



42C16SW0004 2.12510 LIZAR

010

NORANDA EXPLORATION COMPANY, LIMITED
(no personal liability)

Report of Work

KABI LAKE - 1182
42C/15,16

RECEIVED

MAY 24 1989

MINING LANDS SECTION

April 27, 1989
Hemlo District

Doug McIlveen
Project Geologist

*2nd
of this file*
Douglas M. McIlveen



42C16SW0004 2.12510 LIZAR

010C

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APPENDIX

Appendix 1	Minor Element Results
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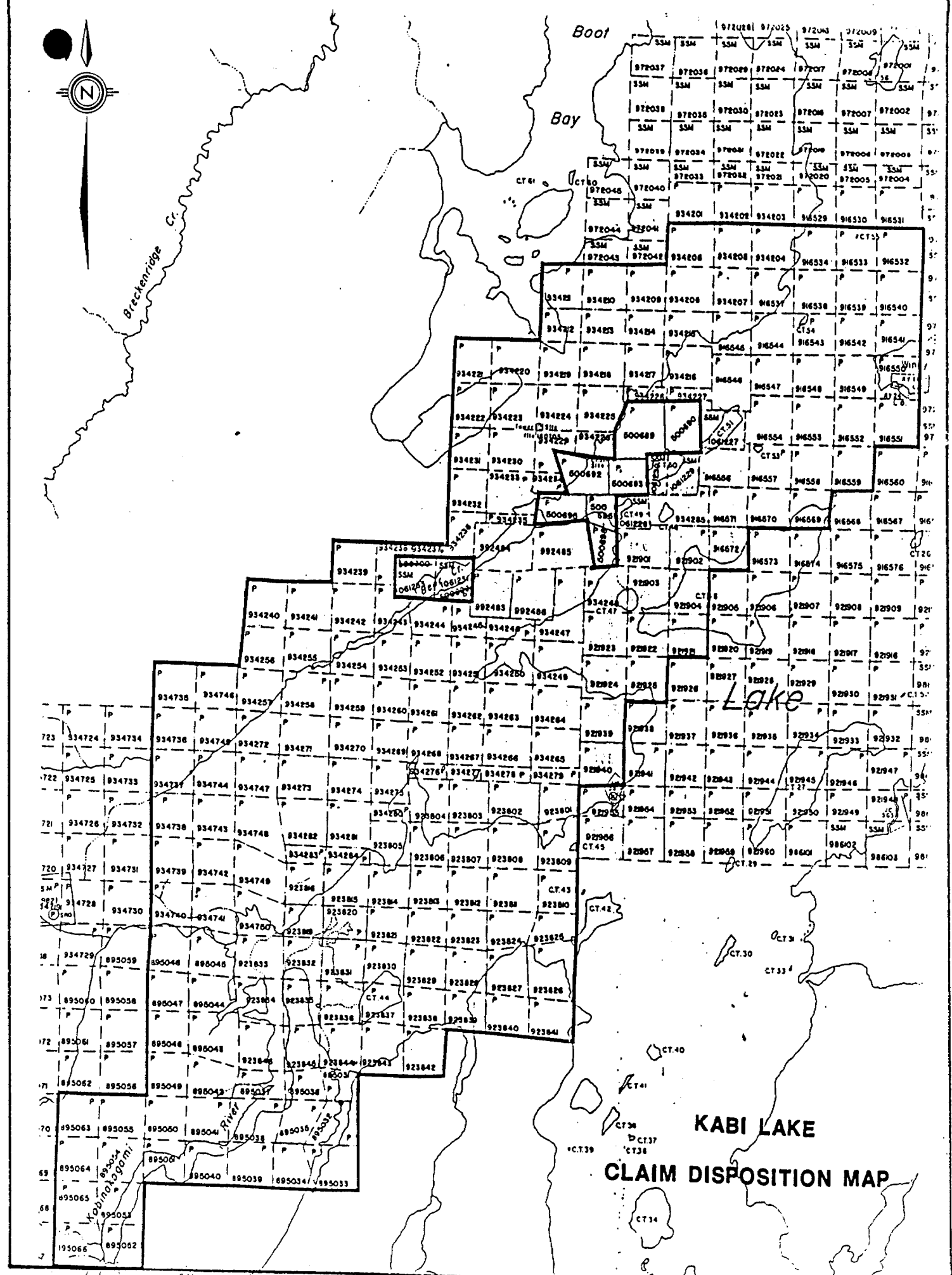
1.0 INTRODUCTION

The Kabi Lake property, comprising 212 contiguous claims surrounding the old Hiawatha gold mine on the western shore of Kabinakagami Lake (Figure 1), was optioned from River Oaks Gold Corporation by Noranda Exploration Company, Limited in May, 1987. In August, 1987, four additional claims in the centre of the optioned block of claims were staked by Noranda in the immediate vicinity of the old mine.

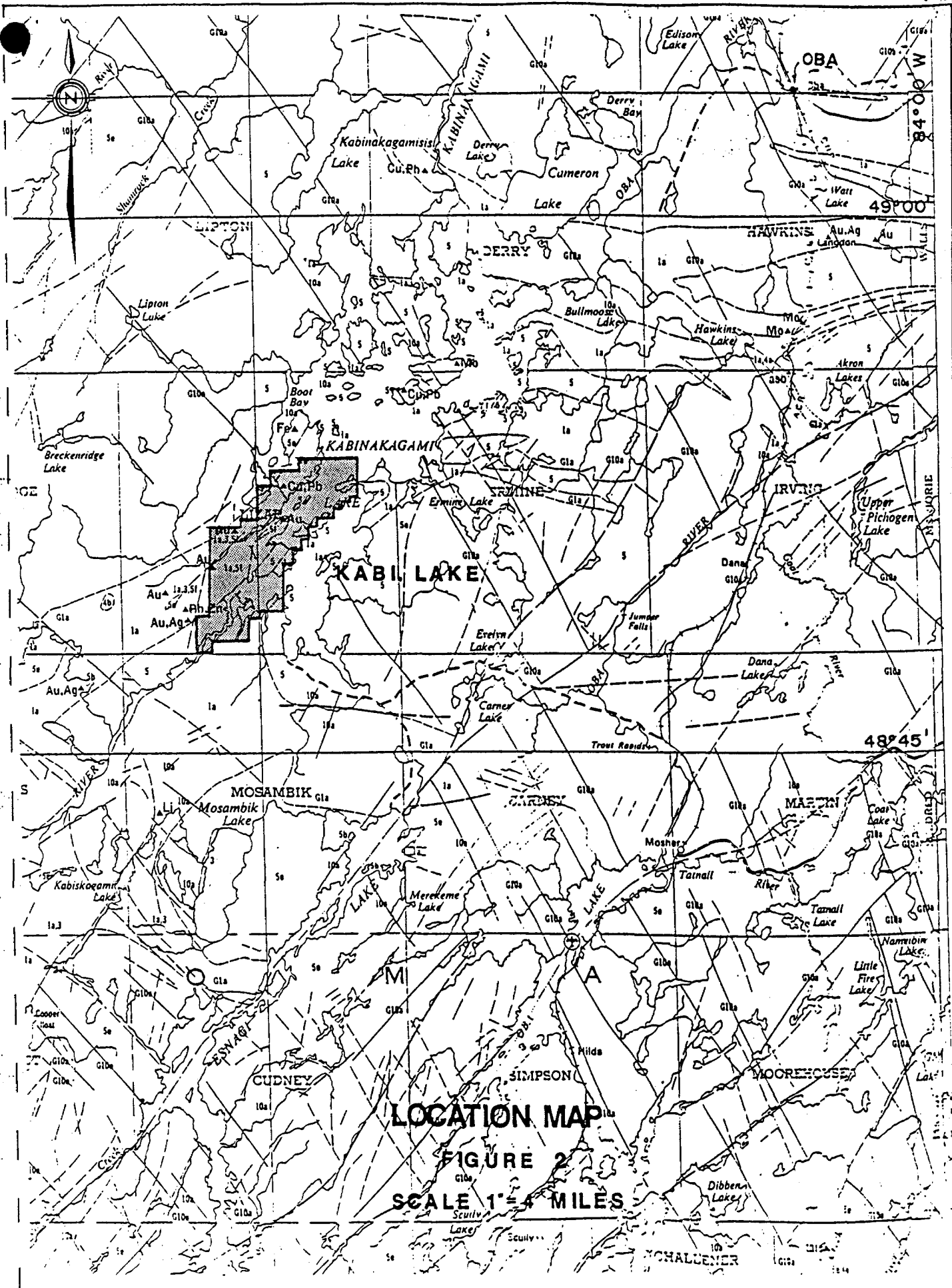
2.0 LOCATION AND ACCESS

The Kabi Lake property is situated approximately 35 km southwest from the junction of the CNR and ACR at Oba, Ontario (Figure 2). The claims are shown on Ontario MNR plan M1299 (Lizar Township), which straddles the boundary between NTS sheets 42 C/15 and 16.

Access is generally by float plane from White River (60 km) or Wawa (100 km), although a navigable river/lake route from Oba is also possible. A third access route is provided by the Larkin Lake road, a timbering road used by the Quebec and Ontario Paper Company. The Larkin Lake road starts approximately 13 km south of Hornepayne on the east side of Hwy. 631, and winds for approximately 45 km to the south-southeast to the western boundary of the Kabi Lake claims.



**KABI LAKE
CLAIM DISPOSITION MAP**



3.0 PREVIOUS EXPLORATION (From D. MacInnis, 1983)

1926 An indian named Peter Louttit locates and open pits gold showing. Sells 3 1/4 tons "ore" for \$1,000.

1936 Hiawatha Gold Mines was formed (H.G.M.)

1936-39 H.G.M. spent \$1,000,000 for 16,508 ft. of diamond drilling, 325 ft of shaft, 6,361 ft. of development, plus purchase of 20 t.p.d. mill.

1939 H.G.M. installed mill and processed 2,000 tons with little gold recovered. This recorded production averaged 0.074 opt. Mine closed end of 1939.

1966 Property reverts to crown on death of the principals and company's charter cancelled. Subsequently staked by R.W. McCarthy.

1969 Primrock Mining and Exploration Incorporated:
Dewatered shaft.

South Zone: Quartz veins 1" - 6" to 3' with disseminated pyrite. Minor chalcopryite and galena. Visible gold has been reported. Chip sampling by Primrock appears to have been selective, nevertheless data suggests gold mineralization occurs.

North Zone: Gold mineralization in a quartz eye porphyry varying in width from 2' to 10'. Narrow non-continuous quartz veins occur within and at the contacts. These veins contain variable amounts of cp and po. The gold appears to be associated with the quartz vein portions. Sampling by Primrock over 50' of drift on the 150 level located 0.17/3.5', 2.78/3.0' and 1.87/2.9'.

West Zone: Similar quartz porphyry sill occurs 1/2 mile S.W. of the shaft. Four diamond drill holes in 1937 assayed 1.3 oz over 3.5'. Primrock drilled two holes, 0.27/2.1 and 0.40 over 2.2 (true widths). Trial shipment of one ton gave 57 oz Au.

Bear Creek Zone: 8' quartz vein with no assays in a flat drill hole.

1971 Primrock carried out surface mapping and geophysics.

1974 Keltic Mining Corp. Ltd.: Optioned property and pumped out and re-sampled workings. Later dropped option.

1978-80 Nickel Rim Mines Ltd. (Dickenson Group): Drilled four DDH (2700') surface mapping and magnetometer survey. Three VG occurrences in drilling and one assay of 1.21 oz over 0.8'.

1980-81 Sveinson Way Mineral Services Ltd.: Staked additional 163 claims and optioned property. Drilled twenty holes totalling 4265' (AQ).

North Zone: (Porphyry)

Twenty holes intersected porphyry. Only one hole assayed 0.12/0.8m. A surface grab nearby assayed 0.19 oz. These results do not correspond to those by Hiawatha. Drifting on the 150 and 275 levels indicated that Hiawatha met with discouraging grades as well.

South Zone: (Quartz vein, main zone)

Six holes drilled into area above 275 level and were also above holes by Nickel Rim. No VG noted. Only one assay of 0.08/0.7m.

Bear Creek Zone: (Porphyry and Shear)

Drilled two holes under Kabi Lake, shear zone intersected is broad with infrequent veins, and minor amounts of sulphides. Most likely this is a contact zone of alteration with a nearby granodiorite. No values reported.

Also in 1980, 15,000' of control line was cut and mapping and geochemical surveys were carried out. Analyses for Cu, Pb, Au, no values reported.

4.0 REGIONAL GEOLOGY (From D. MacInnis, 1983)

Property is centrally located within the Kabinakagami Lake Greenstone Belt believed to be the eastern continuation of the Hemlo Belt.

Gold mineralization in the belt occurs within quartz stringer systems cutting sheared felsic volcanics and intrusives. The felsic rocks are localized along a major mafic volcanic - sedimentary contact and several showings are known along a 10 km strike length. The old Hiawatha Mine (6286 tons produced at 0.10 oz/ton), currently held by others, occurs along strike to the northeast. Much of the claim group is drift covered.

Work by previous operators outlined a broad area of anomalous soil geochemistry localized around the volcanic-sedimentary contact, which has not been tested.

5.0 WORK PERFORMED

During the summers of 1987 and 1988 a total of 166 grab samples of rock were collected from the Kabi Lake property for lithogeochemical studies. Of the total, 128 samples were analysed for Au and other trace elements. Major element determinations were made for 97 of the samples.

5.1 Minor Element Lithogeochemistry

Minor element lithogeochemical analyses were performed by Technical Service Labs of Mississauga, Ontario and by Warnock Hersey of Winnipeg, Manitoba. Results were determined by fire assay with an atomic absorption finish.

Approximately one in every six samples analysed for Au, returned an anomalous geochemical value of >100 ppb. Four samples, which returned geochemical levels greater than 1000 ppb were reanalysed by fire assay, returning a high assay of 0.065 opt.

5.2 Major Element Lithogeochemistry

Major element lithogeochem determinations were performed by Technical Service Labs of Mississauga, Ontario using ICAP.

Results were examined in an attempt to define depletion and enrichment trends with respect to specific elements. Due to the small population of samples taken, no specific trends were defined. However, in general many of the auriferous samples are associated with zones of sodium depletion.

I, Douglas McIlveen, hereby certify that:

1. I am a practicing geologist with Noranda Exploration Company, Limited in Thunder Bay, Ontario, and reside at 10 La Verendrye, Marathon, Ontario.
2. I am a graduate of McMASTER UNIVERSITY, HAMILTON, ONT., 1983, with the degree of B.Sc. GEOLOGY.
3. I am a Canadian Citizen.
4. I have practiced my profession for approximately Six years since graduation.
5. I do not have, nor do I expect to receive, directly or indirectly, any interest in the properties of Noranda Exploration Company, Limited.

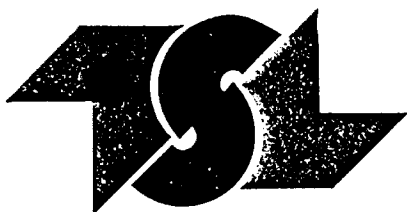
Douglas McIlveen

Geologist

Northwestern Ontario Division

Dated at Marathon, Ontario
this 15th day of May, 1989.

APPENDIX 1
MINOR ELEMENT RESULTS



TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
L4W 1A2

☎ (416) 625-1544 FAX: (416) 625-8368

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Noranda Exploration Company Ltd.
Box 2656
Thunder Bay, Ontario
P7B 5G2

REPORT No.

M4381

SAMPLE(S) OF Rock

INVOICE #:
P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/ton
KL- 41	10	
KL- 40	10	
KL- 39	5	
KL- 28	<5	
KL- 107	30	
KL- 109	10	
KL- 110	<5	
KL- 114	<5	
KL- 116	<5	
KL- 122	130	
KL- 127	<5	
KL- 129	165	
KL- 133	20	
KL- 94	40	
KL- 95	>1000	0.064
KL- 96	220	
KL- 45	20	
KL- 46	<5	
KL- 55	10	
KL- 74	25	

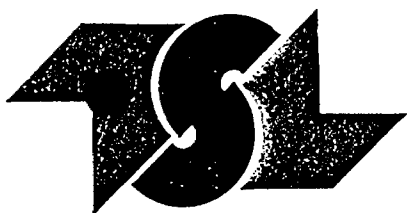
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TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
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REPORT No.

M4381

SAMPLE(S) OF Rock

INVOICE #:

P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/ton
KL- 76	50	
KL- 86	5	
KL- 90	15	
KL- 97	<5	
KL- 98	<5	
KL- 103	<5	
KL- 106	<5	
KL- 108	5	
KL- 111	145	
KL- 115	5	
KL- 121	5	
KL- 125	5	
KL- 132	195	
KL- 134	<5	

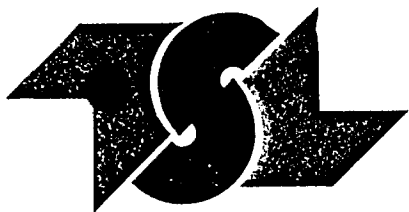
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1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
L4W 1A2

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AUG 30 1988

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Thunder Bay, Ontario
P7B 5G2

REPORT No.

M4381

SAMPLE(S) OF Rock

INVOICE #:
P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/ton	Copper Cu ppm	Zinc Zn ppm
3289 A	20		150	30
3289 B	50		120	18
3289 C	20		110	14
3289 D	30		150	12
3289 E	20		460	40
KL- 52	<5			
KL- 53	10			
KL- 54	<5			
KL- 73	<5			
KL- 75	>1000	4.55 (3.98, 5.81, 3.85)		
KL- 77	500			
KL- 78	500			
KL- 79	60			
KL- 82	105			
KL- 83	30			
KL- 85	45			
KL- 88	10			
KL- 87	10			
KL- 89	10			
KL- 43	15			

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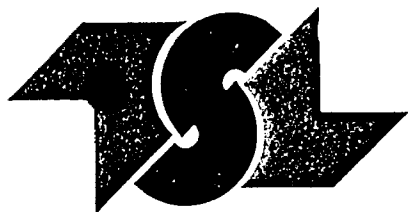
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TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

 1301 FEWSTER DRIVE
 MISSISSAUGA, ONTARIO
 L4W 1A2

☎ (416) 625-1544 FAX: (416) 625-8368

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Noranda Exploration Company Ltd.
 Bag Service #8
 Marathon, Ontario
 POT 2E0

REPORT No.
 M4380

SAMPLE(S) OF Grab Samples

INVOICE #:
 P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/t	Copper Cu ppm	Zinc Zn ppm	
3036 A	>1000	0.053	15	59	:
3036 B	<5		29	50	
3036 C	<5		120	47	
3036 D	<5		73	34	
3036 E	<5		95	27	
3036 F	<5		48	73	
3036 G	<5		90	20	
3036 H	<5		195	62	
3036 I	<5		120	32	
3036 J	<5		27	26	
3036 K	<5		30	42	
3036 L	200		28	29	
3036 M	<5		8	12	
3036 N	<5		130	33	
3036 O	<5		9	4	
3038 A	<5		9	14	
3038 B	30				
3038 C	580				
3038 D	5				
3038 E	<5				

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John Burgner





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1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
L4W 1A2

☎ (416) 625-1544 FAX: (416) 625-8368

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SAMPLE(S) FROM Noranda Exploration Company Ltd.
Bag Service #8
Marathon, Ontario
POT 2E0

REPORT No.
M4380

SAMPLE(S) OF Grab Samples

INVOICE #:
P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/t
3037 A	<5	
3037 B	<5	
3037 C	<5	
3037 D	<5	
3037 E	<5	
3037 F	<5	
3037 G	<5	
3037 H	<5	
3037 I	10	
3037 J	5	
3037 K	<5	
3037 L	40	
3037 M	<5	
3037 N	80	
3037 O	70	
3038 F	10	
3038 G	80	
3038 H	130	
3038 I	<5	
3038 J	80	

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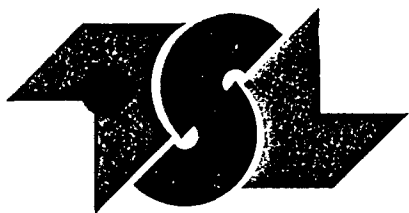
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TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
L4W 1A2

☎:(416) 625-1544 FAX: (416) 625-8368

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Noranda Exploration Company Ltd.
Bag Service #8
Marathon, Ontario
POT 2E0

REPORT No.
M4380

SAMPLE(S) OF Grab Samples

INVOICE #:
P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/t
3038 K	250	
3038 L	670	
3038 M	880	0.034
3038 N	450	
3038 O	410	
3039 J	300	
3039 K	170	
3039 L	>1000	0.027
3039 M	60	
3039 A	25	
3039 B	55	
3039 C	190	
3039 D	20	
3039 E	15	
3039 F	15	
3039 G	10	
3039 H	30	
3039 I	10	
3040 A	10	
3040 B	5	

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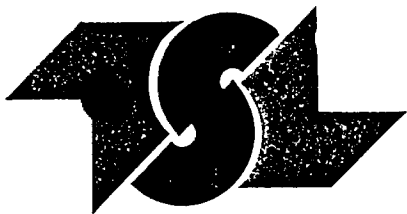
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Robert Burgner

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DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE
MISSISSAUGA, ONTARIO
L4W 1A2

☎ (416) 625-1544 FAX: (416) 625-8368

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Noranda Exploration Company Ltd.
Bag Service #8
Marathon, Ontario
POT 2E0

REPORT No.
M4380

SAMPLE(S) OF Grab Samples

INVOICE #:
P.O.:

Project:1182

	Gold Au ppb	Gold Au oz/t
3040 C	10	
3040 D	30	

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For enquiries on this report, please contact Customer Service Department.
Samples, Pulps and Rejects discarded two months from the date of this report.

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DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. L4W 1A2

TELEPHONE: (416) 625-1544

TELEX 06-960215

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Noranda Exploration Company Ltd.
Box 2656
Thunder Bay, Ontario
P7B 5G2

REPORT No.

M2914

SAMPLE(S) OF Rock

INVOICE #:

P.O.: 25405

Project #1182

	Gold Au ppb	Gold Au oz/T
3070 G	<5	
3070 H	<5	
3070 I	<5	
3070 J	45	
3070 K	230	
3070 L	10	
3070 M	10	
3070 N	25	

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INVOICE TO: Thunder Bay

Sep 18/87

SIGNED





1154 Sanford Street Winnipeg Manitoba R3E 2Z9 (204)786-7546 Telex 07-57254

KAB:

June 30, 1988

ASSAY OF 20 SAMPLE ROCK **ATTN: Mr. G. Pierce**

Received June 27, 1988 From Noranda - Marathon, Ont. P.N. 1182

[illegible]

APPENDIX 11

MAJOR ELEMENT RESULTS

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2

TELEPHONE : (416) 625 - 1544

FAX : (416) 625 - 8368

ICAP WHOLE ROCK ANALYSIS

NORANDA EXPLORATION
MARAT HILL, ONTARIO

T.S.L. REPORT No. : M - 4811

T.S.L. File No. : 120CT

T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
11957-KL1	55.63	15.58	8.09	7.07	4.83	3.16	1.25	.80	.12	.18	202	326	116	1.46	98.25
11958-KL2	62.13	14.78	5.14	5.08	3.07	3.00	1.99	.53	.08	.22	420	375	139	1.77	97.90
11959-KL5	69.02	15.27	2.05	2.02	1.00	4.86	3.06	.22	.03	.10	887	594	105	0.76	98.57
11960-KL7	52.41	13.10	13.62	7.34	5.78	2.25	.77	1.15	.17	.12	91	147	89	1.21	97.96
11961-KL8	49.36	15.75	12.69	10.30	4.29	2.27	1.35	1.10	.19	.16	210	180	111	1.75	99.27
11962-KL11	62.01	16.06	5.05	4.12	2.92	6.94	.45	.51	.08	.23	133	375	127	1.17	99.61
11963-KL14	70.73	15.07	2.78	2.62	1.20	4.66	1.32	.30	.05	.11	293	241	102	1.24	100.15
11964-KL15	70.90	14.30	2.45	3.09	.82	3.03	3.07	.26	.04	.11	351	145	115	1.09	99.24
11965-KL16	50.67	14.46	13.91	8.75	5.54	2.12	1.87	1.15	.21	.17	357	204	105	1.37	100.29
11966-KL18	71.89	13.80	2.82	2.96	1.16	3.22	1.39	.27	.04	.10	483	99	119	1.24	98.97
11967-KL19	45.94	17.50	12.25	9.85	7.77	1.96	1.37	.81	.18	.09	381	248	56	1.95	99.75
11968-KL20	50.55	14.16	13.82	9.31	5.29	2.37	1.41	1.22	.21	.15	230	169	107	1.48	100.03
11969-KL25	64.24	15.31	4.77	4.00	2.92	4.28	1.60	.63	.06	.25	506	644	153	1.06	99.28
11970-KL26	49.93	12.13	18.15	7.88	3.97	2.47	.92	2.23	.25	.33	286	152	212	1.30	99.64
11971-KL30	69.70	14.78	2.59	3.31	.93	5.03	1.35	.27	.04	.10	509	424	98	1.01	99.23
11972-KL31	73.33	14.16	2.73	1.94	.80	4.91	.83	.27	.02	.12	153	110	108	1.22	100.37
11973-KL33	70.84	8.23	6.08	6.80	4.12	.82	.22	.28	.10	.07	19	63	31	0.63	98.20
11974-KL34	94.26	2.06	1.29	1.02	.61	.46	.33	.04	.02	.05	16	31	23	0.30	100.44
11975-KL36	69.20	14.81	2.74	1.81	1.04	5.78	1.33	.29	.04	.12	268	239	105	1.30	98.53
11976-KL37	96.07	.51	.76	.19	.24	.16	.36	.03	.01	.05	18	15	19	0.22	98.60

DATE : 20-OCT-1988

SIGNED :

Adrian H. Debnam
Adrian H. Debnam Ph.D.

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. PLASMA SCAN

Aqua Regia Digestion

NORANDA EXPLORATION
MARATHON ONTARIO

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T.S.L. File No. : C:\SC\SEP09E.DN
T.S.L. Invoice No. :

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ALL RESULTS PPM

SAMPLE #	Sb	As	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Ag	Th
11957-KL1	< 5	< 10	< 1	< 10	< 1	79	11	44	6	< 2	51	< 1	< 10
11958-KL2	< 5	< 10	< 1	< 10	< 1	85	11	27	6	< 2	54	< 1	< 10
11959-KL5	< 5	< 10	< 1	< 10	< 1	64	4	19	5	< 2	13	< 1	10
11960-KL7	< 5	20	< 1	< 10	< 1	83	12	92	4	< 2	21	< 1	< 10
11961-KL8	< 5	< 10	< 1	< 10	< 1	22	13	120	29	< 2	23	< 1	10
11962-KL11	< 5	< 10	< 1	< 10	< 1	46	8	27	7	< 2	32	< 1	10
11963-KL14	< 5	< 10	< 1	< 10	< 1	51	5	9	7	< 2	18	< 1	10
11964-KL15	< 5	< 10	< 1	< 10	< 1	80	4	21	7	< 2	10	< 1	< 10
11965-KL16	< 5	< 10	< 1	< 10	< 1	28	12	140	21	< 2	30	< 1	10
11966-KL18	< 5	< 10	< 1	< 10	< 1	70	4	25	6	< 2	14	< 1	< 10
11967-KL19	5	< 10	< 1	< 10	< 1	100	21	130	30	< 2	76	< 1	10
11968-KL20	< 5	10	< 1	< 10	< 1	24	13	160	20	< 2	28	< 1	10
11969-KL25	< 5	< 10	< 1	< 10	< 1	77	8	81	6	< 2	25	< 1	10
11970-KL26	< 5	< 10	< 1	< 10	1	19	16	130	36	< 2	27	< 1	30
11971-KL30	< 5	< 10	< 1	< 10	< 1	48	4	20	8	< 2	13	< 1	< 10
11972-KL31	< 5	< 10	< 1	< 10	< 1	50	3	47	8	< 2	8	< 1	< 10
11973-KL33	< 5	< 10	< 1	< 10	< 1	220	10	39	13	< 2	27	< 1	< 10
11974-KL34	< 5	< 10	< 1	< 10	< 1	210	2	6	14	< 2	10	< 1	< 10
11975-KL36	< 5	10	< 1	< 10	< 1	95	5	12	8	< 2	16	< 1	< 10
11976-KL37	< 5	10	< 1	< 10	< 1	160	2	16	4	< 2	6	< 1	< 10

DATE : OCT-20-1988

SIGNED :

Paul Ferguson

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. PLASMA SCAN
Aqua Regia Digestion

NORANDA EXPLORATION
MARATHON ONTARIO

T.S.L. REPORT No. : M - 4811 - 2
T.S.L. File No. : C:\SC\SEP09E.DN
T.S.L. Invoice No. :

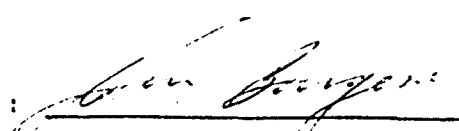
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Sn	W	V	Zn
11957-KL1	< 10	< 10	40	48
11958-KL2	< 10	< 10	28	67
11959-KL5	< 10	< 10	15	34
11960-KL7	< 10	< 10	67	28
11961-KL8	< 10	< 10	140	44
11962-KL11	< 10	< 10	28	32
11963-KL14	< 10	< 10	18	53
11964-KL15	< 10	< 10	14	35
11965-KL16	< 10	< 10	150	56
11966-KL18	< 10	< 10	18	25
11967-KL19	< 10	< 10	61	50
11968-KL20	< 10	< 10	140	49
11969-KL25	< 10	< 10	31	48
11970-KL26	< 10	< 10	200	76
11971-KL30	< 10	< 10	23	30
11972-KL31	< 10	< 10	16	20
11973-KL33	< 10	< 10	19	12
11974-KL34	< 10	< 10	4	3
11975-KL36	< 10	< 10	14	28
11976-KL37	< 10	< 10	4	2

DATE : OCT-20-1988

SIGNED :



TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. ANALYSIS

Minor Elements by Fusion

NORANDA EXPLORATION
MORATHOU, ONTARIO

T.S.L. REPORT No. : M - 4811 - 1
T.S.L. File No. : D:M4811.Y
T.S.L. Invoice No. :

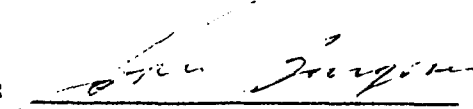
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Y	Sc
11957-KL1	14	21
11958-KL2	8	13
11959-KL5	4	3
11960-KL7	26	40
11961-KL8	26	34
11962-KL11	12	12
11963-KL14	4	5
11964-KL15	4	4
11965-KL16	28	42
11966-KL18	4	4
11967-KL19	18	58
11968-KL20	28	45
11969-KL25	16	12
11970-KL26	56	45
11971-KL30	4	6
11972-KL31	4	4
11973-KL33	6	24
11974-KL34	2	4
11975-KL36	4	4
11976-KL37	< 2	1

DATE : OCT-20-1988

SIGNED :



Ka' Lake. 1182

TECHNICAL SERVICE LABORATORIES
1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

CERTIFICATE OF ANALYSIS

NORANDA EXPLORATION
THUNDER BAY

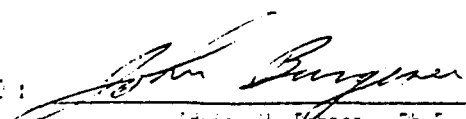
T.S.L. REPORT No. : M - 4723 - 1
T.S.L. File No. : SEP26
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
KL 3	48.91	14.07	13.70	10.17	6.27	3.34	.75	1.13	.20	.11	80	743	56	0.62	99.38
KL 4	50.91	13.21	12.33	11.72	6.42	2.24	.50	1.16	.20	.11	21	118	46	0.50	99.32
KL 9	53.76	13.55	15.77	7.35	5.04	2.65	< .10	1.43	.36	.31	35	147	121	0.40	100.66
KL 10	50.25	15.02	14.21	8.84	6.33	3.67	.22	1.09	.22	.11	46	90	50	0.28	100.27
KL 12	70.37	14.98	2.72	2.15	1.55	5.71	1.42	.27	.03	.10	501	308	97	0.22	99.63
KL 13	57.18	12.58	7.24	5.67	6.62	3.10	3.43	.65	.14	.41	1018	888	201	1.51	98.78
KL 21	48.62	13.78	13.13	11.69	7.23	1.91	.65	1.28	.21	.14	62	129	58	0.65	99.33
KL 22	61.35	15.85	7.44	6.20	1.86	3.71	1.39	.62	.25	.15	533	455	97	1.70	100.64
KL 23	52.25	12.28	12.91	7.84	9.06	2.70	.63	.83	.22	.08	71	109	38	0.77	99.60
KL 24	49.31	13.54	13.12	12.81	7.29	1.77	.50	1.19	.22	.11	39	144	47	0.71	100.60
KL 27	50.36	8.57	7.39	10.65	16.96	1.98	.50	.91	.13	.28	371	269	93	2.46	100.27
KL 28	43.84	12.05	20.55	9.75	8.71	1.40	.23	1.01	.49	.07	24	28	50	0.75	98.86
KL 29	57.76	16.41	5.53	4.89	4.09	4.57	3.99	.49	.10	.17	911	1203	150	1.43	99.69
KL 35	71.37	15.11	2.88	2.58	1.16	4.71	1.55	.27	.04	.09	591	319	70	0.93	100.81
KL 38	58.30	20.27	3.20	3.06	1.60	6.78	3.08	.35	.05	.13	997	791	147	1.33	98.37
KL 44	62.57	13.68	5.81	5.59	4.80	2.30	2.15	.50	.09	.15	356	307	121	1.94	99.68
KL 47	66.48	16.16	2.92	2.79	1.58	5.57	2.04	.30	.04	.11	507	403	101	0.71	98.82
KL 48	70.65	15.44	2.05	2.89	1.27	5.88	1.14	.26	.03	.10	408	435	107	0.90	100.62
KL 49	69.93	15.05	2.82	2.03	1.58	4.54	2.92	.28	.06	.11	772	205	101	0.90	100.34
KL 50	68.79	15.39	2.48	2.18	1.27	4.28	3.85	.30	.05	.13	1108	358	104	1.06	99.95
KL 58	69.29	15.23	2.80	2.16	1.05	3.82	2.86	.26	.04	.13	477	331	108	1.35	99.09
KL 59	54.94	15.39	9.42	7.38	6.09	2.75	1.71	.54	.16	.10	166	219	56	1.77	100.31
KL 60	68.74	15.02	3.41	3.52	1.67	4.90	1.89	.31	.06	.13	354	452	108	0.66	100.41
KL 61	63.79	17.53	3.45	5.68	1.74	5.17	1.36	.30	.06	.12	610	828	125	0.64	100.03
KL 63	55.84	12.76	10.51	8.79	4.04	2.50	.95	.52	.26	.19	83	568	117	2.54	99.00
KL 65	70.27	14.43	2.59	2.87	.81	5.05	2.01	.25	.04	.13	345	349	113	0.40	98.95
KL 70	58.90	15.77	7.34	6.05	4.28	3.61	1.71	.72	.08	.18	313	282	112	0.61	99.34
KL 71	62.34	18.53	4.05	1.35	2.62	8.25	1.37	.32	.04	.12	157	308	121	1.71	100.78
KL 72	50.08	13.93	9.63	6.76	5.26	2.79	4.88	.97	.17	.81	1388	909	236	2.78	98.26
KL 84	69.77	15.07	2.74	2.75	1.37	4.66	1.33	.27	.06	.12	473	382	96	0.66	99.23

DATE : 07-OCTOBER-1968

SIGNED :


Adrian H. Debnam Ph.D.

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. PLASMA SCAN

Aqua Regia Digestion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M - 4723 - 1
T.S.L. File No. : C:\SC\SEPOFD.DN
T.S.L. Invoice No. :

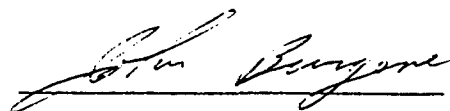
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Sb	As	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Ni	Ag	Th
KL 3	5	< 10	< 1	< 10	< 1	34	15	44	8	< 2	32	< 1	10
KL 4	< 5	< 10	< 1	< 10	< 1	59	9	29	5	< 2	32	< 1	< 10
KL 9	< 5	< 10	< 1	< 10	1	73	10	28	15	< 2	20	< 1	10
KL 10	5	< 10	< 1	< 10	< 1	18	11	22	11	< 2	18	< 1	10
KL 12	< 5	< 10	< 1	< 10	< 1	52	6	20	3	< 2	14	< 1	< 10
KL 13	< 5	20	< 1	< 10	< 1	200	14	46	2	< 2	88	< 1	10
KL 21	< 5	20	< 1	< 10	< 1	58	10	56	1	< 2	25	< 1	10
KL 22	< 5	< 10	< 1	< 10	< 1	53	15	32	26	< 2	30	< 1	10
KL 23	5	< 10	< 1	< 10	< 1	44	12	46	2	< 2	38	< 1	10
KL 24	5	< 10	< 1	< 10	< 1	70	9	43	2	< 2	33	< 1	< 10
KL 27	20	10	< 1	< 10	< 1	420	22	25	42	< 2	210	< 1	< 10
KL 28	< 5	< 10	< 1	< 10	< 1	29	6	65	25	< 2	12	< 1	10
KL 29	< 5	10	< 1	< 10	< 1	50	10	16	4	< 2	35	< 1	< 10
KL 35	< 5	< 10	< 1	< 10	< 1	50	5	12	3	< 2	10	< 1	< 10
KL 38	< 5	< 10	< 1	< 10	1	27	7	10	3	< 2	17	< 1	10
KL 44	5	10	< 1	< 10	< 1	130	12	16	18	< 2	72	< 1	< 10
KL 47	< 5	< 10	< 1	< 10	< 1	44	7	15	5	< 2	17	< 1	< 10
KL 48	< 5	< 10	< 1	< 10	< 1	51	4	9	3	< 2	13	< 1	< 10
KL 49	< 5	< 10	< 1	< 10	< 1	48	7	11	1	< 2	14	< 1	< 10
KL 50	5	< 10	< 1	< 10	< 1	53	6	10	1	< 2	16	< 1	< 10
KL 58	< 5	< 10	< 1	< 10	< 1	68	6	17	5	< 2	12	< 1	< 10
KL 59	5	10	< 1	< 10	< 1	76	19	77	1	4	54	< 1	< 10
KL 60	< 5	30	< 1	< 10	< 1	70	8	16	3	< 2	25	< 1	10
KL 61	< 5	10	< 1	< 10	< 1	38	4	9	3	< 2	10	< 1	< 10
KL 63	< 5	< 10	< 1	< 10	< 1	64	14	24	18	< 2	42	< 1	10
KL 65	< 5	10	< 1	< 10	< 1	57	5	12	3	< 2	7	< 1	10
KL 70	< 5	< 10	< 1	< 10	< 1	46	14	55	7	< 2	40	< 1	10
KL 71	< 5	10	< 1	< 10	< 1	28	7	16	3	< 2	15	< 1	10
KL 72	5	80	< 1	< 10	< 1	35	22	71	6	< 2	28	< 1	20
KL 84	< 5	< 10	< 1	< 10	< 1	51	6	15	6	< 2	13	< 1	< 10

DATE : OCT-07-1988

SIGNED :



TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. PLASMA SCAN

Aqua Regia Digestion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M - 4723 - 3
T.S.L. File No. : C:\SC\SEF090.DN
T.S.L. Invoice No. :

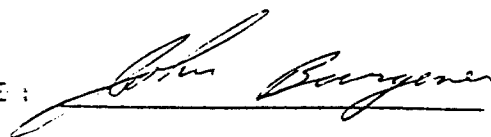
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Sn	W	V	Zn
KL 3	< 10	< 10	100	28
KL 4	< 10	< 10	65	21
KL 9	< 10	< 10	39	36
KL 10	< 10	< 10	81	23
KL 12	< 10	< 10	25	38
KL 13	< 10	< 10	49	48
KL 21	< 10	< 10	53	22
KL 22	< 10	< 10	73	70
KL 23	< 10	< 10	59	25
KL 24	< 10	< 10	53	21
KL 27	< 10	< 10	27	56
KL 28	< 10	< 10	72	30
KL 29	< 10	< 10	23	50
KL 35	< 10	< 10	17	29
KL 38	< 10	< 10	26	56
KL 44	< 10	< 10	22	46
KL 47	< 10	< 10	26	45
KL 48	< 10	< 10	17	32
KL 49	< 10	< 10	19	60
KL 50	< 10	< 10	23	44
KL 58	< 10	< 10	14	43
KL 59	< 10	< 10	61	25
KL 60	< 10	< 10	29	54
KL 61	< 10	< 10	12	34
KL 63	< 10	< 10	24	43
KL 65	< 10	< 10	16	45
KL 70	< 10	< 10	51	50
KL 71	< 10	< 10	20	52
KL 72	< 10	< 10	110	33
KL 84	< 10	< 10	23	70

DATE : OCT-07-1988

SIGNED :



TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

I.C.A.P. ANALYSIS

Minor Elements by Fusion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M - 4723 - 1
T.S.L. File No. : D:M4723.Y
T.S.L. Invoice No. :

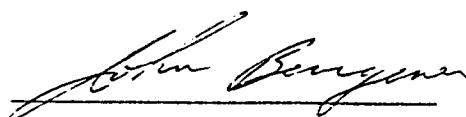
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Y	Sc
KL 3	32	43
KL 4	18	37
KL 9	56	33
KL 10	30	50
KL 12	6	8
KL 13	16	13
KL 21	20	39
KL 22	12	20
KL 23	14	40
KL 24	18	32
KL 27	18	28
KL 28	16	35
KL 29	2	8
KL 35	4	10
KL 38	4	6
KL 44	10	13
KL 47	6	6
KL 48	4	5
KL 49	8	5
KL 50	4	5
KL 58	16	6
KL 59	12	30
KL 60	6	9
KL 61	6	7
KL 63	12	12
KL 65	6	4
KL 70	12	15
KL 71	4	6
KL 72	24	16
KL 84	4	6

DATE : OCT-07-1998

SIGNED :



TECHNICAL SERVICE LABORATORIES
1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

CERTIFICATE OF ANALYSIS

NORANDA EXPLORATION
THUNDER BAY

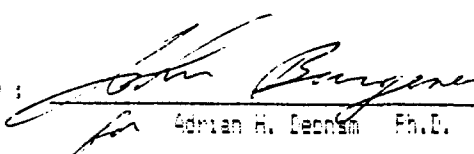
T.S.L. REPORT No. : M - 4723 - 2
T.S.L. File No. : SEP26
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
KL 92	71.49	14.06	1.99	.68	.92	6.55	1.50	.22	.02	.11	276	141	84	0.84	98.44
KL 93	69.02	14.33	2.58	2.00	.95	2.45	6.17	.23	.05	.10	1463	205	92	0.94	99.01
KL 99	68.91	15.84	2.89	2.42	1.57	5.74	.74	.30	.03	.10	350	310	90	0.82	99.45
KL 100	71.21	15.87	1.99	1.46	1.27	5.57	1.17	.26	.05	.11	536	318	100	1.18	100.25
KL 101	64.91	13.51	8.38	6.69	2.68	2.28	.25	.37	.21	.10	103	359	88	0.95	100.39
KL 102	69.56	16.01	2.43	2.52	1.28	4.79	2.27	.26	.04	.10	668	557	93	0.86	100.27
KL 104	70.83	15.51	2.49	3.40	.92	5.03	.63	.24	.03	.10	441	352	95	0.65	99.93
KL 105	69.87	15.20	2.81	1.87	1.02	6.90	< .10	.25	.04	.08	59	189	90	1.01	99.12
KL 113	69.26	15.13	2.51	1.65	.91	5.33	1.98	.24	.05	.09	954	344	87	1.26	98.57
KL 117	45.67	8.21	10.04	5.21	22.85	.59	< .10	.30	.13	.05	64	52	21	6.30	99.40

DATE : 07-OCTOBER-1988

SIGNED :


for Adrian H. Leppin Ph.D.

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2

TELEPHONE : (416) 625-1544

I.C.A.P. PLASMA SCAN

Aqua Regia Digestion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M-4723-2

T.S.L. File No. : C:\SC\SEP09D.DN

T.S.L. Invoice No. :

YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Sb	As	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Ni	Ag	Th
KL 92	< 5	< 10	< 1	< 10	< 1	43	4	12	5	< 2	10	< 1	< 10
KL 93	< 5	< 10	< 1	< 10	< 1	47	6	22	2	< 2	12	< 1	< 10
KL 99	< 5	< 10	< 1	< 10	< 1	46	7	21	210	< 2	16	< 1	< 10
KL 100	< 5	< 10	< 1	< 10	< 1	43	6	27	13	< 2	14	< 1	< 10
KL 101	< 5	< 10	< 1	< 10	< 1	47	7	22	5	< 2	15	< 1	10
KL 102	< 5	< 10	< 1	< 10	< 1	43	5	11	1	< 2	10	< 1	< 10
KL 104	< 5	< 10	< 1	< 10	< 1	47	5	9	1	< 2	12	< 1	< 10
KL 105	< 5	< 10	< 1	< 10	< 1	47	6	10	1	< 2	12	< 1	< 10
KL 113	< 5	10	< 1	< 10	< 1	46	6	13	6	< 2	11	< 1	< 10
KL 117	25	60	< 1	< 10	< 1	1000	38	14	4	< 2	420	< 1	< 10
KL 118	20	< 10	< 1	< 10	< 1	1000	52	15	25	< 2	710	< 1	< 10
KL 119	15	10	< 1	< 10	< 1	450	38	44	4	< 2	550	< 1	< 10
KL 120	15	< 10	< 1	< 10	< 1	1100	30	13	23	< 2	310	< 1	< 10
KL 128	< 5	< 10	< 1	< 10	< 1	78	5	16	2	< 2	20	< 1	< 10
KL 130	15	< 10	< 1	< 10	< 1	460	22	4	3	< 2	190	< 1	< 10
KL 46	5	10	< 1	< 10	< 1	81	8	16	5	< 2	28	< 1	< 10

DATE : OCT-07-1988

SIGNED :

John Buzene

TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2

TELEPHONE : (416) 625 - 1544

I.C.A.P. PLASMA SCAN

Aqua Regia Digestion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M - 4723 - 4
T.S.L. File No. : C:\SC\SEP09D.DN
T.S.L. Invoice No. :

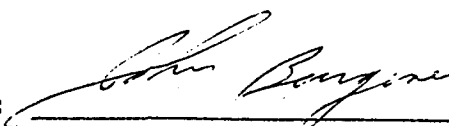
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Sn	W	V	Zn
KL 92	< 10	< 10	19	38
KL 93	< 10	< 10	12	25
KL 99	170	< 10	22	63
KL 100	< 10	< 10	13	370
KL 101	< 10	< 10	24	47
KL 102	< 10	< 10	26	44
KL 104	< 10	< 10	21	29
KL 105	< 10	< 10	21	28
KL 113	< 10	< 10	17	26
KL 117	< 10	< 10	56	55
KL 118	< 10	< 10	47	56
KL 119	< 10	< 10	16	29
KL 120	< 10	< 10	67	52
KL 128	< 10	< 10	16	30
KL 130	< 10	< 10	14	34
KL 46	< 10	< 10	22	41

DATE : OCT-07-1988

SIGNED :



TECHNICAL SERVICE LABORATORIES

1301 FEWSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2

TELEPHONE : (416) 625 - 1544

I.C.A.P. ANALYSIS

Minor Elements by Fusion

NORANDA EXPLORATION
THUNDER BAY ONTARIO

T.S.L. REPORT No. : M - 4723 - 2

T.S.L. File No. : D:M4723.Y

T.S.L. Invoice No. :

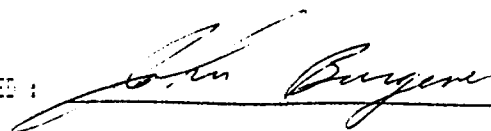
YOUR REFERENCE -

ALL RESULTS PPM

SAMPLE #	Y	Sc
KL 92	2	3
KL 93	4	4
KL 99	4	5
KL 100	6	5
KL 101	10	12
KL 102	4	6
KL 104	4	5
KL 105	4	5
KL 113	6	4
KL 117	8	22
KL 118	14	23
KL 119	4	13
KL 120	10	31
KL 128	4	6
KL 130	8	29
KL 46	4	7

DATE : OCT-07-1966

SIGNED :



TECHNICAL SERVICE LABORATORIES
1301 FENSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 675-1544

CERTIFICATE OF ANALYSIS

NORANDA EXPLORATION CO LTD
THUNDER BAY
ONTARIO

T.S.L. REPORT No. : M - 4381 - 1
T.S.L. File No. : AUG08
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
KL-52	62.66	16.23	6.12	4.80	2.57	4.07	1.48	.52	.14	.30	880	860	151	1.14	100.25
KL-53	77.46	11.76	1.32	2.82	.54	4.07	.33	.19	.02	.07	131	280	110	1.07	99.70
KL-54	69.94	14.43	4.07	1.34	1.43	7.16	.21	.35	.06	.12	89	190	107	1.44	100.59
KL-73	61.44	12.46	6.98	11.98	4.85	1.23	< .10	.32	.13	.05	105	260	21	0.92	100.40
KL-75	88.59	3.81	2.60	2.20	1.12	.73	< .10	.08	.04	.04	92	39	18	0.84	100.06
KL-77	62.84	9.76	9.85	6.73	5.66	.38	.86	.46	.11	.05	411	102	26	3.10	99.86
KL-78	50.33	13.46	10.72	10.39	8.12	2.40	.61	.53	.19	.07	224	142	49	2.70	99.58
KL-79	56.72	11.69	8.68	11.14	6.78	1.48	1.03	.47	.14	.05	203	290	27	0.87	99.10
KL-82	50.21	13.32	19.75	5.98	6.45	1.66	< .10	1.54	.32	.14	39	77	76	0.12	99.51
KL-83	71.43	13.68	3.80	2.90	1.11	3.32	1.16	.31	.03	.10	215	299	95	1.32	99.23
KL-85	61.64	12.50	6.30	6.46	6.71	3.78	1.62	.32	.12	.13	502	259	61	1.09	100.77
KL-88	94.55	1.62	1.24	1.13	.70	.19	< .10	.05	.02	.03	42	54	< 10	0.26	99.80
KL-87	53.20	13.23	9.65	12.19	7.17	1.84	1.02	.49	.15	.06	131	242	29	1.10	100.14
KL-89	48.56	16.93	7.95	15.58	4.82	1.23	2.21	.41	.11	.12	318	667	43	1.45	99.50
KL-41	56.53	13.85	14.70	7.19	3.34	1.71	.45	.87	.48	.11	551	120	76	1.37	100.68
KL-40	49.81	12.08	14.89	12.37	5.10	2.35	< .10	1.08	.26	.09	135	200	45	1.88	100.02
KL-39	50.41	13.67	12.91	10.27	4.98	3.65	.29	1.12	.31	.06	180	361	50	2.09	99.85
KL-107	72.02	13.78	2.91	2.07	1.06	2.21	4.56	.29	.03	.09	515	154	84	1.30	100.41
KL-109	89.64	3.94	1.58	1.26	.63	1.38	.22	.11	.03	.05	81	130	27	0.55	99.40
KL-110	53.90	13.44	10.74	11.89	6.07	2.50	< .10	.58	.17	.07	42	190	33	1.27	100.65
KL-114	74.06	11.46	3.61	1.49	1.83	1.45	2.46	.22	.03	.12	755	109	94	2.28	99.12
KL-116	66.89	14.23	4.67	2.64	1.71	4.67	.66	.46	.05	.15	485	216	106	1.85	98.03
KL-122	70.74	14.89	2.35	2.35	0.99	3.67	2.64	.27	.02	.09	946	164	99	1.33	99.68
KL-127	70.61	13.39	4.01	2.12	1.72	6.05	< .10	.23	.06	.06	173	232	81	0.66	99.23
KL-129	69.60	14.65	2.92	2.83	1.13	4.42	1.47	.28	.03	.09	434	351	100	1.35	99.92
KL-133	82.26	4.99	5.26	2.87	2.16	.72	.14	.20	.05	.05	68	37	16	0.89	99.60
KL-84	74.33	5.69	5.14	4.09	4.69	.81	.30	.30	.08	.10	163	207	28	1.30	99.47
KL-86	61.67	8.96	10.43	6.90	6.75	.94	.48	.43	.14	.03	213	55	24	3.30	100.06
KL-88	37.98	11.32	9.65	7.27	7.10	1.30	1.40	.55	.13	.13	153	273	41	2.30	98.95
KL-45	69.18	13.24	2.86	2.60	2.03	3.15	2.60	.28	.04	.10	553	359	96	1.87	99.66

DATE : 10-20-88

SIGNED :

Robert H. Dorman
Robert H. Dorman, P.Eng.

CU 5 COPY

TECHNICAL SERVICE LABORATORIES
1301 FENSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 825 - 1544

CERTIFICATE OF ANALYSIS

NORANDA EXPLORATION CO LTD
THUNDER BAY
ONTARIO

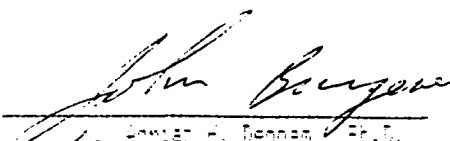
T.S.L. REPORT No. : M - 4381 - 1
T.S.L. File No. : AUG05
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
KL-46	61.35	15.22	7.22	3.36	2.30	4.56	1.34	1.00	.09	.30	297	424	125	2.05	98.89
KL-55	69.23	14.26	2.47	2.93	.79	3.94	2.47	.25	.04	.10	383	216	98	1.79	98.35
KL-76	70.24	15.00	2.89	2.46	1.09	1.40	5.57	.25	.04	.11	724	159	106	1.75	100.91
KL-86	70.49	14.91	2.66	2.77	1.09	3.73	2.14	.27	.02	.09	360	127	53	1.42	95.66
KL-90	71.56	14.60	3.02	1.97	.95	5.42	.86	.30	.02	.11	243	273	113	1.37	100.26
KL-97	66.39	14.97	2.87	2.41	1.66	4.80	1.85	.29	.03	.10	542	259	102	1.02	98.49

DATE : 10-06-88

SIGNED :


Gordon A. Deenan Ph.D.

FILE COPY

TECHNICAL SERVICE LABORATORIES
1301 FENSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 425 - 1544

CERTIFICATE OF ANALYSIS

NGRANDA EXPLORATION CO LTD
THUNDER BAY
ONTARIO

T.S.L. REPORT No. : M - 4381 - 3
T.S.L. File No. : AUG04
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	TiO2 %	MnO %	P2O5 %	Ba ppm	Sr ppm	Zr ppm	LOI	TOTAL
KL-98	70.19	15.10	2.80	2.03	1.42	5.75	1.34	.30	.05	.10	413	274	100	0.91	100.08
KL-103	58.86	10.79	13.84	5.20	.97	3.36	4.06	.87	.16	.32	169	176	172	0.51	99.00
KL-106	74.94	13.02	2.38	1.66	.59	4.54	1.35	.25	.03	.09	349	168	108	0.85	99.77
KL-108	72.72	14.57	2.10	1.34	.78	2.52	3.65	.26	.03	.09	538	135	110	1.45	99.60
KL-111	73.79	14.11	2.72	.77	.92	1.34	3.60	.26	.02	.09	292	139	89	2.42	100.10
KL-115	65.68	16.98	4.21	2.98	.95	5.38	1.36	.68	.04	.21	464	340	108	1.88	100.46
KL-121	65.12	15.43	5.39	4.86	1.18	2.58	2.31	.51	.10	.20	398	305	79	1.84	99.61
KL-125	37.38	2.63	9.75	2.41	31.77	.15	.13	.16	.12	.06	24	106	16	13.04	97.61
KL-132	72.03	14.24	2.93	1.25	1.60	2.39	3.23	.26	.02	.08	336	277	84	2.04	100.15
KL-134	47.84	7.32	8.98	8.54	20.39	.97	3.28	.86	.13	.21	1050	259	72	0.95	99.63

FILE COPY

DATE : 10-08-88

SIGNED :

[Signature]
For Gordon G. Debnam Encl.

TECHNICAL SERVICE LABORATORIES
1301 FENSTER DRIVE, MISSISSAUGA, ONTARIO L4W 1A2
TELEPHONE : (416) 625 - 1544

CERTIFICATE OF ANALYSIS

NORANDA EXPLORATION
THUNDER BAY ONTARIO

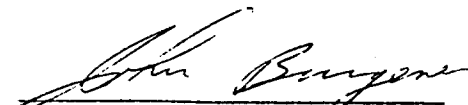
T.S.L. REPORT No. : M - 4723 - 3
T.S.L. File No. : 050CT
T.S.L. Invoice No. :

YOUR REFERENCE-

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm		
KL 118	44.44	5.75	10.05	6.98	24.02	.34	< .10	.30	.18	.04	24	68	27	7.16	99.33
KL 119	41.04	3.06	7.99	6.19	26.11	.08	< .10	.18	.15	.04	29	170	19	14.10	99.05
KL 120	41.62	8.49	11.90	5.39	23.63	.44	< .10	.41	.14	.05	23	47	30	6.56	98.64
KL 128	69.41	15.33	2.45	2.03	1.38	5.97	.94	.29	.03	.09	315	523	112	0.97	99.01
KL 130	46.46	9.15	11.92	7.59	19.81	.87	< .10	.45	.20	.04	11	56	34	2.87	99.43
KL 46	66.78	15.41	3.53	3.81	2.14	4.37	1.76	.36	.04	.10	473	449	102	0.82	99.23

DATE : 07-OCTOBER-1988

SIGNED :


for Norman H. Dennen Ph.D.



Ministry of
Northern Development
and Mines

Report of Work

(Geophysical, Geological,
Geochemical and Expenditures)



42C16SW0004 2.12510 LIZAR

900

2.12510 N

Type of Survey(s) Geochemical	Township or Area Lizar (Wawa)
Claim Holder(s) Noranda Exploration Company, Limited	Prospector's Licence No. A 34387
Address P.O. Box 2656, Thunder Bay, Ontario P7B 5G2	
Survey Company Noranda Exploration Company, Limited	Date of Survey (from & to) 01, 08, 87, 30, 06, 88
Total Miles of line Cut	
Name and Address of Author (of Geo-Technical report) Douglas McIlveen, P.O. Box 2656, Thunder Bay, Ontario P7B 5G2	

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter totals here	- Electromagnetic	
RECEIVED	- Magnetometer	
MAY 24 1989	- Radiometric	
A.M.	- Other	
7:30/10/11/12/1/2/3/4/5/6/7/8/9	Geological	
RECORDED	Geochemical	15
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	- Electromagnetic	
Receipt No.	- Magnetometer	
	- Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	923803	40	P	934271	
	923804	40		934272	
	923805	40		934274	
	923806	40		934275	
	923814	41		934276	
	934241			934281	
	934242			934282	
	934243			934283	
	934244			934742	
	934245			934743	
	934247			934744	
	934248			934745	
	934251			934746	
	934252			934747	
	934253			934748	
	934254			934749	
	934256			992483	
	934257			992484	
	934258			992485	
	934259			992486	
	934260				
	934261				
	934262				

Expenditures (excludes power stripping)

Type of Work Performed Major/Minor Element Lithogeochem		
Performed on Claim(s) Appended		
Calculation of Expenditure Days Credits		
Total Expenditures \$ 3,026.90	Total Days Credits 15	Total Days Credits 201
Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.		

Total number of mining claims covered by this report of work.

43

Date May 17, 1989	Recorded Holder or Agent (Signature) <i>Ronna F. Tergie</i>
-----------------------------	--

For Office Use Only	
Total Days Cr. Date Recorded 846 May 24/89	Mining Recorder <i>Blair</i>
Date Approved as Recorded <i>See mining statement!</i>	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.		
Name and Postal Address of Person Certifying Ronna F. Tergie, P.O. Box 2656, Thunder Bay, Ontario P7B 5G2		
Date Certified May 17, 1989	Certified by (Signature) <i>Ronna F. Tergie</i>	

Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

DOCUMENT No.
W8905-085

2.12510

Mining Act

Geochemical

Township or Area
Lizar

(Wawa)

Noranda Exploration Company, Limited

Prospector's Licence No.
A 34387

P.O. Box 2656, Thunder Bay, Ontario P7B 5G2

Noranda Exploration Company, Limited

Date of Survey (from & to)
01, 08, 87 30, 06, 88

Total Miles of line Cut

Address of Author (of Geo-Technical report)

as McIlveen, P.O. Box 2656, Thunder Bay, Ontario P7B 5G2

Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Provisions	Geophysical	Days per Claim
First survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: Using the same grid: Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	

Prefix	Mining Claim Number	Expend. Days Cr.
P	923803	✓ 40
	923804	✓ 40
	923805	✓ 40
	923806	✓ 40
	923814	41
	934241	
	934242	
	934243	
	934244	
	934245	
	934247	
	934248	
	934251	
	934252	
	934253	
	934254	
	934256	
	934257	
	934258	
	934259	
	934260	
	934261	
	934262	

Prefix	Mining Claim Number	Expend. Days Cr.
P	934271	✓
	934272	✓
	934274	✓
	934275	✓
	934276	✓
	934281	✓
	934282	✓
	934283	✓
	934742	✓
	934743	✓
	934744	✓
	934745	✓
	934746	✓
	934747	✓
	934748	✓
	934749	✓
	992483	✓
	992484	✓
	992485	✓
	992486	✓

Comments on this side and enter totalist here

RECEIVED

MAY 24 1989

A.M. 7:30 P.M. 12:30

RECORDED

MAY 24 1989

Receipt No.

Expenditures (excludes power stripping)

Type of Work Performed
Major/Minor Element Lithogeochem

Performed on Claim(s)
Appended

Calculation of Expenditure Days Credits
Total Expenditures \$ 3,026.90 + 15 = 201
Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date May 17, 1989
Recorded Holder or Agent (Signature) Ronna F. Tergie

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

Ronna F. Tergie, P.O. Box 2656, Thunder Bay, Ontario P7B 5G2

Date Certified
May 17, 1989

Certified by (Signature)
Ronna F. Tergie

For Office Use Only

Total Days Cr. Recorded 846
Date Recorded May 24/89
Date Approved at Recorded

Mining Recorder
Blair Min
Branch Director

Total number of mining claims covered by this report of work. 43

Survey
Drawn

NOF

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by, consultants, draftsmen, etc..

Type of Survey Sample Collection												
Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims	Days per Claim			
85	X	7	=	595	+		=	595	+	42	=	14

Type of Survey Map Preparation, Report Writing and Typing												
Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims	Days per Claim			
6	X	7	=	42	+		=	42	+	42	=	1

Type of Survey												
Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims	Days per Claim			
	X	7	=		+		=		+		=	

Type of Survey												
Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims	Days per Claim			
	X	7	=		+		=		+		=	

SURVEY PERFORMED ON FOLLOWING CLAIMS

P.923803

P.934271

923804

934272

923805

934274

923806

934275

934241

934276

934242

934281

934243

934282

934244

934283

934245

934742

934247

934743

934248

934744

934251

934745

934252

934746

934253

934747

934254

934748

934256

934749

934257

992483

934258

992484

934259

992485

934260

992486

934261

934262



Date
July 5, 1989

Recorded Holder	NORANDA EXPLORATION COMPANY LIMITED
Township or Area	LIZAR TOWNSHIP.

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	\$3026.90 spent on Assaying Samples taken from Mining Claims:
Magnetometer _____ days	P 923803 to 806 incl.
Radiometric _____ days	934241 to 245 incl.
Induced polarization _____ days	934247-248
Other _____ days	934251 to 254 incl.
Section 77 (19) See "Mining Claims Assessed" column	934256 to 262 incl.
Geological _____ days	934271-272
Geochemical _____ days	934274 to 276 incl.
Man days ☐ Airborne ☐	934281 to 283 incl.
Special provision ☐ Ground ☐	934742 to 749 incl.
☐ Credits have been reduced because of partial coverage of claims.	992483 to 486 incl.
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	201 days credit allowed which may be grouped in accordance with Section 76(6) of the Mining Act.

Special credits under section 77 (16) for the following mining claims

--

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey	☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.



Date
July 5, 1989

Mining Recorder's Report of
Work No.
W8905-85

Recorded Holder	NORANDA EXPLORATION COMPANY LIMITED
Township or Area	Lizar Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical <u>15</u> days ☒ Man days ☐ Airborne ☐ Special provision ☒ Ground ☐ Credits have been reduced because of partial coverage of claims. ☐ Credits have been reduced because of corrections to work dates and figures of applicant.	P 923803 to 806 incl. 934241 to 245 incl. 934247-248 934251 to 254 incl. 934256 to 262 incl. 934271-272 934274 to 276 incl. 934281 to 283 incl. 934742 to 749 incl. 992483 to 486 incl.

Special credits under section 77 (16) for the following mining claims

--

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey	☐ insufficient technical data filed
P 923814	

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

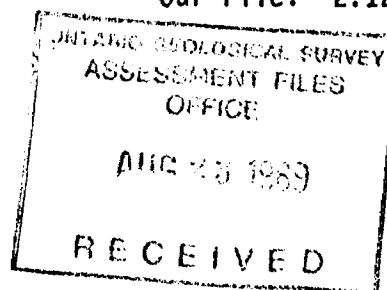
August 2, 1989

Mining Recorder
Ministry of Northern Development and Mines
875 Queen Street East
Box 669
Sault Ste. Marie, Ontario
P6A 2B3

Mining Lands Section
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

Telephone: (416) 965-4888

Your File: W8905-85
Our File: 2.12510



Dear Madam:

Re: Notice of Intent dated July 5, 1989 for Geochemical Survey
and Assaying submitted on Mining Claims P 923803 et al in
Lizar Township.

The assessment work credits, as listed with the above-mentioned Notice of Intent,
have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your
records.

Yours sincerely,

W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division

AB RM:eb
Enclosure

cc: Mr. G.H. Ferguson
Mining and Lands Commissioner
Toronto, Ontario

Resident Geologist
Wawa, Ontario

Noranda Exploration Company, Ltd.
P.O. Box 2656
Thunder Bay, Ontario
P7B 5G2

Noranda Exploration Company, Limited

(no personal liability)

P.O. Box 2656, 960 Alloy Drive
Thunder Bay, Ontario P7B 5G2

noranda

Telephone (807) 623-4339

May 19, 1989

Mining Lands Section
3rd Floor
880 Bay Street
Toronto, Ontario
M5S 1Z8

Dear Sir:

RE: Mining Claims P.923803 et al.

Enclosed please find in duplicate maps and reports for mining claims P.923803 et al, in the area of Lizar Township for geochemical survey.

Yours truly,

NORANDA EXPLORATION COMPANY, LIMITED
(no personal liability)

Ronna F. Tergie

Ronna F. Tergie
Claims Co-ordinator
Northwestern Ontario Division

/rft
encl.

c.c. file 1182 Kabi

RECEIVED

MAY 24 1989

MINING LANDS SECTION

Noranda Exploration Company, Limited

(no personal liability)

P.O. Box 2656, 960 Alloy Drive
Thunder Bay, Ontario P7B 5G2

noranda

Telephone (807) 623-4339

May 19, 1989

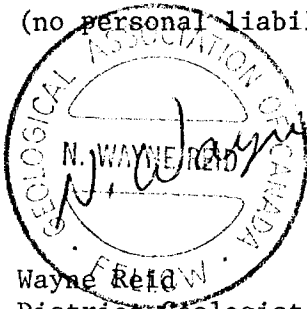
Mining Lands Section
3rd Floor
880 Bay Street
Toronto, Ontario
M5S 1Z8

Dear Sir:

Please consider this letter as certification that we have spent a minimum of \$3,026.90 for analyses on samples taken from mining claims P.923803 et al, in the area of Lizar Township, for our Kabi Lake Project.

Yours truly,

NORANDA EXPLORATION COMPANY, LIMITED
(no personal liability)



Wayne Reid
District Geologist
Northwestern Ontario Division

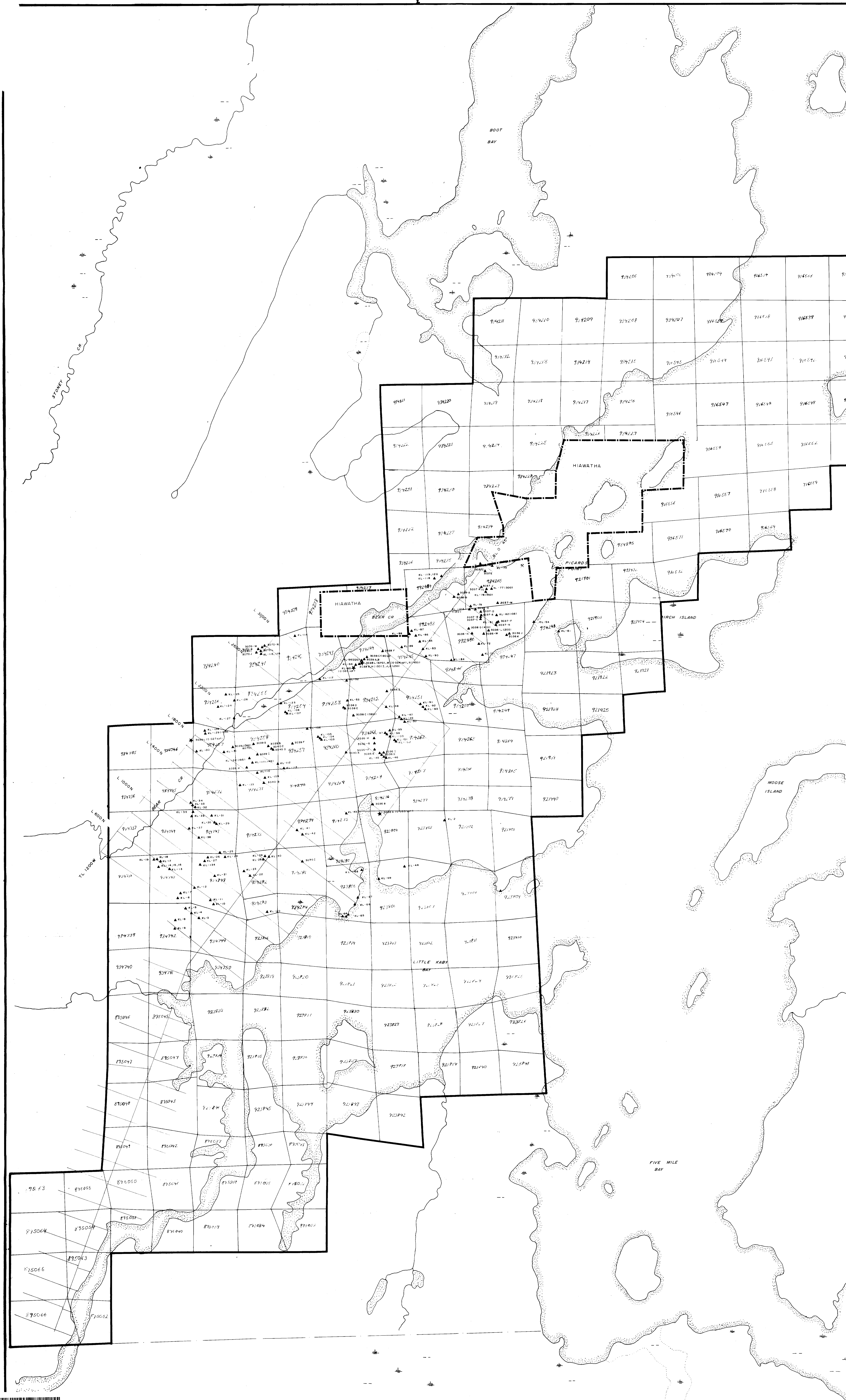
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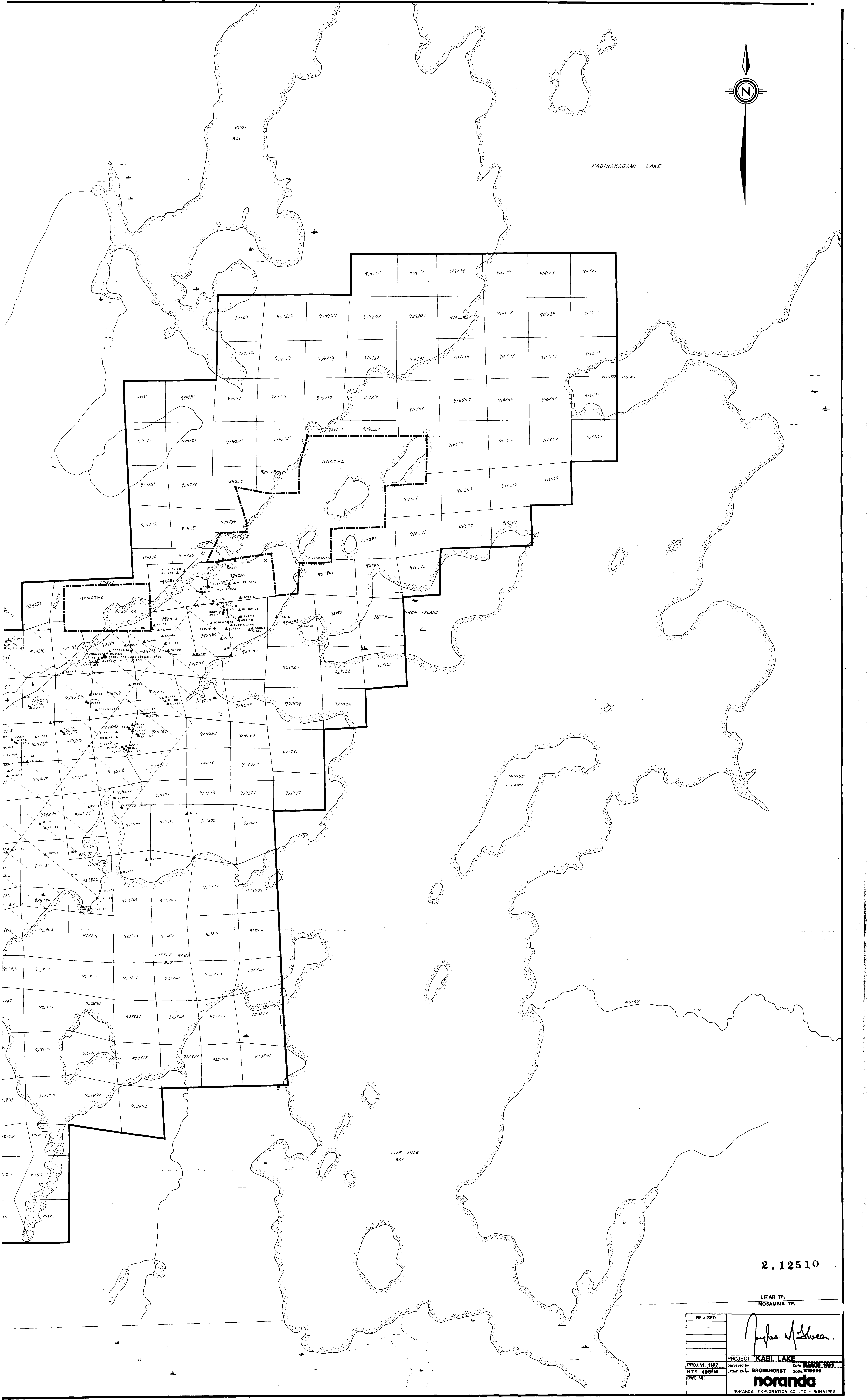
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RECEIVED

MAY 24 1989

MINING LANDS SECTION





LIZAR TP.
MOSAMBIK TP

REVISED	
PROJECT KARL LAKE	Date MARCH 1988 Surveyed by BRONKHORST Drawn by Scale 1:50,000
PROJ NO. 1982 NTS 420010 DWG NO.	 NORANDA EXPLORATION CO. LTD. - WINNIPEG