

87-127-15596

3/88

ASSESSMENT REPORT
 GEOLOGICAL SURVEY ON THE
 CROWN II GROUP
 N.T.S. 82E/2E
 GREENWOOD MINING DIVISION
 Latitude 49°05.1' Longitude 118°36.3'

GEOLOGICAL BRANCH
ASSESSMENT REPORT *Operator Consolidated Boundary Exploration, Limited*

15,596

FILMED

D. Graham Gill (Geologist)

Noranda Exploration Company, Limited *Operator*
(No Personal Liability)

June 28 - August 15, 1986

SUB-RECORDER
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 VANCOUVER, B.C.

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I. INTRODUCTION

1. Location and Access

The Crown II group of claims is comprised of 45 units in the Greenwood Mining Division on N.T.S. Mapsheet 82E/2. The property is located on the southern flanks of Knob Hill and partially on the northern slopes of Mount Attwood directly south of the old Phoenix mine site. It is also situated within the Midway Range of the Monashee Mtns. The town of Greenwood, B.C. is exactly 5 km west from the top of Knob Hill.

Access to the property is obtained via the Phoenix mine access road, a power line access road which bisects the property from east to west or by the Lind Creek access road.

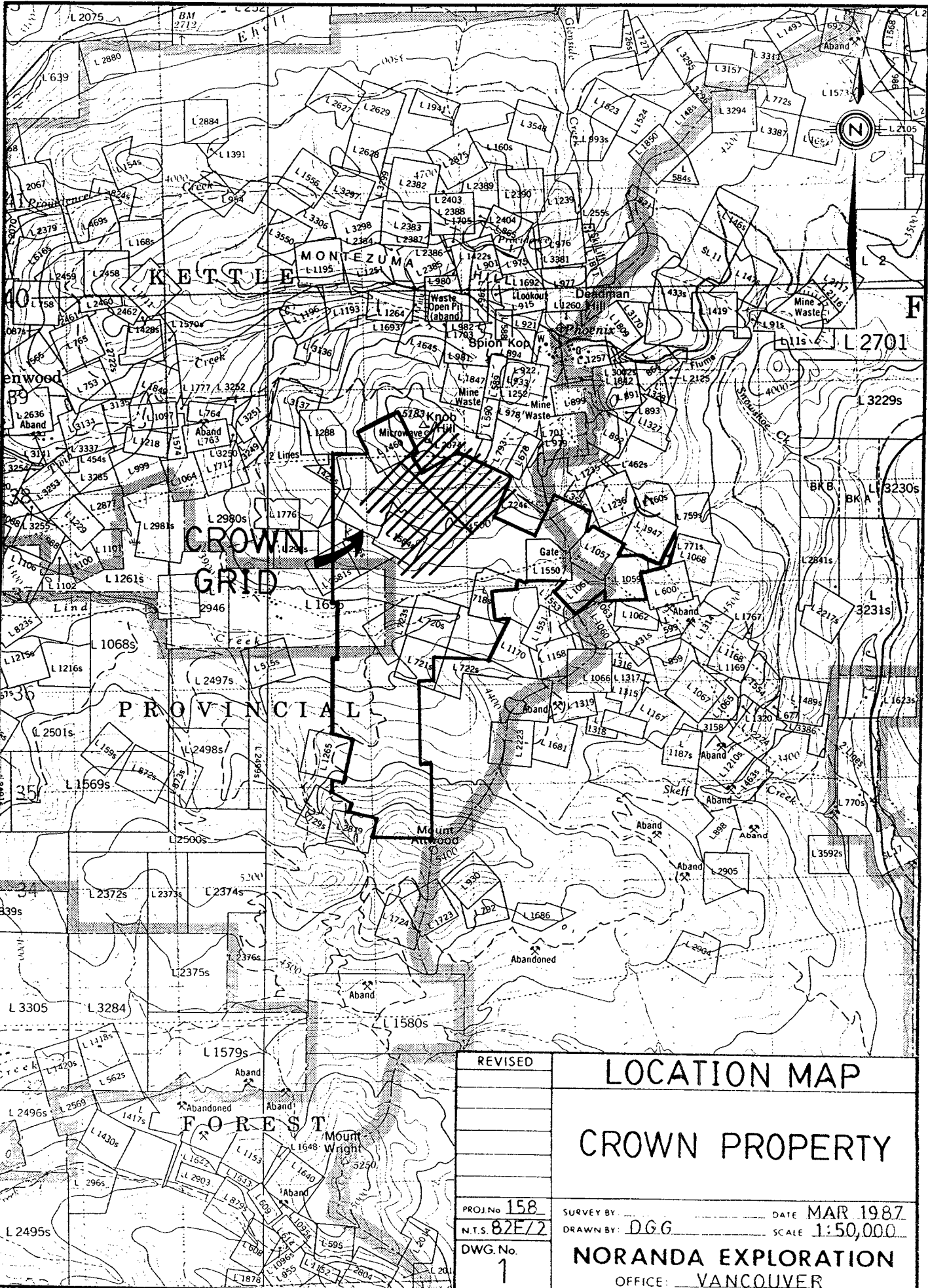
2. Topography and Physiography

The Crown II group of claims lies directly over the south facing slopes of Knob Hill, the north facing slopes of Mount Attwood and over the headwaters of Lind Creek which divides the latter two topographic highs. Except for the very eastern section of the property which is drained by the southern tributary of Snowshoe Creek, the rest of the claims are drained by Lind Creek and its tributaries. Steepness of the terrain ranges from moderate to flat. Maximum relief of the property is 1500 feet with a maximum elevation of 5300 feet.

Vegetation of the area ranges from grassland and scrub bush on exposed southern hillsides to stands of fir and cedar in creek beds and north facing slopes.

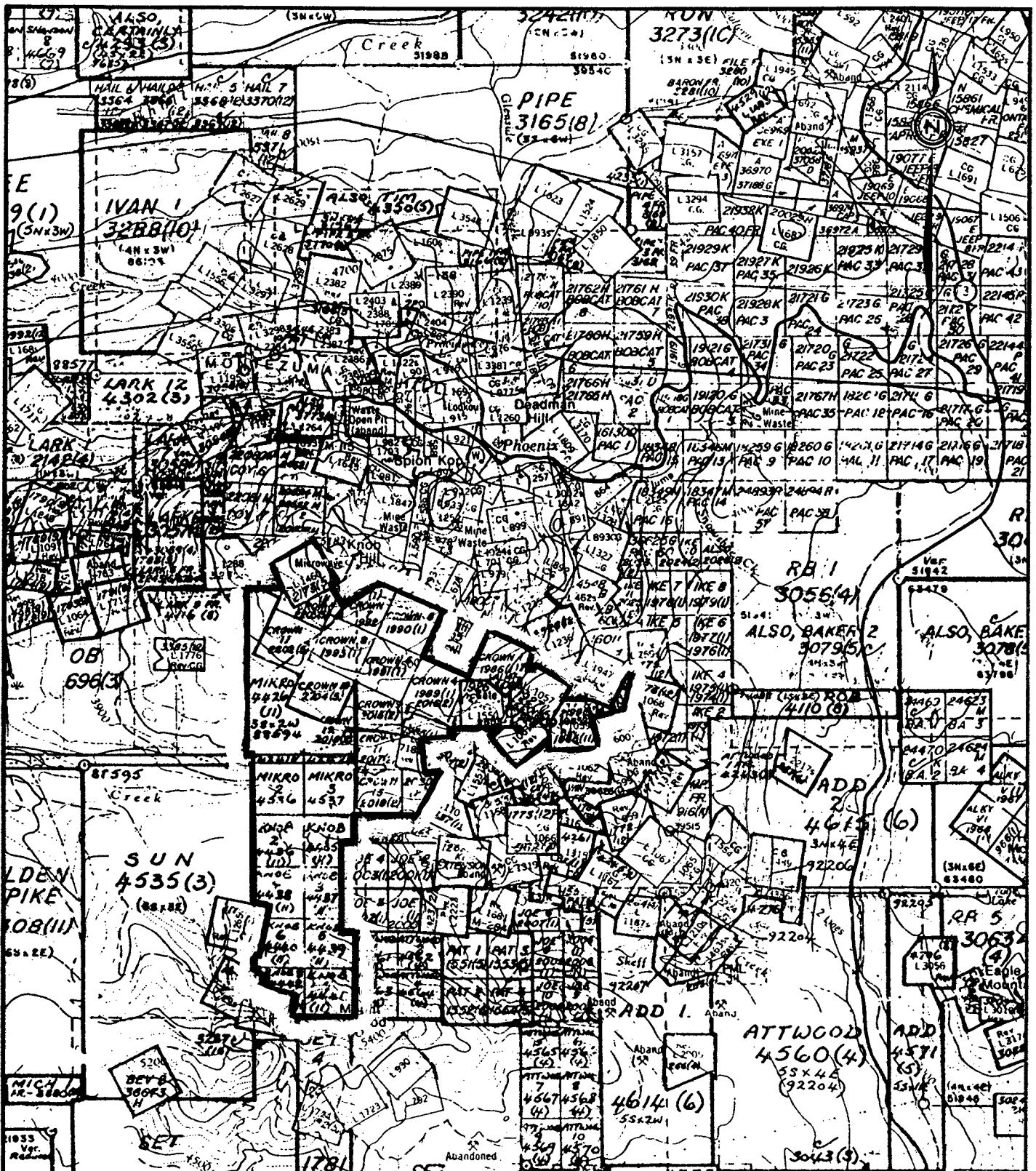
3. Previous Work

Due to the proximity of this claim group to the Phoenix mine site there is no doubt that numerous exploration projects have been undertaken on or near Knob Hill prior to the turn of the century to present.



REVISED	LOCATION MAP	
	CROWN PROPERTY	
PROJ. No. 158	SURVEY BY	DATE MAR 1987
N.T.S. 82E/2	DRAWN BY D.G.G.	SCALE 1:50,000
DWG. No. 1	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

NCI-7



REVISED	CLAIM LOCATION	
	CROWN PROPERTY	
PROJ. No. 158	SURVEY BY: _____	DATE: MAR 1987
N.T.S. 82E/72	DRAWN BY: DGG	SCALE 1:50,000
DWG. No. 2	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

Listed below is some of the more recently reported work done by various companies on this property.

- 1901 250 feet of sinking and 150 feet of crosscuts and drifts on the Hartford claim as well as 75 feet of shafts and crosscuts on the J & R claim were completed.
- 1966 Self-potential and geochemical surveys plus a 4 hole E.X. Diamond drilling program was done by Meridian Exploration.
- 1970 Granby Mining Company, Ltd. completed an induced-polarization survey.
- 1980 Two diamond drill holes on the J & R Fraction were reported by Consolidated Boundary Exploration, Ltd.
- 1981 Argenta Resources carried out a geophysical and a 4 hole diamond drilling program on the J & R Fraction.
- 1983 Geochemical and geological surveys as well as a trenching program was completed on the Crown claim by Consolidated Boundary Exploration, Ltd.
- 1984 12 diamond drill holes were completed by Consolidated Boundary Exploration, Ltd. on the J & R Fraction.

4. Owner-Operator

All of the 45 units comprising the Crown II Group of claims are owned by Consolidated Boundary Exploration, Limited, P.O. Box 1739, Grand Forks, B.C. Noranda Exploration Company, Limited of 1050 Davie Street, Vancouver, B.C. is the sole operator of the property.

The following is a list of claims to which assessment work is being filed.

Claim Name	Owner	Record #	Units	Anniversary Date
Mikro 2	Consolidated Boundary Exploration Ltd. P.O. Box 1739 Grand Forks, B.C.	4536	1	March 12/87
Mikro 3	"	4537	1	"

5. Economic Potential

The survey covered in this report was conducted on the belief that the compilation of previous surveys done by other companies revealed the possibility of an epithermal Au target on this property

The following is a list of this compilation:

1. Coincident anomalous Cu geochem, self potential and low I.P. resistivity responses delineated a circular feature.
2. Intense silicification and brecciation in previous drill holes within the same area noted above.
3. 10 feet of 0.14 oz/ton in one of the holes mentioned above.

II SUMMARY OF WORK DONE

1. Linecutting

A total of 14.7 line kms of slashed and metrically chained grid was cut in order to establish control for geological mapping and future exploration surveys. The grid itself consisted of a 1 km long baseline with winglines spaced 100 m apart ranging in length from 1.2 to 1.4 km.

2. Geological Survey

Geological mapping at a scale of 1:2500 was conducted along 13.7 kms of grid line. In all, mapping covered an area of approximately 1.37 sq kilometres. 29 rock samples were also taken during the course of this survey.

3. Claims worked

All work done during the report period (June 28 - August 15, 1986) was done on the Crown 5-8 (1990 - 1993), Crown 9 (2015), Crown 17 (2023), Crown 18-19 (2203 - 2204), Nellie Cotton (2173) and Mikro (4426) claims of the Crown II Group of claims.

III DETAILED TECHNICAL DATA

1. Geological Survey

i) Purpose

A total of 9 mandays were spent mapping the Crown grid (see drawing #3) at a scale of 1:2500 over 14.7 line kms of grid. The survey, plus the collection of 29 rock samples, was conducted in an attempt to delineate any possible Au bearing stratigraphy, structure and/or alteration associated with an epithermal Au deposit.

ii) Regional Geology

A majority of the Crown II claim group is underlain by Quaternary cover as the property bounds the large, open area at the headwaters of Lind Creek. However, north of Lind Creek the south slopes of Knob Hill are underlain mainly by cherts and greenstones of the Carboniferous-Permian aged Knob Hill Group. Unconformably overlying the latter and usually found as ridge caps is the sharpstone conglomerate member of the Triassic aged Brooklyn Formation.

The southern section of the property is underlain by quartz-chlorite-biotite-muscovite schists of Pre-Carboniferous age and argillites of the Carboniferous-Permian aged Attwood Formation.

Sporadic outcroppings of Jurassic greenstones and ultramafic intrusives have also been mapped by the G.S.C. as seen on Map 1500A from paper 79-29.

iii) Detailed Geology and Rock Geochem

A total of 9 mandays were spent mapping the Crown grid at a scale of 1:2500 which covered an area of 1.37 sq km. The following is a description and interpretation of the stratigraphy observed. See Drawing #3 for reference to geology and Appendix II for Rock geochemical results.

Beginning in the southern portion of the grid rocks of Permian-Carboniferous or older age are encountered. Originating from a high energy environment these rocks of Units 1 & 2 are described as breccia-conglomerates and dacitic tuffs respectively. The breccia-conglomerate is comprised of sub-angular to rounded fragments and/or clasts of chert, quartzite and silt within a green siliceous matrix. Although the finer grained dacitic tuff suggests a period of quiescence during the formation of the breccia-conglomerate, it may in fact be a finer grained, more siliceous version of Unit 1. Several small pits were found in this area and revealed only pyritic, somewhat leached breccia-conglomerate, dacitic tuff and minor hornfelsed siltstone. None of the samples taken from these units returned any anomalous Au results.

Lying topographically above units 1 and 2 is a package of interbedded siltstones, tuffs and conglomerates. These rocks of Unit 4 represent a low energy environment following the deposition of the breccia-conglomerate. The three main rock types comprising this unit are described on the legend of Drawing #3 and are probably associated with the lower part of the Permian-Carboniferous Knob Hill Group. Orientations taken from this sedimentary package reveal a general strike and dip of the rocks to be 160/32-60E.

Intercalated with these sediments are several discontinuous lense-like bodies of mafic volcanics (Unit 3) and chert breccia (Unit 5). The rocks of Unit 3 are described two-fold. The first and most abundant member of Unit 3 consists of dark green, massive, fine to medium grained, undifferentiated andesitic tuffs and flows which commonly appear in the western section of the grid and pinch out to the east. This andesitic unit is seen often especially toward the northern section of the grid near the Knob Hill - Brooklyn contact. One rock sample (1657) taken within Unit 3 returned a value of 1100 ppb Au and is located at 444+50E, 452+75N.

Small outcroppings of andesitic agglomerate located on line 446E makeup the second rock type of Unit 3.

Unit 5, mentioned above, is seen in two locations within the southern section of the grid and is described as a tectonically brecciated chert. In both cases this unit, which acts as a ridge former, is situated in close proximity to a large creek which bisects the grid from NW to SW. The larger outcropping of the breccia (between lines 444E and 446E) is also bounded to the south by a dioritic intrusion. Although rocks samples collected from this unit did not return high Au values the brecciation of the chert, its proximity to the diorite and the possibility that the creek may be an expression of an underlying structure makes this unit a viable target for epithermal mineralization.

Rhyolitic/dacitic tuffs and/or flows of Unit 6 which are very similar in nature to the large, massive cherts of the Knob Hill Group are also seen intercalated with the sediments of Unit 4 as well as in other areas of the grid. In some locations the similarity between the chert and felsic volcanics is such that it is impossible to differentiate between the two. Samples collected from this unit returned high values of gold although it should be mentioned that the samples were taken from shear zones within the felsic volcanics.

Eg).	1659	-	4000 ppb Au)	L447E, 460+85N
	98414	-	2900 ppb Au)	" "

The center of the grid is predominantly underlain by a large, thick package of cherts and minor siltstones (Unit 7) of the Permian-Carboniferous Knob Hill Group. (See the legend of Drawing #3 for detailed description of this unit). The chert is often recrystallized to a larger grain size in the vicinity of several dioritic and gabbroic intrusions listed as Units 9 and 10 respectively. Smaller units of andesite, felsic volcanics and siltstones are also seen within the chert package. Due to its resistance to weathering the chert often forms many small ridges which strike approximately 140-155° and indicate the general strike of the entire unit. Dip measurement reveal figures of 48-85° from north to east but are quite variable (as are the strikes) around the large gabbroic intrusion in the middle of the cherts.

Most of the rock samples taken within Unit 7 returned positive to high Au result. However, it should be noted again that most of the samples were collected from an exposed shear zone with an apparent strike and dip of 142/50NE located between lines 440E and 442E at 454+75N.

Anomalous results are as follows:

94808	-	24000	ppb	Au
94810	-	2680	"	"
94812	-	2240	"	"
94813	-	650	"	"
1666	-	1800	"	"
1667	-	2900	"	"
1668	-	1100	"	"

Lying topographically and stratigraphically above Unit 7 is a fairly thick succession of andesitic flows and tuffs interbedded with a moderate amount of siltstones. Several discontinuous lenses of chert and felsic volcanics are also observed within the andesitic pile which has been described earlier as Unit 3. Not unlike the chert package, the andesite also acts as a ridge former and reveals a general strike of the volcano-sedimentary package at this location to be approximately 150° with moderate to steep easterly dips.

Unit 8, the last mappable unit on this grid, consists of the Triassic aged Brooklyn Formation which lies unconformably on top of the Knob Hill succession of cherts and andesites. It is described as being mottled white-green-grey with variably sized ($\leq 1.5\text{cm}$) siliceous fragments of chert and siltstone.

Intrusive bodies mapped on the grid were of either dioritic or gabbroic composition as mentioned earlier. Emplacement of these intrusives is quite sporadic but a rough orientation is revealed in the center of the grid where the larger and more concentrated gabbroic bodies can be aligned at approximately 110° .

The only major fault structure (besides the shear zones sampled within the chert and felsic volcanics) noted during the survey was seen to displace the sharpstone conglomerate, andesites, and the massive chert package. This structure is seen on Drawing #3 between lines 446E and 447E at 457+50N to 460N. A maximum strike movement (according to inferred geological contacts) of 80 m has taken place along this fault. All gulleys, depressions, swamps and stream beds were also mapped to aid in any further exploration surveys or structural interpretation done on this property.

IV. CONCLUSIONS AND RECOMMENDATIONS

1. The circular feature outlined by coincident Cu geochem, self potential and low I.P. resistivity responses (Meridian Exploration, 1966 and Granby Ltd., 1970.) is likely explained by the gabbroic intrusion centered within the massive chert unit.
2. High gold results obtained from rock geochem are generally concentrated within shear zones found in the massive cherts and felsic volcanic packages. All other significant shear zones should be sampled and assayed.
3. A soil geochemical survey should be undertaken along all lines with a sample interval of 25 m. Of special interest would be the ground underlain by the massive chert unit and gabbroic intrusives, and in the area underlain by the chert breccia and dioritic intrusive.
4. Both induced-polarization and magnetometer surveys should be completed across the existing grid.

REFERENCES

- Little, M.W., (1983) G.S.C. Paper 79-29, Geology of the Greenwood Map Area British Columbia.
- Sookchoff, L., (1984) Assessment Report on the 1984 Diamond Drilling on the Golden Crown Property.
- Sookchoff, L., (1985) Assessment Report 1985 Diamond Drill and Compilation Report on the Crown Claim Group.

APPENDIX I
ANALYTICAL TECHNIQUES

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

Revised:01/86

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver. (March, 1984)

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 analysis.

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

Analysis of Samples.

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.2 g or less depending on the matrix of the rock, and twice as much acid is used for decomposition than that is used for silt or soil.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn (all the group A elements of the fee schedule) can be determined directly from the digest (dissolution) with an atomic absorption spectrometer (AA). A Varian-Techtron Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method

Antimony - Sb: 0.2 g sample is attacked with 3.3 mL of 6% tartaric acid, 1.5 mL conc. hydrochloric acid and 0.5 mL of conc. nitric acid, then heated in a water bath for 3 hours at 95° C. Sb is determined directly from the acid solution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.4 g sample is digested with 1.5 mL of 70 % perchloric acid and 0.5 mL of conc. nitric acid. A Varian AA-475 equipped with an As-EDL measures the arsenic concentration of the digest.

Barium - Ba: 0.1 g sample is decomposed with conc. perchloric, nitric and hydrofluoric acid. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest into the flame of the AA instrument c/w EDL.

Gold - Au: 10.0 g sample (Pan-concentrates see below) is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with Methyl iso-Butyl ketone (MIBK) from the aqueous solution. Gold is determined from the MIBK solution with flame AA.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot, taken from a perchloric-nitric (3:1) decomposition, usually from the multi-element digestion, is diluted with water and a phosphate buffer. This solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01 (10PPB)
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

APPENDIX II
GEOCHEMICAL RESULTS

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: CONSOLIDATED BOUNDARY

CODE : 8608-088

Project No. : 1-58

Sheet: 1 of 1

Date rec'd: AUG 18

Material : RX

Geol.: GG/JK

Date compl: AUG 28

Remarks :

Values in PPM, except where noted.

T. T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	PPB Au
37	1651	70	10	6	1.4	70
38	1652	390	130	1	1.2	140
39	1653	160	12	1	1.0	50
40	1654	26	10	1	0.8	20
41	1655	310	16	1	0.6	20
42	1656	34	14	1	0.6	10
43	1657	5500	40	1	5.8	1100
44	1658	290	20	1	0.4	10
45	1659	600	20	32	7.8	4000
46	1660	110	10	4	0.6	30
47	1661	1900	110	1	2.4	340
48	1662	400	30	1	1.2	10
49	1663	20	18	1	0.8	20
50	CHECK NL-5	26	38	72	1.6	-
51	1664	140	20	50	1.4	30
52	1665	64	6	32	0.4	90
53	1666	70	10	1	0.8	1800
54	1667	370	52	1	8.4	2900
55	1668	34	68	2	0.4	1100
56	1669	80	96	46	0.8	100
57	1670	12	12	1	0.4	60

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82 E/2

PROPERTY CONSOLIDATED BOUNDARY CROWN GRID

DATE Aug 15/86

SAMPLE REPORT 1-58

GLF 54206

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	ASSAYS - Geochem.					SAMPL BY
				Cu	Pb	Zn	Ag	Au	
657	444+50 E, Δ 452+75 N. Contact zone between andesite and chert (local) or c.g. qtz vein. Py, Pc + cpy in siliceous zone of andesite.	grab							DGE
658	443+60 E, Δ 450 N. Green-grey-white mottled cherty (frag) bc - congl. Polymictic. Pyritic.	grab							DGE
659	446+75 E, 460+75 N. Rhyolitic tuff with limonite + kaolinite alter. + pyrite + malachite.	grab							DGE
660	447+75 E, Δ 459 N. Pyritic dense, massive chert	grab							DGE
661	443 E, Δ 457+25 N. Rusty, broken chert + pyrite + malachite.	grab							DGE
662	440+75 E, Δ 450+25 N. Trench. Very fg, hornfelred grey-green silt + pyrite - brecciated	grab							DGE

8610-021

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3N1
TEL : (604) 299 - 6910

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.
1050 DAVIE STREET
VANCOUVER B.C.

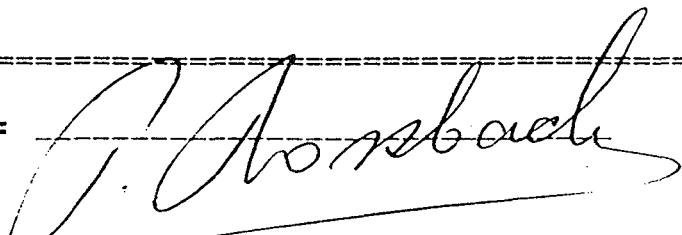
CERTIFICATE#: 86521
INVOICE#: 7028
DATE ENTERED: 86-10-14
FILE NAME: NOR86521
PAGE # : 1

PROJECT: 158 8610-21 *Consolidated boundary*
TYPE OF ANALYSIS: GEOCHEMICAL (JK)

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
	98408	290	466	7.8	98	36	24000	422
T	98409	1	172	0.4	82	2	50	28
	98410	46	132	2.2	48	24	2680	146
	98411	2	166	0.4	80	2	20	2
T	98412	70	428	0.2	96	4	2240	360
	98413	48	464	0.4	314	10	650	158
	98414	1	210	4.0	20	12	2900	200
T	98415	1	66	0.2	24	4	160	18
T	98416	3	108	0.2	18	4	170	54

10/10/86 JK GD DP

CERTIFIED BY :



PROPERTY CROWN GRID 1-58

DATE Aug 15, 1966

GCF # ~~55~~ 54211

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	ANALYSIS Geochem						SAMPLE BY
				Cu	Pb	Zn	As	Ag	Au	
8408	L 441E; Δ 454+60N Fault zone in pit. (Same location as R-1667)	CHIP	1.5m							DGG
8409	Same location as above. Hanging wall of fault. Diomite? / andesite? 29a pyrite as veinlets.	chip	1m.							"
8410	West of L 441E; 454+75N. Quartz healed fault gouge with diss. pyrite. (Uggy qtz in muck pile)	chip	1m.							"
8411	Same location as above. Hanging wall of fault - diomite.	chip	1m.							"
8412	440+90E; 454+70N. Gossaned, brecciated chert. Same location as Sample 1668.	chip	1m.							"
8413	Same location as 98412. (adjacent to 98412).	chip	0.8m							"
8414	R L 447E; 460+90N. Shear zone - rusty	chip	0.5m							"
8415	Same location as 98414. Footwall of shear zone (98414) Silicified, pyritic chert.	chip	1m							"

APPENIDIX III
STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COSTS

PROJECT: #158

DATE: March 23/87

TYPE OF REPORT: GEOLOGICAL

a) Wages:

No. of Days 24
Rate per Day \$ 97.50
Dates From: June 28/86 - August 15/86
Total Wages 24 x \$ 97.50 \$2,340.00

b) Food & Accomodations:

No. of Days 24
Rate per Day \$ 97.50
Dates From: June 28/86 - August 15/86
Total Costs 24 x \$ 35.00 \$ 840.00

c) Transportation:

No. of Days 24
Rate per Day \$ 50.00
Dates From: June 28/86 - August 15/86
Total Costs 12 x \$ 50.00 \$ 600.00

d) Instrument Rental:

Type of Instrument
No. of Days
Rate per Day \$
Dates From:
Total Costs x \$

Type of Instrument
No. of Days
Rate per Day \$
Dates From:
Total Costs x \$

e) Analysis:
(See attached schedule) \$ 210.90

f) Cost of preparation of Report
Author: \$ 230.00
Drafting: \$ 220.00
Typing: \$ 110.00

g) Other:
Contractor

Total Cost \$4,650.90
=====

h) Unit costs for GEOLOGY
No. of Days 9
No. of Units 9 mandays
Unit costs \$279.27 / manday
Total Cost 9 x \$279.27 \$2,513.40

i) Unit costs for LINECUTTING
No. of Days 3
No. of Units 15 mandays
Unit costs \$142.50 / manday
Total Cost 15 X \$142.50 \$2,137.50

GRAND TOTAL \$4,650.90
=====

NORANDA EXPLORATION COMPANY, LIMITED
(WESTERN DIVISION)

DETAILS OF ANALYSES COSTS

PROJECT:

<u>ELEMENT</u>	<u>NO. OF DETERMINATIONS</u>	<u>COST PER DETERMINATION</u>	<u>TOTAL COSTS</u>
Cu	29	1.60	\$ 46.40
Pb	29	.60	\$ 17.40
Zn	29	.60	\$ 17.40
Mo	9	.60	\$ 5.40
As	9	.60	\$ 5.40
Ag	29	.60	\$ 17.40
Au	29	3.50	\$ 101.50
			<hr/>
			\$ 210.90

APPENDIX IV

STATEMENT OF QUALIFICATIONS

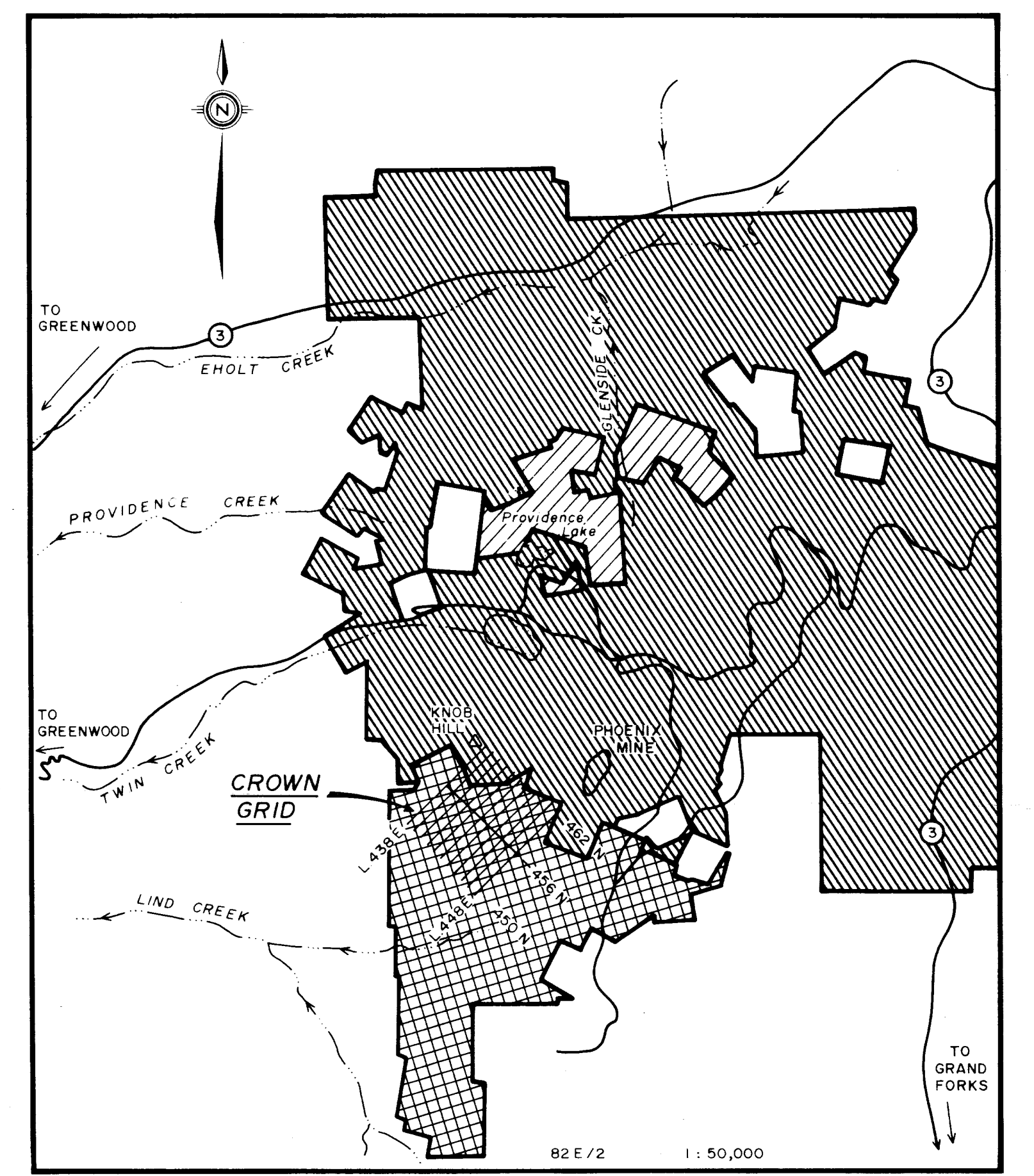
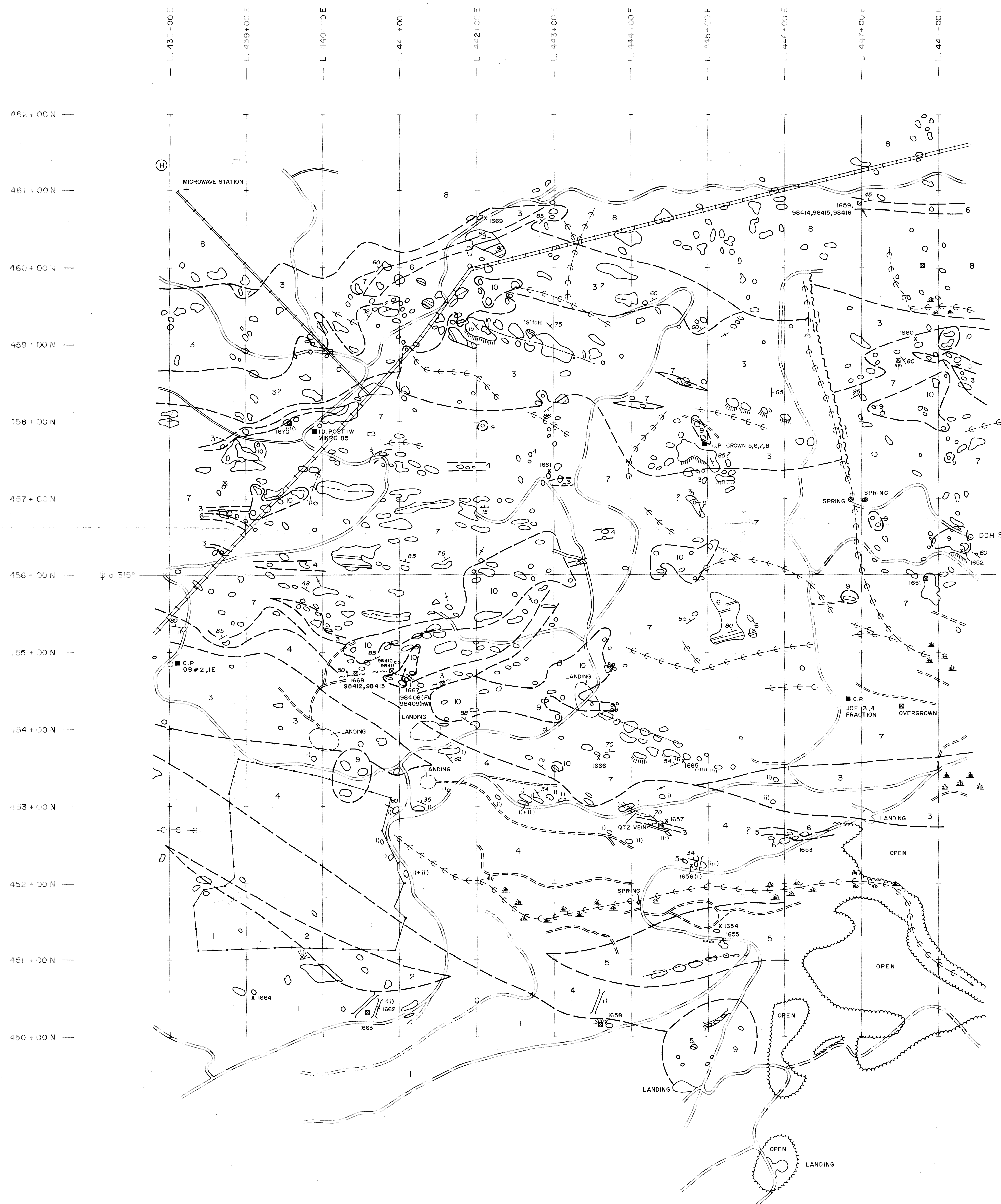
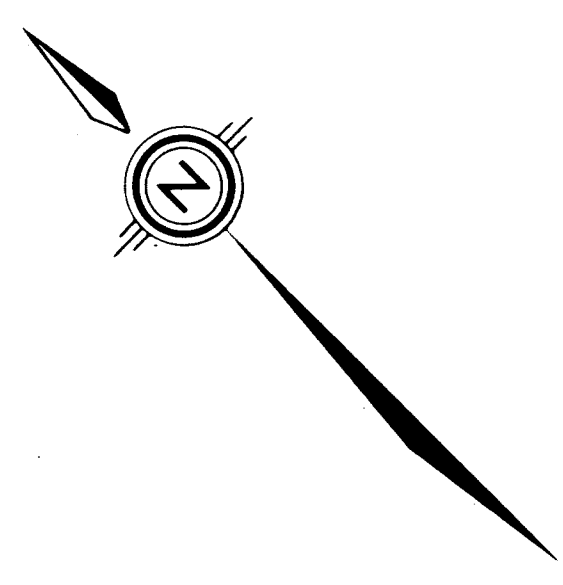
AUTHORS QUALIFICATIONS

I D. Graham Gill of the city of Vancouver, Province of British Columbia, hereby certify that:

- I am a geologist residing at 1272 52nd St., Delta, B.C.
- I have graduated from the University of British Columbia in 1983 with a BSc in geology.
- I have worked in mineral exploration since 1979.
- I have been employed (on a full time and short term basis) by Noranda Exploration Company, Limited since May, 1983.

D. Graham Gill

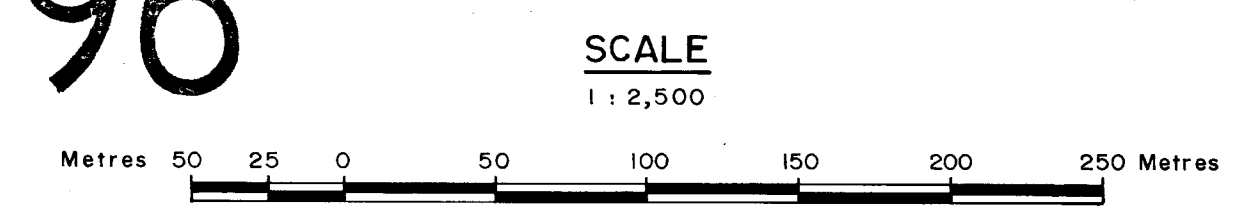
D. Graham Gill



- LEGEND**
- NORANDA/KETTLE RIVER RES.
 - NORANDA/CONSOLIDATED BOUNDARY EX./KETTLE RIVER RES.
 - NORANDA/KETTLE RIVER RES./CANBEC

- LEGEND**
- GABBRO - Dark green, aphanitic (diabase near contacts) to fine to medium grained. Locally magnetic.
 - DIORITE - Dark green-grey mottled, fine to medium grained, crystalline pyroxenes and feldspar.
 - SHARPSTONE CONGLOMERATE - Mottled white-green-grey weathered surface with multicolored, variable sized (<1.5cm) siliceous fragments of chert + siltstone.
- UNCONFORMITY**
- INTERBEDDED CHERT AND FELSIC VOLCANICS**
- MASSIVE WHITE CHERT - with abundant microfracturing and grey-white weathering. Red to pink to tan to light green coloration is common. Occasionally pyritic and/or vuggy. Recrystallization to a larger grain size is evident in some locations. Often interbedded with siltstone.
 - RHYOLITE/DACITE TUFFS AND/OR FLOWS - Siliceous, fine to medium grained, light grey-green weathered and fresh surfaces. Blocky fracturing. Green mafic minerals to 10-15% plus minor quartz eyes. Tuffaceous units range in fragment size from ash to lapilli.
 - CHERT BRECCIA - White-tan-grey colored weathered surface with abundant fracturing. Fragment sizes range from <1mm to 1-2cm in length. No foreign fragment composition suggests tectonic brecciation.
 - SEDIMENTS
 - i) SILTS - Fine grained, green, brown, grey colored silts. Mostly siliceous and often interbedded with bands of chert several cms wide.
 - ii) TUFFS - Fine grained, brownish-grey, ash-sized tuffaceous beds. Blocky fracturing.
 - iii) CONGLOMERATE - with clasts of multicolored silts to 1-2cm in size. Sand sized matrix commonly weathered to a brown-green, soft, rusty state.
 - MAFIC VOLCANICS
 - i) Dark green, massive, fine to medium grained, undifferentiated andesite flows + tuffs
 - ii) Variable green colored andesitic agglomerate with secondary calcite + chlorite
 - DACITIC TUFF - Mottled light green to grey, smooth weathered and fresh surfaces. Quite siliceous with blocky fracturing. Fragment sizes range from lapilli to ash.
 - BRECCIA CONGLOMERATE - Brown, white grey, green mottled weathered surface. Fresh surface exhibits a greenish matrix hosting a variety of subangular to rounded fragments/clasts of chert, quartzite and silt. Consolidated, siliceous with blocky fracturing.
- Other Symbols:**
- Swamp
 - Road or trail
 - Well used road
 - Corner post
 - Pit
 - Trench
 - Geological contact
 - Fault
 - Spring
 - Clearing
 - Outcrop + bluff
 - Bedding, foliation
 - Fence
 - Gully (downhill)
 - Ridge
 - x 1654 Sample location + number
 - Power line
 - Helicopter Pad

15,596



REVISED	Consolidated Boundary CROWN GRID GEOLOGY	
PROJ. No. 158	SURVEY BY: DGG	DATE: AUG./1986
N.T.S. 82 E/2	DRAWN BY: J. Serwin	SCALE: 1:2,500
DWG No. 3	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	