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ASSESSMENT REPORT
GEOLOGICAL/GEOCHEMICAL SURVEY ON THE
PINGSTON GROUP OF CLAIMS
N.T.S. 82K/5 & 12, 82L/8 & 9
SLOCAN MINING DIVISION
Latitude 50°30' Longitude 118°00'

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VANCOUVER, B.C.

D. Graham Gill (Project Geologist)
Noranda Exploration Company, Limited (no personal liability)
October, 1988

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,979

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DRAWINGS

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I. INTRODUCTION

1. Location and Access

The Pingston group of claims is comprised of 40 units in the Slocan Mining Division on the corner of N.T.S. Mapsheets 82K/5 & 12 and 82L/8 & 9. The property is located on the western shore of Upper Arrow Lake and extends westward across Pingston Creek. The town of Revelstoke, B.C. is approximately 65 km to the north of the claims.

Access to the property is obtained via Highway #23 toward the Shelter Bay ferry and logging roads along the west shore of Upper Arrow Lake.

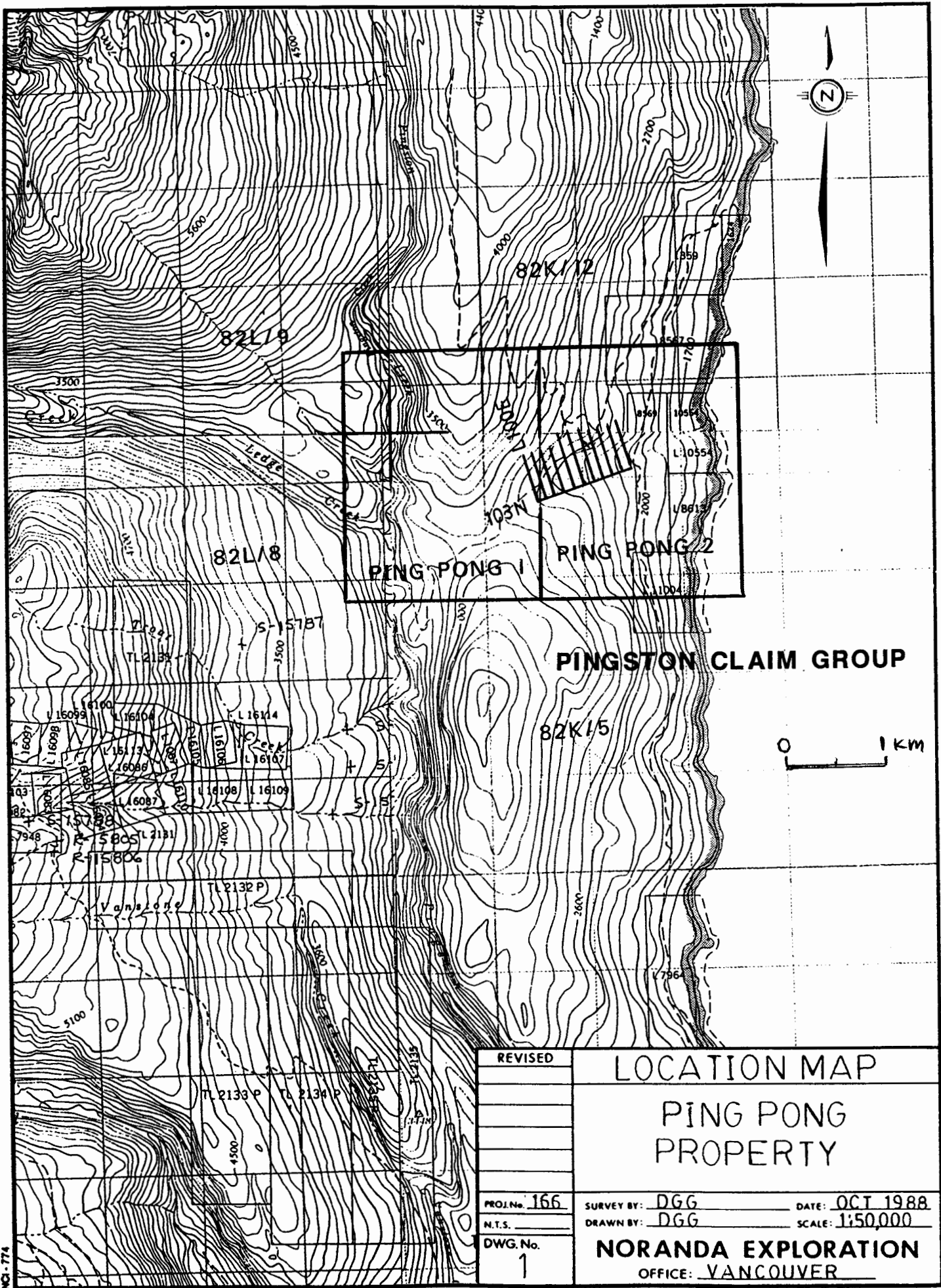
2. Topography and Physiography

This property lies on the eastern slopes of Mount Odin of the Monashee Range. It is drained in the eastern section by Pingston Creek. Steepness of the terrain ranges from moderate to steep. Maximum relief of the property is 2400 ft. with a maximum elevation of 3900 ft.

3. Previous Work

Sulfide mineralization has been known in this area since the 1890's although it was not until 1947 when Cominco began a large programme of exploration (including drilling) which continued until 1966. Since then there have been various other mining companies involved in exploring the ground adjacent to the Big Ledge deposit. Listed below is some of the more recently reported work.

- | | |
|------|---|
| 1977 | Metallgesellschaft performed reconnaissance mapping in the Pingston Creek area. |
| 1980 | Esperanza Explorations Ltd. conducted a programme of soil geochemistry and mapping east and west of Pingston Creek. |
| 1981 | Geochemical, geophysical and geological surveys were completed by Esperanza Explorations Ltd. on the June and Ledge claims. |



REVISED

 PROJ. No. 166
 N.T.S.
 DWG. No. 1

LOCATION MAP
PING PONG
PROPERTY

SURVEY BY: DGG DATE: OCT 1988
 DRAWN BY: DGG SCALE: 1:50,000

NORANDA EXPLORATION
 OFFICE: VANCOUVER

REVELSTOKE M.D.
SLOCAN M.D.

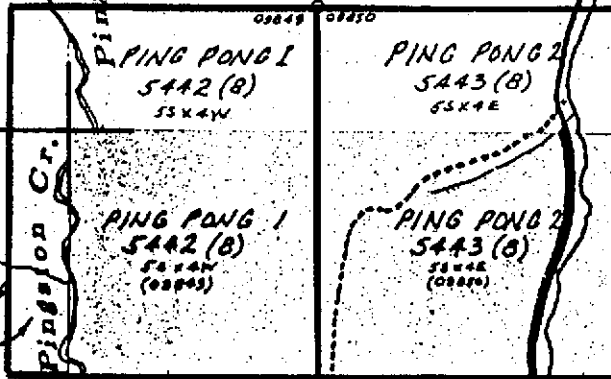


U
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P
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R

PINGSTON CLAIM GROUP

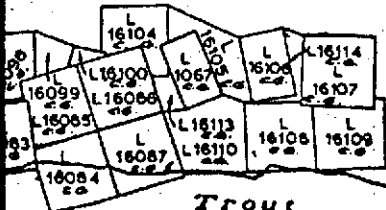
82K/12

82L/9



82L/8

82K/15



META 1
1525(10)
55X34



Vanstone

Trout Cr.

Pissior Cr.

O
S
T
H
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I
L

REVISED	CLAIM LOCATION	
	PING PONG PROPERTY	
PROJ. No. 166	SURVEY BY: DGG	DATE: OCT 1988
N.T.S.	DRAWN BY: DGG	SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

4. Owner - Operator

All of the 40 units comprising the Pingston group of claims are owned and operated by Noranda Exploration Company, Limited of 1050 Davie Street, Vancouver, B.C.

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

<u>Claim Name</u>	<u>Owner</u>	<u>Record No.</u>	<u>Units</u>	<u>Anniversary Date</u>
Ping Pong 1	Noranda Exploration	5442	20	August 8, 1988
Ping Pong 2	Company, Limited 1050 Davie Street Vancouver, B.C.	5443	20	August 8, 1988

5. Economic Potential

Due to similar stratigraphy and structure plus the proximity of the Pingston claim group to the Big Ledge deposit (6.5 million tonnes of 4-5% zinc) it is believed that this property has excellent potential for stratiform zinc mineralization.

II. SUMMARY OR WORK DONE

1. Linecutting

A total of 6.9 line km of slashed and metrically chained grid was cut in order to establish control for geological mapping and future exploration surveys. The grid consisted of a 1.0 km long baseline with winglines spaced 100 m apart ranging in length from 0.5 to 0.6 km.

2. Geochemical Survey

A total of 237 soils, 8 silts and 22 rocks were collected. Soils and silts were analyzed for Cu, Zn, Pb, Ag, Mo and Au while rocks were analyzed for 30 elements plus Au using I.C.P.

3. Geological Survey

Geological mapping at a scale of 1:2,500 was conducted along 6.9 km of grid line. In all, mapping covered an area of approximately 0.53 square kilometres.

4. Claims Worked

All work done during the report period was done on both the Ping Pong 1 and 2 claims.

III. DETAILED TECHNICAL DATA

1. Geochemical Survey

i) Purpose

A total of 237 soils, 8 silts and 22 rocks were taken on the Ping Pong grid in order to delineate the zinc bearing stratigraphy.

ii) Techniques

Soil sampling of the B soil horizon was completed along the winglines of the grid at a sample interval of 25 m. Sampling was done with the aid of a shovel or maddock to a depth of 15-30 cm and subsequently placed in brown 3½" x 6 1/8" open-ended Kraft envelopes for shipping and storage.

Rock specimens were collected as grab samples from various locations on the property wherever mineralization, alteration or a favourable representative rock type was encountered.

Silt samples were collected along the creek that parallels the baseline every 100 m.

Samples were sent either to Noranda's geochemical laboratory at 1050 Davie Street, Vancouver, B.C. or to Acme Analytical Laboratories at 852 East Hastings Street, Vancouver.

Refer to Appendix I for a flow sheet of analytical techniques. Appendix II is a list of all samples taken with associated results.

iii) Discussion of Results

Geochemical results and descriptions of all samples are listed in Appendix II. Drawings 3, 4, 5 and 6 show contoured results of Cu, Zn, Pb and Ag respectively. Both the Au and Mo values were not significant enough to contour.

Copper

Results of copper analyses of the soils reveal several small lense shaped anomalies scattered across the grid. For the most part these anomalies overly rocks of the Ledge Member (Unit #3) in the west and central portion of the grid. To the east, however, there is no rock exposure due to the thickness of the overburden. It is interesting to note that the copper values do not follow the trend of the exposed massive sulfide (Unit #5) but are elevated in areas underlain by the quartz-feldspar-biotite phyllites, schists and gneisses. Although these anomalies are rather spotty they do coincide with the zinc and silver anomalies. There is less overlap with the contoured lead values.

Copper values obtained from silting produced no anomalies. The highest copper value in rocks was 231 ppm (Sample #42598).

Zinc

All samples taken were analyzed for lead. Values returned for the soils ranged from 2 to 840 ppm. Referring to Drawing #5 one can see that there are 2 main anomalies between Lines 105E and 106E and 107E to 109+50E which basically reflect the trend of the massive sulfide. Spot lead anomalies are also evident along the grid and most are associated with the Ledge Member.

Comparing the lead contour map with those for Cu, Zn and Ag it is apparent that this element is not affected by downhill dispersion but still coincides fairly well with these other elements.

None of the silts analyzed returned anomalous values in lead.

Results from the rock samples show that the high lead values (1826, 1513 and 2383 ppm) are associated with the massive sulfide showing but that the Ledge Member also produces results from between 118 and 229 ppm lead.

Silver

All samples taken were analyzed for silver. Soil results ranged between 0.2 and 2.4 ppm. Drawing #6 shows the contoured values for silver at the 0.6, 0.9 and 1.2 ppm levels. Once again this element is also associated with the Ledge Member in the west, the massive sulfide in the centre and the overburden covered section to the east.

None of the silt samples taken provided any anomalous results.

Rock samples collected ranged in values from 0.1 to 4.7 ppm silver. All samples over 2.0 ppm were taken from the massive sulfide showing.

Molybdenum

All samples collected were analyzed for molybdenum. However, values in the soils ranged from 1.0 to 10 ppm and were therefore not contoured. None of the silts were anomalous in this element. Values of up to only 21 ppm were obtained from rock samples.

Gold

No soil contour map was produced for the gold as no sample ran higher than 10 ppb as was the case for the silts. Rock samples collected were also low in gold.

2. Geological Survey

i) Purpose

A total of 6 mandays were spent mapping the Ping Pong grid (see Drawing #7) at a scale of 1:2,500 over 6.9 line km of grid. The survey was conducted in an attempt to delineate the zinc bearing stratigraphy.

ii) Regional Geology

This property is located within a thick heterogenous assemblage of metasedimentary rocks in the southeastern part of the Thor-Odin gneiss dome along the eastern boundary of the Shuswap Metamorphic Complex. These rocks

have been metamorphosed up to sillimanite facies, tightly folded and injected with granitic pegmatites.

iii) Property Geology

A total of 6 mandays were spent mapping the Ping Pong grid at a scale of 1:2,500 which covered an area of 0.53 square kilometres. The following is a description of the stratigraphy observed. See Drawing #7 for reference to geology and Appendix II for rock geochemical results.

Due to thickness of the overburden the grid area lacked good exposure except for along road cuts and in the northern sections where the cover becomes thinner.

Beginning in the northern portion of the grid a complex package of interbedded quartz-biotite-feldspar phyllites, schists and gneisses are encountered. Often these rocks contain muscovite, sericite and up to 15% disseminated graphite. In this part of the grid these rocks are often limonitic and clay altered and may contain up to 10% disseminated pyrrhotite, pyrite and sphalerite. Foliations taken from these rocks suggest an east-west strike (assuming foliation parallels bedding) with a southerly dip between 25° and 45°. Other orientations reveal a number of smaller folds within the metasedimentary package.

Hosted within the later unit is a 1.0 - 1.5 m wide, conformable bed of massive pyrrhotite/pyrite with up to 30% sphalerite and minor chalcopyrite and galena. An exposure of the sulfide showing on the road between Lines 106E and 107E shows that the bed has been tightly folded and overturned such that a small anticline-syncline is produced with all limbs of the folds dipping southward. Rock samples taken from this unit ran up to 6.355% zinc - Sample #42598.

Medium to coarse grained feldspar-quartz pegmatites also occur within the metasedimentary unit. Although there is a large lens or dyke of this material associated with the massive sulfide layer it seems unlikely that there is a correlation between the two rock types. Rather a more probable explanation would be an injection of pegmatite along foliation and axial planes during or after the folding of the country rocks.

Moving southward along the grid, foliated andesites or amphibolites (hornblende-quartz schists and gneisses) are seen. Interbedded with this rock type is a small bed of fine-grained, grey to white marble which may be part of one of the marble markers seen in the hangingwall of the Ledge Member at the Big Ledge deposit. Pegmatite injections are also observed in this rock type.

Further south along Line 103E more quartz-feldspar-biotite schists exist interbedded with foliated andesite/amphibolite and pegmatitic material. Here, no graphite or rust staining is seen within the metasediments as is the case in the northern portion of the grid. This suggests that the metasediments in the north hosting the conformable massive sulfide are indeed part of the Ledge Member and should be concentrated on in future surveys.

IV. CONCLUSIONS AND RECOMMENDATIONS

Zinc mineralization (with minor Cu, Pb and Ag values) is associated with a 1.0 - 1.5 m wide, 240 m long east-west striking open-ended massive sulfide bed which has been overturned and dips approximately 40° south.

Rock and soil geochem also reveal that the mineralization is not only related to the massive sulfide but also to a package of quartz-feldspar-biotite +/- muscovite +/- graphite phyllites, schists and gneisses which are the equivalent to the host rocks at the Big Ledge deposit 12 km to the west of the Ping Pong claims.

Recommended is additional staking of ground to the southwest where regional geology suggests that the Ledge Member changes strike from an east-west trend (near the Big Ledge) to a more northeast-southwest direction on the east side of Pingston Creek. Such a flexure associated with a stratiform zinc deposit may produce larger and possibly richer tonnage. Extension of the existing grid in both directions plus more sampling and mapping along with a programme of E.M. and magnetometer work is also recommended across the property.

REFERENCES

- 'Richardson J. (1981) Assessment Report No.9651 on the Ledge 1-8 and June 1-9 Mineral Claims.
- Cairnes, C.E. and Gunning, H.C, (1928)
Canada Department of Mines Summary Report, 1928,
Part "A", pages 109-118.
- Jones, A.G. Geological Survey of Canada Memoir 296.
- Rayner, G.H. and Holland, R. (1980)
Assessment Report No.8415 on the June and Ledge
Mineral Claims.
- Levin, P. (1977) Assessment Report No.6307 on the Casey Claims.

APPENDIX I
ANALYTICAL TECHNIQUES

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	

ANALYTICAL METHOD DESCRIPTION FOR ICP BY ACME ANALYTICAL LABORATORIES LTD.

A .500 gram sample is digested with 3 ml of HCl-HNO₃-H₂O (3:1:2) at 95°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. Au* analysis by acid leach/AA from 10 gm sample.

APPENDIX II
GEOCHEMICAL RESULTS

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: GOLDSTR. RECCE (Ping Pong) CODE : 8808-041

Project No. : 166 Sheet: 1 of 5 Date rec'd: AUG 08
 Material : 247 SOILS & Geol.: D. G. G. Date compl: AUG 29
 Remarks : 8 SILTS

Values in PPM, except where noted.

T. No.	SAMPLE No.	PPB						
		Cu	Zn	Pb	Ag	As	Mo	Au
2	100E - 10300N	20	120	14	0.2		2	10
3	10325	18	56	6	0.2		1	10
4	10350	8	120	8	0.2		2	10
5	10375	24	150	16	0.2		2	10
6	10400	10	32	4	0.2		1	10
7	10425	12	60	6	0.2		2	10
8	10450	14	32	4	0.2		1	10
9	10475	8	48	8	0.2		1	10
10	10500	16	88	12	0.2		2	10
11	10525	26	110	10	0.2		1	10
12	10550	18	78	8	0.2		1	10
13	10575	22	90	10	0.2		2	10
14	10600	8	86	8	0.2		2	10
15	10625	20	120	14	0.2		2	10
16	10650	10	160	8	0.2		2	10
17	10675	16	290	14	0.2		2	10
18	10700	12	280	18	0.2		2	10
19	10725	12	90	8	0.2		2	10
20	10750	10	120	14	0.2		2	10
21	10775	12	120	16	0.2		2	10
22	100E - 10800N	10	48	8	0.2		1	10
23	101E - 10300N	14	130	12	0.4		2	10
24	10325	32	140	14	0.2		2	10
25	10350	20	190	10	0.2		2	10
26	10375	16	72	8	0.2		1	10
27	10400	10	62	6	0.2		2	10
28	10425	12	150	10	0.4		2	10
29	10450	12	62	8	0.2		2	10
30	10475	10	54	8	0.2		2	10
31	10500	18	88	6	0.2		2	10
32	10525	8	60	8	0.2		1	10
33	10550	16	88	8	0.2		2	10
34	10575	10	100	12	0.2		2	10
35	10600	14	110	14	0.2		2	10
36	10625	20	150	10	0.2		2	10
37	10650	12	180	8	0.2		2	10
38	10675	24	550	20	0.4		4	10
39	10700	36	310	20	0.2		2	10
40	10725	18	280	10	0.2		2	10
41	10750	14	180	10	0.2		2	10
42	10775	18	360	18	0.2		2	10
43	101E - 10800N	10	180	12	0.2		2	10
44	102E - 10300N	14	54	10	0.2		2	10
45	10325	32	88	20	0.2		2	10
46	10350	16	94	12	0.2		2	10
47	10375	16	82	8	0.2		2	10
48	10400	10	100	12	0.4		1	10
49	102E - 10425N	8	110	4	0.2		2	10

T. T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	Mo	Au
50	102E - 10450N	22	70	14	0.2		2	10
51	10475	20	90	12	0.2		2	10
52	10500	12	76	6	0.2		2	10
53	10525	24	86	14	0.4		4	10
54	10550	34	94	58	0.4		4	10
55	10575	28	190	12	0.2		2	10
56	10600	12	130	110	0.2		4	10
57	10625	16	140	12	0.4		2	10
58	10650	58	900	18	1.2		2	10
59	10675	190	750	20	1.6		6	10
60	10700	20	720	58	0.2		2	10
61	10725	18	260	16	0.4		2	10
62	10750	10	110	18	0.2		2	10
63	10775	12	100	12	0.2		2	10
64	102E - 10800N	16	58	6	0.2		2	10
65	103E - 10300N	22	130	8	0.2		2	10
66	10325	26	130	88	0.2		2	10
67	10350	36	90	30	0.2		2	10
68	10375	6	46	8	0.2		2	10
69	10400	10	60	4	0.2		2	10
70	10425	8	68	6	0.2		2	10
71	10450	22	140	12	0.2		4	10
72	10475	14	110	10	0.4		2	10
73	10500	14	160	8	0.2		2	10
74	10525	12	180	10	0.2		2	10
75	10550	12	82	8	0.2		2	10
76	10575	26	180	16	0.4		4	10
77	10600	14	140	8	0.2		2	10
78	10625	8	82	10	0.2		2	10
79	10650	6	96	6	0.2		2	10
80	10675	46	850	20	1.2		4	10
81	10700	10	340	12	0.2		2	10
82	10725	20	620	60	0.2		2	10
83	10750	14	2100	60	0.4		4	10
84	10775	10	360	22	0.2		2	10
85	103E - 10800N	12	120	8	0.2		2	10
86	104E - 10300N	16	130	12	0.4		4	10
87	10325	18	130	10	0.2		2	10
88	10350	26	120	26	0.2		2	10
89	10375	22	180	20	0.2		4	10
90	10400	10	120	10	0.2		2	10
91	10425	18	120	10	0.2		2	10
92	10450	12	94	6	0.2		2	10
93	10475	12	120	10	0.2		2	10
94	10500	12	58	8	0.2		2	10
95	10525	12	64	6	0.2		2	10
96	10550	28	120	10	0.4		2	10
97	10575	20	74	6	0.2		2	10
98	10600	12	110	6	0.2		2	10
99	104E - 10625N	18	230	12	0.2		2	10
100	CHECK NL-6	50	140	64	1.0		20	-
101	104E - 10650N	28	340	16	0.2		2	10
102	10675	120	500	18	1.0		2	10
103	10700	88	920	18	0.6		4	10
104	10725	16	260	10	0.2		2	10
105	10750	14	250	10	0.2		2	10
106	104E - 10775N	12	180	16	0.2		1	10

T. T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	Mo	PPB 8808-041	
								Au	Pg. 3 of 5
107	104E - 10800N	48	110	16	0.2		2	10	
108	10825	12	94	10	0.2		1	10	
109	10850	12	24	2	0.2		1	10	
110	10875	6	30	4	0.2		1	10	
111	104E - 10900N	12	50	8	0.2		2	10	
112	105E - 10300N	22	140	10	0.6		2	10	
113	10325	16	90	8	0.2		2	10	
114	10350	16	40	4	0.2		2	10	
115	10375	20	280	16	0.4		2	10	
116	10400	18	110	6	0.2		1	10	
117	10425	10	62	4	0.2		2	10	
118	10450	14	110	6	0.2		2	10	
119	10475	4	30	6	0.2		1	10	
120	10500	18	350	12	0.2		2	10	
121	10525	8	210	6	0.2		1	10	
122	10550	8	120	4	0.2		2	10	
123	10575	18	240	12	0.2		2	10	
124	10600	14	220	10	0.2		1	10	
125	10625	20	120	6	0.2		2	10	
126	10650	22	260	10	0.2		2	10	
127	10675	16	250	10	0.2		2	10	
128	10700	22	720	10	0.6		4	10	
129	10725	16	110	14	0.2		2	10	
130	10750	92	180	12	0.2		4	10	
131	10775	22	450	120	1.0		2	10	
132	10800	16	62	6	0.2		2	10	
133	10825	20	190	14	0.4		2	10	
134	10850	20	110	12	0.4		2	10	
135	10875	28	110	26	0.2		2	10	
136	105E - 10900N	32	110	10	0.2		1	10	
137	106E - 10300N	20	190	10	0.2		2	10	
138	10325	24	140	14	0.2		2	10	
139	10350	24	180	12	0.2		2	10	
140	10375	18	120	8	0.2		2	10	
141	10400	20	58	6	0.2		2	10	
142	10425	14	110	12	0.2		2	10	
143	10450	8	110	8	0.4		2	10	
144	10475	10	78	8	0.2		1	10	
145	10500	44	1100	12	0.2		2	10	
146	10525	14	92	10	0.2		2	10	
147	10550	8	100	4	0.2		2	10	
148	10575	16	370	12	0.2		1	10	
149	10600	16	34	4	0.2		2	10	
150	10625	14	62	4	0.2		2	10	
151	10650	10	140	8	0.2		2	10	
152	10675	14	390	20	0.2		4	10	
153	10700	14	380	22	0.2		4	10	
154	10725	8	700	12	0.2		4	10	
155	10750	58	1800	550	2.4		10	10	
156	10775	28	700	46	0.6		8	10	
157	10800	12	590	18	0.2		4	10	
158	10825	20	210	28	0.2		6	10	
159	10850	14	160	24	0.2		4	10	
160	10875	10	52	4	0.2		4	10	
161	106E - 10900N	16	68	8	0.2		4	10	
162	107E - 10300N	12	80	12	0.2		4	10	
163	107E - 10325N	30	210	10	0.2		4	10	

T. T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	Mo	PPB 8808-041		
								Au	Pg.	4 of 5
6	107E - 10350N	8	140	12	0.2		4	10		
17	10375	30	92	8	0.2		4	10		
8	10400	10	170	12	0.2		4	10		
9	10425	10	170	12	0.2		4	10		
20	10450	18	150	10	0.2		4	10		
21	10475	16	170	10	0.2		4	10		
22	10500	46	800	14	0.4		6	10		
23	10525	8	300	6	0.2		4	10		
24	10550	10	920	14	0.2		2	10		
25	10575	12	750	10	0.2		2	10		
26	10600	18	860	16	0.2		2	10		
27	10625	24	1600	410	0.6		6	10		
28	10650	14	2200	62	0.4		4	10		
29	10675	8	540	14	0.2		4	10		
30	10700	10	500	10	0.2		2	10		
31	10725	16	300	16	0.2		2	10		
32	10750	16	190	14	0.2		2	10		
33	10775	22	40	4	0.2		2	10		
34	10800	18	110	16	0.2		2	10		
35	10825	30	100	12	0.2		4	10		
36	10850	30	96	10	0.2		2	10		
37	10875	22	82	8	0.2		2	10		
38	107E - 10900N	16	88	6	0.2		2	10		
39	108E - 10300N	26	200	12	0.2		2	10		
40	10325	12	130	20	0.2		2	10		
41	10350	4	40	52	0.4		2	10		
42	10375	16	230	14	0.2		2	10		
43	10400	20	190	6	0.2		2	10		
44	10425	12	170	14	0.2		2	10		
45	10450	150	1100	22	1.4		4	10		
46	10475	12	150	8	0.2		2	10		
47	10500	30	460	14	0.6		6	10		
48	10525	18	440	22	0.6		2	10		
49	10550	22	2000	12	0.4		4	10		
50	10575	42	3900	480	0.6		4	10		
51	10600	14	760	88	0.2		2	10		
52	10625	20	1200	66	0.2		4	10		
53	10650	14	430	18	0.4		4	10		
54	10675	10	160	10	0.2		2	10		
55	10700	8	120	12	0.6		4	10		
56	10725	8	62	6	0.2		2	10		
57	10750	14	48	4	0.2		2	10		
58	10775	10	92	8	0.2		2	10		
59	108E - 10800N	10	80	12	0.2		4	10		
60	109E - 10300N	12	200	12	0.2		4	10		
61	10325	14	140	12	0.2		4	10		
62	10350	18	130	12	0.2		4	10		
63	10375	16	130	16	0.2		4	10		
64	10400	10	150	18	0.4		4	10		
65	10425	16	110	6	0.2		4	10		
66	10450	10	160	10	0.2		4	10		
67	10475	30	370	12	0.4		4	10		
68	10500	48	440	22	0.2		6	10		
69	10525	16	2400	14	0.2		6	10		
70	10550	28	4400	26	0.8		6	10		
71	10575	16	550	150	0.8		4	10		
72	109E - 10600N	36	1300	840	1.6		6	10		

S.T. No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	Mo	PPB 8808-041		
								Au	Pg.	5 of 5
73	109E - 10625N	40	380	130	1.0		6	10		
74	10650	14	120	10	0.2		4	10		
75	10675	26	84	14	0.2		4	10		
76	10700	10	70	10	0.2		2	10		
77	10725	12	100	18	0.2		4	10		
78	10750	16	68	18	0.2		4	10		
79	10775	40	80	14	0.2		6	10		
90	109E - 10800N	22	90	12	0.2		4	10		
81	110E - 10300N	14	170	28	0.2		4	10		
82	10325	10	140	30	0.4		4	10		
83	10350	12	240	42	0.4		4	10		
84	10375	14	62	6	0.2		4	10		
85	10400	22	94	12	0.2		4	10		
86	10425	42	100	14	0.2		4	10		
87	10450	12	200	8	0.4		4	10		
88	10475	150	4000	18	1.0		8	10		
89	10500	10	240	16	0.8		6	10		
90	10525	26	1300	14	0.6		4	10		
91	10550	24	300	10	0.4		4	10		
92	10575	26	230	20	0.4		4	10		
93	10600	14	440	14	0.6		4	10		
94	10625	110	530	20	0.8		4	10		
95	10650	26	170	20	0.4		6	10		
96	10675	22	110	14	0.2		4	10		
97	10700	22	88	12	0.4		6	10		
98	10725	20	84	10	0.4		4	10		
99	110E - 10750N	12	80	16	0.4		4	10		
00	CHECK NL-6	50	130	58	1.0		22	-		
101	110E - 10775N	12	54	6	0.4		4	10		
102	110E - 10800N	18	110	34	0.4		4	10		
03	SILT 42826	18	110	4	0.4	4	4	10		
04	42827	18	150	4	0.2	4	4	10		
105	42828	16	130	4	0.2	1	4	10		
06	42829	10	78	4	0.2	4	4	10		
07	42830	20	120	8	0.4	6	4	10		
108	42831	16	100	4	0.2	4	4	10		
109	42832	16	98	4	0.2	2	4	10		
10	SILT 42833	10	74	2	0.4	1	4	10		

Ry Prg Filed R k 1966

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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 NG 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 8 1988 DATE REPORT MAILED: *Aug 16/88* ASSAYER... *D. Toy*... D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8808-041 166 File # 88-3380

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	V	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	%	%	%	PPM	PPM
42588	21	46	295	4902	.6	46	5	150	6.21	4	5	ND	3	35	10	2	2	310	1.79	.392	9	50	1.19	28	.06	4	2.31	.08	1.02	9	19
42589	4	51	57	2624	.3	20	3	121	3.88	2	5	ND	3	23	6	2	2	56	1.91	.456	15	22	1.08	41	.92	9	1.19	.02	.04	1	4
42590	20	36	37	275	.5	42	4	61	1.58	2	5	ND	3	16	1	2	2	116	.37	.050	10	35	.41	532	.06	8	.98	.01	.07	1	3
42591	3	42	82	1637	.3	9	1	76	4.10	2	5	ND	3	81	5	2	2	24	2.20	.564	18	12	.34	67	.01	15	.84	.05	.03	1	3
42592	15	23	61	790	.8	20	4	116	5.20	3	5	ND	3	24	4	2	3	240	1.37	.578	10	42	.55	30	.04	6	.52	.01	.20	1	1
42593	1	16	15	225	.1	48	10	439	4.38	5	5	ND	17	84	4	2	3	97	2.05	.119	34	60	1.09	83	.01	2	3.80	.01	.01	1	12
42594	1	98	2	44	.7	51	31	193	5.49	2	5	ND	2	8	1	2	2	48	.57	.072	5	20	.62	27	.16	2	.84	.04	.02	2	1
42595	1	224	1826	44835	3.4	27	10	393	22.02	13	5	ND	3	27	113	2	6	37	2.01	.618	10	12	.36	23	.01	4	.44	.01	.12	3	1
42596	4	62	118	2786	.7	12	2	41	10.06	5	5	ND	18	96	8	2	2	11	1.69	.171	10	7	.10	17	.03	8	2.31	.10	.05	1	1
42597	5	20	39	212	.1	7	1	30	1.76	2	5	ND	16	10	2	2	2	3	.96	.012	30	20	.09	918	.01	3	.63	.04	.15	2	1
42598	1	231	69	63553	1.8	46	6	594	31.22	18	5	ND	5	16	170	2	4	17	1.09	.508	16	13	.13	9	.01	5	.35	.02	.05	2	18
42599	1	211	2383	13347	4.7	38	12	205	35.76	12	5	ND	5	16	19	4	5	17	.76	.360	9	10	.09	8	.01	6	.22	.01	.05	3	1
42600	1	53	56	22885	.7	16	4	159	11.07	5	5	ND	1	20	42	2	4	12	1.41	.749	2	6	.13	10	.01	7	3.12	.02	.27	31	8
STD C/AU-R	19	60	38	135	6.6	72	30	1039	4.26	45	17	8	19	49	19	17	20	60	.50	.097	41	64	.97	185	.07	33	2.07	.06	.14	13	525

* ASSAY REQUIRED FOR CORRECT RESULT *

Ping Long Gold Recd (old)

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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 NH FX SR CA P LA CR NG 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 9 1988 DATE REPORT MAILED: *Aug 17/88* ASSAYER: *C. Long* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION PROJECT 8808-045-166 File # 88-3407

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	%	%	PPM	PPM	
42601	4	3	123	32	.2	1	1	62	.86	2	5	ND	6	9	2	2	2	49	.04	.010	12	15	.13	60	.01	2	.36	.03	.13	2	1
42602	2	21	239	291	1.3	1	1	45	25.33	2	5	ND	6	45	2	2	2	24	.04	.257	2	4	.02	160	.03	3	.14	.03	.23	1	1
42603	1	213	1516	21925	3.9	24	11	364	31.78	9	5	ND	4	41	32	2	2	11	1.43	.669	10	9	.09	14	.01	2	.46	.03	.04	2	6
42604	15	13	33	5346	.1	28	3	117	3.23	2	5	ND	1	38	10	2	2	164	1.49	.093	10	24	.82	73	.05	17	2.39	.11	.37	10	1
42605	2	34	33	294	.2	12	3	83	1.57	2	5	ND	2	106	1	2	2	50	2.26	.776	16	25	.53	329	.02	9	1.81	.10	.09	1	1
42606	1	216	854	1193	3.2	25	7	227	34.62	6	5	ND	5	14	3	2	4	13	.53	.164	5	4	.09	11	.01	17	.13	.01	.06	1	1
42607	1	81	209	40546	1.2	13	5	294	13.15	5	5	ND	2	66	62	2	2	27	4.62	1.780	17	12	.61	33	.01	8	.69	.04	.10	3	1
42608	1	205	519	7913	2.6	28	10	216	32.14	6	5	ND	5	31	13	2	2	12	1.26	.323	7	7	.10	19	.01	2	.53	.03	.04	7	1
42604	1	55	17	262	.3	41	18	775	4.73	2	5	ND	1	72	1	2	2	87	1.74	.062	5	78	1.77	90	.33	2	4.55	.19	1.57	1	1
STD C/AU-R	17	57	38	132	6.7	58	29	1066	4.12	40	21	8	38	47	20	17	18	57	.49	.097	41	61	.96	173	.07	32	1.98	.06	.14	13	520

✓ ASSAY REQUIRED FOR CORRECT RESULT -

NORANDA EXPLORATION COMPANY, LIMITED

PROPERTY PING PONG

N.T.S. 82K/S

DATE Aug 6/88

ROCK SAMPLE REPORT

PROJECT 166

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G	A	G	A	G	A	G	A	G	A	SAMPLED BY
					Cu	Pb	Zn	Mo	As	Ag	Au				
42596	105+18E, 108+20N 1m bed of massive Py, Po, sphal. in a graphitic, micaceous quartzite host.		quartz												GGG
42597	105+45E, 108N. Rusty coarse grained quartz-feldspar permatite.		"												"
42598	105+65E, 108+15N 1m wide bed of massive pyrite - sphalerite.		"												"
42599	106+15E, 107+50N 1.5m wide bed of massive Po + minor sphalerite.		"												"
42600	105+70E, 107+40N Banded, massive pyT sphalerite boulder		"												"

APPENDIX III
STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COSTS

PROJECT: PING PONG

DATE: October 30, 1988

TYPE OF REPORT: GEOLOGICAL/GEOCHEMICAL

a) Wages:

No. of Days 14 Mandays
Rate per Day \$113.44
Dates From: July 30, 1988 - August 6, 1988
Total Wages 14 x \$113.44 \$1,588.16

b) Food & Accomodations:

No. of Days 22 Mandays
Rate per Day \$50.53
Dates From: July 30, 1988 - August 6, 1988
Total Costs 22 x \$ 50.53 \$1,111.66

c) Transportation:

No. of Days 8 days
Rate per Day \$67.90
Dates From: July 30, 1988 - August 6, 1988
Total Costs 8 x \$ 67.90 \$ 543.20

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: \$2,134.50
(See attached schedule)

f) Cost of preparation of Report
Author: \$ 300.00
Drafting: \$ 200.00
Typing: \$ 150.00

g) Other: LINECUTTING
No. of days: 8 mandays
Rate per day: \$113.44
Dates from : July 30, 1988 - August 6, 1988
Total Wages : 8 x \$113.44 \$ 907.52

Total Cost \$6,935.04

h) Unit costs for GEOLOGY
No. of Days 8 mandays
No. of Units
Unit costs \$250.41 / day
Total Cost 8 x \$250.41 \$2,003.28

i) Unit costs for GEOCHEM
No of days 6 mandays
No of units 267
Unit costs \$15.07/sample
Total cost 267 x \$15.07 \$4,024.24

j) Unit costs for LINECUTTING

No of days : 8 mandays

No of units: 6.9 km

Unit costs : \$131.53/km

TOTAL COST : 6.9 km x \$131.53

\$ 907.52

NORANDA EXPLORATION COMPANY, LIMITED

(WESTERN DIVISION)

DETAILS OF ANALYSES COSTS

PROJECT: PING PONG


<u>ELEMENT</u>	<u>NO. OF DETERMINATIONS</u>	<u>COST PER DETERMINATION</u>	<u>TOTAL COSTS</u>
Cu	245	1.60	392.00
Pb	245	0.60	147.00
Zn	245	0.60	147.00
Ag	245	0.60	147.00
Mo	245	0.60	147.00
Au	245	3.50	857.50
ICP (30 element + Au)	22	13.50	297.00

APPENDIX IV
STATEMENT OF QUALIFICATIONS

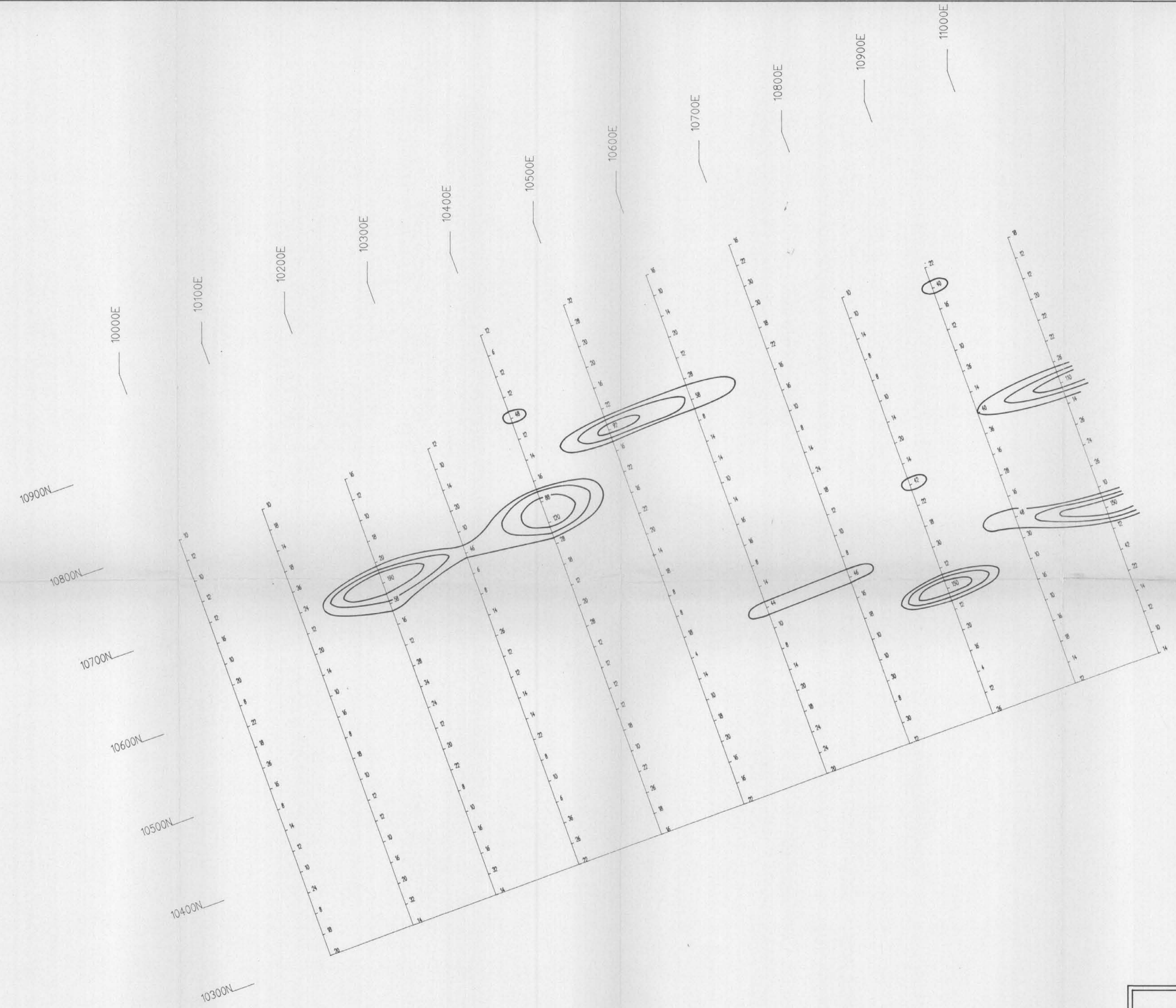
STATEMENT OF QUALIFICATIONS

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

- I am a geologist residing at #302 - 5890 Balsam Street, Vancouver, 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 a temporary employee with Noranda Exploration Company, Limited since May, 1979 and a permanent employee since November, 1987.



D. Graham Gill

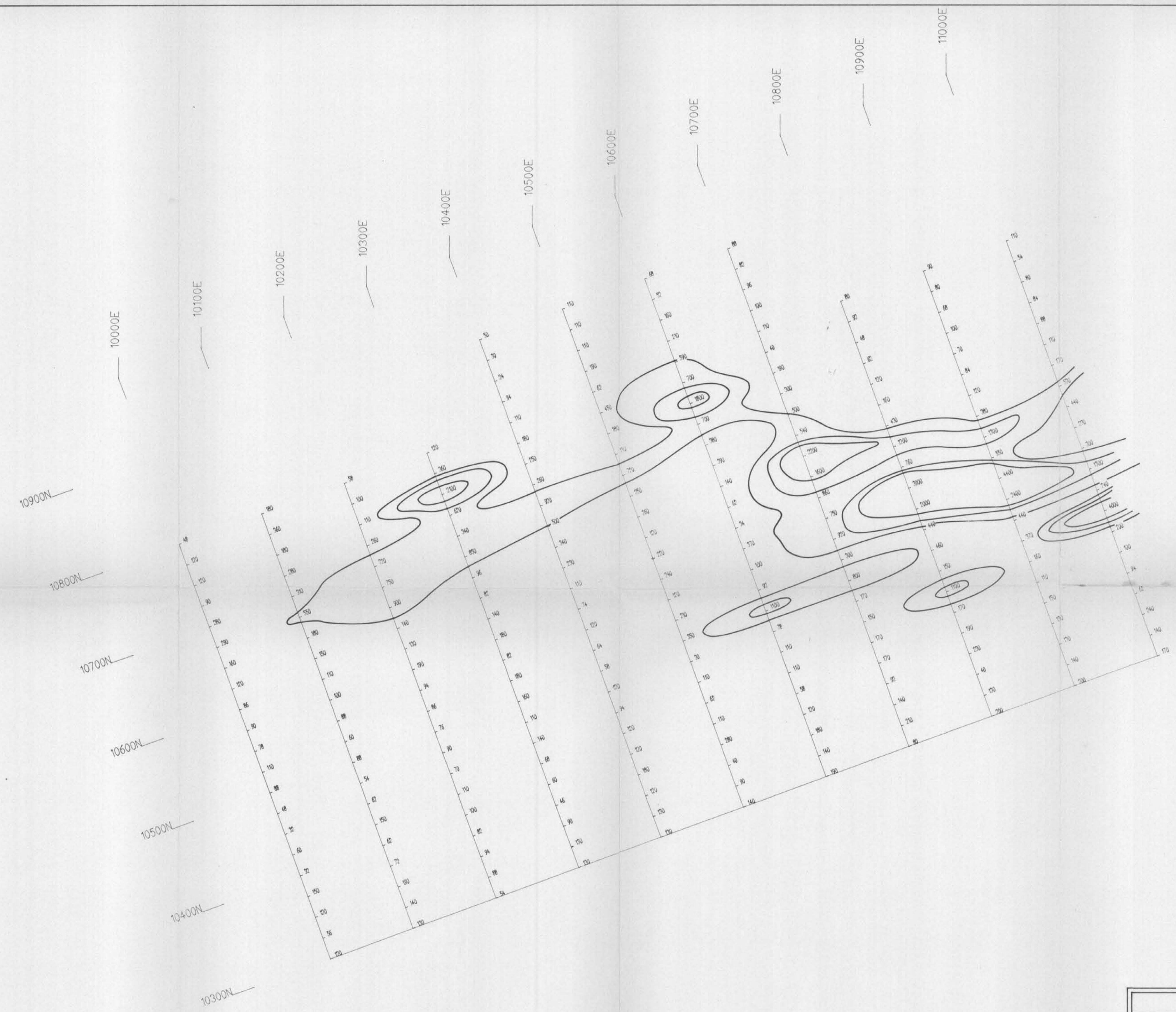


BASELINE 70°
GEOLOGICAL BRANCH
ASSESSMENT REPORT

17-979

CONTOUR INTERVALS	
1st Order	40 ppm
2nd Order	60 ppm
3rd Order	80 ppm

PING PONG	
GEOCHEMICAL SURVEY PPM Cu	
PROJECT: GOLDSTREAM RECCE	PROJECT # : 166
BASELINE AZIMUTH : 70 Deg.	
SCALE = 1: 2500	DATE : 8/ 8/88
SURVEY BY : G GILL	NTS : 082K05,12
FILE: C166PIN	
#4 3	NORANDA EXPLORATION



BASELINE 70°
GEOLOGICAL BRANCH
ASSESSMENT REPORT

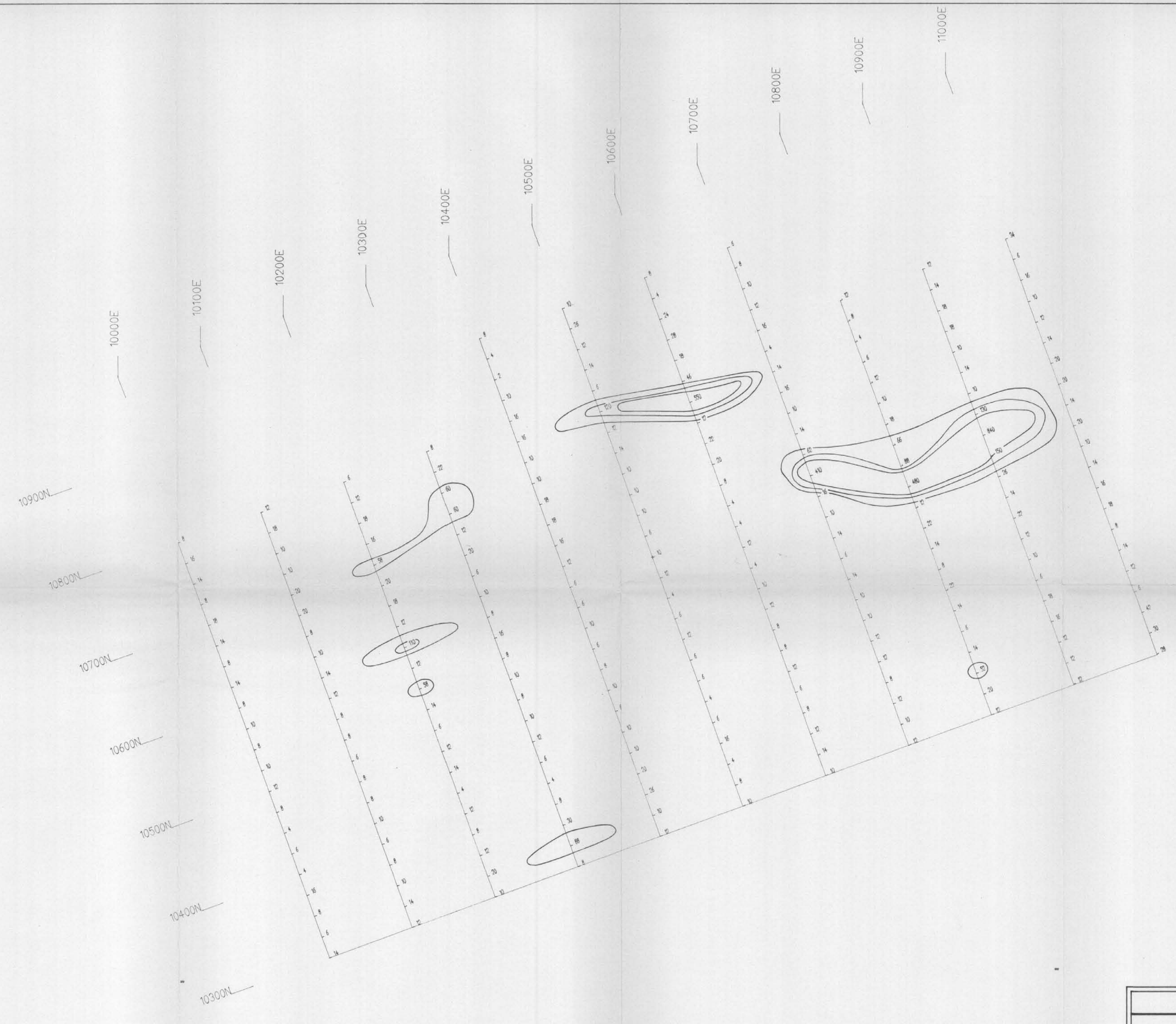
17,979

CONTOUR INTERVALS	
1st Order	500 ppm
2nd Order	1000 ppm
3rd Order	1500 ppm



PING PONG	
GEOCHEMICAL SURVEY PPM Zn	
PROJECT: GOLDSTREAM RECCE	PROJECT # : 166
BASELINE AZIMUTH : 70 Deg.	
SCALE = 1: 2500	DATE : 8/ 8/88
SURVEY BY : G GILL	NTS : 082K05,12
FILE: C166PIN	
NORANDA EXPLORATION	

#4



BASELINE 70° GEOLOGICAL BRANCH
ASSESSMENT REPORT

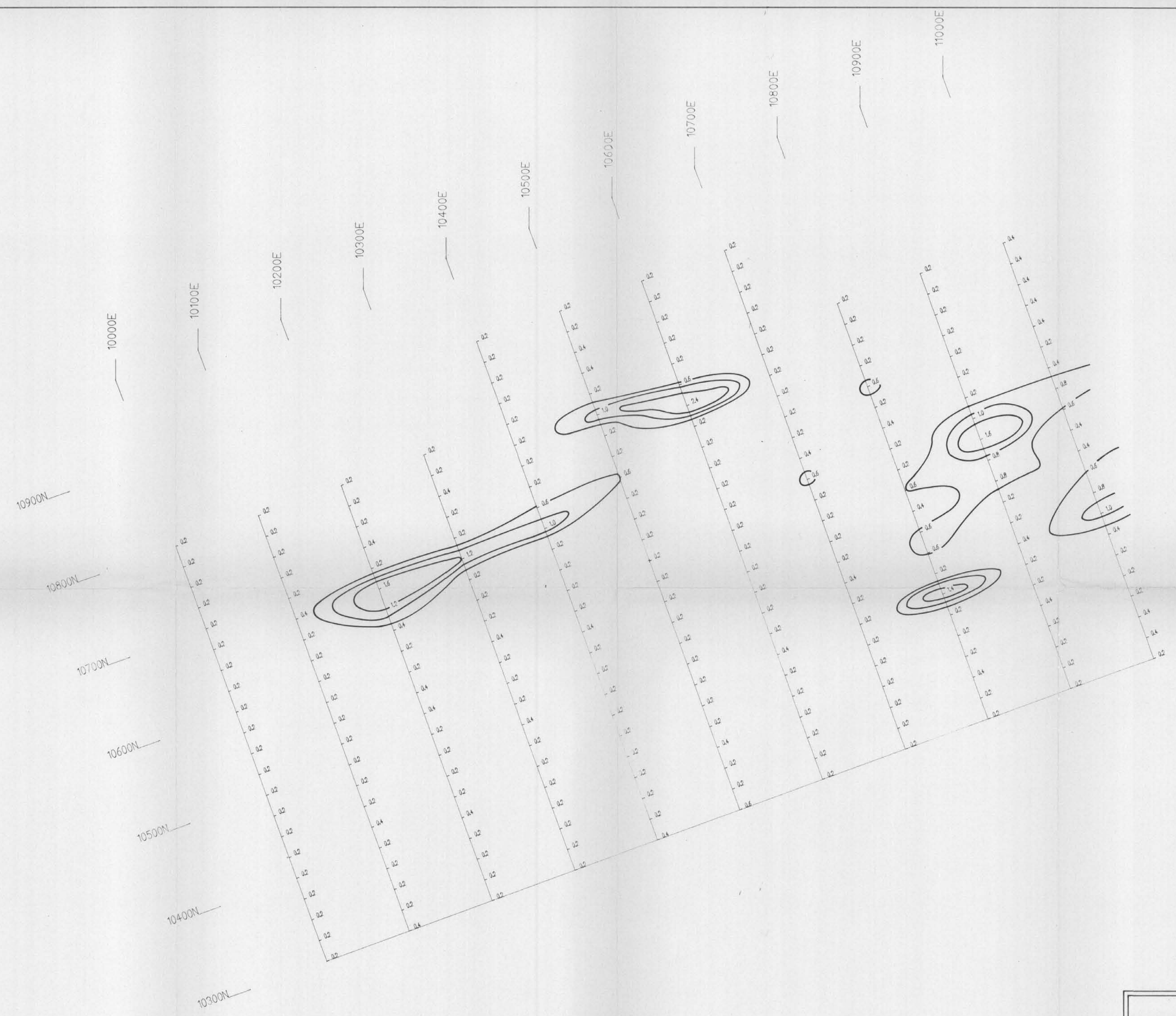
17,979

Contour Intervals:
 1st. Order 50ppm.
 2nd. " 100ppm.
 3rd. " 150ppm.

PING PONG
 GEOCHEMICAL SURVEY
 PPM Pb
 PROJECT: GOLDSTREAM RECCE PROJECT # : 166
 BASELINE AZIMUTH : 70 Deg.

SCALE = 1: 2500 DATE : 8/ 8/88
 SURVEY BY : G GILL NTS : 082K05,12
 FILE: C166PIN

#35
NORANDA EXPLORATION



BASELINE 70°
GEOLOGICAL BRANCH
ASSESSMENT REPORT

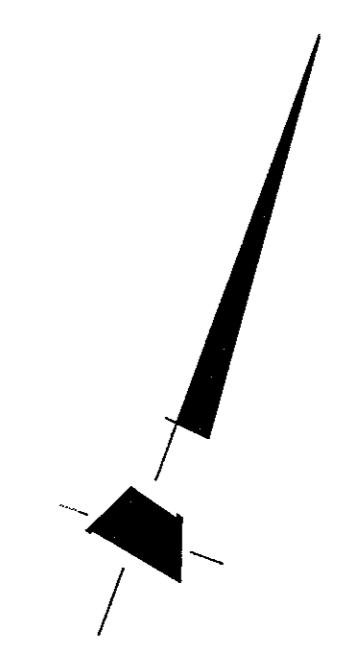
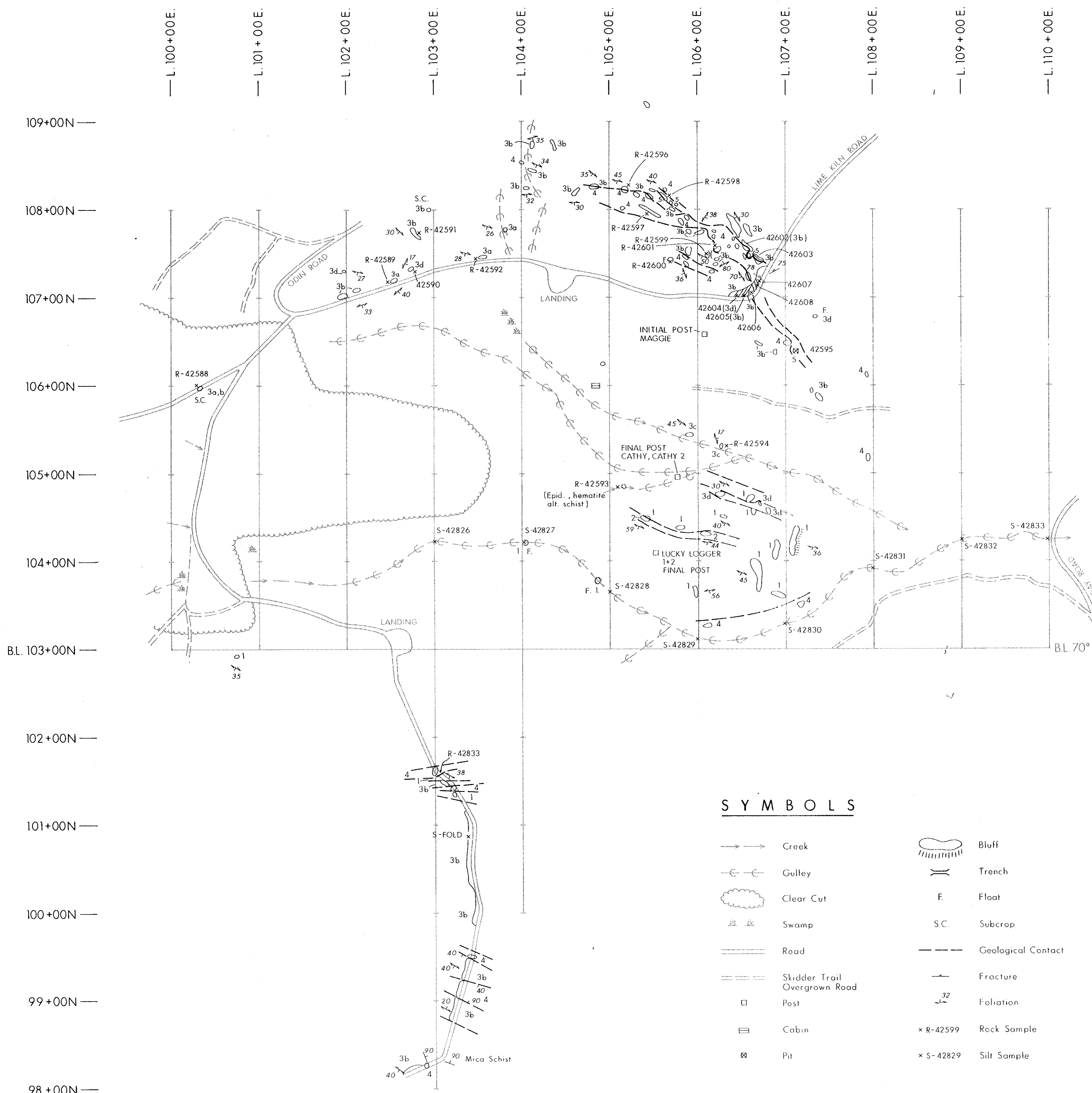
17,979

CONTOUR INTERVALS	
1st Order	.6 ppm
2nd Order	.9 ppm
3rd Order	1.2 ppm



PING PONG	
GEOCHEMICAL SURVEY PPM Ag	
PROJECT: GOLDSTREAM RECCE	PROJECT # : 166
BASELINE AZIMUTH : 70 Deg.	
SCALE = 1: 2500	DATE : 8/ 8/88
SURVEY BY : G GILL	NTS : 082K05,12
FILE: C166PIN	
NORANDA EXPLORATION	

#6



LEGEND

- 5 **SULPHIDE ZONE**
Massive pyrrhotite/pyrite with up to 30% sphalerite (massive and bedded) and minor chalcopyrite and galena. Rusty, purple weathered surface with dense quartz matrix.
- 4 **PEGMATITE**
Medium to coarse grained feldspar-quartz pegmatite with little or no mafic (pyroxene) content. Quite rusty at times.
- 3 **LEDGE MEMBER**
Combination of quartz-biotite phyllite (3a), quartz-biotite schist + muscovite/sericite + graphite (up to 15%) (3b), graphitic feldspar-quartz phyllites (3c), and quartz-feldspar-biotite schists or gneiss (3d). All may contain quartz augens and/or stringers of pegmatite (UNIT 4). Rocks are often limonitic, leached to a white clay altered color and may contain up to 10% disseminated pyrrhotite, pyrite and sphalerite.
- 2 **MARBLE**
Fine grained, dense, grey to white marble.
- 1 **AMPHIBOLITE/FOLIATED ANDESITE OR GABBRO**
Foliated, fine to medium grained hornblende and quartz appearing schistose to gneissic with occasional interbeds of biotite, quartz, mica schist.

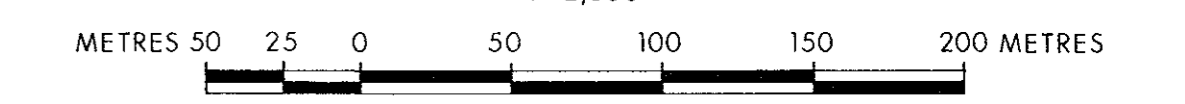
SYMBOLS

- | | | | |
|-----|---------------------------------|-----------|--------------------|
| → → | Creek | | Bluff |
| ← ← | Gully | | Trench |
| | Clear Cut | F | Float |
| | Swamp | S.C. | Subcrop |
| == | Road | --- | Geological Contact |
| --- | Skidder Trail
Overgrown Road | — — | Fracture |
| □ | Post | ↖ ↗ | Foliation |
| ▣ | Cabin | x R-42599 | Rock Sample |
| ⊗ | Pit | x S-42829 | Silt Sample |

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,979

SCALE
1:2,500



REVISED	PING PONG GRID	
	GEOLOGY	
PROJ. No. 166	SURVEY BY: D.G.G.	DATE: August 1988
N.T.S. 82K/5,12,82L/8,9	DRAWN BY: J. Serwin	SCALE: 1:2,500
DWG. No. 7	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	