1981 Drilling Report

on the

MUT 1-6 Claims

Nelson Mining Division

Lat. 49°05' Long. 117°12'

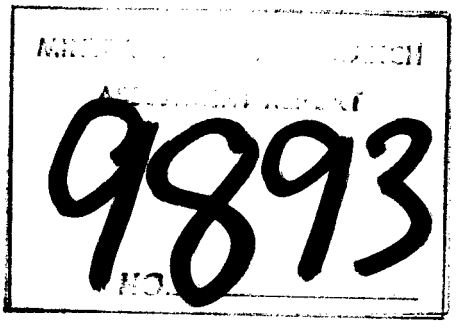
NTS 82F/3

for

BP Minerals Limited

by

D.G. Allen, P. Eng.



November, 1981

Vancouver, B.C.
BPVR 81-31

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SUMMARY

The MUT claims are situated 14 km south southeast of Salmo, B.C. The claims cover parts of Lost Creek and Wilson Creek valleys, both of which are tributaries of the South Salmo River. Access is by a 6.5 km 4 wheel drive road from the Salmo-Creston Highway. The claims are held under option by BP Minerals Limited.

The property lies in the Kootenay Arc, a narrow arcuate belt of folded and faulted miogeoclinal sedimentary rocks of Early Paleozoic age. Limestone in the belt host important lead-zinc deposits such as the Jersey and Reeves MacDonald Mines, and tungsten deposits such as the Emerald, Feeny, Invincible and Dodger Mines, all of which were significant producers. On the MUT property molybdenum-tungsten mineralization occurs in skarn zones, in poly-metallic quartz veins, and in weakly developed quartz vein stockworks.

In 1981 a program of 461 metres of diamond drilling in four holes was carried out on the MUT 6 claim. Purpose of this work was to locate a possible porphyry molybdenum-tungsten deposit which is inferred to be at depth. Drill hole M 80-2 was deepened from 233 to 269 metres where drilling problems were encountered. The hole passed through a series of mineralized granite and aplite dikes or sills and ended up in a well developed but weakly mineralized hornfels. Drill holes M 81-1 and M 81-2 were collared 108 metres southwest of

M 80-2. The holes were abandoned at 72 and 65 metres respectively because of caving problems. Drill hole M 81-3 was drilled at -75° near 80-1. The hole encountered a similar weakly mineralized hornfels zone below a depth of 70 metres and a similar but less abundant series of aplite sills. A gradual increase with depth in intensity of hornfels development and molybdenum content (10 to 50+ ppm Mo) were noted. The molybdenum content of the granite and aplite dikes in M 80-2 and skarns in holes M 81-3 ranged from 100 to 470 ppm, High fluorine (up to 5600 ppm), zinc (up to 3200 ppm), tungsten (up to 240 ppm) and copper (up to 140 ppm) were found to be associated with a zone of pegmatite dikelets containing fluorite, sphalerite and pyrrhotite between 72 and 155 metres in DDH M 81-3. Best grades obtained to date are in the zone of dikes in M 80-2; 79 m of 121 ppm Mo (0.02% MoS_2).

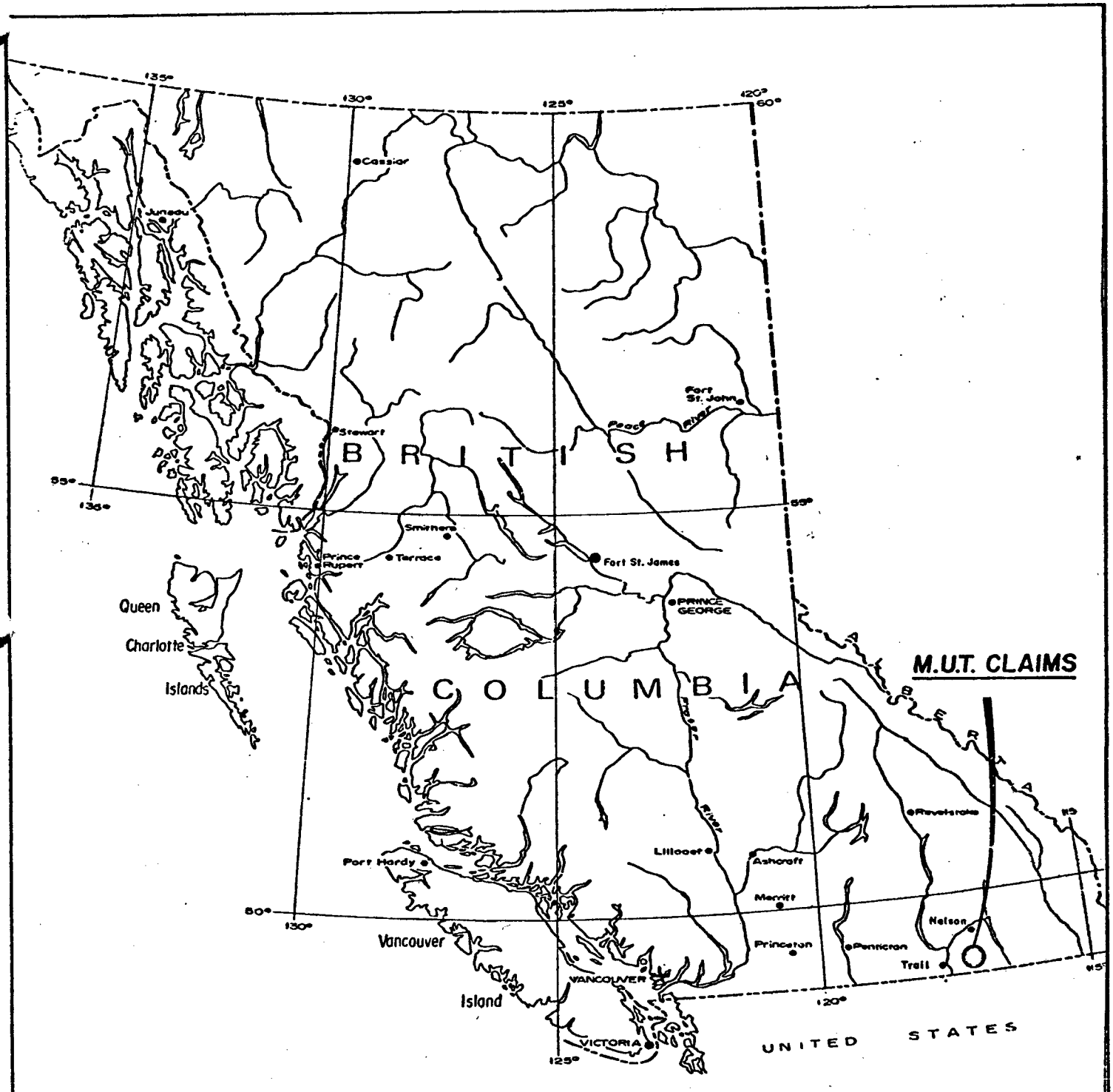
CONCLUSION

In spite of the low grade molybdenum values obtained to date, the exploration potential for a porphyry molybdenum tungsten deposit remains good. Widespread high values of molybdenum, tungsten, fluorine, zinc and silver on surface, erratic hydrothermal alteration (biotite, siliceous and calc-silicate hornfelses) and weak quartz-molybdenite vein stockworks all suggest a large hydrothermal system. However, drilling has been confined to a relatively small area. There is some evidence in drill hole 81-3 that the area drilled

has not been sited on what might be the centre of a buried intrusion - many of the quartz veins and aplite sills lie along bedding planes suggesting that some channelling of hydrothermal fluids along the stratigraphy has occurred. Further drilling at wider-spaced intervals is warranted.

RECOMMENDATIONS

A program of diamond drilling is recommended to further test the property. Prior to drilling gravimetric surveys and further rock geochemical sampling are recommended as an aid to delineating target areas.



BP Minerals Limited

SALMO OPTION
M.U.T. CLAIMS
LOCATION MAP

SCALE		NTS 82 F/3	FIG. 1
517-81-2	DATE JULY 1980	PROJ. 517	
To accompany report:	BPVR 81-30		

INTRODUCTION

During the period May 20 to June 6, 1981, diamond drilling was carried out by BP Minerals Limited on the MUT property. The purpose of the work was to test for a possible buried mineralized intrusion that is presumably responsible for hornfels and skarn development, quartz-molybdenite veining, mineralized aplite and granite dikes and prominent Mo-W-Zn-Ag geochemical anomalies observed on surface and in previous drill holes. The drilling was carried out by Wright Drilling Limited of Kamloops, B.C. Work was supervised by D.G. Allen of A and M Exploration Limited for BP Minerals Limited. Core was logged and split on the property. Split core is stored at the campsite on "MUT HILL". Total cost of the 1981 programm was $73,000.00. Results of this work are summarized in this report.

LOCATION AND ACCESS

The MUT claims are located in southeastern B.C. in the Nelson Mining Division (NTS 82F/3 at 49°05' North Latitude and 117°12' West Longitude). The claims lie north and south of the Lost Creek Valley road, approximately 38.4 air kilometres east of Trail and 14 air kilometres east-southeast of Salmo, B.C.

The drill camp on "MUT HILL", between Wilson Creek and Lost Creek, and much of MUT claims 5 and 6 are accessible

by a good 4 wheel drive road, which runs 6.5 kilometres north from Highway 3, at a point 2.2 kilometres east of Highway 6 (Salmo Nelway).

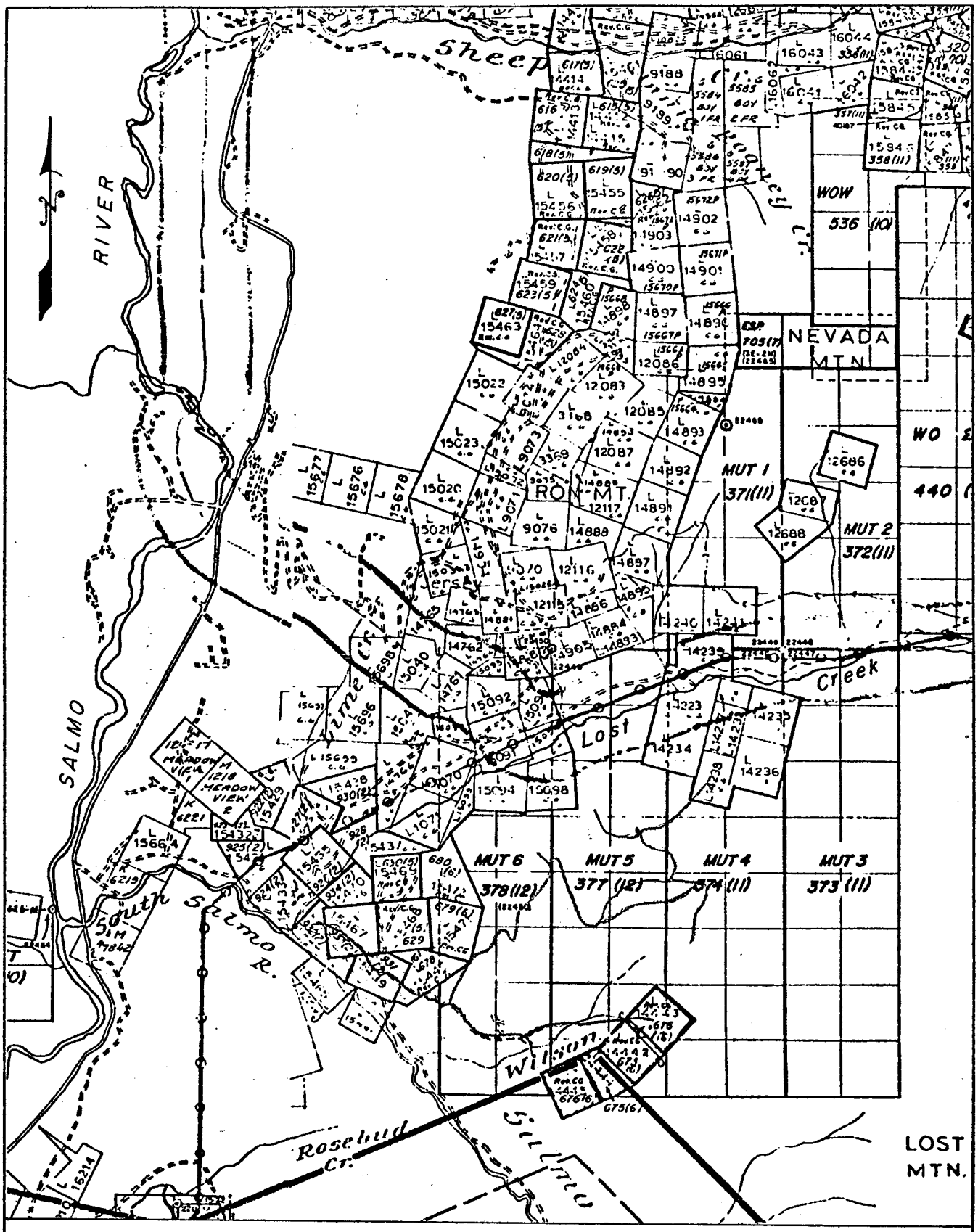
MUT claims 1 and 2 are accessible by a poor quality 4 wheel drive road, which follows the 1,250 metre elevation contour, on the north side of Lost Creek eastward from the Jersey Mine. Access to the Nevada Mountain is by helicopter from Trail; 40 air kilometres to the west, or Castelgar; 42 kilometres to the northwest.

CLAIM OWNERSHIP, STATUS AND ASSESSMENT CREDITS

The property consists of the following claims (Figure 2):

Claim	Units	Record No.	Anniversary Date
MUT 1	10	371 (11)	Nov. 30, 1986
2	10	372 (11)	Nov. 30, 1985
3	16	373 (11)	Nov. 30, 1985
4	16	374 (11)	Nov. 30, 1986
5	16	377 (12)	Dec. 7, 1990
6	16	378 (12)	Dec. 7, 1990

They are owned by John M. Mirko and Ian G. Sutherland and held under option by Benson Mines Limited. BP Minerals Limited in turn holds the property under option from Benson Mines Limited.



Donald G. Allen

BP Minerals Limited

M.U.T. CLAIMS LOCATION MAP

SCALE 1:50000		NTS 82 F/3	FIG. 2
517-81-3	DATE FEB. 1980	PROJ. 517	
To accompany report: BPVR 79-34, BPVR 81-30			

APPLICATION FOR ASSESSMENT CREDITS

The 1981 assessment credits are to be applied as follows:

Claim	Units	Anniversary Date	Credit Yrs. Applied	Credit Value	New Expiry Date
MUT 1	10	Nov. 30, 1986	2 yrs.	$ 4,000	Nov. 30, 1988
2	10	Nov. 30, 1985	3 yrs.	6,000	Nov. 30, 1988
3	16	Nov. 30, 1985	3 yrs.	9,600	Nov. 30, 1988
4	16	Nov. 30, 1986	2 yrs.	6,400	Nov. 30, 1988
5	16	Dec. 7, 1990	0 yrs.	0	Dec. 7, 1990
6	16	Dec. 7, 1990	0 yrs.	0	Dec. 7, 1990

Total Assessment Credits=$26,000 ($25,100 + $900 Credit)

Value of Work to be Credited to PAC Account = $51,049.91

HISTORY

The following history is taken from Bradley and Meszaros (1980):

The MUT claims were staked in November and December of 1976 by J. Mirko and I. Sutherland to secure ground adjacent to the Molly and Jumbo claims, suspected to contain economic concentrations of molybdenum and tungsten.

The general area has been extensively prospected since 1895, when the Southern Bells group (including the United Verde claims) were staked over silver-lead-zinc-gold mineralized quartz veins, south of Wilson Creek. Replacement lead-zinc-pyrite deposits in carbonate rocks were mine at

the H.B., Jersey, Reeves-McDonald, and Hunter V mines from 1902 until 1957. Skarn tungsten deposits were mined at the Emerald, Feeney and Dodger properties during the 1950's. The Molly Mine, owned by Cominco, was operated from 1914 to 1917 and produced 25,000 pounds of molybdenite concentrate. Tungsten as scheelite, in association with molybdenite, was discovered in 1952 by J. Gallo. Trenching was initiated over a wide area of the Molly claims and on what is now the MUT claims.

In 1977, Westwind Mines under option agreement with Mirko and Sutherland, conducted geological mapping, selective sampling of showings, grid establishment, road repair and 156.5 metres of AQ diameter diamond drilling in hole 77-1. Supervision and reporting on the 1977 project was by J. Montgomery, P. Eng., and G. Von Rosen, P. Eng. An assessment report (#6667) by V.M. Ramalingaswamy indicates an aplitic intrusion was intersected in hole 77-1 from 149.5 m - 156.5 m. The target for the drilling was skarn tungsten-molybdenite mineralization at an hypothesized granite-limestone band contact.

In 1978, Benson Mines Limited, drilled 454 metres of AQ core in diamond drilling holes 78-1, 78-2, 78-3. Hole 78-1 penetrated 116.7 m of argillite and minor limy argillite before termination in broken ground. Hole 78-2, declined 70^{o}, bearing northwest, cored 226.52 m of agrillite and terminated at 236.28m in aplite. Hole 78-3 was collared 5 m south of the MUT Adit on Lost Creek, and drilled vertically for a

total of 101.8 metres. The hole intersected granite and interbedded argillite, siliceous sediments, skarn and agrillite. Narrow intersections of skarn assayed from .18% to 1.6% Wo_3 with accessory MoS_2 from 0.02% to 0.03%. Additional mapping, road drill site construction sampling of the MUT Adit, United Verde and 1% showings were also completed during this summer.

In 1978 Cominco completed a substantial diamond drilling program in the limestone - Lost Creek granite contact area of the Molly claims. The extent and results of this program are not known to the author.

BP Minerals optioned the MUT claims from Benson Mines in 1979. A 150 m x 50 m cut grid was established on MUT claims 3-6. Geological mapping was completed at a scale of 1:50,000 and 1,175 soil samples were collected on the MUT grid. A ground magnetometer, scintillometer, and EM-16 survey were also completed on the grid."

In 1980, a total of 478.7 metres of diamond drilling in three holes was undertaken by BP Minerals Limited to test the aplite intrusion indicated at the bottom of drill holes 77-1 and 78-2 and to test an elliptical zoned Zn-Mo-Cu-F geochemical anomaly on the north side of "MUT Hill." Hole M 80-1 was abandoned due to technical difficulties. Hole M 80-2 was sited between previous drilled holes 77-1 and 78-2 and results confirmed the presence of a hydrothermally developed

system (see profiles in this report). Hole M 80-3 was collared 680 m west of M 80-2 and encountered 200 metres of relatively unaltered limy argillite.

GEOLOGY AND MINERALIZATION

Geology of the area is described by Little (1950), Fyles and Hewlett (1959), summarized by Bradley and Hoffman (1980), and Bradley and Meszaros (1980). In brief, the property lies near the southern end of the Kootenay Arc, a narrow arcuate belt of folded and faulted rocks with a northerly to northeasterly trend. Limestone in the belt host important lead-zinc deposits and tungsten deposits. The Jersey Mine on the north side of Lost Creek produced more than 7 million tons grading 1.8% Pb and 4.1% Zn. The Feeny (60,000 tons - 0.92% WO_3), Invincible (275,000 tons - 0.78% WO_3) and Dodger (295,000 tons - 0.58% WO_3), mines of Emerald Tungsten were significant tungsten producers and lie between 3.5 and 4 km north-northeast of "MUT Hill". Tungsten occurs in skarns and molybdenum in quartz veins and joints in granite on Cominco's nearby Molly claims.

The MUT claims are underlain by argillite, phyllite, slate, and limestone of the Cambrian Laib Formation and Ordovician Active Formation. Granite of the Lost Creek stock, presumably related to the Nelson plutonic suite, occupies the northeastern part of the claim group. Locally the sedimentary

rocks on the MUT 5 and 6 claims have been converted to biotite and siliceous hornfelses. Limy units have been converted to tremolite-wollastonite skarns containing minor amounts of scheelite.

Molybdenite and scheelite are widespread on the MUT claims, occurring in skarns, polymetallic veins and quartz vein stockworks. Sphalerite is common in quartz and pegmatite veins in the hornfels zones intersected in previous drilling on "MUT Hill".

1981 DIAMOND DRILLING PROGRAM

Physical Work

Road work, drill site and campsite preparations were carried out during the period May 11, 1981 to May 20, 1981. A bulldozer was contracted from PineTree Logging of Salmo, B.C. for this work.

Drilling

A total 461.4 metres of drilling was carried out in four holes from May 20 to June 6, 1981 as follows (Figure 3):

DDH M 80-2	36.3 m	(deepened from 232.9 to 269.1 m)
DDH M 81-1	72.2 m	
DDH M 81-2	64.6 m	
DDH M 81-3	288.3 m	

GEOLOGICAL RESULTS

Drill Hole M 80-2

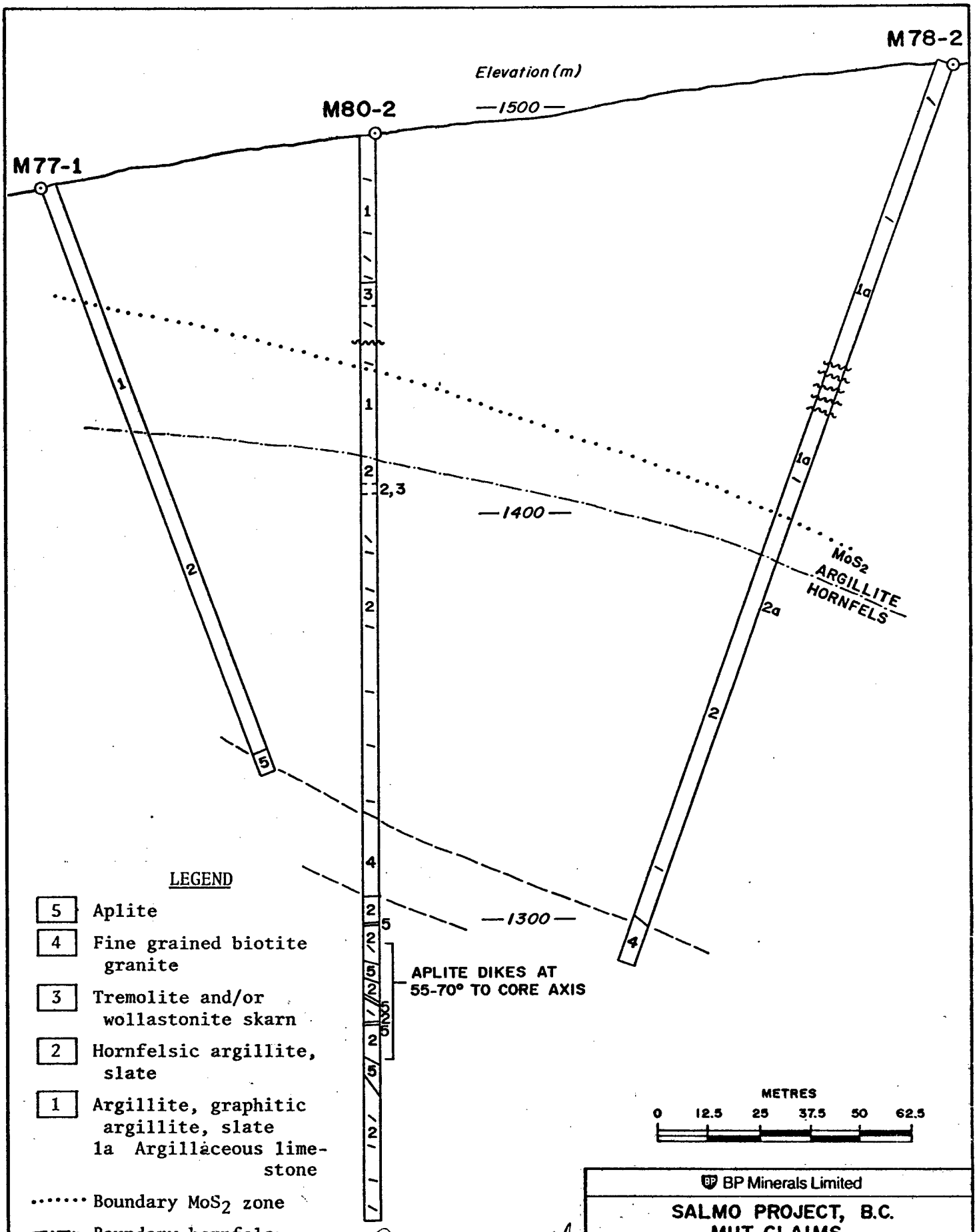
Drill hole M 80-2 was deepened from 232.94 to 269.14 m. The hole intersected fine grained granite in the intervals 232.87 - 237.7 and 259.75 - 260.95 m containing 1 - 2% disseminated biotite and minor amounts of pyrite.. Quartz vein abundance in the granite ranges from 11 to 22 per metre. Molybdenite is common in quartz veins and on fractures with sericite.

The remainder of the hole intersected well-indurated hornfelsic argillite containing zones of pervasive silicification (± calc-silicates) and biotitization. Pyrite and pyrrhotite is abundant as disseminated grains and irregular streaks along bedding or foliation planes. Irregular quartz veinlets (1-11 per metre)commonly contain pyrite, pyrrhotite and minor amounts of sphalerite. Quartz-molybdenite veinlets up to 1 cm wide range in abundance from 1 per 2 metres to 3 per metre and commonly have a purplish grey biotite hornfels envelope up to 0.7 cm wide.

A summary of the hole is as follows (see Figure 4):

Geological description of Diamond Drill Hole M 80-2

Interval	Main Lithology	Secondary Features
232.9-237.7 m	Fine grained granite	11-22 qtz ± MoS_2 veinlets per metre. MoS_2 on fractures with sericite. Minor py dissem and on fractures.



LEGEND

- 5 Aplite
- 4 Fine grained biotite granite
- 3 Tremolite and/or wollastonite skarn
- 2 Hornfelsic argillite, slate
- 1 Argillite, graphitic argillite, slate
  - 1a Argillaceous limestone
- ····· Boundary MoS_2 zone
- —·—·— Boundary hornfels zone
- Bedding (attitude relative to core axis)

Donald G. Allen

BP Minerals Limited

SALMO PROJECT, B.C.
MUT CLAIMS
GEOLOGICAL SECTION THROUGH DDH'S M77-1, M78-2, M80-2 LOOKING N.E.

SCALE 1 : 1,250		NTS 82 F/3	FIG. 4
517-81-6	DATE NOV. 1981	PROJ. 517	
To accompany report: BPVR 81-30			DA/dh

Interval	Main Lithology	Secondary Features
237.7-253.7	Hornfelsic agrillite and siltstone	Scattered thin limy beds. 2-12 qtz $\pm$ MoS_2 veinlets per metre. Local purple biotite development mainly adjacent to qtz veinlets. Abundant dissem and streaks of py and po.
253.7-254.2	Lamprophyre dike.	
254.2-259.7	Hornfelsic laminated argillite.	V. minor MoS_2 in qtz veinlets and on fracts. (1-10/m) Minor sphal. in qtz veinlets. Abundant dissem and streaks of py and po. F.g. purple biotite development mainly along larger qtz veins.
259.7-261.0	Medium grained aplitic granite	Minor dissem MoS_2 and muscovite.
261.0-269.1	Hornfelsic agrillite	Purple biotite as above. Foliation and/or bedding @ 61^{o}. Py and po as above. 1-3 qtz $\pm$ MoS_2 veinlets/m. 262.7 5 cm aplite-pegmatite dikelet lined with MoS_2.
	269.1 End of hole.	

Drill Holes M 81-1, 81-2

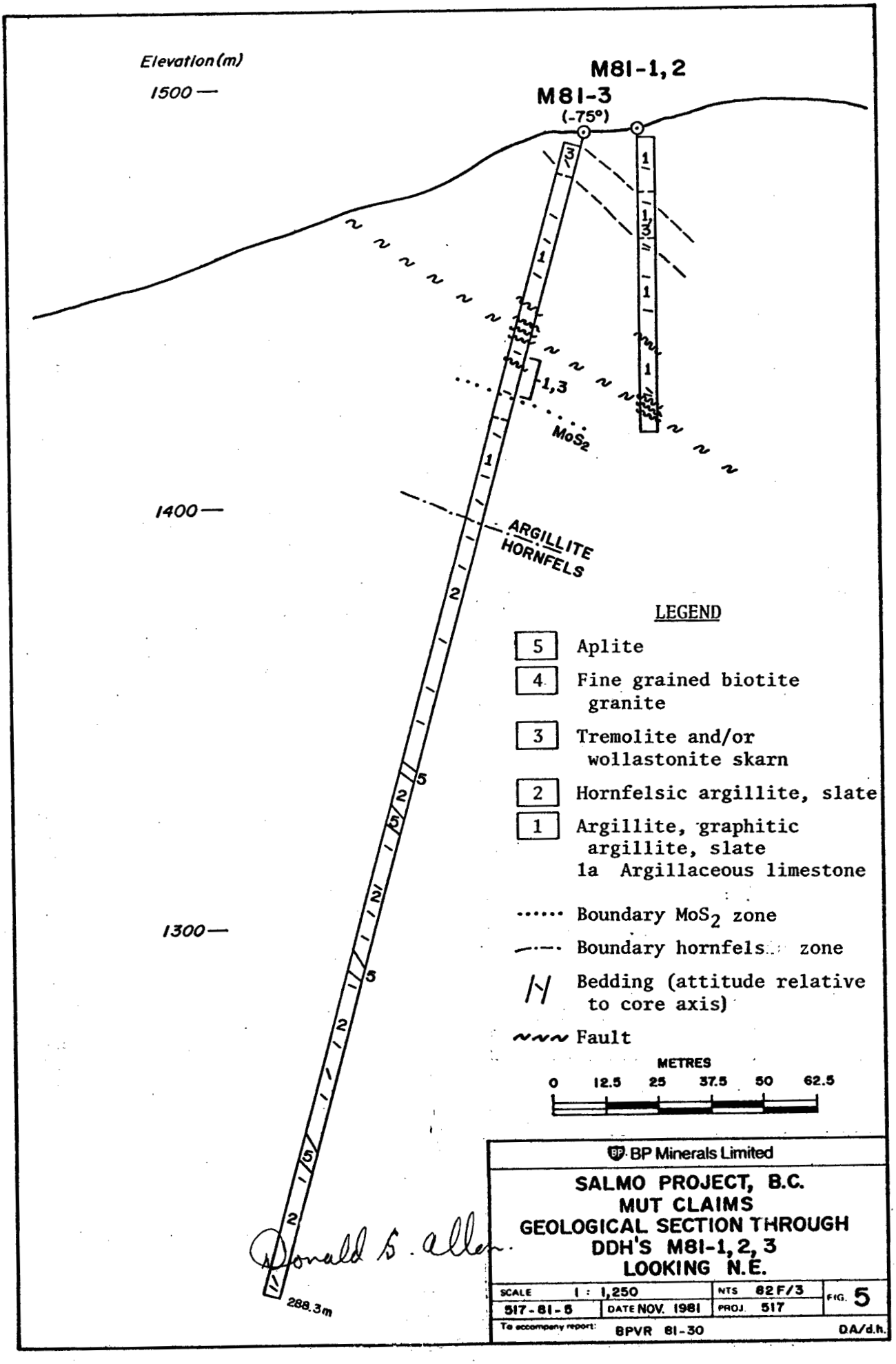
Drill holes 81-1 and 2 were drilled at the same site 108 metres southwest of M 80-2. Both holes were abandoned at 72 and 65 metres respectively because of intense faulting and caving at 63 to 64.6 metres. The rock type encountered is dark grey slaty argillite containing alternating graphite-rich and quartz-rich laminae. Irregular segregations of fine grained quartz (quartz "sweats" -plate 2) and contorted quartz veins are common (up to 5 per metre). Pyrite occurs as disseminated grains and streaks along foliation planes and in quartz veins and segregations. Beds of tremolite skarn 0.1 - 4 metres wide are common. Sphalerite occurs locally in quartz veins.

Geological summaries are as follows(see Figure 5):

Geological description of Diamond Drill Hole M 81-1.

Interval	Main Lithology	Secondary Features
0-14 m	Slaty limestone	Cherty and graphitic-locally laminated. 1-4 contorted ptz and qtz py veinlets/m. Py and minor po dissem along cleavage planes.
14-26	Slaty argillite with thin tremolite-rich beds	5% dissem py. Po in tremolite-rich beds.
26-72.2	Slaty argillite.	Abundant py dissem and in clots along cleavage planes-local qtz-py segregations. Locally graphitic. 50-60:qtz segregations (sweats). 50-60:a few irregular qtz-py-sphalerite veins. 58-62:calcareous tremolite-rich beds with dissem po. 63.1-65.6:fault zone 68-70: hornfels beds with a few qtz-MoS_2 veinlets.

72.2 End of hole.



BP Minerals Limited

SALMO PROJECT, B.C.
MUT CLAIMS
GEOLOGICAL SECTION THROUGH DDH'S M81-1, 2, 3
LOOKING N.E.

SCALE 1 : 1,250		NTS 82F/3	FIG. 5
517-81-5	DATE NOV. 1981	PROJ. 517	
To accompany report: BPVR 81-30			DA/d.h.

Geological description of Diamond Drill Hole M 81-2

Interval	Main Lithology	Secondary Features
0-14 m	Dark grey slaty argillite.	Scattered contorted qtz veins and segregations with 3-5% py. Graphitic; foliation @ 63-78° to core axis.. Py occurs dissem, and as fine grained masses along cleavage planes.
15-26	Graphitic slate with thin actinolite and tremolite-rich beds.	Py as above; po and minor sphal occur in skarny beds.
26-64.6	Graphitic slate.	Py and po as above. Foliation @ 63-87° to core axis. 28-30: minor biotite hornfels. 38-42: traces of sphal in some qtz-py segregations. 32-36, 47-48, 56-58: actinolite and tremolite-rich zones. 46.3-47.1: fault zone @ 55°. 52-56: intensely sheared @ 0-60°. 56-58: locally hornfelsic.

End of hole.

Drill Hole M 81-3

Drill hole M 81-3 was drilled near 81-1 and 2 at 305° azimith and -75° dip.

The interval 2.5 to 13 metres is a grey tremolite skarn. Tremolite occurs as disseminated radiating clots and as felted masses in a siliceous to argillaceous and locally carbonate-rich groundmass. 1-2% pyrrhotite and minor sphalerite occur disseminated in the skarn.

The interval 13 to 76 metres is a black slaty argillite as described above. Thin beds containing abundant white tremolite and dark green actinolite are common.

At 72 metres the slate becomes more competent and has less tendency to break along foliation planes. The section between 72 metres and the end of the hole is characterized by intervals of black hornfelsic slate alternating with sections of pervasively silicified hornfels containing minor amounts of wollastonite or tremolite and local garnet, diopside and epidote. Purplish brown biotite occurs finely disseminated in siliceous zones and as alteration envelopes along pegmatite and quartz veinlets. A subtle increase in intensity of hornfels development with depth is apparent. Below 255 metres tremolite and/or wollastonite is more abundant and coarser in texture.

Several types of quartz veins are present. The most abundant are quartz segregations or "sweats" that appear to grade into irregular contorted or boudined veins. They occur in both the slaty argillite and in the hornfels, (plate 2), range in abundance from 1 to 10 per metre, and contain pyrite, pyrrhotite and local sphalerite. Pegmatitic quartz-feldspar-fluorite $\pm$ pyrite $\pm$ pyrrhotite $\pm$ sphalerite dikelets up to 7 centimetres wide average about 1 per metre in the interval 72-155 metres (plate 3). Quartz-molybdenite $\pm$ pyrite $\pm$ pyrrhotite veinlets and molybdenite-coated fractures appear at a depth of 66 metres i.e. just above the hornfels zone.

In contrast to the quartz-pyrite and pyrrhotite veins, they are sharp and straight, usually with an alteration envelope of biotite hornfels. Their abundance ranges from 1 per 3 metres to 2 per metre. Many of the quartz-molybdenite veinlets in the lower part of the hole lie parallel to bedding planes.

Pyrite occurs as disseminated grains, blebs and as streaks along foliation planes and in quartz-rich laminae in the slate and in quartz veins. Both pyrite and pyrrhotite (3-7%) are present in the hornfels zone. Pyrrhotite is most abundant in skarns zones. Minor amounts of sphalerite occur as disseminations in the hornfels and slate.

Sills or dikes of light grey aplite were encountered at 130.5-131.0, 158.2-160.0, 168.6-172.7, 205.7-209.6 and 252.0-254.0 metres (plate 4). They were found to be less abundant in M 81-3 than in M 80-2 (12 metres vs 28 metres of core length). Quartz-molybdenite veinlets are slightly more abundant in the aplite compared to the hornfels but less well mineralized than in M 80-2. Minor amounts of sericite occur along quartz veinlets and as fractures coatings.

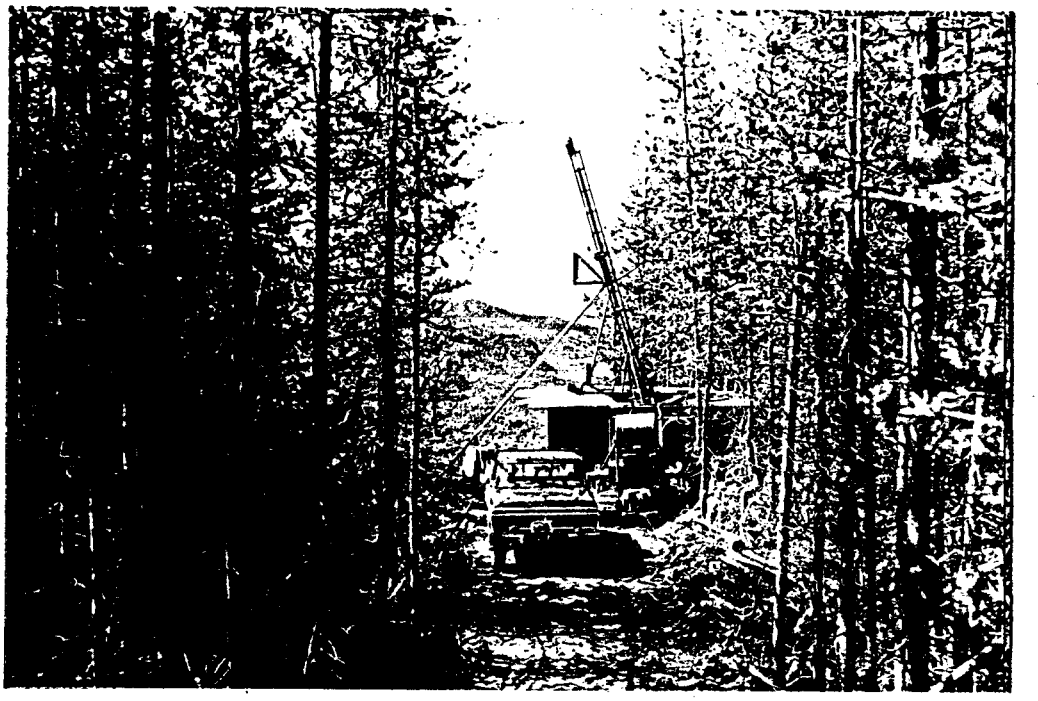


Plate 1. Drill site M 81-3 looking southwest

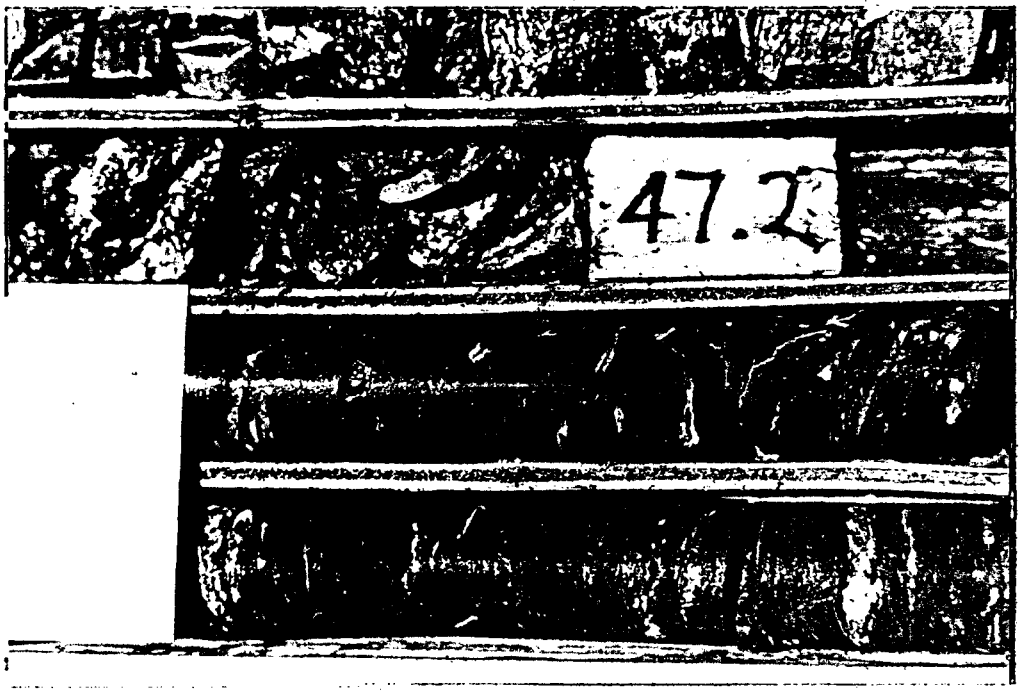


Plate 2. Graphitic slate with irregular quartz and quartz-pyrite segregations and veinlets.

A summary of the hole is as follows(see Figure 5):

Geological description of Diamond Drill Hole M 81-3

Interval	Main Lithology	Secondary Features
0-2.5 m	Casing.	
2.5-13	Tremolite skarn	Irregularly dissem py and minor sphal. Locally siliceous and calcareous.
13-44.8	Black graphitic slate.	Foliation @64-70°. 3-4% py in f.g. clots and streaks. Thin qtz-rich and argillaceous laminae common. Qtz common as segregations and crenulated veinlets up to 5mm with py and minor sphal. 26.6-26.9: dissem to semi-massive ferroactinolite. 38-39.3: local purple biotite hornfels.
44.8-52	Sheared graphitic slate.	58.2-58.7: fault @ 80°.
52-70	Black graphitic slate	59-59.2: biotite hornfels. 59.8-60.6, 62-65: actinolite-tremolite skarn beds with dissem po. 3-4% clots and fine dissem of py. Foliation @ 75-85°.
72-122	Black slate with light grey to purplish grey biotite hornfels zones.	Relict bedding 65-90° to core axis. 3-4% py and po as f.g. clots, streaks and dissem in slate and qtz-rich laminae. Minor MoS_2 and tr scheelite in qtz veinlets. 77-80: irregular dissem garnet. 77.1, 80.1, 80.7, 95.8, 95.4, 96.8, 100.2, 100.8, 103, 106.8, 110.9. pegmatite dikelets up to 3 cm with po, sphal. Local minor amounts dissem sphal. Sphal also in some irregular qtz-po veinlets. 108-114: calcareous laminae. 114-115: fault.

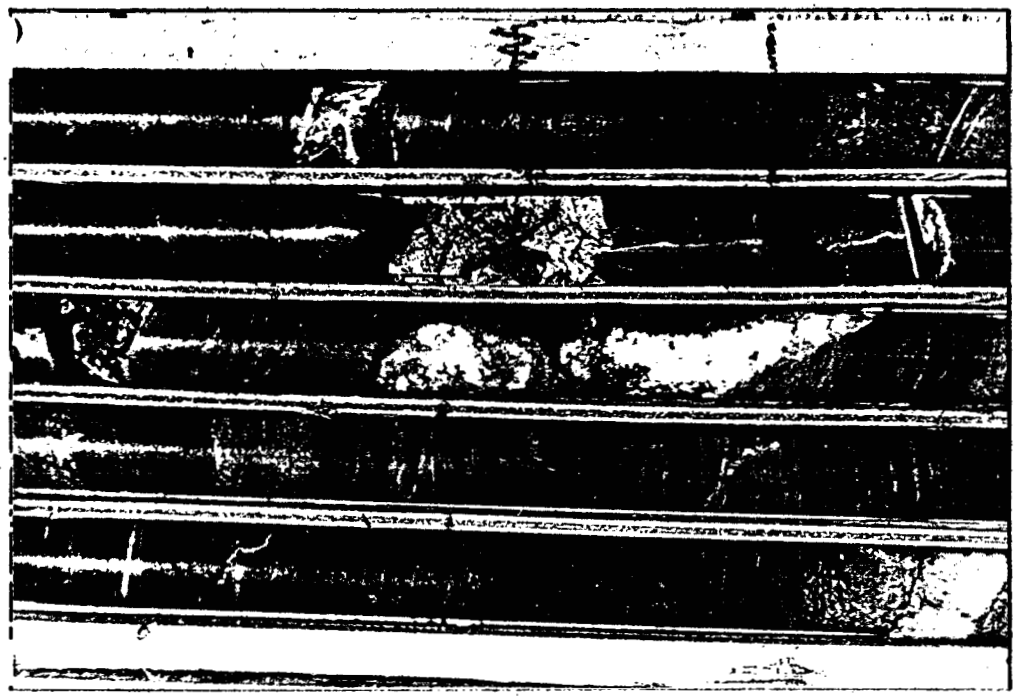


Plate 3. Hornfels containing fluorite-pyrrhotite-sphalerite-pegmatite dikelet (middle row) and pyrrhotite-sphalerite-quartz veinlet with biotitized envelope (lower right row; BQ core 3.5 cm diameter).

Plate 4. Aplite dike containg quartz-molybdenite veinlets. A 20 cm pyrrhotite-molybdenite-quartz vein occurs along the upper dike contact. Host rock is hornfelsic slate.

Geological description of Diamond Drill Hole M 81-3 (cont.)

Interval	Main Lithology	Secondary Features
122-158.2	Hornfelsic black slate with sections of light to dark grey bleaching. Possibly a fine grained mixture of qtz and calc-silicates	Relict bedding 60-85°. Local dissem purple biotite. 3-4% py, po as dissem and f.g. clots and streaks. Minor sphal in qtz-po veinlets, Scattered qtz-MoS_2 veinlets. 125.1, 126.1, 128.7, 136, 145.6, 149.0, 157.4. pegmatite dikelets with po, sphal, fluorite. some with purplish biotite hornfels envelopes.
158.2-160	Light grey aplite	Contacts @ 71 and 76°, parallel to relict bedding. Scattered qtz-MoS_2 and qtz-po-sphal veinlets. Sericite along fractures and qtz veinlets.
160-168.6	Grey to dark grey hornfels	Variable amounts of f.g. calc-silicates. (diopside and wollastonite?). Local purple biotite development. Py and po as above. Relict bedding @ 37-62°, locally contorted.
168.6-172.7	Aplite	Contacts @ 57 and 65°. Scattered qtz veinlets lined with sericite. Minor MoS_2 in veinlets and on fracts with py.
172.7-205.7	Black slate-locally hornfelsic.	Erratic zones f.g. purple biotite and grey calc-silicates. Scattered qtz-MoS_2 veinlets commonly parallel to bedding @ 51-75°. Purple biotite developed adjacent to qtz MoS_2 veinlets. 3-4% po and py as dissem and clots in siliceous segregations and laminae and along cleavage planes.

Geological description of Diamond Drill Hole M 81-3 (cont.)

Interval	Main Lithology	Secondary Features
205.7-209.6	Aplite	192.5, 3 mm qtz-fluorite-sericite veinlet. 194.2, 194.3 qtz-feld-MoS_2 veinlet. Contact @ 65°. Scattered qtz, qtz-MoS_2 ± po veinlets. Minor sericite on fractures.
209.6-252.0	Hornfelsic slate.	Alternation black slate, purplish grey biotite hornfels and grey calc-silicate-bearing sections. 3% po dissem, in seams and clots and in qtz veinlets and segregations. Relict bedding 43-66°. Scattered thin qtz-MoS_2 veinlets - 1-3/m usually parallel to bedding.
252.0-254	Aplite	Contact @ 46 and 61°. Abundant qtz and qtz-MoS_2 veinlets. Sericite and fractures.
254.2-288.3	Hornfelsic slate -as above.	Relict bedding 25-70°. Py and po as above. Variable amounts of biotite and f.g. calc-silicates. 262.3-262.5 felsite dike @75-79° 264-264.2 lamprophyre 265.7-266.1 qtz vein 273.9 pegmatite veinlet.
	End of Hole.	

GEOCHEMICAL RESULTS

Drill core was split at three metre intervals in the skarn and hornfels zones and every other three metres in the slate. Samples were shipped to Rossbacher Laboratories Ltd. for Mo, Cu, Pb, Zn, Sn, W and F geochemical analyses. Results are presented on drill hole profiles on Figures 6 to 8 and data included in Appendix III. Results for the upper part of drill hole M 80-2 are discussed in the 1980 report (Bradley and Meszaros, 1980).

Inspection of the profiles indicates that the relatively unaltered slate and argillite have background values in the following ranges:

Mo 5-30 ppm, W 0-30, Sn 1-2, F 750-1500, Zn 200-1000, Pb 2-8, Ag 0.2-2.2, Cu 25-60.

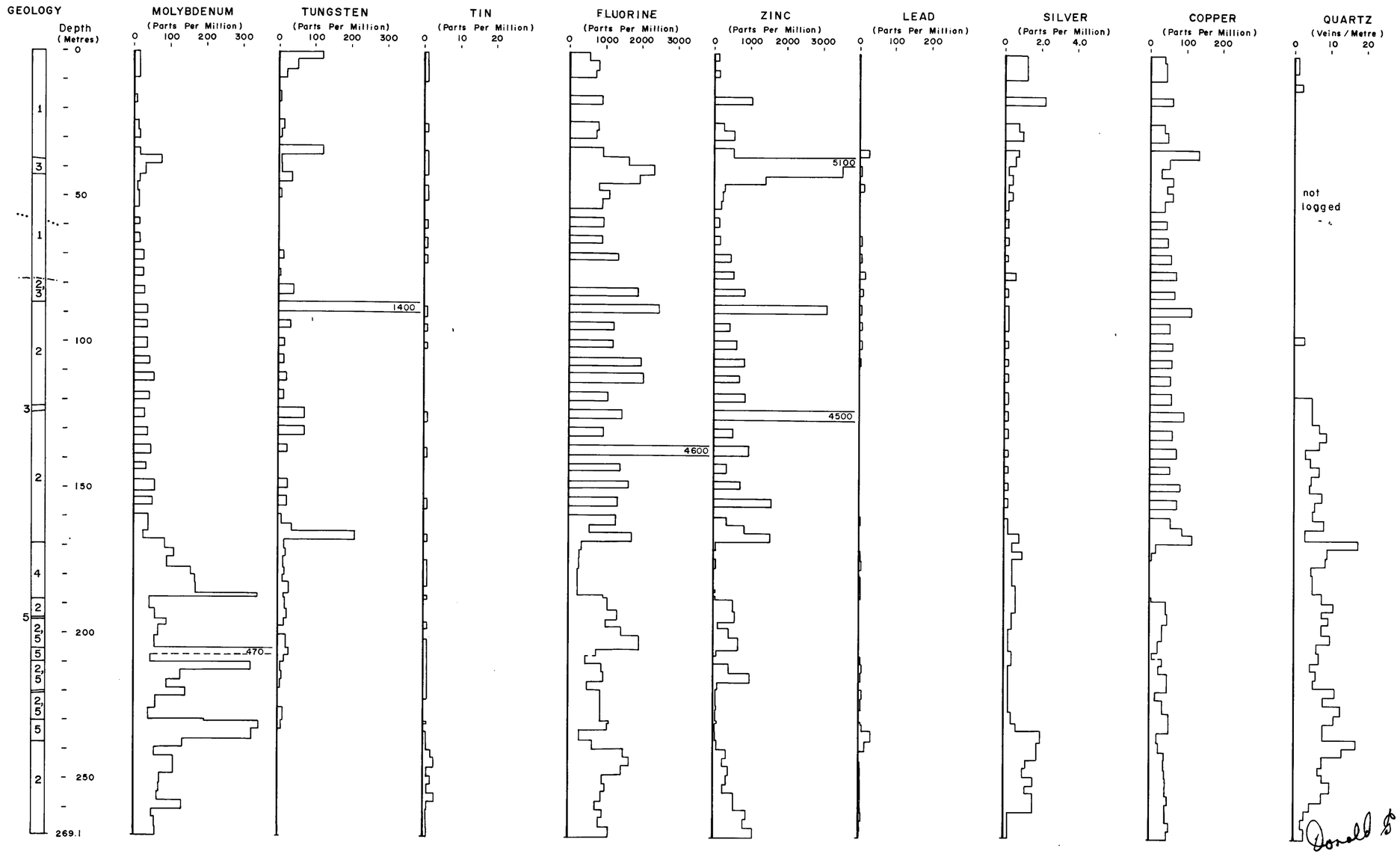
Tremolite skarn zones in the slate show significant increases in W, F, Zn and Cu.

In the hornfels zone a gradual increase in molybdenum content from 30 to 60 $\pm$ ppm is apparent (excluding higher values of up to 470 ppm in skarn zones and dikes) in holes 80-2 and 81-3. Average molybdenum content of dikes in hole M 80-2 is 182 ppm over 28 metres of granite and aplite vs an average of 40 ppm over 12 metres of aplite in hole M 81-3. Best overall interval is in the zone of abundant dikes in M 80-2: 79 m - 121 ppm Mo (0.02% MoS_2). Relatively high tungsten (up to 240 ppm), fluorine (up to 5600 ppm), zinc (up to 3200 ppm), and copper (up to 140 ppm) in the interval 72-155 metres

correlates with a zone of quartz-feldspar-fluorite-sphalerite dikelets.

Higher fluorine, tungsten and molybdenum values in the hornfels and slate show some correlation with tremolite skarns. The highest tungsten value (400 ppm over 3 metres) obtained in M 81-3 is related to a quartz-scheelite veinlet running nearly parallel to the core axis.

DDH M80-2



LEGEND

- 5 Aplite
- 4 Fine grained biotite granite
- 3 Tremolite and/or wollastonite skarn
- 2 Hornfelsic argillite, slate
- 1 Argillite, graphitic argillite, slate
  - 1a Argillaceous limestone
- ····· Boundary MoS_2 zone
- —·—·— Boundary hornfels zone
- // Bedding (attitude relative to core axis)

METRES 0 12.5 25 37.5 50 62.5

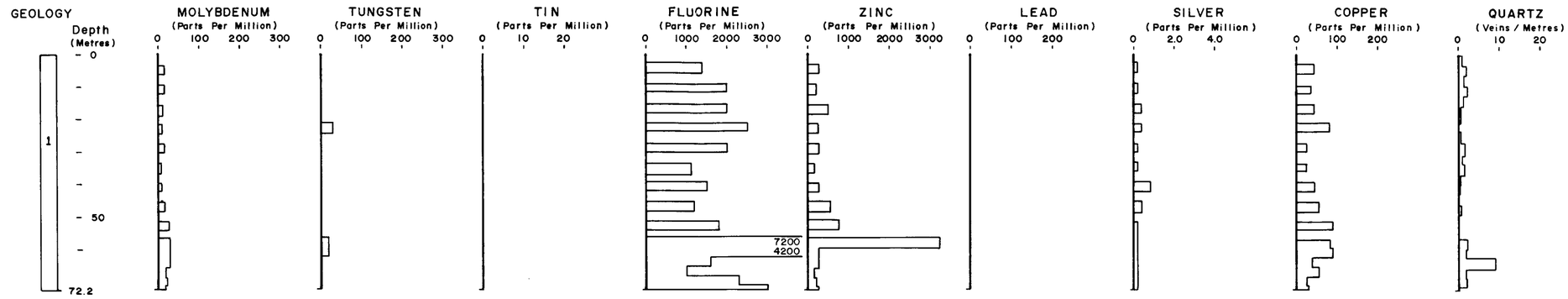
Donald S. Allen

BP Minerals Limited

SALMO PROJECT, B.C.
MUT CLAIMS
GEOCHEMICAL PROFILES

SCALE 1 : 1,250	NTS 82F/3	FIG. 6
517-81-8	DATE NOV. 1981	PROJ 517
To accompany report BPVR 81-30		D.A./d.h.

DDH M81-1,2



LEGEND

- 5 Aplite
- 4 Fine grained biotite granite
- 3 Tremolite and/or wollastonite skarn
- 2 Hornfelsic argillite, slate
- 1 Argillite, graphitic argillite, slate
  - 1a Argillaceous limestone
- ····· Boundary MoS_2 zone
- —·— Boundary hornfels zone
- N Bedding (attitude relative to core axis)

METRES
0 12.5 25 37.5 50 62.5

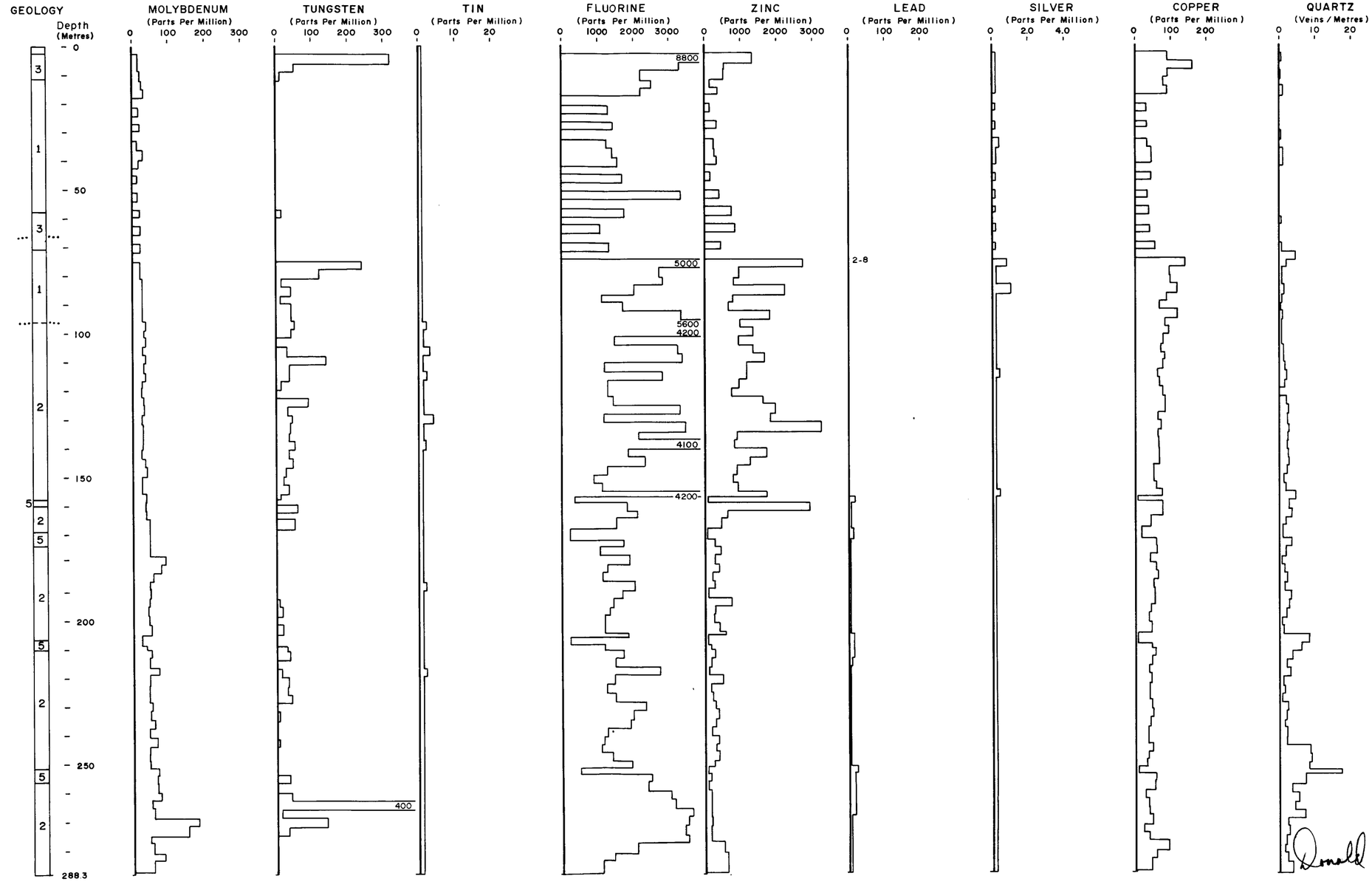
Donald S. Allen

BP Minerals Limited

SALMO PROJECT, B.C.
MUT CLAIMS
GEOCHEMICAL PROFILES

SCALE 1 : 1,250		NTS 82 F/3	FIG 7
517-81-9	DATE NOV 1981	PROJ 517	
To accompany report	BPVR 81-30		D.A./dh.

DDH M 81-3



LEGEND

- 5 Aplite
- 4 Fine grained biotite granite
- 3 Tremolite and/or wollastonite skarn
- 2 Hornfelsic argillite, slate
- 1 Argillite, graphitic argillite, slate
  - 1a Argillaceous limestone
- ····· Boundary MoS_2 zone
- —·—·— Boundary hornfels zone
- // Bedding (attitude relative to core axis)

METRES
0 12.5 25 37.5 50 62.5

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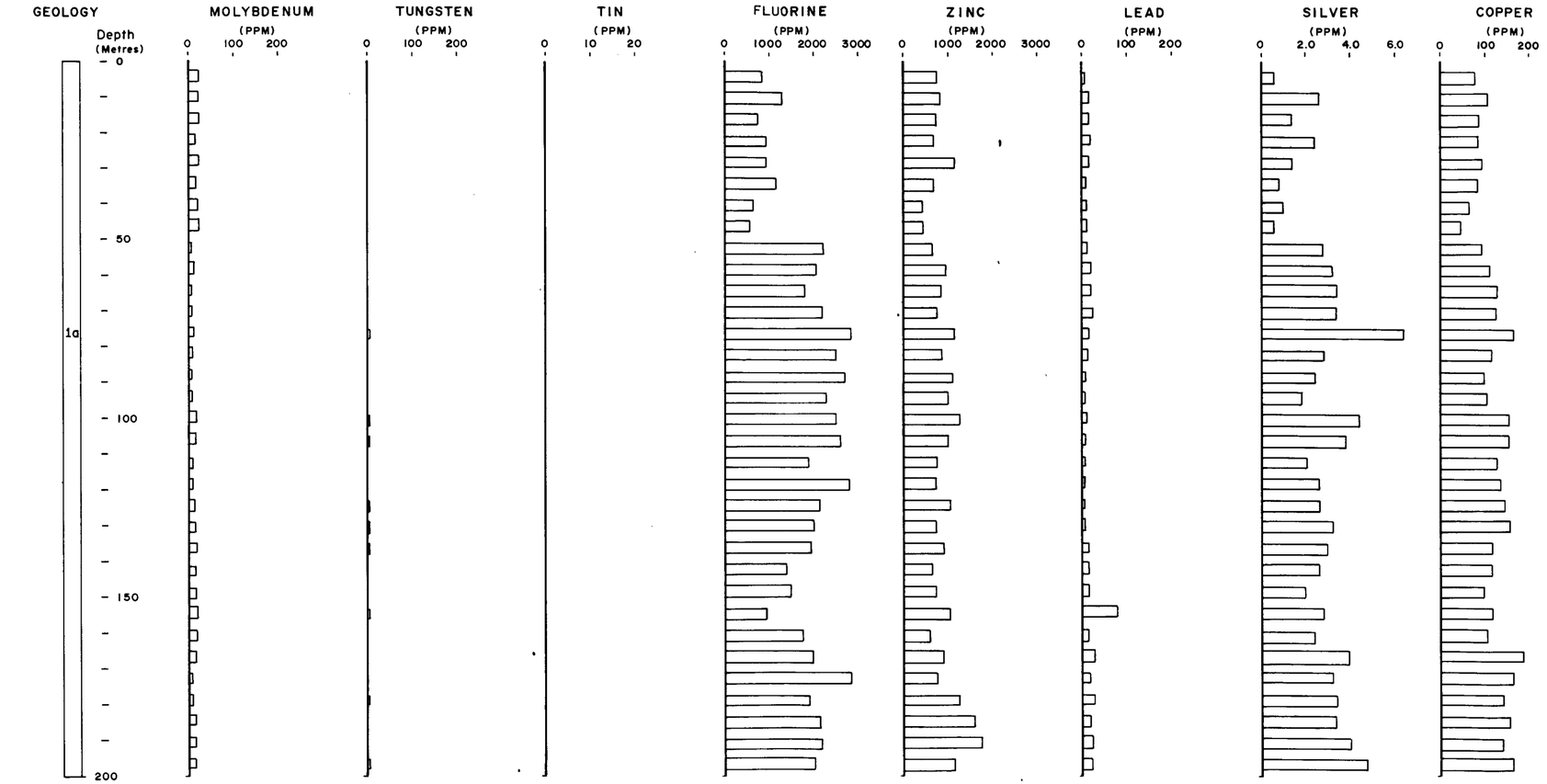
SALMO PROJECT, B.C.
MUT CLAIMS
GEOCHEMICAL PROFILES

SCALE 1 : 1,250		NTS 82 F/3	FIG 8
517-81-7	DATE NOV. 1981	PROJ 517	
To accompany report BPVR 81-30			D.A./d.h.

Donald A. Allen

DDH M80-3



LEGEND

- 5 Aplite
- 4 Fine grained biotite granite
- 3 Tremolite and/or wollastonite skarn
- 2 Hornfelsic argillite, slate
- 1 Argillite, graphitic argillite, slate
  - 1a Argillaceous limestone
- ····· Boundary MoS_2 zone
- —·— Boundary hornfels zone
- /N Bedding (attitude relative to core axis)

METRES 0 12.5 25 37.5 50 62.5

Donald G. Allen

BP Minerals Limited

SALMO PROJECT, B.C.
MUT CLAIMS
GEOCHEMICAL PROFILES

SCALE 1 : 1,250	NTS 83 F/3	FIG	9
517-81-10	DATE DEC 1981	PROJ 517	
TO ACCOMPANY REPORT	BPVR 81-30		

DA/dh

DISCUSSION

The 1980 and 1981 drilling programs were directed towards testing for a buried mineralized intrusion that is presumably responsible for hornfels and skarn development and quartz-molybdenite veining observed on surface and in previous drill holes. Drill holes M 80-2 and 81-3 both encountered a zone of aplite and granite dikes or sills at approximately the same depth. However, they are less abundant and contain less mineralization in hole M 81-3 suggesting that it may lie more distant from a source intrusion. The apparent bedding plane control of quartz-molybdenite veinlets and dikes also suggests a lateral spatial relation with their source.

In spite of the subeconomic grades of molybdenum and tungsten encountered to date, the following observations confirm the presence of a significant hydrothermal system:

1) vein complexity - early quartz-pyrite and/or pyrrhotite veins, fluorite-sphalerite-pyrite-pyrite-bearing permatite dikelets and quartz-molybdenite $\pm$ scheelite veinlets with biotitized envelopes;

2) alteration - variable intensity of silicification, biotitization and skarn development (tremolite-actinolite, wollastonite, minor garnet, diopside and epidote) in the hornfels; sericite in fractures and lining quartz veinlets in aplite and granite dikes;

3) intrusive rocks - aplite and granite dikes containing abundant quartz and quartz-molybdenite veins in DDH 80-2.

Further drilling is warranted on a wider spacing both down dip to the east (assuming that there is some degree of lateral channeling of dikes and hydrothermal fluids up stratigraphy) and to the north and southwest as indicated by fluorine and tungsten distribution in rock and soil. Prior to further drilling however, gravity surveys and fill-in rock geochemical sampling are recommended as an aid in defining where a buried mineralized intrusion might lie. Some further detailed geological mapping in selected areas to outline the distribution of skarn zones, quartz veins and sulfide distribution is also warranted.

D.G. Allen, P. Eng. (B.C.)

REFERENCES

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Bradley, M., and Meszaros, E., 1980. An Assessment Report Detailing The 1980 Diamond Drilling Program on the MUT 5 Claim. BP Minerals Ltd.

Fyles, J.T., and Hewlett, C.G., 1959. Stratigraphy and Structures of the Salmo Lead-Zinc Area. B.C. Department of Mines Bull. 41.

Little, H.W., 1950. Salmo Map Area. Geol. Survey of Canada. Econ. Geol. Series. No. 17.

Appendix I

CERTIFICATE OF QUALIFICATIONS

A&M exploration ltd.
GEOLOGY · GEOPHYSICS
MINING ENGINEERING
4570 HOSKINS ROAD, NORTH VANCOUVER, B.C.
TELEPHONE (604) 985-7921 V7K 2R1

CERTIFICATE

I, Donald G. Allen certify that:

1. I am a Consulting Professional Geological Engineer, resident at 4570 Hoskins Road, North Vancouver, B.C.

2. I am a graduate of the University of British Columbia with degrees in Geological Engineering (B.A.Sc., 1964; M.A.Sc., 1966).

3. I have been practising my profession since 1964.

4. I am a member in good standing of the Association of Professional Engineers of British Columbia.

5. This report is based on field work carried out during the period May 11 to June 6, 1981. I personally worked on the property from May 20 to June 6, 1981.

6. I hold no interest, nor do I expect to receive any, in the M.U.T. claims, in Benson Mines Ltd., or in B.P. Minerals Ltd.

Donald G. Allen.

North Vancouver, B.C.
December 7, 1981

Donald G. Allen
P. Eng. (B.C.)

In Pocket

Appendix II

DRILL LOGS

2a - Geological log DDH M 80-02
DDH M 81-01

2b - Geological log DDH M 81-02
DDH M 81-03

A.R. #9893

DRILL LOG

SHEET NO. 1 / 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. 6 claim		50015	49862	1486 m

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 24, 1981	May 26, 1981		BQ	72.2 m	D.D.H.M 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
0	4 m	1.4m	35	Dark grey slaty argillite - contorted foliation appears to be somewhat cherty and graphitic. Locally bedding and/or foliation well developed with alternating quartz-rich and graphite?-rich laminae.		Several contorted qtz pyrite veinlets @ 3.4 limonite on fractures.		3	>30	
4	6	2.1	105	Dark grey slaty argillite as above		A few scattered contorted qtz and qtz pyrite veinlets limonite on fractures		2	24	
								2	>30	
6	8	2.1	105	As above foliation @ 75°	7.2 - 7.4 Grey tremolite-rich zone.	Abundant pyrite 7-4% as disseminations commonly along foliation planes in places - contorted limonite on fractures		1	9	
								2	>30	
8	10	2.0	100	As above foliation @ 75°		As above		1	19	
								1	14	
10	12	2.0	100	As above - locally contorted		As above scattered contorted qtz + qtz-py veins limonite on fracts		4	18	
								1	17	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 2 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
12	14	1.95	97	Dark grey slaty argillite - foliation @ 73° Quartz rich laminae and irregular quartz veins common.		Abundant pyrite - 5% disseminated along foliation planes and in irreg clots.		1 2	19 22	
14	16	2.1	105	Dark grey slaty argillite - foliation contorted.	Tremolitic zone 14.7 - 14.5 16.7 - 16.8 with abund Py + Po	Abundant dissem Py. + local Po Scattered convoluted qtz and qtz-pyrite veinlets		1 1	10 6	
16	18	2.0	100	As above Dissem grains light grey andalusite? ~ 2% grain size 0.5 - 2mm.	Tremolite rich zone 18.1 - 18.2 Dissem andalusite?	Abundant dissem Py. - 5%.		0 1	5 5	
18	20	2.0	100	As above - cleavage @ 80° disseminated andalusite grains.	Dissem andalusite	As above		1 6	5 20	
20	22	2.1	105	As above 21.2 - 21.8 Tremolitic limestone bed. Sharp contacts @ 33 + 76°	Tremolite-rich limestone bed.	Abundant dissem clots Po in skarny limestone.			730 14	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 3 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
22	24	2.0	100	Dark grey slaty argillite - cleavage @ 74° 22.4-23 Tremolite and hornblende-rich limestone	22.4-23 Tremolite 23.4-27 & hornblende rich zones Skarn contact @ 27 sharp + irregular	Dissem pyrite in argillite " po in skarn Minor amounts of pyrite on fractures		0 0	9 15	
24	26	2.1	105	Dark grey slaty argillite - cleavage @ 78-85° 24.5 Slip plane coated with graphite @ 61°	24-24.2 Tremolite rich	Abundant pyrite dissemination + in clots along cleavage with qtz. Minor py on fracts and in scattered irreg qtz veins.		1 1	27 21	
26	28	2.0	100	As above		as above		0 2	>30 12	
28	30	2.0	100	As above.	28.6 0.5cm qtz veinlet @ 85° with 1.5cm biotite kornatols halo:	as above		1 2	8 12	
30	32	1.9	95	As above Core strongly broken up - water lost @ 31.1 m		as above		0 0	>30 730	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 4 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. D.D.H.
					M 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
32	34	2.0	100	Dark grey slaty argillite 31.3 - 32.0 0.5 - 1.0 cm qtz vein with slickensides along margin ~// to core axis Graphite common along cleavage planes.		As above - py 5%	0°	3 5	730 27	
34	36	2.1	105	As above foliation @ 80°	35.5 - 35.7 Grey Tremolite-rich zone	As above		0 0	730 13	
36	38	1.9	95	As above		As above Some irregular quartz pyrite segregations but no well defined veins		0 0	21 12	
38	40	2.0	100	As above foliation @ 85°		As above		1 0	13 730	
40	42	2.0	100	As above 40.4 - 40.7 rusty vuggy calcite vein // to core axis 41.1 - 41.3 core strongly broken up.	40.6 - 40.8 Tremolite bearing zone.	As above			730 730	

BP FORM NO. 75-1

BP

DRILL LOG

SHEET NO. 5 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
42	44	2.0	100	Dark grey slaty argillite - graphite locally on cleavage planes - cleavage @ 85°		Abundant pyrite disseminated and in clots along cleavage planes with quartz		0	>30	
								0	28	
44	46	1.9	95	As above Core strongly broken up locally.		As above.		0	>30	
								1	>30	
46	48	1.6	80	As above foliation locally contorted. quartz rich laminae more abundant		As above		0	>30	
								1	>30	
48	50	2.0	100	As above foliation @ 57° 49.6 graphite coated slickenside over 5cm @ 70°		As above	70°	1	>30	
								0	>30	
50	52	2.1	105	As above irregular quartz segregations abundant.		As above		0	>30	
								1	19	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 6 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. / D.D.H.
					M 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
52	54	2.0	100	Black graphitic slate interlayered with irregular quartz rich segregations. core strongly broken up along qtz rich zones. No clean cut quartz veins. Abundant graphite-coated fracture planes.		Pyrite abundant - 4% disseminated and in clots along cleavage planes.		0 0	>30 >30	
54	56	2.0	100	Black graphitic slate with scattered qtz-rich segregations. 54-54.4 0.5-1cm calcite vein // to C.A.		As above		0 0	>30 18	
56	58	2.0	100	Dark grey slate laminated sections interlayered with sections containing quartz segregations. Bedding @ 45°	56.3-57.2 purple biotite hornfels zone centred on 10cm qtz-py-sphal vein.	Pyrite as above and in quartz veins with sphalerite. 10cm qtz-py-sphal vein @ 55°		2 2	24 21	
58	60	2.0	100	As above	58.9-59.5 Biotite hornfels. Calcareous tremolite rich zone 58.4-58.7	Pyrite disseminated, in irreg clots along cleavage planes, and in qtz veins. scattered irregular qtz-py-sphal. veins		4 4	20 29	
60	62	2.0	100	Black slate interlayered with calcareous sections	Calcareous tremolite rich sections	As above Scattered fractures coated with calcite and pyrite. Dissem po in tremolite zones.		2 1	730 30	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 7 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. D.D.H.
					M 81-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
62	64	1.7	85	Black graphitic slate - cleavage @ 71° Scattered irregular barren qtz veins 63.1 - 65.6 Fault zone @ ≈ 63°		Pyrite → 5% as irreg masses along cleavage planes and in calcite veinlets in fault zone. Barren white qtz veins	63°	18 10	730 730	
64	66	0.8	40	Lost core As above				3	730	
66	68	2.0	100	Black graphitic slate - cleavage @ 65° weakly hornfelsic.	66.6-66.9 calcareous tremolite rich zone 67.	Pyrite as above Po in tremolite zone		2 1	16 20	
68	70	2.0	100	Grey to brownish grey hornfels interlayered with weakly hornfelsic slate.	Minor sericite dissem along qtz veins in biotite hornfels 68.2 - 69.8	Qtz veins with Tr MoS_2 @ 62.3, 62.6, 62.9, 63.4 @ 50 - 76° Dissem clots f.g. Pyrite.		3 1	18 29	
70	72.24	2.2	100	Dark grey slate - cleavage @ 73° 72.24 End of hole Abandoned because of broken core barrel.	Grey hornfels 69.9 - 72.4	Abundant dissem clots f.g. Pyrite - 7%		0 0	18 30	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 1 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.V.T. 6 claim		50016	49862	1486 m

DATE STARTED	DATE COMPLETED	SURVEYS				HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 27, 1981	May 29, 1981	Acid Test	58m	-87°			146m	M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/FM	STRUCTURE F/FM	Graph Log
0	4	2.7		Dark grey slate - contorted foliation. Scattered contorted qtz veins and segregations. Rock is somewhat graphitic - foliation is outlined by alternating black argillite and quartz-rich laminae.		Limonite on fractures		1	>30	
									>30	
4	6	2.0		As above		As above		1	>30	
								0	>30	
6	8	2.0		As above. cleavage @ 65°		Abundant pyrite (3%) as fine grained dots scattered along cleavage planes and in qtz segregations.		1	23	
								1	30	
8	10	2.1		As above cleavage @ 75°	10.3-10.4 tremolite skarn zone	As above		2	19	
								2	14	
10	12	1.9		As above cleavage @ 70°		As above		1	25	
								0	30	

A.R. #9893

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO. 2	7
DATE STARTED	DATE COMPLETED	SURVEYS		HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
12	14	2.0	100	Dark grey graphitic slate - foliation @ 78° Quartz rich laminae and segregations.		Abundant pyrite 3-5% as fine grained masses plastered on cleavage planes and in quartz segregations Py and/or marcasite on scatter fractures with calcite		0 0	23 10	
14	16	2.0	100	Black graphitic slate - foliation contorted A few contorted qtz veins. Core has a good ring when struck with hammer - may be weakly hornfelsic. From 14-22 Quartz-rich laminae and thin qtz segregations	15.1-15.2 Actinolite rich zone - black ferroactinolite? occurs as radiating masses up to 3cm in diameter.	As above Po & sphal in actinolite zone		1 1	7 7	
16	18	2.0	100	As above - foliation @ 76° Weakly hornfelsic graphitic slate	17.6-17.7 Actinolite-rich zone.	As above 17.8 2mm irreg. qtz-sphal-py-po veinlet		0 1	7 6	
18	20	2.0	100	As above	19.8 Minor actinolite	As above.		0 0	12 730	
20	22	1.95	97	As above Limy skarn zone 22.4-22.8	22.4-22.8 Tremolite-rich zone → fine fibrous masses of tremolite in calcite and siliceous matrix.	Py as above Po dissem in skarn zone		0 1	730 23	

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					3 7

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
22	24	1.9	95	Black graphitic slate - foliation contorted. contains minor quartz rich lamenae and segregations. 22.3-22.6 Limy skarn zone	22.3-22.6 Tremolite rich zone - as above	Abundant pyrite as disseminated p.g. clots commonly as flattened masses along cleavage planes. Dissem po + py in skarn zone.		0 0	16 10	
24	26	2.1	105	As above with skarny sections	24.0-24.2, 25.0-25.5 Actinolite-rich zone Masses of radiating black ferroactinolite up to 0.5 cm in diameter. with po and some siliceous segregations	As above.		0 1	22 10	
26	28	2.0	100	As above - foliation @ 63-75°	27.8-28.5 Grey	As above		0 1	>30 12	
28	30	1.9	95	As above	narrow zone with disseminated flattened clots p.g. biotite along foliation	As above 28.2-28.3 Two irreg 1cm qtz veins with po. Purple biotite along margins		2 0	24 >30	
30	32	1.85	93	As above		py as above		0 0	730 730	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 4 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
32	34	2.0	100	Black graphitic slate - foliation @ 82-87° with quartz-rich (± pyrite) laminae and qtz segregations. Several white quartz and calcite gash veinlets - barren 32.9 several calcite + graphite coated slip planes @ 83°	32.6-38.8 tremolite-rich zone - f.g. grey tremolite with interstitial pyrite and black graphitic material	Abundant pyrite as above		0	>30	
							PS	3	>30	
34	36	2.0	100	As above foliation @ 77°	35.5-35.7 Grey actinolite-rich zone. Black actinolite with interstitial po.	As above po in skarn interstitial to actinolite		1	24	
								6	18	
36	38	2.1	105	As above - foliation @ 63° locally contorted.		As above		0	16	
								0	16	
38	40	1.9	95	As above		As above Traces of sphal. in some qtz-pyrite segregations		0	>30	
								0	>30	
40	42	1.85	92	As above 41.8 Vuggy limonitic calcite vein 1 cm wide @ 23°	40.9-41.1 tremolite rich zone	As above 41.2 2mm qtz-py-sphal veinlet @ 41°		0	28	
								1	>30	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 5 / 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
42	44	2.0	100	Black graphitic slate - foliation @ 80°. with quartz rich laminae and f.g. quartz (± pyrite) segregations. 43.4-43.6 0.5-1cm calcite breccia vein @ 0°		~3-5% pyrite occurs as f.g. irregular clots along foliation and in qtz segregations		0 2	>30 13	
44	46	1.95	97	As above Scattered calcite ± pyrite coated fractures	44.7-44.8 Actinolite-rich zone	As above		1 1	12 >30	
46	48	1.7	85	As above 46.3-47.1 Fault zone @ 55° - abundant graphite coated slickensides. Scattered calcite veinlets	47.1-47.2, 47.8-48.2 Tremolite and actinolite rich zones.	As above	55 graphite	0 0	>30 >30	
48	50	1.8	95	As above - foliation @ 80° 48.2 1cm calcite vein adjacent to slip plane @ 36° 48.5 1cm fault gouge @ 80°		As above	36 calcite	0 1	>30 >30	
50	52	2.0	100	As above - - abundant irregular qtz-pyrite segregations - graphite coated slip planes @ 44-74°		As above			>30 >30	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 6 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
52	54	2.0	100	Black graphitic slate - intensely sheared @ 0-60° - brecciated quartz and calcite in fault zone		Pyrite as above		1 3	730 730	
54	56	1.95	97	Black graphitic slate - core strongly broken up. - scattered irregular quartz veins up to 4cm wide.		~3% pyrite as disseminated cubes, grains and clots. Py also in scattered irreg. qtz veins.		5 2	730 730	
56	58	1.9	95	Black graphitic slate - locally hornfelsic 57.8 - 64.6 Hole breaks in and out of hole 81-1	56.2 - 57 purple biotite hornfels	Py as above Po and sphal in irreg. qtz veins		3 3	22 20	
58	60	2.3	115	AS above Foliation @ 47°	57.4 - 57.6 purple biotite hornfels.	As above		5 6	18 24	
60	62	2.0	100	Hornfelsic slate	56.3 - 56.6 Tremolite skarn zone 56.6 - 57.8 light grey hornfels local minor tremolite	Scatter irreg py ± po ± sphal veinlets		4 2		

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 7 / 7

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. / D.D.H.
					M / 81-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
62	64	1.7	85	Black graphitic slate - foliation @ 72° Scattered irreg barren qtz veins. Graphite coated cleavage planes and slip planes common.				7	>30	
								6	>30	
64	64.6			Cave + cement.						

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 1 / 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. 6 claim		50029	49857	1486 m

DATE STARTED	DATE COMPLETED	SURVEYS	AZIMUTH	DIP	Dip test			HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 30, 1981	JUNE 5, 1981		305°	-75°	280m	-77°	uncorrected	BQ	288.3m	D.D.H. M 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
0	2.5			Casing						
2.5	4	1.22		Grey skarn - relict bedding @ 40° Irregularly disseminated fine to med grained (2mm) clots of tremolite in grey siliceous groundmass in places outlining relict bedding	tremolite "	Limonite on fractures. 2% finely dissem py		1	10	
4	6	1.7	85	Grey siliceous tremolite skarn locally finy (carbonate in groundmass)	"	As above Minor dissem sphalerite.		0	5	
								1	7	
6	8	2.0	100	As above relict bedding @ 43° 7.1-7.6 Black slate	Irreg dissem tremolite in siliceous to argillaceous groundmass.	7.6-7.8 dissem sphalerite + po		0	21	
								0	15	
8	10	2.0	100	Grey tremolite skarn + skarny limestone	As above A few fractures with argillized halo.	1-2% irreg dissem py + minor sphal limonite on fracts		0	18	
								1	12	

A.R. #893

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 2 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
10	12	2.1	105	10 - 11 Grey skarn 11 - 12.2 Black graphitic slate cleavage @ 89° weakly hornfelsic	Tremolite - occurs as disseminated radiating clots up to 3mm and as local filled masses. 11.7-11.8 dissem purple Biotite.	Irregularly dissem Py and po ~ 3% po mainly in skarn zones		0 0	13 20	
12	14	2.0	100	12.2 - 13 Grey tremolite skarn 13 - 14 Black graphitic slate	As above	As above		0 0	19 14	
14	16	2.0	100	Black graphitic slate - cleavage @ 75° Thin quartz-rich laminae (0.5 mm) interlayered with argillaceous laminae (0.5 - 2 mm).		3-4% dissem pyrite in P.g. clots and streaks.		0 0	11 17	
16	18	2.0	100	Black graphitic slate - relict bedding? @ 60°	Tremolite skarn 16.4-16.8, 16.9-17.1 17.5-18 Limonitic bleached zone	As above. 17.5-18 several feldspathic + pyritic veinlets		0 3	5 730	
18	20	2.0	100	As above - cleavage @ 70° Scattered irregular qtz-rich segregations		Py as above		0 0	9 12	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 3 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
20	22	2.0	100	Black graphitic slate - cleavage @ 75° 0.5-2mm qtz-rich laminae alternated with 1-10 mm argillaceous laminae. Some qtz rich segregations and crenulated veinlets up to 5mm rich. 1 pyrite.		~3% pyrite as disseminations and ~as irregular streaks and clots. Minor sphalerite with some pyrite-qtz segregations.		0 0	17 11	
22	24	1.75	87	As above -locally crenulated.	23.7-24 Two 1cm bands rich in tremolite.	As above Minor pyrite and/or marcasite on fractures.		0 0	13 9	
24	26	2.0	100	As above cleavage @ 68°		As above		0 0	12 7	
26	28	2.0	100	As above	26.6-26.9 dissem to semi massive p.g. ferroactinolite.	As above		0 0	5 9	
28	30	2.0	100	As above		As above		0 1	10 13	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 4 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
30	32	1.95	97	Black graphitic slate - cleavage @ 61° with two skarny sections	31.2-31.3, 31.5-31.7 disseminated to semi-massive dark green actinolite 30.5 Irreg. 0.5cm qtz py vein with 2cm bleached halo	~3% pyrite as fine disseminations and as fine grained clots + streaks. Pyrite and/or marcasite on scattered fractures		1 0	>30 >30	
32	34	2.0	100	Black graphitic slate - with 0.1-2mm qtz-rich laminae alternating with argillaceous sections. Some qtz-rich segregations and crenulated veinlets up to 5mm ± pyrite		As above Tr sphalerite in pyritic clots.		0 0	>30 13	
34	36	1.9	95	As above cleavage @ 74° 34.6 1cm fault gouge @ 72°		Py as above	72	0 0	>30 >30	
36	38	2.0	100	As above cleavage @ 74°	Tr tremolite @ 37.7	As above		0 0	14 6	
38	40	1.9	95	38-39.3 Grey to purplish grey hornfelsic siltstone 39.3-40 Black slate as above	Biotite occurs as irregular streaks and disseminations in grey bleached argillite	38.2 irreg qtz pyrite vein 38.7 1cm qtz pyrite vein with purple biotite @ 53° 39.2 1cm qtz sphale vein @ 82°		2 2	13 15	

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO. 5 of 29
DATE STARTED	DATE COMPLETED	SURVEYS		HOLE SIZE / TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
40	41.8	1.7		Black graphitic slate with scattered qtz (±pyrite) rich laminae and segregations. Some ground up core fragments.		~3-4% dissem dots and streaks of f.g. pyrite. Pyrite and/or marcasite on scattered fractures		0	>30	
								0	>30	
41.8	44.8		0	No core. Core tube did not lock.						
44.8	48	3.0		Black graphitic slate - as above abundant qtz-rich laminae. 45.0 chlorite coated fault @ 34° 45.1 - 45.4 several chlorite + graphite coated faults @ 42-75° 46.7 chlorite coated slip plane @ 34° 46.9 - 47.2 core strongly broken up	chlorite coated fractures + slip planes. 46.1 - 46.6 several narrow actinolite-rich bands.	As above		0	>30	
								0	>30	
48	50	2.0	100	48 - 49.4 Black graphitic slate as above 49.4 - 50 late dyke - light green f.g. biotite dacite? or lamprophyre? - contacts broken, faulted and ground.		Pyrite as above in slate		0	>30	
								0	>30	
50	52	2.0	100	50 - 50.4 Intensely sheared graphitic black slate. Graphite on slip places, calcite veins. 50.4 - 51.2 late dyke - light green f.g. biotite dacite? - locally sheared. 51.2 - 52 Hornfels - appears to be a f.g. mixture of biotite and tremolite. Scattered calcite cemented fractures.	51.2 - 52 biotite - tremolite hornfels			0		
								0		

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO. 6	29
DATE STARTED	DATE COMPLETED	SURVEYS		HOLE SIZE / TOTAL DEPTH	HOLE NO. M D.D.H. 81-3	

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
52	54	2.0	100	Hornfelsic limy argillite - light to dark grey hornfels of varying alteration intensity. Relict bedding @ 80-83°. Scattered calcite cemented fractures. 53.9-54 several slip planes @ 50-65°	Irreg l.g. biotite as streaks and dissemination in grey to dark grey siliceous? to tremolitic? matrix	disseminated f.g. grains and clots of pyrite ~2% Pyrite on some fracts with calcite.		0	12	
								0	21	
54	56	2.0	100	Black graphitic slate - relict bedding @ 82° containing scattered qtz-rich laminae and segregations ± pyrite. Scattered carbonate-cemented fractures.	Local actinolite rich clot @ 54.3	As above - pyrite 3-4%		0	12	
								0	23	
56	58	2.0	100	As above cleavage @ 84°		As above		0	15	
								0	12	
58	60	2.0	100	-58.2 As above 58.2 - 58.7 Fault gouge @ ~80° 58.7 - 59.8 Black slate locally hornfelsic 59.8 - 60.2 Limy actinolite skarn	Biotite hornfels 59-59.2 Actinolite-tremolite skarn 59.8-60.6	As above po in skarn	80°	0	730	
								1	6	
60	62	1.9	95	60.2-60.6 Limy section with minor actinolite 60.6 - 62.5 Black graphitic slate - as above		Py as above			10	
									9	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 7 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
62	64	2.0	100	Black graphitic slate with scattered actinolite skarn bands. Bedding and/or cleavage defined by qtz laminations and segregations	60.5-60.8, 61.9-62.1 actinolite - semi-massive aggregates of black radiating slots 0.5-2 mm in diameter. Minor garnet @ 60.6, 60.95	4% pyrite disseminated as f.g. clots in slate and in skarn zones. Po locally in some skarn zones. Scattered fractures coated with calcite + py-it		0 0	13 10	
64	66	2.0	100	As above cleavage @ 85°	65.0-65.3 actinolite-rich zone.	Py as above 65.1 3mm qtz-po-sphal veinlet			11 25	
66	68	2.0	100	As above cleavage @ 75° 67.0 Slip plane @ 80° coated with graphite		Py as above 66.1 3 cm qtz vein @ 75° with Tr MoS2 near border	50 mm	1 0	10 16	
68	70	2.0	100	As above		Py as above 69.7 1cm qtz-po-sphal-(cpy?) vein @ 67°		0 1	15 10	
70	72	1.95	97	As above 70.8-71.1 Irregular qtz-pyrite segregations up to 3 cm wide. - several irregular qtz pyrite veinlets	70.3-70.5 Biotite hornfels zone centred on 2 cm qtz-py-MoS2 veinlet Tr actinolite	Py as above 70.4 2mm qtz-biotite-MoS2 veinlet @ 60°		2 2	8 12	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 8 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
72	74	1.8	90	Black slate with light grey to purplish grey hornfelsic zones. Qtz rich laminae and irregular qtz rich segregations and veins common.	72.1-72.2, 73.0-73.4 biotite hornfels.	72.2 3cm qtz-biotite-Tr MoS_2-fld-py vein @ 61° 3-4% pyrite as f.g. clots, streaks and disseminations in slate and in qtz segregations.		6 3	20 13	
74	76	2.0	100	As above - appears to be a definite increase in rock competency @ 75m Irregular streaks purple biotite Foliation @ 74°	Biotite occurs in irregular streaks 75.6 3cm clot biotite + tremolite 76-76.2 Tremolite-rich zone	Po + sphal in some irreg qtz veinlets and segregations. 73.2 0.5 cm pegmatite (qtz-bio-feld) veinlet @ 73° 75.2 irregular qtz-fld po-sphal veinlet		5 4	9 18	
76	78	2.0	100	Hornfelsic slate as above - cleavage @ 63-74° irregular biotite development throughout	76.4-76.5 calcite in qtz vein @ 60° 76.5-76.7 qtz-feld-biotite-sericite greisen 77.1 1cm peg dikelet with po, sphal, fluorite @ 62°	76.5-76.8 Minor dissem MoS_2 in greisen 76.8-77 dissem sphal + po, py in qtz-rich zone		1 1	9 7	
78	80	1.9	95	Hornfels relict bedding @ 79° light to dark grey siliceous hornfels	Dissem garnet clots with Tr fluorite? 77.3-77.6, 77.8-78.2, 79.7-79.9 Biotite developed adjacent to peg veinlet @ 80.05	~3% dissem py and po. Po occurs in garnet bearing zones. Minor sphal in diffuse sulfide veinlets. 76-80 scattered scheelite grains in bands and qtz veins		1 0	7 4	
80	82	2.0	100	Black slate - scattered qtz laminae and qtz-po segregations	80.1 0.5 cm pegmatite dikelet @ 58° with fluorite, sphal. with 2cm biotite-rich halo.	~3% py + po dissem and in qtz segregations		1 0	5 3	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 9 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
82	84	2.1	105	Black slate - locally hornfelsic Qtz rich laminae and segregations ± po common.	80.2 1 cm qtz-fld veinlet @ 76° 80.7 2cm segmatite vein with po, sphal, fluorite @ 15° with 5 cm biotite hornfels halo.	~4% dissem clots and streaks of py and po. in slate and in qtz segregations. sphal. locally with po.		2 0	7 2	
84	86	1.9	95	As above cleavage @ 86°	85.4-86.3 grey hornfels weak local biotite.	86.6 Irregular massive po-sphal calcite veinlet 2-3 cm wide.		1 1	11 10	
86	88	2.0	100	As above		Py + po as above 2 irreg qtz MoS₂ veinlets @ 87.6		2 2	3 5	
88	90	2.0	100	As above cleavage @ 72° Scattered fractures coated with calcite and pyrite		Py + po as above 89.8 1.5 cm qtz-fld vein with po, sphal @ 35°		0 1	10 10	
90	92	1.95	97	Well indurated black slate - cleavage @ 70°		Py, po, sphal as above. 91.4 0.5 cm qtz-fld-po-Hubnerite veinlet.		0 0	3 5	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 10 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
92	94	2.0	100	Black slate - well indurated, locally hornfelsic cleavage @ 67-70° Qtz rich laminae and segregations with po common	Local grey bleaching Biotite hornfels 93-93.3, 93.7-93.9 0.5cm qtz-feld-fluorite veinlet @ 32°	3-4% dissem grains and fg. clots py and po. 93.8 1cm qtz-feld-py-po±sphal-scheelite vein @ 51°		1 1	8 5	
94	96	2.0	100	Hornfels - siliceous with irreg biotite	Local biotite development. Grey wollastonite? in fg. siliceous groundmass	4-5% dissem py, po with dissem sphal. 95.4 1cm peg-fluorite veinlet with sphal, po. @ 22°		1 1	3 3	
96	98	2.05	102	Grey siliceous hornfels	Biotite 96.6-97.3	Py, po as above 96.8 3cm pegmatite-fluorite-po±sphal vein @ 27°		1 0	2 1	
98	100	2.0	100	As above relict bedding 77-85°	Local fg. tremolite? or wollastonite	Py, po as above minor dissem sphal.		0 0	13 3	
100	102	2.0	100	As above 101.9 calcite - pyrite coated slip plane @ 60	100.7-100.9 local biotite development	Py, po as above Pegmatite - po ± fluorite veins @ 100.2, 100.4	60	2 0	4 3	

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					11 / 29

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/FM	STRUCTURE F/FM	Graph Log
102	104	1.95	97	Black slate - well indurated with local grey hornfels sections. Relict bedding @ 64-72° Scattered fractures coated with py and calcite	Local biotite @ 103 Locally bleached, possibly a mixture of very fine grained calcsilicates and quartz	103 1cm qtz-feld vein lined with MoS2 @ 70° 3-4% dissem py + po along cleavage planes and in siliceous segregations		1 1	7 7	
104	106	2.05	103	As above Cleavage @ 75° 105.2 1cm qt-feld vein with slickenside on one side @ 65°	As above	Trace dissem sphal.		0 1	8 7	
106	108	2.0	100	As above relict bedding @ 77°	As above	Py + po as above Locally dissem sphal. 106.8 1cm qtz-feld sphal vein @ 65° 107.9 2cm qtz-feld-po sphal vein @ 43°		1 1	6 4	
108	110	2.0	100	As above relict bedding 74-90° A few thin limy beds and local disseminated calcite grains. 109.1 2cm calcite vein @ 15°	As above Minor amounts locally dissem epidote Scattered chlorite + calcite coated fractures	Po/Py as above 106-107 Abundant po with sphal commonly in streaks along bedding Also dissem schulite. 110.8 1mm qtz-MoS2? varilet @ 80°		0 2	5 10	
110	112	2.0	100	As above relict bedding @ 76° A few thin limy laminae and disseminated calcite grains.	As above	Py, po as above 110.9 Irreg 1cm qtz-feld-fluorite-calcite-po-sphal vein @ 29°		1 0	5 4	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 12 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					14 D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
112	114	2.0	100	Hornfelsic black slate - well indurated with sections of light to dark grey bleaching - possibly a very fine grained mixture of quartz and calc silicates. 112-114 Some limy sections. A number of qtz-po-sphalerite segregations	Local bleaching. (e.g. calc silicate-qtz ?) Fine white actinolite or wollastonite grains? locally abundant.	3-4% po and py, dissem and in qtz segregations and irreg veinlets. Sphal in qtz-po veinlets + some segregations Py on fracts with calcite.		3 2	10 8	
114	116	2.0	100	Sheared, fractured + bleached hornfels. 114-114.2 Fault gouge with calcite @ 75-83° 115.4-115.5 Fault breccia @ ~030° 115.5-115.7 Light green late dike - dphanitic dacite? 2 cm calcite vein on either side	Bleaching	As above	75-83	1 2	12 17	
116	118	2.0	100	Hornfelsic black slate as above	Local bleaching. 116.3-116.4 biotite developed adjacent to qtz vein.	As above 116.3-116.4 qtz-po-sphal vein @ 74°		3 0	14 15	
118	120	2.0	100	As above relict bedding 0-64°	As above	Py, po, sphal, as above 118-95 0.5 cm qtz-MoS_2 vein @ 69° 118.4 Two 2mm qtz-MoS_2 veins @ 46° (// to foliation)		4 0	9 4	
120	122	2.0	100	As above relict bedding @ 76°	As above	Py, po, sphal as above Tr MoS_2 in qtz-po vein @ 121.3 @ 70° 121.9 2cm qtz-po-sphal vein lined with qtz @ 63°			4 5	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 13 of 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. / D.D.H.
					M 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
122	124	1.9	95	Hornfelsic black slate - well indurated with sections of light to dark grey bleaching possibly a very fine grained mixture of quartz and calc silicates.	Local bleaching (e.g. calc silicates + qtz ?) Fair white tactnolite? or wollastonite grains locally abundant.	Abundant po + py. 3-4% as dissemination and e.g. clots and streaks in slate + siliceous segregations, and scattered qtz veins 121.1 - 5 cm qtz vein @ 82° with po, sphal, schelite + tr cpy		15	10	
								2	6	
124	126	2.0	100	As above - relict bedding @ 72°	As above	As above 124.7 1cm qtz-MoS. vein @ 73° 125.1 1cm peg dikelet @ 62° 125.4 7cm qtz-po-sphal segregation with schelite + cpy.		1	8	
								3	2	
126	128	2.1	105	As above - relict bedding @ 77° Scattered fractures coated with calcite - chlorite.	As above 127.3-127.5 dissem garnet crystals + minor diopside 126.-126.4 biotite locally developed.	Py, po, sphal as above Trace schelite @ 127.4 126.1 0.5 cm peg-sphal-po vein @ 55° 126.4 diffuse qtz-MoS2 vein // to bedding. 126.9 0.5 cm qtz+MoS2 vein @ 87° Several pegmatitic dikelets with po, sphal		4	6	
								1	8	
128	130	2.0	100	As above	As above Traces locally dissem epidote.	128.2 2cm qtz vein @ 90° with MoS2, schelite, po 128.7 3cm peg dikelet with po, sphal, fluorite		3	4	
								2	4	
130	132	2.0	100	As above - relict bedding @ 67° 130.5 - 131.0 white felsite dike contacts irregular @ 55 + 73°	As above. Dissem purple biotite @ 130, 131.0 - 131.3	Py, po. as above Scattered qtz-po,-sphal veinlets and segregations 131.5-131.6 sphal-po-rich section with minor schelite		1	3	
								4	2	

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					14 / 29

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. / D.D.H.
					M / 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
132	134	2.0	100	Grey to dark grey hornfelsic slate - well indurated. Light grey to grey sections as above	Garnet in a few thin beds. Biotitic bleached halos adjacent to some peg. dikelets. Light grey bands of f.g. qtz + calc silicates? 137.8-135.2 dissem grains epidote? in f.g. grey siliceous groundmass. Biotite halo around peg dikelet @ 136	Py, Po; as thin disseminations and clots and streaks in hornfels. Scattered pegmatitic dikelets 0.5-1 cm with Po, sphal, minor schelite with bleached halos.		4 2	2 5
134	136	1.9	95	As above relict bedding @ 82°	As above 137.6 5cm qtz vein @ 85° lined with Tr MoS2. 137.7-137.8 drift use qtz rich zone with abund Po, sphal Tr scheelite. 136.0 5cm peg - sphal vein			2 2	4 5
136	138	2.0	100	Hornfels as above relict bedding @ 74°	Light grey siliceous and/or calc silicate rich sections. Local dissem purple biotite.	Po, Py, sphal as above. 137.6 0.5 cm qtz-Py-MoS2 vein @ 78° with bleached halo.		3 3	4 4
138	140	2.0	100	Hornfels	As above 138.9-139 dissem garnet. Local dissem purple biotite.	Po, Py as above 138.1 5cm qtz vein @ 74° contains sphal and calcite in centre but lined with thin MoS2. Several pegmatitic dikelets with sphal + Po 139.5 Tr scheelite.		2 3	2 3
140	142	1.8	90	Dark grey hornfels relict bedding @ 70°	As above - dissem wollastonite? grains.	Po, Py as above Local Po-rich laminae		2 1	4 7

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					15 / 29

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/FM	STRUCTURE F/FM	Graph Log
142	144	2.2	110	Dark grey hornfelsic slate - well indurated containing light grey bleached sections with dissem calcsilicate (wollast?) Cleavage @ 74°	Local bleached zones comprised of very fine grained qtz and calcsilicate. Ferrug dissem wollastonite? 143.3-146.9 purple biotite hornfels.	Abundant dissem as +py as grains and clots along cleavage planes + in qtz veins + segregations Sphal in local po rich segregations + in scattered pegmatite dikelets 142.4, 143.4 qtz veins with scheelite.		3 .4	7 10	
144	146	1.9	95	Hornfels - as above	As above	As above 145.6 Ferrug 5cm pegmatite dikelet @ 15° with coarse sphal, po, fluorite 145.2-145.5 Two qtz breccia veins with po, scheelite, epidote		2 4	3 7	
146	148	1.9	95	Hornfels - as above Cleavage @ 81°	As above Local purple brown dissem biotite adjacent to qtz veins.	As above 146.1 0.2cm qtz MoS2 vein @ 81° with purple biotitic halo 147.7 5cm qtz-po-sphal vein @ 63° with biotite-rich envelope		2 3	6 8	
148	150	1.9	95	Hornfels - as above	As above	As above 149.1 5cm silicious zone with Tr scheelite 149.0 6cm sphal-rich pegmatite dikelet with biotitic envelope @ 65°		2 1	6 2	
150	152	2.1	105	Hornfels as above relict bedding @ 61° A few thin limy laminae	As above	As above		0 1	8 11	

BP FORM NO. 75-1

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.	
					16	23

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
152	154	2.0	100	Dark grey hornblsic slate - lighter grey sections due to varying amounts of calc-silicate (wollastonite?) Cleavage @ 82° 153.7 1.5 cm calcite cemented shear @ 20°	Irregularly dissem fine grains wollastonite? 153.9-154 dissem garnet.	~1% po dissem as fine grains and clots along cleavage planes with minor sphal. Scattered qtz po ± sphal veinlets.	20	2 1	8 13	
154	156	2.2	110	As above 155.3 calcite-pyrite-chlorite coated slip plane @ 22°	As above 155.6-155.7 dissem garnet.	As above		2 2	4 12	
156	158	1.8	90	156-158.2 As above Cleavage @ 76-85°	As above Purple biotite hornfels 156.2-157.6	As above 157.4 3 cm feld-qtz-po-sphal vein @ 57° 157.9 1 mm qtz (T. MoS) vein @ 75°		1 3	8 10	
158	160	2.0	100	158.2-160 White aplite - fine grained with some irregular qtz and feldspar grains up to 1 mm. No mafics. Contacts @ 71 + 76° ~ // to relict bedding	Sericite along some fractures and qtz veins.	Scattered qtz - MoSz and qtz + po - sphal veinlets Py on fractures with calcite MoSz on ~ 70% of qtz		9 5	6 17	
160	162	2.0	100	Grey to dark grey hornfels. relict bedding 37-55° 160.6 graphite coated slip plane // to bedding	Erratic purple biotite. Local f.g. green diopside?	Po, Py, sphal as above 161.1 0.5 cm qtz-po MoSz vein // to bedding	48	1 1	13 4	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 17 / 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
162	164	2.0	100	Greenish grey hornfels — black slate containing variable amounts of fine-grained calc silicates including wollastonite and diopside. Contains siliceous segregations up to 5cm wide with po + sphal	Variable amounts e.g. calc silicates	Abundant po ~5% stringers and qtz-rich segregations with sphal. 162.4 1mm qtz-py-po-sphalerite vein @ 30° 163.6 Massive po segregation		1	6	
								1	3	
164	166	2.1	105	Dark grey hornfels as above contorted bedding.	As above	Po, py, sphal as above Tr sphalerite @ 164.4 in irreg qtz-po veinlet		3	7	
								1	4	
166	168	2.0	100	As above foliation @ 62°	As above Local purple biotite development	As above Tr MoS_2 in 2 qtz.		1	7	
								3	2	
168	170	2.0	100	166-168.2, 168.4-168.6 As above 168.2-168.4, 168.7-168.9 Qtz veins 168.6-172.7 White aplite. Contact @ 57°	Minor sericite on fractures and along qtz veins	168.2-168.4 qtz vein 60 to bedding with po, sphal + Tr sphalerite near one edge 168.6 1cm qtz-MoS_2 vein near contact 168.7-168.9 qtz-po-MoS_2 vein		4	7	
						170 8cm qtz-po-MoS_2 vein @ 61°		1	30	
170	172			White aplite identical to that at 158-160 v. fine grained, vague sugary texture, no mafics. Scattered qtz phenocrysts up to 2mm rounded		Scattered fractures coated with py. + Tr MoS_2 & qtz-MoS_2 veins @ ~80°		2	7	
								3	4	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 18 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
172	174	2.0	100	172-172.7 white aplite as above 172.7-174 Purplish grey to dark grey hornfels Contact @ 65°	Erratic biotite and calc-silicate development in hornfels.	3 qtz MoS_2-po veins in aplite @ 69° 173.7-173.9 3 qtz-MoS_2 veins @ ⊥ to bedding		3 4	8 6	
174	176	2.0	100	Grey to dark grey hornfels - relict bedding @ 75° 174.7-174.9 lining section	As above	3-4% po as dissemination, and in clots in siliceous segregations and along cleavage planes 3 qtz MoS_2 veins ⊥ to bedding. To schelite in qtz MoS_2 vein @ 175.0		3 1	6 20	
176	178	2.0	100	Black slate - relatively weakly altered cleavage @ 70° Scattered slip planes and shear zones up to 1cm coated + cemented with graphite and calcite ⊥ to foliation		170.0 qtz-po-sphal vein @ 22° cut by qtz-MoS_2 vein @ 66° 176.9 2 stringy qtz-po (+sphal?) veins		4 0	24 19	
178	180	2.0	100	Black slate locally hornfelsic - cleavage @ 62° Scattered calcite coated fractures	Purple biotite developed adjacent to qtz-MoS_2 veins	Po as above 178.6 6 cm qtz MoS_2 vein 179.7 0.7 cm qtz MoS_2 vein both ⊥ to cleavage. Some po-rich beds up to 1cm thick.		1 1	7 7	
180	182	1.9	95	As above	Local p.g. green diopside? Minor local biotite	181.1, 181.2 qtz-MoS_2 veinlets ⊥ to bedding 181.15 po-sphal-rich segregation.		0 2	6 9	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 19 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
182	184	2.1	105	Dark grey slate - locally hornfelsic Scattered calcite coated fractures. ± pyrite Slate is well indurated - breaks along cleavage.	Purple biotite developed as haloes around qtz veins	Po, sphal as above Irreg 2-3 cm qtz-po-MoS2 vein @ 182.5		1 2	6 9	
184	186	2.0	100	As above cleavage @ 60°	As above	As above 184.2-184.4 3-4 cm qtz-MoS2 veins @ 50-61° 185.3 0.5 cm qtz-MoS2 vein @ 42°		3 2	17 8	
186	188	2.0	100	As above relict bedding @ 75°	As above Local v. faily disseminated grey calc silicate ?g rains	As above 187.5-188.0 Several qtz-MoS2 and MoS2-py lined fractures 187.7 Irreg 7 cm qtz po vein with prominent biotite halo		0 4	5 9	
188	190	2.0	100	As above relict bedding @ 70°	As above	Po as above Several qtz MoS2 veinlets generally // to bedding		2 1	8 7	
190	192	2.0	100	Grey to purplish grey hornfels - relict bedding @ 51-73°	Light grey to greenish grey bands rich in v.f.g. calc silicate interlayered with purple to dark grey hornfels.	Po as above 2mm qtz-MoS2 veinlet @ 92.8 cutting 5mm pegmatitic veinlets.		1 2	7 6	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 20 / 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
192	194	2.0	100	Hornfels - alternating black slate, purple and grey hornfels bands 10-50 cm Relict bedding @ 60°	Grey calc silicate? bands and purple brown biotite hornfels bands	Abundant Po as above 192.4 0.3 cm qtz MoS2 vein ⊥ to bedding 192.5 0.3 cm qtz-chlorite-sericite veinlet near a 1 cm qtz-po-Ti MoS2 veinlet ∥ bedding		4 2	9 20	
194	196	2.1	105	Hornfels -as above relict bedding @ 50°	As above	193.5 3cm qtz-po-sphal vein ∥ to bedding As above 194.2, 194.3 3, 5 cm qtz-fld+MoS2 veins @ 60 + 80° 195.4-196.0 Several narrow qtz-po-sphal veinlets		3 4	12 6	
196	198	2.0	100	Hornfels as above	As above	Po, as above		1 1	7 6	
198	200	2.0	100	Black slate - local grey and purple hornfels bands. Cleavage @ 78°	As above	Po as above. 199.95 1cm qtz-po vein with Ti MoS2 @ 59°		2 2	10 15	
200	202	2.0	100	Black slate		Po as above		0 0	7 18	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 21 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
202	204	2.0	100	Black slate - well indurated, locally hornfelsic. Core strongly broken up by numerous fractures, many coated with py and calcite	Narrow biotite hornfels haloes adjacent to qtz veins.	3% po finely disseminated and in clots and qtz segregations. 202.6 3mm qtz - MoS2 vein @ 30°		1 1	>30 >30	
204	206	2.0	100	204-205.7 - as above cleavage @ 25° contact @ 47° 205.7-209.6 Aplite	As above	As above 205 3mm irreg qtz - MoS2 veinlet. 205.9 5mm qtz - MoS2 vein @ 73°		1 7	20 >30	
206	208	2.0	100	White aplite - identical to dikes higher up in hole. V. f.g. sugary texture.	Minor amounts of sericite, mainly on fractures	Scattered qtz and qtz - MoS2 ± po veins. MoS2 lining a few fractures. veins mainly @ ~85°		8 10	>30 >30	
208	210	2.0	100	-209.6 Aplite - as above 209.6 - Irreg contact @ ~ 65° 209.6 - 210 Hornfels.	As above	As above		6 12	>30 14	
210	212	2.0	100	Hornfelsic slate - alternating black slate and grey to purplish grey hornfels bands. Foliation @ 87° Calcite, chlorite, minor pyrite on fractures	Narrow grey calc silicate hornfels. Biotite hornfels developed adjacent to qtz veins	212.6 1cm qtz - MoS2 - po-sphal vein @ 85°		0 2	12 21	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 22 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 83-1

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Gra Lo
212	214	2.0	100	Horn felsic slate - black slate alternating with purplish brown and grey hornfels sections. Relict bedding @ 78-84° Calcite, minor chlorite, local pyrite on fractures	Purple biotite hornfels alternating with grey calc-silicate bearing sections 212.5-213 qtz-rich section with diffuse qtz veins	~3% po dissem, in seams and clots, in qtz segregations and in qtz veins 212.5 1 cm qtz-po-MoSz vein @ 77°		5 3	12 19	
214	216	1.9	95	As above	As above	As above 214.7 0.5 cm qtz-MoSz vein @ 33°		2 2	16 24	
216	218	2.2	110	As above	217.3-217.4 tremolite rich zone	216.8, 217.3 0.3 cm qtz-MoSz veins @ 85° 217.8-218 3 qtz-MoSz veins @ ~85°		2 4	16 21	
218	220	2.0	100	Hornfels - as above relict bedding @ 70°	As above	Po as above 219.9 5 cm qtz-po-MoSz vein @ ~47° 218.9 1 cm qtz-po-MoSz vein @ ~90°		3 2	7 6	
220	222	1.85	93	Hornfels - as above	As above.	Po as above		2 0	10 12	

BP

DRILL LOG

SHEET NO. 23 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Grap Lo
222	224	2.0	100	Dark grey slate - with grey hornfels sections. Relict bedding @ 75°. Scattered fractures coated with calcite.	Grey calc-silicates locally developed.	? 4-5% dissem po. Po also in siliceous laminae and segregations	1	1	10	
							1	1	14	
224	226	2.0	100	As above cleavage @ 66°	As above - biotite developed adjacent to a few qtz veinlets	As above 225.9 0.4 cm qtz MoS2 vein @ 55°		1	9	
								2	8	
226	228	2.0	100	As above cleavage @ 43-66°	As above 227.4-227.5 tremolite-rich zone	As above. 227.4 1 cm qtz-po vein lined with MoS2 // to bedding @ 47°		1	4	
								1	7	
228	230	2.0	100	As above relict bedding @ 30° 229-232.3 dominantly grey hornfels	Grey very fine-grained calc silicate. Local biotite development.	As above 229.2 0.5 cm qtz-py-MoS2 vein // bedding		0	16	
								2	5	
230	232	1.9	95	As above relict bedding @ 42-65°	As above	As above 231.5 0.3 cm qtz-MoS2 vein @ 63° 232 Irreg qtz-carb-py-Sericite veinlet		2	9	
								3	8	

DRILL LOG

SHEET NO. 24 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
232	234	2.0	100	Hornfelsic slate - grey to dark grey in color. foliation @ 60-65° Scattered calcite cemented fractures.	Grey: Ag. calc silicates irregularly developed in slate. Local biotite adjacent to fractures and qtz veinlets	Abundant dissem Po. Po also assoc with qtz laminae and segregations up to 5 cm wide. 233.2, 233.5, 1mm qtz-MoS_2 veinlets // bedding		2	6	
								2	10	
234	236	2.1	105	As above foliation @ 67°	As above 234.8-235.2 silicified zone - Local tremolite and light green diopside?	As above 234.4 qtz-po-MoS_2 veinlet // bedding 234.1 Tr MoS_2? in qtz		2	11	
								0	4	
236	238	2.0	100	As above relict bedding 65-75°	As above 236.1-236.4 silicified section	As above 236.05 0.5 cm qtz-MoS_2 237.9 0.8 cm Ag diketal with po both // bedding		2	10	
								3	8	
238	240	2.0	100	As above relict bedding @ 63° Locally limy.	As above	As above Several qtz-MoS_2 lined fractures.		3	6	
								1	8	
240	242	2.0	100	As above relict bedding @	As above	As above -MoS_2 noted on 2 veinlets // to bedding.		2	14	
								3	8	

DRILL LOG

SHEET NO. 25 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Group Lo
242	244	2.0	100	Dark grey hornfelsic slate - well indurated with little tendency to break along cleavage. Light grey bleached zones developed along a few fractures and qtz veins. Some qtz-rich laminae and segregations with py + po. Relict bedding +/or cleavage @ 45-55°	Light grey bleaching adjacent to fracts and qtz veins. Tr sericite on fractures	~3% dissem po and py - appears to be a relative increase in pyrite content. 242.2 qtz-MoS2 vein 243.2 qtz-carb-MoS2 lined slip plane @ 45° with grey bleached halo		1 2	6 8	
244	246	2.0	100	As above 245.3 2cm fault gouge @ 62° 245.4-245.5 Abundant graphite coated slip planes	As above Biotite developed adjacent to qtz @ 245.8	As above 244.7 10cm qtz-po segregation Several qtz-MoS2 veinlets.	62	3 4	11 730	
246	248	2.0	100	As above increase in grey qtz-po-sphal veins - most are irregular and slightly boudinaged. 246.3 qtz-carb veining adjacent to slip planes @ 45°	As above Minor local biotite	As above Increase in qtz-po-sphal veins.		19 8	23 10	
248	250	2.0	100	As above - hornfels locally brecciated by qtz(± po ± sphal) veins	As above	As above		9 9	15 5	
250	252	2.0	100	Grey hornfels	Local biotite development	As above 250.2 0.5cm qtz-MoS2 veinlet @ 730 251.2 0.5cm qtz-MoS2 veinlet @ 64°		7 9	13 730	

DRILL LOG

SHEET NO. 26 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
252	254	2.0	100	White aplite - identical to those higher in hole. Very fine grained with vague sugary texture - no matrix Contact @ 252 m - 46° Rock tends to break along numerous fractures @ 55° coated with fine sericite	Thin sericite coatings on fractures. Minor sericite in qtz veins	MoS_2 in qtz veins and coating slip planes. Qtz-MoS_2 veins subparallel @ 50-75°		16 19	>30 >50	
254	256	1.9	95	252-254.2 White aplite contact @ 61° 254.2-258 Grey, dark grey and greenish grey hornfels Relict bedding @ 75°	Biotite locally developed in grey siliceous calc silicate hornfels. Sericite on a few fractures and near qtz-MoS_2 vein @ 254.4	Abundant finely disseminated po in hornfels ~ 3% Pyrite locally more abund. Qtz-MoS_2 vein 254.2-255.1 Irreg qtz vein with po, biotite ⊥ to core axis cut by 2 qtz MoS_2 veins		10 6	15 8	
256	258	1.9	95	= Hornfels as above	As above 256.7-256.9 - siliceous zone.	255.1 1 cm qtz-MoS_2 @ 75° Several fractures + slip planes with thin coatings MoS_2. Scattered fractures coated with py.		7 2	8 15	
258	260	2.0	100	Hornfels as above Relict bedding 65-70°	As above	Py, po as above 259.4 2 cm qtz vein mid with minor MoS_2 @ 71°, sub ⊥ to bedding; several fractures coated with qtz and fine MoS_2 ⊥ to bedding.		3 5	7 6	
260	262	2.0	100	Grey banded hornfels 262.3-262.5 White felsite dike - contacts @ 75+79°	As above Several sericite coated fractures with Tr MoS_2 in dike 260.5-260.7 tremolite-rich zone with Tr disseminated MoS_2	Py, po as above Several fractures coated with qtz + fine MoS_2		5 5	13 10	

DRILL LOG

SHEET NO. 27 | 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
262	264	2.0	100	Grey to brownish grey hornfels - with variable amounts of biotite and calc silicates in v.f.g. siliceous? groundmass. Scattered fractures coated with py and calcite.	Variable intensities - biotite and calc silicates.	~1% v. finely disseminated py & Tr po. A few scattered fracts coated with qtz and MoS_2. 262.2 Tr scheelite in qtz vein.		6 7	7 >30	
264	266	1.8	90	264.0-264.15' Biotite lamprophyre with calcite and epidote rich inclusion - contacts @ 32 & 60° 264.15-265.7 Dark grey to grey hornfels. Shear contact at 256.7 with qtz vein @ 22° 265.7-266.1 qtz vein containing small amounts biotite and pyrite cut by a qtz-scheelite vein.	As above As above	As above. Trace MoS_2 in qtz vein @ 265.7-266.1. Scattered scheelite grains in crosscutting qtz vein 11 to ore.		2 3	12 >30	
266	268	1.9	95	Hornfels - as above	As above	Py, Po as above. Tr MoS_2 noted on one fracture. Scattered irregular qtz + qtz po veinlets.		10 8	14 7	
269	270	2.2	110	Hornfels - locally biotite + tremolite rich relict bedding: 25-44°	As above 269.9-270.4 coarse biotite + tremolite As above	Scattered narrow qtz-MoS_2 veinlets @ 70-80° Tr disseminated MoS_2 in coarser hornfels section Tr scheelite and MoS_2		4 3	20 16	
270	272	2.0	100	Hornfels - as above relict bedding @ 27°		in coarser hornfels. Two fractures with qtz + MoS_2 coatings. Two po-rich qtz segregations in black slate section with cpy		2 2	10 6	

DRILL LOG

SHEET NO. 28 29

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH

HOLE NO. M
D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
272	274	1.8	90	Grey to brownish grey hornfels relict bedding @ 61°	Variable amounts biotite and grey calc silicate 273.9 1cm felsic qtz vein with biotite + well developed biotite halo @ 65°	Weak irreg dissem po. A few fractures coated with qtz + minor MoS_2 272.2 Ø.5cm qtz-MoS_2 vein @ 66° with sericite.		3 3	9 7	
274	276	2.0	100	As above relict bedding @ 43° 275.5-278.5 Brownish grey biotite	As above 274.3-274.7 Tremolite rich zone with dissem biotite and minor sericite. Siliceous matrix in place	As above 1 qtz MoS_2 veinlet @ 274.6 Tr scheelite on fracture with qtz @ 275.4		2 2	10 11	
276	278	2.0	100	hornfels	Scattered green act./biotite veinlets with narrow grey siliceous halo.	As above qtz MoS_2 coated fract. 276.9, 277.2 @ 72° 277.3 Tr dissem scheelite		2 2	18 11	
278	280	2.0	100	Grey to brownish grey hornfels as above relict bedding @ 40°	As above	As above Two qtz-MoS_2 water fractures.		1 2	9 12	
280	282	2.0	100	Dark grey hornfels	Brownish grey biotite hornfels zone developed adjacent to qtz veins	As above Several qtz-po segregations with minor spy. 281.5 7mm qtz-MoS_2 vein @ 75° 281.6, 281.7 qtz-MoS_2 veinlets		2 3	4 5	

DRILL LOG

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					29 / 29

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/Ft	STRUCTURE F/Ft	Graph Log
282	284	2.0	100	Dark grey hornfels - relict bedding @ 65° 282.2-282.4 shear zone - abundant irregular slip planes	Brown biotite developed adjacent to qtz veins. Thin zones grey calc silicate.	~2-3% dissem po along bedding planes and in some siliceous segregations. By on scattered fractures with calcite. 283.4 0.3 cm qtz-MoS$_2$ vein with bi halo @ 50°	≈	2 3	≈30 4	
284	286	2.0	100	As above - relict bedding @ 68°	As above 284.6-284.8 Tremolite rich zone with dissem po and sericite	282.4 irreg qtz-po-sphal vein As above 284.5 0.4 cm carb-qtz vein lined with MoS$_2$ ⊥ to bedding.		3 1	10 3	
286	288.3	2.3	100	As above - relict bedding @ 55-85°, locally contorted. 288.3 (946') End of hole	As above 288.0-288.2 Siliceous zone rich in tremolite.	As above 282.1 0.3 cm qtz MoS$_2$ vein @ 55° ⊥ to bedding several qtz-MoS$_2$ coated fractures.		2 5	1 3	

DRILL LOG

SHEET NO. 1 4

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. 6 Claim		50095	49995	1794m

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 22, 1981	May 23, 1981		BQ	269.14m	M D.D.H. 80-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
232.87 Metres	234	0.67 m	59	232.87 - 233.48 Cave 233.48 Fine grained quartz monzonite	Bleaching - Sericite on fractures ± MoS_2	MoS_2 occurs on slip planes with sericite and lining qv's qv trend 50-55°		10	6	
234	236	2.1	105	Fine grained quartz monzonite 1-2% dissem clots biotite up to 1mm in siliceous groundmass	as above	as above weak pyrite dissem and on fractures Qtz-MoS_2 veins @ 32-52°		14 11	20	
236	238	2.1	105	- 237.7 Fine grained qtz monzonite as above Contact @ 237.7 @ 35° 237.7 - 238 Hornfels		as above		12 22	16 15	
238	240	2.0	100	Hornfels Dark gray - altered to purple color adjacent to quartz veins Foliation @ 52°	Purple biotite along quartz veins Scattered fracts coated with calcite	as above abund dissem py and po. Po occurs disseminated in irregular streaks. as well as along foliation		6 9	10 9	
240	242	2.0	100	Hornfels - Grey in color with purple streaks Foliation @ 53° A few thin lime beds.	as above	Qtz-MoS_2 veins @ 47-52° crosscuts foliation		12 2	9 9	

A.R. # 9893

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 2 4

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 80-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
242	244	2.05 m	102	Grey to dark grey hornfels. Local purple cast. 242.8 4cm fault gouge.	Local purple cast mainly adjacent to quartz veins.	MoS2 in scattered grains on on slip planes. Abund and pyrite + minor po, dissem and in a few qtz veins. 243.95 5cm qtz-py-MoS2 vein @ 62°		3	16	
								6	7	
244	246	2.1	105	Dark grey hornfels - local purple cast.	As above.	MoS2 on 20% of grains Abund py, minor po on fracts, dissem and in qtz veins.		11	10	
								12	14	
246	248	2.1	105	Dark grey hornfelsic siltstone very finely laminated in places.	As above	as above 246.5 5cm pegmatitic qtz feldspar dekeleft lined with MoS2		6	16	
								6	15	
248	250	2.0	100	Dark grey hornfelsic siltstone - weak purple cast in places. Foliation @ 77° Limy zone 249-249.2	As above	MoS2 on 40% of veins and on a few fractures 249.2 2cm qtz py vein @ 75° with MoS2 slickenades along margin.		4	5	
								7	18	
250	252	2.0	100	Dark grey hornfelsic argillite + siltstone	As above	250.6 2cm qtz-py-MoS2 (+sphal?) vein @ 54°		19	12	
								8	24	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 3 4

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 80-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
252	254	2.0	100	Grey, dark grey, purplish grey hornfels 253.75 - 254.2 Grey lamprophyre. Abund. fine biotite. 254.4 graphite-coated slip plane @ 38°.	Purplish cast developed mainly along larger quartz veins Scattered 1mm fractures coated with white zeolite.	253 Py coated slip plane @ 70° 253.1 MoS_2 " " - @ 67° MoS_2 on several qtz Pyrite, minor po, abund dissem and in qtz. 252.7 clots of py, po and sphalerite		5 10	14 9	
254	256	2.2	110	Dark grey laminated hornfels. - very fine 0.1-0.2 mm contorted laminae (bedding)	As above	Tr MoS_2 on fractures. Py, po, minor sphal in qtz veins. 255 MoS_2 coated slip planes @ 52, 61°		2 9	13 17	
256	258	1.9	95	Grey to dark grey laminated hornfels. lamination @ 75°	as above zeolite coated fractures trend @ 20°	256.8 1cm qtz-MoS_2 vein @ 61° Py and po locally dissem and on fractures.		3 4	28 7	
258	260	2.05	102	258 - 259.75 Grey to dark grey laminated hornfels. Lamination @ 70° 259.4 - 259.7 Graphitic zone with a number of zeolite coated fractures. 259.75 contact @ 24° 259.75 - 260.95 Med grained aplitic granite	259.2 - 259.4 right brownish grey bleached zone	259.0 0.5 cm qtz MoS_2 vein @ 90° py + po as above No qtz veins in granite Some dissem MoS_2 in "		1 2	9 18	
260	262	2.0	100	contains a few scattered clots MoS_2 + muscovite. 5 cm hornfels inclusion @ 854.5 Contact @ 260.95 @ 15° - appears to cut off a 5mm qtz MoS_2 vein Dark grey hornfelsic argillite	Local purple cast adjacent to qtz veins.	261.6 7mm qtz-MoS_2 vein with some purple alt. @ 65° 261.7 5mm qtz-MoS_2 vein @ 71° py + po as above		1 4	13 14	

BP FORM NO. 75-1

DRILL LOG

SHEET NO. 4 4

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M. D.D.H. 80-2

DEPTH From	DEPTH To	CORE Length	CORE %Rec	LITHOLOGY	ALTERATION	MINERALIZATION	STRUCTURE F	STRUCTURE V/M	STRUCTURE F/M	Graph Log
262	264	2.0	100	Dark grey hornfelsic argillite foliation @ 61°	Purple biotite-rich envelope adjacent to MoS2-qtz veinlets.	262.7 5cm aplitic-pegmatitic dikelet @ 82° lined with MoS2. 263.5 0.7cm qtz-MoS2 @ 81° with 0.7 purple halo. Py and po dissem along foliation planes and on scattered fractures		1 3	9 5	
264	266	2.0	100	Dark grey hornfelsic argillite - foliation locally crenulated.	as above	264.5 1mm qtz-MoS2 vein @ 82° 264.6 1cm " " " @ 70° Py & Po as above		2 2	6 9	
266	268	1.9	95	Dark grey hornfelsic argillite as above.	as above A few calcite coated fractures.	266.6 1mm qtz-MoS2 @ 73° 267.25 1cm qtz MoS2 vein @ 73		1 2	35 35	
268	269.14	1.0	88	As above 268.0 5cm aplite dikelet @ 90° cut by pyrrhotite veinlet. 269.14 End of hole.	as above	A few qtz-po veinlets @ 33°			9	
				Hole abandoned because of extreme vibrations on drill.						

BP FORM NO. 75-1

In Pocket

Appendix III

GEOCHEMICAL RESULTS

3a - Surface samples

3b - DDH M 80-02
M 81-01
M 81-02
M 81-03

ASSAY DATA SHEET

A.R.# 9893

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.	
M.U.T. 6 claim		50016	49862	1486 m	1	2

DATE STARTED	DATE COMPLETED	SURVEYS				HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 27, 1981	May 29, 1981	Acid Test	58 m	- 87°		BQ	64.6	M D.D.H. 81-2

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
3	6	3		3522		16	42	2	290	0.2	1	1400	1
9	12	3		3523		14	34	2	196	0.2	1	2000	1
15	18	3		3524		10	44	2	500	0.4	1	2000	1
21	24	3		3525		9	82	2	420	0.4	1	2500	30
27	30	3		3526		13	88	2	290	0.2	1	2000	1
33	36	3		3527		9	28	2	120	0.2	1	1100	1
39	42	3		3528		8	44	2	276	0.8	1	1500	1
45	48	3		3529		14	56	2	540	0.4	1	1250	1
51	54	3		3530		23	90	2	750	0.2	1	1800	2
56	59	3		3531		28	88	2	3200	0.2	1	7000	20

NO. 75-2

ASSAY DATA SHEET

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
					2 2

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-2

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
59	62	3		35332		28	90	2	230	02	1	4200	20
62	65	3		35333		28	40	4	240	02	1	1600	1
65	68	3		35334		18	54	2	130	0.2	1	1600	2
68	71	3		35335		20	26	4	210	02	1	2350	1
71	72.2	2.2		35336		16	30	2	248	02	1	3500	1

NO. 75-2

A.R.# 9893

ASSAY DATA SHEET

SHEET NO. 1 2

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. 6 claim		50095	49995	1494 m

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 22, 1981	May 23, 1981		BQ	269.1 m	M D.D.H. 80-2

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
232.9	236.0	3.1		35011		326	20	36	44	2.0	1	280	1
236	239	3		35022		130	22	18	86	1.8	1	650	1
239	242	3		35033		52	44	6	330	1.8	2	1500	1
242	245	3		35044		108	44	4	258	1.2	3	1650	1
245	248	3		35055		110	44	2	400	1.0	1	1450	1
248	251	3		35066		70	47	4	386	1.6	2	760	1
251	254	3		35077		68	46	6	246	1.2	1	1600	2
254	257	3		35088		66	52	6	520	1.6	3	880	2
257	260	3		35099		130	48	6	580	0.6	1	1700	1
260	263	3		35110		47	46	8	480	0.2	1	900	1

NO. 75-2

ASSAY DATA SHEET

SHEET NO. 2 | 2

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. 6 Claim		50095	49995	1494 m

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 22, 1981	May 23, 1981		BQ	269.1 m	M D.D.H. 80-2

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu 43	Pb	Zn 48	Ag	Sn 53	F	W 58
263	266	3		35111		52	54	4	470	0.2	1	840	1
266	269	3		35112		59	50	6	380	0.2	1	1100	1

NO. 75-2

ASSAY DATA SHEET

SHEET NO.

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION
M.U.T. PROPERTY SURFACE				

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					D.D.H.

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
				81MAT80		16	30	4	156	0.2			
				81MAT81		16	20	4	44	0.2			
				81MAT82		25	46	6	400	0.2			
				81MAT83		4	14	6	28	0.2			
				81MAT84		38	16	10	32	0.4			
				81MAT85		46	30	12	42	0.4			
				81MAT86		16	8	26	44	0.2			
				81MAT87		8	76	8	400	0.2			
				81MDT09		6	32	8	36	0.2			
				81MDT10		20	30	10	72	0.2			

A.R. # 9893

FM NO. 75-2

ASSAY DATA SHEET

SHEET NO.

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. D.D.H.

FROM (1–7)	TO (8–14)	CORE LENGTH (20)	% CORE RECOVERED (21–26)	SAMPLE NUMBER (27–38)	TOTAL MoS_2	ASSAY RESULTS (39–58) Mo	Cu43	Pb	Zn 48	Ag	Sn 53	F	W 58
				81MDT12		2	2	6	6	0.2			
				81MDT13		14	16	90	26	1.6			
				81MDT14		2	26	8	12	0.4			

*5-2

A.R.# 9893

ASSAY DATA SHEET

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO.
M.U.T 6 Claim		50029	49857	1486 m	1 / 9

DATE STARTED	DATE COMPLETED	SURVEYS			HOLE SIZE	TOTAL DEPTH	HOLE NO.
May 30, 1981	June 5, 1981	Azimuth	305°		BQ	288.3 m	M D.D.H. 81-3
		Dip	-75°				

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
3	6	3		3537		24	90	2	1370	0.2	1	8800	300
6	9	3		3538		16	160	2	580	0.2	1	3300	50
9	12	3		3539		20	88	4	530	0.2	1	2200	10
12	15	3		3540		28	70	2	156	0.2	1	2550	1
15	18	3		3541		30	88	4	390	0.2	1	2200	1
21	24	3		3542		19	30	2	166	0.2	1	1250	1
27	30	3		3543		20	30	2	350	0.2	1	1400	1
33	36	3		3544		14	32	4	226	0.4	1	1250	1
36	39	3		3545		28	34	2	280	0.2	1	1700	1
39	41	3		3546		18	44	4	430	0.2	1	1550	1

NO. 75-2

ASSAY DATA SHEET

SHEET NO. 2 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

FROM (1–7)	TO (8–14)	CORE LENGTH (20)	% CORE RECOVERED (21–26)	SAMPLE NUMBER (27–38)	TOTAL MoS_2	ASSAY RESULTS Mo (39)	Cu (43)	Pb	Zn (49)	Ag	Sn (53)	F	W (58)
44	47	3		3547		12	44	4	138	0.2	1	1700	1
51	54	3		3548		14	34	6	390	0.2	1	3300	1
57	60	3		3549		20	38	4	730	0.2	1	1700	15
63	66	3		3550		20	40	2	830	0.2	1	1050	1
69	72	3		3551		20	52	2	450	0.2	1	1300	1
75	78	3		3552		20	140	2	2700	0.8	1	5000	240
78	81	3		3553		20	92	4	940	0.2	1	2700	120
81	84	3		3554		26	96	2	790	0.2	1	2800	10
84	87	3		3555		26	118	2	2200	1.0	1	2000	40
87	90	3		3556		28	86	4	780	0.2	1	1100	10

M NO. 75-2

ASSAY DATA SHEET

SHEET NO. 3 9.

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	HOLE SIZE	TOTAL DEPTH	HOLE NO.
							M D.D.H. 81-3

DATE STARTED: | DATE COMPLETED: | SURVEYS:

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
90	93	3		3557		26	64	2	650	0.2	1	1700	40
93	96	3		3558		26	118	6	1800	0.2	1	3300	40
96	99	3		3559		33	80	6	930	0.2	2	5600	50
99	102	3		3560		30	94	4	1300	0.2	1	4200	40
102	105	3		3561		35	74	4	900	0.2	1	1400	1
105	108	3		3562		29	70	4	1330	0.2	3	3200	30
108	111	3		3563		36	80	6	1660	0.2	1	3500	140
111	114	3		3564		30	76	4	1140	0.2	1	1150	35
114	117	3		3565		36	60	8	1120	0.4	2	2800	35
117	120	3		3566		25	66	4	900	0.2	1	1250	10

NO. 75-2

ASSAY DATA SHEET

SHEET NO. 4 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
120	123	3		3567		23	74	6	720	0.2	1		2
123	126	3		3568		29	80	4	1620	0.2	1		90
126	129	3		3569		30	80	4	1950	0.2	1		30
129	132	3		3570		23	60	4	1800	0.2	4		45
132	135	3		3571		28	70	6	3500	0.2	1		40
135	138	3		3572		26	60	4	740	0.2	1		35
138	141	3		3573		28	62	4	710	0.2	2		50
141	144	3		3574		24	64	8	1710	0.2	1		35
144	147	3		3575		32	64	6	1200	0.2	1		45
147	150	3		3576		38	45	6	960	02	1		25

FORM NO. 75-2

ASSAY DATA SHEET

SHEET NO. 5 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3.

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
150	153	3		3577		26	48	4	740	0.2	1	860	20
153	156	3		3578		24	58	6	890	0.2	1	1150	35
156	158.1	2.1		3579		36	82	8	1750	0.4	1	4250	10
158.1	160	1.9		3580		31	4	12	58	0.2	1	800	1
160	163	3		3581		35	62	6	2900	0.2	1	1800	60
163	165	2		3582		42	66	6	600	0.2	1	2100	2
165	168.6	3.6		3583		42	40	6	430	0.2	1	1500	50
168.6	172.8	4.2		3584		44	12	10	40	0.2	1	180	1
172.8	175	2.2		3585		44	44	8	206	0.2	1	1700	1
175	178	3		3586		44	58	6	420	0.2	1	1050	1

NO. 75-2

ASSAY DATA SHEET

SHEET NO. 6 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
178	181	3		3587		90	38	8	232	0.2	1	1860	1
181	184	3		3588		78	56	8	370	0.2	1	1250	1
184	187	3		3589		56	60	6	190	0.2	1	1100	1
187	190	3		3590		48	48	8	260	0.2	2	2000	1
190	193	3		3591		48	50	8	74	0.2	1	1650	1
193	196	3		3592		44	50	8	710	0.2	1	1400	5
196	199	3		3593		40	40	8	220	0.2	1	1300	15
199	202	3		3594		42	36	6	208	0.2	1	1150	1
202	205	3		3595		48	42	8	380	0.2	1	1150	1
205	205.6	0.6		3596		48	44	8	580	0.2	1	1800	1

ASSAY DATA SHEET

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION	SHEET NO. 7 9
DATE STARTED	DATE COMPLETED	SURVEYS		HOLE SIZE / TOTAL DEPTH	HOLE NO. D.D.H. 81-3

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
205.6	209.6	3		35977		24	6	12	18	0.2	1	180	1
209.6	211	1.4		35988		39	48	10	106	0.2	1	1150	1
211	214	3		35999		50	52	10	252	0.2	1	1750	15
214	217	3		36000		43	42	8	124	0.2	1	1550	1
217	220	3		36051		72	34	10	94	0.2	2	2700	30
220	223	3		36052		49	44	10	460	0.2	1	1400	35
223	226	3		36053		44	38	10	110	0.2	1	1200	1
226	229	3		36054		45	34	8	194	0.2	1	1450	10
229	232	3		36055		50	42	10	270	0.2	1	2300	35
232	235	3		36056		49	46	10	312	0.2	1	1950	80

NO. 75-2

ASSAY DATA SHEET

SHEET NO. 8 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO. M D.D.H. 81-3

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
235	238	3		36571		54	42	10	270	0.2	1	1850	40
238	241	3		36581		42	34	10	164	0.2	1	1200	1
241	244	3		36591		64	34	10	308	0.2	1	1100	5
244	247	3		36601		48	46	12	290	0.2	1	1050	1
247	250	3		36611		42	34	10	348	0.2	1	1350	1
250	252	2		36622		46	30	12	222	0.2	1	1900	5
252	254.1	2.1		36633		20	2	20	22	0.2	1	480	1
254.1	257	2.9		36644		63	52	14	116	0.2	1	2450	35
257	260	3		36655		66	50	14	72	0.2	1	2350	1
260	263	3		36666		72	22	12	120	0.2	1	3000	40

75-2

ASSAY DATA SHEET

SHEET NO. 9 9

LOCATION	CO-ORDINATES	NORTH	EAST	ELEVATION

DATE STARTED	DATE COMPLETED	SURVEYS	HOLE SIZE	TOTAL DEPTH	HOLE NO.
					M D.D.H. 81-3

FROM	TO	CORE LENGTH	% CORE RECOVERED	SAMPLE NUMBER	TOTAL MoS_2	ASSAY RESULTS Mo	Cu	Pb	Zn	Ag	Sn	F	W
263	266	3		3667		50	34	14	114	0.2	1	3100	400
266	269	3		3668		58	36	12	114	0.2	1	3600	10
269	272	3		3669		180	46	6	186	0.2	1	3500	140
272	275	3		3670		150	20	8	156	0.2	1	3400	30
275	278	3		3671		46	38	6	134	0.2	1	3500	1
278	281	3		3672		52	92	6	500	0.2	1	2050	1
281	284	3		3673		88	56	4	620	0.2	1	1400	5
284	288.3	4.3		3674		52	44	2	600	0.2	1	1200	1

FORM NO. 75-2

Appendix IV

STATEMENT OF COSTS

SUMMARY OF COSTS - 1981 DRILL PROGRAM MUT CLAIMS 1-4

1) LABOUR COSTS

Michael Smith (Project Geologist)	
May, Nov. Dec., 1981 10 days x $200/day	$ 2000.00
John Gravel (Geologist)	
May 6-19 = 12 days x $106/day	1272.00
John Dekker (Assistant)	
May 1-7, 16-18 = 8 days x $98/day	784.00
Alistair Fyfe (Assistant)	
May 10 days x $70/day	700.00

2) CONTRACTORS

A & M Exploration Services-Project Management	11,126.76
A & M Exploration Services-Gravity Survey	5,165.73

3) ACCOMODATION

May 19 - June 15, 1981	471.70

4) TRAVEL

a) Airfares; Vancouver-Castlegar-Vancouver	456.85
b) Truck rentals - Bow Mac Truck Rentals (Jimmy 4 x 4)	237.73
- Redhawk Rentals (3/4 ton 4 x 4)	1,275.00
c) Car rental - Tilden	67.82

5) DRILLING COSTS

a) Road and site preparation (Pinetree Logging Co. Ltd.) May 14-25/81	1,820.62
b) Total drilling cost including Mob/Demob May 20 - June 6 Total footage= 461.4 metres.	42,402.84

SUMMARY OF COSTS - 1981 DRILL PROGRAM MUT CLAIMS MUT 1-4

... continued

6)	MATERIALS AND SUPPLIES (CONSUMABLES)	
	a) Office and field equipment	$ 1,884.18
	b) Lumber and tent floors	1,191.98
	c) Fuels	1,175.27
	d) Food and meals	1,669.75
7)	FREIGHT	
	Trucking and Air cargo	656.18
8)	ANALYTICAL COSTS	
	Geochemical Assay (Rossbacher Labs)	
	9 assays x $13.20/assay	118.80
	111 assays x $13.04/assay	1,447.70
	TOTAL EXPENDITURE	$76,149.91

A&M exploration ltd.
GEOLOGY · GEOPHYSICS
MINING ENGINEERING
4570 HOSKINS ROAD, NORTH VANCOUVER, B.C.
TELEPHONE (604) 985-7921 V7K 2R1

Invoice: 81-120

December 1, 1981

Mr. Gene Gulajec
B.P. Minerals Ltd.
3rd Floor - 900 West Pender St.
Vancouver, B.C.
V6C 1L1

Dear Gene:

Re: M.U.T. Property Gravity Survey - Project 517

Mobilization and Fieldwork

Geophysicist 4 days @ $300/day	$1,200.00
Assistant 4 days @ $150/day	600.00
Equipment rental	
Gravimeter 1 week @ $350/week	350.00
Meter insurance & shipping	90.00
Magnetometer 1 week @ $150/week	150.00
Room and board 6 man days @ $40/day	240.00
Vehicle expenses rental 4 days @ $35/day	140.00
Mileage 1600 km @ 0.10/km	160.00
Gas and oil	203.23

Report

Terrain corrections 65 stations @ $15/station	975.00
Geophysicist 3 days @ $300/day	900.00
Draughting 6 hours @ $15/hour	90.00
Compilation typing, photocopying	67.50
	$5,165.73

APPROVED FOR PAYMENT
CHARGE 80082-5334 - #5,165.73
DATE DEC 9 1981 INTLS

Yours truly,

D.R. MacQuarrie

D. R. MacQuarrie

L-83

Rossbacher Laboratory Ltd.

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B.C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

BP MINERALS LTD.

1007-1111 West Hastings Street

VANCOUVER.B.C.

Project 517

DATE June 18, 1981

INVOICE NO. 1314

CERTIFICATE NO. 81121/81122

ITEM	DESCRIPTION		SUB-TOTAL	TOTAL
111	Geochem. analysis for 5 elements @	3.20	$ 355.20	
109	Sn	2.50	272.50	
108	W	2.25	243.00	
110	F	3.25	357.50	
5	Rock sample prep.	1.50	7.50	
106	Assay prep. for geochem. analysis	2.00	212.00	
				$ 1,447.70

APPROVED FOR PAYMENT
CHARGE 80087-5324 - $1,447.70
DATE JUL 6 1981 INTLS.

TERMS – NET 30 DAYS

L-32

Rossbacher Laboratory Ltd.

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B. C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

B.P. MINERALS LTD.
1007-1111 W. Hastings
Vancouver, B.C.
Project # 517.

DATE June 15,1981
INVOICE NO. 1302
CERTIFICATE NO. 81104

ITEM	DESCRIPTION		SUB-TOTAL	TOTAL
9	Geochem analysis for 5 elements	@ $ 3.20	$ 28.80	
9	Sn, W, F	8.00	72.00	
9	Assay prep for Geochem	2.00	18.00	
				$ 118.80

APPROVED FOR PAYMENT
CHARGE 80087-5324 $ 118.80
DATE JUL 6 1981 INTLS.

TERMS – NET 30 DAYS

L-32

BEMA INDUSTRIES LTD.
~~5780-203 STREET, LANGLEY, B.C. V3A 1W3 (604)530-9731~~
#203 - 19945 - 56th Avenue, Langley, B.C. V3A 3Y2

INVOICE № 0706

DATE May 6, 1981

FILE NO.

PROJECT 81-31

B.P. Minerals Ltd.
#1007 - 1111 W. Hastings Street
VANCOUVER, B.C.

ATTENTION: Mr. John Decker

RE: CONSTRUCTION OF TENT FLOORS

Construction of 14' x 16' Tent Floors
F.O.B. Bema Langley Warehouse

5 Tent Floors @ $425.00 each $2,125.00

THIS IS OUR ACCOUNT: $2,125.00

BEMA INDUSTRIES LTD.

PER:

;vvh

DATE OF ISSUE: May 6th, 1981.

517 528 524 526 → 550 525 525 525

APPROVED FOR PAYMENT
CHARGE
DATE 14 May
INITIALS

80087-5305-$550.
80078-5305-$525.
80079-5305-525.
80090-5305-525.
$2,125

L-22

INVOICE

WRIGHT DRILLING LTD.
SITE 22-5 E.L#1
CHASE, B.C
V0E 1M0

INVOICE NO. 282

SOLD TO

B. P. CANADA
1111 - WEST HASTINGS ST.
VANCOUVER, B.C

SHIPPED TO

SALMO

DATE	ORDER NO.	SALESMAN	TERMS	SHIPPED VIA	PPD.	COLL.
7/7/81			15 DAYS			

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	DEMOBILIZATION - LOBO TRANSPORT		$869.40
	BILL OF LADING # 23761		
			869.40

RECEIVED
JUL 7 1981
B P MINERALS LIMITED
Vancouver, B.C.

APPROVED FOR PAYMENT
CHARGE 80087-5305-4
DATE JUL 21 1981 INTLS

$ 869.40

PAST DUE INVOICES SUBJECT TO
2% INTEREST PER MONTH.

FORM NO. PK103R-3
AVAILABLE FROM BUSINESS ENVELOPE MANUFACTURERS OF CANADA, LTD., 3015 KENNEDY ROAD, UNIT NO. 8, AGINCOURT, ONTARIO M1V 1E7
LOT = 576949
PRINTED IN U. S. A.

INVOICE

WRIGHT DRILLING LTD.
SITE 22-5 R.R.#1
CHASE, B.C
V0E 1M0

RECEIVED
JUN 12 1981
BP MINERALS LIMITED
VANCOUVER, B.C.

INVOICE NO. 277

SOLD TO

B. P. CANADA
1111 - WEST HASTINGS ST.
VANCOUVER, B.C

SHIPPED TO

SALMO

DATE	ORDER NO.	SALESMAN	TERMS	SHIPPED VIA	PPD.	COLL.
11/06/81			15 DAYS			

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	DIAMOND DRILLING MAY 19 - JUNE 9		$41,533.44
	APPROVED FOR PAYMENT 5305 - $16,639.39		
	CHARGE 80087 - 5304 - $24,894.05		
	DATE JUN 25 1981 INTLS.		$41,533.44
	1514 /		
D	16.44/1		
I	10.99/1		
	PAST DUE INVOICES SUBJECT TO 2% INTEREST PER MONTH.		$41,533.

LOT = 57

THIS DELIVERY IS IN METRIC UNITS/LIVRAISON EN UNITÉ

METER READING / RELEVÉ DU COMPTEUR

LITRES

SOLD TO / VENDU A: BP CANADA 1007-1111 WEST HASTINGS VANCOUVER BC

SHIP TO - LIVRER A

VIA

PROV. SALES T. NO. / NO DE TAXE DE VENTE PROVINCIALE

L.P.O.S./D.P.E.

* THE PROVINCIAL FUEL TAX INCLUDED IS AT THE LEGISLATED CENTS PER LITRE RATE.

* LA TAXE PROVINCIALE SUR LES CARBURANTS COMPRISE DANS LE PRIX EST CALCULÉE AU TAUX EN CENTS PAR LITRE ÉTABLI PAR LA LOI.

PRODUCTS - PRODUITS	CODE	QUANTITY-DELIVERED / QUANTITÉ-LIVRÉE	TOTAL UNIT PRICE / PRIX UNITAIRE TOTAL	*	AMOUNT-MONTANT
SHELL SUPER NON-LEADED/SANS PLOMB	231-001-				
SHELL ULTRA	211-001-				
SHELL GASOLINE / ESSENCE SHELL	221-001-	615	.338	.0532	207.87
SHELL FURNACE OIL / MAZOUT DOMESTIQUE Nº 2 SHELL	321-101-	615	.244		150.06
DIESELINE	322-110-	1437	.326	.0576	468.46
SHELL STOVE OIL / MAZOUT DOMESTIQUE Nº 1 SHELL	302-101-				
INCLUDED IN PAYMENT - COMPRIS DANS LE PAIEMENT	050-				
PROVINCIAL SALES TAX / TAXE DE VENTE PROVINCIALE	020-100				
	960-620	13			299.00
	960-730				
TOTAL					1125.39

RECEIVED PAYMENT - POUR ACQUIT: BY CHEQUE / PAR CHÈQUE; BY CASH / AU COMPTANT; SHELL SCRIP / BON DE SHELL; CHARGEX/VISA; MASTER CHARGE; TOTAL; AGENT

EXCHANGE / ÉCHANGE; PREVIOUS SHORTAGE / DÉFICIT ANTÉRIEUR; PREVIOUS OVERAGE / EXCÉDENT ANTÉRIEUR; PAYMENT RECEIVED BY (SIGNATURE) / PAIEMENT REÇU PAR (SIGNATURE)

VOL. COLL. / FRAIS VOLUM; LIGHT DRUMS / FÛTS LÉGERS; HEAVY DRUMS / FÛTS LOURDS — CHARGES / DÉBITS; CREDITS / CRÉDITS

DELIVERED BY (SIGNATURE) / LIVRAISON FAITE PAR (SIGNATURE)

GOODS RECEIVED BY - MARCHANDISES REÇUES

CUSTOMER'S REFERENCE NO./DATA / Nº DE RÉFÉRENCE DU CLIENT

INVOICE NO. - FACTURE Nº: 262-426 | MONTH/MOIS 05 | DAY/JOUR 18

TRANS 56: 1 CASH / COMPTANT; ☑ 2 CREDIT / CRÉDIT; 0 AGENT TRUCK / CAMION DE L'AGENT; 2 COMPANY TRUCK / CAMION DE LA CIE; 3 OUTSIDE CARRIER / TRANSPORTEUR PUBLIC; ☑ 4 PLANT PICK-UP / AU DÉPÔT

4 EX. FEDERAL EXCISE TAX; 5 EX DUTY; 6 EX. FEDERAL SALES & EXCISE TAXES; 7 EX. FEDERAL SALES TAX; 9 EX DUTY & SALES TAX

PROV. FUEL TAX - T. PROV. SUR CARB. | PROV. SALES TAX - T.V. PROV.

1 TAX INCLUDED PRIMARY RATE; 5 TAX INCLUDED SECONDARY RATE; 3 EXEMPT; 7 EXEMPT; 9 TAX EXTRA

P.O. Box 440 **STATEMENT** Phone 352-3221

Shell Canada Limited

B.A. BENSON & SON LTD. - Agent
NELSON, B.C.

B. P. CANADA
1007-1111 West Hastings
Vancouver, B.C.

Terms: Payment on receipt of statement

DATE	INVOICE NO.	DEBIT	CREDIT	BALANCE
DEC 31	BALANCE ... (Ideming of fuel release)			CR (69.00)
MAY 19/81	INV 262-426	1125.39		1056.39

APPROVED FOR PAYMENT
CHARGE 80087-4692 - $ 1056.39
DATE JUL 27 1981 INTLS. [illegible]

RECEIVED
JUN 1 19[illegible]
BP MINERALS LIMITED
VANCOUVER, B.C.

Note: Balance oustanding 30 days beyond statement date is subject to a

LIBERTY FOOD STORE SALMO LTD
BOX 145 FRUITVALE, B.C.

GRAHAM McDOUGALL
JOHN GRAVE
RON ALLEN
ALISTER FYFE.

622-8345

B.P. Minerals — ACCOUNT NO _____

ADDRESS Suite 1007 - 1111 West Hastings St

CITY Vancouver, BC — E.J. GRELA TELEPHONE _____

SALESMAN _____ BANK _____ RATING _____

DATE	PARTICULARS	DEBIT	CREDIT	BALANCE
BALANCE FORWARD	not signed			
MAY 25	John [illegible] X	183 38 M		
19	[illegible] X	470 15 M		
20	Alistar [illegible]	23 58 M		
21	"	48 47 M		
22	Alistar [illegible]	32 03 M		
26	Alistar [illegible]	235 87 M		
27	(McLachlin)	12 91 M		
28	[illegible] (McLachlin)	15 65 M		
29	[illegible]	40 99 M		
2	[illegible]	[illegible] M		
JUNE 2	[illegible]	350 M		
3	[illegible]	33 73 M		
5	[illegible]	[illegible] M		1271 84

APPROVED FOR PAYMENT
CHARGE 80087-4624 $1,271.84
DATE JUN 25 1981 INITIALS [illegible]

Folio _____ Statement

JUNE 8, 1981

M B.P. EXPLORATION CANADA LTD.
#1007 - 1111 WEST HASTINGS ST.
VANC., BC. V6E 3.75

In Acc't With PINETREE LOGGING COMPANY LTD
357-9454

Terms _____ BOX 27, SALMO, BC.

		1979 KOMATSU D65E				
		JOB SITE:				
		BENSON PROPERTY				
		SOUTH OF SALMO				
MAY 14	81	8 HRS.				
✓ 15		2 ✓				
✓ 20		9½ ✓				
✓ 21		4 ✓				
✓ 25		4 ✓				
		27½ HRS @		60	75	1670 62
		LOW-BEDDING TO & FROM JOB SITE				150 00
		R. Sloan				
		APPROVED FOR PAYMENT				
		CHARGE 80087-3616 - $1820.62				
		DATE JUN 25 1981 INTLS	TOTAL		$	1820 62
		Attn: Gene				

RECEIVED
JUN
BP MINERALS LIMITED
VANCOUVER, B.C.

A&M exploration ltd.
GEOLOGY · GEOPHYSICS
MINING ENGINEERING
4570 HOSKINS ROAD, NORTH VANCOUVER, B.C.
TELEPHONE (604) 985-7921 V7K 2R1

Invoice 81-121

December 1, 1981

Mr. Gene Gulajec
B.P. Minerals Ltd.
3rd Floor - 900 West Pender St.
Vancouver, B.C.
V6C 1L1

Dear Gene:

Re: M.U.T. Property Report - Project 517

Professional Services

D. G. Allen	10 days @ $350/day	$3,500.00

Assessment report 8 days
Editing & compilation ½ day
Memo - Re: exploration program 1 day
Joint venture presentation ½ day

Expenses

Typing 4 hours @ $20/hr	80.00
Photocopying	18.05
Vehicle and travel expences	7.50
	$3,605.55

Yours truly,

D. G. Allen

APPROVED FOR PAYMENT
CHARGE 80087-2022 - # 3605.55
DATE DEC 9 1981 INTLS

L-83

A&M exploration ltd.
GEOLOGY · GEOPHYSICS
MINING ENGINEERING
4570 HOSKINS ROAD, NORTH VANCOUVER, B.C.
TELEPHONE (604) 985-7921 V7K 2R1

Invoice # 81-107-1

June 15, 1981

BP Minerals
Suite 1007
1111 West Hastings Street
Vancouver, B.C.
V6E 3N5

Invoice: Project 517-1981 Salmo Program

D. Cuvelier

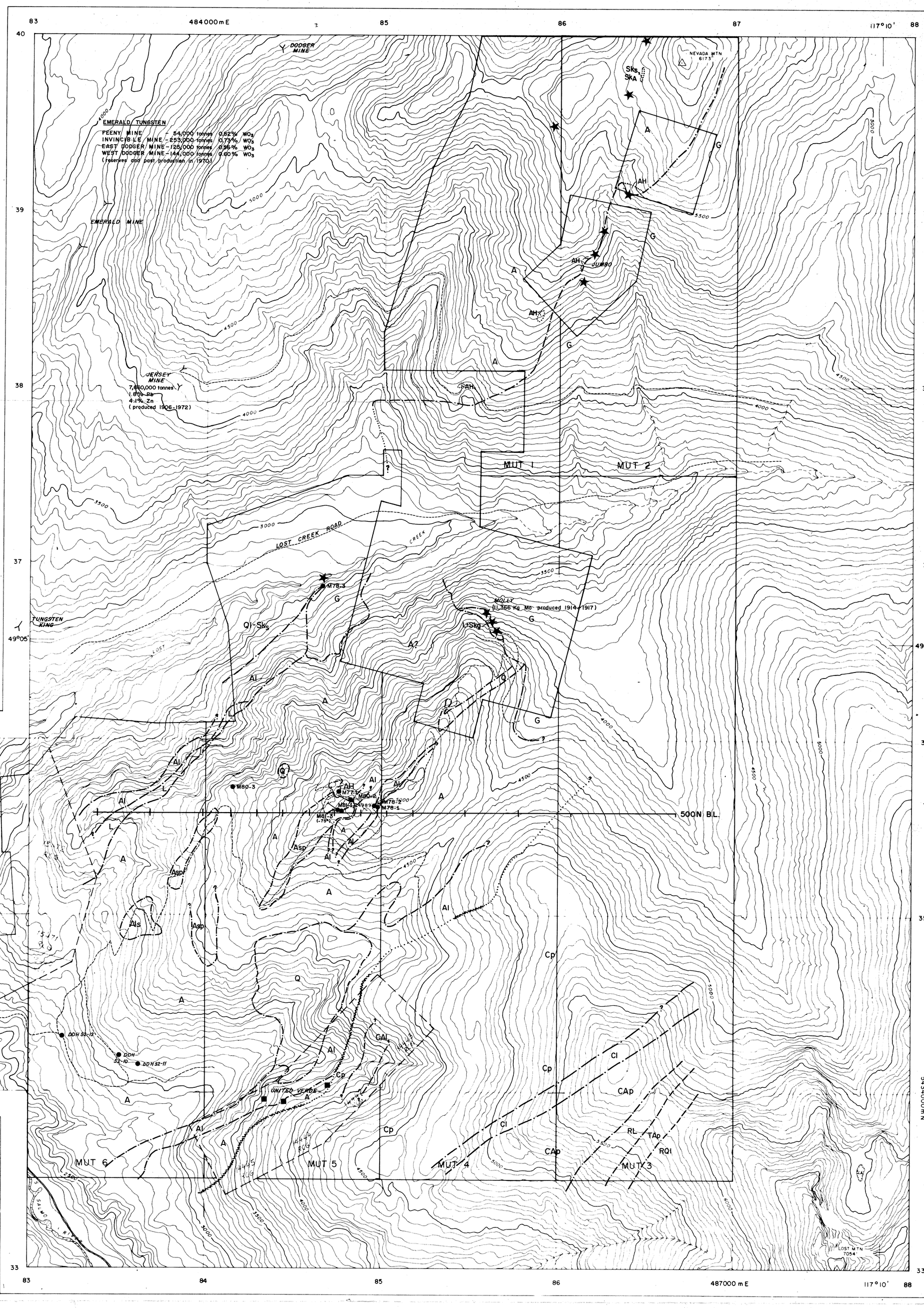
Salary $66.34/day x 14 days (May 28-June 10)		$ 928.76
Expenses		
Meals		7.40
Airport taxi		4.85
	sub total	$ 941.01

D. Allen

Salary $350/day x 18 days (May 20-June 6)		$6,300.00
Expenses		
Motel May 20		28.62
Meals May 20		16.50
Meals May 21		5.20
Truck expenses (May 23-June 6)		210.98
Motel June 1		6.00
Meal		9.90
Parking June 8		3.00
	sub total	$6,580.20
	Total	$7,521.21

APPROVED FOR PAYMENT
CHARGE 80087-2006 - $7,521.21
DATE JUN 25 1981 INTLS

DA/na
cc



LEGEND

LOWER CRETACEOUS (?)

- 6/6A — NELSON INTRUSIONS: GRANITE, QUARTZ MONZONITE; 6A: APLITE

ORDOVICIAN

- A — ACTIVE FORMATION: MAINLY BLACK ARGILLITE WITH MINOR LIMY ARGILLITE AND QUARTZITE BUT INCLUDING
  - AL — LIMY BLACK ARGILLITE
  - AS — SHALY TEXTURED BLACK ARGILLITE
  - ASP — SLATY TEXTURED BLACK ARGILLITE
  - AP — PHYLLITIC TEXTURED BLACK ARGILLITE
  - AH — WEAKLY HORNFELSED BLACK ARGILLITE
  - AH — MOD-STRONGLY HORNFELSED BLACK ARGILLITE
  - L — BLACK LIMESTONE, MARBLE
  - Q, QL, Q1 — INCLUDES SILICIFIED & SILICATED ARGILLITE, Q: QUARTZ PYROXENE HORNFELS (QL: WITH CARBONATE) RESEMBLING WHITE QUARTZITE, Q1: QUARTZITE
  - SK — SK_A - ACTINOLITE - WOLLASTONITE SKARN BANDS; SK_S - SILICEOUS SKARN, CALC-SILICATE SILICATE; SK_G - GARNET - DIOPSIDE SKARN

CAMBRIAN

- C — LAIB FORMATION
  - CP — GREY-SILVERY PHYLLITE
  - CAP — GREY TO RED PHYLLITIC ARGILLITE; CAPL - LIMY PHYLLITIC ARGILLITE
  - CA — BLACK ARGILLITE
  - CAL — LIMY BLACK ARGILLITE
  - CL — GREY LIMESTONE
- RL — REEVES MEMBER : GREY LIMESTONE
- TAP — TRUMAN MEMBER : PHYLLITIC ARGILLITE, MINOR FOLIATED QUARTZITE
- RQL — RENO FORMATION: GREY MICACEOUS TO GRAPHITIC QUARTZITE, IN PART CALCAREOUS

BLACK BUFF FAULT

- ADIT IN MOLYBDENUM ± TUNGSTEN (URANIUM) SKARNS
- ADIT IN LEAD/SILVER/ZINC
- ROADS

SYMBOLS

- A—A' GEOLOGICAL CROSS SECTION
- ADIT
- DIAMOND DRILL HOLE
- BEDDING, TOPS UNKNOWN WITH STRIKE & DIP
- FOLIATION, BEDDING CLEAVAGE WITH STRIKE & DIP
- STRIKE & PLUNGE OF FOLD: UPRIGHT, OVERTURNED
- VEIN OR DYKE: INCLINED, VERTICAL
- JOINT: STRIKE & DIP
- FAULT: DEFINED, INFERRED, ASSUMED
- OUTCROP AREA
- CONTACT: DEFINED, ASSUMED, INTERPRETED

ABBREVIATIONS

PO.	PYRRHOTITE	WO.	WOLLASTONITE
PY.	PYRITE	S/C.	SUBCROP
SCH.	SCHEELITE	BI.	BIOTITE
MO	MOLYBDENITE	QTZ. VS.	QUARTZ VEINS
POW	POWELLITE	SIL.	SILICIFIED
SPH	SPHALERITE	SK.	SKARNED
TREM.	TREMOLITE	CHAB.	CHABOZITE
ACT.	ACTINOLITE	LIM.	LIMONITE-JAROSITE
MT.	MAGNETITE		

T.N. M.N. 21°26'E

FEET 0 1000 2000 3000 4000

METERS 0 120 240 360 480 600 720 840 960 1080 1200

BP Minerals Limited

GEOLOGY & DDH LOCATION MAP THE MUT CLAIMS SALMO, B.C.

SCALE 1 : 10,000		NTS 82 F/3	FIG. 3
DWG NO. 517-81-4	DATE FEB. 1980	PROJ. 517	
To accompany report: BPVR 81 - 30			

Donald S. Allen