



41010NE0051 2.1743 CUNNINGHAM

010

REPORT ON A GEOCHEMICAL SURVEY FOR
GRANDORA EXPLORATIONS LTD. (NPL),
SHUNSBY PROPERTY, CUNNINGHAM TOWNSHIP,
SUDBURY M.D., ONTARIO

INTRODUCTION

The purpose of this report is to describe the geochemical survey work carried out on six unpatented claims of Consolidated Shunsby Mines Ltd., under option to Grandora Explorations Ltd., (NPL). These six unpatented claims comprise what is known as the Tower Group. Field work commenced on September 20, 1974 and terminated on September 26, 1974, and the field crew consisted of: William Heshka, geologist; Fred Holcapek, P.Eng., consulting geologist and field supervisor; and J. Pyce, helper. The writer has not personally visited the property but has mapped the field results. The writing of this report was done in consultation with Mr. Fred Holcapek, P.Eng., supervising engineer.

LOCATION AND ACCESS

The property is located in Cunningham Township, Sudbury Mining District, Ontario, approximately seventy-five miles south-west of Timmins or fourteen miles north-east of Sultan which is located along the Canadian Pacific Railway mainline. A gravel road, classified as a summer road branches from the Provincial Highway 129, twenty-five miles south of Chapleau. This road passes through Sultan and one-quarter miles east of Peter Lake. Access from Peter Lake is by three miles of gravel road by four-wheeled drive vehicle. Considerable road repairs have been done on the latter sections of the road since field

work commenced on the property in September, 1974. There are also good landing areas for float planes along the lakes on the property. The centre of the property has coordinates 47° 42' North Latitude, 82° 40' West Longitude.

PROPERTY

The property consists of the following mineral claims located in Cunningham Township in the Province of Ontario:

Patented Claims

<u>Claim No.</u>	<u>Parcel No.</u>	<u>Claim No.</u>	<u>Parcel No.</u>
S34944	11110	S57539	18414
S34945	11111	S57540	18413
S34946	11112	S57541	18412
S34947	11113	S57542	18411
S43946	15413	S57543	18410
S43947	15414	S57544	18409
S43948	15945	S57585	18408
S57536	18417	S61828	18420
S57537	18416	S61829	18419
S57538	18415	S61830	18418

Leased Claims

<u>Claim No.</u>	<u>Mining Lease No.</u>	<u>Parcel No.</u>	<u>Registered No.</u>
S90411	100921	742 LSWS	1717 LSWS
S90412	100920	739 LSWS	1714 LSWS
S90413	100919	740 LSWS	1715 LSWS
S90414	100918	741 LSWS	1716 LSWS
S90415	100917	743 LSWS	1718 LSWS
S121596	102273	912 LSWS	278780

Claim No.	Mining Lease No.	Parcel No.	Registered No.
S121597	102274	903 LSWS	178781
S121598	102270	904 LSWS	278782
S147117	102272	905 LSWS	278783
S147118	102271	906 LSWS	278784

Staked Claims (Unpatented)

Unpatented mining claims S388970 to S388980, both inclusive.

Licence of Occupation

Licence of Occupation No. 13525, dated February 8, 1963, comprising those parts of claims S57542, S57543 and S57544 covered by the waters of Edwards Lake, comprising 23.32 acres. Total acreage is about 1650 acres.

GENERAL GEOLOGY

The Cunningham Township and adjacent areas were mapped by V. L. Meen in 1941 and the geology is described in Ontario Department of Mines Publication VOL. 51, Part 7, and accompanying Geological Map 51F. The map shows Cunningham Township to be underlain by Precambrian rocks, mainly Keewatin type basic volcanics locally intercalated with narrow bands of rhyolite, trachyte, pyroclastics, and sedimentary rocks. Exposed on the west central part of the Township is the Ridout Series, a sequence of conglomerates, quartzites, and iron formation and cherts which overlies the Keewatin volcanics. This is possibly a later series. Intruding both the volcanic and sedimentary rocks in the south-west corner of the Township is a stock of granite and granite-gneiss and minor intrusives of various composition.

The predominant faults trend northerly and the Keewatin and Ridout Series have been closely folded and the dips vary from moderate to steep.

LOCAL GEOLOGY

Extensive work has been done on the eastern half of the property. The two principal chart members identified are the basal and middle chert bands which strike northerly and dip westerly at 30°; and, are interbedded with andesitic lavas and intruded by diorite sills and dykes.

These chert bands are in the Ridout Series and are partly brecciated. These brecciated zones are the principal host for the copper-zinc mineralization; but, occasionally mineralization occurs in the sulphide-bearing fracture zones. The chert formation outcrops extensively on the north-western part of the property and the controlling structure appears to be a shallow syncline plunging westerly at about 30°. The unpatented claims cover the north end of this syncline and the geochemistry survey conducted was over these unpatented claims.

MINERALIZATION

Mineralization occurs as chalcopyrite, sphalerite, pyrite, minor magnetite, pyrrhotite and galena. These minerals have been found wide spread within the cherts and argillites with breccia fillings along bedding planes or as disseminations. Richer sections are normally associated with intense brecciation of the chert. Information derived from diamond drilling suggest a possible strata form deposit.

GEOCHEMICAL SURVEY, Procedure

(1) Field

A geochemical survey was conducted on the six unpatented claims which comprise the Tower Group; viz., S388970 to S388975 from September 20, 1974 to September 26, 1974. A 400' x 100' grid was established which was flagged and chained. Samples were taken every one hundred feet. A total of two hundred and nineteen samples were taken from the B soil horizon, which was poorly defined and considered glacial drift or thin layers over bedrock. Samples were taken by grub hoe from an average depth of four to six inches. The samples were then bagged into kraft envelopes and shipped to Vancouver for analysis.

(2) Laboratory

Laboratory analysis was carried out by Chemex Laboratories Ltd., 212 Brooksbank, North Vancouver, B.C.

Geochemical samples were dried at eighty degrees centigrade for twelve to twenty-four hours. The dried sample was then sieved to a minus eighty mesh fraction through a nylon and stainless steel sieve. A fifty gram sample was then weighed out into a calibrated test tube. The digestion was done in hot seventy per cent perchloric acid ($HClO_4$) and hot nitric acid (HN_3) to give a hot extraction. The digestion took place for two or three hours. Quantitative analysis for zinc and copper was performed using atomic absorption methods.

RESULTS

A statistical analysis of the two hundred and nineteen samples taken was made. Frequency distribution plots were made of soil values for zinc and copper in p.p.m as a function of cumulative per cent frequency to determine the background and anomalous ranges. As a result, the parameters obtained were:

<u>Range</u>	<u>Background</u>	<u>Anomalous</u>
Cu 1-30 p.p.m	15 p.p.m	50 p.p.m
Zn 22-2368 p.p.m.	250 p.p.m	500 p.p.m

INTERPRETATION AND CONCLUSION

As can be seen from the isograd maps for zinc and copper, two coincident copper and zinc anomalies occur. The most northerly anomaly (1200' x 400') strikes east and west along 26+00N across lines 16W and 12W. This anomaly straddles the chert-greenstone geological contact. The higher values of the anomaly overlay the chert formation. The parallel anomaly near Tower Lake on line 16W is also in the chert formation. Since it has been found that the brecciated chart hosts the copper-zinc mineralization, these anomalies, although small, may have some significance. The trend of the anomalies is perpendicular to the direction of glacial drift which is north to south, and it is thought, therefore, that the anomalies are related to mineralization. The topographic relief is not drastic and is thought to have little influence on geochemical results.

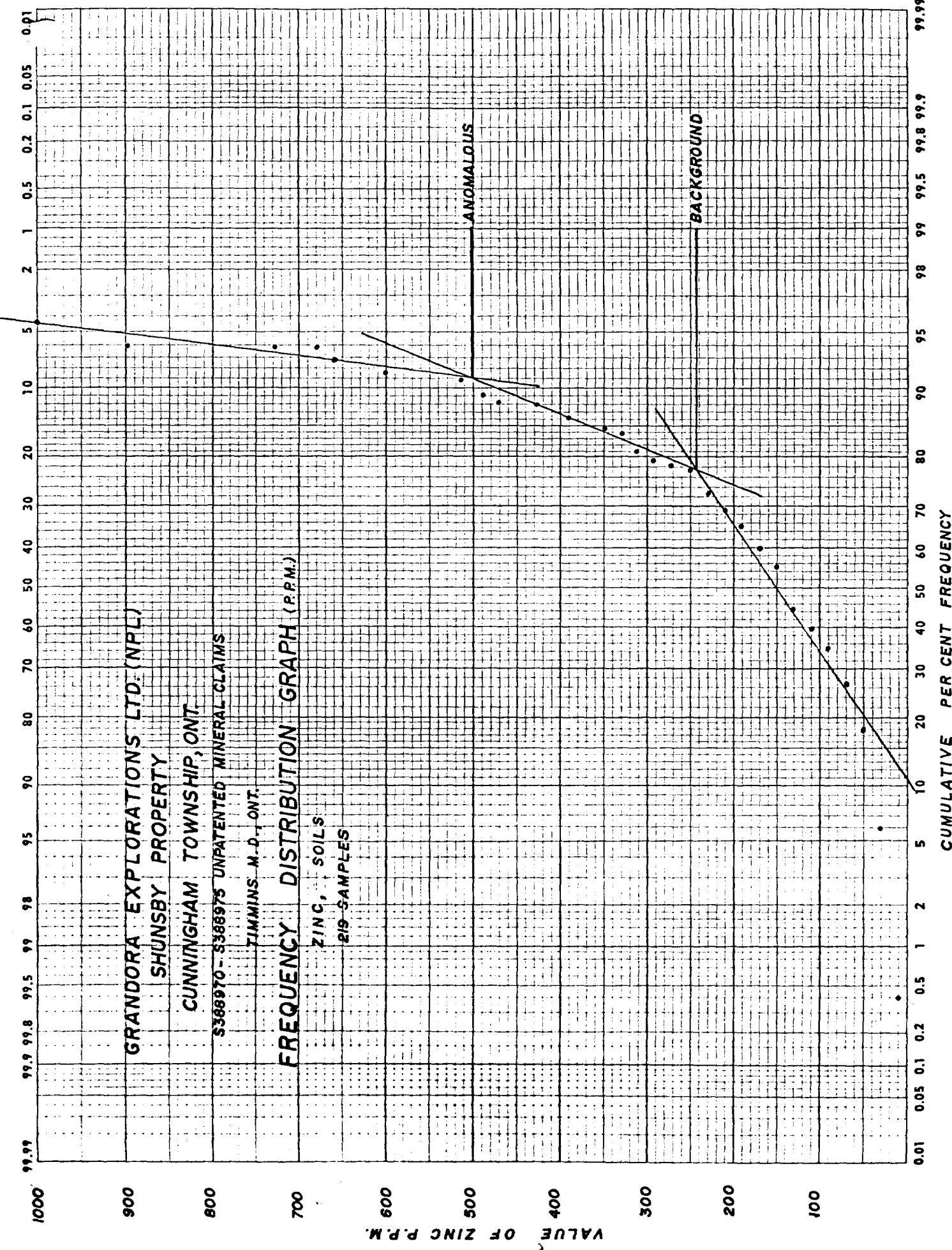
C. H. Stanley

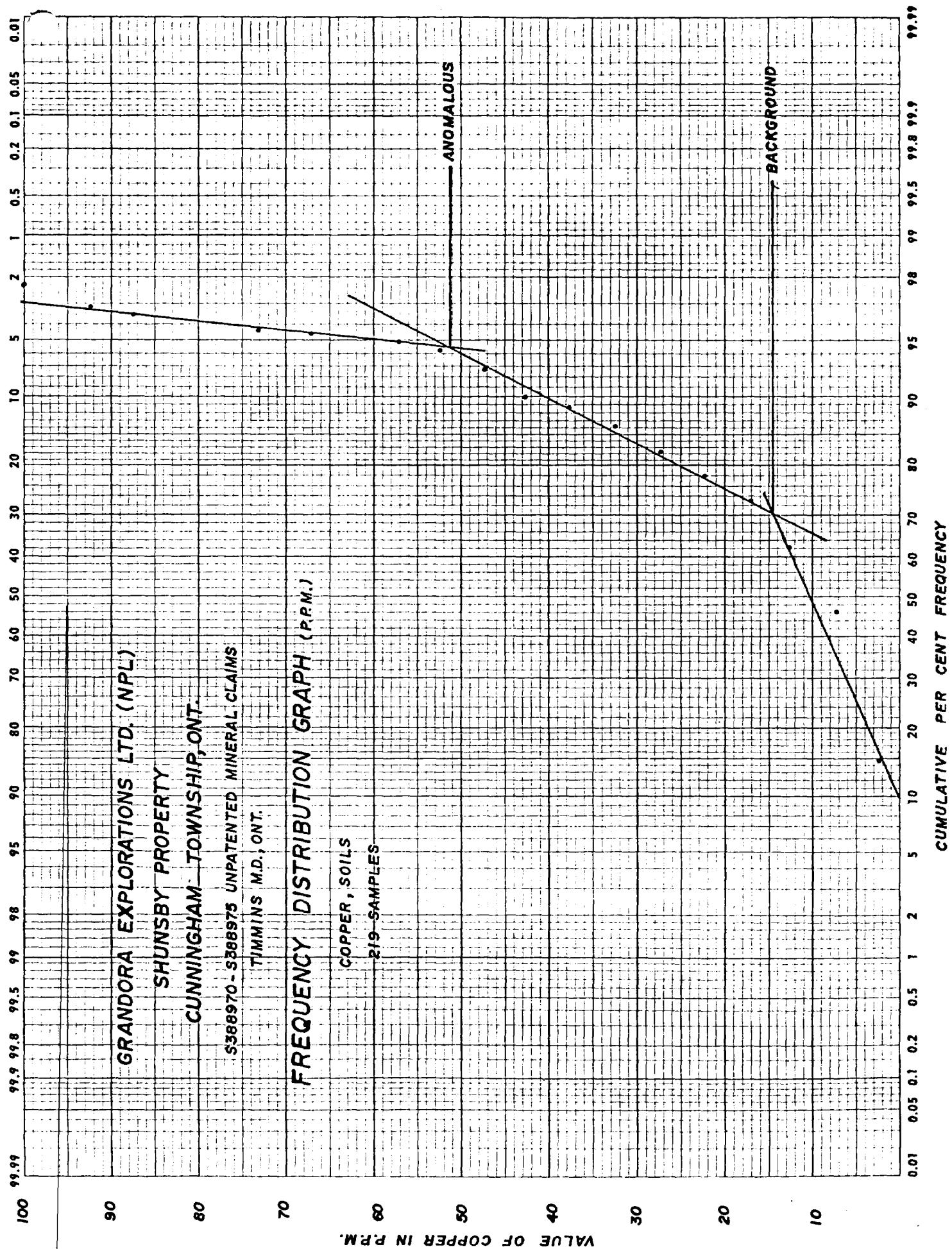
March 13, 1975

VANCOUVER, BRITISH COLUMBIA

Qualifications: on the file (New)

* next page







CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 28835

TO: Agilis Exploration Services Ltd., INVOICE NO. 13168

107 - 325 Howe St.,
Vancouver 1, B.C.

RECEIVED Dec. 6/74
ANALYSED Dec. 11/74

ATTN:

SAMPLE NO. :	PPM Copper	PPM Zinc
101 6100 WL205	22	200
102 5100 S.E.	4	77
103 4100	7	127
104 3100	14	265
105 2100	24	295
106 1100	7	164
107 0100	12	144
108 5100 TG. LO.	13	160
109 1100 N	6	189
110 2100	24	233
111 2100	21	225
112 0100	300	680
113 5100	48	360
114 6100	6	152
115 7100	44	660
116 8100	14	900
117 9100	12	115
118 10100	4	120
119 11100	54	160
120 12100	7	160
121 13100	8	200
122 14100	8	330
123 15100	14	211
124 16100	4	179
125 17100	16	330
126 18100	6	105
127 19100	34	248
128 20100	44	184
129 21100	26	148
130 22100	33	330
131 23100	4	98
132 24100	7	67
133 25100	4	45
134 26100	3	240
135 27100	20	400
136 28100 L.	14	174
137 29100 L. 4 L.	8	65
138 30100 S	1	32
139 31100	106	900
140 32100	56	155
Std.	72	50

TOWER
GROUP



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: Hart Riddle



CHEMEX LABS LTD.

CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Agilis Exploration Services Ltd.,
107 - 325 Howe St.,
Vancouver 1, B.C.

ATTN:

CERTIFICATE NO.	28836
INVOICE NO.	13168
RECEIVED	Dec. 6/74
ANALYSED	Dec. 11/74

SAMPLE NO. :	PPM Copper	PPM Zinc	
141 S400 L 9 W	4	55	
142 G110	22	148	
143 T100	18	248	
144 E470	24	1536	
145 9100	4	131	
146 10400	13	50	
147 11400	6	89	
148 12100	28	285	
149 14100	33	200	
150 15100	36	317	
151 16100	4	65	
152 17100	16	80	
153 18100	8	50	
154 20100	30	152	
155 21100	10	123	
156 22100	36	218	
157 23100	13	144	
158 24100	1	89	
159 25100	3	200	
160 26100	6	248	
161 27100	10	275	
162 28100	4	218	
163 29100 S	3	95	
164 0100 L 8 W	7	115	
165 141111	1	86	
166 2430 N	6	400	
167 3400	1	360	
168 4400	3	482	
169 5400	14	525	
170 6400	3	317	
171 7400	50	169	
172 8400	7	233	
173 10400	18	152	
174 11400	1	70	
175 12400	4	200	
176 1340	10	466	
177 15400	6	108	
178 16400	58	174	
179 17400	48	248	
180 18400	12	218	
Std.	72	50	



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Hart Riddle



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TELEPHONE: 985-0648
AREA CODE: 604

CERTIFICATE OF ANALYSIS

TO: Agilis Exploration Services Ltd.,
197 - 325 Howe St.,
Vancouver 1, B.C.

ATTN:

CERTIFICATE NO. 28837

INVOICE NO. 13168

RECEIVED Dec. 6/74

ANALYSED Dec. 11/74

SAMPLE NO. :	PPM Copper	PPM Zinc	
181 19±0	92	275	
182 20±0	16	155	
183 21±0	34	105	
184 22±0	14	218	
185 23±0	6	80	
186 24±0	8	62	
187 25±0	10	206	
188 26±0	20	620	
189 27±0	24	660	
190 28±0	14	65	
191 29±0		317	
192 30±0	1	24	
193 31±0	7	50	
194 32±0	12	43	
195 32±0 N	295	1148	TOWER GROUP!
196 0±0 L 12W	12	600	
197 1±0 N	7	206	
198 2±0	7	75	
199 3±0	16	192	
200 4±0	31	434	
201 6±0	7	43	
202 7±0	10	144	
203 8±0	7	148	
204 9±0	3	225	
205 10±0	98	305	
206 11±0	4	95	
207 12±0	7	83	
208 13±0	12	95	
209 14±0	13	360	
210 15±0	7	206	
211 16±0	10	400	
212 17±0	8	184	
213 18±0	12	115	
214 19±0	16	265	
215 20±0	16	57	
216 21±0	12	50	
217 22±0	42	47	
218 23±0	13	43	
219 24±0	8	86	
220 25±0	3	75	
Std.	72	52	



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ASSOCIATION

CERTIFIED BY:

Hartfield



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• GEOCHEMISTS

• REGISTERED ASSAYERS

CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

CERTIFICATE OF ANALYSIS

TO: Agilis Exploration Services Ltd.,
107 - 325 Howe St.,
Vancouver 1, B.C.

ATTN:

CERTIFICATE NO. 28838

INVOICE NO. 13168

RECEIVED Dec. 6/74

ANALYSED Dec. 11/74

SAMPLE NO. :	PPM Copper	PPM Zinc	
221 26+cc	7	500	
222 27+cc	50	434	
223 28+cc	88	2368	
224 29+cc	7	194	
225 30+cc	14	41	
226 31+cc	26	92	
227 32+cc	4	95	
228 33+cc	7	62	
229 34+cc N	7	131	
230 6+cc L'GW	8	34	
231 1+cc S	10	43	
232 2+cc	40	255	
233 3+cc	6	34	
234 4+cc	4	89	
235 5+cc	268	1916	TOWER GROUP
236 6+cc	26	1772	
237 7+cc	12	50	
238 8+cc	6	80	
239 9+cc	30	50	
240 10+cc	20	123	
241 11+cc	28	733	
242 12+cc	66	1260	
243 13+cc	13	108	
244 14+cc	14	330	
245 15+cc	4	62	
246 16+cc	6	344	
247 21+cc	4	155	
248 22+cc	7	169	
249 23+cc	10	218	
250 24+cc	52	127	
251 25+cc	10	211	
252 26+cc	12	123	
253 27+cc	10	43	
254 28+cc	20	70	
255 29+cc	86	194	
256 30+cc	6	152	
257 31+cc	8	131	
258 32+cc	13	160	
259 33+cc	33	392	
260 34+cc	30	295	
Std.	74	52	



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

Hartville



CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

CERTIFICATE OF ANALYSIS

TO: Agilis Exploration Services Ltd.,
#107 - 325 Howe St.,
Vancouver 1, B.C.

ATTN:

CERTIFICATE NO. 27656
INVOICE NO. 13138
RECEIVED Dec. 2/74
ANALYSED Dec. 6/74

SAMPLE NO. :	PPM Copper	PPM Zinc	
280	96-	144-	
281	7-	25-	
282	22-	39-	
261	48-	1000-	
262	6-	75-	
263	24-	95-	
264	38-	55-	
265	12-	72-	
266	18-	295-	
267	24-	174-	
268	18-	179-	
269	18-	144-	
270	8-	248-	
271	6-	179-	
272	10-	500-	
273	7-	34-	
274	8-	25-	
275	21-	28-	
276	22-	43-	
277	7-	62-	
278	7-	25-	
279	7-	22-	
Std.	74	52	



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: D. Miller



CHEMEX LABS LTD.

• ANALYSTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

CERTIFICATE OF ANALYSIS

TO: Agilis Exploration Services Ltd.,
107 - 325 Howe St.,
Vancouver 1, B. C.

ATTN:

CERTIFICATE NO. 28839

INVOICE NO. 13168

RECEIVED Dec. 6/74

ANALYSED Dec. 11/74

SAMPLE NO. :	PPM Copper	PPM Zinc
283 5+9 S. L24 W.	16	52
284 6+00 S.	10	57
285 7+00	13	92
286 8+00	12	65
287 9+00	12	47
288 10+00	31	57
289 10+70	54	43
290 14+00	14	62
291 15+00	12	102
292 16+00	30	140
293 17+00	48	120
294 18+00	24	41
295 19+00	30	105
296 20+00	22	115
297 21+00	74	620
298 22+00	48	285
299 23+00	8	248
300 24+00	14	144
301 24+80	12	255
302 26+00	4	140
303 27+00	14	160
304 28+00	12	20
305 29+00	6	95
306 30+00	18	135
307 31+00	16	65
308 32+00	8	95
309 33+00	14	233
310 34+00	10	525
311 34+80	7	155
312 0+00 LDE	6	155
313 1+00	28	211
314 2+00	20	1000
315 3+00	1	155
316 4+00	4	317
317 5+00	6	728
318 6+00	40	525
319 7+00	7	152
320 8+00	6	83
321 9+00	20	36
322 11+00	7	43
Std.	72	50



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

Hart Bille

ASSESSMENT WORK BREAKDOWN

1. TYPE WRITER

Type of Work	Name & Address	Dates Worked	Number of 8 hour days
Engineering calculations	219 surveys analyzed for 6,300		
6,11 Victoria, Toronto	Sept 20-21/74	8	
John P. Cox, Chapleau		8	
Engineering field surveillance with samples			

16

2. CONSULTANTS AGILE ENGINEERING LTD

107 - 325 Howe Street, Vancouver, B.C.

Name & Address	Dates Worked (specify in field or office)	Number of 8 hour days
F. Helcepolo, P. Eng.	Sept 20, 21, 1974 field layout of program	2
T. Helcepolo, P. Eng.	Dec 20, 1974 office supervision	1
C. Gandy, P. Eng.	Report office	2

5

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

Name & Address	Type of Work	Dates Worked	Number of 8 hour days
C. Gandy Draughting	6 ft. 9	November 1974	2
V. Ho Kew Typing Report			1

3

TOTAL 8 HOUR TECHNICAL DAYS

8

4. LINE-CUTTING

Name	Address	Dates Worked	Number of 8 hour days

TOTAL 8 HOUR LINE-CUTTING DAYS

$$24 \times 7 = 168 \div 6 = 28 \text{ days per claim}$$

3

GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA

To be presented as an APPENDIX
FACTS HOW THEY NEED TO
TECHNICAL REPORT. MUST CONTAIN INTERPRETATION, CONCLUSIONS

41010NE0051 2.1743 CUNNINGHAM

900

Type of Survey(s) Geophysical Survey \$100/ftTownship or Area 10-11-12 TownshipClaim Holder(s) Consolidated Shores Inc. Ltd.Survey Company Pigott Engineering Ltd.Author of Report C. Stanley B.Sc. T.Minepote F.Edg.Address of Author 1011-305 How Street, Vancouver B.C.Covering Dates of Survey Sept. 20 - 26 / 74 (Tower group only)
(line cutting to office)Total Miles of Line sampled: 4.15 milesSPECIAL PROVISIONS
CREDITS REQUESTEDENTER 40 days (includes
line cutting) for first
survey.ENTER 20 days for each
additional survey using
same grid.

Geophysical	DAYS per claim
-Electromagnetic	
-Magnetometer	
-Radiometric	
-Other	
Geological	20 days
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)Magnetometer Electromagnetic Radiometric
(enter days per claim)DATE: Nov 12/75 SIGNATURE: F. Pigott P.Eng.
Author of Report or AgentRes. Geol. Qualifications

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....

MINING CLAIMS TRAVESED
List numerically

S	388970 1/3 N/C
(prefix)	(number)
S	388971 ✓
S	388972 ✓
S	388973 1/3 N/C
S	388974 ✓
S	388975 1/4 N/C

*This survey
appears well
timed.
full units
are being allowed*

TOTAL CLAIMS 6

GEOCHEMICAL SURVEY PROCEDURE RECORD

Number of samples from which sample taken - 219 - S 3 + E 4 75 inclusive
Date of sample - June 1968

Total Number of Samples 219

Type of Sample soil (Nature of Material) loamy sand - no organic material

Average Sample Weight about 6 oz.

Method of Collection by hand

Soil Horizon Sampled B horizon where possible

Horizon Development poor

Sample Depth 4 - 6 inches

Terrain undulating, maximum

elevation difference 150 ft

Drainage Development poor along major valleys

Estimated Range of Overburden Thickness

from 0 to > 30 ft in valley

average 10 ft, on ridge less than 5 ft.

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis - 80 mesh,
screened and dried

General No sample from swamps or
water logged areas were collected.

Sample was packed into Kraft-
coil sample envelopes and shipped
to Vancouver.

Before preparation samples were dried
in an electric oven - prior to splitting
3 oz samples were sifted and prepared
for analysis.

ANALYTICAL METHODS

Values expressed in:

per cent

p.p.m.

p.p.b.

Cu, Pb, Zn, Ni, Co, Ag, Mn, As, (circle)

Others

Field Analysis (tests)

Extraction Method

Analytical Method

Reagents Used

Field Laboratory Analysis

No. (tests)

Extraction Method

Analytical Method

Reagents Used

Commercial Laboratory (219 tests)

Name of Laboratory Chemical Labs, Victoria

Extraction Method hot acidic digestor

Analytical Method Atomic absorption

Reagents Used perchloric acid titration

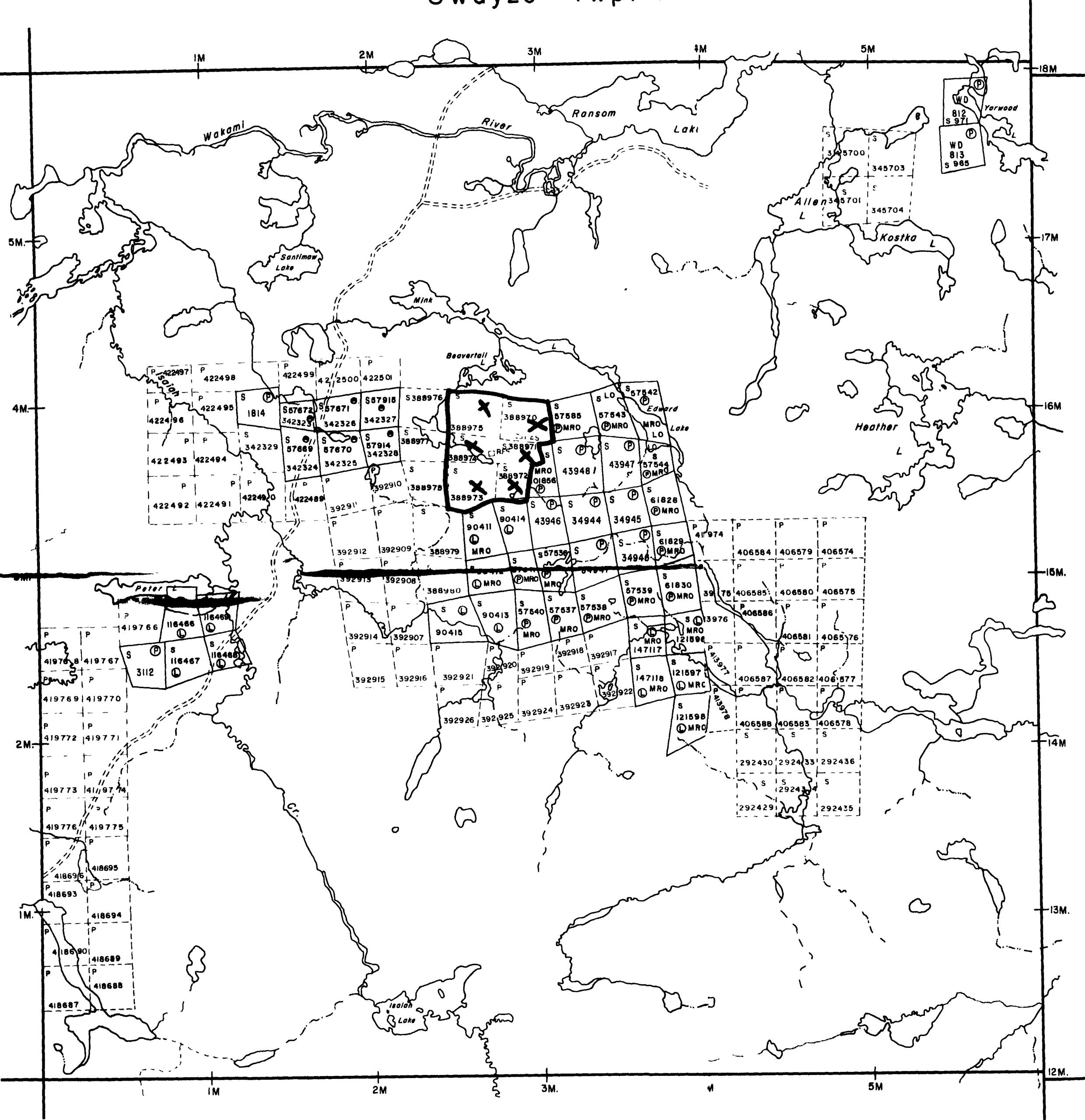
General 24 hour digestion period.

All analyses were checked against a
standard - over 90 over 40 samples

Note: All this information
is included in coverage
Report.

Swayze Twp. M. 1150

Greenlaw Twp. M. 895



Blamey Twp. M. 568



200

THE TOWNSHIP
OF
2.1743
CUNNINGHAM

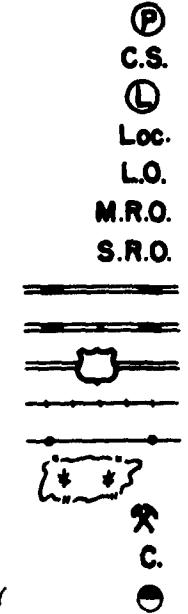
DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- (P) CROWN LAND SALE
- (L) LOCATED LAND
- (L.O.) LICENSE OF OCCUPATION
- (M.R.O.) MINING RIGHTS ONLY
- (S.R.O.) SURFACE RIGHTS ONLY
- (R) ROADS
- (I) IMPROVED ROADS
- (K) KING'S HIGHWAYS
- (R) RAILWAYS
- (P) POWER LINES
- (M) MARSH OR MUSKEG
- (M) MINES
- (C) CANCELLED
- (P) PATENTED FOR SURFACE RIGHTS ONLY



Garnet Twp. M. 829

NOTES

400' Surface Rights Reservation along the shores of all lakes & rivers

- MINING LANDS -
DATE OF ISSUE
APR - 3 1975
MINISTRY
OF NATURAL RESOURCES

PLAN NO.- **M.744**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

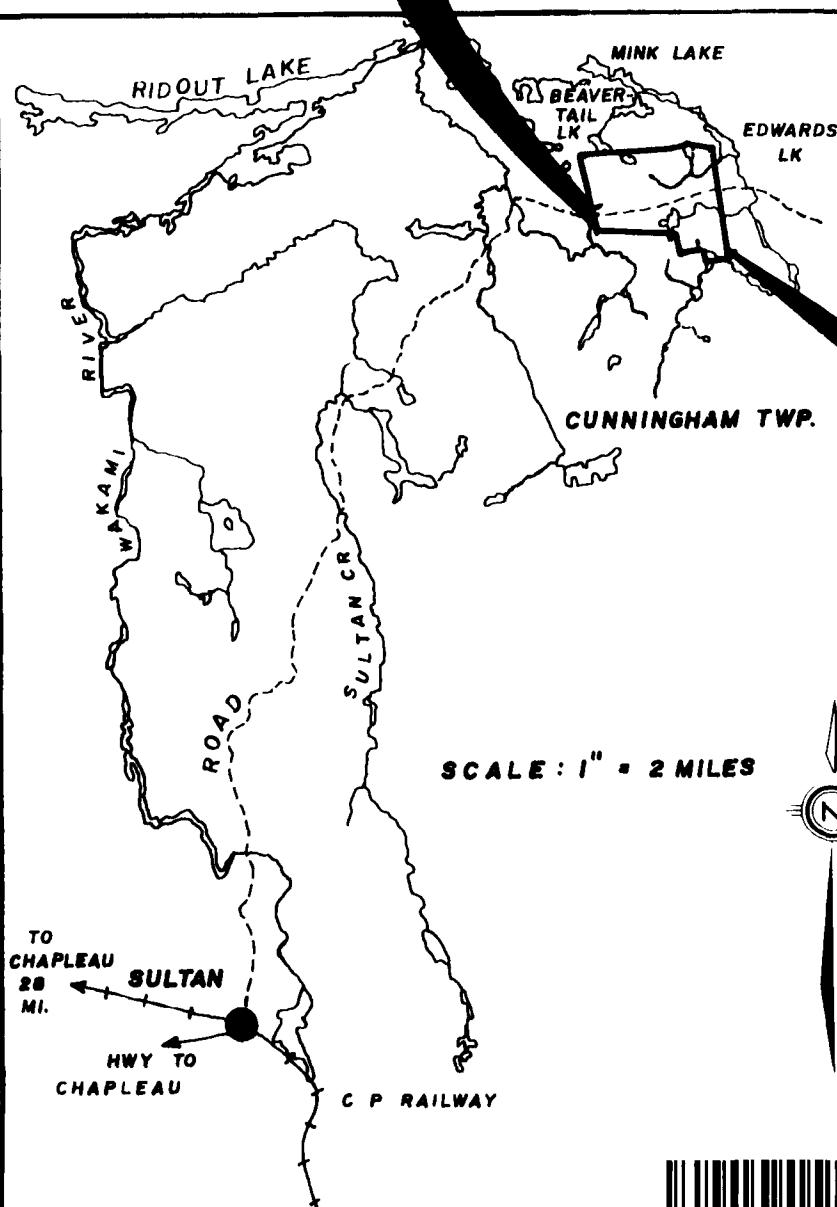
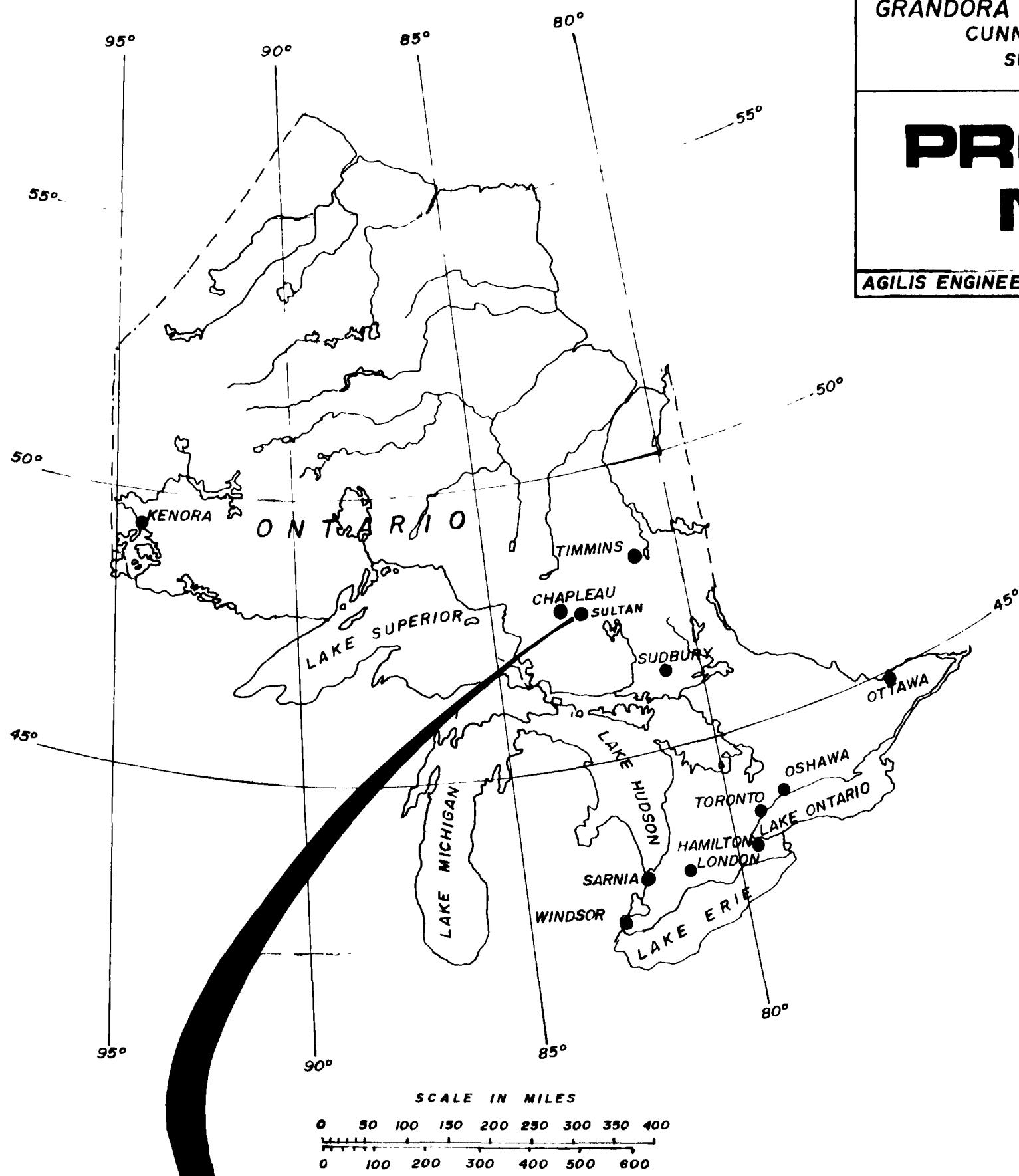
GRANDORA EXPLORATIONS LTD.(N.P.L.)
CUNNINGHAM TOWNSHIP
SUBURY M.D., ONT.

PROPERTY MAP

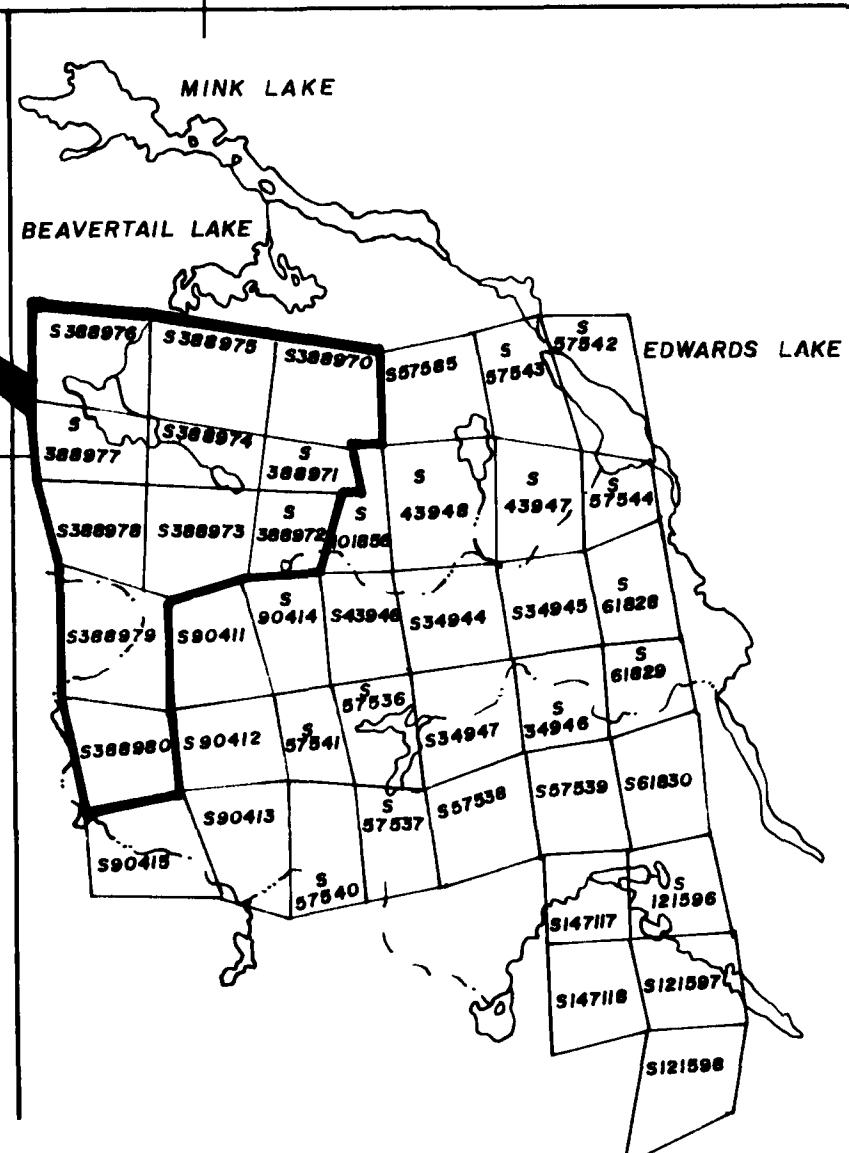
AGILIS ENGINEERING LTD.

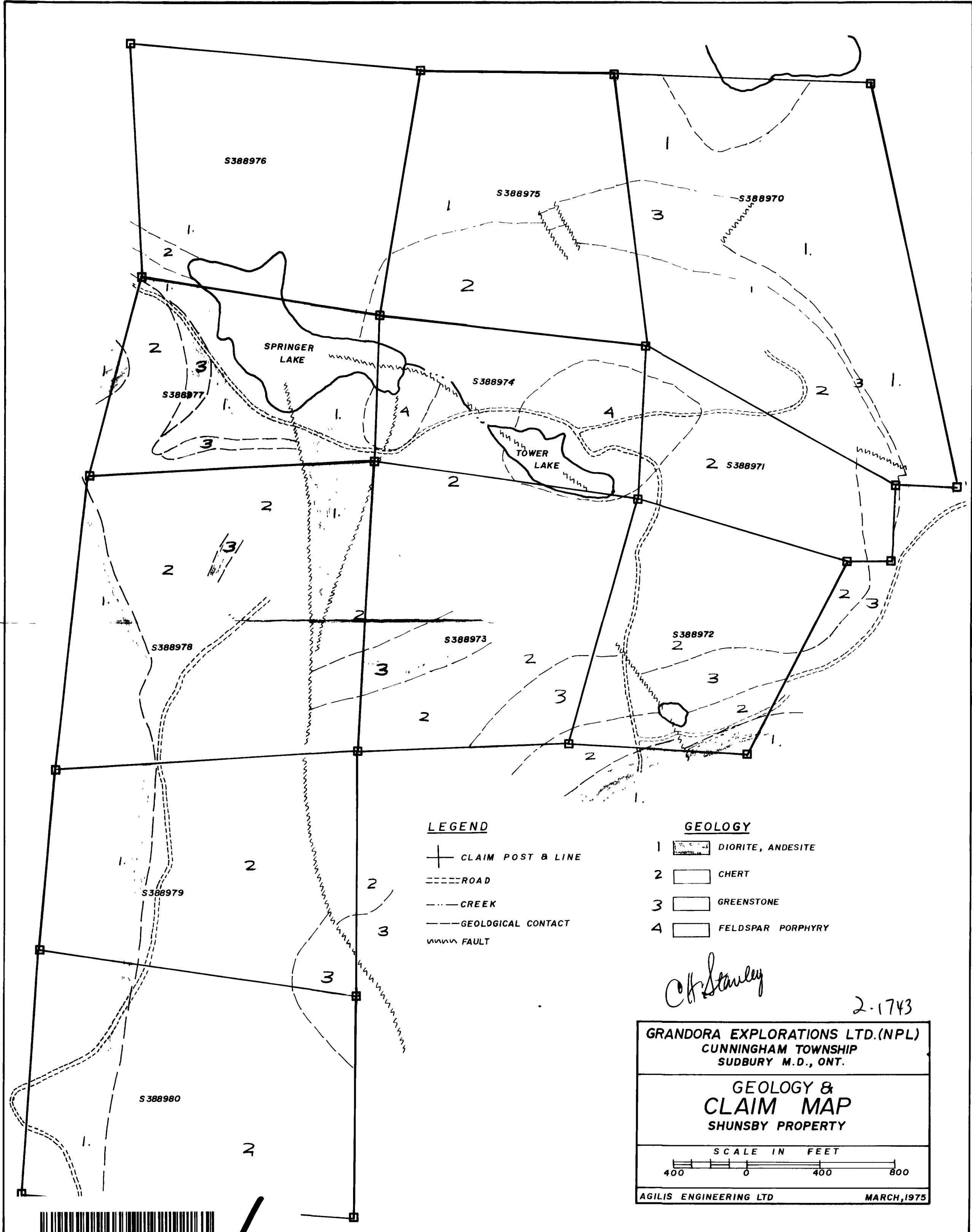
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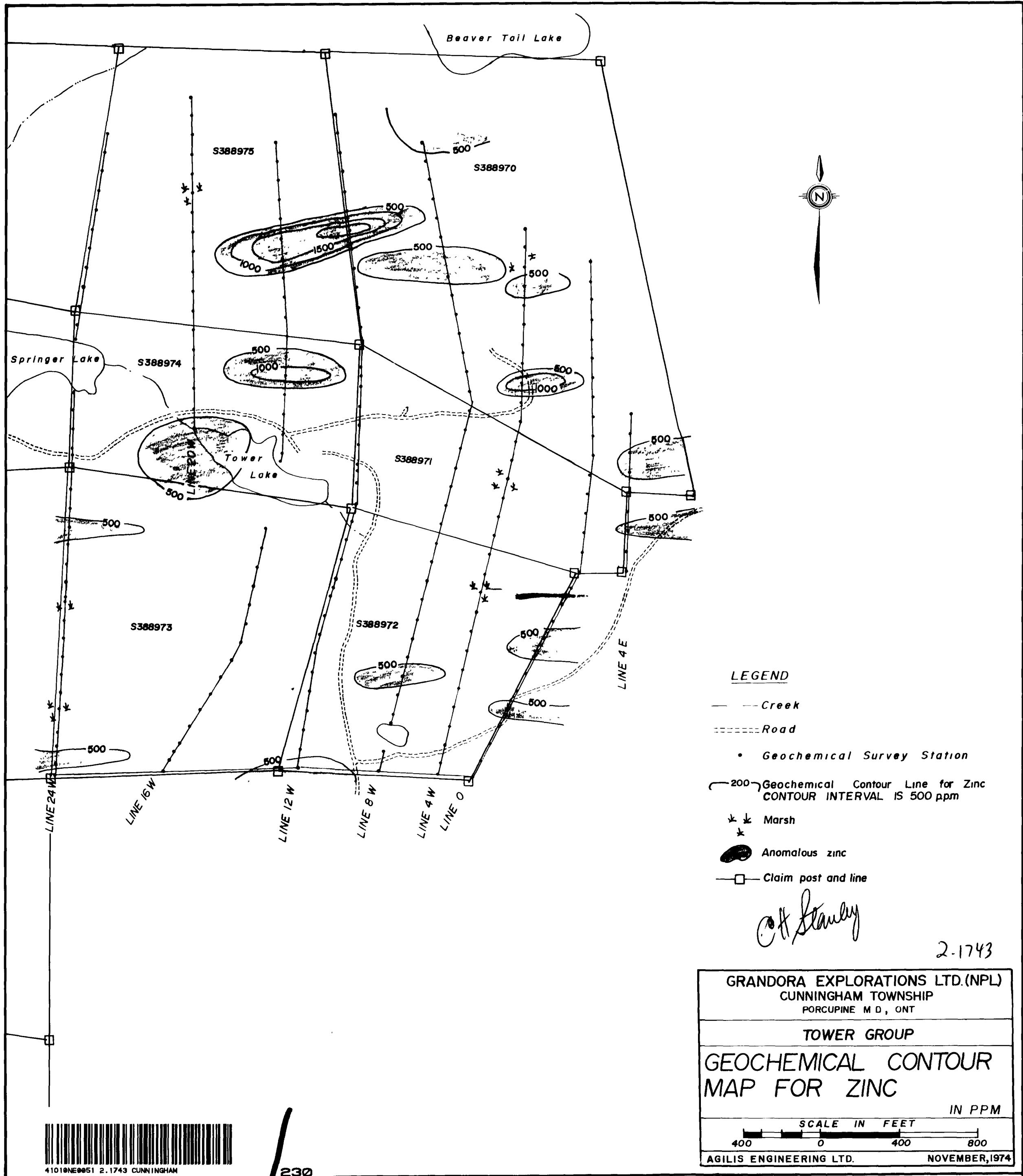
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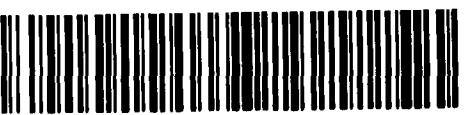
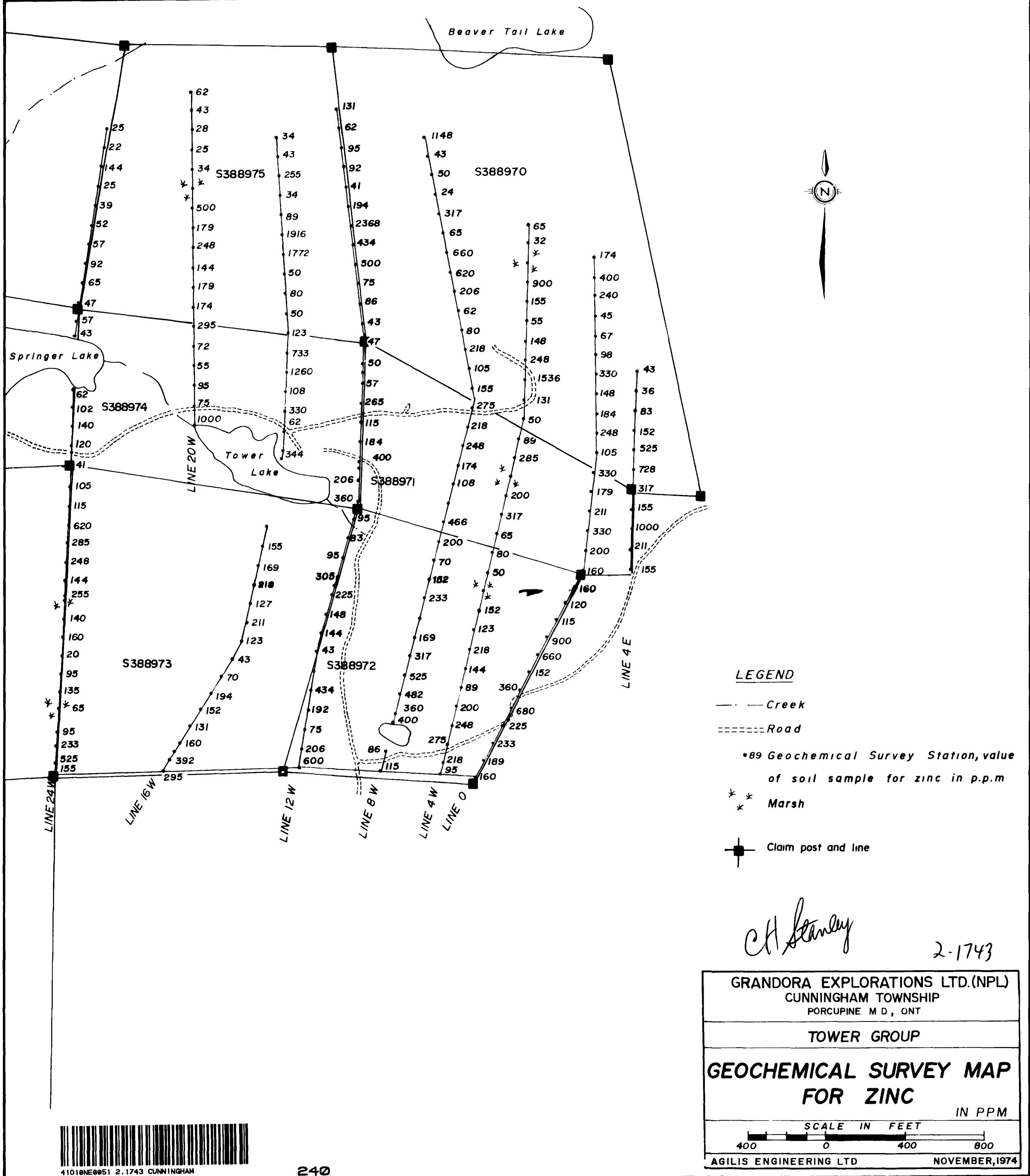


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