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#704 - 850 WEST HASTINGS ST., VANCOUVER, B.C. V6C 1E1  
TELEPHONE (604) 681-0191 FAX 681-7480

671744

**SUMMARY GEOLOGICAL REPORT**

on the

**BE PROPERTY**

Liard Mining Division - British Columbia

N.T.S. 104G/7W

Lat.  $57^{\circ} 17' N.$

Long.  $130^{\circ} 53' W.$

for

**NORTHERN CROWN MINES LTD.**

1500-675 West Hastings Street  
Vancouver, B.C.  
V6B 1N2

by

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

May 8, 1990

Vancouver, B.C.

## TABLE OF CONTENTS

SUMMARY	1
CONCLUSION	2
RECOMMENDATION	2
ESTIMATED COST OF RECOMMENDATION	3
INTRODUCTION	4
LOCATION, PHYSIOGRAPHY, ACCESS	4
CLAIM DATA	5
HISTORY	5
REGIONAL GEOLOGY	6
REGIONAL METALLOGENY	7
PROPERTY GEOLOGY	8
Geology	8
Structural Geology	11
Alteration	15
GEOCHEMICAL SURVEYS	16
GEOPHYSICAL SURVEYS	18
DRILLING	18
EXPLORATION POTENTIAL	19
REFERENCES	
CERTIFICATE	

## ILLUSTRATIONS

Figure 1	Location Map		After p.	4
Figure 2	Property Ownership Map		After p.	4
	Galore Creek-Mess Creek Area			
Figure 3	Claim Map		After p.	5
Figure 4	Regional Geology		After p.	6
Figure 5	Geological Map: Mess Creek-Schaft Creek Area		After p.	6
Figure 6	Geological Map	1:20,000	After p.	8
Figure 7	Geochemical Compilation Map	1:20,000		
7a	Gold and Copper		After p.	17
7b	Silver and Molybdenum		After p.	17
Figure 8	Geophysical Compilation Map	1:5,000	After p.	18

## APPENDICES

Appendix I	Drill Hole Summaries
Appendix II	Summary of Relogging and Resampling

## SUMMARY

Northern Crown Resources Ltd. holds an option to earn up to a 60% interest in the BE copper-molybdenum-gold prospect comprising 120 claim units in the active Stikine Arch Gold District area of northwest British Columbia. The property is situated 64 kilometres south of Telegraph Creek and 51 kilometres northwest of Bob Quinn Lake. Access is by helicopter.

The BE claims cover a complex alkalic stock with associated copper-molybdenum-gold mineralization along a north-south strike length of at least 3 kilometres. Mineralization occurs in porphyritic monzonite, and adjacent altered volcanic and volcanoclastic rocks of the Stuhini and Hazelton Groups.

The property has been explored in recent years by a number of operators, including Phelps Dodge, BHP-Utah, and Chevron. Their work outlined a north-south trending copper and gold soil anomaly, coincident with an induced polarization chargeability response. During the period 1976 to 1982, a total of 17 holes were drilled. The best overall copper intercept was 33 metres grading 0.73% copper and the best gold intercepts were 1.5 metres grading 0.14 ounces per ton gold and 6.4 metres grading 0.04 ounces per ton gold. Most of the past exploration work was designed to evaluate the property as a porphyry copper prospect. More recent work, although very much incomplete, has been directed to exploration of the property for its gold potential. Reanalyses of drill core and stored soil samples has identified at least six target areas. The prime target is a coincident gold-copper geochemical anomaly measuring 1000 by 200 metres. Chevron Canada Resources reported an assay of 0.32 ounces per ton from a grab sample in this area. Four zones containing visible gold have been identified on surface.

A two phase exploration is proposed to fully evaluate the property.

## CONCLUSION

The associated rock types (monzonites) and nature of mineralization and alteration (e.g., magnetite, K-feldspathization) indicate comparison with porphyry deposits of the alkalic suite, which throughout the Intermontane Belt of British Columbia, are hosts to a number of producing and potential producing copper-gold deposits. The closest significant deposit of this type is at Galore Creek, 33 kilometres to the southwest.

The association of mineralization with a prominent fault structure, presence of serpentinites, and the local development of carbonate veining suggest a geological setting comparable to a number of significant structurally controlled gold deposits in the Stikine Arch. Examples of this type include the Golden Bear deposit recently brought into production by Homestake and Chevron and the Trophy deposit in the Scud River area.

The above features and the presence of at least six gold geochemical and geological targets, none of which have been fully delineated or tested, along with proximity to the Schaft Creek deposit, indicate significant exploration potential.

## RECOMMENDATION

A two phase exploration program is recommended to evaluate the BE property. Phase I will comprise mapping, sampling and hand trenching the known gold occurrences and prospecting and hand trenching within the additional six target areas. In addition, detailed geochemical soil sampling to fully define the existing gold grade anomalies and to locate vein type targets and/or zones containing higher grades will be carried out.

Phase II will be contingent on results of Phase I and will consist of follow-up diamond drilling on selected targets defined in Phase I. Estimated cost of Phase I and Phase II are \$50,300 and \$290,000 respectively, for a grand total of \$340,300.

ESTIMATED COST OF RECOMMENDATION

PHASE I Geological mapping, prospecting, geochemical soil sampling, and rock sampling, hand trenching.

Salaries		
Geologist	20 man days @ \$400/day	\$ 8,000
Field Assistant	40 man days @ \$200/day	8,000
Room and board	60 man days @ \$50/day	3,000
Helicopter support	15 hours @ \$650/hr	9,750
Vehicle rental, travel		1,500
Expediting, sample shipment		500
Geochemical analysis, assay	500 samples @ \$20/sample	10,000
Report, consulting, supervision		<u>5,000</u>
	Subtotal	45,750
	Contingencies	<u>4,550</u>
	<b>TOTAL PHASE I</b>	<b>\$50,300</b>

PHASE II Follow-up diamond drilling.

Drilling	1000 metres @ \$150/m (all incl.)	\$150,000
Helicopter support	100 hours @ \$650/hr	65,000
Geochemical analysis, assay		10,000
Fixed wing charter		10,000
Personnel, supervision, consulting, report		<u>30,000</u>
	Subtotal	265,000
	Contingencies	<u>25,000</u>
	<b>TOTAL PHASE II</b>	<b>\$290,000</b>

**GRAND TOTAL PHASE I AND PHASE II** **\$340,300**

## INTRODUCTION

Northern Crown Mines Ltd. holds an option to earn up to a 60% interest in the BE property, comprising 120 claim units in the Mess Creek-Schaft Creek area of northwestern British Columbia. The claims cover a porphyry copper-molybdenum-gold prospect with a north-south strike length of over 3 kilometres. The primary exploration target is a coincident gold-copper geochemical anomaly measuring 200 by 1000 metres, containing gold values up to 0.32 ounces per ton.

The BE property is in the Stikine Arch Gold District which includes the Stewart, Sulphurets, Iskut, Eskay Creek, Galore Creek and Telegraph Creek gold camps. The southern part of the belt has been the focus of intense exploration, with major discoveries having been made in recent years in the Sulphurets-Iskut-Eskay Creek area. Exploration activity is intensifying northwards, with new discoveries also being made in the Galore Creek area 35 kilometres to the southwest. A major porphyry copper deposit, the Schaft Creek deposit (1 billion tons grading 0.3% Cu, 0.034% MoS<sub>2</sub>, 0.004 ounces per ton Au and 0.035 ounces per ton Ag), lies 7 kilometres to the northwest.

The purpose of this report, prepared at the request of W. Roberts and J. Brock, is to summarize results of exploration work on the property carried out by BHP-Utah Mines Ltd. and Chevron Canada Resources Ltd. This report is based mainly on an examination of all available data and reports in the files of BHP-Utah and Chevron. A field examination was not made by the writer because of snow conditions at this time of year. However the data collected by BHP-Utah and Chevron have been well documented and are considered to have a high degree of reliability. In the writer's opinion, any additional information collected in a property visit would not be likely to change the conclusions arrived at in this report.

## LOCATION, PHYSIOGRAPHY, ACCESS

The BE property is situated along the east side of Mess Creek, 64 kilometres south of Telegraph Creek, and 51 kilometres northwest of Bob Quinn Lake on the Stewart Cassiar highway (Figures 1 and 2).

NORTHERN CROWN MINES LTD.

BE PROPERTY

LOCATION MAPS

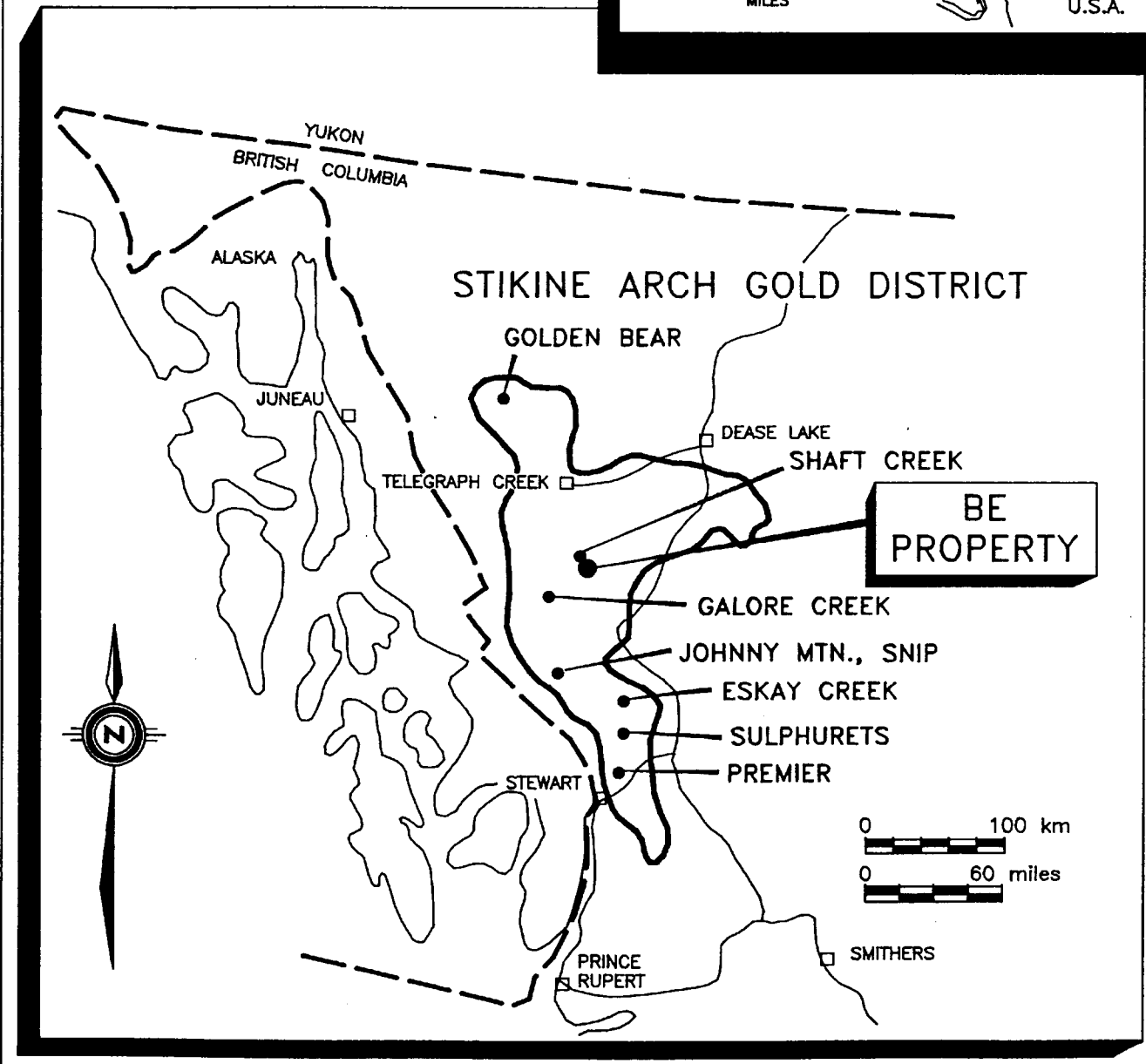
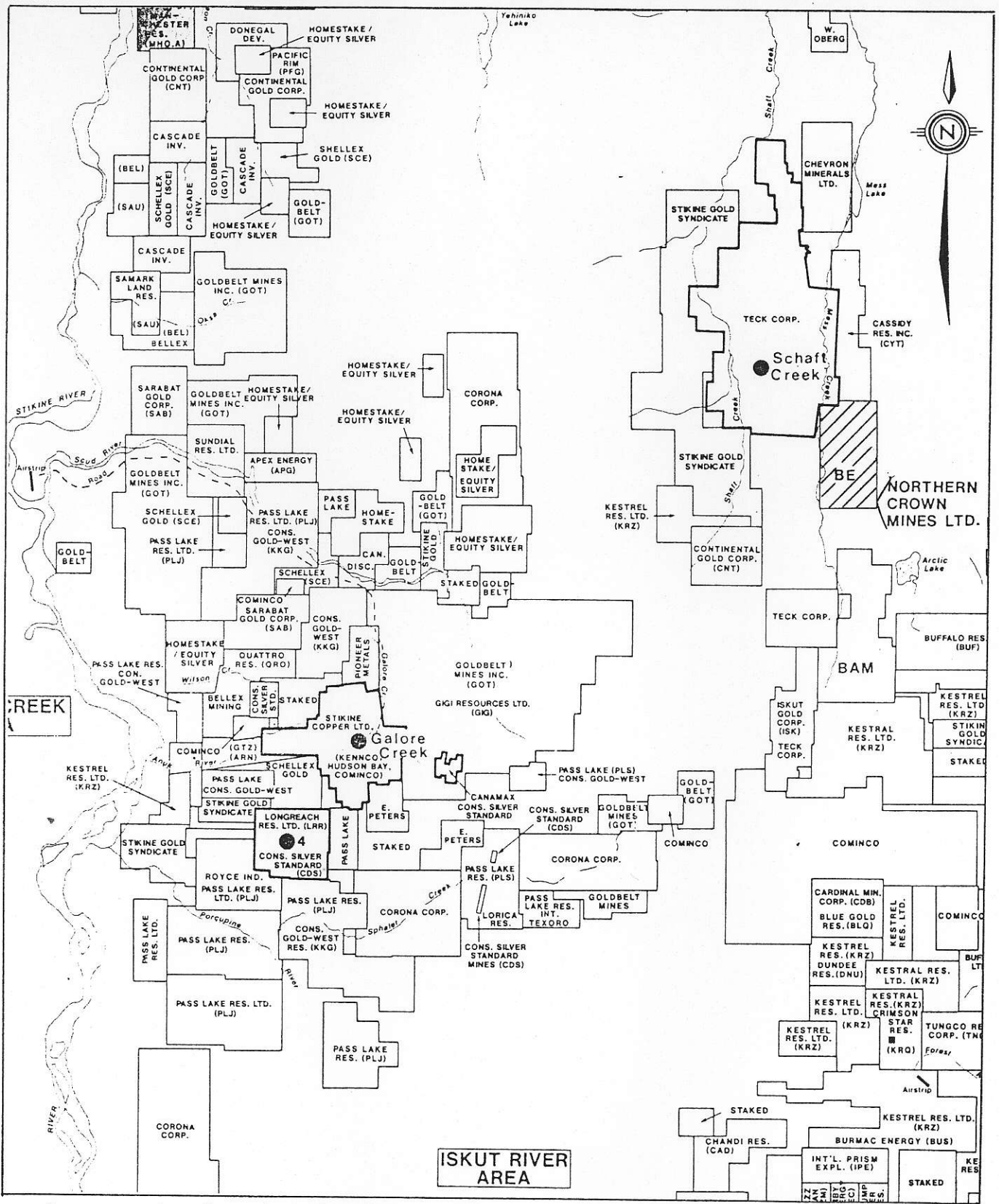


Figure 1



Basemap courtesy Keewatin Engineering

CLAIM OWNERSHIP MAP  
 GALORE CREEK - MESS CREEK AREA



The property lies along the boundary of two major physiographic features, the Spectrum Plateau on the east and the Coast Range Mountains to the west. The southern and eastern part of the property is characterized by hummocky alpine terrain which is deeply incised by westerly flowing streams. The western part of the claim ground covers the flat swampy valley bottom of Mess Creek. Elevations range from 760 metres in Mess Creek to 1675 metres along the east boundary. The north part of the property is thickly forested from the valley bottom to about 1050 metres, above which scrub timber and alpine meadow predominate.

Access is by helicopter from the Bob Quinn Lake, Telegraph Creek, or from the Schaft Creek airstrip.

#### CLAIM DATA

The BE property (formerly known as the MAY Group) comprises 6 claims totalling 120 claim units as follows (see Figure 3):

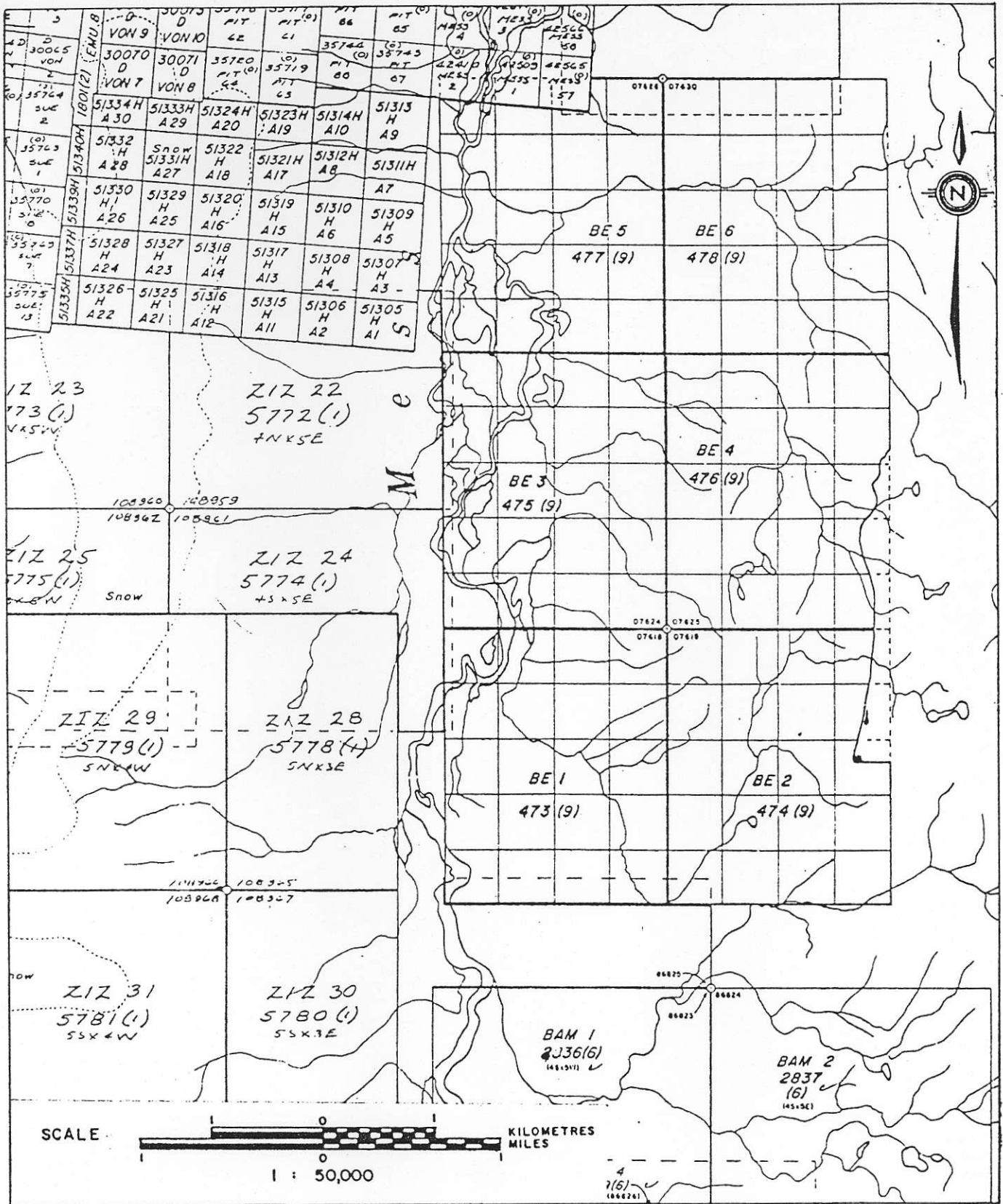
<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Year</u>
BE 1	20	473	Sept. 1, 1977	1995
BE 2	20	474	Sept. 1, 1977	1995
BE 3	20	475	Sept. 1, 1977	1995
BE 4	20	476	Sept. 1, 1977	1991
BE 5	20	477	Sept. 1, 1977	1995
BE 6	20	478	Sept. 1, 1977	1995

The claims are registered in the name of BHP-Utah Mines Ltd.

#### HISTORY

The Mess Creek-Schaft Creek and surrounding areas received considerable attention during the porphyry copper rush of the late 1950's to 1970's. The nearby Schaft Creek copper-molybdenum deposit and the Galore Creek copper-gold deposits were discovered in 1957.

The history of the BE property as summarized by Holland (1982) is as follows:



NORTHERN CROWN MINES LTD.  
**CLAIM MAP**  
 BE PROPERTY

Liard Mining Division - British Columbia

N.T.S. 104G/7W

"During much of the period from 1956 to 1975, the area including the current claims was held by Newmont Mining Corporation, Coin Canyon Mines, Coseka Resources Ltd. and Phelps Dodge Corp. Phelps Dodge carried out mapping, geophysics, soil sampling programs and completed four diamond drill holes (RG 1-4), totalling 580 metres.

Utah Mines staked the area in 1976 and during the 1976 and 1977 field seasons, the property was mapped on a scale of 1:2500, a grid was established and soil sampling, magnetic, and induced polarization surveys were completed. Except for detailed geology, data from earlier surveys was incorporated. In 1980 an additional induced polarization survey was done, as well as examination of a tetrahedrite showing and an area where gold was reported. During the winter of 1982, some soil samples, rock chips and drill core were analysed for Au.

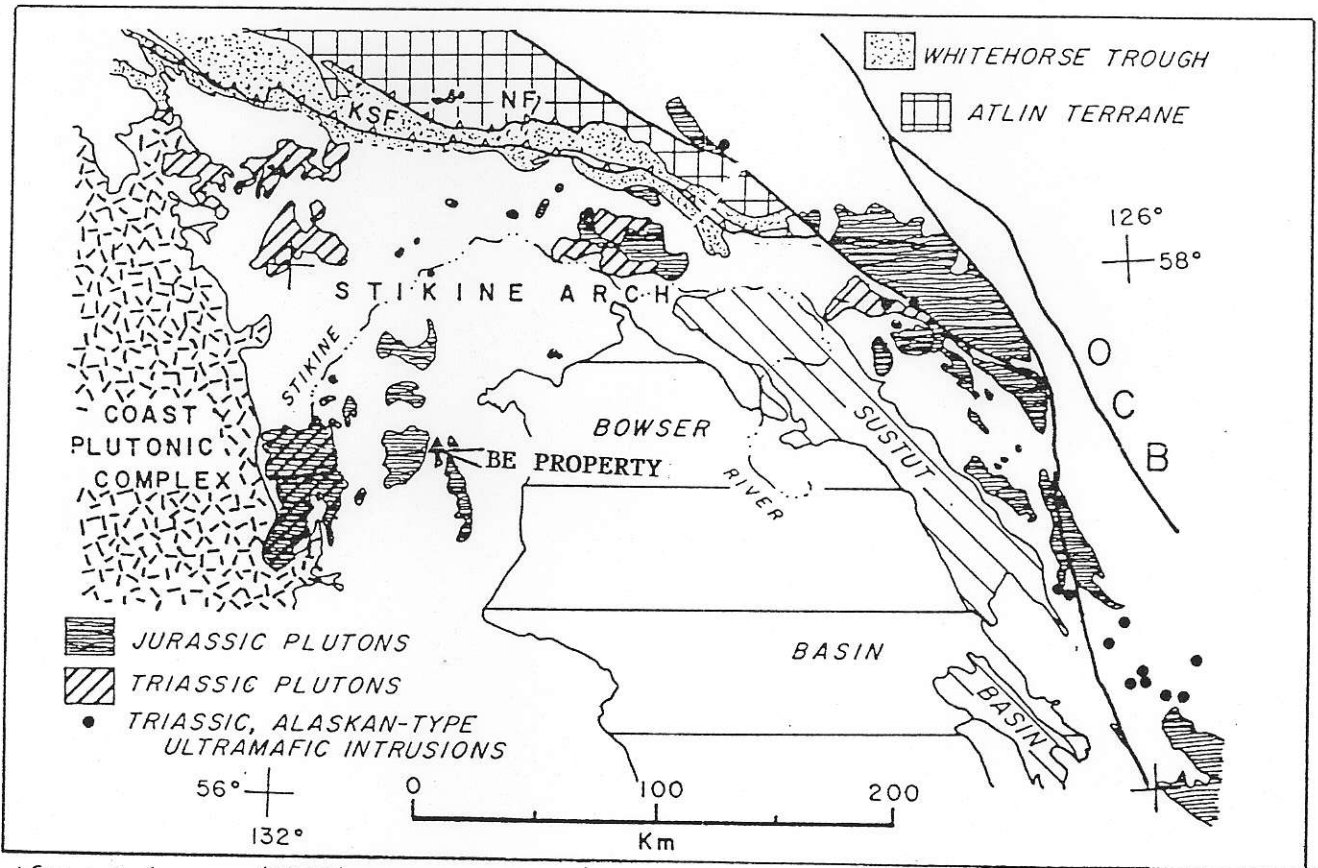
The Phelps Dodge drill core was relogged and in 1977 and 1982 Utah drilled additional thirteen (13 Drillholes, totalling 2,155.9 metres."

In 1986 the property was optioned by Chevron Canada Resources Ltd. who conducted a program of soil sampling in the area of a known gold occurrence (160 soil samples), relogging of drill core, rock sampling (72 rock samples) and prospecting. Erratic but highly anomalous gold values including one sample grading 0.32 ounces per ton were found to be associated with sulfide-rich areas along the contact of the monzonite stock.

#### REGIONAL GEOLOGY

The BE property is in the Telegraph Creek Map area of Souther (1972). The geology of the area immediately to the west has been described more recently and in more detail by Brown and Gunning (1989), and Logan and Koyanagi (1989), and the area immediately to the south by Holbek (1988).

Regionally, the property is in the Stikine Arch (Figure 4), one of several tectonic elements that form the Intermontane Belt of the northern British Columbia Cordillera. The Stikine Arch is a triangular-shaped area between Dease Lake, Tulsequah and the Unuk-Iskut River area that was the site of Permian to Mid-Triassic deformation and metamorphism, and localized Middle to late Triassic magmatism. It remained positive throughout most of the Mesozoic age providing the source area for sedimentation in the Bowser Basin to the south and the Whitehorse Trough to the north.



After Anderson (1988)

REGIONAL GEOLOGIC SETTING  
 BE PROPERTY

LEGEND

- CENOZOIC**
- QUATERNARY  
PLEISTOCENE AND RECENT**
- 29 Fluvatile gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium
- 28 Hot-spring deposit, tufa, aragonite
- 27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29
- TERTIARY AND QUATERNARY  
UPPER TERTIARY AND PLEISTOCENE**
- 26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related subvolcanic intrusions; minor basalt
- 25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26
- CRETACEOUS AND TERTIARY  
UPPER CRETACEOUS AND LOWER TERTIARY  
SLOKO GROUP**
- 24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments
- 22 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills  
23. Porphyritic biotite andesite, lava domes, flows and (?) sills
- SUSTUT GROUP**
- 21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal
- 20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22
- 19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite
- JURASSIC AND/OR CRETACEOUS  
POST-UPPER TRIASSIC PRE-TERTIARY**
- 18 Hornblende diorite
- 17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite
- JURASSIC  
MIDDLE (?) AND UPPER JURASSIC  
BOWSER GROUP**
- 16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13
- MIDDLE JURASSIC**
- 15 Basalt, pillow lava, tuff-breccia, derived volcanoclastic rocks and related subvolcanic intrusions
- LOWER AND MIDDLE JURASSIC**
- 14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone
- LOWER JURASSIC**
- 13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites, pillow-breccia and derived volcanoclastic rocks

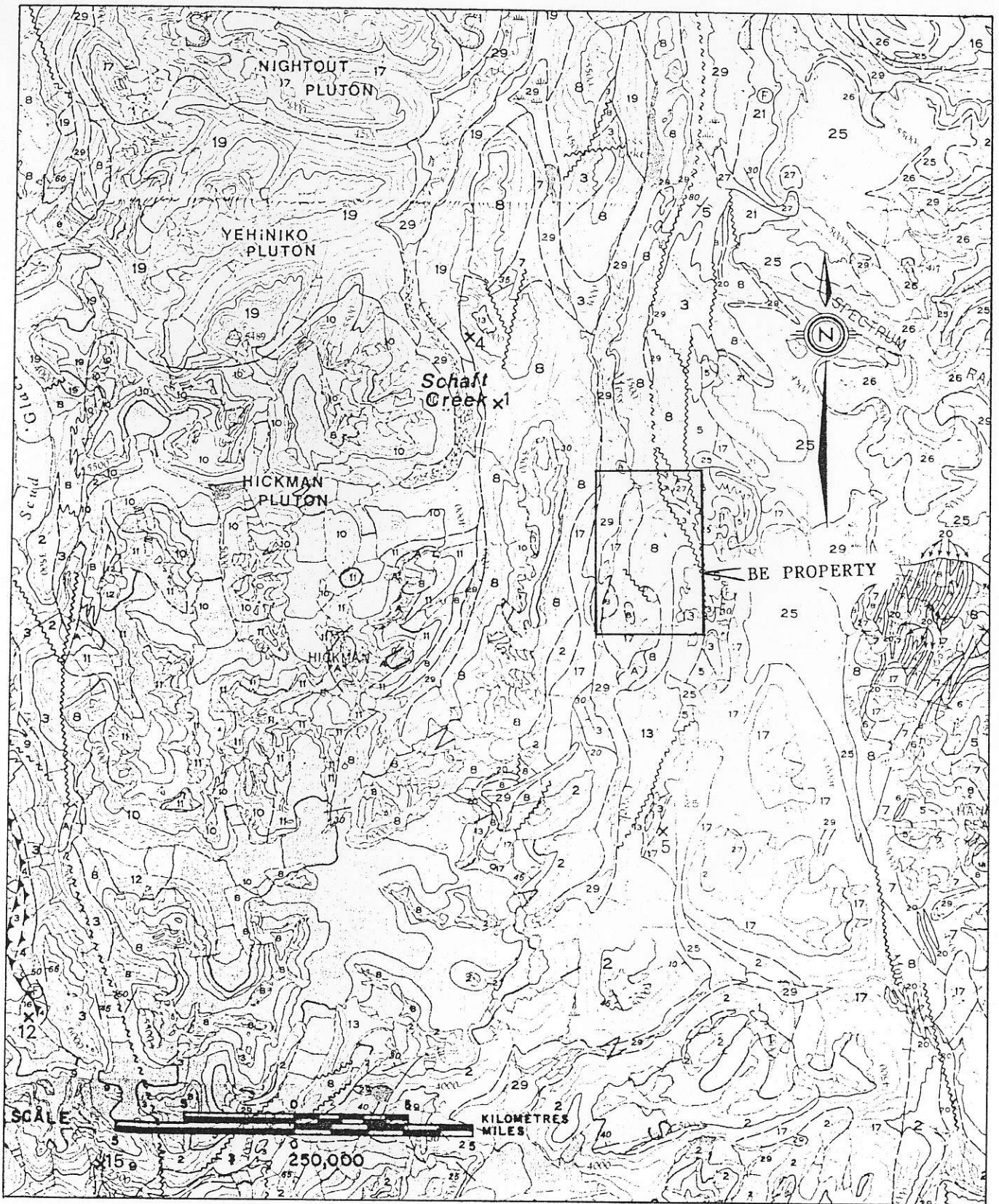
- MESOZOIC**
- TRIASSIC AND JURASSIC  
POST-UPPER TRIASSIC PRE-LOWER JURASSIC**
- 12 Syenite, orthoclase porphyry, monzonite, pyroxenite
- HICKMAN BATHOLITH**
- 10 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite
- TRIASSIC  
UPPER TRIASSIC**
- 9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)
- 8 Augite-andesite flows, pyroclastic rocks, derived volcanoclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate
- 7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomictic siltstone, greywacke, volcanic conglomerate, and minor limestone
- 6 Limestone, fetid argillaceous limestone, calcareous shale and reefoid limestone; may be in part younger than some 7 and 8
- 5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone
- MIDDLE TRIASSIC**
- 4 Shale, concretionary black shale; minor calcareous shale and siltstone
- PALEOZOIC**
- PERMIAN  
MIDDLE AND UPPER PERMIAN**
- 3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff
- PERMIAN AND OLDER**
- 2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone
- MISSISSIPPIAN**
- 1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite
- B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic
- A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic
- Geological boundary (defined and approximate, assumed) .....
- Bodding (horizontal, inclined, vertical, overturned) .....
- Anticline .....
- Syncline .....
- Fault (defined and approximate, assumed) .....
- Thrust fault, teeth on hanging-wall side (defined and approximate, assumed), .....
- Fossil locality .....
- Mineral property .....
- Glacier .....

INDEX TO MINERAL PROPERTIES

1. Liard Copper	5. Bam	9. MH	13. Ann, Su
2. Galore Creek	6. Gordon	10. BIK	14. SF
3. QC, QCA	7. Limpoke	11. JW	15. Goat
4. Nabs	8. Poke	12. Copper Canyon	16. Mary

LEGEND FOR FIGURE 5





After Souther (1972)

GEOLOGICAL MAP  
 SCHAFT CREEK - MESS CREEK AREA

Three major lithotectonic packages make up the Stikine Arch in the Mess Creek area:

- 1) Devonian to Mississippian Stikine Assemblage - a basal assemblage of metavolcanic rock, overlain by silicic to felsic tuffs, rusty argillite and a thick sequence of platformal carbonates
- 2) Middle Triassic sedimentary rocks - chert and silicic mudstone
- 3) Upper Triassic Stuhini Group - mafic volcanoclastics.

They are interpreted to be allochthonous island arc assemblages that amalgamated prior to Middle Jurassic time to form the Stikine Terrane or Stikinia, a composite terrane that subsequently collided and merged with the North American continental plate as a result of subduction and sea floor spreading.

Four composite plutonic suites have been defined in the area:

- 1) a Middle to Late Triassic suite - genetically associated with the coeval Stuhini Group volcanic rocks e.g., the Hickman batholith which outcrops on the Schaft Creek area (Figure 5);
- 2) an early Jurassic Suite e.g. Yehiniko pluton;
- 3) a Middle Jurassic Suite;
- 4) an Eocene Suite.

Late Tertiary to Recent bimodal volcanic rocks of the Edziza and Spectrum Range outcrop to the northeast (Souther and Symonds, 1973).

### REGIONAL METALLOGENY

According to Brown and Gunning (1988) the geological setting of the immediate area is favorable for 1) calcalkaline-porphyry molybdenum deposits (Schaft Creek); 2) alkalic porphyry copper-gold deposits (Galore Creek); 3) porphyry molybdenum deposits (Ben); 4) structurally controlled epigenetic precious metal deposits (Golden Bear and Trophy Gold properties); 5) precious metals in carbonate veins associated with listwanites; 6) skarns; 7) volcanogenic massive sulphides; 9) sediment-hosted massive sulphides in the rusty argillite unit; and 10) platinum-grouped elements in Alaskan-type ultramafic rocks (e.g. ultramafic phases of the Hickman batholith).

The nearby Schaft Creek porphyry copper-molybdenum deposit (Figures 2 and 5) is hosted by the Hickman batholith (209 to 236 million years) but appears to be related to phases of the slightly younger Yehiniko pluton.

Relatively small alkalic stocks ranging in composition from porphyritic syenite to biotite pyroxenite form a lithological and chronological distinct suite which occurs scattered throughout the Iskut-Stikine-Telegraph Creek area. Important copper-gold deposits and peripheral vein type gold-silver deposits are spatially associated with this suite.

### PROPERTY GEOLOGY

#### Geology

The geology of the BE property is summarized on Figure 6. The following description of the property geology, mineralization and alteration has been taken directly from Holland (1982):

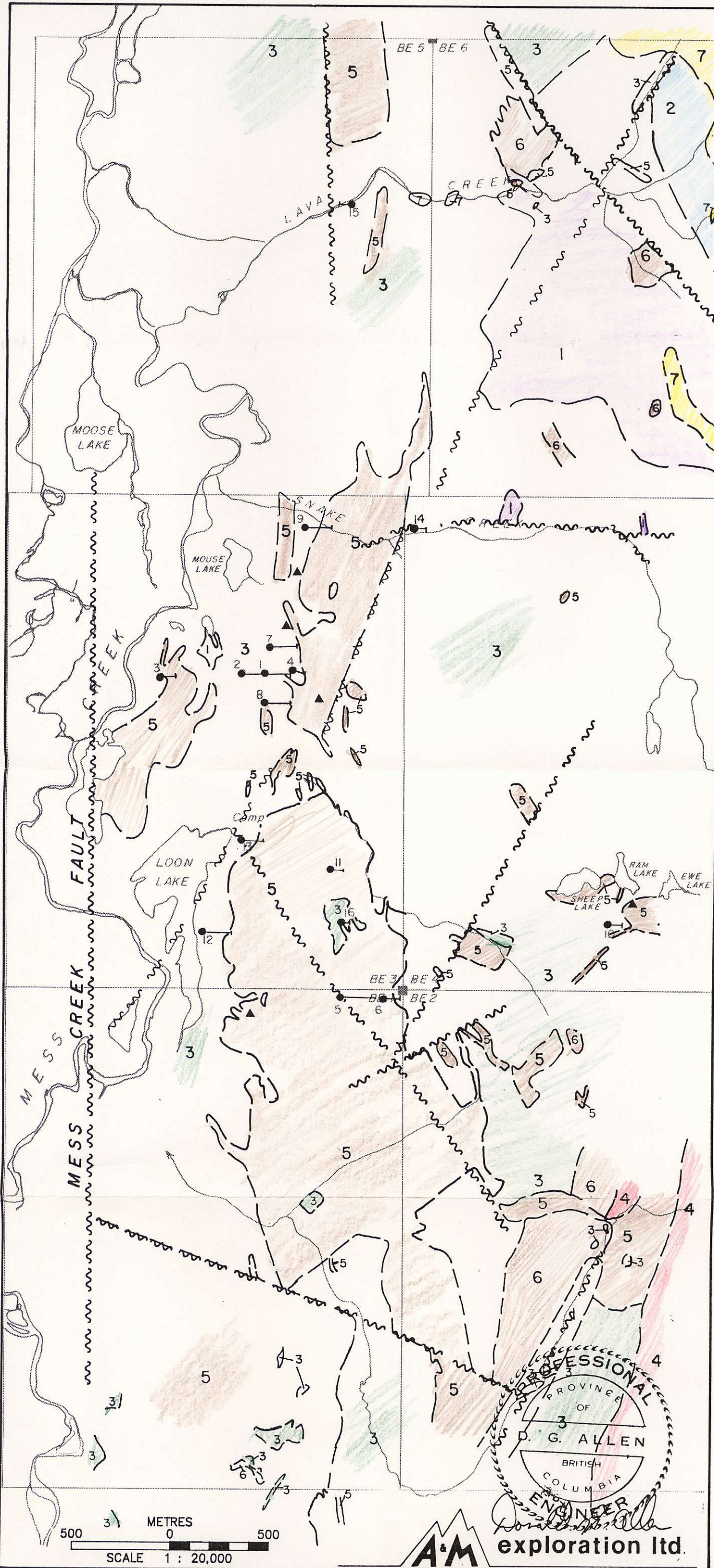
#### "Lithologic Descriptions

Mississippian: The oldest rock unit mapped on the May Group is a fault bounded slice of ferruginous crinoidal dolomite which produces a spectacular jarositic gossan in the canyon of Lava Creek. The limestone trends north 30° west and dips generally westerly from 25° to 45°. The fault bounded block is approximately 200 metres wide.

Upper Triassic: Most of the property excepting the eastern edge is underlain by a complex sequence of andesitic volcanic rocks and derived sediments. A wide range of textures were observed in this sequence however it was impossible to trace definable marker beds over any significant distance. This may be attributed to the following factors:

- 1) Incomplete exposure,
- 2) Lack of lateral continuity, which is often characteristic of units in a volcanic pile.
- 3) Disruption by very complex block faulting, which is characteristic of the property.
- 4) Disruption by widespread and geometrically complex monzonite and ultra-mafic intrusives.
- 5) Fairly intensive alteration of the volcanic units close to the monzonitic intrusives.





**LEGEND**

- 7 TERTIARY TO RECENT  
Rhyolite, basalt flows and pyroclastics
- 6 UPPER CRETACEOUS  
Sustut Group: conglomerate, arkose, siltstone, shale
- 5 LOWER JURASSIC  
Conglomerate, sandstone greywacke, siltstone
- 4 LOWER JURASSIC  
Monzonite porphyry
- 3 UPPER TRIASSIC  
Andesite
- 2 PERMIAN  
Limestone
- 1 PRE-LOWER JURASSIC  
Amphibolite, serpentinite
- ~ Fault
- ▲ Native gold occurrence
- └ Legal corner post, claim boundary
- Drill hole site

NORTHERN CROWN MINES LTD.  
BE PROPERTY  
GEOLOGICAL  
COMPILATION MAP

**AM exploration Ltd.**

Figure 6



The volcanic sequence appears to be mostly tuffs and coarser pyroclastics with textures ranging from very fine grained banded tuffs and dust tuffs to lappillis and very coarse grained pyroclastic breccias. Approximately 10% of the section is sedimentary in origin, with material derived from the volcanic pile itself. These rocks range in texture from fine siltstones to coarse grained volcanic sandstones. Unsorted wacke units have also been observed in several areas containing angular volcanic and sedimentary fragments. The distinction between fine banded tuffs and fine bedded siltstones is often very difficult to make from hand specimens but is probably not very important in an economic sense. Massive plagioclase and/or hornblende augite porphyritic andesites are common in the sequence, however flow textures are very rarely observed. These rocks could be flows or subvolcanic feeder dikes and sills. It is probable that both types exist but the proportion of each is difficult to ascertain. Strike and dip readings, where obtained, were quite variable, however, a northerly trend and westerly dip is indicated.

Lower Jurassic: On the eastern edge of the property the Triassic volcanics and intrusives are overlain unconformably by a thick sequence of conglomerates and sandstones. The bulk of the material in these sediments is andesitic in composition and is probably derived from the underlying Triassic volcanic sequence. Cobbles in the conglomerate are rounded to subrounded and the matrix is sandy. The unconformity surface is generally poorly exposed however it appears to be roughly horizontal but irregular.

Tertiary and Quaternary: These rocks are primarily basaltic-andesitic in composition and are very fresh with a definite glass component. A series of very recent basaltic flows have travelled down Lava Creek from an uneroded cone just off the northeastern edge of the property. Remnants and debris from these flows extend down to the base of Mess Creek Valley. Throughout the rest of the property occasional fresh andesite and basaltic dikes have been observed. These rocks are probably related to the Mt. Edziza terrestrial volcanic event which has been active from Upper Tertiary to recent times.

Fluvial-glacial material has filled in a broad area in Mess Creek Valley which underlies the western edge of the property. These 'thick' accumulations have been caused by repeated damming of Mess Creek by alluvial fans from tributaries like Lava Creek. The resulting area is a swampy plane with numerous meandering forks and channels which restrict ground access, obscure any geology and make evaluation very difficult.

#### Intrusive Rocks

Serpentinized Ultramafic Rocks: These rocks intrude the Upper Triassic volcanic sequence but appear to be intruded by the Late Upper Triassic to Lower Jurassic monzonites. This relationship with

the monzonite is difficult to definitely confirm because most contacts appear to be faults. Souther (GSC Paper 71-44) places the age of these rocks as probably pre-Lower Jurassic and related spacially to major faulting. The original composition of these rocks is problematic since they are now almost completely serpentized. Near some margins they have a significant chlorite component probably indicating contamination from the andesitic country rocks.

Monzonite Porphyry: These rocks intrude the upper Triassic Volcanic sequence and probably the ultramafic rocks. Four distinctly mappable phases have been observed.

1) Hornblende Feldspar Monzonite Porphyry

This rock is dark greenish pink in colour with a pink fine grained to aphanitic matrix. White plagioclase phenocrysts are euhedral to subhedral and vary in size from 2-4mm.

Lath-shaped phenocrysts of hornblende up to 3mm are generally partly chloritized and make up ten to fifteen percent of the rock. The matrix is a mixture of plagioclase and K-spar. This phase is quite magnetic with one to two percent disseminated magnetite. It is distinctly more mafic than the other phases possibly as a result of contamination from the andesitic country rocks. This phase is probably younger than the other three types but field relationships are confused. Distribution of the hornblende feldspar monzonite porphyry is restricted to two relatively small bodies at the far south end of the property.

Before describing specifically the coarse grained and fine grained monzonite porphyry and the xenolithic breccia it should be noted that the only differences among these types are textural and that these can be quite subtle. Alteration quite commonly further obscures the textures in these rocks and makes discrimination between the phases difficult or impossible. The fact that we were able to distinguish these phases in some areas and outline them as mappable units does not preclude the possibility that more phases exist or that textural variations within a given phase or subsequent alteration have made identification impossible.

2) Coarse Grained Monzonite Porphyry

Most cross-cutting relationships observed indicate that this phase is younger than the fine grained phase. It is a light pink porphyritic rock with less than 10% mafics. The mafics are generally chloritized and/or epidotized. Pseudomorphs suggest the original mafics were mostly hornblende although minor biotite has also been indicated. The rock is distinctly plagioclase porphyritic with euhedral to subhedral phenocrysts up to 6mm long. Though quite variable these plagioclase phenocrysts average 3-4mm and make up anywhere from 20 to 60% of the rock. They are generally white to pale pink in colour and are in a

fine grained darker pink matrix which is largely K-spar. The pinkish coloration of the plagioclase phenocrysts is thought to be due to the presence of minor amounts of hematite. Quartz is rarely observed in hand specimens but was identified in most thin sections in the matrix or as fine grained euhedral phenocrysts. It averages between 5 and 10% of the total rock.

3) Fine Grained Monzonite Porphyry

Compositionally this rock appears to be virtually identical to the coarse grained type. The main textural difference is the size and distinctiveness of the plagioclase phenocrysts. In this phase they seldom exceed 2mm. This group includes some rocks that are probably altered or chilled phases of the coarse grained type which could not be identified with sufficient confidence to place in that category.

4) Xenolithic Coarse Grained Monzonite Porphyry Breccia

This unit underlies large areas east and west of Loon Lake. Essentially the rock is composed of coarse and fine grained monzonite fragments in a coarse grained monzonite matrix. Hornfelsed volcanic fragments are common as xenoliths in this rock type but appear to be restricted to the intrusive-volcanic contacts.

The composition of the breccia grades inward from its borders, which is composed wholly of volcanic clasts, to the centre, which is almost wholly coarse grained and fine grained monzonite clasts. Drillholes have indicated the following sequence inward from the borders: a zone of mainly volcanic clasts, with minor intrusive clasts and a 10% coarse grained monzonite porphyry matrix; a zone of mainly intrusive clasts with minor volcanic clasts and about 40% coarse and fine grained monzonite porphyry matrix; finally a zone of wholly coarse and fine grained monzonite porphyry clasts with less than 5% matrix. Fragment size increases towards the centre. In all zones the fragments are rounded to subrounded indicating some milling rotation. ....

It is believed that the above descriptions and classification of the monzonite intrusives are in a simplified form and are probably more complicated than indicated.

Structural Geology

The strongest structural feature on the property is the Mess Creek Fault which is traceable for over 80 kilometres along the valley of Mess Creek. This fault does not outcrop on the property, nor has it been tested by drillholes, but its probable location is traced from lineament studies along the western edge of the map area trending approximately north-south. On the property the geology consists of a complex mosaic of block faults created by an intensive system of high angle splay and subsidiary faults related to the Mess Creek system.

There are five very prominent fault directions all of which are repeated and some show significant movement. They are as follows:

N30<sup>o</sup>E  
 N30<sup>o</sup> - 40<sup>o</sup>W  
 N40<sup>o</sup> - 45<sup>o</sup>E  
 N15<sup>o</sup> - 20<sup>o</sup>W  
 N80<sup>o</sup> - 85<sup>o</sup>W

Mapping and drilling has suggested that the emplacement of the serpentinite bodies is controlled by strong fault structures. Bedding, where observed in the Triassic Volcanics and sediments shows a general northerly trend and steep westerly dip, but in outcrop orientations are highly variable over very short distances. These have been attributed to rotation and tilting along the faults. Minor drag folding near faults and doming on several intrusive contacts was observed. Fracturing and faulting is more intense in the western portion of the property, probably due to its proximity to the Mess Creek fault system.

The north-south elongation of the monzonitic intrusives suggests that their emplacement was at least in part controlled by the Mess Creek Fault system. The intrusives have a steep westerly dip in most cases.

Evidence bearing on the origin of the breccia body includes:

- 1) Inward zoning of the body from andesite-rich breccia to coarse and fine grained monzonite-rich breccia.
- 2) Volcanic clasts in breccia similar to those of adjacent walls.
- 3) Mixing of clasts, with commonly a few volcanic in porphyry and vice versa.
- 4) Brecciated contacts of andesite and monzonite porphyry dykes in other areas on the property.
- 5) Internal zones of higher siliceous matrix around the clasts.
- 6) Sulphides are contained in micro-veinlets within the clasts and also in quartz stockwork around the clasts.

These facts are most compatible with an origin by explosion and not by collapse or faulting. Development most likely started with intrusion of a large porphyry body (dyke?), followed by crackle brecciation and emplacement of silica with minor sulphides, then several phases of explosion, accompanies with movement and silicification along planes of weakness. These major planes of weakness, which form the plumbing system, are along the contact margins of the intrusive and volcanics or major breaks within the intrusive.

Several phases of fluid movement passed along these systems, forming the quartz stockwork in the breccia and penetrating into the volcanic wallrock, greatly enriching these zones with sulphides.

#### Mineralization

Sulphide mineralization is clearly linked to the monzonitic intrusives and extends into the andesitic country rocks near the contacts. This relationship is quite clearly illustrated by comparing I.P. Frequency Effect maps and the geology Maps. Pyrite is by far the most common sulphide mineral. It is found locally within the intrusive and in the volcanics near contacts in concentrations up to 10%. Average pyrite content in the mineralized area is generally between one and two percent. Chalcopyrite, molybdenite and gold are the main minerals of economic interest on the May property and show a widespread, although usually weak distribution. Bornite is also present locally but is only a minor part of the copper mineralization.

Within the intrusive rocks, the chalcopyrite is generally coarse grained and occurs in veinlets, fractures and quartz veins. It is rarely observed as uniform disseminations and rarely exceeds 0.1 to 0.2% copper. The molybdenite is more directly associated with quartz veining although it also occurs on minor slips and faults. Magnetite and hematite are commonly strongest in zones of copper-molybdenum mineralization, and the hematite is secondary after magnetite.

Within the volcanic rocks near intrusive contacts the sulphide mineralization is quite different in character than it is within the monzonite. All mineralization is fracture controlled and to a great extent the concentrations are affected by the intensity of fracturing and/or brecciation. Chalcopyrite and molybdenite are found in dry fracture fillings, with quartz veins, and on minor slips. In most observed cases this mineralization does not extend more than 10-20 metres into the andesites contacts, except where brecciation is strong.

Traces of galena and sphalerite are associated with carbonate alteration. On the far eastern portion of the property a highly 'carbonate altered' intrusive contains minor tetrahedrite veining and sphalerite blebs in breccia.

The presence of gold has been detected on the property. The only visible gold found on the property is in two outcrops north of Loon Lake and southeast of Shrew Lake. This free gold is in a siliceous brecciated contact zone of the andesite and monzonite porphyry.

All other gold data detected has been from drillcore, rock chip sampling and soil geochemistry. The following is a compilation of all significant gold values obtained from drillcore:

<u>Drillhole No.</u>	<u>Interval (metres)</u>	<u>Au oz/ton</u>	<u>Geology</u>
RG-1	5.8 - 12	0.057,0.020	Contact zone of andesite and monzonite porphyry
BC-5	30 - 33	0.052	Within the breccia
BC-8	24 - 30	0.015	Within the monzonite
	123 - 129	0.012	Contact zone of andesite and monzonite porphyry
BC-9	90 - 93	0.031	Shear zone
BC-10	24 - 33	0.058,0.021	Contact zone of andesite and monzonite porphyry
	96 - 99	0.019	monzonite porphyry
		0.106	Contact zone of andesite and monzonite porphyry

Limited rock chip sampling in the area between 24N and 44N at about 10E yielded values up to 350 ppb (0.020 oz/ton). This is an area of andesite-monzonite porphyry contacts and Cu-Mo geochem anomalies. Sampling of rocks on the southern boundary of the claims resulted in below detection values.

Soil samples were selected over the whole property and analysed for Au by H.R. Muntanion in early 1982. The following data is a brief summary of his report, which is located in Appendix I. Most of the samples analysed are from the Cu-Mo anomaly zone, but other areas of interest were also tested:

- a) Cu-Mo zone: sizeable zones with contiguous results in excess of 100 ppb occur. Results indicate a good correlation between Au and Cu.
- b) Tetrahedrite-sphalerite showing: two very anomalous samples of 840 and 2000 ppb were recorded. These values are possibly associated with the carbonate vein hosted Cu-Ag mineralization.
- c) South extreme of property: values in the range of 280 to 100 ppb were obtained. This is a monzonite porphyry area.

Although the data base is very sparse and incomplete, a few statements can be drawn from the existing data:

- 1) There is a weak Au-Cu association.
- 2) The andesites, although not completely tested, appear to have very weak Au values (higher than background but probably not in economic quantities).
- 3) Au values tend to be higher in and around the contact zones of andesite and monzonite porphyry.

- 4) The soil sampling and drillcore assays from BC-10 have both indicated some Au potential for the tetrahedrite showing on the eastern side of the property.

It is believed that, like copper, gold values are dependent on proximity to the monzonite intrusives, pre-ore faults and the breccia body. Further rock chip sampling and soil geochemistry is recommended to better understand the relationship of gold on the May property.

#### Alteration

Alteration intensity does not form the traditional patterns but is more patchy on the May Group. Like the sulphides, it appears to be defined by proximity to the plutons, pre-ore faults, and breccia body. The alteration types on the May Group can be considered in two separate categories:

- 1) Alteration Within The Monzonitic Intrusives

Alteration in the monzonites is seldom pervasive and usually present only as veins and fracture fillings. Phyllic alteration consisting of quartz veining with sericite selvages and minor pervasive sericite is the strongest alteration facies observed in the monzonites. This type of alteration is present to some degree in most of the intrusive rocks north of the south end of Loon Lake and is strongest in two zones - east of Loon Lake and east of Mouse Lake. Within the intrusives, sulphide mineralization and secondary iron oxides (magnetite and hematite) are best developed where the phyllic alteration is strongest. In the zone east of Loon Lake where a strong quartz sericite breccia is developed pyrite averages 5-10% and molybdenum is present, however, copper minerals and magnetite and hematite are rare. This has been interpreted as a fault bounded barren or copper deficient core zone in a porphyry model. In the zone east of Mouse Lake the silica-sericite alteration is weaker but generally a similar mineral assemblage is present.

Peripheral to these strong phyllic zones is an irregular but extensive weaker phyllic zone in which overall sulphide content is lower but copper minerals (chalcopyrite mainly with minor bornite) and iron oxides (magnetite and hematite) are stronger. Superimposed on and peripheral to these phyllic zones is a propylitic zone which is characterized by chloritization of mafics, minor epidote, and clay alteration of the feldspars. Sulphide mineralization in the propylitic zone is weak and usually pyrite. Superimposed on all phases of alteration within the intrusives is a network of rusty weathering ferrodolomite veins which in areas of strong fracturing may form stockworks.



## 2) Alteration of the Andesitic Rocks Near Intrusive Contacts

Because of their original composition, the andesites exhibit a somewhat different alteration sequence than the intrusive rocks. The degree of alteration and its lateral extent from the contact depends to a large degree on the amount of structural preparation and the original textures of the country rocks. A potassic zone is developed close to the intrusive contacts in which minor monzonitic dikelets and quartz K-spar veinlets fill fractures and open spaces in the volcanics. Pervasive silicification and K-feldspathization is common in this zone, particularly near the contacts. Secondary biotite is common in this zone but is probably a result of thermal metamorphism of the original mafics by the heat generated from the intrusive. It is in effect not really an additive alteration product but rather a hornfelsing recrystallization product. Sulphide mineralization is usually strong in this zone and chalcopyrite is often more abundant than pyrite. The highest assays obtained in drilling to date have come from these potassic zones particularly where brecciation is strongest. Iron oxide contents as magnetite and specular hematite are also very high. The Potassic Alteration grades outward from the contacts to a poorly defined phyllic zone in which alteration is structurally controlled and consists of quartz veining, minor pervasive silica and minor sericite. Sulphides range from 1-5% and are almost exclusively pyrite. Iron oxide content is lower, seldom exceeding 2%. Between fractures the overall alteration is propylitic with moderate chlorite, epidote, clay and carbonate alteration. The phyllic alteration gives way with the absence of quartz veins to propylitic zone. In this zone mafics are chloritized, plagioclase is partly saussuritized, carbonate and clay alteration is weak but present, and sulphides and iron oxides are generally weaker. Where this type of alteration is weak it is virtually impossible to differentiate from regional lower greenschist metamorphism.

Superimposed on this overall alteration pattern are widespread, probably post mineral, ferrodolomite veinlets which in well fractured zones may form stockworks. With individual intrusive bodies each forming alteration centres the alteration patterns in the volcanics may overlap and become quite complex."

## GEOCHEMICAL SURVEYS

All of the BE property between Mess Creek and the eastern claim boundary has been covered by east-west survey lines spaced 120 to 200 metres apart (240 metres apart in the southern three quarters of the property). Soil samples were collected at 50 to 60 metre intervals along these lines at various times by several companies. While this sample

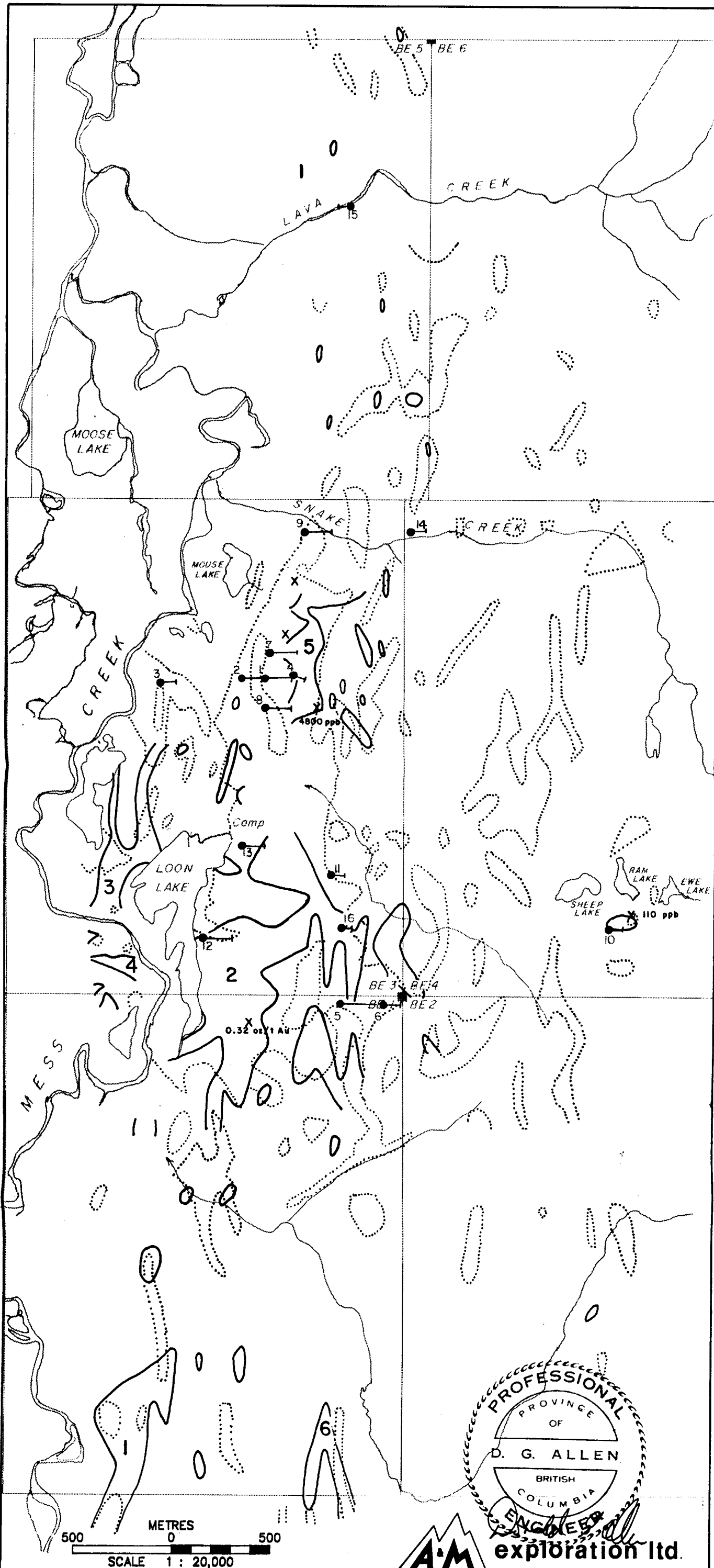
spacing is adequate for the search and delineation of a porphyry copper-molybdenum deposit, it is not considered adequate to locate vein type gold targets which might be associated with a porphyry system. In addition, not all samples were available for re-analyses for gold. Hence, many of the gold anomalies shown on Figure 7a are not fully outlined.

The copper and molybdenum geochemical data (Figures 7a and 7b) has outlined a large low grade porphyry system at least 3 kilometres and possibly up to 5 kilometres long by 0.4 to 1 kilometre wide with a number of scattered peripheral zones.

Deighton (1989) briefly described some of the important gold anomalies (Anomalies 1 to 6 on Figure 7a):

"Numerous samples are highly anomalous and six large gold soil anomalies and several smaller soil anomalies are found on the property. The values in the soil anomalies are greater than 50 ppb and reach 2100 ppb Au with numerous values in the hundreds and thousands of ppb. None of these anomalies have been thoroughly tested by drilling. The large anomalies are located in or close to intrusives and may or may not have associated copper anomalism. The largest anomalies are located as follows:

- 1) At the south end of the property east of Mess Creek.
- 2) East and southeast of Loon Lake. Associated anomalous copper anomaly with a reported native silver showing and contains rock geochemical assays to 2100 ppb Au. Chevron reports and assay of 0.316 oz/t Au from a grab sample in this anomaly.
- 3) West of Loon Lake and south of Mess Creek. High soil anomalies with spotty copper anomalies and a known gold occurrence.
- 4) West of Loon Lake and north of Mess Creek. High gold anomalies and spotty copper anomalies. This anomaly may be a continuation of the previous anomaly south of the creek.
- 5) East of Shrew Lake. Northerly trending gold anomaly with associated copper anomaly. Two known gold occurrences in the area, one occurrence in Snake Creek returned an assay of 0.10 oz/t Au, 0.60 oz/t Ag and 2.5% Cu. A rock geochemical assay of 400 ppb Au (Chevron) at the south end of the anomaly. South end of the area has reported drill intersection of 36m of 0.62% Cu and 0.068% Mo. Reported quartz-carbonate veining and shearing.
- 6) South end of the property east of the first anomaly. A poorly defined gold anomaly with an associated copper anomaly."



**LEGEND**

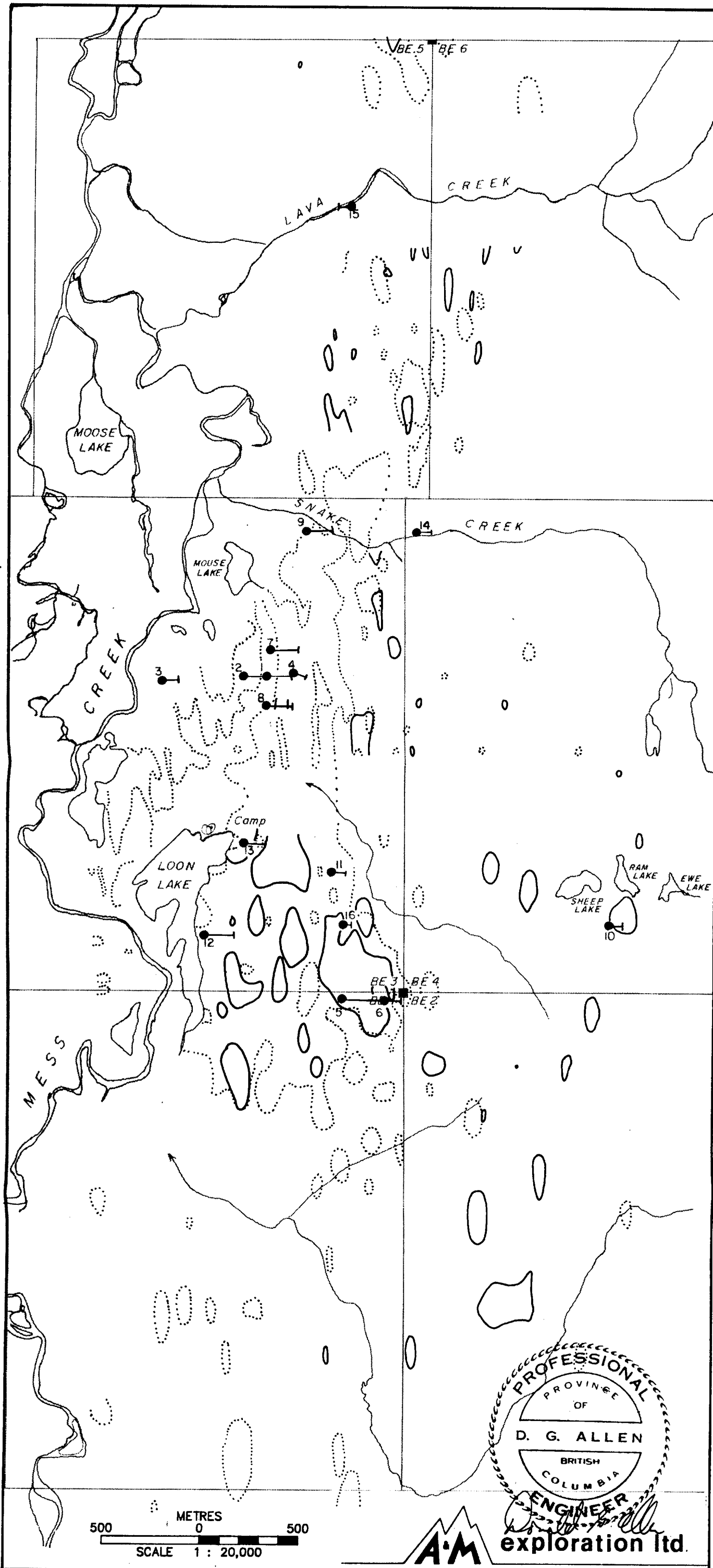
- Gold soil anomaly; Au greater than 50 ppb
- Copper soil anomaly; Cu greater than 160 ppm
- 2** Anomaly number
- x** Rock sample site; Au value in ppb or oz/ton
- Legal corner post, claim boundary
- Drill hole site

NORTHERN CROWN MINES LTD.  
 BE PROPERTY  
 GEOCHEMICAL  
 COMPILATION MAP  
 GOLD & COPPER







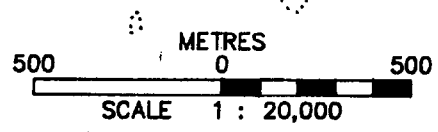
500 METRES 0 500  
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Figure 7a



**LEGEND**

-  Silver soil anomaly; Ag greater than 0.6 ppm
-  Molybdenum soil anomaly; Mo greater than 10 ppm
-  Legal corner post, claim boundary
-  Drill hole site



NORTHERN CROWN MINES LTD.  
 BE PROPERTY  
 GEOCHEMICAL  
 COMPILATION MAP  
 SILVER & MOLYBDENUM

Figure 7b

## GEOPHYSICAL SURVEYS

Magnetic and induced polarization surveys have been carried out in the property at various times.

Clouthier and Vyselaar (1979) obtained a series of north-south magnetic trends, and found that some contacts between andesites, monzonites and ultramafics were well defined. Ultramafic bodies showed very high magnetic values and steep gradients. According to Clouthier and Vyselarr, the monzonite and andesites generally showed the same level of magnetic values but the andesites are much more variable in character. A buried intrusion is interpreted to be the cause of a weak magnetic anomaly in the eastern part of the property (Figure 8).

Induced polarization surveys have covered the central two thirds of the BE property. The survey successfully outlined the extent of porphyry copper style mineralization. The broad anomaly shown on Figure 8 is the generalized boundary of weak to strong chargeability response.

## DRILLING

A total of 2156 metres of diamond drilling in 18 holes has been conducted on the BE property. This work was designed mainly to test the porphyry copper-molybdenum potential. BHP-Utah's drill hole summaries (Holland, 1982) and Chevron's summary logs (Hewgill and Walton, 1986) along with their core re-analyses are included in Appendix I and Appendix II respectively. Results of drilling have outlined a large low-grade porphyry system with copper values ranging between 0.1 and 0.2% and molybdenum values between 0.01 and 0.02%.

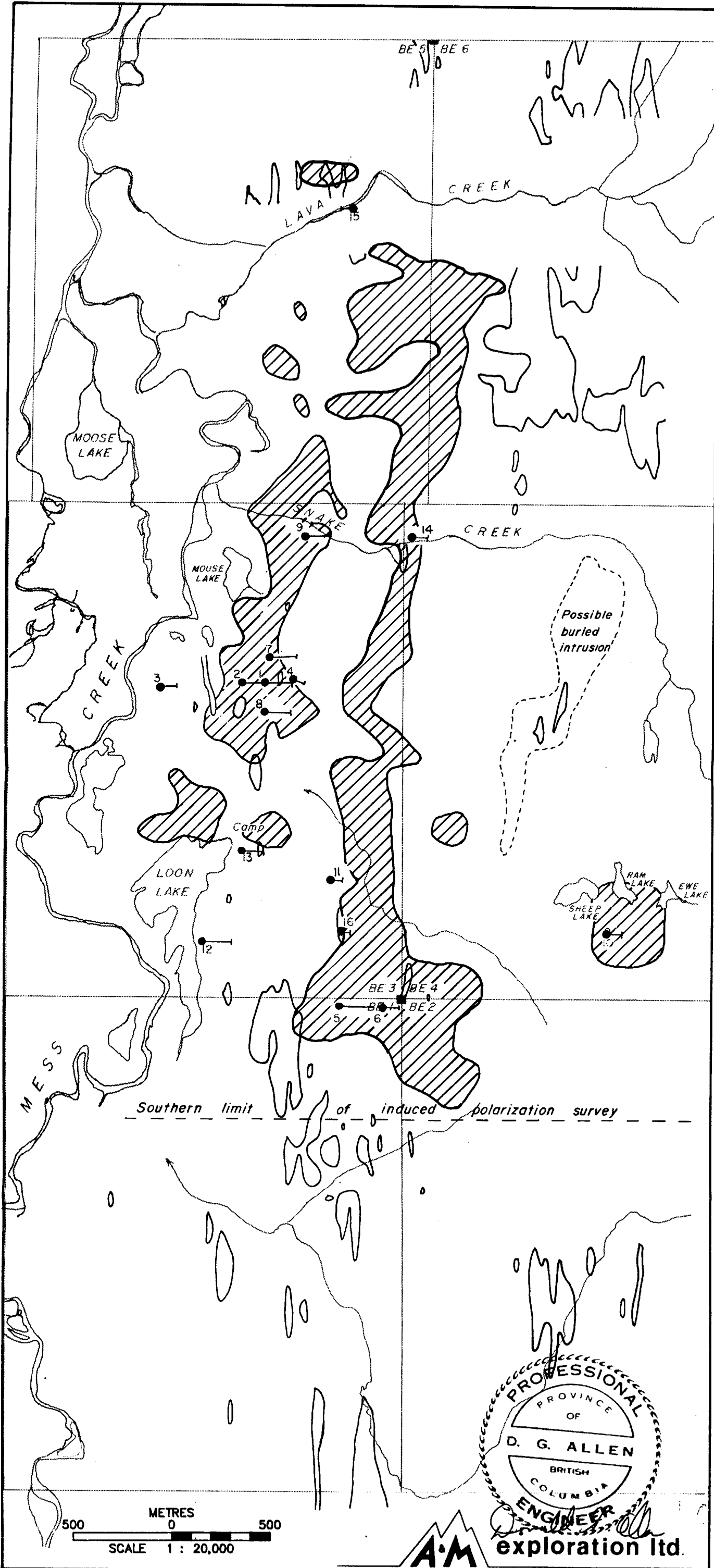
As summarized above a limited number of core re-analyses by BHP-Utah and Chevron revealed some significant gold values.

## EXPLORATION POTENTIAL





The BE property is considered to have good gold exploration potential for the following reasons:

- 1) As summarized by Deighton (1989), the property contains six large relatively untested gold soil anomalies and several smaller anomalies. Gold values in soil range from 50 to 2100 parts per billion with numerous values in the hundreds and thousands of parts per billion.
- 2) Mineralization is associated with alkalic intrusions, which along with a relatively high magnetite content and associated gold anomalies, indicates a comparison with a class of deposits known as porphyry copper-gold deposits of the alkalic suite. This suite is common in the Intermontane Belt of British Columbia and hosts a number of producers and potential producers including the Galore Creek deposits 35 kilometres to the southeast (137 million tons grading 1.067% copper 0.011 ounces per ton gold). The relatively high gold values in such deposits has been well documented in recent years (e.g. Mutschler et al, 1985; Sillitoe, 1979). Sillitoe (1979) noted the presences of abundant magnetite with some gold-rich porphyry copper deposits of alkaline affinity and suggested that drilling of such deposits should be directed towards parts possessing the highest magnetic response. It is interesting to note that the magnetic high, on the BE property, southeast of Loon Lake lies a short distance upslope from the main gold anomaly. Recent work by Mingold Resources Inc. at Galore Creek, a magnetite-rich alkaline porphyry deposit, has outlined significant gold-bearing sections in the Central Zone and peripheral deposits (E. Yarrow, personal communication).

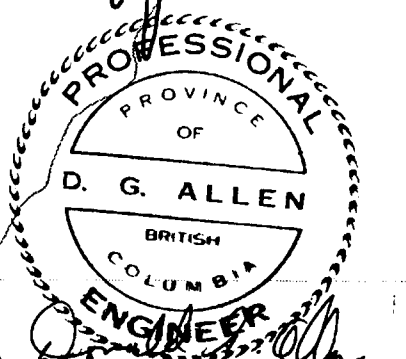
There is also evidence that the Mess Creek Fault and its offshoots have potential to host gold mineralization. Gold mineralization on both the BAM (Diner, 1987) and the BJ properties (Holbek, 1981, 1988), 7 to 15 kilometres to the south, appears to be associated with carbonate alteration and silicification related to this structure. Features in



**LEGEND**

-  Magnetic high: greater than 1500 gammas
-  Induced polarization anomaly
-  Legal corner post, claim boundary
-  Drill hole site

NORTHERN CROWN MINES LTD.  
 BE PROPERTY  
 GEOPHYSICAL  
 COMPILATION MAP



**A.M.** exploration ltd.

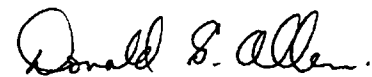
Figure 8

common with all three prospects are the presence of serpentinite, which presumably are fault slices lying along offshoot fault zones, and the presence of widespread carbonate veining. Future work therefore should be directed not only to looking for porphyry style gold mineralization, but also for veins associated with carbonate alteration and veining (listwanite gold targets).

Not to be ignored, considering the strength of copper prices in the last two years, is the possible presence of potentially economic copper grades. Drilling to date has totalled only 17 holes. The presence of good copper grades in drill hole 1 indicates some such potential. Sillitoe (1979) also suggests that there is no reason why copper-poor alkaline porphyry gold deposits should not exist. In fact, Lawrence (1978) has described such an occurrence in Fiji.

In view of the known geology and mineralization, and magnitude and extent of the gold geochemical anomalies, and follow-up exploration program is definitely warranted to fully assess the gold potential of the property.

Respectfully submitted,



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





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CERTIFICATE

I, Donald G. Allen, certify that:

1. I am a Consulting Geological Engineer, at A & M Exploration Ltd., with offices at Suite 704, 850 West Hastings Street, Vancouver, British Columbia, V6C 1E1.
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 in British Columbia, the Yukon, various parts of the western United States, and Africa.
4. I am a member in good standing of the Association of Professional Engineers of British Columbia.
5. This report is based on fieldwork carried out by personnel of BHP-Utah Mines Ltd. and Chevron Canada Resources Ltd. and on reports by and conversations with such personnel. I have not visited the BE Property, because it is not possible to do so at this time of year. However, I have personally worked on or have visited a number of prospects in the Stikine-Iskut area including the Galore Creek and Schaft Creek deposits, and therefore have a good working knowledge of the area.
6. I have no interest, nor do I expect to receive any, in the BE property or in Northern Crown Mines Ltd.
7. I consent to the use of my name and this report in a Prospectus or Statement of Material Facts in connection with the raising of funds for the project covered by this report.

May 8, 1990  
Vancouver, B.C.



*Donald G. Allen*

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

**APPENDIX I**

**Drill Hole Summaries**

(After Holland, 1982)

## DRILLHOLE SUMMARY

The first four drillholes (RG-1 thru 4) were drilled in 1974 by Phelps Dodge. All four holes are situated in a small area, between Rat and Mouse Lakes, that features coincidental soil geochemistry and induced Polarization anomalies. The geology is very complex and features numerous monzonite porphyry intrusives in the volcanics.

RG-1: This hole intersected a monzonite porphyry and fragmental andesite breccia contact zone. Sulphide content ranged 1 - 5% with averages of 1 - 2% in the monzonite and 3 - 5% in the andesites. Grades obtained are as follows:

Cu - 9 - 21m - 0.22%
42 - 48m - 0.16%
48 - 81m - 0.73%
87 - 99m - 0.13%
Mo - 48 - 81m - 0.080%
Au - 5.8 - 12m - 0.035 oz/ton
63 - 72m - 0.014 oz/ton

RG-2: This hole was drilled in mainly andesite tuff with minor monzonite dykes intruding. Sulphide content was constant throughout, ranging 1 - 2%. All copper estimates were below 0.10%.

RG-3: The top portion (75 metres) of this hole was mainly an andesite porphyry with minor monzonite dykes. Below 75 metres, to the end of the hole, monzonite porphyry was intersected. Sulphide content ranged 2 - 5% and all copper estimates were less than 0.10%.

RG-4: This hole was drilled in a contact zone of andesite porphyry and monzonite porphyry throughout. Sulphide content ranged 1 - 2% and all copper estimates were below 0.10%.

Drillholes BC-5 thru BC-9 were drilled in 1977 by Utah Mines and are described below:

BC-5: This hole was drilled to test zone 'a' which is characterized by:

- 1.) Moderate phyllic alteration with intense local quartz veining.
- 2.) Strong fracturing and pyrite mineralization.
- 3.) Strong P.F.E. anomaly and copper molybdenum geochemistry.

The hole was drilled entirely in monzonite porphyry with only minor inliers of highly altered volcanic rocks. Unweighted assay averages are as follows:

2.4m - 222.5m	0.08% Cu	0.013% Mo
75m - 105 m	0.25% Cu	0.032% Mo
125m - 144 m	0.13% Cu	0.034% Mo

The zones of best mineralization are characterized by the strongest quartz-sericite alteration and strong fracturing. Sulphide content in the hole averages approximately 2% and seldom exceeds 5%. It is not noticeably higher where copper mineralization is better. From 150 metres to the bottom of the hole alteration is weaker with talc, chlorite, and clay more common on fractures and quartz-sericite alteration weaker. Copper molybdenum values are also low.

BC-6: This hole was collared in what was thought to be a phyllic altered monzonite porphyry. Surface outcrops at the drill site were intensely weathered and bleached as a result of oxidation of strong pyrite mineralization and fracturing. In core the top 50 metres of the hole cut a strongly pyritized cataclastic volcanic breccia. The target in this instance was:

- 1.) Strong anomalies in copper and molybdenum geochemistry and a very strong P.F.E. induced polarization anomaly.
- 2.) Strong fracturing, quartz veining, and pyrite in outcrop with minor molybdenite and chalcopyrite.
- 3.) The intense oxidation at surface and the geochemistry suggested possible surface leaching.

Pyrite in the altered Volcanic Breccia at the top of the hole averaged approximately 6%. From 50 metres to the bottom of the bottom of the hole - monzonite porphyry was encountered. Pervasive alteration in this rock is propylitic although quartz veining and minor sericite is moderate to strong. Only very minor copper, and molybdenum mineralization was observed near or in quartz veins. Pyrite content for this part of the hole averages 3 1/2% as coarse fracture fillings and disseminations. The unweighted assay average for this hole was:

4.6m - 153.9m	0.03% Cu	0.005% Mo
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BC-7: This hole was drilled 122m north of RG #1 parallel to the andesite monzonite contact to test for possible extensions of the mineralized brecciated contact zone encountered in that hole. From 6m to 144m predominantly volcanics were encountered

with a series of minor steeply dipping monzonite porphyry dikes. From 144m to the bottom of the hole at 190.5m the drilling cut monzonite porphyries. Fine disseminated and fracture filling chalcopyrite and molybdenite mineralization is associated with quartz K-spar alteration which is strongest near monzonite contacts in the volcanics. Within the monzonite the mineralization occurs as coarser disseminations and as veins, but is generally weak. The mineralization in the volcanics is similar to that found in RG #1 but much lower grade. Unweighted assay averages are as follows:

6.1m - 190.5m	0.14% Cu	0.013% Mo
6.1m - 39.0m	0.16% Cu	0.017% Mo
63 m - 75 m	0.18% Cu	0.012% Mo
84 m - 114 m	0.18% Cu	0.008% Mo

Total sulphides average approximately 3% in the hole.

BC-8: This hole was drilled 122m south of RG #1 parallel to the monzonite-andesite contacts to test for possible extensions of the mineralized brecciated contact zone in that hole. The geology encountered is very similar to that described in BC-7. It is noteworthy that this hole encounters eight different monzonite dikes rather than the single more massive intrusive body that surface mapping would indicate. This is due to the fact that the intrusives weather positively and form most of the surface outcrops whereas the andesites are softer and often do not form outcrops. In the opinion of the writer this selective weathering process has led to a general enlargement of the areal extent of intrusive rocks as interpreted from surface geology particularly in the area north of Loon Lake. Thus far this opinion has been supported in all seven drill holes in this area. The unweighted assay average for BC-8 is as follows:

9m to 184.4m	0.12% Cu	0.008% Mo
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BC-9: This hole was drilled to test the western flank of zone 'b', an area of strong quartz veining and moderate copper molybdenum mineralization. From 17m to 47m the hole cut a coarse grained monzonite porphyry with pervasive propylitic alteration a patchy structurally controlled phyllic alteration. Copper molybdenum mineralization is strongest where phyllic alteration is strongest. From 47m to 137.5m, the hole cuts a series of monzonite porphyry dikes which intrude brecciated to strongly fractured andesitic rocks. From 137.5 to the bottom of the hole at 181.4m it intersected a silicified coarse grained monzonite porphyry. Unweighted average assays for this hole are as follows:

17m - 132 m	0.12% Cu	0.012% Mo
17m - 181.4m	0.08% Cu	0.009% Mo

Drillholes BC-10 thru BC-17 were drilled in 1982 by Utah Mines and are described below:

BC-10: This hole was drilled to test a tetrahedrite showing on the eastern portion of the property. It is characterized by:

- 1.) Strong P.F.E. anomaly
- 2.) Anomalous gold soil geochemistry and rock assays
- 3.) Outcrop exposure of minor tetrahedrite veining in a breccia zone

The hole intersected a contact zone of andesite porphyry and medium grained monzonite porphyry to a depth of 68 metres, at which point a lapilli to dust tuff and the andesite porphyry were the prominent rock type to the end of the hole. Sulphide content averaged 2 - 4% with minor zones of up to 10%. Copper and molybdenum grades were all below 0.10% and 0.004% respectively. Gold assays are as follows:

24 - 33	-	0.033 oz/ton average
96 - 99	-	0.106 oz/ton

BC-11: This hole was drilled to test zone 'a' which is characterized by:

- 1.) Moderate phyllic alteration
- 2.) Strong fracturing and pyrite-magnetite mineralization
- 3.) Strong P.F.E. anomaly and copper-molybdenum soil geochemistry

The hole was collared in a silicified andesite-monzonite porphyry contact zone and intersected the medium grained monzonite porphyry throughout most of the hole. It bottomed in an andesite porphyry. Sulphide content was 1 - 2% throughout and copper-molybdenum grades were below 0.10% and 0.009% respectively.

BC-12: This hole was drilled to test the following:

- 1.) Magnetic anomaly
- 2.) Copper molybdenum soil geochemistry anomaly
- 3.) Contact of monzonite and intrusive

The hole drilled through andesite porphyry and banded tuffs to a depth of 181 metres at which point a major fault filled with



serpentinite was intersected. The hole was lost due to squeezing on the rods and the monzonite-andesite contact was never reached. Sulphides averaged 1 - 2% and no copper-molybdenum-gold values above 0.10%, 0.005% and 0.003 oz/ton respectively were obtained.

BC-13: This hole was drilled to test the following:

- 1.) Strong copper-molybdenum soil anomaly
- 2.) Magnetic anomaly
- 3.) Test west intrusive contact

The hole was drilled entirely within the xenolithic monzonite porphyry. Sulphide content was 1 - 2% and no anomalous values in copper, molybdenum and gold were obtained.

BC-14: This hole was drilled to test the following:

- 1.) Strong phyllic alteration zone
- 2.) Magnetic high
- 3.) Eastern edge of copper-molybdenum soil anomaly

The hole collared in the Xenolithic monzonite breccia and drilled this unit to a depth of 49.0 metres. Then a fine grained monzonite porphyry was intersected to a depth of 74.0 metres, with a 10 metre contact zone with the andesites. Andesite porphyry and pyroclastics were drilled for the rest of the hole. Sulphide content was 1 - 2% through most of the hole with minor sections of 4 - 6%. Copper grades were generally less than 0.10% with minor isolated values in the range of 0.15%. Gold values were all below 0.008 oz/ton and molybdenum was low with minor sections of 0.015%.

BC-15: The hole was drilled to test the following:

- 1.) Small zone of massive pyrite mineralization
- 2.) Strong phyllic alteration
- 3.) Moderate P.F.E. anomaly

The hole was drilled in the andesite porphyry throughout most of the hole. A large fault zone was intersected at the collar with small sections of coarse grained monzonite porphyry within it. Sulphide content was 1% and all copper-molybdenum-gold assays were below 0.10% - 0.010% - 0.003 oz/ton respectively.

BC-16 & 17: These holes were drilled to test the following:

- 1.) Moderate phyllic alteration
- 2.) Minor chalcopyrite mineralization in outcrop

- 3.) Strong P.F.E. anomaly
- 4.) Copper-molybdenum soil anomaly

BC-16 was drilled at 090°/-70° and was lost due to caving in a fault zone at 117.6 metres. BC-17 was drilled at 090°/-50° from the same set-up. Both holes drilled remained in the monzonite breccia unit throughout. Sulphide content was in the range of 3 - 4%. Minor copper values of 0.20% were obtained in the middle of both holes, but were very sporadic. Molybdenum values above 0.010% are as follows:

BC-16	-	27 - 60m	-	0.033% average
BC-17	-	27 - 45m	-	0.028% average
		66 - 75m	-	0.066% average

All gold values were below 0.005 oz/ton.

APPENDIX II

Summary of Relogging and Resampling

(Hewgill and Walton, 1986)

# DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... RG-1 .....

DIP TEST		
	Angle	
Footage	Reading	Corrected
0	-45°	

Hole No. .... RG-1 Sheet No. .... 1 ..... Lat. ....  
 Section ..... Dep. ....  
 Date Begun .... July 9, 1986 ..... Bearing .....  
 Date Finished .... July 9, 1986 ..... Elev. Collar .... 2590' .....

Total Depth .... 188.1 .....  
 Logged By .... E.D. Titley .....  
 Claim .... BE-3 .....  
 Core Size .... NQ 1/2 & 1/2 .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE		
0 - 5.3	OVERBURDEN	No Samples			
5.8 - 33.7	TUFF (ANDESITIC?)				
	- fine grained, medium green, locally bleached, brecciated and altered. Occasional banding, some pyroclastics. A few monzonite stringers.				
	- 1% ankerite veining, 0.3% calcite veinlets.				
	- 5% chlorite, blebs and hairline fractures 0.01% qtz. veins.				
	- 1% f. gr. subhedral pyrite, disseminated and in veinlets.				
	0.1% disseminated chalcopryrite.				
	- 0.1% limonitic fractures. 0.3% hematite veinlets.				
	- 0.3-1% magnetite in local concentrations.				
33.7 - 39.9	MONZONITE				
	- medium to coarse grained, porphyritic, orange-pink. Phenocrysts are pale pink to white feldspar in a darker orange pink, fine grained matrix of alkali feldspar. Some phenocrysts are sub-angular in appearance. Quartz is minor up to 5% dark green chlorite in veinlets and replacing some minerals.				
	- 1% white to rusty ankerite veinlets.				
	- occasional tuff xenoliths. 0.03% qtz. veins.				
	- 0.3% f.gr. pyrite in veinlets.				

PROPERTY ..... BE

HOLE No. .... RG-1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. RG-1 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
33.7-39.9 (cont'd)	- 0.1% chalcopryite in local concentrations.						
39.9-100.4	TUFF						
	- similar to 5.8-33.7 m.						
	84-86.5 m f.gr. dark green, massive, possibly an intrusive.						
	98.5-99.7 m monzonite stringer.						
100.4-106.5	MONZONITE						
	- similar to 33.7-39.9 m. fine to m.gr. non-porphyrific.						
106.5-109.8	TUFF						
	- similar to 5.8-33.7 m.						
	- 2.5% qtz veins. Local concentrations up to 2.5% pyrite.						
109.8-118.8	MONZONITE						
	- similar to 33.7-39.9 m. mostly m.gr.						
118.8-145.4	TUFF						
	- similar to 5.8-33.7 m.						
	123 m: Monzonite stringer 0.7 m wide.						
	142 m: Monzonite stringer 1.0 m wide, c.gr. porph.						
	144.5 m: Monzonite stringer 0.4 m wide, m.gr.						
145.4-156.3	MONZONITE						
	- similar to 33.7-39.9 mostly m.gr., tuff xenoliths fairly abundant.						
	- strongly sheared from 153-156.3 m.						

# DIAMOND DRILL RECORD

PROPERTY BE .....

HOLE No. RG-1 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. RG-1 Sheet No. 3 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
156.3-161.7	TUFF						
	- similar to 5.8-33.7 m.						
	158.2 m: Monzonite stringer, 0.3 m wide, m.gr.						
161.7-188.1	MONZONITE						
	- similar to 33.7-39.9 m, m.gr., abundant tuff xenoliths. Some grey c.gr. porphyry.						
161.7-188.1	- 0.3% cpy. 0.03% MoS <sub>2</sub> .						
188.1	END OF HOLE						

## DIAMOND DRILL RECORD

PROPERTY BEHOLE No. RG-2

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	47°	

Hole No. RG-2 Sheet No. 1 Lot.....  
 Section..... Dep.....  
 Date Begun July 9, 1986 Bearing 090°  
 Date Finished July 9, 1986 Elev. Collar 2420'

Total Depth 149.7 m  
 Logged By E.D. Titley  
 Claim BE-3  
 Core Size NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-16.5	OVERBURDEN						
16.5-82.4	TUFF						
	- f.gr., dark green, locally bleached, bx'd and alt'd.						
	Occasional pyroclastics.						
	- 2.5% white to rusty ank. veins.						
	- 1% f.gr. py. dissem. and in veinlets. Tr. cpy.						
	- 5% chlorite, 1% hem., 1% lim.						
	0.3-1% magnetite.						
	- rock is moderately sheared and fractured.						
	73.3-73.7, 74.3-74.6 m: Monzonite stringers, m.gr., orange pink.						
82.4-86.9	MONZONITE						
	- m.gr. to c.gr., orange pink, locally porphyritic.						
	- 5% chlorite blebs and veinlets, occasional tuff xenoliths.						
	- 1% ank. veins.						
	- 0.3-1% f.gr. py. dissem. or veinlets.						
86.9-88.9	TUFF						
	- similar to 16.5-82.4 m. lower contact between boxes, footage blocks unreadable, something missing?						

# DIAMOND DRILL RECORD

PROPERTY BE .....

HOLE No. RG-2 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. RG-2 Sheet No. 2 Lat. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
88.9-94.5	MONZONITE - similar to 82.4-86.9 m, some rubbly core - contact also at box end!  Box 14, 15 & 16 may have been mislabelled and blocked?					
94.5-99.2	TUFF - similar to 16.5-82.4 m.					
99.2-100.3	MONZONITE - similar to 82.4-86.9 m.					
100.3-102.6	TUFF - similar to 16.5-82.4 m, several monzonite stringers.					
102.6-103.4	MONZONITE - similar to 82.4-86.9 m.					
103.4-124.1	TUFF - similar to 16.5-82.4 m. 117-122 m: strongly bleached and bx'd with 5% ank. stockwork.					
124-129.1	MONZONITE - Similar to 82.4-86.9 m, mostly m.gr., several tuff xenoliths.					
129.1-149.7	TUFF - similar to 16.5-82.4 m, some f.gr. massive sections.					
149.7	END OF HOLE					



# DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... RG-3 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-45°	

Hole No. .... <u>RG-3</u> .....	Sheet No. .... <u>1</u> .....	Lot.....	Total Depth..... <u>108.2 m</u> .....
Section.....	Dep.....	Logged By..... <u>E.D. Titley</u> .....	Claim ..... <u>BE-3</u> .....
Date Begun..... <u>July 9, 1986</u> .....	Bearing ..... <u>090°</u> .....	Core Size ..... <u>NQ½</u> .....	
Date Finished..... <u>July 9, 1986</u> .....	Elev. Collar..... ?.....		

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0-15.5	OVERBURDEN					
15.5-22.2	MONZONITE with TUFF XENOLITHS.					
	- pale grey to pale orange pink, m.gr. monz. w/grey green, bleached, bx'd and altered tuff xenoliths.					
	- 2.5% ank. veinlets.					
	- 1% py. f.gr. dissem. and in veinlets					
	- 5% chlorite blebs. Rock is moderately sheared.					
	- from 27-32.2 m: Monzonite is more typically orange pink, m.gr. to f.gr. porphyritic variety with fewer tuff xenoliths.					
32.2-33.3	MONZONITE(?)					
	- pale grey, c.gr., porphyritic (looks similar to syenodiorite in BC-10) possibly bleached monzonite.					
	- 1% f.gr. py. dissem and in veinlets. 1% ank. veinlets.					
	- 5% chloritic blebs, 0.1% cpy, tr. MoS <sub>2</sub> .					
	- 2.5% ank. veins.					
	- did not succeed in staining this rock with sodium cobaltinitrate (HF etch), K-spar??					
39.3-47.6	TUFF					
	- f.gr., dk. green, locally bleached, bx'd and altered.					
	- 5% chlorite blebs and veinlets					
	- 5% ank. veinlets, 0.3% quartz veins locally form stockwork.					



# DIAMOND DRILL RECORD

BE

PROPERTY .....

RG-4

HOLE No. ....

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-46°	

Hole No. RG-4 Sheet No. 1 Lat. .... Total Depth 117.3  
 Section. .... Logged By E. D. Titley  
 Date Begun. .... Bearing 123° Claim BE  
 Date Finished. .... Elev. Collar 2720' Core Size NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0-7	OVERBURDEN					
7-31.0	MONZONITE					
	- orange-pink, m.gr. to c.gr. porphyritic with occasional tuff xenoliths.					
	- 0.3% f.gr. py. dissem and in veinlets.					
	- 1% ank. veins, 0.1% qtz veins.					
31.0-33.5	TUFF					
	- f.gr. dk. green, probably a xenolith.					
	- somewhat bleached and bx'd.					
	- 5% chlorite, 2.5% ank. veins, 0.3% py.					
33.5-37.6	MONZONITE					
	- similar to 7-31.0, c.gr. porphyritic					
	- some sheared and rubbly zones.					
	- 2.5-5% chlorite.					
37.6-44.7	ALTERED TUFF with MONZONITE STRINGERS					
	- medium green, with brown-pink shades.					
	- f.gr. tuff is strongly bx'd, bleached and feldspathized and cut by irregular monzonite strings. 1% ank. veins.					
	- 5-10% chlorite.					
44.7-53.2	MONZONITE with TUFF XENOLITHS					
	- similar to 7-31.0 m, mostly m.gr. non-porphy.					
	- tuff xenoliths common.					



**DIAMOND DRILL RECORD**

PROPERTY BE .....

HOLE No. BC-5 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-5 Sheet No. 1 Lat. 13234 N Total Depth 222.5 m  
 Section..... Dep. 13250 E Logged By. E.D. Titley  
 Date Begun July 8, 1986 Bearing 090° Claim BE-3?  
 Date Finished July 8, 1986 Elev. Collar 1170 m Core Size NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-2.4	OVERBURDEN						
2.4-140.3	MONZONITE						
	- m. gr., orange-pink, locally c. gr., occasional tuff xeno.						
	- 1% ank. veins 0.1% calc. veins. Tr. qtz veins. 1% chlor.						
	- 1% f. gr. py. disseminated and veinlets. 0.1% cpy.						
	- 0.3% hem. veinlets. 0.03% MoS <sub>2</sub> on fractures.						
	30-33 m: typical looking monzonite.						
	46-48 m: c. gr. pale pink to white monzonite.						
	68.5 m: strongly sheared.						
	70-72 m: 5% ank. stockwork.						
	75-80 m: dark fine grained sulphides on fractures at 5-10°.						
	105 m: strongly sheared.						
	123.4 m: tan pink, bleached? (or xenoliths).						
	126.0-127 m: 2.5% cpy, 5% py, 0.3% MoS <sub>2</sub> in veinlets.						
140.3-140.8	ALTERED TUFF						
	- m. gr., f. gr., strongly altered probably a xenolith.						
	- 5-10% chlorite.						
140.8-222.5	MONZONITE						
	- similar to 2.4-140.3 m. c.gr.						
	146-175 grey brown monzonite, m. gr. 0.3% cpy.						
	175-222.5 m: m. gr. monzonite, some grey brown sections.						
	211.5 m: sheared						
222.5 m	END OF HOLE						

PROPERTY BE

HOLE No. BC-6

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-45°	

Hole No. BC-6 Sheet No. 1 Lat. 13234 N Total Depth 153.9  
 Section 13462 E Logged By E.D. Titley  
 Date Begun July 8, 1986 Bearing 090° Claim BE-3?  
 Date Finished July 8, 1986 Elev. Collar 1290 m Core Size NQ $\frac{1}{2}$

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au(ppb)	Ag(ppm)	Cu(ppm)	Mo(ppm)
0-2.2	OVERBURDEN						
2.2-4.6	NOT RECOVERED Shattered bedrock						
4.6-41.0	ALTERED TUFF	ET6M1-175	4.6-7.1	475	4.3	930	220
	- pale tan green, to brown green, f. gr., strongly bleached, brecciated, 2.5-10% limonitic tuff. 5-10% py., 5% hem. veinlets, 0.1% jarosite, 2.5-5% ank. veins.	ET6M1-176	7.1-7.7	210	5.0	720	570
	7.1-7.7 m: 10% m.gr. eubedral py., 5-10% ank. uns. also: 15.7-16.2 m, 17.9-18.2.						
	- gradual decrease in alteration to 41.0						
41.0-52.3	TUFF						
	- dk. gr., f. gr. locally bx'd, bleached and altered.						
	- 1% ank. veins, 0.3% calc. veins. Tr. qtz. veins.						
	- 5% chlorite. 0.3-1% py. disseminated and in veinlets.						
	- occasional pyroclastics and banding.						
52.3-153.9	MONZONITE						
	- m. gr., orange-pink monzonite, locally c.gr.						
	- 1-2.5% f.gr. py. dissem. and in veinlets. Tr. cpy.						
	- 1% ank. veins, 1% chlorite.						
	- occasional tuff xenoliths.						
	132.5-136.4 m: moderately sheared and bx'd with f. gr. sulphides, fault zone? some tuff xenoliths.						



PROPERTY BE

HOLE No. BC-7

DIP TEST		
Footage	Angle	
	Reading	Corrected
Ø	-45°	

Hole No. BC-7 Sheet No. 1 Lat. 14980. N Total Depth 190.5  
 Section Dep. 12886. E Logged By E.D. Titley  
 Date Begun July 8, 1986 Bearing 090° Claim BE-3  
 Date Finished July 8, 1986 Elev. Collar 775 m Core Size NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au(ppb)	Ag(ppm)	Cu(ppm)	Mo(ppm)
0-6.1	OVERBURDEN						
6.1-16.4	TUFF with LOCAL ALTERATION - tan green to dark green, locally strongly bleached and bx'd. - 2.5-5% ank. veins, 0.3-1% calc. veins. - 2.5-5% chlor. veinlets and stringers. - 0.3-1% f. gr. py., disseminated and in veinlets, 0.01% cpy. - occasional monzonite stringers.						
16.4-18.0	MONZONITE - mostly m.gr., orange pink monzonite. - 2.5% chlor. veinlets, 1% ank. veins, 0.3% calc. veins. - 1% f. gr. py. disseminated and in veinlets. - tr. qtz. veins, 0.3% cpy. - occasional tuff xenoliths.						
18.0-22.7	TUFF - similar to 6.1-16.4 m.						
22.7-25.5	FAULT ZONE - strongly sheared tuff and monzonite with 20% gouge, 2.5-10% fine dark sulphides.	ET6M1-174	22.7-25.5	345	2.7	1850	220
25.5-26.2	MONZONITE - similar to 16.4-18.0 m.						

all/16/4



# DIAMOND DRILL RECORD

PROPERTY BE .....

HOLE No. BC-7 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-7 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
26.2-123.7	TUFF - similar to 6.1-16.4 m. - strongly sheared from 33 to 35 m with 20% gouge, 57, 59 m monzonite stringers 0.5 m wide. - 117, 119 m monzonite stringers 0.5 m wide.						
123.7-125.5	MONZONITE - similar to 16.4-18.0 m, mostly c.ar.						
125.5-126.6	TUFF - similar to 6.1-16.4 m.						
126.6-128.1	MONZONITE - similar to 16.4-18.0 m.						
128.1-147.3	TUFF - similar to 6.1-16.4 m. 141.5 m: monzonite stringer 0.5 m wide.						
147.3-152.2	MONZONITE - similar to 16.4-18.0 m.						
152.2-156.4	TUFF - similar to 6.1-16.4 m.						
156.4-161.3	MONZONITE - similar to 16.4-18.0 m.						



BE

## DIAMOND HILL RECORD

BC-8

PROPERTY .....

HOLE No. ....

DIP TEST		
Angle		
Footage	Reading	Corrected
0	-45°	

Hole No. BC-8 Sheet No. 1 Lat. 14696.N Total Depth. 184.4 m  
 Section. Dep. 12866.E Logged By. E.D. Titley  
 Date Begun. July 8, 1986 Bearing. 090° Claim. BE-3  
 Date Finished. July 8, 1986 Elev. Collar. 795.m Core Size. NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-8.8	OVERBURDEN	No Samples					
8.8-38.2	TUFF, LOCALLY ALTERED						
	- dark green, locally tan green, f.gr. w/banded sections (@65°), occasionally pyroclastics, locally altered and bx'd.						
	- 2.5-5% ank. veins, 2.5-5% chlor. veinlets and alteration, 0.3% ank. veinlets, 0.3% hem., 1% lim.						
	- 0.3-1% f.gr. py. in veinlets and dissem.						
	24.0-30.0 not very altered, 2.5% ank. veins, rare bx'd sections.						
	- 38.2 m: some bx'n at lower contact.						
38.2-50.5	MONZONITE						
	- m.gr. to c.gr. orange pink monzonite, a few tuff xenoliths.						
	- 2.5% chlor. veinlets, 0.3% calc. veinlets, 1% ank. veins.						
	- 1% f.gr. py. dissem. and on veinlets. Tr. qtz veins.						
	- tuff xenoliths becoming more common towards lower contact,						
50.5-67.2	TUFF						
	- similar to 8.8-38.2 m.						
67.2-74.9	MONZONITE						
	- mostly m.gr., similar to 38.2-50.5 m.						
	- sharp lower contact at 50° is at 90° angle to banding in adjacent tuff.						

d11/17/1

BE

PROPERTY .....

HOLE No. .... BC-8

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... BC-8 ..... Sheet No. .... 2 ..... Lat. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim ....  
 Date Finished. .... Elev. Collar. .... Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
74.9-96.9	TUFF						
	- similar to 8.8-38.2 m.						
	- occasional monzonite stringers.						
	- not much alteration.						
96.9-99.1	MONZONITE						
	- similar to 38.2-50.5.						
99.1-117.7	TUFF, LOCALLY ALTERED						
	- similar to 8.8-38.2 m.						
	- several monzonite stringers.						
	109.0-109.9 monzonite stringer.						
117.7-120.2	MONZONITE						
	- similar to 38.2-50.5 m.						
120.2-137.4	TUFF						
	- similar to 8.8-38.2 m.						
137.4-140.4	MONZONITE						
	- similar to 38.2-50.5 m.						
140.4-145.3	TUFF						
	- similar to 8.8-38.2 m.						
145.3-164.6	MONZONITE						
	- similar to 38.2-50.5 m.						



# DIAMOND DRILL RECORD

BE

BC-9

PROPERTY .....

HOLE No. ....

DIP TEST		
	Angle	
Footage	Reading	Corrected
0	-45°	

Hole No. .... BC-9	Sheet No. .... 1	Lat. .... 15580 N	Total Depth ... 181.4
Section. ....	Dep. .... 13062 E	Logged By ... E.D. Titley	
Date Begun ... July 7, 1986	Bearing ... 090°	Claim ... BE-3?	
Date Finished ... July 8, 1986	Elev. Collar ... 790 m	Core Size ... NQ $\frac{1}{2}$	

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0-17.1	OVERBURDEN					
17.1-47.5	MONZONITE					
	- orange-pink, m.gr. to c.gr., porphyritic.					
	- 0.3% ank. veins, 0.01% qtz veins, occasional tuff xenoliths.					
	- 1% f.g. dissem. py. 0.1% cpy, 0.01% MoS <sub>2</sub> .					
	33 m: irregular 2 cm wide vein @5° w/5-10% f.gr. py.,					
	1-2.5% m.gr. cpy., 5-10% hematite, 0.1% MoS <sub>2</sub> .					
47.5-66.0	ALTERED TUFF					
	- f.gr., tan to dark green, altered tuff.					
	- locally strongly bleached and bx'd with 2.5 to 10% ank.					
	stockwork. 1-2.5% calc. veinlets.					
	- locally well banded to laminated at 35°.					
	- some sections clay altered, some up to 5% hem.					
	- rare qtz. veins, some monzonite stringers.					
66.0-67.5	MONZONITE					
	- similar to 17.1-47.5 m.					
	- several sub-angular tuff xenoliths to 3 cm.					
	- sharp lower contact @40°.					
67.5-70.7	ALTERED TUFF					
	- similar to 47.5 to 66.0					

# DIAMOND DRILL RECORD

BE

BC-9

PROPERTY ..... BE .....

HOLE No. .... BC-9 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... BC-9 ..... Sheet No. .... 2 ..... Lat. ....  
 Section ..... Dep. .... Total Depth .....  
 Date Begun ..... Bearing ..... Logged By .....  
 Date Finished ..... Elev. Collar ..... Claim .....  
 Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au(ppb)	Ag(ppm)	Cu(ppm)	Mo(p)
70.7-71.6	MONZONITE						
	- similar to 17.1-47.5 m.						
71.6-98.3	ALTERED TUFF						
	- similar to 47.5 to 66.0						
	89.0-92.0 m: strongly bleached, 10-20% ank. stockwork.	ET6M1-170	89.0-90.0	175	2.2	1080	120
	0.3% blue green pyrophyllite veinlets.	ET6M1-171	90.0-91.0	3100	1.1	810	80
	91.8 m: calc.-monz. stringer w/10% f.gr. py., 2.5% cpy.,	ET6M1-172	91.0-92.0	485	1.9	3700	170
	tr. azurite.	ET6m1-173	92.0-93.0	75	0.6	1130	160
	- monzonite stringer at 97 m.						
98.3-99.7	MONZONITE						
	- similar to 47.5 to 66.0 m.						
99.7-105.6	ALTERED TUFF						
	- similar to 47.5 to 66.0 m.						
	- monzonite stringer at 102 m.						
105.6-113.5	MONZONITE						
	- similar to 47.5 to 66. m.						
	- sharp vein contact at 60°.						
	- 110 m: cpy. hem. qtz. vein @50°.						
113.5-137.8	ALTERED TUFF WITH MONZONITE STOCKWORK						
	- similar to 47.5 to 66.0 m but more strongly bx'd and altered						
	with strong monzonite stockwork.						





# DIAMOND DRILL RECORD

PROPERTY .....BE.....

HOLE No. ....BC-10.....

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-60°	

Hole No. ....BC-10..... Sheet No. ....1.....  
 Section.....  
 Date Begun..... July 3, 1986.....  
 Date Finished..... July 7, 1986.....

Lat..... 13585 N.....  
 Dep..... 14725 E.....  
 Bearing..... 090°.....  
 Elev. Collar..... 1430 m.....

Total Depth..... 147.9 m.....  
 Logged By..... E.D. Titley.....  
 Claim..... BE-4.....  
 Core Size..... NQ½.....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au(ppb)	Ag (ppm)	Cu(ppm)	Mo (
0-9.1	OVERBURDEN						
9.1-14.8	CRYSTAL TUFF						
	- f.gr., dk. green, tuff with m.gr. white f-spar laths, giving porphyritic texture.						
	- 1% c.v., 1% euhedral py., 1% lim.						
	- 20-30% chloritized replacements. 1% hem. veinlets.						
	- intrusive-looking texture, may be diorite?						
	- strong bleaching and sericitization increases from 13.0 to 14.8 m.						
14.8-20.3	MONZONITE						
	- m.gr., brown pink to pink tan, porphyritic.						
	- 1% f.gr. euhedral py., dissem. and in veinlets.						
20.3-22.6	TUFF						
	- f.gr. dk. grey green, chloritized tuff (xenolith?).						
	- 1% calc. veinlets.						
22.6-52.3	SYENODIORITE?						
	- m.gr., med. grey, syenodiorite? 2 mm laths of white plag. in a matrix of white to grey k-spar.	ET6M1-149	22.6-24.0	125	0.4	39	1
	- plag. locally brown (sericitized?). Massive text., locally weakly foliated.	ET6M1-150	25.5-27.0	4700	30.0	36	1
	- 2.5-5% dissem. f.gr. py., 1% ank. veins of various angles.	ET6M1-151	28.5-30.0	1160	6.4	21	2

# DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... BC-10 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-10 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au(ppb)	Ag(ppm)	Cu(ppm)	Mo (f)
22.6-52.3	- some f-spars appear sericitized.						
(cont'd)	- 5% black chlor. blebs and veinlets, locally up to 20%.	ET6M1-156	31.5-33.0	460	3.5	52	1
	- sharp, uneven lower contact at 80°	ET6M1-157	34.5-36.0	520	6.3	17	2
52.3-108.0	VOLCANICLASTIC	ET6M1-158	37.5-39.0	690	4.6	26	1
	- med. to dk. grey, rock varies from f.gr. black laminated (@50°), graphitic, pyritic (5%) siltstone to greywacke to breccia with rounded f-spar clasts to felsic to andesitic fragmental rock.	ET6M1-159	40.5-42.0	215	1.2	20	1
	- 2.5 ank. veins and 1% calc. veins locally forming a stockwork.						
	- 1-5% dissem. f.gr. subhedral pyrite.						
	- 0.3% qtz. veins and a few siliceous (chert?) bands.						
	- except for the siltstone, the rock is unbedded to poorly bedded. Locally, bx is tectonic with an ank. matrix. Rare, narrow gougy zones. Local concentrations of up to 20% py. (i.e. 92.0 m).	ET6M1-166	64.1-65.1	175	0.8	87	4
	- tr. of cpy.						
	92.0-108.0: volcanoclastics are locally strongly bx'd. 5-10% ank. veins and stockwork.	ET6M1-167	95.0-96.0	90	1.2	163	1
		ET6M1-168	96.0-97.0	215	2.9	141	4
	5-20% f.gr. dissem. py. 0.1-0.3% cpy. in carbonate veins.	ET6M1-169	97.0-98.0	195	1.9	137	2
	- appears to be more tuffaceous.	ET6M1-181	99.0-100.0	175	2.2	1080	120

# DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... BC-10 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... BC-10 ..... Sheet No. .... 3 ..... Lat. ....  
 Section ..... Dep. .... Total Depth .....  
 Date Begun ..... Bearing ..... Logged By .....  
 Date Finished ..... Elev. Collar ..... Claim .....  
 Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
108.0-109.1	SYENODIORITE DYKE?						
	- tan grey m.gr. intrusive? Looks similar to 22.6-53.3 m (but 108.0-109.1 may also be a strongly bleached pyroclastic rock).						
(cont'd)	1% dissem. py.						
	- upper contact appears interbedded. Lower contact sharp at 90°.						
	- some sericitic alteration.						
109.1-147.82	TUFF WITH SEDIMENTS						
	- mostly f.gr., occasionally m.gr., dk. green mafic to andesitic tuff, locally banded @70°, locally bleached with interbedded dark grey siltstone and tan grey greywacke. Some possible syenodiorite dykes. 5-10% chlorite locally.						
	- 2.5-5% ank. veins, decreasing downhole.						
	- 1-2.5% calc. veins increasing downhole.						
	- occasionally pyroclastics. 1% calcareous amygdules locally. Some bleached sections.						
	- 0.3-2.5% dissem. euhedral to subhedral f.gr. py.						
	- local concentrations of py. (i.e. 115.5, 129 m).						
	- minor bx'n and ank. veins at 141 m.						
	- strong bleaching from 144.4 to 147.82 with several zones of lapilli tuff.						

END OF HOLE

## DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... BC-12 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-45°	

Hole No. .... BC-12 ..... Sheet No. .... 1 ..... Lat. .... 13465 N ..... Total Depth .... 203.3 m .....  
 Section ..... Dep. .... 12550 E ..... Logged By .... E.D. Titley .....  
 Date Begun .... July 3, 1986 ..... Bearing .... 090° ..... Claim .... BE-3 .....  
 Date Finished .... July 3, 1986 ..... Elev. Collar .... 725 m ..... Core Size .... NQ½ .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-24.4	OVERBURDEN	No samples					
24.4-181.0	TUFF						
	- med. green, locally pale green or grey green, locally banded						
	(20-60°) locally bleached, med. green locally b'x'd, locally silty layers, rare pyroclastics. Mostly massive texture.						
	- 0.03% ank. veins, 1% calc. veins, 1% chlor. veinlets.						
	- 0.3% lim. 0.1% f.gr. euhedral py.						
	- rare traces of gouge.						
	- increased ank. veins and bleaching from 130.0-141.5 m.						
	145.5-151.6 m: Monzonite dykes m.gr. tan orange to pink.						
	5% ank veins, 1% f.gr. py. 5% chlorite, some altered tuff.						
	162.0-163.7 m: Monzonite dyke m.gr. pale buff pink to pale buff green.						
	161.0-164.5 m: dark grey f.gr. silty layers common.						
181.0-194.0	SERPENTINITE						
	- dark green, strongly sheared, chloritized, strong magnetic attraction.						
194.0-195.98	FAULT ZONE (SERPENTINITE)						
	- strongly sheared, 20-30% light green gouge, strongly chloritic, strong magnetic attraction.						
195.98-203.3	NO CORE RECOVERY - Triconed (Fault Zone)						

203.3

END OF HOLE

a11/21/1

## DIAMOND DRILL RECORD

PROPERTY BEHOLE No. BC-13

DIP TEST		
	Angle	
Footage	Reading	Corrected
0	-45°	

Hole No. BC-13 Sheet No. 1 Lat. 13965N Total Depth 154.5  
 Section June 22, 1986 Dep. 12690E Logged By E.D. Titley  
 Date Begun June 22, 1986 Bearing 090° Claim BE-3  
 Date Finished July 2, 1986 Elev. Collar 725 Core Size NQ½

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-21.9	OVERBURDEN						
21.9-22.8	FAULT ZONE: dk green, f.gr. chloritic sheared tuff with light green gouge.						
22.8-53.6	BLEACHED TUFF (POSSIBLY ANDESITIC)						
	- pale green, mostly f.gr. with some m.gr. patches and fragments.						
	- locally strongly bx'd., locally chloritic.						
	- 2.5% qtz. ankerite veins up to 1 cm. at various angles.						
	- patchy blebs of v.f.gr. py. from 0.3-10%, (1% overall) locally in veinlets forming stockwork.						
	- 2.5-10% white to tan clay or seric. alteration.						
	- 0.1% limonite, possibly trace of jarosite.						
	- rock is locally banded at 55°, possibly sedimentary in part.						
	- around 45 m some chloritized hornblende porphyry.						
	- gradual decrease in bleaching over several meters to lower contact.						
	- lower contact is indistinct, gradual.						
53.6-61.2	TUFF (POSSIBLY ANDESITIC)						
	- f.gr. dk. green, 5 to 10% pervasive chloritic hairline fractures. Locally weakly bx'd. A few chloritized phenocrysts. 1% f.gr. dissem. patchy py., 2.5% calc						

# DIAMOND DRILL RECORD

PROPERTY BE

HOLE No. BC-13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-13 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
53.6-61.2	veinlets. Tuff locally bleached. Some possible					
(cont'd)	pyroclastics.					
	- 0.1% ank. veining.					
61.2-108.1	BLEACHED TUFF (POSSIBLY ANDESITIC)					
	- f.gr. pale green, moderately to strongly bleached. Locally					
	strongly bx'd.					
	- 2.5% chlorite stockwork.					
	- 2.5% calc. veinlets, 5% ank. veins.					
	- some diffuse banding, pyroclastics, "phenocrysts" (crystal					
	tuff).					
	- local strong tan 30-50% seric. or clay alteration.					
	- 2.5% f.gr. py. dissem. and in veinlets.	ET6M1-125	69.0-72.0			
	69.0-72.0 m: strongly bleached, 5% py.					
	- some veinlets w/v.f.gr. dk. sulphides.					
	- yr. chalcopyrite. Gradual lower contact, increase in					
	alteration and shearing					
92.6-93.9	MONZONITE DYKE					
	- m.gr., orange pink, 5-10% qtz., 2.5% ank. veins, 2.5% hem.					
	blebs.					
	- contacts appear to be sharp, lower contact 75°.					
	- 86.0-86.6 m: strongly bleached, bx'd and altered, 5% fine	ET6M1-126	86.0-86.6			

# DIAMOND DRILL RECORD

PROPERTY BE

HOLE No. BC-13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-13 Sheet No. 3 Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
92.6-93.9	dark py. stringers in matrix.					
(cont'd)	- irregular qtz. stringers at 106.3 m.					
108.1-125.0	FAULT ZONE					
	- strongly sheared, gouged, bx'd, clay altered, bleached, 108.1-125.0 sericitized tuff(?).					
	- pale tan green colour, 5% py. dissem. and in fine dark veinlets. 5% calc. veinlets. 2.5% ank. veins. 40% white clay, 10% tan sericite(?).					
	108.111.1 m: sample upper 2 m of fault zone.	ET6M1-127	108.1-116.1			
125.0-129.3	SILICIFIED TUFF?	ET6M1-128	125.0-126.0			
	- f.gr. buff to pale grey, very strongly bx'd and bleached tuff, 30-40% silicified. 5% fine dissem. py., 5% qtz. ank. veins forming stockwork.					
	- some sections of breccia.					
129.3-138.0	BLEACHED TUFF					
	- similar to 108.1-125.0 m.					
	- intensely bleached and bx'd. some sections very clay altered pale green to buff colour. 2.5% qtz. veins.	ET6M1-129	129.3-130.3			
138.0-154.5	BLEACHED TUFF					
	- similar to 61.2-108.1 m.					
	- some med. to dark green unbleached sections.					
	- common dark green chlorite crystals to 3 mm.					

654/52/3

END OF HOLE





# DIAMOND DRILL RECORD

PROPERTY BE

HOLE No. BC-14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. BC-14 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH (m)	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
15.7-33.8 (cont'd)-	some possible monzonite stockwork and/or dykes. - 0.1% cpy. - tuff is silicified from 31.4-33.8 m.						
33.8-34.5	MONZONITE DYKE - buff pink, m.gr., bx'd, sharp contacts @60°. -2.5% ank. veins, 5% hem. blebs.						
34.5-37.8	SILICIFIED TUFF - pale tan grey, f.gr., strongly silicified tuff. - similar to 31.4-33.8, strongly bx'd towards lower contact.						
37.8-41.8	MONZONITE - m.gr., orange pink monzonite, 5-10% hem. blebs. - somewhat bx'd texture.						
41.8-49.0	TUFF WITH MONZONITE STOCKWORK - grey green with shades of tan and pink. - strongly bx'd, and altered tuff? with abundant irregular monzonite stockwork and bx. fragments. - 10-20% hem. blebs and veinlets. Strong sericite, locally silicified.						
49.0-74.0	MONZONITE WITH TUFF XENOLITHS - m.gr., orange pink monzonite with some altered tuff xenoliths. 10% hem. blebs.						



# DIAMOND DRILL RECORD

PROPERTY ..... BE .....

HOLE No. .... BC-15 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected
0	-71°	

Hole No. .... 15 .....	Sheet No. .... 1 .....	Lot .... 17205N .....	Total Depth .... 152.4 .....
Section .....	Dep. .... 13270E .....	Logged By .... E. Titley .....	Claim .... BE-5 .....
Date Begun .... July 10, 1986 .....	Bearing .... 275° .....	Core Size .... NQ½ .....	
Date Finished .... July 10, 1986 .....	Elev. Collar .... 760 m .....		

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au (ppb)	Ag (ppm)	Cu (ppm)	Mo (
0.21.34	OVERBURDEN						
21.34-23.9	MONZONITE - orange pink, m.gr. to c.gr., locally porphyritic. - occasional tuff xenoliths. - 1% pale grey qtz. veins, 0.3% creamy white ank. veins. - 0.1% f.gr. py. dissem. and in veinlets.						
23.9-24.7	MAFIC TO INTERMEDIATE INTRUSIVE (?) - f.gr., med. green, massive, homogenous-looking, equigranular intrusive(?). 1% white feldspar laths. Very minor veining (0.1% calc. veins). - no bleaching or brecciation, no sulphides noted. 1% magnetite.	ET6M1-18	23.9-24.7	5	0.2	27	6
24.7-25.9	MONZONITE - similar to 21.34-23.9 m, 2.5% qtz. veins.						
25.9-34.5	TUFF (ANDESITE?) - f.gr., tan green to medium green, locally bleached, brecciated and altered intrusive; locally sheared. - occasional pyroclastics. - 5% chlorite blebs and veinlets, locally 10%. - 2.5% ank. veins, 1% hematite.						
	- 0.1-0.3% f.gr. py., dissem. and in veinlets.	WH6M1-132	35.8-37.8	25	0.3	580	38

# DIAMOND DRILL RECORD

PROPERTY BE

HOLE No. BC-15

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 15 Sheet No. 2 Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
25.9-134.5	- 0.3-1% magnetite locally.						
(cont'd)	25.9-50 m: some strongly sheared sections.						
	50-90 m: mostly unaltered, unbx'd, unbleached; tuff,						
	1% magnetite, 1% calc. veins, 0.3% ank. veins.						
	90-134.5 m: locally strongly bleached, bx'd and altered tuff,						
	occasional banding, tan green colour common. (Bleaching						
	and sericitic alteration? or different phase of extrusive?)						
134.5-137.0	MONZONITE(?)						
	- pale orange pink, c.gr., porphyritic.						
	- 2.5% chloritic veinlets, 1% white ank. veins.						
	- 1% f.gr. py. dissem. and in veinlets.						
	- 0.1% qtz. veins.						
	- phenocrysts of well-formed white plagioclase laths up to 8						
	mm long.						
	- sharp contacts						
	- did not succeed in staining this rock with (HF etch) Sodium						
	Cobaltinitrate (K-spar??).						
137.0-152.4	TUFF						
	- f.gr., dark green, locally banded, occasional pyroclastics.						
	- 5% dark green chloritic veinlets.						



## DIAMOND DRILL RECORD

PROPERTY BEHOLE No. BC-16

DIP TEST		
Angle		
Footage	Reading	Corrected
0	-70°	

Hole No. 16 Sheet No. 1 Lat. 13435N Total Depth 117.65  
 Section  Dep. 13240E Logged By E. Titley  
 Date Begun July 8, 1986 Bearing 090° Claim BE-3  
 Date Finished July 8, 1986 Elev. Collar 1160 m Core Size NQ 1/2

(meters) DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-3.10	OVERBURDEN	No samples					
3.10-34.5	ALTERED TUFF						
	- med. green, f.gr. tuff. Moderately to strongly altered, bx'd and bleached. Locally banded (@ 50°) occasional pyroclastics.						
	- 5% chlor., 1% lim., 2.5% hem. 0.1% cpy.						
	- 5% ank. veins and alteration. 1% f.gr. py. dessem. and in veinlets.						
	7-11.5 m: strongly sheared, 10% gouge, fault zone.						
	- strongly bx'd and altered to lower contact.						
34.5-82.0	MONZONITE						
	- m.gr. to c.gr. orange purple occasional tuff xenoliths.						
	- 2.5% f.gr. py. dissem. and in veinlets. 0.1% cpy.						
	- 5% chlor., 1-2.5% ank. veins, 0.03% MoS <sub>2</sub> .						
	38.4-40.3 m: 5% ank. stockwork, 5% f.gr. py., 0.3% cpy.						
82.0-117.65	ALTERED TUFF						
	- similar to 3.10-34.5 m, no lim.						
	90.5-110.5 m: fault zone, rubbly core, poor rec.?						
117.67	END OF HOLE						

