LOG NO: 11-22 RD.
ACTION:

FILE NO:

ASSESSMENT REPORT

GEOLOGICAL/GEOCHEMICAL AND GEOPHYSICAL SURVEY

ON THE

COQUIHALLA GROUP OF CLAIMS

N.T.S. 92H/11

New Westminster and Similkameen

Latitude 49°31.5' Longitude 121°03'

UTM 5487000 m N 642000 m E

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VANCOUVER, B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

L.R. Erdman (Project Geologist)
Noranda Exploration Company, Limited (no personal liability)

November, 1990

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INTRODUCTION

The Christa mineral claims were located by Noranda Exploration Company, Limited (n.p.l.) in October 1988 to cover an area underlain by rocks of the Coquihalla Tertiary Volcanic Complex. The claims are located in the New Westminster and Similkameen Mining Divisions, and are comprised of 5 modified grid claims totalling 92 units (Figure 1). In July 1989 the claims were grouped as the Coquihalla Group. Claim information is given in Table 1 below.

TABLE 1 CLAIM STATUS

Claim Name	Record No	Mining Div.	Units	Date Recorded
Christa 1	3233	Similkameen	20	Oct. 2, 1988
Christa 2	3234	Similkameen	20	Oct. 3, 1988
Christa 3	3235	Similkameen	12	Oct. 2, 1988
Christa 4	3236	Similkameen	20	Oct. 2, 1988
Christa 5	3461	New Westminster	20	Oct. 3, 1988

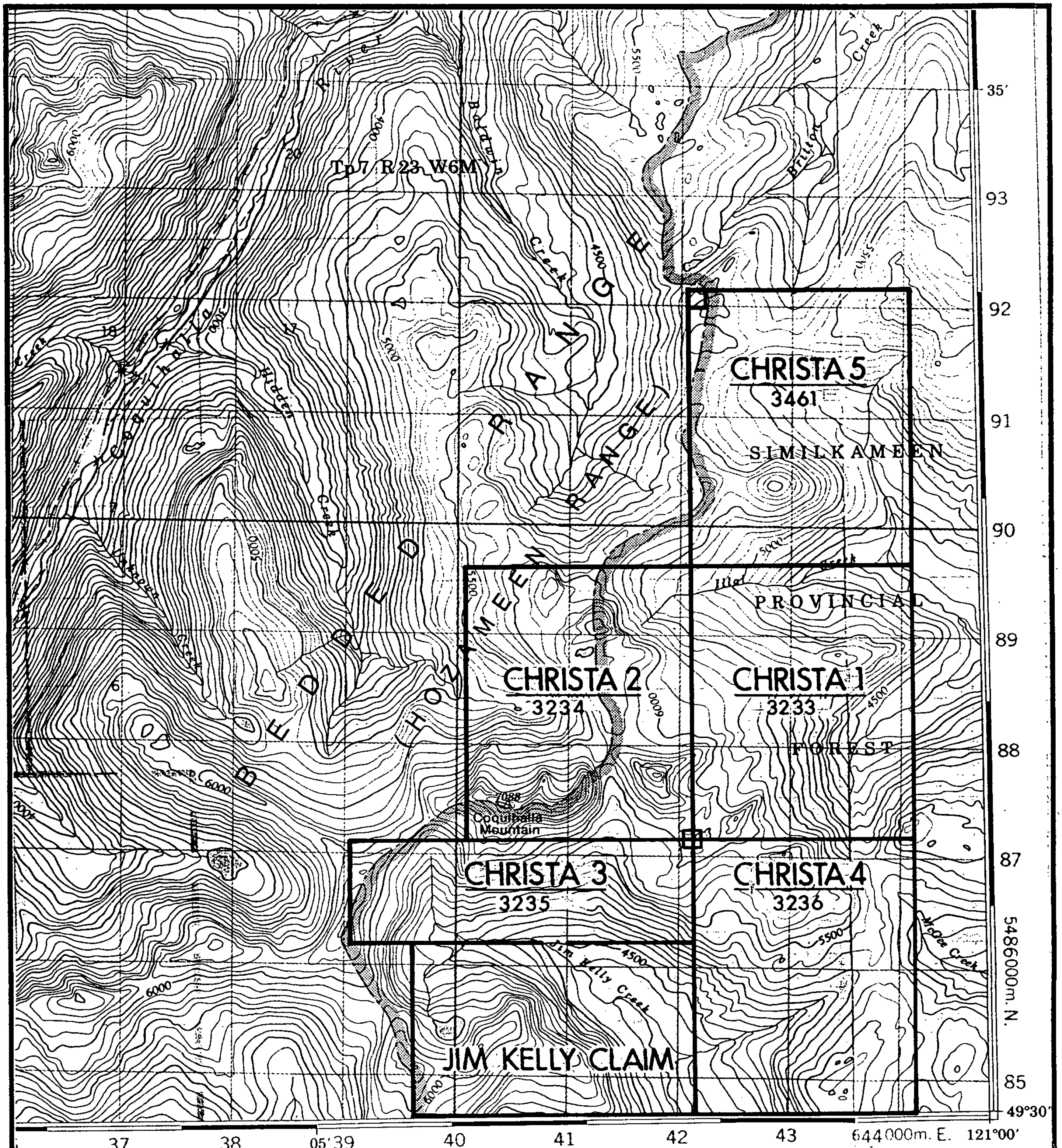
The work outlined in this report has been applied to the Christa 1 to Christa 4 claims only. Upon acceptance of this document the claims will be in good standing until October, 1995.

LOCATION AND ACCESS

The Coquihalla Group is located approximately 40 km northeast of Hope, B.C., 11 km east of the Coquihalla Highway (Figure 2). There are no roads onto the property, consequently access is by helicopter from Hope, an 80 minute round trip.

Relief is 880 m, from 1280 m at Jim Kelly Creek, to 2160 m on the peak of Coquihalla Mt. Vegetation is alpine to sub-alpine at elevations above 1615 m, and is conifer forest at lower elevations.

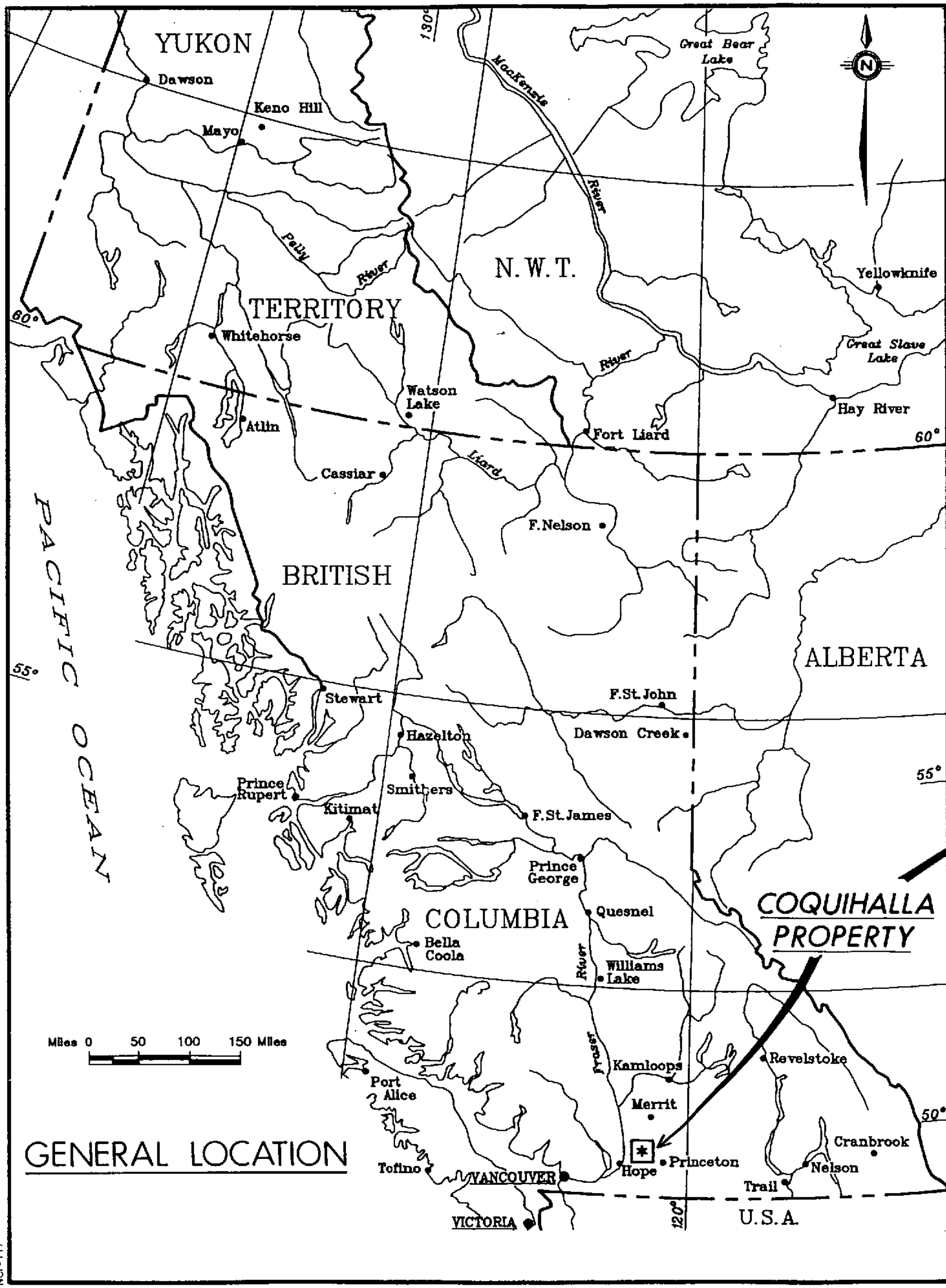
A campsite was established adjacent to 2 small lakes on Christa 4. This location is at grid co-ordinates 26+30N and 41+50E.

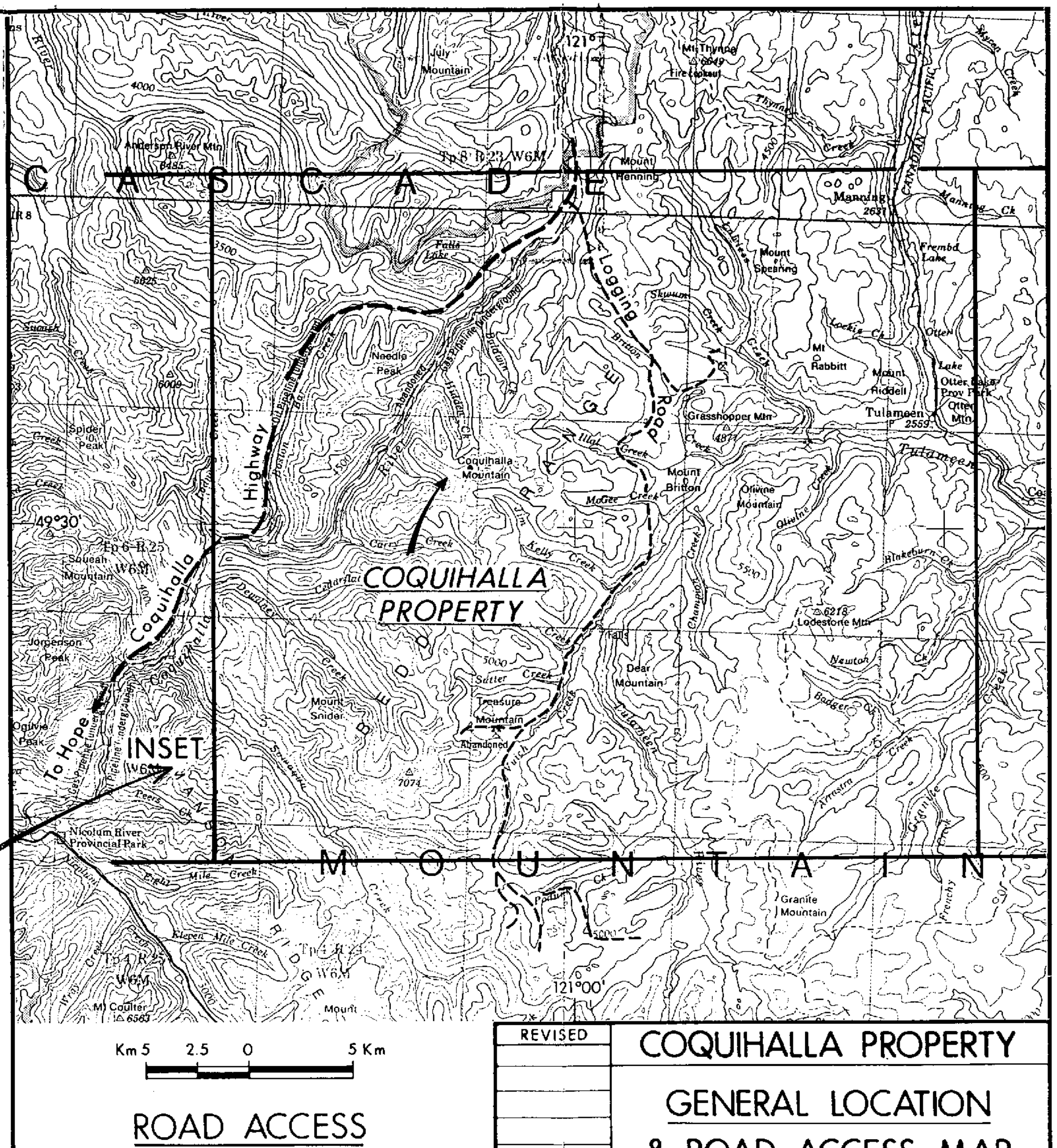


Metres 1000 0 1000 Metres

REVISED	COQUIHALLA PROPERTY
	CLAIM LOCATION
PROJ. No. 116 N.T.S. 92H/11	SURVEY BY: L. E. DATE: Nov. 1990 DRAWN BY: J. S. SCALE: 1:50000
DWG. No. 1	NORANDA EXPLORATION OFFICE: VANCOUVER

NCI-774





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REVISED	COQUIHALLA PROPERTY
	GENERAL LOCATION & ROAD ACCESS MAP
PROJ. No. 116	SURVEY BY: L. Erdman — DATE: Nov. 1990
N.T.S. 92H/11	DRAWN BY: J. Serwin — SCALE:
DWG. No. 2	NORANDA EXPLORATION — OFFICE: VANCOUVER

NCI-777

P.J.A.

PREVIOUS WORK

Prior to staking the Christa claims, the majority of work in this area was concentrated in the valley of Jim Kelly Creek.

Earliest reports are of gold-bearing quartz veins in the upper reaches of Jim Kelly Creek. These were being worked for gold in 1914 (BCDMAR 1914 p. K232).

The area experienced a second period of activity in 1937 when gold and silver-bearing quartz veins were worked with open cuts and short adits (BCDMAR 1937 p. D21). The exact locations of these quartz veins, and of those worked in 1914 is not given in contemporary descriptions.

In 1966 a considerable amount of work was done on the south side of Jim Kelly Creek by Bethex Exploration Limited. Bethex excavated 32 trenches totalling over 5,486 m in length and drilled 863 m in 5 holes (BCDMAR 1966 p.174). The objective at the time appears to have been copper in a porphyry-type situation. Samples were assayed for copper and molybdenum but not for gold or silver. Assays for these samples are not available.

In November 1981 to February 1982, Mine Quest Exploration Associates Ltd. staked 13 claims on behalf of Clifton Resources Ltd. The claims straddled Jim Kelly Creek on the southeast side of Coquihalla Mountain.

Five contour soil lines between 4500 m and 5500 m were put in around the Jim Kelly Creek basin. Seven hundred-twenty soils were collected along these lines. Of the 5 lines soiled, 1 line proved anomalous on it's east half in Au and Ag. Rock chip samples along this line had uniformly low Au values (AR 10,868).

The exploration programme also consisted of prospecting and geological examination. In particular, attempts were made to find the gold-bearing locations which are described in BCMAR in 1914 and 1937. This was unsuccessful.

In 1985, a follow-up sampling programme hoped to extend the anomalous zone of gold values to the southeast across the Tertiary Volcanic/Eagle Granodiorite contact. Because of snow conditions, sampling had to take place at the 1330 m level (below the treeline) and none of the collected samples were anomalous. It was thought that the 1982 samples were collected closer to the source or in an area of thinner overburden, than those collected from forest soil (AR 14,362).

A short recce programme targeting the Tertiary Coquihalla Volcanic Complex was implemented by Noranda Exploration during the 1988 summer field season. Grab samples from several outcrops were collected, and returned weakly to highly anomalous gold values. The two most interesting gold anomalies came from an outcrop of quartz breccia exposed on a south facing hillside. On grab sample contained 3315 ppb Au/35.9 ppm Ag and the other had 1540 ppb Au/13.4 ppm Ag. Based on these results the Christa claims were staked in October 1988.

From August 6 to August 27, 1989 Noranda Exploration Company, Limited completed a work programme of gridding, soiling, rock geochemistry, geophysics, petrography and geologic mapping. In total 11.6 line km of grid were established, 420 soils were collected, 172 rocks were analyzed, 7.8 km of ground magnetometer work was completed, and a preliminary geologic map was produced (Erdman, 1989).

Sixty-three continuous 1.5 m chip samples from the anomalous outcrop of quartz breccia returned consistently anomalous levels of Au and Ag. The average over 76 m was 514 ppb Au and 5.4 ppm Ag, including a 13.5 m section of 1034 ppb Au and 9.6 ppm Ag. Soil geochemistry defined a 400 m long linear trend of weakly anomalous gold values, located south and sub-parallel to the quartz breccia outcrop.

REGIONAL GEOLOGY

The Coquihalla Volcanic Complex occurs in the northern part of the Cascade Mountains; near the physiographic boundaries with the Coast Mountains on the west and the Interior Plateau on the east. The eastern boundary roughly corresponds to the tectonic division between the Coast Plutonic Complex and the Intermontane Belt.

The Tertiary Volcanic Complex lies unconformably on the Cretaceous Eagle plutonic complex on all sides except to the southwest, where it is in fault contact with Eocene clastic rocks (Grieg, 1988) (Figure 3). The Volcanic Complex covers approximately 30 km^2 and is exposed at elevations between 840 m and 2160 m. It is composed of calc-alkaline acid to intermediate extrusive and intrusive rocks. Avalanche breccias and minor amounts of epiclastic conglomerate and sandstone are also present.

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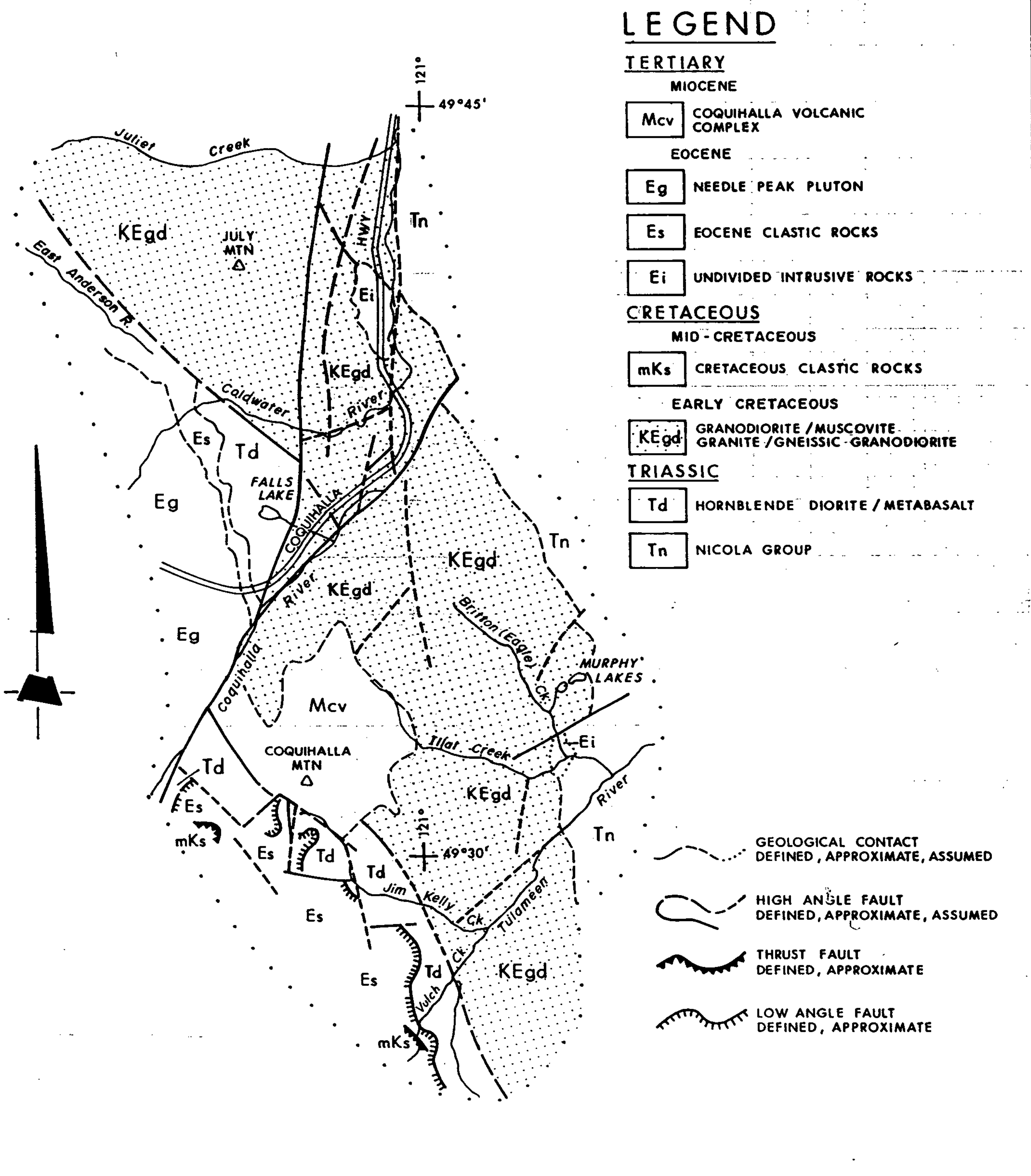

Km 5 0 5 Km

Regional Geology (from Greig, 1988)

REVISED	COQUIHALLA PROPERTY
	REGIONAL GEOLOGY
PROJ. No. 116	SURVEY BY: L. Erdman DATE: Nov. 1990
N.T.S. 92H/11	DRAWN BY: J. Serwin SCALE:
DWG. No. 3	NORANDA EXPLORATION OFFICE: VANCOUVER

NCI - 774

The Eagle plutonic complex is a large body of gneissic granodiorite, muscovite granite and heterogeneous gneiss (Grieg, 1988). It is the southern part of the Mount-Lytton Eagle Complex, an elongate north northwest trending plutonic complex that has a length of for 200 km.

PROPERTY GEOLOGY

The area covered by the Coquihalla Group of claims is primarily underlain by rocks of the Tertiary Coquihalla Volcanic Complex. These were mapped in detail by Berman (1979) and by Erdman (1989). Rocks of the Eagle Granodiorite are exposed in outcrop in the southern part of the Christa 4 claim (Figure 4).

The Tertiary igneous rocks are sub-divided into 7 map units based on textural and mineralogical properties. Two of the 7 members are extrusive, the remaining 5 are all intrusive, emplaced with the extrusive members.

An acidic pyroclastic tuff has the greatest aerial extent and is present throughout most of the claim block. Intrusive into this are a flow banded rhyolite (possibly a remnant of a rhyolite dome), a dioritic to quartz dioritic stock, pyroxene and hornblende andesites, and a hornblende dacite. The andesite and dacite members take the form of dykes, sills and domes. The youngest extrusive has a limited extent, and is identified by Berman (1979) as an explosion breccia.

The eighth member of the Tertiary Coquihalla Volcanic Complex is an avalanche breccia, formed by large scale avalanching into the subsiding Coquihalla basin (Berman, 1979). This unit is similar to breccias described by Lambert (1974) at the Bennett Lake Caldera Complex.

WORK OBJECTIVE

The 1990 field programme was designed to map in detail the geology adjacent to the anomalous outcrop of quartz breccia, and to assess the potential for additional mineralization eastward from the known mineralization.

Field work commenced on August 2, 1990 and was completed on August 18, 1990. A total of 3 to 5 persons were present for the duration of the work period.

GRID PREPARATION

The grid emplaced in 1989 was expanded 600 metres to the east with the base line positioned at 24+00N and oriented at 068°. Cross lines are oriented at right angles to the base line and spaced 100 metres apart. These are numbered 44+10E to 50+00E. In addition 3 intermediate lines were located on the 1989 grid so that positions of outcrops could be located with greater accuracy. These are numbered 41+50E, 42+40E, and 43+10E.

On each line stations were established at 25 metre intervals and marked with blue and orange flagging tape. The corresponding grid location was written on the tape with a felt marking pen. The line itself was marked with orange flagging only, either tied to branches of trees, or tied to pickets in areas of sparse vegetation.

A total of 11.2 line kilometres of grid was emplaced during the 1990 field programme.

DETAILED GEOLOGY

A detailed geologic map of the area surrounding the anomalous (Au-Ag) outcrop of quartz breccia subdivided the Eagle Plutonic Complex into 2 distinct lithologies, and separated a bordering brecciated phase sub-parallel to the contact with the overlying volcanic tuff (Figure 5).

The outcrop of quartz breccia is hosted by a muscovite rich granite. This commonly has biotite as well as muscovite, but muscovite is more abundant, and locally is the only mica present. The micas have a random orientation, thus the rock exhibits no foliation. In general grain size varies from fine (aplitic), to medium, but a pegmatitic phase is present locally, occurring most often within outcrops of gneiss (described below).

The gneiss is characterized by it's dark colour, heterogeneous nature, and conspicuous layering. Well layered gneiss is interlayered with rare amphibolite, and light coloured boudins. The gneiss is comprised of centimetre scale discontinuous layers of feldspar-quartz, alternating with narrower layers rich in hornblende-biotite. Locally small folds are observed, but adjacent outcrops may exhibit no deformation. Pegmatites of muscovite

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granite intrude the gneiss both parallel to, and cross cutting the layering.

The contact between the muscovite granite and gneiss complex is not well defined in the field due to lack of outcrop. It was decided that the most eastern outcrops of gneiss established the position of the contact, despite the fact that outcrops of non-pegmatitic muscovite granite do appear west of this line. According to Greig (1988) the muscovite bearing granite is the youngest phase within the Eagle Plutonic Complex and has mixed intrusive relationships at it's contact with the older intrusive phases.

At the contact with the overlying volcanic tuff these 2 phases of the Eagle Complex show a breccia texture. These breccias have angular to subangular, monolithologic, tightly packed fragments within a matrix of the same lithologic material, making it difficult to distinguish the brecciation without careful observation. The zone of brecciation lies adjacent and parallel to the contact with the overlying tuff, and varies from 30 m to 125 m in width. It appears to continue to the southwest beyond the limit of mapping, but dies out towards the east, away from the plutonic-volcanic contact. Difficult access to the north trending plutonic-volcanic contact prevented mapping of this breccia zone at this location.

Close to the southern extent of the detailed mapping are numerous outcrops of a magnetic feldspar porphyritic mafic dyke, trending approximately 070°. These outcrops indicate a dyke thickness of 1-3 m. As outcrops are not continuous along strike it could not be ascertained as to whether these represent a single faulted dyke, or if they are a series of sub-parallel dykes. Further to the east the dyke becomes much thicker and the trend changes to 010°. Several narrower dykes of the same rock type occur throughout the remainder of the mapped grid and cut through all of the mapped units. At one location, on Line 44+10E, a dyke is observed cutting through an outcrop of quartz breccia.

The anomalous quartz breccia outcrop, located on Line 42+40E, forms a cliff 3 m to 7 m in height, oriented at 024/25°. Most of the outcrop is comprised of clear to milky quartz fragments in a siliceous matrix. However, minor portions of the outcrop do not exhibit breccia textures. At these locations the rock is a highly silicified-sericitized host containing a quartz stockwork. This latter rock type is gradational into the breccia. In the brecciated portions of the outcrop fragments are angular to subrounded and vary from a few mm to 30 cm in size. In general the larger fragments are less angular than the smaller fragments. The breccia is poorly sorted with fragment density ranging from 50% to 80%. Locally thin (>5 mm) quartz veins are present cutting through both the fragments and matrix, in other locations veins are present within the fragments only. Thicker milky white quartz veins cut across the thinner clear quartz veins indicating at least 2 generations of quartz veining. There are no visible sulfides, but the outcrop is variably coloured white to orange. The orange tint is not a surface coating, but is pervasive throughout the breccia.

Mapping this year found several smaller outcrops of similar quartz breccia, both to the southwest and northeast along strike, as well as higher in elevation. All of these have similar strikes and dips, suggesting a series of stacked sub-parallel quartz veins, with a possible strike length of 335 m.

SOIL GEOCHEMISTRY

A total of 202 soil samples were collected from the grid established in 1990. If possible the samples were collected from the B soil horizon at a depth of 15 cm to 25 cm. However, many of the soils were collected from an immature soil horizon developed on extremely steep (37°), sparsely vegetated, south facing slopes.

All of the soil samples were analyzed by the Noranda Vancouver Laboratory by ICP for 27 elements, and by AA for Au (Appendix 1).

With the exception of one sample, results for Au and Ag are not anomalous (Appendix 3). Gold values are consistently 5 ppb Au or less (Figure 6), and Ag is generally 0.8 ppm or less, with two samples having 1.0 ppm Ag, and one sample having 2.0 ppm Ag. Barium levels are generally high, consistent with the previous year's observation that soils developed over Eagle granodiorite contain greater amounts of barium than those developed over volcanics (Figure 7).

ROCK GEOCHEMISTRY

Twelve rock samples were collected from outcrops not sampled in previous years (Appendix 2, Figures 4 and 5). All of the samples were either of quartz vein, quartz breccia or silicified muscovite granite. Only one of the samples, R120921, contained sulfides, as 5% to 10% very fine grain disseminated pyrite. Three of the rocks contained from 3.6 ppm to 12.8 ppm Ag, and the latter silver anomalous sample, also had a low level Au anomaly, 156 ppb Au. This sample comes from a small outcrop on Line 41+50E Station 23+74N, 105 m southwest of the anomalous cliff of quartz breccia. The remaining 11 samples are not anomalous in gold although 2 of the 11 have very weak elevations of Au relative to background: 22 ppb Au and 11 ppb Au.

GEOPHYSICS

During August, 1990, geophysical surveys consisting of Total Field Magnetics, and time - domain Induced Polarization were carried out on the Coquihalla Property. The purpose of the surveys was to aid in mapping of the local geology as well as the delineation of potential economic mineral deposits.

The 1990 magnetic survey was carried out on an extension of the grid established in 1989 on which a Total Field Magnetics survey was carried out. The I.P. survey was carried out on parts of the 1989 and 1990 grids.

All surveys were carried out by Noranda personnel in both years. Only the work completed in 1990 has been applied to this year's assessment.

INSTRUMENTATION

Magnetometer System

The 1989 magnetometer survey utilized EDA Omni4 magnetometers with readings corrected for diurnal drift by the use of a recording magnetic base station. The EDA system records the Total Magnetic Field with an accuracy of within 1 nanoTesla. Readings were taken every 12.5 m. along the survey lines. The 1989 survey covered Lines 3100E to 4350E inclusive. The 1990 survey covered Lines 4410E to 5000E inclusive and utilized the Scintrex MP4 magnetometer system which also corrected readings for diurnal drift with a recording base station. Readings were also taken at 12.5 m. stations.

Induced Polarization Survey

The time - domain I.P. survey utilized a Phoenix IPT-1 transmitter powered by a Phoenix MG-1 motor generator capable of producing 1.2 kW of power. The receiver unit was a BRGM IP6 capable of simultaneously measuring 6 dipoles. The transmitted signal had a period of 8 seconds, 50% duty. The double dipole electrode array was used with a dipole spacing of 25 m. with n=1 to n=6 being recorded. Chargeability was measured in units of mV/V.

DISCUSSION OF GEOPHYSICAL RESULTS

Total Field Magnetics

The data sets from 1989 and 1990 were levelled and merged and are presented at a 1:2500 scale in both profile and contour plan form (Figures 8 and 9).

The 1989 results showed dominant intense E - W linear features labelled A to E and these were interpreted to represent andesitic dykes since they closely matched outcropping locations of this rock. Dyke E continues onto the 1990 grid and strikes roughly N - S and is cut by a major interpreted break. Other major dykes are labelled F, G (Figure 9).

Quiet magnetic areas appear at two areas of the grid: 1)Lines 3600E - 3800E/2475N - 2550N, 2)the area centred roughly at L.4350E/2400N. These two areas are separated by interpreted dyke and fault features. This quiet magnetic terrain is interpreted to represent the muscovite granite unit.

The third magnetic unit found elsewhere on the grid possesses moderate magnetic susceptibility and could represent mapped breccia units.

Two major faults, labelled 1 and 2, cross-cut the grid with other faults running sub-parallel to the dyke features.

Induced Polarization

Three anomalous chargeability zones have been outlined and are as shown on the magnetic contour map (Figure 9). Pseudo-section profiles of each line are also presented at a 1:2500 scale (Figures 10 to 14).

Zone 2 is significant in that it contains a strong response at L.4240E/2450N that is closely associated with a nearby known mineralized showing. I.P. appears to have traced the response over a length of 260 m although to the west it weakens and appears to be cut off by cross-cutting faults. The strongest response of Zone 2 occurs at L.4410E/2487.5N at a depth of 10 m. and appears depth limited. Judging from the resistivity contrast and magnetics, the chargeability source lies at the contact between andesitic dykes and muscovite granite.

Zone 1 appears as quite an attractive target because of its strong response at L.4150E/2275N. The source here appears at surface with an interpreted width of 75 m. It appears thicker than the Zone 2 response at L.4410E/2487.5N.

It is interesting to note that most of the I.P. responses occur within the muscovite granite unit at the edge of the dykes. Dykes are not the source of mineralization but may be indicative of zones of weakness favourable for occurrence of mineralization.

GEOPHYSICAL CONCLUSIONS

Geophysical surveys have located favourable targets to test for the occurrence of economic mineralization.

Targets deserving merit for further investigation are:

1) L.4150E/2275N/depth=10 m. Depth limited.

2) L.4410E/2487.5N/depth=10 m. Thinner than above target.

3) L.4240E/2450N/depth=10m. Closely associated with known showing within a possible mineralized zone of strike length of at least 260m.

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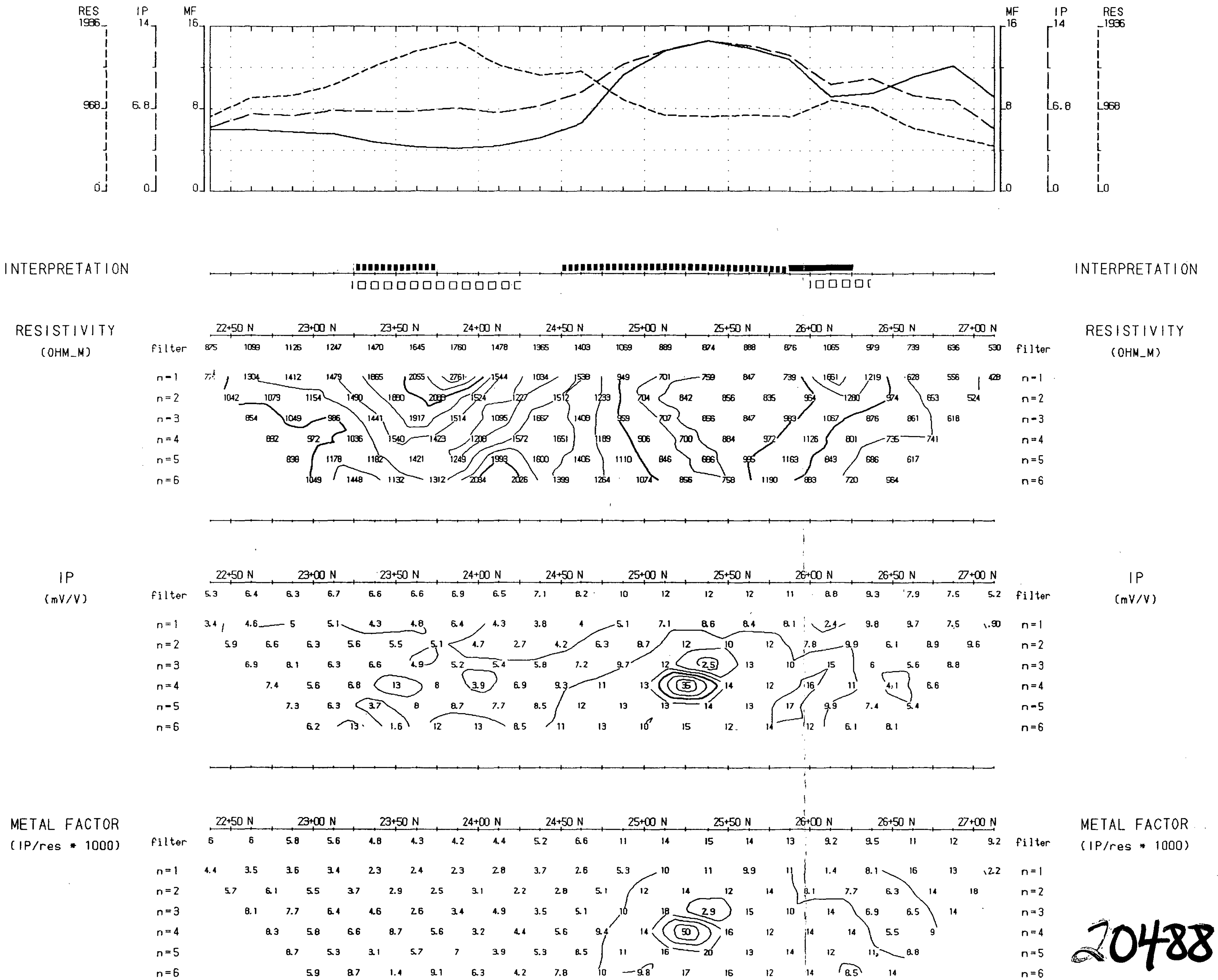
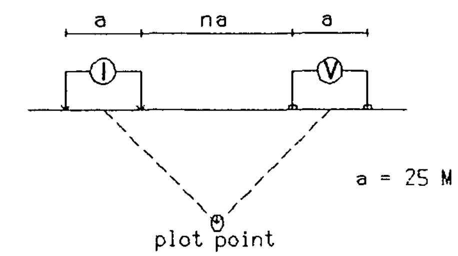


Line 3900 E

Dipole-Dipole Array



Filter

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Pronounced resistivity increase
- Pronounced resistivity decrease

Scale 1:2500

25 0 25 50 75 100 125 (metres)

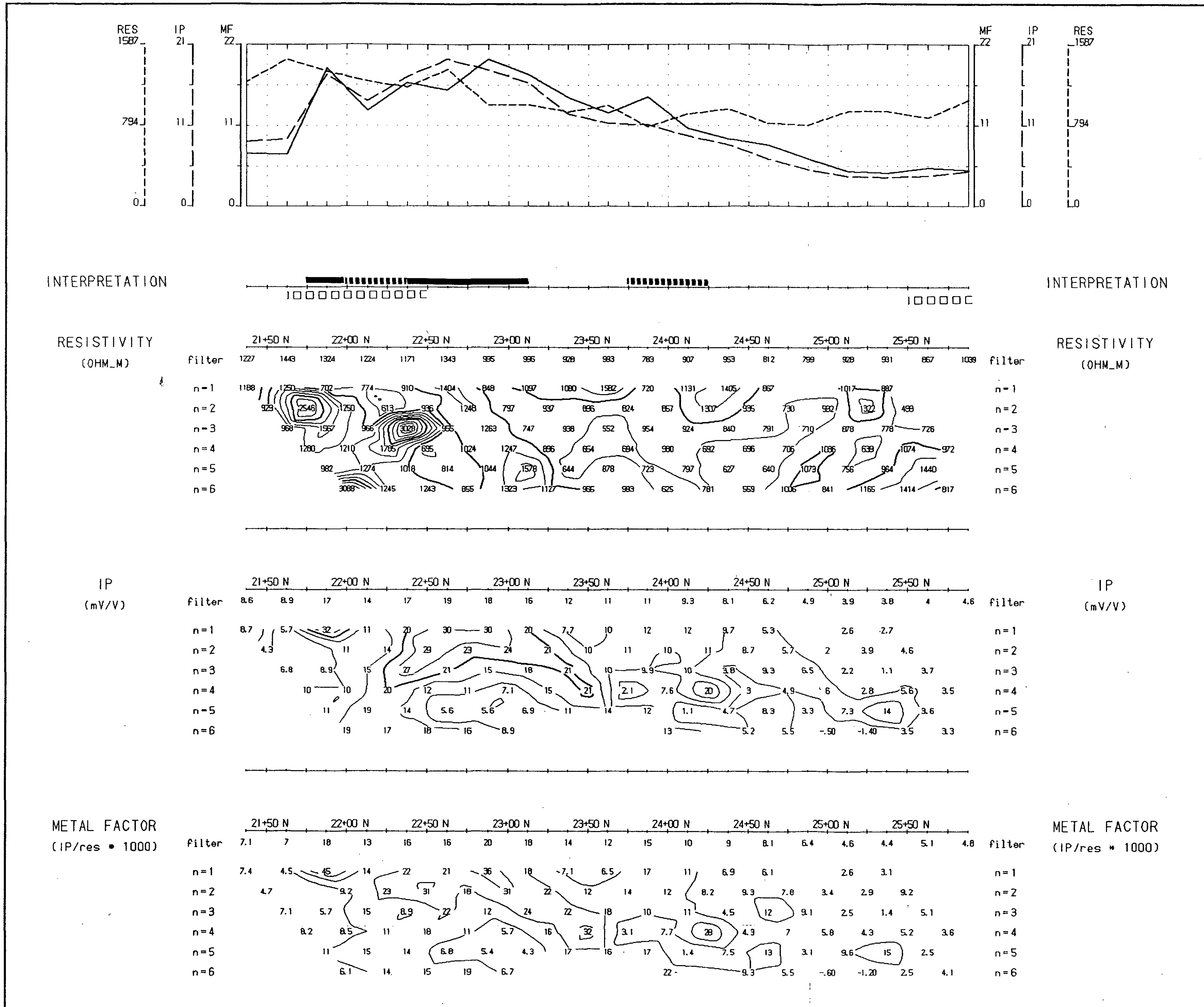
FIGURE 10

COQUIHALLA MTN.

INDUCED POLARIZATION SURVEY
Line 3900 E
Project 116

Date: 90/11/01
Interpretation by: R. Sharpe

noranda



Line 4150 E

Dipole-Dipole Array

a = 25 M

plot point

Filter

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

Strong increase in polarization

Moderate increase in polarization

Pronounced resistivity increase

Pronounced resistivity decrease

Scale 1:2500

25 0 25 50 75 100 125 (metres)

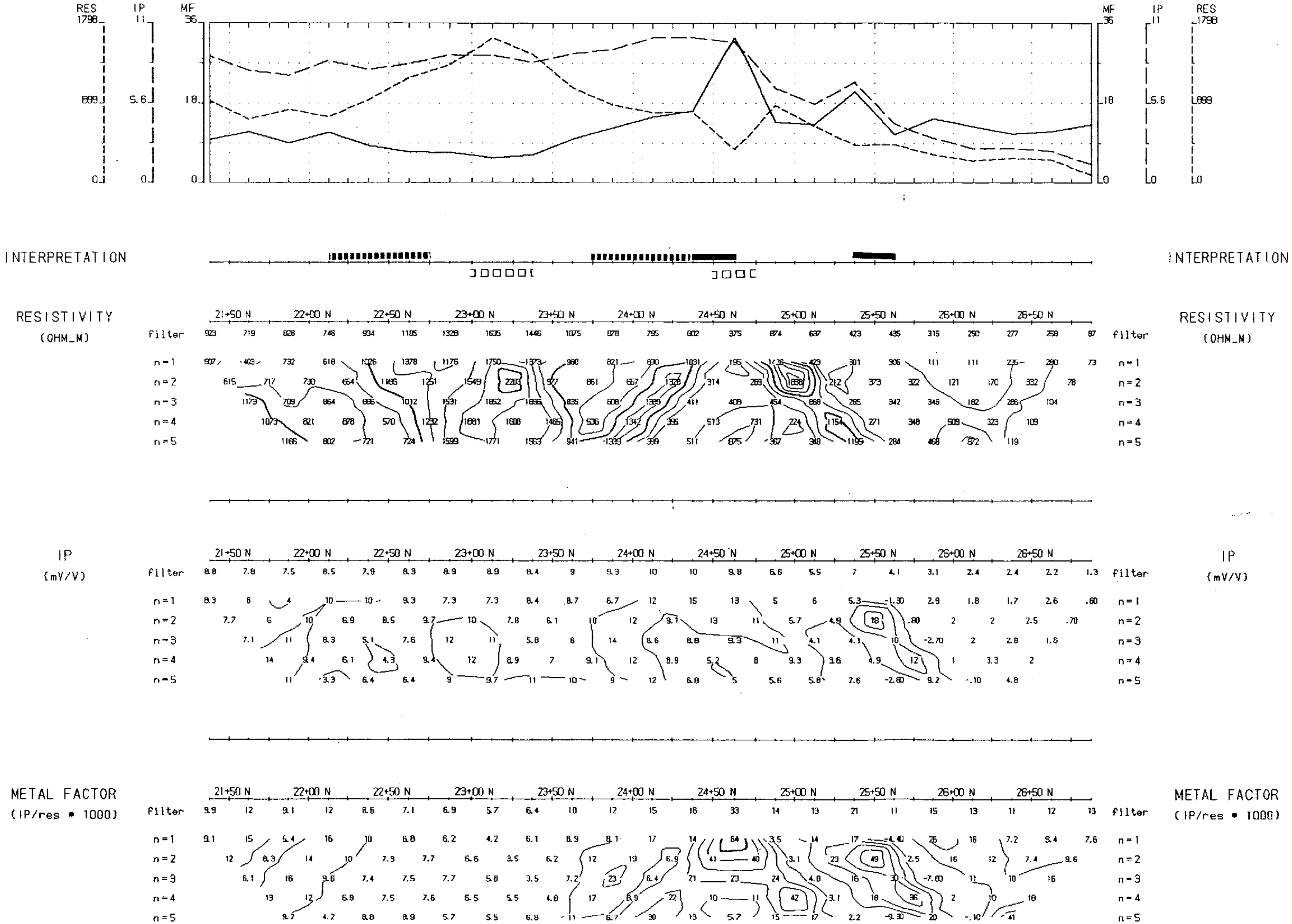
FIGURE 11 20488

COQUIHALLA MTN.

INDUCED POLARIZATION SURVEY
Line 4150 E
Project 116

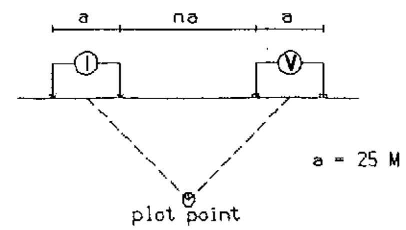
Date: 90/11/01
Interpretation by: R. Sharpe

noranda



Line 4240 E

Dipole-Dipole Array



Filter

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Pronounced resistivity increase
- Pronounced resistivity decrease

Scale 1:2500

25 0 25 50 75 100 125 (metres)

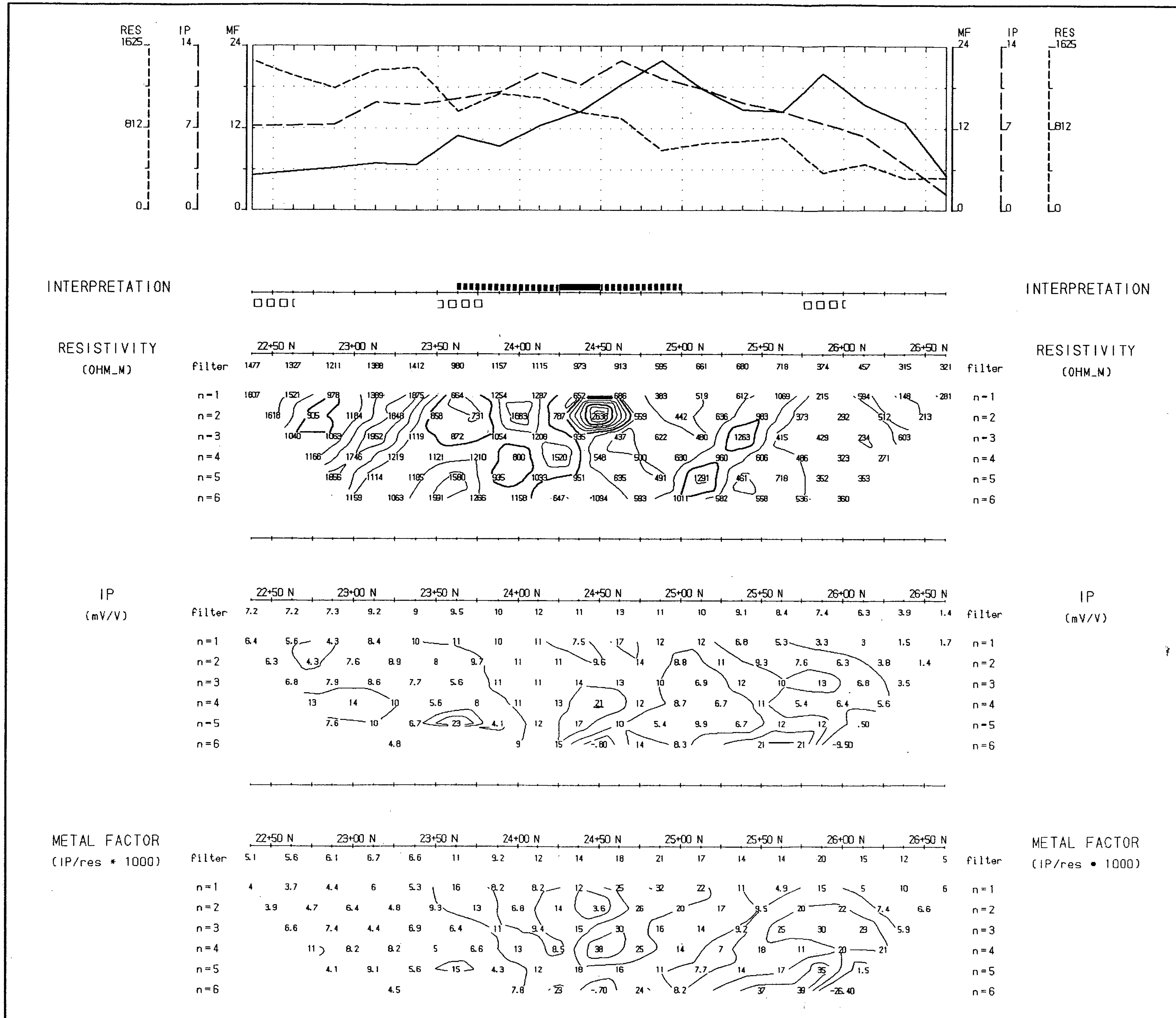
FIGURE 12 20488

COQUIHALLA MTN.

INDUCED POLARIZATION SURVEY
Line 4240 E
Project 116

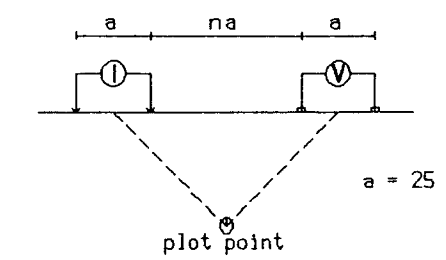
Date: 90/11/01
Interpretation by: R. Sharpe

noranda



Line 4350 E

Dipole-Dipole Array



Filter

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

Strong increase in polarization

Moderate increase in polarization

Pronounced resistivity increase

Pronounced resistivity decrease

Scale 1:2500

25 0 25 50 75 100 125 (metres)

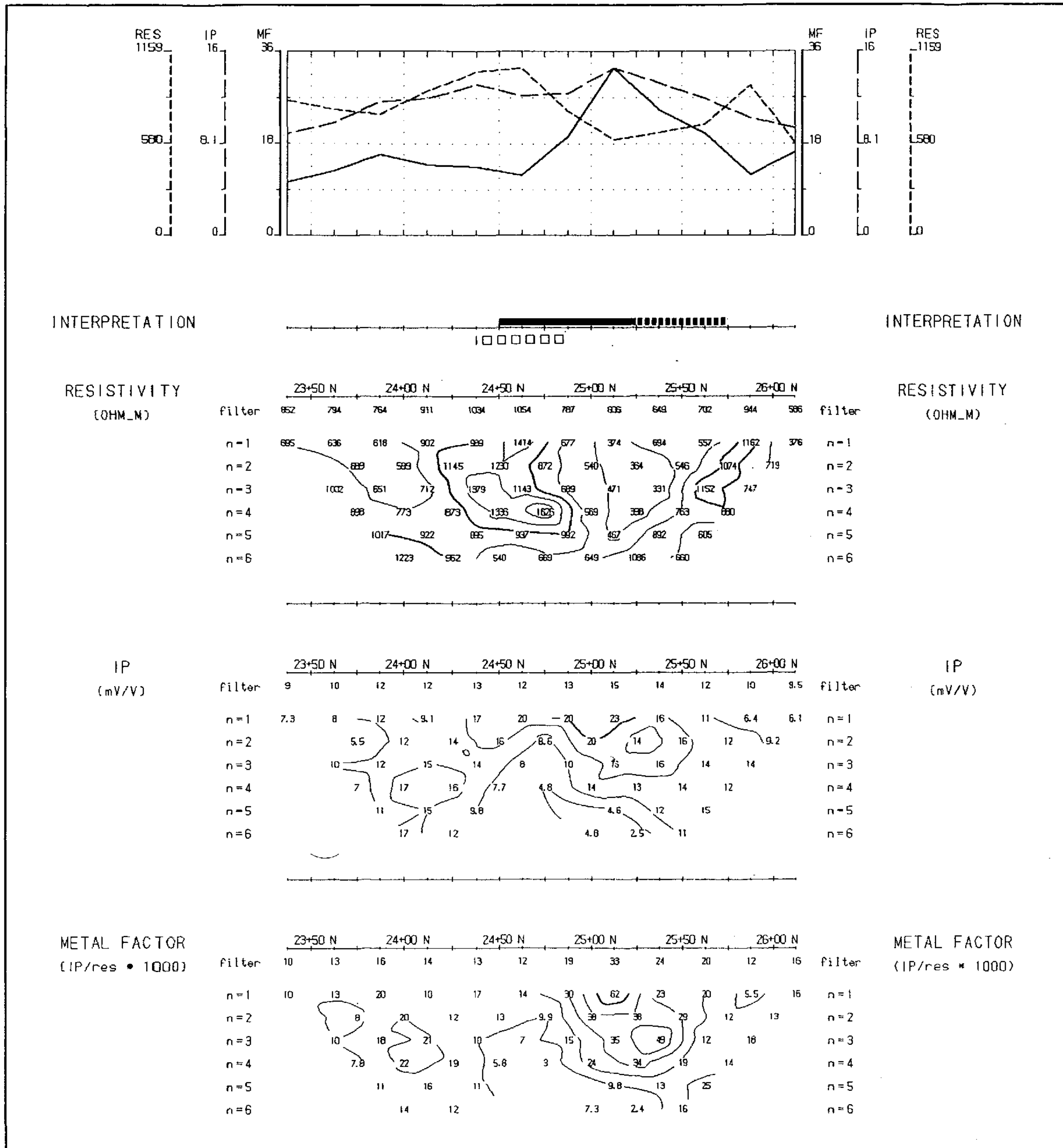
FIGURE 13 20488

COQUIHALLA MTN.

INDUCED POLARIZATION SURVEY
Line 4350 E
Project 116

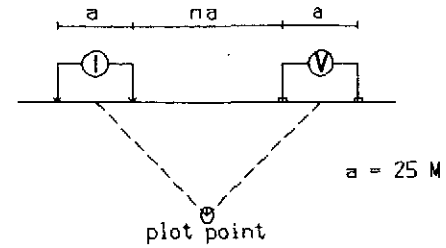
Date: 90/11/01
Interpretation by: R. Sharpe

noranda



Line 4410 E

Dipole-Dipole Array



Filter

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* *
* * *
* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Pronounced resistivity increase
- Pronounced resistivity decrease

Scale 1:2500

25 0 25 50 75 100 125 (metres)

FIGURE 14 20488

COQUIHALLA MTN.

INDUCED POLARIZATION SURVEY
Line 4410 E
Project 116

Date: 90/11/01
Interpretation by: R. Sharpe

noranda

Probable zones of mineralization may be controlled to a certain extent by the occurrence of dykes and/or structural features. It is recommended that further magnetic surveys be carried out to map lithology and structure with further I.P. work contingent upon the magnetic survey results.

PRODUCTION

Production figures are the total of work done in 1989 and 1990. Geophysical costs for 1990 are given in Appendix 4.

I.P.	2.2 Km.
Mag.	13.25 Km.

SUMMARY

The Coquihalla property is primarily underlain by Tertiary Age igneous rocks belonging to the Coquihalla Volcanic Complex. These unconformably overly intrusive rocks of the Cretaceous Eagle plutonic complex to the east and south, and are in fault contact with Triassic intrusives and Eocene sediments to the southwest.

Detailed mapping in the vicinity of anomalous outcrop of quartz breccia (76 m averaging 514 ppb Au and 5.4 ppm Ag (Erdman, 1989)) located several similar outcrops of quartz breccia. These all occur within a brecciated phase of the Cretaceous Eagle plutonic complex, subdivided into a brecciated muscovite granite, and a brecciated gneissic granodiorite. This brecciated zone is restricted to a wide band located at the tuff intrusive contact, and occurs entirely within the intrusive rocks. Intrusive rocks of the Eagle complex are of two distinct lithologies, a fine to coarse muscovite granite, and a foliated gneissic granodiorite, in gradational contact along a north-south trend.

It appears that the anomalous outcrop of quartz breccia is the thickest member in a series of sub-parallel quartz veins. These were emplaced within the Eagle plutonic complex prior to Tertiary volcanic activity, and were brecciated at the same time as the formation of the brecciated plutonic members.

A 600 m eastward extension of the grid entirely within Eagle plutonic rocks, failed to locate any additional gold-silver soil anomalies suggesting mineralization is associated with the contact between volcanic and intrusive lithologies.

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Total field magnetics show intense linear features interpreted to represent andesitic dykes, 2 areas of quiet magnetics interpreted as muscovite granite, and areas of moderate magnetic susceptibility, possibly representing the quartz breccia unit.

Three anomalous chargeability zones are outlined by I.P. These all occur within the muscovite granite unit and are spatially related to dykes. This suggests the dykes are an important factor in controlling the location of probable mineralization.

CONCLUSIONS

The anomalous (Au-Ag) outcrop of quartz breccia sampled in 1989 appears to be the thickest member in a series of sub-parallel brecciated quartz veins. These are somehow related to dykes at the contact between rocks of the Cretaceous Eagle Plutonic Complex, and overlying tuffs of the Tertiary Coquihalla Volcanic Complex. Possible extent, number of veins, and nature of veining is difficult to determine from surface exposures, due to lack of outcrop.

A series of short drill holes located on the I.P. chargeability targets would provide information as to potential size and grade of the gold mineralizing system, and are recommended for the 1991 field programme.

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APPENDIX 1

ANALYTICAL METHOD

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ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyses geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples:

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions are analyzed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples:

ICP analyses for 28 elements is determined using a Leeman PS3000. For silts and soils a 0.2 g sample is digested with 3 ml of $HClO_4/HNO_3$ at a ratio of 4:1. This digestion occurs for 4 hours at a temperature of 203°C. The resulting liquid is diluted to 11 ml with water. Pulps of rock or core are weighed out at 0.4 g, and chemical quantities are doubled relative to the above noted method for digestion. Otherwise the procedure remains the same.

Gold (Au) content is determined by atomic absorption (AA), not ICP. A 10 g sample is weighed and ashed at 590°C for 3 to 5 hours. After cooling, 35 mls of aqua regia ($1HNO_3$:3HCl) is added and the samples are digested on a hot plate for 2 hours, or until 15 mls of aqueous solution is left. Dilute with water to 100 mls and add 5 mls MIBK. Addition of MIBK extracts and pre-concentrates the gold from the aqueous solution. Following this step the MIBK solution is analyzed on the AA.

Detection limits (D.L.) and low range sensitivities (L.R.S.) for ICP and AA (Au only) analyses (Noranda Vancouver Laboratory).

Element	D.L.	L.R.S.	Element	D.L.	L.R.S.
Au (ppb)	5		K (%)	0.01	
Ag (ppm)	0.2		La (ppm)	1	
Al (%)	0.02		Li (ppm)	1	
As (ppm)	2	5	Mg (%)	0.01	
Ba (ppm)	1		Mn (ppm)	1	
Be (ppm)	0.1		Mo (ppm)	1	3
Bi (ppm)	2	5	Na (%)	0.01	
Ca (%)	0.1		Ni (ppm)	1	
Cd (ppm)	0.2	0.5	P (%)	0.01	
Ce (ppm)	5		Pb (ppm)	2	5
Co (ppm)	1		Sr (ppm)	1	
Cr (ppm)	1		Ti (%)	0.01	
Cu (ppm)	1		V (ppm)	2	
Fe (%)	0.1		Zn (ppm)	1	

APPENDIX 2

ROCK DESCRIPTIONS AND ANALYTICAL RESULTS

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Coquihalla (LF)

Noranda Exploration Co. Ltd. PROJECT 9008-082 116 File # 90-3678

P.O. Box 2380, 1050 Davie, Vancouver BC V6B 3T5

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
47823	1	19	11	19	.2	1	1	68	.98	6	5	ND	1	10	.2	2	2	4	.02	.029	3	1	.01	248	.01	2	.33	.02	.15	1	11
47824	7	25	69	15	6.8	4	1	159	.75	28	5	ND	1	8	.2	31	16	1	.01	.006	2	4	.01	517	.01	6	.13	.01	.03	1	22
120914	1	9	3	51	.1	4	11	571	3.56	2	5	ND	1	22	.2	2	2	40	.24	.033	3	5	.47	235	.04	10	.90	.04	.36	1	1
120915	7	8	20	22	3.6	12	2	47	.69	7	5	ND	1	28	.2	2	2	3	.02	.006	2	8	.02	1870	.01	6	.11	.01	.04	1	156
120916	134	71	335	40	12.8	1	2	39	.75	46	5	ND	1	9	.2	99	2	1	.03	.013	2	1	.01	572	.01	4	.12	.01	.05	1	6
120917	2	6	3	2	.1	4	1	128	.40	2	5	ND	1	1	.2	2	2	1	.01	.001	2	5	.01	21	.01	2	.03	.01	.01	1	2
120918	2	9	9	5	.1	6	2	98	.87	2	5	ND	1	3	.2	2	2	1	.03	.003	2	6	.01	33	.01	3	.14	.02	.06	1	1
120919	2	10	2	4	.1	7	1	79	.52	3	5	ND	2	1	.2	2	3	3	.01	.003	2	6	.01	19	.01	3	.10	.03	.03	1	1
120920	28	19	26	33	.2	4	3	470	.94	2	5	ND	1	2	.2	5	2	1	.05	.018	2	1	.01	73	.01	4	.13	.01	.04	1	1
120921	9	6	5	28	.3	5	7	120	4.24	6	5	ND	1	3	.2	2	3	13	.02	.013	2	3	.02	65	.01	3	.24	.03	.10	1	2
120922	5	6	38	14	.2	8	2	89	1.19	2	5	ND	1	3	.2	4	2	1	.01	.002	4	8	.01	119	.01	3	.06	.01	.04	1	1
120923	7	3	10	21	.1	10	1	178	.56	2	5	ND	1	11	.2	2	2	1	.01	.007	2	8	.01	1180	.01	4	.12	.01	.04	1	1
STANDARD C/AU-R	20	59	36	130	7.2	72	32	1052	3.96	40	20	7	39	53	19.0	15	19	56	.52	.096	38	57	.89	182	.07	37	1.89	.06	.14	12	510

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

DATE RECEIVED: AUG 20 1990 **DATE REPORT MAILED:** Aug 24/90. **SIGNED BY** C.Leong ..D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 116

N.T.S. 92H/11

LAB REPORT # ____________

DATE Aug. 14/90

PROJECT COQUIHALLA

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)								SAMPLED BY
47823	4.2 m at 075° from 43+50E. Stn. 25+25N. Quartz breccia exposed in a 0.8 m high ledge. Attitude 313 /18N. No visible sulfides, limonitic weathering surface.		Chip	0.8								L. Erdman
47824	Quartz breccia adjacent and to the North of the dyke at 44+20E Stn. 25+70N. Limonitic weathering surface but no visible sulfides. Quartz clasts range from <1 cm to 4 cm.	-	Chip	1.5								L. Erdman

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 116

LAB REPORT #

N.T.S. 92H/11

DATE Aug. 14/90

PROJECT COQUIHALLA

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)								SAMPLED BY
120914	L41+00E Stn. 22+75N. 21 m west at 270° . Silicified muscovite granite. 95% quartz, 5% muscovite/sericite. Locally foliated with 15%-20% muscovite. Strongly limonitic.	-	Chip	0.3								R. Butler
120915	L41+50E Stn. 23+74N. 1.5 m west. Quartz breccia with 80% angular clasts to 3 cm by 4 cm. Matrix appears to have same feldspar content. Possible brecciated pegmatite. Weak to moderate orange colour .	-	Chip	0.3								R. Butler
120916	L42+00E Stn. 25+22N. 11 m E. Quartz breccia float boulders with clasts less than 1 cm^2. Strong orange colour concentrated along fractures.		Grab	-								R. Butler
120917	L40+00E Stn. 22+60N. Boulder 30x20x10 cm of milky white quartz. Well fractured, with limonite along fractures.	-	Grab	-								R. Butler

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 116

N.T.S. 92H/11

LAB REPORT # ____________

DATE Aug. 14/90

PROJECT COQUIHALLA

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)								SAMPLED BY
120917(con't)	Possibly a piece of quartz vein.											
120918	L40+40E Stn. 23+00N. Boulder 15x10x10 cm. Muscovite granite with a 2-3 cm wide milky white quartz vein. Vein is vuggy and well fractured with limonite along fractures. Trace of pyrite in one of the vugs.	Tr Py	Grab	-								R. Butler
120919	L45+00E Stn. 25+80N. 7 m east. Brecciated, silica flooded, aplitic muscovite granite. Locally 90% quartz. Locally aplitic granite with 60% <1 mm wide quartz stringers. 1% pyrite (1 mm) associated with the quartz stringers.	1% Py	Chip	0.5								R. Butler
120920	L46+00E Stn. 27+08N. 20 m E. Quartz breccia boulder. Clasts range from <1 cm to 3 by 5 cm. Limonitic along fractures.		Grab									R. Butler

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 116

LAB REPORT # ____________

N.T.S. 92H/11

DATE Aug. 14/90

PROJECT COQUIHALLA

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)								SAMPLED BY
120921	BL24+00N Stn. 46+55E. Medium grained muscovite granite with stockwork quartz stringers to 1 mm width 5-10% very fine grain disseminated pyrite.	5-10	Chip	0.5								R. Butler
120922	L42+75E Stn. 25+40N. 22 m W. Boulder of quartz. Milky white, well fractured, local limonitic stain along fractures. 1% pyrite as cubic clusters to 1 cm x 2 cm . Rare, fine grain, disseminated single cubes.	1%	Grab									R. Butler
120923	L42+00E Stn. 25+25N. 20 m E. Quartz veins at 290/20N. Vein comprised of 3, 15 cm layers. Center layer is massive, white, and sugary. Outer layers are brecciated and weakly to strongly limonitic. No visible sulfides.	-	Chip	0.45								R. Butler

APPENDIX 3

SOILS - ANALYTICAL RESULTS

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NORANDA VANCOUVER LABORATORY

Geochemical Analysis

Project Name & No.: COQUIHALLA – 116 Geol.: L.E. Date rec'd: AUG. 13 LAB CODE: 9008-043

Material: 53 SOILS Sheet: 1 of 2 Date compl: SEP. 05

Remarks:

Au – 10.0 g sample digested with aqua-regia and determined by A.A. (D.L. 5 PPB)

ICP – 0.2 g sample digested with 3 ml HClO4/HNO3 (4:1) at 203 °C for 4 hours diluted to 11 ml with water. Leeman PS3000 ICP determined elemental contents.

N.B. The major oxide elements and Ba, Be, Ce, Ga, La, Li are rarely dissolved completely from geological materials with acid dissolution methods.

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm
2	4410E-2100N	5	0.4	4.30	2	255	0.6	2	0.17	0.8	28	8	13	30	3.28	0.50	11	26	0.33	1507	1	0.09	9	0.14	14	25	0.14	78	125
3	2125	5	0.6	5.01	2	233	0.9	3	0.27	1.7	28	18	9	37	4.90	0.53	8	35	0.87	2781	1	0.08	12	0.17	9	20	0.16	167	153
4	2150	5	0.8	4.23	2	420	1.1	2	0.19	1.0	50	11	16	23	3.23	0.62	34	21	0.31	2448	1	0.08	12	0.19	15	24	0.13	86	95
5	2175	5	0.4	4.87	3	631	1.0	3	0.32	1.1	37	12	15	24	3.49	0.83	12	24	0.38	2123	1	0.07	15	0.18	17	36	0.13	98	112
6	4410E-2200N	5	0.4	4.30	2	415	0.8	2	0.23	0.8	30	8	17	16	3.06	0.75	11	25	0.31	1541	1	0.08	10	0.16	10	28	0.13	72	83
7	4410E-2225N	5	0.2	5.56	2	511	0.9	2	0.13	0.6	36	11	22	23	3.19	1.23	15	21	0.32	1659	1	0.07	25	0.14	17	53	0.10	80	119
8	2250	5	0.4	5.48	2	790	1.0	2	0.17	0.6	39	9	22	23	2.99	1.22	17	19	0.25	1888	1	0.07	20	0.12	15	48	0.10	83	102
9	2275	5	0.6	3.43	2	351	0.7	2	0.21	0.5	28	6	18	15	2.49	0.53	13	20	0.22	2296	1	0.13	7	0.12	14	31	0.16	67	83
10	2300	5	0.2	3.52	2	224	0.4	2	0.11	0.2	23	3	16	10	2.07	0.63	10	11	0.17	838	1	0.12	7	0.08	15	24	0.15	58	61
11	4410E-2325N	5	0.4	4.79	12	374	0.7	2	0.04	0.2	50	6	23	12	1.72	0.95	23	7	0.20	84	1	0.09	24	0.05	7	58	0.10	76	49
12	4410E-2350N	5	0.2	3.57	6	277	0.5	2	0.18	0.2	30	5	13	15	2.38	0.60	12	14	0.18	427	1	0.14	8	0.10	10	49	0.13	72	67
13	2375	10	0.4	4.43	2	342	0.7	2	0.14	0.4	32	3	6	11	2.52	1.00	12	15	0.24	278	1	0.07	5	0.09	16	28	0.11	54	71
14	2400	5	0.6	6.12	2	320	0.6	2	0.07	0.2	28	9	4	19	2.92	0.99	10	19	0.18	2319	1	0.07	7	0.12	14	16	0.09	73	93
15	2425	5	0.4	5.28	5	268	0.5	2	0.08	0.2	28	6	3	17	2.83	1.29	11	9	0.22	1104	1	0.09	5	0.09	8	21	0.11	89	71
16	4410E-2450N	5	0.4	3.79	2	208	0.5	2	0.13	0.2	25	5	10	16	2.90	0.59	9	13	0.24	460	1	0.10	6	0.08	7	21	0.13	80	58
17	4410E-2475N	5	0.6	2.69	2	63	0.3	2	0.09	0.2	14	2	16	10	2.07	0.21	7	9	0.14	147	1	0.25	5	0.09	8	13	0.21	47	27
18	2500	5	0.8	4.24	2	248	0.9	2	0.14	0.2	30	3	13	17	1.72	0.55	16	14	0.19	141	1	0.20	6	0.19	7	19	0.15	47	39
19	2525	5	0.6	5.35	5	305	0.7	2	0.05	0.2	33	8	7	43	2.57	1.26	12	25	0.23	1483	2	0.08	7	0.17	13	16	0.08	69	91
20	2550	5	0.8	6.08	17	249	1.3	2	0.05	0.5	34	10	8	51	3.17	1.43	12	56	0.29	1568	3	0.07	9	0.15	18	16	0.07	79	120
21	4410E-2575N	5	1.0	6.11	20	282	1.6	2	0.08	1.1	34	12	7	47	3.22	1.62	13	17	0.31	2059	4	0.05	10	0.15	28	12	0.07	74	143
22	4110E-2600N	5	0.2	6.59	2	210	1.5	2	0.04	0.5	26	9	5	41	2.99	1.92	9	14	0.25	1572	2	0.06	7	0.14	15	10	0.08	86	122
23	4500E-2100N	5	0.6	2.85	3	380	0.6	2	0.24	0.2	32	8	18	13	2.33	0.46	14	34	0.25	2690	1	0.08	8	0.11	11	32	0.14	61	76
24	2125	5	0.4	2.67	13	391	0.8	3	0.33	0.2	32	7	16	14	2.32	0.38	17	35	0.27	1466	1	0.09	7	0.15	8	35	0.15	64	67
25	2150	5	0.4	3.68	2	340	0.8	2	0.32	0.7	30	9	12	15	3.20	0.40	10	28	0.47	1217	1	0.12	7	0.14	5	32	0.16	75	76
26	4500E-2175N	5	0.4	4.12	2	202	0.8	2	0.13	0.7	30	9	10	17	3.20	0.42	8	21	0.49	1908	1	0.12	10	0.13	5	14	0.15	79	81
27	4500E-2200N	5	0.8	3.52	8	571	0.8	3	0.53	1.6	44	23	13	31	3.20	0.26	14	16	0.38	9962	1	0.07	13	0.34	18	48	0.15	74	121
28	2225	5	0.6	4.35	2	189	0.5	2	0.13	0.6	24	6	14	12	3.15	0.37	9	20	0.30	588	1	0.09	8	0.08	3	16	0.15	84	85
29	2250	5	0.4	2.62	3	147	0.4	2	0.12	0.6	21	4	27	11	2.76	0.27	9	14	0.19	205	1	0.21	8	0.07	5	16	0.19	83	62
30	2275	5	0.6	5.94	16	318	0.9	2	0.09	0.8	33	7	9	18	3.43	1.17	10	20	0.26	1071	2	0.06	8	0.08	18	13	0.09	52	88
31	4500E-2300N	5	0.2	4.05	2	111	0.8	2	0.05	0.9	40	6	10	11	3.56	0.36	20	15	0.23	157	3	0.10	6	0.04	7	14	0.15	109	52
32	4500E-2325N	5	0.4	3.74	3	251	0.7	2	0.13	0.3	30	9	13	26	2.48	0.53	12	18	0.23	3842	1	0.10	8	0.18	12	22	0.13	58	82
33	2350	5	0.4	3.64	3	283	0.7	2	0.15	0.3	33	9	17	22	2.56	0.52	12	24	0.28	1877	1	0.09	13	0.13	9	37	0.13	62	90
34	2375	5	0.2	3.41	4	336	0.6	2	0.11	0.3	43	9	26	18	2.83	0.69	18	14	0.24	1380	1	0.10	20	0.13	9	104	0.12	72	69
35	2400	5	0.6	3.11	5	284	0.4	2	0.16	0.2	26	5	18	14	2.47	0.43	9	30	0.27	511	1	0.13	10	0.12	7	24	0.17	62	78
36	4500E-2425N	5	0.2	3.04	2	148	0.3	2	0.16	0.2	22	4	16	13	2.67	0.42	8	13	0.18	551	1	0.12	6	0.09	9	24	0.15	68	54

T.T.	SAMPLE	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sr	Ti	V	Zn	9008-043
No.	No.	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	Pg. 2 of 2
37	4500E-2450N	5	0.4	3.59	4	117	0.5	2	0.09	0.2	22	2	15	14	2.42	0.48	10	14	0.13	124	1	0.10	4	0.08	15	20	0.17	53	33	
38	2475	5	0.8	2.98	3	47	0.4	2	0.06	0.2	21	2	14	11	1.51	0.15	6	8	0.08	119	1	0.18	4	0.11	9	12	0.06	28	22	
39	2500	5	0.6	3.84	12	144	0.4	2	0.06	0.2	29	5	7	19	2.22	0.44	10	92	0.13	1154	1	0.08	4	0.12	22	30	0.07	45	61	
40	2525	5	0.8	5.17	19	244	1.1	2	0.04	1.2	34	25	9	37	4.62	1.05	11	17	0.28	5295	5	0.04	9	0.25	25	10	0.06	103	92	
41	4500E-2550N	5	0.6	3.51	2	170	0.8	2	0.07	0.9	29	13	13	23	3.33	0.65	12	21	0.29	3039	4	0.10	8	0.23	12	13	0.10	76	85	
42	4500E-2575N	5	0.8	3.36	2	174	0.5	2	0.10	0.8	25	10	11	17	2.66	0.45	9	23	0.18	3294	1	0.09	5	0.20	14	15	0.11	59	67	
43	2600	5	0.4	2.58	2	129	0.4	2	0.15	0.2	21	4	15	10	1.93	0.47	8	19	0.19	763	1	0.15	5	0.11	6	19	0.15	57	47	
44	2625	5	0.4	2.78	2	100	0.3	2	0.05	0.2	23	2	7	13	1.45	0.39	7	72	0.08	233	1	0.04	2	0.14	13	8	0.05	34	26	
45	2650	5	0.8	5.86	4	309	1.2	2	0.12	0.8	39	10	6	40	3.28	1.78	14	37	0.24	1689	2	0.06	10	0.16	20	21	0.07	71	122	
46	4500E-2675N	5	0.6	4.59	2	294	1.1	2	0.11	0.6	43	5	7	13	2.47	1.31	20	20	0.25	1135	1	0.11	6	0.18	12	14	0.11	55	91	
47	4500E-2700N	5	0.4	5.17	2	664	1.5	2	0.35	0.5	67	6	4	13	2.33	1.69	27	62	0.25	1142	1	0.04	6	0.17	20	21	0.09	50	93	
48	2725	5	0.6	7.65	2	341	2.1	2	0.08	1.2	48	13	2	37	3.52	2.35	18	29	0.30	2332	1	0.03	7	0.12	29	12	0.06	82	133	
49	2750	5	0.6	7.79	2	389	1.9	2	0.17	1.3	31	11	3	39	4.28	2.29	9	27	0.32	1921	1	0.04	8	0.14	22	20	0.07	98	166	
51	2775	5	0.4	7.83	3	164	1.8	2	0.02	1.1	26	10	4	27	3.65	2.43	9	19	0.25	877	1	0.04	7	0.08	14	10	0.07	98	139	
52	4500E-2800N	5	0.6	6.55	43	479	1.8	2	0.31	1.3	55	15	4	55	3.97	1.84	20	31	0.53	1896	3	0.04	8	0.14	29	21	0.07	77	144	
53	4500E-2825N	5	0.6	5.94	6	684	1.6	3	0.61	1.3	63	17	5	58	4.56	1.45	21	42	0.87	2375	1	0.05	8	0.24	7	30	0.09	135	116	
54	2850	5	1.0	6.90	6	520	1.7	2	0.46	1.4	54	16	5	108	4.40	1.93	18	38	0.67	1642	5	0.05	10	0.14	31	42	0.07	99	144	
55	4500E-2875N	5	0.6	7.34	2	575	1.9	2	0.32	0.8	62	10	3	27	3.42	2.19	23	27	0.60	1305	1	0.04	6	0.12	16	19	0.07	81	123	

NORANDA VANCOUVER LABORATORY

Geochemical Analysis

Project Name & No.: COQUIHALLA - 116 Geol.: L.E. Date rec'd: AUG. 20 LAB CODE: 9008-082
Material: 149 SOILS Sheet: 1 of 4 Date compl: SEP. 11
Remarks: • Sample screened @ -35 MESH (0.5 mm).
¤ Organic

Au - 10.0 g sample digested with aqua-regia and determined by A.A. (D.L. 5 PPB)

ICP - 0.2 g sample digested with 3 ml HClO4/HNO3 (4:1) at 203 °C for 4 hours diluted to 11 ml with water. Leeman PS3000 ICP determined elemental contents.

N.B. The major oxide elements and Ba, Be, Ce, Ga, La, Li are rarely dissolved completely from geological materials with this acid dissolution method.

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm
2	4600E-2100N	5	0.2	2.76	4	151	0.3	2	0.10	0.5	24	4	20	13	3.52	0.33	9	14	0.17	500	1	0.11	7	0.09	6	18	0.18	63	86
3	2125	5	0.4	3.00	5	204	0.5	2	0.11	0.2	26	3	12	13	2.48	0.41	10	9	0.14	281	1	0.10	4	0.14	7	18	0.10	42	51
4	2150	5	0.4	3.13	2	195	0.5	2	0.16	0.2	25	7	14	16	2.72	0.45	9	16	0.24	1704	1	0.07	6	0.10	2	21	0.12	66	93
5	2175	5	0.4	3.03	4	105	0.4	2	0.14	0.2	26	4	13	11	2.62	0.36	9	16	0.21	570	1	0.07	5	0.08	2	19	0.13	57	60
6	4600E-2200N	5	0.4	3.21	3	169	0.5	2	0.20	0.2	29	5	15	13	3.00	0.40	10	21	0.29	481	1	0.06	7	0.08	2	24	0.13	63	72
7	4600E-2225N	5	0.2	2.73	2	208	0.4	2	0.20	0.2	31	3	14	11	2.65	0.44	11	14	0.20	185	1	0.09	5	0.06	3	25	0.16	65	56
8	2250	5	0.2	3.08	2	150	0.4	2	0.11	0.2	26	3	18	10	2.50	0.39	10	15	0.20	230	1	0.15	6	0.09	4	17	0.15	74	56
9	2275	5	0.2	4.85	2	329	1.0	2	0.14	0.4	51	12	37	21	3.28	0.95	19	22	0.52	2119	1	0.07	27	0.20	13	18	0.11	79	116
10	2300	5	0.4	4.16	4	423	1.3	2	0.31	0.2	46	8	16	18	2.77	0.70	18	32	0.41	1685	1	0.06	10	0.26	8	28	0.10	63	105
11	4600E-2350N	5	0.4	3.06	2	172	0.7	2	0.15	0.2	33	12	15	28	3.19	0.29	16	25	0.34	1728	2	0.06	10	0.13	8	21	0.10	76	95
12	4600E-2375N	5	0.4	3.40	3	152	0.5	2	0.11	0.3	25	8	17	21	3.51	0.38	10	20	0.34	1267	1	0.08	8	0.12	5	18	0.12	82	82
13	2400	5	0.4	3.67	2	119	0.5	2	0.13	0.2	29	4	12	14	2.88	0.40	11	20	0.24	265	1	0.05	6	0.09	5	20	0.13	56	63
14	2425	5	0.2	3.34	4	139	0.4	2	0.19	0.2	30	3	10	10	1.71	0.63	11	24	0.29	190	1	0.04	5	0.05	2	25	0.11	46	58
15	2450	5	0.2	7.62	2	677	0.9	2	0.07	0.2	34	4	1	30	1.43	1.97	14	21	0.28	1223	1	0.06	3	0.08	11	12	0.02	34	65
16	4600E-2475N	5	0.4	7.44	9	310	0.8	2	0.02	0.2	23	12	4	122	3.19	1.33	8	46	0.28	879	2	0.05	6	0.09	2	5	0.04	87	89
17	4600E-2500N	5	0.2	4.06	2	166	0.5	2	0.17	0.2	30	4	8	14	2.75	0.73	12	29	0.29	400	1	0.04	5	0.06	5	24	0.11	52	74
18	2525	5	0.6	2.72	2	98	0.4	2	0.12	0.2	28	2	11	10	1.43	0.35	11	14	0.13	101	1	0.17	3	0.07	6	19	0.14	40	33
19	2550	5	0.6	2.68	2	113	0.4	2	0.14	0.2	27	2	11	12	1.41	0.39	10	15	0.16	127	1	0.15	4	0.10	5	19	0.13	40	40
20	2575	5	0.6	3.43	2	117	0.5	2	0.15	0.3	29	4	16	15	2.14	0.42	11	18	0.19	323	1	0.10	6	0.12	3	22	0.13	58	55
21	4600E-2600N	5	0.2	2.90	2	135	0.4	2	0.16	0.2	29	7	19	19	2.45	0.45	14	19	0.22	679	1	0.08	8	0.10	4	25	0.14	68	67
22	4600E-2625N	5	0.6	4.28	2	116	0.6	2	0.13	0.2	24	4	14	19	2.82	0.41	10	19	0.22	274	1	0.05	6	0.10	2	19	0.10	57	60
23	2650	5	0.6	3.54	2	322	0.9	2	0.18	0.2	25	7	12	16	2.72	0.48	11	32	0.26	2387	1	0.09	6	0.21	2	23	0.12	70	85
24	2675	5	0.6	5.06	2	111	0.6	2	0.04	0.2	22	2	11	12	2.64	0.93	9	27	0.15	185	1	0.11	5	0.16	2	12	0.11	71	52
25	2700	5	0.6	4.42	2	136	0.6	2	0.03	0.2	21	4	7	16	2.28	1.01	9	28	0.17	801	1	0.10	6	0.21	2	9	0.08	64	74
26	4600E-2725N	5	0.2	4.81	2	542	1.2	2	0.19	0.3	43	7	3	11	2.20	1.53	17	40	0.21	2378	1	0.04	7	0.20	13	17	0.06	48	106
27	4600E-2750N	5	0.2	5.53	2	164	0.7	2	0.03	0.2	27	4	4	17	2.55	1.35	12	27	0.23	267	1	0.10	5	0.13	7	9	0.09	80	80
28	2775	5	0.6	5.39	2	283	0.9	2	0.09	0.2	34	5	5	13	2.73	1.34	16	46	0.24	1077	1	0.09	6	0.15	15	13	0.09	73	105
29	2800	5	2.0	5.20	2	392	1.2	2	0.11	0.2	33	6	5	13	2.77	1.55	15	43	0.23	1725	1	0.06	6	0.22	31	12	0.07	61	123
30	2825	5	0.4	4.94	4	208	0.9	2	0.05	0.2	32	6	6	14	2.92	1.14	14	28	0.30	2256	1	0.08	5	0.23	43	9	0.07	56	117
31	4600E-2850N	5	0.2	3.74	2	163	0.7	2	0.05	0.2	37	7	10	17	2.22	0.85	20	19	0.24	480	1	0.10	6	0.19	26	10	0.07	53	90
32	4600E-2875N	5	0.8	5.89	2	387	1.8	2	0.19	0.2	70	9	3	32	2.91	1.94	32	28	0.56	1607	1	0.03	7	0.10	29	11	0.05	59	132
33	4600E-2900N	5	0.2	4.96	2	549	1.4	2	0.30	0.4	48	10	8	16	2.88	1.54	20	17	0.53	1748	1	0.05	10	0.20	10	20	0.06	66	126
34	4700E-2100N	5	0.2	1.97	3	103	0.6	2	0.10	0.2	21	2	9	10	1.28	0.20	8	8	0.09	111	1	0.21	3	0.08	5	15	0.11	34	25
35	2125	5	0.2	2.76	4	178	0.4	2	0.16	0.2	27	3	12	11	2.20	0.37	10	13	0.16	319	1	0.10	5	0.09	4	24	0.13	57	47
36	4700E-2150N	5	0.4	3.06	5	222	0.7	2	0.18	0.2	33	5	15	14	2.38	0.47	15	13	0.18	830	1	0.09	6	0.11	7	25	0.14	58	55

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm	9008-082 Pg. 2 of 4
37	4700E-2175N	5	0.4	4.32	2	321	0.9	2	0.13	0.2	30	9	9	21	2.75	0.97	11	19	0.28	2663	1	0.07	8	0.18	10	18	0.11	58	121	
38	2200	5	0.4	5.19	2	408	1.0	2	0.10	0.2	30	11	11	25	3.44	1.13	12	19	0.29	2635	1	0.05	10	0.13	8	17	0.09	73	123	
39	2225	5	0.2	3.98	2	217	0.6	2	0.09	0.2	32	8	14	15	3.17	0.69	11	15	0.21	1085	1	0.07	12	0.10	3	15	0.10	72	68	
40	2250	5	0.2	2.90	5	156	0.6	2	0.14	0.2	38	9	29	16	2.71	0.46	14	18	0.34	1329	1	0.07	16	0.15	8	19	0.11	63	78	
41	4700E-2275N	5	0.4	3.17	2	132	0.5	2	0.14	0.2	33	8	19	24	2.84	0.41	15	19	0.23	895	2	0.06	10	0.15	2	22	0.10	68	68	
42	4700E-2300N	5	0.2	4.21	2	306	0.8	2	0.05	0.3	24	11	7	20	3.88	0.77	11	24	0.31	2031	2	0.08	7	0.23	2	15	0.09	94	112	
43	2325	5	0.2	5.65	2	392	1.2	2	0.04	0.7	30	17	6	24	5.16	0.96	12	27	0.38	2451	2	0.06	7	0.21	2	13	0.08	125	151	
44	2350	5	0.2	6.01	2	293	1.2	4	0.02	0.9	29	19	17	29	5.80	1.03	11	33	0.39	2623	3	0.04	14	0.17	2	12	0.06	136	199	
45	2375	5	0.4	4.44	14	195	0.8	2	0.05	0.2	23	2	3	23	2.73	0.96	9	11	0.14	140	5	0.06	4	0.11	4	11	0.07	38	75	
46	4700E-2400N	5	0.2	2.49	5	164	0.3	2	0.07	0.2	34	3	5	15	1.56	0.53	14	8	0.12	343	3	0.16	3	0.08	2	11	0.09	39	50	
47	4700E-2425N	5	0.4	3.87	2	155	0.6	2	0.09	0.2	26	5	9	13	2.86	0.52	12	20	0.19	799	1	0.12	5	0.13	4	15	0.13	48	66	
48	2450	5	0.4	3.64	2	158	0.5	2	0.13	0.4	28	2	8	12	2.77	0.53	11	24	0.16	178	1	0.06	3	0.09	2	22	0.11	48	54	
49	2500	5	0.4	3.80	2	202	0.7	2	0.13	0.2	32	6	9	14	2.41	0.76	13	26	0.28	2021	1	0.08	6	0.15	3	20	0.12	50	108	
51	2525	5	0.2	3.55	3	130	0.5	2	0.13	0.2	37	6	9	16	2.61	0.56	17	27	0.22	226	1	0.05	7	0.05	5	22	0.09	52	63	
52	4700E-2550N	5	0.2	4.90	2	165	0.6	2	0.08	0.2	26	3	6	14	2.26	0.82	11	32	0.25	266	1	0.03	4	0.05	3	16	0.07	36	78	
53	4700E-2575N	5	0.2	3.41	2	92	0.4	2	0.12	0.2	28	2	10	11	1.82	0.34	11	16	0.12	115	1	0.08	3	0.06	4	20	0.11	41	37	
54	2600	5	0.2	3.50	2	107	0.4	2	0.18	0.3	26	3	11	13	3.07	0.34	9	18	0.21	156	1	0.08	5	0.05	2	26	0.13	63	53	
55	2625	5	0.2	2.92	6	90	0.4	2	0.16	0.2	27	3	10	13	3.15	0.37	10	17	0.23	196	1	0.06	5	0.07	2	22	0.13	57	50	
56	2650	5	0.2	3.56	2	103	0.4	2	0.18	0.2	30	4	14	16	2.86	0.39	11	17	0.27	331	1	0.06	6	0.09	3	24	0.15	62	58	
57	4700E-2675N	5	0.2	3.51	2	95	0.4	2	0.15	0.2	29	2	13	13	2.25	0.38	12	16	0.16	129	1	0.17	4	0.08	3	22	0.19	59	34	
58	4700E-2700N	5	0.2	3.96	2	100	0.4	2	0.14	0.2	32	2	9	8	2.08	0.45	12	21	0.15	102	1	0.11	3	0.04	2	20	0.14	52	35	
59	2725	5	0.6	4.90	2	230	1.0	2	0.16	0.2	33	4	11	20	2.83	0.87	15	27	0.21	136	1	0.09	6	0.08	2	22	0.13	73	59	
60	2750	5	0.2	5.02	6	282	1.2	2	0.16	0.2	38	5	12	17	2.45	0.92	24	35	0.31	163	1	0.05	6	0.10	9	20	0.08	65	63	
61	4700E-2775N	5	0.4	6.33	2	473	1.5	2	0.20	0.8	34	19	13	120	5.73	1.63	15	22	0.70	754	3	0.02	15	0.13	2	18	0.06	192	123	
62	4800E-2100N	5	0.2	2.08	5	131	0.3	2	0.10	0.2	26	2	14	7	1.18	0.29	11	9	0.12	161	1	0.15	5	0.03	6	20	0.13	44	32	
63	4800E-2125N	5	0.2	2.69	5	124	0.3	2	0.15	0.2	32	4	14	9	2.75	0.34	13	12	0.19	209	1	0.11	6	0.04	3	22	0.17	81	53	
64	2150	5	0.4	2.80	2	79	0.3	2	0.11	0.2	24	3	18	12	2.62	0.26	9	14	0.17	131	1	0.24	7	0.06	8	18	0.24	66	35	
65	2175	5	0.4	3.43	2	244	0.4	2	0.22	0.2	28	2	13	7	1.10	0.46	13	19	0.21	102	1	0.13	5	0.05	7	28	0.15	48	42	
66	2200	5	0.4	2.82	2	111	0.4	2	0.15	0.2	24	3	13	9	2.09	0.45	9	12	0.16	174	1	0.09	5	0.08	3	25	0.12	56	46	
67	4800E-2225N	5	0.2	3.69	15	853	1.2	2	0.38	0.4	124	20	145	27	4.24	0.81	48	18	0.73	1461	1	0.04	99	0.30	8	120	0.10	113	115	
68	4800E-2250N	5	0.4	2.92	2	261	0.5	2	0.25	0.2	29	6	16	14	2.25	0.61	11	15	0.24	1754	1	0.06	9	0.14	6	31	0.10	55	75	
69	2275	5	0.4	3.97	4	383	2.0	2	0.29	0.4	42	9	11	32	3.14	0.71	34	17	0.22	2378	1	0.09	8	0.22	15	27	0.11	72	112	
70	2300	5	0.2	3.78	3	433	0.8	2	0.47	0.5	36	12	11	27	3.99	0.72	13	25	0.35	2528	3	0.08	8	0.26	11	41	0.11	95	147	
71	2325	5	0.2	3.94	8	277	0.7	2	0.23	0.2	32	12	14	33	3.14	0.85	16	21	0.26	1627	2	0.07	10	0.15	11	35	0.12	79	112	
72	4800E-2350N	5	0.4	4.18	2	370	0.8	2	0.29	0.2	30	11	11	27	3.54	0.83	11	29	0.30	2670	2	0.07	8	0.17	4	35	0.11	77	113	
73	4800E-2375N	5	0.6	4.43	4	398	0.7	2	0.17	0.4	24	10	8	20	4.18	0.93	10	22	0.23	2670	2	0.08	5	0.12	3	22	0.10	98	96	
74	2400	5	0.2	5.00	3	378	0.8	2	0.03	0.4	29	8	5	21	5.12	1.09	13	32	0.23	892	2	0.08	6	0.13	2	12	0.09	93	104	
75	2425	5	0.4	3.07	3	177	0.4	2	0.13	0.2	23	2	9	8	2.36	0.53	9	13	0.14	164	1	0.12	3	0.12	3	18	0.11	56	38	
76	2450	5	0.2	3.26	9	157	0.4	2	0.13	0.2	30	2	13	10	2.11	0.51	14	16	0.16	263	1	0.08	4	0.08	2	22	0.13	58	43	
77	4800E-2475N	5	0.2	2.71	7	139	0.4	2	0.15	0.2	28	3	19	7	1.63	0.39	12	16	0.14	280	1	0.15	3	0.06	5	20	0.13	45	39	
78	4800E-2500N	5	0.4	3.17	6	100	0.4	2	0.15	0.2	32	3	14	14	2.25	0.42	13	17	0.15	415	1	0.12	4	0.11	4	22	0.16	52	44	
79	2525	5	0.4	2.76	4	70	0.3	2	0.10	0.2	27	2	8	7	1.50	0.28	11	13	0.10	124	1	0.14	2	0.06	2	14	0.12	36	34	
80	2550	5	0.4	2.71	8	147	0.6	2	0.13	0.2	31	5	12	11	1.78	0.38	13	17	0.15	1180	1	0.12	4	0.10	4	19	0.13	45	49	
81	4800E-2575N	5	0.2	2.98	3	228	0.4	2	0.21	0.2	36	6	13	17	2.50	0.49	16	22	0.17	626	1	0.07	6	0.10	2	31	0.11	54	61	

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm	9008-082 Pg. 3 of 4
82	4800E-2600N	5	0.2	4.19	2	256	0.8	2	0.16	0.2	35	5	12	14	2.59	0.65	15	26	0.25	423	1	0.05	7	0.09	2	25	0.09	58	65	
83	4800E-2625N	5	0.2	3.65	4	145	0.6	2	0.22	0.2	35	6	8	17	2.20	0.68	14	23	0.34	488	1	0.03	5	0.07	4	24	0.08	44	75	
84	2650	5	0.2	4.18	2	123	0.5	2	0.23	0.2	31	7	11	14	2.52	0.64	12	22	0.30	1092	1	0.07	5	0.12	2	32	0.12	59	78	
85	2675	5	0.2	3.42	2	178	0.5	2	0.26	0.2	33	5	11	15	2.85	0.60	13	18	0.24	1109	1	0.07	5	0.12	2	36	0.13	61	71	
86	2700	5	0.2	3.43	2	115	0.4	2	0.24	0.2	28	4	8	12	2.66	0.44	11	22	0.25	315	1	0.05	5	0.05	3	31	0.10	53	61	
87	4800E-2725N	5	0.2	3.63	2	98	0.4	2	0.23	0.2	32	3	10	11	3.30	0.42	12	18	0.24	223	1	0.07	5	0.05	3	33	0.14	70	61	
88	4800E-2750N	5	0.2	3.86	2	122	0.4	2	0.25	0.2	31	4	9	13	2.85	0.51	11	23	0.26	259	1	0.05	5	0.06	2	35	0.12	61	74	
89	2775	5	0.2	4.07	3	272	0.6	2	0.28	0.2	34	6	10	15	2.52	0.71	12	25	0.41	1037	1	0.06	7	0.11	2	38	0.12	58	103	
90	2800	5	0.2	4.78	3	171	0.6	2	0.18	0.2	29	4	10	14	3.00	0.76	11	31	0.34	232	1	0.05	6	0.09	4	26	0.11	57	77	
91	2825	5	0.4	4.67	2	396	1.5	3	0.29	0.2	37	12	9	28	2.62	1.19	18	47	0.32	2043	31	0.04	11	0.15	7	40	0.05	66	111	
92	4800E-2850N	5	0.4	6.65	2	421	1.5	2	0.18	0.2	38	10	9	34	3.52	1.55	17	51	0.38	1684	1	0.05	10	0.18	11	20	0.07	84	125	
93	4800E-2875N	5	0.2	4.69	2	226	0.8	2	0.18	0.2	30	7	7	24	2.88	0.99	13	32	0.29	1668	1	0.05	7	0.18	15	20	0.08	64	118	
94	4800E-2900N	5	0.2	5.01	2	510	1.4	2	0.39	0.2	54	8	4	22	2.76	1.66	24	22	0.46	2113	1	0.03	6	0.14	19	19	0.06	59	122	
95	4900E-2100N	5	0.2	4.34	5	182	0.8	2	0.19	0.5	32	6	16	30	3.73	0.65	11	29	0.34	900	1	0.09	10	0.11	18	31	0.17	71	156	
96	2125	5	0.2	2.96	2	154	0.4	2	0.29	0.2	34	4	23	13	2.45	0.37	12	16	0.27	354	1	0.11	7	0.06	3	50	0.19	76	66	
97	4900E-2150N	5	0.2	3.14	2	202	0.5	2	0.26	0.2	33	4	18	12	2.46	0.47	13	16	0.20	582	1	0.13	5	0.08	4	43	0.18	64	59	
98	4900E-2175N	5	0.2	3.82	3	408	1.0	2	0.31	0.2	39	6	21	20	2.79	0.53	23	25	0.27	1615	1	0.14	10	0.12	5	46	0.18	65	96	
99	2200	5	0.2	3.36	5	196	0.5	2	0.30	0.6	31	3	22	15	4.03	0.39	12	17	0.20	244	2	0.10	6	0.07	3	38	0.20	77	64	
101	2225	5	0.2	2.86	6	112	0.5	2	0.19	0.2	33	6	17	20	3.80	0.32	15	17	0.19	209	2	0.05	7	0.07	4	28	0.14	78	58	
102	2250	5	0.4	2.57	2	268	0.7	2	0.40	0.2	31	3	14	18	2.29	0.29	15	14	0.16	259	1	0.12	5	0.09	3	46	0.14	54	46	
103	4900E-2275N	5	0.4	2.83	2	300	0.6	2	0.44	0.2	33	4	16	13	2.82	0.37	13	17	0.19	284	1	0.09	5	0.09	4	44	0.17	63	53	
104	4900E-2300N	5	0.6	3.34	2	256	0.9	2	0.33	0.2	34	5	14	15	2.43	0.40	15	18	0.29	957	1	0.14	6	0.16	2	36	0.15	58	71	
105	2325	5	0.2	3.61	2	169	0.4	2	0.24	0.2	33	4	19	15	3.17	0.53	12	20	0.28	237	1	0.07	7	0.04	2	34	0.14	69	63	
106	2350	5	0.6	3.12	2	467	1.1	2	0.42	0.2	38	7	14	19	2.58	0.38	18	29	0.29	3217	1	0.15	7	0.12	4	41	0.18	61	97	
107	2375	5	0.6	3.24	2	139	0.5	2	0.12	0.2	26	3	8	14	2.01	0.33	11	18	0.13	159	1	0.17	3	0.07	3	20	0.12	48	47	
108	4900E-2400N	5	0.2	3.06	3	86	0.3	2	0.13	0.2	26	2	9	10	2.51	0.33	10	17	0.16	178	1	0.10	3	0.05	2	20	0.14	56	47	
109	4900E-2425N	5	0.4	3.73	2	91	0.3	2	0.13	0.2	25	3	9	14	3.33	0.38	10	20	0.21	376	1	0.07	4	0.11	2	25	0.13	57	63	
110	2450	5	0.2	3.67	3	80	0.3	2	0.11	0.2	30	2	10	8	2.45	0.33	11	18	0.14	180	1	0.10	3	0.08	2	18	0.15	55	42	
111	2475	5	0.2	2.76	5	93	0.4	2	0.16	0.2	33	6	13	16	2.26	0.38	17	20	0.18	412	1	0.06	6	0.10	3	22	0.10	48	58	
112	2500	5	0.4	3.05	3	110	0.5	2	0.13	0.3	30	4	11	14	2.48	0.43	13	16	0.18	311	1	0.09	4	0.10	2	20	0.12	47	58	
113	4900E-2525N	5	0.4	3.83	2	180	0.7	2	0.12	0.2	30	4	9	18	1.95	0.65	13	23	0.21	445	1	0.09	4	0.07	3	18	0.11	41	64	
114	4900E-2550N	5	0.2	2.81	2	138	0.5	2	0.11	0.2	28	3	12	15	1.73	0.39	12	17	0.13	254	1	0.19	4	0.05	2	17	0.13	50	43	
115	2575	5	0.2	3.50	2	259	0.8	2	0.18	0.2	34	6	10	15	2.09	0.61	15	25	0.24	1449	1	0.06	7	0.09	4	24	0.09	52	70	
116	2600	5	0.2	4.25	2	208	0.8	2	0.14	0.2	34	5	13	15	2.20	0.57	15	25	0.20	805	1	0.10	6	0.10	3	21	0.11	54	67	
117	2625	220	0.4	4.56	2	150	0.6	2	0.12	0.4	34	5	14	20	3.53	0.63	14	23	0.24	512	1	0.05	8	0.09	2	19	0.12	73	77	
118	4900E-2650N	5	0.2	2.92	5	73	0.3	2	0.19	0.2	26	3	16	9	2.60	0.29	10	19	0.20	153	1	0.07	6	0.05	3	26	0.16	63	51	
119	4900E-2675N	5	0.2	3.94	2	97	0.4	2	0.08	0.2	27	2	5	8	2.29	0.47	11	23	0.15	150	1	0.07	2	0.05	2	15	0.09	39	49	
120	2700	5	0.2	3.72	2	102	0.4	2	0.09	0.2	29	2	6	7	1.45	0.55	11	21	0.14	256	1	0.09	3	0.06	2	15	0.09	33	40	
121	2725	5	0.2	3.51	2	217	0.8	2	0.11	0.2	41	8	9	16	1.64	0.86	21	31	0.31	941	1	0.03	7	0.05	2	20	0.06	40	78	
122	2750	5	0.6	3.24	2	108	0.7	2	0.16	0.2	36	3	11	21	2.11	0.38	14	14	0.14	307	1	0.09	4	0.09	6	22	0.12	43	51	
123	4900E-2775N	5	0.2	2.73	2	198	0.7	2	0.19	0.2	30	4	10	7	1.79	0.40	12	24	0.14	490	1	0.10	3	0.04	2	32	0.12	44	55	
124	4900E-2800N	5	0.2	2.72	2	101	0.3	2	0.11	0.2	28	2	5	6	1.19	0.45	11	19	0.12	138	1	0.06	2	0.03	2	16	0.08	35	38	
125	4900E-2825N	5	0.2	3.71	2	156	0.6	2	0.14	0.2	32	4	9	11	2.38	0.67	12	25	0.24	820	1	0.07	4	0.07	2	22	0.13	51	60	

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm	9008-082 Pg. 4 of 4
126	4900E-2850N	5	0.2	3.64	2	128	0.5	2	0.19	0.2	34	3	10	17	2.06	0.63	14	19	0.18	667	1	0.05	3	0.09	2	27	0.11	48	51	
127	2875	5	0.2	3.61	2	98	0.4	2	0.15	0.2	30	3	8	8	2.01	0.40	12	25	0.15	161	1	0.06	3	0.04	2	21	0.10	43	58	
128	4900E-2900N	5	0.2	4.33	2	149	0.5	2	0.11	0.2	32	4	6	10	2.23	0.82	13	31	0.28	211	1	0.04	3	0.05	2	18	0.08	42	69	
129	5000E-2100N	5	0.2	3.26	2	99	0.3	2	0.23	0.2	29	3	14	9	2.35	0.34	10	13	0.22	165	1	0.08	4	0.03	2	34	0.14	64	42	
130	2125	5	0.2	2.60	2	157	0.3	2	0.27	0.2	29	2	12	6	1.14	0.44	10	11	0.14	140	1	0.07	3	0.03	2	41	0.12	53	36	
131	2150	5	0.2	2.52	7	119	0.5	2	0.23	0.2	30	5	16	21	2.03	0.34	16	12	0.11	130	1	0.07	6	0.03	3	41	0.12	69	40	
132	2175	5	0.4	1.69	2	198	0.4	2	0.26	0.2	21	2	12	10	1.17	0.19	8	10	0.11	150	1	0.22	4	0.05	6	62	0.17	39	27	
133	5000E-2200N	5	0.2	2.85	2	74	0.3	2	0.15	0.2	23	2	15	10	2.93	0.30	9	13	0.16	147	1	0.08	4	0.03	2	24	0.16	78	44	
134	5000E-2225N	5	0.2	3.41	5	99	0.3	2	0.17	0.2	24	3	15	12	3.18	0.37	10	16	0.18	174	1	0.06	5	0.04	2	29	0.14	67	45	
135	2250	6	0.4	3.76	3	189	0.8	2	0.25	0.2	36	3	18	20	1.13	0.36	14	17	0.21	120	1	0.11	7	0.12	8	31	0.15	41	52	
136	2275	5	0.2	2.58	4	74	0.3	2	0.17	0.2	26	2	14	11	2.27	0.25	10	12	0.13	154	1	0.11	5	0.04	4	22	0.16	60	47	
137	2300	5	0.2	2.08	4	65	0.2	2	0.08	0.2	19	2	9	8	1.27	0.26	8	12	0.09	102	1	0.18	3	0.05	2	14	0.11	43	36	
138	5000E-2325N	5	0.2	3.17	2	160	0.4	2	0.16	0.2	33	3	13	6	1.36	0.41	14	20	0.21	135	1	0.12	4	0.05	8	25	0.18	55	46	
139	5000E-2350N	5	0.2	3.29	4	364	0.5	2	0.25	0.2	32	5	10	10	2.56	0.59	12	28	0.22	308	1	0.07	4	0.03	6	35	0.13	56	55	
140	2400	5	0.2	4.47	2	438	0.8	2	0.15	0.2	25	4	12	17	1.18	0.77	11	32	0.27	127	1	0.07	6	0.08	8	25	0.13	41	69	
141	2425	5	0.2	2.88	5	192	0.6	2	0.13	0.2	32	6	11	16	1.35	0.52	17	22	0.19	163	1	0.08	7	0.04	4	24	0.11	47	50	
142	2450	6	0.2	2.14	5	63	0.3	2	0.08	0.2	23	2	13	9	1.16	0.27	10	10	0.08	98	1	0.12	4	0.03	2	17	0.12	47	32	
143	5000E-2475N	5	0.2	2.90	7	79	0.3	2	0.11	0.2	25	2	16	9	1.78	0.37	11	12	0.12	133	1	0.07	6	0.04	2	22	0.14	60	48	
144	5000E-2500N	5	0.2	3.71	2	93	0.4	2	0.11	0.2	27	2	15	8	2.54	0.41	12	16	0.14	130	1	0.08	5	0.03	2	22	0.15	59	48	
145	2525	5	0.2	2.97	2	84	0.3	2	0.10	0.2	22	2	18	7	2.31	0.28	9	14	0.12	108	1	0.14	5	0.04	2	20	0.18	64	44	
146	2550	5	0.2	4.97	3	134	0.5	2	0.08	0.2	28	4	20	19	3.00	0.90	13	21	0.23	177	1	0.06	12	0.05	2	33	0.10	75	87	
147	2575	5	0.2	4.20	3	96	0.5	2	0.17	0.2	28	3	13	11	2.90	0.56	11	19	0.18	239	1	0.05	7	0.07	2	21	0.15	58	63	
148	5000E-2600N	5	0.2	4.19	5	77	0.3	2	0.12	0.2	28	3	11	10	2.72	0.54	11	16	0.16	142	1	0.09	6	0.04	4	19	0.14	64	57	
149	5000E-2625N	5	0.2	2.96	6	68	0.3	2	0.10	0.2	28	2	17	7	1.92	0.36	10	11	0.14	119	1	0.14	6	0.03	2	19	0.19	67	40	
151	2650	5	0.2	4.87	6	80	0.6	2	0.05	0.2	25	7	28	21	1.77	1.18	13	9	0.17	104	1	0.06	21	0.04	7	15	0.07	65	69	
152	2675	6	0.2	4.89	5	117	1.0	2	0.05	0.2	32	6	9	15	2.60	1.10	13	14	0.17	530	1	0.06	8	0.24	3	40	0.07	56	99	
153	5000E-2700N	5	0.2	5.41	2	116	0.7	2	0.03	0.2	24	5	24	14	1.92	1.52	11	8	0.17	1488	1	0.08	15	0.10	9	22	0.09	45	76	

APPENDIX 4

STATEMENT OF COSTS

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NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COSTS

PROJECT: Coquihalla DATE: October 26, 1990

TYPE OF REPORT: Geological/Geochemical/Geophysical

a) Wages

No. of Days : 46 man days

Rate per Day :	L. Erdman	10 days @ $210/day	$2,100.00
	R. Butler	12 days @ $180/day	$2,160.00
	C. Welton	12 days @ $140/day	$1,680.00
	S. Louden	12 days @ $140.00	$1,680.00

Dates From: Aug. 2-15, 1989

Total Wages: $7,620.00 $7,620.00

b) Food & Accommodations:

No. of Days: 46 man days

Rate per Day: $40.43

Dates From : Aug. 3 - August 18, 1990

Total Costs : 46 x $40.43 $1,859.78

c) Transportation: Truck Rental plus Helicopter

No. of Days: 12 days

Rate per day: $50.61/day (truck)

Dates From : Aug. 3 - Aug. 18, 1990

Total Cost : 12 x $50.61 (truck) $ 607.32

Helicopter time: 2.67 hours

Rate per hour : $630.00

Total Cost : (Helicopter) 2.67 x $630 $1,682.10

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e)	Analysis: (See attached schedule)	$3,234.00
f)	Cost of preparation of Report	
	Author : 3 days @ $210/day	$ 630.00
	Typing : 1 day @ $150/day	$ 150.00
g)	Other: Linecutting	
	No. of Days: 7 mandays	
	Rate per day: $115/day	
	Dates From : Aug. 3 - Aug. 6, 1990	
	Total Wages : 7 x $115.00	$ 805.00
	Other: Geophysics	$8,061.12
	TOTAL COST :	$24,649.32
	Other: Geology	
	No. of Days: 25 mandays	
	No. of Units: 25	
	Unit Cost : $392/manday	
	Total Cost : 25 x $392	$9,800.00
	Unit Costs for: Geochemistry	
	No. of Days : 14 mandays	
	No. of Units : 214	
	Unit Costs : $25.00/sample	
	Total Cost : 214 x $25.00	$5,350.00

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Unit Costs for Linecutting

No. of Days :	7 mandays	
No. of Units :	11.2 km	
Unit Costs :	$150/km	
Total Cost :	11.2 x $150.00	$1,680.00

Unit Costs for Geophysics (Mag):

No. of Days :	6 mandays	
No. of Units :	4.8 km	
Unit Costs :	$349.85/km	
Total Costs :	4.8 x $349.85	$1,679.28

Unit Cost for Geophysics (I.P.)

No. of Days :	15 mandays	
No. of Units :	2.2 km	
Unit Costs :	$2,791/km	
Total Costs :	2.2 x $2,791.00	$6,140.20

TOTAL COST: $24,649.48

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NORANDA EXPLORATION COMPANY, LIMITED
WESTERN DIVISION

DETAILS OF ANALYSES COSTS

PROJECT: COQUIHALLA

ELEMENT	NO. OF DETERMINATION	COST PER DETERMINATION	TOTAL COST
28 Element}	202 soils	$15.00	$3,030.00
ICP plus }	12 rocks	$17.00	$ 204.00
Au by AA }			
			$3,234.00

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NORANDA EXPLORATION COMPANY, LIMITED
STATEMENT OF COSTS

PROJECT: COQUIHALLA **DATE:** Oct. 28, 1990

TYPE OF REPORT: Geophysical

a) Wages:

No. of Days	:	mandays		
Rate per Day	:	T. Wong	4 days @ $180/day	$ 720.00
		R. Butler	4 days @ $120/day	$ 480.00
		W. Kerby	4 days @ $180/day	$ 720.00
		C. Welton	4 days @ $100/day	$ 400.00
		S. Louden	5 days @ $110/day	$ 550.00
Dates from	:	Aug. 15 - Aug. 18, 1990		
Total Wages	:	$2,870.00		$2,870.00

b) Food & Accommodation:

No. of Days	:	21 mandays	
Rate per Day	:	$30.00	
Dates from	:	Aug. 15 - Aug. 18, 1990	
Total Costs	:	21 x $30.00	$ 630.00

c) Transportation: (Truck & Helicopter)

No. of Days	:	4 days	
Rate per Day	:	$42.43 (truck)	
Dates From	:	Aug. 15 - Aug. 18, 1990	
Total Costs	:	4 x $42.43	$ 169.72
Helicopter Hours	:	2.4	
Rate per Hour	:	$630/hour	
Total Costs	:	2.4 x $630.00	$1,512.00

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Unit Cost for Geophysics (Mag):

No. of Days	:	4 mandays	
No. of km	:	4.8 km	
Rate per km	:	$120.00/km	
Total Cost	:	4.8 x $120.00	$ 576.00

Unit Cost for Geophysics (I.P.)

No. of Days	:	17 man days	
No. of km	:	2.2 km	
Rates per km	:	$1,047/km	
Total Cost	:	2.2 x $1,047.00	$ 2,303.40

TOTAL COST : <u>$ 8,061.12</u>

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APPENDIX 6
STATEMENT OF QUALIFICATIONS

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STATEMENT OF QUALIFICATIONS

****

I, Linda R. Erdman of the City of Vancouver, Province of British Columbia, hereby certify that:

1. I am a resident of British Columbia, residing at 2-2291 West 1st. Avenue, Vancouver, B.C.

2. I am a graduate of the University of British Columbia, with a B.Sc. (Honours) in Geology (1978) and an M.Sc. in Geology (1985).

3. I am a Fellow of the Geological Association of Canada.

4. I have been engaged in mining exploration since 1976.

5. I have been a temporary employee of Noranda Exploration Company, Limited (no personal liability) since May, 1986 and a permanent employee since November, 1987.

Linda Erdman

Linda R. Erdman, M.Sc.
Project Geologist

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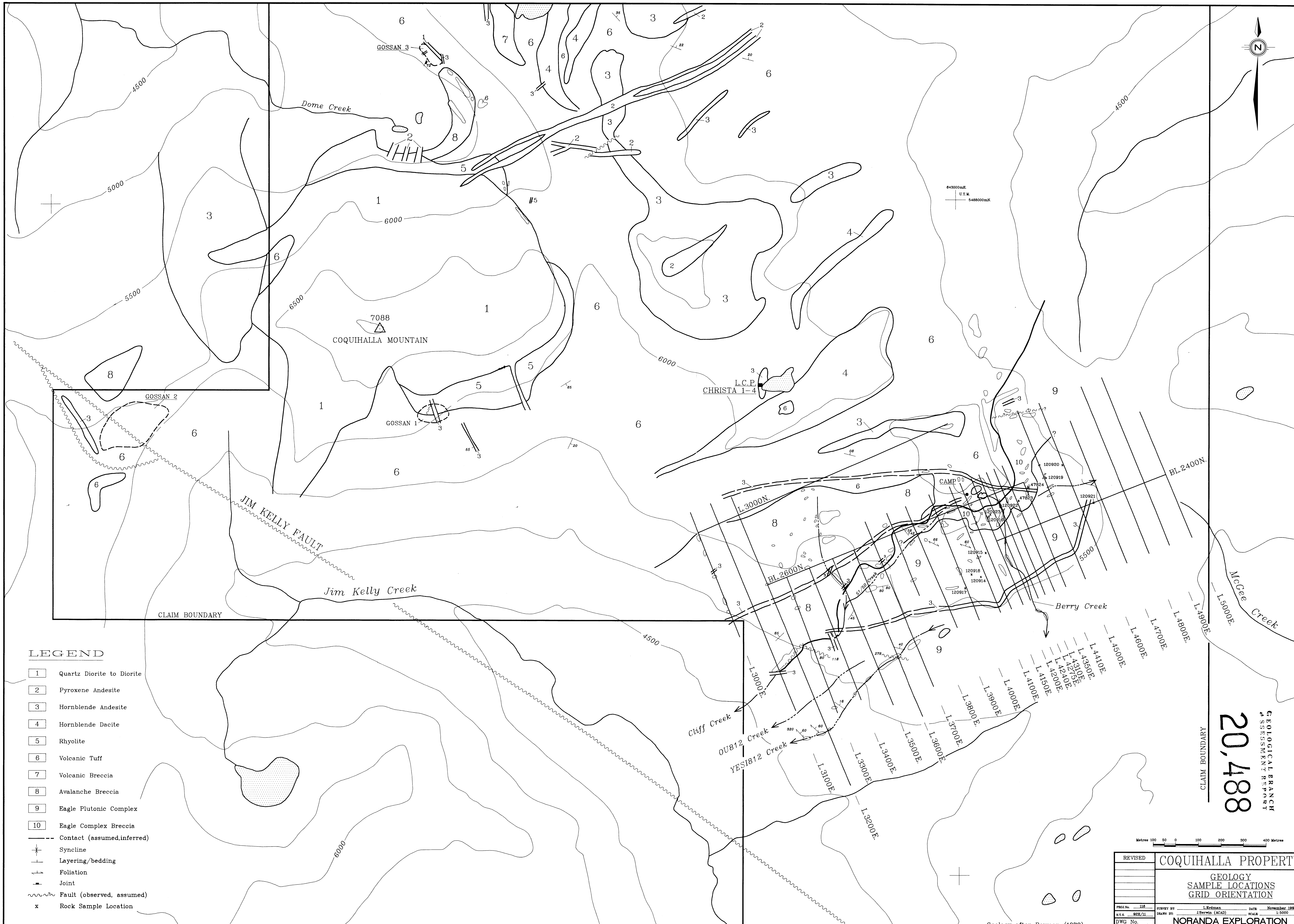
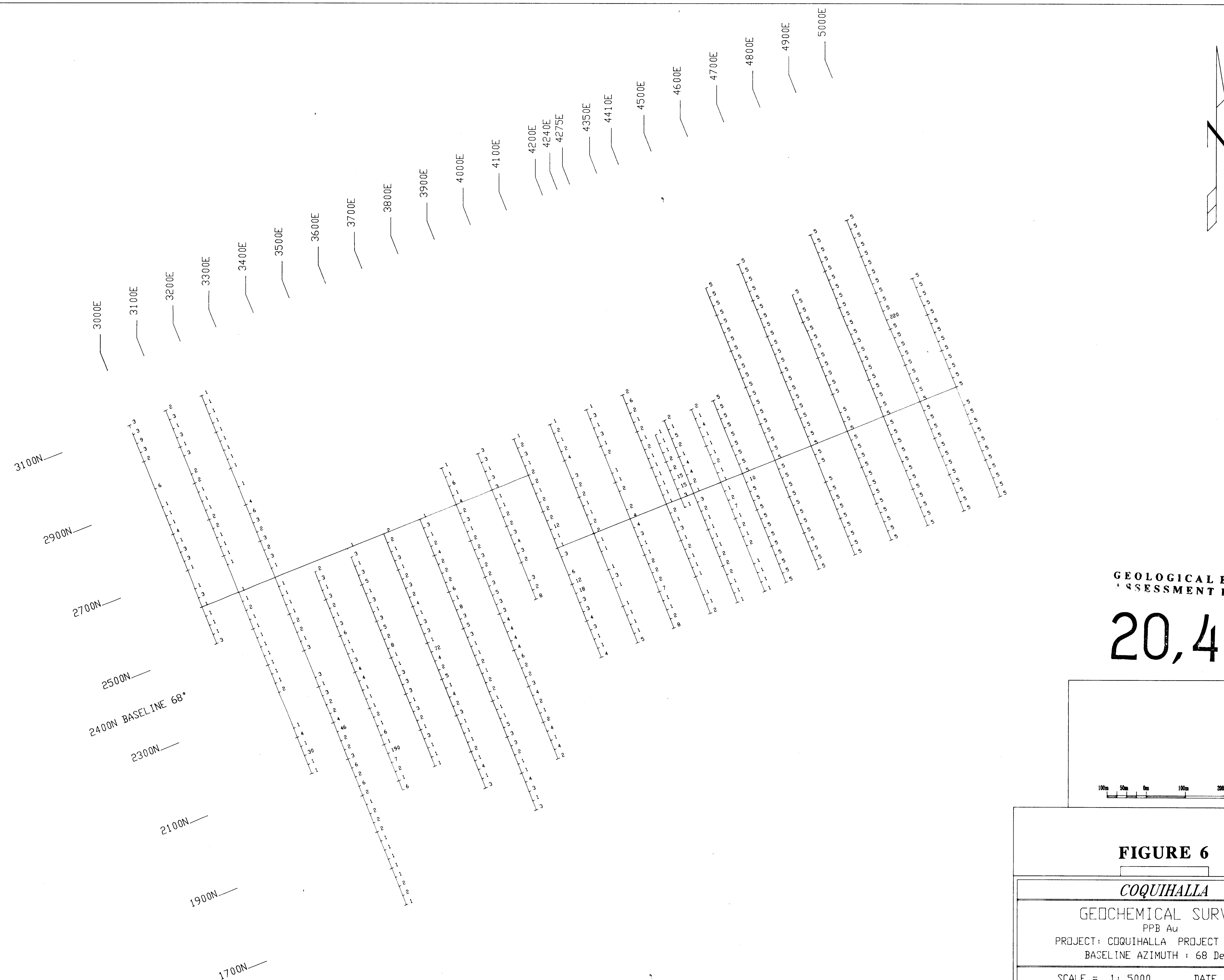


LEGEND
1 Quartz Diorite to Diorite
2 Pyroxene Andesite
3 Hornblende Andesite
4 Hornblende Dacite
5 Rhyolite
6 Volcanic Tuff
7 Volcanic Breccia
8 Avalanche Breccia
9 Eagle Plutonic Complex
10 Eagle Complex Breccia
Contact (assumed, inferred)
Syncline
Layering/bedding
Foliation
Joint
Fault (observed, assumed)
x Rock Sample Location
GOSSAN 3
Dome Creek
7088
COQUIHALLA MOUNTAIN
GOSSAN 1
GOSSAN 2
CLAIM BOUNDARY
JIM KELLY FAULT
Jim Kelly Creek
L.C.P.
CHRISTA 1-4
CAMP
BL 2400N.
L.3000N.
BL.2600N.
Berry Creek
McGee Creek
Cliff Creek
OU812 Creek
YES1812 Creek
L.3000E.
L.3100E.
L.3200E.
L.3300E.
L.3400E.
L.3500E.
L.3600E.
L.3700E.
L.3800E.
L.3900E.
L.4000E.
L.4100E.
L.4150E.
L.4200E.
L.4240E.
L.4275E.
L.4310E.
L.4350E.
L.4410E.
L.4500E.
L.4600E.
L.4700E.
L.4800E.
L.4900E.
L.5000E.
4500
5000
5500
6000
6500
643000mE.
U.T.M.
5488000mN.
120920
120919
47624
47623
120921
120922
120923
120916
120915
120918
120914
120917
CLAIM BOUNDARY
20,488
GEOLOGICAL BRANCH
ASSESSMENT REPORT
Metres 100 50 0 100 200 300 400 Metres
REVISED
COQUIHALLA PROPERTY
GEOLOGY
SAMPLE LOCATIONS
GRID ORIENTATION
PROJ.No. 116
N.T.S. 92H/11
SURVEY BY L.Erdman
DRAWN BY J.Serwin (ACAD)
DATE November 1990
SCALE 1:5000
DWG No. 4
NORANDA EXPLORATION
OFFICE VANCOUVER
Geology after Berman (1979)



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

FIGURE 6

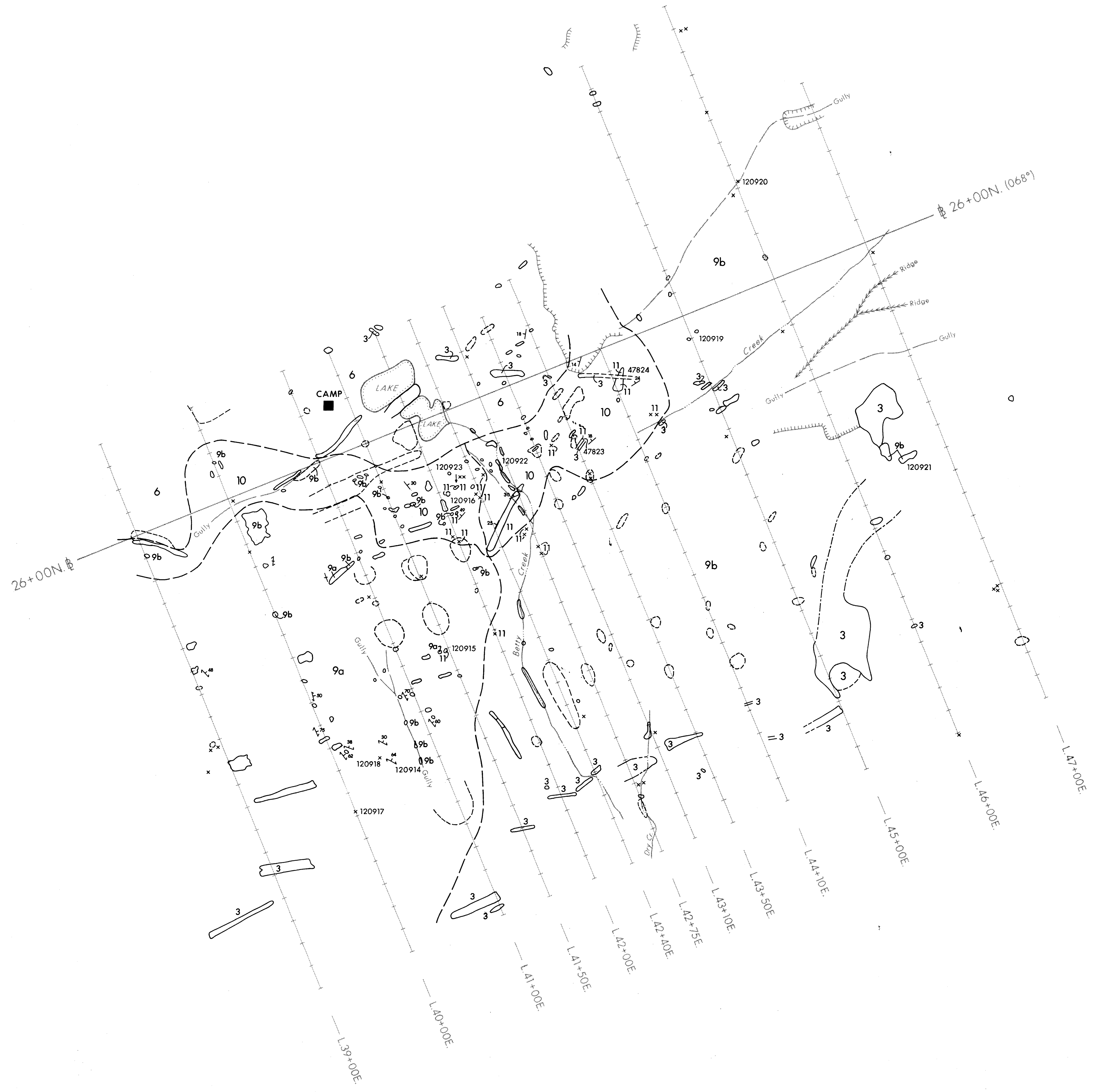
COQUIHALLA

GEOCHEMICAL SURVEY
PPB Au
PROJECT: COQUIHALLA PROJECT # : 116
BASELINE AZIMUTH : 68 Deg.

SCALE = 1: 5000 DATE : 8/13/89
SURVEY BY : L ERDMAN NTS : 092H11
FILE: C116COQ
NORANDA EXPLORATION

noranda
NORANDA EXPLORATION CO. LTD.

Vers. 5.02 Thu 27 Sep 1990 at 11:57 Centre of plot at 4000.0E/2400.0N Serial # C90140, Registered User : NORANDA EXPLORATION



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

LEGEND

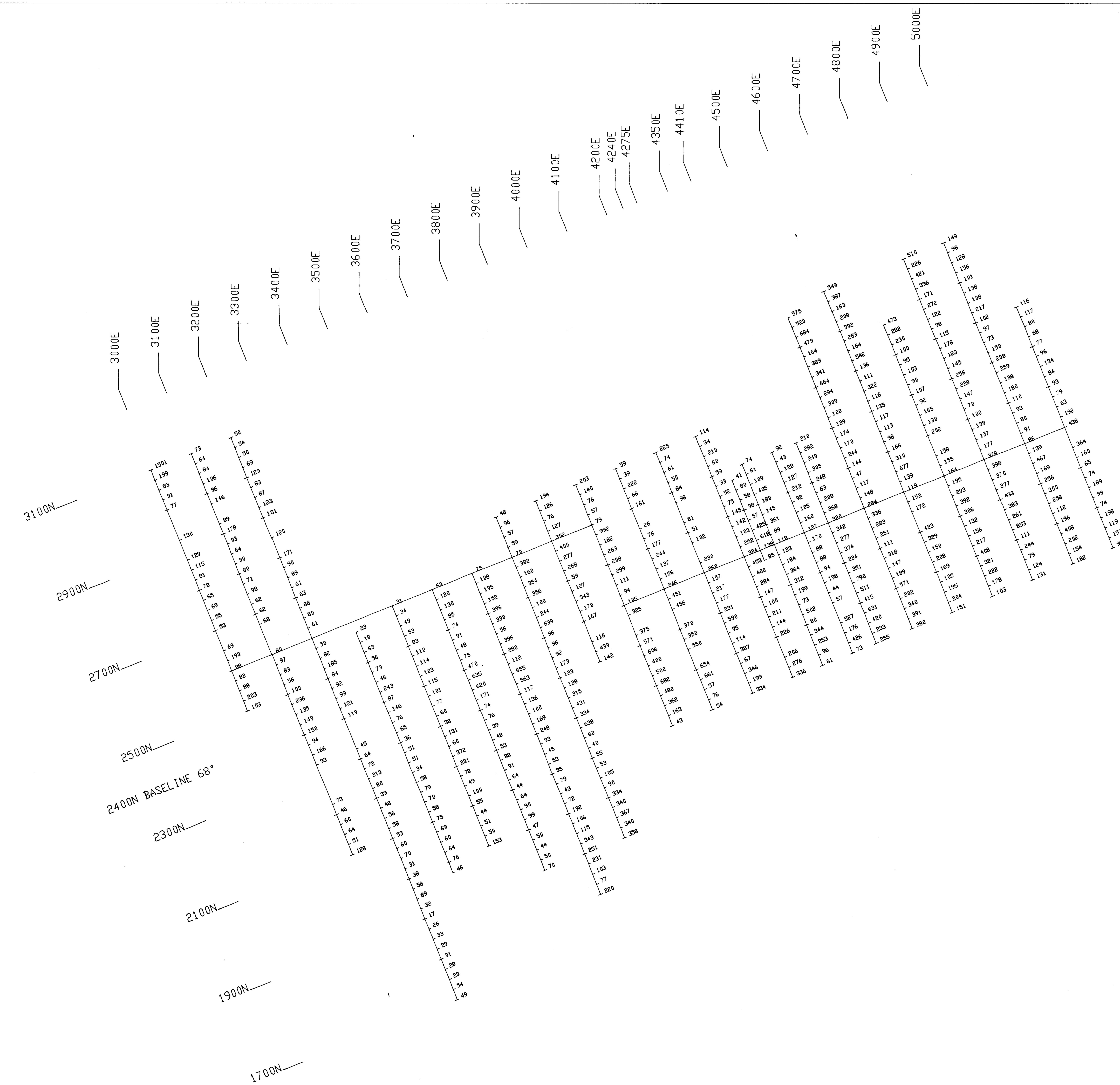
- Outcrop
- Talus/Subcrop
- Escarpment
- × Boulder
- 120920 Rock Sample Location

3	Mafic feldspar porphyritic dyke (magnetic).
6	Tertiary Coquihalla Complex Volcanic tuff.
10	Brecciated phase of gneiss complex, or muscovite granite.
9a	Gneiss Complex
9b	Muscovite granite, locally pegmatitic
11	Quartz breccia

SCALE
1:2000

Metres 50 0 50 100 150 200 Metres

REVISED	
	COQUIHALLA PROPERTY
	DETAILED GEOLOGY
PROJ. No. 0116	SURVEY BY: L.Erdman DATE: October/90
N.T.S. 92H/11	DRAWN BY: [signature] SCALE: 1:2000
DWG. No. 5	**NORANDA EXPLORATION**
	OFFICE: Vancouver



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

Contour Interval :

100m 50m 0m 100m 200m

FIGURE 7

COQUIHALLA

GEOCHEMICAL SURVEY

PPM Ba

PROJECT: COQUIHALLA PROJECT # : 116

BASELINE AZIMUTH : 68 Deg.

SCALE = 1: 5000 DATE : 8/13/89

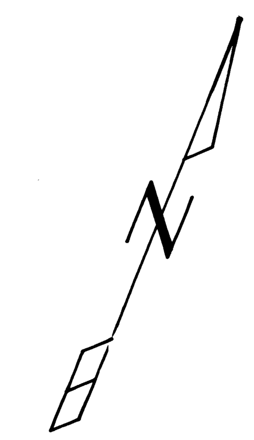
SURVEY BY : L ERDMAN NTS : 092H11

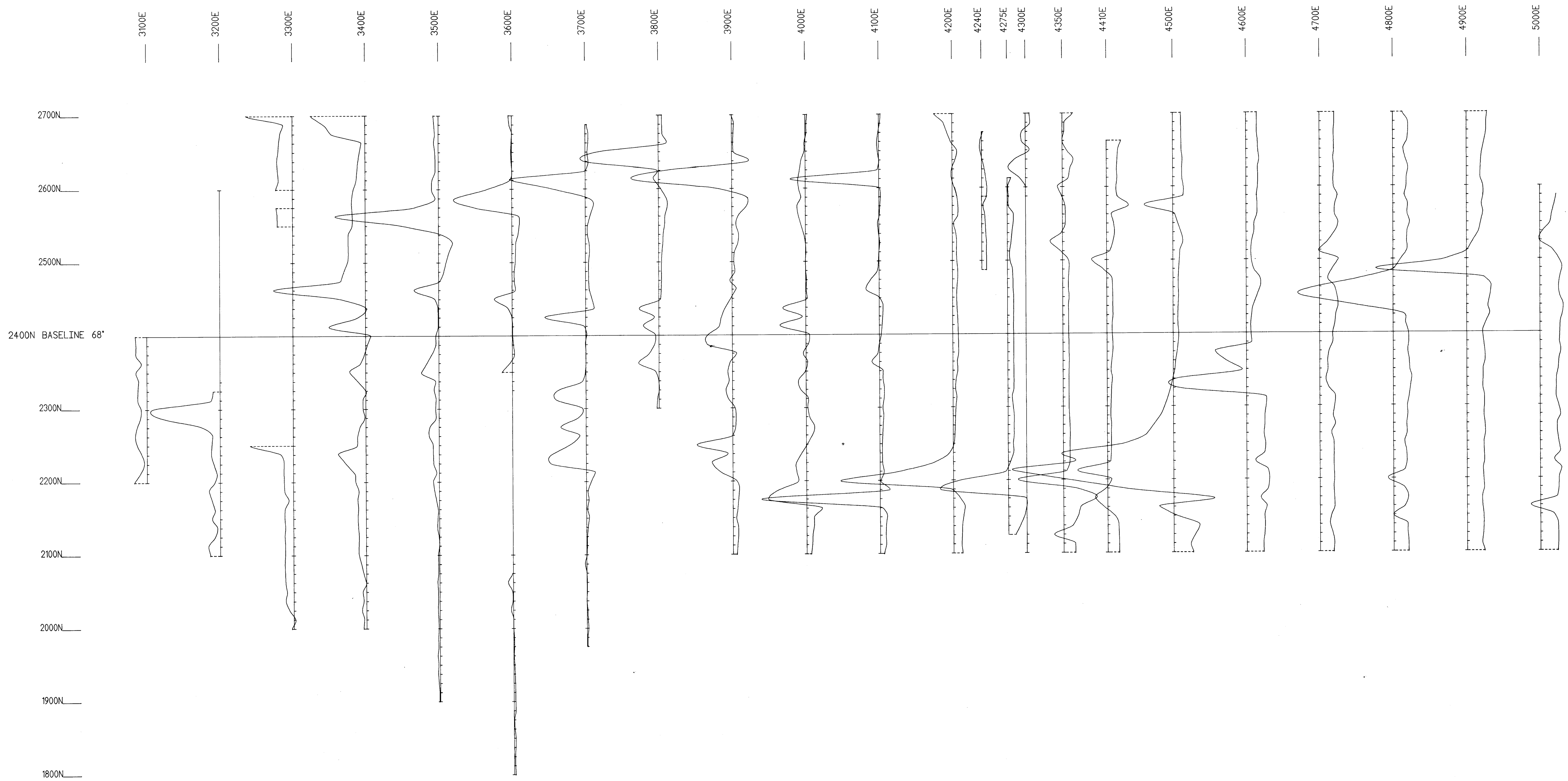
FILE: C116CDQ

NORANDA EXPLORATION

noranda
NORANDA EXPLORATION CO. LTD.

Vers. 5.02 Thu 27 Sep 1990 at 11:57 Centre of plot at 4000.0E/2400.0N Serial # C90140, Registered User : NORANDA EXPLORATION

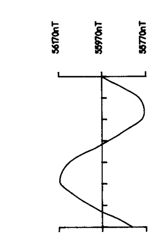




GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

FIGURE 8



Instrument : OMNI
Field : TOTAL
Datum : 0.0 nT

Contour Interval :

Profile Scale : 200 nT / Cm

Conductor Axis :

50m 25m 0m 50m 100m

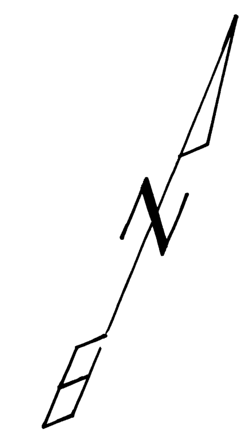
COQUIHALLA MTN.

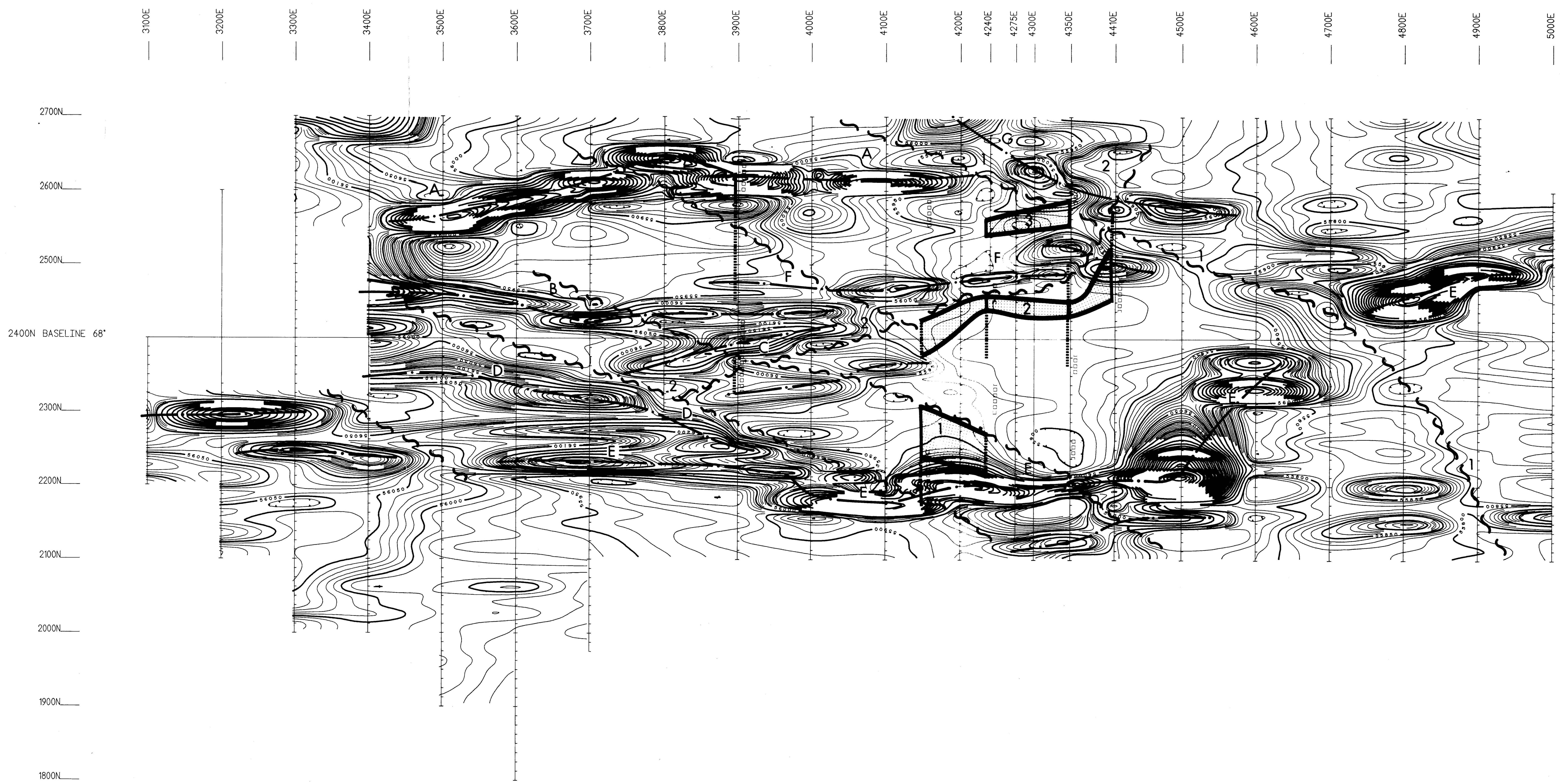
MAGNETOMETER SURVEY

PROJECT: COQUIHALLA MTN. PROJECT # : 116
BASELINE AZIMUTH : 68 Deg.

SCALE = 1 : 2500 DATE : / /
SURVEY BY : WK/TW NTS :
FILE: MC0Q90
NORANDA EXPLORATION

Vers. 5.02 Tue 30 Oct 1990 at 9:13 Centre of plot at 4050.0E/2250.0N Normal profile centred on 55970.0 nT Serial # M90140 Registered User : NORANDA EXPLORATION





GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,488

LEGEND

- High I.P. Effect
- Moderate I.P. Effect
- High Resistivity Zone
- A — Interpreted Dykes
- Magnetic Breaks
- 1 — I.P. Zone

FIGURE 9

Instrument : OMNI
Field : TOTAL
Datum : 0.0 nT

Contour Interval : 10 nT

Conductor Axis :

50m 25m 0m 50m 100m

COQUIHALLA MTN.

MAGNETOMETER SURVEY

PROJECT: COQUIHALLA MTN. PROJECT # : 116
BASELINE AZIMUTH : 68 Deg.

SCALE = 1 : 2500 DATE : 10/1/90
SURVEY BY : WK/TW NTS :
FILE: MCOQ90
NORANDA EXPLORATION