



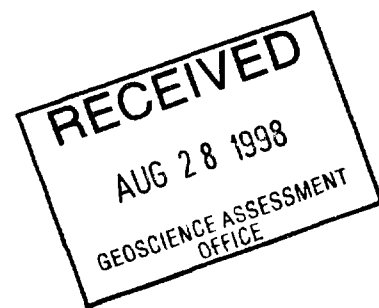
31M04SE2003 2.18718 SOUTH LORRAIN

010

***GEOCHEMICAL SURVEY AND
ASSESSMENT WORK REPORT
STAKED MINING CLAIM 1214461
SOUTH LORRAIN TOWNSHIP
LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING, ONTARIO***

for
***Ministry of Northern Development and Mines
Mining Recorder's Office
Willet Green Miller Centre
933 Ramsey Lake Road
3rd Floor (B)
Sudbury, Ontario
P3E 6B5***

by
***S. Casalnuovo
D. Gourley
K. G. Kriese
K. H. Kriese***



2.18718

August 1998

FOREWORD

In accordance with The Ontario Mining Act R. S. O. 1990 (Printed August 1996) and Ontario Regulation 6/96, this report is submitted for assessment work credit on staked mining claim number 1214461 in the Township of South Lorrain, District of Temiskaming.

The registered claim holder is K. H. Kriese, R. R. # 2 Lisle, Ontario. The Ontario Prospector's License number of K. H. Kriese is A51943.

The parties performing the survey and additional work eligible for assessment credit were:

S. Casalnuovo - 119 Thistledown, Toronto, Ontario
D. Gourley - 11 - 12 Oakburn Crescent, Toronto, Ontario
K.G. Kriese - R. R. # 2, Lisle, Ontario
K.H. Kriese - R. R. # 2, Lisle, Ontario

The survey and assessment work was carried out from May 14th to May 18th, 1997.

This report was prepared by D. Gourley, P.Eng. The Ontario Prospector's License number for D. Gourley is A52028.

A Statement of Qualifications for Mr. K. H. Kriese and Mr. D. Gourley is provided in Appendix F.

2.18718



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Staking of Mining Claim

The staking of mining claim number 1214461 was performed on September 18, 1996. The block claim consists of eight sixteen hectare units for a total area of 128 hectares. An Application to Record Staked Mining Claim(s) was officially received by the Ontario Ministry of Northern Development and Mines, Larder Lake Mining Division on September 23, 1996.

Historical Background

Previous assessment work was carried out on this claim block from 1926 through 1929 and again in early 1950's. The claim borders the former Friday Mine. Details on the workings are found in "Note on Friday Mines Limited, South Lorrain, Ontario" by Robert Thomson, October 16, 1950.

Geology and Terrain Conditions

Appendix A contains an Ontario Department of Mines "Geology and Principal Minerals of Ontario" map. In the vicinity of claim 1214461, the map indicates that there are Metasedimentary and Metavolcanic rocks.

In addition, a portion of a more regional Ontario Department of Mines map of the claim area exhibits more detailed geology and is also reproduced in Appendix A.

The physiography of the claims is typical of this part of Ontario. The relief is fairly high (greater than 15 metres) with numerous bedrock ridges and outcrops. The land area of the block claim is predominantly covered in forest. The overburden is very thin to non-existent at most locations except in several areas where swampy conditions exist.

Assessment Work

In May of 1997, geochemical survey work, line cutting and sampling was undertaken on claim 1214461 in the Township of South Lorrain, District of Timiskaming. This was the first assessment work performed on this block claim since registration.

The location of the claim is shown on Figure 1.

The claim is located on and around the shores of Lorrain Lake, not far from the western boundary of the Township of South Lorrain. Access is by float plane or by water. Reportedly, Lorrain Lake is also accessible by several trails leading from Highway 11. The condition of these trails are unknown.

Methodology

A control grid for soil sampling was constructed. Baseline and tieline are oriented north-south and spaced at 10 metre intervals. A baseline and tie lines were placed east of the shaft known as the former "Friday Mine".

Figure 2 shows the soil sampling control grid, scale 1:1000 (1 cm = 10 metres).

Sample interval along lines is 10 metres. The baseline and tie lines were established with compass from the shaft. Every 10 metre station was appropriately marked by blazing and flagging tape (approximately 100 stations).

Soil Sample Preparation

The soil samples were collected using a grub hoe and placed in burlap sample bags and appropriately marked for location and submission to a licensed

laboratory for analysis. Prior to the retrieval of each soil sample the grub hoe was cleaned. All soil samples collected were within one foot below grade.

Soil Chemical Analyses

A total of 57 soil samples were submitted for soil chemical analyses to Chemex Labs Ltd.

Soil samples were analyzed for a suite of metals employing ICP-AES and ICP-MS multi-element analysis.

A copy of the Certificate of Soil Chemical Analyses is shown in Appendix B.

Appendix B also contains laboratory information on ICP-AES and ICP-MS multi-element analysis sensitivities and methodology information.

Findings

The Ontario Ministry of Environment and Energy (MOEE) has produced a document called "Ontario Typical Range of Chemical Parameters in Soil". Appendix C contains a copy of the Ontario Typical Range Soil Concentrations (background).

The results of the geochemical survey on claim 1214461 indicate anomalous concentrations of cobalt and gold are found in the soil in the vicinity of the former mine shaft.

In one of the soil samples a concentration of cobalt was found to be on the order of twenty times the typical background concentration for the Province of Ontario.

Assessment Work Credits

Appendix D contains a completed copy of an Ontario Ministry of Northern Development and Mines Form 0241 - Declaration of Assessment Work Performed on Mining Land.

Appendix E contains a completed copy of an Ontario Ministry of Northern Development and Mines Form 0212 - Statement of Costs for Assessment Credit.

In accordance with Regulation 6/96 the following expenses incurred are eligible for credit as assessment work:

- * Transportation of four men, equipment and supplies to and from mining claim 1214461 (including aircraft charter)
- * Procurement of supplies used for assessment work
- * Labour and Field Supervision for four men establishing grid and collecting samples
- * Soil Sample preparation, delivery and cost of chemical soil analyses
- * Labour and Field Supervision for four men line cutting
- * Report writing by a Professional Engineer


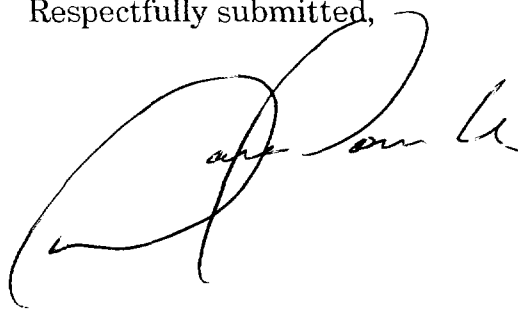
Discussion and Recommendations

The majority of soil samples appear to be well within typical background level soil concentrations for the Province of Ontario.

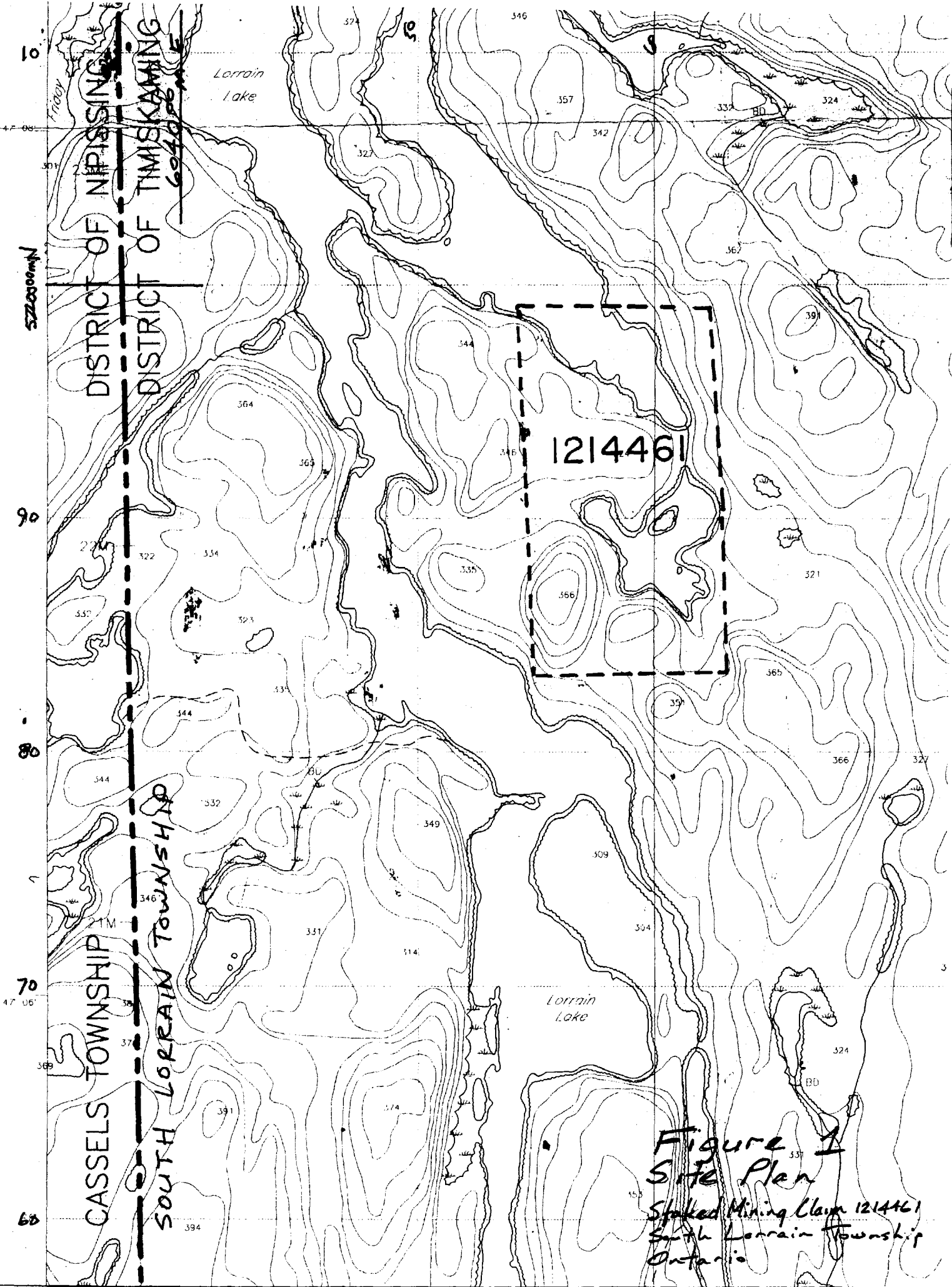
The past history of this area and a small number of soil samples that contain cobalt and gold are two factors that point to the need for more work to be performed on this claim.

In addition to more geochemical surveys, geophysical surveys (land and airborne) will provide more comprehensive information about potential mineral deposits.

Respectfully submitted,



D. W. Gourley, P.Eng

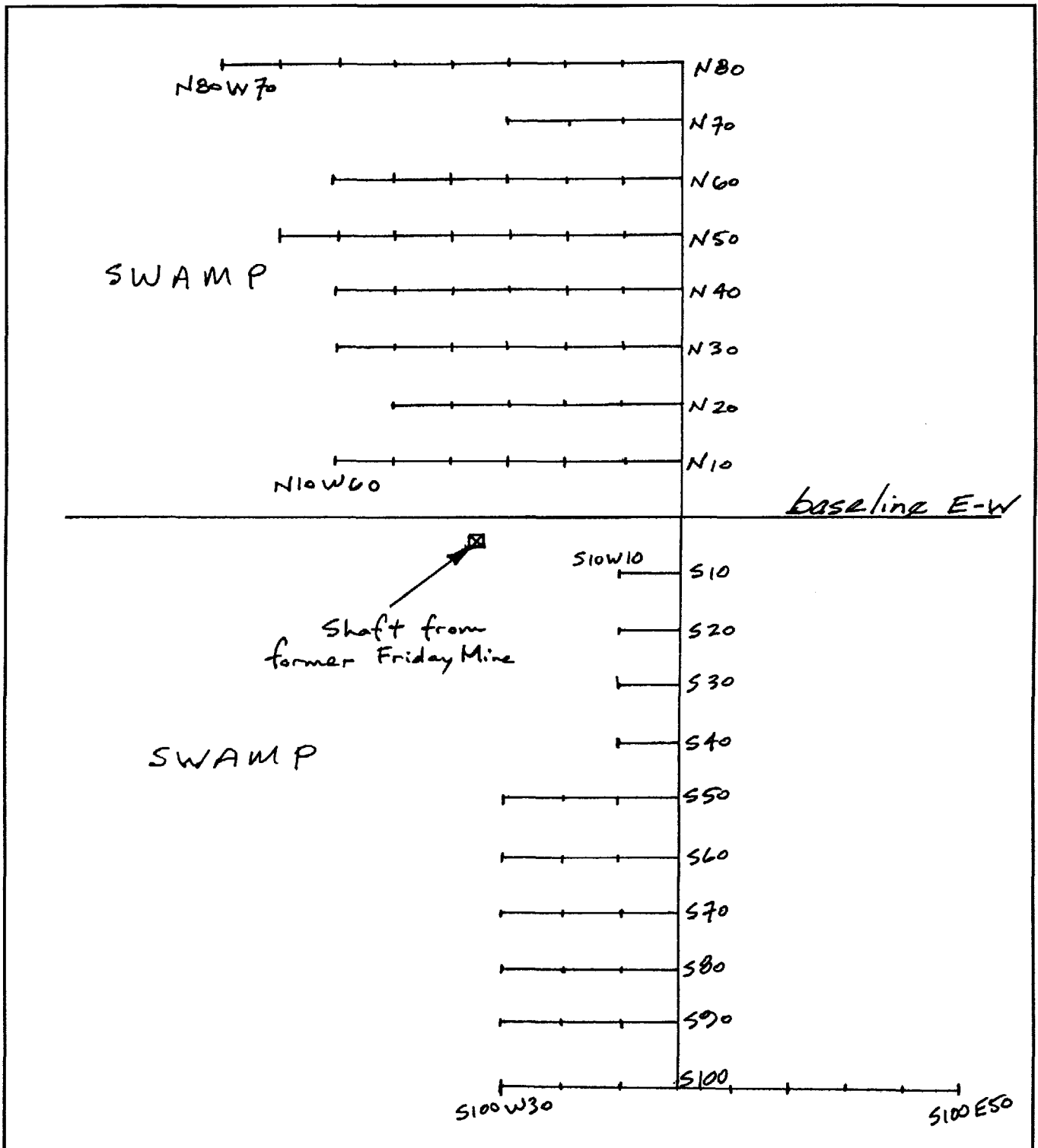


DISTRICT OF NIPISSING
DISTRICT OF TIMISKAMING

CASSELS TOWNSHIP
SOUTH LORRAIN TOWNSHIP

1214461

Figure 1
Site Plan
Spiked Mining Claim 1214461
South Lorrain Township
Ontario



Approximate Scale: 1 cm = 10 m
 Date: August, 1998

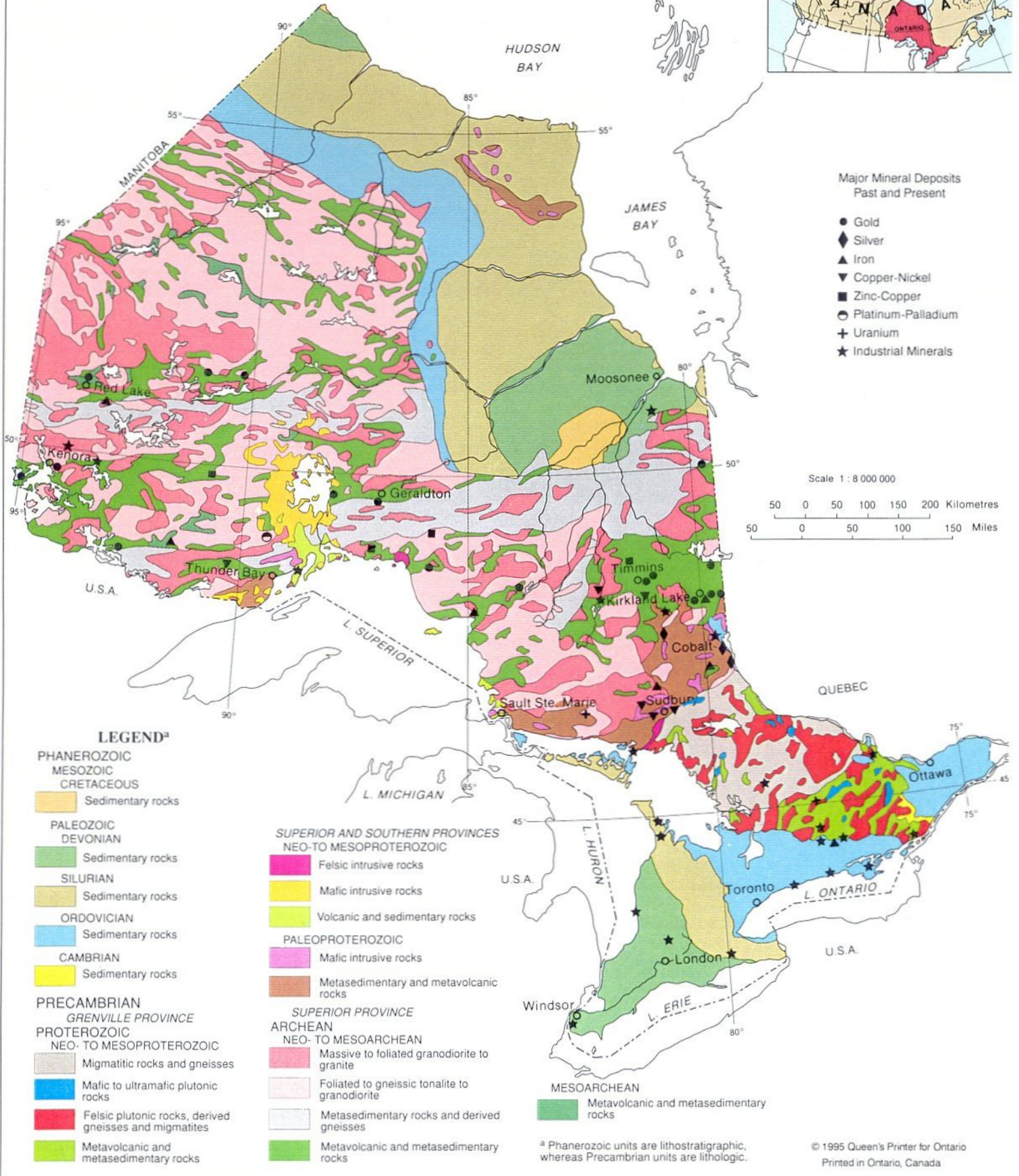


Figure 2
 Soil Sample Locations & Control Grids
 Staked Mining Claim 1214461
 South Lorrain Township, Ontario

APPENDIX A

Geology Maps

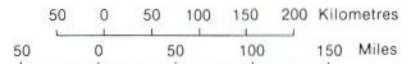
GEOLOGY AND PRINCIPAL MINERALS OF ONTARIO



Major Mineral Deposits Past and Present

- Gold
- ◆ Silver
- ▲ Iron
- ▼ Copper-Nickel
- Zinc-Copper
- Platinum-Palladium
- + Uranium
- ★ Industrial Minerals

Scale 1 : 8 000 000

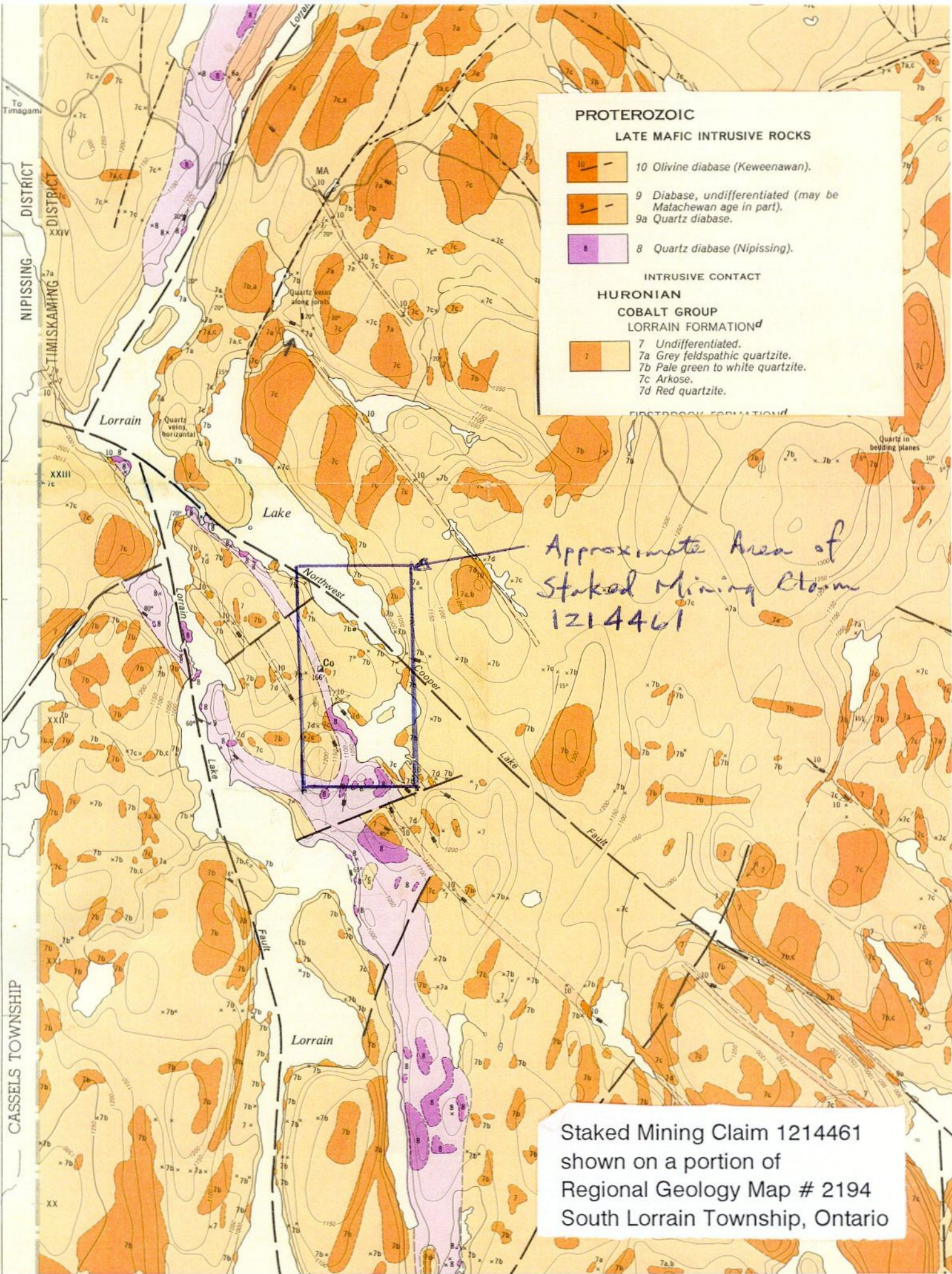


LEGEND^a

- PHANEROZOIC**
- MESOZOIC**
- CRETACEOUS**
- Sedimentary rocks
- PALEOZOIC**
- DEVONIAN**
- Sedimentary rocks
- SILURIAN**
- Sedimentary rocks
- ORDOVICIAN**
- Sedimentary rocks
- CAMBRIAN**
- Sedimentary rocks
- PRECAMBRIAN**
- GRENVILLE PROVINCE**
- PROTEROZOIC**
- NEO- TO MESOPROTEROZOIC**
- Migmatitic rocks and gneisses
 - Mafic to ultramafic plutonic rocks
 - Felsic plutonic rocks, derived gneisses and migmatites
 - Metavolcanic and metasedimentary rocks

- SUPERIOR AND SOUTHERN PROVINCES**
- NEO- TO MESOPROTEROZOIC**
- Felsic intrusive rocks
 - Mafic intrusive rocks
 - Volcanic and sedimentary rocks
- PALEOPROTEROZOIC**
- Mafic intrusive rocks
 - Metasedimentary and metavolcanic rocks
- SUPERIOR PROVINCE**
- ARCHEAN**
- NEO- TO MESOARCHEAN**
- Massive to foliated granodiorite to granite
 - Foliated to gneissic tonalite to granodiorite
 - Metasedimentary rocks and derived gneisses
 - Metavolcanic and metasedimentary rocks
- MESOARCHEAN**
- Metavolcanic and metasedimentary rocks

^a Phanerozoic units are lithostratigraphic, whereas Precambrian units are lithologic.



PROTEROZOIC

LATE MAFIC INTRUSIVE ROCKS

- 10 Olivine diabase (Keweenaw).
- 9 Diabase, undifferentiated (may be Matachewan age in part).
9a Quartz diabase.
- 8 Quartz diabase (Nipissing).

INTRUSIVE CONTACT

HURONIAN

**COBALT GROUP
LORRAIN FORMATION^d**

- 7 Undifferentiated.
- 7a Grey feldspathic quartzite.
- 7b Pale green to white quartzite.
- 7c Arkose.
- 7d Red quartzite.

FIRST ROCK FORMATION^d

Approximate Area of
Staked Mining Claim
1214461

Staked Mining Claim 1214461
shown on a portion of
Regional Geology Map # 2194
South Lorrain Township, Ontario

APPENDIX B

Laboratory Certificate of
Soil Chemical Analyses

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CHEMEX LABS YCR ADMIN

8604 984 1809



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

5175 Timberlea Blvd., Mississauga
Ontario, Canada L4W 2S3
PHONE: 905-624-2806 FAX: 905-624-6163

To: KRIESE, KARL

802 - 34 LITTLE NORWAY CRES.
TORONTO, ON
M5V 3A3

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Certificate Date: 14-NOV-97
Invoice No. : 19749629
P.O. Number :
Account : PNR

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CERTIFICATE OF ANALYSIS A9749629

SAMPLE	PREP CODE	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
		FA+AA																		
N10	201 220	< 5	< 0.2	1.64	< 2	30	< 0.5	< 2	0.12	< 0.5	6	45	17	1.67	< 10	< 1	0.06	< 10	0.31	110
N10-30	201 220	< 5	< 0.2	1.91	< 2	70	< 0.5	< 2	0.17	< 0.5	10	45	20	1.86	< 10	< 1	0.08	< 10	0.39	135
N10-40	201 220	< 5	< 0.2	2.49	6	120	< 0.5	< 2	0.28	< 0.5	13	64	36	2.29	< 10	< 1	0.14	10	0.49	320
N10-40A	201 220	< 5	< 0.2	0.81	2	20	< 0.5	< 2	0.15	< 0.5	3	23	8	0.79	< 10	< 1	0.06	< 10	0.19	75
N10-50	201 220	< 5	< 0.2	1.29	8	40	< 0.5	< 2	0.24	< 0.5	8	47	29	1.62	< 10	< 1	0.07	10	0.45	155
N10-80	201 220	125	< 0.2	1.00	< 2	30	< 0.5	< 2	0.11	< 0.5	3	34	12	1.67	< 10	< 1	0.08	< 10	0.21	70
N10-100	201 220	< 5	0.2	0.54	2	50	< 0.5	2	0.08	0.5	3	13	29	0.56	< 10	< 1	0.14	< 10	0.06	70
N20-20	201 220	< 5	< 0.2	1.79	4	40	< 0.5	< 2	0.12	< 0.5	9	52	21	1.91	< 10	< 1	0.07	< 10	0.38	175
N20-40	201 220	< 5	< 0.2	2.20	16	50	< 0.5	< 2	0.13	< 0.5	27	62	34	2.16	< 10	< 1	0.06	< 10	0.40	130
N30-30	201 220	< 5	< 0.2	0.72	< 2	10	< 0.5	< 2	0.08	< 0.5	3	27	5	0.90	< 10	< 1	0.04	< 10	0.11	50
N30-50	201 220	< 5	< 0.2	1.44	< 2	40	< 0.5	< 2	0.17	< 0.5	19	36	11	1.39	< 10	< 1	0.07	< 10	0.29	415
N40-10	201 220	< 5	< 0.2	1.67	24	60	< 0.5	< 2	0.21	< 0.5	22	43	83	1.66	< 10	< 1	0.09	10	0.38	505
N40-30	201 220	< 5	< 0.2	0.61	8	70	< 0.5	< 2	0.30	0.5	4	16	34	0.74	< 10	< 1	0.22	< 10	0.31	175
N40-60	201 220	< 5	< 0.2	1.09	< 2	30	< 0.5	< 2	0.19	< 0.5	6	36	13	1.31	< 10	< 1	0.05	< 10	0.33	100
N40-W40	201 220	< 5	< 0.2	0.35	6	40	< 0.5	< 2	0.14	0.5	1	9	26	0.42	< 10	< 1	0.10	< 10	0.06	55
N50-10	201 220	< 5	< 0.2	1.55	< 2	50	< 0.5	< 2	0.17	< 0.5	8	45	22	1.60	< 10	< 1	0.07	< 10	0.38	160
N50-30	201 220	< 5	< 0.2	2.41	2	40	< 0.5	< 2	0.13	< 0.5	9	53	14	2.36	< 10	1	0.07	< 10	0.27	110
N50-80	201 220	< 5	< 0.2	1.31	< 2	30	< 0.5	< 2	0.37	< 0.5	8	47	14	1.49	< 10	< 1	0.06	< 10	0.59	150
N60-40	201 220	< 5	< 0.2	1.83	< 2	30	< 0.5	< 2	0.15	< 0.5	7	47	13	2.10	< 10	< 1	0.09	< 10	0.32	90
N60-50	201 220	< 5	0.4	0.47	6	110	< 0.5	< 2	0.46	0.5	3	21	36	0.74	< 10	< 1	0.21	< 10	0.11	140
N60-60	201 220	< 5	0.2	0.26	8	80	< 0.5	< 2	0.32	0.5	1	7	44	0.31	< 10	< 1	0.19	< 10	0.05	75
N70-10	201 220	< 5	< 0.2	1.67	1	50	< 0.5	< 2	0.19	< 0.5	7	43	28	2.50	< 10	< 1	0.08	< 10	0.24	75
N70-30	201 220	< 5	0.2	0.21	6	40	< 0.5	< 2	0.79	1.5	2	7	40	0.44	< 10	< 1	0.38	< 10	0.14	320
N80	201 220	< 5	< 0.2	0.97	< 2	20	< 0.5	< 2	0.12	< 0.5	3	18	7	1.01	< 10	< 1	0.05	< 10	0.12	60
N80-20	201 220	< 5	< 0.2	1.03	2	40	< 0.5	< 2	0.19	< 0.5	5	29	9	1.11	< 10	< 1	0.06	< 10	0.24	100
N80-30	201 220	< 5	< 0.2	0.34	< 2	10	< 0.5	< 2	0.08	< 0.5	< 1	10	7	0.36	< 10	< 1	0.06	< 10	0.05	35
N80-50	201 220	< 5	< 0.2	2.00	4	60	< 0.5	< 2	0.15	< 0.5	7	44	14	2.50	< 10	< 1	0.07	< 10	0.25	85
N80-60	201 220	< 5	< 0.2	1.27	2	50	< 0.5	< 2	0.32	< 0.5	7	28	17	1.10	< 10	< 1	0.08	< 10	0.20	145
N80-70	201 220	< 5	< 0.2	2.02	6	60	< 0.5	< 2	0.26	< 0.5	10	50	43	1.86	< 10	< 1	0.11	10	0.38	115
S10	201 220	< 5	< 0.2	3.68	10	20	< 0.5	< 2	0.06	< 0.5	3	58	12	3.64	< 10	< 1	0.06	< 10	0.12	60
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S30	201 220	< 5	< 0.2	1.37	8	30	< 0.5	< 2	0.17	< 0.5	3	35	24	1.49	< 10	< 1	0.10	< 10	0.35	100
S40	201 220	< 5	< 0.2	0.50	2	40	< 0.5	< 2	0.20	0.5	2	14	27	0.43	< 10	< 1	0.16	< 10	0.07	185
S40-W10	201 220	< 5	< 0.2	0.72	2	30	< 0.5	< 2	0.08	< 0.5	3	23	6	1.48	< 10	< 1	0.07	< 10	0.11	145
S50	201 220	< 5	< 0.2	1.87	2	40	< 0.5	< 2	0.09	< 0.5	4	43	10	1.86	< 10	< 1	0.05	< 10	0.22	105
S50-W10	201 220	< 5	< 0.2	1.60	< 2	40	< 0.5	< 2	0.14	< 0.5	8	44	16	2.06	< 10	< 1	0.06	< 10	0.31	185
S50-W20	201 220	< 5	0.2	3.63	266	180	0.5	< 2	0.88	0.5	51	70	52	2.83	10	< 1	0.22	10	0.54	3480
S50-W30	201 220	< 5	< 0.2	1.49	186	40	< 0.5	< 2	0.22	< 0.5	27	47	17	2.48	< 10	< 1	0.07	< 10	0.33	250
S60	201 220	< 5	< 0.2	0.38	12	50	< 0.5	< 2	0.11	< 0.5	2	13	18	0.44	< 10	< 1	0.09	< 10	0.05	80

CERTIFICATION: Hart Becker



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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P.O. Number :
Account : PNR

CERTIFICATE OF ANALYSIS

A9749629

SAMPLE	PRRP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Tl %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
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N10-30	201 220	< 1	< 0.01	29	140	6	< 2	3	13	0.08	< 10	< 10	38	< 10	30
N10-40	201 220	< 1	< 0.01	44	240	6	2	4	17	0.08	< 10	< 10	43	< 10	66
N10-40A	201 220	< 1	< 0.01	11	90	28	< 2	1	12	0.07	< 10	< 10	30	< 10	16
N10-50	201 220	< 1	< 0.01	28	110	6	< 2	3	14	0.09	< 10	< 10	33	< 10	24
N10-80	201 220	< 1	< 0.01	13	250	12	< 2	1	9	0.07	< 10	< 10	37	< 10	16
N10-100	201 220	< 1	< 0.01	20	540	28	< 2	< 1	7	0.01	< 10	< 10	11	< 10	30
N20-20	201 220	< 1	< 0.01	30	230	4	< 2	3	7	0.06	< 10	< 10	36	< 10	50
N20-40	201 220	< 1	< 0.01	46	180	44	2	3	8	0.08	< 10	< 10	41	< 10	48
N30-30	201 220	< 1	< 0.01	11	90	4	< 2	1	8	0.04	< 10	< 10	26	< 10	12
N30-50	201 220	< 1	< 0.01	21	130	64	< 2	2	13	0.07	< 10	< 10	33	< 10	30
N40-10	201 220	< 1	< 0.01	38	240	24	< 2	5	13	0.07	< 10	< 10	35	< 10	140
N40-30	201 220	1	0.01	25	590	44	< 2	1	17	0.05	< 10	< 10	26	< 10	42
N40-60	201 220	< 1	< 0.01	19	90	6	< 2	2	10	0.06	< 10	< 10	30	< 10	16
N40-W40	201 220	< 1	< 0.01	11	300	54	< 2	< 1	10	0.02	< 10	< 10	15	< 10	24
N50-10	201 220	< 1	< 0.01	27	230	8	< 2	2	10	0.06	< 10	< 10	31	< 10	38
N50-30	201 220	< 1	< 0.01	25	260	20	< 2	2	8	0.08	< 10	< 10	43	< 10	28
N50-80	201 220	< 1	< 0.01	25	290	6	< 2	3	19	0.07	< 10	< 10	32	< 10	28
N60-40	201 220	< 1	< 0.01	25	170	10	< 2	2	11	0.09	< 10	< 10	49	< 10	24
N60-50	201 220	1	0.01	41	890	78	< 2	1	19	0.03	< 10	< 10	17	< 10	48
N60-60	201 220	1	0.01	29	720	56	< 2	< 1	15	< 0.01	< 10	< 10	7	< 10	36
N70-10	201 220	< 1	< 0.01	34	220	6	< 2	3	13	0.07	< 10	< 10	40	< 10	26
N70-30	201 220	< 1	0.02	33	990	60	< 2	< 1	29	< 0.01	< 10	< 10	6	< 10	100
N80	201 220	< 1	< 0.01	10	150	6	< 2	1	10	0.06	< 10	< 10	22	< 10	22
N80-20	201 220	< 1	< 0.01	16	130	4	< 2	1	13	0.08	< 10	< 10	27	< 10	24
N80-30	201 220	< 1	< 0.01	5	100	8	< 2	< 1	8	0.04	< 10	< 10	18	< 10	8
N80-50	201 220	< 1	< 0.01	27	230	8	< 2	2	9	0.08	< 10	< 10	44	< 10	26
N80-60	201 220	< 1	< 0.01	20	200	10	2	1	13	0.05	< 10	< 10	24	< 10	24
N80-70	201 220	< 1	< 0.01	32	290	22	< 2	3	12	0.08	< 10	< 10	36	< 10	38
S10	201 220	< 1	< 0.01	13	1390	8	< 2	2	5	0.08	< 10	< 10	57	< 10	26
S10-W30	201 220	< 1	< 0.01	11	310	6	< 2	1	8	0.06	< 10	< 10	31	< 10	40
S20	201 220	< 1	< 0.01	14	1180	4	< 2	3	8	0.08	< 10	< 10	54	< 10	32
S30	201 220	< 1	< 0.01	17	880	16	< 2	1	10	0.06	< 10	< 10	32	< 10	36
S40	201 220	1	0.01	18	720	42	< 2	< 1	10	0.01	< 10	< 10	13	< 10	32
S40-W10	201 220	< 1	< 0.01	7	320	8	< 2	< 1	7	0.05	< 10	< 10	29	< 10	30
S50	201 220	< 1	< 0.01	20	730	4	< 2	1	7	0.06	< 10	< 10	33	< 10	54
S50-W10	201 220	< 1	< 0.01	24	460	6	< 2	2	4	0.07	< 10	< 10	36	< 10	36
S50-W20	201 220	1	< 0.01	57	870	14	2	5	45	0.06	< 10	< 10	56	< 10	108
S50-W30	201 220	< 1	< 0.01	22	370	10	< 2	2	13	0.09	< 10	< 10	44	< 10	38
S60	201 220	< 1	< 0.01	11	400	34	< 2	< 1	10	0.02	< 10	< 10	10	< 10	22

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Karl Kriese

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802 - 34 LITTLE NORWAY CRES.
TORONTO, ON
M5V 3A3

Project:
Comments:

Page Number : 2-A
Total Pages : 2
Certificate Date: 14-NOV-97
Invoice No. : 19749629
P.O. Number :
Account : PNR

CERTIFICATE OF ANALYSIS

A9749629

SAMPLE	PREP CODE		Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
	FA+AA																				
B60-W30	201	220	< 5	< 0.2	1.20	4	40	< 0.5	< 2	0.11	< 0.5	5	35	9	2.25	< 10	< 1	0.05	< 10	0.20	120
B70	201	220	< 5	< 0.2	0.40	4	30	< 0.5	< 2	0.09	< 0.5	1	19	6	0.62	< 10	< 1	0.06	< 10	0.08	70
B70-W10	201	220	< 5	< 0.2	0.18	6	50	< 0.5	< 2	0.18	< 0.5	6	8	13	0.20	< 10	< 1	0.09	< 10	0.03	70
B70-W20	201	220	< 5	< 0.2	1.11	2	40	< 0.5	< 2	0.17	< 0.5	5	33	9	1.86	< 10	< 1	0.08	< 10	0.24	190
B80	201	220	< 5	< 0.2	0.09	2	50	< 0.5	< 2	0.42	< 0.5	< 1	3	17	0.13	< 10	< 1	0.16	< 10	0.05	260
B80-W20	201	220	30	< 0.2	1.25	6	60	< 0.5	< 2	0.14	< 0.5	7	52	15	2.16	< 10	< 1	0.09	< 10	0.35	450
B90	201	220	< 5	< 0.2	1.05	8	30	< 0.5	< 2	0.12	< 0.5	3	33	17	2.46	< 10	< 1	0.06	< 10	0.15	80
B90-W10	201	220	< 5	< 0.2	1.86	312	80	0.5	< 2	0.38	< 0.5	440	52	66	1.81	< 10	< 1	0.39	10	0.48	1060
B90-W20	201	220	< 5	0.2	1.41	8	50	< 0.5	< 2	0.18	< 0.5	19	46	50	1.38	< 10	< 1	0.08	< 10	0.37	835
B100	201	220	< 5	< 0.2	1.76	2	30	< 0.5	< 2	0.24	< 0.5	9	40	10	2.31	< 10	< 1	0.06	< 10	0.26	95
B100-B10	201	220	< 5	< 0.2	0.15	4	50	< 0.5	< 2	0.43	< 0.5	4	5	11	0.25	< 10	< 1	0.20	< 10	0.07	140
B100-B30	201	220	< 5	< 0.2	0.40	< 2	20	< 0.5	< 2	0.10	< 0.5	1	17	3	0.52	< 10	< 1	0.04	< 10	0.09	115
B100-B40	201	220	< 5	< 0.2	1.03	< 2	50	< 0.5	< 2	0.14	< 0.5	7	45	10	1.51	< 10	< 1	0.08	< 10	0.34	375
B100-B50	201	220	< 5	< 0.2	1.70	2	50	< 0.5	< 2	0.14	< 0.5	6	55	16	1.97	< 10	< 1	0.10	< 10	0.32	130
B100-W20	201	220	< 5	< 0.2	0.49	6	40	< 0.5	< 2	0.13	< 0.5	3	19	12	0.78	< 10	< 1	0.07	< 10	0.11	205
B10	201	220	< 5	< 0.2	0.24	6	40	< 0.5	< 2	0.06	< 0.5	1	10	10	0.38	< 10	< 1	0.06	< 10	0.03	45
B50	201	220	25	< 0.2	0.71	2	30	< 0.5	< 2	0.08	< 0.5	3	19	9	1.08	< 10	< 1	0.06	< 10	0.11	50

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SAMPLE	PREP CODE		Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
#60-W30	201	220	< 1	< 0.01	12	260	20	< 2	1	7	0.06	< 10	< 10	35	< 10	36
#70	201	220	< 1	< 0.01	7	240	4	< 2	< 1	7	0.03	< 10	< 10	15	< 10	20
#70-W10	201	220	< 1	< 0.01	9	280	12	< 2	< 1	12	0.02	< 10	< 10	6	< 10	18
#70-W20	201	220	< 1	< 0.01	17	270	8	< 2	1	12	0.07	< 10	< 10	33	< 10	38
#80	201	220	< 1	0.01	13	490	14	< 2	< 1	22	< 0.01	< 10	< 10	2	< 10	36
#80-W30	201	220	< 1	< 0.01	27	410	6	< 2	2	10	0.07	< 10	< 10	46	< 10	46
#90	201	220	< 1	< 0.01	9	590	4	< 2	1	9	0.07	< 10	< 10	41	< 10	30
#90-W10	201	220	< 1	0.01	61	560	6	< 2	4	19	0.06	< 10	< 10	28	< 10	31.4
#90-W20	201	220	< 1	< 0.01	33	380	6	< 2	2	12	0.08	< 10	< 10	28	< 10	78
#100	201	220	< 1	< 0.01	17	250	2	< 2	2	15	0.10	< 10	< 10	39	< 10	30
#100-E10	201	220	< 1	0.01	11	320	6	< 2	< 1	16	0.01	< 10	< 10	4	< 10	36
#100-E30	201	220	< 1	< 0.01	6	120	2	< 2	< 1	10	0.05	< 10	< 10	15	< 10	16
#100-E40	201	220	< 1	< 0.01	21	400	8	< 2	1	10	0.06	< 10	< 10	28	< 10	34
#100-E50	201	220	< 1	< 0.01	25	350	8	< 2	3	9	0.10	< 10	< 10	36	< 10	42
#100-W20	201	220	< 1	< 0.01	9	270	18	< 2	< 1	8	0.03	< 10	< 10	22	< 10	30
#10	201	220	< 1	< 0.01	6	170	12	< 2	< 1	5	0.01	< 10	< 10	10	< 10	12
#50	201	220	< 1	< 0.01	11	140	6	< 2	< 1	6	0.04	< 10	< 10	26	< 10	16

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◆ ICP-AES AND ICP-MS MULTI-ELEMENT ANALYSIS
EXPLORATION SAMPLES (SOIL, SEDIMENTS AND WEAKLY MINERALIZED ROCK OR DRILL CORE)

Element	Standard Aqua-Regia Leach ICP packages					Range	Extended sensitivity Aqua-Regia Leach ICP + ICP-MS package ¹		Standard tri-acid Near total digestion ICP packages			Extended sensitivity tri-acid near total digestion ICP + ICP-MS package ¹				
	G32	G32m	G9f	G9M	G9h		G132	Range	T24	T27	Range	T124	Range			
Aluminum	Al	✓	✓				Al	✓	0.01 - 15%	Al	✓	✓	0.01 - 25%	Al	✓	0.01 - 25%
Antimony	Sb	✓	✓	✓	✓		Sb	✓	0.1 ppm - 1%	Sb	✓	✓	0.2 - 1000 ppm			
Arsenic	As	✓	✓	✓	✓		As	✓	0.2 ppm - 1%	As	✓	✓	0.2 - 1000 ppm			
Barium	Ba	✓	✓				Ba	✓	10 ppm - 1%	Ba	✓	✓	10 ppm - 1%	Ba	✓	10 ppm - 1%
Beryllium	Be	✓	✓				Be	✓	0.5 - 100 ppm	Be	✓	✓	0.5 - 1000 ppm	Be	✓	0.05 - 1000 ppm
Bismuth	Bi	✓	✓	✓	✓		Bi	✓	0.02 ppm - 1%	Bi	✓	✓	2 ppm - 1%	Bi	✓	0.02 ppm - 1%
Cadmium	Cd	✓	✓				Cd	✓	0.1 - 500 ppm	Cd	✓	✓	0.5 - 500 ppm	Cd	✓	0.1 - 500 ppm
Calcium	Ca	✓	✓				Ca	✓	0.01 - 15%	Ca	✓	✓	0.01 - 25%	Ca	✓	0.01 - 25%
Cerium														Ce	✓	0.01 - 500 ppm
Cesium														Cs	✓	0.05 - 500 ppm
Chromium	Cr	✓	✓				Cr	✓	1 ppm - 1%	Cr	✓	✓	1 ppm - 1%	Cr	✓	1 ppm - 1%
Cobalt	Co	✓	✓		✓		Co	✓	1 ppm - 1%	Co	✓	✓	1 ppm - 1%	Co	✓	0.2 ppm - 1%
Copper	Cu	✓	✓	✓	✓	✓	Cu	✓	0.2 ppm - 1%	Cu	✓	✓	1 ppm - 1%	Cu	✓	1 ppm - 1%
Gallium	Ga	✓	✓				Ga	✓	0.1 ppm - 1%					Ga	✓	0.1 - 500 ppm
Germanium							Ge	✓	0.1 - 500 ppm					Ge	✓	0.1 - 500 ppm
Indium														In	✓	0.01 - 100 ppm
Iron	Fe	✓	✓			✓	Fe	✓	0.01 - 15%	Fe	✓	✓	0.01 - 25%	Fe	✓	0.01 - 25%
Lanthanum	La	✓	✓				La	✓	10 ppm - 1%					La	✓	0.5 - 500 ppm
Lead	Pb	✓	✓	✓	✓	✓	Pb	✓	2 ppm - 1%	Pb	✓	✓	2 ppm - 1%	Pb	✓	0.5 ppm - 1%
Lithium														Li	✓	0.2 - 500 ppm
Magnesium	Mg	✓	✓				Mg	✓	0.01 - 15%	Mg	✓	✓	0.01 - 15%	Mg	✓	0.01 - 15%
Manganese	Mn	✓	✓			✓	Mn	✓	5 ppm - 1%	Mn	✓	✓	5 ppm - 1%	Mn	✓	5 ppm - 1%
Mercury	Hg	✓		✓			Hg	✓	0.01 ppm - 1%							
Mercury	Hg															
Molybdenum	Mo	✓	✓	✓	✓	✓	Mo	✓	0.2 ppm - 1%	Mo	✓	✓	1 ppm - 1%	Mo	✓	1 ppm - 1%
Nickel	Ni	✓	✓			✓	Ni	✓	1 ppm - 1%	Ni	✓	✓	1 ppm - 1%	Ni	✓	0.2 ppm - 1%
Niobium														Nb	✓	0.2 - 500 ppm
Phosphorus	P	✓	✓				P	✓	10 ppm - 1%	P	✓	✓	10 ppm - 1%	P	✓	10 ppm - 1%
Potassium	K	✓	✓				K	✓	0.01 - 10%	K	✓	✓	0.01 - 10%	K	✓	0.01 - 10%
Rubidium														Rb	✓	0.2 - 100 ppm
Scandium	Sc	✓	✓				Sc	✓	1 ppm - 1%							
Silver	Ag	✓	✓	✓	✓	✓	Ag	✓	0.02 - 100 ppm	Ag	✓	✓	0.2 - 100 ppm	Ag	✓	0.05 - 100 ppm
Sodium	Na	✓	✓				Na	✓	0.01 - 10%	Na	✓	✓	0.01 - 10%	Na	✓	0.01 - 10%
Strontium	Sr	✓	✓				Sr	✓	1 ppm - 1%	Sr	✓	✓	1 ppm - 1%	Sr	✓	0.2 ppm - 1%
Sulfur																
Tantalum														Ta	✓	0.2 - 100 ppm
Tellurium							Te	✓	0.1 - 500 ppm					Te	✓	0.1 - 500 ppm
Thallium	Tl	✓	✓				Tl	✓	0.1 ppm - 1%					Tl	✓	0.05 - 500 ppm
Thorium														Th	✓	0.2 - 500 ppm
Titanium	Ti	✓	✓				Ti	✓	0.01 - 10%	Ti	✓	✓	0.01 - 10%	Ti	✓	0.01 - 10%
Tungsten	W	✓	✓				W	✓	0.05 ppm - 1%	W	✓	✓	10 ppm - 1%	W	✓	0.2 ppm - 1%
Uranium	U	✓	✓				U	✓	0.05 ppm - 1%					U	✓	0.2 - 500 ppm
Vanadium	V	✓	✓				V	✓	1 ppm - 1%	V	✓	✓	1 ppm - 1%	V	✓	1 ppm - 1%
Yttrium														Y	✓	0.1 - 500 ppm
Zinc	Zn	✓	✓	✓	✓	✓	Zn	✓	2 ppm - 1%	Zn	✓	✓	2 ppm - 1%	Zn	✓	2 ppm - 1%
Price Per Sample		\$7.00	\$9.95	\$7.00	\$9.95	\$7.00		\$17.00		\$10.50	\$20.00				\$20.50	

✓ Elements will only be partially leached

✓ Determined quantitatively using non-ICP techniques

¹ The G132 and T124 packages extend the sensitivity and elemental coverage of the standard G32 and T24 packages, but will default back to the standard ICP packages if the base metal (Cu, Pb, Mo, Zn, etc.) concentrations are greater than 1% individually, or 3% cumulative.

◆ ICP-AES AND ICP-MS MULTI-ELEMENT ANALYSIS MINERALIZED AND ORE GRADE SAMPLES

Aqua-Regia Leach Ore Grade ICP Package		Tri-Acid Near Total Digestion ICP Package		Peroxide Fusion - ICP Package for Higher Grade Sulphides	
	A30 Range		A22 Range		A6 Range
Al	✓ 0.01 - 15%	Al	✓ 0.05 - 30%		
Sb	✓ 10 ppm - 1%				
As	✓ 10 ppm - 5%			As	✓ 0.01 - 10%
Ba	✓ 20 ppm - 2%	Ba	✓ 0.01 - 5%		
Be	✓ 5 - 100 ppm	Be	✓ 0.001 - 1%		
Bi	✓ 10 ppm - 5%	Bi	✓ 0.002 - 5%		
Cd	✓ 5 - 1000 ppm	Cd	✓ 0.001 - 1%		
Ca	✓ 0.01 - 30%	Ca	✓ 0.05 - 30%		
Cr	✓ 10 ppm - 2%	Cr	✓ 0.001 - 10%		
Co	✓ 5 ppm - 5%	Co	✓ 0.001 - 10%	Co	✓ 0.01 - 10%
Cu	✓ 5 ppm - 5%	Cu	✓ 0.001 - 10%	Cu	✓ 0.02 - 20%
Fe	✓ 0.01 - 30%	Fe	✓ 0.05 - 30%	Fe	✓ 0.1 - 40%
Pb	✓ 5 ppm - 5%	Pb	✓ 0.001 - 10%		
Mg	✓ 0.01 - 30%	Mg	✓ 0.05 - 30%		
Mn	✓ 10 ppm - 5%	Mn	✓ 0.001 - 10%		
Hg	✓ 10 ppm - 1%				
Mo	✓ 5 ppm - 5%	Mo	✓ 0.001 - 10%		
Ni	✓ 5 ppm - 5%	Ni	✓ 0.001 - 10%	Ni	✓ 0.02 - 10%
P	✓ 0.01 - 1%				
K	✓ 0.01 - 10%	K	✓ 0.1 - 20%		
Sc	✓ 5 ppm - 1%				
Ag	✓ 1 - 200 ppm	Ag	✓ 1 - 200 ppm		
Na	✓ 0.01 - 20%	Na	✓ 0.05 - 20%		
Sr	✓ 5 ppm - 1%	Sr	✓ 0.001 - 10%		
				S	✓ 0.01 - 40%
Tl	✓ 20 ppm - 1%				
Ti	✓ 0.01 - 10%	Ti	✓ 0.05 - 20%		
W	✓ 20 ppm - 1%				
U	✓ 20 ppm - 1%				
V	✓ 20 ppm - 5%	V	✓ 0.001 - 5%		
Zn	✓ 5 ppm - 5%	Zn	✓ 0.002 - 10%		
	\$16.50		\$16.50		\$22.50

Traditional ICP Packages

The field of geochemical multi-element analysis has been revolutionized with the introduction of new ICP-AES and ICP-MS equipment that is far more capable to deal with the inter-element effects that plagued older generation equipment.

The analysis of geological materials presents special problems to the analyst because of the widely varying matrices that are encountered. Spectroscopic techniques such as ICP-AES, ICP-MS, INAA and XRF all rely on being able to resolve the spectral signals unique to each element. When some of the signals are very strong, they start to interfere with the weaker signals from the other elements, and it may no longer be possible to achieve the optimum detection limits. Newer instruments are now more capable to deal with such problems, although samples with a significant degree of mineralization will still require special handling, and we might not be able to achieve the optimum detection limits.

ICP-AES and ICP-MS require that all samples are presented to the instrument in a liquid form. This is considered to be a limitation of the technique by some since it requires a digestion or leach procedure to be used prior to analysis. The most common procedure to date has been the use of an aqua regia leach. Selective leaches are gaining some popularity today because they sometimes enhance the definition of anomalies. The aqua regia leach is the most commonly used form of a selective leach even though a significant number of elements are quantitatively dissolved using this procedure.

For a more complete analysis of samples, we use a tri-acid digestion procedure that produces "near total" results for a much wider spectrum of elements.

New ICP Packages for 1998

Using either technique, the sensitivity obtained by conventional ICP-AES methods is not always adequate for every project. For sets of samples that have a very low background, ICP-MS would be a better finish technique. This year we are offering combination ICP-AES/MS packages that address this need. ICP-MS equipment can detect extremely low concentrations (parts per trillion) of most elements. Unfortunately this means that, when a sample with percent level concentrations of elements such as Cu, Pb, Zn, As, or Hg is introduced to the instrument, it can take days before the instrument has been sufficiently cleaned out to run another routine sample. For this reason we insist on pre-screening all samples using regular ICP-AES techniques prior to running them on the ICP-MS equipment. When samples exceed our criteria for being run by ICP-MS, we will only be able to provide the ICP-AES results.

We will gladly customize any ICP package by reporting only those elements that are of interest to you.

APPENDIX C

Province of Ontario
Typical Range Soil Concentrations
(background)

TABLE F: Ontario background soil concentrations

TABLE F: Chemical Compound	Soil Background Concentration (ug/g)	
	Agricultural Land Use	All Other Land Uses
ACENAPHTHENE	0.05	0.07
ACENAPHTHYLENE	0.08	0.08
ACETONE	*	*
ALDRIN	0.05	0.05
ANTHRACENE	0.05	0.16
ANTIMONY	1.0	1.0
ARSENIC	14	17
BARIUM	190	210
BENZENE	0.002	0.002
BENZO(a)ANTHRACENE	0.10	0.74
BENZO(a)PYRENE	0.10	0.49
BENZO(b)FLUORANTHENE	0.30	0.47
BENZO(g,h,i)PERYLENE	0.20	0.68
BENZO(k)FLUORANTHENE	0.05	0.48
BERYLLIUM	1.2	1.2
BIPHENYL, 1,1-	*	*
BIS(2-CHLOROETHYL)ETHER	*	*
BIS(2-CHLOROISOPROPYL)ETHER	*	*
BIS(2-ETHYLHEXYL)PHTHALATE	*	*
BROMODICHLOROMETHANE	*	*
BROMOFORM	0.002	0.002
BROMOMETHANE	0.003	0.003
CADMIUM	1.0	1.0
CARBON TETRACHLORIDE	0.002	0.002
CHLORDANE	0.05	0.05

TABLE F: Chemical Compound	Soil Background Concentration (ug/g)	
	Agricultural Land Use	All Other Land Uses
CHLOROANILINE, p-	*	*
CHLOROBENZENE	0.002	0.002
CHLOROFORM	0.006	0.006
CHLOROPHENOL, 2-	0.1	0.1
CHROMIUM (TOTAL)	67	71
CHROMIUM (VI)	2.5	2.5
CHRYSENE	0.18	0.69
COBALT	19	21
COPPER	56	85
CYANIDE (FREE)	0.12	0.12
DIBENZO(a,h)ANTHRACENE	0.15	0.16
DIBROMOCHLOROMETHANE	0.003	0.003
DICHLOROBENZENE, 1,2- (o-DCB)	0.002	0.002
DICHLOROBENZENE, 1,3- (m-DCB)	0.002	0.002
DICHLOROBENZENE, 1,4- (p-DCB)	0.002	0.002
DICHLOROBENZIDINE, 3,3'-	*	*
DDD	*	*
DDE	*	*
DDT	0.12	1.4
DICHLOROETHANE, 1,1-	0.002	0.002
DICHLOROETHANE, 1,2-	0.002	0.002
DICHLOROETHYLENE, 1,1-	0.002	0.002
DICHLOROETHYLENE, CIS-1,2-	*	*
DICHLOROETHYLENE, TRANS-1,2-	0.003	0.003
DICHLOROPHENOL, 2,4-	0.1	0.1
DICHLOROPROPANE, 1,2-	0.002	0.002
DICHLOROPROPENE, 1,3-	0.003	0.003
DIELDRIN	0.05	0.05
DIETHYL PHTHALATE	*	*

TABLE F:	Soil Background Concentration (ug/g)	
	Chemical Compound	Agricultural Land Use
DIMETHYL PHTHALATE	*	*
DIMETHYLPHENOL, 2,4-	0.2	0.2
DINITROPHENOL, 2,4-	0.2	0.2
DINITROTOLUENE, 2,4-	*	*
DIOXIN/FURAN (ng TEQ/g soil)	0.007	0.007
ENDOSULFAN	*	*
ENDRIN	0.05	0.05
ETHYLBENZENE	0.002	0.002
ETHYLENE DIBROMIDE	0.004	0.004
FLUORANTHENE	0.24	1.1
FLUORENE	0.05	0.12
HEPTACHLOR	0.05	0.05
HEPTACHLOR EPOXIDE	0.05	0.05
HEXACHLOROBENZENE	*	*
HEXACHLOROBUTADIENE	*	*
HEXACHLOROCYCLOHEXANE, GAMMA	*	*
HEXACHLOROETHANE	*	*
INDENO(1,2,3-cd)PYRENE	0.11	0.38
LEAD	55	120
MERCURY	0.16	0.23
METHOXYCHLOR	0.05	0.05
METHYL ETHYL KETONE	*	*
METHYL ISOBUTYL KETONE	*	*
METHYL MERCURY	*	*
METHYL TERT BUTYL ETHER	*	*
METHYLENE CHLORIDE	0.003	0.003
METHYLNAPHTHALENE, 1-	0.05	0.26
METHYLNAPHTHALENE, 2-	0.05	0.29
MOLYBDENUM	2.5	2.5

TABLE F:	Soil Background Concentration (ug/g)	
	Chemical Compound	Agricultural Land Use
NAPHTHALENE	0.05	0.09
NICKEL	43	43
PENTACHLOROPHENOL	0.1	0.1
PETROLEUM HYDROCARBONS(gas/diesel)	*	*
PETROLEUM HYDROCARBONS(heavy oils)	*	*
PHENANTHRENE	0.19	0.69
PHENOL	0.1	0.1
POLYCHLORINATED BIPHENYLS	0.3	0.3
PYRENE	0.19	1.0
SELENIUM	1.4	1.9
SILVER	0.35	0.42
STYRENE	0.002	0.002
TETRACHLOROETHANE, 1,1,1,2-	*	*
TETRACHLOROETHANE, 1,1,2,2-	0.004	0.004
TETRACHLOROETHYLENE	0.002	0.002
THALLIUM	2.5	2.5
TOLUENE	0.002	0.002
TRICHLOROBENZENE, 1,2,4-	*	*
TRICHLOROETHANE, 1,1,1-	0.008	0.009
TRICHLOROETHANE, 1,1,2-	0.002	0.002
TRICHLOROETHYLENE	0.004	0.004
TRICHLOROPHENOL, 2,4,5-	0.1	0.1
TRICHLOROPHENOL 2,4,6-	0.1	0.1
VANADIUM	91	91
VINYL CHLORIDE	0.003	0.003
XYLENES	0.002	0.002
ZINC	150	160
ELECTRICAL CONDUCTIVITY (mS/cm)	0.47	0.57
CHLORIDE	58	330

Dated February 1997

A41

Chemical Compound	Soil Background Concentration (ug/g)	
	Agricultural Land Use	All Other Land Uses
NITROGEN (TOTAL %)	0.7	0.7
NITRITE/NITRATE	40	61
SODIUM ADSORPTION RATIO (SAR)	1.0	2.4

Note: * No value derived.

APPENDIX D

Province of Ontario
Ministry of Northern Development
and Mines Completed Form 0241
"Declaration of Assessment
Work Performed on Mining Lands"

APPENDIX E

Province of Ontario
Ministry of Northern Development
and Mines Completed Form 0212
"Statement of Costs for Assessment Credit"

APPENDIX F

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

AUGUST 1998

D. Gourley

D. Gourley is a licensed Professional Engineer in the Province of Ontario. Mr. Gourley has over fourteen years experience in geotechnical, environmental and construction engineering.

K. H. Kriese

K. H. Kriese has a background in geology and environmental consulting. Mr. Kriese has been mineral prospecting in many parts of Canada for 30 years.

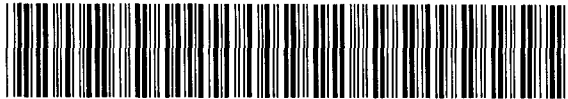


Ministry of
Northern Development
and Mines

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use) W9880.00531
Assessment Files Research Imaging



31M04SE2003 2.18718 SOUTH LORRAIN 900

subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the
view the assessment work and correspond with the mining land holder.
Recorder, Ministry of Northern Development and Mines, 8th Floor.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0218
- Please type or print in ink.

RECEIVED
AUG 28 1998
18:45
GEOSCIENCE ASSESSMENT
OFFICE

1. Recorded holder(s) (Attach a list if necessary)

Name <i>KARL H. KRIESE</i>	Client Number <i>18.45</i>
Address <i>R.R.#2 LISLE, ON L0M1M0</i>	Telephone Number <i>705 466 2775</i>
	Fax Number
Name	Client Number
Address	Telephone Number
	Fax Number

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs) Physical: drilling, stripping, trenching and associated assays Rehabilitation

Work Type <i>Soil Sampling + Linecutting</i>	Office Use
	Commodity
Dates Work Performed From <i>14 05 97</i> To <i>18 05 97</i>	Total \$ Value of Work Claimed <i>11,009</i>
Global Positioning System Data (if available)	NTS Reference
Township/Area <i>SOUTH LORRAIN</i>	Mining Division <i>Larder Lake</i>
M or G-Plan Number <i>G-3448</i>	Resident Geologist District <i>Kirkland Lake</i>

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name <i>Dave Gourley</i>	Telephone Number <i>416 730 0648</i>
Address <i>11-12 OAKBURN CRES, WILLOWDALE, ON M2N 2T4</i>	Fax Number <i>416 730 9687</i>
Name	Telephone Number
Address	Fax Number
Address	Fax Number

2.18718

4. Certification by Recorded Holder or Agent

I, *KARL H. KRIESE* (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent <i>[Signature]</i>	Date <i>10/09/98</i>
Agent's Address <i>R.R.#2 LISLE, ON. L0M1M0</i>	Telephone Number <i>705 466 2775</i>
	Fax Number

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W9880.00532

Mining Claim Number. Or if work was done on other eligible mining land, enter in this column the location number indicated on the claim map.	Number of Claims Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg TB 7827	16 ha	\$25,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,882	\$ 4,000	0	\$4,882
1 1214461	8	11,009	11009	0	0
2					
3					
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10					
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12					
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14					
15					
Column Totals					

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I, KARL H. KRIEVE (Print Full Name) do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/86 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recipient, Miner or Agent Authorized in Writing: [Signature] Date: 10/08/98

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

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 AUG 31 1998
 GEOSCIENCE ASSESSMENT OFFICE

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)		

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)		



Statement of Costs for Assessment Credit
Mining Claim 1214461

Transaction Number (office use)
W9880.00532

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

RECEIVED
AUG 28 1998
GEOSCIENCE ASSESSMENT OFFICE

Work Type	Units of Work <small>Depending on the type of work, list the number of hours/days worked, metres of drilling, kilo metres of grid line, number of samples, etc.</small>	Cost Per Unit	Total Cost
Linecutting 0.5 km	(3 men x 4 hours x \$40.00/hr) + (1 man x 4 hours x \$80.00/hr)		\$800.00
Sampling Gridline layout	100+ stations (3 x 8 hours x \$40. + 1 x 8 x \$80.)		\$1,600.00
Soil Sample Retrieval, preparation & bagging & organization for laboratory analyses	3 x 8 x 40 + 1 x 8 x 80.		\$1,600.00
Report Writing Professional Engineer	16 hours	\$80.00/hour	\$1,280.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
mobilization 4 men (3 x 8 hrs x \$40) + (1 x 8 x \$80)			\$1,600.00
demobilization 4 men (3 x 8 hrs x 40) + (1 x 8 x \$80)			\$1,600.00
Equipment, maps, sample bags			\$318.99
Delivery of soil samples to Laboratory 4 hrs		\$40.00/hr.	\$160.00
Soil Chemical Analyses on 57 soil samples			\$1,186.00
Transportation Costs			
Float Plane, Canoe rental, fuel			\$586.67
Food and Lodging Costs			
			\$278.27
Total Value of Assessment Work			\$11,009.93

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK × 0.50 = Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, KARL H. KRIESE (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as KARL H. KRIESE (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

Signature: [Signature] Date: 10/08/98

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9846
Fax: (877) 670-1555

January 8, 1999

KARL HELMUTH KRIESE
R.R.#2
LISLE, ONTARIO
L0M-1M0

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.18718

Status

Subject: Transaction Number(s): W9880.00532 Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.18718

Date Correspondence Sent: January 08, 1999

Assessor: Lucille Jerome

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9880.00532	1214461	SOUTH LORRAIN	Approval After Notice	January 05, 1999

Section:

13 Geochemical GCHEM

The 45 days outlined in the Notice dated November 17, 1998 have passed.

Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

Correspondence to:

Resident Geologist
Kirkland Lake, ON

Recorded Holder(s) and/or Agent(s):

KARL HELMUTH KRIESE
LISLE, ONTARIO

Assessment Files Library
Sudbury, ON

Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: January 08, 1999

Submission Number: 2.18718

Transaction Number: W9880.00532

<u>Claim Number</u>	<u>Value Of Work Performed</u>
1214461	6,011.00
Total: \$	6,011.00



2.18718
GCNEM

ARCHIVED SEPT. 17, 1996
CIRCULATED AUGUST 21, 1996

AREAS WITHDRAWN FROM DISPOSITION
 MRD - Mining Rights Only
 SRG - Surface Rights Only
 M+S - Mining and Surface Rights

NOT OPEN FOR STAKING - CONSERVATION RESERVE SECTION I OF THE MINING ACT

FILE 134327

DISPOSITION OF CROWN LANDS

Patent
 Surface & Mining Rights
 Surface Rights Only
 Mining Rights Only

Lease
 Surface & Mining Rights
 Surface Rights Only
 Mining Rights Only

Order-in-Council
 Granted
 Reserved
 Sand & Gravel
 Land Use Permit

Ministry of Natural Resources
 Ministry of Northern Development and Mines

INDEX TO LAND DISPOSITION
 DATE OF ISSUE
 JUL 7 1996 3448

PROVINCIAL RECORDING OFFICE (ONTARIO)

SOUTH LORRAIN

Scale 1:20 000

M.N.R. ADMINISTRATIVE DISTRICT
TEMAGAMI
 MINING DIVISION
 LARDER LAKE
 LAND TITLES/REGISTRY DIVISION
TIMISKAMING

SYMBOLS

Boundary	Administrative District	Flooded land
Township, Meridian, Baseline	Road (stippled)	Mine shaft
Road (stippled)	Lot/Concession, surveyed	Pipeline (orange line)
Parcel, surveyed	Lot/Concession, unsurveyed	Railway, single track
Parcel, unsurveyed	Right-of-way, road	Railway, double track
Right-of-way, road	Reservation	River/Stream/Creek
Right-of-way, railway	Cliff, Pit, Pile	Shoreline (orange)
Reservation	Interpolated	Transmission line
Cliff, Pit, Pile	Approximate	Wooded area
Interpolated	Control point (horizontal)	
Approximate		
Control point (horizontal)		

THIS TOWNSHIP FALLS WITHIN THE TEMAGAMI COMPREHENSIVE PLANNING AREA. SPECIAL WORKING CONDITIONS MAY APPLY TO EXPLORATION ACTIVITIES. FOR MORE DETAILS PLEASE CONTACT: DISTRICT MANAGER, NORTH BAY DISTRICT, MINISTRY, NATURAL RESOURCES

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THESE MINING CLAIMS SHOULD BE CONSULTED WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.