRACTURES AND AS MATRIX FOR ANDESITE FRAGMENTS. 1% DISSEMINATED PY. LIKELY HEALED FAULT AT 37° TO C.A.							
	(27.88 - 33.20) GREENISH GREY TO BROWNISH GREY MODERATELY	10991	30.90	31.40	.5	NOT ASSAYED		
	SILICIFIED AND SHEARED WITH MOST SHEARS AT ABOUT 20° TO C.A.	10992	31.40	32.00	.6	NOT ASSAYED		
	PY 3 - 4% DISSEMINATED FROM 27.88 - 32.00.	10993	32.00	32.70	.7	<.005	<.01	<.01
	(30.70 - 33.20) 10% OFF-WHITE, WORMY, LENSOID, RANDOMLY ORIENTED QUARTZ VEINLETS.	10994	32.70	33.20	.5	.005	.14	.02
	(30.96) OFF-WHITE, WORMY QUARTZ VEIN 20 mm WIDE AT 45° TO C.A. CONTAINS 2% DISSEMINATED PY.							
	(32.00 - 32.56) PY 10% DISSEMINATED.							
33.20-36.37	SHACK QUARTZ VEIN - OFF-WHITE WITH GREENISH GREY, WISPY	10995	33.20	33.50	.3	.005	1.46	1.06
	CHLORITE? LIMING FRACTURE SURFACES. QUARTZ 97%, CHLORITE? 1-2%;	10996	33.50	33.86	.36	.005	.48	.11
	PY 0.5%, CP 0.5%. MODERATELY BROKEN CORE THROUGHOUT. UPPER	10997	33.86	34.15	.29	.005	.61	.51
	CONTACT FAULT; GREY GOUGE AND FINELY BROKEN CORE 8 - 13 mm THICK	10998	34.15	34.60	.45	.004	.21	.11
	ON FRACTURE AT ABOUT 9° TO C.A. LOWER CONTACT FAULT WITH 3 mm	10999	34.60	35.00	.4	.196	.23	.11
	PALE GREY MUD ON FRACTURE AT 14° TO C.A.	11000	35.00	35.40	.4	.008	.35	.30
	(33.20 - 33.50) PY 4%, CP 2% AS IRREGULAR MASSES FILLING	11001	35.40	35.90	.5	.005	.21	.19
	CAVITIES.	11002	35.90	36.37	.47	.012	.12	.04
	(33.92 - 34.13) PY 2%, PO 1%, CP 1%.							
	(35.00) EUHEDRAL QUARTZ CRYSTALS TO 19 mm LONG.							
36.37-50.00	ANDESITE - GREYISH GREEN, FINE GRAINED MASSIVE. GENERALLY	11003	36.37	36.87	.5	<.005	.01	.01
	WEAKLY FRACTURED WITH PALE GREEN SKARN MINERALS LINING FRACTURES. 2 - 3 % FINELY DISSEMINATED PY.							
	(36.37 - 37.40) MODERATELY SHEARED, WEAKLY SILICIFIED, MODERATELY BRECCIATED. 4% DISSEMINATED PY.							
	(36.58) FAULT. 5 mm GREY MUD AND FINELY BROKEN CORE ALONG FRACTURE AT ABOUT 26° TO C.A.							
	(37.67 - 39.23) 3% CARB VEINLETS.							
	(39.53 - 39.61) POSSIBLE HEALED FAULT; SHEARED WITH BANDING AT 47° TO C.A.; 7% DISSEMINATED PY.							
	(44.56 - 45.70) LIGHT GREY-GREEN BLEACHED (?) INTERVAL WITH 7 - 10% FINELY DISSEMINATED PY.							
	(48.70) BANDING AT 70° C.A. - 50.00 - END OF HOLE							

LOCATION: 1446.6 W/296.2 S
HOLE STARTED: NOVEMBER 12, 1988
HOLE COMPLETED: NOVEMBER 16, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 205.46 m LENGTH: 64.50 m
AZIMUTH: 270° INCLIN.: - 72°
DIP TESTS: - 72° AT 64.50 m
HOR. PROJ: 30.70 m VERT. PROJ: 56.7 m

OBJECTIVE: TEST SHACK VEIN DOWN-DIP AND WEST OF SH-88-9

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
0.00 - 1.50	**CASING**							
1.50 - 1.89	**GRAVEL**							
1.89 -18.05	**FELDSPAR PORPHYRY** - LIGHT GREY-GREEN. GENERALLY ACICULAR, CREAM COLOURED FELDSPAR PHENOCRYSTS AVERAGE 1 mm LONG IN APHANITIC MATRIX. GENERALLY SOMEWHAT BROKEN CORE WITH PIECES AVERAGE ABOUT 8 cm LONG. LOCAL WEAK, WISPY, HAIRLINE FRACTURES; FRACTURES RANDOMLY ORIENTED AND DISCONTINUOUS. NO SULPHIDES SEEN. (5.28 - 5.43) POSSIBLE FAULT; MODERATELY TO FINELY BROKEN CORE; ORIENTATION NOT MEASURABLE. (9.00 - 9.40) MODERATELY BROKEN CORE. (9.18) FAULT. 2 mm GOUGE AND FINELY BROKEN CORE ON FRACTURE AT ABOUT 17° TO C.A. CARB VEINLET 8 mm WIDE ALONG FAULT. (15.00 - 16.32) MODERATELY BROKEN CORE; MODERATELY FRACTURED. (15.45) FAULT. 3 mm LIGHT GREEN-GREY GOUGE ON FRACTURE AT 5° TO C.A. (15.90) FAULT 1 mm PALE GREEN-GREY GOUGE ON FRACTURE AT ABOUT 10° TO C.A.; CARB VEINLET 8 mm WIDE EMPLACED ALONG FAULT. NO SULPHIDES SEEN. (17.10 - 18.05) MODERATELY TO INTENSELY FRACTURED; FRACTURES INCREASE WITH DEPTH. (18.05) FAULT. SMEAR OF GOUGE ON FRACTURE AT 20° TO C.A. FAULT CONTACT WITH UNDERLYING ANDESITE.							
18.05-18.46	**ANDESITE** - DARK GREEN, VERY FINE GRAINED, MODERATELY BRECCIATED. 10% CARB AS IRREGULAR VEINLETS WHICH FORM BRECCIA	11023	18.00	18.46	.46	NOT ASSAYED		

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu %
	MATRIX. 3% PY AS BLEBS AND SUBHEDRAL CRYSTALS UP TO 4 mm ACROSS. (18.37 - 18.46) 10% PY AS LENSOID BAND 6 mm WIDE AT 8° TO C.A.							
18.46-18.88	**CARBONATE VEIN** - PALE GREY TO OFF-WHITE WITH DARK GREEN ANDESITE XENOLITHS FORMING ABOUT 10% ROCK VOLUME. 3 TO 5% DISSEMINATED PY MAINLY CONCENTRATED WITHIN THE ANDESITE XENOLITHS. UPPER CONTACT GRADATIONAL OVER FEW cm; LOWER DISCRETE AT 10° TO C.A. BAND OF PY 3 mm TO 10 mm WIDE ALONG LOWER CONTACT FORMS ABOUT 20% OF ROCK VOLUME BETWEEN 18.80 AND 19.08 m. ANDESITE XENOLITHS WITHIN CARB VEIN MAINLY AS WISPY BANDS TO FEW mm WIDE SUBPARALLEL C.A.	11024	18.46	18.88	.42	NOT ASSAYED		
18.88-19.00	**ANDESITE** - AS FOR 18.05 - 18.46 EXCEPT THIS INTERVAL CONTAINS 5 - 10% PY, AND IS INTENSELY BRECCIATED. FAULT CONTACT WITH UNDERLYING PORPHYRY AT ABOUT 10° TO C.A. SOFT CORE.	11025	18.88	19.00	.5	NOT ASSAYED		
19.00-23.37	**FELDSPAR PORPHYRY** - AS FOR 1.89 - 18.05. (19.00 - 20.20) INTENSELY BRECCIATED. (19.00 - 19.50) FAULT. SOFT, FINELY BROKEN CORE AND GOUGE 2 cm WIDE BETWEEN FRACTURES AT ABOUT 10° TO C.A. 3% CARB VEINLETS. TRACES DISSEMINATED PY. (19.62 - 20.20) MODERATELY TO FINELY BROKEN CORE. (19.80) FAULT. GOUGE 3 mm THICK ON FRACTURE ABOUT SUBPARALLEL C.A. (21.62) OFF-WHITE CARB VEIN 10 mm WIDE AT 16° TO C.A. NO SULPHIDES SEEN. (22.41) AS ABOVE AT 10°. (22.75) CARB VEINLET 6 mm WIDE AT 12° TO C.A. (23.37) CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 75° TO C.A.							
23.37-27.19	**ANDESITE**-LIGHT GREEN-GREY, FINE GRAINED, INTENSELY BRECCIATED. 3% DISSEMINATED PY. ABOUT 5% PERVASIVELY ALTERED TO SKARN. CONTACT WITH UNDERLYING ROCK UNIT DISCRETE AT 49° TO C.A. (24.23) CARB VEIN 17 mm WIDE AT 15° TO C.A.							
27.19-28.00	**FELDSPAR PORPHYRY** - GREENISH GREY, MASSIVE, MEDIUM GRAINED. MUCH COARSER GRAINED THAN FELDSPAR PORPHYRIES IN UPPER PART OF THIS HOLE. ROCK ABOUT 15% OFF-WHITE, SUBROUND FELDSPAR PHENOCRYSTS AVERAGE 2-3 mm ACROSS; 5% DARK GREEN HORNBLENDE PHENOCRYSTS UP TO 2 mm LONG; APHANITIC TO VERY FINE GRAINED							

PROJECT: SHACK
D.D. HOLE #: SH-88-12

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
	MATRIX. CONTACT WITH UNDERLYING ANDESITE AT 22° TO C.A.							
28.00-35.80	**ANDESITE** - GREENISH GREY, WEAKLY TO MODERATELY BRECCIATED, FINE GRAINED; LOCAL CLASTIC INTERVALS.							
	(33.00) CARB VEINLET 7 mm WIDE AT 20° TO C.A.							
	(33.30) CARB VEINLET 5 mm WIDE AT 17° TO C.A. CONTAINS LOCAL 2% CP.							
	(35.80) CONTACT WITH UNDERLYING GREYWACKE AT 32° TO C.A.							
35.80-41.81	**GREYWACKE** - LIGHT GREY WITH BROWNISH AND GREENISH SECTIONS, FINE GRAINED, HARD, SILICEOUS. GENERALLY CONGLOMERATIC AND ABOUT 3-4% SKARN BELOW 39.60. CONTACT WITH UNDERLYING ANDESITE AT 43° TO C.A. FEW WORMY QUARTZ AND CARB VEINLETS.							
	(35.80 - 39.60) PY 4 TO 7% FINELY DISSEMINATED.							
41.81-64.50	**ANDESITE** - GREENISH GREY TO DARK GREY TO LIGHT GREYISH GREEN, VERY FINE GRAINED, MASSIVE. MODERATELY FRACTURED (MAINLY AT ABOUT 40° TO C.A.) WITH PALE CREAMY GREEN SKARN LINING FRACTURES.							
	(41.81 - 43.56) WEAKLY SILICIFIED, LOCALLY INTENSELY BRECCIATED AND FRACTURED, PY 2% DISSEMINATED, LIGHT GREYISH GREEN COLOUR.							
	(45.45 - 47.15) SLIGHTLY PORPHYRITIC.							
	(56.62 - 57.12) 4% DISSEMINATED PY WITHIN CONGLOMERATIC GREYWACKE.							
	(60.50) BAND 20 mm WIDE AT 59° TO C.A. CONTAINS 50% PY.	11026	60.56	60.86	.3	NOT ASSAYED		
	(60.70) CARB VEINLET 9 mm WIDE AT 20° TO C.A.							
	(60.73) 20% PY AS LENS 1 cm WIDE, 5 cm LONG ALONG CARB VEINLET MARGIN.							
	(63.94) QUARTZ - CARB VEINLET 5 mm WIDE AT 31° TO C.A.							
64.50	END OF HOLE							

PROJECT: SHACK
D.D. HOLE #: SH-88-14

LOCATION: 1405.8 W / 271.1 S
HOLE STARTED: NOVEMBER 18, 1988
HOLE COMPLETED: NOVEMBER 20, 1988
CORE RECOVERY: 100%
DRILLED BY: DRILCOR
LOGGED BY: D.J. PAWLIUK

COLLAR LAT.:
LONG.:
ELEV.: 207.98 m LENGTH: 42.00 m
AZIMUTH: 156° INCLIN.: - 77°
DIP TESTS: - 76° AT 42.0 m
HOR. PROJ: 9.8 m VERT. PROJ: 40.8 m

OBJECTIVE: TEST NORTHEASTERN SHACK VEIN.

INTERVAL	DESCRIPTION	SAMPLING SAMPLE#	FROM	TO	m.	oz/ton Au	Ag	Cu
0.00 - 3.00	CASING							
	(2.70 - 2.80) GREY ANDESITE; BROKEN CORE.							
	(2.80 - 3.00) FELDSPAR PORPHYRY.							
3.00 - 4.56	**FELDSPAR PORPHYRY** - LIGHT CREAMY GREEN TO LIGHT GREYISH GREEN; CREAM COLOURED SUBANGULAR FELDSPAR PHENOCRYSTS AVERAGE 2 mm ACROSS IN FINE GRAINED MATRIX. CREAM COLOURED FELDSPARS ALSO WITHIN MATRIX. MASSIVE. NO SULPHIDES SEEN. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 46° TO C.A.							
4.56 - 5.04	**ANDESITE** - MEDIUM GREY-GREEN, FINE GRAINED, MAINLY CLASTIC WITH LARGEST CLASTS UP TO FEW mm ACROSS. CONTACT WITH UNDERLYING PORPHYRY AT ABOUT 80° TO C.A.							
5.04 -19.02	**FELDSPAR PORPHYRY** - LIGHT GREYISH GREEN; PALE GREENISH CREAM COLOURED FELDSPAR PHENOCRYSTS 0.5 TO 4 mm ACROSS COMPRISE ABOUT 5% ROCK VOLUME. HORNBLENDE(?) PHENOCRYSTS TO 1.5 mm LONG ABOUT 0.5% ROCK VOLUME. PHENOCRYSTS IN APHANITIC MATRIX. HARD, WEAKLY SILICIFIED ROCK WITH LOCAL FAINT HAIRLINE FRACTURES. TRACES TO LOCALLY 2% DISSEMINATED PY. CONTACT WITH UNDERLYING ANDESITE FAULTED AT 26° TO C.A.; FINELY BROKEN CORE AND SHEAR OF GOUGE ON FRACTURE SURFACE AT FAULT AT 19.02.							
19.02-21.09	**ANDESITE** - GREYISH GREEN TO DARK GREY-GREEN, FINE GRAINED, MAINLY CLASTIC WITH SUBROUND CLASTS UP TO 7 mm ACROSS. 1-2% DISSEMINATED PY. MODERATELY FRACTURED THROUGHOUT. CONTACT WITH UNDERLYING PORPHYRY DISCRETE AT 54° TO C.A.							
	(21.03) 5% DISSEMINATED PY.							

INTERVAL	DESCRIPTION	SAMPLE#	SAMPLING FROM	TO	m.	oz/ton Au	Ag	Cu
21.89-24.11	**FELDSPAR PORPHYRY** - AS FOR 3.00 - 4.56 ABOVE. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 40° TO C.A. (24.09 - 24.11) QUARTZ 52%, BRECCIATED PORPHYRY 35%, CARBONATE 10%, PY 3% DISSEMINATED ALONG CONTACT WITH UNDERLYING ANDESITE.	11034	24.00	24.17		NOT ASSAYED		
24.11-24.67	**ANDESITE OR SHEARED FELDSPAR PORPHYRY** - GREEN-BROWN, VERY FINE GRAINED; INTENSELY SHEARED WITH WELL-DEVELOPED FOLIATION AND BANDING AT ABOUT 43° - 53° TO C.A. PY 3-4% DISSEMINATED. WEAKLY SILICIFIED. LENSOID CARB VEINLETS UP TO 40 mm LONG AND 2 mm WIDE SUBPARALLEL FOLIATION. FAULTED CONTACT WITH UNDERLYING SHACK QUARTZ VEIN. (24.66) FAULT. 15 mm OF SOFT, INTENSELY BRECCIATED ANDESITE ALONG FRACTURE AT 55° TO C.A.; 3 mm FINELY BROKEN CORE AND GOUGE ALONG FRACTURE.	11035	24.17	24.67	.5	.005	.01	
24.67-24.76	**SHACK QUARTZ VEIN** - OFF-WHITE, WITH WISPY BROWN HAIRLINE BANDS ALONG WHICH DISSEMINATED PY PRESENT WITHIN 1.5 cm OF H/W MARGIN. PY 2% FINELY DISSEMINATED; CP 1% AS MASS 9 mm ACROSS IN CENTRE OF VEIN. SP 2% AS MASS 15 mm ACROSS ADJACENT TO CP; BOTH SP AND CP MASSES IN CORE SENT FOR ASSAY. DISSEMINATED PY WITH TRACES SP AND CP NEAR H/W CONTACT. BOTH UPPER AND LOWER VEIN CONTACTS FAULTED. 2 mm OF GOUGE AND FINELY BROKEN CORE ALONG FRACTURE AT 59° TO C.A. AT LOWER VEIN CONTACT.	11036	24.67	24.76	.09	.034	.10	
24.76-25.23	**ANDESITE OR SHEARED FELDSPAR PORPHYRY** - AS FOR 24.11 - 24.67 (25.23) CONTACT WITH UNDERLYING FELDSPAR PORPHYRY DISCRETE AT 53° TO C.A.	11037	24.76	25.26	.5	<.005	<.01	
25.23-27.27	**FELDSPAR PORPHYRY** - AS FOR 5.84 - 19.02 EXCEPT LOCALLY MODERATELY SILICIFIED. CONTACT WITH UNDERLYING ANDESITE DISCRETE AT 35° TO C.A.							
27.27-27.61	**ANDESITE** - DARK GREEN, FINE GRAINED, 4% FINELY DISSEMINATED PY. CONTACT WITH UNDERLYING FELDSPAR PORPHYRY DISCRETE AT 26° TO C.A.							
27.61-42.00	**FELDSPAR PORPHYRY** - AS FOR 25.23 - 27.27. (28.44 - 28.84) BLEACHED PALE GREEN. (30.10 - 30.81) 20% BLEACHED PALE GREEN.							
42.00	**END OF HOLE**							

APPENDIX D

ASSAY CERTIFICATES

DRILL CORE SAMPLES

GIANT BEAR

MINERAL CLAIM

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Dec 22 1988
REPORT#: 881899 AA
JOB#: 881899

PROJECT#: SHACK
SAMPLES ARRIVED: Dec 21 1988
REPORT COMPLETED: Dec 22 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881899 NA
TOTAL SAMPLES: 24
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: ROCKS

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A

REPORT NUMBER: 881899 AA JOB NUMBER: 881899 IMP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10852	--	.02	.036
10875	--	.01	<.005
10951	--	.02	.026
10952	--	<.01	<.005
10953	--	<.01	<.005
10977	--	.20	.138
10979	--	.01	.005
11029	--	.01	.006
11030	--	.01	.006
11031	--	<.01	<.005
11032	--	<.01	<.005
11042	--	<.01	<.005
11043	.03	.05	.022
11044	.30	1.28	.408
11045	.01	<.01	.005
11046	--	<.01	<.005
11047	--	<.01	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 881899 AA JOB NUMBER: 881899 IMP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
11048	--	<.01	<.005
11049	--	.01	<.005
11050	--	<.01	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
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1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B
MISSISSAUGA, ONT
RENO, NEVADA, U.S.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Nov 15 1988
REPORT#: 881803 AA
JOB#: 881803

PROJECT#: SHACK
SAMPLES ARRIVED: Nov 14 1988
REPORT COMPLETED: Nov 15 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881803 NA
TOTAL SAMPLES: 16
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: ROCK CORES

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10858	.01	<.01	<.005
10859	.03	<.01	<.005
10860	.01	<.01	<.005
10978	.18	.28	.262
10980	.01	<.01	<.005
10981	2.76	7.13	.910
10982	2.99	4.73	.112
10983	1.79	2.29	.050
10984	1.80	8.33	1.502
10985	.75	2.87	.846
10986	.91	2.53	.552
10987	.22	.09	.006
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Nov 18 1988
REPORT#: 881808 AA
JOB#: 881808

PROJECT#: SHACK
SAMPLES ARRIVED: Nov 16 1988
REPORT COMPLETED: Nov 18 1988
ANALYSED FOR: Cu Ag Au Au

INVOICE#: 881808 NA
TOTAL SAMPLES: 9
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: ROCK CORES

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: Recheck of reject is also included.

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

SAMPLE #	Cu %	Ag oz/st	Au oz/st	Rejects Au oz/st
11007	.01	<.01	<.005	--
11008	<.01	.03	.006	--
11009	1.17	1.96	.040	--
11010	.89	2.78	.378	--
11011	2.60	6.84	4.778	5.060
11012	.36	.59	.132	--
11013	.02	.09	.016	--
11014	.01	.04	.005	--
11015	.01	.03	.005	--
DETECTION LIMIT	.01	.01	.005	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

CAPTAIN HOOK

MINERAL CLAIM

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 17 1988
REPORT#: 881591 AA
JOB#: 881591

PROJECT#: Shack
SAMPLES ARRIVED: Oct 6 1988
REPORT COMPLETED: Oct 17 1988
ANALYSED FOR: Ag Au

INVOICE#: 881591 NA
TOTAL SAMPLES: 17
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock Core

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: Mr. D. J. Pawliuk

PREPARED FOR: Mr. D. J. Pawliuk

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881591 AA **JOB NUMBER: 881591** **INP EXPLORATION DEV.** **PAGE 1 OF 1**

SAMPLE #	Ag oz/st	Au oz/st
10701	.03	.006
10702	.06	<.005
10703	.05	.012
10704	.06	.005
10705	.04	<.005
10706	.02	<.005
10707	.05	<.005
10708	.04	<.005
10709	.02	<.005
10710	.04	<.005
10711	.04	<.005
10713	.04	<.005
10714	.02	.005
10715	.05	<.005
10716	.06	<.005
10718	.05	<.005
10732	.03	.006
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% (ppm = parts per million) < = less than

signed: _____

VGC

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1988 Triumph Street
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(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 5 1988
REPORT#: 881558 AA
JOB#: 881558

PROJECT#: Shack
SAMPLES ARRIVED: OCT 4 1988
REPORT COMPLETED: Oct 5 1988
ANALYSED FOR: Ag Au

INVOICE#: 881558 NA
TOTAL SAMPLES: 5
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: D. Pawliuk
COPY SENT TO: Mr. Waldo Ejtel

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881558 AA JOB NUMBER: 881558 INP EXPLORATION DEV.

SAMPLE #	Ag oz/st	Au oz/st
10712	.15	.026
10717	.03	<.005
10719	.04	.005
10730	.07	.010
10731	.11	.034

DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 7 1988
REPORT#: 881559 AA
JOB#: 881559

PROJECT#: Shack
SAMPLES ARRIVED: Oct 5 1988
REPORT COMPLETED: Oct 7 1988
ANALYSED FOR: Ag Au Cu

INVOICE#: 881559 NA
TOTAL SAMPLES: 10
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock Cores

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: Mr. Waldo Ejtel

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: Original Samples

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881559 AA **JOB NUMBER: 881559** **INP EXPLORATION DEV.** **PAGE 1 OF 1**

SAMPLE #	Ag oz/st	Au oz/st	Cu %
10720	6.83	.762	2.89
10721	11.88	.226	6.90
10722	4.56	.026	2.67
10723	1.91	.018	1.56
10724	2.93	.016	2.00
10725	.66	.016	.42
10726	1.68	.016	1.07
10727	2.28	.146	.99
10728	1.37	.406	.49
10729	.87	.274	.52
DETECTION LIMIT	.01	.005	.01

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

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MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 11 1988
REPORT#: 881590 AA
JOB#: 881590

PROJECT#: N/G
SAMPLES ARRIVED: OCT 6 1988
REPORT COMPLETED: Oct 11 1988
ANALYSED FOR: Ag Au

INVOICE#: 881590 NA
TOTAL SAMPLES: 1
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock Core

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: Mr. W. Ejtel

PREPARED FOR: Mr. W. Ejtel

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
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(604) 251-5656

REPORT NUMBER: 881590 AA **JOB NUMBER: 881590** **INP EXPLORATION DEV.** **PAGE 1 OF 1**

SAMPLE #	Ag oz/st	Au oz/st
10733	<.01	<.005

DETECTION LIMIT .01 .005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% (ppm = parts per million) < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 13 1988
REPORT#: 881638 AA
JOB#: 881638

PROJECT#: Shack
SAMPLES ARRIVED: Oct 12 1988
REPORT COMPLETED: Oct 13 1988
ANALYSED FOR: Ag Au

INVOICE#: 881638 NA
TOTAL SAMPLES: 7
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock Cores

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: Mr. Waldo Ejtel

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC
VANGEOCHEM LAB LIMITED
MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717
BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881638 AA JOB NUMBER: 881638 INP EXPLORATION DEV. PAGE 1 OF 1

SAMPLE #	Ag oz/st	Au oz/st
10736	.01	.005
10737	1.02	.052
10738	.82	.138
10739	.06	.006
10740	.02	.005
10743	.61	.020
10744	.07	<.005

DETECTION LIMIT .01 .005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

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BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV. DATE: Nov 1 1988
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C. REPORT#: 881747 AA
: V6C 2X8 JOB#: 881747

PROJECT#: NONE GIVEN INVOICE#: 881747 NA
SAMPLES ARRIVED: Oct 31 1988 TOTAL SAMPLES: 13
REPORT COMPLETED: Nov 1 1988 REJECTS/PULPS: 90 DAYS/1 YR
ANALYSED FOR: Cu Ag Au SAMPLE TYPE: ROCKS

SAMPLES FROM: DELIVERED
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: ICP REPORT WILL FOLLOW

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 881747 AA JOB NUMBER: 881747 INP EXPLORATION DEV. PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10734	.13	<.01	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
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MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV. DATE: Nov 15 1988
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C. REPORT#: 881803 AA
: V6C 2X8 JOB#: 881803

PROJECT#: SHACK INVOICE#: 881803 NA
SAMPLES ARRIVED: Nov 14 1988 TOTAL SAMPLES: 16
REPORT COMPLETED: Nov 15 1988 REJECTS/PULPS: 90 DAYS/1 YR
ANALYSED FOR: Cu Ag Au SAMPLE TYPE: ROCK CORES

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
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● FAX (604) 254-5717
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MISSISSAUGA, ONT.
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SAMPLE #	Cu %	Ag oz/st	Au oz/st
10748	.01	<.01	<.005
10973	.01	.01	.005
10978	.18	.28	.262
10980	.01	<.01	<.005
10981	2.76	7.13	.910
10982	2.99	4.73	.112
10983	1.79	2.29	.050
10984	1.80	8.33	1.502
10985	.75	2.87	.846
10986	.91	2.53	.552
10987	.22	.09	.006
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
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MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Nov 10 1988
REPORT#: 881797 AA
JOB#: 881797

PROJECT#: SHACK
SAMPLES ARRIVED: Nov 10 1988
REPORT COMPLETED: Nov 10 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881797 NA
TOTAL SAMPLES: 12
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: ROCKS

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: ICP rport will follow

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
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REPORT NUMBER: 881797 AA JOB NUMBER: 881797 INP EXPLORATION DEV. PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10961	.01	.01	.005
10962	<.01	.01	.020
10963	<.01	.05	<.005
10964	<.01	<.01	<.005
10965	<.01	<.01	<.005
10966	.12	.05	.014
10967	2.41	10.24	1.958
10968	1.38	.19	.060
10969	.77	2.94	.392
10970	.02	.12	.072
10971	.93	1.45	.150
10972	.01	.01	.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
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VANCOUVER, B.C. V5L 1K5
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● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV. DATE: Nov 17 1988
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C. REPORT#: 881804 AA
: V6C 2X8 JOB#: 881804

PROJECT#: SHACK INVOICE#: 881804 NA
SAMPLES ARRIVED: Nov 15 1988 TOTAL SAMPLES: 13
REPORT COMPLETED: Nov 17 1988 REJECTS/PULPS: 90 DAYS/1 YR
ANALYSED FOR: Cu Ag Au Au Au SAMPLE TYPE: ROCK CORES

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: Rechecks of pulps and rejects are also included.

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
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● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
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RENO, NEVADA, U.S.A.

REPORT NUMBER: 881804 AA JOB NUMBER: 881804 INP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st	Pulps Au oz/st	Rejects Au oz/st
10993	<.01	<.01	<.005	--	--
10994	.02	.14	.005	.006	.005
10995	1.06	1.46	.005	.006	.005
10996	.11	.48	.005	.006	.005
10997	.51	.61	.005	.006	.014
10998	.11	.21	.084	.086	.058
10999	.11	.23	.196	.190	.192
11000	.30	.35	.008	.010	.008
11001	.19	.21	.005	.005	.006
11002	.04	.12	.012	.014	.012
11003	.01	.01	<.005	--	--
11018	.01	<.01	<.005	--	--
11019	.01	<.01	<.005	--	--
DETECTION LIMIT	.01	.01	.005	.005	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Dec 22 1988
REPORT#: 881899 AA
JOB#: 881899

PROJECT#: SHACK
SAMPLES ARRIVED: Dec 21 1988
REPORT COMPLETED: Dec 22 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881899 NA
TOTAL SAMPLES: 24
REJECTS/PULPS: 90 DAYS/1 YR.
SAMPLE TYPE: ROCKS

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT
RENO, NEVADA, U.S.A.

REPORT NUMBER: 881899 AA JOB NUMBER: 881899 IMP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
11035	--	.01	.005
11036	--	.10	.034
11037	--	<.01	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

APPENDIX E

GEOCHEMICAL ANALYSIS CERTIFICATES

DRILL CORE SAMPLES

CAPTAIN HOOK

MINERAL CLAIM

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL.
ATTENTION: W. EJTEL
PROJECT:

REPORT#: 881590PA
JOB#: 881590
INVOICE#: 881590NA

DATE RECEIVED: 88/10/06
DATE COMPLETED: 88/10/22
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10733	.1	3.17	28	ND	99	ND	.92	1.3	30	39	16	5.07	.30	2.21	1299	3	.02	39	.04	56	ND	ND	ND	ND	17	ND	ND	230
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H20 AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION: A OLSON
PROJECT:

REPORT#: 881747 PA
JOB#: 881747
INVOICE#: 881747 NA

DATE RECEIVED: 88/10/31
DATE COMPLETED: 88/11/17
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10734	1.1	.57	ND	ND	4	4	3.90	4.5	23	12	991	18.19	1.16	.48	1373	8	.01	5	.01	53	ND	ND	ND	ND	29	ND	ND	242
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H20 AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL.
ATTENTION: W. EJTEL
PROJECT: SHACK

REPORT#: 881638PA
JOB#: 881638
INVOICE#: 881638NA

DATE RECEIVED: 88/10/12
DATE COMPLETED: 88/10/22
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10736	2.9	3.32	12	ND	60	3	2.00	1.8	24	41	694	4.62	.43	2.79	1267	9	.02	18	.14	52	ND	ND	ND	ND	24	ND	ND	161
10737	35.1	.15	58	ND	13	3	.17	21.2	55	217	4829	4.44	.17	.09	124	6	.03	4	.01	15	ND	ND	ND	ND	1	ND	ND	1016
10738	31.4	.14	159	ND	14	ND	.17	23.4	11	224	2966	1.08	.05	.05	59	6	.03	6	.01	12	ND	ND	ND	1	1	ND	ND	1351
10739	.4	2.21	108	ND	51	ND	1.96	2.1	19	41	113	5.03	.44	1.78	673	3	.02	5	.14	30	ND	ND	ND	ND	23	ND	ND	164
10740	.1	1.81	6	ND	46	ND	3.04	1.8	26	43	70	6.50	.63	1.63	692	5	.02	8	.12	25	ND	ND	ND	ND	29	ND	ND	74
10743	.1	2.34	30	ND	47	ND	4.55	1.5	20	31	25	4.68	.78	1.65	870	3	.02	9	.13	32	ND	ND	ND	ND	53	ND	ND	112
10744	.1	2.95	12	ND	40	ND	3.76	1.2	16	41	29	4.49	.66	2.28	1133	3	.02	3	.11	36	ND	ND	ND	ND	72	ND	3	113
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

APPENDIX F

ROTARY HAMMER

DRILL HOLE LOGS

OWNER: Name ICM Address

LOCATION OF WELL: (LEGAL) CANOE CREEK 25 MILES SOUTH OF UCLUELET

PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test well ■ Other ☐

TYPE OF WORK: Owner's number of well (if more than one) . . . B-88

New well ■ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ■ Bored ☐ Driven ☐ Jetted ☐

DIMENSIONS: Diameter of well 6 in. Drilled 505 ft. Depth of completed well 505 ft.

CONSTRUCTION DETAILS:

Casing installed: Threaded ☐ Welded ■

.188 Gage 6 " Diam. from 0 ft. to 12.0 ft.

Gage " Diam. from ft. to ft.

Screens: Yes ☐ No ■

Manufacturer's name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Surface seal: Yes ■ No ☐ To what depth? 12.0 ft.

Material used in seal CUTTINGS.

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturer's name

Type H.P.

Pump intake set at ft.

WATER-LEVELS:

Land-surface elevation above mean sea-level . . . 500 ft.

Static level 10 ft. below top of well Date

Artesian pressure lb. per sq. in. Date

Artesian water is controlled by (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water-level is lowered below static level.

Date of test

Bailer test 50 gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m. Date

Recommended pump setting ft.

Recommended maximum pump output g.p.m.

WATER ANALYSIS:

Hardness p.p.m. pH

Iron p.p.m. Chloride p.p.m.

Temperature of water

Taste Odour

Colour Turbidity

WELL LOG:

Formation: Describe by colour, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

FROM	TO	MATERIAL	FROM	TO
0	8	SHOT ROCK	0	12.0
8	11	YELLOW CLAY, WOOD		
11	30	LIME ROCK		
30	105	FAIRLY HARD GREEN		
		WITH QUARTZ LAYERS		
105		LIMESTONE SOFT. 20 GPM		
135	441	HARD GREEN GRANITES		
		WITH CRACKS OF LIMESTONE		
		& QUARTZ 50 GPM.		
441	445	VEIN OF MIXED QUARTZ		
		& GREEN GRANITE SOFT.		
445	505	HARD BASALT & SOME		
		GREEN ROCK.		
505		SANDSTONE.		
	*	AUTHORIZED TO QUIT @	505.	
		SUMMARY OF WELL		
		DEPTH - 505.0		
		CASING - 12.0		
		1 6" DRIVESHOE		
		SWL - 10.		
		GPM - 50+		

POSTED

Work started NOV. 30 19 88 Completed DEC. 4 19 88

WELL DRILLER:

Name (Person, firm, or corporation)

Address

WELL DATA [illegible]

OWNER: Name TCM Address

LOCATION OF WELL: (LEGAL) CANOE CREEK 15 MILES SOUTH OF UCLUELET

PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test well ☒ Other ☐

TYPE OF WORK: Owner's number of well (if more than one) . . . #A-88

New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

DIMENSIONS: Diameter of well 6 in. Drilled 420 ft. Depth of completed well 420 ft.

CONSTRUCTION DETAILS:

Casing installed: Threaded ☐ Welded ☒

.188 Gage 6 " Diam. from 0 ft. to 14.0 ft.

_____ Gage _____ " Diam. from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒

Manufacturer's name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? ft.

Material used in seal CUTTINGS.

Did any strata contain unusable water? Yes ☐ No ☒

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturer's name

Type H.P.

Pump intake set at ft.

WATER LEVELS:

Land-surface elevation above mean sea-level . . . 500 ft.

Static level 20 ft. below top of well Date

Artesian pressure lb. per sq. in. Date

Artesian water is controlled by (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water-level is lowered below static level.

Date of test

Bailer test 60 gal./min. with ft. drawdown after hrs.

Artesian flow gpm. Date

Recommended pump setting ft.

Recommended maximum pump output gpm.

WATER ANALYSIS:

Iron ppm. Chloride ppm.

Temperature of water

Taste Odour

Colour Turbidity

WELL LOG:

Formation: Describe by colour, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

FROM	TO	MATERIAL	FROM	TO
0	4	SHOT ROCK. SLAB	0	20.5
4	15	WOOD CHUNKS, YELLOW & RED CLAY.	5.10	16.6
15	45	SOFT WHITE LIME ROCK		
45	46	FRACTURE APX 2 S/m		
46	170	BLUE, GRAY & WHITE LIMEROCK		
170	172	FRACTURE APX 6 G/m		
172	221	HARD CHERT & MEDIUMHARD ROCKS, APX 50 GPM.		
221	226	QUARTZ ZONE WITH PYRITES.		
226	350	HARD BASALT & CHERT WITH QUARTZ STRINGS.		
350	420	VERY HARD ROCK BASALT & LAVA ROCK.		
			2.6	14.0
		SUMMARY OF WELL.		
		DEPTH - 420'		
		CASING - 14.0		
		6" DRIVENSHOE		
		SWL - 10		
		GPM - 50+		

Work started NOV. 26, 19[illegible] Completed NOV. 30, 19[illegible]

WELL DRILLER:

Name (Person, firm, or corporation)

Address

APPENDIX G

ASSAY CERTIFICATES

ROTARY HAMMER DRILL RETURN

GIANT BEAR

MINERAL CLAIM

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
• (604) 251-5656
• FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Dec 16 1988
REPORT#: 881880 AA
JOB#: 881880

PROJECT#: SHACK
SAMPLES ARRIVED: Dec 15 1988
REPORT COMPLETED: Dec 16 1988
ANALYSED FOR: Ag Au

INVOICE#: 881880 NA
TOTAL SAMPLES: 11
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: CRUSHED ROCKS

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: ICP Report will follow

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A

REPORT NUMBER: 881880 AA JOB NUMBER: 881880 IMP EXPLORATION DEV.

CAPTAIN HOOK

MINERAL CLAIM

SAMPLE #	Ag oz/st	Au oz/st
11259	.03	.005
11260	.01	.005
11261	<.01	<.005
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Dec 16 1988
REPORT#: 881880 AA
JOB#: 881880

PROJECT#: SHACK
SAMPLES ARRIVED: Dec 15 1988
REPORT COMPLETED: Dec 16 1988
ANALYSED FOR: Ag Au

INVOICE#: 881880 NA
TOTAL SAMPLES: 11
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: CRUSHED ROCKS

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu

SIGNED: _____

Registered Provincial Assayer

GENERAL REMARK: ICP Report will follow

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

SAMPLE #	Ag oz/st	Au oz/st
11251	<.01	<.005
11252	.01	<.005
11253	<.01	<.005
11254	<.01	<.005
11255	<.01	<.005
11256	.01	.005
11257	.01	.006
11258	.01	.010
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

APPENDIX H

GEOCHEMICAL ANALYSIS CERTIFICATES

ROTARY HAMMER DRILL RETURN

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION:
PROJECT: SHACK

REPORT#: 881880 PA
JOB#: 881880
INVOICE#: 881880 NA

DATE RECEIVED: 88/12/15
DATE COMPLETED: 88/12/21
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
11259	.3	.90	4	ND	35	ND	1.24	.1	15	90	24	2.25	.24	.58	364	2	.01	11	.04	8	ND	ND	ND	ND	1	19	ND	ND	45
11260	.2	1.91	18	ND	42	ND	2.19	.8	18	26	24	3.39	.49	1.43	686	2	.01	9	.08	16	ND	ND	ND	2	29	ND	ND	96
11261	.2	2.11	22	ND	46	ND	2.42	1.1	19	47	24	3.62	.44	1.57	751	3	.01	9	.08	16	ND	ND	ND	2	32	ND	ND	107
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CAPTAIN HOOK
MINERAL CLAIM

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION:
PROJECT: SHACK

REPORT#: 881880 PA
JOB#: 881880
INVOICE#: 881880 NA

DATE RECEIVED: 88/12/15
DATE COMPLETED: 88/12/21
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
11251	.5	2.44	11	ND	32	ND	.93	1.5	24	42	60	3.76	.26	1.44	568	3	.04	35	.11	22	ND	ND	ND	8	62	ND	ND	73
11252	.5	2.89	16	ND	42	3	1.10	1.5	26	85	66	4.18	.30	1.63	645	4	.05	28	.12	22	ND	ND	ND	8	78	ND	ND	80
11253	.5	2.55	13	ND	33	ND	.96	1.2	25	38	62	3.93	.27	1.53	593	2	.04	22	.12	20	ND	ND	ND	8	64	ND	ND	75
11254	.5	2.74	19	ND	34	ND	1.01	1.1	26	47	64	4.15	.28	1.64	631	2	.05	46	.12	19	ND	ND	ND	8	68	ND	ND	79
11255	.3	.58	25	ND	22	ND	1.14	.3	16	125	78	1.90	.21	.37	220	2	.01	12	.02	9	ND	ND	ND	2	20	ND	ND	53
11256	.2	.45	24	ND	19	ND	1.07	.1	14	65	79	1.54	.19	.30	191	1	.01	9	.02	7	ND	ND	ND	1	17	ND	ND	55
11257	.2	.38	22	ND	18	ND	1.00	.3	14	111	78	1.44	.18	.25	171	3	.01	136	.02	7	ND	ND	ND	1	14	ND	ND	52
11258	.2	.38	35	ND	20	ND	1.05	.1	14	224	87	1.53	.19	.25	179	8	.01	18	.01	7	ND	ND	ND	1	14	ND	ND	49
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

APPENDIX I

ASSAY CERTIFICATES

SURFACE DIAMOND SAW CHANNEL,
CHIP AND GRAB SAMPLES

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5 3
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: August 30 1988
REPORT#: 881145 AA
JOB#: 881145

PROJECT#: None given
SAMPLES ARRIVED: Aug 29 1988
REPORT COMPLETED: August 30 1988
ANALYSED FOR: Ag Au

INVOICE#: 881145 NA
TOTAL SAMPLES: 19
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: INP Exploration
COPY SENT TO: Vancouver Office

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chi

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: Invoice sent to Vancouver office

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881145 AA JOB NUMBER: 881145 INP EXPLORATION DEV.

SAMPLE #	Ag oz/st	Au oz/st
10651	2.05	.840
10652	4.38	1.934
10653	2.24	1.800
10654	2.84	1.964
10655	.55	.236
10656	.79	.762
10657	1.07	.438
10658	.37	.254
10659	.29	.068
10660	.51	.150
10661	.18	.190
10662	1.00	.240
10663	.60	.364
10664	1.28	.284
10665	1.60	.160
10666	1.08	.604
10667	.64	1.616
10668	.07	.042
10669	.07	.014
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: OCT 20 1988
REPORT#: 881691 AA
JOB#: 881691

PROJECT#: Shack
SAMPLES ARRIVED: Oct 20 1988
REPORT COMPLETED: OCT 20 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881691 NA
TOTAL SAMPLES: 4
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: Mr. Waldo Ejtel

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chiu

SIGNED: _____

Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881691 AA ' JOB NUMBER: 881691 INP EXPLORATION DEV. PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10928	1.61	.09	.005
10929	1.53	.10	.005
10930	2.78	.28	.068
10931	.91	.12	.008

DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 26 1988
REPORT#: 881720 AA
JOB#: 881720

PROJECT#: Shack
SAMPLES ARRIVED: Oct 25 1988
REPORT COMPLETED: Oct 26 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881720 NA
TOTAL SAMPLES: 6
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: INP EXPLORATION DEV.

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VANGEOCHEM LAB LIMITED
MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717
BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881720 AA JOB NUMBER: 881720 INP EXPLORATION DEV. PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10933	.09	.05	.005
10934	.11	.07	.024
10936	.16	.04	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
• (604) 251-5656
• FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV. DATE: Nov 1 1988
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C. REPORT#: 881747 AA
: V6C 2X8 JOB#: 881747

PROJECT#: NONE GIVEN INVOICE#: 881747 NA
SAMPLES ARRIVED: Oct 31 1988 TOTAL SAMPLES: 13
REPORT COMPLETED: Nov 1 1988 REJECTS/PULPS: 90 DAYS/1 YR
ANALYSED FOR: Cu Ag Au SAMPLE TYPE: ROCKS

SAMPLES FROM: DELIVERED
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: ICP REPORT WILL FOLLOW

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ON
RENO, NEVADA, U.S

REPORT NUMBER: 881747 AA JOB NUMBER: 881747 INP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10944	.06	.04	.006
10945	.01	<.01	.005
10946	.01	.02	<.005
10947	.02	.02	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED
MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
● (604) 251-5656
● FAX (604) 254-5717
BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ONT.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV. DATE: Nov 15 1988
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C. REPORT#: 881803 AA
: V6C 2X8 JOB#: 881803

PROJECT#: SHACK INVOICE#: 881803 NA
SAMPLES ARRIVED: Nov 14 1988 TOTAL SAMPLES: 16
REPORT COMPLETED: Nov 15 1988 REJECTS/PULPS: 90 DAYS/1 YR
ANALYSED FOR: Cu Ag Au SAMPLE TYPE: ROCK CORES

SAMPLES FROM: DAVID PAWLIUK
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: MR. AUGUST OLSON

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1988 TRIUMPH ST.
VANCOUVER, B.C. V5L 1K5
• (604) 251-5656
• FAX (604) 254-5717

BRANCH OFFICES
PASADENA, NFLD.
BATHURST, N.B.
MISSISSAUGA, ON.
RENO, NEVADA, U.S.

REPORT NUMBER: 881803 AA JOB NUMBER: 881803 INP EXPLORATION DEV.

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10950	.01	<.01	<.005
11017	.04	<.01	<.005
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

CAPTAIN HOOK

MINERAL CLAIM

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5 3
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: August 30 1988
REPORT#: 881146 AA
JOB#: 881146

PROJECT#: None given
SAMPLES ARRIVED: Aug 29 1988
REPORT COMPLETED: August 30 1988
ANALYSED FOR: Ag Au ICP

INVOICE#: 881146 NA
TOTAL SAMPLES: 18
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: INP Exploration
COPY SENT TO: Vancouver Office

PREPARED FOR: Mr. Waldo Ejtel

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: Invoice sent to Vancouver office

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5 3
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

SAMPLE #	Ag oz/st	Au oz/st
10670	.04	.005
10671	1.18	.042
10673	<.01	<.005
10674	.02	<.005
10676	<.01	<.005
10677	.02	<.005
10678	<.01	<.005
10679	.02	<.005
10680	<.01	<.005
10681	.02	<.005
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Sept 21 1988
REPORT#: 881290 AA
JOB#: 881290

PROJECT#: N/G
SAMPLES ARRIVED: Sep 8 1988
REPORT COMPLETED: Sept 21 1988
ANALYSED FOR: Cu Pt Pd

INVOICE#: 881290 NA
TOTAL SAMPLES: 1
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Pulp

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: August Olson

PREPARED FOR: August Olson

ANALYSED BY: David Chiu

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

SAMPLE #	Cu %	Pt ppm	Pd ppm
10671	10.53	<.05	<.05

DETECTION LIMIT	.01	.05	.05

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

ASSAY ANALYTICAL REPORT

CLIENT: INP EXPLORATION DEV.
ADDRESS: 1950 Park Place, 666 Burrard
: Vancouver, B.C.
: V6C 2X8

DATE: Oct 26 1988
REPORT#: 881720 AA
JOB#: 881720

PROJECT#: Shack
SAMPLES ARRIVED: Oct 25 1988
REPORT COMPLETED: Oct 26 1988
ANALYSED FOR: Cu Ag Au

INVOICE#: 881720 NA
TOTAL SAMPLES: 6
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: Rock

SAMPLES FROM: INP EXPLORATION DEV.
COPY SENT TO: INP EXPLORATION DEV.

PREPARED FOR: INP EXPLORATION DEV.

ANALYSED BY: David Chiu
SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC

VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY
1988 Triumph Street
Vancouver, B.C. V5L 1K5
(604)251-5656 FAX:254-5717

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 881720 AA | JOB NUMBER: 881720 | INP EXPLORATION DEV. |

SAMPLE #	Cu %	Ag oz/st	Au oz/st
10932	.01	.06	<.005
10935	4.72	.45	.060
10937	1.33	.62	.032
DETECTION LIMIT	.01	.01	.005

1 Troy oz/short ton = 34.28 ppm | 1 ppm = 0.0001% | ppm = parts per million | < = less than

signed: _____

APPENDIX J

GEOCHEMICAL ANALYSIS CERTIFICATES

SURFACE DIAMOND SAW CHANNEL,
CHIP AND GRAB SAMPLES

GIANT BEAR

MINERAL CLAIM

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PB DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION: W. EJTEL
PROJECT: SHACK

REPORT#: 881691PA
JOB#: 881691
INVOICE#: 881691NA

DATE RECEIVED: 88/10/20
DATE COMPLETED: 88/11/03
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10928	0.1	.11	3	ND	6	ND	5.56	3.4	20	26	14626	3.17	.86	.10	661	3	.03	10	.01	10	ND	ND	ND	ND	31	ND	ND	598
10929	5.1	.07	ND	ND	7	ND	9.47	3.2	16	28	15183	1.91	1.34	.24	474	3	.02	1	.01	2	ND	ND	ND	ND	56	ND	ND	713
10930	10.9	.11	23	ND	9	ND	7.44	12.9	58	48	33885	4.84	1.17	.09	1213	6	.07	4	.01	ND	ND	ND	ND	ND	24	ND	ND	2572
10931	5.0	.06	19	ND	8	ND	2.12	2.7	20	128	7690	2.30	.36	.15	661	69	.03	3	.01	14	ND	ND	ND	ND	2	12	ND	ND	508
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PB DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION:
PROJECT: SHACK

REPORT#: 881720PA
JOB#: 881720
INVOICE#: 881720NA

DATE RECEIVED: 88/10/25
DATE COMPLETED: 88/11/08
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10933	.5	.51	ND	ND	5	5	2.34	3.7	20	32	647	16.58	.88	.21	874	6	.03	14	.01	5	ND	ND	ND	ND	2	ND	ND	78
10934	.1	.66	ND	ND	4	7	3.76	5.1	20	28	844	21.32	1.24	.11	796	5	.04	16	.01	6	ND	ND	ND	ND	1	ND	ND	227
10935	2.6	1.27	14	ND	11	ND	1.53	.4	28	43	1666	2.27	.28	.54	271	4	.02	3	.25	18	ND	ND	ND	5	30	ND	ND	73
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

ANOMALOUS RESULTS:
FURTHER ANALYSES
BY ALTERNATE
METHODS SUGGESTED

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN,FE,CA,P,CR,MG,BA,TI,B,AL,NA,K,W,PT AND SR. AG AND PB DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION: A OLSON
PROJECT:

REPORT#: 881747 PA
JOB#: 881747
INVOICE#: 881747 NA

DATE RECEIVED: 88/10/31
DATE COMPLETED: 88/11/17
COPY SENT TO:

ANALYST

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10944	.4	.29	ND	ND	10	5	.50	6.1	22	21	490	47.09	1.74	.36	1542	1	.01	6	.01	16	ND	ND	ND	ND	11	ND	ND	115
10945	.5	.54	6	ND	10	ND	.75	.1	17	20	97	3.34	.22	.24	188	12	.06	5	.29	13	ND	ND	ND	4	21	ND	ND	54
10946	.5	.95	10	ND	25	ND	.66	.1	13	17	50	2.33	.17	.77	229	2	.06	2	.29	13	ND	ND	ND	4	14	ND	ND	57
10947	.5	1.43	7	ND	15	ND	.65	.1	15	17	66	2.59	.18	.74	431	3	.05	3	.28	15	ND	ND	ND	3	18	ND	ND	65
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CAPTAIN HOOK
MINERAL CLAIM

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,W,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
I5= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION:
PROJECT: SHACK

REPORT#: 881720PA
JOB#: 881720
INVOICE#: 881720NA

DATE RECEIVED: 88/10/25
DATE COMPLETED: 88/11/08
COPY SENT TO:

ANALYST

PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10932	1.0	1.58	27	ND	13	ND	3.79	.1	9	65	86	1.31	.55	.99	250	7	.01	4	.12	27	ND	ND	ND	2	27	ND	ND	48
10935	15.0	.12	302	ND	3	ND	2.31	8.3	270	36	65599	15.78	.85	.08	595	8	.04	28	.01	ND	ND	ND	ND	1	7	ND	ND	524
10937	19.8	1.30	274	ND	26	7	.24	6.3	92	29	12222	24.75	.88	.99	579	12	.05	1	.01	11	ND	ND	ND	ND	7	ND	ND	224
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

ANOMALOUS RESULTS:
FURTHER ANALYSES
BY ALTERNATE
METHODS SUGGESTED

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH:(604)251-5656 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA STREET. VANCOUVER B.C. V5L 1L6 PH:(604)251-7282 FAX:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,W,FE,CA,P,CR,MG,BA,PB,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
I5= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: INP EXPL
ATTENTION: MR. WALDO EJTEL
PROJECT:

REPORT#: 881146PA
JOB#: 881146
INVOICE#: 881146NA

DATE RECEIVED: 88/08/29
DATE COMPLETED: 88/09/02
COPY SENT TO:

ANALYST

PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
10670	1.1	.08	7	ND	11	ND	4.14	1.0	12	11	5349	1.86	.41	.09	439	2	.02	3	.01	21	ND	ND	ND	1	26	ND	ND	237
10671	40.5	.34	422	ND	13	ND	4.09	30.9	212	94	>10%	14.37	.52	.24	940	11	.17	12	.01	54	ND	ND	ND	9	2	ND	ND	2060
10673	2.3	.34	22	ND	14	ND	4.97	2.3	35	46	7672	4.81	.47	.09	833	3	.03	4	.02	29	ND	ND	ND	3	9	ND	ND	290
10674	.5	1.50	25	ND	13	ND	2.04	1.2	12	27	578	2.69	.29	1.31	792	2	.01	7	.07	19	ND	ND	ND	2	5	ND	ND	94
10676	.1	.11	12	ND	11	ND	5.55	1.5	9	24	153	6.20	.48	.12	1432	3	.02	3	.01	16	ND	ND	ND	4	1	ND	ND	37
10677	.1	.25	18	ND	12	3	7.38	2.3	12	34	76	9.05	.55	.24	1178	4	.03	4	.01	36	ND	ND	ND	5	ND	ND	ND	50
10678	.1	.17	19	ND	12	ND	6.82	2.3	15	26	38	8.31	.53	.09	1468	5	.02	4	.01	23	ND	ND	ND	4	ND	ND	ND	54
10679	.1	.30	23	ND	11	3	7.27	2.4	22	31	46	8.70	.54	.24	1557	5	.03	4	.01	25	ND	ND	ND	4	ND	ND	ND	88
10680	.1	.12	15	ND	13	ND	4.92	1.3	14	17	28	6.00	.46	.08	1325	3	.02	4	.01	15	ND	ND	ND	3	ND	ND	ND	37
10681	.1	.17	14	ND	11	ND	6.04	1.7	15	40	46	6.79	.50	.13	1015	4	.02	3	.01	18	ND	ND	ND	4	3	ND	ND	22
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

ANOMALOUS RESULTS:
FURTHER ANALYSES
BY ALTERNATE
METHODS SUGGESTED

APPENDIX K

ORE RESERVE ESTIMATE

CALCULATIONS

February 14, 1989

SHACK (SHACK II) VEIN ORE RESERVE ESTIMATE

Based on surface sampling and 14 diamond drill holes which intersected vein:

PROBABLE

125 m strike length
54.9 m down dip
0.46 m wide (average of estimated true widths)

3157 m^3 @ 2.75 tonne/m^3 = 8681.75 tonnes
@ 0.560 oz/metric tonne = 4861.78 ounces gold
@ C. $490.00 per oz = $2,382,272.20

POSSIBLE

125 m	strike length	PLUS	125 m	strike length
130 m	down dip		54.9 m	down dip
0.46 m	wide		0.46 m	wide

7475 m^3 @ 2.75 tonne /m^3 = 20,556.25 tonnes
+ 8,681.75 tonnes = 29,238 tonnes

TOTAL

37,919.75 tonnes
grade: 0.560 oz/tonne uncut (weighted average assay)
reserve: 21,235 ounces gold
value @ C. $490.00/oz = $10,405,150.00

January 11, 1989

SHACK VEIN I & II PRELIMINARY RESERVE ESTIMATE

Based on surface channel sampling and 17 diamond drill holes to an average depth of 35 m.

PROBABLE

125 m long vein
54.9 m down dip
0.51 m width of the vein

3499.8 m^3 at 2.75 t/m^3 = 9600 tonnes @ 0.701 oz/ton = 6730 oz.
= at C. $492/oz. = C. #3,311,000.

POSSIBLE/PROBABLE

125	m	long vein	PLUS	125 m	long vein
130	m	down dip		54.9 m	down dip
0.51	m	width		0.51 m	width

8,287 m^3 + 3,499 m^3 = 11,787 m^3

11,787 m^3 at 2.75 t/m^3 = 32,415 tonnes @ 0.701 oz./tonne
= 22,723 oz.
= at C. $492/oz. = C. $10,175,000.

TOTAL TONNAGE: 42,015 Tonnes
AVERAGE GRADE: 0.701 oz/tonne
ORE RESERVE: 29,500 oz of fine gold
ORE VALUE AT C. $492./oz: $14,514,000
OPERATING COSTS AT C. $150./ton = $6,300,000
at C. $200./ton = $8,400,000

NET REVENUE (Before Taxes): $8,214,000.00
or $6,114,000.00

LOOKING NORTHWEST

SHACK II VEIN

SURFACE

10901 10902 10903 10904

weighted average 0.630 oz/ton gold, 1.15 oz/ton silver across .46 m

SHACK VEIN

SURFACE

10801 10802 10803 10804 10805 10806 10807 10808 10809 10810 10811 10812 10813 10814 10815 10816 10817 10818 10819 10820 10821 10822

weighted average 0.607 oz/ton gold, 1.97 oz/ton silver across .37 m

datum 180 m a.s.l.

SH-88-5 .036, .02, — / .17

SH-88-6 <.005, <.01, .03 / .29

SH-88-7 <.005, <.01, — / .30

SH-88-8 .395, 2.22, .85 / .66

SH-88-9 .042, .40, .16 / .50

SH-88-10 .56, 4.80, 1.91 / 1.52

SH-88-11 1.21, 2.98, 1.27 / .59

SH-88-12 NO VEIN CORED

SH-88-13 .002, .004, — / .28

SH-88-14 .034, .10, — / .04

SH-88-16 .10, .29, .08 / .26

SH-88-17 <.005, .01, — / .11

SH-88-1 .026, .15, — / .21

SH-88-2 .221, 3.17, 1.72 / 1.26

SH-88-3 .093, .40, — / .46

SH-88-A .005, .01, — / .36

SH-88-B .005, .01, — / 0.9

NATIONWIDE GOLD MINES CORPORATION
GOLDEN SPINNAKER MINERALS CORPORATION

approximate boundary

SYMBOLS

10901 — Vein on surface, diamond saw channel site and number

SH-88-16 — .10, .29, .08 / .26 — Drill hole intercept through vein; drill hole number; gold in oz/ton, silver in oz/ton, per cent copper, estimated true width of intersection

NOTE: See Figure 4 for details of surface sampling

0 5 10 15 20
METRES

To accompany a report by David J. Pawliuk, P.Geol.

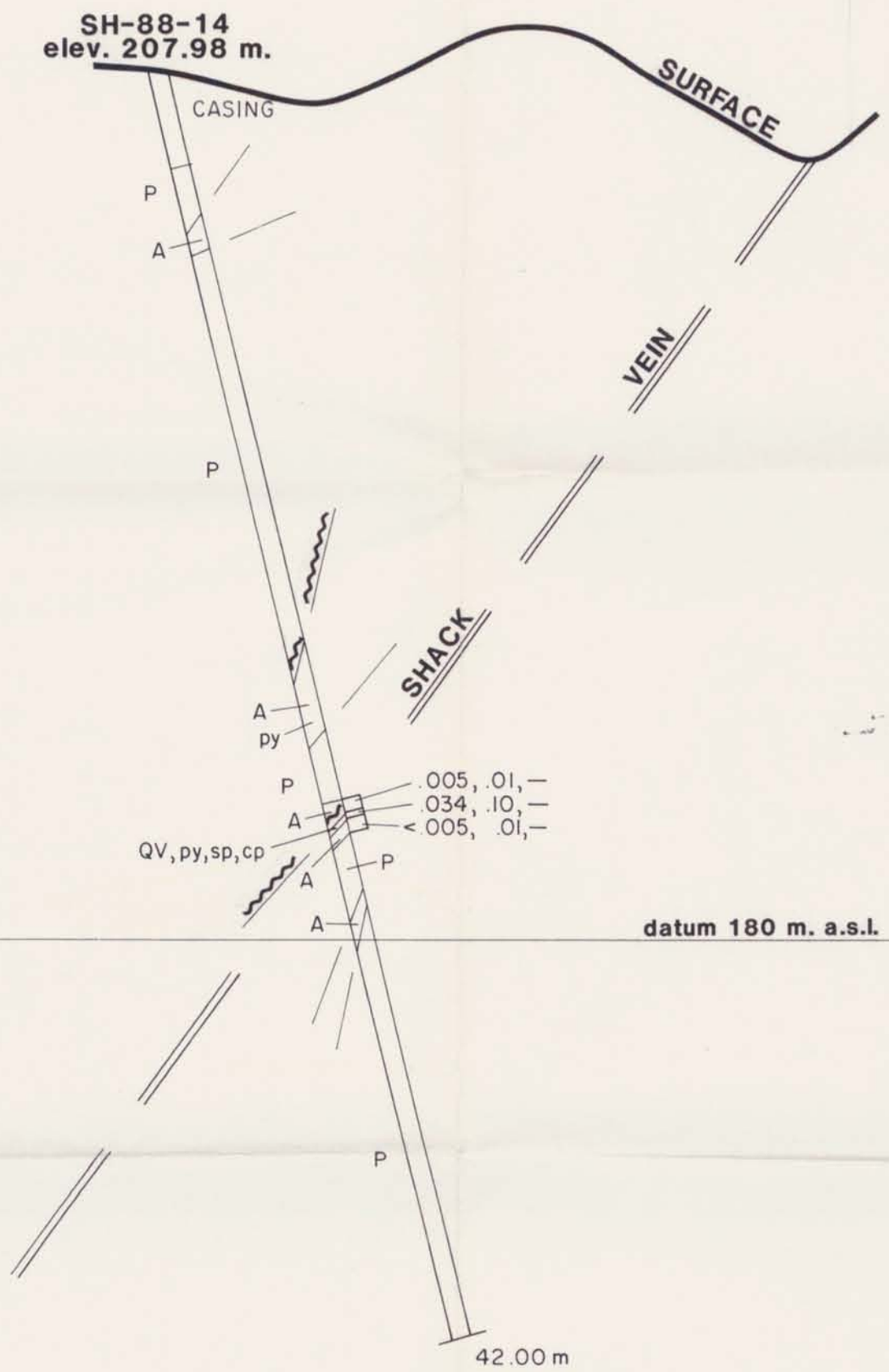
PROFESSIONAL GEOLOGIST ALBERTA
DAVID J. PAWLIUK

NATIONWIDE GOLD MINES CORPORATION GOLDEN SPINNAKER MINERALS CORPORATION
GIANT BEAR AND CAPTAIN HOOK MINERAL CLAIMS
LONGITUDINAL SECTION SHACK II, SHACK VEIN

Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 22

DRILL HOLE AZIMUTH 156°

SECTION LOOKING NORTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278, 89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limnt	limonite
carb	carbonate
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G.C.	ground core

0 5 10 15 20
METRES

To accompany a report by
David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST
DAVID J. PAWLIUK
ALBERTA

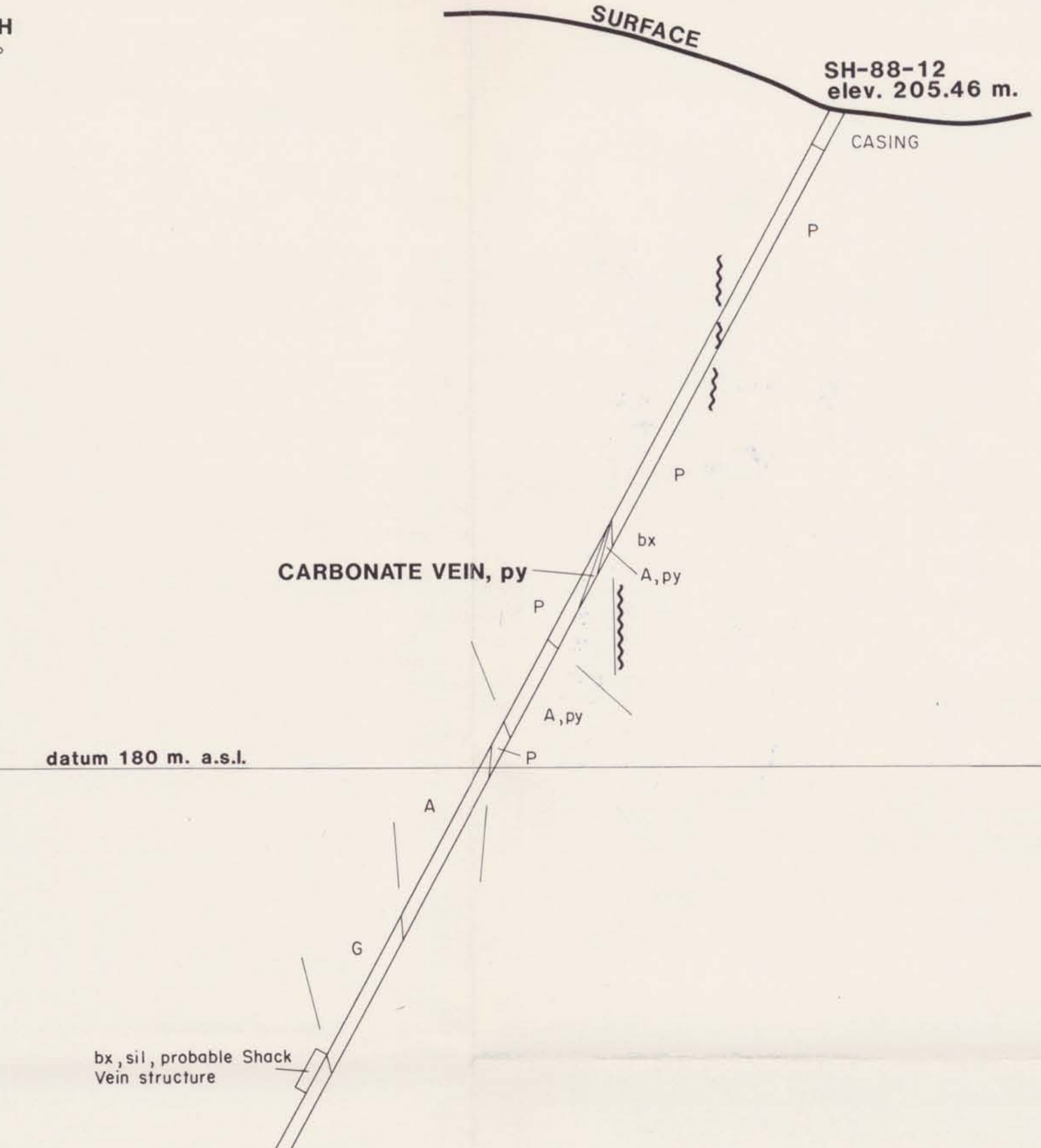
NATIONWIDE GOLD MINES CORPORATION

CAPTAIN HOOK MINERAL CLAIM

**CROSS SECTION
DIAMOND DRILL HOLE
SH-88-14**

Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 21

SECTION LOOKING NORTH
DRILL HOLE AZIMUTH 270°



LEGEND

TERTIARY

QV — **Quartz Vein**

JURASSIC ?
Island Intrusions

Qd — **Quartz Diorite**

UPPER TRIASSIC
Vancouver Group

G,S — **Greywacke; S, altered to skarn**

Karmutsen Formation

A,S — **Andesite, Basalt; often clastic; S, altered to skarn**

F,S — **Felsic volcanic rock; S, altered to skarn**

P — **Feldspar porphyry flows (?)**

Quatsino Formation

L — **Recrystallized Limestone**

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,.89 — **Assays: gold and silver in oz/ton, per cent copper**

py	**pyrite**
cp	**chalcopyrite**
po	**pyrrhotite**
sp	**sphalerite**
limt	**limonite**
carb	**carbonate**
mag	**magnetite**
hem	**hematite**
sil	**silicified**
bx	**brecciated**
G.C.	**ground core**

0 5 10 15 20
METRES

To accompany a report by David J. Pawliuk, P.Geol.

NATIONWIDE GOLD MINES CORPORATION

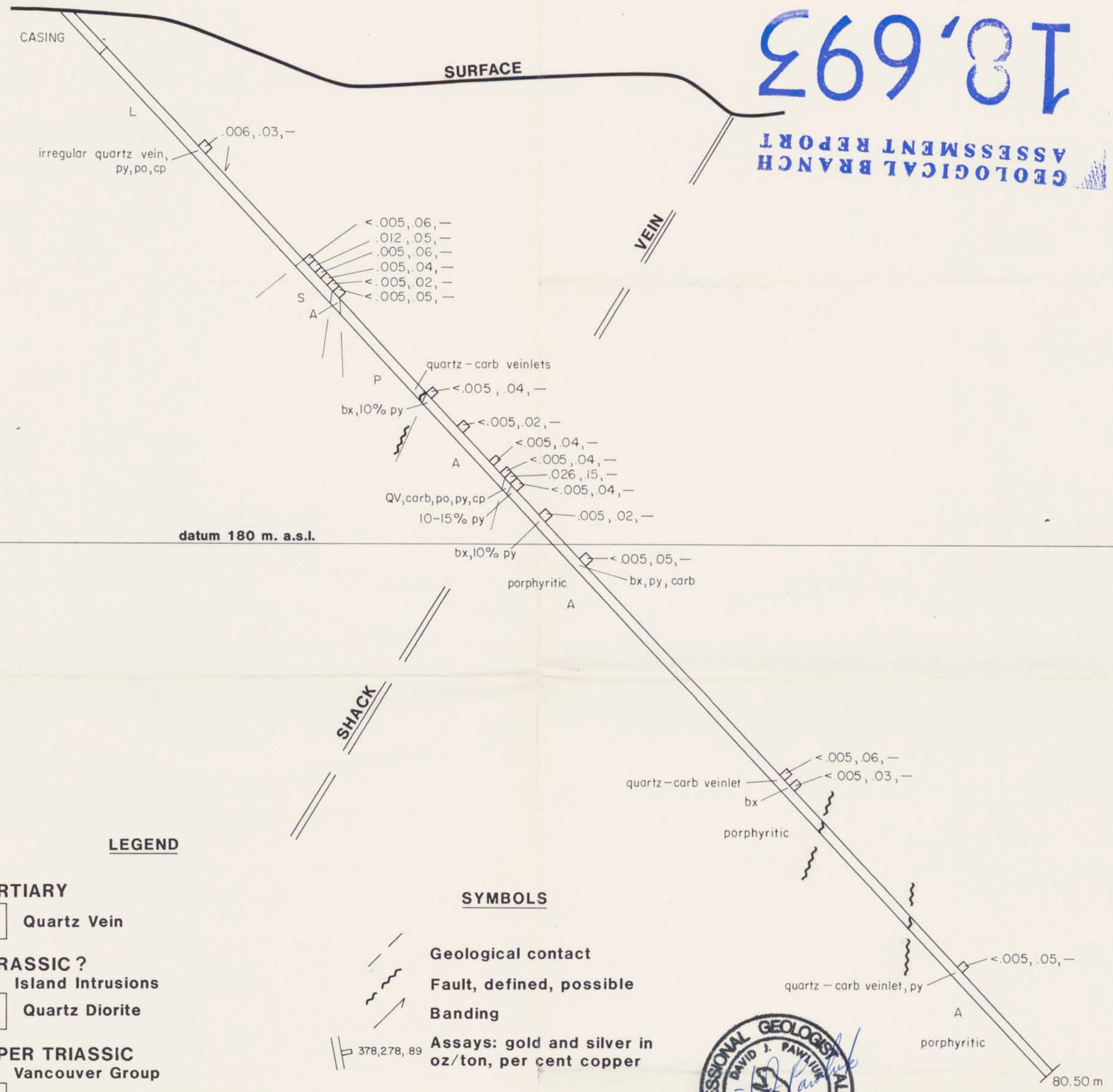
CAPTAIN HOOK MINERAL CLAIM

CROSS SECTION DIAMOND DRILL HOLE SH-88-12

Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 20

SECTION LOOKING NORTHEAST

DRILL HOLE AZIMUTH 167°



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,.89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonate
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G C.	ground core

0 5 10 15 20

METRES

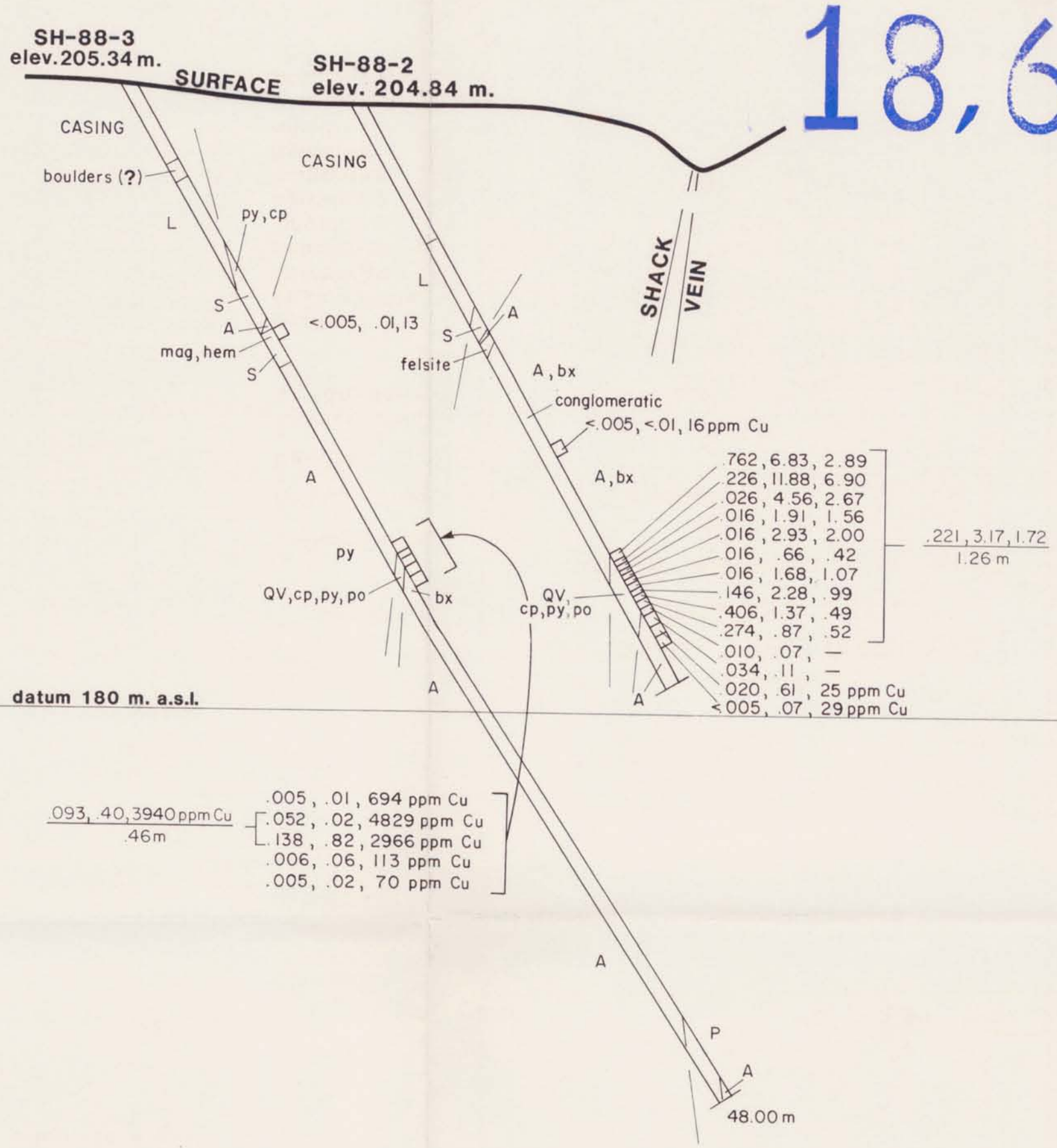
To accompany a report by David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST DAVID J. PAWLIUK ALBERTA

NATIONWIDE GOLD MINES CORPORATION	
CAPTAIN HOOK MINERAL CLAIM	
CROSS SECTION DIAMOND DRILL HOLE SH-88-1	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 16

DRILL HOLE SH-88-2 AZIMUTH 203°
DRILL HOLE SH-88-3 AZIMUTH 200°

SECTION LOOKING SOUTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278, 89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonate
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G.C.	ground core

0 5 10 15 20
METRES

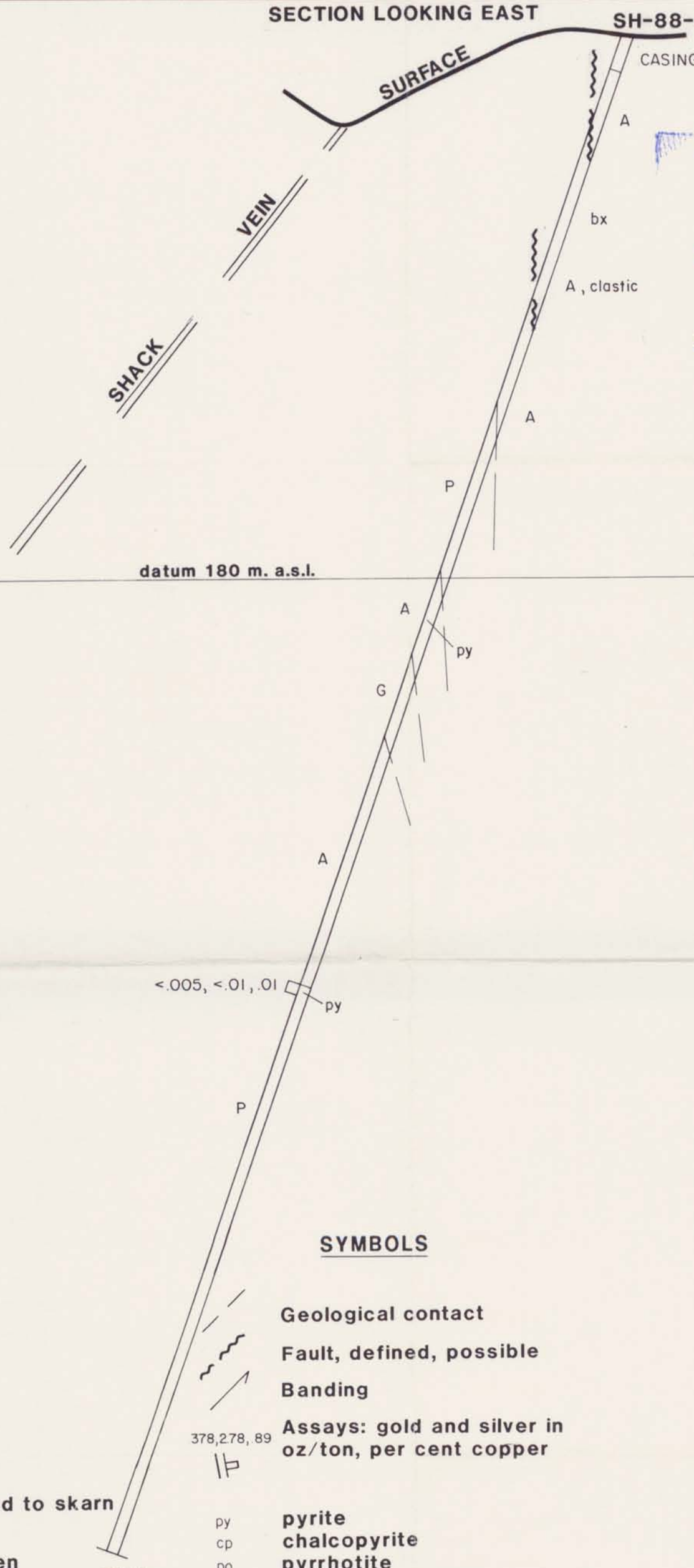
To accompany a report by David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST ALBERTA
DAVID J. PAWLIUK

NATIONWIDE GOLD MINES CORPORATION	
CAPTAIN HOOK MINERAL CLAIM	
CROSS SECTION DIAMOND DRILL HOLE SH-88-2,SH-88-3	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 17

SECTION LOOKING EAST

DRILL HOLE AZIMUTH 340°



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278, 89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
lmnt	limonite
carb	carbonate
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G C.	ground core

0 5 10 15 20

METRES

To accompany a report by David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST DAVID J. PAWLIUK ALBERTA

NATIONWIDE GOLD MINES CORPORATION	
CAPTAIN HOOK MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-4**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 18

SECTION LOOKING EAST

3+00 S

SH-88-A
elev.208.87m

logging road

SURFACE

overburden

L

L

L

datum 180 m a.s.l.

L

A

P, soft

L

S

A, S

A, F

F

A, S

63.7m
64.6m
<.005, <.01, 60ppm Cu
<.005, .01, 66ppm Cu
<.005, <.01, 62ppm Cu
<.005, <.01, 64ppm Cu

F, A, 3-4% py

A

— S, F

A

A, S

F, S

F, 3% py

G

98.4m
QV, py, soft
99.1m
<.005, <.01, 78ppm Cu
.005, .01, 79ppm Cu
.006, .01, 78ppm Cu
.010, .01, 87ppm Cu
A

.005, .01, 80ppm Cu / 36m

F, S

A, S

F, S

A, S, hard

F

A

F, .5-2% py

128m

Rotary Hammer Drill Hole
(3.6m west of section)

SHACK

SH-88-9
elev. 202.94m.

SHACK VEIN

SH-88-8
elev. 202.94m.

CASING

L

S

A

A

QV, cp, py, po, sp

A

QV

A

A

.005, .01, .01
.020, .01, <.01
<.005, .05, <.01
<.005, <.01, <.01
<.005, <.01, <.01
.014, .05, .12
1.958, 10.24, 2.41
.060, .19, 1.38
.392, 2.94, .77
.072, .12, .02
.150, 1.45, .93
.005, .01, .01
.005, .01, .01
<.005, <.01, .01
<.005, <.01, .01

.395, 2.22, .85 / 66m

P

conglomeratic

bx

A

bx

<.005, <.01, <.01
.005, .14, .02
.005, 1.46, 1.06
.005, .48, .11
.005, .61, .51
.084, .21, .11
.196, .23, .11
.008, .35, .30
.005, .21, .19
.012, .12, .04
<.005, .01, .01

.042, .40, .16 / .50m

QV, py, cp, chlorite (?)

P

py

A

VEIN

py

50.00m

SH-88-9
drill hole azimuth 345°

P

bx

A

siliceous, py

G

A

P

80.00m

SH-88-8

0 5 10 15 20
METRES

To accompany a report by David J. Pawliuk, P.Geol.

LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Graywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

.084, .21, .11 — Assays: gold and silver in oz/ton, per cent copper

py — pyrite
cp — chalcopyrite
po — pyrrhotite
sp — sphalerite
limnt — limonite
carb — carbonate
mag — magnetite
hem — hematite
sil — silicified
bx — brecciated
G.C. — ground core

PROFESSIONAL GEOLOGIST DAVID J. PAWLIUK ALBERTA

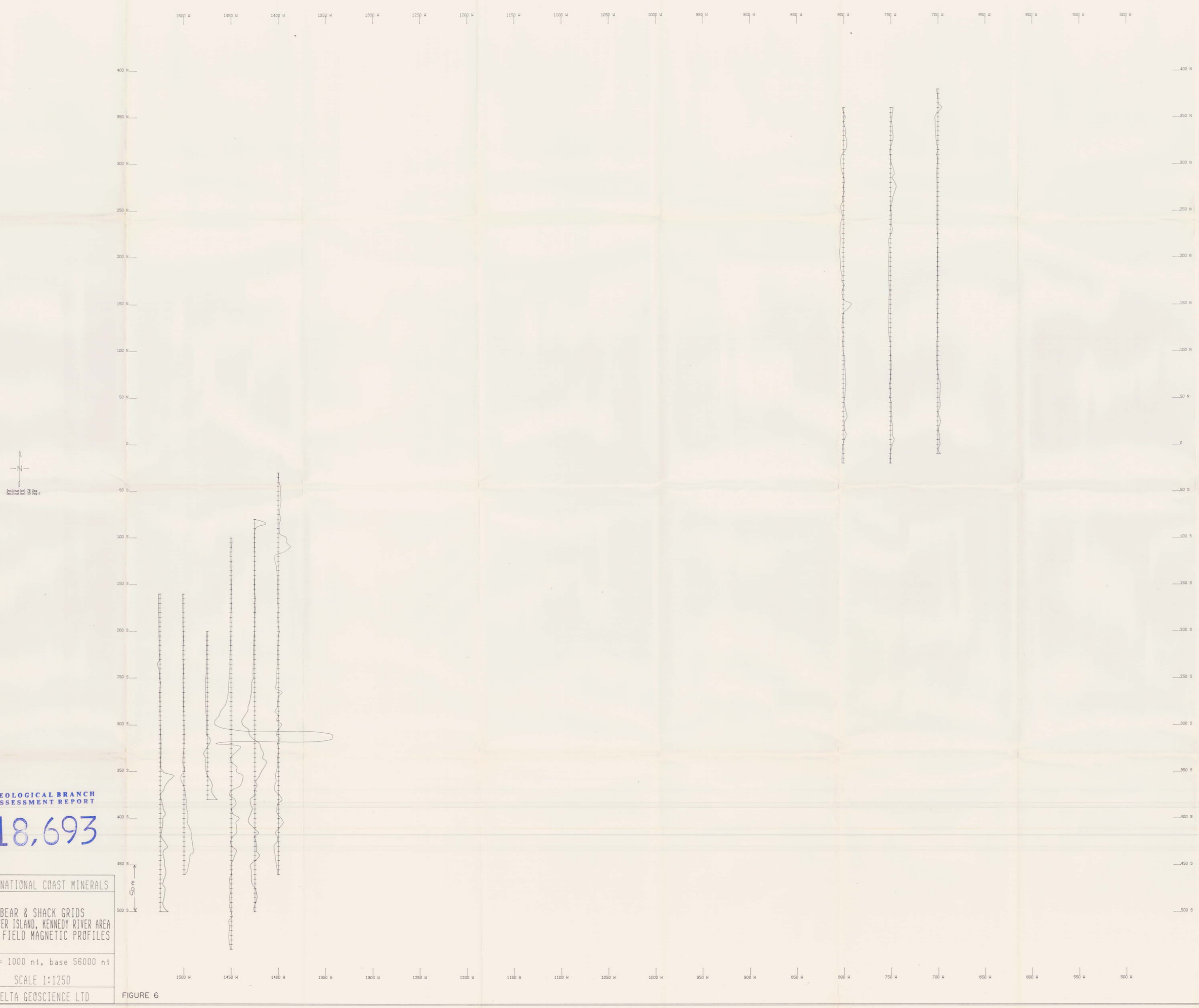
NATIONWIDE GOLD MINES CORPORATION

CAPTAIN HOOK MINERAL CLAIM

CROSS SECTION
LINE 1450 W

SHACK VEIN AREA

Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 19

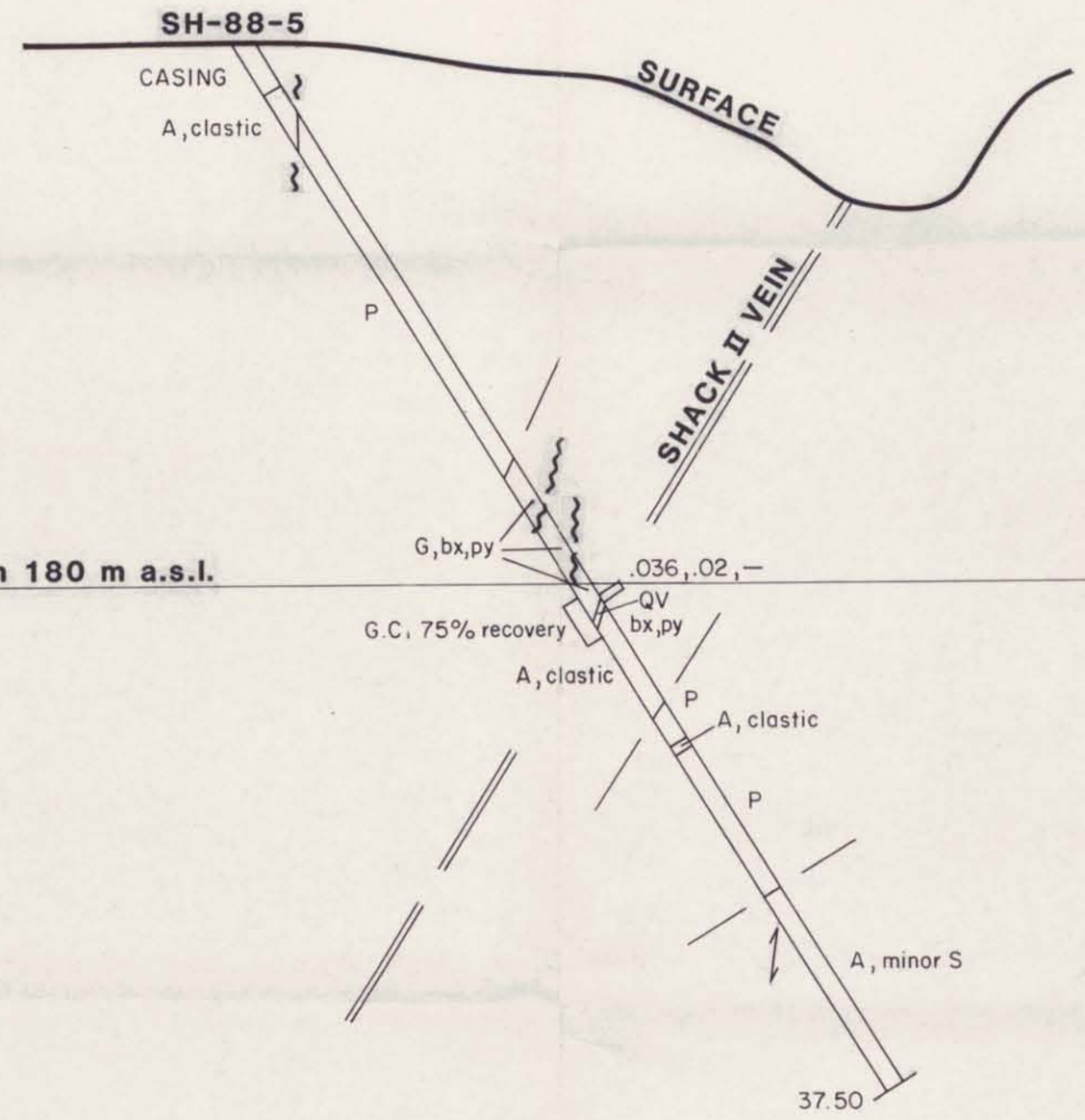


INTERNATIONAL COAST MINERALS
BEAR & SHACK GRIDS VANCOUVER ISLAND, KENNEDY RIVER AREA TOTAL FIELD MAGNETIC PROFILES
1 cm = 1000 nt, base 56000 nt SCALE 1:1250
DELTA GEOSCIENCE LTD

FIGURE 6

DRILL HOLE AZIMUTH 147°

SECTION LOOKING NORTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?
Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC
Vancouver Group

G,S — Greywacke; S, altered to skarn

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F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,2.78,.89 — Assays: gold and silver in oz/ton, per cent copper

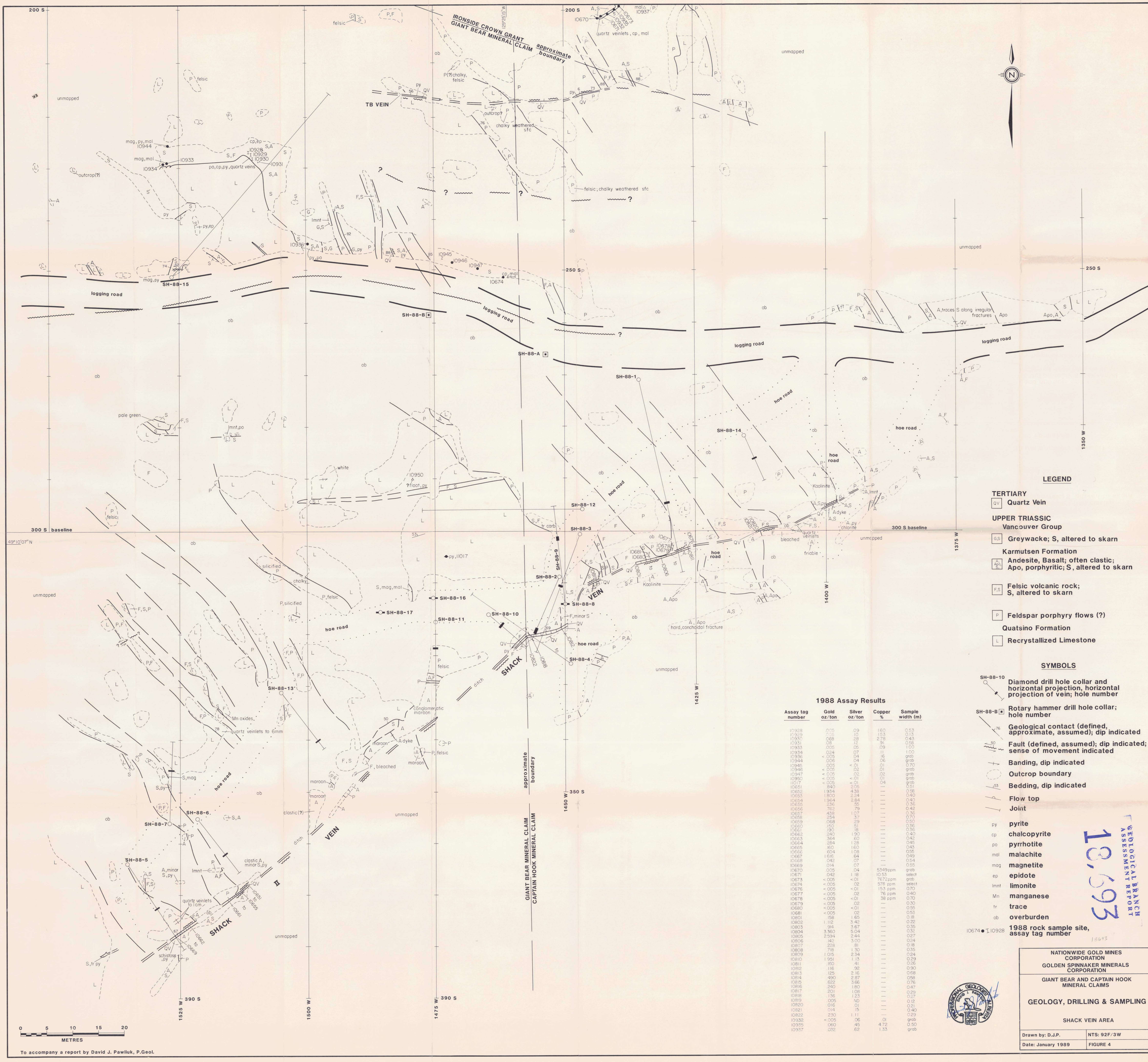
py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limnt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G.C.	ground core

0 5 10 15 20
METRES

To accompany a report by
David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST
DAVID J. PAWLIUK
ALBERTA

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-5**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 8

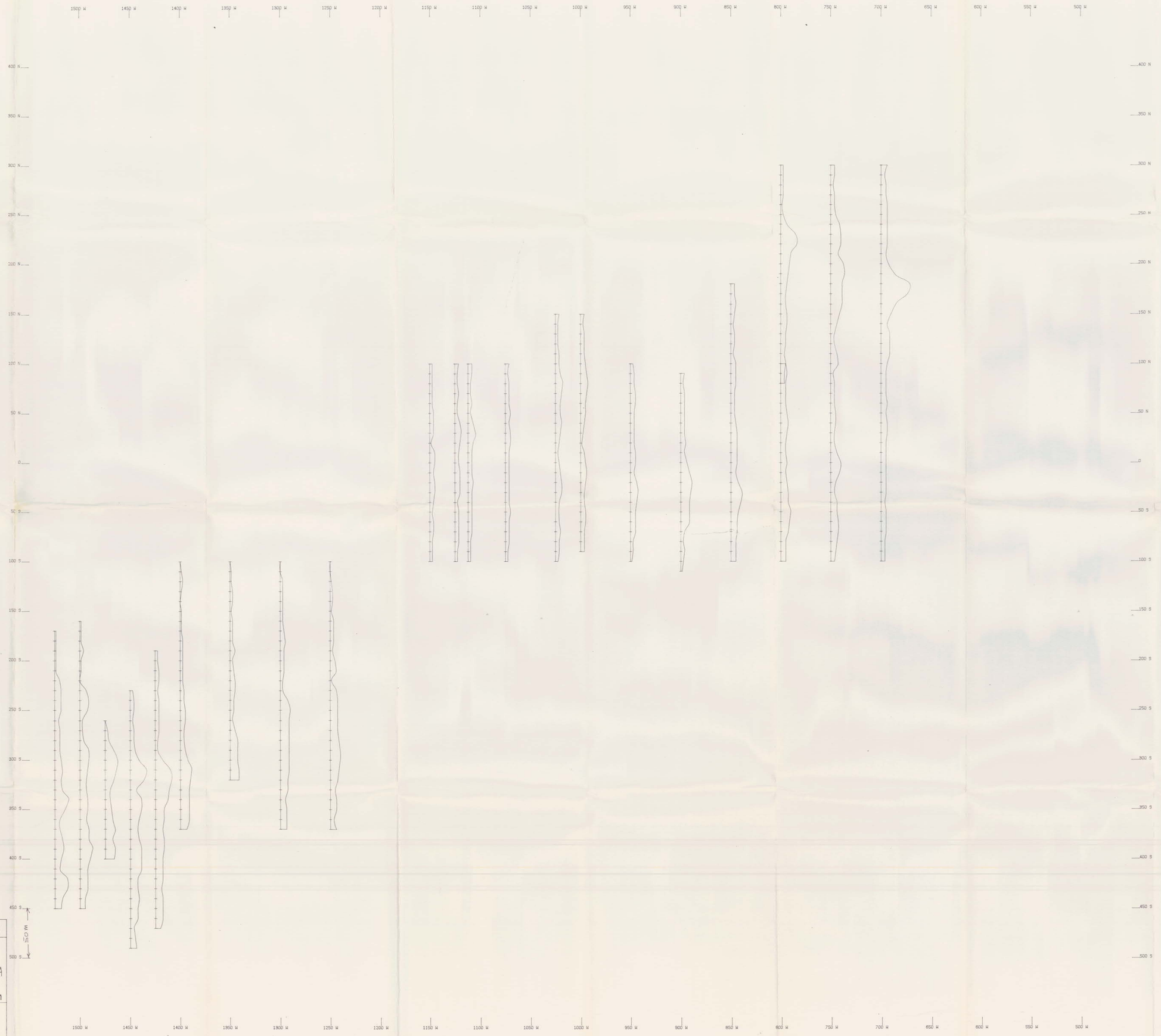


1988 Assay Results

Assay tag number	Gold oz/ton	Silver oz/ton	Copper %	Sample width (m)
10928	.005	.09	1.60	0.53
10929	.005	.10	1.53	0.13
10930	.068	.28	2.78	0.43
10931	.08	.12	.91	0.58
10933	.005	.05	.09	1.00
10934	.024	.07	.11	1.00
10936	<.005	.04	.16	grab
10944	.006	.04	.06	grab
10945	.005	<.01	.01	0.70
10946	<.005	.02	.01	grab
10947	<.005	.02	.02	grab
10950	<.005	<.01	.01	grab
11017	<.005	<.01	.04	grab
10651	.840	2.05	—	0.51
10652	1.934	4.38	—	0.58
10653	1.800	2.24	—	0.40
10654	1.964	2.84	—	0.40
10655	.236	.55	—	0.36
10656	.762	.79	—	0.42
10657	.438	1.07	—	0.36
10658	.254	.37	—	0.70
10659	.068	.29	—	0.50
10660	.150	.51	—	0.36
10661	.190	.18	—	0.36
10662	.240	1.90	—	0.40
10663	.364	.60	—	0.42
10664	.284	1.28	—	0.45
10665	.160	1.60	—	0.43
10666	.604	1.08	—	0.55
10667	1.616	.64	—	0.49
10668	.042	.07	—	0.54
10669	.014	.07	—	0.55
10670	.005	.04	5349 ppm	grab
10671	.042	1.18	10.53	select
10673	<.005	<.01	7672 ppm	grab
10674	<.005	.02	578 ppm	select
10676	<.005	<.01	153 ppm	0.70
10677	<.005	.02	76 ppm	0.40
10678	<.005	<.01	38 ppm	0.70
10679	<.005	.02	—	0.30
10680	<.005	<.01	—	0.55
10681	<.005	.02	—	0.53
10801	.158	1.65	—	0.18
10802	1.112	3.42	—	0.22
10803	.914	3.67	—	0.35
10804	3.360	5.04	—	0.32
10805	2.594	2.44	—	0.27
10806	.142	3.00	—	0.24
10807	.228	.81	—	0.18
10808	.718	1.30	—	0.35
10809	1.015	2.34	—	0.24
10810	1.951	1.13	—	0.29
10811	.160	.41	—	0.26
10812	.116	.92	—	0.90
10813	.125	2.16	—	0.68
10814	.490	2.87	—	0.58
10815	.622	3.66	—	0.76
10816	.240	1.80	—	0.47
10817	.201	1.08	—	0.29
10818	.136	1.23	—	0.27
10819	.005	ND	—	0.12
10820	.016	.01	—	0.21
10821	.014	.15	—	0.40
10822	.230	1.11	—	0.29
10932	<.005	.06	.01	grab
10935	.060	.45	4.72	0.50
10937	.032	.62	1.33	grab

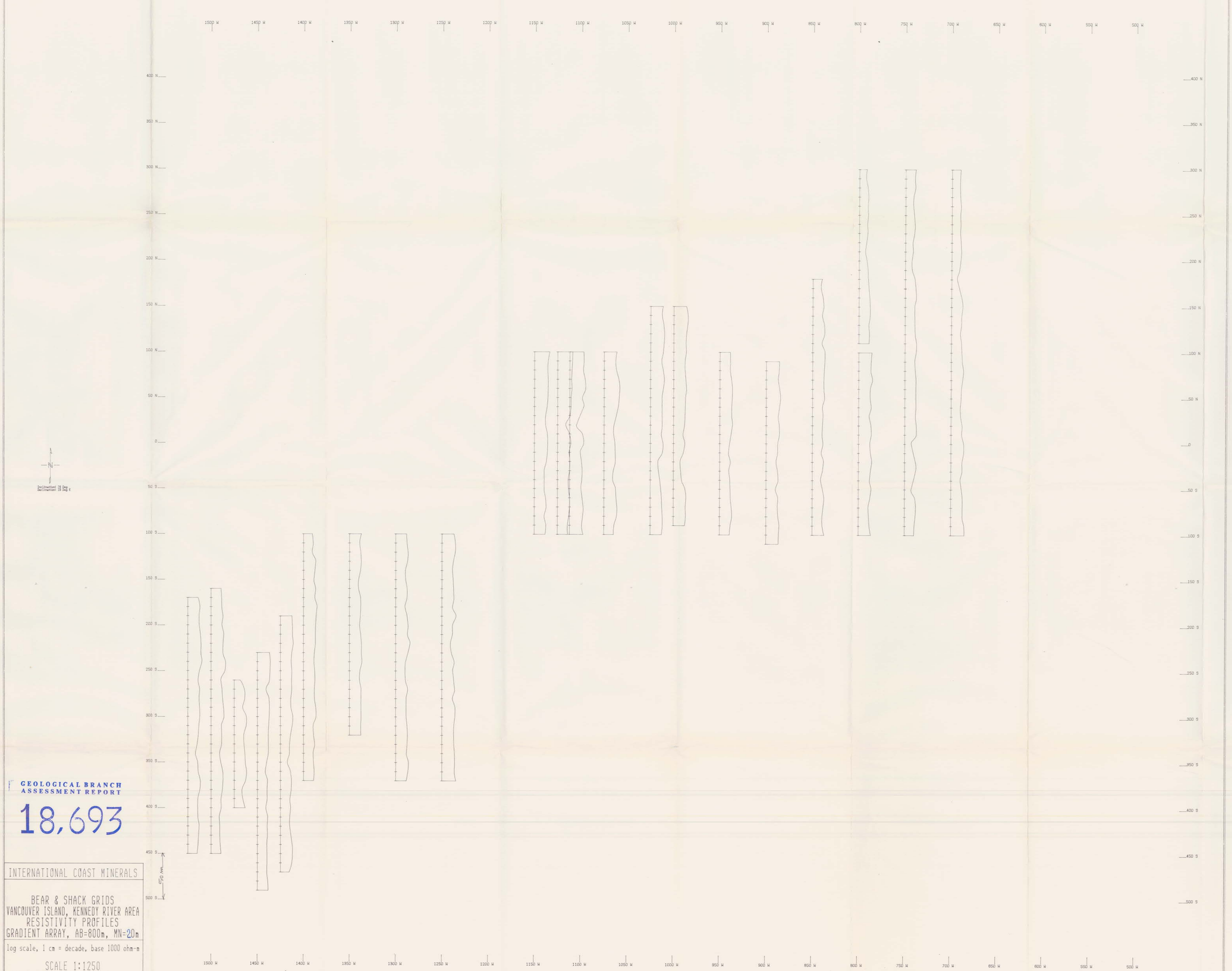
INTERNATIONAL COAST MINERALS
BEAR & SHACK GRIDS VANCOUVER ISLAND, KENNEDY RIVER AREA FILTERED VLF PROFILES, (Fraser) 23.4 khz
1 cm = 10 %, base 0 SCALE 1:1250
DELTA GEOSCIENCE LTD

FIGURE 5



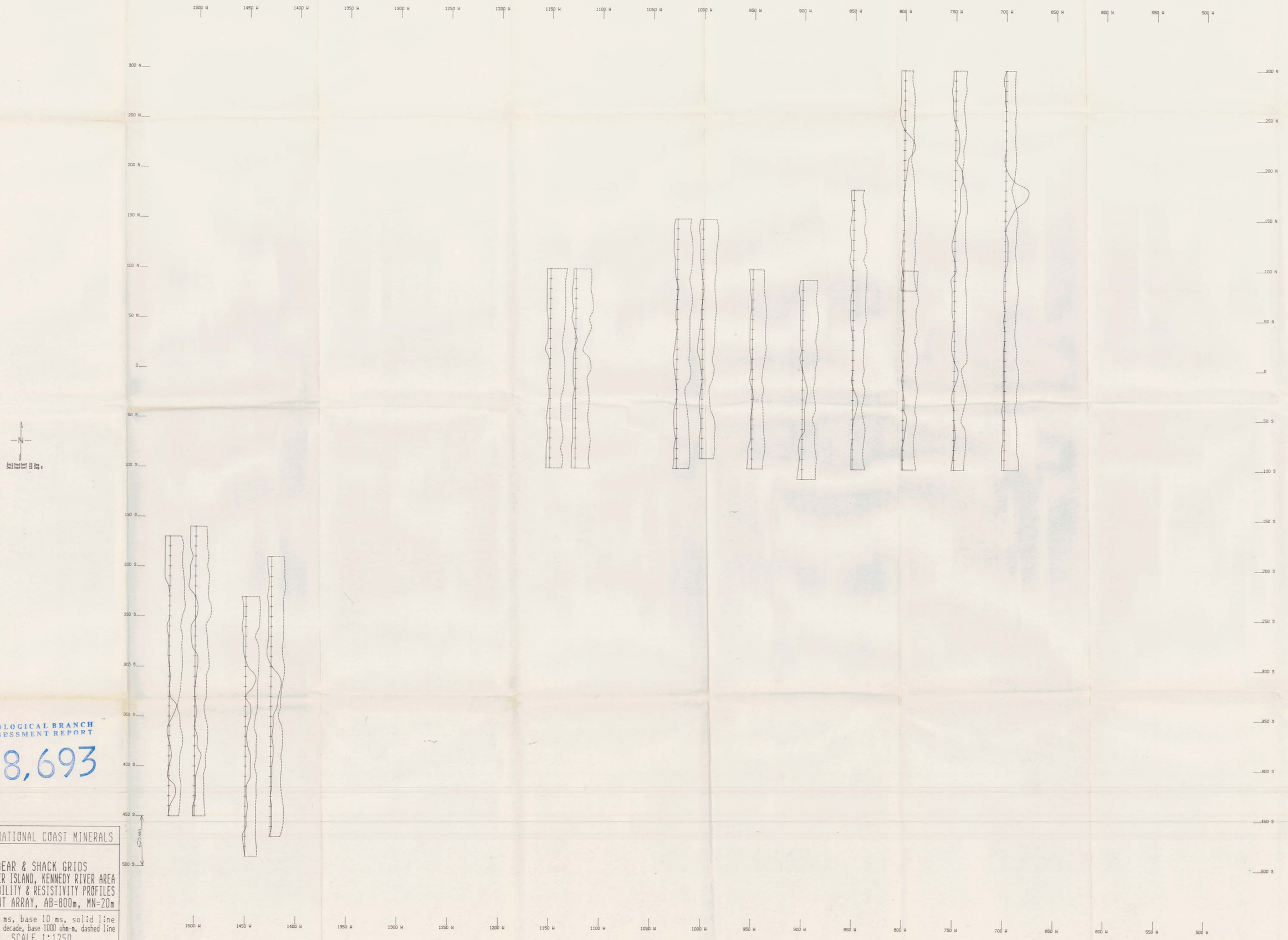
INTERNATIONAL COAST MINERALS
BEAR & SHACK GRIDS VANCOUVER ISLAND, KENNEDY RIVER AREA CHARGEABILITY PROFILES GRADIENT ARRAY, AB=800m, MN=20m
1 cm = 10 ms, base 10 ms
SCALE 1:1250
DELTA GEOSCIENCE LTD

FIGURE 7b



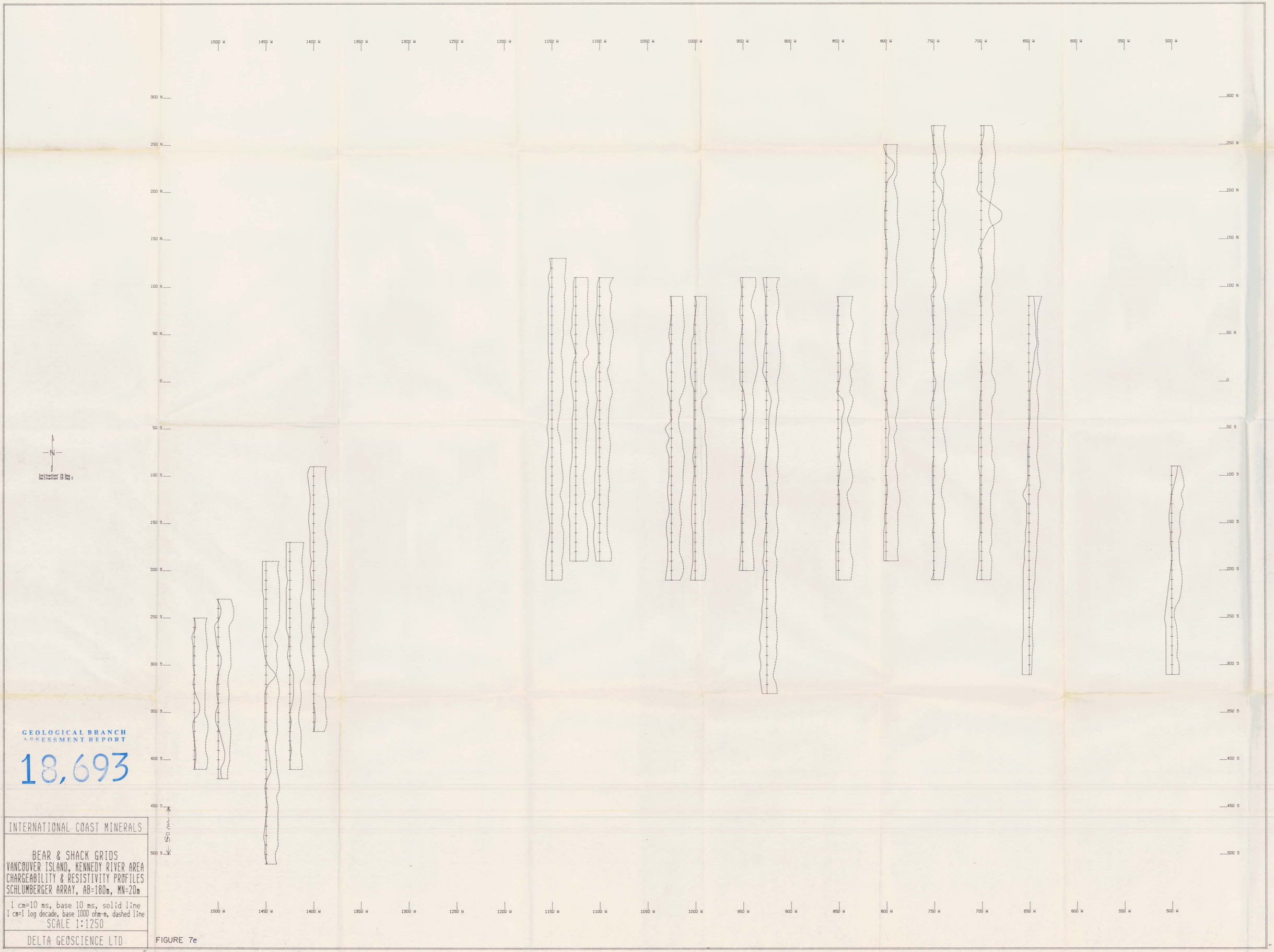
INTERNATIONAL COAST MINERALS
BEAR & SHACK GRIDS VANCOUVER ISLAND, KENNEDY RIVER AREA RESISTIVITY PROFILES GRADIENT ARRAY, AB=800m, MN=20m
log scale, 1 cm = decade, base 1000 ohm-m
SCALE 1:1250
DELTA GEOSCIENCE LTD

FIGURE 7c



INTERNATIONAL COAST MINERALS
BEAR & SHACK GRIDS VANCOUVER ISLAND, KENNEDY RIVER AREA CHARGEABILITY & RESISTIVITY PROFILES GRADIENT ARRAY, AB=800m, MN=20m
1 cm=10 ms, base 10 ms, solid line 1 cm=1 log decade, base 1000 ohm-m, dashed line SCALE 1:1250
DELTA GEOSCIENCE LTD

FIGURE 7d



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,693

INTERNATIONAL COAST MINERALS

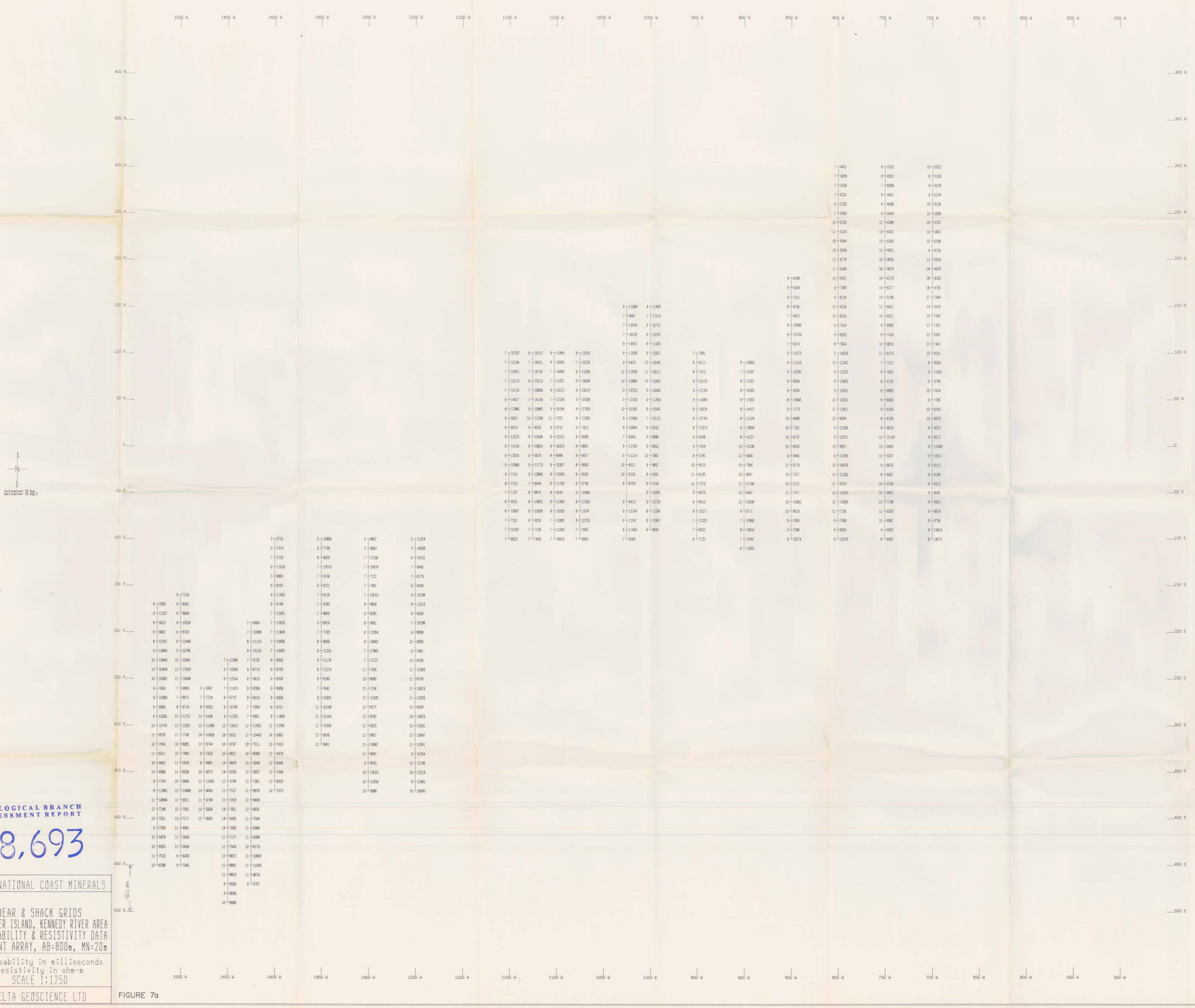
BEAR & SHACK GRIDS
VANCOUVER ISLAND, KENNEDY RIVER AREA
CHARGEABILITY & RESISTIVITY PROFILES
SCHLUMBERGER ARRAY, AB=180m, MN=20m

1 cm=10 ms, base 10 ms, solid line
1 cm=1 log decade, base 1000 ohm-m, dashed line
SCALE 1:1250

DELTA GEOSCIENCE LTD

FIGURE 7e

Inclination: 28 Deg E
Declination: 19 Deg E



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,693

INTERNATIONAL COAST MINERALS

BEAR & SHACK GRIDS
VANCOUVER ISLAND, KENNEDY RIVER AREA
CHARGEABILITY & RESISTIVITY DATA
GRADIENT ARRAY, AB=800m, MN=20m

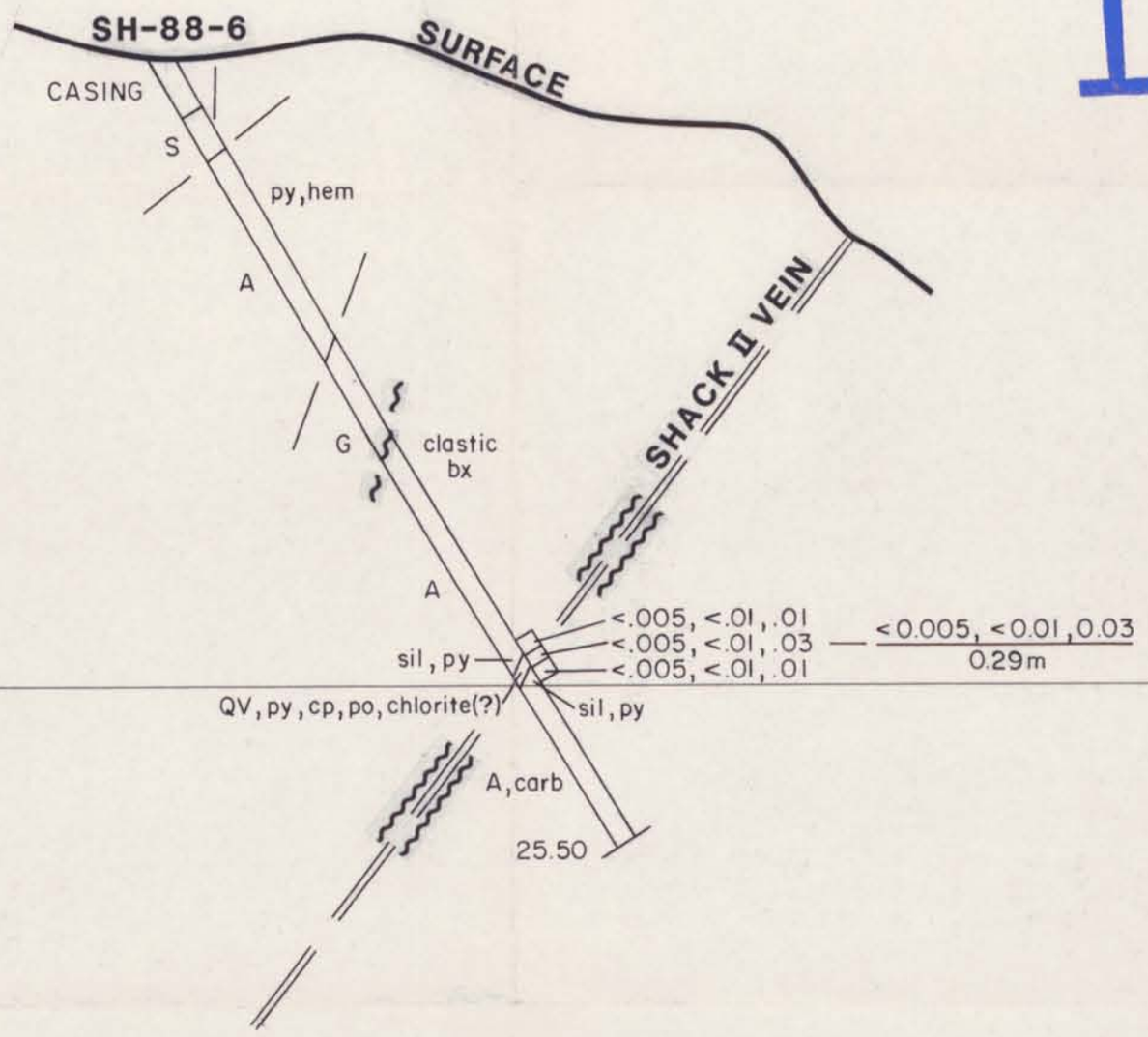
Chargeability in milliseconds
Resistivity in ohm-m
SCALE 1:1250

DELTA GEOSCIENCE LTD

FIGURE 7a

DRILL HOLE AZIMUTH 142°

SECTION LOOKING NORTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G.C.	ground core

0 5 10 15 20

METRES

To accompany a report by David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST — DAVID J. PAWLIUK — ALBERTA

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-6**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 9

DRILL HOLE AZIMUTH 003°

SECTION LOOKING EAST

LEGEND

TERTIARY

QV — **Quartz Vein**

JURASSIC ?

Island Intrusions

Qd — **Quartz Diorite**

UPPER TRIASSIC

Vancouver Group

G,S — **Greywacke; S, altered to skarn**

Karmutsen Formation

A,S — **Andesite, Basalt; often clastic; S, altered to skarn**

F,S — **Felsic volcanic rock; S, altered to skarn**

P — **Feldspar porphyry flows (?)**

Quatsino Formation

L — **Recrystallized Limestone**

SYMBOLS

Geological contact

Fault, defined, possible

Banding

0.378, 2.78, 89 — **Assays: gold and silver in oz/ton, per cent copper**

py	**pyrite**
cp	**chalcopyrite**
po	**pyrrhotite**
sp	**sphalerite**
limt	**limonite**
carb	**carbonite**
mag	**magnetite**
hem	**hematite**
sil	**silicified**
bx	**brecciated**
GC	**ground core**

0 5 10 15 20

METRES

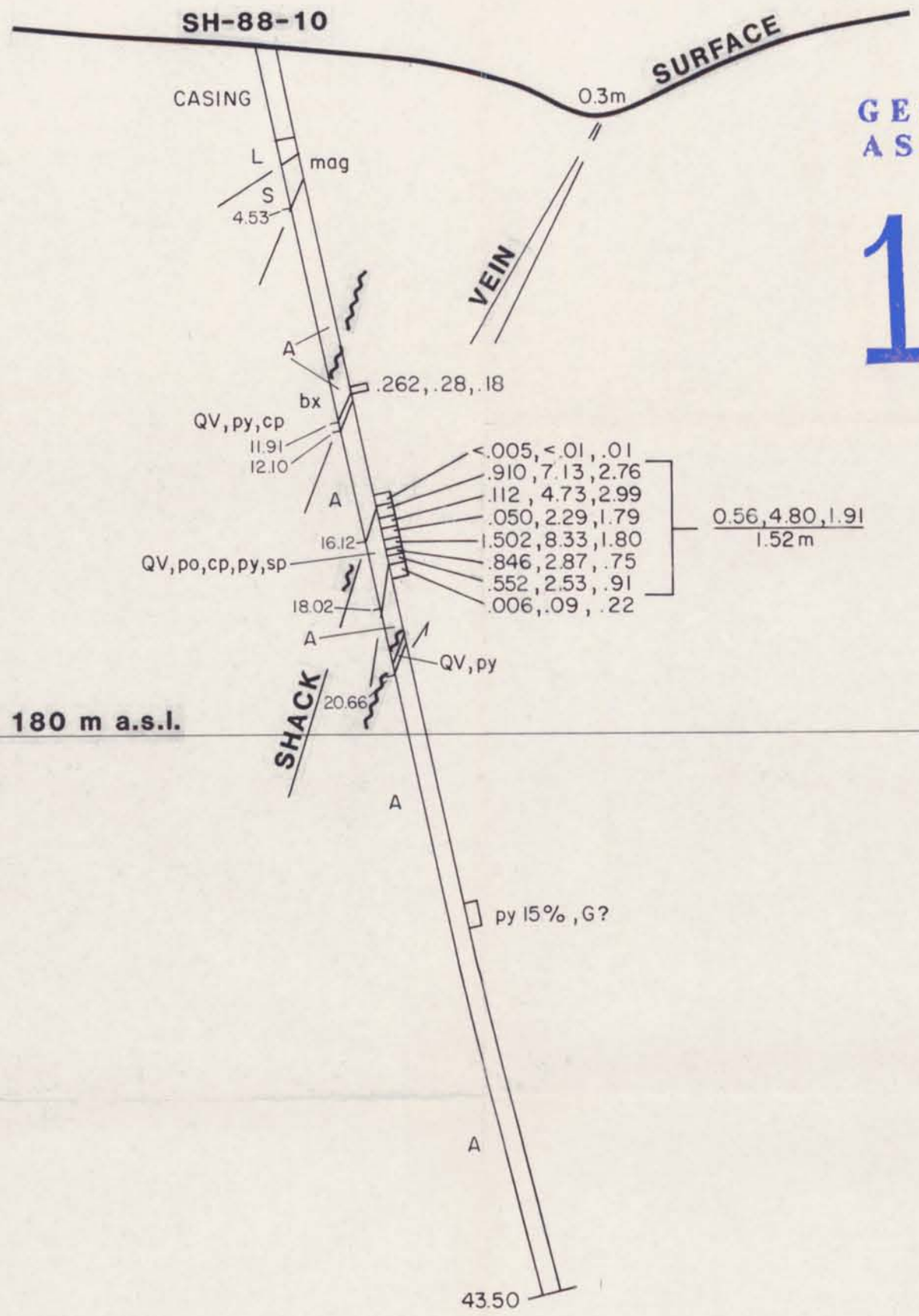
To accompany a report by David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST ALBERTA
DAVID PAWLIUK

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM	
CROSS SECTION DIAMOND DRILL HOLE SH-88-7	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 10

DRILL HOLE AZIMUTH 132°

SECTION LOOKING NORTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?
Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC
Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378, 278, 89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G C.	ground core

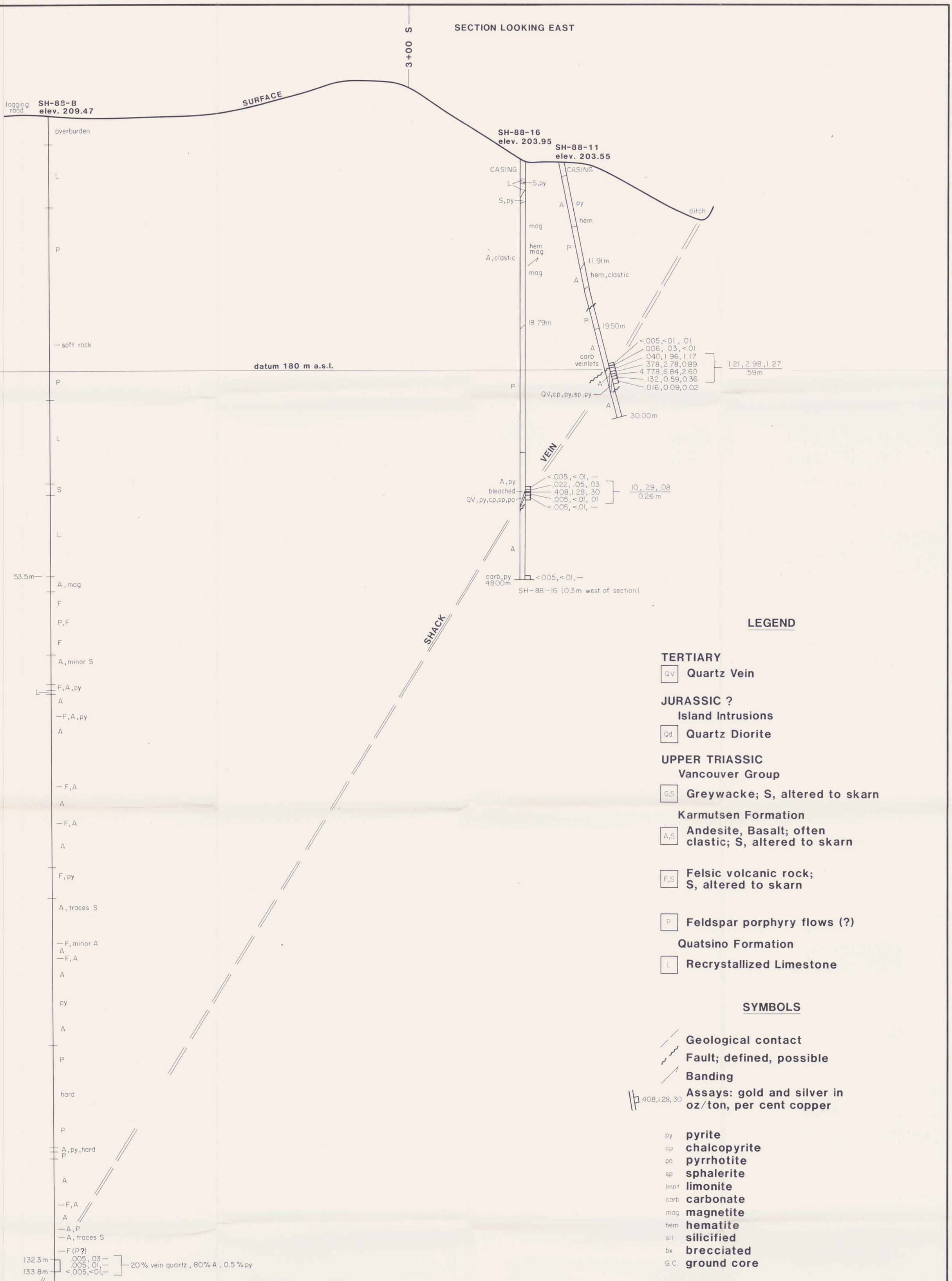
0 5 10 15 20
METRES

To accompany a report by
David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST
DAVID J. PAWLIUK
ALBERTA

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-10**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 11

SECTION LOOKING EAST



0 5 10 15 20
METRES

To accompany a report by David J. Pawliuk, P.Geol.

LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

Vancouver Group

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A,S — Andesite, Basalt; often clastic; S, altered to skarn

F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault; defined, possible

Banding

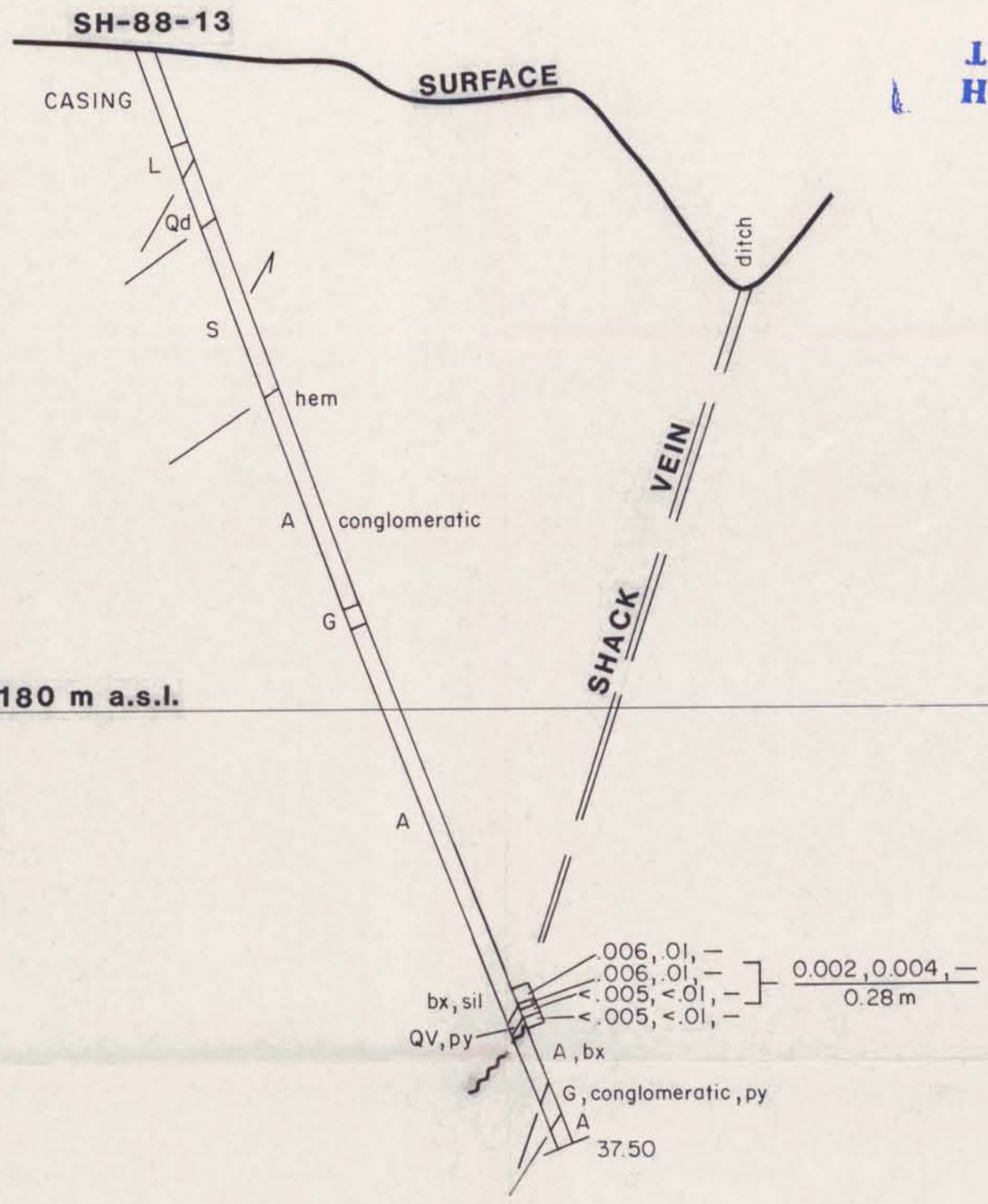
408, 1.28, .30 — Assays: gold and silver in oz/ton, per cent copper

py — pyrite
cp — chalcopyrite
po — pyrrhotite
sp — sphalerite
limt — limonite
carb — carbonate
mag — magnetite
hem — hematite
sil — silicified
bx — brecciated
G.C. — ground core

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM	
CROSS SECTION LINE 1475 W SHACK VEIN AREA	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 12

DRILL HOLE AZIMUTH 142°

SECTION LOOKING NORTHEAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

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F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,.89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G C.	ground core

0 5 10 15 20
METRES

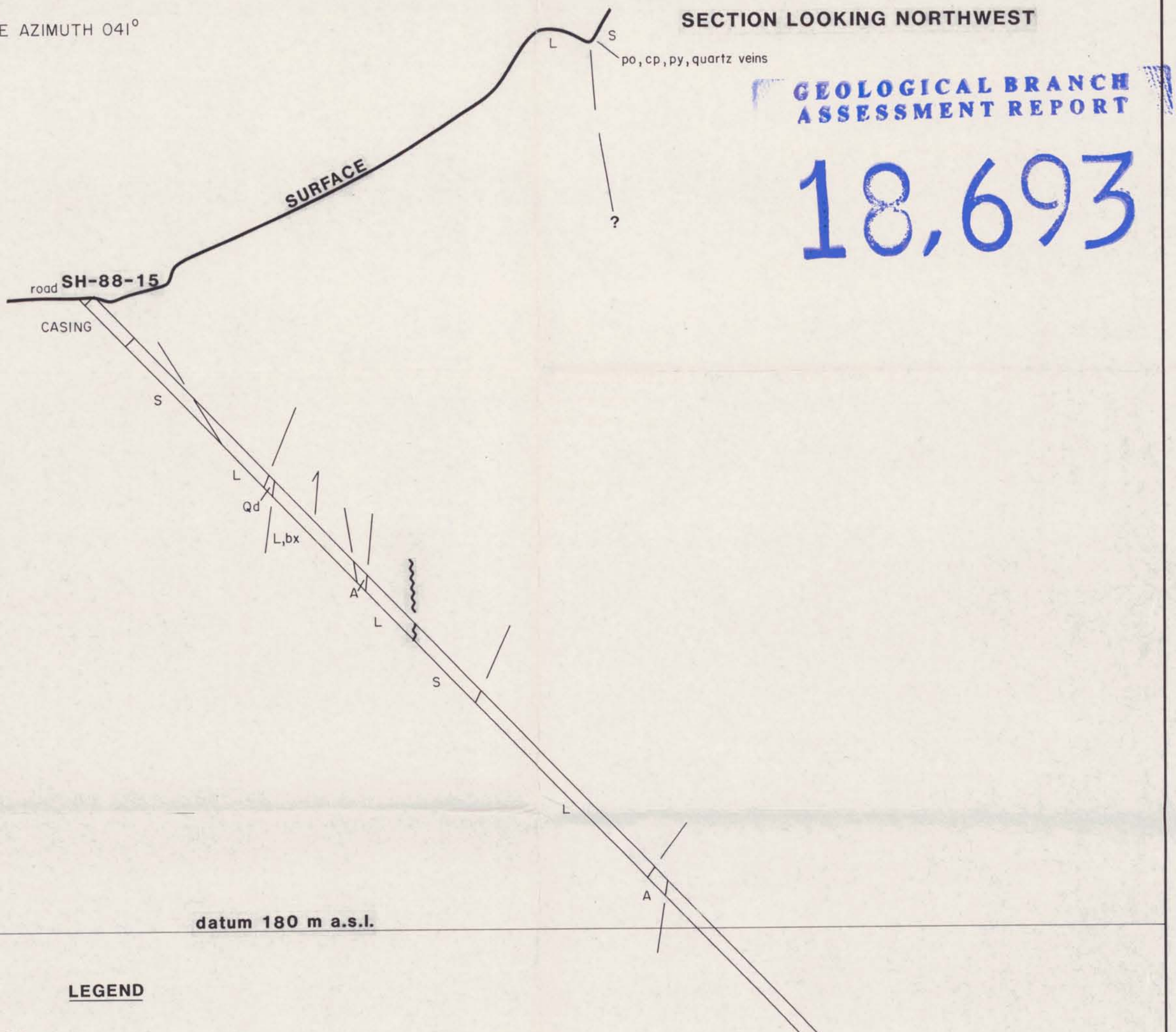
To accompany a report by
David J. Pawliuk, P.Geol.

PROFESSIONAL GEOLOGIST ALBERTA
DAVID J. PAWLIUK

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-13**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 13

DRILL HOLE AZIMUTH 041°

SECTION LOOKING NORTHWEST



datum 180 m a.s.l.

LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?
Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC
Vancouver Group

G,S — Greywacke; S, altered to skarn

Karmutsen Formation

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P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limnt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G C.	ground core

0 5 10 15 20
METRES

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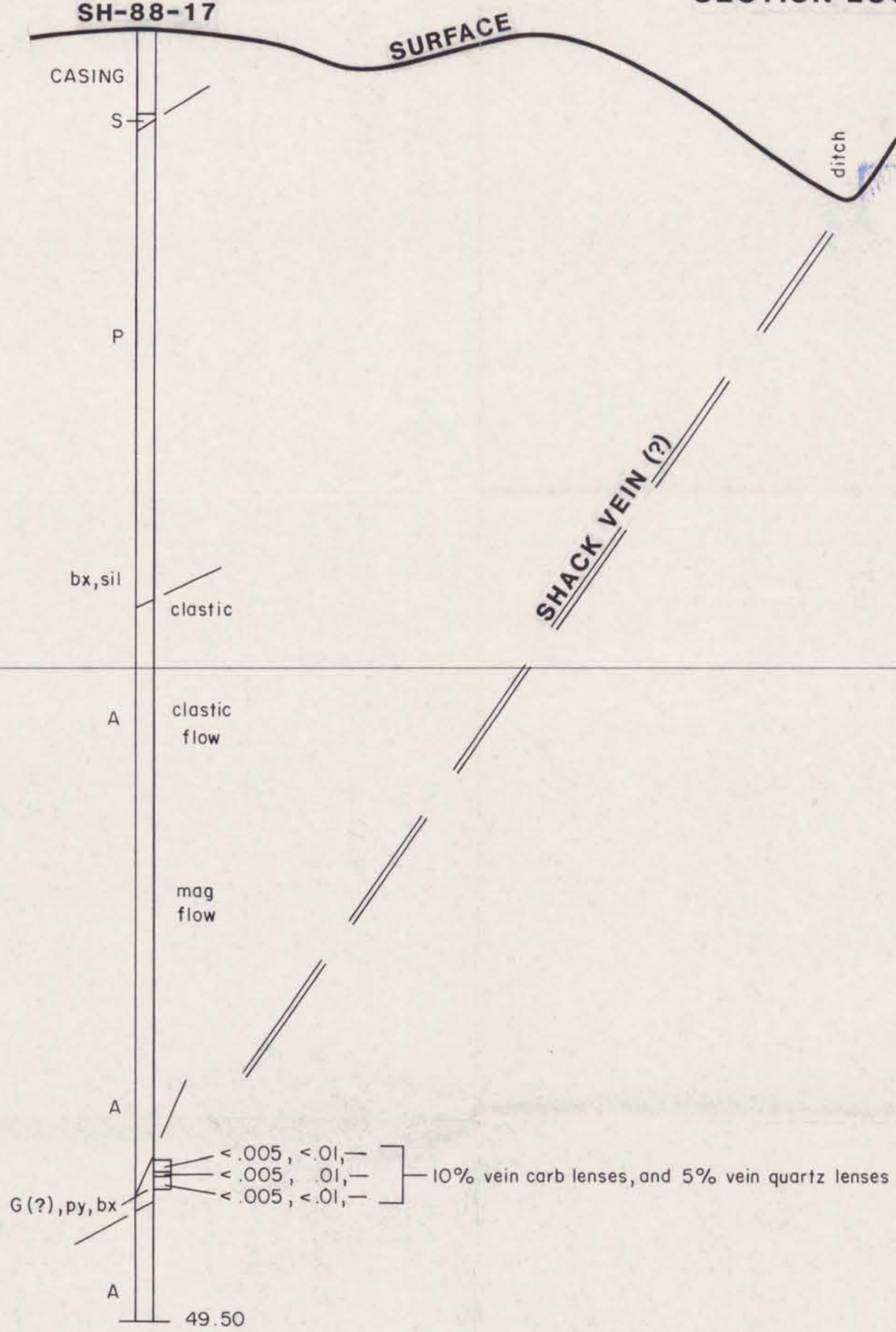
GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-15**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 14

SECTION LOOKING EAST



LEGEND

TERTIARY

QV — Quartz Vein

JURASSIC ?

Island Intrusions

Qd — Quartz Diorite

UPPER TRIASSIC

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G,S — Greywacke; S, altered to skarn

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F,S — Felsic volcanic rock; S, altered to skarn

P — Feldspar porphyry flows (?)

Quatsino Formation

L — Recrystallized Limestone

SYMBOLS

Geological contact

Fault, defined, possible

Banding

378,278,89 — Assays: gold and silver in oz/ton, per cent copper

py	pyrite
cp	chalcopyrite
po	pyrrhotite
sp	sphalerite
limt	limonite
carb	carbonite
mag	magnetite
hem	hematite
sil	silicified
bx	brecciated
G.C.	ground core

0 5 10 15 20

METRES

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DAVID J. PAWLIUK

GOLDEN SPINNAKER MINERALS CORPORATION	
GIANT BEAR MINERAL CLAIM **CROSS SECTION DIAMOND DRILL HOLE SH-88-17**	
Drawn by: D.J.P.	NTS: 92F/3W
Date: January 1989	FIGURE 15