

LOG NO: 11-22	RD.
ACTION:	
FILE NO:	

LOG NO: March 12/91	RD.
ACTION: Date returned back from amendments	
FILE NO:	

ASSESSMENT REPORT

GEOLOGICAL AND GEOCHEMICAL SURVEY

SUB-RECORDER
RECEIVED
NOV 19 1990
M.R.# \$
VANCOUVER, B.C.

on the
BEACH GROUP OF CLAIMS
N.T.S. 82G/05
FORT STEELE MINING DIVISION

Latitude 49°18.5' Longitude 115°46.5'

UTM 5462000 m N 589000 m E

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,483

L.R. Erdman (Project Geologist)
Noranda Exploration Company, Limited (no personal liability)
October 1990

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION.....	1
Location and Access.....	1
Topography and Vegetation.....	1
Previous Work.....	1
Regional Geology.....	4
Purpose of Exploration.....	4
Work Programme.....	4
Property Geology.....	6
Soil Geochemistry.....	6
Stream Sediments Geochemistry.....	6
Rock Geochemistry.....	8
Summary and Recommendations.....	8
References.....	10

APPENDICES

- Appendix 1: Soil and Silt Geochemistry
- Appendix 2: Rock Descriptions and Analytical Results
- Appendix 3: Statement of Costs
- Appendix 4: Statement of Qualifications

LIST OF TABLES

- Table 1: Claim Status.....Page 1

LIST OF FIGURES

- Figure 1: Claim Location..... Page 2
- Figure 2: General Location..... Page 3
- Figure 3: Regional Geology..... Page 5
- Figure 4: Soil Locations, Silt Locations.....Page 7
- Figure 5: Rock Sample Locations.....Page 9
- Figure 6: Soil, Silt, Moss Mat Samples Cu, Ag (ppm).....In Pocket
- Figure 7: Rock Samples Cu (ppm), Ag (ppm).....In Pocket
- Figure 8: Geology.....In Pocket

INTRODUCTION

The Beach mineral claims were staked by Noranda Exploration Company, Limited (n.p.l.) in October 1989. These claims cover the Barkshanty Creek drainage basin, in which government geologists collected silts anomalous in copper (Hoy, 1982). The claims are located in the Fort Steel Mining Division and are comprised of 4 modified grid claims totalling 72 units (Figure 1). Claim information is listed in Table 1 below.

TABLE 1 CLAIM STATUS

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Date Recorded</u>
Beach 1	3703	16	October 13, 1989
Beach 2	3704	20	October 12, 1989
Beach 3	3705	20	October 14, 1989
Beach 4	3706	16	October 15, 1989

Location and Access

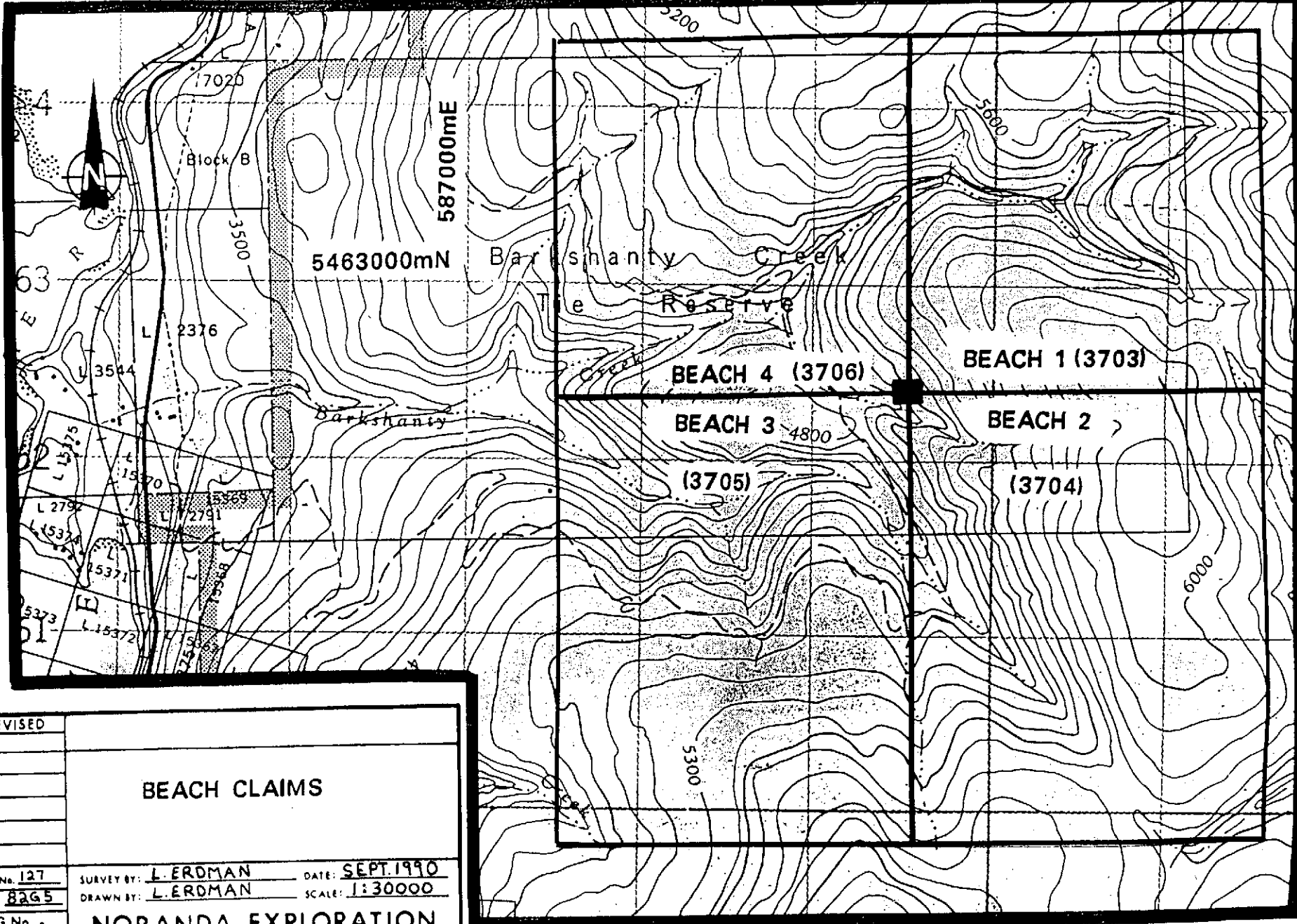
The centre of the Beach claims is located approximately 5 km northeast of the town of Moyie, B.C. (Figure 2). Access is via a good to fair condition logging road branching east from Highway 95, approximately 1 km north of Moyie, B.C.

Topography and Vegetation

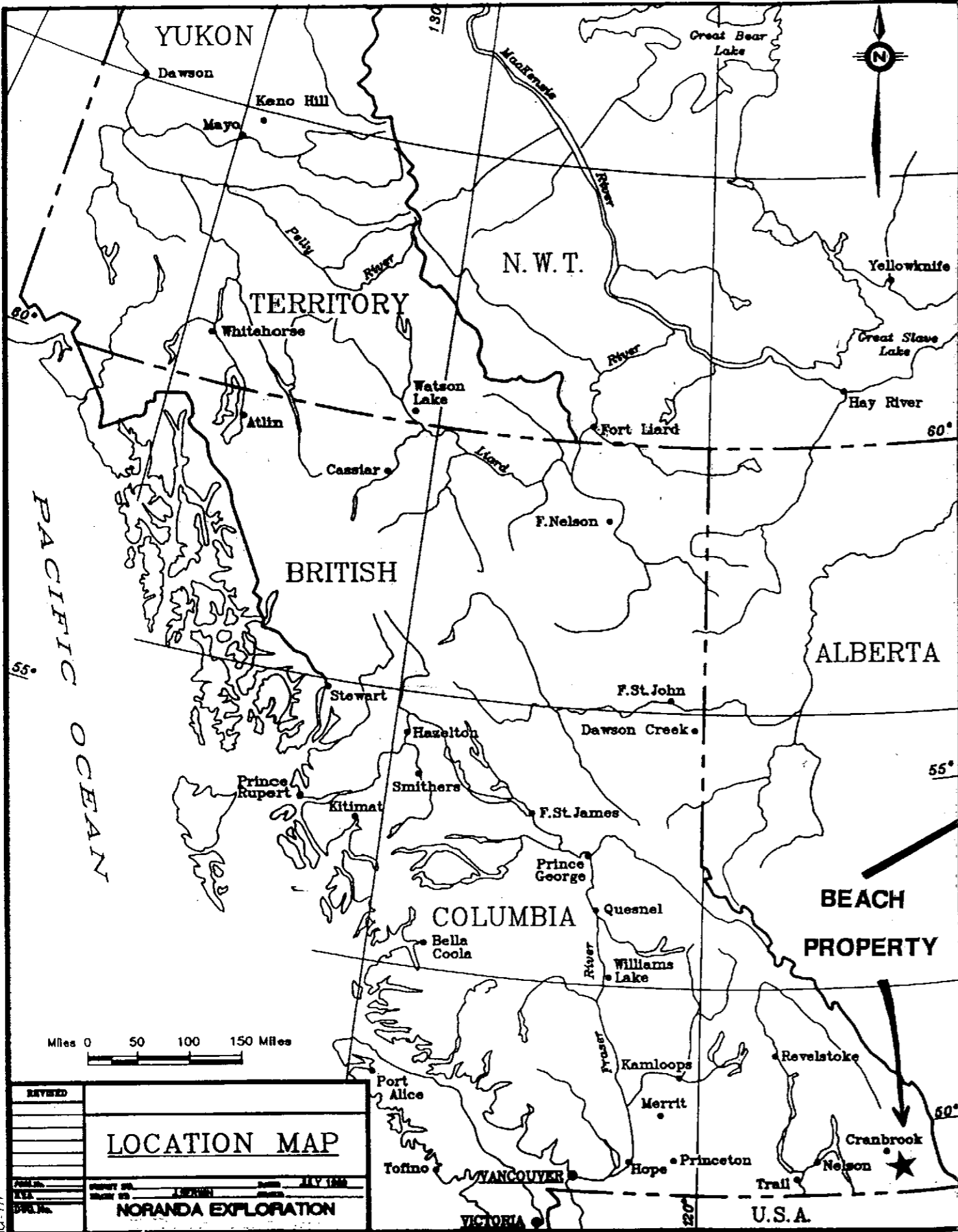
Relief is 700 m, from 1859 m at the eastern edge of the claim block, to 1158 m in the Barkshanty Creek valley at the western edge. Open forest of second growth pine, douglas fir, spruce and tamarack covers much of the property, with recently logged areas present in the northwest.

Previous Work

There is no history of previous work on the Beach claim group. To the north is Kokanee Exploration's Vine property, and to the southwest is the St. Eugene Mine (a past producer).

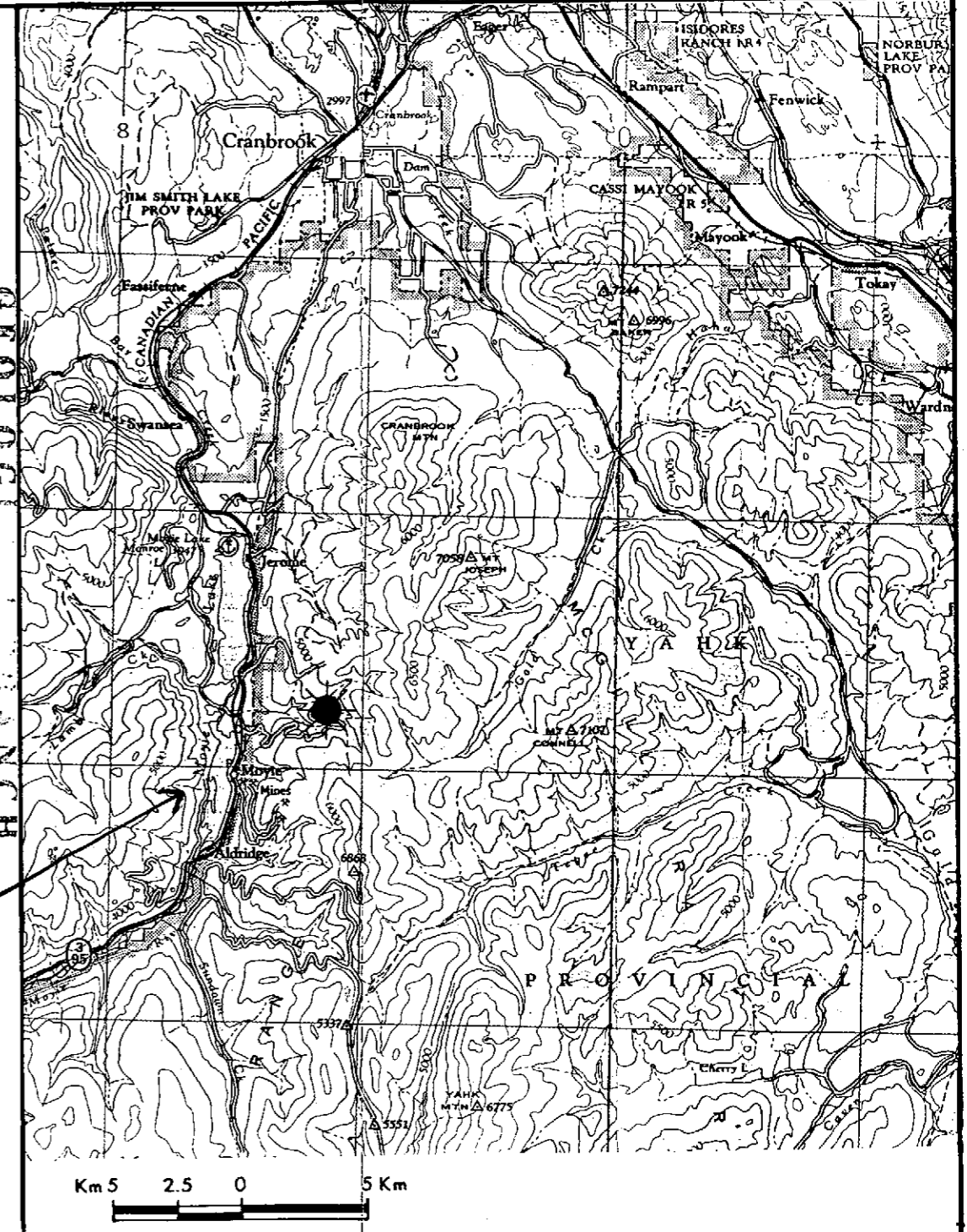


REVISED	
PROJ. No. 127	SURVEY BY: L. ERDMAN
N.T.S. 8265	DRAWN BY: L. ERDMAN
	DATE: SEPT. 1990
	SCALE: 1:30000
DWG. No. 1	NORANDA EXPLORATION
	OFFICE: _____



20,483

GEOLOGICAL ASSESSMENT REPORT



REVISED	
LOCATION MAP	
NORANDA EXPLORATION	

REVISED		BEACH PROPERTY	
		GENERAL LOCATION & ROAD ACCESS MAP	
PROJ. No.	127	SURVEY BY:	L. ERDMAN
N.T.S.	8265	DATE:	SEPT. 1990
DWG. No.	2	DRAWN BY:	L. ERDMAN
		NORANDA EXPLORATION	
		OFFICE:	

NO. 177

Regional Geology

The area is underlain by rocks of the Purcell Anticlinorium, a broad north-plunging structure (Figure 3). The oldest rocks exposed in the anticlinorium are pre-Cambrian rusty weathering greenish siltstones and quartzites of the Lower Aldridge Formation. Overlying this are wackes and siltstones of the Middle Aldridge, and thinly bedded, rusty weathering black argillite and siltstone of the Upper Aldridge Formation. Above the Aldridge are clean quartzites and siltstones of the Creston Formation, overlain by calcareous and dolomitic argillites of the Kitchener-Siyeh Formations, overlain in turn by purple and green amygdaloidal and vesicular basalts of the Nichol Creek Formation. Stromatolitic dolomites and siltstones of the Sheppard Formation occur above the Nichol Creek basalts, and overlying the Sheppard Formation are siltstones and argillites of the Gateway Formation.

Purpose of Exploration

Anomalous copper values in silts from Barkshanty Creek, collected by B.C. government geologists in 1979-80 (Hoy, 1982) suggested the possibility of a sedimentary copper deposit hosted by quartzites of the Creston Formation. Similar deposits in Montana, the Noxon and Troy deposits, are hosted by argillites and quartzites of the Revett Formation, stratigraphically equivalent to the Creston Formation in B.C. The Noxon deposit lists reserves of 142 MT grading 0.78% Cu and 68 g/t Ag, whereas the Troy deposit has 58 MT grading 0.76% Cu and 54 g/t Ag.

Work Programme

A crew of 2 persons completed a programme of geological and geochemical work during the period August 25 to September 2, 1990.

Eight km of flagged line were put in using a compass and hip chain and stations were located at 50 m intervals. Soil samples were collected at the numbered stations, and geologic mapping was completed in the areas adjacent to the lines. Geologic mapping was also completed along all roads, and traverses were made in the creek valleys which had anomalous levels of copper in silts.

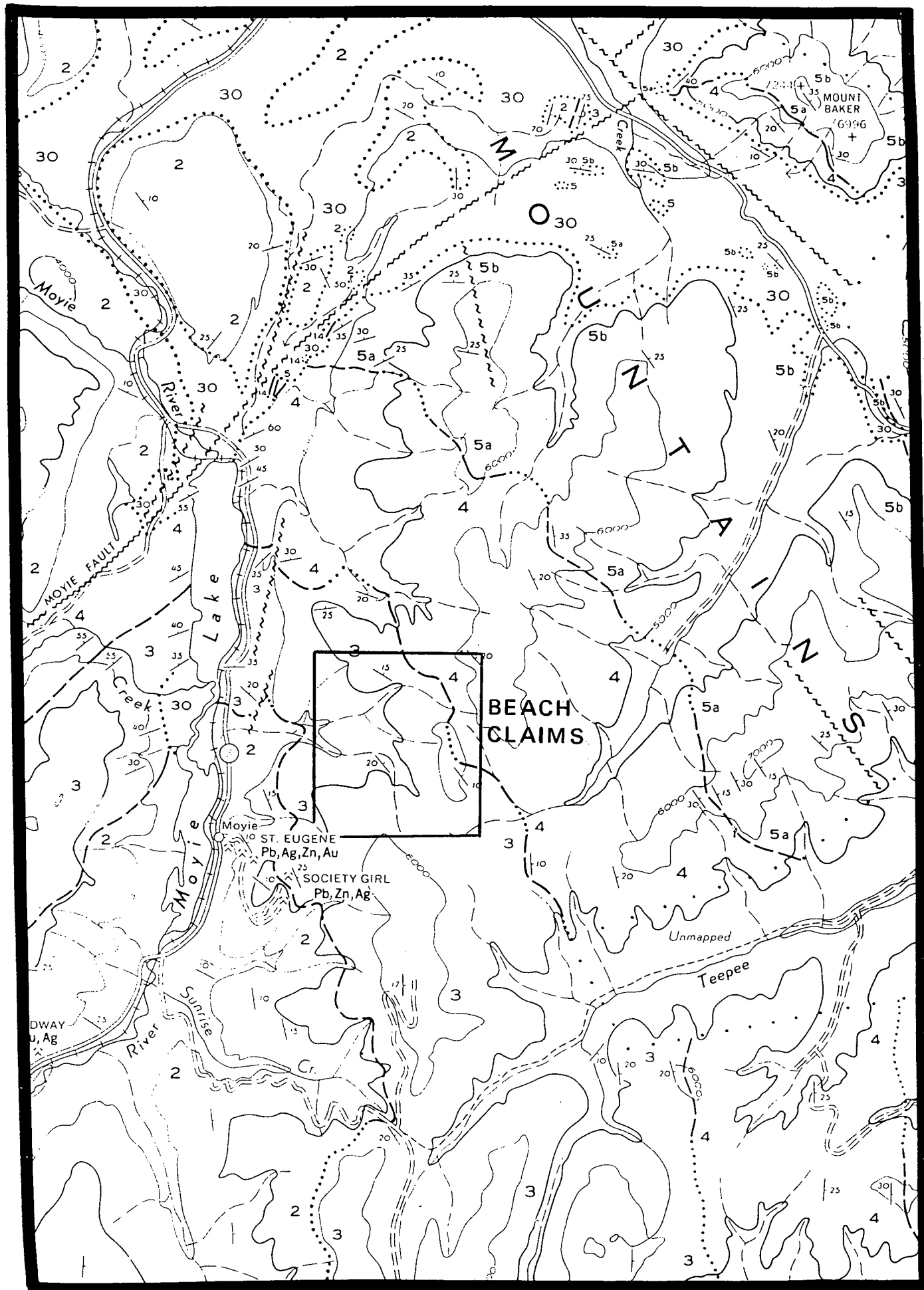


Figure 3 REGIONAL GEOLOGY

SCALE 1:126,720

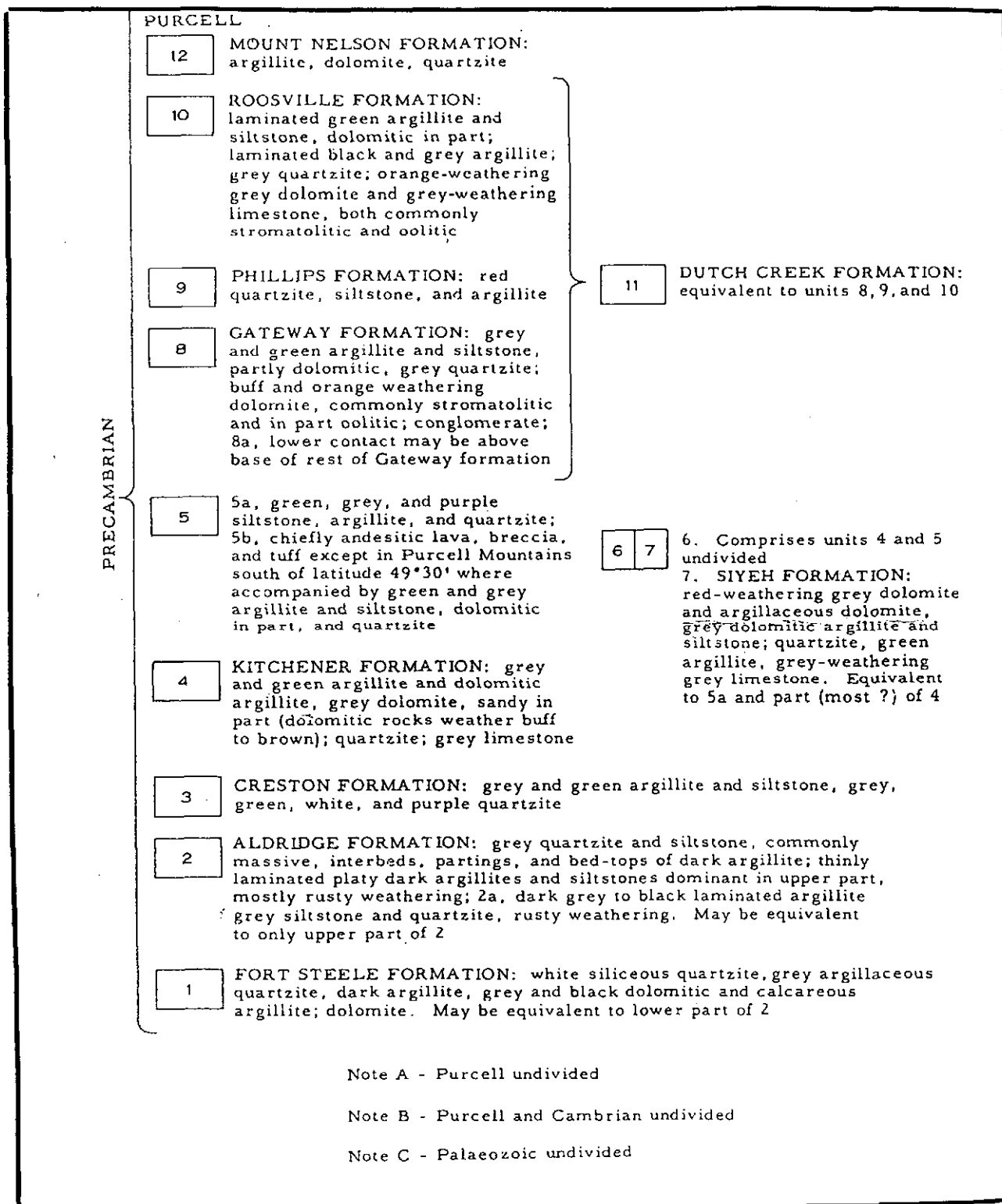


Figure 3 LEGEND

Property Geology

The Beach claims are underlain by light green to grey coloured, well bedded argillites of the Creston Formation (Figure 8). Locally, thin interbeds (≤ 50 cm) of mauve to white quartzite are present. The argillites are locally magnetic and contain up to 2% well crystallized euhedral magnetite. Consequently, many of the argillites display a rusty weathering surface. In the eastern part of the property, exposed along one of the uppermost roads, are large (4 cm) cubic pyrite crystals. These are associated with fractures and joints in the argillite.

The strike varies from 282° to 355° , with dips of 007°E to 020°E , suggestive of minor folds or small faults.

Soil Geochemistry

A total of 165 soil samples were collected from numbered stations on flagged lines (Figure 4). Soils were collected at 50 m intervals from the "B" horizon where possible. This varied in depth from 5 to 30 cm. About $\frac{1}{2}$ of the samples were collected from soils developed on vegetated talus slopes, also at a depth of 5 to 30 cm. The "B" horizon soils varied from dark red-orange to light orange-brown in colour, whereas the soils on the talus slopes varied from grey to beige in colour.

Only 5 out of the 165 soil samples had Cu values above the threshold level, defined as the mean plus 2 standard deviations, and only 2 of the 5 had Cu levels greater than 100 ppm (Appendix I and Figure 6). None of the soil samples contain anomalous levels of silver.

Stream Sediments Geochemistry

Following staking of the Beach claims in October 1989, 27 silt samples were collected from Barkshanty Creek and its tributaries (the cost of this work is not included for assessment). An additional 2 silt and 1 mossmat samples were collected from a previously unsampled tributary during the 1990 work programme. Ten out of 29 silts have Cu values greater than 32 ppm Cu, and are therefore weakly anomalous (Appendix I, Figures 4 and 6).

Rock Geochemistry

The Beach claims expose very little outcrop, except in road cuts and at the tops of hills. Twenty-five rock samples were collected from outcrops and from float boulders in creek beds (Appendix 2, Figures 5 and 7). None of the samples are anomalous in Cu or Ag.

Summary and Recommendations

The Beach claims are underlain by light green argillites belonging to the Creston Formation. Locally thin, ≤ 50 cm, interbeds of mauve to white quartzite are observed. The argillites contain from 1% to 8% well crystallized euhedral magnetite, and more rarely large cubic crystals of pyrite.

Stream sediment samples are slightly anomalous in copper, but recce soil samples failed to locate any anomalies. The lack of significant Cu soil anomalies may be attributed to the sampled material, as many of the sample sites did not sample the "B" horizon.

Rock outcrops are not abundant except along road cuts and at the crest of hills. None of the sampled outcrops or float boulders from streams carried any anomalous metal values.

Future work should include:

1. Soil pits at various locations, to determine soil profiles and hence the optimum sampling horizon.
2. Recce soil lines on Beach 2.
3. Two mini-grids on Beach 3 and Beach 4, to be used for soil sampling and a VLF-E.M. survey.

REFERENCES

Høy, T., 1982: Notes to Accompany Preliminary Map No.49.
Reconnaissance Stream Geochemical Survey, Moyie
Lake Sheet (82G/W) Southeastern British Columbia.

APPENDIX I
SOIL AND SILT GEOCHEMISTRY

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

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

Preparation of Samples:

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

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

Analysis of Samples:

ICP analyses for 28 elements is determined using a Leeman PS3000. For silts and soils a 0.2 g sample is digested with 3 ml of $\text{HClO}_4/\text{HNO}_3$ at a ratio of 4:1. This digestion occurs for 4 hours at a temperature of 203°C. The resulting liquid is diluted to 11 ml with water. Pulps of rock or core are weighed out at 0.4 g, and chemical quantities are doubled relative to the above noted method for digestion. Otherwise the procedure remains the same.

Gold (Au) content is determined by atomic absorption (AA), not ICP. A 10 g sample is weighed and ashed at 590°C for 3 to 5 hours. After cooling, 35 mls of aqua regia ($1\text{HNO}_3:3\text{HCl}$) is added and the samples are digested on a hot plate for 2 hours, or until 15 mls of aqueous solution is left. Dilute with water to 100 mls and add 5 mls MIBK. Addition of MIBK extracts and pre-concentrates the gold from the aqueous solution. Following this step the MIBK solution is analyzed on the AA.

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

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Beach Cl. (LE)

Noranda Exploration Co. Ltd. PROJECT 9009-030 127 File # 90-4152 Page 1

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

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
115301	1	9	13	109	.1	25	6	1226	1.38	2	5	ND	3	12	.2	2	2	16	.19	.097	12	11	.23	292	.08	5	2.05	.02	.08	1	3
115302	1	24	20	65	.1	29	11	342	1.98	4	5	ND	8	12	.2	2	2	17	.14	.061	34	20	.51	199	.06	4	1.75	.01	.08	1	2
115303	1	12	17	133	.1	41	8	745	1.99	2	5	ND	4	17	.2	2	2	20	.22	.159	19	23	.42	422	.08	4	2.61	.02	.11	1	1
115304	1	11	16	82	.1	23	5	223	1.54	2	5	ND	5	16	.2	2	5	16	.16	.170	16	12	.38	233	.08	4	2.21	.02	.08	1	2
115305	1	8	11	81	.1	22	6	364	1.56	2	5	ND	4	15	.2	2	2	17	.18	.135	13	11	.29	313	.09	7	2.25	.02	.07	1	3
115306	1	10	13	84	.1	13	5	304	1.38	3	5	ND	3	11	.2	2	2	15	.14	.029	18	12	.46	202	.06	2	1.69	.02	.08	1	1
115307	1	15	19	86	.1	19	6	316	1.86	2	5	ND	4	12	.2	3	2	18	.14	.103	11	12	.38	257	.09	2	3.13	.02	.09	1	5
115308	1	15	22	89	.1	18	5	462	1.56	2	5	ND	4	17	.2	2	2	19	.20	.030	11	14	.45	306	.07	3	2.44	.03	.07	1	1
115309	1	9	12	59	.1	13	4	135	1.24	2	6	ND	5	9	.2	2	5	11	.14	.012	26	13	.66	214	.04	6	1.37	.01	.07	1	4
115310	1	16	18	130	.3	26	7	938	2.12	5	5	ND	7	16	.2	4	2	24	.17	.166	14	14	.33	315	.13	9	4.33	.03	.08	1	1
115311	1	7	15	93	.2	16	6	786	1.42	4	5	ND	3	14	.2	3	4	19	.19	.054	12	12	.29	400	.09	5	2.34	.02	.10	1	2
115312	1	9	8	95	.2	14	6	220	1.48	2	5	ND	5	8	.2	4	3	11	.13	.040	26	14	.98	152	.04	4	1.81	.01	.08	1	1
115313	1	12	18	90	.1	19	5	215	1.65	2	6	ND	4	13	.2	2	2	18	.16	.085	13	13	.39	225	.10	4	2.47	.02	.08	1	1
115314	1	17	22	130	.1	23	6	320	1.79	2	5	ND	3	13	.2	2	5	20	.16	.080	13	13	.41	255	.09	5	2.94	.02	.09	1	1
115315	1	10	23	120	.1	17	6	632	1.82	2	5	ND	4	15	.3	2	2	23	.20	.128	10	14	.35	229	.11	6	2.51	.02	.08	1	4
115316	1	21	26	97	.1	21	7	219	2.03	2	5	ND	6	13	.2	3	2	19	.16	.177	17	15	.63	236	.09	4	3.07	.02	.09	1	1
115317	1	28	21	98	.2	20	7	315	2.12	2	5	ND	6	13	.2	2	2	23	.16	.044	16	18	.78	263	.08	2	3.07	.02	.09	1	2
115318	1	17	17	81	.1	16	6	210	1.69	2	5	ND	4	13	.2	2	2	19	.17	.019	17	18	.72	233	.06	3	2.18	.02	.08	1	2
115319	1	17	10	58	.2	10	4	649	1.40	2	5	ND	3	15	.4	3	2	19	.13	.192	8	7	.12	118	.13	7	3.45	.04	.04	1	1
115320	1	11	17	115	.3	21	6	763	1.42	2	5	ND	4	13	.2	2	3	18	.17	.087	13	11	.30	178	.09	8	2.33	.02	.07	1	1
117980	1	16	20	80	.2	25	7	557	1.86	4	5	ND	5	11	.2	2	2	20	.14	.141	15	14	.51	182	.09	5	3.26	.02	.09	1	1
115321	1	11	16	76	.1	22	6	406	1.56	2	5	ND	4	11	.2	2	2	19	.11	.097	13	12	.38	158	.10	4	2.45	.02	.07	1	1
115322	1	10	18	93	.1	20	5	399	1.51	2	5	ND	4	11	.2	2	2	13	.14	.116	21	14	.64	220	.05	2	2.08	.01	.06	1	1
115323	1	9	17	125	.2	13	6	2014	1.58	2	5	ND	3	12	.2	2	2	20	.17	.171	11	12	.32	257	.10	5	2.41	.02	.08	1	2
115324	1	14	29	96	.2	18	8	306	2.49	2	5	ND	7	11	.2	2	4	23	.15	.033	18	18	.87	314	.10	5	3.85	.01	.09	1	1
115325	1	15	24	94	.1	18	8	293	2.44	2	5	ND	6	11	.2	2	3	22	.15	.034	19	18	.86	312	.10	3	3.80	.01	.09	1	1
117876	1	16	33	98	.3	17	7	823	2.73	4	5	ND	5	11	.2	3	2	32	.14	.099	15	17	.44	237	.14	7	4.07	.02	.07	1	3
117877	1	21	28	72	.3	12	6	468	2.27	3	5	ND	4	13	.2	3	2	28	.16	.104	18	13	.26	253	.16	5	4.02	.02	.06	1	1
117878	1	21	27	103	.3	19	8	344	2.90	3	5	ND	5	13	.2	2	2	33	.19	.090	38	20	.57	164	.11	5	2.92	.01	.09	1	1
117879	1	16	23	95	.1	15	7	766	2.52	5	5	ND	3	12	.2	3	2	29	.14	.123	17	17	.49	172	.13	8	4.09	.01	.07	1	1
117880	1	12	12	83	.1	30	5	440	1.33	2	5	ND	4	18	.4	3	2	16	.17	.173	11	10	.22	229	.09	5	2.28	.03	.06	1	1
117901	1	12	14	89	.2	17	6	562	1.65	2	5	ND	3	11	.6	2	5	19	.08	.107	17	11	.32	163	.07	2	2.02	.02	.05	1	1
117902	1	12	12	109	.2	22	5	852	1.62	2	5	ND	5	19	.4	2	6	20	.14	.191	14	10	.20	245	.12	3	2.86	.03	.05	1	5
117903	1	186	31	76	.3	18	8	249	2.60	2	5	ND	22	27	.2	2	4	28	.15	.040	74	17	.44	96	.13	2	3.36	.02	.08	1	1
117904	1	14	21	84	.1	16	6	1470	1.83	4	5	ND	5	23	.5	2	3	24	.14	.131	14	13	.20	215	.14	6	3.23	.03	.06	1	1
117905	1	13	19	104	.3	24	6	1146	1.67	3	5	ND	4	17	.5	2	2	22	.14	.122	14	11	.25	257	.12	3	2.78	.02	.06	1	2
117906	1	9	14	92	.1	20	6	259	1.84	2	9	ND	4	12	.2	2	2	24	.09	.163	11	11	.23	213	.11	6	2.93	.02	.05	1	1
STANDARD C/AU-S	18	59	40	132	6.9	72	31	1051	3.99	40	17	7	38	53	18.6	15	22	55	.51	.097	39	61	.89	181	.07	34	1.91	.06	.14	11	48

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: P1-P5 SOIL P6 SILT P7 MOSS MAT P8 ROCK AU* ANALYSIS BY ACID LEACH/A FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 5 1990 DATE REPORT MAILED: *Sept 12/90* SIGNED BY: *C. Leong* 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
117907	1	18	15	93	.1	18	7	273	2.16	2	5	ND	6	10	.2	2	2	22	.09	.100	25	13	.57	180	.09	2	2.71	.01	.07	1	3
117908	1	7	12	114	.3	16	6	1326	1.57	3	5	ND	2	14	.3	2	2	19	.09	.140	17	10	.21	290	.11	2	1.91	.02	.07	1	2
117909	1	15	13	113	.2	16	6	741	1.64	4	5	ND	5	17	.2	2	2	15	.12	.146	22	10	.38	263	.07	2	1.75	.01	.07	1	1
117910	1	16	11	78	.1	11	5	352	1.69	10	5	ND	2	9	.2	2	2	14	.07	.200	22	9	.35	180	.07	2	1.55	.01	.05	1	1
117911	1	14	12	134	.2	19	6	1641	1.66	8	5	ND	3	27	.3	2	2	.16	.19	.249	20	10	.28	262	.09	2	2.08	.02	.07	1	2
117912	1	13	14	108	.1	16	7	1506	1.77	3	5	ND	5	18	.2	2	2	17	.13	.301	22	9	.24	383	.09	2	2.05	.01	.06	1	2
117913	1	14	10	87	.3	17	5	721	1.70	2	5	ND	4	25	.2	2	2	20	.19	.196	16	8	.18	161	.15	2	3.43	.03	.06	1	2
117914	1	9	13	93	.2	16	6	982	1.78	6	5	ND	4	13	.2	2	2	17	.10	.156	18	10	.24	221	.11	2	2.28	.02	.05	1	2
117915	1	10	22	158	.2	11	6	550	1.93	2	5	ND	4	31	.3	2	2	19	.30	.887	7	9	.14	771	.17	3	3.93	.03	.08	1	1
117916	1	9	14	97	.1	24	6	224	1.85	2	5	ND	6	23	.2	2	2	16	.19	.103	24	10	.42	191	.09	2	2.23	.01	.09	1	2
117917	1	26	17	85	.1	21	7	421	2.00	9	5	ND	5	16	.2	2	2	23	.11	.154	14	11	.30	184	.14	2	2.81	.02	.06	1	1
117918	1	13	21	113	.2	29	6	588	1.83	2	5	ND	5	28	.4	2	2	21	.17	.061	18	10	.28	237	.14	3	2.81	.03	.08	1	1
117919	1	19	19	78	.2	21	8	212	2.20	5	5	ND	11	25	.2	2	2	20	.08	.059	45	11	.45	163	.09	3	2.81	.01	.09	1	1
117920	1	10	16	93	.1	23	5	305	1.69	3	5	ND	3	23	.3	2	2	22	.17	.112	11	9	.22	216	.16	2	2.66	.03	.07	1	2
117921	1	12	15	102	.1	15	5	509	1.53	2	5	ND	3	31	.4	2	2	20	.23	.222	7	8	.13	325	.17	4	3.04	.04	.07	1	2
117922	1	8	11	94	.1	15	5	845	1.32	2	5	ND	2	42	.4	2	2	17	.31	.347	7	7	.14	382	.13	2	2.19	.04	.07	1	2
117923	1	11	12	76	.1	17	6	561	1.67	3	5	ND	4	20	.2	2	2	17	.17	.190	16	9	.29	274	.10	2	1.82	.02	.08	1	2
117924	1	7	13	99	.1	14	5	951	1.33	6	5	ND	3	27	.4	2	2	18	.18	.221	9	7	.14	359	.12	2	1.84	.03	.07	1	1
117925	1	8	19	105	.1	12	5	983	1.43	2	5	ND	3	23	.4	2	2	19	.17	.144	9	9	.13	384	.13	2	1.88	.03	.07	1	1
117926	1	8	11	47	.1	12	6	108	1.83	2	5	ND	4	13	.2	2	2	15	.10	.125	22	9	.33	193	.04	2	1.45	.01	.06	1	2
117927	1	10	13	45	.1	12	5	295	1.57	3	5	ND	4	10	.2	2	2	15	.10	.138	18	8	.27	135	.08	2	1.93	.01	.06	1	1
120701	1	22	34	153	.1	25	10	3332	2.37	2	5	ND	12	44	1.0	2	2	19	.33	.080	73	12	.49	449	.09	4	2.36	.01	.19	1	1
120702	1	18	24	134	.1	21	9	2702	2.19	2	5	ND	12	48	1.0	2	2	14	.40	.075	107	11	.45	285	.05	4	1.72	.01	.12	1	1
120703	1	10	20	65	.1	17	7	502	2.01	2	5	ND	10	20	.2	2	2	12	.17	.030	79	10	.50	115	.05	2	1.29	.01	.08	1	2
120704	1	8	15	88	.1	20	6	772	1.91	2	5	ND	7	21	.2	2	2	12	.21	.039	42	10	.38	139	.07	2	1.60	.01	.10	1	1
120705	1	8	17	71	.1	13	6	485	1.61	2	5	ND	9	18	.2	2	2	8	.16	.028	74	8	.44	148	.03	2	1.10	.01	.09	1	1
120707	1	8	14	74	.1	16	6	248	1.79	2	5	ND	8	18	.2	2	3	11	.13	.025	55	10	.33	145	.06	2	1.37	.01	.10	1	2
120708	1	10	12	68	.1	15	5	211	1.57	2	5	ND	7	19	.2	2	2	11	.17	.024	36	9	.43	146	.06	2	1.47	.01	.11	1	2
120709	1	10	11	72	.1	23	5	227	1.73	3	5	ND	6	16	.2	2	3	12	.12	.022	32	10	.44	231	.08	2	1.84	.01	.09	1	1
120710	1	8	9	66	.1	18	5	199	1.51	2	5	ND	6	10	.2	2	3	11	.08	.023	32	10	.69	226	.06	4	1.75	.01	.09	1	1
120711	1	11	14	84	.1	29	6	318	1.53	2	5	ND	5	18	.3	2	2	16	.16	.083	19	9	.31	309	.11	3	2.03	.03	.09	1	1
120712	1	11	11	93	.1	23	5	514	1.49	2	5	ND	5	16	.4	2	2	14	.15	.048	24	14	.33	312	.08	3	1.73	.02	.09	1	1
120713	1	16	14	92	.1	27	6	476	1.68	2	5	ND	5	21	.3	2	2	18	.17	.085	22	10	.40	336	.12	3	2.52	.03	.10	1	2
120714	1	15	13	72	.1	22	6	207	1.57	3	5	ND	5	17	.4	2	2	15	.15	.058	23	10	.50	335	.10	3	2.32	.02	.10	1	2
120715	1	13	16	113	.1	31	6	599	1.62	4	5	ND	4	19	.4	2	2	19	.17	.084	16	11	.32	293	.13	3	2.60	.03	.09	1	1
120716	1	21	15	74	.1	18	7	273	2.04	2	5	ND	8	12	.3	2	2	19	.08	.043	29	11	.59	221	.09	2	2.54	.01	.09	1	1
STANDARD C/AU-S	19	61	40	132	6.9	73	31	1047	3.93	42	20	7	40	56	19.8	15	21	58	.51	.097	39	59	.89	182	.09	35	1.89	.06	.13	11	45

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	Tl %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
120717	1	20	18	104	.1	28	7	900	2.01	2	5	ND	6	13	.2	2	2	22	.13	.080	24	14	.43	290	.12	5	3.71	.02	.09	1	1
120718	1	13	16	144	.1	26	7	793	1.97	2	5	ND	5	12	.2	2	3	22	.13	.127	15	14	.38	240	.10	7	3.55	.02	.06	1	1
120719	1	14	18	104	.2	22	8	369	1.88	3	5	ND	6	8	.3	2	3	19	.08	.066	19	14	.47	171	.08	3	3.01	.01	.07	1	2
120720	1	10	10	111	.1	25	6	300	1.45	4	5	ND	5	11	.2	2	2	14	.09	.031	26	12	.38	224	.06	3	1.89	.01	.08	1	3
120721	1	8	13	101	.1	21	6	878	1.49	4	5	ND	3	10	.2	2	4	18	.11	.234	16	10	.26	261	.08	3	2.54	.02	.06	1	1
120722	1	9	16	112	.1	23	7	703	1.71	2	5	ND	4	11	.2	2	2	19	.11	.073	18	14	.42	221	.08	4	2.50	.02	.07	2	1
120723	1	8	16	78	.1	19	7	701	1.47	2	5	ND	4	8	.3	2	3	17	.08	.104	16	11	.40	194	.08	4	2.44	.02	.05	1	3
120724	1	6	7	62	.1	13	4	262	1.36	2	5	ND	3	7	.2	2	3	10	.09	.029	30	15	.72	112	.02	4	1.47	.01	.06	1	1
120725	1	7	15	120	.1	33	7	649	1.57	2	5	ND	4	16	.3	2	4	18	.20	.063	18	13	.40	300	.08	8	2.46	.02	.11	1	1
123382	1	10	15	90	.1	25	7	525	2.04	3	5	ND	4	21	.2	2	6	25	.24	.309	9	12	.24	179	.13	5	4.39	.03	.07	1	2
123383	1	83	39	88	.2	23	9	844	2.53	5	5	ND	6	20	.2	2	2	16	.43	.067	47	25	1.16	403	.03	3	3.09	.01	.12	1	1
123384	1	16	23	77	.3	17	7	288	1.86	5	5	ND	4	12	.2	2	5	20	.13	.093	12	13	.34	247	.10	4	3.32	.02	.07	1	1
123385	1	17	22	97	.1	19	7	1309	1.73	2	5	ND	3	30	.3	2	2	17	.49	.270	16	16	.44	432	.07	4	2.15	.02	.12	1	1
123386	1	17	19	95	.1	19	7	972	1.55	2	5	ND	4	15	.5	2	2	16	.20	.073	18	15	.53	266	.06	3	2.02	.01	.11	1	1
123387	1	22	16	105	.2	28	7	512	1.86	2	5	ND	5	22	.2	2	2	20	.25	.233	13	16	.38	296	.11	5	2.68	.03	.09	1	1
123388	1	210	38	119	.4	25	9	632	2.37	2	5	ND	10	17	.2	2	2	20	.31	.065	34	24	.83	509	.05	4	2.89	.02	.14	1	1
123389	1	47	32	149	.6	24	6	307	2.06	3	5	ND	6	17	.2	5	4	21	.24	.229	11	16	.44	411	.08	6	3.36	.02	.12	1	1
123390	1	48	30	116	.1	19	5	279	2.03	2	5	ND	6	29	.4	2	2	21	.50	.369	10	10	.30	207	.17	2	4.00	.04	.08	1	1
123391	1	22	41	111	.2	20	6	215	1.87	2	5	ND	4	21	.2	2	2	22	.20	.175	9	13	.21	225	.14	3	3.24	.04	.07	1	1
123392	1	19	25	88	.2	22	7	501	1.88	3	5	ND	4	18	.2	3	5	26	.17	.171	11	12	.24	243	.16	4	3.32	.04	.07	1	2
123393	1	9	28	81	.2	18	7	353	1.99	3	5	ND	4	13	.2	2	2	24	.17	.147	8	12	.25	146	.13	4	3.34	.02	.06	1	1
123394	1	9	21	88	.1	15	6	354	1.56	2	5	ND	4	8	.3	2	2	17	.08	.095	16	15	.52	154	.07	2	2.11	.02	.07	1	1
123395	1	9	11	59	.1	14	5	134	1.43	2	5	ND	4	4	.2	2	5	10	.03	.028	23	16	.90	90	.03	4	1.60	.01	.05	1	1
123396	1	11	20	79	.1	17	6	595	1.70	2	5	ND	3	13	.2	2	2	21	.12	.137	10	11	.28	151	.11	2	3.04	.02	.05	1	1
123397	1	39	41	84	.2	17	7	293	1.77	2	5	ND	4	10	.2	2	4	18	.15	.023	30	18	.77	220	.05	2	2.01	.01	.07	1	1
123398	1	27	40	104	.2	24	8	251	2.62	2	5	ND	6	9	.4	2	2	23	.12	.085	19	19	.63	210	.08	5	3.98	.01	.09	1	1
123399	1	13	26	147	.5	15	7	307	2.36	2	5	ND	5	10	.2	3	2	27	.11	.259	12	13	.25	185	.14	5	3.52	.02	.07	2	1
123400	1	23	28	83	.2	19	6	523	1.95	2	5	ND	5	12	.2	2	2	25	.11	.122	13	12	.28	169	.14	5	3.60	.02	.06	1	1
123401	1	15	40	112	.2	17	6	211	2.64	3	5	ND	4	10	.2	2	3	28	.11	.062	16	16	.45	210	.11	2	3.23	.01	.08	1	1
123402	1	59	52	94	.3	25	8	372	3.01	2	5	ND	10	14	.2	2	3	32	.19	.052	25	24	.85	329	.10	3	4.62	.02	.11	1	1
123403	1	34	43	82	.2	23	8	639	3.06	6	5	ND	7	10	.2	2	3	31	.13	.100	19	18	.39	232	.13	3	4.77	.02	.08	1	1
123404	1	49	52	96	.1	26	9	429	3.17	3	5	ND	11	12	.2	2	2	26	.16	.090	27	23	.79	250	.10	2	5.07	.02	.12	1	1
123405	1	22	36	83	.2	20	8	410	2.78	3	5	ND	6	9	.2	2	4	26	.11	.119	19	17	.54	172	.11	3	4.04	.02	.08	1	1
123406	1	13	25	55	.1	17	7	197	2.14	3	5	ND	5	7	.3	3	3	22	.09	.104	12	15	.45	101	.10	6	3.62	.02	.06	1	1
123407	1	41	39	95	.1	25	8	430	3.23	4	5	ND	7	14	.2	2	2	30	.20	.071	20	22	.90	283	.11	3	5.31	.02	.12	1	1
123408	1	26	25	62	.1	25	7	129	3.03	2	5	ND	6	8	.2	3	2	31	.08	.116	14	21	.59	157	.12	3	4.49	.02	.08	1	3
STANDARD C/AU-S	18	59	41	133	7.1	72	31	1054	3.96	40	19	7	38	53	18.5	15	20	56	.51	.099	38	60	.89	181	.07	35	1.89	.06	.14	11	45

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	Tl %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
123409	1	28	26	89	.1	23	8	265	3.16	3	5	ND	6	9	.2	2	2	32	.12	.134	13	18	.60	152	.13	2	4.35	.02	.09	1	4
123410	1	18	30	67	.1	14	7	236	2.44	2	5	ND	4	8	.2	3	2	28	.10	.139	12	14	.47	93	.12	4	3.24	.01	.06	1	3
123411	1	20	36	67	.1	13	9	465	2.36	2	5	ND	5	6	.2	3	2	27	.06	.121	14	15	.48	97	.10	3	3.23	.01	.07	1	1
123412	1	12	18	51	.2	11	7	466	1.95	3	5	ND	3	7	.2	2	2	24	.08	.125	10	13	.36	78	.10	3	3.28	.02	.05	2	1
123413	1	9	18	73	.1	12	5	288	1.97	2	5	ND	3	5	.2	3	3	24	.06	.065	12	15	.53	60	.09	2	2.50	.01	.06	1	1
123414	1	17	29	68	.1	16	8	476	2.22	2	5	ND	4	7	.2	2	5	27	.07	.110	7	13	.35	86	.14	3	4.69	.02	.06	1	2
123415	1	16	20	66	.1	12	6	1422	2.01	4	5	ND	2	8	.2	2	2	28	.08	.111	3	8	.15	57	.16	2	4.19	.02	.04	1	1
123416	1	17	23	64	.1	15	6	505	2.10	2	5	ND	4	7	.2	2	5	26	.07	.124	6	12	.34	94	.13	2	4.45	.02	.05	1	1
123417	1	16	23	70	.1	13	7	949	1.99	5	5	ND	3	7	.2	4	2	27	.07	.157	4	10	.17	71	.16	3	4.90	.02	.04	1	1
123418	1	16	19	107	.1	13	7	989	2.15	2	5	ND	3	17	.2	2	2	20	.71	.054	15	21	.57	223	.13	4	3.95	.03	.06	1	1
123419	1	8	18	56	.1	15	7	90	1.97	2	5	ND	4	5	.2	2	3	19	.08	.026	18	16	.95	58	.08	2	2.48	.01	.06	1	1
123420	1	10	17	71	.1	14	7	75	2.32	3	7	ND	6	4	.2	2	4	17	.08	.047	25	18	1.35	67	.07	5	2.29	.01	.06	1	1
123421	1	7	14	59	.1	8	6	250	1.55	2	5	ND	3	7	.2	2	2	19	.13	.041	19	13	.57	66	.08	3	1.50	.01	.05	1	1
123422	1	9	20	87	.1	15	7	136	2.15	5	5	ND	3	6	.2	2	2	18	.17	.036	20	17	1.14	64	.07	2	2.30	.01	.07	1	1
123423	1	9	18	96	.1	13	7	101	2.58	4	5	ND	3	7	.2	2	2	24	.11	.090	17	16	.68	97	.09	2	2.63	.01	.06	1	2
123424	1	10	22	67	.1	13	6	253	2.18	4	5	ND	3	8	.2	3	2	19	.12	.082	16	16	.93	114	.09	2	2.58	.01	.05	1	1
123425	1	11	17	62	.1	13	6	191	1.88	4	7	ND	3	7	.2	2	2	19	.10	.050	17	16	.90	122	.08	3	2.55	.01	.07	1	4
123426	1	11	21	60	.1	12	6	161	2.01	7	5	ND	3	8	.4	4	2	22	.11	.071	13	14	.72	63	.09	5	3.17	.02	.05	1	1
123427	1	12	24	83	.1	14	8	457	1.93	9	5	ND	4	9	.2	2	2	23	.14	.107	12	14	.49	67	.11	2	3.60	.02	.06	1	2
123428	1	10	19	69	.1	20	8	415	2.24	7	5	ND	3	10	.2	2	3	26	.12	.081	9	13	.40	106	.14	2	4.60	.02	.05	1	1
123429	1	10	20	88	.1	15	9	182	2.14	3	5	ND	3	8	.2	2	2	25	.11	.061	10	13	.51	72	.12	2	3.37	.02	.05	1	1
123430	1	17	16	45	.1	8	5	139	1.68	5	5	ND	2	9	.2	3	2	22	.09	.102	5	6	.16	37	.13	2	4.68	.03	.03	1	2
123431	1	9	19	87	.1	13	5	95	2.33	3	5	ND	2	6	.3	2	3	27	.09	.063	15	14	.57	61	.09	3	2.28	.01	.07	1	1
123432	1	14	21	79	.2	12	6	102	2.52	5	5	ND	4	8	.2	3	3	22	.15	.092	12	14	.68	52	.12	4	4.05	.02	.04	1	1
123433	1	11	18	106	.1	13	6	193	2.52	5	5	ND	2	8	.2	2	2	24	.14	.073	11	16	.67	74	.11	4	3.14	.01	.06	1	1
123434	1	12	18	99	.1	13	6	126	2.35	14	5	ND	3	5	.3	2	2	22	.07	.046	18	16	1.13	48	.08	2	2.44	.01	.05	1	2
123435	1	9	15	81	.1	15	6	137	2.38	10	5	ND	4	9	.5	2	2	29	.16	.064	11	16	.43	68	.11	2	2.84	.01	.06	1	2
123436	1	12	20	116	.1	16	7	121	2.88	8	5	ND	4	6	.3	2	2	28	.08	.061	15	17	.77	65	.12	2	3.76	.01	.06	1	1
123437	1	15	19	121	.2	26	8	577	2.33	2	5	ND	6	11	.3	2	2	22	.09	.055	22	14	.35	195	.09	5	2.80	.01	.08	1	1
123438	1	13	28	124	.2	21	7	928	1.90	4	5	ND	3	13	.8	2	2	23	.11	.081	15	11	.25	178	.11	3	2.93	.02	.07	1	1
123439	1	19	22	120	.1	22	7	1275	2.02	4	5	ND	4	16	.5	2	3	25	.13	.089	18	11	.27	206	.13	4	3.80	.02	.06	1	2
123440	1	13	20	123	.2	19	7	1357	1.80	2	5	ND	3	19	.4	2	2	20	.13	.106	17	11	.26	223	.10	4	2.47	.02	.07	1	1
123441	1	12	15	110	.1	24	7	767	1.76	5	5	ND	3	21	.4	2	2	23	.15	.086	14	10	.20	179	.13	2	2.99	.03	.05	1	1
123442	1	16	23	118	.1	19	8	536	2.40	4	5	ND	4	14	.3	2	2	27	.13	.132	15	12	.33	192	.12	3	3.25	.02	.07	1	1
123443	1	17	26	117	.1	21	8	739	2.27	3	5	ND	5	15	.2	2	2	26	.12	.066	20	14	.37	194	.11	3	2.99	.02	.06	1	1
123444	1	15	22	106	.1	22	6	1332	1.88	2	5	ND	4	20	.6	2	2	26	.15	.231	12	10	.16	188	.14	5	3.57	.02	.05	1	1
STANDARD C/AU-S	19	59	42	131	6.9	72	31	1051	3.97	41	17	7	37	53	18.9	15	20	56	.51	.099	38	60	.89	180	.07	36	1.88	.06	.14	13	53

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
123445	1	8	15	145	.1	40	6	769	1.61	4	5	ND	2	21	.5	2	2	17	.15	.097	20	9	.25	265	.07	2	2.07	.02	.07	1	7
123446	1	8	11	155	.1	28	7	214	1.99	2	5	ND	8	15	.4	2	2	15	.05	.135	29	10	.29	171	.06	2	2.05	.01	.07	2	2
123447	1	10	10	82	.4	16	8	363	2.12	4	5	ND	5	16	.6	4	7	16	.10	.173	22	9	.30	163	.06	2	1.95	.01	.05	1	3
123448	1	96	16	128	.6	26	8	1074	2.04	6	5	ND	4	21	.6	3	2	17	.18	.097	50	12	.48	186	.06	2	2.22	.02	.07	1	1
123449	1	45	18	97	.2	20	8	1265	1.82	3	5	ND	3	29	.4	4	2	17	.26	.039	72	12	.50	197	.04	2	2.06	.01	.08	1	2
123450	1	8	10	77	.3	17	6	956	1.65	6	5	ND	2	14	.3	2	2	16	.13	.195	16	8	.26	232	.08	2	2.34	.02	.06	1	1
149262	1	20	19	114	.1	26	7	349	1.69	5	5	ND	5	19	.4	3	2	20	.12	.193	16	8	.19	185	.12	2	2.69	.03	.06	1	1
149263	1	13	17	85	.3	19	6	503	1.51	2	8	ND	3	27	.8	3	2	17	.21	.172	15	7	.20	190	.10	3	1.94	.02	.08	1	1
149264	1	14	19	98	.2	24	8	358	1.79	3	5	ND	4	18	.6	2	4	18	.21	.183	18	10	.27	200	.09	2	2.48	.02	.09	1	2
149265	1	15	20	80	.1	19	8	1364	1.81	3	5	ND	3	16	.7	2	2	19	.14	.255	19	12	.28	203	.11	3	3.31	.03	.04	1	1
149266	1	14	15	97	.4	16	7	223	1.81	5	5	ND	5	12	.3	4	2	13	.10	.059	29	11	.61	125	.04	2	1.65	.01	.07	1	1
149267	1	6	6	63	.1	7	5	125	1.41	3	5	ND	3	14	.3	2	2	10	.17	.036	23	7	.34	94	.03	2	.86	.01	.06	1	1
149268	1	15	11	66	.1	15	6	535	1.65	2	5	ND	4	28	.2	2	3	18	.21	.412	13	8	.20	302	.09	2	2.52	.03	.05	1	2
149269	1	20	14	87	.3	20	7	243	1.80	2	5	ND	7	23	.2	3	9	15	.19	.094	24	10	.43	181	.08	2	2.01	.02	.09	1	1
149270	1	12	8	103	.1	27	7	291	1.69	3	5	ND	3	24	.2	2	2	17	.18	.127	16	10	.35	253	.09	2	2.01	.02	.07	1	1
149271	1	18	20	95	.1	25	7	335	2.01	8	5	ND	5	25	.7	2	3	21	.22	.085	15	10	.30	349	.13	3	2.94	.02	.07	1	1
149272	1	12	10	128	.1	28	5	318	1.41	3	5	ND	3	32	.2	3	3	18	.27	.112	11	8	.20	285	.12	2	2.42	.03	.09	1	2
149273	1	40	21	104	.3	26	10	1179	2.33	3	5	ND	13	35	.3	3	2	19	.24	.038	84	12	.53	274	.08	2	2.80	.01	.10	1	1
149274	1	49	22	79	.1	22	9	923	2.43	2	5	ND	11	26	.6	2	3	18	.18	.033	98	13	.60	147	.07	2	2.27	.01	.08	1	2
149275	1	66	21	82	.1	22	10	894	2.30	2	5	ND	11	19	.2	2	4	15	.18	.051	107	13	.67	109	.04	2	2.12	.01	.09	1	1
STANDARD C/AU-S	19	58	36	132	7.2	73	32	1051	3.99	40	20	7	38	53	18.8	15	23	57	.52	.099	39	60	.89	183	.08	32	1.88	.06	.14	13	47

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 MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: P1-P2 SILT AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. p - pulverized, -30 mesh.

DATE RECEIVED: OCT 26 1989 DATE REPORT MAILED: *Nov 3/89* SIGNED BY *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Noranda Exploration Co. Ltd. PROJECT 8910-042 157 File # 89-4507 Page 1

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	
S-114101	1	33	18	75	.1	16	7	570	1.70	3	6	ND	1	25	1	2	2	11	.52	.051	47	11	.56	203	.02	4	1.84	.01	.08	1	4	
S-114102	P	1	23	17	59	.1	15	6	396	1.77	2	5	ND	2	16	1	2	2	11	.31	.031	37	12	.59	159	.02	2	1.65	.01	.12	1	4
S-114103	P	1	17	15	62	.1	15	7	357	2.74	2	5	ND	3	11	1	2	2	15	.21	.024	30	11	.53	109	.03	3	1.16	.01	.12	1	5
S-114104	P	1	22	13	64	.1	13	6	414	1.75	3	5	ND	1	18	1	2	3	11	.36	.040	35	10	.59	165	.02	2	1.50	.01	.13	1	2
S-114105	P	1	37	17	64	.1	15	6	399	2.12	2	5	ND	1	20	1	2	3	13	.41	.043	46	12	.56	182	.02	6	1.71	.01	.14	1	3
S-114106	P	1	37	17	82	.1	20	8	900	2.60	3	5	ND	3	26	1	2	2	15	.32	.040	44	12	.57	194	.03	2	2.17	.01	.12	1	1
S-114107	P	1	18	12	55	.1	13	6	402	1.69	2	5	ND	1	17	1	2	2	11	.36	.038	32	9	.52	166	.02	3	1.40	.01	.10	1	2
S-114108	P	1	16	12	61	.1	13	6	406	2.03	3	5	ND	2	13	1	2	2	13	.26	.029	28	10	.52	133	.02	4	1.21	.01	.12	1	1
S-114109	P	1	11	12	55	.1	14	8	471	1.94	2	5	ND	6	6	1	2	2	15	.13	.025	25	10	.67	74	.02	2	.98	.01	.09	1	1
S-114110	P	1	21	17	74	.1	14	7	593	1.85	2	9	ND	1	21	1	2	2	14	.51	.050	35	12	.58	203	.02	4	1.63	.01	.13	1	1
S-114111	P	1	15	13	62	.1	13	8	535	2.26	2	5	ND	4	10	1	2	2	12	.21	.031	29	10	.63	103	.03	3	1.17	.01	.10	1	1
S-114112	P	1	10	14	54	.1	12	7	485	2.28	2	5	ND	2	8	1	2	2	10	.14	.028	27	8	.43	100	.02	4	1.06	.01	.08	1	1
S-114113	P	1	12	16	58	.1	11	6	654	1.60	2	5	ND	2	9	1	2	2	8	.23	.029	29	8	.49	143	.01	2	1.21	.01	.11	1	1
S-114114	P	1	18	16	72	.1	15	9	724	2.80	2	5	ND	1	14	1	2	2	14	.18	.045	34	10	.42	86	.02	2	1.22	.01	.09	1	1
S-114126	1	17	16	58	.1	11	7	501	2.27	2	5	ND	1	16	1	2	2	10	.24	.052	34	10	.36	78	.02	2	1.10	.01	.05	1	1	
S-114127	P	1	11	14	46	.1	9	6	530	1.70	2	5	ND	2	9	1	2	2	9	.22	.029	27	8	.40	139	.02	10	1.17	.01	.08	1	1
S-114128	1	32	20	80	.2	12	6	603	1.94	6	5	ND	1	13	1	2	2	11	.99	.058	35	11	1.19	174	.03	12	2.06	.01	.10	1	1	
S-114129	1	29	19	81	.1	11	7	527	1.90	5	5	ND	2	13	1	2	2	11	.94	.059	33	11	1.21	160	.03	10	2.01	.01	.10	1	1	
S-114130	1	27	21	96	.1	12	6	659	1.75	4	5	ND	1	14	1	2	2	11	1.07	.059	33	12	1.06	160	.03	6	1.82	.01	.09	1	1	
S-114131	1	23	17	70	.1	11	7	510	1.77	5	5	ND	2	11	1	2	2	11	.69	.052	29	9	1.11	125	.03	7	1.74	.01	.08	1	1	
S-114132	1	21	22	69	.1	10	7	467	1.78	3	5	ND	2	10	1	2	2	12	.62	.048	28	9	1.11	118	.04	9	1.74	.01	.08	1	2	
S-114133	1	21	19	80	.1	13	7	573	1.92	7	5	ND	2	11	1	2	2	12	.72	.053	30	11	1.21	129	.04	5	1.89	.01	.08	1	2	
S-114135	1	33	23	85	.3	13	7	763	2.41	7	5	ND	2	13	1	2	2	16	.71	.049	47	15	1.14	232	.05	5	3.05	.01	.09	2	1	

Noranda Exploration Co. Ltd. PROJECT 8910-042 157 FILE # 89-4507

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
S-117776 P	1	33	16	81	.1	17	9	535	2.32	8	5	ND	5	11	1	2	2	12	.57	.040	37	14	1.16	156	.03	5	1.92	.01	.17	1	1
S-117777 P	1	41	19	78	.1	18	8	450	2.24	6	5	ND	4	13	1	2	2	13	.68	.045	39	15	1.13	189	.03	5	2.23	.01	.17	1	1
S-117778 P	1	23	17	78	.1	18	8	454	2.12	4	5	ND	7	7	1	2	3	10	.30	.029	34	13	1.16	115	.03	2	1.62	.01	.13	1	1
S-117779 P	1	36	26	79	.1	16	7	553	1.98	5	5	ND	3	14	1	2	2	12	.90	.050	39	13	1.16	196	.03	3	2.20	.01	.15	1	1
S-117780 P	1	26	15	71	.1	13	6	367	1.69	2	5	ND	4	11	1	2	2	9	.56	.026	32	12	1.12	176	.03	9	2.07	.01	.12	1	1
S-117781 P	1	17	12	60	.1	13	9	561	2.78	3	5	ND	3	11	1	2	2	12	.14	.039	31	10	.39	70	.02	10	1.06	.01	.08	1	3
STD C/AU-S	18	61	35	132	6.5	68	29	998	3.93	41	12	7	37	49	17	14	22	56	.44	.087	38	53	.80	176	.06	33	1.94	.06	.14	12	51

SILT

Noranda Exploration Co. Ltd. PROJECT 9009-030 127 FILE # 90-4152

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
149259	1	45	33	86	.1	18	8	773	2.17	3	5	ND	5	23	.2	2	2	14	.71	.048	55	18	1.04	311	.05	2	2.37	.01	.09	1	2
149261	1	35	22	96	1.3	18	9	692	2.34	2	5	ND	6	14	.2	3	2	13	.42	.041	32	18	1.22	190	.04	2	1.99	.01	.10	1	1

MOSS MAT

Noranda Exploration Co. Ltd. PROJECT 9009-030 127 FILE # 90-4152

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
149254	1	52	16	116	.5	16	7	460	1.97	4	5	ND	2	25	.5	2	2	11	.89	.086	48	12	1.04	216	.02	7	1.79	.02	.28	1	1

APPENDIX 2

ROCK DESCRIPTIONS AND ANALYTICAL RESULTS

APPENDIX 3
STATEMENT OF COSTS

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
R 47825	1	1	2	7	.1	7	5	109	1.02	5	5	ND	12	8	.4	2	2	2	.14	.042	42	5	.11	48	.01	2	.48	.02	.15	1	3
R 117881	1	3	7	46	.1	11	6	241	1.24	2	5	ND	11	5	.2	2	2	3	.05	.011	19	8	.39	51	.01	2	.63	.03	.14	1	1
R 117882	1	2	6	43	.1	16	5	101	1.54	2	5	ND	13	4	.2	2	2	4	.12	.048	27	13	1.17	80	.01	2	1.24	.01	.22	1	2
R 117883	1	8	47	7	.4	10	37	55	17.92	14	5	ND	8	17	.2	4	7	2	.01	.055	11	9	.07	1317	.01	3	.32	.01	.13	1	4
R 117884	2	3	3	51	.1	10	3	126	.63	2	5	ND	3	3	.3	2	2	2	.07	.029	12	9	.52	43	.01	2	.55	.01	.04	1	2
R 117928	10	86	10	73	.1	18	10	453	2.29	3	5	ND	12	7	.2	2	2	4	.10	.036	26	12	.70	34	.01	2	.95	.01	.11	1	1
R 117929	1	5	14	80	.2	25	12	395	3.50	2	5	ND	12	8	.2	2	2	12	.10	.037	10	13	.84	37	.01	2	1.19	.01	.15	1	2
R 117930	2	14	10	54	.3	5	5	101	2.71	23	5	ND	10	15	.2	2	2	6	.09	.047	12	9	.62	118	.02	2	1.00	.01	.32	1	1
R 117931	1	17	6	50	.1	14	7	869	1.51	2	5	ND	8	53	.2	2	2	4	3.18	.039	28	16	2.05	91	.01	2	1.01	.02	.16	1	1
R 117932	1	8	4	46	.1	11	4	1452	1.48	2	5	ND	9	84	.2	3	2	2	4.16	.045	26	8	2.38	70	.01	2	.48	.01	.12	1	1
R 120706	1	22	17	87	.1	21	10	710	2.80	2	5	ND	12	13	.2	2	2	9	.09	.028	16	17	.90	56	.01	2	1.39	.02	.15	1	2
R 120924	1	71	16	64	.1	16	9	304	3.05	2	5	ND	15	15	.2	2	2	8	.34	.138	53	10	.48	102	.01	2	.97	.01	.18	1	1
R 120925	1	5	13	33	.1	11	3	624	1.57	9	5	ND	6	66	.3	4	2	4	7.28	.042	21	12	2.06	69	.02	2	1.03	.01	.38	1	1
R 123376	1	3	11	35	.1	28	8	159	3.80	4	5	ND	7	13	.2	2	2	12	.20	.083	30	21	1.29	67	.01	2	1.98	.01	.20	1	1
R 123377	1	1	12	61	.1	21	9	304	2.03	3	5	ND	12	6	.2	2	2	7	.07	.024	29	14	.69	30	.03	2	.78	.01	.08	1	1
R 123378	1	2	5	34	.1	6	3	196	.79	2	5	ND	8	5	.5	2	3	3	.03	.008	44	7	.17	43	.01	2	.51	.03	.10	1	1
R 123379	1	1	2	29	.1	23	5	126	3.15	4	5	ND	10	7	.2	2	2	9	.07	.027	27	22	.99	64	.01	2	1.71	.01	.24	1	1
R 123380	1	7	6	95	.2	20	10	275	2.32	4	5	ND	8	9	.2	2	2	6	.13	.060	25	13	.71	59	.01	2	.99	.02	.13	1	1
R 123381	1	4	3	22	.1	4	2	872	.49	4	5	ND	2	4	.5	2	2	1	.03	.016	8	4	.10	72	.01	2	.17	.01	.03	1	1
R 149255	1	1	3	25	.1	16	3	156	3.57	2	5	ND	7	3	.2	2	2	10	.07	.028	26	16	.68	150	.01	3	1.58	.01	.19	1	1
R 149256	1	11	9	84	.3	11	6	2532	2.03	4	5	ND	7	97	.2	2	2	3	6.12	.039	21	6	3.79	86	.01	2	.69	.01	.10	1	1
R 149257	1	1	10	32	.3	9	5	696	1.53	7	5	ND	5	57	.2	3	2	3	6.18	.036	21	5	4.10	127	.02	5	.79	.01	.49	1	1
R 149258	2	61	7	23	.7	14	6	424	.95	7	5	ND	6	10	2.1	2	4	7	.12	.033	13	10	.21	237	.01	2	.41	.01	.08	2	1
R 149260	1	6	14	73	.1	16	7	201	1.05	3	5	ND	9	5	.2	2	2	3	.13	.037	29	11	.73	100	.01	2	.85	.01	.16	1	2
STANDARD C/AU-R	19	60	40	133	7.3	73	31	1052	3.97	44	16	7	38	53	19.0	15	21	56	.51	.094	38	59	.90	181	.07	35	1.88	.06	.14	11	540

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

GEOCHEMICAL ANALYSIS CERTIFICATE *Beach (LE)*

Noranda Exploration Co. Ltd. PROJECT 9009-030 127 File # 90-4230
P.O. Box 2380, 1050 Davie, Vancouver BC V6B 3T5

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
117885	1	9	4	34	.1	12	4	257	.82	2	5	ND	10	7	.2	3	2	2	.06	.014	30	8	.14	98	.01	5	.56	.04	.12	1	2

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

DATE RECEIVED: SEP 7 1990 DATE REPORT MAILED: *Sept 13/90* SIGNED BY: *C. Leung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

NORANDA EXPLORATION COMPANY, LIMITED
STATEMENT OF COSTS

PROJECT: BEACH PROPERTY

DATE: Sept. 7, 1990

TYPE OF REPORT: Geological/Geochemical

a) Wages:

No. of Days	:	17 mandays	
Rate per Day	:	L. Erdman	\$150.00/day
		R. Butler	\$139.13/day
Dates from	:	Aug. 25 - Sept. 2, 1990	
Total Wages	:	(9 x \$150) + (8 x 139.13)	\$ 2,463.04

b) Food & Accommodation:

No. of Days	:	17 mandays	
Rate per Day	:	\$33.88/day	
Dates from	:	Aug. 25 - Sept. 2, 1990	
Total Costs	:	17 x \$33.88	\$ 575.96

c) Transportation: Truck + Fuel

No. of Days	:	9 days	
Rate per Day	:	\$25.10/day	
Dates From	:	Aug. 25 - Sept. 2, 1990	
Total Costs	:	9 x \$35.86	\$ 225.90

e)	Analysis:	\$2,419.00
	(see attached schedule)	
f)	Cost of Preparation of Report	
	Author: 2 days @ \$150.00	\$ 300.00
	Drafting: 1 day @ \$150.00	\$ 150.00
g)	Other :	
	No. of Days :	
	Rate per day :	
	Dates from :	
	Total Wages :	

TOTAL COST		\$6,133.90
-------------------	--	-------------------

h)	Unit Costs for: Geology	
	No. of Days : 7 mandays	
	No. of Units : 7	
	Unit Costs : \$179.35/manday	
	Total Cost : 7 x \$179.35	\$1,255.45

	Unit Costs for: Linecutting	
	No. of Days : 3 mandays	
	No. of Units : 8 km	
	Unit Costs : \$76.16 km	
	Total Cost : 8 x \$76.16	\$ 609.28

	Unit Costs for: Geochemistry	
	No. of Days : 7 mandays	
	No. of Units : 193 samples	
	Unit Costs : \$22.12/sample	
	Total Cost : 193 x \$22.12	\$4,269.16
	TOTAL COST :	<u>\$6,133.89</u>

NORANDA EXPLORATION COMPANY, LIMITED

WESTERN DIVISION

DETAILS OF ANALYSES COSTS

PROJECT: BEACH PROPERTY

<u>ELEMENT</u>	<u>NO. OF DETERMINATION</u>	<u>COST PER DETERMINATION</u>	<u>TOTAL COST</u>
30 Element}	165 soils	\$12.00	\$1,980.00
ICP plus)	2 silts	\$13.00	\$ 26.00
Au by AA)	1 mossmat	\$13.00	\$ 13.00
	25 rocks	\$16.00	\$ 400.00
			<u>\$2,419.00</u>

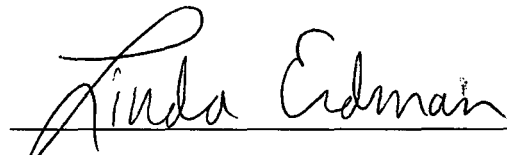
APPENDIX 4

STATEMENT OF QUALIFICATIONS

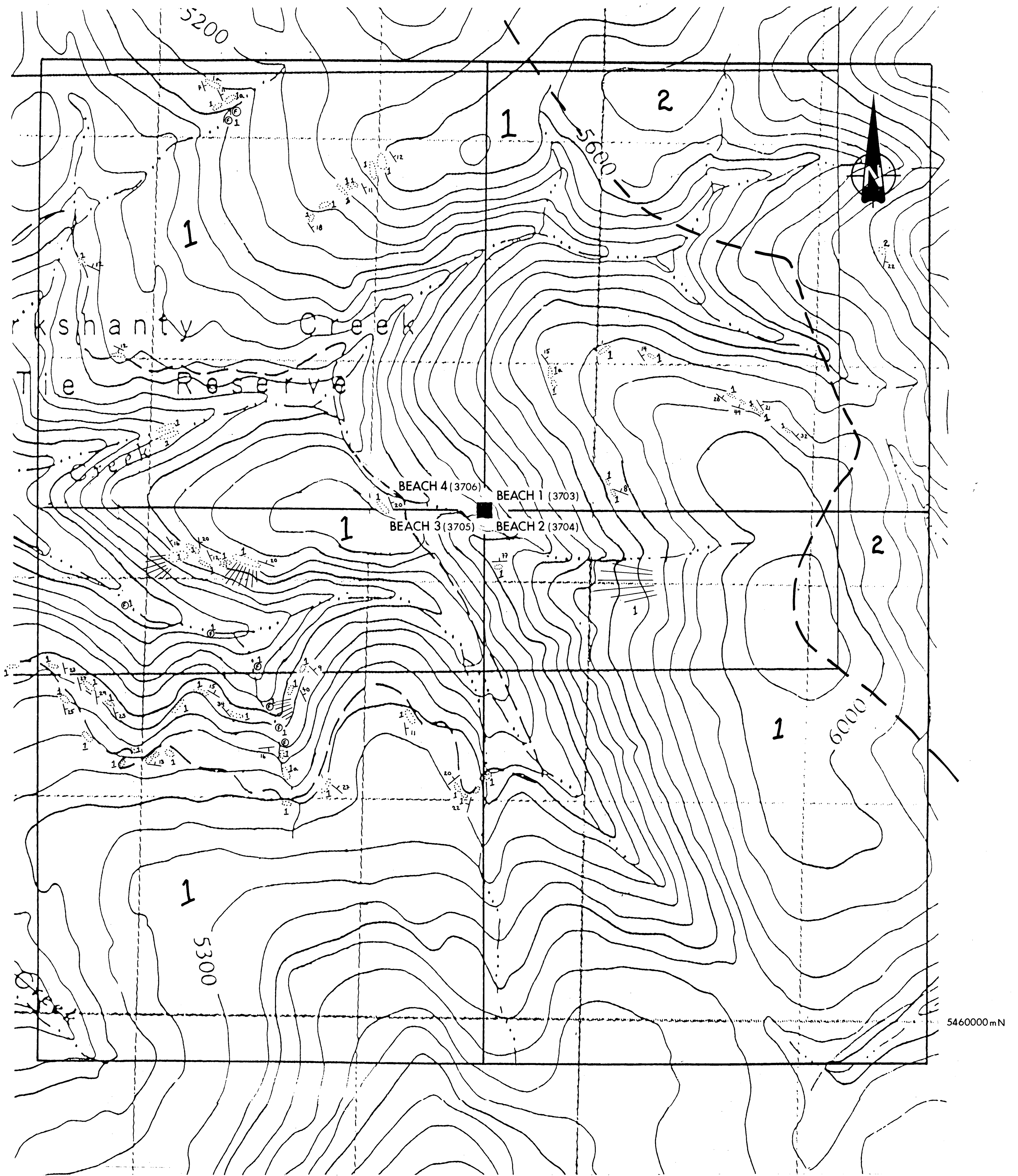
STATEMENT OF QUALIFICATIONS

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

1. I am a resident of British Columbia, residing at 2-2291 West 1st. Avenue, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, with a B.Sc. (Honours) in Geology (1978) and an M.Sc. in Geology (1985).
3. I am a Fellow of the Geological Association of Canada.
4. I have been engaged in mining exploration since 1976.
5. I have been a temporary employee of Noranda Exploration Company, Limited (no personal liability) since May, 1986 and a permanent employee since November, 1987.



Linda R. Erdman, M.Sc.
Project Geologist



LEGEND

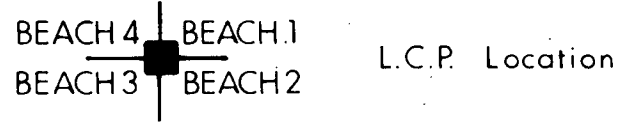
**PRECAMBRIAN
PURCELL**

- 2 KITCHENER Fm.: ARGILLITE; grey green, well bedded
- 1 CRESTON Fm.: ARGILLITE; light green to grey and very fine grained, rusty weathering. Generally well bedded with only minor folding. Fissile to well indurated. Minor pyrite to 2%, especially along fractures and on bedding planes, with euhedral magnetite.
- 1a Argillite, as above interbedded with quartzite (>50cm)

- F Area of abundant float
- Talus slope
- Outcrop

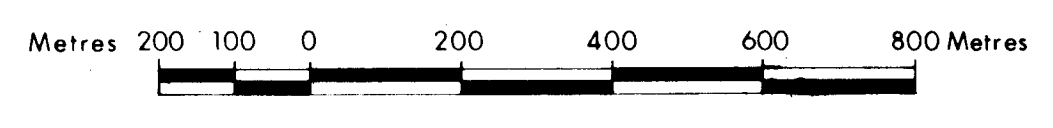
--- Geological contact (After GSC Map II-1960, Fernie W1/2)

NOTE: Due to limited outcrop of KITCHENER Fm., a field mapped contact could not be determined.

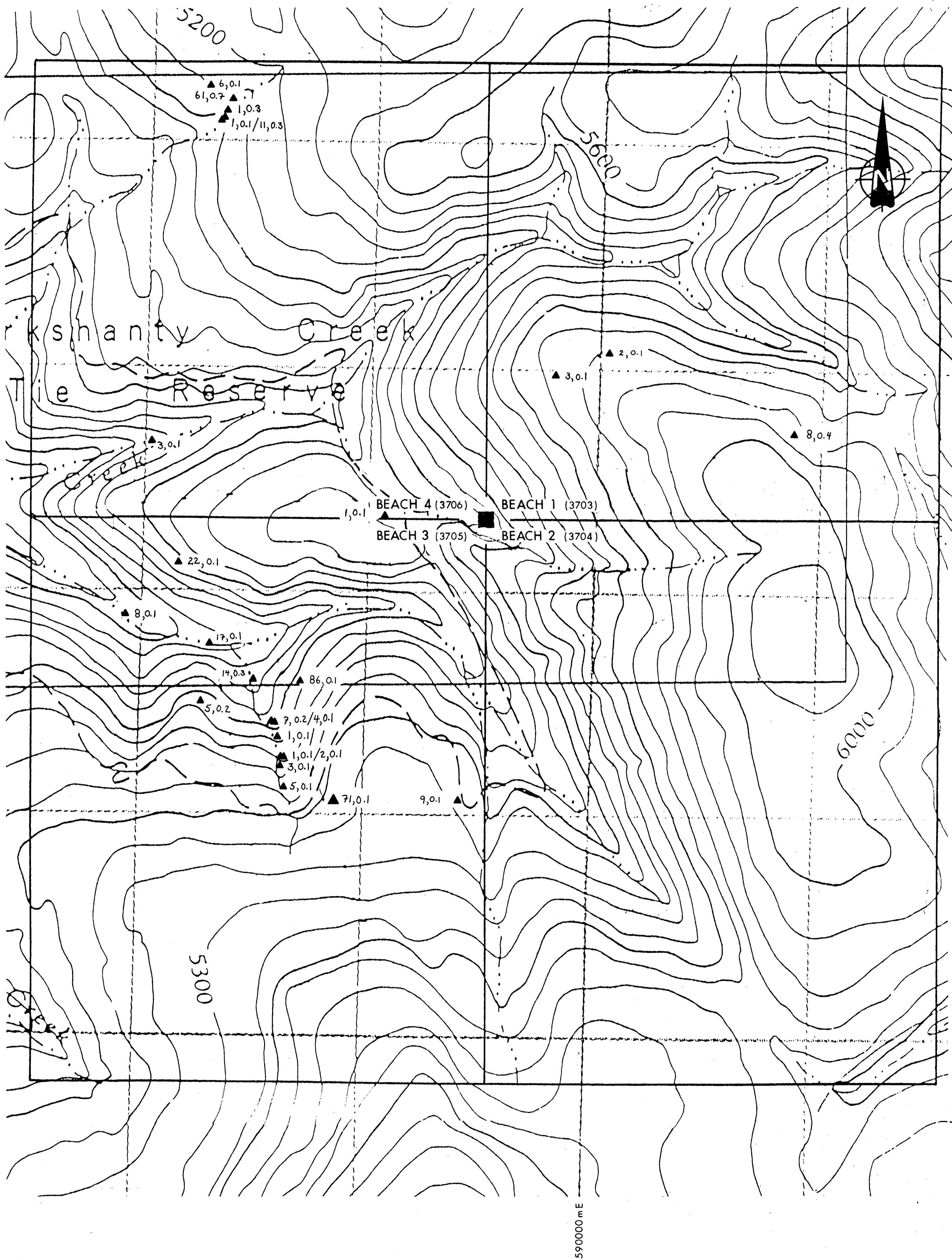


A.R. 20483

SCALE
1:10,000



REVISED	BEACH CLAIMS	
	GEOLOGY	
PROJ. No. 127	SURVEY BY: L. Erdman	DATE: November 1990
N.T.S. 82G/5	DRAWN BY: L. Erdman	SCALE: 1:10,000
DWG. No. 8	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	



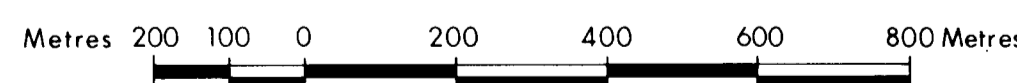
LEGEND

▲ 71, 0.1 Cu, Ag (ppm) in Rock Samples

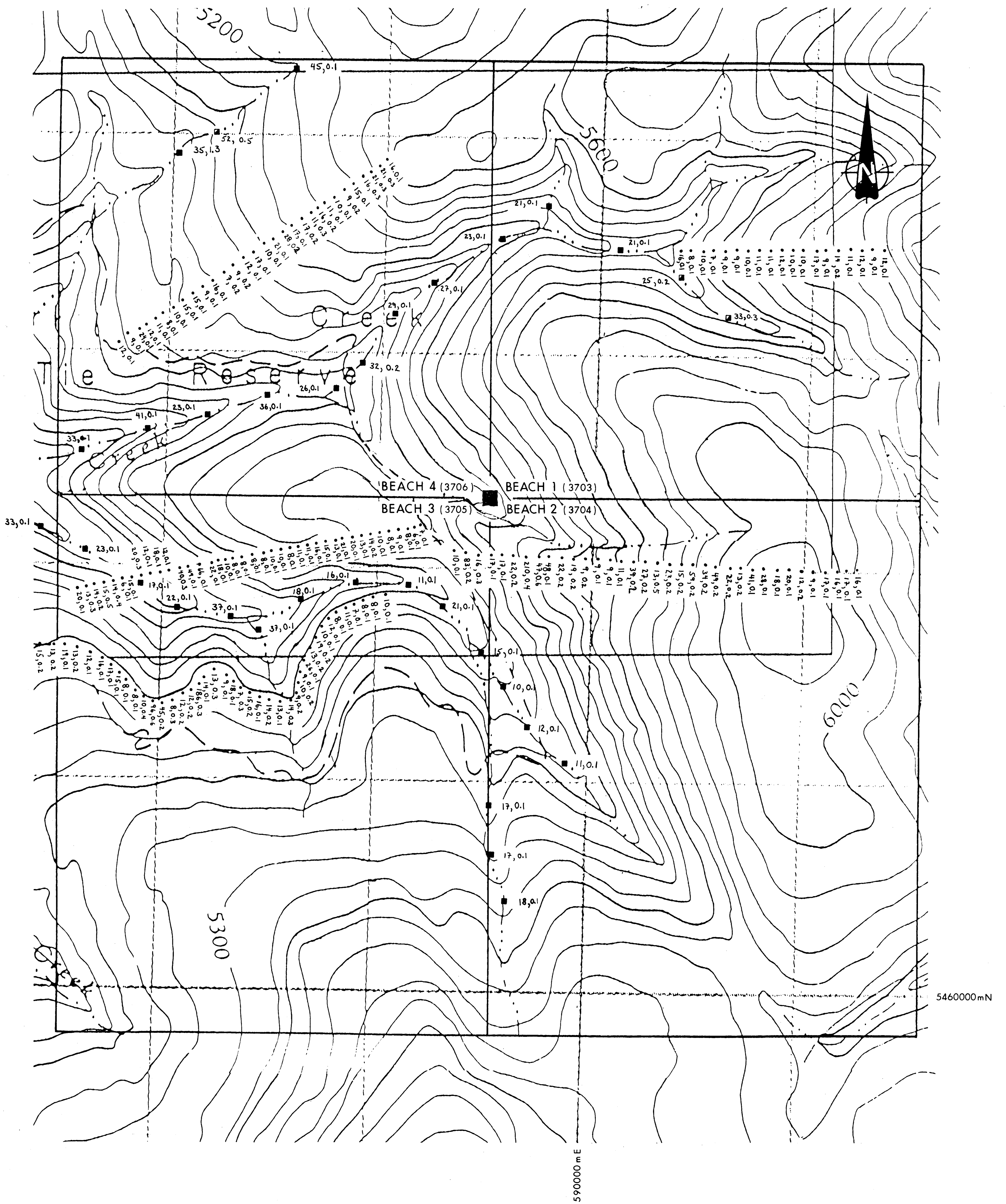
BEACH 4 | BEACH 1
BEACH 3 | BEACH 2 L.C.P. Location

A.R. 20483

SCALE
1:10,000



REVISED	BEACH CLAIMS	
	ROCK SAMPLES	
	Cu (ppm), Ag (ppm)	
PROJ. No. 127	SURVEY BY: L. Erdman	DATE: November 1990
N.T.S. 82G/5	DRAWN BY: L. Erdman	SCALE: 1:10,000
DWG. No. 7	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	



LEGEND

- 17,0.1 Cu (ppm), Ag (ppm) in Silt Samples
- 33,0.3 Cu (ppm), Ag (ppm) in Moss Mat Samples
- 27,0.2 Cu (ppm), Ag (ppm) in Soil Samples

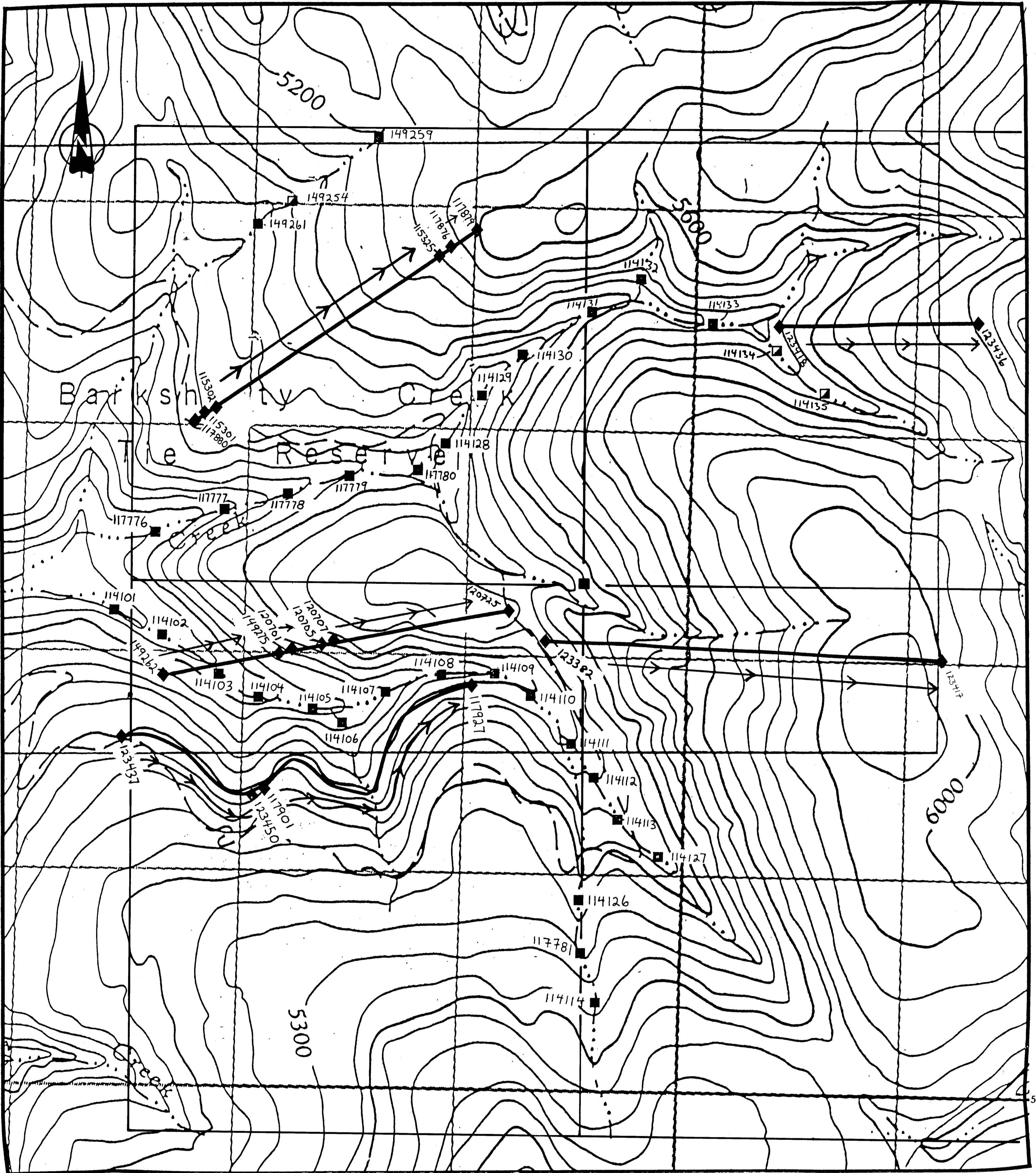
BEACH 4 BEACH 1
 BEACH 3 BEACH 2 L.C.P. Location

A.R. 20483

SCALE
 1:10,000



REVISED	BEACH CLAIMS	
	SOIL SILT MOSS MAT SAMPLES	
	Cu, Ag (ppm)	
PROJ. No. 127	SURVEY BY: L. Erdman	DATE: November 1990
N.T.S. 82G/5	DRAWN BY: L. Erdman	SCALE: 1:10,000
DWG. No. 6	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	



5460000
mN

A.R. 20483

- SILT LOCATIONS
- ◆ SOIL LOCATIONS
- ▣ MOSS MAT LOCATIONS

SCALE
1:10,000

Metres 200 100 0 200 400 600 800 Metres

REVISED	BEACH CLAIMS	
	SILT, SOIL & MOSS MAT	
	SAMPLE LOCATION	
PROJ. No. 127	SURVEY BY: L. Erdman	DATE: November 1990
N.T.S. 82G/5	DRAWN BY: L. Erdman	SCALE: 1:10,000
DWG. No. 4	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	