



Laurence Curtis &
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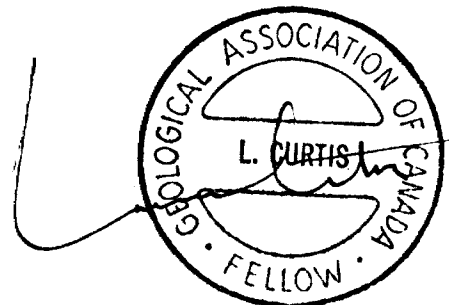
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PROGRESS REPORT ON THE NUINSCO
MONTE CRISTO CLAIM GROUP,
ROWAN LAKE AREA,
DISTRICT OF KENORA, ONTARIO



October 1983

• Exploration Management • Prospect Evaluation • Concept Development • Petrological Studies



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- Appendix 2 Summary report on geophysical surveys carried out on the Monte Cristo project, 1983 by D. Sutherland, Toronto.
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Summary

Geological mapping and geophysical surveys together with 5,310 feet of diamond drilling have been completed on the seven patent claims comprising the Monte Cristo prospect in Rowan Lake, Northwestern Ontario. Total cost of this programme was in excess of \$ 200,000.

The geology, geophysics and drilling confirm the existence of a strong structural feature which has a strike length in excess of 13,500 feet and a width of 200-400 feet. Surface prospecting indicates discontinuous mineralization at surface along the length of the structure.

Diamond drilling in the vicinity of the old No.1 shaft (K 2768) and from an island to the north of the shaft (in the vicinity of the common corners of K 2767, 2768; K 4710 and K 4709) have indicated a wide zone of mineralized alteration coincident with the structure. To a vertical depth of 400 feet, a 50-65 feet wide envelope of low grade gold mineralization (0.04 to 0.10 oz/ton gold), contains individual shoots grading 0.15 to 0.20 oz/ton gold over true widths of 5-30 feet. The mineralized structure, as tested to date, is open to depth and along strike and the implications of the geophysical surveys are that this structure may well be mineralized over a much greater strike length between the peninsula and Victor Island.

To adequately test this structure and other geophysical targets a staged drilling programme is recommended. Since most of the drilling will be done on ice, Part I of this programme should be commenced as soon as freeze-up is completed, in the fall of 1983. This will enable Parts II and III to be completed in the winter 1983, should each stage prove successful in reaching its objective. Total estimated cost of the recommended drilling programme will be \$ 1,035,000.

1. Introduction

A report covering the status of the Monte Cristo property was submitted by David Bell Geological Services Inc. in January 1983. In this report, D. Esson recommended a two-stage programme to evaluate the potential of the property. Phase I involved establishing a control grid, the completion of IP and VLF and magnetometer surveys, geological mapping and 5,000' of diamond drilling. The total estimated cost of this programme was \$ 204,000. Subject to favourable results Esson recommended an additional \$ 316,000 to be expended on further diamond drilling of the prospect. Actual expenditures in the current programme are listed in Appendix 4.

Supervision of the diamond drilling programme was carried out by Nuinsco geologists G. Archibald and D. Hunter. The writer supervised some of the drilling in June and reviewed the field mapping programme in August. Curtis and Associates were also contracted in June to carry out a detailed field and microscopic examination of the mineralization intersected in the current drill programme. (See Appendix 1). The writer's experience in the region has been gained largely through his involvement with the Nuinsco Cameron Lake project, 12 km to the southwest and from examination of gold prospects in the Rowan Lake area.

In this report the author summarises the results of Phase I of the programme and makes recommendations for a comprehensive Phase II programme.

2.1. Geology (Figures 1 and 2)

The initial geological reconnaissance carried out by D. Hunter has been followed up by detailed 1" = 200 foot mapping by P. Jones, geologist for the Monte Cristo project. The preliminary map produced by Jones indicates that the property is underlain by a package of pillowed basalts, lithic and crystal tuffs, massive, amygdaloidal basalts, blue quartz-eye gabbros and feldspar porphyries.

The main mineralized and altered shear zone has been traced in detail for a distance of 6,800' +. Reconnaissance by Curtis and Hume indicates that the Monte Cristo shear extends for a distance of at least 13,500', within the boundary of the property. Assays of grab samples along the shear from Victor Island to east of the Main Monte Cristo workings ranged from trace to 0.16 oz/ton gold. The width of the major shear zone is variable, but on the basis of drilling and surface observation could be in excess of 200' wide in some areas. On surface the structural zone is seen to consist of a number of shears 20 - 50 feet wide, separated by intervals of less sheared competent rock. DDH NM 9 which was collared on an island 500 feet north of the Main Zone intersected a true width of 400 + feet of crenulated and sheared metavolcanic. It is apparent that the true magnitude of the structure will only be appreciated following further drilling off ice.

The pronounced crenulation and microfolding observed in drill core suggests the existence of a complex structural situation and further work is required to determine how such structures may have influenced the localization of mineralization. Crenulation folds plunge to the

LEGEND

- 1 Mafic to Intermediate MV
- 2 Felsic to intermediate MV
- 3 Mafic Intrusives

~~~~~ Monte Cristo Shear Zone

↖ ↗ Plunge of fold

→ IP Conductor axis

☐ Shaft

▲ Gold occurrence

Base Map Geology ODM Preliminary  
631, 1973

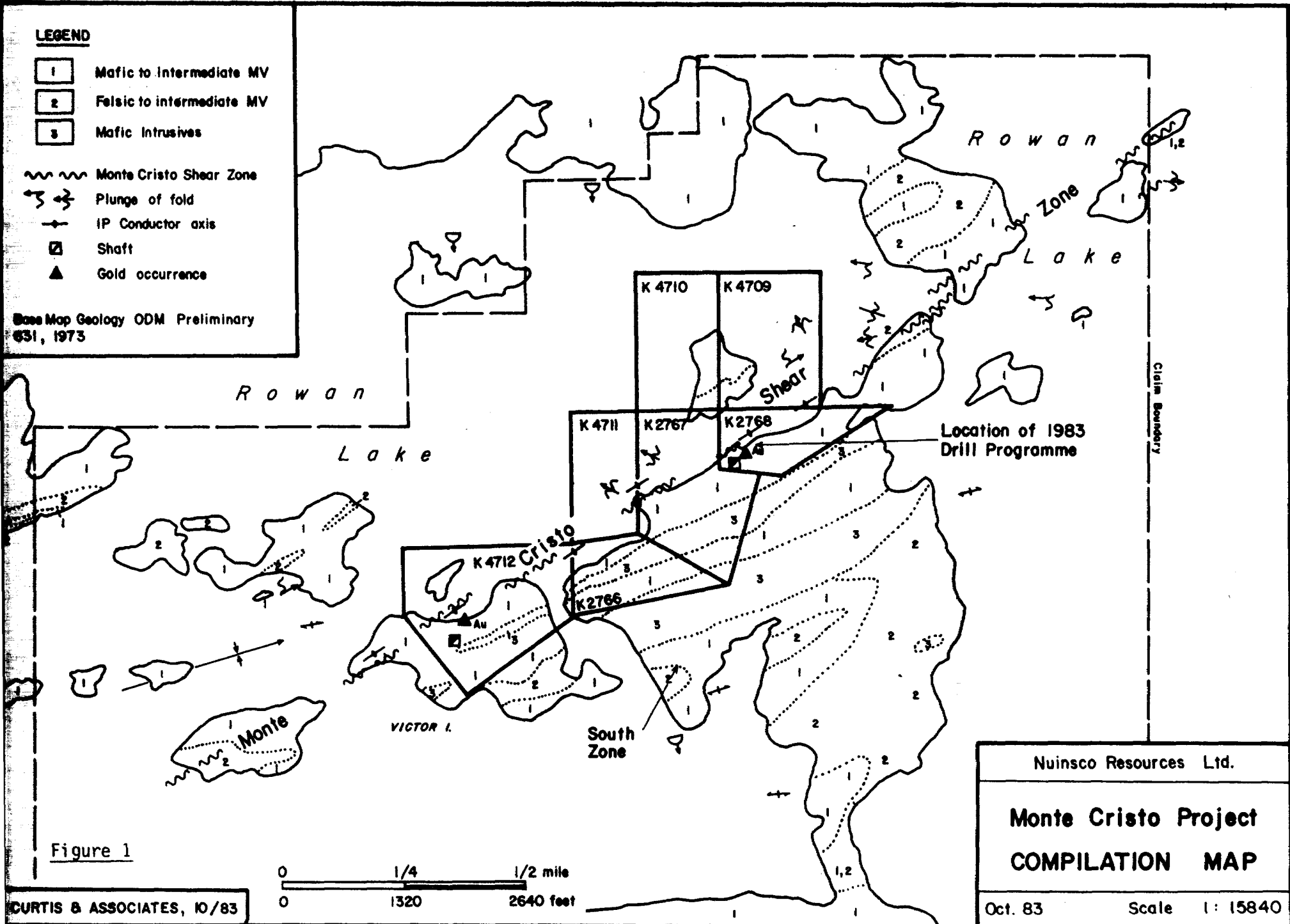
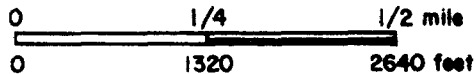


Figure 1



Nuinsco Resources Ltd.

**Monte Cristo Project  
COMPILATION MAP**

Oct. 83

Scale 1 : 15840

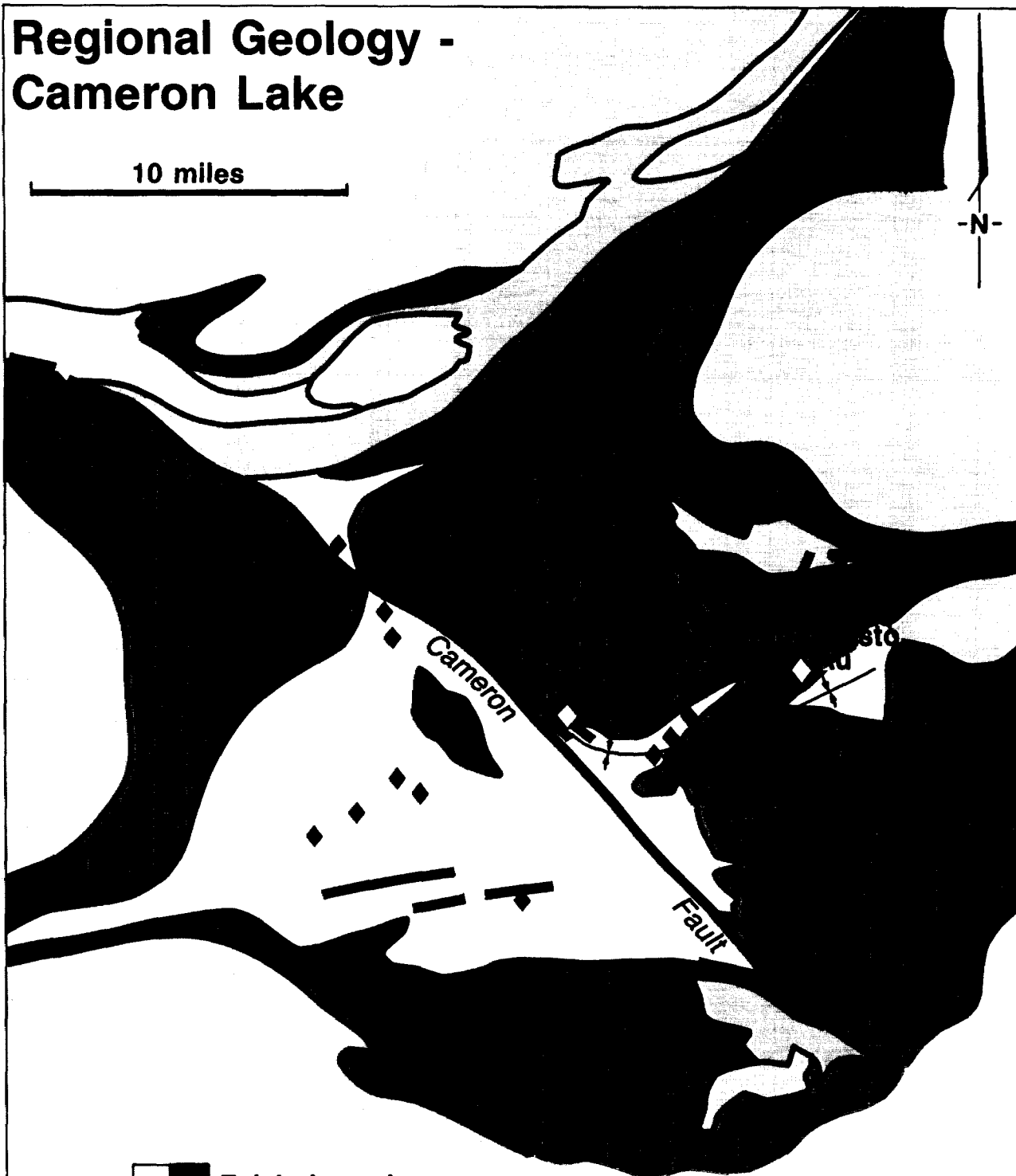


Figure 2

# Regional Geology - Cameron Lake

10 miles

N



-  Felsic Intrusives
-  Clastic Metasediments
-  Mafic Metavolcanics & Gabbro/pdt
-  Felsic Metavolcanics & Gabbro/pdt
-  Gold Occurrence

CURTIS & ASSOCIATES  
1983

NUINSCO LOCKWOOD  
JOINT VENTURE

northwest but drag folds with axes parallel to the direction of shearing have been observed to plunge in both a northeast and a southeasterly direction.

## 2.2. Alteration and Mineralization

The alteration associated with mineralization consists of ankerite - sericite - quartz ± pyrite ± fuchsite and is widespread along the shear zone, as well as regionally. Similar alteration has been observed by the writer on the Gautier property to the northwest of the Monte Cristo property and in trenches on the Nolan Lake Exploration Inc. property. The similarity between mineralization and alteration found on the Monte Cristo property and that observed in the Cameron Lake ore body is remarkable and reinforces the economic potential of the Monte Cristo Zone.

Results of the diamond drilling programme suggest that the better mineralization is associated with late quartz flooding and brecciation of altered metavolcanics within the Monte Cristo shear zone. As is evident from Table 1, the gold-bearing samples are characterised by a pyrite-rutile-chalcopyrite-pyrrhotite assemblage. Molybdenite has been observed in trace amounts in one sample (MC 6). Sericite-ferroan dolomite/ankerite - quartz ± tourmaline are ubiquitous alteration minerals.

A second zone of mineralization was discovered recently to the south of the main shear, but assays have yet to be received.

7  
TABLE 1

SUMMARY OF THIN SECTIONS MC 2 - 16

| Sample | DDH  | Depth (feet) | Rock Type                                                        | Opaque                                                      | Comment                                                                              | Alteration                                    |
|--------|------|--------------|------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------|
| MC-2   | NM-9 | 72.0         | Crystal tuff                                                     |                                                             |                                                                                      | Ser - Ct - Zoisite                            |
| MC-3   | NM-9 | 12.0         | Altered tuff/Chemical sediment                                   | Py - Po - Cpy - Ru                                          | Inclusions of Tm in Py and vice-versa sa                                             | Ab-Tm-Ct associated with QCV with Chl/Ser.    |
| MC-4   | NM-9 | 367.0        | Altered and sheared metatuff                                     |                                                             | Mylonitic ser. in fold hinges                                                        | Ser. - Fe Dol.                                |
| MC-5   | NM-1 | 170.0        | Altered and sheared metatuff (?) with Q-Ab veins ± Py            | Py-(Po-Cpy-Ru-Au)<br>Au 20-100 micron<br>Assay 0.33 oz/t Au | Qv with tr fuchsite (?)<br>Au assoc. with Cpy and in pressure shadows with Chl-Q-C   | Ser. - Fe Dol.<br>(Q) - Fe Dol - Chl - (Ser.) |
| MC-6   | NM-2 | 319.1        | As above with Q-Ab vein (pegmatite - phase ?)                    | Py-Ru-(Cpy)-(Mo)<br>Assay 0.10 oz/t Au                      | Phenocrysts of Ab in matrix<br>Mo as rare inclusions in Py                           | Q-Fe Dol-Chl-(Ser.)                           |
| MC-7   | NM 2 | 313.8        | Sheared and mylonitic metatuff                                   | Py-(Ru-Po-Cpy)<br>Assay 0.04 oz/t Au                        | Compare Cl 86                                                                        | Fe Dol-Ser-Q                                  |
| MC-8   | NM-4 | 202.1        | Mylonitized altered metatuff + QCV                               | Py-(Ru-Cpy-Au)<br>Au 5-10 micron<br>Assay 0.31 oz/t Au      | Py-Ru-Ser assoc. Au as inclusions in Py and on annealed grain boundaries. Ru post-Py | Fe-Dol-Ser-Q<br>Tm in pyrite seams.           |
| MC-9   | NM-4 | 158.5        | Altered and sheared metatuff                                     | Assay trace                                                 | Compare MC-7, typical sample                                                         |                                               |
| MC-10  | NM-4 | 139.5        | Altered and sheared metatuff                                     | Assay trace                                                 | Compare MC 5, 8 and 9                                                                | Ser-Fe-Dol.<br>Ser is post Fe Dol.            |
| MC-12  | NM-5 | 29.5         | Mylonitic metatuff and QV                                        | Ru (Cpy-Mgt)                                                |                                                                                      | Fe Dol. - Ser.                                |
| MC-13  | NM-6 | 262.1        | As above                                                         | Py-Ru-(Cpy)-(Mgt)<br>Assay 0.18 oz/t Au                     | Compare MC 6 and 12                                                                  | Fe-Dol-Ser-(Tm)                               |
| MC-14  | NM-6 | 334.3        | Sheared metatuff (?) with Q-Ab veins ± fuchsite ± tourmaline (?) | Py-Ru (Cpy-Po-Au)<br>Au up to 50 microns                    | Compare MC-6. Free gold in matrix and assoc. with Py                                 | Fe Dol - (Ser)                                |
| MC-15  | NM-1 | 709.0        | Weakly altered metavolcanic (?)                                  | (Py-Ru) - Hm(?) assoc with ser. shears                      | Ser. alteration is pre-folding                                                       | Ser - Fe Dol.<br>Ser is incipient             |
| MC-16  | NM-3 | 18.0         | Weakly altered metatuff/metavolcanic                             | (Py-Ru)                                                     | Compare MC-15                                                                        | Ser - Fe Dol.                                 |

**Abbreviations:** Py pyrite, Ru rutile, Po pyrrhotite, Cpy chalcopyrite, Mo molybdenite, Au gold, Q quartz, Tm tourmaline, Ser sericite, Fe Dol ferroan dolomite/ankerite, Chl chlorite, Ab albite.

### 2.3. Geophysics

VLF, magnetic and IP surveys were completed over various portions of the property, with emphasis being placed on the Monte Cristo shear zone. (Figure 1)

Prominent conductors coincident with the shear zone were indicated by the IP and VLF surveys. A summary report of the geophysical data has been prepared by D. Sutherland and is appended (Appendix 2).

It is concluded that several conductive zones occur along strike and coincident with the gold intersections obtained in the current drilling programme, and that these zones must be tested in the next exploration stage. The conductors occur discontinuously over the full length of the IP survey, a strike length in excess of 7,000 feet. One conductive zone to the west end of the grid (at 36 W) coincides with the position of a 1937 drill hole (DDH 9 drilled to the north of Victor Island) which reputedly cut gold mineralization (see report by Burwash, ODM Vol. 42, Part 4).

TABLE 2

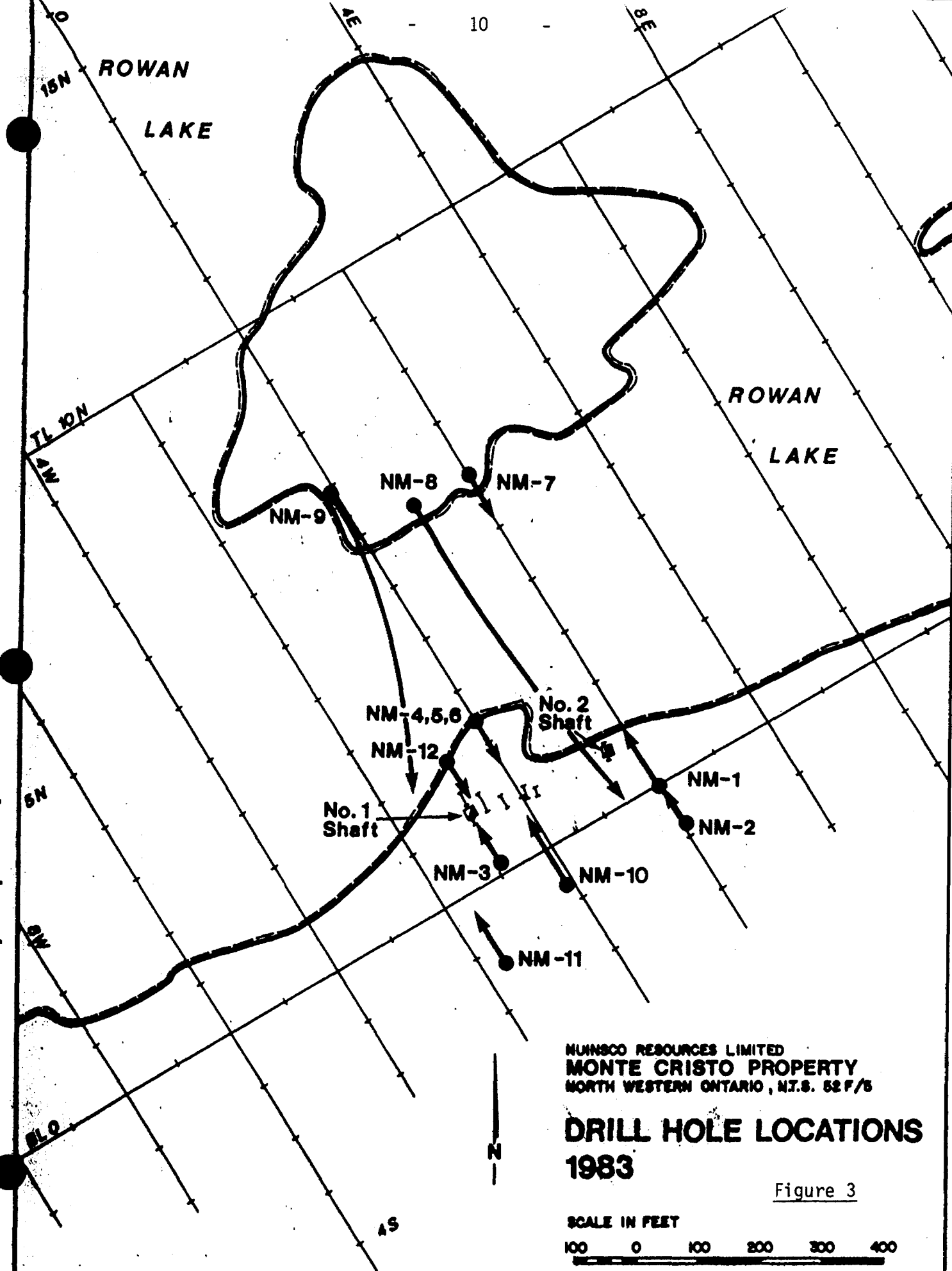
## SUMMARY OF 1983 DRILLING PROGRAMME, MONTE CRISTO

| DDH       | Coordinates      | Depth<br>(feet) | Log Summary* |                                                                                   | Mineralization<br>**(Assays in oz/ton Gold)    |                                                              |                              |
|-----------|------------------|-----------------|--------------|-----------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------|
| NM-1      | 0+03 S<br>2+00 E | 343             | 6 - 40       | Weakly foliated Mv/tuff                                                           |                                                |                                                              |                              |
|           |                  |                 | 40 - 118     | Sheared Mv/tuff                                                                   |                                                |                                                              |                              |
|           |                  |                 | 118 - 194.5  | Altered Mv/tuff with pyritic alteration zones                                     | 151.8-195.3                                    | 43.5' (29')                                                  | 0.17                         |
|           |                  |                 | 194.5-343    | Sheared Mv/tuff                                                                   |                                                |                                                              |                              |
| NM-2      | 0+71 S<br>2+05 E | 403             | 3 - 67       | Weakly foliated gabbroid Mv                                                       |                                                |                                                              |                              |
|           |                  |                 | 67 - 143     | Weakly foliated Mv flows                                                          |                                                |                                                              |                              |
|           |                  |                 | 143 - 300    | Sheared and altered Mv                                                            |                                                |                                                              |                              |
|           |                  |                 | 300 - 403    | Weakly altered Mv                                                                 | 300 - 328                                      | 28' (19')                                                    | 0.04                         |
| NM-3      | 0+85 W<br>0+15 N | 343             | 7 - 73       | Basaltic Mv                                                                       |                                                |                                                              |                              |
|           |                  |                 | 73 - 141     | Weakly altered and moderately sheared Mv                                          |                                                |                                                              |                              |
|           |                  |                 | 141 - 216    | As above with irregular zones of strong pyrite-bearing alteration                 | 144 - 197.7<br>incl.                           | 53.7' (36')<br>24' (10')                                     | 0.13<br>0.17                 |
|           |                  |                 | 216 - 255    | Weakly altered and foliated Mv                                                    |                                                |                                                              |                              |
| 255 - 343 | Foliated Mv      |                 |              |                                                                                   |                                                |                                                              |                              |
| NM-4      | 2+44 N<br>0+00   | 303             | 16 - 223     | Weakly altered Mv with variable shearing accompanied by pyrite-bearing alteration | 8.8- 30<br>140 - 176<br>201 - 203.5            | 21.2' (16')<br>36' (28')<br>2.5' (2')                        | 0.026<br>0.06<br>0.31        |
|           |                  |                 | 223 - 303    | Weakly altered Mv with less shearing                                              |                                                |                                                              |                              |
|           |                  |                 |              |                                                                                   |                                                |                                                              |                              |
| NM-5      | 2+44 N<br>0+00   | 353             | 3 - 50       | Weakly altered Mv and shear zone with pyrite-bearing alteration                   | 13 - 46                                        | 33' (17')                                                    | 0.08                         |
|           |                  |                 | 50 - 181     | Weakly altered Mv and shear zone                                                  | 108.5-117.3                                    | 8.8' (4.5')                                                  | 0.10                         |
|           |                  |                 | 181 - 270    | Weakly to strongly altered Mv with strong shearing                                | 201.5-228                                      | 26.5' (14')                                                  | 0.09                         |
|           |                  |                 | 270 - 353    | Weakly foliated Mv with weak alteration                                           |                                                |                                                              |                              |
| NM-6      | 2+44 N<br>0+00   | 393             | 5 - 79       | Sheared and moderate to strongly altered Mv                                       | 120.9- 30.0                                    | 9.1' (3.6')                                                  | 0.10                         |
|           |                  |                 | 79 - 114     | Unaltered Mv                                                                      |                                                |                                                              |                              |
|           |                  |                 | 114 - 214    | Moderately altered Mv                                                             |                                                |                                                              |                              |
|           |                  |                 | 214 - 353    | Altered and sheared Mv with pyritic alteration                                    | 211.6-238<br>249 - 270.4<br>308 - 353<br>incl. | 26.4' (9.6')<br>21.4' (7.8')<br>45' (16.3')<br>29.2' (10.6') | 0.09<br>0.10<br>0.14<br>0.18 |
|           |                  |                 | 353 - 393    | Weakly altered foliated Mv                                                        |                                                |                                                              |                              |
| NM-7      | 6+00 N<br>2+00 E | 323             | 3 - 28       | Massive Mv                                                                        |                                                |                                                              |                              |
|           |                  |                 | 28 - 149     | Foliated and weakly altered (96'-149') Mv                                         |                                                |                                                              |                              |
|           |                  |                 | 149 - 323    | Weak to strongly altered foliated/ folded Mv                                      |                                                |                                                              | Hole abandoned               |

\*Mv=Metavolcanic; Alteration=sericite+carbonate+silica

\*\* ( ) true width.

| DDH   | Coordinates      | Depth<br>(feet) | Log Summary* |        | Mineralization<br>**(Assays in oz/ton Gold)                                                                             |                                                                                |
|-------|------------------|-----------------|--------------|--------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| NM-8  | 1+00 E<br>6+00 N | 763             | 2            | -142   | Massive Mv                                                                                                              |                                                                                |
|       |                  |                 | 142          | -508   | Alternating weakly to strongly altered foliated/sheared/folded Mv with sporadic pyrite-bearing alteration               | 191 -213 22' / 0.08                                                            |
|       |                  |                 | 508          | -534   | Sheared and weakly altered Mv                                                                                           |                                                                                |
|       |                  |                 | 534          | -633   | Weakly altered Mv, strongly foliated                                                                                    | 541.5-551.4 9.9' / 0.09                                                        |
|       |                  |                 | 633          | -763   | Foliated unaltered and altered Mv                                                                                       |                                                                                |
| NM-9  | 0+10 E<br>6+89 N | 773             | 6.5-         | 95     | Foliated Mv/tuff                                                                                                        |                                                                                |
|       |                  |                 | 95           | -310   | Foliated Mv weakly altered                                                                                              |                                                                                |
|       |                  |                 | 310          | -581   | Weak to moderately altered Mv with rarer strongly altered zones (403-481, 530-570)                                      | 543 -567.7 24.7' / 0.04                                                        |
|       |                  |                 | 581          | -745   | Moderate to strongly altered Mv with pyrite-bearing alteration accompanied by secondary brecciation and quartz flooding | 587.5-651.5 64.0' / 0.07<br>695.6-712.8 17.2' / 0.12<br>incl. 7.0' / 0.21      |
|       |                  |                 | 745          | -773   | Weak to moderately altered Mv                                                                                           |                                                                                |
| NM-10 | 0+63 S<br>0+12 W | 503             | 2            | -173   | Massive to gabbroic Mv                                                                                                  |                                                                                |
|       |                  |                 | 173          | -275   | Weakly altered moderately foliated Mv                                                                                   |                                                                                |
|       |                  |                 | 275          | -362   | Variable weak to strongly altered Mv. Quartz flooding and brecciation 312-322                                           | 312.2-324 11.8' / 0.14                                                         |
|       |                  |                 | 362          | -464.7 | Weak to moderately altered Mv with pyritic alteration                                                                   |                                                                                |
|       |                  |                 | 464.7-503    |        | Unaltered and weakly altered Mv                                                                                         | Hole abandoned                                                                 |
| NM-11 | 1+29 S<br>1+63 W | 673             | 1            | - 83   | Massive to gabbroic Mv                                                                                                  |                                                                                |
|       |                  |                 | 83           | -104   | Feldspar porphyry                                                                                                       |                                                                                |
|       |                  |                 | 104          | -279   | Foliated massive to gabbroic Mv                                                                                         |                                                                                |
|       |                  |                 | 279          | -673   | Variable weak to moderately altered Mv                                                                                  | 546 - 553.8 7.8' / 0.05<br>561.4- 570.8 9.4' / 0.03<br>658.6- 673 14.4' / 0.06 |
|       |                  |                 |              |        |                                                                                                                         | Hole cemented and wedged at 470'.                                              |
| NM-12 | 1+26 W<br>2+12 N | 137             | 13           | -137   | Sheared Mv with some weak alteration zones.                                                                             | Hole Abandoned.                                                                |



MUNSCO RESOURCES LIMITED  
 MONTE CRISTO PROPERTY  
 NORTH WESTERN ONTARIO, N.T.S. 52 F/5

**DRILL HOLE LOCATIONS  
 1983**

Figure 3





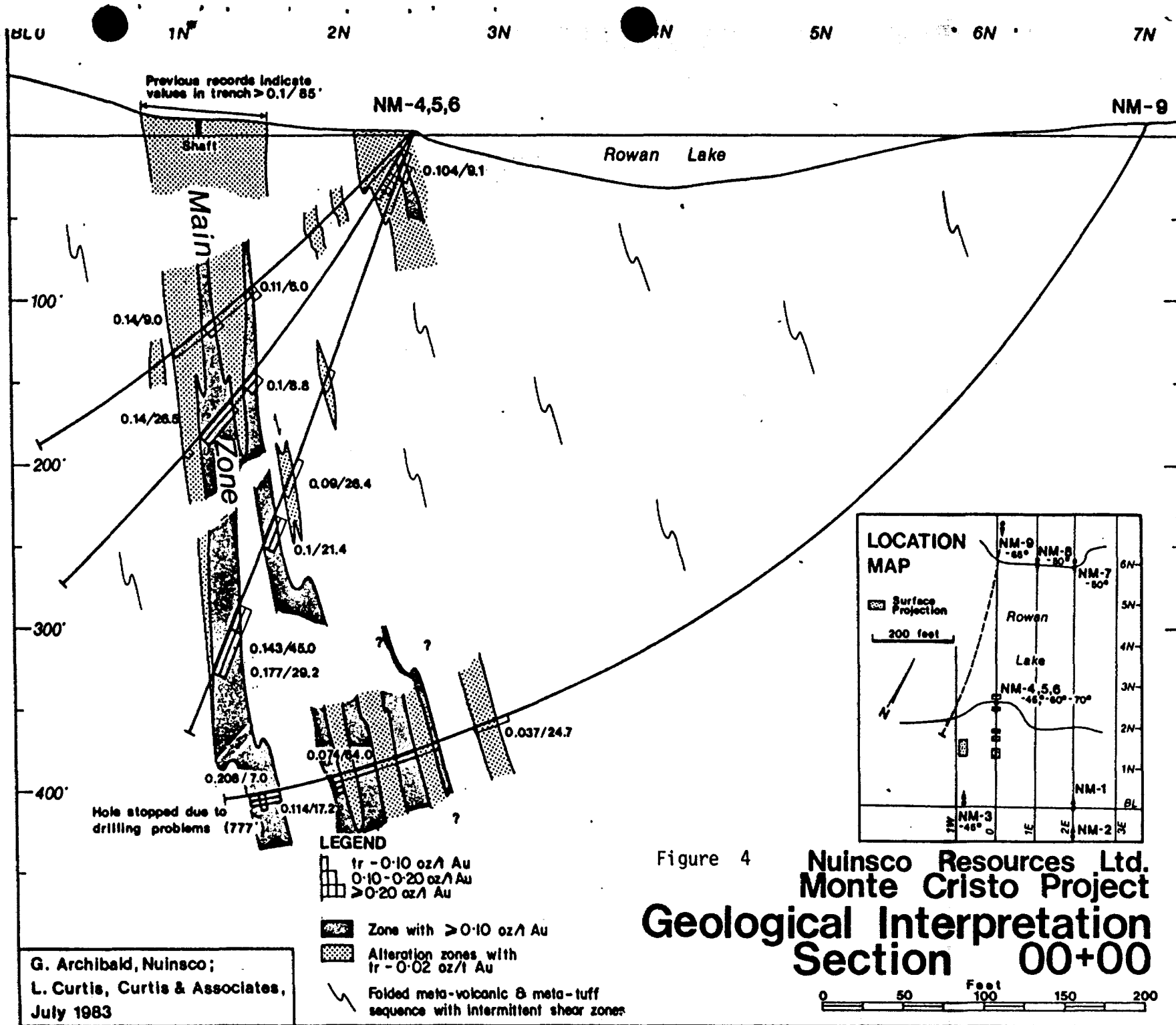


Figure 4 Nuinsco Resources Ltd.  
Monte Cristo Project  
**Geological Interpretation  
Section 00+00**

G. Archibald, Nuinsco;  
L. Curtis, Curtis & Associates,  
July 1983

#### 2.4. Diamond Drilling (Figures 3 and 4)

Results of the 1983 diamond drilling programme are summarised in Table 2 and drill logs are appended (Appendix 3), together with drill sections.

The drilling programme (totalling 5,310 feet) exceeded expectations in that all holes which cut the target produced mineralized intersections over varying widths to a vertical depth of 400 feet (Figure 4). At present two zones appear to exist. Drill holes NM 4, 5 and 6 were collared on the surface projection of the "Upper Zone", the best intersection being 9.1 feet of 0.10 oz/ton gold in NM 6 (true width of 3.6 feet) within a wider envelope of weakly mineralized rock represented by the 33 foot intersection (17 feet true width) of 0.08 oz/ton gold in NM 5.

The "Main Zone" underlying the old No.1 shaft appears to be composed of a number of ore shoots within a wider weakly mineralized alteration envelope. The most encouraging intersections obtained from this zone were 43.5 feet (29 feet true width) of 0.17 oz/ton gold at minus 100 feet and 45 feet (16 feet true width) of 0.14 oz/ton gold at minus 300 feet. The latter intersection contained 29.2 feet (10.6 feet true width) of 0.18 oz/ton gold.

In an effort to test the depth extension of the mineralization, three holes were collared on an island north of the peninsula (NM 7, 8 and 9). Due to severe flattening problems, NM 7 was abandoned, and although the same problems persisted throughout the drilling of NM 8 and 9, NM 9 intersected extensive mineralization in the target area at minus 400 feet. Intersections in NM 9 indicated a wide alteration envelope with values of 0.07 oz/ton gold over 64 feet (close to true width) and a separate,

well mineralized section averaging 0.12 oz/ton gold over 17.2 feet, which included one section of 7.0 feet grading 0.21 oz/ton gold.

As is evident from the drill log summary (Table 2), the better intersections (0.15 - 0.20 oz/ton gold) coincide with zones of quartz flooding and brecciation within a wider carbonate - sericite - silica altered alteration envelope carrying lower values of gold (0.04 - 0.10 oz/ton gold). The structural deformation history in the core is quite complex, with S<sub>1</sub> (foliation), S<sub>2</sub> (drag folding) and S<sub>3</sub> (transposition of folds accompanied by shear) fabrics being recognized. My observations from drill core suggest that the weakly mineralized carbonate-sericite-silica alteration event is post - S<sub>2</sub> and that the stronger zones of mineralization were formed during a post - S<sub>3</sub> event. Although, the structural history has yet to be adequately resolved, it is clear that the ore zones are located in a very complex structural domain. I anticipate that the configuration of the major ore shoots will be a function of these structural processes and, therefore, could constitute elusive drill targets. From this standpoint detailed drill sections will be required to confidently indicate tonnage.

In summary, the mineralized structure, as defined by drilling in this programme consists of a number of shoots with combined true widths of 50 - 65 feet, with a vertical depth of 400 + feet and with a strike length of 300 + feet. The structure is open-ended and open at depth, and contains 20 - 65 feet true widths of low grade gold mineralization (0.04 - 0.10 oz/ton gold) within which are individual "shoots" grading 0.15 - 0.20 oz/ton gold over true widths of 5 - 30 feet.

### 3. Conclusions

1. In excess of \$ 175,000 has been expended during the 1983 exploration programme conducted by Nuinsco Resources on the Monte Cristo property. These expenditures, detailed in Appendix 4 entitle Nuinsco Resources to earn an 80% undivided interest in the seven patented claims.
2. Phase I of the programme as recommended by D. Esson of David Bell Geological Services Inc. has been completed. Additional geophysical and geological work is continuing on the property.
3. The current programme substantiated the existence of a major mineralized structural zone. This structural zone has been traced on surface over a strike length of 13,500'.
4. A three stage diamond drilling programme has been recommended to test the depth and strike length continuation of the mineralization, in addition to other geophysical and geological targets. Additional geophysical coverage has also been recommended. Total cost of this staged programme will be in the vicinity of \$ 1,000,000 if the staged drilling proceeds successfully.

4. Recommendations

|                                                                                              | \$            |
|----------------------------------------------------------------------------------------------|---------------|
| 1. Extend IP survey to cover remainder of patent claims                                      |               |
| 10 miles @ \$ 950/mile                                                                       | say 9,500     |
| Interpretation and Data Reduction                                                            | say 2,500     |
|                                                                                              | <hr/> 12,000  |
| 2. <u>Diamond Drilling Part I</u>                                                            |               |
| Objective: To test strike extension of mineralization                                        |               |
| 10,000 feet diamond drilling @ \$ 25/ft                                                      | 250,000       |
| Assaying 600 @ \$ 20                                                                         | 12,000        |
| Supervision, geologist plus assistant, 2 months @ \$ 6,000/month                             | 12,000        |
| Camp costs, Fuel, Transportation, estimated for 2 months                                     | say 20,000    |
| Consulting/Reporting 10 day/month @ \$ 350/day plus costs, 2 months                          | say 10,000    |
| Downhole surveying \$ 3,000/month for 2 months                                               | say 6,000     |
|                                                                                              | <hr/> 310,000 |
| Contingency 10%                                                                              | 31,000        |
|                                                                                              | <hr/> 341,000 |
| 3. <u>Diamond Drilling Part II</u>                                                           |               |
| Objective: To test depth extension of mineralization over priority zones outlined in Part I. |               |
| 10,000 ft with costs estimated as above                                                      | 341,000       |
| 4. <u>Diamond Drilling Part III</u>                                                          |               |
| Objective: Fill in Drilling for Ore Reserve Estimates                                        |               |
| 10,000 ft with costs estimated as above                                                      | 341,000       |
|                                                                                              | <hr/>         |
| T o t a l                                                                                    | 1,035,000     |
|                                                                                              | <hr/> <hr/>   |

APPENDIX I  
PETROGRAPHIC DESCRIPTIONS  
MONTE CRISTO

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L. Taras Byrndzia  
September, 1983

DDH NM-1 @ 109.0'

Sample MC-15

Altered Metavolcanic (?).

Offcut

Massive dark green, chloritic rock. Foliation not obvious but there are numerous seams of grey-white QC-veins (?) approx. 2-3mm wide and oriented at approx.  $30^{\circ}$  to C.A., some distinct tight isoclinal folds. Fine grained, disseminated (1mm) chalcopyrite and pyrite associated with deformed selvages of quartz and carbonate.

Petrography

This is a very chloritic rock, distinctly foliated and with numerous veins of quartz and ferroan dolomite (QC-veins). Matrix is very siliceous consisting mostly of very fine grained quartz with chlorite, sericite and ferroan dolomite.

Deformation has been intense and can be seen to consist of the following elements:

- 1) QC-veins in which the dolomite twin lamellae have been kinked and the overall orientation of the vein deformed into the chlorite foliation.
- 2) The chlorite fabric envelopes veins and disrupted matrix quartz and carbonate.
- 3) Approx. 50% of the chlorite has been replaced by sericite and opaques (rutile, based on internal reflections). Ferroan dolomite in QC-veins has also been sericitized.
- 4) The rock appears to have been deformed post-sericite, possibly by folding (?). There is a very strong crenulation cleavage developed in the sericite and chlorite-rich layers (not obvious in the QC

assemblages). The sericite and chlorite-rich layers contain a very high abundance of opaque phases, consisting of pyrite, rutile and possibly hematite (?).

There is no equivocal evidence for a metavolcanic origin for this rock. There are no mafic phases such as amphibole or epidote, only chlorite which could be secondary after these minerals.

Comment (Curtis)

This rock is fairly typical of much of the 'weakly altered' to 'unaltered' metavolcanic logged in this hole.



DDH NM-1 @ 170.0'

Sample MC-5

Altered and sheared metatuff.

Offcut

The overall texture of this rock is very similar to MC-14. This sample is highly deformed and intruded by veins of quartz and alkali feldspar (albitic?), with accessory and abundant approx. 0.5mm grains of pyrite which possess distinctly porous textures. The matrix consists of sericite, quartz and oxidized, tan-coloured ferroan dolomite. Chlorite is associated with foliation and disseminated, fine grained matrix pyrite. The orientation of foliation is at approx. 60° to C.A. Pressure shadows of chlorite and quartz are well developed adjacent to pyrite grains.

Petrography

This rock is mineralogically simple, consisting of weakly banded layers of variable grain size, containing ferroan dolomite, quartz, sericite and chlorite. The dolomite is the most abundant phase, typically a tan-brown oxidized colour and recrystallized to clear subhedral aggregates and rhombohedra.

Coarse grained domains consisting of the assemblage dolomite, quartz, pyrite and chlorite may have been QC-veins prior to deformation. Evidence of recrystallization can be seen in the dolomite textures described previously as well as pressure shadows adjacent to pyrite grains.

Shears in this section are approx. parallel to foliation and are dominated by coarse grained wisps of chlorite and abundant fine grained disseminated opaques. Sericite is only a minor phase and occurs as an incipient alteration phase of both chlorite and carbonate. Opaques may have formed as a consequence of recrystallization and oxidation of the ferroan dolomite.

The overall textures and mineralogy do not equivocally support a metavolcanic origin for this rock, more likely it was tuffaceous in origin.

#### Opaque Mineralogy

Minerals include pyrite, pyrrhotite, chalcopyrite, rutile and native gold.

Pyrite has typical cubic form, often fractured approx. parallel to foliation and with sieve textured cores. Chalcopyrite occurs as inclusions within pyrite grains, along annealed grain boundary contacts, and commonly along pyrite grains in contact with the matrix. Chalcopyrite also occurs in pressure shadows. Pyrrhotite is a common phase within pyrite.

Rutile (in shears) appears to form augen about recrystallized pyrite grains as well as passing through fractured pyrite. Rutile also occurs as trapped inclusions within pyrite.

Native gold is a common phase in this section occurring as 20-100 micron inclusions in pyrite, associated with chalcopyrite, and as unassociated gold in pressure shadows of chlorite, quartz and carbonate.

Assay:

From 167' - 170.2' = 0.33 oz/t Au.

DDH NM-2 @ 319.1

Sample MC-6

Altered and sheared metatuff.

Offcut

Tan colour, due possibly to oxidized ferroan dolomite. Strong foliation at approx.  $65^{\circ}$  to C.A. Significant sericitization associated with pyrite and minor interlamination of chlorite. Strongly disrupted matrix due to massive intrusions of quartz and albite.

Overall, a very siliceous rock.

Petrography

There are two distinct parts to this section:

- 1) Essentially identical mineralogically and texturally to section MC-5 with several percent fine grained disseminated opaques in a chlorite, ferroan dolomite, sericite and dominantly quartz rich matrix. However, MC-6 differs markedly from MC-5 by having phenocrysts of albite in its matrix. The albite is quite abundant and has been incipiently sericitized. An interesting textural feature regarding feldspar in this section is the fact that while the matrix feldspar has been sericitized, albite in the quartz-albite assemblage appears pristine and unaltered even though it coexists with coarse grained sericite.
- 2) Quartz-albite intrusion zone. This is a coarse grained assemblage, essentially felsic, consisting of quartz and albite with interstitial sericite and clear, inclusion free dolomite. Intrusion is suggested by its overall disrupted nature. There are no eutectic

features such as myrmekitic or granophyric intergrowths which would suggest a pegmatoidal origin for this assemblage.

The assemblage has suffered subsequent recrystallization as evidenced by undulose extinction in the albite, dolomite and quartz, as well as the serrated pressure solution grain contacts along quartz grain boundaries.

A chlorite, quartz and carbonate vein in this section appears to be distinctly pre- quartz-albite intrusion since sericite has replaced chlorite in both the matrix of the section as well as in the vein. Intensely sheared parts of this section have been sericitized and contain abundant opaques. Pressure shadows of quartz and sericite are ubiquitous adjacent to cubes of pyrite. Albite-quartz-carbonate intrusion appears to be related to a micro-fault/vein (?) that cuts foliation approx. perpendicularly in this section. Detailed structural analysis is precluded by the highly disrupted state of this rock.

#### Opaque Mineralogy

Phases present in this section include pyrite, rutile and rare chalcopyrite and molybdenite. Pyrite occurs as disseminated aggregates and as a near massive seams which has been fractured due to deformation. Excellent recrystallization textures such as triple junctions have been preserved in the pyrite aggregates.

Rutile occurs as a coarse grained replacement phase along grain contacts of pyrite.

Molybdenite and chalcopyrite are both rare phases in this section, the former occurs as an interstitial grain in the fractured pyrite seam while the latter occurs as inclusions within individual grains of pyrite.

No gold was observed in this section.

Assay:

From 318' - 321.5' = 0.10 oz/t Au.

DDH NM-2 @ 313.8'

Sample MC-7

Sheared, mylonitic metatuff.

Offcut

Fine grained chloritic rock with alternating khaki and grey coloured layers of oxidized ferroan dolomite and quartz. Possibly QC-veins (?) now deformed approx. sub-parallel to foliation. Rare 3mm feldspar phenocryst. Minor disseminated pyrite cubes concentrated into pyritiferous seams. Some of the pyrite cubes have a distinctly porous texture and appear oriented parallel to foliation. It is obvious that there may have been two structural fabrics in this rock but due to intense deformation by the later penetrative deformation (mylonitization), structural relationships have been obscured.

Petrography

This is a fine grained, well laminated rock with laminations on the scale of a mm, and consisting of alternating carbonate, quartz, sericite and chlorite and pyrite-rich seams. Both sericite and chlorite define the foliation in this rock with chlorite being strongly sericitized. Sericite-rich layers contain trains of numerous fine grained opaques, possibly rutile.

Quartz and ferroan dolomite with minor albite form the matrix to this section. The ferroan dolomite occurs typically as anhedral, inclusion-filled and tan-coloured grains and aggregates. However, apparently due to deformation the ferroan dolomite has undergone recrystallization to fine grained, clear dolomite rhombohedra. The ferroan dolomite aggregates have also undergone incipient sericitization. This section is very similar to section CL-86 - previously documented.

In section CL-86 similar intense deformation features were observed, as was recrystallization of coarse grained anhedral ferroan dolomite to fine grained dolomite rhombohedra. Both sections are considered to have been mylonitized.

Opaque Mineralogy

Opaque phases in this section include pyrite, rutile, pyrrhotite and chalcopyrite. Pyrite occurs as approx. 0.1 to 1.0mm cubes, concentrated into narrow seams. The coarser grains are oriented approx. parallel to foliation and contain numerous inclusions of gangue, chalcopyrite and pyrrhotite. Chalcopyrite also occurs as an unassociated phase in the matrix and along pyrite grain boundaries.

Rutile occurs as numerous small grains, in trails oriented parallel to the sericite foliation.

No gold was observed in this section.

Assay:

From 313.0' - 315.5' = 0.04 oz/t Au.



DDH NM-3 @ 18.0'

Sample MC-16

Altered metatuff / volcanic.

Offcut

Dark green chloritic rock. Very fine grained and massive, with siliceous grey-white bands variable in width from approx. 1mm-0.3cm. Clearly boudinaged, with obvious competency difference between the siliceous and chloritic material. Banding is quite strong oriented at approx. 60 to 70° to C.A. A few khaki coloured laminations in this rock are sericitic shears. Minor pyrite, elongated approx. parallel to foliation. Overall, this sample has been intensely deformed-mylonitized.

Petrography

This is predominantly a chloritic sample with chlorite defining the pronounced foliation in this section. It is cut by two sub-parallel, approx. 0.5mm wide QC-veins at approx. 30° to foliation.

Similar to MC-15, with the following exceptions:

- 1) More deformed than MC-15.
- 2) Much less sericite, only incipiently sericitized as described in MC-15 with sericite clearly secondary after chlorite.
- 3) Coarse grained flakes of sericite with approx. parallel orientation and at right angles to the dominant chlorite foliation in this section define shears in which opaques are abundant. The opaques are probably rutile based on their deep reddish internal reflections.

The remainder of this section consists of matrix quartz and anhedral masses of tan-coloured, inclusion filled, oxidized ferroan dolomite.

Ferroan dolomite, quartz, chlorite-veins have been deformed into sub-parallel orientation with the dominant sericite-chlorite foliation.

Albite was not observed in this section.

Chlorite pressure shadows are well developed about QC-layers and pyrite grains.

There is no evidence for a metavolcanic origin for this rock.

Comment (Curtis)

This rock is typical of the 'unaltered' metavolcanic in this hole.

DDH NM-4 @ 202.1'

Sample MC-8

Mylonitized, altered metatuff.

Offcut

Khaki coloured, predominantly ferroan dolomite rock. Strongly deformed with foliation at approx.  $30^{\circ}$  to C.A. Interstitial, approx. 1mm laminations of chloritic material. Highly sericitic rock with sericite on foliated surfaces. Large, up to approx. 1cm grains and cubes of pyrite with very porous texture and well developed chlorite, quartz pressure shadows oriented approx. parallel to foliation. Foliation is very intense, possibly mylonitized.

Petrography

Minerals within section include quartz, ferroan dolomite, sericite, chlorite epidote and tourmaline.

This section is texturally similar to MC-7 with the exception of an approx. 0.5cm wide, contorted QC-vein that cuts foliation at approx.  $75^{\circ}$ . The QC-vein is definitely post foliation since it cuts across pyritiferous seams which are oriented parallel to and are conformable with the dominant foliation in this section.

The QC-vein consists of coarse grained highly strained quartz, displaying undulose extinction and fine grained, recrystallized quartz due to pressure solution along quartz grain boundaries. The carbonate phase is ferroan dolomite which is oxidized, inclusion filled and tan-coloured.

The remainder of the section consists of dominant carbonate, quartz and euhedral, non-sericitized albite. The carbonate (dolomite) displays typical recrystallization features, such as rhombohedral, clear, inclusion-free dolomite forming at the expense of the anhedral oxidized inclusion-free ferroan dolomite. This recrystallization texture is related to the dominantly sericitic (and chlorite) foliation, which cuts across the carbonate, quartz matrix and results in an oriented assemblage of opaques and rhombohedral dolomite in sericitic shears, (see sample CL-86 for example).

A few rare, well crystallized, approx. 2mm long grains of tourmaline are associated with sericite, chlorite, albite and pyrite in one of the pyritic seams. Accessory epidote as clear, recrystallized small grains occurs in the sericitic shears associated with rutile. Sericite replaces chlorite in predominately quartz-rich pressure shadows adjacent to pyrite grains.

#### Opaque Mineralogy

Opaque phases in this section include pyrite, rutile, chalcopyrite and native gold. Pyrite is abundant as fine grained disseminations, associated with abundant accessory rutile in sericitic shears. Some grains of pyrite, cubic in form and with inclusion-filled sieve textured cores and clear overgrown rims are distorted due to deformation, but generally oriented concordant with foliation. Chalcopyrite and native gold (approx. 5-10 microns) are common inclusion phases within the sieved pyrite grains, and as trapped inclusions along annealed grain boundaries within pyrite aggregates.

Rutile also occurs as large (50 micron) grains in the matrix, texturally, as a replacement phase of pyrite particularly along corroded pyrite grain boundaries.

Assay: From 201.5' - 203.5' = 0.31 oz/t Au.

DDH NM-4 @ 158.5'

Sample MC-9

Altered and sheared metatuff.

Offcut

Strong penetrative foliation at approx.  $60^{\circ}$  to C.A. Sericite along cleaved surfaces. Alternating, approx. 0.5cm wide chlorite-rich ( $\pm$  sericite) and carbonate and quartz-rich bands. Carbonate has tan colour, possibly oxidized ferroan dolomite. No visible pyrite.

Petrography

This sample is texturally and mineralogically identical to MC-7 (possibly with less pyrite), and also very similar to CL-86, i.e. both samples are mylonitic.

Assay:

Trace.

DDH NM-4 @ 139.5'

Sample MC-10

Altered and sheared metatuff.

Offcut

Texturally, structurally and compositionally similar to samples MC-5, MC-8 and MC-9. Strongly foliated at approx. 60° to C.A. Sericitic, with abundant quartz and ferroan dolomite veining.

Petrography

Highly deformed, medium to fine grained rock consisting of well defined layers of ferroan dolomite and quartz. Layers defined by variable amounts of quartz:carbonate. The bulk of the carbonate is tan coloured, oxidized, inclusion filled ferroan dolomite, but rhombohedral dolomite clearly forms by recrystallization of the ferroan dolomite. These rhombohedra are typically clear and inclusion free.

Coarse, sheaf-like sericite is abundant in this section and occurs as a replacement phase of ferroan dolomite, particularly along quartz-carbonate (QC)-vein margins.

Alternating chlorite and sericite-rich seams (shears), contain abundant opaques (possibly rutile) which have been strongly elongated, conformable with foliation. Also, sericite replaces chlorite.

Confusing relationships exist between veins in this section, which are cut by a series of approx. 0.5cm wide veins which in turn are themselves cut by the dominant foliation in the rock.

QC-veins ( $\pm$  chlorite which envelopes the veins) are cut and replaced by sericite. QC-veins (without chlorite) are disrupted by QC-veins having sericite and albite as ubiquitous phases. The albite is generally unaltered with sharp, well defined twins and clean, sharp grain margins. Recrystallization has affected albite as twin lamellae have been deformed and indurated grain margins have developed along quartz-albite grain contacts. The albite and quartz and carbonate veins appear to have been cut by the sericitic shears described above. It appears that the most intense deformation (mylonitization) post dates all previous structural features even though contemporaneity with sericitization of the host rocks as a whole can be demonstrated.

There is no evidence to suggest a metavolcanic origin for this rock even though such features may have been obscured by mylonitization.

Assay:

Trace.

DDH NM-5 @ 208.8'

Sample MC-11

Altered and sheared metatuff.

Offcut

Identical to MC-5.

Petrography

Very fine grained, buff-grey coloured rock. Laminated (conformable with foliation), with up to approx. 20% pyrite concentrated into certain layers. These structures have been disrupted by numerous 3-5mm wide quartz-rich veins which cut the foliation at an angle of approx.  $50^{\circ}$  to C.A.

Veins consist predominantly of coarse grained approx. 0.5 to 1cm recrystallized albite and quartz, with clear, inclusion free ferroan dolomite and accessory flakes of sericite. The vein assemblage has been highly recrystallized with indurated grain margins undulose extinction and pressure solution features along both quartz and albite grain boundaries.

In the matrix, quartz is by far the most abundant phase with ferroan dolomite, sericite, chlorite and rutile. The carbonate occurs as anhedral masses and aggregates with typical oxidized tan colour, and inclusion filled nature. Textural evidence indicates that the ferroan dolomite has been sericitized and recrystallized to clear, small grains of rhombohedral dolomite. Sericite occurs as coarse recrystallized grains associated with rutile in intensely deformed shear zones. Chlorite is an accessory phase associated the quartz-carbonate-albite veins and sericitic shears.



Several percent of fine grained opaques tend to be concentrated into seams dominated by rhombohedral carbonate, quartz and sericite. These seams cut the QC Albite-veins consistently (as in previous sections).

#### Opaque Mineralogy

Minerals identified include pyrite, chalcopyrite, pyrrhotite, rutile and abundant native gold. Pyrite occurs as large mm-sized corroded grains with sieve textured cores and well preserved triple junctions. Within the matrix, fine grained disseminated pyrite occurs with rutile. In the vein assemblage (QC Albite-vein), coarse grained pyrite is associated with abundant native gold and chalcopyrite, both of which occur with pyrrhotite as inclusions within pyrite. Native gold also exists as an unassociated phase, with pyrite in the vein assemblage.

#### Assay:

From 207' - 210' = 0.50 oz/t Au.

DDH NM-5 @ 29.5'Sample MC-12

Mylonitic metatuff.

Offcut

Very fine grained, intensely deformed rock (mylonitized?) with a strong penetrative foliation at approx. 65-70° to C.A. Consists of alternating khaki and dark green chloritic layers with obvious pinch and swell structures. Khaki colour is due to sericite and tan coloured, oxidized ferroan dolomite. An approx. 0.5cm wide QC-vein cuts foliation at approx. right angles.

Petrography

Chloritic rock with alternating laminae of chlorite-rich and carbonate, quartz and sericite-rich material. Foliation defined principally by both sericite and chlorite even though texturally chlorite is replaced by sericite. Sericitization appears to be accompanied by rutile.

The matrix is dominated by quartz and ferroan dolomite, with minor phenocrysts of albite which are oriented conformable with foliation and are incipiently sericitized. Recrystallization of ferroan dolomite to fine grained clear rhombohedra is obvious in the carbonate-rich layers.

The vein consists of approx. 95% of coarse grained recrystallized quartz which is definitely pre-foliation as sericite trails cut through the vein. Quartz in the vein displays undulose extinction

and has indurated grain contacts. Pressure solution features which cut across the vein quartz may be fractures (?) and are oriented approx. parallel to foliation, i.e. deformation overprinted QC-veining.

Approx. 2mm rhombohedra of ferroan dolomite (incipiently sericitized), constitute the remainder of the vein assemblage.

#### Opaque Mineralogy

Opaque phases are sparse in this section. Rutile is by far the most abundant opaque phase and occurs as rod-like grains oriented parallel to foliation and concentrated principally into the sericitic shears. Chalcopyrite and magnetite occur as rare accessory phases in the matrix.

#### Assay:

From 28'-30' = 0.10

#### Comment (Curtis)

Most of the drill core in NM5 looks similar to this particular sample.

DDH NM-6 2 262.1'

Sample MC-13

Altered and sheared metatuff.

Offcut

Identical to MC-6.

Petrography

This sample is texturally and mineralogically very similar to sample MC-12, possibly a little coarser grained and with obvious pyrite which is lacking in MC-12. Minerals include quartz, carbonate, albite, chlorite, rutile, sericite and tourmaline. The foliation in this sample is defined principally by sericite and chlorite, the latter texturally replaced by sericite.

The matrix consists dominantly of quartz, with ferroan dolomite and albite. The carbonate has been recrystallized to rhombohedral dolomite which is concentrated into 'seams' bounded by alternating sericite and chlorite-rich layers (as documented in sample CL-86). Chlorite rich areas, when sericitized seem to form rutile - which suggests that the origin for this ubiquitous mineral could be Ti residing in chlorite. The original source of Ti may have been metavolcanic in origin, but there is no equivocal evidence of such an origin.

Tourmaline occurs as an accessory phase, approx. 0.5mm long, prismatic grains, with chlorite and ferroan dolomite.

Chlorite, sericite and quartz form pressure shadows adjacent to numerous cubes of pyrite in this section.

### Opaque Mineralogy

Pyrite is the most abundant phase, occurring as approx. 0.5mm cubes, many of which have been fractured. Some pyrite cubes have corroded grain margins and typical sieve textured cores, host to numerous inclusions of gangue, chalcopyrite and rutile. Pyrite grains also have clear overgrowths (?) of inclusion free pyrite suggesting a minimum of two obvious generations of pyrite. Pyrite grains host to abundant rutile appear texturally at least to have recrystallized in the rutile-rich sericitic shears.

Magnetite is a rare accessory phase in the chlorite-rich parts of the matrix.

No visible gold was observed in this section, a surprising observation considering the assay results.

### Assay:

From 260.7' - 263.6' = 0.18 oz/t Au.

DDH NM-6 @ 334.3'

Sample MC-14

Altered and sheared metatuff.

Offcut

This is a well laminated/foliated sample (approx.  $65^{\circ}$  to C.A.), consisting of alternating 1mm to 0.5cm wide bands of oxidized tan-coloured ferroan dolomite and dark-green, khaki coloured chlorite-sericite. Quite siliceous, having been disrupted by intrusion of numerous quartz veins, milky white-grey in colour and with no preferred orientation. Coarse grained, sieve-textured (porous) pyrite is associated with the quartz veining and accessory tourmaline (?) and pale lime green coloured fuchsite. Also intruded by numerous, sinuous, approx. 2mm wide clear quartz veinlets.

Petrography

This section is strikingly similar to MC-6, approx. 30% of the section consists of quartz and albite vein (?) with minor and accessory ferroan dolomite and rare sericite. Albite and quartz grains up to 2mm have been strongly recrystallized and display well developed undulose extinction. Twin lamellae in albite have been deformed, the grains generally, however, are not sericitized. The matrix assemblage, consisting of quartz, ferroan dolomite and albite has been cut by coarse grained, discontinuous shears of sericite, chlorite and rutile, in which pyrite is distinctly quite abundant. Ferroan dolomite in the matrix is typically tan-coloured and inclusion-filled.

Chlorite, quartz and sericite form pressure shadows adjacent to pyrite cubes. Tourmaline was not observed in this section.

Note: There is a lot of sericite and albite in this section with the albite quite pristine, i.e. unaltered.

Opaque Mineralogy

Minerals identified include pyrite, chalcopyrite, pyrrhotite, rutile and native gold.

Pyrite occurs as cubes, and aggregates containing numerous inclusions of gangue, rutile, chalcopyrite, pyrrhotite and native gold, i.e. typical sieve-textured cores.

An unusual feature observed in this section was a distinctly anisotropic grain of pyrite, with blue-green to orange-red bireflectance very similar to that of arsenopyrite. The grain was not arsenopyrite, however. Anomalous anisotropy in pyrite is common in grains possessing lattice defects caused by impurities such as substitution by other elements (Uytenborgaardt and Burke, Tables for microscopic identification of Ore Minerals, 2nd revised edition, Elsevier Publishing Company).

Abundant fine grained, disseminated pyrite and rutile are concentrated into sericitic shears.

Chalcopyrite occurs as a remobilized (?) phase in pressure shadows adjacent to pyrite grains and also as trapped inclusions along annealed pyrite grain boundaries within fractured pyrite aggregates.

Native gold, approx. 50 microns occurs as an unassociated phase in the matrix of this section and as trapped inclusions along annealed grain contacts within pyrite aggregates.

Assay: From 333' - 336.0' = 0.25oz/t Au

DDH NM-9 @ 72'

Sample MC-2

Altered QFP-tuff/metavolcanic, with mafic lapilli (?).

Offcut

Dark green chloritic and sericitic crystal tuff. Quartz eyes approx. 1mm to 0.5cm. Approx. 30% of rock consists of feldspar phenocrysts, approx. 1mm to 1cm long, many of which contain a fine red staining, possibly due to inclusion of hematite. The chlorite/sericite matrix is strongly foliated at approx 70° to 80° to C.A. with well developed augen about the feldspar phenocrysts.

Petrography

Minerals identified in this section include albite, quartz, sericite, calcite, chlorite, epidote, zoisite-clinozoisite, cummingtonite - actinolite, and accessory opaques and sphene.

The prominent phases include phenocrysts of albite plagioclase and quartz with albite grains oriented approx. parallel to foliation. Albite phenocrysts display good twinning and appear clouded in plain light, probably due to numerous inclusions of opaques - probably hematite. Sericitization and calcite alteration of albite is incipient.

An unusual alteration phase of albite is zoisite, which has high relief (similar to epidote) but much lower first-order blue-yellow birefringance and straight extinction (c/f inclined extinction for epidote). Zoisite occurs as non-pleochroic (c/f epidote) blocky prismatic grains generally concentrated within the albite plagioclase.



Intermediate between layers that are dominated by albite plagioclase are ferromagnesian-rich layers. Minerals occurring in these layers include cummingtonite-actinolite, chlorite, epidote-clinzoisite and opaques (Fe-oxides). The amphiboles form coarse grained interlocking aggregates of sheaf-like grains, clearly having been recrystallized. Amphiboles are pleochroic in shades of green/yellow. These mafic enclaves with the QFP matrix are interpreted as being inclusions (accidental origin) of mafic lapilli.

Epidote and clinzoisite form abundant aggregates within chloritic masses in this section and also appear to have been recrystallized to their present coarse-grained, euhedral form, with some grains measuring up to approx. 2mm. Both phases display pronounced yellow/yellow-green pleochroism.

Chlorite texturally does not appear to be a primary phase in the above ferromagnesian assemblage, most likely being retrograde i.e. secondary in origin.

The matrix to this section consists predominantly of quartz, with minor carbonate (calcite), chlorite and sericite, the latter two phases clearly replacing epidote and amphibole. Sphene, Fe-oxides and chlorite pseudomorphously replace amphiboles. Structurally, this rock is highly deformed with well developed augen of sericite and chlorite about quartz and plagioclase phenocrysts. Chlorite is anomalous in that it displays strong blue-purple birefringence, and is weakly pleochroic in shades of green. Deformation has also resulted in deformed solution at the ends of albite phenocrysts and quartz eyes.

DDH NM-9 @ 12'

Sample MC-3

Altered tuff-chemical sediment.

Offcut

Very fine grained rock with colour bands on the scale of approx. 1cm, variable from dark chlorite green, to grey and highly siliceous. Coloured bands are laminated on the scale of a mm and less. The rock is quite sericitic, a feature obvious on cleaved surfaces. Some of the leucocratic coloured layer (carbonate?) have been distinctly elongated by deformation. Distinct, dark, elongate mineral occurs throughout the entire core section but is particularly concentrated into pyrite-rich seams. Pyrite occurs as cubes, approx. 0.5cm on average, with a distinctly porous texture. The black silicate mineral looks like tourmaline and comprises approx. 5-10% of the section. Grains of tourmaline are strongly aligned parallel to foliation.

Petrography

This section has strong compositional affinities to a tuff- the matrix is dominated by quartz, sericite, chlorite and minor fine grained calcite. The chlorite displays anomalous blue-violet interference colours and pale yellow-green pleochroism.

Laminations are defined by quartz-rich layers ( - 1mm) in which the quartz appears to have a detrital origin i.e. quartz grains are angular and appear poorly sorted. Overall, however, these laminations are distinguished from the matrix assemblage by the presence of abundant tourmaline, some grains approx. 1mm in length. Perfect tourmaline basal sections were also observed. Tourmaline grains

contain numerous inclusions of opaques, and also occur as inclusions in pyrite. Albite plagioclase is a common accessory phase associated with the tourmaline, as is sericite. Sericite replaces calcite and tourmaline and also occurs preferentially in the pyrite-rich seams.

A QC-vein containing chlorite and sericite occurs in the section. It appears discontinuous in places but appears to have been deformed into parallel orientation with the foliation. Albite, tourmaline and calcite are common accessory phases in the QC-vein. Deformation has also produced well developed pressure shadows of sericite, quartz, chlorite and calcite adjacent to large grains of pyrite.

#### Opaque Mineralogy

Opaque phases include pyrite, chalcopyrite, pyrrhotite and rutile. Pyrite typically occurs as approx. 0.5-1.0mm cubes, some with sieve textured cores containing numerous inclusions of gangue, chalcopyrite, pyrrhotite and tourmaline. Chalcopyrite also occurs as trapped inclusions along annealed grain boundaries within pyrite aggregates, and as unassociated grains in the matrix.

Rutile occurs as patchy grey aggregates having very pronounced white to tan-yellow internal reflections.

An unusual textural feature in this section is that existing between pyrrhotite and pyrite in the matrix. Texturally, pyrrhotite appears to have been oxidized to pyrite, while in the same section pyrite grains have distinctly corroded margins. These textures may indicate fluctuating redox conditions during their genesis..

Chalcopyrite-pyrrhotite intergrowths are also common in the matrix of this section. Conceivably, complete oxidation of the pyrrhotite to pyrite could produce trapped inclusions of chalcopyrite (as well as gangue) in sieve textured cores of pyrite.

DDH NM-9 @ 367'

Sample MC-4

Altered and sheared metatuff.

Offcut

Dark green chloritic rock with alternating bands of sericite and ferroan dolomite. Sericite is obvious on cleaved surfaces. Strong penetrative foliation has resulted in stretched quartz and carbonate clots as well as augen development. The distinctive feature in this sample is the presence of a strongly crenulated (Z-sense), predominantly carbonate and sericite and minor chlorite zone, approx. 5cm wide. Internally, this zone is finely laminated on a mm scale, with alternating pinkish sericite-rich layers and oxidized tan coloured ferroan dolomite-rich layers. Suspect that deformation and competency differences produced the crenulations, since crenulation cleavage is approx. parallel to foliation.

Petrography

Minerals identified in this section include quartz, sericite, chlorite ferroan dolomite and albite. In thin section intense deformation is quite obvious, with alternating assemblages consisting of sericite, quartz and recrystallized ferroan dolomite rhombohedra, being tightly isoclinally folded. Intensely folded layers contain the assemblage chlorite (almost completely) with minor sericite only. Within these highly folded areas, sericite obviously replaces chlorite. The matrix to the section generally consists of fine grained quartz, oxidized tan-coloured, and sieve textured ferroan dolomite which texturally appears to recrystallize to clear inclusion free rhombohedra. Abundant subhedral grains of alkali feldspar (albite) associated with quartz-carbonate rich material have been strongly sericitized.

Limb zones in the chlorite-rich material are host to abundant well crystallized, approx. 0.5mm grains of epidote. Sericite in the chloritic material occurs preferentially along (and defines) axial planar cleavages, i.e. the axial planar cleavage cuts across the highly deformed chlorite, carbonate, quartz assemblage in which the chlorite is distinctly kinked (crenulated). These textures, therefore, are useful in determining the sense of timing of isoclinal folding (chloritic) and kinking (sericitic). Deformation clearly appears to be mylonitic with recrystallization apparently producing smaller grain size minerals, e.g. as in the case of ferroan dolomite. Crenulations (drag folds??) may be due to competency differences between chlorite and carbonate-rich folds and sericite and quartz-rich margins?

APPENDIX 2  
SUMMARY REPORT  
GEOPHYSICAL PROGRAM

MONTE CRISTO PROPERTY

ROWAN LAKE AREA

DISTRICT OF KENORA  
ONTARIO

OCTOBER 24TH, 1983  
TORONTO, ONTARIO.

DON B. SUTHERLAND, B. A., M. A., P. Eng.  
CONSULTING GEOPHYSICIST

## INTRODUCTION

The 1983 geophysical program on the property includes induced polarization, VLF electromagnetic and magnetic surveying.

## INDUCED POLARIZATION SURVEY

The IP surveying was done on a grid of lines spaced at 200 foot intervals to detail the area of the Monte Cristo Shear Zone on strike with the main showing.

Eight IP zones, lettered A to G inclusive, have been interpreted from the data.

### ZONE A

Zone A outlines a narrow, shallow, source of low to moderate metallic content that correlates well with the material encountered in the recent drill program. It extends for 2,000 feet and correlates with the Monte Cristo Shear. It is considered a prime drill target.

### ZONE B

This anomaly appears to be the western continuation of Zone A and displays similar magnitudes. Zone B is a narrow source from 8W to 20W. However, from 20W to 30W it may be a broad source or two separate sources 300 to 400 feet apart that trend away from the shear zone.

### ZONE C

Zone C also suggests a source of low to moderate metallic content. Like Zone A, Zone C appears



to be closely related to the Monte Cristo Shear Zone. A previous drill hole, from the island to the north, is reported to have intersected sulphide mineralization with gold values.

The presence of a second source to the south on 34W should be noted.

#### ZONE D

Zone D is a short, weak, indication that improves to the west and is open in this direction. Zone D appears to be on strike with Zone C but a few hundred feet north of the Monte Cristo Shear Zone. Nevertheless, it warrants further consideration and probably additional surveying to the west.

#### ZONE E

Zone E consists of weak indications in an area of low resistivities. It may be due to lake bottom sediments and is thought to be of minor importance at present.

#### ZONES F AND G

These two zones lie on the east end of the detail grid and are open to the east. They may be the faulted continuation of Zone A, but they are regarded as second priority targets at present.

#### VLF ELECTROMAGNETIC SURVEY

Twenty-seven VLF conductive anomalies, numbered 1 to 27 inclusive, have been interpreted from the data.

None of these displays the "reverse" quadrature curves typical of highly conductive zones and all are considered poor conductors in the VLF sense. Poor conductors can be shear or fault zones containing sulphides, contacts or overburden related features. Many of the conductors show an EW trend while others display a NE trend which is parallel to the Monte Cristo Shear.

ANOMALY 1

Anomaly 1 displays an EW strike for more than 1,200 feet. It may represent a shear or conductive lake bottom.

ANOMALIES 2, 3 and 4

These are three short, weak, conductors that trend NE. Anomaly 3 may be associated with IP zone F.

ANOMALIES 5, 6 and 7

These three anomalies may represent shearing that is related to Zone A. Note that anomaly 7 correlates closely with the shear zone and the showing.

ANOMALIES 8 and 9

Anomaly 8 is a long conductor while anomaly 9 is short. Anomaly 9 is on land and may be easily investigated.

ANOMALIES 10 and 11

These two long conductors suggest EW shears that may be related to Zone B.

ANOMALIES 12, 13, 14 and 15

Four short conductors occur in an area of strong magnetics and may be related to mafic intrusives. Three are on land and their intercepts should be investigated but these anomalies are not confirmed by the IP data.

ANOMALY 16

Anomaly 16 is a predominantly EW conductor that may be related to IP Zone C. Land evaluation of this anomaly may be possible on 30W.

ANOMALY 17

This weak VLF conductor may be related to IP Zone D.

ANOMALY 18

Anomaly 18 is a weak response that may be related to weak IP indications to the south of IP Zone C.

ANOMALY 19

A short moderate conductor, this anomaly can be checked on land. However, it is not evident in the IP data.

ANOMALIES 20 and 21

Between 4W and 4E, these two zones probably mark the edges of a wide conductor. East and West of the wide section, there is only a single conductor, Anomaly 20.

These conductors are entirely on land and may be due to overburden effects.

ANOMALIES 22 and 26

Both of these anomalies are in the lake and suggest bottom sediments as their cause.

ANOMALIES 23, 24 and 25

Ground investigations are suggested for these three short conductors which occur on the peninsula.

ANOMALY 27

A NW conductor is indicated by the reversed dip angles on 24W and 26W. It may be a conductive fault or bottom sediments in the narrow channel.

MAGNETICS

On the primary 100 foot grid, observations were made at 100 foot intervals while on the detail grid the station interval was reduced to 25 feet.

The contours show a band of strong magnetic highs, 500 to 1,000 feet wide, trending NE across the property in the vicinity of the baseline. This feature suggests a more or less continuous series of mafic intrusives and/or flows. Most of the magnetic highs lie south of the baseline but west of 44W they extend 300 feet north of the baseline and suggest a NS or NW fault near 44W.

Between 42W and 20E, most of the traverses show a broad (600 to 800 feet) magnetic low north of the baseline with a relief of 100 to 150 gammas that appears to be the signature of the Monte Cristo Shear. West of 42W and east of 20E, high values, indicative of more basic rocks, either mask this feature or indicate a northward displacement of the Shear.

#### SUMMARY AND RECOMMENDATIONS

Eight IP Zones, lettered A to G inclusive, have been outlined by the surveying.

Zone A correlates well with the main showing, the Monte Cristo Shear and the low to moderate metallics encountered in DDH's NM 1 to 12. Sulphide mineralization with gold values was reported in a previous hole that correlates with Zone C.

Zones A, B, C and D are similar zones that occur on or near the Monte Cristo Shear and indicate low to moderate metallic sources extending discontinuously from 14E at least as far west as 54W. Together, these zones indicate a strike potential of more than 5,000 feet and warrant a detailed drill program.

IP Zone E is very weak and a low priority target. Zones F and G are stronger but are considered secondary to Zones A, B, C and D.

Twenty-seven VLF anomalies have been interpreted from the data. The two primary strike directions are EW and NE, parallel to the Monte Cristo Shear.

Although anomaly 7 correlates directly with the main showing, few of the remaining VLF Zones appear to be directly related to the IP targets.

Many of the VLF anomalies lie in the water and some may be due to lake bottom sediments. The following anomalies occur on land and detailed geologic examination of their intercepts may be warranted:- 9, 10, 12, 13, 14, 18, 19, 20, 21, 24 and 25.

The magnetics have outlined a wide series of mafic intrusives and/or flows that trend NE across the entire grid.

The Monte Cristo Shear Zone is characterized by broad, weak, magnetic lows on most traverses from 42W to 20E. Strong magnetic highs west of 42W and east of 20E indicate more basic rocks that either mask the negative magnetic signature or indicate a northward displacement of the Shear at these localities.

Respectfully submitted by



Don B. Sutherland, B.A.M.A., P. Eng.

APPENDIX 3

DRILL LOGS FOR THE  
1983 DIAMOND DRILLING PROGRAMME  
MONTE CRISTO





NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH     | ROCK TYPE                                     | GRAIN SIZE<br>COLOUR                                             | SECONDARY<br>STRUCTURE                            | TEXTURE AND STRUCTURE                                                                                                              | ALTERATION                                                                                                                                                                                                                                                | MINERALIZATION                                                                                                            | COMMENTS                                                                    |
|-----------|-----------------------------------------------|------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 0-6       | CASING                                        |                                                                  |                                                   |                                                                                                                                    |                                                                                                                                                                                                                                                           |                                                                                                                           |                                                                             |
| 6-24      | Mafic volcanic<br>(baslat)                    | Dark green fn.<br>grained                                        | Somewhat<br>massive; vague<br>gabbroid<br>texture | Weak foliation 45° to C.A.                                                                                                         | 15% qtz-carb.<br>stringers - minor<br>epidote                                                                                                                                                                                                             | Isolated grains of<br>pyrite                                                                                              | Coarse grained flow<br>or gabbro                                            |
| 24-40     | Mafic flow<br>(baslat)                        | very fine gr.<br>dark green                                      | incipient<br>shearing<br>increasing<br>down hole  | Weakly foliated at 45° to C.A.<br>gradually increasing down<br>hole grades into highly<br>foliated rock below                      | Chlorite quartz<br>carbonate<br>stringers                                                                                                                                                                                                                 | Trace of pyrite                                                                                                           | Transition zone                                                             |
| 40-118    | Sheared mafic<br>volcanic (basalt<br>flows)   | dark green<br>veiny fine gr.                                     |                                                   | Highly sheared at 55° to C.A.<br>30% qtz.carb. stringers<br>Parallel to foliation good<br>chlorite developed along<br>shear planes | chlorite qtz.<br>carbonate occas.<br>incipient sericite as tiny<br>flakes 1mm carb.<br>rhombs 94-98 &<br>110-118                                                                                                                                          | Trace                                                                                                                     | Shear zone - no<br>primary textures<br>may be a fine gr.<br>tuff.           |
| 118-194.5 | Alteration zone<br>Sheared volcanics as above | dark greenish<br>grey to pale<br>yellowish brown<br>fine grained |                                                   | Highly sheared to 55-60° to<br>C.A.                                                                                                | 10-30% sericite-<br>carb. minor silicification in highly<br>alt. zones in qtz<br>grs & stringers<br>parallel to foliation also local<br>30% later milky<br>white cross cutting<br>qtz veins. Alt.<br>varies low mod. to<br>short 2-5' intense<br>sections | 0-7% pyrite, best py<br>with the more intense<br>alt. Tr of chalcop<br>pyrite & fn grs grey<br>metaly mineral-<br>gabbro? | Similar to altered<br>sections Cameron Lake<br>foliation more<br>pronounced |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH     | ROCK TYPE                                                                                        | GRAIN SIZE<br>COLOUR              | SECONDARY<br>STRUCTURE                                                                             | TEXTURE AND STRUCTURE                                                                                                         | ALTERATION                                                                                                                 | MINERALIZATION         | COMMENTS                                           |
|-----------|--------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------|
| 194.5-343 | Sheared meta volcanic same as 40-118 (basalt)                                                    | fine grained medium greyish green | highly foliated & carbonatized carbonate sericite bands parallel to foliates foliation 60° to C.A. | Original textures obscure<br><br>213-216 qtz vein 3cm parallel to C.A.<br><br>300-343 degree of shearing gradually decreasing | moderate to heavy carbonates incipient sericite well developed chlorite minor talc along foliation<br><br>10-20% carbonite | 0-1% pyrite<br><br>Nil | shear zone shearing gradually decreasing down hole |
| 343       | END OF HOLE<br><br>Comments: called meta-volcanics possibly very pronounced shearing (foliation) |                                   |                                                                                                    | tuffs??<br>(foliation)                                                                                                        |                                                                                                                            |                        |                                                    |





# DRILL LOG

## NUINSCO RESOURCES LIMITED

| Coordonnées  |          |              |               |             |        |                        |  |                        |     |                     |      |             |      |
|--------------|----------|--------------|---------------|-------------|--------|------------------------|--|------------------------|-----|---------------------|------|-------------|------|
| Forage no    | NM-2     | Latitude:    | Line 2+05     | Départ:     | 0+716  | Élévation:             |  | Pendage:               | 58° | Azimat:             | 330° | Profondeur: | 403' |
| Localisation |          | Commencé le: | June 29, 1983 | Terminé le: | (May?) | Déclinaison Magnétique |  | Diamètre de la carotte |     | <u>BUT DU TROU:</u> |      |             |      |
| Projet       | Province | Canton       | Lot           | Rang        | Claim  | Grillage               |  | S.N.R.C.               |     |                     |      |             |      |

| <u>Test à l'acide</u> |                |                   |                | <u>Test au Tropari</u> |                |                          |
|-----------------------|----------------|-------------------|----------------|------------------------|----------------|--------------------------|
| <u>Profondeur</u>     | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u>      | <u>Pendage</u> | <u>Azm. Astronomique</u> |
| 200'                  | 49°            |                   |                |                        |                |                          |
| 400'                  | 47°            |                   |                |                        |                |                          |

*Profondeur des coins:* \_\_\_\_\_

Contractor:

By: G.F. Archibald

Date:

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH           | ROCK TYPE                                  | GRAIN SIZE<br>COLOUR                   | SECONDARY<br>STRUCTURE                                                                          | TEXTURE AND STRUCTURE                                                                                                             | ALTERATION                                                                 | MINERALIZATION                                                                                             | COMMENTS                                                                  |
|-----------------|--------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 0-3.0           | CASING                                     |                                        |                                                                                                 |                                                                                                                                   |                                                                            |                                                                                                            |                                                                           |
| 3.0-67          | Basalt                                     | Dark green fn<br>gr 1-2mm              | Weakly sheared<br>(foliated) at<br>40° to C.A.                                                  | Gabbroic texture                                                                                                                  |                                                                            |                                                                                                            | Massive flow or fn<br>grained gabbro?                                     |
| 67.0-143.0      | Basalt<br>Massive flows<br>weakly sheared  | Dark green fn<br>grained 1mm<br>lens   | Weakly sheared<br>at 40° to C.A.<br>gradually in-<br>creasing down<br>hole                      | 3-15% carbonate stringers to<br>7mm parallel to foliation -<br>no primary textures recognized                                     | Carbonatized                                                               | Scattered grains of<br>pyrite to 2mm                                                                       | No distinct contact<br>weak above-3-67 may<br>be a coarse grained<br>flow |
| 143.0-<br>300.0 | Basalt as above<br>"shear zone"            | Greyish green<br>fine grained<br>< 1mm | Highly sheared<br>at 40° to C.A.                                                                | No apparent primary features<br>20-30% carbonate stringers<br>parallel to foliation<br>Well developed chlorite along<br>foliation | Carbonate<br>Chlorite                                                      | tr pyrite                                                                                                  | Fairly sharp in-<br>crease in degree<br>of shearing at 143'               |
|                 |                                            |                                        | 240-403 chlor-<br>ite carbonite<br>schist - 30-40%<br>carbonite<br>stringers along<br>foliation |                                                                                                                                   |                                                                            | 182-189 qtz carb vein<br>4" 4% py.<br>228-230 minor qtz carb<br>veining parallel to<br>foliation 1% pyrite |                                                                           |
|                 |                                            |                                        |                                                                                                 |                                                                                                                                   | 247-261 40-60%<br>carbonite-sericite<br>alteration, weak<br>silicification | 243-246 3% pyrite<br>4% pyrite                                                                             |                                                                           |
| 300-328         | Basalt as above<br>Weak alteration<br>zone |                                        | Foliation in-<br>creased to 45°<br>to C.A.                                                      | Incipient sericite to short<br>sections 1-3' of moderate<br>sericite. Weak silicification                                         | 300-306 10% seri-<br>cite . 3% irregular<br>qtz veins to 4%                | 1-5% pyrite                                                                                                |                                                                           |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH           | ROCK TYPE   | GRAIN SIZE<br>COLOUR | SECONDARY<br>STRUCTURE | TEXTURE AND STRUCTURE                                                                      | ALTERATION                                                                                                                                                                                                                                                | MINERALIZATION | COMMENTS                                                                                                                                                                                   |
|-----------------|-------------|----------------------|------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 300-328 cont'd. |             |                      |                        | Minor irregular white qtz veins 4-3% pyrite. Similar to Hole #1 less intensive & extensive | Altered as in Hole #1 - but less intense<br><br>317-321 20% silica as irregular white qtz veins? dark grey silicification<br>327-328 40% silica 3% pyrite<br>345-354 irregular qtz veining<br>354-360 altered 30% carbonite minor sericite<br>4-1% pyrite |                |                                                                                                                                                                                            |
| 403.0           | END OF HOLE |                      |                        |                                                                                            |                                                                                                                                                                                                                                                           |                | Comments: Alteration & mineralization much less developed than in Hole #1. Zone possibly dipping at a shallower angle than surface indicated, i.e. foliation Hole probably paralling zone. |









NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH   | ROCK TYPE                                                         | GRAIN SIZE<br>COLOUR                                        | SECONDARY<br>STRUCTURE                                                                                            | TEXTURE AND STRUCTURE                                       | ALTERATION                                                                                                                                                                   | MINERALIZATION                                             | COMMENTS                                                                                                                                                                                                                          |
|---------|-------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0-7     | CASING (Pulled)                                                   |                                                             |                                                                                                                   |                                                             |                                                                                                                                                                              |                                                            |                                                                                                                                                                                                                                   |
| 7-73    | Meta-volcanic<br>(basalt)                                         | dark green<br>fn grained                                    | Moderately<br>sheared at 40°<br>to C.A.<br>10-15% carbon-<br>ate stringers<br>parallel to<br>foliation            | Local carbonate filled<br>elongated amygdules 3-6mm         | Carbonatized<br>chlorite along<br>foliation                                                                                                                                  | Nil sulphides Weakly<br>magnetic                           |                                                                                                                                                                                                                                   |
| 73-141  | Meta volcanic<br>as above<br>(shear zone)                         | greyish<br>green fn gr                                      | Highly sheared<br>to 45° to C.A.<br>25-30% car-<br>bonate string-<br>ers                                          | No primary textures<br>Local wavy and contorted<br>shearing | Chlorite carbon-<br>ate increasing<br>incipient seri-<br>cite down hole                                                                                                      | Nil                                                        | Same as above,<br>gradual increase in<br>degree of shearing                                                                                                                                                                       |
| 141-216 | Meta-volcanics<br>as above<br>Alteration &<br>mineralized<br>zone | fine gr light<br>greenish grey<br>to light<br>brownish grey | Moderate to<br>high shearing<br>50-60° to C.A.<br>except where<br>obliteration<br>in highly sili-<br>cified zones |                                                             | Highly carbonat-<br>ized +30%. Local<br>intense silicifi-<br>cation one to 5<br>feet. Low to mod.<br>sericite (less<br>than in Hole #1)<br>occasional chrome<br>mica to 5mm. | Pyrite 0-3-4% trace<br>of chalcopyrite trace<br>of galena? | Alteration & mineral-<br>ization not uniform<br>varies from low to<br>mod with short sects<br>of 80% silica with grey<br>and a later?? white<br>quartz. Veining at<br>irregular angles to<br>C.A. - not controlled<br>by shearing |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH     | ROCK TYPE                       | GRAIN SIZE<br>COLOUR           | SECONDARY<br>STRUCTURE                                     | TEXTURE AND STRUCTURE | ALTERATION                                                                                                                                                                                                                                                                                                                                                 | MINERALIZATION | COMMENTS                                                    |
|-----------|---------------------------------|--------------------------------|------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------|
| 216-255   | Meta volcanic<br>incipient alt. | Light greyish<br>green fine gr | Strong foli-<br>ation at 45-<br>50% to C.A.-<br>shear zone |                       | 152-153 50% qtz<br>158-160 ----"<br>160-185 poorly<br>mineralized relat-<br>ively unaltered<br>185-198 3% pyrite<br>30-40% silicified<br>198-208 gradual<br>decrease in alt.-<br>low silica. Py<br>decreasing to trace<br>208-216 weakly<br>altered - sericite-<br>talc 20%                                                                                | Tr pyrite      |                                                             |
| 255-343.0 | Meta volcanics                  | dark greyish                   | -----"                                                     |                       | Fringe alteration<br>10% sericite 25%<br>carbonate<br><br>Carbonate stringers<br>parallel to foli-<br>ation - chlorite<br>Rock now a carbon-<br>ate-chlorite schist<br><br>295-343 decreasing<br>carbonate veins &<br>stringers with a<br>gradual appearance<br>of carbonate<br>rhombs -----<br>moderate chlorite<br>strong foliation at<br>50-60% to C.A. | Tr             | Same as 73-141<br><br><br><br><br><br>early carbonitization |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH | ROCK TYPE   | GRAIN SIZE<br>COLOUR | SECONDARY<br>STRUCTURE | TEXTURE AND STRUCTURE | ALTERATION | MINERALIZATION | COMMENTS                                                                                                                                                                                                                                  |
|-------|-------------|----------------------|------------------------|-----------------------|------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 343   | END OF HOLE |                      |                        |                       |            |                | <p>Comments: Wider zone of alteration than Hole #1 but less intense overall short sections of fair mineralization and silicification - hole spotted at 0+85E and 0+15N to accommodate the drillers (should have been at 1+00E on BL.)</p> |



ANALYSE des CAROTTES de FORAGE

| SAMPLE # | FROM  | TO    | Length |    |      |  | Cu | Zn | Ag | On/T | Au | On/T | Fe % | Mn % | CaO % | Na <sub>2</sub> O % | K <sub>2</sub> O % | SiO <sub>2</sub> % | TiO <sub>2</sub> % |
|----------|-------|-------|--------|----|------|--|----|----|----|------|----|------|------|------|-------|---------------------|--------------------|--------------------|--------------------|
|          |       |       | pl.    | m. |      |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 74769    | 194.2 | 195.3 | 1      | 1  | .056 |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 70       | 195.3 | 197.7 | 2      | 4  | .058 |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 71       | 197.7 | 200.6 | 2      | 9  | .012 |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 72       | 200.6 | 205.0 | 4      | 4  | Tr   |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 73       | 205.0 | 207.5 | 2      | 5  | Tr   |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 74       | 207.5 | 212.0 | 4      | 5  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 75       | 212.0 | 216.0 | 4      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 76       | 216   | 218   | 2      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 77       | 223   | 225   | 2      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 78       | 229   | 231.5 | 2      | 5  | .030 |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 79       | 235   | 237   | 2      | 0  | Tr   |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 80       | 239   | 241.5 | 2      | 5  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 81       | 243   | 245   | 2      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 82       | 247   | 249   | 2      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |
| 83       | 254   | 256   | 2      | 0  | "    |  |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |

# DRILL LOG

## NUINSCO RESOURCES LIMITED

|                    |            |              |           |             |           |                        |          |                        |     |                     |      |             |      |
|--------------------|------------|--------------|-----------|-------------|-----------|------------------------|----------|------------------------|-----|---------------------|------|-------------|------|
| <i>Coordonnées</i> |            |              |           |             |           |                        |          |                        |     |                     |      |             |      |
| Forage no          | NM-4       | Latitude:    | 2=44N     | Départ:     | 0+00      | Élévation:             | Lake +3' | Pendage:               | 45° | Azimat:             | 156° | Profondeur: | 303' |
| Localisation       | Rowan Lake | Commencé le: | June 4/83 | Terminé le: | June 6/83 | Déclinaison Magnétique |          | Diamètre de la carotte |     | <u>BUT DU TROU:</u> |      |             |      |
| Projet             | Province   | Canton       | Lot       | Rang        | Claim     | Grillage               | S.N.R.C. |                        |     |                     |      |             |      |
| Monte Cristo       |            |              |           |             |           |                        |          |                        |     |                     |      |             |      |

| <u>Test à l'acide</u>              |                |                   |                | <u>Test au Tropari</u> |                |                          |
|------------------------------------|----------------|-------------------|----------------|------------------------|----------------|--------------------------|
| <u>Profondeur</u>                  | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u>      | <u>Pendage</u> | <u>Azm. Astronomique</u> |
| 200'                               | 38°            |                   |                |                        |                |                          |
| 303'                               | 30°            |                   |                |                        |                |                          |
| 0-50                               | 45             |                   |                |                        |                |                          |
| 50-125                             | 43             |                   |                |                        |                |                          |
| 125-175                            | 40             |                   |                |                        |                |                          |
| 175-225                            | 38             |                   |                |                        |                |                          |
| 225-275                            | 34             |                   |                |                        |                |                          |
| 275-300                            | 30             |                   |                |                        |                |                          |
| <i>Profondeur des coins:</i> _____ |                |                   |                |                        |                |                          |

Contractor: .....

Logged by: G.E. Archibald

Date:



NUINSCO RESOURCES LIMITED  
DRILL LOG

| Depth     | Rock type                                                     | Grain size<br>Colour            | Secondary<br>Structure                                | Texture and Structure                                                                                             | Alteration                                                                                                      | Mineralization                       | Comments                                                                                   |
|-----------|---------------------------------------------------------------|---------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------|
| 0-6       | CASING                                                        |                                 |                                                       |                                                                                                                   |                                                                                                                 |                                      |                                                                                            |
| 6-44      | Meta volcanic - basalt (shear zone)<br>Weakly alt. & mineral. | greenish-grey<br>fine grained   | Highly sheared at 40° to C.A.                         | No original textures. 30% carbonate stringers parallel - foliation 20%, sericite - 5% irregular white quartz vein | Chlorite-carbonate<br>sericite silica                                                                           | 0-2% pyrite trace of<br>chalcopyrite | Incipient altered & mineralized zone                                                       |
| 44.0-60.0 | Altered basalt as above (shear zone)                          | dark green                      | -----"-----                                           |                                                                                                                   | Chlorite carbonates (15%) No syenites<br>carbonate stringers & rhombs                                           | Tr py                                | Less altered than above and below section                                                  |
| 60-110    | -----"-----                                                   | light greyish-green             | Highly sheared at 40-45° often crenulated, e.g. 73-74 |                                                                                                                   | 30% carbonated weak sericite - talc(5-10%)<br>very weak silicification                                          | 0-4% pyrite                          | Difficult alteration and very weak mineralized zone<br>See assay sheet for random sampling |
| 110-138   | --"---                                                        | --"---                          | -----"-----                                           |                                                                                                                   | 30% carbonate < 5%<br>sericite weak silicification                                                              | Nil                                  |                                                                                            |
| 138-147   | Altered basalt as above<br>shear zone                         | greyish green<br>fine grained   | Highly sheared foliation at 40° to C.A.               |                                                                                                                   | Weakly silicified 10-15% short sections<br>1.0' 60% +30%<br>carbonates 5-10%<br>sericite                        | 4-3% pyrite tr of<br>chalcopyrite    | Weakly altered & mineralized zone equivalent to zones in previous holes                    |
| 147-159   | -----"-----                                                   | -----"-----                     | -----"-----                                           |                                                                                                                   | 30% carb. incipient silic.                                                                                      | 0-4% pyrite                          |                                                                                            |
| 159-203   | -----"-----<br>mineralized zone(weak)                         | grey-green<br>faint brown tinge | -----"-----                                           |                                                                                                                   | 5-15% sericite + 10%<br>silica +10% silica<br>30% carb.<br>159-167/5% sericite<br>167-178/15% " "<br>178 5% " " | 4-3% pyrite tr of<br>cp.             | Main mineralized zone?<br>Much less altered & mineralized than previous holes.             |

NM-4

DDH #

Page 1

NUINSCO RESOURCES LIMITED

DRILL LOG

| Depth   | Rock type                       | Grain size<br>Colour          | Secondary<br>Structure                                         | Texture and Structure | Alteration                                                                                                                                                             | Mineralization | Comments                                                                                                                                                                                                   |
|---------|---------------------------------|-------------------------------|----------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 203-223 | Same as<br>138-147              | -----                         | -----<br>foliation 45° to<br>C.A.                              |                       | as 138-147                                                                                                                                                             | 4-1% pyrite    | incipient alteration<br>& mineralization.                                                                                                                                                                  |
| 223-303 | Basalt<br>altered<br>sheer zone | dark green<br>fine<br>grained | Moderate shearing<br>at 45° to C.A.<br>Much less than<br>above |                       | 10-15% carb. < 5%<br>silica 0-3% sericite<br>alteration decreasing<br>down hole<br><br>273-290/ 2% pyrite<br>as bands of 50%<br>pyrite to 1cm<br>parallel to foliation | Tr py.         |                                                                                                                                                                                                            |
| 303     | END OF HOLE                     |                               |                                                                |                       |                                                                                                                                                                        |                | COMMENTS: Mineralization and alteration more diffuse than in previous holes and much less intense -<br>however, zone of alt. etc. wider alt. & mineral at beginning of hole not seen in the earlier holes. |

# ANALYSE des CAROTTES de FORAGE

Curtis Samples

| SAMPLE # | FROM | TO   | Length |    |      |  | Cu | Zn | Ag On/T | Au On/T | Fe % | Mn % | CaO % | Na <sub>2</sub> O % | K <sub>2</sub> O % | SiO <sub>2</sub> % | NO <sub>x</sub> % |  |  |  |  |  |  |       |
|----------|------|------|--------|----|------|--|----|----|---------|---------|------|------|-------|---------------------|--------------------|--------------------|-------------------|--|--|--|--|--|--|-------|
|          |      |      | pl.    | m. |      |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 74784    | 6.0  | 8.8  | 2      | 8  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 85       | 8.8  | 13.0 | 4      | 2  | .034 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 86       | 13.0 | 16.0 | 3      | 0  | .058 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 87       | 16.0 | 19.6 | 3      | 6  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 88       | 19.6 | 21.7 | 2      | 1  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 89       | 21.7 | 23.8 | 2      | 1  | .078 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 90       | 23.8 | 26.5 | 2      | 7  | .012 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 91       | 26.5 | 30.0 | 3      | 5  | .010 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 92       | 30.0 | 34.0 | 4      | 0  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 93       | 34.0 | 38.0 | 4      | 0  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 94       | 38.0 | 40.8 | 2      | 8  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 95       | 40.8 | 44.0 | 3      | 2  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 96       | 61.5 | 64.7 | 3      | 2  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 97       | 71   | 74.3 | 3      | 3  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 98       | 85.5 | 88.7 | 3      | 2  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 99       | 92   | 94   | 2      | 0  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 74800    | 138  | 140  | 2      | 0  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  | Nc-10 |
| 74951    | 140  | 144  | 4      | 0  | .042 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 52       | 144  | 146  | 2      | 0  | .248 |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |
| 53       | 146  | 148  | 2      | 0  | tr   |  |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |  |       |

Forage No NM-4  
1587461



# DRILL LOG

NUINSCO RESOURCES LIMITED

|                    |              |           |           |         |             |            |             |          |              |         |      |             |      |
|--------------------|--------------|-----------|-----------|---------|-------------|------------|-------------|----------|--------------|---------|------|-------------|------|
| <i>Coordonnées</i> |              |           |           |         |             |            |             |          |              |         |      |             |      |
| Forage no          | NM-5         | Latitude: | 2+44W     | Départ: | 0+00        | Elévation: | Lake +3'    | Pendage: | -60°         | Azimat: | 150° | Profondeur: | 353' |
| Localisation       | Commencé le: |           | June 6/83 |         | Déclinaison |            | Diamètre de |          | BUT DU TROU: |         |      |             |      |
|                    | Terminé le:  |           | June 8/83 |         | Magnétique  |            | la carotte  |          |              |         |      |             |      |
| Projet             | Province     | Canton    | Lot       | Rang    | Claim       | Grillage   | S.N.R.C.    |          |              |         |      |             |      |
| Monte Cristo       |              |           |           |         |             |            |             |          |              |         |      |             |      |

### Test à l'acide

### Test au Tropari

| <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Azm. Astronomique</u> |
|-------------------|----------------|-------------------|----------------|-------------------|----------------|--------------------------|
| 200               | 49°            |                   |                |                   |                |                          |
| 350               | 43°            |                   |                |                   |                |                          |
| 0- 75             | - 58           |                   |                |                   |                |                          |
| 75-125            | - 55           |                   |                |                   |                |                          |
| 125-175           | - 52           |                   |                |                   |                |                          |
| 175-225           | - 49           |                   |                |                   |                |                          |
| 225-275           | - 47           |                   |                |                   |                |                          |
| 275-325           | - 45           |                   |                |                   |                |                          |
| 325-353           | - 43           |                   |                |                   |                |                          |

Profondeur  
des coins: \_\_\_\_\_

Contractor: .....

Logged by: G.F. Archibald  
Date: .....

NUINSCO RESOURCES LIMITED

DRILL LOG

| Depth   | Rock type                                                                             | Grain size<br>Colour          | Secondary<br>Structure                     | Texture and Structure      | Alteration                                                                                                         | Mineralization                           | Comments                                                         |
|---------|---------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------|
| 0-3     | CASING                                                                                |                               |                                            |                            |                                                                                                                    |                                          |                                                                  |
| 3-50    | Basalt<br>(shear<br>zone)<br><br>Weak<br>minerali-<br>zed and<br>assoc.<br>alteration | Grey-green<br>fine<br>grained | Highly sheared<br>foliation 35-40°<br>C.A. | No original textures noted | 30% carbonate as<br>bands & stringers<br>10% silica<br>15% sericite talc                                           | 0-3% pyrite<br>tr of chalcopyrite        | Same as in Hole #4                                               |
| 50-181  | Basalt<br>(shear<br>zone)                                                             | -----"                        | -----"                                     | -----"                     | incipient sericite<br>alteration &<br>silicification 30%<br>carb. 5% sericite<br>5% silica<br>142-144 20% sericite | trace of pyrite in<br>more altered zones |                                                                  |
| 181-207 | -----"                                                                                | -----"                        | -----"                                     | -----"                     | slight increase in<br>alteration<br>30% carb.<br>5-10% sericite<br>10% silica                                      | 0-1% pyrite                              |                                                                  |
| 207-219 | Basalt<br>as above<br>Alter. Zone                                                     | Brownish-<br>grey             | Highly sheared as<br>at 35° to C.A.        |                            | 30% sericite<br>20% silica as qtz.<br>flooding & qtz.<br>veinlets<br>+ 30% carbonate                               | 2-5% pyrite                              | Good alteration zone                                             |
| 219-270 | Basalt<br>(shear<br>zone)                                                             | Greenish-<br>grey             | -----"                                     |                            | Weak sericite &<br>incipient silifi-<br>cation.<br>20-25% carb.<br>5-15% sericite                                  | 0-1% pyrite                              | Fringe alteration<br>short section to 5' of<br>moderate sericite |
| 270-353 | -----"                                                                                | -----"                        | Foliation 40-45°<br>to C.A.                |                            | Carbonate-qtz string-                                                                                              | Trace to 1%                              |                                                                  |

NUINSCO RESOURCES LIMITED

DRILL LOG

| Depth           | Rock type   | Grain size<br>Colour | Secondary<br>Structure | Texture and Structure                                                                        | Alteration                                              | Mineralization | Comments |
|-----------------|-------------|----------------------|------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------|----------|
| 270-353 cont'd. |             |                      |                        | ers parallel to foliation 20%<br>gradually decreasing downhole<br>Very weak sericite to 300' |                                                         |                |          |
| 353             | END OF HOLE |                      |                        |                                                                                              | 328-345<br>2-10 mm bands of 40%<br>pyrite as in Hole #4 |                |          |
|                 | COMMENTS:   |                      |                        | Alteration about the same, perhaps slightly better than Hole #4.                             |                                                         |                |          |







# DRILL LOG

## NUINSCO RESOURCES LIMITED

| Coordonnées  |          |              |           |             |            |                        |          |                        |     |                     |      |             |      |
|--------------|----------|--------------|-----------|-------------|------------|------------------------|----------|------------------------|-----|---------------------|------|-------------|------|
| Forage no    | NM-6     | Latitude:    | 2+44N     | Départ:     | 0+00       | Elévation:             | Lake +3  | Pendage:               | 70° | Azimat:             | 150° | Profondeur: | 393' |
| Localisation |          | Commencé le: | June 9/83 | Terminé le: | June 10/83 | Déclinaison Magnétique |          | Diamètre de la carotte |     | <u>BUT DU TROU:</u> |      |             |      |
| Projet       | Province | Canton       | Lot       | Rang        | Claim      | Grillage               | S.N.R.C. |                        |     |                     |      |             |      |

| <u>Test à l'acide</u> |                |                   |                | <u>Test au Tropari</u> |                |                          |
|-----------------------|----------------|-------------------|----------------|------------------------|----------------|--------------------------|
| <u>Profondeur</u>     | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u>      | <u>Pendage</u> | <u>Azm. Astronomique</u> |
| 200'                  | 69°            |                   |                |                        |                |                          |
| 300'                  | 64°            |                   |                |                        |                |                          |
| 393'                  | 64°            |                   |                |                        |                |                          |

*Profondeur des coins* \_\_\_\_\_

NUINSCO RESOURCES LIMITED

DRILL LOG

| Depth    | Rock type                                  | Grain size<br>Colour                 | Secondary<br>Structure       | Texture and Structure                      | Alteration                                                                                                   | Mineralization                                                        | Comments                                         |
|----------|--------------------------------------------|--------------------------------------|------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------|
| 0-5      | Casing                                     |                                      |                              |                                            |                                                                                                              |                                                                       |                                                  |
| 5-79     | Shear zone                                 | Banded<br>light<br>yellow &<br>green | Schistose-banded<br>C.A. 30° |                                            | 50% sericite qtz.<br>bands - 50% chlorite<br>silicified sections<br>22.5-2-25.4'<br>27.5-30.0'<br>44.5-51.5' | Tr - 0/5% pyrite<br>1% pyrite cubes in<br>silicified zones<br>Tr ccp. |                                                  |
| 79.0-114 | "                                          | Med.green                            | C.A. 30-35°                  |                                            | Chlorite-qtz dissem.<br>carbonate rhombs<br>disseminated through-<br>out. Sub mm 10-20%<br>grains            | Negligible - few<br>grains of pyrite<br>noted                         |                                                  |
| 114-155  | "                                          | Banded<br>yellow-<br>green           |                              |                                            | Sericite quartz as<br>from 5-79'                                                                             |                                                                       |                                                  |
| 155-168  |                                            | Yellow                               | C.A. 35°                     |                                            | Sericite - quartz<br>80% - 10% quartz<br>carbonate veins 20%<br>dark chloritic bands                         | 1% pyrite                                                             |                                                  |
| 168-214  |                                            | Yellow,<br>green<br>pink<br>banded   |                              |                                            | 6"-1' bands of<br>sericite quartz                                                                            | Tr pyrite                                                             |                                                  |
| 214-236  | Sericitic<br>silicified<br>pyritic<br>zone |                                      |                              | Brecciated-quartz carbonate<br>veined zone | Yellow sericitic<br>'fragments' in<br>white bull quartz<br>carbonate veins                                   | 1-2% dissem.pyrite<br>trace chalcopyrite                              | Locally very well<br>mineralized with<br>pyrite. |
| 236-253  | Banded<br>chlorite<br>quartz               |                                      |                              |                                            | Sericite-quartz well<br>developed 249-250.5                                                                  |                                                                       |                                                  |

NUINSCO RESOURCES LIMITED

DRILL LOG

| Depth         | Rock type                       | Grain size<br>Colour | Secondary<br>Structure                      | Texture and Structure | Alteration                                                                                                  | Mineralization                                     | Comments                             |
|---------------|---------------------------------|----------------------|---------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------|
| 253-259.5     | Silicified<br>pyritic<br>zone   |                      |                                             | As from 214-236       | Not as pervasively<br>altered as from 214-<br>236'. 2-3' sections of<br>banded chlorite seri-<br>cite rock. |                                                    |                                      |
| 259.5-<br>310 | Banded<br>sericite<br>chlorite  |                      | C.A. 35° colour<br>banding and<br>foliation |                       |                                                                                                             | Tr - 0/5% dissem.<br>pyrite                        |                                      |
| 310-353       | Silicified<br>sericitic<br>zone |                      |                                             |                       | Predominantly<br>sericite to ~ 323'                                                                         | 0.5-5% pyrite<br>predom. conc. in<br>beds v.fn.gr. | V.G. in quartz stringer<br>at 321.5' |
| 353-393       | Chlorite-<br>sericite           |                      |                                             |                       | Chlorite                                                                                                    | Tr - 1% pyrite                                     |                                      |
|               | END OF HOLE                     |                      |                                             |                       |                                                                                                             |                                                    |                                      |

DDI # NM-6 .....

Page: 2

NUINSCO RESOURCES LIMITED  
DRILL LOG

| Depth | Rock type | Grain size<br>Colour | Secondary<br>Structure | Texture and Structure | Alteration                                                                                                                                                                                                                                                                                         | Mineralization | Comments |
|-------|-----------|----------------------|------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
|       |           |                      |                        |                       | <u>Assays NM-6</u><br>1 - 13 -10' (5.0)<br>2 - 18 -20.9 (2.9)<br>3 -20.9-23.0 (4.5)<br>4 -23.0-25.4<br>5 -25.4-27.5 (2.1)<br>6 -27.5-30.0 (2)<br>7 - 30 -33.0<br>8 - 33 -38<br>9 - 38 -43<br>10 - 43 -44.9<br>11 -44.9-48.0<br>12 -48.0-51.7<br>13-155.4-159.5<br>14-159.5-163.0<br>15-153.0-166.0 |                |          |

DDH # NM-6

Page: 1A











# DRILL LOG

## NUINSCO RESOURCES LIMITED

| Coordonnées                       |                |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
|-----------------------------------|----------------|-------------------|----------------|---------|-------------|------------------------|----------------|--------------------------|--------------------------|---------|------|-------------|------|
| Forage no                         | NM-7           | Latitude:         | 6+00           | Départ: | 2+00E       | Élévation:             | Lake +4        | Pendage:                 | 50°                      | Azimat: | 150° | Profondeur: | 323' |
| Localisation                      | Commencé le:   |                   | June 14, 1983  |         | Déclinaison |                        | Diamètre de    |                          |                          |         |      |             |      |
| Rowan Lake                        | Terminé le:    |                   | June 17, 1983  |         | Magnétique  |                        | la corotte     |                          | <u>BUT DU TROU:</u> 323' |         |      |             |      |
| Projet                            | Province       | Canton            | Lot            | Rang    | Claim       | Grillage               | S.N.R.C.       |                          |                          |         |      |             |      |
| Monte Cristo                      |                |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
| <u>Test à l'acide</u>             |                |                   |                |         |             | <u>Test au Tropari</u> |                |                          |                          |         |      |             |      |
| <u>Profondeur</u>                 | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> |         |             | <u>Profondeur</u>      | <u>Pendage</u> | <u>Azm. Astronomique</u> |                          |         |      |             |      |
| 3'                                | 52°            |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
| 200'                              | 33°            |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
| 250'                              | 31°            |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
| 300'                              | 27°            |                   |                |         |             |                        |                |                          |                          |         |      |             |      |
| <i>Profondeur des coins</i> _____ |                |                   |                |         |             |                        |                |                          |                          |         |      |             |      |

Contractor: Norwescon Drilling

Logged by: D. Hunter  
Date:

NUINSCO RESOURCES LIMITED  
DRILL LOG

160-163  
201.5-204.3  
224-227.5

Sample

| DEPTH   | ROCK TYPE                 | GRAIN SIZE<br>COLOUR     | SECONDARY<br>STRUCTURE                                           | TEXTURE AND STRUCTURE                                                                                               | ALTERATION                                                                                                                          | MINERALIZATION                                                        | COMMENTS                                                                                                                                                |
|---------|---------------------------|--------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0-3     | CASING                    |                          |                                                                  |                                                                                                                     |                                                                                                                                     |                                                                       |                                                                                                                                                         |
| 3-28    | Basalt                    | Green                    | Well foliated C.A. 45°                                           | Massive lava                                                                                                        |                                                                                                                                     |                                                                       |                                                                                                                                                         |
| 28-149  | Basalt                    | "                        | Foliated & banded                                                | Locally amygdaloidal as at 43-45' (noted throughout) chloritic bands may represent fragments and/or pillow selvages | Light yellow bands of silicification developed esp. from 96-103' and 125.5-127.5' 138.0-138.5'<br>In general rock is soft-chloritic |                                                                       |                                                                                                                                                         |
| 148-323 | Altered basalt shear zone | Light green light yellow | Banded and kinked sericitic zones C.A. 68° 200' C.A. 70° at 250' |                                                                                                                     | 10-50% sericite-qtz-carbonate bands Chloritic bands Chloritic predominant platy mineral                                             | Very fn gr dissem. carbonate rhombs Conspicuous in chloritic sections | Very blocky section starts at 159' Highly schistose shear zone Hole abandoned due to extreme deviation from 52° to 27° in 300'<br>Drillers broke 2 rods |
|         | END OF HOLE               |                          |                                                                  |                                                                                                                     |                                                                                                                                     |                                                                       |                                                                                                                                                         |



DRILL LOG

NUINSCO/LOCKWOOD

Property:

Rowan Lake

DDH: NM-8

|                                                                                                                                                                                                                          |              |                      |                                                                                                                                                                                                                                                                                                                                                          |                                                            |                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------|
| Co Ordinates: 1+00E, 6+00N                                                                                                                                                                                               |              | Claim: Elevation +5' |                                                                                                                                                                                                                                                                                                                                                          | Date Hole Commenced: 18/6/83                               |                     |
| Declination: -50°                                                                                                                                                                                                        |              | Azimuth: 150°        |                                                                                                                                                                                                                                                                                                                                                          | Date Completed: 23/6/83                                    |                     |
|                                                                                                                                                                                                                          |              | Core Size: BQ        |                                                                                                                                                                                                                                                                                                                                                          | Logged By: L. Curtis (see also handwritten log by M. Wade) |                     |
|                                                                                                                                                                                                                          |              | Total Depth: 763'    |                                                                                                                                                                                                                                                                                                                                                          |                                                            |                     |
| ACID TEST                                                                                                                                                                                                                |              |                      | TROPARI TEST                                                                                                                                                                                                                                                                                                                                             |                                                            |                     |
| Depth                                                                                                                                                                                                                    | Inclination  | Depth                | Inclination                                                                                                                                                                                                                                                                                                                                              | Depth                                                      | Inclination Azimuth |
| 10'                                                                                                                                                                                                                      | 53°          | 313'                 | 35°                                                                                                                                                                                                                                                                                                                                                      |                                                            |                     |
| 100'                                                                                                                                                                                                                     | 46.5°        | 453'                 | 30°                                                                                                                                                                                                                                                                                                                                                      |                                                            |                     |
| 200'                                                                                                                                                                                                                     | 36°, 38°=37° | 613'                 | 24°                                                                                                                                                                                                                                                                                                                                                      |                                                            |                     |
| 270'                                                                                                                                                                                                                     | 40°          |                      |                                                                                                                                                                                                                                                                                                                                                          |                                                            |                     |
| Drill Log Summary                                                                                                                                                                                                        |              | Assay                | Comments                                                                                                                                                                                                                                                                                                                                                 |                                                            |                     |
| Mineralization:                                                                                                                                                                                                          |              |                      | <p>Outcrop ~ 300' E on shoreline contains well bedded &amp; finely laminated crystal tuff &amp; mafic ash? tuff - foliation steep 80-85° N. Definite crystals of feldspar &amp; graded bedding. ? when sheared this rock would be similar to some material seen in <u>core</u>. No crystals observed in NMB</p> <p>Aw = 5-25%, Am = 25-50, As 71-50%</p> |                                                            |                     |
| <b>ABBREVIATIONS USED IN LOGGING:</b>                                                                                                                                                                                    |              |                      |                                                                                                                                                                                                                                                                                                                                                          |                                                            |                     |
| <p><u>Rock type:</u> MV metavolcanic; lv tuff; QFP quartz feldspar porphyry.<br/>         A altered zone; Aw weak; Am moderate; As strong.<br/>         CSZ chloritic shear zone. Defined as &lt;10, 10-20, &gt; 20%</p> |              |                      | <p><u>Veining:</u> OCV quartz-carbonate vein; CV/QV carbonate vein/quartz vein;<br/>         %/5'-Estimate over 5' interval; estimate attitude; indicate color.<br/>         CQV - carbonate dominant over Quartz</p>                                                                                                                                    |                                                            |                     |
| <p><u>Texture:</u> ns massive; gb gabbroid; vs vesicular; sp spotted;<br/>         an amygdaloidal; Rc rhoeb-carbonated.</p>                                                                                             |              |                      | <p><u>Alteration:</u> Carb carbonatization; Sil silicification; Ser sericitization;<br/>         Chl chlorite; Hm hematite; F fuchsite; T tourmaline.<br/> <u>Modifier:</u> Pvs pervasive; Df diffuse; Av, Am, As,<br/>         Rc rhoeb-carbonated; Qf quartz flooding (grey).</p>                                                                      |                                                            |                     |
| <p><u>Structure:</u> Fol foliated; Sh shear; My nylonite. Br Breccia, Cr Crenulated</p>                                                                                                                                  |              |                      | <p><u>Mineralization:</u> Py pyrite; Cpy chalcopyrite; Au gold; Ag silver.<br/> <u>Modifier:</u> Dis disseminated; Pp pyrite porphyroblasts;<br/>         Ps pressure shadows; cl clusters; sv selvage; V veins.</p>                                                                                                                                     |                                                            |                     |
| <p><u>Grain Size:</u> fgr fine &lt;1 mm; mgr medium 1-2 mm; cgr coarse &gt; 2mm.</p>                                                                                                                                     |              |                      |                                                                                                                                                                                                                                                                                                                                                          |                                                            |                     |

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DRILL LOG

S<sub>0</sub> = Bedding Primary Structure

S<sub>1</sub> = foliation

S<sub>2</sub> = crenulated/drag fold

| DEPTH   | ROCK TYPE                                | GRAIN SIZE<br>COLOUR    | SECONDARY<br>STRUCTURE                                                                                                                                                            | TEXTURE AND STRUCTURE                                                                                                               | ALTERATION                                                                                                                       | MINERALIZATION                                                 | COMMENTS                                                                                                                            |
|---------|------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 2-142   | Mv * dk gn                               |                         | Well foliated<br>=S <sub>1</sub> 42-50°<br>planar                                                                                                                                 | Massive; irregular, trans-<br>posed QCV                                                                                             | Weak carbonate<br>section                                                                                                        | trace<br>No Ppp @ 22                                           | *o/c on island east<br>of this island<br>appears to have<br>mafic meta tuff<br>horizons - some of<br>these rx may be<br>equivalent? |
| 142-231 | Alternating As<br>& Aw<br><br>Shear Zone | >beige &<br>pl to dk gn | Note alter-<br>ation is<br>coincident<br>with change<br>in structur-<br>al style -<br>Drag folds<br>or "crenu-<br>lations" in<br>S <sub>1</sub> , develop=<br>S <sub>2</sub> Fol. | 163-164.5 QCV with slivers<br>of ser. & QV<br><br>Late Chl v.<br>» Shear 188-213 indicated by<br>slivers of core & vf tight<br>fol. | 158-164.5 pervas-<br>ive carb-ser.<br><br>183.5-213 50-90%<br>As, bleached alt<br>with sections of<br>QV/QCV + tr fuchite<br>ser | No py<br><br>Sporadic py from tr to<br>199-200<br>210-212 1-2% | QV/QC fuchite v<br>post folding<br>but in next section<br>altered mv is<br>folded                                                   |
| 231-245 | Aw/Mv<br><br>transition                  | dk gn beige             | S <sub>1</sub> & S <sub>2</sub> well<br>preserved<br>S folds 2-3"                                                                                                                 | Banded green/beige =chlorite/<br>carbonate bands defining folds<br>(S <sub>2</sub> ) & foliation - interbanded                      | 10-20% carb bands                                                                                                                | Pp 231.5 trace py                                              |                                                                                                                                     |
| 245-253 | Mv                                       | weakly fol. 35°         | gabbroic to<br>massive<br>upper con-<br>tact is<br>graditional                                                                                                                    |                                                                                                                                     | small Rc                                                                                                                         |                                                                |                                                                                                                                     |
| 253-353 | Aw/Mv                                    |                         | Drag folds<br>strong fol<br>S <sub>1</sub> - 20-30°                                                                                                                               | As for 231-245 Rare concordant<br>QCV "Feathered" zones of carb in<br>MV at 355-368                                                 | 5-15% carb-ser<br>preferential carb<br>in folded/crenu-<br>lated zones                                                           | Poorly mineralized<br><br>Spht 285.5-290.5<br>for bg value     | Diffuse carb zones<br>develop in folded<br>zones difficult to<br>tell if carb altn                                                  |

NOTE: We believe the structural sequence is:  
foliation S<sub>1</sub> → Folding S<sub>2</sub> → Carb/Ser Altn → Shearing S<sub>3</sub>

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| DEPTH          | ROCK TYPE                             | GRAIN SIZE<br>COLOUR          | SECONDARY<br>STRUCTURE                                                         | TEXTURE AND STRUCTURE                                                                                                    | ALTERATION                                                                                  | MINERALIZATION             | early<br>transposition<br>feathering<br>COMMENTS                                                                                        |
|----------------|---------------------------------------|-------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 253-353 cont'd |                                       |                               |                                                                                | These are mere transposition features with slippage along sev layers-transposing fold crests. See NM-1 @ 346'            | incipient to foliation & quite variable some Rc spotting                                    | 50% carb/ser               | is pre or post folding*                                                                                                                 |
| 353            |                                       |                               |                                                                                |                                                                                                                          | Altn decreases from 333-353 max 5-10%                                                       |                            |                                                                                                                                         |
| 353-412        | Sheared MV?<br>(could be mafic tuff?) | dk gr                         | Transposition implied by "feathered" fracture which is common in this interval | Stray folds are rare - but transposition & shearing marked by ser is common e.g. 361.5 & 391.7 QCV with carb halo at 413 | At 429 a QCV with carb halo which X cuts slivers of flow ser i.e. this vein is post seritiz | Trace py in QCV e.g. 393.9 | *Does lack of carb-ser coincide with absence of S-drag folds?                                                                           |
| 412-500        | Mixed Aw-m & Mv                       | plgn beige                    | Fol 20° Intensity of fol <sup>n</sup> /shearing increasing                     | Rc as alt <sup>n</sup> zone is approached 483-412<br>Minor drag folding - Some lge disord QCV(no halo) i.e. v.late       | Weakly altered (5-15%) Mv & interbd Mv 412-473<br>Moderately altd Mv(20-30%?) 473-498       | Absent                     | Note S <sub>1</sub> - foliation<br>S <sub>2</sub> - drag fold<br>S <sub>3</sub> - shear & transposition<br>S <sub>4</sub> - brecciation |
| 500-508        | As                                    | mauve - grey<br>(in cut core) | Strong S <sub>1</sub> & shear 20°                                              | Bleached and sheared Mv<br>Several QCV lge no halos 1"                                                                   | Sheaves of ser<br>pervasive carb                                                            | tr py                      |                                                                                                                                         |
| 508-511        | Mv                                    |                               | "Feathered"                                                                    |                                                                                                                          | Weak 5-10%                                                                                  |                            |                                                                                                                                         |
| 511-534        | Sheared Mv                            | gn beige                      | Drag folds/<br>crenulations                                                    | Interbanded altn & Mv<br>Some "feathered"                                                                                | 10-15% variable                                                                             | Tr<br>-absent              | Again planer fabric in altered zones as compared with                                                                                   |

Aw = weak = <10%  
 Am = 10-20%  
 As = >20%

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It is understood that alteration = carb + ser

| DEPTH   | ROCK TYPE  | GRAIN SIZE<br>COLOUR                                | SECONDARY<br>STRUCTURE                                                                   | TEXTURE AND STRUCTURE/<br>VEINING                                                              | ALTERATION                                                                                                                                                  | MINERALIZATION                                                                                                                                                                                                               | COMMENTS                                                                               |
|---------|------------|-----------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 511-534 | cont'd.    |                                                     |                                                                                          |                                                                                                |                                                                                                                                                             |                                                                                                                                                                                                                              | Am zones which retain crenulations & drag folds<br>→ implies altered zones are sheared |
| 534-633 | Aw/Mv<br>* | Dk gn plgn/tan<br><br>Tan<br><br>Beige<br><br>Dk gn | Brecciation probably correlated with late Qv+py<br><br><br>Strong fol (S <sub>3</sub> ?) | Note White Qv disrupt & br ser-carb-py zones & are in urn Xcut by later clear Qv<br><br><br>Am | A weak, variable 5-15% >carb/ser<br><br>As from 539-540<br>541.5-543<br>& 544-545<br>due to carb around Qv in breccia zones<br><br>As 605-607<br>> carb 80% | Similar to good Au intersection in DDH NM-6 (Malcolm Wade)<br><br>576-581 variable py seams up to 15% over 10cm - 1% over 4.4'<br><br>Trace dissem py<br><br>Cpy 1-2% over 1cm<br>593.7+2.3%py over short intervals<br>601.8 | Paragenesis -<br>MV → ser-carb+py+ fuchite<br>→ white Qv+py Po<br>→ clear Qv           |
| 633-699 | Mv         | Dk gn                                               | Strongly fol 15° - due to hole flattening                                                | Qv with hard bk mineral 667.5 -67°<br>Some minor drag folding                                  | Variable weakly altered ( 5%) over short intervals<br>667.5-670 carb assoc c̄ Qv                                                                            | Pp in seam 2mm @ 669                                                                                                                                                                                                         |                                                                                        |
| 699-763 | Mv         | Dk gn                                               | Non foliated to weakly fol                                                               | Massive Mv; rare Qv                                                                            | Rc                                                                                                                                                          | Local pp                                                                                                                                                                                                                     |                                                                                        |



55.5 m

ANALYSE des CAROTTES de FORAGE

| No. Echant. | de    | a     | Longueur |       | Cv    | Zn | Ag Qv/T | Au Qv/T | Fe % | Mn % | CaO % | Na2O % | K2O % | SiO2 % | TiO2 % |
|-------------|-------|-------|----------|-------|-------|----|---------|---------|------|------|-------|--------|-------|--------|--------|
|             |       |       | pl.      | m.    |       |    |         |         |      |      |       |        |       |        |        |
| 1           | 74851 |       |          | 2.026 |       | ↑  |         |         |      |      |       |        |       |        |        |
|             | 74852 |       |          | 0.160 |       | ↑  |         |         |      |      |       |        |       |        |        |
|             |       |       |          | 0.166 |       | ↑  |         |         |      |      |       |        |       |        |        |
|             |       |       |          | 0.014 |       | ↓  |         |         |      |      |       |        |       |        |        |
|             |       |       |          | 0.048 |       | ↓  |         |         |      |      |       |        |       |        |        |
|             |       |       |          | 0.142 |       | ↓  |         |         |      |      |       |        |       |        |        |
| 7           | 74882 | 497.6 | 501.8    | 4.2   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 8           | 74883 | 501.8 | 505.5    | 3.7   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 9           | 74884 | 505.5 | 508.6    | 3.1   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 10          | 74885 | 508.6 | 511.8    | 3.2   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 11          | 74886 | 533.8 | 538.0    | 4.2   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 12          | 74887 | 538   | 541.5    | 3.5   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 13          | 74888 | 541.5 | 543.7    | 2.2   | 0.166 | ↑  |         |         |      |      |       |        |       |        |        |
| 14          | 74889 | 543.7 | 546.5    | 2.8   | 0.132 | ↑  |         |         |      |      |       |        |       |        |        |
| 15          | 74890 | 546.5 | 548.2    | 1.7   | Tr    | ↓  |         |         |      |      |       |        |       |        |        |
| 16          | 74891 | 548.2 | 551.4    | 3.2   | 0.040 | ↓  |         |         |      |      |       |        |       |        |        |
| 17          | 74899 | 577.6 | 581.0    | 4.4   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 18          | 74850 | 597.2 | 601.8    | 4.6   | Tr    |    |         |         |      |      |       |        |       |        |        |
| 19          | 74881 | 627.0 | 636.0    | 3.0   | Tr    |    |         |         |      |      |       |        |       |        |        |
|             | 74892 | 287.0 | 290.0    | 3.0   | Tr    |    |         |         |      |      |       |        |       |        |        |

Forage No \_\_\_\_\_

Poee

DRILL LOG

Property: Rowan Lake

NUINSCO/LOCKWOOD

DDH: NM-9

|                            |                 |                                       |
|----------------------------|-----------------|---------------------------------------|
| Co Ordinates: 0+10E, 6+89N | Claim: Lake +5' | Date Hole Commenced: June 24/1983     |
| Declination: -60°          | Azimuth: 150°   | Date Completed: June 27,1983          |
|                            | Core Size:      | Logged By: M. Wade (edited by Curtis) |
|                            | Total Depth:    |                                       |

| ACID TEST |             |       |             | TROPARI TEST |             |         |       |             |         |
|-----------|-------------|-------|-------------|--------------|-------------|---------|-------|-------------|---------|
| Depth     | Inclination | Depth | Inclination | Depth        | Inclination | Azimuth | Depth | Inclination | Azimuth |
| 13'       | 63°         | 500'  | 24°         |              |             |         |       |             |         |
| 200'      | 47°         | 613'  | 18°         |              |             |         |       |             |         |
| 300'      | 38°         |       |             |              |             |         |       |             |         |
| 400'      | 33°         |       |             |              |             |         |       |             |         |

| Drill Log Summary | Assay | Comments                                                                                                                                      |
|-------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mineralization:   |       | Curtis sample from this hole as follows:<br>NMC 3=73'; NMC 4=48'; NMC 5=497'; NMC 6=516.5';<br>NMC 9=632.6'.<br>Aw=5-25%, Am=25-50%, As > 50% |

ABBREVIATIONS USED IN LOGGING:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><u>Rock Type:</u> MV metavolcanic; Tu tuff; QFP quartz feldspar porphyry.<br/>                     A altered zone; Av weak; Am moderate; As strong.<br/>                     CSZ chloritic shear zone. → 5-25% → 25-50% → 50%</p> <p><u>Texture:</u> ms massive; gb gabbroid; vs vesicular; sp spotted;<br/>                     an anagdaloidal; Rc rhomb-carbonated. Fth-Feathered</p> <p><u>Structure:</u> Fol foliated; Sh shear; My mylonite.<br/>                     Br-Breccia, Cr-Crenulated</p> <p><u>Grain Size:</u> fgr fine &lt; 1 mm; mgr medium 1-2 mm; cgr coarse &gt; 2mm.</p> | <p><u>Veining:</u> OCV quartz-carbonate vein; CV/QV carbonate vein/quartz vein;<br/>                     Z/S'-Estimate over 5' interval; estimate attitude; indicate color.<br/>                     CQV - carbonate is dominant</p> <p><u>Alteration:</u> Carb carbonatization; Sil silicification; Ser sericitization;<br/>                     Chl chlorite; Men hematite; F fuchsite; T tourmaline.</p> <p><u>Modifier:</u> Pvs pervasive; Df diffuse; Av, Am, As,<br/>                     Rc rhomb-carbonated; Qf quartz flooding (grey).</p> <p><u>Mineralization:</u> Py pyrite; Cpy chalcopyrite; Au gold; Ag silver.<br/> <u>Modifier:</u> Dis disseminated; Pp pyrite porphyroblasts;<br/>                     Ps pressure shadows; cl clusters; sv selvage; V veins.</p> <p style="text-align: center;">Tr=Trace= &lt; 1%</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH     | ROCK TYPE                                                | GRAIN SIZE<br>COLOUR                                | SECONDARY<br>STRUCTURE                                                             | TEXTURE AND STRUCTURE                                                      | ALTERATION                                                                          | MINERALIZATION                                                                             | COMMENTS                                                                                             |
|-----------|----------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 0-6.5     | CASING                                                   |                                                     |                                                                                    |                                                                            |                                                                                     |                                                                                            |                                                                                                      |
| 6.5-95    | Mv/Meta Tuff?<br>Interbedded<br>Ash tuff<br>Crystal tuff | Fine to<br>coarse grain-<br>ed                      | Well foliated<br>C.A. 40° @ 8'                                                     | Alternating light & dark (pre<br>dominant bands with granular<br>sections. | Negligible                                                                          |                                                                                            | Appears to be a unit<br>analogous to outcrop<br>mentioned on cover<br>page of NM-8 (by<br>L. Curtis) |
| 95-278.5  | Mv with minor<br>Aw towards end<br>of section            | F gr to<br>gabbro                                   | Fairly well<br>foliated<br><br>CA 44° @ 110<br>43° @ 169<br>49° @ 209<br>56° @ 268 | Massive<br><br>263.5-265.5 - gabbroic with<br>Re and hematite @ 185        | Weak banded carb<br>sections are short<br>& infrequent                              |                                                                                            |                                                                                                      |
| 278.5-310 | Mv/Aw                                                    | Dk green &<br>tan (in bands)<br>f gr to<br>gabbroid | folding & band<br>ing increases<br>to end of sect<br>well foliated                 | Banded-green, grey=chlorite/<br>carbonate/silica<br><br>QCV @ 302.8        | Weak carbonate<br><br>10%)<br>Rc @ 300' section<br>becomes more<br>altered downhole | Minor pyrite & chalco<br>in assoc with QCV @<br>302.8                                      | Transition                                                                                           |
| 310-384.5 | Aw/Am                                                    | Green, tan<br>bands                                 | Crenulations<br>are common<br>Banding well<br>developed                            | Banded & folded green, grey<br>= chlor/carb minor feathering               | Alteration is<br>fairly evenly dis-<br>tributed through<br>section                  | 368.5 diss pyrite in<br>banded material but<br>in close assoc with<br>late QV chalco in QV | Possible a weak alt-<br>eration envelope for<br>shear zone                                           |
| 384.5-403 | Mv/Aw                                                    | Dk green                                            | Sheared Mv                                                                         | Very fine tight bands mostly<br>chlorite                                   | Weak carbonate<br>≈ 5% across sect<br>Minor Rc through-<br>out                      | Pp at 393.5, other-<br>wise absent                                                         | Appears to be<br>sheared Mv                                                                          |
| 403-481   | Am/As                                                    | F gr green,<br>tan bands &                          | Many crenu-<br>lations QV &                                                        |                                                                            | Mostly Am carbon-<br>ate ≈ 15-20% with                                              |                                                                                            | Random samples of<br>altered rock for                                                                |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH              | ROCK TYPE | GRAIN SIZE<br>COLOUR                                                   | SECONDARY<br>STRUCTURE                                                                                                            | TEXTURE AND STRUCTURE                                                                                                                                                                                  | ALTERATION                                                                                  | MINERALIZATION                                                                                                            | COMMENTS                                                                                                                                                                                                                 |
|--------------------|-----------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 403-481<br>cont'd. |           | bleached<br>sections of As                                             | QCV veins<br>Well foliated<br>69° @ 425                                                                                           |                                                                                                                                                                                                        | sections of As<br>carbonate and ser-<br>icite pervasive<br>No pyrite                        |                                                                                                                           | Assay are:<br>426.2-428.2<br>431.3-434<br>461-464.8                                                                                                                                                                      |
| 481-513            | Aw/Am     | F gr green/<br>tan bands                                               | crenulations<br>& banding                                                                                                         | Well foliated CA 18° @ 508<br>minor feathering                                                                                                                                                         | Weak to moderate<br>carbonate fairly<br>evenly distributed<br>Same as section<br>310-384.5  | Absent                                                                                                                    |                                                                                                                                                                                                                          |
| 513-570.3          | As/Am     | F gr dark gr<br>& tan brown<br>bands                                   | QCV's are<br>common and<br>appear to be<br>part of the<br>brecciated<br>event which<br>typically pro-<br>duces the best<br>assays | Well foliated CA 73° @ 553'<br>They appear to start out thin<br>(1") without full brecciation<br>and grade into longer sect-<br>ions with well developed<br>brecciation @ 555.2-556.4 &<br>560.7-564.7 | Mainly short sect-<br>ions (up to 3") of<br>pervasive carb<br>sericite alter-<br>ation      | Pyrite occurs as med-<br>coarse grains generally<br>in pervasive altered<br>rock with QC veining<br><br>Fuchite? at 563.8 | NC-6 & 8 @ 516.5 &<br>530.5 possibly shows<br>being of brecciat-<br>ion?<br><br>The best assay in<br>this section: 552.2-<br>556.4 assayed .224<br>and coincides with<br>the interval con-<br>taining the most<br>pyrite |
| 570.3-581.6        | Aw/Am     | F gr green-<br>grey bands                                              | QCV's @ 579.5<br>concordant with<br>structure have<br>associated Pp<br>( 1%) minor<br>crenulations                                | Well foliated & tightly band-<br>ed CA 75° at 576 some feath-<br>ering but not on a large<br>scale.                                                                                                    | Generally weak in-<br>cipient carb alt-<br>eration very little<br>sericite<br>Minor diss Rc | Very poor traces of<br>pyrite occur as Pp but<br>are nowhere >1%                                                          |                                                                                                                                                                                                                          |
| 581.6-676          | As/Am     | F gr green-<br>tan & grey<br>bands and<br>some bleached<br>tan & white |                                                                                                                                   | Many sections of brecciation<br>associated with quartz flood-<br>ing of As and pyrite minerali-<br>ation.                                                                                              | Widespread pervas-<br>ive carb-sericite<br>sericite sections,<br>many have been             | Pp are present within<br>the brecciated zones<br>up to 5%                                                                 |                                                                                                                                                                                                                          |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH                           | ROCK TYPE | GRAIN SIZE<br>COLOUR                         | SECONDARY<br>STRUCTURE                                         | TEXTURE AND STRUCTURE                                                                                                                                                 | ALTERATION                                                                     | MINERALIZATION                                                                | COMMENTS                                                                               |
|---------------------------------|-----------|----------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 581.6-676<br>cont'd.            |           | (brecciated)<br>sections                     |                                                                | These sections (which are typical of good assays) vary in size from a few inches to 9' (e.g. 609.3-618.3) and are separated from one another by less altered sections |                                                                                | Fuchite is present largely within fractures? in quartz in brecciated sections | Alteration + weak brecciation forms an envelope to strong alteration + silica flooding |
| 676-696                         | Am/Aw     | F gr green-grey + tan bands                  | Well foliated + banded minor but well distributed crenulations | Well foliated CA 10° @ 693' feathered unit at beginning from 676.7-678                                                                                                | Weak to moderate carbonate + sericite incipient alteration                     | Quartz Tourmaline? veins @ 691.5+692                                          | This section apparently separates two main zones of mineralized + brecciated rock      |
| 696-744.7                       | As/Am     | F gr green-grey-tan bands                    |                                                                | Brecciated sections similar to those described previously exist near start of the section                                                                             | Incipient and pervasive carb-sericite alteration alternate through the section | Pp in brecciated areas near start of section are up to 5% and are Mgr → Cgr   |                                                                                        |
| 744.7 -<br>End of Hole<br>(773) | Aw/Am     | F gr green-grey bands with minor brown bands | Crenulations are common                                        | Well foliated CA 10° @ 770'                                                                                                                                           | Weak to moderate incipient alteration                                          | 755-757.5 py as diss grains in bands ~1%                                      | Hole stopped at 773 having passed through the altered zone                             |



ANALYSE des CAROTTES de FORAGE

| SAMPLE # | FROM  | TO    | Length |    |       |    | Cu | Zn | Ag | On/T | Au | On/T | Fe % | Mg % | CaO % | Na <sub>2</sub> O % | K <sub>2</sub> O % | SiO <sub>2</sub> % | TiO <sub>2</sub> % |  |  |
|----------|-------|-------|--------|----|-------|----|----|----|----|------|----|------|------|------|-------|---------------------|--------------------|--------------------|--------------------|--|--|
|          |       |       | pl.    | m. |       |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 74913    | 565.0 | 567.7 | 2      | 7  | .034  |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 14       | 567.7 | 570.2 | 2      | 5  | ↑     |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 15       | 575.2 | 576.5 | 1      | 3  |       |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 16       | 576.5 | 579.2 | 2      | 7  |       | Tr |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 17       | 579.2 | 581.3 | 2      | 1  |       |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 18       | 581.3 | 585.4 | 4      | 1  |       |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 19       | 585.4 | 487.5 | 2      | 1  | ↓     |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 20       | 587.5 | 590.5 | 3      | 0  | 0.108 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 21       | 590.5 | 592.1 | 1      | 6  | 0.102 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 22       | 592.1 | 594.0 | 1      | 9  | 0.080 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 23       | 594.0 | 597.2 | 3      | 2  | 0.044 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 24       | 597.2 | 599.3 | 2      | 1  | .070  |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 25       | 599.3 | 600.9 | 1      | 6  | 0.056 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 26       | 600.9 | 603.5 | 2      | 6  | 0.072 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 27       | 603.5 | 605.6 | 2      | 1  | .042  |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 28       | 605.6 | 609.3 | 3      | 7  | Tr    |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 29       | 609.3 | 611.3 | 2      | 0  | 0.102 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 30       | 611.3 | 614.3 | 3      | 0  | 0.184 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 31       | 614.3 | 618.0 | 3      | 7  | 0.060 |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |
| 32       | 618.0 | 620.8 | 2      | 8  | Tr    |    |    |    |    |      |    |      |      |      |       |                     |                    |                    |                    |  |  |

Forage No. NM-9

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### ANALYSE des CAROTTES de FORAGE

| SAMPLE # | FROM  | TO    | Length |    |       |    | Cu | Zn | Ag Ov/T | Au Ov/T | Fe % | Mn % | CaO % | Na <sub>2</sub> O % | K <sub>2</sub> O % | SiO <sub>2</sub> % | RO <sub>2</sub> % |  |  |  |  |  |
|----------|-------|-------|--------|----|-------|----|----|----|---------|---------|------|------|-------|---------------------|--------------------|--------------------|-------------------|--|--|--|--|--|
|          |       |       | pl.    | m. |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 74933    | 620.8 | 623.6 | 2      | 8  | .052  |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 34       | 623.6 | 624.4 | 0      | 8  | .036  |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 35       | 624.4 | 626.2 | 1      | 8  | 0.024 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 36       | 626.2 | 630.1 | 3      | 9  | .058  |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 37       | 630.1 | 634.0 | 3      | 9  | 0.142 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 38       | 634.0 | 638.0 | 4      | 0  | 0.126 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 39       | 638.0 | 640.3 | 2      | 3  | 0.012 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 40       | 640.3 | 643.9 | 3      | 6  | 0.084 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 41       | 643.9 | 646.0 | 2      | 1  | .122  |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 42       | 646.0 | 649.5 | 3      | 5  | .068  |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 43       | 649.5 | 651.1 | 2      | 0  | 0.038 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 44       | 651.5 | 655.1 | 3      | 6  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 45       | 655.1 | 658.0 | 2      | 9  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 46       | 658.0 | 661.0 | 3      | 0  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 47       | 661.0 | 663.9 | 2      | 9  |       | Tr |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 48       | 663.9 | 666.1 | 2      | 2  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 49       | 663.9 | 666.1 | 2      | 2  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 50       | 666.1 | 668.5 | 2      | 4  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 74001    | 668.5 | 670.6 | 2      | 1  |       |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |
| 02       | 670.6 | 673.6 | 3      | 0  | 0.048 |    |    |    |         |         |      |      |       |                     |                    |                    |                   |  |  |  |  |  |

Forage No NM-9

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# DRILL LOG

## NUINSCO RESOURCES LIMITED

|                    |                            |           |       |                        |       |                        |          |                     |      |         |      |             |      |
|--------------------|----------------------------|-----------|-------|------------------------|-------|------------------------|----------|---------------------|------|---------|------|-------------|------|
| <i>Coordonnées</i> |                            |           |       |                        |       |                        |          |                     |      |         |      |             |      |
| Forage no          | NM-10                      | Latitude: | 0+63S | Départ:                | 0+12W | Élévation:             | Lake+48' | Pendage:            | -67° | Azimat: | 150° | Profondeur: | 503' |
| Localisation       | Commencé le: July 15, 1983 |           |       | Déclinaison Magnétique |       | Diamètre de la carotte |          | <u>BUT DU TROU:</u> |      | 503'    |      |             |      |
|                    | Terminé le: July 18, 1983  |           |       |                        |       |                        |          |                     |      |         |      |             |      |
| Rowan Lake         |                            |           |       |                        |       |                        |          |                     |      |         |      |             |      |
| Projet             | Province                   | Canton    | Lot   | Rang                   | Clair | Grillage               | S.N.R.C. |                     |      |         |      |             |      |
| Monte Cristo       |                            |           |       |                        |       |                        |          |                     |      |         |      |             |      |

| <u>Test à l'acide</u>             |                |                   |                | <u>Test au Tropari</u> |                |                           |
|-----------------------------------|----------------|-------------------|----------------|------------------------|----------------|---------------------------|
| <u>Profondeur</u>                 | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u>      | <u>Pendage</u> | <u>Az m. Astronomique</u> |
| Collar                            | 67°            |                   |                |                        |                |                           |
| 103'                              | 66°            |                   |                |                        |                |                           |
| 200'                              | 59°            |                   |                |                        |                |                           |
| 300'                              | 50°            |                   |                |                        |                |                           |
| 373'                              | 46°            |                   |                |                        |                |                           |
| 500'                              | 27°            |                   |                |                        |                |                           |
| <i>Profondeur des coins</i> _____ |                |                   |                |                        |                |                           |

Contractor: Norwescon Drilling

Logged By: Malcolm Wade

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH | ROCK TYPE | GRAIN SIZE<br>COLOUR         | SECONDARY<br>STRUCTURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TEXTURE AND STRUCTURE                                                                                                  | ALTERATION                                     | MINERALIZATION                                                                                                                                            | COMMENTS |
|-------|-----------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 0-2   | CASING    |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                        |                                                |                                                                                                                                                           |          |
| 2-173 | MV        | fn gr varying<br>of dk green | White numerous<br>qtz veins<br>randomly dist.<br>varying in<br>width most are<br>< 2cm most are<br>concordant to<br>foliation<br><br>Grey irregular<br>vein-like<br>features with<br>magnetite and<br>py in margins.<br>Start @ around<br>123'. These<br>are probably<br>pillow sel-<br>vages. The<br>grey appears<br>to contain Re<br>and similar<br>looking<br>features with-<br>out mag + py<br>occur through-<br>out section.<br><br>Is it possible<br>that selvages<br>have become pre-<br>ferentially<br>altered? | Massive to gabbroic with some<br>pillows(?) foliation varies<br>from non-existent to weakly<br>foliated C.A. 15° @ 20' | Negligible<br><br>Re towards end of<br>section | Pp occur throughout<br>section, cgr, euderal<br>randomly distributed<br>and locally concen-<br>trated.<br><br>Magnetite @ 123-138'<br>locally distributed |          |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH   | ROCK TYPE | GRAIN SIZE<br>COLOUR                                                                                                                                                                                                                                                                            | SECONDARY<br>STRUCTURE                                                             | TEXTURE AND STRUCTURE                                      | ALTERATION                                                                                                                                                                                                                                                                                                | MINERALIZATION                                                                                                                      | COMMENTS                                                                                                                |
|---------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 173-275 | Mv/Aw     | f gr green<br>grey bands<br>some brown<br>bands                                                                                                                                                                                                                                                 | Thin discord-<br>ant QCV's are<br>rare<br><br>More commonly<br>concordant<br>q v's | Moderately to well foliated<br>C.A. 28° @ 203'; 37° @ 268' | Weak < 5% incipient<br>carb alteration<br>increasing to 15%<br>carb-sericite @<br>225-234' then<br>dropping off to<br>< 5% again<br><br>Grey section of<br>silicification @<br>244' (3")                                                                                                                  | Py + Mag @ 198 (3")<br><br>Traces of py in most<br>other areas as<br>euhedral grains                                                | Silicification @ 244'<br>is first such section<br>by writer in any<br>any of Holes 5-10                                 |
| 275-362 | Am/As/Aw  | f gr green-<br>grey bands to<br>some bleached<br>sections &<br>some breccia<br>sections<br><br>qcv's are<br>generally<br>discordant to<br>foliation &<br>cut alteration<br><br>quartz flood-<br>ing & brecci-<br>ation occur<br>between 312-<br>322'<br><br>thin (1mm)<br>chlorite<br>veins are | Minor crenu-<br>lations are<br>common & are<br>on a very<br>small scale            | Well foliated & banded<br>C.A. 38° @ 288'<br>40° @ 350'    | Varying degrees of<br>incipient carb-<br>sericite alteration<br>showing no general<br>pattern<br><br>some areas of per-<br>vasive (tan) carb-<br>sericite eg @ 350-<br>352'<br><br>Beginning of sect.<br>is marked by 10"<br>section of well<br>silicified grey<br>rock<br><br>Brecciation @ 312-<br>322' | Py occurs as Pp in<br>brecciated zones but<br>is not as plentiful<br>as in other holes ~ 1%<br><br>Otherwise py is in tr<br>amounts | Fuchsite? in vein-<br>like structure in the<br>first of this seen<br>by the writer<br><br>Cut sections 303.0-<br>328.5' |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH     | ROCK TYPE | GRAIN SIZE<br>COLOUR                                                                                | SECONDARY<br>STRUCTURE                                                                                                                           | TEXTURE AND STRUCTURE                                                                        | ALTERATION                                                                                                                                                                                                                                     | MINERALIZATION                                                                                                                                                                                         | COMMENTS                                                     |
|-----------|-----------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 275-362   | cont'd.   |                                                                                                     |                                                                                                                                                  |                                                                                              |                                                                                                                                                                                                                                                |                                                                                                                                                                                                        |                                                              |
| 362-433   | Am/Aw     | f gr<br>green-grey<br>bands                                                                         | found within<br>quartz in<br>brecciated<br>sections e.g.<br>314.7' also<br>fuchsite?vein<br>in same quartz<br><br>crenulations<br>are not common | feathering occurs @ 386.5-389'<br>and at 432-433'                                            | incipient carb-<br>sericite varying<br>from weak to mod<br>some very short<br>sections of per-<br>vasive alt. e.g.<br>419.7'                                                                                                                   | thin fuchsite(?) vein<br>in quartz @ 314.5<br>(within brecciated<br>zone) (possibly in a<br>fracture)<br><br>pyrite occurs within<br>bands up to 3% esp @<br>372.6-382.4' as f gr<br>& diss grains     | cut sections 372.4-<br>381.9<br>393.2-395.2; 414.3-<br>421.6 |
| 433-464.7 | Am/As     | f gr green,<br>grey brown<br>bands with<br>some bleach-<br>ed sects &<br>some brecci-<br>ated zones | thin qtz tourm?<br>vein @ 408 -<br>discordant<br><br>crenulations<br>throughout                                                                  | well foliated C.A. 55° @ 459'<br>some feathered sections in<br>moderate to weaker alteration | incipient carb-<br>sericite(moderate)<br>grades to per-<br>vasive (As) from<br>443-454' and then<br>back again to<br>moderate and lower<br>incipient alterat-<br>ion.<br><br>brecciated zone<br>occurs @ 447.7-<br>449.7<br><br>hematite @ 446 | Pp within brecciated<br>zones mostly found in<br>carb-sericite bands,<br>or in chlorite veins,<br>some show chlorite<br>pressure shadows<br>altogether 2% or less<br>of zone<br><br>Otherwise trace py | cut sections<br>446.6-450.4                                  |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH       | ROCK TYPE                                                                                                                                                                                                                                                                                      | GRAIN SIZE<br>COLOUR                                 | SECONDARY<br>STRUCTURE                                                                      | TEXTURE AND STRUCTURE         | ALTERATION                             | MINERALIZATION | COMMENTS                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|----------------|-----------------------------------------------------------------------------------------------|
| 433-464.7   | cont'd.                                                                                                                                                                                                                                                                                        |                                                      |                                                                                             |                               | Rc in less altered sections            |                |                                                                                               |
| 464.7-503   | Mv/Aw                                                                                                                                                                                                                                                                                          | f gr<br>green-grey<br>bands<br>(predominantly green) | qv's, qcv's all concordant with foliation<br><br>rare crenulations in more altered sections | well foliated C.A. 61° @ 497' | weak to very weak incipient alteration | Trace pyrite   | Hole finished after 503' due to a) not getting it down in right place<br>b) drilling problems |
| END OF HOLE |                                                                                                                                                                                                                                                                                                |                                                      |                                                                                             |                               |                                        |                |                                                                                               |
| COMMENT:    | <p>Hole hit the ore zone midway between NM-5+NM-6 - due to deviation (15° in last 100')<br/>It is possible that the hole is badly off line again.<br/>Overall the core was not strongly altered and the zone appeared to be quite weak.</p> <p>Drilling Problems: Broken Core Barrel @ ---</p> |                                                      |                                                                                             |                               |                                        |                |                                                                                               |





DRILL LOG

Property: Rowan Lake

NUINSCO/LOCKWOOD

DDH: NM-11

|                                                                                                                                                                                  |               |                                                                                                                                                                                                   |                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Co Ordinates: 1+29S                                                                                                                                                              | Lake +54'     | Claim:                                                                                                                                                                                            | Date Hole Commenced:                                                   |
| Declination: -65°                                                                                                                                                                | Azimuth: 150° | Core Size:<br>Total Depth:                                                                                                                                                                        | Date Completed:<br>Logged By: M. Wade & Paul Jones edited<br>by Curtis |
| ACID TEST                                                                                                                                                                        |               | TROPARI TEST                                                                                                                                                                                      |                                                                        |
| Depth                                                                                                                                                                            | Inclination   | Depth                                                                                                                                                                                             | Inclination                                                            |
| 3'                                                                                                                                                                               | 66.5°         | 500'                                                                                                                                                                                              | 56°                                                                    |
| 100'                                                                                                                                                                             | 66            | 470'                                                                                                                                                                                              | 59°                                                                    |
| 200'                                                                                                                                                                             | 64            | 600'                                                                                                                                                                                              | 49.5                                                                   |
| 300'                                                                                                                                                                             | 63            | 660'                                                                                                                                                                                              | 32.5                                                                   |
| 400'                                                                                                                                                                             | 60            | Hole wedged & cemented to 470'                                                                                                                                                                    |                                                                        |
| Drill Log Summary                                                                                                                                                                |               | Assay                                                                                                                                                                                             | Comments                                                               |
| Mineralization:                                                                                                                                                                  |               |                                                                                                                                                                                                   | Sample NMC-11 @ 290'                                                   |
| <b>ABBREVIATIONS USED IN LOGGING:</b>                                                                                                                                            |               |                                                                                                                                                                                                   |                                                                        |
| <u>Rock Type:</u> MV metavolcanic; Tu tuff; QFP quartz feldspar porphyry.<br>A altered zone; Aw weak; Am moderate; As strong.<br>CSZ chloritic shear zone. 05-25%; 25-50%; > 50% |               | <u>Veining:</u> QCV quartz-carbonate vein; CV/QV carbonate vein/quartz vein;<br>%/5'-Estimate over 5' interval; estimate attitude; indicate color.                                                |                                                                        |
| <u>Texture:</u> ns massive; gb gabbroid; vs vesicular; sp spotted;<br>an amygdaloidal; Rc rhomb-carbonated.                                                                      |               | <u>Alteration:</u> Carb carbonatization; Sil silicification; Ser sericitization;<br>Chl chlorite; Hem hematite; f fuchsite; T tourmaline.                                                         |                                                                        |
| <u>Structure:</u> fol foliated; Sh shear; My mylonite.                                                                                                                           |               | <u>Modifier:</u> Pvs pervasive; Df diffuse; Av, Am, As,<br>Rc rhomb-carbonated; Qf quartz flooding (grey).                                                                                        |                                                                        |
| <u>Grain Size:</u> fgr fine < 1 mm; mgr medium 1-2 mm; cgr coarse > 2mm.                                                                                                         |               | <u>Mineralization:</u> Py pyrite; Cpy chalcopyrite; Au gold; Ag silver.<br><u>Modifier:</u> Dis disseminated; Pp pyrite porphyroblasts;<br>Ps pressure shadows; cl clusters; sv selvage; V veins. |                                                                        |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH      | ROCK TYPE                       | GRAIN SIZE<br>COLOUR                                               | SECONDARY<br>STRUCTURE                                                    | TEXTURE AND STRUCTURE                                                                                                                             | ALTERATION                                                                                | MINERALIZATION                                                                                                                                               | COMMENTS                                                                                                                                                                                  |
|------------|---------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0-1        | CASING                          |                                                                    |                                                                           |                                                                                                                                                   |                                                                                           |                                                                                                                                                              |                                                                                                                                                                                           |
| 1-83.2     | Mv                              | Dk green f<br>grained                                              |                                                                           | Massive to gabbroic<br>Weakly to non-foliated 270<br>@ 13'                                                                                        | Negligible                                                                                | Coarse grained Pp are<br>randomly distributed<br>through section<br>Magnetite @ 33-35<br>locally concentrated<br>sometimes closely<br>associated with pyrite |                                                                                                                                                                                           |
| 83.2-104.0 | Feldspar<br>Porphyry<br>dyke    | F to medium<br>grained                                             |                                                                           | Porphyritic (feldspar (2mm)<br>phenocrysts                                                                                                        | Appears to be<br>sericite alter-<br>ation adjacent to<br>QCV's @ 88.7 and<br>92.0         | Fine and medium pyrite<br>grains are rare                                                                                                                    |                                                                                                                                                                                           |
| 104.0-198  | Mv                              | Dk green with<br>some areas of<br>light green                      | Many QCV veins                                                            | Massive to well foliated CA                                                                                                                       | Negligible                                                                                | Pp grains are coarse<br>and are randomly dis-<br>tributed                                                                                                    |                                                                                                                                                                                           |
| 198-239    | Mv (possibly<br>gabbro units)   | F gr homo-<br>geneous gr<br>with mottled<br>green & black<br>veins |                                                                           | Weakly foliated CA 28° @ 203'<br>Gabbroic units show alignment<br>of feldspars near contacts<br>grading to massive at the<br>centre of the units. | Around some quartz<br>veins feldspar<br>phenocrysts are<br>present along with<br>epidote? | Pp are coarse and<br>found throughout,<br>though the majority<br>appear to be in the<br>fine grained (Mv)<br>units                                           | The appearance of this<br>section is somewhat<br>similar to the Felds-<br>par porphyry pre-<br>viously described only<br>contacts are grad-<br>ational & the matrix<br>appears more mafic |
| 239-279    | Mv (possible<br>more andesitic) | F gr green to<br>greyish green                                     | QCV's occur<br>throughout<br>extensive and<br>almost ? to<br>CA @ 251-253 | Foliated weakly CA 28° @ 268'<br>@ 258 veining appears to con-<br>tain feldspar and epidote<br>(possibly alteration                               | Greyish colour<br>may be due to weak<br>pervasive silici-<br>fication?                    | Pp occur at random<br>through the section                                                                                                                    |                                                                                                                                                                                           |
| 279-463    | Aw/Am/Mv                        | Green with<br>grey & white<br>bands                                | Rare Z-type<br>folds eg NMC-<br>11 @ 290                                  |                                                                                                                                                   | Bands are carbon-<br>ate and silica with<br>one As section @<br>297 of carb-seri-<br>cite | Pp in sections of less<br>altered rock and con-<br>centrated locally in<br>bands                                                                             |                                                                                                                                                                                           |

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH                               | ROCK TYPE                      | GRAIN SIZE<br>COLOUR                                 | SECONDARY<br>STRUCTURE                                                                                  | TEXTURE AND STRUCTURE                                                           | ALTERATION                                                          | MINERALIZATION                                                             | COMMENTS                                                                                                   |
|-------------------------------------|--------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 279-463<br>cont'd.<br>AFTER WEDGING |                                |                                                      |                                                                                                         |                                                                                 | Am becomes dominant to end of section                               | Banded fine gr pyrite (2 1/6') at 457-463<br>Also some cpy                 |                                                                                                            |
| 463-482                             | Mv(basalt)minor<br>Aw          | F gr dark green with light grey & tan banding        | Well foliated (S <sub>1</sub> ) at 20° to CA at 465<br>Relatively common crenulations (S <sub>2</sub> ) | Highly foliated, little original structure remains.                             | Weak carbonate-sericite alteration occurring throughout section     |                                                                            | Essentially foliated meta-vol, with local zones of carb-ser alt'n & minor QCV                              |
| 482-498                             | MV(basalt)common<br>Aw some Am | F gr dark green with large light-grey & tan sections | Well foliated (S <sub>1</sub> ) at 30-40° to CA<br>Common crenulations (S <sub>2</sub> )                | Highly foliated no original texture carbonate-sericite bands parallel foliation | Weak to moderate carbonate-sericite alt'n throughout entire section |                                                                            | Similar to above however with higher degree of carb-ser alt'n                                              |
| 498-518                             | MV(basalt)<br>minor Aw         | F gr dark green-grey with grey & tan banding         | Well foliated (S <sub>1</sub> ) at 40° (at 498') to 50° (at 515') to CA                                 | Texture & structure similar to section from 463-482                             | Weak carb-ser alt'n v common                                        | Py relatively common occurs in thin bands often in the chlorite rock bands | Generally very similar to section from 463-492 however somewhat more carb-ser alt'n and higher sde content |

### ANALYSE des CAROTTES de FORAGE

| SAMPLE # | FROM  | TO    | Length |    | Au    |       | Cu    | Zn            | Ag On/T  | Au On/T | Fe % | Mn % | CaO % | Na <sub>2</sub> O % | K <sub>2</sub> O % | SiO <sub>2</sub> % | TiO <sub>2</sub> % |  |  |  |  |  |  |  |
|----------|-------|-------|--------|----|-------|-------|-------|---------------|----------|---------|------|------|-------|---------------------|--------------------|--------------------|--------------------|--|--|--|--|--|--|--|
|          |       |       | pl.    | m. |       |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 74048    | 474.8 | 478.8 | 4      | 0  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 49       | 489.5 | 492.8 | 3      | 3  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 50       | 492.8 | 496.0 | 3      | 2  | 0.072 |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 51       | 496.0 | 500.0 | 4      | 0  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 52       | 500.0 | 503.0 | 3      | 0  | 0.044 |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 53       | 503.0 | 506.2 | 3      | 2  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 54       | 517.2 | 519.3 | 2      | 1  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 55       | 534.5 | 537.7 | 3      | 2  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 56       | 537.7 | 540.9 | 3      | 2  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 57       | 546.0 | 548.8 | 2      | 8  | 0.076 | 0.224 |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 58       | 548.8 | 553.8 | 5      | 0  | 0.030 | 0.15  | 7.8   | ↓<br>0.05/7.8 |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 59       | 553.8 | 556.5 | 2      | 7  | Tr    |       | 0.37  |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 60       | 556.5 | 561.4 | 4      | 9  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 61       | 561.4 | 564.5 | 3      | 1  | 0.038 | 0.118 |       | ↓             |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 62       | 564.5 | 567.2 | 2      | 7  | 0.012 | 0.032 | 9.4   |               | 0.03/9.4 |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 63       | 567.2 | 570.8 | 3      | 6  | 0.032 | 0.115 | 0.265 | ↓             |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 64       | 570.8 | 573.0 | 2      | 2  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 65       | 625.5 | 630.5 | 5      | 0  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 66       | 647.2 | 650.6 | 3      | 4  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |
| 67       | 650.6 | 653.0 | 2      | 4  | Tr    |       |       |               |          |         |      |      |       |                     |                    |                    |                    |  |  |  |  |  |  |  |



# DRILL LOG

## NUINSCO RESOURCES LIMITED

| Coordonnées  |            |                   |       |         |       |                        |           |                        |      |                     |      |             |
|--------------|------------|-------------------|-------|---------|-------|------------------------|-----------|------------------------|------|---------------------|------|-------------|
| Forage no.   | NM-12      | Latitude:         | 2+12N | Départ: | 1+26W | Élévation:             | Lakeshore | Pendage:               | -80° | Azimut:             | 330° | Profondeur: |
| Localisation | Rowan Lake | Commencé le: 1983 |       |         |       | Déclinaison Magnétique |           | Diamètre de la carotte |      | <u>BUT DU TROU:</u> |      |             |
| Projet       | Province   | Canton            | Lot   | Rang    | Claim | Grillage               | S.N.R.C.  |                        |      |                     |      |             |
| Monte Cristo |            |                   |       |         |       |                        |           |                        |      |                     |      |             |

| <u>Test à l'acide</u> |                |                   |                | <u>Test au Tropari</u> |                |                          |
|-----------------------|----------------|-------------------|----------------|------------------------|----------------|--------------------------|
| <u>Profondeur</u>     | <u>Pendage</u> | <u>Profondeur</u> | <u>Pendage</u> | <u>Profondeur</u>      | <u>Pendage</u> | <u>Azm. Astronomique</u> |
| Collar (13')          | 80°            |                   |                |                        |                |                          |
| 50'                   | 78°            |                   |                |                        |                |                          |
| 94'                   | 67°            |                   |                |                        |                |                          |
| 115'                  | 61°            |                   |                |                        |                |                          |

*Profondeur des coins* \_\_\_\_\_

Contractor: Norwescon Drilling Ltd.

Logged by:  
Date:

NUINSCO RESOURCES LIMITED  
DRILL LOG

| DEPTH           | ROCK TYPE                                                                                                  | GRAIN SIZE<br>COLOUR   | SECONDARY<br>STRUCTURE                          | TEXTURE AND STRUCTURE                                                                                                                                                                                                                                         | ALTERATION                                                                                                                                                                                                                                                                                                                                                                                             | MINERALIZATION                                    | COMMENTS                                                                                                                                                                                                                                                                                                                                                |
|-----------------|------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0-13            | CASING                                                                                                     |                        |                                                 |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                   |                                                                                                                                                                                                                                                                                                                                                         |
| 13-137          | Sheared<br>meta-basalt                                                                                     | Aphanitic to<br>v.f.g. | Highly sheared<br>S <sub>3</sub> 10° to<br>C.A. | Original texture obliterated<br>by later shearing. Minor<br>irregular qtz veins tran-<br>secting foliation. Some qtz<br>veins disrupted by later<br>veins. Rare qtz augen<br><br>foliation 0-10° to C.A. to<br>100' gradually increasing to<br>10-25° at 137' | Carbon.alt.-30-40%<br>Sericitization -<br>10-15%<br>Qtz veining - 5%<br>qtz veins<br><br>Carbonate sericite<br>bands interlayered<br>with qtz arch<br>bands one in some<br>places up to 90cm<br>thick with only<br>mirror chlorite<br>rich bands (ie at<br>84' alteration at<br>this point is mod.<br>In general however<br>alt. is weak<br><br>110-137 scattered<br>sugary white qtz<br>veins to 20cm | Rare enehedral to<br>enehedral py to up to<br>3mm | Sequence of alternat-<br>ing bands of chlorite<br>rich-carbonate rich-<br>sericite rich bands<br>(in order of abundance)<br>Qtz veins occur as<br>irregular patches<br>transsecting foli-<br>ation and as thin<br>veinlets parallel to<br>it. Some sections<br>(ie 84') however in<br>general alteration is<br>weak and sde' con-<br>tent is low (< 1%) |
| 137 END OF HOLE | COMMENTS: Hole had to be abandoned due to excessive flattening - Drillers broke 13 rods drilling the 137'. |                        |                                                 |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                   |                                                                                                                                                                                                                                                                                                                                                         |





MONTE CRISTO PROJECT  
COST BREAKDOWN, 1983

|                                       |           |
|---------------------------------------|-----------|
| Diamond Drilling                      | \$122,962 |
| I.P. Survey                           | 17,712    |
| Mag. & V.L.F. Surveys                 | 15,944    |
| Line Cutting                          | 24,735    |
| Airborne Survey                       | 7,198     |
| Equipment (Trailer, Generator)        | 9,508     |
| Flying and Helicopter Service         | 3,443     |
| Equipment Rental                      | 1,949     |
| Geological Consulting Fees & Expenses | 11,478    |
| Hole Surveys                          | 4,997     |
| Instrument Rental                     | 2,806     |
| Groceries and Camp Supplies           | 2,417     |
| Accommodation and Transportation      | 1,908     |
| Mapping and Prints                    | 6,305     |
| Geological Wages and Expenses         | 15,405    |
|                                       | <hr/>     |
|                                       | \$248,767 |
|                                       | <hr/>     |

#63.4309D



52F055E9655 63.4309B ROWAN LAKE

020

OM 83-3-C-81

NUINSCO RESOURCES LIMITED

Rowan Lake Gold Property  
(Monte Cristo)

Report on Geological Mapping in 1983

By Paul L. Jones B.Sc.

December 1983

Introduction

Following approximately 2 months of diamond drilling, geological mapping by the author with the assistance of Malcolm Wade commenced in mid-July and continued until the end of August. Sporadic mapping took place between late-September and late-October. To date mapping on the I.P. grid with 61m (200ft) line spacings, which covers the "Main Shear Zone", has been completed. Limited mapping on the larger grid with 122m (400ft) line spacings has also occurred. However, to date, no mapping has taken place on the Pacific Seadrift or Del Norte Chrome options or on those claims staked on the southern shore of Rowan Lake and covering the Nolan Lake Stock.

### Location and Physiography

The Monte Cristo Property surrounds a large peninsula which projects northward from the southern shore of Rowan Lake east of the entrance to Sullivan Bay. The property is approximately 34km (21mi) northwest of the village of Nestor Falls, Ontario, which lies on highway 71 midway between Fort Francis and Kenora. Latitude  $49^{\circ}18'15''$  and longitude  $93^{\circ}34'00''$  intersect at approximately the centre of the property. The Nuinsco/Lockwood property at Cameron Lake is 12km (7.5mi) to the west.

Access to the property is by floatplane or helicopter, and when on the property a boat is essential for travel.

Maximum topographic relief on the property is approximately 35m (115ft), however generally the relief is much less. Rowan Lake is dotted with numerous islands, often with convoluted shorelines. Shoreline outcrops are abundant, yet inland from the lakeshore generous vegetation, glacial debris and smooth gradients often combine to conceal outcrop. The dominant portion of the property lies under the waters of Rowan Lake.

### Previous Work

At the present time there are no producing mines in the Kenora-Fort Francis region of northwestern Ontario, in which the Monte Cristo Property is located. However mining activities date back to the mid 19th century, reaching a peak between 1890 and 1910 when the area accounted for over 55% of Ontario's Gold Product (Beard and Garrett, 1976). This initial activity almost totally ceased in 1912. A second major period of explor-

ation occurred in the 1930's and 1940's, aided by the revaluation of gold in 1934.

A report by C.E. Brent in 1899 indicated that exploration was underway on the north shore of the Monte Cristo Peninsula on what was known as the Little Bobs Mine (subsequently renamed the Monte Cristo). Six trenches and two shafts were dug in order to more systematically sample and observe the gold and pyrite mineralization in the Monte Cristo shear zone. The shafts, located on present day lines 3+00E and 1+20W near the shoreline, were dug to 4m (13ft) and 6.7m (22ft) respectively. Based upon work completed at that time, Brent estimated that a deposit of 65000 tons (59100 tonnes) grading approximately 0.115 oz/ton occurred at the site (gold valued at \$22/oz in 1899).

Also in 1899 the Victor Company were sinking a shaft on Victor Island. The shaft, contracted to go to a depth of 30.5m (100ft), was at a depth of 7.6m (25ft) when the report was written. Brent described the ore from the Victor Shaft as being identical to that of the Monte Cristo Property.

Reexamination of the Monte Cristo Property by J.G. Cross in 1931 resulted in initially encouraging reports. Lakeport Gold Mines Limited, formed in 1936 to explore the Monte Cristo area, began drilling on the property in May of 1937. The drilling program consisted of 9 holes, completing 675m (2213.7ft) of diamond drilling (reported as 5000ft). All drill holes were collared on the ice, striking approximately 150° and with inclinations between -45° and -53°. Drill holes 1 through 8 were collared north of the Monte Cristo Peninsula between present day grid lines 4+00E and 5+00W. Drill hole number 9 was collared just north

of Victor Island to undercut the mineralization of the Victor Shaft.

Sampling and trenching by Lakeport Mines in the vicinity of the shafts sunk at the turn of the century indicated a zone approximately 7.6m (25ft) wide, grading 0.17oz/ton, in an envelope of lower grade material (gold valued at 35 oz/ton). Drill holes 1 and 3 which undercut this zone had fair results, however drill hole number 2 (between holes 1 and 3) and those drilled to the east and west of the trenched zone showed disappointing results. It was recommended in 1938 that exploration be abandoned (refer to Hunter, 1982, for a more detailed description of the drilling results).

Following an agreement between Nuinsco and Lakeport in February 1983, Nuinsco optioned 7 patented claims from Lakeport which overlie the alteration zones on the Monte Cristo Peninsula and Victor Island. In addition Nuinsco acquired 100% ownership of 38 claims surrounding the patented claims (a further 50 were added at a later date). Line cutting and geophysical surveys (I.P., E.M., and mag.) were carried out in early 1983, followed by drilling and geological mapping during the summer months. Sufficient funds were expended in the exploration program outlined above to earn Nuinsco Resources an 80% undiluted interest in the 7 patented Lakeport claims.

Regional Geology

The Monte Cristo Property is located at the western end of the Savant Lake-Crow Lake metavolcanic-metasedimentary belt in the western Wabigoon Subprovince (Trowell, Blackburn and Edwards, 1980, Mackasay, Blackburn and Trowell, 1974).

Located northeast of the southeast-northwest trending Pipestone-Cameron Fault. The lithologies in the region consist of a greenschist facies assemblage, with a predominant lower pillowed mafic sequence named the Rowan Lake Volcanics, overlain by a mixed sequence of intermediate and mafic flows and pyroclastics and minor felsic flows and tuffs named the Cameron Lake Volcanics (Trowell, Blackburn and Edwards, 1980, Blackburn and Janes, 1983, Blackburn, 1983).

The Monte Cristo Property is apparently located near the boundary between the Rowan Lake and Cameron Lake Volcanics. Thick sequences of mafic metavolcanics occur north of the property whilst to the east and southeast an intermediate-felsic succession of flows and volcaniclastics occur and continue, discontinuously, in an arcuate band to Cameron Lake and the Nuinsco/Lockwood Cameron Lake Property.

A predominantly quartz monzonite and porphyritic quartz monzonite stock, with minor pegmatitic phases, named the Nolan Lake Stock was emplaced to the south of the property (Kaye, 1973).

Jenson plots of 47 samples from the Rowan Lake area (from both The Rowan and Cameron Lake volcanics) cluster near the tholeiitic-calc-alkaline boundary. However those samples collected from the Cameron Lake volcanics plot predominantly in the calc-alkaline field while those

samples from the underlying Rowan Lake volcanics are predominantly tholeiitic in composition (Trowell, Blackburn and Edwards, 1980, Blackburn, 1983).



### Local Geology

In the immediate vicinity of the Monte Cristo occurrence the lithologies consist of a sequence of metavolcanic-volcaniclastic units, and concordant to subconcordant gabbroic sills which trend approximately 60°. Small discordant to concordant felsic intrusions and mafic porphyry dykes intrude the main sequence.

Units dip consistently to the northwest, whilst stratigraphic tops are to the south (based upon graded bedding and pillow orientation directions), indicating that the sequence is overturned.

### Mafic Metavolcanics

Mafic metavolcanic rocks consist of large expanses of pillowed and massive flows, particularly in the north and central parts of the map sheet. These rocks are greenish-grey, tan and very dark green on weathered surfaces, and dark green to grey on fresh surfaces. Grain size ranges from aphanitic-very fine grained to medium grained flows. Rarely fine grained porphyritic flows also occur, with randomly oriented plagioclase phenocrysts up to 2mm.

Pillowed flows are most abundant in the northern part of the map sheet, although occurrences on Victor Island and the Peninsula do occur (including pillowed units in the shear zone and superb pillows on the southern shoreline of the Peninsula). Pillows range from 0.2m-1.5m by 0.2m-0.8m, however within the shear zone pillows are greatly elongated, attaining lengths of 3m-4m. Pillow selvages range from 0.5cm-5-6cm thick.

Amygdules are almost ubiquitous in the mafic flows. They range in size from 0.4cm-2cm along the elongate axis, are regular to irregular in shape and constitute from 0-20% of a given flow. The amygdules are filled with chlorite and carbonate and may occur together or separately. Carbonate filled amygdules are generally larger than those that are chlorite filled.

Goodwin (1964) stated that typical flows in the region are 6m-15m (20ft-50ft) thick with a lower massive and upper pillowed zone, commonly topped by 1m-1.5m (3ft-5ft) of flow breccia. To date systematic examination has not been undertaken, however limited qualitative observation does concur with those of Goodwin.

The sulphide content of the mafic volcanics is variable from 0% (none visible at the macroscopic scale) to 3% disseminated fine grained to coarse grained pyrite.

### Volcaniclastic Rocks

Volcaniclastic rocks which occur on the property are intercalated with but subordinate in abundance to mafic metavolcanics. Nevertheless these units are exposed over much of the island immediately to the north of the Monte Cristo Peninsula, on the peninsula itself, on Victor Island and on islands to the east and west of these locations. Limited observations south of the area mapped to date suggest that volcaniclastics become more abundant (concurring with Kayes observations, 1973).

Overall the volcaniclastics are variable in both texture and composition, however individual units generally show a limited range of grain

size range and are often well sorted. The units range from mafic to felsic in composition, although intermediate types apparently predominate. Grain sizes generally range from 2mm-6cm, although larger fragments are common and rare blocks greater than 0.5m occur. Grading although not common was observed a several locations.

To date two relatively thick volcanoclastic sequences have been mapped. They are separated by metavolcanics, metagabbro, and the Monte Cristo Shear Zone.

The northern sequence is well exposed along the shoreline of the island immediately to the north of the Monte Cristo Peninsula. Observed thickness of this unit is up to 230m (750ft), but the unit extends under Rowan Lake. Originally interpreted to be interbedded slates and greenstones (Thompson, 1935), recent examination suggests that the succession consists of interbedded mafic-intermediate ash tuff, crystal tuff and lapilli tuff. These units range from 1cm to 5m in thickness, contacts are indistinct to distinct and grading is apparently rare.

The thickest section through the southern sequence of volcanoclastics occurs on Victor Island where it is observed over 215m (700ft). Again this sequence may extend under Rowan Lake and thus be considerably thicker. Similar to the units described above, this sequence was also a zone of weakness into which a large gabbroic sill was intruded on the Monte Cristo Peninsula. Nevertheless the sequence can be traced for more than 2000m (6500ft) across Victor Island and the peninsula. Graded bedding which occurs at several locations, primarily in fine grained lithic tuffs, indicates stratigraphic tops is to the south, and that the sequence is overturned. An excellent example of graded bedding occurs

on the south-west shoreline of Victor Island where, on a 1m shoreline outcrop, approximately ten, 10cm rhythmically layered, south facing, tuff beds occur.

The limited grain size range, generally limited range of fragment types within individual beds, and the graded bedding, suggest that the volcanoclastics are airfall deposits, laid down subaqueously (based upon the local presence of pillowed flows). The apparent lack of pyroclastic breccia, and abundance of ash units and units with small fragment sizes may suggest that deposition occurred distal to the vent location.

Some units identified on the accompanying map as volcanoclastic material may in fact be volcanic flows. This is particularly so along the southern shoreline of Victor Island. Here a light grey weathering, very fine grained (aphanitic) unit with quartz amygdules occurs in a sequence of intermediate ash and lithic tuffs and cherty sediments. However lack of brecciation in the unit suggests that the unit may in fact be an ash tuff. The upper contact between this unit and the overlying mafic unit is gradational and possibly erosional.

In addition to the two thick sequences described above, thin discontinuous volcanoclastic lenses occur throughout the map area.

Sulphide content varies from 0-4% of a given unit, usually occurring as disseminated grains, but rarely as small pods and aggregates.

#### Gabbroic Sills

Gabbroic rocks are common in the area mapped to date. They are

concordant to subconcordant with the mafic metavolcanic or volcanoclastic sequences, but are quite sinuous within the sequence and therefore presumably truncate individual flows and beds.

Weathered surfaces are grey to grey-green and fresh surfaces are generally dark green. Outcrop surfaces often have a smooth, rounded appearance, and occupy topographic highs.

Often little is discernable on fresh surfaces, the only mineral clearly visible being a fibrous amphibole (an alteration product of primary pyroxene). In other cases intergrowths of amphibole, chlorite, and plagioclase are visible, with some grains attaining sizes of 8mm. Distinctive blue quartz phenocrysts also occur.

Sulphides occur as small aggregates up to 5mm across, interstitial to silicate minerals. Pyrite is the most abundant but chalcopyrite also occurs. Magnetite is also present.

Shearing, of variable intensity, is almost ubiquitous along the gabbroic-host rock contact. Where gabbro has intruded mafic metavolcanics the shearing can make placement of the contact difficult and somewhat arbitrary. Carbonate (ankerite) mineralization and quartz carbonate veining are relatively common at gabbro contacts. Also notable is the presence of shear bands adjacent to or in close proximity to the northern gabbro contact. Several good examples of this occur at the eastern end of the peninsula.

#### Felsic and Mafic Porphyries

Minor quartz-feldspar porphyry and feldspar-porphyry intrusions

are dispersed throughout the map area. They are generally white to cream-tan in colour on weathered surfaces, while fresh surfaces are white. Phenocrysts are distinct and indistinct and may be up to 5mm in size.

The felsic porphyries are round to elongate (rarely dykes - aplitic?) and range from 4m to 30m (13ft-100ft) across. Deformation is variable, some bodies display a well defined penetrative fabric, whereas others are apparently undeformed (even within the main shear zone) suggesting various ages of emplacement.

On the south shore of Victor Island the intermediate-felsic volcanics have been invaded by a thin mafic feldspar porphyry dyke. It has a chlorite rich, dark green groundmass and anhedral-subhedral feldspar phenocrysts which may form aggregates up to 4mm-5mm and constitute 20-30% of the rock. Quartz-epidote alteration and quartz veining are common in this unit.

Alteration and Mineralization

Apart from minor occurrences in shearing adjacent to gabbro contacts and as thin carbonate veins, the gold-pyrite mineralization on the Monte Cristo Property occurs in the "Main Shear Zone" in irregular carbonate (ankerite)+sericite+quartz+pyrite altered lenses. These lenses have been observed over distances of 1650m (6350ft). It is difficult to estimate the size of these pods because they generally extend under Rowan Lake. However the northern shore of Victor Island, the northern shore of the peninsula surrounding the trenches discussed earlier and a zone on the island immediately to the northeast of the western shore of the peninsula are sites of well altered zones.

Initial drilling results from the 12 Nuinsco drill holes collared near the trenches on the north shore of the peninsula indicate that two gold-pyrite mineralized zones exist. The "Upper Zone", projecting downwards from the surface expression on which NM-4,5 and 6 were collared, and the "Main Zone", an extension of the alteration and mineralization observed in the trenches and shafts (Curtis, 1983).

Highest gold values occur in those areas consisting of the alteration discussed above with the later addition of quartz flooding. The flooding has resulted in brecciation and stoping of the altered country rock. (Refer to Curtis, 1983 for a more detailed description of alteration and mineralization).

At surface the alteration zones consist of steeply dipping, highly schistose carbonate-sericite laminae, intercalated chloritic bands may occur. Sulphide content is usually between 0.5% and 2% but may be as high

as 4% in some places. Quartz and quartz-carbonate crosscut the schistosity at high angles and often occur in swarms. Green mica (fuchsite?) is often observed within the veins.



Structural Geology

Situated approximately 10km (6.2mi) northeast of the major Pipestone-Cameron Fault the property lies south of the southwest plunging Shingwak Anticline, and very close to the axis of an arcuately folded syncline which passes close to Sullivan Bay and may in fact curve northwards beyond the axis of the Shingwak Anticline (Kaye, 1973, Trowell, Blackburn and Edwards, 1980). If the syncline is in fact folded then the Cameron Lake occurrence is situated very near the nose of the same syncline. Kaye (1973) proposed that the Nolan Lake Stock, south of the property, was emplaced into the nose of an antiformal structure.

The most prominent structural feature on the Monte Cristo Property is the "Monte Cristo Shear Zone" (Main Shear Zone). This concordant to subconcordant structure has been observed by the author to be 1650m (6350ft) along strike, although reconnaissance by Curtis and Hume (Curtis, 1983) indicates that it is greater than 4400m (13500ft) in length. It attains widths of 245m (800ft), strikes at approximately 60 and dips steeply to the northwest. The intensity of shearing within the zone is variable, consisting of intensely sheared pods or lenses separated by shearing of lower intensity. As would be expected the orientation of schistosity and foliation varies to some extent, striking between 60° - 85°.

Lithologies within the shear zone consist of sheared mafic volcanics (in places chlorite schist) and irregular, discontinuous pods and lenses of sericite schist. Some outcrops (particularly on the small island north of Victor Island) display what are apparently stretched and

elongate fragments, suggesting that volcanoclastic layers may occur within the shear zone. However both the north and south boundaries of the shear zone are anchored in metavolcanic units.

Within the most intensely altered sections of the shear zone, those areas composed of banded sericite schist with or without intercalated sheared mafic metavolcanic, intense and complex folding is common. Drag folds measured to date generally strike between  $90^{\circ}$  and  $105^{\circ}$  and plunge between  $48^{\circ}$  and  $80^{\circ}$ . These measurements are consistent with the presence of a synclinal structure to the south as proposed by Trowell, Blackburn and Edwards (1980), also corroborated by the local presence of south facing tops. However the drag folds may have been formed coincident with the shear zone.

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UNRELATED REPORT

#62-1309b

OM83-3-C-81



52F055E9655 63.4309B ROWAN LAKE

030

REPORT ON PROPERTY  
OF  
NUINSCO RESOURCES LTD.  
IN THE  
ROWAN LAKE AREA  
DISTRICT OF KENORA, ONTARIO

Timmins, Ontario  
January 25, 1983

By: DAVID R. BELL GEOLOGICAL SERVICES INC.  
Per: D.W. Esson, P. Eng.





52F05SE9655 63.4309B ROWAN LAKE

I N D E X

030C

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5

SUMMARY

Nuinsco Resources Ltd. has entered into a working option-joint venture agreement with Lakeport Gold Mines Ltd. which provides for further exploration/development of the latter's 7 claim gold prospect property in the Rowan Lake area, District of Kenora, Ontario. Nuinsco has acquired by staking, for its own account, some 38 mining claims surrounding the optioned claims.

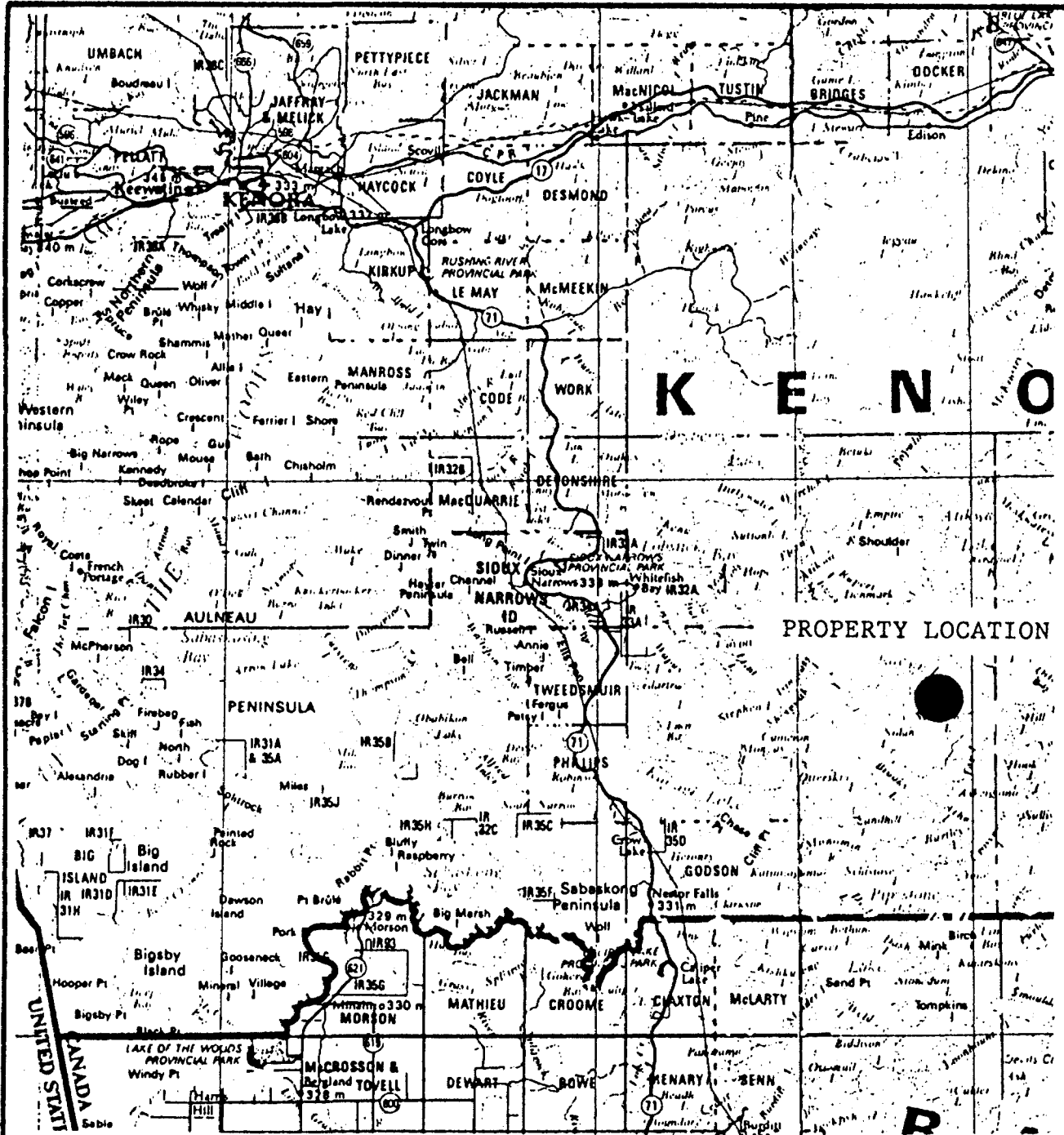
Previous work on the property, dating from 1899, has shown significant widths of potentially ore-grade gold mineralization in several diamond drill holes. Continuity of this mineralization has not been established by earlier work. However this early work suffered from poor drill core recovery and sampling was incomplete. The encouraging results of previous exploration coupled with recent concepts of the genesis of gold mineralization warrants renewed exploration of the claims.

Programs proposed herein provide for:

1. Geophysical surveys.
2. Diamond Drilling
3. Geological Mapping
4. Extended surveys and additional diamond drilling.

Costs of the recommended programs are:

|            |                  |
|------------|------------------|
| Phase I    | \$204,000        |
| Phase II   | <u>316,000</u>   |
| Total Cost | <u>\$520,000</u> |



From: O.M.N.R. Map 42-6 Districts of Rainy River & Kenora

Scale: 1:600,000



DAVID R. BELL GEOLOGICAL SERVICES INC.

PROPERTY LOCATION MAP

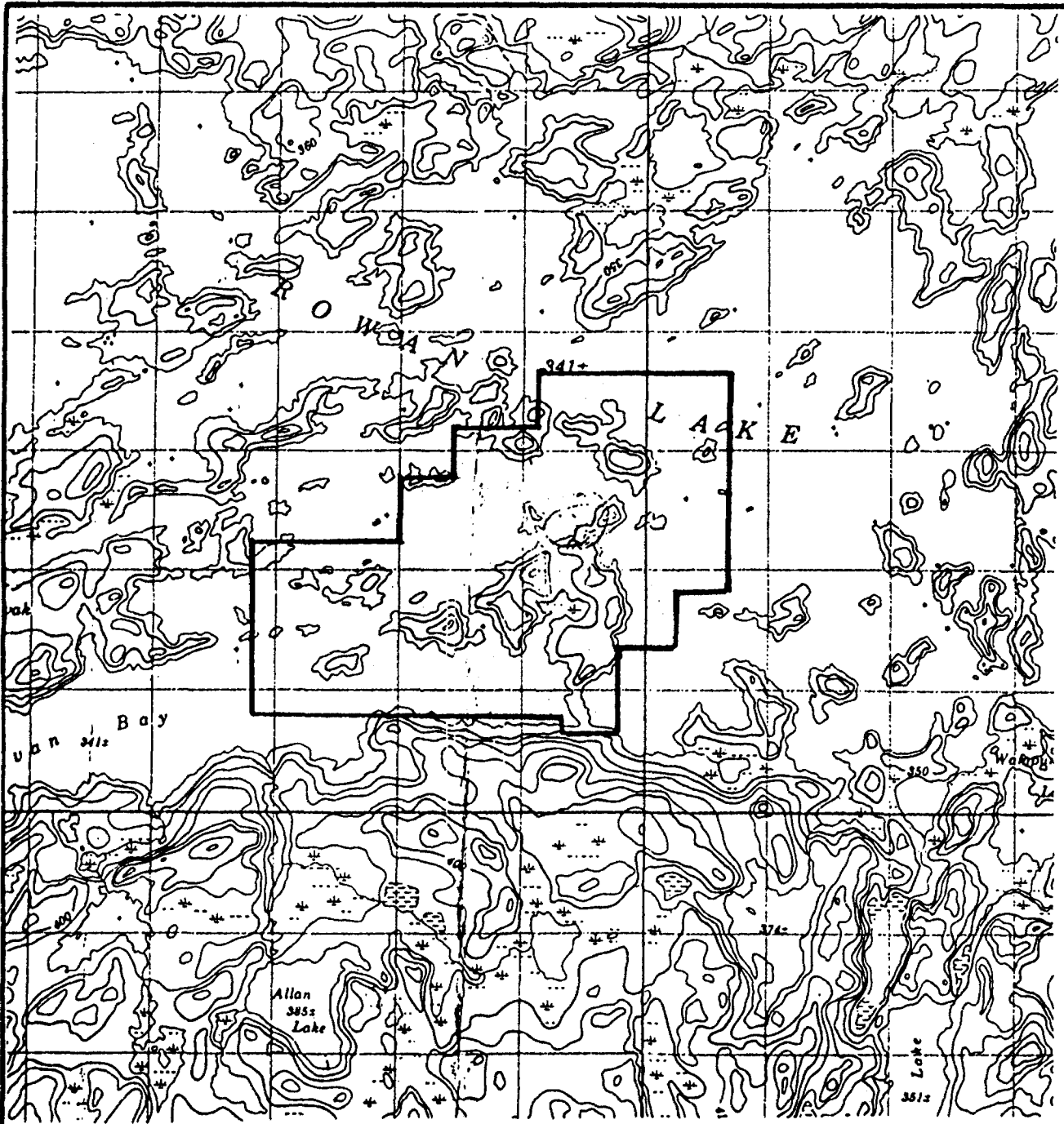
NUNISCO RESOURCES LTD.

District of Kenora, Ontario.

January 25, 1983

Plan No. NR-83-1





From: EMR "Caviar Lake" NTS 52 F/5

Scale: 1:50,000



DAVID R. BELL GEOLOGICAL SERVICES INC.

Topographic Map

NUINSCO RESOURCES LTD.

District of Kenora, Ontario

January 25, 1983

Plan No. NR-83-2

II

INTRODUCTION

David Bell Geological Services Inc. was commissioned by Nuinsco Resources Ltd., through Mr. H.D. Hume, to prepare a Report on their recently-optioned and staked 45 claim gold prospect property located on Rowan Lake in the Kenora Mining District of Ontario. The subject property has been explored on several previous occasions with encouraging but inconclusive results.

This Report is based on examination of all data relating to the regional geology and previous work on the property, discussions with Mr. Douglas Hunter, the optionees' geologist, examination of the files of the Ministry of Natural Resources in Toronto and on a brief personal inspection of a nearby property and helicopter reconnaissance of the specific property in 1982. Snow and winter conditions preclude a meaningful examination of the property at the present time.

III

PROPERTY

III-1 Location and Local Services

Location of the Rowan Lake property is shown on Map NR-83-1 and NR-83-2 attached hereto.

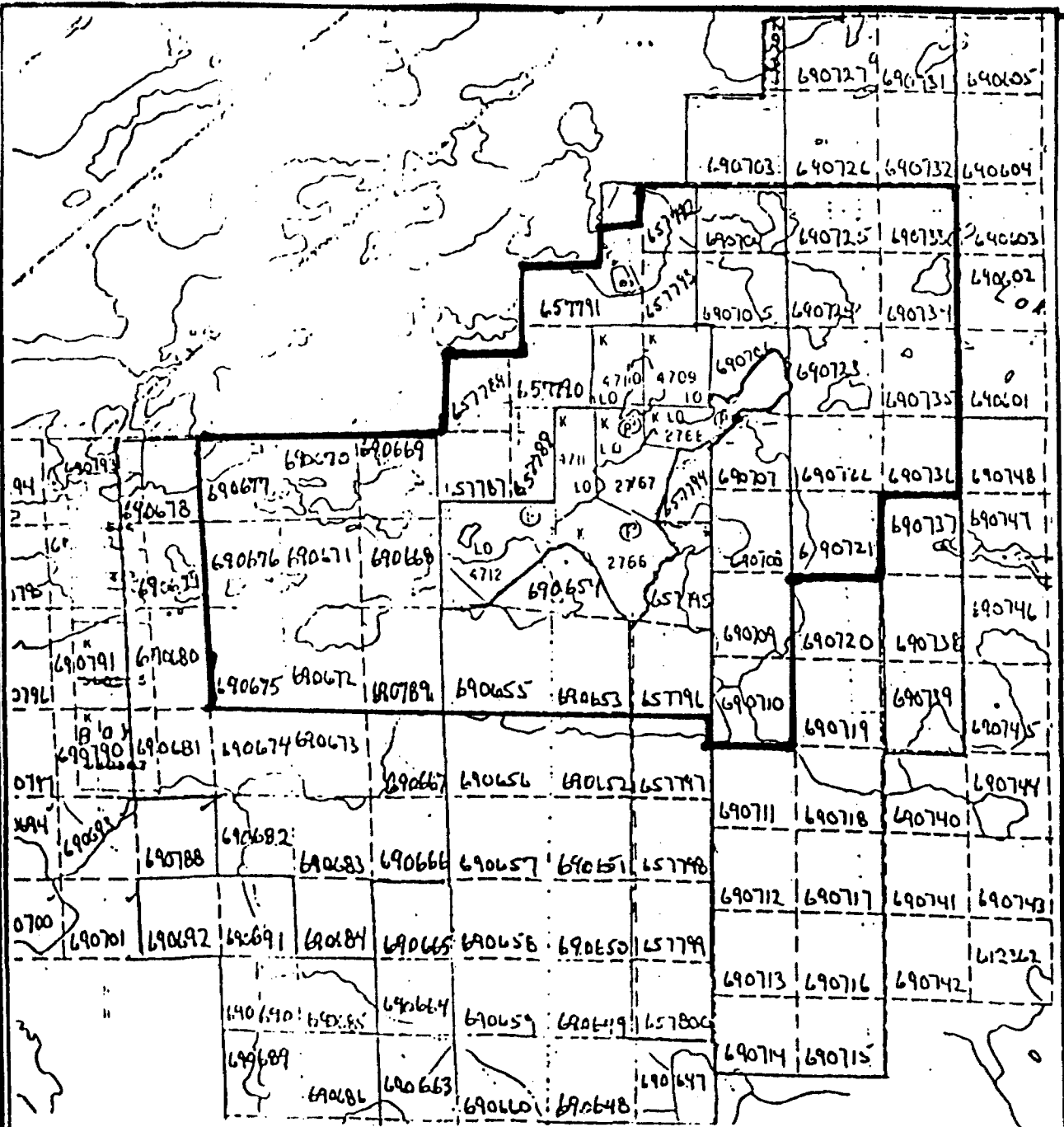
The property lies some 21 air miles north east of the village of Nestor Falls which is on Ontario Highway 71 between the major centres of Fort Frances and Kenora. Access is provided by airplane, from Nestor Falls. There is no road access.

Hydro power could be available from an Ontario Hydro power line that is located more or less along Highway 71. Water is abundant from the major lakes and rivers in the area. Substantial stands of timber exist in the area and there are active timber-cutting operations northeast of the property.

III-2 Topography

The property is flat-lying and, a substantial portion of the property lies under water.

5



From: OMNR M2585 "Dogpaw Lake"

Scale: 1 in = 1/2 mile



|                                        |                   |
|----------------------------------------|-------------------|
| DAVID R. BELL GEOLOGICAL SERVICES INC. |                   |
| Claim Map                              |                   |
| NUINSCO RESOURCES LTD.                 |                   |
| District of Kenor, Ontario.            |                   |
| January 25, 1983                       | Plant No. NR-83-3 |

Rock outcroppings are sparse, limited to the peninsula on which the discovery was originally made and to scattered islands.

### III-3 Status

The 45 claim property has been acquired under a working-option joint-venture agreement and by staking by Nuinsco Resources Ltd.. The claims are located in the Kenora Mining Division in the District of Kenora, Ontario and are shown on the attached Map NR-83-3.

The optioned claims, seven in number, are patented and are registered in the name of O.R. Tanner of Duluth, Minnesota, U.S.A. but are understood to be beneficially owned by Lakeport Gold Mines Ltd. Taxes are paid up to December 1982. The claims may be held in perpetuity as long as current taxes are paid. Nuinsco, by agreement dated November 1, 1982, can acquire up to an 80% interest in the claims by making the following payments and performing the following work:

|                          |                             |                       |
|--------------------------|-----------------------------|-----------------------|
| 1. Prior to Nov. 1, 1983 | Payment \$1,500 (US)        | Work \$ 25,000        |
| 2. Prior to Nov. 1, 1984 | Payment \$2,000 (US)        | Work \$ 50,000        |
| 3. Prior to Nov. 1, 1985 | Payment <u>\$5,000</u> (US) | Work <u>\$100,000</u> |
| Totals                   | <u>\$8,500</u>              | <u>\$175,000</u>      |

Should the total payments and work commitments not be fulfilled, Nuinsco will have no retained interest in the claims.

Lakeport will retain a 20% interest in the claim of which 10% will be a free carried interest in any future profits from the property. The other 10% is a working interest subject to dilution at a rate of 1% for each \$12,500 of expenditures not subscribed for by Lakeport on a pro-rata basis.

The optioned, patented claims are numbered:

K2766-2768 inclusive

K4709-4712 inclusive

The unpatented claims, recently staked for the account of Nuinsco Resources, are registered in the name of Nuinsco Resources Ltd..

The staked claims, 38 in number, may be held by performance of assessment work on them. The dates by which work will be due is as follows:

| <u>Claim Number</u>      | <u>Next Assessment Work Due Date</u> |
|--------------------------|--------------------------------------|
| K657795                  | January 6, 1984                      |
| K657793                  | January 6, 1984                      |
| K657787-657792 inclusive | January 6, 1984                      |
| K657794                  | January 6, 1984                      |
| K657796                  | January 6, 1984                      |
| K690653                  | January 6, 1984                      |
| K690655-690656 inclusive | January 6, 1984                      |
| K690668-690672 inclusive | January 6, 1984                      |
| K690675-690677 inclusive | January 6, 1984                      |
| K690704-690710 inclusive | January 6, 1984                      |
| K690721-690725 inclusive | January 6, 1984                      |
| K690733-690736 inclusive | January 6, 1984                      |
| K690789                  | January 6, 1984                      |

IV HISTORY OF EXPLORATION

Gold was discovered in the region before 1900, and at the turn of the century it was the major gold mining area of Ontario. Although a number of mines were opened up, they were mostly short-lived and by 1912 development had almost ceased. There was apparently sporadic exploration over the years but no sustained activity until the revaluation of gold in the 1930's. This produced a flurry of activity which died with WWII without significant production. The 1950's and 60's produced some exploration for base metals in the area and one gold property some 10 miles southwest of the subject property is known to have been diamond-drilled on two separate occasions. No sustained, economic production resulted from these earlier exploration efforts.

The exact date of discovery of gold on the claim group is not known. In 1899, Mr. Chas Brent, Mining Engineer, reported on sampling results from a series of six trenches and 2 "shafts" (test pits) which were excavated on the property in that year.

(See Bibliography) These results are summarized as follows:  
(Assays converted to oz./ T. @ Gold \$20.00/ oz.)

| <u>No.1 Trench (East Trench)</u>           | <u>Grade oz.Au/T</u> |
|--------------------------------------------|----------------------|
| No. 1 shaft(13 ft. deep)                   |                      |
| Average of 3 samples                       | 0.135 / 6 foot width |
| General sample                             | 0.25                 |
| Average of all samples                     | 0.17                 |
| South of No. 1 shaft                       | inaccessible         |
| North of No. 1 shaft                       | 0.10 / 40 foot width |
| <u>No. 2 Trench</u>                        |                      |
| (180 feet west of No. 1)                   | 0.12 / 12 foot width |
| <u>No. 3 Trench</u>                        |                      |
| (110 feet west of No. 2)                   | 0.12 / 21 foot width |
| <u>No. 4 Trench</u> (west of No. 3)        |                      |
| No. 2 shaft (22 feet deep)                 | 0.235/ 6 foot width  |
| Average of 3 samples                       | 0.235/ 6 foot width  |
| General Sample                             | 0.32                 |
| Average of all samples                     | 0.225                |
| Sample of trench bottom                    | 0.24/ 85 foot width  |
| <u>No. 5 Trench</u> (100 ft. west of No.4) |                      |
| General Sample                             | 0.11 / 15 foot width |
| <u>No. 6 Trench</u> (Between No. 4 & 6)    |                      |
| General Sample                             | 0.10                 |

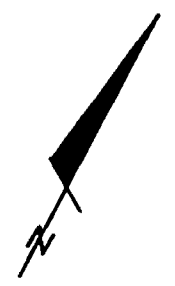
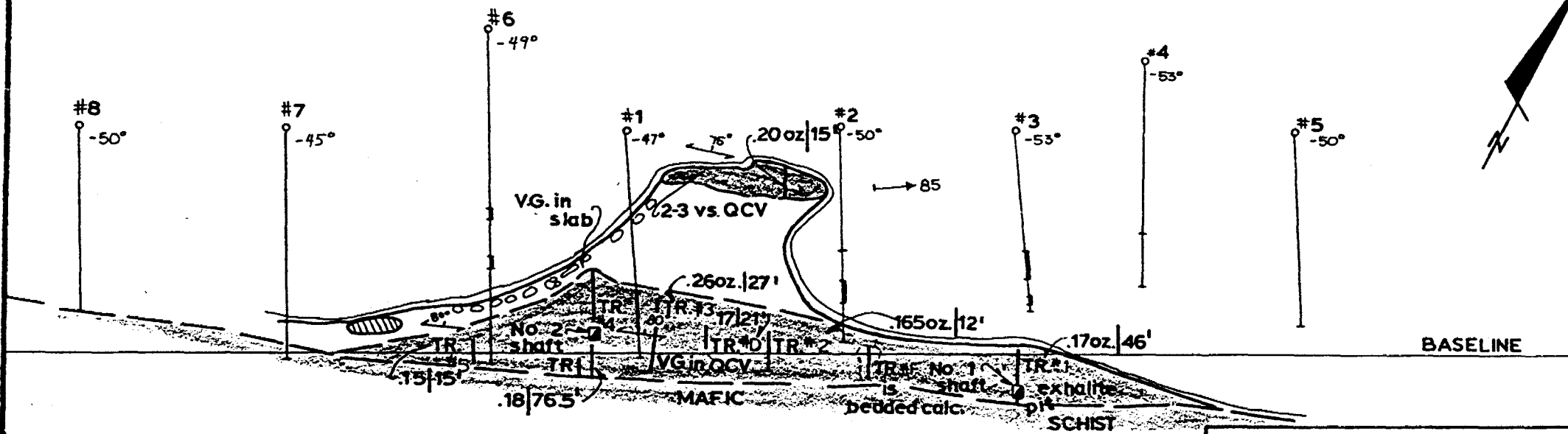
A number of other general and bulk samples were reported from various trenches and shafts. Grade of these samples averaged higher than an average of the above samples.

Mr. Brent also mentions in his report that the Victor shaft on the adjoining property, some 3,000 feet southwest, was down 25 feet and was contracted to go to 100 feet.



There is no further record of work on the property until 1921. Mr. J.G. Cross, M.E., reported on the property and discussed a series of samples taken by a prospector in 1926. This series of samples were halved and sent to two different assay labs. Individual assays of the halved samples showed extreme variation, the average

5

ROWAN  
LAKE



LEGEND

-  MAFIC FLOWS
-  PYROCLASTIC VOLCANIC-SEDIMENTARY BELT



Scale: 1 in = 100 ft.  
after A.D. Hunter 1982 & J.C. Cross  
1931

DAVID R. BELL GEOLOGICAL SERVICES INC.

TRENCH AND DIAMOND DRILL HOLE PLAN

NUINSCO RESOURCES LTD.

District of Kenora, Ontario.

January 25, 1983

Plan No. NR-83-4

of each of the suites were 0.10 oz./T and 0.19 oz. /T.. Mr. Cross also reported that, due to low water, the gold-bearing schist zone was wider than exposed previously and he estimated that the entire horizon could be 200 ft. wide. He sampled across an island exposed by the low water and 80 ft. north of the previous shoreline. This sample yielded 0.20 oz./T over a 15 foot width.

Burwash (1933, see Bibliography) reported that sampling by Cross in 1931."yield smaller values on assay..." In fact, it would appear that the Cross sampling yielded generally higher values, e.g.

|                              | <u>Oz. Au./Ton</u>   |
|------------------------------|----------------------|
| Trench No. 1 and Shaft No. 1 | .17/46 feet width    |
| Trench No. 2                 | .165/ 12 foot width  |
| Trench No. 3                 | .17/ 21 foot width   |
| Trench C                     | .26/ 27 foot width   |
| Trench No. 4 and Shaft No. 2 | .18/ 76.5 foot width |
| Trench No. 5                 | .15. 15 foot width   |

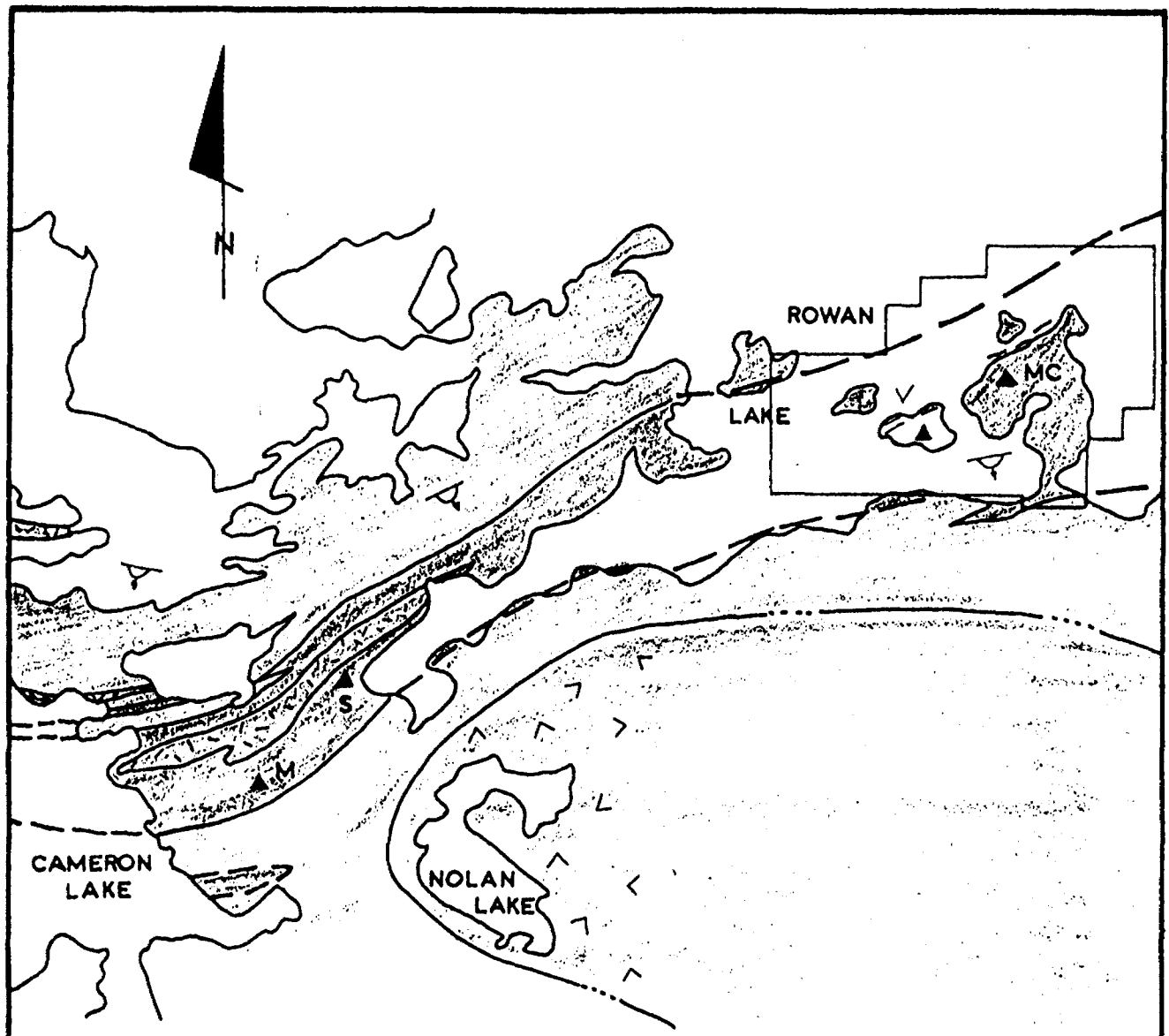
The map reproduced in Burwash (page 88) indicated other trenches D, F and G for which no sample values are known.

In 1936, Lakeport Gold Mines Ltd. acquired the Monte Cristo and Victor claims which are the 7 patented claims of the subject property. In 1937 that Company drilled 9 holes for a total of 2,214.4 feet. Eight of these holes tested the Monte Cristo showing along a strike length of 890 feet., the longest hole being 364 feet. A plan of the drill and trench locations is shown on Map NR-83-4 herein. The ninth hole was drilled some 2500 feet to the southwest near the Victor shaft. Core recovery was very poor and sampling was not complete in all holes.

Results are summarized below:

| <u>DDH No.</u> | <u>Width feet (true)</u>                          | <u>Weighted Average Grade Oz. Au./T</u> |
|----------------|---------------------------------------------------|-----------------------------------------|
| 1              | 34.8 (23)                                         | 0.12                                    |
|                | (including 11.7 feet @ 0.15 and 12.8 feet @ 0.14) |                                         |
| 2              | 10.4                                              | 0.04                                    |
| 3              | 27.7 (20 feet)                                    | 0.14                                    |
|                | (including 15 feet @ 0.21 oz./ Ton)               |                                         |





General Geology Map - Rowan Lake Area  
 - after A.D. Hunter, M.Sc.

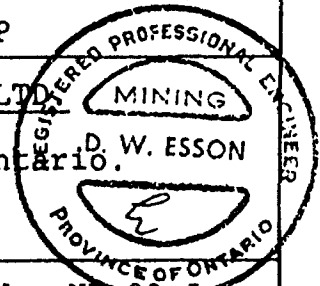
▲ - Gold Occurrence

Scale: 1 inch = 1 mile

**LEGEND**

- ☐ Quartz porphyry
- ▣ Mafic Flows
- ▣ Pyroclastic
- ▣ Volcanic-Sedimentary Belt
- ▣ Gabbro-Diorite
- ▣ Granitic Intrusion

|                                        |                  |
|----------------------------------------|------------------|
| DAVID R. BELL GEOLOGICAL SERVICES INC. |                  |
| GENERAL GEOLOGY MAP                    |                  |
| NUINSCO RESOURCES LTD.                 |                  |
| District of Kenora, Ontario.           |                  |
| January 25, 1983                       | Plan No. NR-83-5 |



| <u>DDH No.</u> | <u>Width feet (true)</u>                                      | <u>Weighted Average Grade Oz. Au. T</u> |
|----------------|---------------------------------------------------------------|-----------------------------------------|
| 4              | no significant values, mineralized zone not assayed           |                                         |
| 5              | no significant values, mineralized zone randomly sampled only |                                         |
| 6              | 2.5                                                           | 0.03                                    |
|                | mineralized zone poorly sampled, considerable lost core.      |                                         |
| 7              | no significant values, zone not all sampled                   |                                         |
| 8              | no significant values, considerable lost core, poorly sampled |                                         |
| 9              | 10                                                            | 0.09                                    |
|                | not all of mineralized zone sampled, hole ended in zone       |                                         |

Due to poor core recovery and incomplete sampling, the results of this earlier drilling are regarded by the writer as indicating that the mineralized zone exposed on surface continues to depth and that economic values are essentially untested.

There is no record of work performed on the property subsequent to 1937.

Recently, there has been renewed interest in the area with many claims staked.

## V GEOLOGY

### V1 Regional Geology

The regional geology of the area is shown on Preliminary Map P831 published by the Ontario Division of Mines, 1973. (see Bibliography). A map of the area geology is reproduced herein as Plan No. NR-83-5 after A.D. Hunter, 1982.

The oldest rocks in the area are the meta-volcanics of mafic to felsic composition. The pillowed to massive flows of basalt and andesite are the most prevalent with the intermediate to felsic pyroclastics and subordinate volcanogenic sediments accumulating in lesser amounts towards the end of the cycle. Porphyritic mafic flows, with large feldspar phenocrysts, occur throughout the mafic flows.

Mafic to intermediate tuffs and lapilli-tuffs occur

interbedded with the pillow and massive basalt and andesite flows and with felsic pyroclastic units. Tuffaceous sedimentary rocks are an integral part of the pyroclastic sequence.

Rhyolite and rhyodacite flows are found mainly in association with silicic tuff and lapilli tuff. Feldspar porphyry and quartz-feldspar porphyry, mapped as intrusive rocks, may in part be extrusive or cogenetic with felsic extrusive rocks. The large feldspar porphyry plug, exposed in the west central part of the area, may be the remnant a feeder pipe which supplied felsic material to higher levels in the volcanic sequence.

The concordant to subconcordant mafic sills that intrude the metavolcanics consist mostly of medium to coarse grained metamorphosed gabbro and anorthositic gabbro. These sills appear to coalesce with large masses of mafic to ultramafic intrusive rocks in the northwestern portion of the area.

The principal granitic intrusive in the area is the Nolan Lake stock of relatively fresh, coarse-grained porphyritic quartz-monzonite, lying to the south of the subject property.

Most of the rocks in the area have been metamorphosed to middle or upper greenschist facies rank. Metamorphic grade may be higher near granitic intrusive contacts.

The axial trace of the large anticline, which closes in the vicinity of Shingwak Lake, trends N70E. A similar trend is inferred for the axial trace of an antiformal structure which closes in the vicinity of Nolan Lake, and which is occupied for the most part by the Nolan Lake quartz monzonite stock. A compressed, or otherwise deformed, synclinal keel is localized through Sullivan Bay intervening between the two large anticlinal fold structures.

Complex small-scale folding is a characteristic feature of the banded or layered volcanoclastic rocks exposed on island and shores in the east-central and eastern parts of Rowan Lake. An analysis of these structure implies two important phases of deformation. Most earlier-phase small folds plunge S70°W; they may be parasitic on the large regional folds for which a similar attitude of plunge may be inferred. However reversals in plunge direction recognized within the map-area may be the result of crossing-folding or a drag-folding produced by faulting or shearing.

A major zone of complex shearing, which strikes generally northwest through Cameron Lake, is probably an extension of a similar feature recognized west of the map area. Relative movements connected with the shearing are obscure. Three faults which strike northwest through Cameron Lake and which appear to be associated with the major shear zone, show right-hand strike-slip displacements.

## V-2 Property Geology

This description of property geology is taken from the Report of A.D. Hunter, M. Sc. (1982) who mapped a portion of the property. This geology is shown on Plan NR-83-4 herein.

"The author mapped the Monte Cristo in October this year. (1982) The zone has about 500 feet (152m) strike length and is up to 85 feet (26m) wide at the west end on surface. Gold-pyrite mineralization occurs in a highly schistose sericite carbonate-rich zone in bedded pyritic tuff. The zone is characterized also by quartz-carbonate stringers and veins throughout, largely cross-cutting schistosity. The veins may contain green mica and up to 1% pyrite and trace chalcopyrite. A flake of visible gold was noted in a carbonate vein in a shoreline slab. Examples of delicately laminated tuff-carbonate exhalite with fine grained pyrite are evident in material excavated from the trenches. The sulphide content of the zone as a whole is low, 1-2%. Gold was readily observed when the zone was tested by panning and this together with the results of amalgamation tests (Brent 1900) indicated to previous workers that the zone would produce freemilling ore.

The Monte Cristo was the subject of a diamond drill program in the winter of 1937-38. Nine holes were completed, totalling 2214 feet(673m).

Eight of these holes tested the zone, from the lake ice, over a strike length of 900 feet (274m). The last hole drilled, #9, was put down near the Victor shaft over 3000 feet west-southwest of the Monte Cristo #2 shaft. Drilling on the Monte Cristo indicated a zone of sheared tuff at least 200 feet (60m) wide. The tuff is described in drill logs as a chlorite carbonate schist and felsite schist with varying proportions of quartz-carbonate stringers and veins and a variable pyrite content (not quantified). Relatively little assaying was done except where material similar to that of the surface gold bearing zone was intersected, yet the chlorite carbonate schist carries assays in several holes."

VI

CONCLUSIONS

Earlier work on the Nuinsco-Lakeport property has produced some very encouraging widths and assays of gold mineralization. While the previous exploration has not been able to demonstrate continuity of mineralization, core recovery in diamond drilling was poor and the sampling was incomplete.

A volcanogenic, strata-bound concept of the genesis of the gold mineralization has been proposed by A.D. Hunter. This concept is in accordance with current geological theory and opens up a considerably larger potential for the property than had been conceived by earlier operators.

A substantial program of exploration and diamond drilling of the property is warranted, based on the encouraging results of work to-date.

VII

RECOMMENDATIONS

Phase I

1. Establish a control grid of base line and tie lines oriented 060° true and cross lines at 400 ft. intervals over the

5

1. (con't) whole property. Over the central portion of the property, from 1500 ft. southwest of the Victor shaft to 2000 ft. northeast of the Monte Cristo No. 2 shaft and extending 1000 ft. north and south of the baseline, provide cross-lines at 200 ft. intervals.

Due to the large amount of the property covered by water, this will be a winter program.

2. Survey all 400 ft. spaced lines by magnetometer and VLF with stations at 100 ft. intervals.

3. Survey the 200 ft. spaced grid with an IP survey using the Newmont array and time domain.

4. Diamond drill the Monte Cristo-Victor mineralized tuff, drill locations to be guided by the results of 3 above. Allow for 5000 ft. of drilling, recovering BQ core. This drilling will be primarily from land covered by water and will be a winter program.

5. Map and prospect the land portions of the property after the snow is gone.

Phase II

1. Allow for extension of IP and Magnetometer surveys to cover extensions of the favourable strata as revealed in Phase 1-5 above.

2. Allow for additional diamond drilling to follow up the results of Phase I-4 and Phase II-1.

VIII COSTS OF RECOMMENDED PROGRAMS

Phase I

|                                             |                 |            |
|---------------------------------------------|-----------------|------------|
| 1. Control grid                             |                 |            |
| Total Miles of line-55 @ \$200/ mile        | \$ 11,000.00    |            |
| 2. Magnetometer & VLF Surveys               |                 |            |
| 40 miles @ \$200.00/ miles                  | 8,000.00        |            |
| 3. IP Survey                                |                 |            |
| 14 miles @ \$800/ mile                      | say 11,000.00   |            |
| 4. Diamond Drilling                         |                 |            |
| 5000 ft. @ \$20.00 ft.                      | \$100,000.00    |            |
| Assaying, 800 @ \$20 ea.                    | 16,000.00       |            |
| Supervision, 2 months @ \$4000.00 per month | 8,000.00        |            |
| Travel, camp costs etc.                     | <u>5,000.00</u> | 129,000.00 |

Σ

|                                     |                 |                   |
|-------------------------------------|-----------------|-------------------|
| 5. Geological Mapping & Prospecting |                 |                   |
| 1 month @ \$4,000/ month            | \$4,000.00      |                   |
| 1 month @ \$2,000/ month            | 2,000.00        |                   |
| Camp costs, travel, boat etc.       | <u>3,000.00</u> | \$ 9,000          |
| 6. Consulting & Reporting           |                 |                   |
| 5 days/month @ \$600/ day, 3 months |                 | 9,000.            |
| 7 Contingencies @ 15%               | say             | <u>27,000.</u>    |
| Total Cost, Phase I                 |                 | <u>\$204,000.</u> |

Phase II

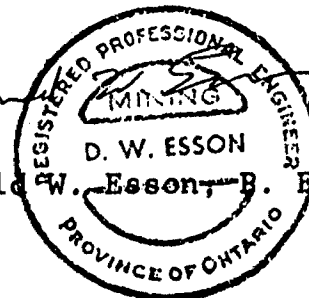
|                                    |                 |                   |
|------------------------------------|-----------------|-------------------|
| 1. IP and Magnetometer Surveys     |                 |                   |
| Allow for 20 mi @ \$1,000/ mile    |                 | \$ 20,000.        |
| 2. Diamond Drilling                |                 |                   |
| Allow for 10,000 ft. @ \$20/ft.    | \$200,000.00    |                   |
| Assaying, 1500 @ \$20./ea.         | 30,000.00       |                   |
| Supervision, 3 month @ \$4000/ mo. | 12,000.00       |                   |
| Travel, camp, etc.                 | <u>5,000.00</u> | 247,000.          |
| 3. Consulting & Reporting          |                 |                   |
| 5 days/ month \$600/ day, 3 months |                 | 9,000.            |
| 4. Contingency @ 15%               | say             | <u>40,000.</u>    |
| Total Cost Phase II                |                 | <u>\$316,000.</u> |
| Total Cost Phase I & II            |                 | <u>\$520,000.</u> |

Respectfully submitted,

DAVID R. BELL GEOLOGICAL SERVICES INC.

Timmins, Ontario  
January 25, 1983.

Per: Donald W. Esson, B. Eng.



C E R T I F I C A T E

I, Donald W. Esson, do hereby certify:

1. that I am a consulting geologist and reside at RR#1, Duntroon, Ontario.
2. that I am a graduate of the University of Toronto, 1957, with the degree of Bachelor of Applied Science (Mining Geology).
3. that I have been practicing my profession since graduation.
4. that I am registered with the Association of Professional Engineers of Ontario as a Professional Engineer.
5. that I do not have, nor do I expect to receive, directly or indirectly, any interest in the properties and / or securities of Nuinsco Resources Ltd. nor of Lakeport Gold Mines Ltd..
6. that my report is based on a personal examination and helicopter reconnaissance of the area of the property on December 10, 1982, on review of all published geological data of the area, and on review of all available reports, maps, and sections resulting from earlier work on the property.

*Donald W. Esson*

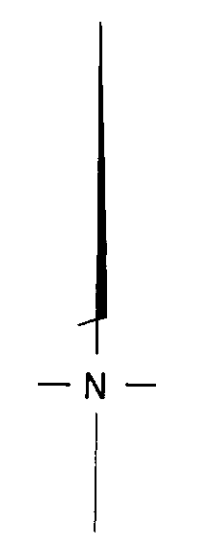
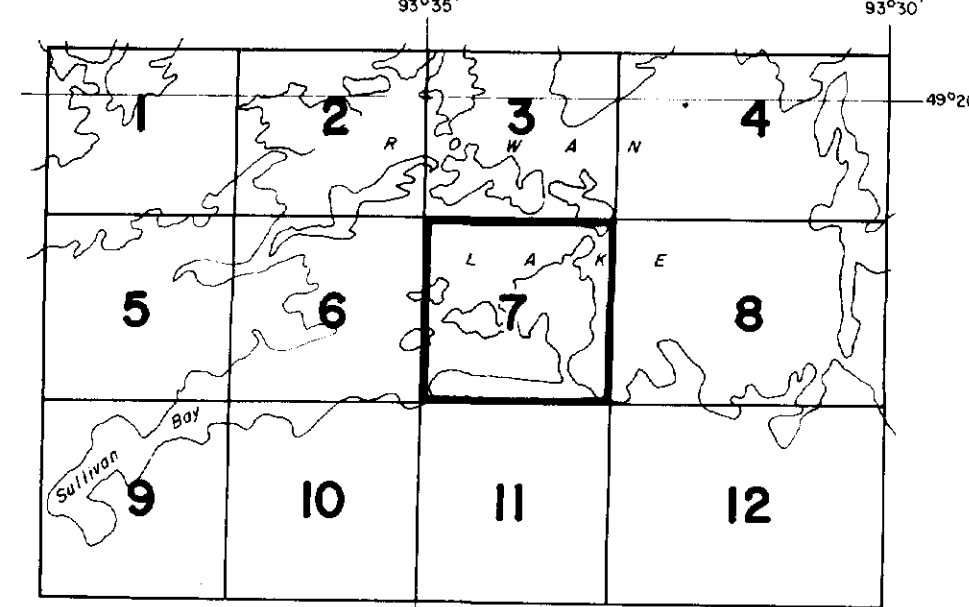
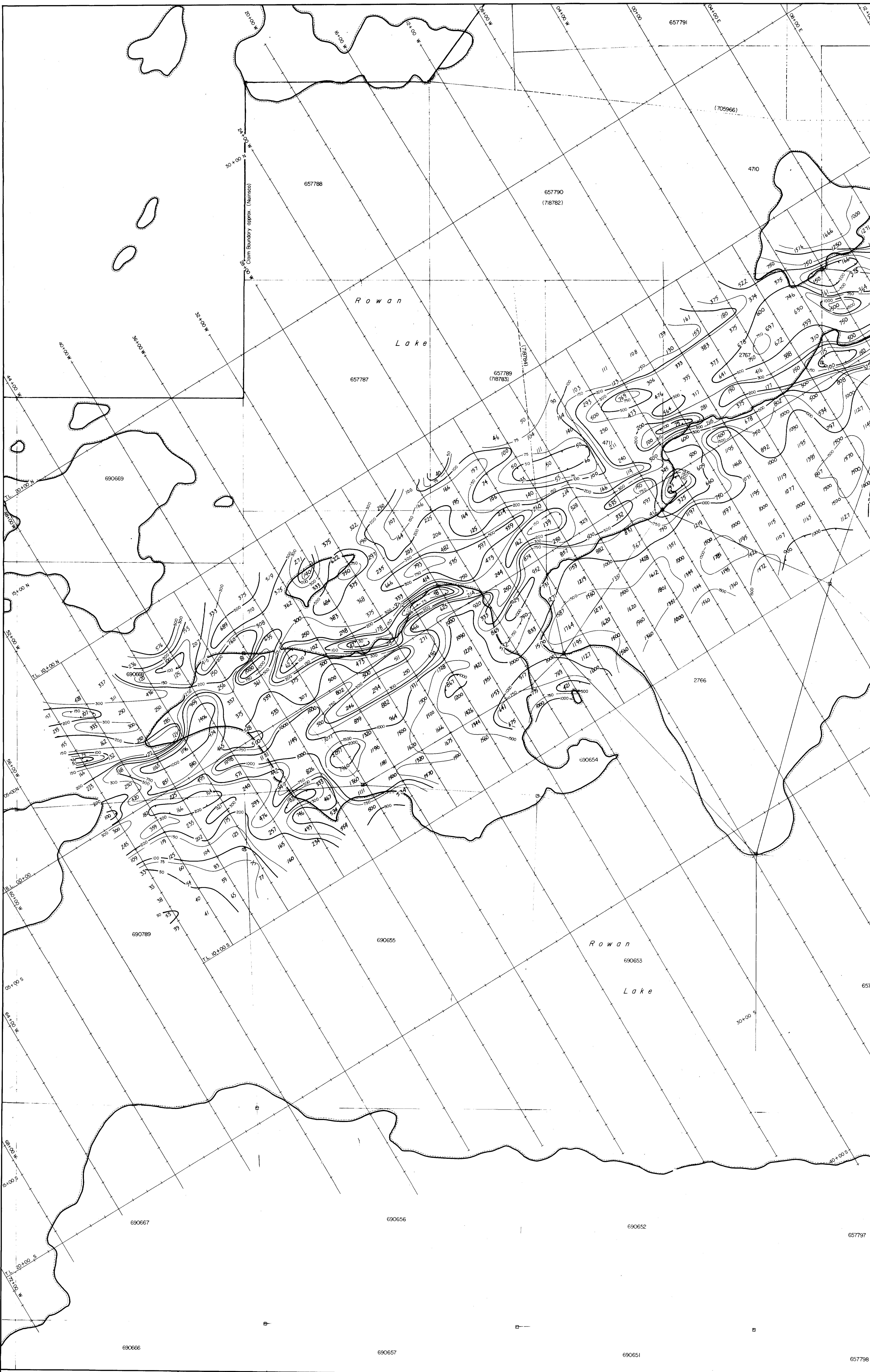
Timmins, Ontario  
January 25, 1983.

Donald W. Esson, B.A. Sc., P. Eng.



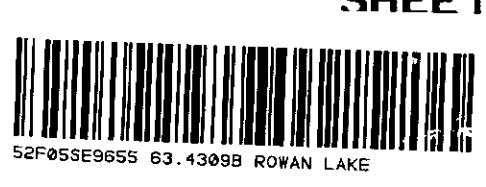
BIBLIOGRAPHY

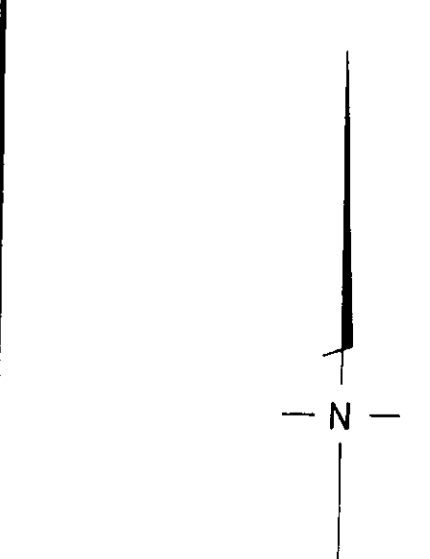
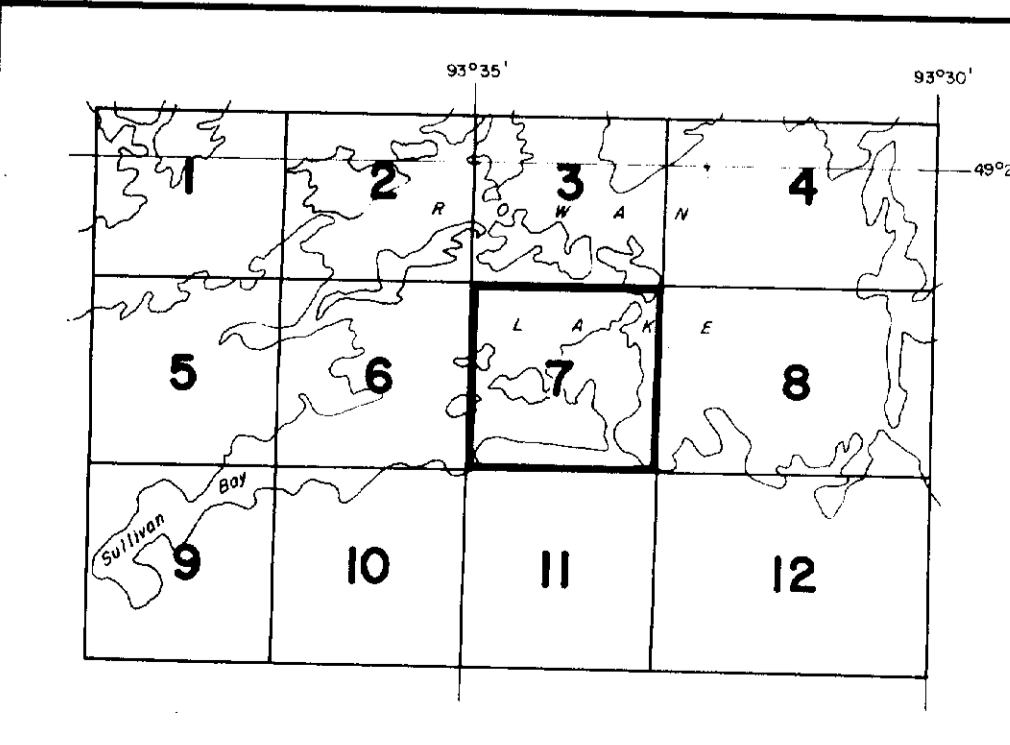
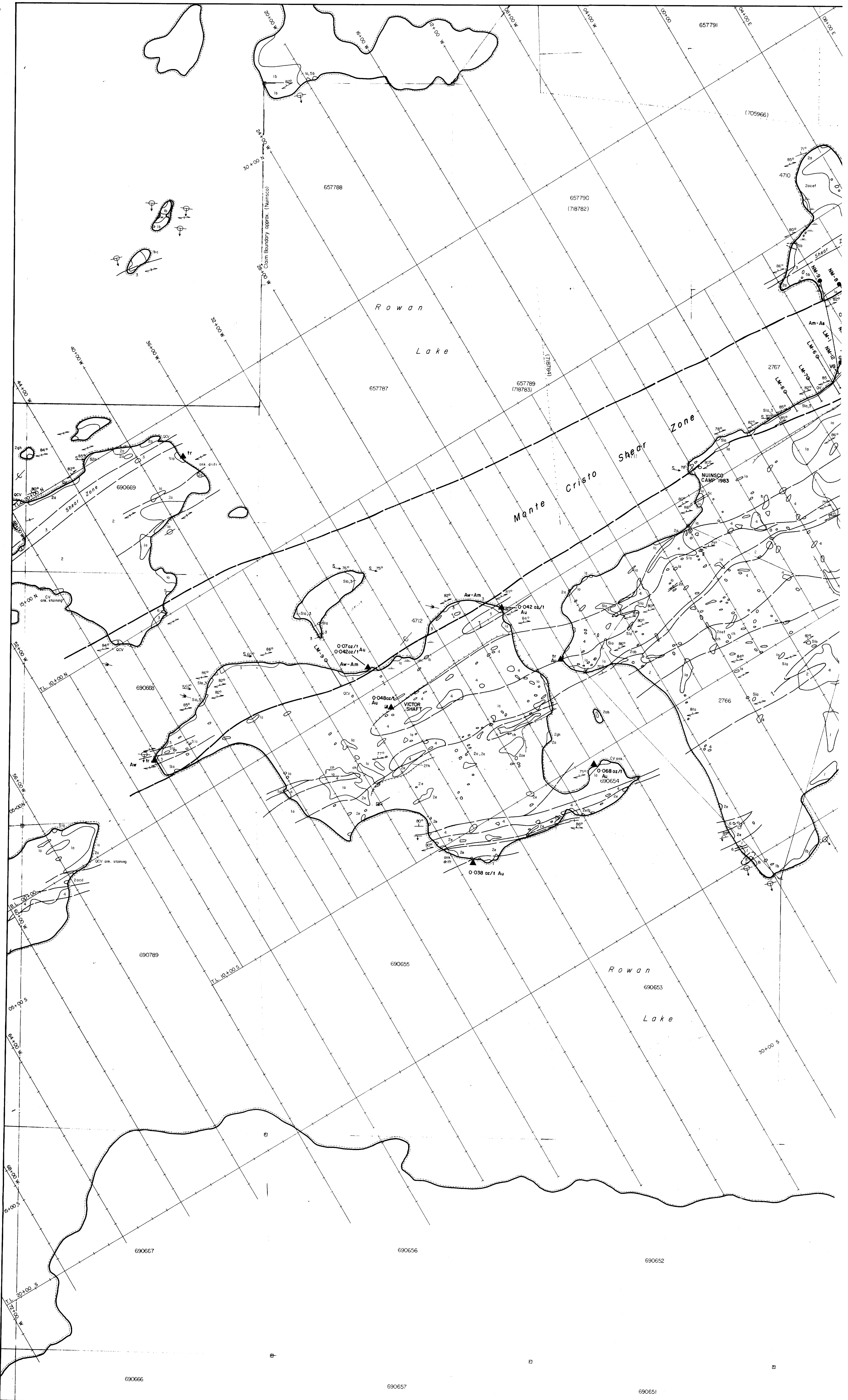
- Kaye, L,  
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scale 1 inch to  $\frac{1}{2}$  mile Geology 1972.
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- Cross, J.G.  
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- LEGEND**
- Grid line
  - Claim post
  - 690652 Claim number
  - (718785) Over-staked claim number
  - Shoreline

SHEET INDEX





**LEGEND**

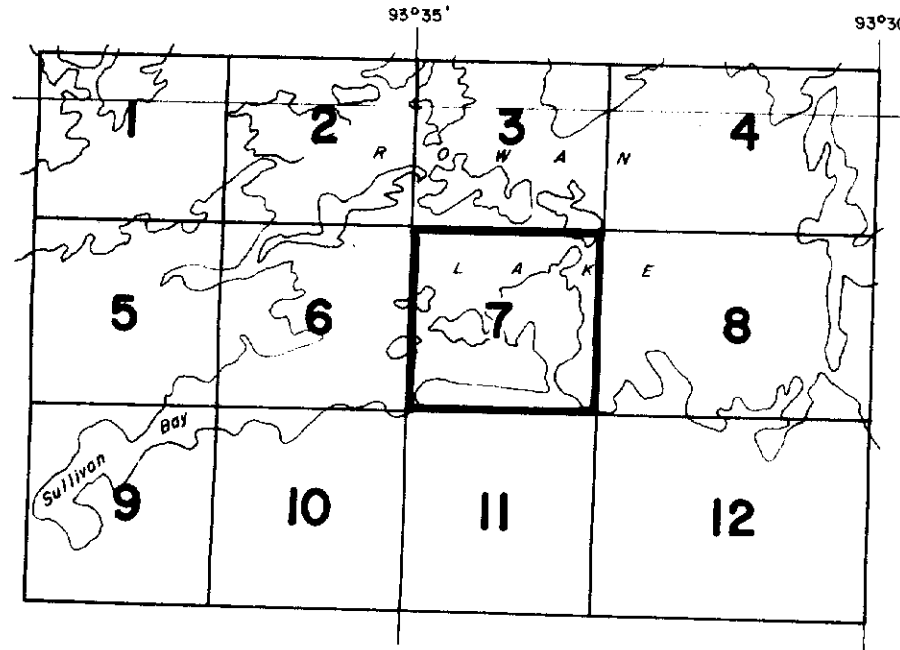
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|  | Grid line                |
|  | Claim post               |
|  | Claim number             |
|  | Over-staked claim number |

**Legend**

|                                                |                          |
|------------------------------------------------|--------------------------|
| <b>Intrusive Rocks</b>                         |                          |
| 6                                              | mafic feldspar porphyry  |
| 5a                                             | quartz feldspar porphyry |
| 5b                                             | feldspar porphyry        |
| 5c                                             | porphyry dyke            |
| 4                                              | gabro                    |
| 3                                              | sericite schist          |
| <b>Volcaniclastics (Mafic)</b>                 |                          |
| 2a                                             | ash tuff                 |
| 2b                                             | lithic tuff              |
| 2c                                             | lapilli tuff             |
| 2d                                             | crystal tuff             |
| <b>Volcaniclastics (Pelsic - Intermediate)</b> |                          |
| 2e                                             | ash tuff                 |
| 2f                                             | lithic tuff              |
| 2g                                             | lapilli tuff             |
| 2h                                             | crystal tuff             |
| <b>Mafic Volcanics</b>                         |                          |
| 1a                                             | massive basalt           |
| 1b                                             | pillowed basalt          |
| 1c                                             | pillow tuff              |

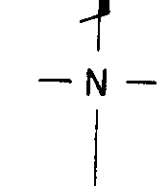
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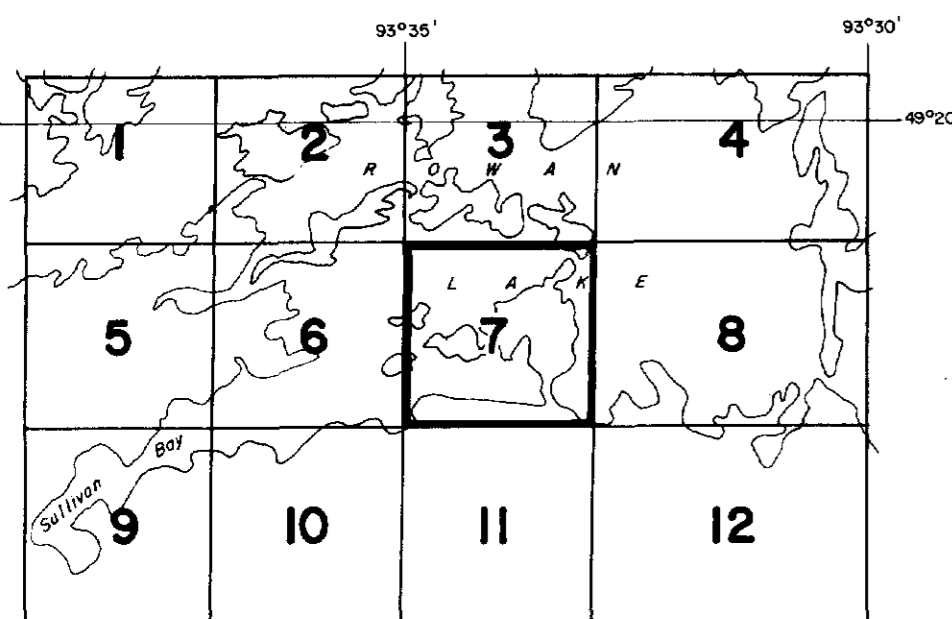
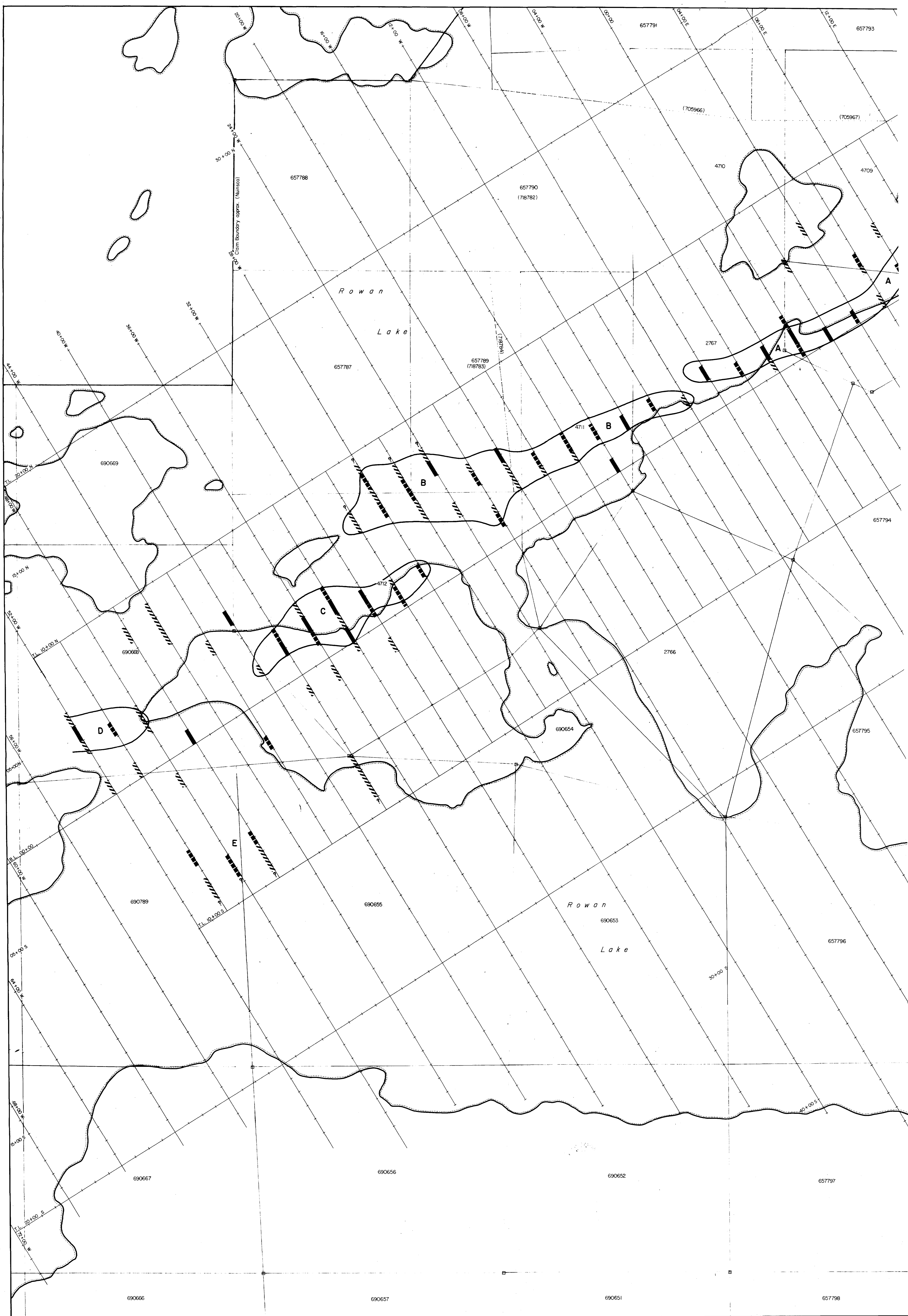
|  |                                       |  |     |
|--|---------------------------------------|--|-----|
|  | VG visible gold                       |  | ▲ 0 |
|  | ch chert bands                        |  |     |
|  | S sheared                             |  |     |
|  | Am weak alteration                    |  |     |
|  | As moderate alteration                |  |     |
|  | As strong alteration                  |  |     |
|  | shaft                                 |  |     |
|  | trench                                |  |     |
|  | pit                                   |  |     |
|  | swamp                                 |  |     |
|  | outcrop                               |  |     |
|  | drill road                            |  |     |
|  | escarpment or steep slope             |  |     |
|  | diamond drill hole, direction assumed |  |     |
|  | (NW - Nuinisco Resources)             |  |     |
|  | (LM - Lakeport Mines - approx)        |  |     |
|  | holes NM-8 & 9 lite logged            |  |     |



SHEET INDEX

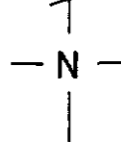
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  - 690652 Claim number
  - (718785) Over-staked claim number
  - Depression contour
  - 1000 gamma contour
  - 500 gamma contour
  - 100 gamma contour
  - 50 gamma contour
  - 57869 Magnetic survey reading (gammas)

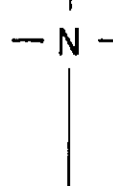
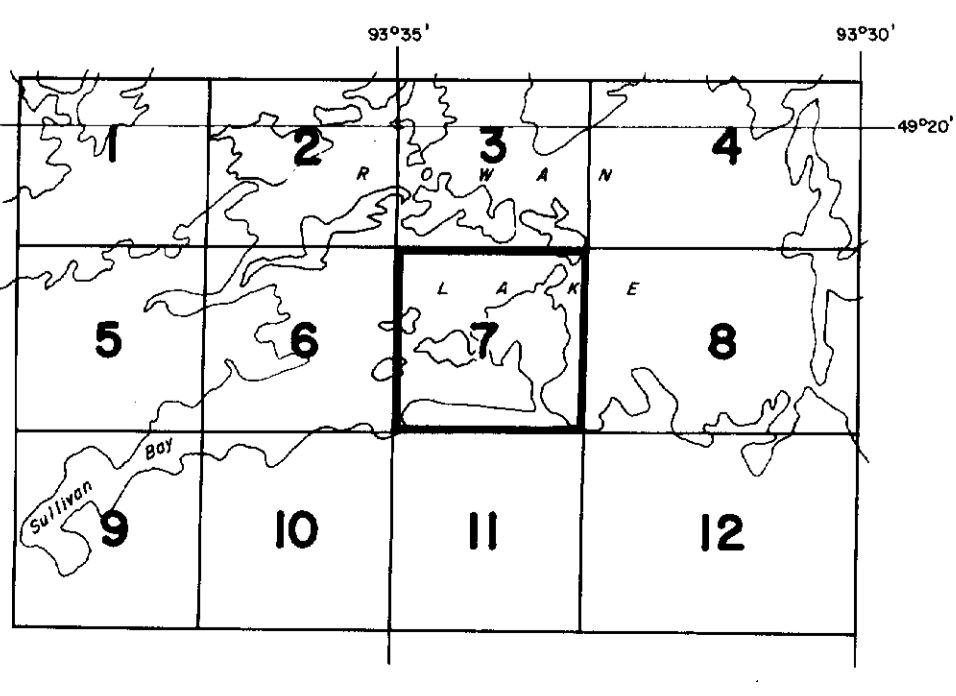
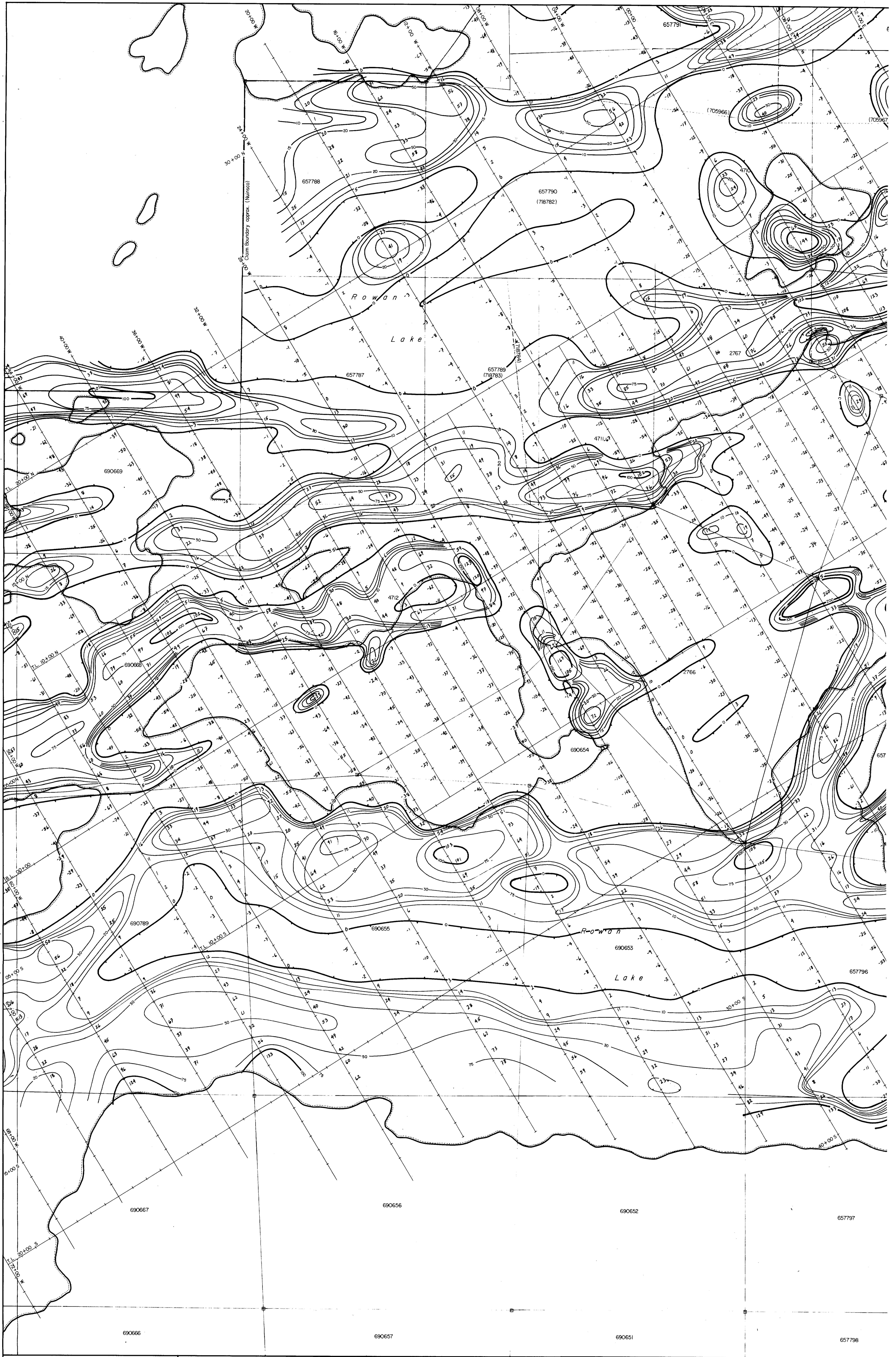




SHEET INDEX

- LEGEND**
- Grid line
  - Claim post
  - 690652 Claim number
  - (718785) Over-stated claim number
  - A IP Zone with designation
  - ▬ Definite IP Anomalies
  - ▨ Probable IP Anomalies
  - ▧ Possible IP Anomalies





- LEGEND**
- Grid line
  - Claim post
  - 690652 Claim number
  - (718785) Over-staked claim number
  - Contoured Values (%)
  - Depression contour







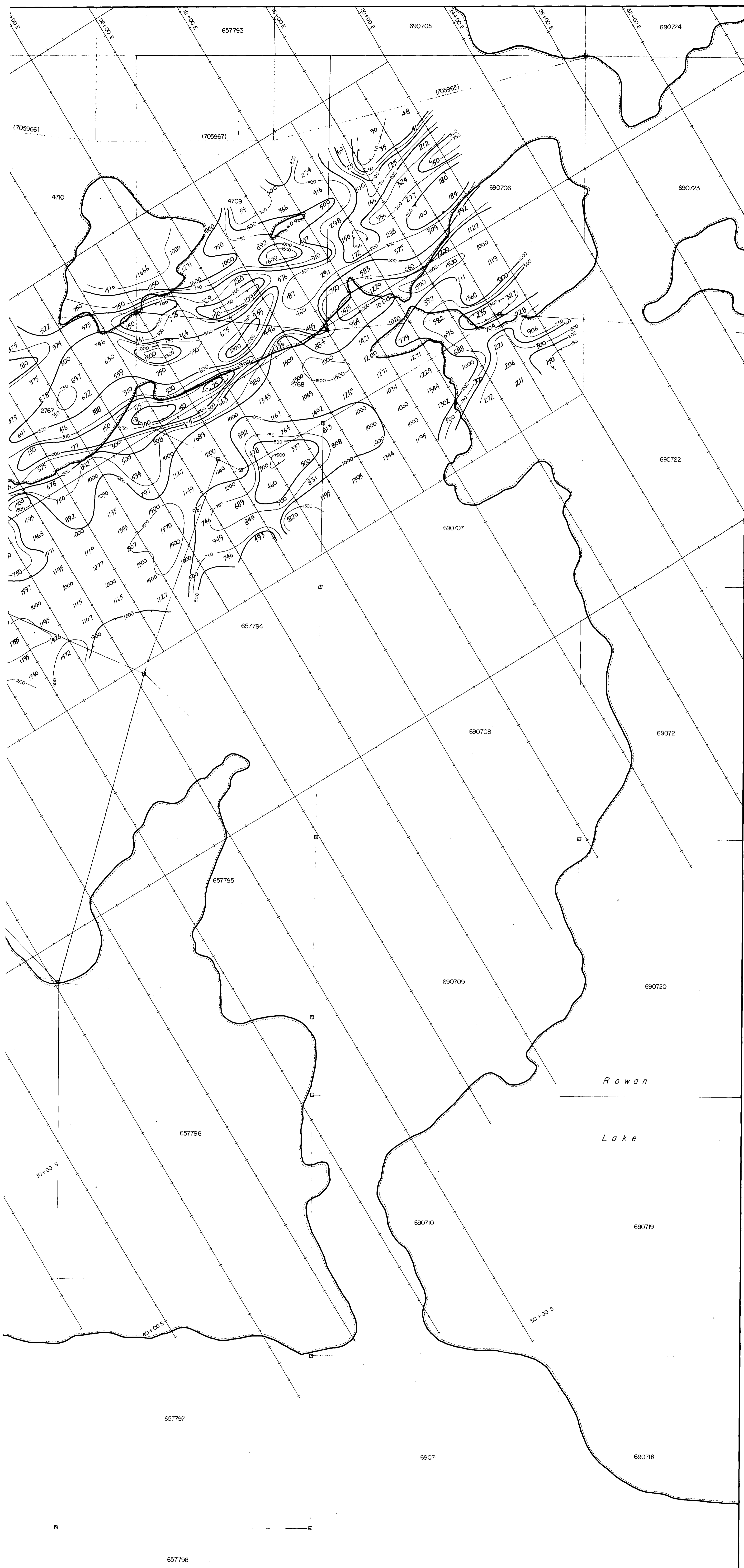












**NUINSCO RESOURCES LIMITED**  
**Monte Cristo Property**

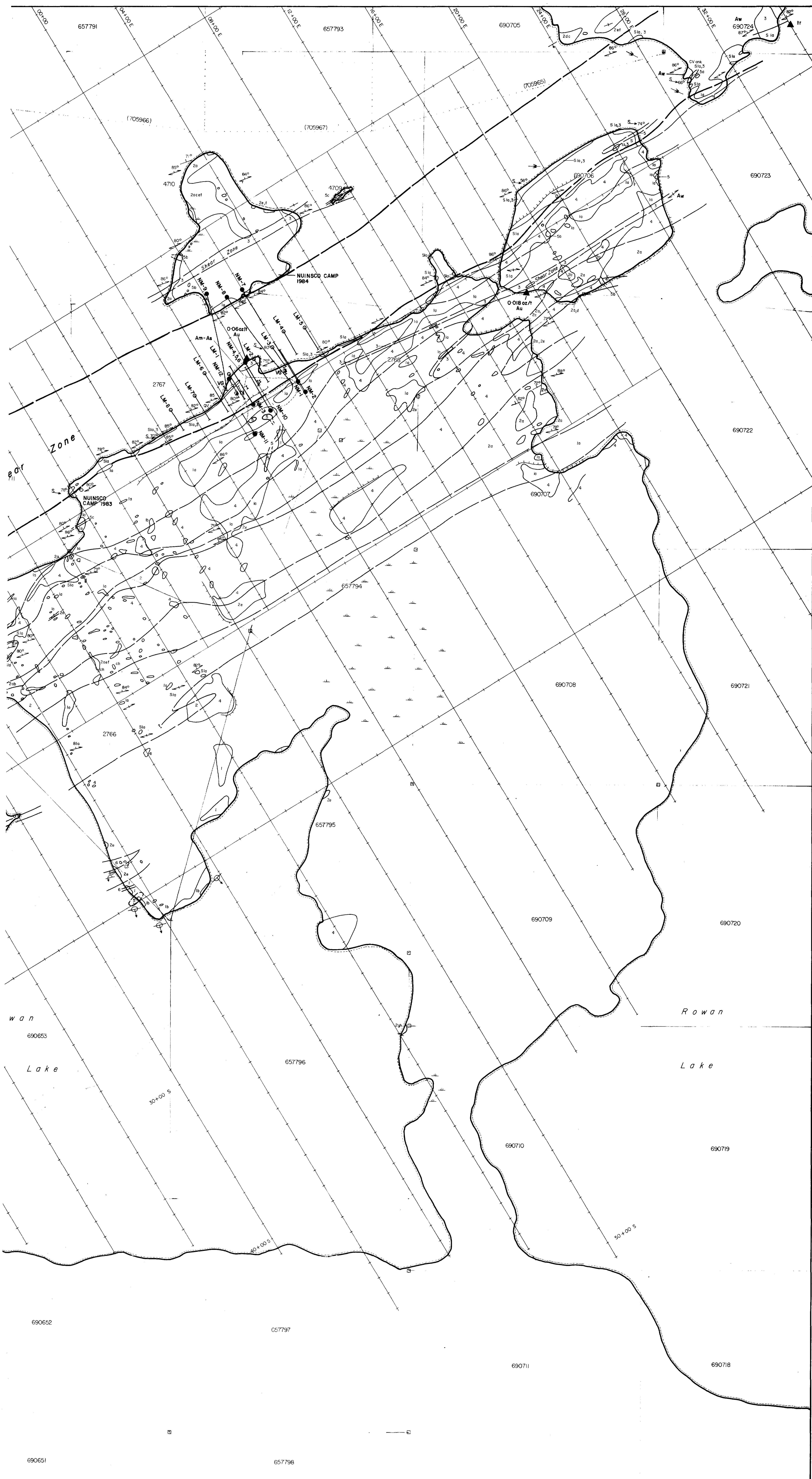
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| DRAFTED BY : | PLAN No. : |



- Symbols**
- VG visible gold
  - ch chert bands
  - S sheared
  - Aw weak alteration
  - Am moderate alteration
  - As strong alteration
  - shaft
  - trench
  - ⊗ pit
  - ⊘ swamp
  - outcrop
  - drill road
  - ▬ escarpment or steep slope
  - diamond drill hole, direction assumed (NW - NuinSCO Resources) (LM - Lakeport Mines - approx) holes NM-8 & 9 lite logged
  - ▲ 0.6 oz/t assay location
  - bedding - inclined - vertical - overturned
  - foliation - inclined - vertical
  - shear zone boundary
  - geological boundary - observed - assumed
  - s 55° drag fold with plunge
  - kink band
  - fold closure
  - z fold
  - s fold
  - ← glacial striae

**NUINSCO RESOURCES LIMITED**  
**Monte Cristo Property**

NORTH WESTERN ONTARIO - NTS 52F/5

**SHEET No. 7**

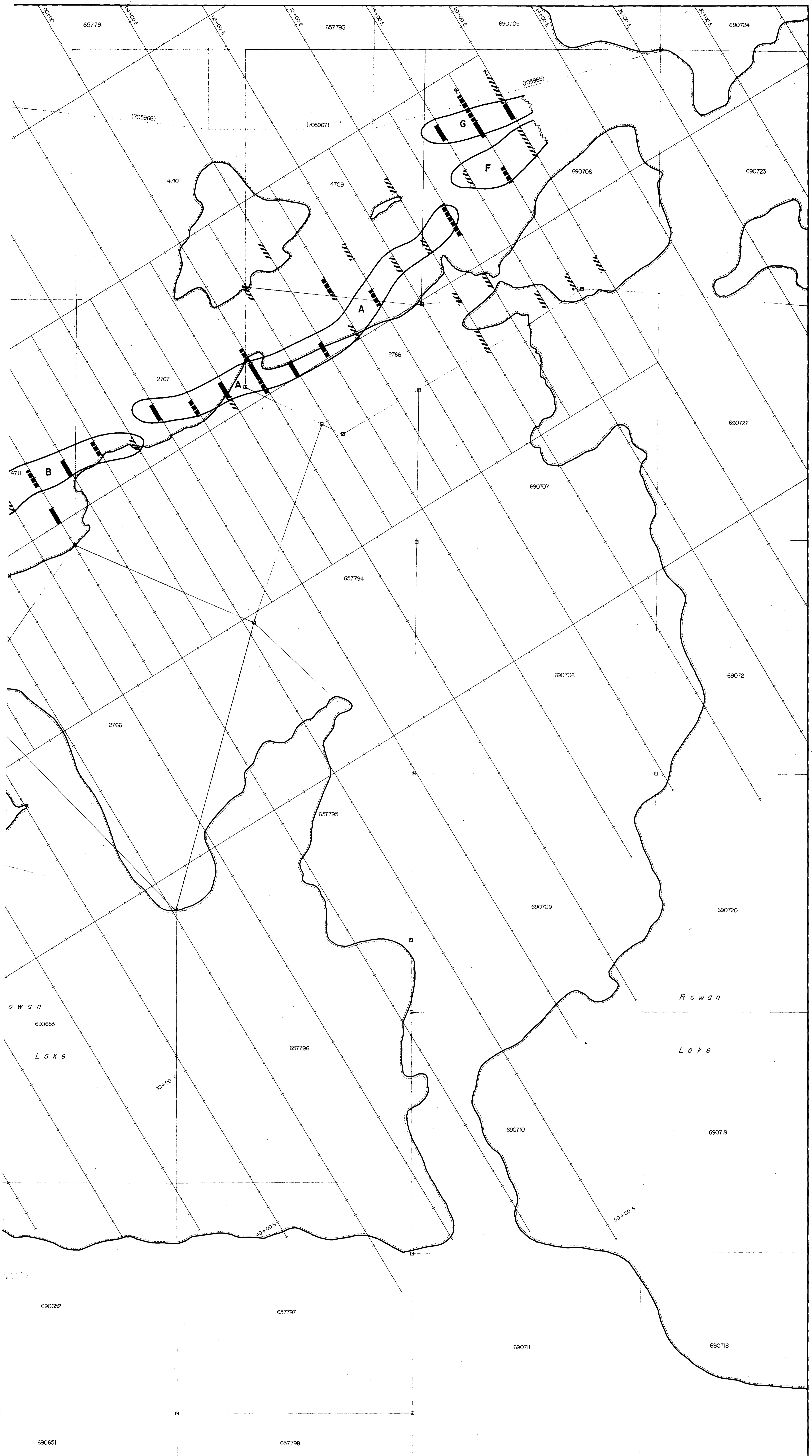
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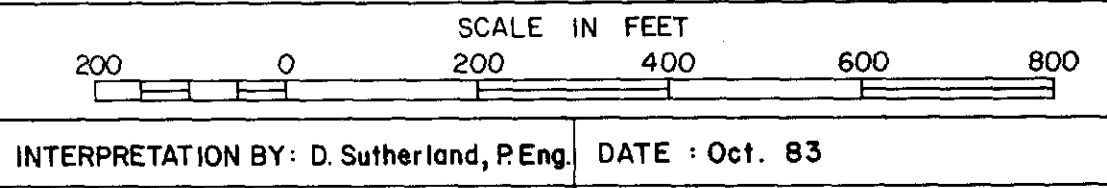


**NUINSCO RESOURCES LIMITED**  
**Monte Cristo Property**

NORTH WESTERN ONTARIO - NTS. 52F/5  
**SHEET No. 7**

**I.P. ANOMALIES**

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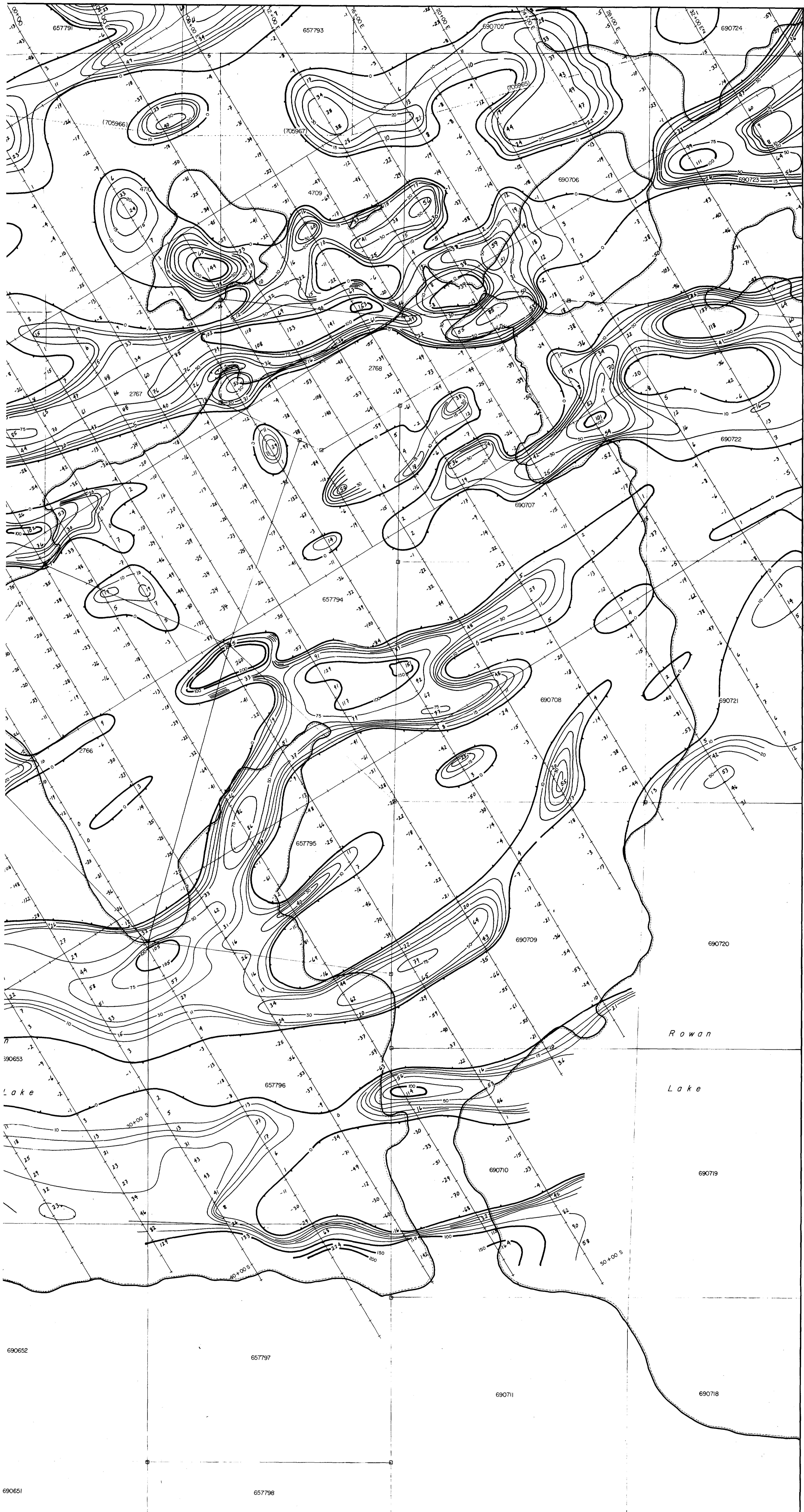


INTERPRETATION BY: D. Sutherland, P.Eng. DATE: Oct. 83  
 DRAFTED BY: J. Meek

To accompany report of CURTIS & ASSOCIATES

PLAN No. 3 (1983-MC-1)





NUINSCO RESOURCES LIMITED  
Monte Cristo Property

NORTH WESTERN ONTARIO - NTS 52F/5

SHEET No. 7

VLF-EM Survey  
CONTOURS OF FILTERED  
IN-PHASE COMPONENT

SCALE IN FEET  
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DATA BY :

DATE : Oct. 83

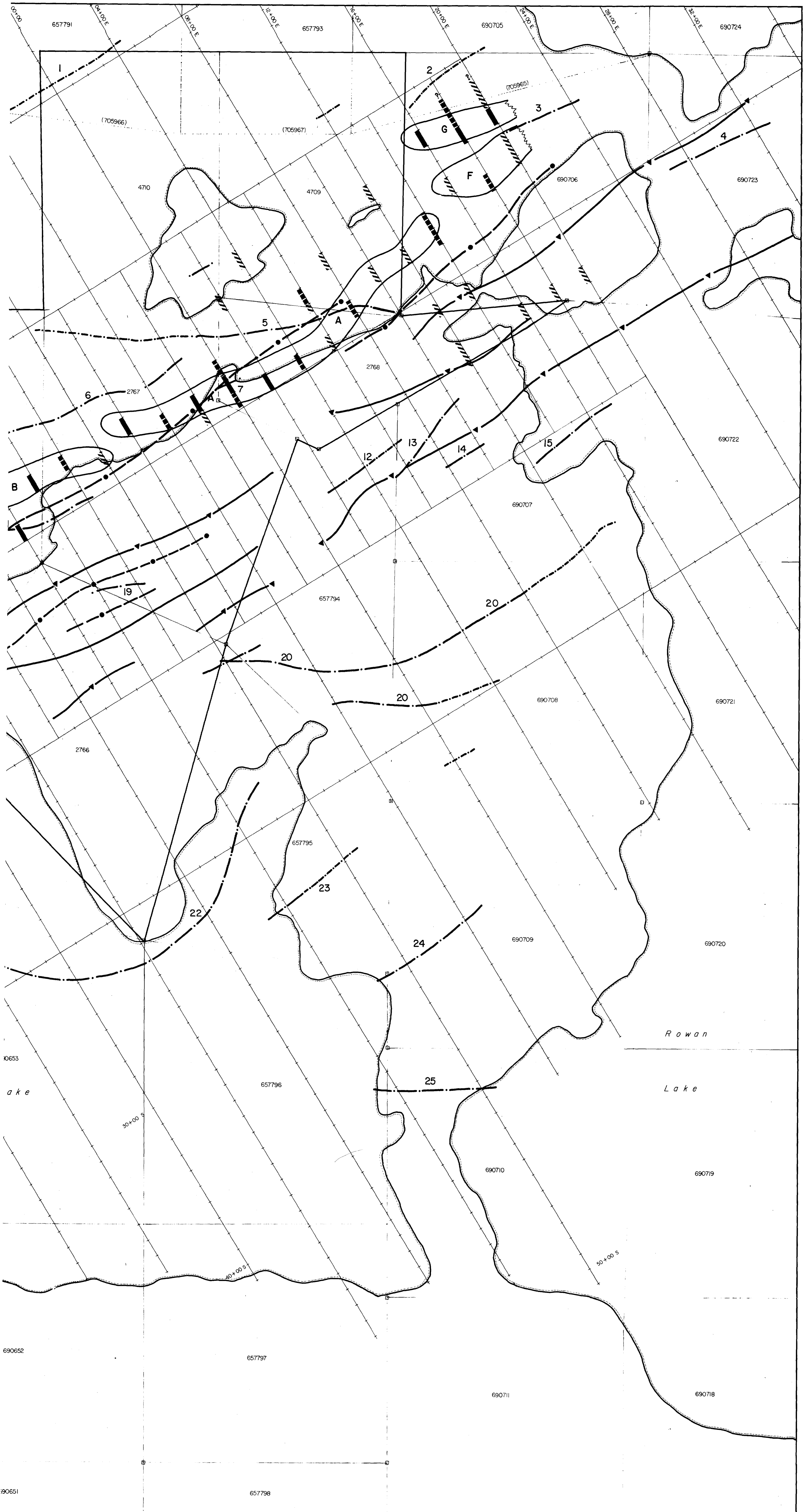
To accompany report by CURTIS & ASSOCIATES

DRAFTED BY : J. Meek

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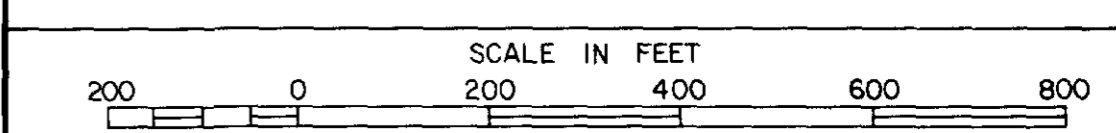


**NUINSCO RESOURCES LIMITED**  
**Monte Cristo Property**

NORTH WESTERN ONTARIO - NTS. 52F/5

**SHEET No. 7**

**COMPILATION  
 OF  
 GEOPHYSICS**



INTERPRETATION BY: D. Sutherland, P.Eng. DATE: Oct. 1983

To accompany report of CURTIS & ASSOCIATES

DRAFTED BY: J. Meek

PLAN No.: 5 (1983-MC-1)

#63-4309D

02+00N

03+00N

NW

NM-12  
-80°

10052.36'  
 117.33'  
 1002.43'  
 117.34'  
 1002.38'  
 117.44'  
 44'  
 12/30'  
 7'  
 37'  
 ..

1580'  
 1580'  
 1580'  
 1580'  
 1580'  
 Hole Stopped

|                                                                                            |                           |
|--------------------------------------------------------------------------------------------|---------------------------|
| NUINSCO RESOURCES LIMITED<br>Monte Cristo Property<br>NORTH WESTERN ONTARIO - N.T.S. 52F/5 |                           |
| <b>VERTICAL CROSS SECTION ON<br/>         LINE 01+50 W</b><br>LOOKING S 60° W              |                           |
| <b>DDH Nos. NM-11, 12</b>                                                                  |                           |
| SCALE IN FEET<br>                                                                          |                           |
| DATA BY:<br>DRAFTED BY: J. Meek                                                            | DATE: Nov. 83<br>PLAN No. |

#63.4309b

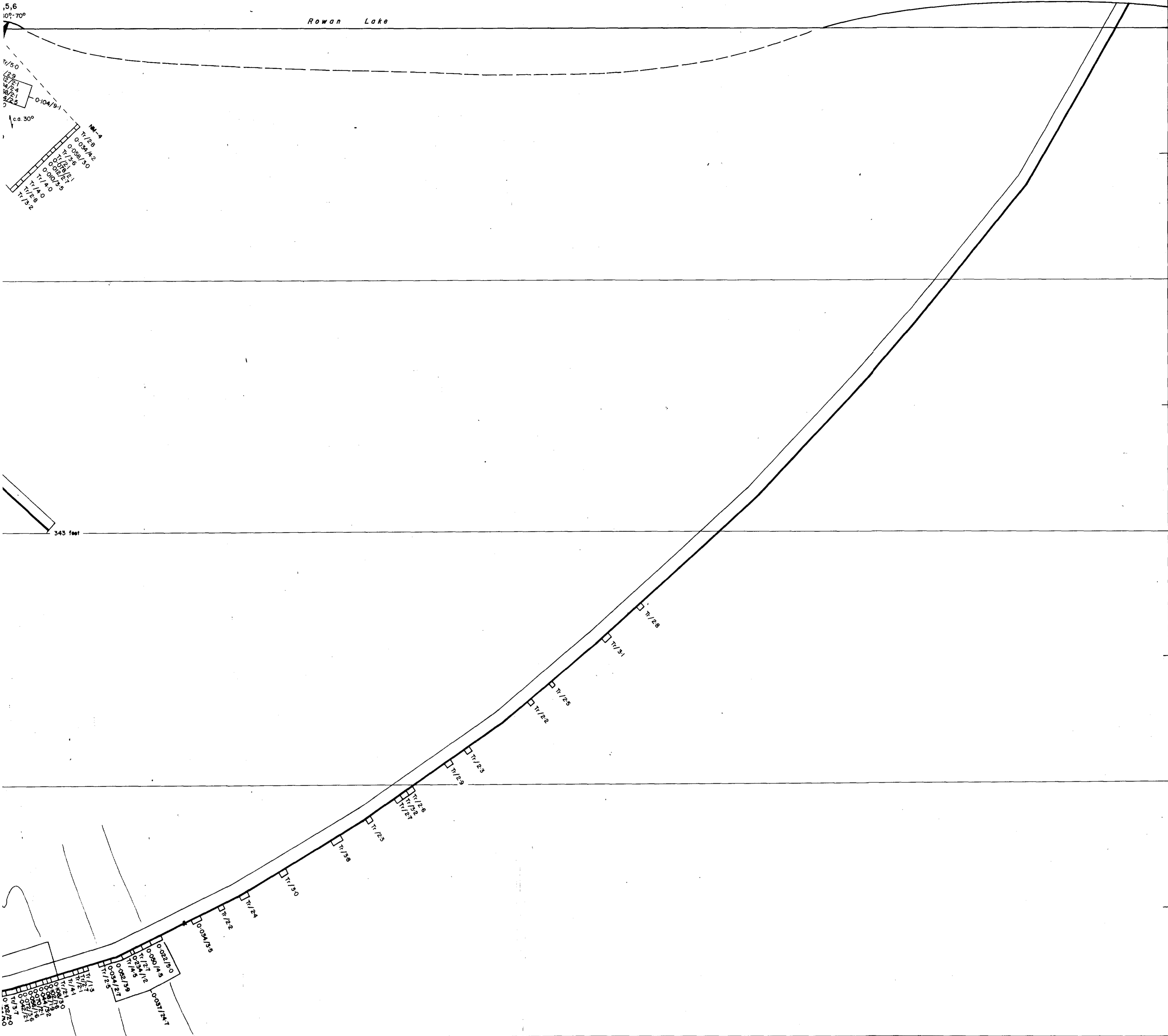
03+00 N

04+00 N

06+00 N

07+00 N

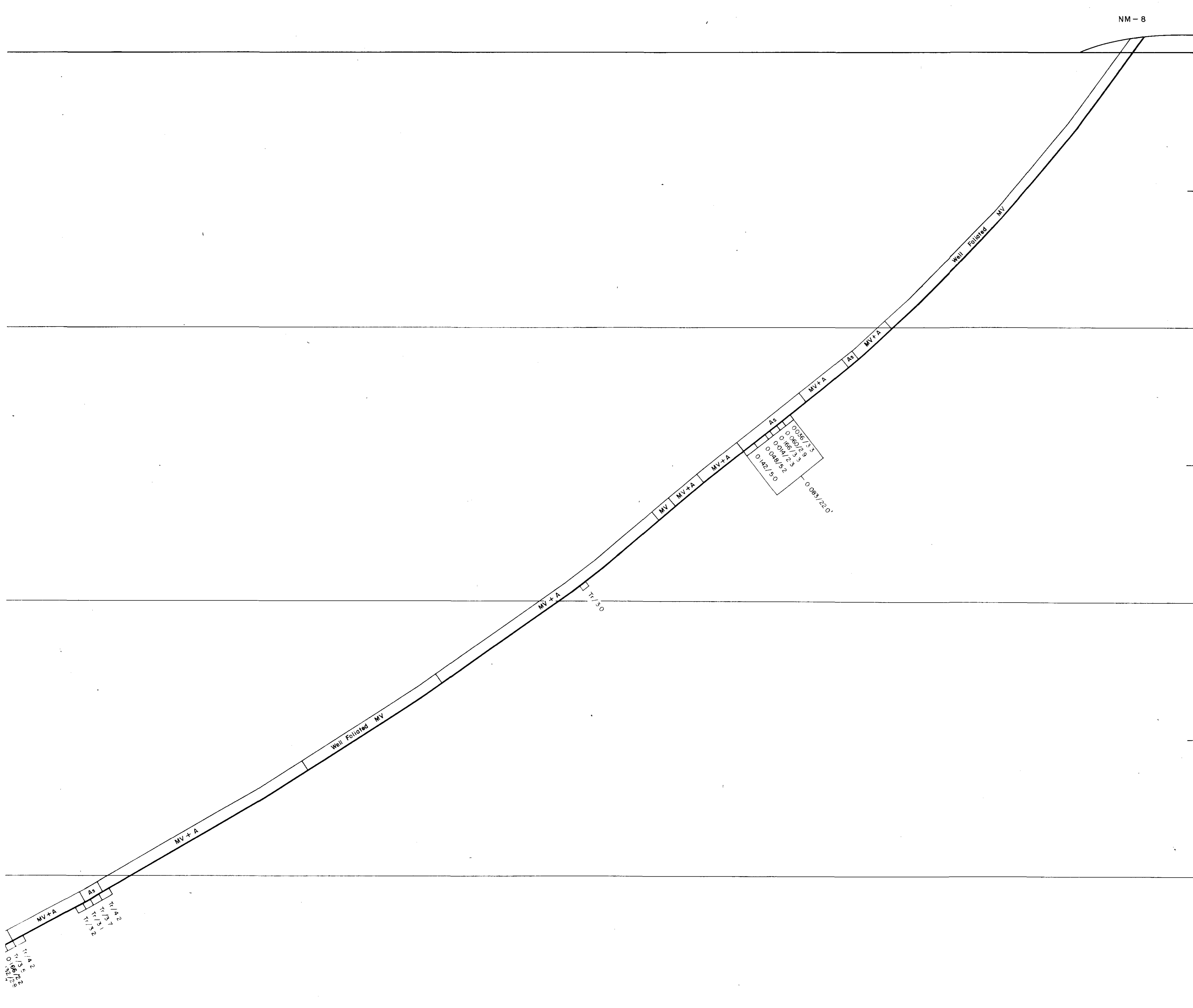
08+00 N



|                                      |                        |
|--------------------------------------|------------------------|
| NUINSCO RESOURCES LIMITED            |                        |
| Monte Cristo Property                |                        |
| NORTH WESTERN ONTARIO - N.T.S. 52F/5 |                        |
| <b>VERTICAL CROSS SECTION ON</b>     |                        |
| <b>LINE 00+00</b>                    |                        |
| LOOKING S 60° W                      |                        |
| <b>DDH Nos. NM- 3,4,5,6,9,10</b>     |                        |
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| DRAFTED BY: J. Meek                  | PLAN No. 6 (1983-MC-1) |

# 63.4309b

02+00 N      03+00 N      04+00 N      05+00 N      06+00 N



|                                    |               |
|------------------------------------|---------------|
| NUINSCO RESOURCES LIMITED          |               |
| Monte Cristo Property              |               |
| NORTH WESTERN ONTARIO - NIS. 52F/5 |               |
| <b>VERTICAL CROSS SECTION ON</b>   |               |
| <b>LINE 01+00 E</b>                |               |
| LOOKING S 60° W                    |               |
| <b>DDH Nos. NM-8,</b>              |               |
| SCALE IN FEET                      |               |
|                                    |               |
| DATA BY:                           | DATE: Nov. 83 |
| DRAFTED BY: J. Meek                | PLAN No.      |

#63.4309b

03+00 N

04+00 N

05+00 N

06+00 N

Rawan Lake

NM-7  
-50°

hole abandoned 323 feet

|                                                              |               |
|--------------------------------------------------------------|---------------|
| NUINSCO RESOURCES LIMITED<br>Monte Cristo Property           |               |
| NORTH WESTERN ONTARIO-N.T.S. 52/75                           |               |
| VERTICAL CROSS SECTION ON<br>LINE 02+00 E<br>LOOKING S 60° W |               |
| DDH Nos. NM-1, 2, 7                                          |               |
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#63-4309b