

ASSESSMENT REPORT

**GEOLOGICAL AND GEOCHEMICAL SURVEYS
ON THE DUDE PROPERTY**

**EAST-CENTRAL TEXADA ISLAND
BRITISH COLUMBIA**

NANAIMO MINING DIVISION
LATITUDE 49°38' N LONGITUDE 124°18' W
MAPSHEET 92F/9W

CLAIMS: Dude 381020(9)
Dude 1 to 6 380227(8) – 380232(8)
DC #1 to #4 381274(10) – 381277(10)
DC #4 381021(9)
New Tak 1 380233(8)
New Tak 2 380234(8)

OWNER & Northstar Mining Ltd.
OPERATOR: 4520-B Franklin Avenue, Powell River, B.C., V8A 3E3

REPORT B.K. (Barney) Bowen, P. Eng., Consulting Geologist
AUTHOR: 12470 99A Avenue, Surrey, B.C., Canada, V3V 2R5

REPORT DATE: October 19, 2001

GEOLOGICAL SURVEY BRANCH

26,690

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The Dude property is located in the east-central part of Texada Island, British Columbia, approximately 95 km northwest of the city of Vancouver. The property consists of one 12-unit claim and 13 contiguous 2-post claims which together cover an area of about 342 hectares. All of the claims are 100%-owned by Northstar Mining Ltd.

Texada Island has a long history of mine development and production, including the mining of copper-gold skarn deposits at Vananda in the early 1900's, the mining of magnetite replacement ore northwest of Gillies Bay by Texada Mines Ltd. from 1952-77 and three presently operating limestone quarries in the northern portion of the island. In the southern part of the island comparatively little work has been undertaken.

Local prospectors discovered copper and molybdenum mineralization in the Dude claims area in 1969. They staked the area in the same year and subsequently optioned their claims to Falconbridge Nickel Mines Ltd. which carried out exploration for copper-molybdenum porphyry potential in 1969-70. The current claims were staked by Northstar Mining Ltd. in 2000.

Volcanic and sedimentary strata on Texada Island range in age from Late Paleozoic to Upper Cretaceous and include Buttle Lake Group sediments, Karmutsen Formation volcanic rocks, Quatsino Formation limestone and Nanaimo Group sandstones and conglomerates. Karmutsen and Quatsino Formation rocks are intruded by two main pulses of intrusive activity. One pulse is dated at about 160 Ma (Middle Jurassic) and is correlated with the Island Plutonic Suite. A younger suite of intrusives, dated at about 110 Ma (Lower Cretaceous), is thought to be related to the Coast Plutonic Complex.

The Dude property straddles a northwest-trending, steeply southwest-dipping contact between a quartz diorite stock to the northeast and Karmutsen basic volcanics to the southwest. These rocks are cut by a number of narrow, northeast-trending dikes of variable texture and composition, including hornblende microdiorite, porphyritic dacite and andesite.

At the Dude porphyry prospect, a persistent and strongly-developed northeast-trending, vertically to steeply southeast-dipping fracture zone controls sulphide fracture-fill mineralization (mainly pyrite with lesser chalcopyrite and molybdenite) over a total zone width of about 600 m. The fracture zone transects the quartz diorite-volcanic contact and correlates well with large, coincident, copper and molybdenum soil anomalies. Recent work has identified the potential for a gold credit within the porphyry system, but to date, the extent and orientation of gold-bearing structures throughout the target area is not well understood. There were no routine gold analyses carried out by Falconbridge.

A large IP chargeability anomaly covers a good portion of a 1.3 by 1.2 km area surveyed by Falconbridge. A crude, semi-elliptical distribution of higher values partially envelopes a central core of lower values. The latter is aligned in a northeasterly direction and roughly coincides with a 200 m wide zone of stronger copper and molybdenum soil anomalies.

Six shallow, AQ-size core holes completed by Falconbridge encountered low-grade copper mineralization in the 0.1-0.2% range, but the majority of their drilling appears to have tested the pyrite halo, as inferred from the IP chargeability data.

2.0 CONCLUSIONS

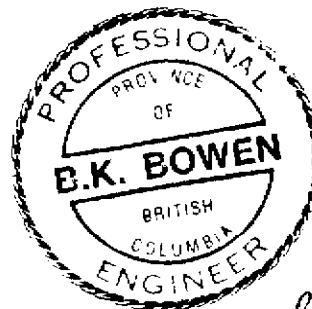
Falconbridge's work to date represents an incomplete test of the porphyry potential of the Dude prospect. More drilling and ancillary work is necessary to complete a proper evaluation of the target area, particularly in light of the recently recognized potential for a gold credit within the porphyry system.

3.0 RECOMMENDATIONS

A proposed Phase 1 program, estimated to cost about \$120,000, consists of 600 m of excavator trenching and 50 line km of IP surveying. The trenching will attempt to better define the distribution of gold-bearing structures in the core of the copper-molybdenum target area. The purpose of the IP survey is to fully delineate the extent of the porphyry sulphide system and to identify within it areas of lower chargeability which may represent chalcopyrite-enriched mineralized centers.

Contingent on the results of Phase 1 work is a proposed Phase 2 diamond drilling program, also estimated to cost about \$120,000. Drilling would consist of four, 250 m deep, HQ-size, inclined holes, with collar locations, etc. to be defined upon evaluation of Phase 1 results. The HQ core size would maximize core recovery and provide a large sample for assay purposes. Both factors are important should it be established that a significant gold credit is present in the mineralized zones.

The total cost for Phase 1 plus Phase 2 work programs, including a 10% contingency, is about \$264,000.



B.K. Bowen

4.0

INTRODUCTION

4.1 Location and Access

The Dude property is located in the east-central part of Texada Island about 20 km southeast of Vananda and 95 km northwest of the city of Vancouver (Figure 1). Specifically, the claims are located on mapsheet 92F/9W at coordinates 49°38' N and 124°18' W and are in the Nanaimo Mining Division. The nearby city of Powell River on the mainland is the area's commercial center.

Access to Texada Island from Vancouver is via a highway and ferry system to Blubber Bay on the northern end of the island or by regular air service to Gillies Bay on the western coast of the island. Paved and good secondary roads connect the Dude property to the island's communities.

4.2 Claims

The property consists of one 12-unit claim and 13 contiguous 2-post claims which together cover an area of about 342 hectares (Figure 2). All of the claims are 100%-owned by Northstar Mining Ltd. of Powell River, B.C. Claims data is given in Table 1.

4.3 Topography, Vegetation and Climate

The southwestern part of the property is on a flat to gently northeast-sloping bench which gives way to a steeper hillside to the northeast. Total relief from sea level to the southwestern claim boundary is about 500 m.

The claims area was logged in the 1950's and experienced a large forest fire in the late 1960's. Second growth varies from immature stands of Douglas fir and hemlock relatively free of undergrowth to dense thickets of smaller evergreen and deciduous trees.

The climate is atypical of the coastal areas of British Columbia. Texada Island receives less precipitation (about 75 cm annually, falling mainly as rain) and more hours of sunshine than many nearby areas.

4.4 History and Development

4.4.1 Texada Island

Texada Island has a long history of mine development and production. In the early 1900's, several copper-gold skarn deposits were mined at Vananda, with production totaling about 75,000 ounces of gold, 500,000 ounces of silver and 19,000,000 pounds of copper.



Powell River
Dude property
Texada Island

Nanaimo Vancouver

VANCOUVER ISLAND CANADA

Port Renfrew Bellingham

Victoria UNITED STATES

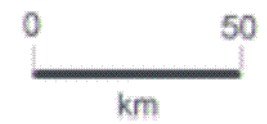


FIGURE 1
Location Map
Scale as shown

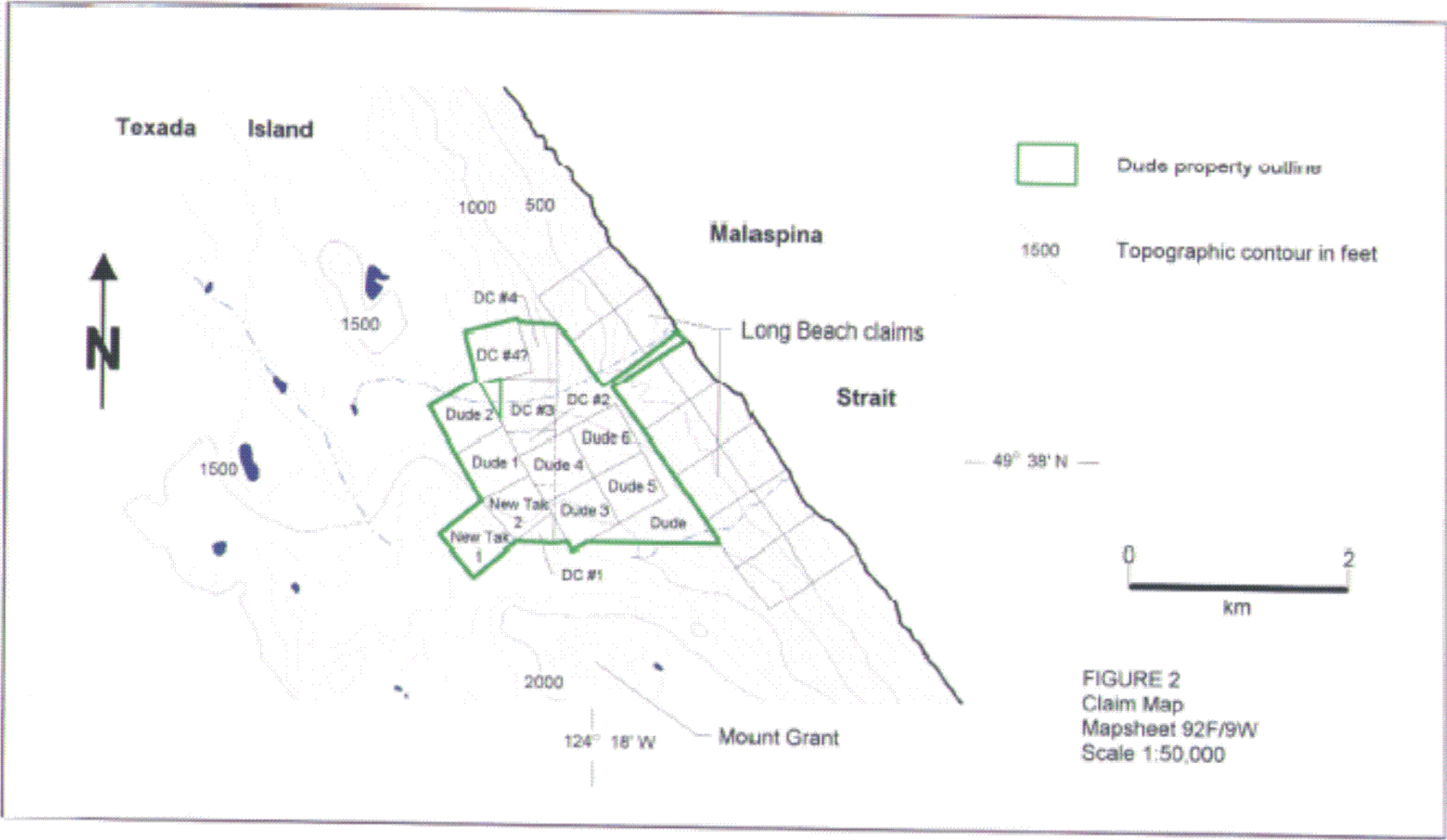


FIGURE 2
 Claim Map
 Mapsheet 92F/9W
 Scale 1:50,000

TABLE 1

CLAIMS DATA – DUDE PROPERTY

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date*</u>
Dude	12	381020	2000/09/17	2002/09/17
Dude 1	1	380227	2000/08/21	2002/08/21
Dude 2	1	380228	2000/08/21	2002/08/21
Dude 3	1	380229	2000/08/22	2003/08/22
Dude 4	1	380230	2000/08/22	2003/08/22
Dude 5	1	380231	2000/08/22	2003/08/22
Dude 6	1	380232	2000/08/22	2003/08/22
DC #1	1	381274	2000/10/12	2003/10/12
DC #2	1	381275	2000/10/12	2003/10/12
DC #3	1	381276	2000/10/12	2002/10/12
DC #4	1	381277	2000/10/12	2002/10/12
DC #4(?)	1	381021	2000/09/16	2002/09/16
New Tak 1	1	380233	2000/08/30	2002/08/30
New Tak 2	1	380234	2000/08/30	2003/08/30
Total units	25			

* as of Statement of Work dated August 20,2001

From 1952-77, open pit and underground mining by Texada Mines Ltd. 3 km northwest of Gillies Bay produced iron and lesser copper concentrates and about 25,000 ounces of gold from 20 million tons of magnetite replacement ore grading about 33% Fe.

Currently, there are three operating limestone quarries in the northern portion of the island, as well as one gravity mill for gold recovery operated intermittently by 555 Corporate Ventures Inc. of Vancouver, B.C.

Although the southern part of the island is considered favorable for the discovery of base and precious metals deposits, comparatively little work has been undertaken. A small amount of marble has been quarried at Anderson Bay near the southern tip of the island.

4.4.2 Dude Porphyry Prospect

Local prospectors discovered copper and molybdenum mineralization in the Dude claims area in 1969. They staked the area in the same year and subsequently optioned their claims to Falconbridge Nickel Mines Ltd. which carried out exploration for copper-molybdenum porphyry potential in 1969-70. Falconbridge's work included grid soil sampling, IP chargeability/resistivity surveys, geological mapping and limited diamond drilling. The drilling encountered low-grade copper mineralization and the option was terminated.

A portion of the target area was re-staked as the Hernando claims by F. Brennan of Vananda in the late 1970's. He completed three very shallow, small-diameter core holes to a maximum depth of 11 m on the western fringe of Falconbridge's main Cu-Mo target area. The holes did not intercept mineralization and the claims were allowed to lapse.

Northstar Mining Ltd., the current owner and operator, staked the Dude, DC and New Tak claims in 2000.

4.5 Summary of Work Done

The writer carried out a field examination on the Dude property during the period July 5-8, 2001, assisted by Northstar's prospector Bob Duker on July 5 and 6. Main focus of the work was the geological mapping and rock sampling of roadcut and quarry exposures along a B.C. Hydro access road which provides a good cross-section across the northeast portion of the Cu-Mo porphyry target developed by Falconbridge. This road was constructed after the Falconbridge work and lies outside of their geological mapping coverage.

Geological mapping by the writer was carried out at a scale of 1:4,000 and covered approximately one kilometre along the road, on portions of the Dude and Dude 6 claims. A hip-chain and silva compass survey provided control for location of recorded data.

Nine composite rock grab samples were collected from mineralized outcrops along the B.C. Hydro road. A tenth grab sample was taken from an old test pit located

approximately 700 m southwest of the road, on the Dude 3 claim. The samples were submitted to Acme Analytical Laboratories of Vancouver for multi-element, ultratrace ICP analyses, including Pt and Pd for the 9 samples along the road.

Subsequently, available company reports and pertinent assessment reports were reviewed prior to report writing.

5.0 GEOLOGY AND MINERALIZATION

5.1 Regional Geology

The oldest rocks on Texada Island are Late Paleozoic marbles, volcanoclastics and bedded cherts of the Buttle Lake Group which are exposed at the extreme southern tip of the island (Figure 3). These rocks are unconformably overlain by a thick sequence of Middle to Upper Triassic Karmutsen Formation basic volcanic rocks which extend throughout the length of the island. Limestone and silty limestone of the Middle to Upper Triassic Quatsino Formation conformably overlie Karmutsen volcanic rocks, mainly in the northern and west-central portions of the island. Upper Cretaceous Nanaimo Group sandstones and conglomerates unconformably overlie the Triassic age rocks in the west-central part of the island.

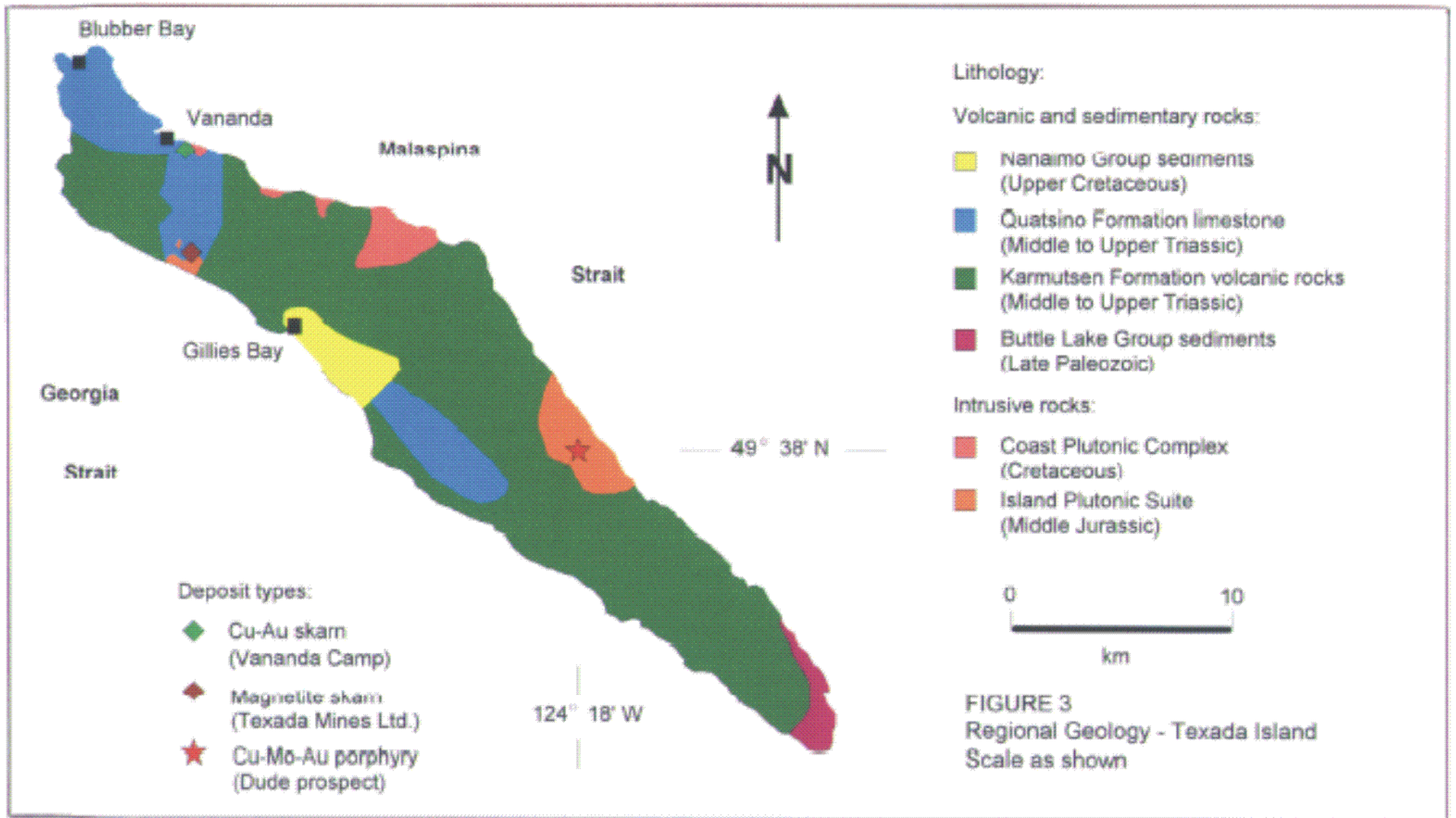
The Geological Survey of Canada has dated two main pulses of intrusive activity which cut Karmutsen and Quatsino Formation rocks. An older quartz diorite and granodiorite suite, dated at about 160 Ma (Middle Jurassic), intrudes Karmutsen volcanic rocks in the vicinity of the Dude porphyry prospect, and Quatsino limestone at the past-producing iron mine northwest of Gillies Bay. These intrusives are correlated with the Island Plutonic Suite. A number of granodiorite and quartz monzonite bodies, dated at about 110 Ma (Lower Cretaceous), occur mainly along the northeast coast of the island southeast of Vananda. The Cretaceous intrusives are thought to be related to the Coast Plutonic Complex. In the Vananda copper-gold skarn camp, small plugs and dikes of diorite and porphyritic diorite are spatially related to the orebodies and may post date the Cretaceous intrusives.

A number of regional, northwest-trending lineaments/fault zones transect Texada Island. Important transverse faults trending in northeasterly, east-southeasterly or east-west directions are also present. An intensely developed, northeasterly-trending fracture system is thought to be the main control for sulphide fracture-fill mineralization at the Dude porphyry prospect.

5.2 Local Geology

5.2.1 Introduction

The description of local geology that follows is based on detailed, property-scale mapping completed by R. Wares (Falconbridge, 1970) and detailed mapping along the B.C. Hydro access road completed by the writer. In a gross sense, the local geological



setting is relatively simple and therefore there is no property-scale geological map accompanying this report. Instead, the main geological features of the Cu-Mo target area are superimposed on the geochemical and geophysical maps presented in Figures 4-6. These maps provide a technical and historical background to which the detailed geology along the B.C. Hydro access road, presented in Figure 7, is referenced.

5.2.2 Lithology

The Dude property straddles a northwest-trending, steeply southwest-dipping contact between a quartz diorite stock to the northeast and Karmutsen basic volcanics to the southwest. These rocks are cut by a number of narrow, mainly northeast-trending dikes of variable texture and composition, including hornblende microdiorite, porphyritic dacite and andesite. The dike set may be a high-level expression of a buried stock which may be related to the near-surface Cu-Mo-Au mineralization.

5.2.3 Structural Setting

Both Wares and the writer observed a persistent and strongly-developed northeast-trending, vertically to steeply southeast-dipping fracture zone which controls sulphide fracture-fill mineralization (mainly pyrite with lesser chalcopyrite and molybdenite) over a total zone width of about 600 m. Fracture intensity across the zone is variable, but fracture spacing of one per centimetre across widths of several metres to greater than 10 m is not uncommon. The fracture zone transects the quartz diorite-volcanic contact.

5.2.4 B.C. Hydro Road Geology

The predominant lithology exposed along the B.C. Hydro road is quartz diorite which locally is cut by 1-2 m wide andesitic feldspar porphyry dikes (Figure 7). The dikes strike northeasterly and northwesterly and dip steeply to the northwest and northeast respectively.

Aside from the 600 m wide zone of sulphide fracture-fill mineralization described above, the only other structural features of note are east-west striking fault or shear zones, one of which was observed to dip 80° to the north.

5.3 Alteration and Mineralization

5.3.1 Introduction

In order to evaluate the remaining exploration potential at the Dude porphyry prospect, it was necessary to integrate the 1969-70 Falconbridge data with the writer's mapping and sampling results along the B.C. Hydro access road. The main elements of both data sets were digitized into MapInfo 5.5, using a superimposed local metric grid with an origin of 10,000 m north and 10,000 m east at the (paper) location of Falconbridge's old claim post common to the now abandoned Tex 1 to Tex 4 claims.

In the sections that follow, historic Falconbridge data includes Cu and Mo soil geochemistry, IP chargeability and diamond drilling (Sections 5.3.2 to 5.3.4 respectively). Recent rock geochemical results are presented in Section 5.3.5.

5.3.2 Soil Geochemistry

A large Cu-in-soil anomaly (at >50 ppm Cu) correlates well with the 600 m wide, sulphide-filled fracture zone exposed along the B.C. Hydro access road (Figure 4). The anomaly extends about 1,300 m to the southwest and transects the quartz diorite/volcanic contact. A somewhat smaller Mo-in-soil anomaly (at >10 ppm Mo) is coincident with the copper anomaly (Figure 5). The cores of both anomalies, at >400 ppm Cu and >40 ppm Mo, define a discontinuous, 200 m wide central zone which trends northeasterly, parallel to the main fracture set. Its axis projects through the B.C. Hydro road at a point where there is no outcrop, possibly due to recessive weathering of more strongly fractured rock.

To the northeast of the access road, grid coverage is limited. The greater depth of overburden at lower elevations may mask an anomalous geochemical expression of continued mineralization in this direction.

5.3.3 IP Chargeability

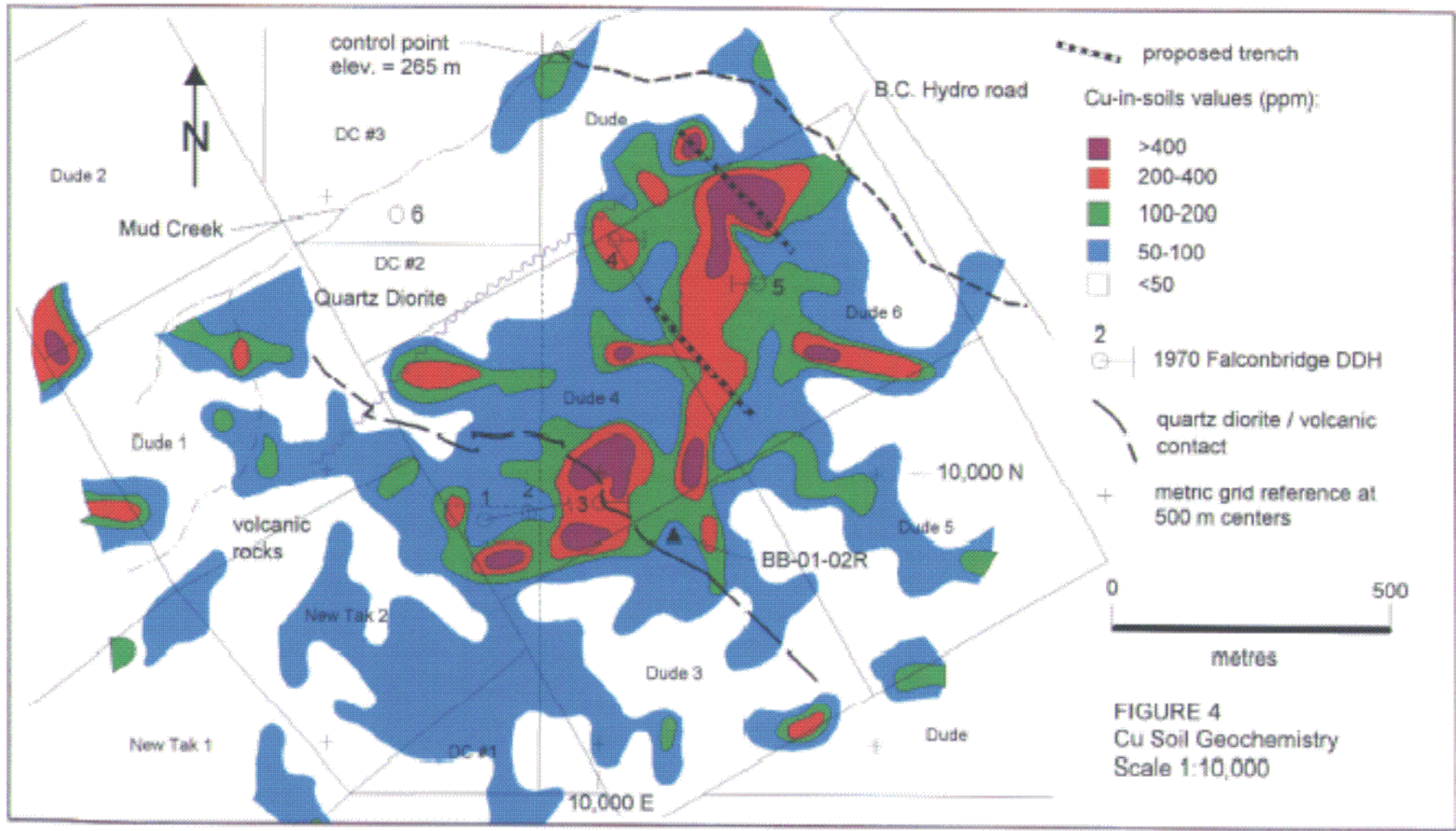
A large IP chargeability anomaly covers a good portion of the 1.3 by 1.2 km survey area completed by Falconbridge (Figure 6). A crude, semi-elliptical distribution of higher values partially envelopes a central core of lower values. The latter is aligned in a northeasterly direction and roughly coincides with the 200 m wide zone of stronger Cu and Mo soil anomalies described above. Ware notes that the Falconbridge drilling clearly demonstrated that the higher chargeability values are attributable to concentrations of pyrite along fractures, whereas the central core of lower values is reflecting a pyrite-deficient zone where hairline fractures are coated with chalcopyrite. This sulphide zoning pattern is similar to many porphyry copper deposits which have a well-defined pyrite halo enclosing a central zone of Cu-Mo mineralization.

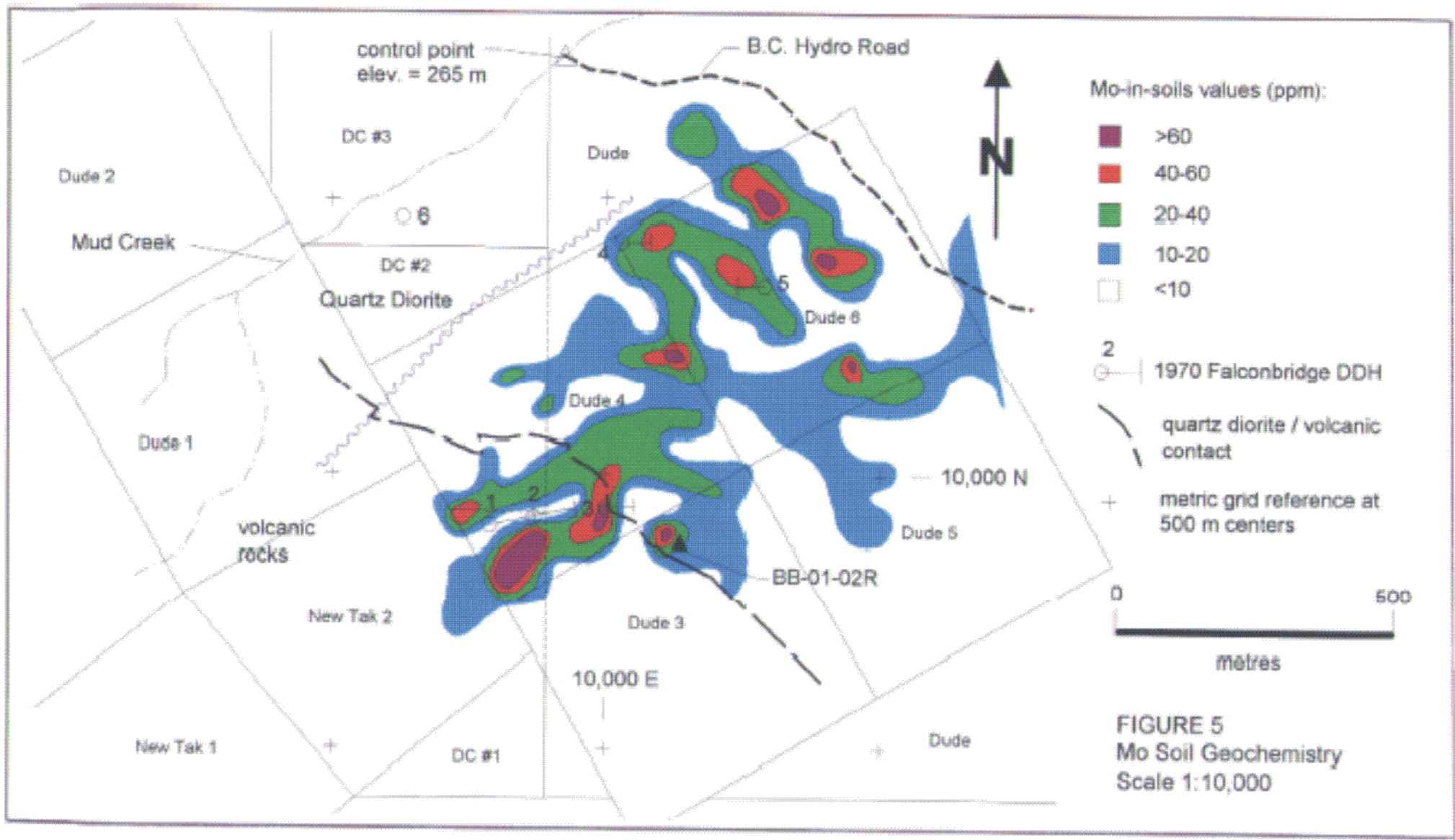
The IP survey was plagued by instrument malfunctions which necessitated a change of equipment when the survey was about 70% complete. The data was not strictly comparable because of different equipment capabilities. In addition, survey lines were oriented east-west rather than perpendicular to the main mineralized trend.

5.3.4 Diamond Drilling

Approximately 490 m of AQ core drilling was completed by Falconbridge in 6 angle holes. Most of the holes were angled at -45° to -50° due east or west to a maximum vertical depth of about 90 m. Hole locations are shown on Figures 4 to 6 and Figure 8.

In the writer's opinion, Falconbridge's drilling program represents an incomplete test of the porphyry potential of the Dude prospect. The main reasons for this conclusion are as follows:





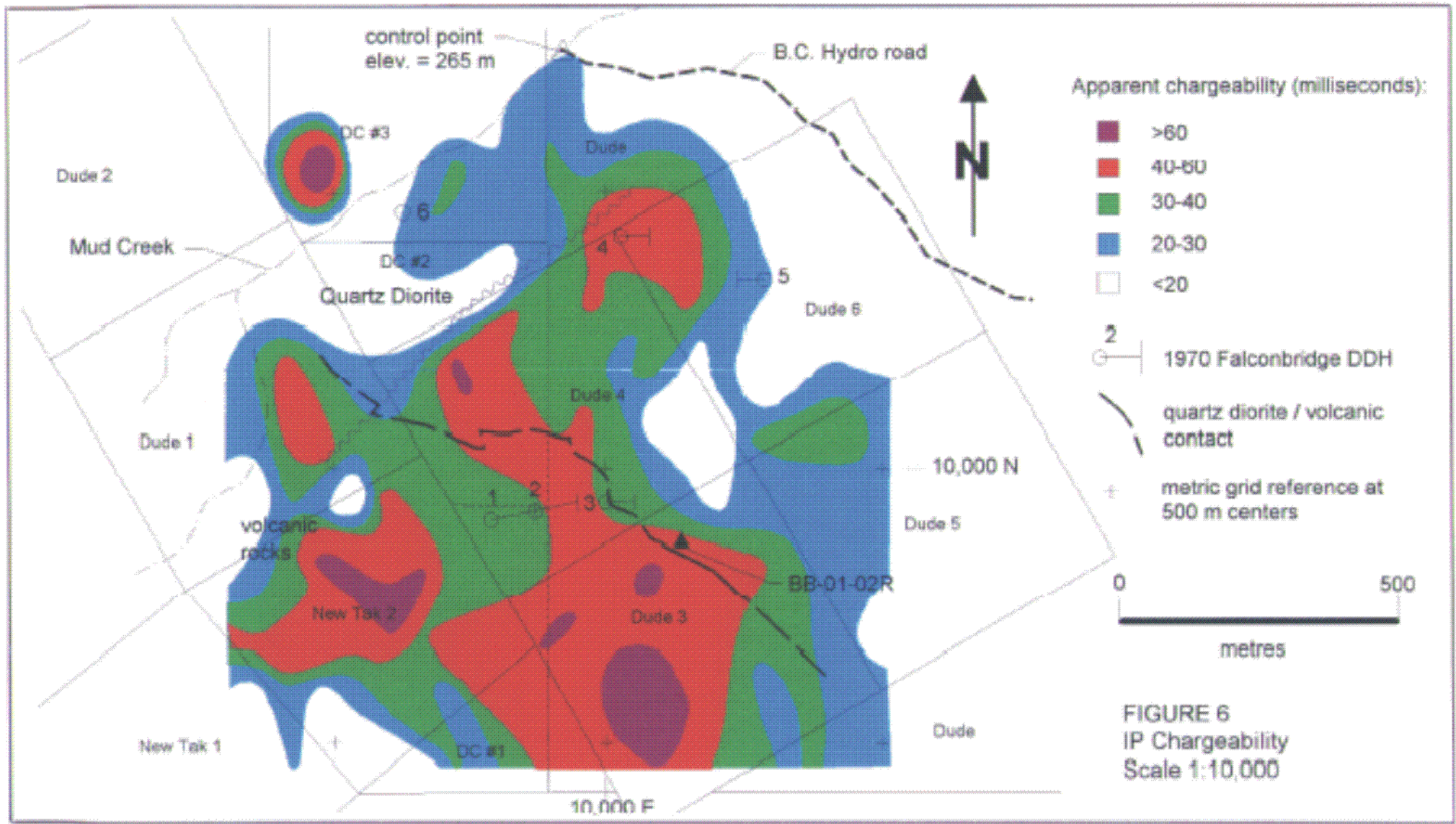
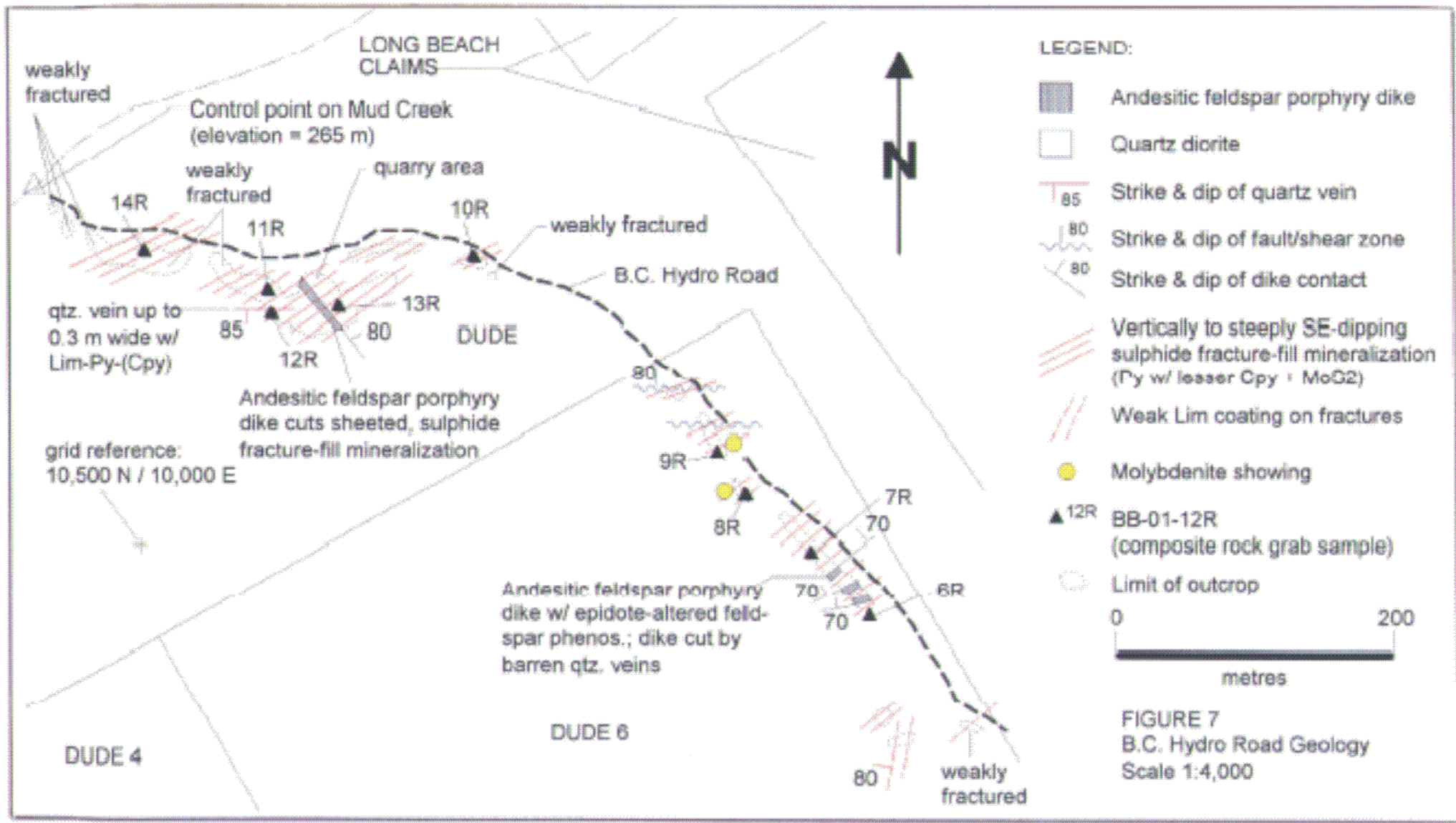


FIGURE 6
IP Chargeability
Scale 1:10,000



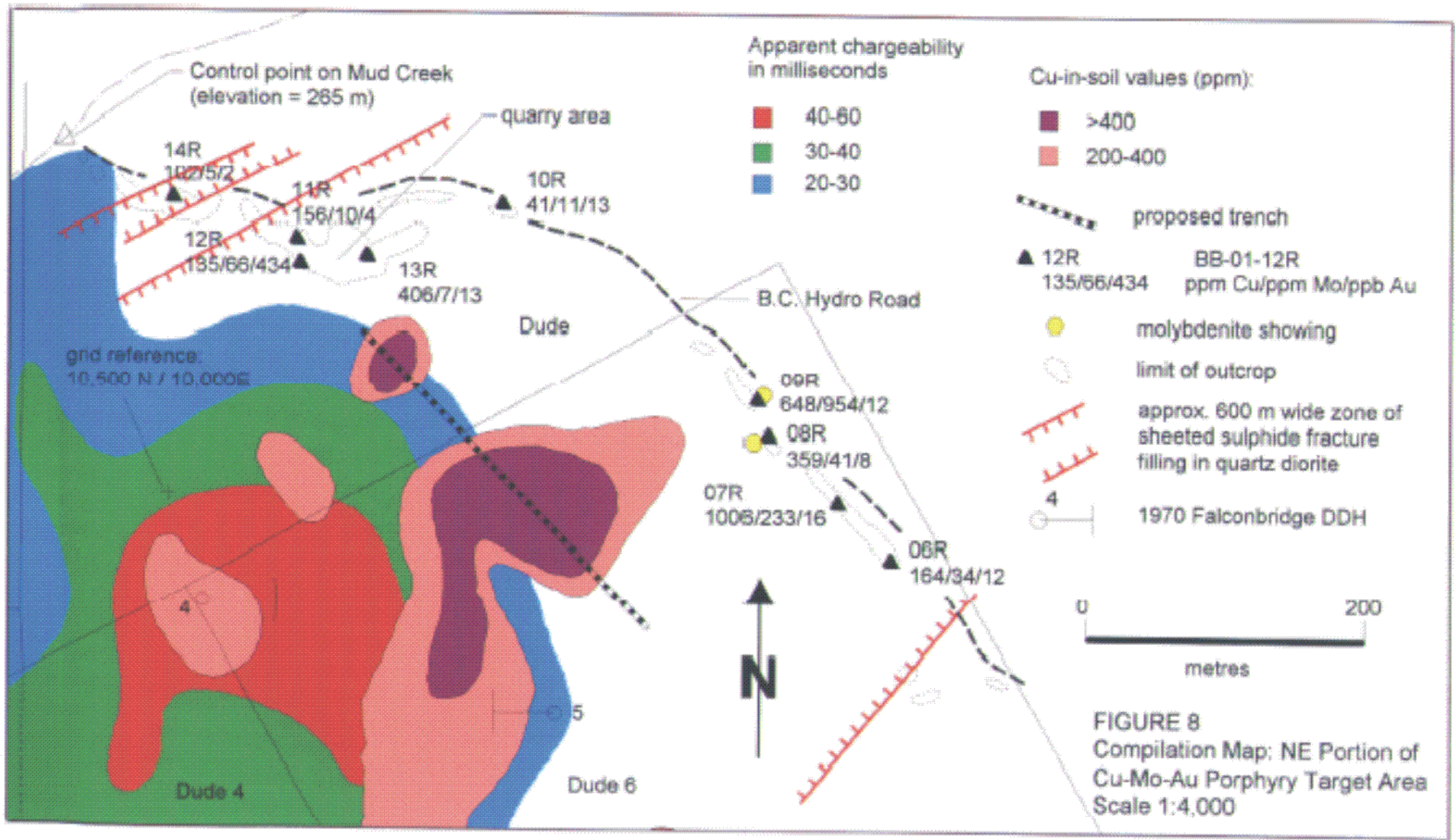
- (1) Significantly, only one hole (70-5) tested the central zone of Cu-Mo mineralization where it roughly coincides with lower chargeability values. This hole was not assayed (copper grades were estimated to be $\leq 0.15\%$ Cu) and it only tested mineralization to a vertical depth of 47 m;
- (2) Four of the remaining holes tested areas of higher chargeability within the inferred pyrite halo. Copper values were generally low, but this should come as no surprise as this is common in pyrite haloes of other known porphyry deposits;
- (3) A sixth hole, collared outside of the pyrite halo on the northwest fringe of the IP anomaly, was abandoned at a down-hole depth of 24 m;
- (4) The style of mineralization, that is mainly fracture-fill sulphides with little or no disseminations, lends itself to possible under representation of grades, as core loss of the mineralized fracture material would likely be proportionately greater than core loss of the relatively unaltered and competent quartz diorite between the fractures;
- (5) The small core size (a little over one inch in diameter) could result in recovery problems in zones of strongly to intensely fractured rock. No recovery data was recorded in Falconbridge's drill logs;
- (6) There were no routine analyses carried out for gold. Recent work (discussed below) has identified the potential for a gold credit within the porphyry system.

5.3.5 July 2001 Rock Geochemical Results

Nine composite rock grab samples were collected by the writer from outcrop exposures along the B.C. Hydro access road (Figure 7). Seven samples (BB-01-06R to 08R, 10R, 11R, 13R and 14R) represent moderately to strongly fractured quartz diorite with variable amounts of oxidized and unoxidized sulphides (mainly pyrite) coating the fractures. In collecting these samples, which averaged about 7 kg in weight, an effort was made to take large pieces of rock containing several fracture coatings so as to minimize fines loss. These samples returned values generally ranging from 100-1,000 ppm Cu and 10-200 ppm Mo, with consistently low gold values in the 2-16 ppb range. A duplicate sample was prepared in the lab for samples BB-01-08R and 13R to check for a possible "nugget effect". Analyses of the duplicate samples showed low gold values, as per the original set of results.

Sample BB-01-09R was taken from an area of rusty subcrop containing minor quartz veining and associated molybdenite mineralization. It returned values of 648 ppm Cu, 954 ppm Mo and 12 ppb Au.

Sample BB-01-12R is located in the upper portion of a quarry recently excavated by the Ministry of Forests while carrying out road improvement work. This grab sample was taken from a 0.3 metre wide, drusy quartz vein with much limonite and hematite, minor pyrite and traces of chalcopyrite. The vein, which strikes east-west and dips 85° to the south, may represent a dilational feature oriented at about 45° to the main fracture trend. It returned values of 135 ppm Cu, 66 ppm Mo and 434 ppb Au.



Sample BB-01-02R was taken from a narrow pyrite-molybdenite-(chalcopyrite) vein within quartz diorite, in an old test pit located approximately 700 m southwest of the B.C. Hydro road. It returned values of 2,246 ppm Cu, 289 ppm Mo and 317 ppb Au.

None of the samples analyzed for Pt and Pd returned anomalous values.

Cu-Mo-Au results for the samples taken along the B.C. Hydro road are plotted on a compilation map on Figure 8 and the location of BB-01-02R within the Dude 3 claim is shown on Figures 4-6. Appendix 1 includes the analysis certificate and a description of the chemical procedure for testing the samples.

6.0 FUTURE EXPLORATION

6.1 Proposed Phase 1 Work Program

A proposed Phase 1 program, estimated to cost about \$120,000, consists of 600 m of excavator trenching and 50 line km of IP surveying. This proposed work is discussed in some detail in the two sections that follow.

6.1.1 Excavator Trenching

Two, 300 m-long excavator trenches, spaced approximately 300 m apart and oriented northwest-southeast, are proposed to test surface (bedrock) mineralization for the presence of gold-enriched, dilational fracture sets which may trend roughly north-south or east-west within the 600 m wide, northeasterly-trending, mineralized fracture zone. Proposed trench locations are shown in Figures 4 and 8.

The existence of one or more, gold-enriched fracture sets at Dude is inferred from the anomalous gold values obtained in samples BB-01-02R and 12R. At the nearby Long B prospect, located approximately 2.6 km southeast of the Dude porphyry prospect, gold and copper-bearing quartz veins and silicified structures within a weakly-developed Cu-Mo porphyry system are known to trend roughly north-south and east-west.

The southern trench will test the intersection area of two prominent, >200 ppm Cu-in-soil trends which may represent dilational fracture sets. The northern trench will test a 100 m² area of >400 ppm Cu for the presence of possible northerly-trending dilational fractures. As well, the latter trench will test for possible grade increases in copper and molybdenum within the main, northeasterly-trending fracture system in an area where there is poor bedrock exposure.

6.1.2 IP Survey

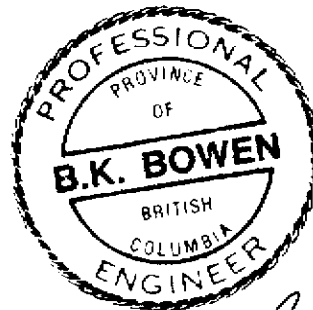
In any porphyry system, it is important, at an early stage, to fully delineate the extent of any associated sulphide system and to identify within it areas of lower chargeability which may represent chalcopyrite-enriched mineralized centers. Therefore, it is recommended that a new, 50 line-km IP survey be completed over a 6.25 km² area

centered roughly on Falconbridge's survey area, with extensions beyond their work biased somewhat to the northeast and southeast. Line spacing would be at 100 m and there should be sufficient electrode separation or "a" spacings along the survey lines to allow for various depth penetrations down to at least 300 m below surface.

The expanded survey in a southeasterly direction will cross the nearby B.C. Hydro Cheekye-Dunsmuir transmission line, which may result in a certain amount of survey "noise" in this portion of the survey area.

6.2 Proposed Phase 2 Diamond Drilling Program

As stated earlier, Falconbridge's drilling program represents an incomplete test of the porphyry potential of the Dude prospect. It is recommended that, contingent on the results of Phase 1 work, a Phase 2 diamond drilling program be carried out. It is proposed that four, 250 m deep, HQ-size inclined holes be drilled at an estimated cost of \$120,000. Collar locations, etc. would be defined upon evaluation of Phase 1 results. The HQ holes would maximize core recovery and provide a large sample for assay purposes. Both factors are important should it be established that a significant gold credit is present in the mineralized zones.



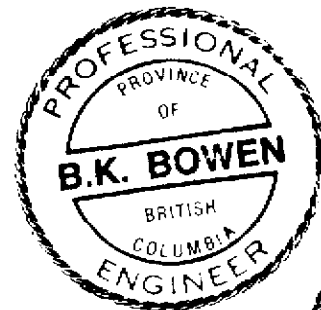
B.K. Bowen

7.0

COST STATEMENT

The cost for the work summarized in Section 4.5 is as follows:

	<u>\$CDN</u>	<u>\$CDN</u>
(1) <u>Wages:</u>		
B.K. Bowen, Geologist (July 5-8, 2001):		
- 4 days @ \$300/day	1,200	
Bob Duker, Prospector (July 5-6, 2001):		
- 2 days @ \$200/day	<u>400</u>	
Total wages:	1,600	1,600
(2) <u>Accommodation:</u>		
B.K. Bowen (July 5-8, 2001):		
- 4 days @ \$55/man-day	220	
Bob Duker (July 5-6, 2001):		
- 2 days @ \$55/man-day	<u>110</u>	
Total Accommodation:	330	330
(3) <u>Truck Rental (includes gas):</u>		
- 4 days @ \$100/day	400	400
(4) <u>Analyses:</u>		
Rock prep:		
- 10 samples @ \$4.75/sample	47.50	
Ultratrace ICP (w/ Pt + Pd):		
- 9 samples @ \$23.10/sample	207.90	
Ultratrace ICP:		
- 1 sample @ 20.50	<u>20.50</u>	
Total Analyses:	275.90	275.90
(5) <u>Report Cost:</u>		
B.K. Bowen (October 18-19, 2001):		
- 2 days @ \$300/day	600	<u>600</u>
TOTAL COST:		\$3205.90



B.K. Bowen

8.0**REFERENCES**

- Sarjeant, P.T
Morris, D.L. Geological and Geochemical Survey on the Angel Property
Assessment Report #18,671, Echo Bay Mines Ltd., March, 1989
- Shearer, J. Geochemical Report on the Long B Claims
Assessment Report #13,747, Caribou Gold Corp., May, 1985
- Shearer, J. Geochemical Report on the Long B Claims
Assessment Report #9,264, Carolin Mines Ltd., May, 1981
- Brennan, F.J. Prospecting Report on the Hernando #1 to #3 Claims
Assessment Report #10,065, F.J. Brennan, 1981
- Brennan, F.J. Diamond Drilling Report on the Hernando #1 to #3 Claims
Assessment Report #7,559, F.J. Brennan, September, 1979
- Wares, R. Mickle-Samuelson Option, Texada Island, B.C.
Internal report for Falconbridge Nickel Mines Ltd., April, 1971

9.0

STATEMENT OF QUALIFICATIONS

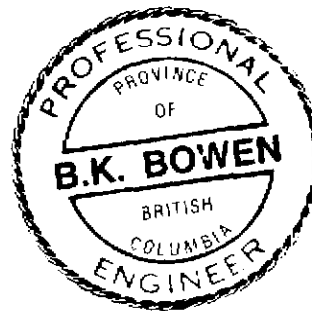
I, Brian K. Bowen, of Surrey, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Consulting Geological Engineer with an office at 12470 99A Avenue, Surrey, British Columbia, V3V 2R5, Telephone (604) 930-0177.
2. I am a graduate of the University of British Columbia with a degree of Bachelor of Applied Science in Geological Engineering, obtained in 1970. I have been practicing my profession continuously in Canada and elsewhere since graduation.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
4. This report is based on my personal knowledge of the property from on site examinations made during the period July 5-8, 2001 and from my review of all available information on the property.
5. I have no interests in Northstar Mining Ltd. nor in the property reported on herein, nor do I expect to receive any.

Dated at Surrey, British Columbia, this nineteenth day of October, 2001.

October 19, 2001
Surrey, B.C.
BKB/bb

B. K. Bowen, P. Eng.
Consulting Geologist



B. K. Bowen

APPENDIX 1

ACME ANALYTICAL LABORATORIES LTD.
ANALYTICAL CERTIFICATE
&
CHEMICAL PROCEDURES



GEOCHEMICAL ANALYSIS CERTIFICATE



Northstar Mines File # A102191

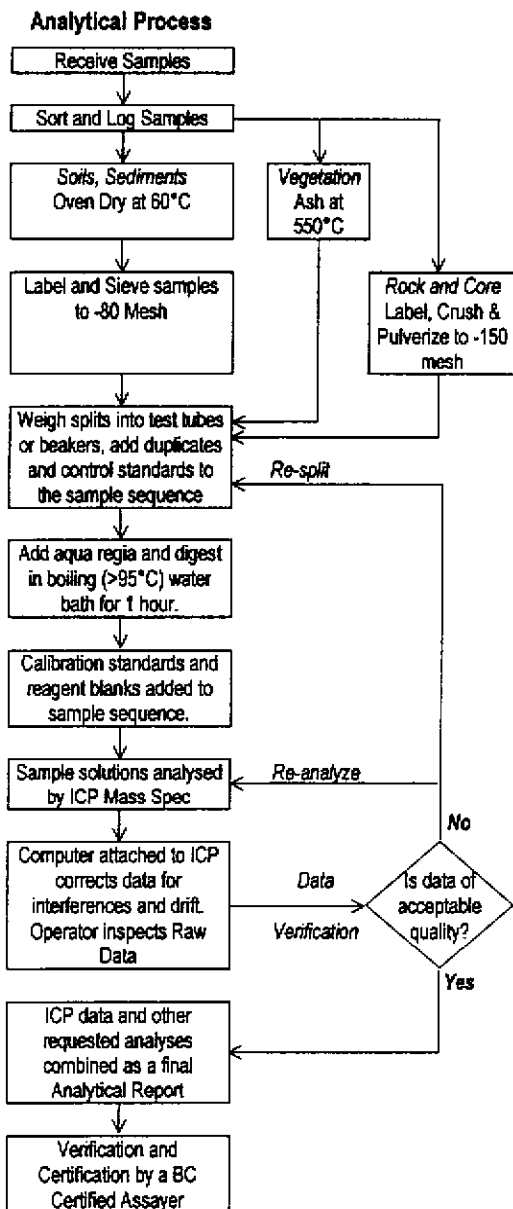
4520-B Franklin Ave, Powell River BC V8A 3E3 Submitted by: B.K. Bowen

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Tl	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Pd	Pt
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppb	ppb
BB-01-01R	4.46	317.21	59.84	77.1	223	8.4	6.1	314	2.60	1.3	1.0	4.3	2.7	124.7	.20	.31	.08	59	.53	.097	8.2	73.5	68	61.3	133	11.03	.106	.10	1.7	2.1	<.02	.63	99	6	.07	4.4	-	-	
<i>DUPLICATE PROPERTY</i> BB-01-02R	289.47	2246.02	100.64	70.9	5040	14.8	138.5	58	7.11	3.5	.4	316.6	1.5	36.9	.02	.71	1.30	54	.25	.044	9.0	49.0	.03	20.8	128	1	.33	.068	.13	1.9	9	.03	7.41	168	12.7	95	2.2	-	-
BB-01-03R	24.63	725.48	27.03	34.1	1807	8.0	40.3	201	8.46	4.2	.9	216.2	4.2	21.1	.09	.37	1.88	78	.22	.074	2.6	75.0	46	32.1	120	<1	.91	.054	22	30.4	3.3	.04	1.32	50	14.1	2.04	6.5	-	-
BB-01-04R	2.79	1215.48	26.91	702.0	7844	70.3	48.3	1643	5.88	44.2	<1	318.3	.4	75.5	6.39	.49	2.40	95	5.17	.077	2.6	120.2	1.80	48.7	.004	3	2.68	.014	.24	.3	8.9	.04	1.39	188	1.1	5.18	6.8	-	-
BB-01-05R	1.79	41.65	16.80	40.5	760	23.5	20.5	1223	5.22	15.5	<1	5181.6	.1	177.5	.45	.29	.03	91	9.80	.028	2.8	78.8	2.41	6.5	<.001	1	1.32	.013	.04	.9	5.5	<.02	1.83	40	2.1	.09	4.1	-	-
<i>DUPLICATE PROPERTY</i> BB-01-06R	34.15	164.04	23.51	66.2	97	7.4	7.8	521	2.59	.7	.6	12.2	1.9	221.9	.11	.10	.03	80	.57	.096	7.6	50.2	.82	112.1	.156	1	1.48	.087	.32	.7	2.4	.10	.02	39	1	.06	6.0	<10	<2
BB-01-07R	232.57	1006.01	10.48	62.2	947	10.5	15.1	536	3.42	1.8	8	15.9	2.6	343.2	<.01	.20	.27	84	.53	.092	5.7	57.6	1.29	208.2	.156	<1	1.85	.063	.22	1.2	3.9	.06	54	17	2.5	.18	6.9	<10	<2
BB-01-08R	41.17	359.19	24.03	111.4	453	8.1	9.0	974	2.86	1.9	.8	8.1	2.9	30.7	.11	.31	.32	72	.50	.099	6.2	59.2	1.31	28.4	.150	2	1.57	.061	.07	1.0	3.2	<.02	.33	27	1.2	.06	5.7	<10	<2
RE BB-01-08R	42.08	365.38	26.22	114.4	499	8.6	9.1	1002	2.92	2.1	8	7.1	3.1	33.9	.09	.33	.34	71	.50	.111	6.8	62.7	1.36	27.4	.144	1	1.58	.059	.07	1.1	3.9	<.02	.32	25	1.3	.07	5.9	<10	<2
BB-01-09R	954.11	647.65	12.58	55.6	700	8.1	7.9	473	3.08	1.6	1.3	11.9	3.5	121.0	<.01	.22	.31	64	.40	.094	6.3	59.7	.97	54.7	.127	1	1.28	.051	.11	1.2	2.7	.02	.64	22	2.1	.08	4.9	<10	<2
BB-01-10R	10.60	41.01	15.32	37.5	49	5.3	6.1	314	2.39	1.0	.6	3.0	2.4	225.6	.07	.20	.02	68	.71	.094	8.3	44.6	.44	83.5	.110	1	1.21	.092	.11	.8	1.5	<.02	<.01	31	.3	.04	4.5	<10	<2
BB-01-11R	9.96	155.63	12.45	32.2	110	6.8	4.7	297	2.43	1.7	.9	3.6	2.7	46.9	.06	.21	.09	58	.51	.093	8.6	55.5	.58	33.6	.113	2	.98	.076	.08	1.3	1.3	<.02	.10	27	.7	.05	4.1	<10	<2
BB-01-12R	65.61	135.11	19.22	15.7	1284	3.4	4.0	62	2.07	2.8	.2	434.3	.1	3.4	<.01	.64	6.27	6	.01	.006	6	102.4	.03	5.8	.008	<1	.13	.004	.06	4.8	.4	<.02	.16	89	2.9	3.91	.5	<10	<2
BB-01-13R	7.48	406.18	9.42	41.2	335	7.4	7.5	372	2.92	2.0	.9	12.8	2.5	103.1	.07	.20	.33	61	.41	.097	7.1	54.0	.83	61.7	.124	1	1.15	.065	.11	1.4	2.5	<.02	.58	23	9	1.3	5.1	<10	<2
RE BB-01-13R	7.87	404.27	10.18	43.0	361	7.9	7.7	365	2.91	1.9	.9	14.3	2.6	110.8	.05	.21	.36	62	.42	.099	7.8	56.4	.83	59.9	.118	1	1.14	.077	.11	1.5	2.5	<.02	.62	22	9	.14	5.4	<10	<2
BB-01-14R	4.57	102.19	7.39	50.4	75	7.0	7.5	572	2.63	1.1	.7	2.4	2.9	33.4	.03	.08	.25	68	.38	.096	7.5	57.7	.89	38.7	.097	1	1.15	.059	.10	1.8	2.6	<.02	.03	13	.2	.08	4.5	<10	<2
BB-01-15R	.59	134.71	2.94	69.5	42	79.3	48.1	1434	8.19	.9	<.1	3.7	.3	73.0	.09	.12	<.02	195	5.86	.046	6.1	115.0	4.25	9.3	<.001	2	3.30	.042	.03	<.2	13.1	<.02	<.01	38	2	.02	10.4	-	-
BB-01-16R	2.36	239.85	9.72	30.3	145	35.7	20.7	970	3.58	1.2	<.1	1.7	<.1	73.3	.08	.10	<.02	42	7.06	.009	1.2	86.1	2.72	1.7	<.001	<1	.54	.004	<.01	1.1	3.2	<.02	.01	22	3	.02	1.5	-	-
BB-01-17R	1.20	21.55	3.97	114.1	42	3.3	19.9	1211	4.79	36.0	.1	4.0	.8	47.2	.16	.50	.07	62	4.08	.099	3.8	8.4	1.56	44.1	.002	6	1.40	.040	.19	<.2	6.5	.03	.52	32	1	.06	4.7	-	-
BB-01-18R	.96	1066.50	10.76	49.7	437	76.1	23.8	644	6.29	4.4	<.1	42.7	.2	59.7	.24	1.81	.04	173	2.19	.063	1.2	180.2	.81	5.3	.359	2	1.09	.055	.01	.5	6.4	<.02	.06	103	.6	.18	5.2	-	-
BB-01-19R	2.13	20.71	7.00	44.5	16	43.9	15.1	1116	2.84	1.2	<.1	.8	.1	9.3	.16	.18	<.02	86	.50	.024	1.3	154.9	1.20	10.1	.013	<1	1.54	.019	.01	6	6.9	<.02	<.01	11	<.1	<.02	5.2	-	-
BB-01-20R	7.74	1058.02	6.12	42.4	577	49.5	53.5	385	7.02	28.1	<.1	207.0	.1	24.8	.09	.85	2.79	118	.83	.025	.6	122.0	1.18	52.7	.123	1	1.98	.092	.38	1.8	7.1	22	5.47	9	2.2	2.41	7.3	<10	<2
STANDARD DS3	9.06	125.00	35.40	155.4	296	37.2	12.5	836	3.19	29.7	6.2	21.8	4.2	31.5	5.80	5.52	5.53	81	.55	.095	17.9	197.4	.61	147.4	.103	1	1.79	.030	.18	3.9	3.1	1.00	.01	239	1.1	1.01	6.4	<10	<2

GROUP 1F30 - 30.00 GM SAMPLE, 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML, ANALYSIS BY ICP/ES & MS.
UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 16 2001 DATE REPORT MAILED: *July 25/01* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1F-MS – ULTRATRACE BY ICP-MS • AQUA REGIA



Comments

Sample Collection

Samples may consist of soil, sediment, plant or rock. A minimum field sample weight of 200 gm is recommended.

Sample Preparation

Soils and sediments are dried (60°C) and sieved to -80 mesh (-177 microns). Moss-mat samples are dried (60°C), pounded to loosen trapped sediment, then sieved to -80 mesh. Rocks are dried (60°C) crushed (>75% -10 mesh) and pulverized (>95% -150 mesh). Splits weighing 1 to 30 g (Optional packages) are placed in bottles. Each batch (34 samples) contains a duplicate pulp split for monitoring precision and reference material DS2 for monitoring accuracy.

Sample Digestion

Aqua Regia is added to each bottle (3mL/gm of sample). Aqua Regia is a 2:2:2 mixture of ACS grade concentrated HCl, concentrated HNO₃ and distilled H₂O. Sample solutions are heated for 1 hr in a boiling hot water bath (95°C). The solutions are then diluted to 20:1 mL/gm ratio. A reagent blank is carried in parallel through leaching and analysis.

Sample Analysis

Analysis is by an Elan 6000 ICP Mass Spec for the determination of 37 elements comprising: Au, Ag, Al, As, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sr, Te, Th, Ti, Tl, U, V, W and Zn. Extended element packages containing incompatible elements (Hf, Nb, etc.) and REEs are available. Sample volumes of 10 to 30 gm are recommended when the determination of Au or other elements subject to the nugget effect are of importance.

Data Evaluation

Raw data are reviewed by the instrument operator and by the laboratory information management system. The data is subsequently reviewed and adjusted by the Data Verification Technician. Finally all documents and data undergo a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.