

LOG NO: NOV 22 1991	RD.
ACTION:	
FILE NO:	

GEOLOGICAL, GEOCHEMICAL
REPORT ON
THE WIL CLAIMS

WIL 1	301569	WIL 4	303625
WIL 2	301570	WIL 5	303624
WIL 3	301571	WIL 6	303623

Clinton & Lillooet Mining Divisions
N.T.S. 920/3

Latitude 51°02'10", Longitude 123°17'00"

SUB RECORDER
NOV 18 1991

Owner and Operator: Noranda Exploration Co., Ltd.
(no personal liability)

Author: Joan McCorquodale
Date : October, 1991

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,836

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SUMMARY

The Wil property is located within the Coast Mountain range on N.T.S. Mapsheet 920/3. It consists of 6 claims totalling 83 units. The claims are underlain by rocks of the Coast Plutonic Complex.

Twenty-eight man days were spent exploring the western third of the property. A 12.6 km line grid was established and soil sampled. Limited mapping, prospecting and rock sampling was also conducted over the grid and surrounding area. The program was designed to confirm the previously reported Cu, Mo soil anomaly (Assessment Reports # 552 & 9550) and to test if the system is gold bearing. Mapping, prospecting and rock sampling of the grid and surrounding area was completed to evaluate the source, extent and potential of the historical anomalies.

Large and extensive Cu & Mo anomalies both in rock and soil geochemistry were found to exist throughout the survey area, however there appears to be no gold associated with this system.

1.0 INTRODUCTION

1.1 Property Location

The Wil property is located within the Coast Mountain Range approximately 40 km NW of Gold Bridge, B.C. The western half of the property covers the head waters of the Taseko River. The property is situated at approximately latitude 51°02'10", longitude 123°17'00" on N.T.S. Map Sheet 920/3 (Figure 1).

1.2 Access

Access to the property is by helicopter either from Gold Bridge, B.C. a distance of 40 km or from Lillooet, B.C. a distance of approximately 97 km.

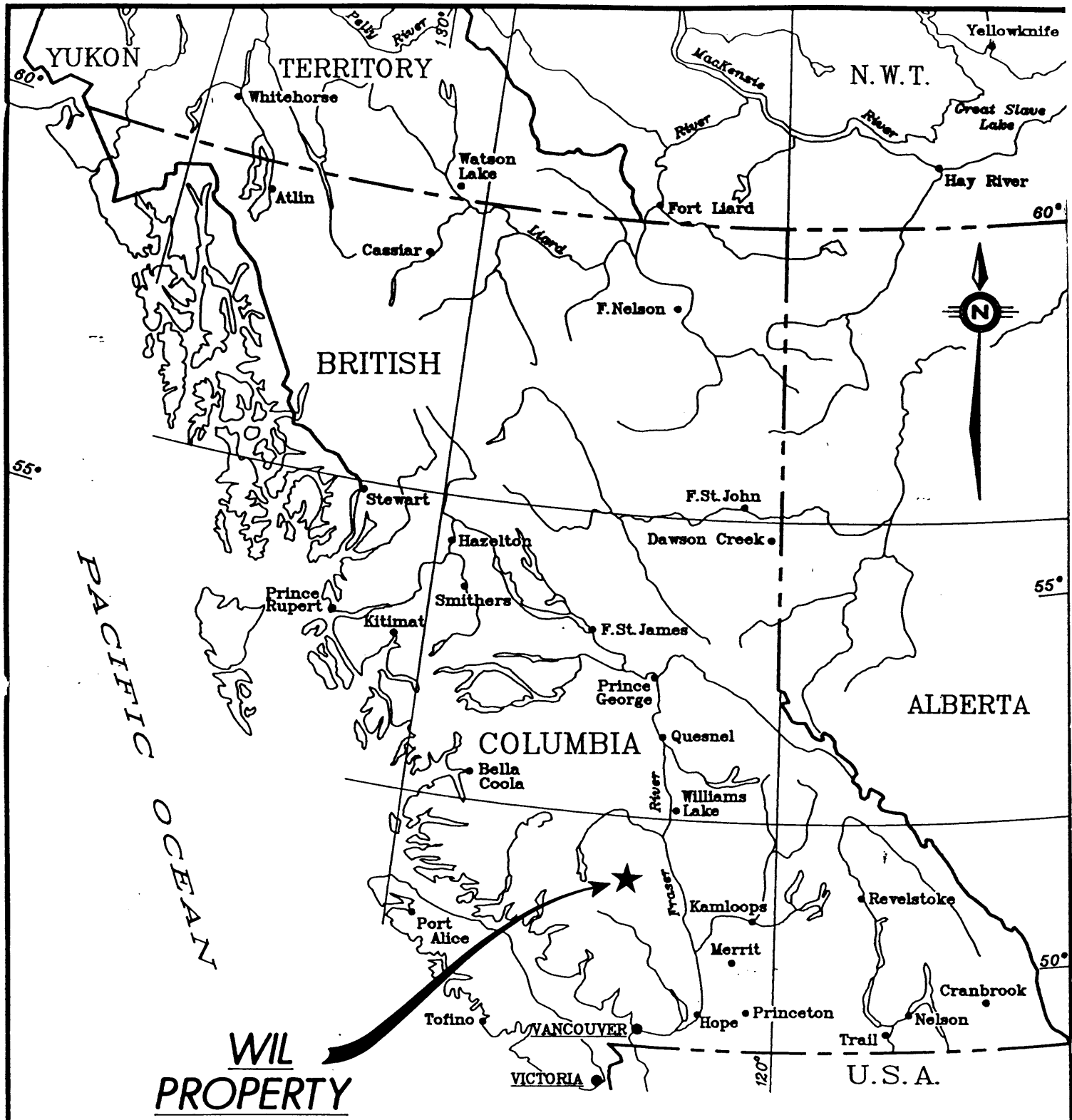
1.3 Physiography

The property includes a portion of the Wilson Ridge and overlies the headwaters of the Taseko River.

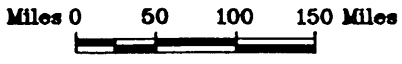
The topographic relief is quite severe, with the localized exception of the Taseko River valley floor. The elevation varies between 2740 m (the summit of Porteau Mountain), and 1770 m, giving a local relief of about 970 m.

The Taseko River headwaters lie within sub-alpine vegetation, consisting of small widely spaced coniferous trees. The remaining portion of the property lies above treeline and consists of talus, scree slopes, glaciers/icefields and moraines. Rock outcroppings are generally confined to the rugged ridges.

The main drainage is the headwaters of the Taseko River which flows off the property to the NNW.



**WIL
PROPERTY**



REVISED	WIL PROPERTY	
	LOCATION MAP	
PROJ.No. 136	SURVEY BY: J.SERWIN (ACAD)	DATE: OCT/1991
N.T.S.	DRAWN BY: J.SERWIN (ACAD)	SCALE:
DWG.No. 1	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

1.4 Ownership - Property Status

The Wil claim group consists of 6 claims totalling 85 units and are owned by Noranda Exploration (Figure 2). The following is a list of all the claims and to which assessment will be applied.

<u>Claim</u>	<u>Record #</u>	<u>Units</u>	<u>Record Date</u>	<u>Expiry Date *</u>
Wil 1	301569	18	June 13/91	June 13/94
Wil 2	301570	18	June 13/91	June 13/94
Wil 3	301571	16	June 13/91	June 13/94
Wil 4	303625	15	Aug. 20/91	Aug. 20/94
Wil 5	303624	12	Aug. 20/91	Aug. 20/94
Wil 6	303623	6	Aug. 19/91	Aug. 19/94
		--		
	TOTAL:	85 Units		

* Upon approval/acceptance of the work provided within this report.

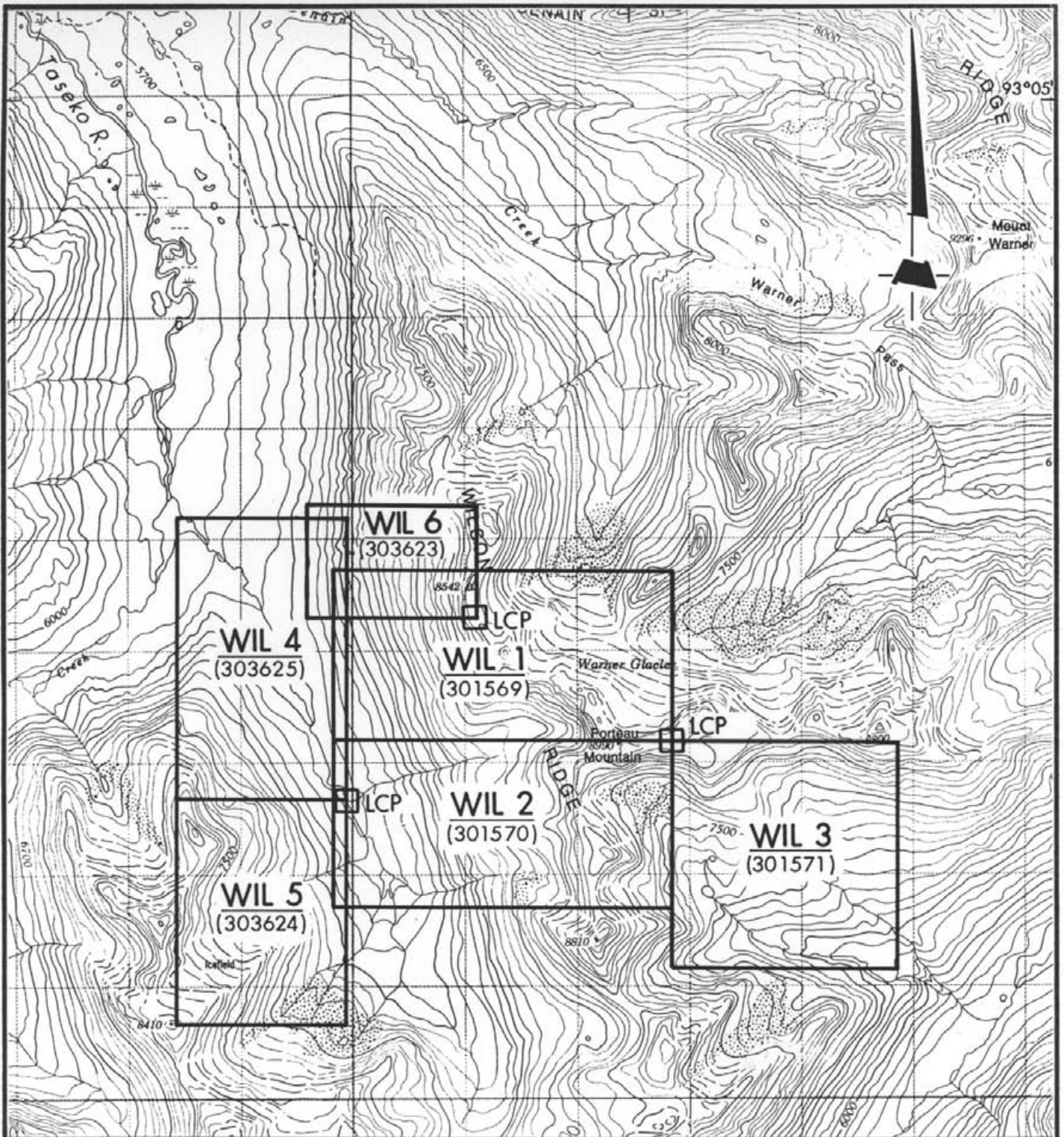
1.5 Previous Work

Several companies had been active in the area during the 1960's and 1970's exploring for Cu-Mo porphyries. The main focus of activity was to the north of the present claim group.

Previous work recorded within the present day Wil claim group is restricted to three surveys completed by two companies.

The first and second surveys were completed by Phelps Dodge Corporation during 1963 and 1964. In 1963, 6.5 miles of reconnaissance soil sampling with 500 foot sample intervals, was followed by 7.8 miles of detailed soil sampling with 100 foot sample intervals. Soil samples were tested for Cu in the field using the Rubeanic Acid test. Two hundred and forty feet of trenching was completed, with no reported results. The detailed soil survey outlined a Cu-Mo anomalous area of 3000 feet by 1500 feet.

In 1964 Phelps Dodge drilled 5 BQ holes within the anomalous soil survey area. Results of the drilling were not reported.



77 78 79 80 81 82 123°15' 83 84 85 86

SCALE
1:50,000



REVISED	WIL PROPERTY	
	CLAIMS LOCATION	
PROJ. No. 136	SURVEY BY: J. McC.	DATE: Oct./1991
N.T.S. 92-0/3	DRAWN BY: J. Serwin	SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

NGI-774

The third survey was conducted by E & B Explorations Inc. and JMT Services Corp. in 1980. A soil survey following topographical contours was completed over the historical Phelps Dodge soil anomaly area.

The soils were analyzed for Cu, Mo using Atomic Absorption. This survey confirmed the pre-existing Cu, Mo anomaly outlined by Phelps Dodge in 1963.

1.6 Project Objective

Noranda Exploration's 1991 objective was to relocate the previously reported Cu, Mo soil anomaly and to test if the anomaly is gold bearing. Analysis of the soils was using 30 element ICP plus Atomic Absorption for Au. The programme also attempted to explain the source of the soil anomalies using rock geochemistry, mapping and prospecting.

2.0 GEOLOGY

2.1 Regional Geology

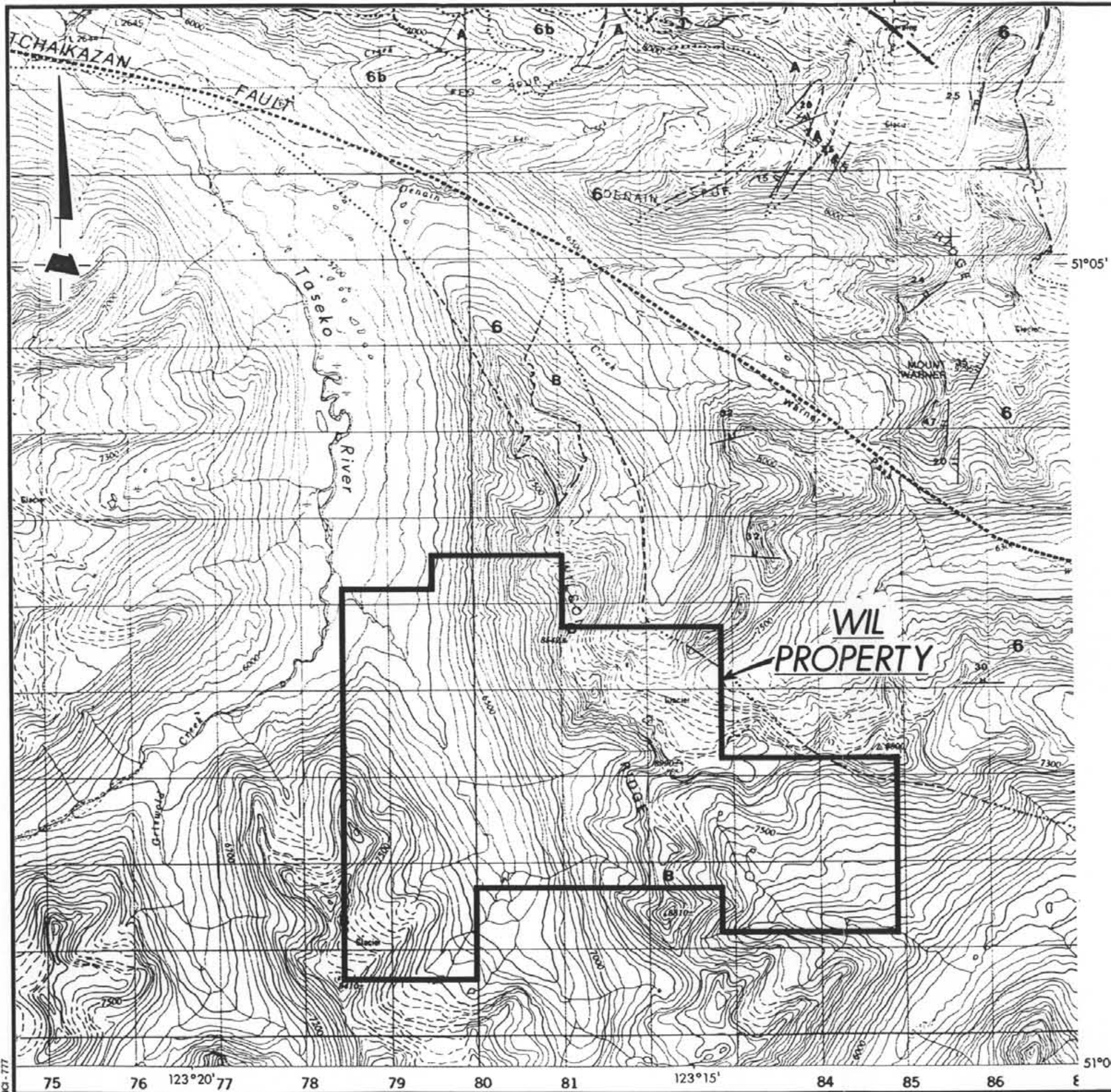
The Wil claims lie immediately southwest of the Tyaughton Trough within the Coast Plutonic Complex. The Complex consists of medium to coarse grained quartz diorite to quartz monzonite.

To the north and northeast of the property the regional Tchaikazan fault trends NW and transects Upper Cretaceous intermediate volcanics and volcanoclastics.

On a small scale the main structures trend NW and parallels the Tchaikazan fault and the contact between the Coast Plutonic Complex and the Cretaceous volcanics and volcanoclastics. On a larger scale, joint planes, and fault/shear zones generally trend NE.

2.2 Property Geology

The field survey was limited to the western third of the Wil group and covers the Taseko River drainage basin. The majority of the geological mapping was concentrated on the east side of the Taseko River within the grid area, (Figure 4).



LEGEND

UPPER CRETACEOUS (CENOMANIAN AND (?) YOUNGER)

- 6c Bedded Laharic Andesitic Breccia and Epiclastic Sediments
- 6b Andesitic Breccia, Lapilli Tuff, Crystal Tuff, with Minor Andesitic to Basaltic Flows
- 6a Volcanic Sandstone and Conglomerate; Polymict Conglomerate
- 6 Undivided; Mostly Unit 6b with Minor Epiclastic Sediments
- 5 Micaceous Sandstone, Shale and Polymict Conglomerate

INTRUSIVE ROCKS

- B COAST PLUTONIC COMPLEX: Quartz Diorite to Quartz Monzonite
- A Hornblende Plagioclase Porphyries; Minor Diorite

SYMBOLS

- Geologic Contact (Defined, Approximate, Assumed)
- Bedding, Tops Known (Horizontal, Inclined, Vertical Overturned)
- Bedding, Tops Unknown (Horizontal, Inclined, Vertical)
- High Angle Fault (Defined, Approximate, Assumed)

Geology from ;
 Open File Map 1987/3 "3A. Geology of the Warner Pass Area", N.T.S. 92 O/3



REVISED	WIL PROPERTY	
	REGIONAL GEOLOGY	
PROJ. No. 136	SURVEY BY: J. McC.	DATE: Oct./1991
N.T.S. 92 O/3	DRAWN BY: J. Serwin	SCALE: 1:50,000
DWG. No. 3	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

Rock outcroppings occur primarily along the ridge tops, with glacial drift covering the Taseko River valley floor.

The predominant rock type is a mesocratic medium to coarse grained granodiorite of the Coast Plutonic Complex. The mafics consist of hornblende (locally chloritized) and primary biotite. A leucocratic quartz monzonite dyke is exposed in the SE corner of the grid. It is fine to medium grained, with minor plagioclase and little or no mafics observed. Fresh and weathered surfaces are light orange in colour. This dyke is approximately 25 m wide and trends NE.

Mineralization within the survey area is primarily confined to quartz-carbonate veinlets and the adjacent wallrock. These veinlets contain malachite, chalcopyrite and minor pyrite. They range in size from 1 mm to 6 cm with an average width of 1-2 cm. Malachite and chalcopyrite commonly occurs in the wallrock adjacent to the mineralized quartz-carbonate veinlets. This mineralized wallrock zone commonly extends 10-30 cm from the veinlet. The veinlets parallel and often infill joint planes and fractures. Numerous mineralized veinlets were observed within the survey area, however, concentrations of these veinlets was limited.

Alteration of the granodiorite was primarily confined to the wallrock of the quartz-carbonate veinlets. It consisted of K-feldspar and argillic alteration with minor sericite.

On a property scale joint planes, minor shear zones and fractures trend in a NE direction and dip moderately to the SE.

3.0 GEOCHEMICAL SURVEY

3.1 Soil Geochemistry

A soil grid was emplaced on the eastern slope of the Taseko River headwaters (Figures 4 & 5). It covers the historical Cu-Mo soil anomaly, completed and reported by Pheleps Dodge (1963) and, E & B Exploration and JMT Services Corp. (1980). The purpose was to confirm the location of the Cu-Mo soil anomalies and to test the soil samples for gold.

A baseline 1.6 km in length with an azimuth of 065° was established. Crosslines were spaced at 400 m intervals on the southwest half of the grid and at 300 m centers on the northeast half. Stations along the crosslines and baselines are every 25 m.

Soil samples were collected every 100 m along the crosslines, using a track shovel or grub hoe. Based on historical reports, areas with >1000 ppm Cu in soils were sampled every 50 m.

Soil samples were collected from the B horizon, generally 15-20 cm in depth. Talus fines were collected from the most northeastern crosslines due to heavy talus cover. Soil and talus fines samples were placed in a brown 8.9 cm x 15.5 cm open ended Kraft envelopes for storage and shipment to Noranda's geochemical laboratories in Vancouver. Full description of the method of analysis is in Appendix II.

Two reconnaissance style soil lines were established on the west side of the Taseko River. The lines were subparallel, 2 km long, and trended NNE-SSW direction (Figures 4 & 5). Soils were collected (as described above) every 100 m.

Two soil profile pits were hand dug and sampled (Appendix V). Soil Profile "A" is located on L.106+00E, 103+50N. Soil Profile "B" is located on the west side of the Taseko River proximal to the reconnaissance soil lines (Figure 5).

A total of 189 soil samples were collected and analyzed for 30 element ICP plus Atomic Absorption for gold (See Appendix III for complete results).

3.2 Rock Geochemistry

A total of 13 rocks were collected from various locations on the property within the Taseko River drainage basin and the gridded area.

To determine the source and concentrations of metal ions in the different lithologies of the mineralized quartz-carbonate veinlets, one sample was taken of the vein material and one of the wallrock. Figure 4 shows the rock sample locations and Appendix IV contains the rock sample descriptions.

3.3 Stream Sediment Geochemistry

Six stream sediment samples were collected from 3 locations along the Taseko River headwaters. At each of the localities one pan concentrate and one moss mat sample was collected.

Pan concentrate samples were collected on the downstream side of a gravel bar and sieved through a screen into a conical shape gold pan. The samples were panned down to approximately 50-60 grams and placed in a plastic bag.

Moss mat samples were collected along the stream shore and close to the water level ensuring that the moss being sampled was submerged during stream flooding. The moss provides a trap for fine grained suspended sediments. A moss mat sample is analogous to a silt sample, but due to the moss mats' mechanical entrapping of sediments the heavier elements tend to be more concentrated producing higher results than a corresponding silt sample. The moss mat sample is compressed into a brown 8.9 cm x 15.5 cm open ended Kraft envelope.

All stream sediment samples were shipped to Noranda's geochemical laboratories in Vancouver.

4.0 DISCUSSION OF RESULTS

A soil geochemical contour map for Cu & Au is shown on Figure 5. Within the grid, Cu in soils have been contoured at 400 ppm Cu and 1000 ppm Cu. The 400 ppm Cu contour covers an area of approximately 1.5 km x 1.4 km. Within the 400 ppm Cu contour two zones of ≥ 1000 ppm Cu each cover an area of approximately 0.6 km x 0.4 km. The highest Cu value in a soil is 5861 ppm, located at L113+00E/97+00N.

Most of the rock outcropping is exposed on and east of L116+00E. A large downslope talus/scree cover is seen west of L116+00E. Hence, samples collected on L116+00E and L113+00E were primarily talus fines. The water table crosscuts the local topography between lines 110+00E and 106+00E. This causes the soil to be partially or totally saturated downslope of the exposed water table, and hence anomalies in this area may be hydromorphic and should be confirmed by cold extractable sample analyses.

The two reconnaissance soil lines west of the Taseko River returned only sub-anomalous values (Figure 5). Five out of forty-two soils returned Cu values >300 ppm, with the highest being 490 ppm Cu.

Two soil profiles were hand dug and sampled. Detailed description and results are in Appendix V. Soil Profile A is located on L106+003/103+50N. There is an increase in Cu values with depth, from 280 ppm Cu on surface to 1594 ppm Cu at the base of the profile. Soil profile B located west of the Taseko River, returned sub-anomalous Cu values with a slight increase in Cu at depth. Values ranged from 23 ppm Cu on surface to 52 ppm Cu at the base of the profile. Gold values in both profiles did not fluxate and remained at 5 ppb Au.

Several rock samples from various locations returned significant Cu results. Au values are sub-anomalous, with the highest being 27 ppb Au. West of Taseko River, rock sample number R114679 returned 22071 ppm Cu over 2 m and R114680 from the same outcrop returned 6070 ppm Cu over 2 m. The granodiorite exhibits moderate potassic and argillic plus minor sericitic alteration. East of the Taseko River within the grid area, rock sample number R114685 returned 20121 ppm Cu over 0.5 metres. This sample consisted of a series of subparallel quartz-carbonate veinlets with malachite and chalcopyrite within the vein material and host rock.

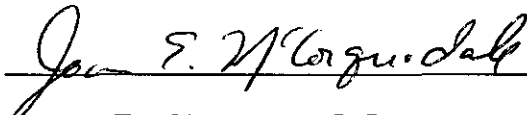
5.0 CONCLUSIONS

From the soil geochemical survey, a large 1.5 x 1.4 km Cu anomaly (≥ 400 ppm) has been confirmed. Rock samples collected from the grid and surrounding area returned values of up to 2% Cu. Gold values in both soil and rock samples are sub-anomalous. The highest gold value reported in a rock sample is 27 ppb Au, and one soil returned above background gold value of 30 ppb Au.

STATEMENT OF QUALIFICATIONS

I, Joan E. McCorquodale, of the City of Vancouver, Province of British Columbia do hereby certify that:

1. I am a geologist residing at 127 West 21st Avenue, Vancouver, B.C.
2. I graduated from the University of Alberta in 1988 with a BSc. degree (specialization) in Geology.
3. I have worked in mineral exploration and government geology since 1985.
4. I am presently a Contract Geologist with Noranda Exploration Company, Limited.


Joan E. McCorquodale

REFERENCES

- Agnew, H.W. (1964): "M.M." Claim Group, Geological and Geochemical Reports. Assessment Report 552.
- Glover, J.K., et al (1987): 3A. Geology of the Warner Pass Area. N.T.S. 920/3. Open File map 1987/3.
- Howell, W.A., Livingstone, K.W. (1981): Geological and Geochemical Survey Report on the Forcite, Jewel, Erg, Whitewater Mineral Claims. Assessment Report 9550.

APPENDIX I
STATEMENT OF COSTS

STATEMENT OF COSTS

a) Wages:

No. of Days : 28 man days
Rate per day: \$140.00/man day
Dates from : August 18, 21-26, 1991
Total Wages : 28 x \$140.00 \$ 3,920.00

b) Food & Accommodation:

No. of Days : 7 days, 1 night accommodation
Rate per day: \$236.39/day ÷ 4 men/day
= \$33.77/man day
Dates from : August 18, 21-26, 1991
Total Costs : 28 mandays x \$33.77/manday \$ 945.60

c) Transportation:

Helicopter
No. of Hours : 4.75 hrs.
Rate per hour: \$750/hr.
Total Cost : 4.75 hours x \$750/hour \$ 3,544.00

Truck
No. of days : 7 days
Rate per day : \$41.60/day
Dates from : August 18, 21-26, 1991
Total Cost : 7 days x \$41.60/day \$ 291.20

d) Analysis:

Soil

189 samples analyzed for 30 element ICP plus AA gold.
Rate per sample: \$17.49/sample
Total Cost : 189 samples x \$17.49/sample \$ 3,305.61

Rock

13 samples analyzed by rock geochemistry for 30 element ICP plus AA gold.
Rate per sample: \$17.49/sample
Total Cost : 13 samples x \$17.49 \$ 227.37

Stream Sediments

3 silt samples analyzed for 30 element ICP plus AA gold.

Rate per sample: \$17.49/sample
Total Cost : 3 samples x \$17.49 \$ 52.47

3 pan concentrate samples analyzed for Au, Cu, Zn, Pb, Ag, by AA.

Rate per sample: \$17.49/sample
Total Cost : 3 samples x \$17.49 \$ 52.47

\$3,6337.92

e) Report:

Author : \$320.00

Drafting : \$240.00

Typing : \$240.00

Total Cost:

\$ 800.00

TOTAL COST

\$13,138.72
=====

APPENDIX II

DETAILED DESCRIPTION OF METHOD OF ANALYSIS

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse 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 (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

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 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. 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 dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to measure arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 - 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 with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

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 the use of 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 from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

N.B.: If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.

LOWEST VALUES REPORTED IN PPM:

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
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 III
GEOCHEMICAL CERTIFICATES OF ANALYSIS

NORANDA VANCOUVER LABORATORY

Geochemical Analysis

Project Name & No.: TYAUGHTON-WIL - 136

Geol.: J.M^c

Date received: SEP. 03

LAB CODE: 9109-027

Material: 190 SOILS & 12 SILTS

Sheet: 1 of 5

Date completed: SEP. 18

Remarks:

* Sample screened @ -35 MESH (0.5 mm)

□ Organic, A Humus, S Sulfide

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, La, Li, Ga 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	11000E-10500N	5	0.2	3.81	12	152	0.7	5	0.28	0.2	42	21	39	983	4.77	0.55	19	21	1.31	541	30	0.03	25	0.10	4	20	0.35	140	74
3	10600	5	0.2	3.76	19	183	0.7	5	0.39	0.2	43	15	38	966	4.87	0.60	19	24	1.33	345	36	0.03	29	0.13	4	25	0.36	144	79
4	10700	5	0.4	3.13	16	166	0.6	5	0.28	0.2	33	12	31	722	3.75	0.43	16	16	0.90	428	28	0.04	19	0.14	4	21	0.27	111	71
5	10800	5	0.2	3.86	12	235	0.6	5	0.74	0.2	43	19	20	520	5.43	0.74	17	25	1.45	434	31	0.08	23	0.11	6	55	0.36	162	82
6	11000E-10900N	5	0.2	3.76	27	182	0.7	5	0.39	0.2	47	17	23	1542	4.66	1.11	23	69	1.01	318	34	0.02	23	0.10	6	35	0.24	131	64
7	11000E-11000N	5	0.2	3.15	16	232	0.6	5	0.43	0.2	43	15	30	966	4.55	0.85	19	30	1.24	355	38	0.03	21	0.10	4	19	0.27	135	70
8	11000E-11700N	5	0.2	1.53	7	57	0.3	5	0.19	0.2	24	4	18	59	2.55	0.17	10	12	0.32	116	13	0.04	8	0.03	2	17	0.20	90	40
9	10200E-9600N	5	0.2	1.02	5	101	0.2	5	0.34	0.2	23	2	12	26	1.18	0.14	9	6	0.16	126	35	0.12	5	0.04	3	33	0.18	45	30
10	9700	5	0.2	1.94	4	80	0.3	5	0.22	0.2	27	4	16	67	1.86	0.16	12	20	0.25	84	65	0.05	7	0.02	3	21	0.27	78	26
11	10200E-9800N	5	0.2	2.03	4	47	0.4	5	0.20	0.2	28	6	26	98	2.49	0.15	12	11	0.34	140	8	0.03	9	0.05	2	13	0.16	80	31
12	10200E-9900N	5	0.2	1.99	5	51	0.3	5	0.23	0.2	26	6	26	53	2.87	0.16	12	15	0.37	182	6	0.06	9	0.10	3	17	0.19	96	46
13	10000	5	0.2	2.86	4	55	0.4	5	0.23	0.2	27	6	26	50	3.15	0.17	11	17	0.45	166	9	0.05	9	0.16	5	14	0.26	102	45
14	10100	5	0.2	2.13	14	188	0.4	5	0.49	0.6	30	11	21	585	2.80	0.29	13	27	0.61	447	67	0.09	12	0.04	6	27	0.26	104	56
15	10200	5	0.2	1.62	7	75	0.3	5	0.25	0.2	32	7	26	78	3.03	0.19	15	19	0.45	140	22	0.04	9	0.03	5	16	0.22	113	31
16	10200E-10300N	5	0.2	2.25	4	107	0.4	5	0.31	0.4	30	9	18	700	2.50	0.22	16	43	0.58	290	44	0.12	16	0.04	8	23	0.27	82	62
17	10200E-10350N	5	0.2	1.19	4	65	0.3	5	0.29	0.2	29	5	19	76	1.81	0.18	13	11	0.27	118	35	0.11	8	0.04	6	20	0.27	73	40
18	10400	5	0.2	2.12	7	160	0.4	5	0.48	0.5	37	11	17	589	2.40	0.24	18	39	0.61	293	44	0.08	13	0.04	8	29	0.26	82	66
19	10450	5	0.2	1.55	8	49	0.3	5	0.22	0.2	26	5	21	48	2.75	0.15	12	11	0.37	116	45	0.03	8	0.03	5	15	0.26	114	34
20	10500	5	0.2	1.61	7	71	0.3	5	0.23	0.3	25	4	15	29	1.87	0.16	11	10	0.22	85	28	0.04	6	0.03	7	22	0.26	77	30
21	10200E-10550N	5	0.2	1.43	3	84	0.3	5	0.26	0.2	28	4	22	43	2.36	0.17	13	11	0.25	106	45	0.06	5	0.03	3	25	0.25	91	31
22	10200E-10600N	5	0.2	1.86	4	55	0.4	5	0.18	0.2	30	4	21	634	2.45	0.16	15	17	0.30	103	58	0.04	4	0.04	2	13	0.20	78	31
23	10650	5	0.2	1.71	3	98	0.3	5	0.25	0.2	29	6	20	59	2.42	0.20	12	18	0.38	148	11	0.07	9	0.03	2	19	0.22	85	41
24	10700	5	0.2	1.91	2	50	0.2	5	0.18	0.2	25	3	17	23	1.72	0.20	12	20	0.22	90	12	0.05	6	0.03	2	17	0.23	68	30
25	10800	5	0.2	1.81	6	94	0.3	5	0.25	0.2	27	6	20	127	2.33	0.25	12	14	0.45	158	23	0.06	10	0.06	4	22	0.31	88	46
26	10200E-10900N	5	0.6	3.35	6	209	0.5	5	0.42	0.2	32	8	24	797	2.72	0.38	17	35	0.70	169	52	0.09	16	0.06	8	32	0.30	102	60
27	10200E-11000N	5	0.2	3.21	8	168	0.5	5	0.46	0.2	32	12	27	442	3.91	0.40	15	29	1.15	226	65	0.08	22	0.06	6	31	0.33	135	68
28	11100	5	0.2	2.18	3	147	0.3	5	0.40	0.2	35	7	21	251	2.33	0.22	17	17	0.66	165	29	0.09	13	0.04	5	40	0.29	84	55
29	11200	5	0.2	1.15	3	49	0.2	5	0.14	0.2	22	2	11	21	1.05	0.16	9	6	0.15	84	20	0.09	4	0.02	3	14	0.22	58	23
30	11300	5	0.2	1.95	8	65	0.4	5	0.23	0.2	33	7	24	196	2.80	0.19	15	16	0.48	152	7	0.03	12	0.08	3	16	0.18	88	37
31	10200E-11400N	5	0.2	1.58	3	123	0.3	5	0.36	0.2	36	10	19	161	1.87	0.21	17	13	0.49	226	22	0.03	9	0.07	2	30	0.17	59	51
32	10200E-11500N	5	0.4	1.39	4	83	0.2	5	0.28	0.2	25	5	16	35	1.50	0.22	11	8	0.24	319	12	0.12	5	0.04	5	27	0.25	60	41
33	10600E-9400N	5	0.2	1.37	4	98	0.3	5	0.23	0.2	30	5	19	30	2.31	0.16	13	14	0.33	183	27	0.08	6	0.06	2	16	0.19	78	34
34	9500	5	0.2	2.51	9	214	0.5	5	0.42	0.3	34	10	25	328	3.16	0.30	14	39	0.75	271	73	0.04	15	0.07	4	26	0.28	105	52
35	9600	5	0.4	2.19	6	116	0.5	5	0.29	0.2	28	13	20	238	2.76	0.20	13	22	0.59	655	33	0.10	13	0.10	6	24	0.25	84	54
36	10600E-9700N	5	0.4	2.39	7	86	0.5	5	0.24	0.2	30	7	23	142	2.94	0.25	13	23	0.52	164	45	0.04	12	0.09	6	17	0.24	94	42

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Bc 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	9109-027 Pg. 5 of 5
177	P 175477	5	0.2	3.10	15	164	0.7	7	0.34	0.2	36	8	26	159	3.00	0.28	22	29	0.64	299	54	0.06	13	0.19	6	33	0.22	92	77	
178	175478	5	0.2	3.10	9	121	0.6	11	0.29	0.3	38	13	29	128	4.51	0.30	18	23	1.01	474	37	0.04	16	0.14	4	25	0.31	126	90	
179	175479	5	0.2	1.82	6	79	0.4	5	0.21	0.4	26	4	17	48	2.09	0.18	11	12	0.27	171	9	0.04	7	0.11	3	21	0.16	62	36	
180	175480	5	0.4	2.43	10	129	0.5	6	0.38	0.3	34	10	22	302	2.76	0.29	14	19	0.63	445	91	0.06	13	0.11	6	35	0.24	86	59	
181	P 175481	5	0.2	2.23	5	67	0.4	5	0.38	0.2	31	7	26	115	2.45	0.33	10	21	0.52	247	12	0.03	9	0.08	2	26	0.15	73	43	
182	P 175482	5	0.2	2.19	2	85	0.3	5	0.24	0.2	28	4	20	47	2.07	0.24	12	13	0.42	177	10	0.05	6	0.11	2	23	0.23	77	45	
183	175483	5	0.2	2.54	7	75	0.5	5	0.30	0.2	25	7	26	134	3.24	0.26	11	15	0.62	215	16	0.03	11	0.07	2	21	0.18	94	49	
184	175484	5	0.2	3.05	5	93	0.6	5	0.32	0.2	28	10	28	182	3.64	0.26	13	31	0.79	288	144	0.05	11	0.10	2	25	0.29	107	70	
185	175485	5	0.2	3.10	8	76	0.6	5	0.28	0.2	35	11	28	273	3.75	0.38	15	43	0.92	407	9	0.04	16	0.10	2	17	0.24	118	83	
186	P 175486	5	0.2	2.82	12	95	0.7	5	0.32	0.2	37	7	25	490	2.99	0.22	24	27	0.57	207	101	0.04	9	0.10	2	29	0.23	78	46	
187	P 175487	5	0.4	2.27	2	62	0.4	5	0.28	0.3	27	6	19	52	2.66	0.16	12	18	0.48	235	14	0.03	7	0.12	4	25	0.24	82	50	
188	175488	5	0.2	2.65	7	88	0.5	5	0.43	0.4	36	14	21	212	3.49	0.17	16	40	1.21	582	45	0.05	15	0.14	5	38	0.40	110	101	
189	175489	5	0.2	2.44	8	82	0.4	5	0.42	0.4	33	11	28	113	3.70	0.28	14	27	1.06	327	8	0.04	14	0.10	2	21	0.39	128	72	
190	175490	5	0.2	2.56	7	107	0.5	5	0.57	0.3	38	11	29	79	2.94	0.32	17	22	0.91	360	14	0.05	15	0.12	5	33	0.23	94	53	
191	P 175491	10	0.2	1.84	7	81	0.4	5	0.66	0.3	42	11	36	54	2.62	0.29	17	15	0.75	433	4	0.05	12	0.10	2	32	0.19	82	45	
192	P 175492	5	0.2	2.30	4	56	0.4	5	0.30	0.2	31	7	25	37	2.90	0.17	13	18	0.55	248	8	0.07	8	0.22	4	27	0.31	98	51	
193	175493	5	0.2	2.19	5	108	0.4	5	0.42	0.2	43	11	25	118	2.98	0.31	16	19	0.88	332	3	0.03	13	0.07	2	23	0.24	96	48	
194	175494	5	0.2	1.89	6	60	0.4	5	0.29	0.2	30	7	24	66	2.66	0.16	12	17	0.55	228	12	0.06	9	0.11	3	18	0.22	87	43	
195	175495	5	0.2	2.76	3	70	0.4	5	0.30	0.2	24	6	22	28	2.70	0.23	10	22	0.44	204	13	0.06	7	0.10	5	29	0.24	87	50	
196	P 175496	5	0.2	1.98	9	50	0.3	5	0.23	0.2	25	6	25	22	3.85	0.15	11	10	0.46	148	9	0.03	7	0.07	4	20	0.29	132	32	



GEOCHEMICAL ANALYSIS CERTIFICATE

Tynghton W1 (JMC)



Noranda Exploration Co. Ltd. PROJECT 9109-027 136 File # 91-4220 Page 1

1050 Davie St., Vancouver BC V6E 1M4

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb	
R114678	25	7676	13	46	1.7	9	9	226	2.72	11	6	ND	3	5	.8	3	30	34	.17	.022	5	47	.59	65	.02	3	1.19	.01	.24	438	20
R114679	7	22071	6	95	.6	19	10	424	2.54	10	5	ND	6	7	3.2	2	46	59	.18	.038	8	38	1.17	27	.03	2	1.37	.04	.16	1	7
R114680	18	6070	12	54	3.2	17	8	265	2.86	71	5	ND	5	8	.9	2	71	46	.35	.028	6	33	.92	23	.03	2	1.12	.03	.14	15	21
R114681	171	3469	8	54	5.0	7	9	217	1.67	9	10	ND	1	3	.5	2	16	23	.05	.003	2	11	.37	17	.02	2	.49	.01	.07	4	5
R114682	9	1427	6	80	.5	19	11	441	3.12	7	5	ND	5	18	.2	2	11	72	.60	.037	5	41	1.24	45	.28	2	1.54	.07	.19	1	8
R114683	3	472	3	59	.2	18	10	364	2.80	14	5	ND	9	30	.2	2	4	47	.95	.031	8	24	.91	142	.08	2	1.10	.06	.36	1	6
RE 4114680	17	5588	12	51	3.1	16	8	253	2.71	66	5	ND	5	8	.8	2	66	44	.33	.027	6	32	.88	23	.03	2	1.08	.04	.14	15	26
R114684	12	205	4	32	.1	8	6	169	2.15	2	5	ND	1	18	.2	2	3	48	.22	.019	3	15	.71	205	.22	2	1.03	.09	.78	1	4
R114685	176	20121	264	133	27.1	20	18	186	6.42	354	8	ND	1	4	2.5	14	292	34	.04	.005	2	15	.11	29	.01	3	.28	.01	.09	1	13
R175266	81	6108	13	21	5.7	11	3	85	2.30	18	9	ND	1	2	.6	2	38	17	.03	.005	2	21	.12	12	.01	2	.40	.01	.09	129	27
R175273	26	1982	8	45	1.1	19	10	307	3.00	5	5	ND	9	17	.2	2	16	68	.41	.032	6	32	1.09	177	.27	2	1.48	.07	.77	30	6
R175274	15	1200	7	47	.6	19	9	310	2.97	4	5	ND	8	21	.2	2	10	67	.47	.036	5	32	1.03	267	.29	2	1.44	.10	.97	1	9
STANDARD C/AU-R	18	57	36	133	6.9	71	33	1044	3.96	39	17	7	36	54	18.9	16	17	57	.48	.092	37	59	.89	176	.09	34	1.90	.06	.15	13	470

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. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: P1 ROCK P2 MOSS MAT AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.
 Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 9 1991 DATE REPORT MAILED: *Sept 12/91* SIGNED BY: *C. Leung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



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
R115126	14	2158	2	47	.6	17	11	256	2.74	9	5	ND	11	20	.2	2	2	65	.37	.045	6	27	1.00	182	.26	3	1.40	.09	.74	27	4
R115127	13	442	5	7	.3	11	2	71	.73	12	6	ND	35	8	.2	2	2	7	.27	.005	2	7	.03	57	.01	6	.27	.03	.14	3	3
R175275	178	6997	2	37	4.2	6	8	103	2.10	22	10	ND	4	6	.5	2	7	22	.09	.027	3	13	.22	40	.06	2	.38	.02	.17	119	1
RE R175275	188	7583	2	39	4.4	7	9	111	2.23	24	14	ND	4	7	.6	2	8	24	.09	.027	3	13	.23	44	.06	3	.41	.02	.19	123	4

Samples beginning 'RE' are duplicate samples.

NORANDA VANCOUVER LABORATORY
Geochemical Analysis

PROPERTY/
LOCATION: TYAUGHTON

CODE: 9109-027

Project No.: 136 Sheet: 1 of 1 Date received: SEP. 14
 Material: 3 PAN-CONS Geol.: J.M.^c Date completed: SEP. 20
 Remarks: Pan-con: entire sample used for Au determination.

*Cu, Zn, Pb, Ag values obtained from Aqua Regia sol'n.

T.T. No.	SAMPLE No.	weight (g)	PPB Au		Cu	Zn	Pb	Ag
94	H 175267	76.4	5	-35#	80	66	1	0.2
96	H 175269	59.5	5		38	36	1	0.2
98	H 175271	105.2	5	-80#	34	32	1	0.2



Noranda Exploration Co. Ltd. PROJECT 9109-027 136 FILE # 91-4220

Page 2



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
MM175268	1	70	6	41	.2	14	9	353	3.23	5	5	ND	10	23	.2	2	3	76	.65	.116	13	63	.85	74	.20	3	1.12	.02	.14	1	6.7
MM175270	2	32	2	36	.1	15	10	275	3.93	5	7	ND	13	24	.2	2	2	98	.62	.149	12	107	.68	45	.11	4	.91	.02	.10	1	2.0
MM175272	3	36	8	35	.2	14	10	286	3.63	5	5	ND	11	23	.2	2	2	90	.58	.131	12	90	.69	47	.11	4	.92	.02	.10	3	2.6

APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 136

N.T.S. 920/3

LAB REPORT # 9109-027 136
9109-047 136

DATE August '91

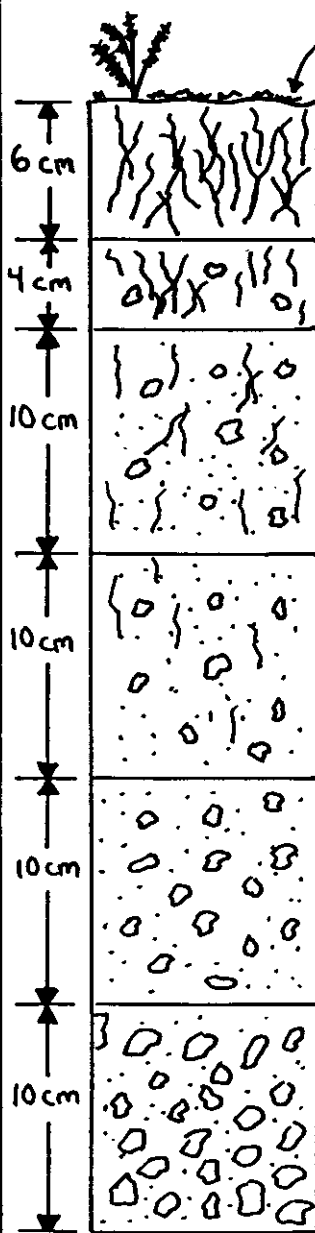
PROJECT WIL

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)	Cu ppm	Au ppb	Mo ppm	Ag ppm	Pb ppm	Zn ppm	As ppm	SAMPLED BY
R114678	Malachite with minor chalcopyrite within 10 cm wide quartz vein. Host rock medium grained granodiorite.		Chip	0.5	7676	20	25	1.7	13	46	11	T.B.
R114679	K-feldspar and phyllic alteration with malachite and chalcopyrite within a discontinuous zone hosted by granodiorite.		Chip	2	22071	7	7	0.6	6	95	10	T.B.
R114680	Same as above (R114679).		Chip	2	6070	21	18	3.2	12	54	71	J.M.
R114681	Rusty coloured and vuggy quartz vein with malachite and chalcopyrite.		Chip	0.5	3469	5	171	5.0	8	54	9	J.M.
R114682	Wall rock 1 m chip on both sides of quartz vein (R114681). Minor chalcopyrite within granodiorite, proximal to quartz vein.		Chip	2	1427	8	9	0.5	6	80	7	J.M.
R114683	Sample from old (1963/64) trench. Medium to fine grained quartz diorite with weak chlor-		Chip	2	472	6	3	0.2	3	59	14	T.B.

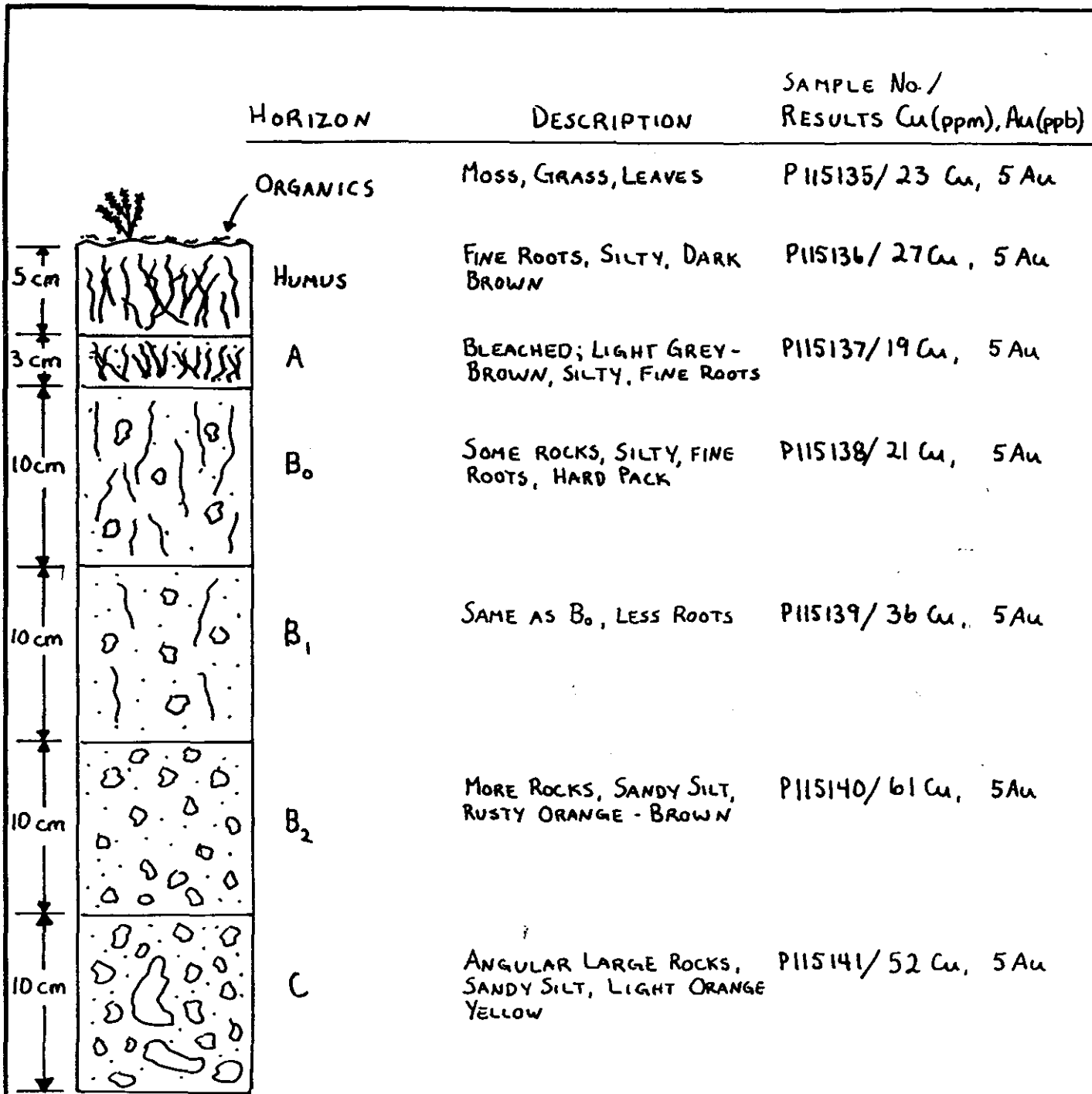
APPENDIX V
SOIL PROFILE SURVEY

HORIZON	DESCRIPTION	SAMPLE No./ RESULTS Cu(ppm), Au(ppb)
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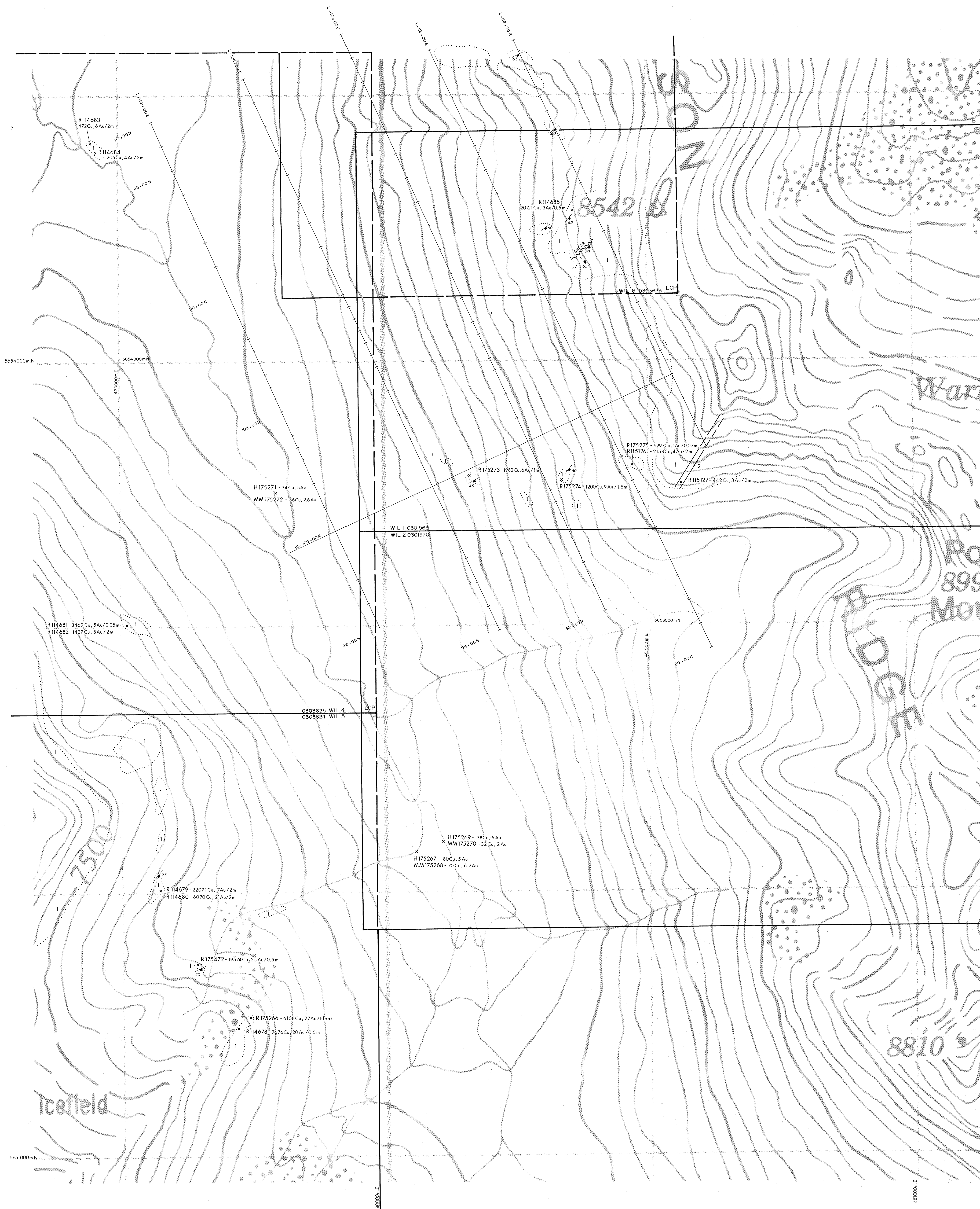
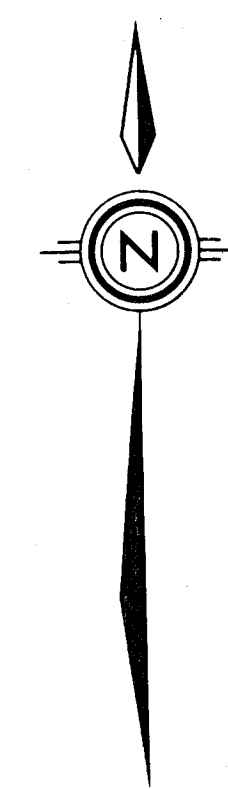
ORGANICS	PINE NEEDLES, MOSS, LEAVES	P115128/ 280 Cu, 5 Au
HUMUS	ROOTS, SILTY, MEDIUM BROWN	P115129/ 282 Cu, 5 Au
A	GRANODIORITE ROCKS, FINE ROOTS, LIGHT BEIGE COLOUR, SILTY SAND	P115130/ 850 Cu, 5 Au
B ₀	SOME ROOTS, PEBBLES SANDY SILT, MEDIUM BROWN	P115131/ 995 Cu, 5 Au
B ₁	SAME AS B ₀ , BUT LESS ROOTS	P115132/ 1269 Cu, 5 Au
B ₂	CLAYEY SILT, INCREASE IN ROCKS, MEDIUM BROWN	P115133/ 1299 Cu, 5 Au
C	CLAYEY SILT, INCREASE IN ROCKS, DARK BROWN, APPROACHING WATER TABLE	P115134/ 1594 Cu, 5 Au

REVISED	WIL PROPERTY	
	SOIL PROFILE 'A'	
PROJ. No. 136	SURVEY BY: J.M.	DATE: OCT, 1991
N.T.S. 9203	DRAWN BY: J.M.	SCALE:
DWG. No. Appendix V	NORANDA EXPLORATION	
	OFFICE:	



NOI-774

REVISED	WIL PROPERTY	
	SOIL PROFILE 'B'	
PROJ. No. 136	SURVEY BY: J.M.	DATE: OCT '91
N.T.S. 9203	DRAWN BY: J.M.	SCALE:
DWG. No. Appendix V	NORANDA EXPLORATION	
	OFFICE:	



LEGEND

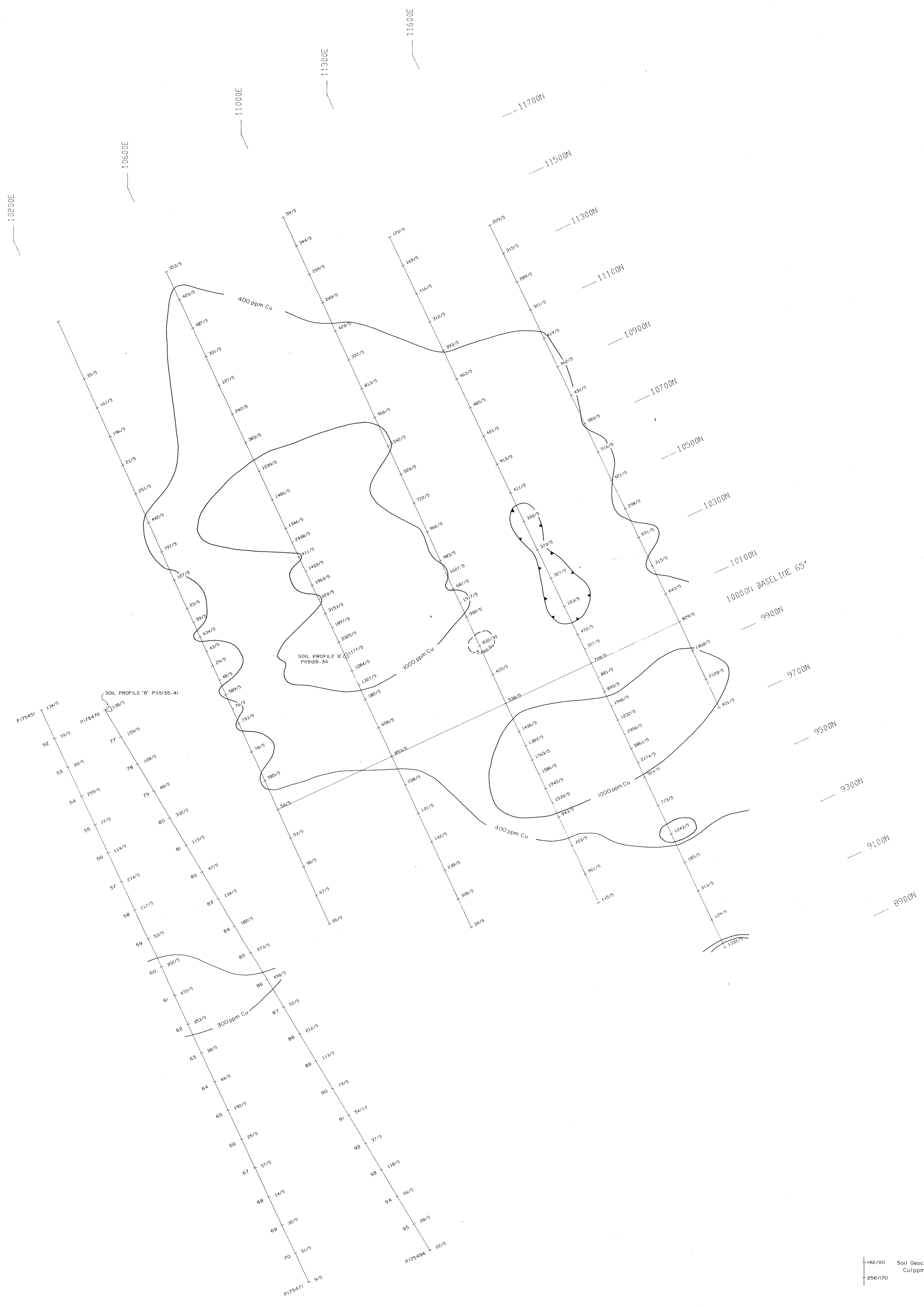
- 2 QUARTZ MONZONITE
Fine to Medium Grained with Minor Plagioclase
- 1 COAST PLUTONIC COMPLEX
Medium to Coarse Grained Granodiorite, mafics
Consist of Hornblende and/or Primary Biotite.
- Geological Contact, Defined, Proximal
- Shear Zone
- Joint Measurement, Strike + Dip
- Outcrop
- R 115127
442Cu, 3Au/2m
Rock Sample Location; Sample Number,
Cu (ppm), Au (ppb) / Sample Width (metres)
- H 175271
34Cu, 5Au
Heavy Concentrate (Pan) Sample Location;
Sample Number, Cu (ppm), Au (ppb)
- MM 175272
36Cu, 2.6Au
Mass Mat Sample Location; Sample Number,
Cu (ppm), Au (ppb)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,836

Metres 0 100 200 300 400 500 Metres

REVISED	WIL CLAIMS	
	PROPERTY GEOLOGY + ROCK / STREAM / SEDIMENT SAMPLE LOCATIONS	
PROJ. No. 136	SURVEY BY: JMS/C	DATE: 08/15/1991
N.T.S. 920/3	DRAWN BY: GM / J.S.	SCALE: 1:5000
DWG. No. 4	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

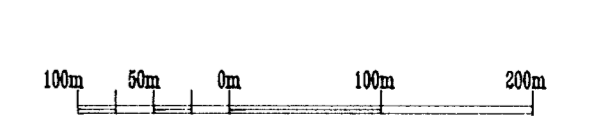


Recce Soil Lines

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,836

- 142/10 Soil Geochemical Values
Cu (ppm) / Au (ppb)
- 256/170
- P175471 Soil sample number
- △ Soil profile location
- Soil contour (Cu)
- Soil contour (Au)



REVISED	WIL CLAIMS	
	SOIL GEOCHEMICAL SURVEY	
	Cu (ppm) / Au (ppb)	
PROJECT: 136	SURVEY BY: JMC	DATE: October 7/91
N.T.S.: 02203	DRAWN BY: Norplot/AuleCAD (R. Fenton)	SCALE: 1:5000
DWG. No: 5	NORANDA EXPLORATION COMPANY, LIMITED	
	OFFICE: Vancouver	