



41015SE0036 2.12292 DORE

010

GEOLOGICAL REPORT  
FOR THE CHARET PROPERTY

**RECEIVED**  
MAR 28 1989  
MINING LANDS SECTION

SWAYZE AND DORE TOWNSHIPS

PORCUPINE MINING DIVISION

DISTRICT OF SUDBURY

ONTARIO

E. Sawitzky  
B.Sc., F.G.A.C.  
January 13, 1989



41015SE0036 2.12292 DORE

010C

PAGE

SUMMARY PAGE		
1.0	INTRODUCTION	1
1.1	PROPERTY, LOCATION AND ACCESS	1
1.2	PREVIOUS WORK	5
1.3	PRESENT WORK	10
2.0	GEOLOGY	10
2.1	REGIONAL GEOLOGY	10
2.2	PROPERTY GEOLOGY	13
3.0	GEOCHEMISTRY	25
3.1	INTRODUCTION	25
3.2	DISCUSSION OF RESULTS	26
4.0	GEOPHYSICAL SURVEY	28
4.1	INTRODUCTION	28
4.2	MAGNETOMETER SURVEY	29
5.0	CONCLUSIONS	31
6.0	RECOMMENDATIONS	32
7.0	REFERENCES	34
8.0	CERTIFICATE OF QUALIFICATION	36

APPENDICES

A)	Table 1	37
B)	Table 2	40
C)	Figure 7	48
D)	Figure 8	50
E)	Figure 9	52
F)	Certificates of Analyses	54

PHOTOGRAPHS

(1). Carbonated felsic volcanic	17
(2). Quartz veining in carbonated felsic volcanics	17
(3). Intensely sheared and altered felsic volcanics	21
(4). Crenulated schistosity	21

TABLES

1. Inco Drill Results	37
2. Sample Description, Location & Analyses	40

FIGURES

1. Location Map	2
2. Land Position and Location of Grids A, B, C and D	
3. Previous Work Areas	6
4. Regional Geology	9
5. Significant Gold Occurrence of the Southern Swayze	12
6. Property Geology: Compilation	
7. Lineament Analysis	50
8. Percent frequency vs. Au, As and K <sub>2</sub> O content	52
9. Percent frequency vs. Cu and Zn content	54

GEOLOGY MAPS

Grid A:	Geology West Sheet	
	East Sheet	(backpocket)
	Sample Location and Analysis	
	West Sheet	
	East Sheet	
Grid B:	Geology	(backpocket)
	Sample Location and Analysis	
Grid C:	Geology	(backpocket)
	Sample Location and Analysis	
Grid D:	Geology	(backpocket)

## SUMMARY

Charet Syndicate controls 315 mining claims in 2 groups in Swayze and Dore Townships, Porcupine Mining Division, Ontario. The properties are located 32 miles (52 km) south-southwest of Foleyet.

This report deals with the initial phase of exploration work carried out on the main 245-claim block, by Norwin Resources between September and November, 1988. During this period a programme of exploration consisting of line-cutting, geological mapping, geochemical rock sample collection and prospecting was carried out over 4 selected areas. These areas considered to be of enhanced exploration potential for gold, are described in Winter; July, 1988.

The property is underlain by a west trending and steeply dipping stratigraphy consisting of predominantly mafic and intermediate to felsic volcanic rocks. Ultramafic volcanic rocks are intercalated with mafic volcanics in grids "B" and "C". Minor metasediments occur on grid "A". Intruding these rocks are minor granitoid and diabase dikes. Major west trending, altered shear zones transected by northeast and northwest trending faults occur on the property.

Based on the present field work and a review of the available geological and geophysical data 6 areas within the Charet Syndicate property have been identified as having enhanced exploration potential for gold mineralization.

A two-phase exploration programme is recommended to evaluate the potential of these 6 areas of interest. Completion of the phase 1 work programme is recommended which consists of detailed prospecting, stripping and trenching (of significant areas revealed by prospecting) and a ground magnetometer survey. Phase 2 consists of a programme of stripping and trenching, ground geophysical surveys and preliminary diamond drilling to evaluate the results of the phase 1 program. The proposed expenditures in phases 1 and 2 are \$66,000 and \$338,800 respectively for a total expenditure of \$404,800 if both phases are implemented.

## 1.0 INTRODUCTION

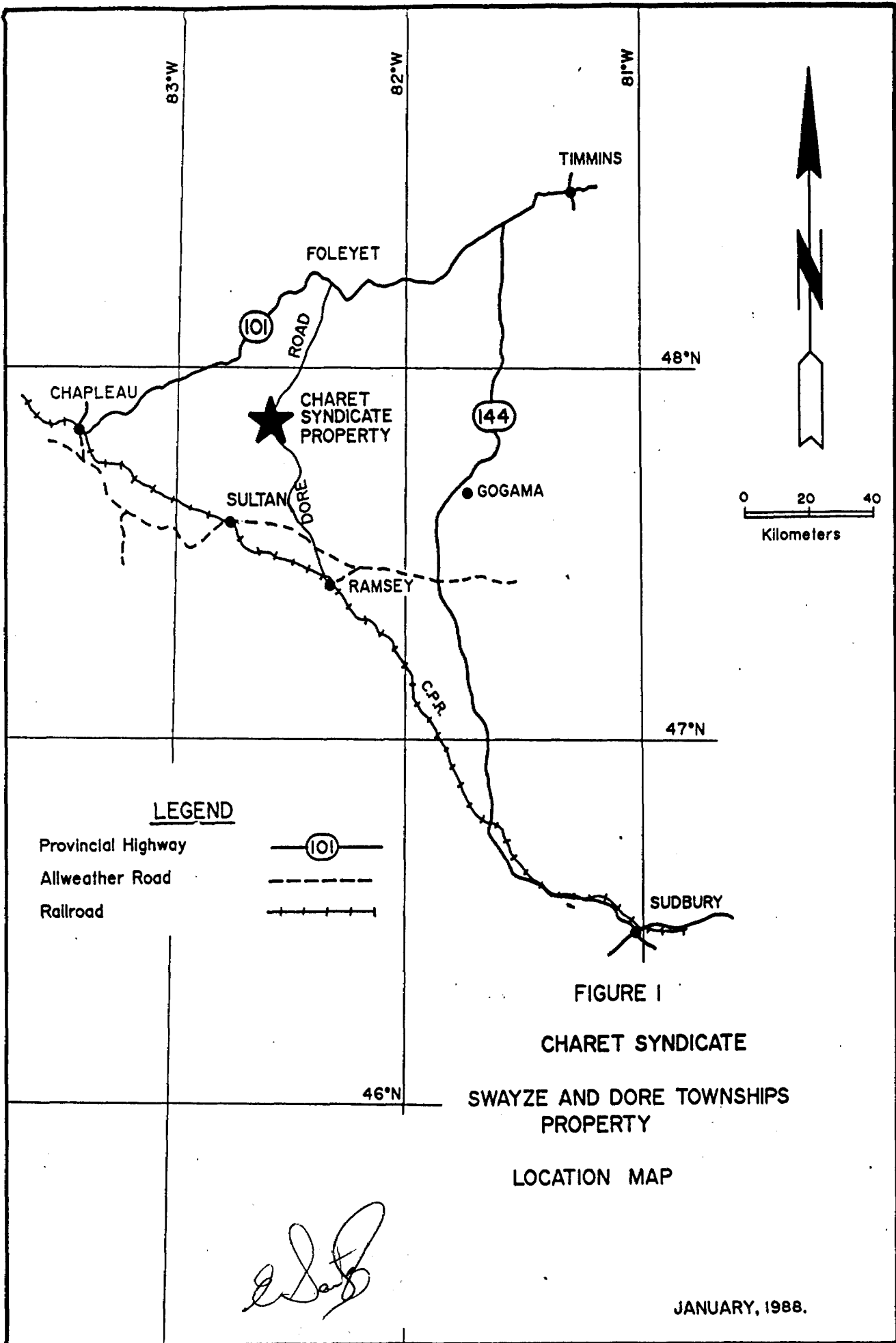
Charet Syndicate controls 2 blocks of 315 mining claims within Swayze and Dore Townships, Porcupine Mining Division, Ontario (Figure 1). Norwin Resources was instructed by Charet Syndicate to carry out a preliminary geological mapping and lithogeochemical sampling program in order to assess the property's gold potential. This report is a summary of the work carried out results obtained and conclusions and recommendations made based upon this work.

The surface exploration program consisted of line-cutting, geological mapping, geochemical rock sample collection and prospecting. This work was carried out over 4 pre-selected areas (Winter; July, 1988) within the property over which grids "A", "B", "C" and "D" were established (Figure 2, Backpacket). Field work, compilation and report writing were carried out from September 26, 1988 to January 13, 1989.

### 1.1 PROPERTY, LOCATION AND ACCESS

The property consists of 245 contiguous, unpatented mining claims in good standing and is illustrated in Figure 2. Claims included are listed below:

<u>CLAIM NUMBER</u>	<u>NUMBER OF CLAIMS</u>
Swayze Twp: P 987120 - P 987134 (inclusive)	15
P 995607 - P 995626 (inclusive)	20
P 996086 - P 996185 (inclusive)	100
P 996293 - P 996324 (inclusive)	<u>32</u>
Sub-Total	167





Grid "D": Parts of P 1013926 - P 1013029 (inclusive)	<u>4</u>
(Dore Twp.)	
Sub-Total	<u>4</u>
TOTAL	76

A total of 27.1, 26.2, 13.2, 1.3 line/miles were cut on grids "A", "B", "C" and "D" respectively, for grand total of 67.8 line/miles. Each grid consists of an unsurveyed west trending baseline with north trending grid lines. A 400-foot line spacing and 25-foot station interval is utilized on each grid. Grid "A" consists of 2.7 miles of baseline, 20.7 miles of grid lines and 3.7 miles of tie-lines. Grid "B" consists of 2.2 miles of baseline, 20.2 miles of grid lines, and 3.8 miles of tie-lines. Grid "C" consists of 1.4 miles of baseline, 9.5 miles of grid lines, and 2.3 miles of tie-lines. Grid "D" consists of 0.38 miles (2,000 ft) of baseline and 0.98 miles (5,200 feet) of grid lines.

The property is located in the south-central and eastern parts of Swayze township and the adjacent west-central part of Dore township in the District of Sudbury, Porcupine Mining Division of northeastern Ontario at 47° 48' N latitude and 82° 36' W longitude. This is approximately 120 km southwest of Timmins, Ontario and 190 km northwest of Sudbury, Ontario (Figure 1).

The property can be readily accessed by vehicle from either Timmins to the northeast or Sudbury to the southeast. From Timmins, Highway 101 leads southwest approximately 100 km to the Dore Access road which is 10 km east of Foleyet. This road leads south 60 km to where it crosses the eastern part of the property. From Sudbury, Highway 144 leads north to the Eddy Forest Products road which in turn provides access to the Dore Forest Access road from the south.

The southwestern part of the property can easily be



accessed by float-equipped or ski-equipped aircraft to Cree Lake. This part of the property or other less accessible parts can readily be reached by helicopter.

The property, which lies about 40 km north of the Great Lakes - Arctic Watershed, is generally poorly drained. Relief within the area is typical of this part of the Canadian Shield with low rocky hills and drift covered ridges separated by swamp. The area is generally forested with spruce, balsam, jack-pine, poplar, birch and cedar. However cutting, particularly in the eastern part of the property, has produced many clear-cut areas. This cutting has provided a number of lumber roads giving ready access to much of the property.

## 1.2 PREVIOUS WORK

Previous work in the area has been directed towards gold or basemetal exploration and dates to the 1930's. Information reported in the Ontario Geological Survey Assessment Files, Timmins, Ontario is summarized below. Areas where previous work have been done relative to the subject claim group are shown in Figure 3.

The first recorded work was done by Montgomery Ackerman Gold Mines Limited in 1934 north of Ackerman Lake (Assessment File, Timmins T-777). The file consists of a number of newspaper clippings from the Northern Miner for the first half of 1934 which indicates that a well-mineralized porphyry dike had been located containing gold values over approximately a 2-meter width for a strike length of about 60 meters. In total 13 veins were reported but gold values were not considered to be of commercial grade.

In January, 1962, D.C. McKechnie, on behalf of Flint Rock Mines Limited (Timmins Assessment File T-2192), visited the Flint Rock property located on claim #699963. The original-Flint Rock property may have included part of the present Charet Property but excluded the Flint Rock showing. McKechnie took samples from vein material and wallrock. Values ranged from 0.73

**LEGEND**

x3 WRITER'S SAMPLE LOCATION

T. 777  
OUTLINE OF AREA AND TIMMINS ONTARIO GEOLOGICAL SURVEY ASSESSMENT FILE NUMBER.

DIAMOND DRILL HOLE  
see text for description

0 1000 2000  
METERS

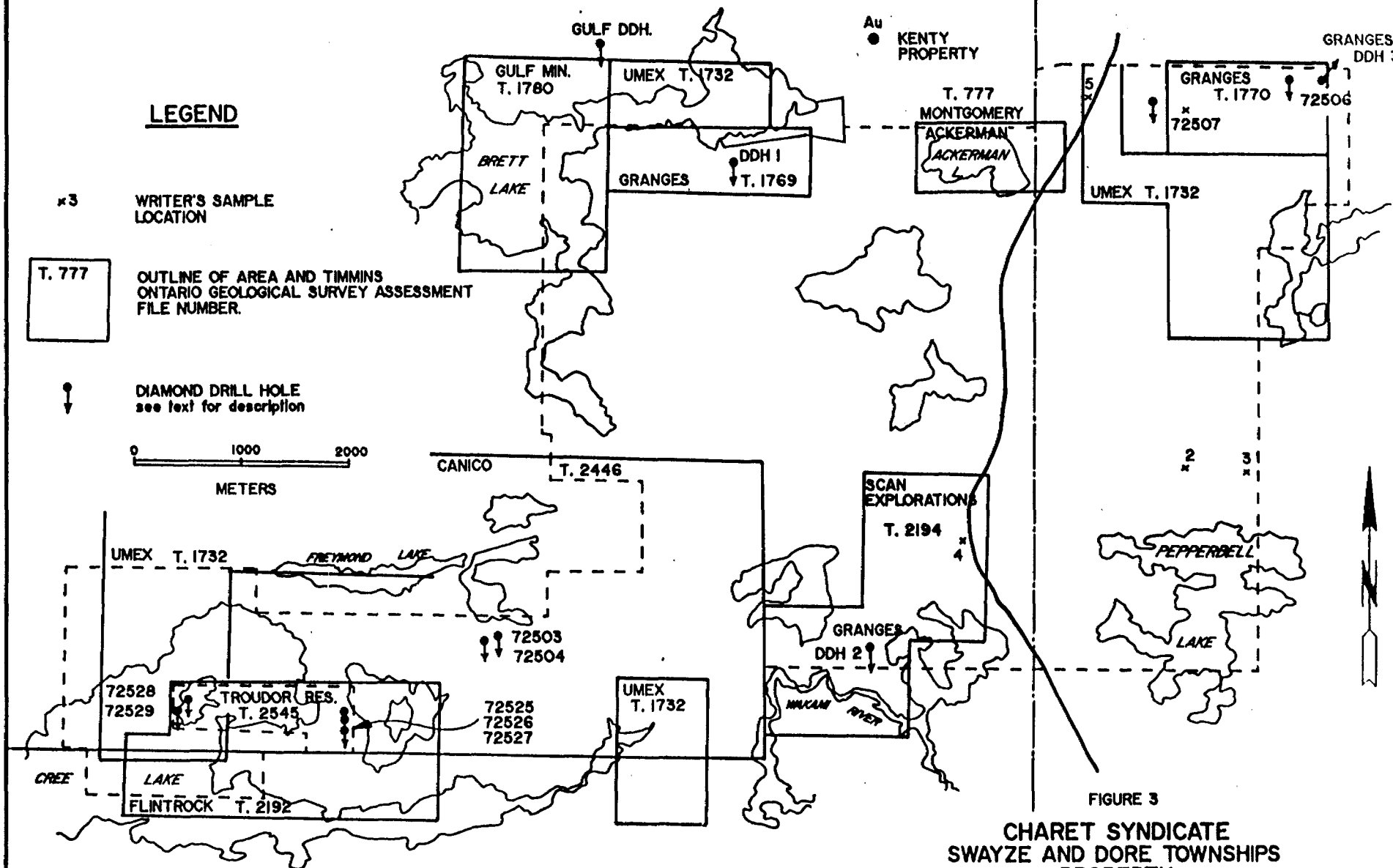


FIGURE 3  
CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS  
PROPERTY  
PREVIOUS WORK AREAS

AUGUST 20, 1987.

*[Handwritten signature]*

g/T gold from waste rock in the middle of the vein to 212.0 g/T gold from vein quartz containing pyrite and chalcopyrite. Subsequently, in 1963, 22 short holes were drilled to test the structure. All holes were 30 to 50 meters in length and no assay results are reported.

In 1971 Scan Explorations (Timmins Assessment file T-2194) carried out geophysical surveys in what is now the south-central part of the property in east-central Swayze township. Their work consisted of a fluxgate magnetometer survey and a Geonics EM-17 horizontal loop EM-survey on the most westerly claims. This work indicated a west trending magnetic anomaly but no EM conductors were identified.

In 1976, Scintrex carried out an airborne magnetometer survey on behalf of Umex (Timmins Assessment File, T-1732) in which all of Swayze and Dore townships were flown.

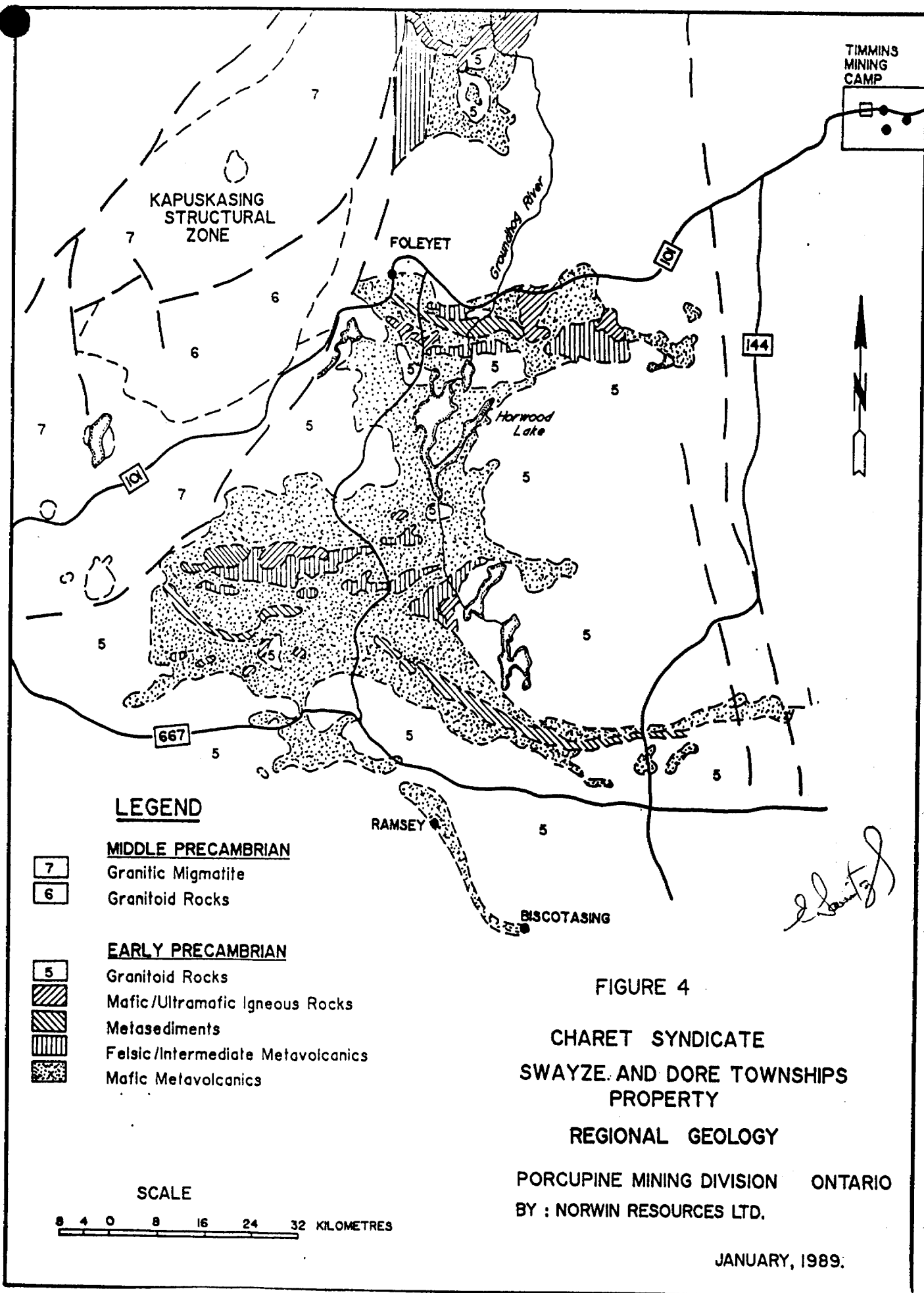
In the early 1970's there was considerable activity in search of base metal mineralization. Granges (Timmins Assessment file T-1769) drilled two holes in the eastern part of Swayze township testing airborne geophysical anomalies. Drill hole # 1 (Figure 3) encountered dacite porphyries and graphitic argillites and intersected a graphitic and mineralized (pyrite-pyrrhotite, 10%) mineralized conductor. Drill hole # 2 intersected silicified dacitic volcanics with minor pyrite and pyrrhotite. No assays were reported from either of these holes. In 1977, Granges reported results from a third hole located in the northern part of the current claim group in northern Dore township (Timmins Assessment file T-1770). This hole intersected fragmental rhyolite and agglomerate with 3-5% pyrite mineralization. No assay values are reported. Gulf Minerals drilled adjacent to the northwest corner of the current claim group and intersected metasediments and felsic volcanics. A pyritized and highly silicified rhyolite was reported, however, assay values were not given.

In 1982, Troudor Resources carried out surface exploration work on their property which covered the Flint Rock showing and adjacent claims located in the extreme southwestern

part of the current property (Timmins Assessment File T-2545). This work consisted of a VLF-EM and magnetometer survey. Cunningham (File T-2545) reported the property was underlain by mainly pyroclastic volcanics intruded by feldspar-porphyry dikes. He also concluded that the eight VLF-EM conductors were related to overburden effects.

Canadian Nickel Company staked 560 claims in 1981 in parts of Denyes, Swayze and Dore townships. Exploration work was carried on these claims over the next four years (Timmins Assessment file T-2446). In the fall of 1981 an airborne geophysical survey was carried out. A series of mafic and ultramafic flows and intrusions, with a broad magnetic signature resembling a horseshoe-shape was interpreted as a large synclinal structure. The airborne electromagnetic survey detected conductors which previous drilling had indicated to be graphitic argillites. Reconnaissance mapping, prospecting and sampling were carried out in the fall of 1981. Eight samples contained more than 100 ppb gold and five from 20-100 ppb gold. In 1983, a grid was cut over the Cree Lake area. Claims were mapped and a humus sampling program carried out. Subsequently, Canico carried out an IP survey over a 20 km grid southeast of Freymond Lake. IP anomalies were considered to represent disseminated magnetite in gabbros and peridotites and not sulphide mineralization. An IP anomaly, east of Kenty Lake was caused by 1-5% pyrite in felsic lapilli-tuffs. Following this work Canico drilled nine holes adjacent to or on what is now the Charet Property. Results are summarized in Table 1 (Appendix A) and hole locations are shown in Figure 3.

In late 1980 and early 1981, Questor Surveys Limited carried out an airborne magnetometer and electro-magnetic survey of the Swayze area for the Ontario Geological Survey.



**LEGEND**

**MIDDLE PRECAMBRIAN**

- 7 Granitic Migmatite
- 6 Granitoid Rocks

**EARLY PRECAMBRIAN**

- 5 Granitoid Rocks
- Mafic/Ultramafic Igneous Rocks
- Metasediments
- Felsic/Intermediate Metavolcanics
- Mafic Metavolcanics

**FIGURE 4**

**CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS  
PROPERTY**

**REGIONAL GEOLOGY**

**PORCUPINE MINING DIVISION ONTARIO  
BY : NORWIN RESOURCES LTD.**

**SCALE**



**JANUARY, 1989.**

### 1.3 PRESENT WORK

Based on a review of geological and geophysical data of the property and surrounding region, 6 areas of enhanced exploration potential for gold mineralization were identified on the main claim block (Winter; July, 1988). Three areas were subsequently chosen for detailed surface exploration, as outlined in Figure 2, to cover the 6 latter areas of interest. These are listed below:

Area A - 27 claims; covers point 4 and 5

Area B - 28 claims; covers point 3 and 6

Area C - 17 claims; covers point 1 and 2

A grid was established by line-cutting contractors over each of the latter areas with subsequent geological mapping, geochemical rock sample collection and prospecting carried out by Norwin personnel. Field work commenced September 26, 1988 and was completed November 4, 1988.

## 2.0 GEOLOGY

### 2.1 REGIONAL GEOLOGY

The subject claims are underlain by Early Precambrian-Archean rocks of the Abitibi Subprovince of the Canadian Shield (Figure 4). This area is generally referred to as the Swayze Greenstone Belt which is about 45 km long and 29 km wide and is truncated at its western extremity by the Kapuskasing structural zone. To the east, the belt separates into two arms with the north arm trending towards the Porcupine area and the south arm trending towards the Gogama and Shiningtree area.

Within the Swayze - Dore township area, all of the rocks occur in steeply-dipping fold structures whose axes trend in a general but sinuous east-west path. The supracrustal units are

surrounded on all sides by rocks of granitoid composition.

The southern arm of the Swayze Greenstone Belt extends for a strike length of at least 80-100 km and consists of tholeiitic basalts and clastic and chemical metasediments. Mafic and ultramafic rocks commonly intrude metavolcanic sequences. Komatiitic volcanics appear to represent basal units of volcanic cycles. Small plutons of granitoid composition and lamprophyre dikes intrude the greenstone supracrustals.

Chemical and clastic sedimentation occurred during the development of the volcanic pile. Chert, cherty iron-formation and sulphide-rich exhalative units, often graphitic, are present. Chert units may be brecciated through deformation (Donovan, 1965; Rickaby, 1934).

Spatially associated with the main chert units are small bodies of feldspar porphyry considered to be sub-volcanic intrusions.

Metasediments appear to be more common in the east and west parts of the belt and consist of polymictic conglomerates and minor arkosic sandstone and slate.

Mafic intrusions occur in the central part of the belt associated with mafic volcanics. The composition of these rocks vary from dominantly gabbro to diorite.

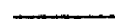
The metamorphic foliation in the area trends approximately east-west and dips vertically to sub-vertically. Shearing parallels regional east-west foliation. North-northwest trending faults are indicated by lithological displacements. East-northeast trending faults are also present.

In early 1900, the Swayze area was explored for iron deposits in the form of iron formations. Iron ore grades were too low to be economically feasible. In the 1920's, claims were staked in Cunningham township for lead-zinc-copper mineralization associated with iron formation. From time to time there has been exploration activity directed towards the search for volcanogenic massive sulphide deposits but to date no significant discoveries have been made.

**LEGEND**



GOLD OCCURRENCE AND OCCURRENCE NUMBER (THIS REPORT)

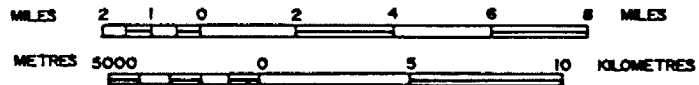


BOUNDARY OF SWAYZE GREENSTONE BELT.



CHARET SYNDICATE PROPERTY

**SCALE**



NOTE : BASE MAP AFTER O.D.M. MAP 2221

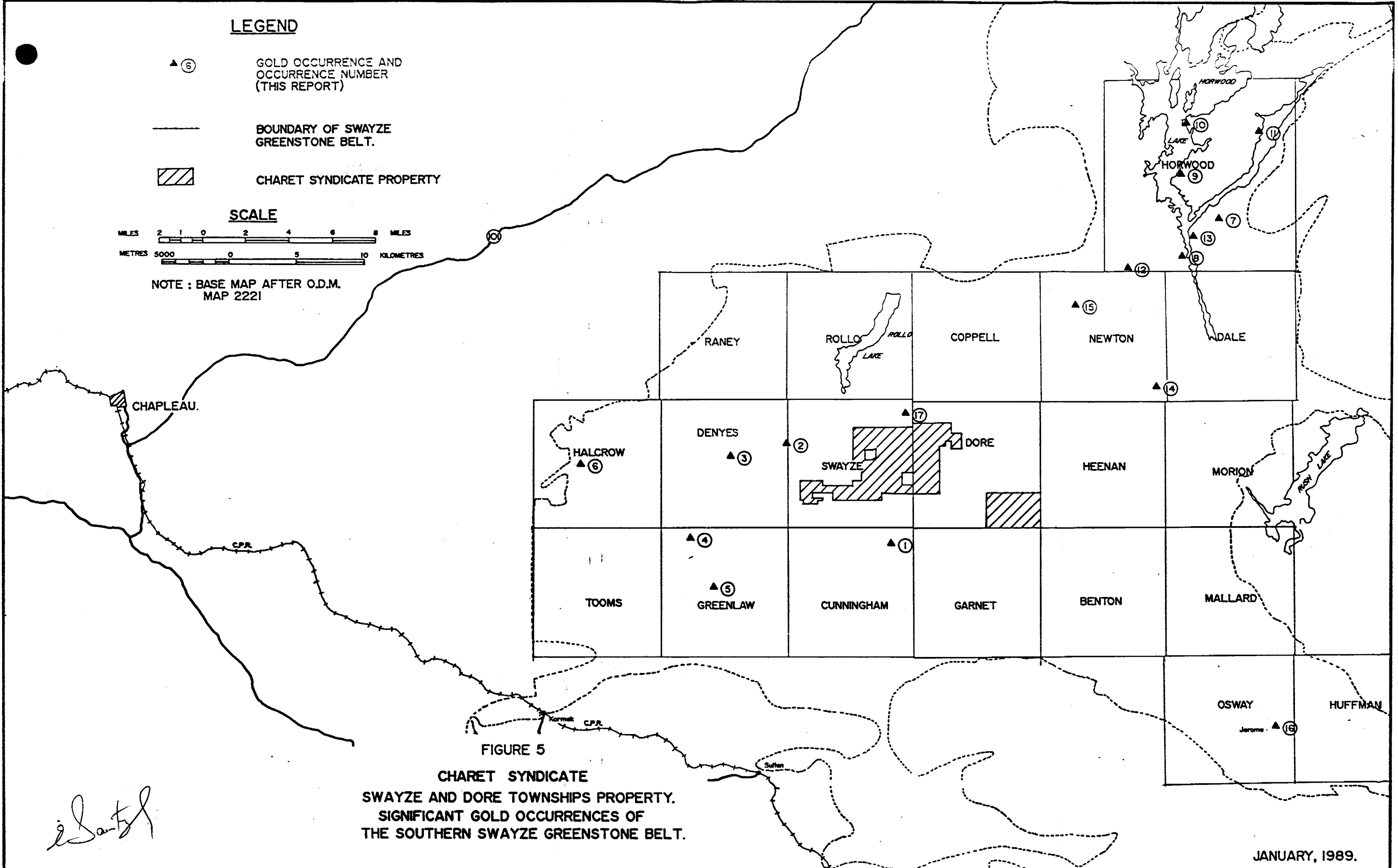


FIGURE 5

CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS PROPERTY.  
SIGNIFICANT GOLD OCCURRENCES OF  
THE SOUTHERN SWAYZE GREENSTONE BELT.

*i. Santyl*



Gold mineralization was first discovered in the region on the Kenty property, in 1931, by J.G. and L.J. Kenty (Figure 5). Gold mineralization was related to quartz-carbonate veining within mafic and ultramafic volcanics and intrusions and metasediments. Two mineralized shoots were reported to occur on surface: # 1 vein - 1.9 meters wide, 15.2 meters long averaging 11.37 g/T gold and the # 2 vein - 1.1 meters wide, 22 m long averaging 19.54 g/T gold. (Gordon et al, 1979).

On an island in Cree Lake approximately one thousand meters east of the mainland (?), gold was found in a quartz-carbonate-sulphide vein system averaging 2 feet in width within sheared tuffs by Flint Rock Mines Limited. Approximately 1 km southeast of Freymond Lake, gold was discovered by Buffalo-Canadian Gold Mines. Trenching and stripping indicated mineralized quartz within a silicified and carbonatized shear zone. Gold values obtained ranged between 0.58 and 2.33 g/T. Significant gold occurrences in the southern Swayze greenstone belt are presented in Figure 5.

## 2.2 PROPERTY GEOLOGY

The geology of the property will be discussed as it pertains to each grid and includes a discussion on structure, alteration and mineralization.

### GRID A

This portion of the property is underlain entirely by felsic volcanic rocks. Coarse felsic volcanic breccia centered in the Ackerman Lake area "grades" north and east to finer tuffaceous rocks intercalated with flows, minor interflow sediments and felsic intrusive rock.

In the west half of the grid between Ackerman and Kenty Lakes polymictic tuff-breccia and lapilli-tuff predominate and are intercalated with massive and porphyritic flow or intrusive felsic rock. Fragments range in size from less than one inch to

several feet with the coarser fraction occurring south of the baseline and north of Kenty lake. Composition of fragments vary from felsic volcanic (porphyritic, massive and trachytic) to minor intermediate volcanic (?) or intrusive fragments. The matrix of these tuffaceous rocks is generally felsic and may contain coarser feldspar and/or quartz grains. Locally a chlorite-rich matrix occurs. The volcanic fragmentals between Ackerman and Kenty Lakes probably correlates with the volcanic breccia mapped by Donovan, (1965) along the Swayze River and central Brett Lake area.

In the east half of the grid, east of Ackerman Lake, stratigraphy is more complex. Rocks though all felsic in composition vary in texture from fragmental (25%), massive (20%) and porphyritic (45%).

Fragmental rocks occur in 3 distinct bands. In general these rocks are finer-grained fragmentals than occurs south of Ackerman Lake. The northern most band consists of predominantly tuff and lapilli-tuff thin to thickly bedded and may contain such "sedimentary" features as graded-bedding, load casts and flame structures. These rocks are distinct from clastic metasediments which form as discontinuous units of thinly bedded and laminated argillite, siltstone and fine-grained wackes, and occur only in the northern part of the grid. The fragmental rocks to the south are polymictic in composition and contain a greater percentage of lapilli-size, intermediate-mafic fragments. These rocks are always massive, showing no stratification.

The massive variety of felsic volcanic rocks are very fine- to fine-grained and weather whitish to buff in colour. There is an increase to the south of mafic minerals (hornblende) from approximately 5% to 15%. These rocks occur throughout the stratigraphy and have been observed to (a) grade into a porphyritic phase and (b) occur as lenses within fragmental units. Contacts and cross-cutting relationships are rare. These rocks probably formed as flows, however, an intrusive origin cannot be ruled out for some of these rocks.

Two (2) dominant types of porphyritic rocks occur:

- a) a quartz +/- feldspar phenocryst-bearing variety
- and b) a feldspar-bearing variety (rare or no quartz).

In type (a) rocks, the quartz/feldspar content varies and may grade into a massive equigranular phase. Type (b) rocks often have sharp contacts and in several cases appear to cross-cut stratigraphy suggesting an intrusive origin.

One (1) small and isolated outcrop of mafic volcanic or intrusive rock occurs on line 24+00 E and 2+00 N.

A diabase dike is interpreted to occur parallel to a northwest trending structure passing through the east part of Ackerman Lake (Figure 6, Backpocket).

Stratigraphy trends west and dips north, however, facing directions are ambiguous. In the north part of the grid graded bedding, load casts and flame structures clearly indicate a south facing stratigraphy. However, in the Ackerman Lake area, there appears to be a general decrease of fragment size to the north in the volcanic fragmental pile.

The deformation of rocks in this area occurs in narrow and localized zones with intervening areas of apparently minimal disturbance. Deformation consists of a) moderate to intense fracturing b) fracture cleavage and/or foliation development and c) localized shearing associated with incipient mylonitization. The significant structural elements of grid "A" are presented in Figure 6. These consist of mainly north-northwest and northeast trending faults, shears or lineaments. Not presented in Figure 6 are the numerous but narrow west trending zones of shearing or strong schistosity.

At least 2 penetrative planar fabrics ( $F_1$  and  $F_2$ ) are developed.  $F_1$  represents an axial planar foliation parallel to bedding which trends west-northwest. This fabric is expressed by planar sericitic development.  $F_2$  represents a second foliation transecting  $F_1$  at an acute angle and trends west-southwest.  $F_2$  is in general expressed as a fracture cleavage.

Extensive shear zones developed on grids "B" and "C" are

absent from this area. Shearing occurs but on a localized scale as narrow 1-foot to 10-foot wide zones. In the southeast corner of the grid altered and mineralized rock occurs in a zone of moderate to intense fracturing and increased schistosity with local shear development. Mylonitized rock (uncommon) and/or slickenside development may accompany shearing.

Brittle deformation is expressed by a weak, moderate or locally strong fracturing. Fractures are commonly accompanied by slickensides.

An analysis of the lineaments present in the property area are shown in Figure 7.

In general, there appears to be a greater degree of alteration in the east half of the grid as compared to the west. In the east, felsic volcanic rocks have been variably altered by sericite, carbonate (iron mainly) and chlorite. Pervasive and often intense carbonatization +/- sericitization +/- chloritization occur in narrow zones of increased structural deformation ie. increased fracturing or schistosity. These zones are west trending and intensity of alteration along their strike length varies from weak to strong. The most significant of these occurs several hundreds of meters north of the baseline in the east part of the grid (Figure 6). Felsic volcanic rocks in this 200-foot to 400-foot wide zone are variably fractured or sheared and sericitized, carbonated and chloritized. At the very northern boundary of the property, weak to moderate carbonatization begins and appears to be the southern edge of a stronger pervasive zone of alteration to the north (Photo # 1). This zone trends west and coincides with a magnetic low feature on the vertical gradient magnetic map.

On the west half of the grid, south of Ackerman Lake felsic fragmental rocks weather to a distinctive pale mauve colour suggestive of biotitization, however, biotite could not be detected visually in handspecimens. This alteration (?) is restricted to the area between Ackerman - Kenty Lakes. In this area moderate-strong carbonatization is restricted to narrow zones of shear. Weak to moderate pervasive carbonatization



Photograph (1): strongly carbonated felsic volcanics;  
Dore Access Road, north of Grid "A" tie-line.



Photograph (2): sheared, carbonated and sericitized felsic  
volcanics cross-cutting quartz infilled  
fractures. West end of access road lying  
immediately north of grid "B".

occurs in areas of increased fracturing.

Quartz veins form a minor component of the rocks and their distribution is erratic. Quartz +/- chlorite +/- tourmaline veins ranging in width from 1/8" to 5" commonly infill tension gash fractures which trend north. Veins rarely carry sulphide mineralization.

Pyrite is the predominant form of sulphide mineralization. Pyritization is more prevalent in the east part of the grid where 2 zones of mineralization occur (a) near the north boundary between lines 40+00 E and 52+00 E and (b) to the south, north of the baseline from line 0+00 to line 64+00 E.

In the north zone, pyrite content is generally less than 1% but increases to 2-3% locally. Mineralization is sporadic and associated with areas of increased carbonatization. In the south disseminated pyrite, trace to 5%, occurs in an eastward thickening mineralized lense. Although the mineralized zone trends eastward contours of pyrite content appears to trend northwest between lines 36+00 E and 48+00 E. This northwest mineralized trend corresponds to a similar trending magnetic "high" (see Vertical Gradient Map).

#### GRID B

This portion of the property is underlain by mafic, ultramafic and felsic volcanic rocks. The Brett Lake Fault separates predominantly mafic and ultramafic rocks underlying the eastern portion of the grid from felsic volcanic rocks west of the fault (Figure 6).

East of the fault, mafic volcanic rocks predominant and consist of massive flows with minor pillowed flows and pillow breccia. Vesicular flows are rare. Mafic volcanic rocks weather to a buff or creamy brown colour and have a pale grey to dark green fresh surface. These rocks are commonly fine- or medium-grained and rarely coarse-grained. Feldspar porphyritic flows, though uncommon, occur mainly in the baseline area. Ultramafic rocks have been recognized in several localities and occur at

three separate stratigraphic horizons ie.

- a) along the north tie-line
- b) near the baseline
- c) south end of Grid "B".

These rocks are massive, medium-grained, weather an orange-brown colour and have a dark bluish green fresh surface. In part, these rocks are extrusive in origin as evidenced by the polygonal structures present in rocks along the baseline between lines 32 and 28 west.

Mafic rocks are intruded by a number of small lenses of felsic rock near the baseline and the south end of the grid. Felsic rocks are massive and equigranular to porphyritic (quartz +/- feldspar). They weather buff-white and have a pale yellow-green cream coloured fresh surface.

West of the Brett Lake Fault intermediate to felsic volcanic rocks predominate. Minor mafic volcanic rocks occur at the south end of the grid. Intermediate - felsic volcanic rocks are both fragmental and massive in nature. The fragmental rocks form lapilli-tuffs and minor tuff-breccias which have a polymictic fragment composition and a chloritic-rich matrix. Massive, fine- to medium-grained, equigranular and porphyritic (quartz and/or feldspar) felsic rocks predominate and are intercalated with fragmental volcanics. Extensive shearing, alteration and lack of exposed contacts makes it difficult to ascertain whether these rocks are of extrusive and/or intrusive origin.

The mafic volcanic rocks at the south end of the grid are massive, fine-grained and occasionally feldspar porphyritic. These rocks weather dark buff-brown and have a moderate to dark green fresh surface. Some of these rocks may in part be ultramafic in composition.

Several diabase outcrops are located within northwest trending faults in the west half of the grid.

Stratigraphy trends west dips north and facing

directions, obtained from pillow structures, indicate stratigraphic tops are north.

Mafic to ultramafic rocks east and west of the Brett Lake fault exhibit little deformation. Rocks are weakly foliated and fractured. Only locally, in narrow zones associated with shearing does a strong schistosity develop. These local shears often form slickensided fault scarps with no apparent displacement. These zones trend northwest, north-northeast and northeast and parallel in large part the major lineaments and/or faults in the region (Figure 6).

The Brett Lake fault which transects the western portion of the grid trends northwest and appears to have had displacements of up to 2,500 feet along parts of its strike length (Donovan, 1965; Map 2070). As mentioned above, the Brett Lake fault separates a thick package of sheared and altered felsic rocks to the west from weakly foliated and carbonated mafic volcanic rock to the east.

East of the fault a major shear or deformation zone trends west. This shear will be referred to as the Saxton Lake shear from hereon in. Although the intensity of deformation varies across this zone the width is in the order 1,800 feet (Figure 6). Immediately west of the Charet property, the Saxton Lake shear has been extensively stripped exposing strongly schistose, sheared, altered (Fe-carbonate + sericite + epidote +/- fuschite), and weak to moderately pyritic volcanic and sedimentary rock (Photo # 3 and 4). Kink-banding, crenulated foliation and folding in quartz veins occur along the Saxton shear and its intersection with the Brett Lake fault (Photo # 4). Immediately north of Grid "B" another west trending shear was found while prospecting. This shear or deformation zone with a minimum 1,000 foot width may be the offset equivalent of the Saxton shear (Figure 6). This shear is intersected by the Brett Lake fault and the Kenty Mine - Cookoo Lake lineament (Figure 6).

East of the Brett Lake fault alteration is weak. Semi-pervasive carbonatization (calcite) has bleached both mafic and ultramafic volcanic rocks imparting a pale greenish grey colour





Photograph (3): Intensely sheared sericitized/ carbonated/ chloritized felsic volcanics. Trenching on Saxton shear zone, west of Charet Property (Figure 6).

Photograph (4): Strongly deformed and altered felsic volcanics; Location as in Photo 3.



to the fresh surface. This is often accompanied by minor (<2%), thin (<1/8") stringers of calcite, quartz, or epidote. In areas of increased fracturing or schistosity spotty iron-carbonate alteration, semi-pervasive or fracture-controlled, may occur. Chlorite schists formed in small fault escarpments may be accompanied by chlorite slickensides, quartz veining and Fe-carbonate. Ultramafics along line 64+00 W, 4+00 to 5+00 N, are sheared and altered to a carbonate + serpentine + talc assemblage.

Sulphide mineralization consists of minor and patchy pyritization (trace to less than 1%). Pyrite occurs in veins, chlorite schist, or areas of Fe-carbonatization.

Moderate to intense alteration occurs in sheared felsic rocks west of the Brett Lake Fault. South of the baseline rocks locally form a carbonate (iron) + sericite + quartz +/- chlorite +/- epidote schist. The most intensely altered rocks were observed near the south end of the grid near the intermediate-felsic and mafic volcanic contact and resemble rocks in photographs # 3 and 4. Quartz veining is sporadic (Photo # 2). Pyrite mineralization, though commonly sparse, ranges from trace to 2% occurring as disseminated grains or fractured-controlled stringers. Increased pyritization was noted (a) in the southwest corner of the grid along the north shore of an unnamed lake and (b) 100 to 200 feet north of the access road near line 100 W. It is important to note that bedrock exposure in this particular area is poor.

South of the baseline between lines 100 and 108 W intermediate volcanic fragmental rocks locally display an intense and spotty reddish iron (?) alteration.

In an area north of grid "B" off the Charet property increased disseminated pyritization (5%) was observed in a major west trending shear occurring in bleached, quartz stringer-bearing, felsic volcanics (Photo # 2).

GRID "C"

Grid "C" is underlain by a sequence of mafic and ultramafic volcanics to the north and felsic intrusive and/or extrusive rocks to the south. Rocks are regionally metamorphosed to greenschist assemblage.

Mafic volcanic flows which predominate in the north are intercalated with ultramafic flows and lenses of felsic intrusions. Mafic volcanic rocks occur as massive and pillowed flows and pillow breccia deposits. Rocks are commonly fine- to medium-grained but immediately north of the baseline a coarse-grained flow (?) or hypabyssal intrusive rock occurs. Mafic rocks weather a pale orange-buff colour and have grey-green fresh surfaces.

Ultramafic volcanic rocks are massive, medium-grained, and have blackish-green fresh surfaces and weather dark orangy-brown to green colour. These rocks occur as a narrow band immediately south of Hook Lake and extend across the grid. Felsic rocks occur as fine-grained, equigranular and porphyritic (feldspar), massive or crudely layered, intrusive (?) lenses conformable to stratigraphy.

The south half of the grid is underlain by felsic rocks intruded by granitoid dikes and sills. Felsic rocks are fine- to very fine-grained and massive. Rocks are equigranular or feldspar porphyritic and rarely fragmental. There appears to be a mix of intrusive and extrusive felsic rocks in this area. Granitoid rocks form west trending dikes in the southeast corner of the grid. These rocks are massive, medium-grained and of granodioritic composition.

Stratigraphy trends west, dips vertically to steeply south and faces north. (Facing directions were obtained from Donovan, 1965).

Rocks, in general, have a weak to moderate foliation. Zones of increased schistosity forming narrow shears are common and trend north-northeast and south-southwest. North-northeast and northwest fault escarpments with chloritic slickensides were

observed, locally.

Intense fracturing and shearing have affected rocks in the southeast part of the grid. Felsic rocks east of Cookoo Lake are 1) highly fractured 2) cross-cut by northeast structures along which granitoid dikes have intruded and 3) intensely sheared and altered by a west-northwest trending shear zone passing through the south end of Cookoo Lake (hereon in referred to as the Cookoo shear). Centered in Cookoo Lake is the intersection of the Cookoo shear and a lineament trending southwest from the old Kenty Mine. The west extension of the Cookoo shear may pass through the Flintrock gold occurrence located immediately west of the Charet Property.

Alteration in the north half of the grid consists of minor quartz, epidote and carbonate (calcite) stringers infilling fractures and pervasive but patchy bleaching (carbonate) in mafic, ultramafic and felsic rocks. Fe-carbonate occurs only in zones of increased schistosity as a pervasive but patchy alteration. Ultramafic rocks are generally very weakly carbonated, and/or chloritized, serpentized and chrysotile may be locally developed.

To the south, east of Cookoo Lake there is a notable increase in quartz + carbonate veining associated with increased deformation. Rocks in the Cookoo shear are highly altered forming a carbonate (iron) + sericite + epidote +/- chlorite +/- quartz schist. Disseminated or fractured-controlled pyritization from trace to 2% occurs locally. Associated with the intense local fracturing of felsic rocks is an increase in chlorite. Hematitic staining is also locally well-developed especially along fractures and foliation planes.

At the Buffalo-Canadian occurrence mafic volcanic rock is intruded by a granite dike which is in turn cross-cut by quartz veins up to 8 inches wide containing 5% to 10% sulphides, locally. This occurrence lies along the Kenty Mine lineament (Figure 6).

GRID "D"

A small grid was cut over this area after prospecting revealed moderately carbonated felsic volcanics outcropping south of an unnamed lake on claim 1013926. Other than a few outcrops occurring along an all-weather access road the area is covered with a thin (2 feet to 4 feet) to thick (>50 feet) sheet of reworked glacial till. Exposed rocks consist of weak to moderately fractured and moderately pervasive carbonated and sericitized felsic volcanics. These rocks are fine to medium-grained, massive and locally feldspar porphyritic and fragmental. Quartz stringers occur but are minor. Pyrite is fine-grained, disseminated and occurs in amounts generally less than 1 percent. A minimum 50-foot wide diabase dike occurs several hundreds of feet east of the grid. A mafic and felsic volcanic contact trending west occurs several hundreds of feet south of the grid.

3.0 GEOCHEMISTRY

3.1 INTRODUCTION

A total of 59, 51 and 26 rock samples for geochemical analysis were collected on or near grids A, B and C respectively. Of these 83 were felsic volcanics, 47 mafic metavolcanics, 4 ultramafics and 2 granitic rocks. Sample location maps are included in the backpocket of the report. Samples collected are tabulated in Appendix B.

Of the total 136 samples collected, all were analyzed for Au and 115 were also analyzed for their As, K<sub>2</sub>O, Cu and Zn contents. Swastika Laboratories, in Swastika, processed all except 21 samples which were sent to Accurassay, in Kirkland Lake, Ontario. Analytical methods, sensitivities and detection limits for elements analyzed are tabulated below:

<u>Element</u>	<u>Detection Limit</u>	<u>Sensitivity</u>	<u>Analytical Method</u>
Au	5 ppb	3 ppb	Geochem. (F.A.-A.A.)
Cu	1 ppm	.5 ppm	Geochem. (A.A.)
Zn	1 ppm	.5 ppm	Geochem. (A.A.)
As	1 ppm	1 ppm	I.C.P.S./Hydride Generation
K <sub>2</sub> O	.01 %	.01%	Geochem. (A.A.)

Certificates of Analysis are included in Appendix F.

### 3.2 DISCUSSION OF RESULTS

In Figures 8 and 9 the percent frequency versus element content for Au, As, K<sub>2</sub>O, cu and Zn have been plotted.

Gold: The gold content of various rock samples collected ranges from 5 ppb (detection limit) to 310 ppb and has an arithmetic mean content of 11 ppb. Five (5) gold assays returned greater than 50 ppb gold (Figure 6).

The highest gold value obtained of 310 ppb was taken from a sulphide-bearing quartz vein hosted in a granitoid dike cross-cutting mafic volcanics. This sample (104410) was obtained from an old trench from the Buffalo-Canadian occurrence located south of Hook Lake in the east part of the grid.

Arsenic: The arsenic content of the various rock samples collected ranges from 1 ppm (detection limit) to 17 ppm and has an arithmetic mean content of 5 ppm.

The highest arsenic value came from a pyritic, moderately fractured and weakly

carbonated felsic rock on line 44+00 E, 17+00 N from grid "A". This sample lies within an altered and mineralized zone in the southend of grid "A" (Figure 6).

Potassic: The K<sub>2</sub>O content and distribution does not reveal (K<sub>2</sub>O) any significant enriched (or depleted) zones. However, a rigorous analyses of the K<sub>2</sub>O content is not possible at this time because of the following factors:

- (1) low sample population.
- (2) primary or "unaltered" composition of many rock types is not known ie. whole-rock geochemistry required.
- (3) detailed mapping is required to establish the nature of the felsic rocks present as to their extrusive or intrusive origin.

Copper: The copper content of the various samples collected ranges from 21 ppm to 10,780 ppm and has an arithmetic mean content of 49 ppm. The general "background" level of Cu appears to be higher on grids "B" and "C" as compared to grid "A". Of the 20 samples with copper contents of greater than 100 ppm, 18 came from grids "B" and "C" in equal proportions. All samples with a copper content of greater than 100 ppm have been plotted on Figure 6.

The highest copper tenor (10,780 ppm) corresponds to the highest gold assay and was obtained from quartz veins in the Buffalo-Canadian occurrence on grid "C".

Zinc: The zinc content of various samples collected ranges from 4 ppm to 155 ppm and has an arithmetic mean content of 58 ppm.

The general "background" level of zinc appears to be higher on grid "B" than on grid "A" and "C". Of the 15 samples with greater than or equal to 100 ppm zinc, 10 and 4 came from grids "B" and "C" respectively (Figure 6).

### SUMMARY

Grid "B" contained the highest tenor and greatest number of geochemically anomalous zinc values. Grids "B" and "C" have a generally higher "background" level of copper and zinc and more geochemically anomalous copper and zinc values than does grid "A".

A number of geochemically anomalous copper and zinc values coincide with a prominent magnetic low trend in the southwest part of grid "B" (Figure 6) and appears in part to follow a mafic-felsic volcanic contact.

In grid "C" the geochemically anomalous copper/zinc values occur in mainly 2 areas: northwest and east-northeast of Cookoo Lake. The 3 geochemically anomalous gold values found on this grid occur within the latter areas.

## 4.0 GEOPHYSICS

### 4.1 INTRODUCTION

An airborne magnetic and VLF-EM survey was carried out over the Charet claim block in April, 1988. A total of 594 line-km were flown at a line spacing of 100 meters and a station interval of 27 meters. A Cessna 182 aircraft was utilized carrying a GSM-9BA procession magnetometer (GEM Systems Inc.) and a TOTEM 2A VLF-EM unit (Herz Industries). The 2 transmitter stations used were NAA, Cuttler 24.0 kHz (along line "Line" coil)



and NSS Annapolis, 24.0 kHz (cross-line "Ortho" coil). Total field and vertical gradient magnetic data, VLF-EM data and interpretation maps were produced at a scale of 1:10,000.

#### 4.2 MAGNETOMETER SURVEY

The area is underlain by rocks of low to moderate magnetic susceptibilities with narrow bands of west and northwest trending magnetic susceptibility highs.

The three dominant, west-trending, magnetic susceptibility highs transect the upper part of grid "C", the lower to middle part of grid "B" and the very north part of grid "A". The magnetic "highs" on grids "C" and "B" correspond to mafic and ultramafic volcanic rocks. Northwest to north-northwest trending magnetic susceptibility highs correspond to diabase dikes intruding major fault structures.

The vertical magnetic gradient improves the resolution of the total field magnetic trends and has been used as a guide to delineate stratigraphy and structure.

Significant features of the magnetic data relating to grids "A", "B" and "C" are listed below:

##### Grid "A":

- (1) Felsic volcanic rocks which underlie all of grid "C" have a fairly uniform and low magnetic expression. Local variances, either higher or lower are due to slight differences in magnetite and/or sulphide (pyrrhotite) content or alteration.
- (2) Linear magnetic trends are the result of
  - (a) two (three ?) northwest trending diabase dikes.
  - (b) north-northwest trending faults or shears.Six (6) distinct areas of low magnetic susceptibilities (hereon in termed mag low) occur on the grid. Mag lows

can be generated by alteration of a primary rock. Three (3) mag lows correlate well with areas known to altered by iron-carbonate. The remaining mag lows may be the result of a 'dipole effect' and not alteration.

GRID "B"

- (1) Linear magnetic "highs" trending west and northwest correspond to mafic-ultramafic flows and diabase dike(s) respectively.
- (2) Certain areas underlain by mafic-ultramafic rocks ie. northeast part of grid "B", baseline area, have relatively low magnetic susceptibilities. These rocks have undergone weak but pervasive alteration (calcium carbonate).
- (3) A prominent west trending magnetic low occurs in the southwest part of the grid. In part, this magnetic low corresponds to the altered and sheared felsic volcanic rocks (Saxton shear) west of the Brett Lake Fault. The magnetic low east of the fault, where bedrock exposure is poor and only mafic volcanic rocks were mapped, remains unexplained.

GRID "C"

- (1) East of Cookoo Lake, a magnetic low is centered in altered and fractured felsic rocks directly south of the Buffalo-Canadian occurrence. This mag low lies near the intersection of a northwest trending structure and the Kenty Mine lineament.
- (2) The Cookoo shear is, in part, delineated by a magnetic low east of Cookoo Lake.

- (3) The Flint Rock Mine gold occurrence is flanked to the northeast by a small and isolated magnetic high.

## 5.0 CONCLUSIONS

Based on the present field work and a review of the available geological and geophysical data 6 areas within the Charet Syndicate property have been identified as having enhanced exploration potential for gold mineralization. Target areas selected are outlined below:

1) Cookoo Lake shear zone:

Specific areas along this shear which warrant further examination include:

- a) intersect of the mag high and Cookoo Lake shear.
- b) the mag low portion of the shear.
- c) intersection of Cookoo Lake shear with a northeast trending cross-structure eg. the Kenty Mine lineament.

2) Buffalo-Canadian occurrence area:

Auriferous, pyritic quartz-carbonate veins occur on the north flank of a small magnetite-bearing peridotite plug (?). South of this mag high is a mag low associated with intersecting northwest and northeast trending faults. A cluster of geochemically anomalous Cu and Zn values occur in this area.

3) Saxton Lake shear zone:

In the vicinity of the intersection of the Saxton Lake shear and the Brett Lake Fault, deformation, alteration and pyrite mineralization increase. Three (3) untested VLF airborne electromagnetic anomalies occur in this area (Figure 6). Northeast cross-structures are also present. Geochemically anomalous Cu and Zn values occur along a prominent mag low feature associated with the south edge of the Saxton shear.

4) Claims 943272, 943273 and 894895 - 894898 inclusive.

Within this claim group lies the intersection of 3, possible 4, major structures. Near the latter intersection disseminated pyrite mineralization (3% to 5%) occurs in sheared, bleached and quartz vein-bearing felsic volcanic rock.

5) Brett Lake Area:

Although field work has not been carried out in this region, interpretation of airborne magnetic data suggests the area has been subjected to a great deal of tectonic deformation ie. faulting. Several quartz stockworks have been found along the Brett Lake Fault (Donovan, 1962).

6) East of Ackerman Lake pyrite mineralization which appears to be "stratabound" is in fact associated with a north-northwest trending magnetic high representing a possible fault. Where the magnetic high crosscuts the mineralized horizon pyrite content increases. The major portion of this magnetic high lies south of grid "A" and has not been examined.

#### 6.0 RECOMMENDATIONS

Completion of the phase 1 exploration program as proposed by Winter; (July, 1988) is recommended. This would entail further detailed prospecting, stripping and trenching of significant areas revealed by prospecting, and a ground magnetometer survey.

Following evaluation of the phase 1 results, the implementation of a phase 2 diamond drilling program would be contingent upon results of the initial work.

PHASE 1

1. Prospecting: 2 men for 1 month	\$ 6,000
2. Magnetic survey: 140 line-miles at \$150/mile	21,000
3. Stripping and trenching, supervision	17,500
4. Meals and accommodations	4,500
5. Assaying	4,000
6. Transportation and communications	3,500
7. Report, maps and compilation	<u>3,500</u>
Sub-Total	\$ 60,000
Contingency (10%)	<u>6,000</u>
TOTAL PHASE 1	\$ 66,000

PHASE 2

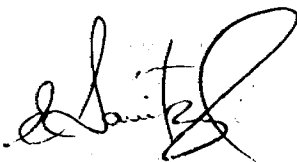
1. IP survey of selected areas: 20 days @ \$1,500/day	\$ 30,000
2. Stripping, trenching, sampling	20,000
3. Detailed mapping	11,000
4. Assaying	5,000
5. Preliminary diamond drilling: 6,000 ft @ \$35/ft all inclusive - includes supervision, logging, sampling, assaying, etc.	21,000
6. Reports, maps, assessment filing, etc.	17,000
7. Transportation, accommodation	<u>15,000</u>
Sub-Total	\$ 308,000
Contingency (10%)	<u>30,800</u>
TOTAL PHASE 2	\$ 338,800

Respectfully submitted,

E. Sawitzky

B.Sc., F.G.A.C.

January 13, 1989



7.0 REFERENCES

- Canadian Nickel Company Limited, 1984 A  
Geological Survey report on claims in Swayze Township;  
M.N.D.M. Assessment File T2446, 10 p. plus maps.
- Canadian Nickel Company Limited, 1984 B  
Annual report of activities, Canico-Golden Hope Resources  
joint venture Swayze Project; M.N.D.M. Assessment File  
T2446; 20 p. plus maps.
- Colvine, A.C. et al., 1984  
An Integrated Model for the Origin of Archean Lode Gold  
Deposits, Ontario Geological Survey Open File Report 5524.
- Donovan, J.F., 1965  
Geology of Swayze and Dore Townships, Ontario Dept. of  
Mines Geological Report 33, 22 p.
- Furse, G.D., 1932  
Geology of the Swayze Area, Ontario Department of Mines,  
Vol. XLI, Part 3, p. 35-53.
- Gordon, J.B. et al., 1979  
Gold Deposits of Ontario Part II Geological Survey Mineral  
Deposit Circular 18, 253 p.
- McKechnie, D.C., 1962  
Report on the property of Flint Rock Mines Limited in  
Swayze and Dore Townships; M.N.D.M. Assessment File T2192,  
3 p. plus maps.
- Meen, V.B., 1942  
Geology of the Cunningham-Garnet area, Sudbury District;  
O.D.M. A.R. v. 51-7.  
M.N.D.M. Assessment File T2545, 1984  
Report of work (lithogeochemical sampling) and map for  
Troudor Resources Inc.
- O.D.M. Map 2221, 1976  
Chapleau-Foleyet; Geological Compilation Series Coloured  
Map, 1:253,440.
- Ontario Geological Survey, 1987  
Assessment Files Timmins, Ontario.
- Ontario Geological Survey, 1982  
Airborne Electromagnetic and Total Intensity Magnetic Survey  
Swayze Area, District of Sudbury by Questor Surveys Limited  
for the Ontario Geological Survey Maps 80541 and 80542.

Rickaby, H.C., 1934

Geology of the Swayze gold area; O.D.M. Annual Report,  
v. 43-3, 36 p.

Terraquest, 1988

Report on an airborne magnetic and VLF-EM survey, Swayze  
and Dore Townships; Report for Charet Syndicate by  
Terraquest Ltd., 5 p. plus maps.

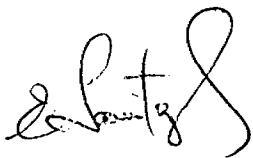
Winter, L.D.S., 1987

Geological report on the exploration potential of the  
Swayze Township Property; 22 p. plus maps.

CERTIFICATE OF QUALIFICATION

I, Edward George Sawitzky do hereby certify:

1. that I am a geologist and reside at 1633 Carol Street, Val Caron, Ontario, POM 3A0
2. that I am a Fellow of the Geological Association of Canada,
3. that I graduated from Carleton University, Ottawa in 1978,
4. that I have practiced my profession continuously for 12 years,
5. that my report for Charet Syndicate on the Charet Property, Porcupine Mining Division, Foleyet, Ontario is based on my personal knowledge of the area and on a review of published and unpublished information on the property and surrounding area,
6. that I have no personal, direct or indirect interest in the latter property, or any adjacent properties, and I have written this report as a totally independent consultant.



Ed Sawitzky

B.Sc., F.G.A.C.

January 13, 1989



APPENDIX A

TABLE 1

TABLE 1  
INCO DRILLING RESULTS  
SWAYZE AND DORE TOWNSHIPS

<u>Hole #</u>	<u>Comments</u>
72503	This hole was 50.6 m long and intersected basalts and chert horizons containing some quartz-ankerite veins. The assay results indicate that there are no values greater than 0.03 g/T of gold.
72504	This hole was drilled to depth of 68.6 m and intersected some quartz-veining in basalts intercalated with chert. A quartz-feldspar porphyry dike was also reported. A 0.41 m interval at 39.7 m returned 1.97 g/T of gold followed by 0.51 m at 0.745 g/T from a quartz vein in pyritized and bleached metavolcanics. The remainder of the values were less 0.09 g/T.
72506	Tuffs, lapilli tuffs and agglomerates were intersected from a hole 143.26 m long. From 15.18 to 16.29 m 0.37 g/T of gold were reported.
72507	Feldspar porphyries, rhyolites, cherts and clastic sediments were intersected in this 145.08 m long hole. The best assay result was 0.274 g/T across 0.26 m in a chert horizon mineralized with pyrite.
72525	This hole intersected mafic volcanics intercalated with tuff and chert horizons. From 17.95 m to 19.32 m on a basalt-chert contact 1.7 g/T of gold was reported.
72526	Intercalated basalts, dacites and tuffs are reported over a core length of 55.8 m. No significant assay values are reported.
72527	This hole was drilled to a depth of 68.9 m and intersected agglomerates, tuffs, metavolcanics and metasediments. There were no significant gold values reported.

72528

Basalts and andesites with minor tuff and interflow horizons were intersected over a hole length of 63 m. At 45.5 m, 0.43 m of quartz-carbonate veining containing pyrite assayed 1.7 g/T. At 47.5 m, 1.16 m of brecciated quartz-calcite veining containing 8% pyrite assayed 3.02 g/T.

72529

This hole was drilled to a depth of 66.1 m and intersected tuffs, andesitic flows and agglomerates. An intersection of 0.68 m at 57 m in the hole assayed 1.38 g/T in a chert horizon mineralized with 4% sulphides.

APPENDIX B

TABLE 2

Table 2:

## Sample description, Location and Analysis

\* Analyses for Au in ppb, Cu, Zn, As in ppm and K<sub>2</sub>O in %.

<u>Sample No.</u>	<u>Location (Grid/line)</u>	<u>Assays* Au, As, K<sub>2</sub>O, Cu, Zn</u>	<u>Comments</u>
Grid "A"			
103901	64+00E, 0+70N	Nil, 11, 2.46, 1, 15	felsic volcanic (3a)
103902	63+90E/0+80N	Nil, 7, 1.90, 21, 69	felsic volcanic (3d) float?
103903	51+50E/31+70N	Nil, 10, 2.34, 18, 66	felsic volcanic (3c)
103904	53+25E/9+50N	10, 6, 1.51, 11, 34	felsic volcanic (3c, d)
103905	52+62E/6+30N	Nil, 5, 2.07, 36, 33	felsic volcanic (3a)
103906	37+00E/0+05N	10, 8, 1.46, 4, 24	felsic volcanic (3a)
104001	45+50E/5+75N	20, 7, 0.720, 61, 24	felsic volcanic (3a, f)
104002	45+50E/5+60N	10, 13, 1.99, 11, 23	felsic volcanic (3a, f)
104003	44+00E/8+50N	10, 6, 2.37, 26, 18	felsic volcanic (3a) float
104004	44+15E/13+30N	Nil, 5, 1.43, 29, 27	felsic volcanic (3a, f)
104005	43+40E/15+50N	20, 17, 1.64, 25, 22	felsic volcanic (3a, f)
104006	20+00E/5+00N	10, 5, 1.49, 4, 30	felsic volcanic (3a)
104007	19+00E/3+00N	10, 5, 1.47, 6, 92	felsic volcanic (3a)
104008	26+00E/7+15N	Nil, 8, 1.59, 10, 66	felsic volcanic (3a)
104009	11+60E/7+50N	Nil, 4, 1.95, 29, 82	felsic volcanic (3e)
104010	15+75E/4+00N	Nil, 3, 1.76, 11, 57	felsic volcanic (3a)
104011	40+00E/4+80N	Nil, 3, 2.12, 14, 13	felsic volcanic (3a, f)
104012	40+00E/4+10N	Nil, 3, 3.10, 7, 16	felsic volcanic (3a, f)
104013	36+00E/6+50N	Nil, 3, 0.915, 19, 26	felsic volcanic (3a)

<u>Sample No.</u>	<u>Location (Grid/line)</u>	<u>Assays* Au, As, K<sub>2</sub>O, Cu, Zn</u>	<u>Comments</u>
Roadside prospecting (September, 1988)			
104101	* (+/-) 8+00E/38+00N	33	felsic volcanic (3f)
104102	* (+/-) 8+00E/38+00N	6	felsic volcanic (3f)
104103	* (+/-) 8+00E/38+00N	69	felsic volcanic (3f)
104104	* (+/-) 8+00E/38+00N	7	felsic volcanic (3f)
104105	* (+/-) 8+00E/38+00N	6	felsic volcanic (3f)
104106	36+00W/2+30N	<5	felsic volcanic (3e)
104107	* (+/-) 12+00W/9+50S	<5	felsic volcanic (3e, f)
104108	* (+/-) 6+00E/9+00S	10	felsic volcanic (3a)
104109	50+80E/0+70N	23	felsic volcanic (3a)
104110	50+80E/0+70N	18	felsic volcanic (3a)
104111	50+80E/0+70N	16	felsic volcanic (3a)
104112	50+80E/0+70N	62	felsic volcanic (3a)
104113	45+20E/5+20N	<5	felsic volcanic (3a)
104114	45+20E/5+20N	11	felsic volcanic (3a)
104115	39+90E/14+60N	9	felsic volcanic (3a)
104116	39+50E/25+80N	6	felsic volcanic (3a, f)
104117	39+00E/26+80N	13	felsic volcanic (3c, h)
104118	44+00E/36+25N	29	felsic volcanic (3c)

\* near "Grid A"

<u>Sample No.</u>	<u>Location (Grid/line)</u>	<u>Assays* Au, As, K<sub>2</sub>O, Cu, Zn</u>	<u>Comments</u>
Grid "B"			
103907	68+00W/17+00N	Nil, 7, 0.078, 102, 111	felsic volcanic (3a)
103908	100+00W/16+80S	Nil, 6, 1.98, 44, 49	felsic volcanic (3e)
103909	100+00W/22+00S	Nil, 5, 0.125, 54, 91	felsic volcanic (3a)
103910	104+00W/8+50S	Nil, 6, 2.31, 19, 63	felsic volcanic (3a)
103911	108+00W/2+50S	Nil, 4, 2.60, 24, 70	felsic volcanic (3a)
103912	104+00W/23+80S	Nil, 5, 0.176, 84, 63	felsic volcanic (3a)
103913	104+00W/20+70S	10, 3, 0.137, 115, 82	felsic volcanic (3a)
103914	64+00W/2+00N	Nil, 6, 1.78, 100, 33	felsic volcanic (3g)
104014	40+00E/9+25N	Nil, 5, 1.87, 16, 30	felsic volcanic (3e, f)
104015	40+00E/11+10N	Nil, 6, 2.81, 29, 31	felsic volcanic (3a)
104016	40+00E/11+70N	10, 5, 2.01, 47, 42	felsic volcanic (3a)
104017	40+00E/14+50N	Nil, 3, 1.86, 15, 23	felsic volcanic (3f)
104401	44+00E/6+50N	Nil, 12, 1.43, 45, 40	felsic volcanic (3a)
104402	62+25W/17+00N	Nil, 4, 2.24, 1, 38	felsic volcanic (3f)
104301	32+00W/5+60S	Nil, 4, 2.99, 28, 64	felsic volcanic (3f)
104302	32+00W/6+80S	Nil, 6, 2.06, 14, 91	felsic volcanic (3e, f)
104303	32+00W/6+80S	Nil, 5, 1.40, 12, 38	felsic volcanic (3e, f)
104304	4+00W/6+40S	Nil, 11, 3.38, 1, 40	felsic volcanic (3e)
104305	0+00/19+15N	Nil, 6, 0.325, 101, 80	felsic volcanic (3a, b) float
104306	0+00/6+20S	Nil, 5, 1.75, 3, 81	felsic volcanic (3e, f)
104307	6+00E/4+30N	Nil, 5, 0.394, 30, 132	felsic volcanic (3a)

Sample No.	Location (Grid/line)	Assays*				Comments
		Au.	As.	K <sub>2</sub> O.	Cu, Zn	
104308	28+00E/14+50N	Nil,	7,	2.43,	11, 67	felsic volcanic (3a)
0241	48+00E/6+00N	10,	5,	0.831,	32, 13	felsic volcanic (3a)
0242	48+00E/6+00N	30,	2,	1.59,	4, 7	felsic volcanic (3a, f)
0244	48+00E/7+00N	40,	3,	1.55,	7, 6	felsic volcanic (3a, f)
0245	48+00E/7+00N	20,	2,	1.82,	4, 6	felsic volcanic (3a, f)
0246	48+00/7+00N	20,	2,	1.81,	4, 12	felsic volcanic (3a, f)
0247	48+00E/7+00N	30,	4,	1.69,	160, 13	felsic volcanic (3a, f)
0248	48+00E/7+00N	40,	5,	1.60,	4, 8	felsic volcanic (3a, f)
0249	48+00E/7+00N	30,	4,	1.76,	5, 11	felsic volcanic (3a, f)
104018	(claim # 894898)	Nil,	6,	3.37,	23, 25	felsic volcanic (3a)
104019	32+00W/1+00S	10,	4,	0.314,	10, 4	ultramafic volcanic (1)
104020	67+00W/0+60S	20,	5,	0.041,	99, 90	mafic volcanic (2a)
104021	65+30W/13+80N	Nil,	5,	0.043,	97, 84	mafic volcanic (2a)
104022	66+00W/19+20N	10,	6,	2.28,	83, 79	mafic volcanic (2a)
104023	(claim # 987125)	Nil,	7,	2.07,	28, 21	felsic volcanic (3a)
104024	(claim # 987125)	Nil,	3,	1.92,	14, 15	felsic volcanic (3a)
104025	(claim # 987125)	10,	11,	4.77,	38, 62	felsic volcanic (3a)
104026	(claim # 987124)	Nil,	9,	1.91,	47, 79	felsic volcanic (3a)
104027	(claim # 987124)	Nil,	6,	2.16,	34, 67	felsic volcanic (3a)
104403	96+00W/9+00S	Nil,	3,	0.194,	47, 75	mafic volcanic (2a, h)
104404	92+90W/21+90S	Nil,	5,	0.280,	62, 155	mafic volcanic (2a)
104415	1+0W/17+00S	10,	7,	1.26,	32, 26	mafic volcanic (2a)



Sample No.	Location (Grid/line)	Assays*					Comments
		Au.	As.	K <sub>2</sub> O.	Cu.	Zn	
104416	1+0W/14+00S	30,	5,	1.74,	3,	83	mafic volcanic (2a)
104417	1+00W/12+00S	20,	5,	1.54,	1,	41	mafic volcanic (2a)
104418	1+00W/5+00S	Nil,	4,	2.20,	8,	62	mafic volcanic (2a)
104419	84+00W/19+00S	Nil,	2,	0.052,	7,	146	mafic volcanic (2a)
0201	8+00W/8+00N	Nil,	2,	0.088,	92,	109	mafic volcanic (2a)
0202	8+00W/0+00	Nil,	6,	0.312,	73,	74	mafic volcanic (2a, b)
0205	12+00W/16+00N	Nil,	3,	0.148,	52,	36	mafic volcanic (2a)
0206	94+00W/16+00N	Nil,	6,	0.084,	130,	114	mafic volcanic (2a)
0207	32+00W/1+00N	Nil,	6,	0.011,	26,	64	mafic volcanic (2b)
0208	44+00W/3+00N	Nil,	7,	0.023,	111,	83	mafic volcanic(2a, b)
0209	35+00W/3+60N	Nil,	8,	3.63,	31,	31	mafic volcanic (2a, b)
0210	84+90W/1+00N	Nil,	9,	0.182,	134,	101	mafic volcanic (2a)
0211	112+00W/1+00S	Nil,	9,	2.90,	7,	47	felsic volcanic (3a)
0212	76+00W/18+00S	Nil,	7,	0.057,	104,	105	felsic volcanic (3a, f)
0213	52+00W/15+00S	Ni,	7,	0.578,	101,	78	mafic volcanic (2a)
0214	60+00W/10+00N	Nil,	3,	3.08,	49,	76	mafic volcanic (2b, h)
0215	60+00W/10+00N	Nil,	3,	0.087,	83,	95	mafic volcanic (2a)
0216	60+00W/10+00N	Nil,	5,	0.113,	71,	90	mafic volcanic (2a)
0217	60+00W/24+00S	10,	3,	0.614,	63,	149	mafic volcanic (2a)
0218	52+00W/9+00N	Nil,	4,	1.83,	48,	53	mafic volcanic (2a)
0219	52+00W/13+00N	Nil,	4,	0.080,	85,	89	mafic volcanic (2a)
0220	40+00W/10+00	20,	3,	0.301,	62,	150	mafic volcanic (2a)
0236	108+00W/9+00S	Nil,	11,	1.86,	6,	40	felsic volcanic (3a)
0237	108+00W/13+85S	Nil,	2,	2.02,	14,	47	felsic volcanic (3a)

<u>Sample No.</u>	<u>Location (Grid/line)</u>	<u>Assays* Au,As, K<sub>2</sub>O, Cu,Zn</u>	<u>Comments</u>
0238	109+00W/18+00S	30, 3, 0.952, 68, 97	felsic volcanic (3a)
0239	109+00W/18+00S	10, 3, 1.29, 164, 129	felsic volcanic (3a)
0240	109+00W/18+00S	10, 4, 1.08, 55, 78	felsic volcanic (3a)
104119	south of claim # 996147	7	ultramafic volcanic (1)
104120	south of claim # 996147	6	ultramafic volcanic (1)
104121	south of claim # 996147	<5	ultramafic volcanic (1)
Grid "C"			
104405	68+00W/0+00	20, 12, 1.17, 14, 36	mafic volcanic (2a)
104406	0+00/2+00N	10, 4, 1.76, 11, 45	mafic volcanic (2a)
104407	0+00/15+00S	10, 3, 2.04, 28, 28	felsic volcanic (3a)
104408	0+00/19+00S	Nil, 3, 0.313, 77, 66	felsic volcanic (3a)
104409	60+00W/2+00S	60, 4, 1.23, 146, 51	mafic volcanic (2a)
104410	20+00W/5+00S	310, 2, 0.819, 10780, 38	granitized quartz vein in mafic volcanics (2a, 8) "Old Pit"
104411	20+00W/9+00S	10, 1, 0.272, 106, 47	mafic volcanic (2a)
104412	24+00W/18+00S	10, 2, 0.088, 63, 101	felsic volcanic (3a)
104413	24+00W/7+00S	Nil, 2, 2.31, 44, 14	mafic volcanic (2a)
104414	12+00W/16+00S	1, 2, 1.53, 184, 31	felsic volcanic (3a, f)
0221	72+00W/6+00N	40, 6, 0.258, 119, 108	mafic volcanic (2a)
0222	72+00W/12+00N	30, 4, 1.46, 54, 99	mafic volcanic (2a)

<u>Sample No.</u>	<u>Location (Grid/line)</u>	<u>Assays* Au,As, K<sub>2</sub>O, Cu,Zn</u>	<u>Comments</u>
0223	16+00W/5+00N	10, 3, 0.367, 78, 69	mafic volcanic (2a)
0224	16+00W/1+00N	Nil, 3, 0.952, 129, 58	mafic volcanic (2a)
0225	16+00W/1+00S	50, 3, 0.194, 91, 51	felsic volcanic (3a)
0226	16+00W/11+00S	30, 4, 2.95, 1. 38	felsic granitoid rock (8)
0227	48+00W/1+00S	Nil, 3, 2.32, 31, 20	felsic volcanic (3a)
0228	40+00W/5+00S	Nil, 4, 0.433, 159, 117	mafic volcanic (2a)
0229	40+00W/3+40S	Nil, 2, 1.45, 19, 53	felsic volcanic (3f)
0230	40+00W/2+25S	Nil, 2, 0.235, 88, 80	mafic volcanic (2a)
0231	48+00W/8+00S	Nil, 3, 0.097, 83, 38	mafic volcanic (2a)
0232	44+00W/3+00N	Nil, 2, 1.30, 11, 32	mafic volcanic (2a)
0233	40+00W/3+00N	Nil, 3, 0.345, 115, 90	mafic volcanic (2a)
0234	64+00W/3+00S	Nil, 7, 1.10, 5, 51	felsic volcanic (3a)
0235	64+00W/5+00N	Nil, 4, 0.548, 119, 87	mafic volcanic (2a)
0243	0+00/2+00N	10, 2, 0.059, 67, 31	mafic volcanic (2a)
Grid "D"			
8152	0+00/0+20S	38	felsic volcanic (3e)

APPENDIX C

FIGURE 7

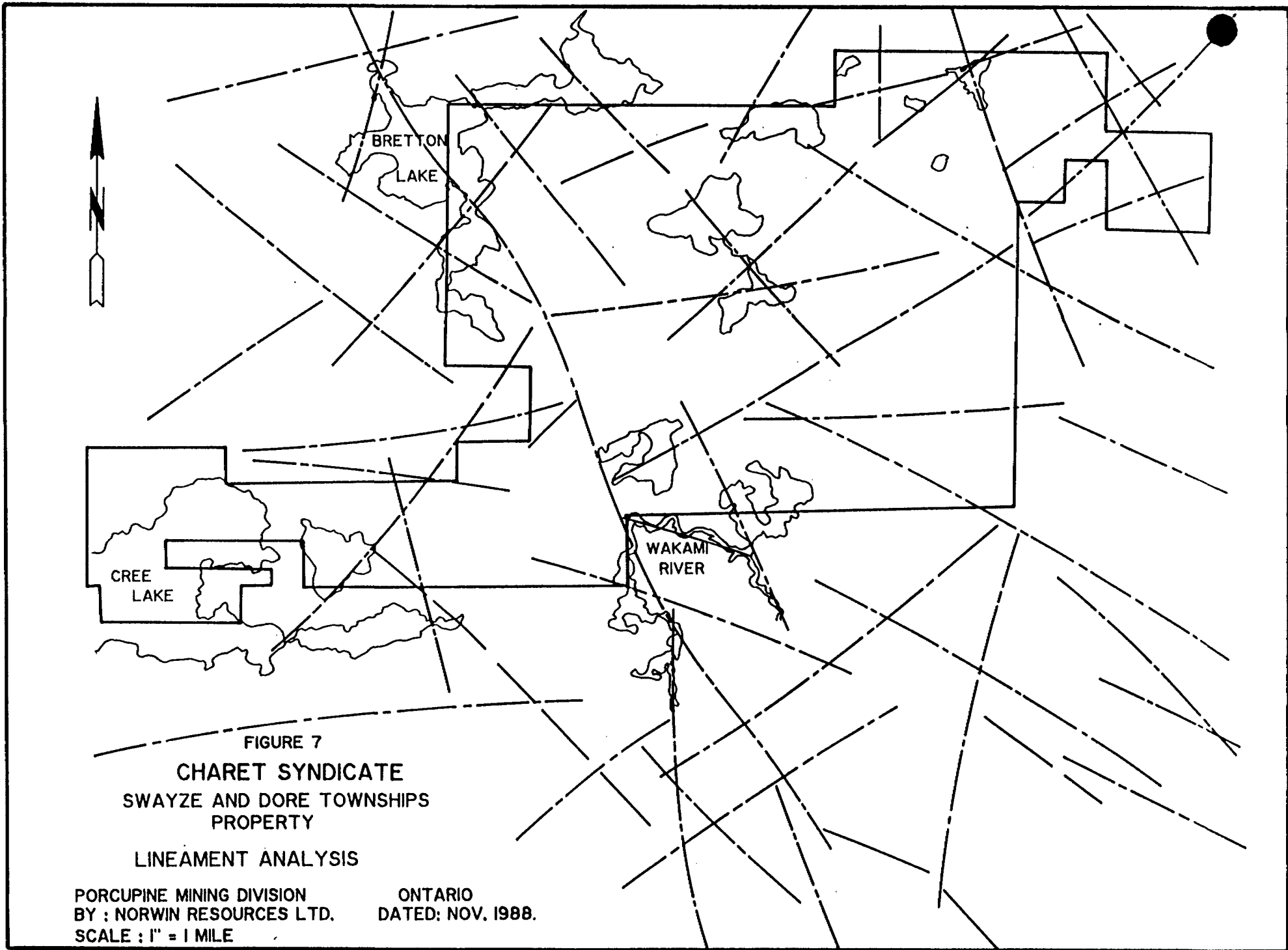


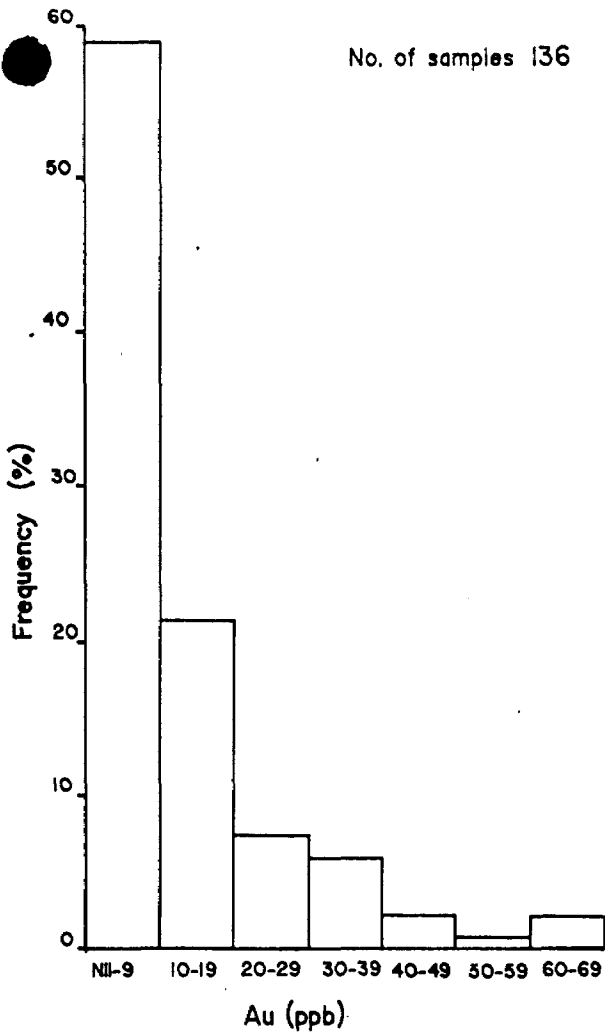
FIGURE 7  
CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS  
PROPERTY  
LINEAMENT ANALYSIS

PORCUPINE MINING DIVISION  
BY : NORWIN RESOURCES LTD.  
SCALE : 1" = 1 MILE

ONTARIO  
DATED: NOV. 1988.

APPENDIX D

FIGURE 8



Note : 0.75% @ 310 ppb Au.

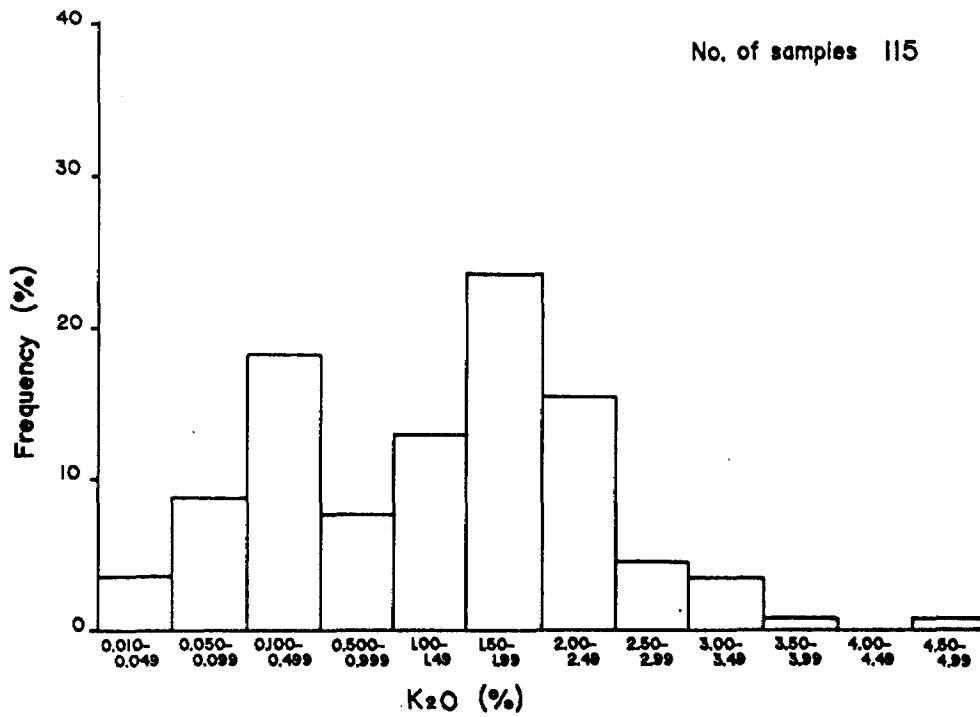
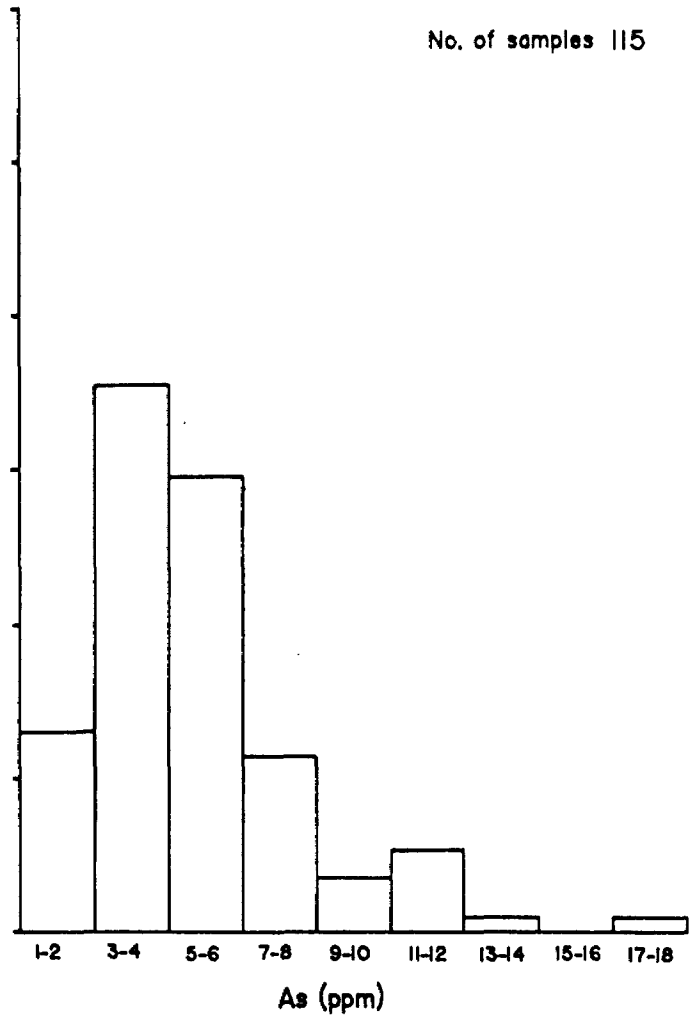


FIGURE 8 : Per cent frequency vs. Au, As and K<sub>2</sub>O content.

APPENDIX E

FIGURE 9



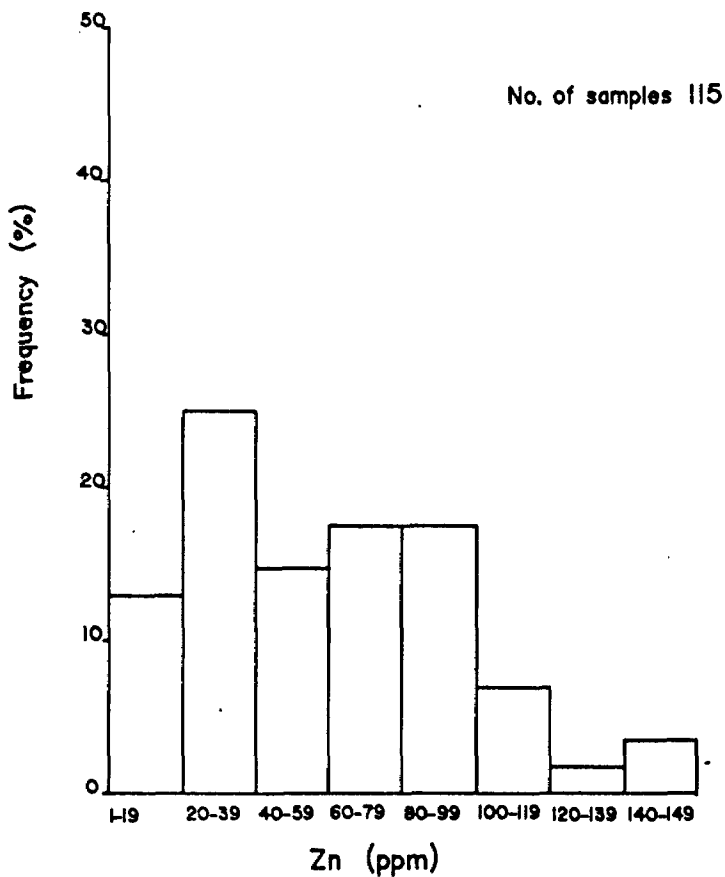
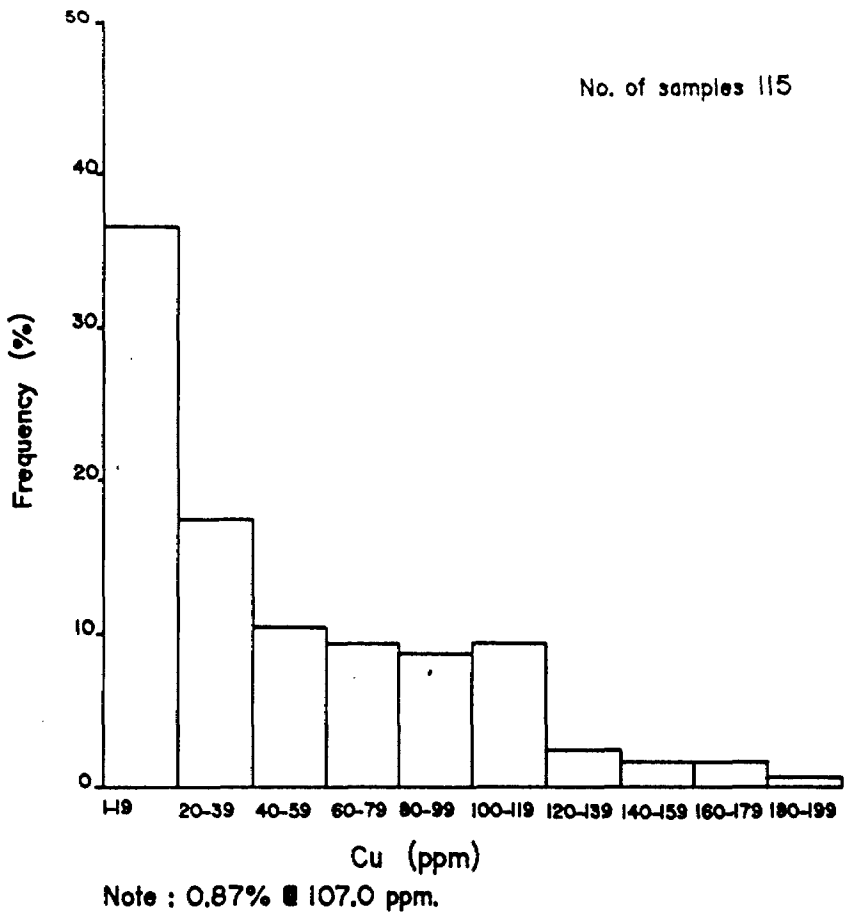
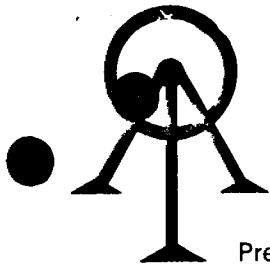


FIGURE 9 : Per cent frequency vs. Cu and Zn content.

APPENDIX F  
CERTIFICATES OF ANALYSES



# ACCURASSAY LABORATORIES LTD.

P.O. BOX 604  
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5  
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

## Certificate of Analysis

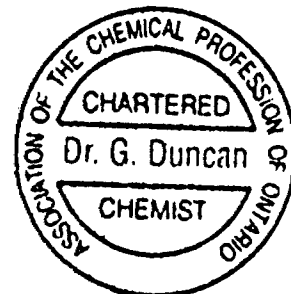
Page: 1

24032 Norwin Resources Ltd.  
560, Notre Dame Ave.  
Sudbury, Ontario  
P3C-5L2

Date: September 9 19 88

Work Order # : 880921  
Project :

Accurassay	SAMPLE NUMBERS Customer	Gold ppb	
144676	104101	33	
144677	104102	6	
144678	104103	69	
144679	104104	7	
144680	104105	6	
144681	104106	<5	
144682	104107	<5	
144683	104108	10	
144684	104109	23	
144685	104110	33	
144685	104110	13	Check
144686	104111	16	
144687	104112	62	
144688	104113	<5	
144689	104114	11	
144690	104115	9	
144691	104116	6	
144692	104117	13	
144693	104118	29	
144694	104119	<5	
144694	104119	7	Check
144695	104120	6	
144696	104121	73	
144696	104121	<5	Check



Per: Dr. G. Duncan



Established 1928

# Swastika Laboratories


A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73198 Date Oct. 12, 1988  
 Received Oct. 6, 1988 18 Samples of Rock  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	GOLD PPB
104001	20
104002	10
104003	10
104004	20/Nil
104005	20
104006	10
104007	10
104008	Nil
104301	Nil
104302	Nil
104303	Nil
104304	Nil
104305	10/Nil
104306	Nil
104307	Nil
104308	Nil
104401	Nil
104402	Nil

Per   
 G. Lebel - Manager /ns





Established 1928

-57-

# Swastika Laboratories


A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73198 - B Date Dec. 6, 1988  
 Received Oct. 6, 1988 18 Rock Samples  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O %
104001	7	0.720
104002	13	1.99
104003	6	2.37
104004	5	1.43
104005	17	1.64
104006	5	1.49
104007	5	1.37
104008	8	1.59
104301	4	2.99
104302	6	2.06
104303	5	1.40
104304	11	3.38
104305	6	0.325
104306	5	1.75
104307	5	0.394
104308	7	2.43
104401	12	1.43
104402	4	2.24

Per   
 G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0  
 Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73198 A Date November 24, 1988

Received October 6, 1988 18 Samples of Rock

Submitted by Norwin Resources Ltd., Sudbury, Ontario

SAMPLE NO.	COPPER PPM	ZINC PPM
104001	61	24
104002	11	23
104003	26	18
104004	29	27
104005	25	22
104006	4	30
104007	6	92
104008	10	66
104301	28	64
104302	14	91
104303	12	38
104304	1	40
104305	101	80
104306	3	81
104307	30	132
104308	11	67
104401	45	40
104402	1	38

NOTE: Arsenic & K<sub>2</sub>O results to follow.

Per   
G. Lebel-Manager/rl





Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73285

Date Oct. 18, 1988


Received Oct. 13, 1988

33

Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	GOLD PPB	SAMPLE NO.	GOLD PPB
0201	Nil	103908	Nil
0202	Nil	103909	Nil
0205	Nil	103910	Nil
0206	Nil	103911	Nil
0207	Nil	103912	Nil
0208	Nil	103913	10/10
0209	Nil	104009	Nil
0210	Nil/Nil	104010	Nil
0211	Nil	104011	Nil
0212	Nil	104012	Nil
103901	Nil	104013	Nil
103902	Nil	104014	Nil
103903	Nil	104015	Nil
103904	10	104016	10
103905	Nil	104017	Nil
103906	10	104403	Nil
103907	Nil		

Per   
G. Lebel - Manager /ns





Established 1928

# Swastika Laboratories


A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73284 Date Oct. 14, 1988  
 Received Oct. 13, 1988 1 Rock Sample:  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	GOLD PPB
104018	Ni1/Ni1

Per   
 G. Lebel - Manager /hs



P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone: 705-842-2244

FAX: 705-842-2800





Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation


## Certificate of Analysis

Certificate No. 73285 - A Date Dec. 6, 1988

Received Oct. 13, 1988 33 Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>	SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>
0201	2	0.088	103908	6	1.98
0202	6	0.312	103909	5	0.125
0205	3	0.148	103910	6	2.31
0206	6	0.084	103911	4	2.60
0207	6	0.011	103912	5	0.176
0208	7	0.023	103913	3	0.137
0209	8	3.63	104009	4	1.95
0210	9	0.182	104010	3	1.76
0211	9	2.90	104011	3	2.12
0212	7	0.057	104012	3	3.10
103901	11	2.46	104013	3	0.915
103902	7	1.90	104014	5	1.87
103903	10	2.34	104015	6	2.81
103904	6	1.51	104016	5	2.01
103905	5	2.07	104017	3	1.86
103906	8	1.46	104403	3	0.194
103907	7	0.078			

Per   
G. Lebel - Manager /ns





Established 1928

# Swastika Laboratories

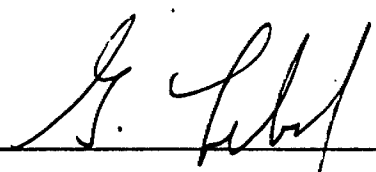
A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73284 - B Date Dec. 6, 1988  
 Received Oct. 13, 1988 1 Rock Samples  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O %
104018	6	3.37

Per   
 G. Lebel - Manager /ns





Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.


Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73285 - A Date Nov. 24, 1988  
 Received Oct. 13, 1988 33 Rock Samples  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	COPPER PPM	ZINC PPM	SAMPLE NO.	COPPER PPM	ZINC PPM
0201	92	109	103910	19	63
0202	73	74	103911	24	70
0205	52	36	103912	84	63
0206	130	114	103913	115	82
0207	26	64	104009	29	82
0208	111	83	104010	11	57
0209	31	31	104011	14	13
0210	134	101	104012	7	16
0211	7	47	104013	19	26
0212	104	105	104014	16	30
103901	1	15	105015	29	31
103902	21	69	104016	47	42
103903	18	66	104017	15	23
103904	11	34	104403	47	75
103905	36	33			
103906	4	24			
103907	102	111			
103908	44	49			
103909	54	91			

NOTE: Arsenic & K<sub>2</sub>O results to follow.

Per   
 G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0  
 Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.


Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73284 - A Date Nov. 24, 1988  
 Received Oct. 13, 1988 1 Rock Sample  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	COPPER PPM	ZINC PPM
104018	23	25

NOTE: Arsenic & K<sub>2</sub>O results to follow.

Per   
 G. Lebel - Manager /ns





Established 1928

-65-  
**Swastika Laboratories**

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation


## Certificate of Analysis

Certificate No. 73507 Date Nov. 2, 1988

Received Oct. 28, 1988 35 rock samples

Submitted by Norwin Resources, Sudbury, Ontario

SAMPLE NO.	GOLD PPB	SAMPLE NO.	GOLD PPB
0213	Nil	0233	Nil
0214	Nil	0234	Nil
0215	Nil	0235	Nil
0216	Nil	103914	Nil
0217	10	104404A	Nil
0218	Nil	104405A	20
0219	Nil	104406A	10
0220	20	104407A	10
0221	40	104408A	Nil
0222	30	104409A	60
0223	10	104410A	280/310
0224	Nil	104411A	10
0225	50/20	104412A	10
0226	30	104413A	Nil
0227	Nil	104414A	10
0228	Nil		
0229	Nil		
0230	Nil		
0231	Nil		
0232	Nil		

Per   
G. Lebel, Manager/dg



P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-2244

FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis


Certificate No. 73507 - B

Date Dec. 6, 1988

Received Oct. 28, 1988 35 Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>	SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>
0213	7	0.578	0231	3	0.097
0214	3	3.08	0232	2	1.30
0215	3	0.087	0233	3	0.345
0216	5	0.113	0234	7	1.10
0217	3	0.614	0235	4	0.548
0218	4	1.83	103914	6	1.78
0219	4	0.080	104404A	5	0.280
0220	3	0.301	104405A	12	1.17
0221	6	0.258	104406A	4	1.76
0222	4	1.46	104407A	3	2.04
0223	3	0.367	104408A	3	0.313
0224	3	0.952	104409A	4	1.23
0225	3	0.194	104410A	2	0.819
0226	4	2.95	104411A	1	0.272
0227	3	2.32	104412A	2	0.088
0228	4	0.433	104413A	2	2.31
0229	2	1.45	104414A	2	1.53
0230	2	0.235			

Per   
G. Lebel - Manager /hs



P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

-67-  
**Swastika Laboratories**

A Division of Assayers Corporation Ltd.


Assaying - Consulting - Representation

# Certificate of Analysis

Certificate No. 73507 - A Date Nov. 24, 1988  
 Received Oct. 28, 1988 35 Rock Samples  
 Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	COPPER PPM	ZINC PPM	SAMPLE NO.	COPPER PPM	ZINC PPM
<u>0213</u>	101	78	0231	83	38
0214	49	76	0232	11	32
0215	83	95	<u>0233</u>	115	90
0216	71	90	0234	5	51
0217	63	149	<u>0235</u>	119	87
0218	48	53	<u>103914</u>	100	33
0219	85	89	104404A	62	155
0220	62	150	104405A	14	36
<u>0221</u>	119	108	104406A	11	45
0222	54	99	104407A	28	28
0223	78	69	104408A	77	66
<u>0224</u>	129	58	<u>104409A</u>	146	51
0225	91	51	<u>104410A</u>	10780	38
0226	1	38	<u>104411A</u>	106	47
0227	31	20	104412A	63	101
<u>0228</u>	159	117	104413A	44	14
0229	19	53	<u>104414A</u>	184	31
0230	88	80			

NOTE: Arsenic & K<sub>2</sub>O results to follow.

Per   
 G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0  
 Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

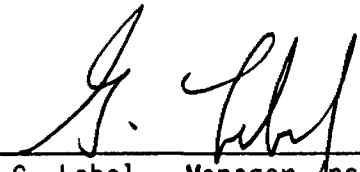
Certificate No. 73662 Date Nov. 14, 1988

Received Nov. 9, 1988 28 Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

Proj. #88-107

SAMPLE NO.	GOLD PPB	SAMPLE NO.	GOLD PPB
0236	Nil	104019A	10
0237	Nil	104020A	20
0238	30	104021A	Nil
0239	10	104022A	10
0240	10	104023A	Nil
0241	40/10	104024A	Nil
0242	30	104025A	10
0243	10	104026A	Nil
0244	40	104027A	Nil
0245	20	104415A	10
0246	20	104416A	30
0247	30	104417A	20
0248	40	104418A	Nil
0249	30	104419A	Nil

Per   
G. Lebel - Manager /ns







Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis

Certificate No. 73662 - B

Date Dec. 6, 1988


Received Nov. 9, 1988 28

Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

Proj. #88-107

SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>	SAMPLE NO.	ARSENIC PPM	K <sub>2</sub> O % <sup>2</sup>
0236	11	1.86	104019A	4	0.314
0237	2	2.02	104020A	5	0.041
0238	3	0.952	104021A	5	0.043
0239	3	1.29	104022A	6	2.28
0240	4	1.08	104023A	7	2.07
0241	5	0.831	104024A	3	1.92
0242	2	1.59	104025A	11	4.77
0243	2	0.059	104026A	9	1.91
0244	3	1.55	104027A	6	2.16
0245	2	1.82	104415A	7	1.26
0246	2	1.81	104416A	5	1.74
0247	4	1.69	104417A	5	1.54
0248	5	1.60	104418A	4	2.20
0249	4	1.76	104419A	2	0.052

Per   
G. Lebel - Manager /ms



P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

# Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

## Certificate of Analysis


Certificate No. 73662 - A Date Nov. 24, 1988

Received Nov. 9, 1988 28 Rock Samples

Submitted by Norwin Resources Ltd., Sudbury, Ontario.

SAMPLE NO.	COPPER PPM	ZINC PPM	SAMPLE NO.	COPPER PPM	ZINC PPM
0236	6	40	104019A	10	4
0237	14	47	104020A	99	90
0238	68	97	104021A	97	84
0239	164	129	104022A	83	79
0240	55	78	104023A	28	21
0241	32	13	104024A	14	15
0242	4	7	104025A	38	62
0243	67	31	104026A	47	79
0244	7	6	104027A	34	67
0245	4	6	104415A	32	26
0246	4	12	104416A	3	83
0247	160	13	104417A	1	41
0248	4	8	104418A	8	62
0249	5	11	104419A	7	146

NOTE: Arsenic & K<sub>2</sub>O results to follow.

Per   
G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 FAX (705) 642-3300



# ACCURASSAY LABORATORIES LTD.

P.O. BOX 804  
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5  
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

## Certificate of Analysis

Page: 1

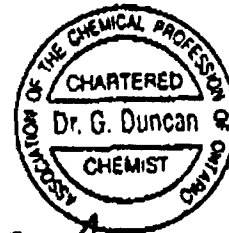
24012 Norwin Resources Ltd.  
560 Notre Dame Ave.  
Sudbury, Ontario  
P3C-5L2

Date: December 21 19 88

Work Order # : 881428  
Project :

SAMPLE NUMBERS		Gold
Accurassay	Customer	ppb

161093	8152	38	
161093	8152	61	Check <i>bedrock.</i>



Per: *G. Duncan*

LP-30

ORIGINAL

2.1 Mining Act



900

Type of Survey(s) **Geochemical Expenditures**

Claim Holder(s) **W.S. Vaughan c/o Aird & Berlis** Prospector's Licence No. **A43152 (in trust)**

Address **15th Floor - 145 King Street, W., Toronto, Ontario M5H 2J3**

Survey Company **Norwin Geological Ltd.** Date of Survey (from & to) **26 09 88 30 10 88** Total Miles of line Cut **N/A**

Name and Address of Author (of Geo-Technical report) **E. Sawitzky, 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
For each additional survey: using the same grid: Enter 20 days (for)	- Radiometric	
	- Other	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
Airborne Credits	Geological	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	- Electromagnetic	
	- Magnetometer	
	- Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P	996091	5.76	P	996201	5
	996092	5		996202	5
	996093	5		996203	5
	996094	5		996204	5
	996095	5		996140	5
	996096	5		996141	5
	996102	5		996142	5
	996103	5		996143	5
	996104	5		996144	5
	996105	5		996145	5
	996106	5		996146	5
	996107	5		996147	5
	996186	5		996148	5
	996187	5		996149	5
	996188	5		996150	
	996189	5		996151	
	996190	5		996152	
	996193	5		996153	
	996194	5		996154	
	996195	5		996155	
	996196	5		996156	
	996197	5		996157	
	996200	5		996158	

Expenditures (excludes power stripping)

Type of Work Performed **Lithochemical Sampling**

Performed on Claim(s) **All of listed claims**

Calculation of Expenditure Days Credits

Total Expenditures **\$ 3,836.40** ÷ Total Days Credits **15** = **255.76**

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

For Office Use Only

Total Days Cr. Recorded **255.76** Date Recorded **MAY 25/89** Mining Recorder **[Signature]**

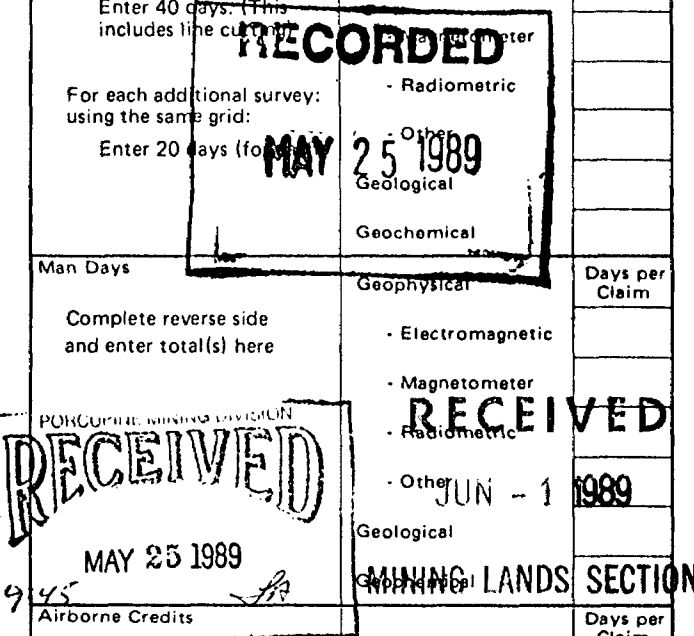
Date Approved as Recorded **6 Oct 89** Branch Director **[Signature]**

Date **May 16, 1989** Recorded Holder or Agent (Signature) **[Signature]**

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

Name and Postal Address of Person Certifying **E. Sawitzky, Norwin Geological Ltd., 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Date Certified **May 16, 1989** Certified by (Signature) **[Signature]**





Mining Act Page 2 of 2

Type of Survey(s) <b>Geochemical Expenditures</b>		Township or Area <b>Swayze &amp; Dore Twps.</b>	
Claim Holder(s) <b>W.S. Vaughan c/o Aird &amp; Berlis</b>		Prospector's Licence No. <b>A43152 (in trust)</b>	
Address <b>15th Floor - 145 King Street W., Toronto, Ontario M5H 2J3</b>			
Survey Company <b>Norwin Geological Ltd.</b>		Date of Survey (from & to) 26 09 88   30 10 88 Day   Mo.   Yr.   Day   Mo.   Yr.	Total Miles of line Cut <b>N/A</b>
Name and Address of Author (of Geo-Technical report) <b>E. Sawitzky, 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2</b>			

Credits Requested per Each Claim in Columns at right		
Special Provisions  For first survey: Enter 40 days. (This includes line cutting)  For each additional survey using the same grid: Enter 20 days (for each)	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days  Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits  Note: Special provisions credits do not apply to Airborne Surveys.	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	

Mining Claims Traversed (List in numerical sequence)					
Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	996159		P	995614	
	996160			995617	
	996161			995618	
	996162				
	996163				
	996164				
	996165				
	996166				
	996167				
	996314				
	996315				
	996316				
	996317				
	996318				
	996319				
	996320				
	996321				
	996322	35			
	996323	35			
	996324				
	995609				
	995610				
	995613				

Expenditures (excludes power stripping)	
Type of Work Performed	
Performed on Claim(s)	
Calculation of Expenditure Days Credits	
Total Expenditures	Total Days Credits
\$ <input type="text"/>	15 = <input type="text"/>
Instructions Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.	

Total number of mining claims covered by this report of work. 72

Date	Recorded Holder or Agent (Signature)

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work		
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.		
Name and Postal Address of Person Certifying		
<b>E. Sawitzky, Norwin Geological Ltd., 560 Notre Dame Avenue.</b>		
Sudbury, Ontario P3C 5L2		Date Certified
		May 16, 1989
		Certified by (Signature)

AMENDED

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

Telephone: (416) 965-4888

May 8, 1989

Your file: W8806-171  
Our file: 2.12292

Mining Recorder  
Ministry of Northern Development and Mines  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

Re: Notice of Intent dated April 4, 1989 Geological Survey submitted  
on mining Claims P 995609 et al in Swayze and Dore Townships.

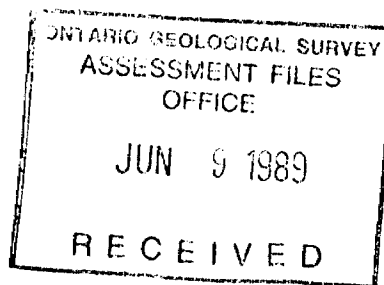
---

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

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

Yours sincerely,

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



RM:eb  
Enclosure

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

Resident Geologist  
Timmins, Ontario

W.S. Vaughan  
Toronto, Ontario

E. Sawitzky  
Sudbury, Ontario



AMENDED

Recorded Holder  
W.S. Vaughan, c/o Arid and Berlis

Township or Area  
Swayze and Dore Townships

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological <u>35</u> days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	P 995609-610 995613-614 995617-618 996091 to 096 incl. 996102 to 107 incl. 996140 to 167 incl. 996186 to 190 incl. 996193 to 197 incl. 996200 to 204 incl. 996315 to 321 incl. 996324 1013926 to 929 incl 996314

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

No credits have been allowed for the following mining claims

not sufficiently covered by the survey       insufficient technical data filed

P 996322-323

Mining Act

Type of Survey: **Geological Survey** Township or Area: **Swayze & Dore Twps.**  
 Claim Holder(s): **W. S. Vaughan c/o Aird & Berlis** Prospector's Licence No.: **A43152 (in trust)**  
 Address: **15th Floor 145 King Street, W., Toronto, Ontario M5H 2J3**  
 Survey Company: **Norwin Geological Ltd.** Date of Survey (from & to): **26 09 88 30 10 88** Total Miles of line Cut: **67.8 miles**  
 Name and Address of Author (of Geo-Technical report): **E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Credits Requested per Each Claim in Columns at right Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	- Electromagnetic	
	- Magnetometer	
	- Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	996159		P	995614	
	996160			995617	
	996161			995618	
	996162			1013926	
	996163			1013927	
	996164			1013928	
	996165			1013929	
	996166				
	996167				
	996314				
	996315				
	996316				
	996317				
	996318				
	996319				
	996320				
	996321				
	996322				
	996323				
	996324				
	995609				
	995610				
	995613				

Expenditures (excludes power stripping)  
 Type of Work Performed:  
 Performed on Claim(s):  
 Calculation of Expenditure Days Credits  
 Total Expenditures: **1909** Total Days Credits: **15**  
 $1909 \div 15 =$

Total number of mining claims covered by this report of work. **76**

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

For Office Use Only  
 Total Days Cr. Recorded: \_\_\_\_\_ Date Recorded: \_\_\_\_\_ Mining Recorder: \_\_\_\_\_  
 Date Approved as Recorded: \_\_\_\_\_ Branch Director: \_\_\_\_\_  
*See Return Statement*

Date: **7.6.1988** Recorded Holder or Agent (Signature): *[Signature]*

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

Name and Postal Address of Person Certifying: **E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**



*Apr 15*

Mining Act

Type of Survey(s) **Geological Survey 2.12292** Township or Area **Swayze & Dore Twp.**  
 Claim Holder(s) **W. S. Vaughan c/o Aird & Berlis** Prospector's Licence No. **A43152 (in trust)**  
 Address **15th Floor - 145 King Street, W., Toronto, Ontario M5H 2J3**  
 Survey Company **Norwin Geological Ltd.** Date of Survey (from & to) **26 09 88 30 10 88** Total Miles of line Cut **67.8 miles**  
 Name and Address of Author (of Geo-Technical report) **E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	40
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	Electromagnetic	
	Magnetometer	
	Radiometric	
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P	996091		P	996201	
	996092			996202	
	996093			996203	
	996094			996204	
	996095			996140	
	996096			996141	
	996102			996142	
	996103			996143	
	996104			996144	
	996105			996145	
	996106			996146	
	996107			996147	
	996186			996148	
	996187			996149	
	996188			996150	
	996189			996151	
	996190			996152	
	996193			996153	
	996194			996154	
	996195			996155	
	996196			996156	
	996197			996157	
	996200			996158	

RECEIVED

MAR 22 1989

MINING LAID OFF

FEB 23 1989

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditures Days Credits

Total Expenditures  $\div$  15 = Total Days Credits

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

Date **Feb. 17, 1989** Recorded Holder or Agent (Signature) *E. Sawitzky*

For Office Use Only

Total Days Cr. Recorded **3040** Date Recorded **FEB. 23/89** Mining Recorder *[Signature]*

Date Approved as Recorded *[Signature]* Branch Director *[Signature]*

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

Name and Postal Address of Person Certifying  
**E. Sawitzky, 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

May 8, 1989

Mining Recorder  
Ministry of Northern Development and Mines  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

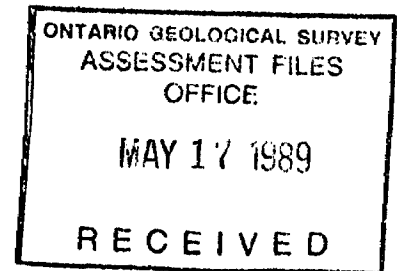
Mining Lands Section  
3rd floor, 880 Bay Street  
Toronto, Ontario  
M5S 1Z8

Telephone: (416) 965-4888

Your file: W8806-171  
Our file: 2.12292

Dear Sir:

Re: Notice of Intent dated April 4, 1989 Geological  
Survey submitted on Mining Claims P 995609 et al  
Swayze and Dore Townships.



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

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

Yours sincerely,

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

RM:eb  
EM  
Enclosure

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

W.S. Vaughan  
Toronto, Ontario

Resident Geologist  
Timmins, Ontario

E. Sawitzky  
Sudbury, Ontario

Recorded Holder  
 W.S. Vaughan, c/o Arid and Berlis

Township or Area  
 Swayze and Dore Townships

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b>	
Electromagnetic _____ days	P 995609-610
Magnetometer _____ days	995613-614
Radiometric _____ days	995617-618
Induced polarization _____ days	996091 to 096 incl.
Other _____ days	996102 to 107 incl.
Section 77 (19) See "Mining Claims Assessed" column	996140 to 167 incl.
Geological _____ 35 _____ days	996186 to 190 incl.
Geochemical _____ days	996193 to 197 incl.
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	996200 to 204 incl.
Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	996193 to 197 incl.
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	996200 to 204 incl.
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	996315 to 321 incl.
	996324
	1013926 to 929 incl

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

\_\_\_\_\_

**No credits have been allowed for the following mining claims**

not sufficiently covered by the survey       insufficient technical data filed

P 996322-323

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



Ministry of Northern Development and Mines  
Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. **W 8906-171**

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

Mining Act

(Survey(s)) **Geological Survey 2.12292** Township or Area **Swayze & Dore Twps.**  
 Claim Holder(s) **W. S. Vaughan c/o Aird & Berlis** Prospector's Licence No. **A43152 (in trust)**  
 Address **15th Floor - 145 King Street, W., Toronto, Ontario M5H 2J3**  
 Survey Company **Norwin Geological Ltd.** Date of Survey (from & to) **26 09 88 30 10 88** Total Miles of line Cut **67.8 miles**  
 Name and Address of Author (of Geo-Technical report) **E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	40
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total (s) here	Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	996091		P	996201	
	996092			996202	
	996093			996203	
	996094			996204	
	996095			996140	
	996096			996141	
	996102			996142	
	996103			996143	
	996104			996144	
	996105			996145	
	996106			996146	
	996107			996147	
	996186			996148	
	996187			996149	
	996188			996150	
	996189			996151	
	996190			996152	
	996193			996153	
	996194			996154	
	996195			996155	
	996196			996156	
	996197			996157	
	996200			996158	

Expenditures (excludes power stripping)

Type of Work Performed  
 Performed on Claim(s)  
 Calculation of Expenditure Days Credits  
 Total Expenditures **611.00** + **15** = **626.00**  
 Instructions  
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

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

For Office Use Only  
 Total Days Cr. Recorded **3040** Date Recorded **FEB. 23/89** Mining Recorder **[Signature]**  
 Date Approved as Recorded **See Revised** Branch Director **[Signature]**

Date **FEB. 17, 1989** Recorded Holder or Agent (Signature) **[Signature]**

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying  
**E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C5L2**

Date Certified **FEB. 17, 1989** Certified by (Signature) **[Signature]**

Mining Act

Type of Survey(s) <b>Geological Survey</b>	Township or Area <b>Swayze &amp; Dore Twps.</b>
Claim Holder(s) <b>W. S. Vaughan c/o Aird &amp; Berlis</b>	Prospector's Licence No. <b>A43152 (in trust)</b>
Address <b>15th Floor 145 King Street, W., Toronto, Ontario M5H 2J3</b>	
Survey Company <b>Norwin Geological Ltd.</b>	Date of Survey (from & to) <b>26 09 88 30 10 88</b>
Name and Address of Author (of Geo-Technical report) <b>E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2</b>	Total Miles of line Cut <b>67.8 miles</b>

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
For each additional survey: using the same grid: Enter 20 days (for each)	Geochemical	
	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Man Days  Complete reverse side and enter total(s) here	- Other	
	Geological	
	Geochemical	
	Electromagnetic	
	Magnetometer	
Autborne Credits  Note: Special provisions credits do not apply to Autborne Surveys.	Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	996159		P	995614	
	996160			995617	
	996161			995618	
	996162			1013926	
	996163			1013927	
	996164			1013928	
	996165			1013929	
	996166				
	996167				
	996314				
	996315				
	996316				
	996317				
	996318				
	996319				
	996320				
	996321				
	996322				
	996323				
	996324				
	995609				
	995610				
	995613				

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures **1309**      Total Days Credits

$\$ 11.12 \div 15 =$   

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

Total number of mining claims covered by this report of work. 76

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
Date Approved as Recorded	Branch Director	
<i>See Record Statement</i>	<i>[Signature]</i>	

Date **Feb 17 1989**      Recorded Holder or Agent (Signature) *[Signature]*

Certification Verifying Report of Work

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

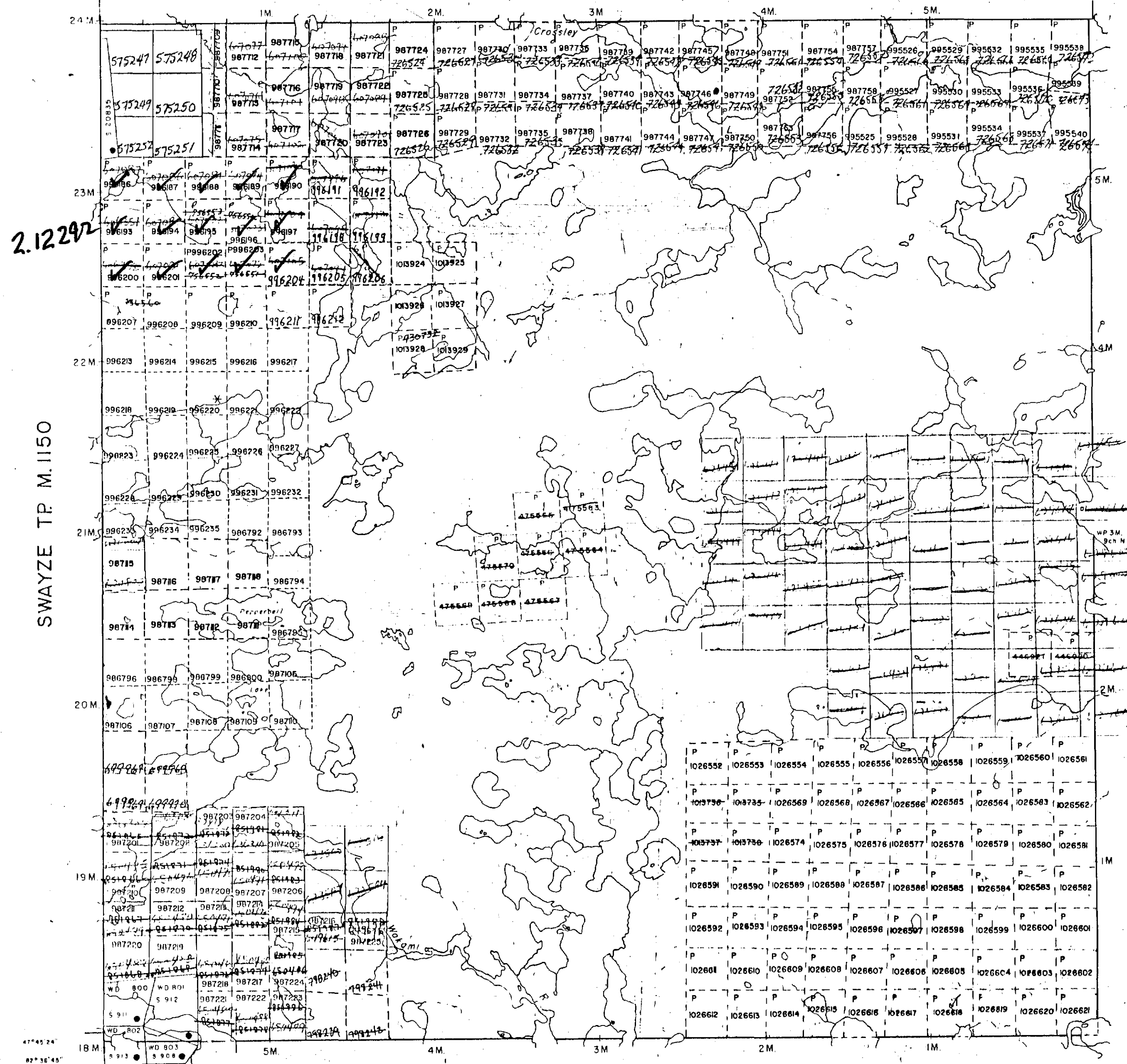
Name and Postal Address of Person Certifying  
**E. Sawitzky 560 Notre Dame Avenue, Sudbury, Ontario P3C 5L2**

Date Certified **Feb 17, 1989**      Certified by (Signature) *[Signature]*

NOTES

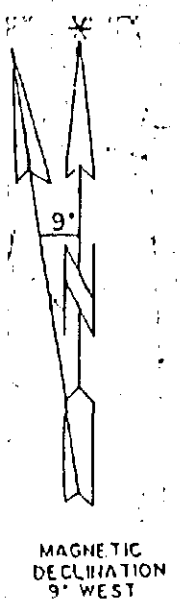
400' surface rights reservation along the shores of all lakes and rivers.

COPPELL TP.



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES



DISPOSITION OF CROWN LANDS

- | TYPE OF DOCUMENT               | SYMBOL |
|--------------------------------|--------|
| PATENT SURFACE & MINING RIGHTS | ●      |
| SURFACE RIGHTS ONLY            | ○      |
| MINING RIGHTS ONLY             | ◐      |
| LEASE SURFACE & MINING RIGHTS  | ■      |
| SURFACE RIGHTS ONLY            | ◼      |
| MINING RIGHTS ONLY             | ◑      |
| LICENCE OF OCCUPATION          | ▼      |
| CROWN LAND SALE                | CS     |
| ORDER-IN-COUNCIL               | CC     |
| RESERVATION                    | ⊙      |
| CANCELLED                      | ⊗      |
| SAND & GRAVEL                  | ⊘      |
| * LAND USE PERMIT              | *      |

Received Jan 7/80

SCALE: 1 INCH = 40 CHAINS

ACRES	HECTARES
40	16

TOWNSHIP

# DORE

DISTRICT

SUBBURY

MINING DIVISION

RECEIVED JAN 24 1980

PORCUPINE

Ministry of Natural Resources

Ontario - Surveys and Mapping Branch

Date April 27th, 1973 Plan No.

Whitney Block Queen's Park, Toronto

# M. 763



GARNET TP. M. 829



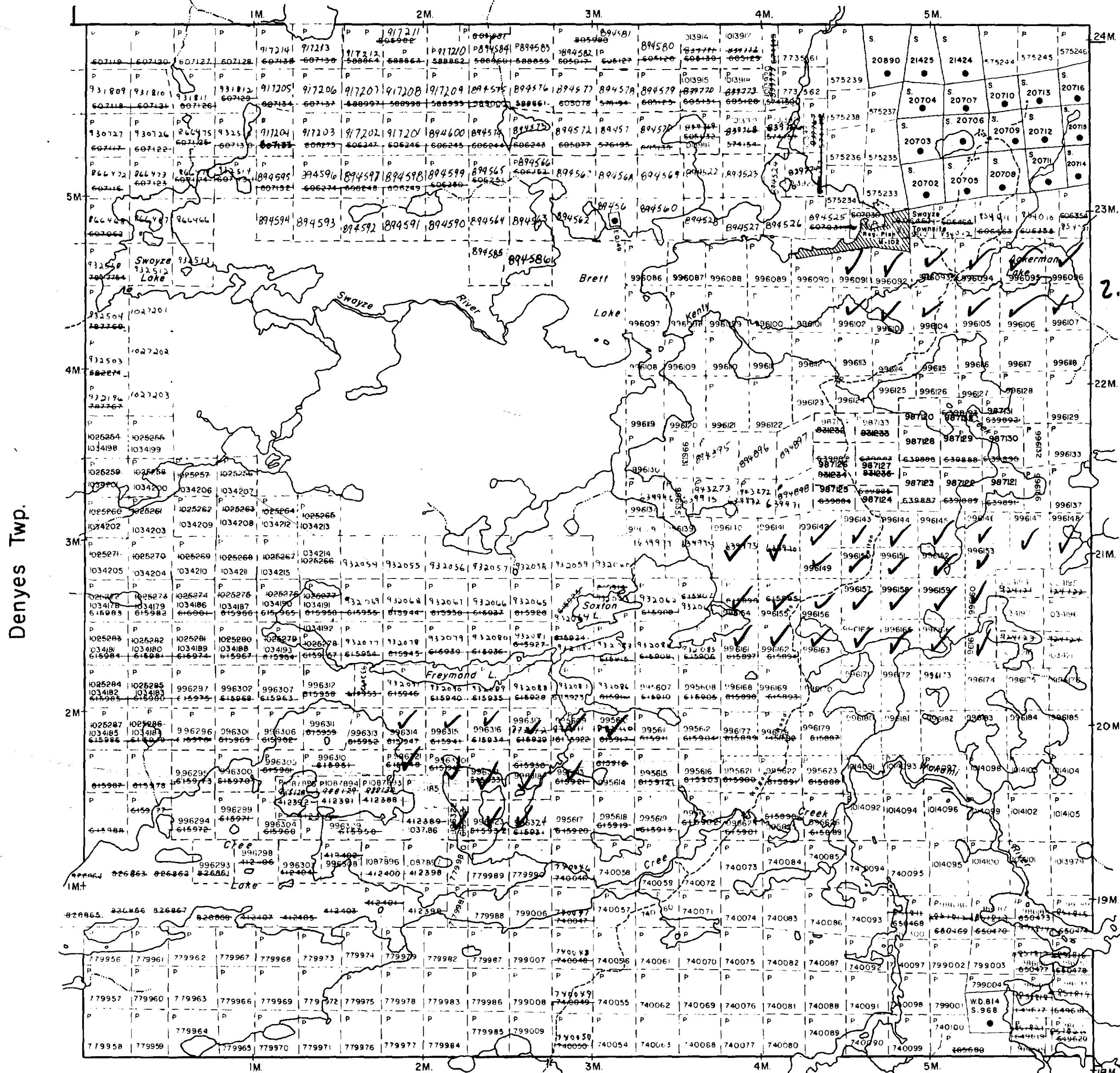
REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File

Rollo Twp.



LEGEND

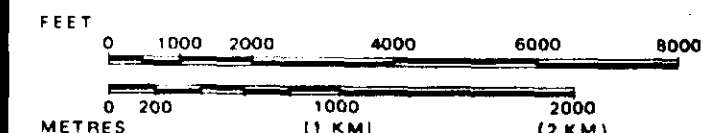
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	◐
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	◼
" MINING RIGHTS ONLY	◻
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	⊙
CANCELLED	⊘
SAND & GRAVEL	⊙

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 360, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP  
**SWAYZE**  
 M.N.R. ADMINISTRATIVE DISTRICT  
**CHAPLEAU**  
 MINING DIVISION  
**PORCUPINE**  
 LAND TITLES / REGISTRY DIVISION  
**SUDBURY**

Ministry of Land  
 Natural Resources Management  
 Branch

Date MARCH, 1985

Number

**G-3249**



410155E0036 2.12292 DORE

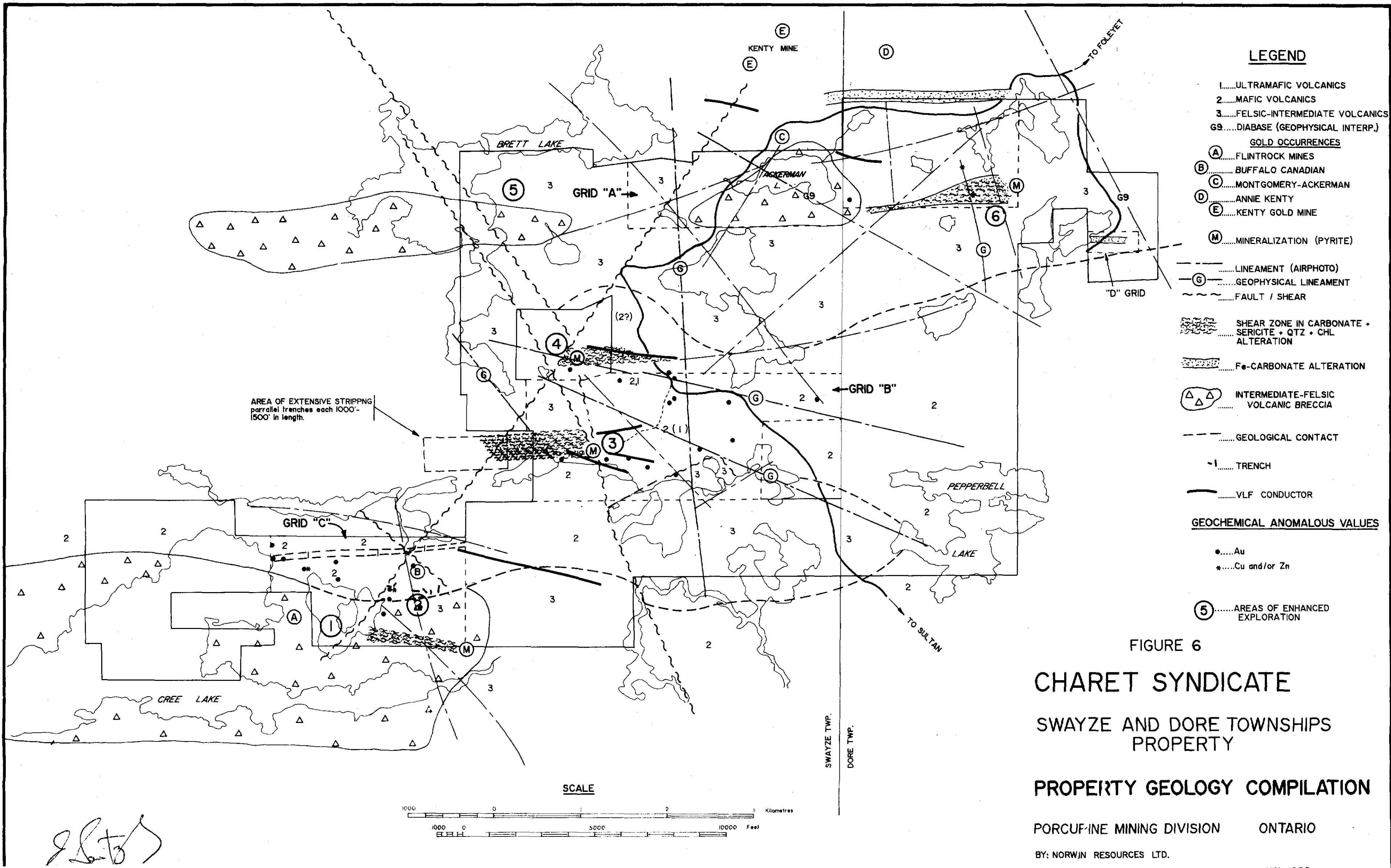


FIGURE 6  
**CHARET SYNDICATE**  
 SWAYZE AND DORE TOWNSHIPS  
 PROPERTY  
**PROPERTY GEOLOGY COMPILATION**

PORCUPINE MINING DIVISION ONTARIO  
 BY: NORWJN RESOURCES LTD.  
 DRWN: E.P. DATED: JAN, 1989.

**2.12292**

*J. L. Dore*





Rollo Twp.

Coppell Twp.

Denyes Twp.

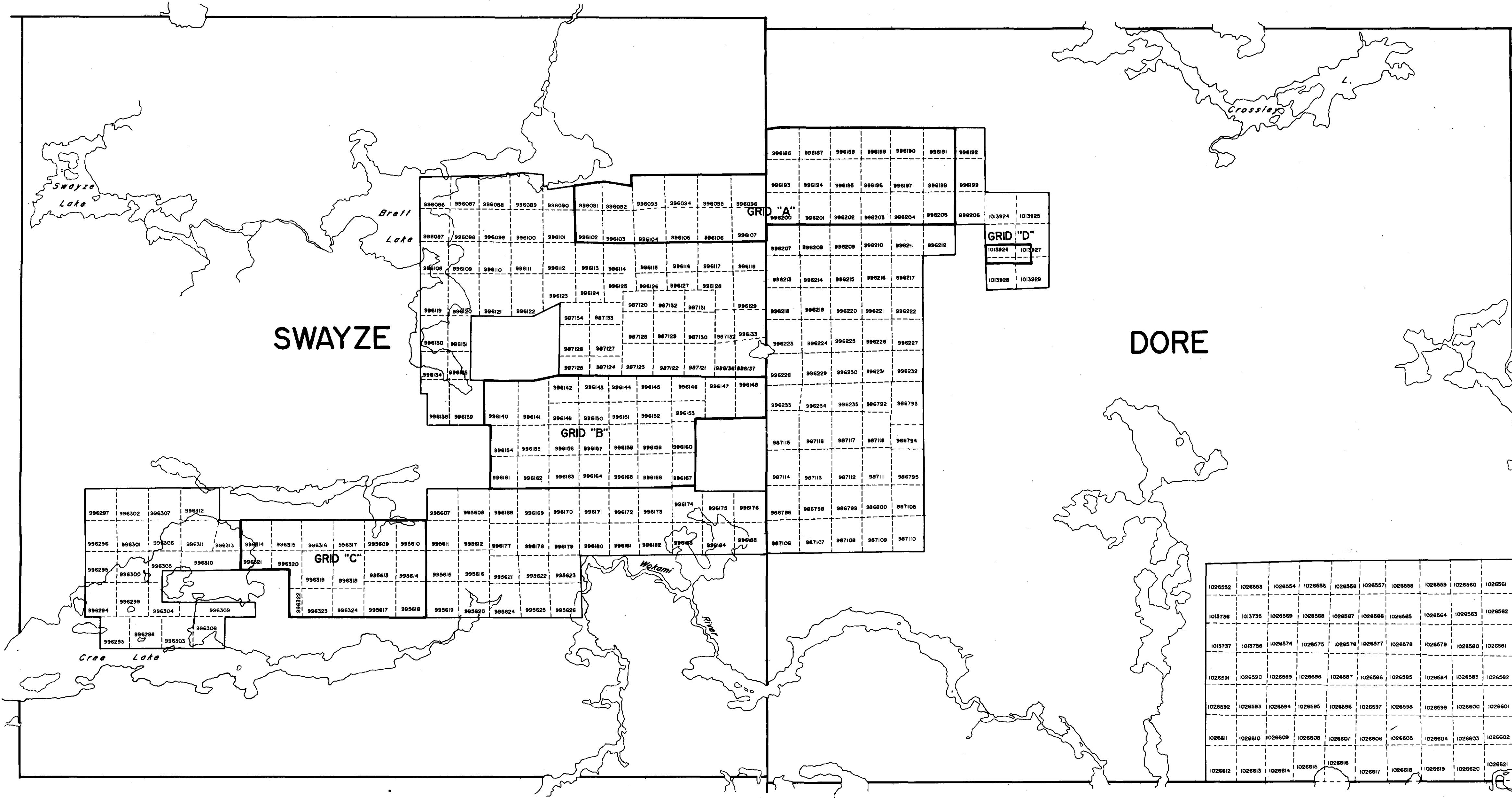
Heenan Twp. M. 925

SWAYZE

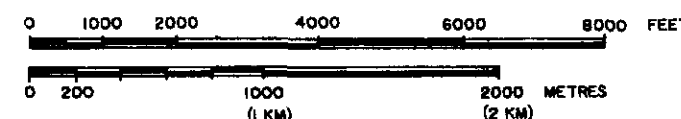
DORE

Cunningham Twp.

Garnet Twp. M. 829



SCALE



NOTE: 1) AFTER M.N.D.M. CLAIM MAPS M. 763 & M. 3249.

2) ALL CLAIMS PREFIXED BY LETTER P.

FIGURE 2

CHARET SYNDICATE

SWAYZE AND DORE TOWNSHIPS  
PROPERTY

LAND POSITION & GRID LOCATION

PORCUPINE MINING DIVISION      ONTARIO

BY : NORWIN RESOURCES LTD.

**2.12292**

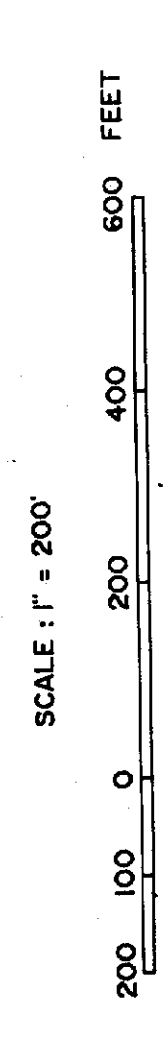
DRWN : E.P.

DATED : JANUARY, 1989.



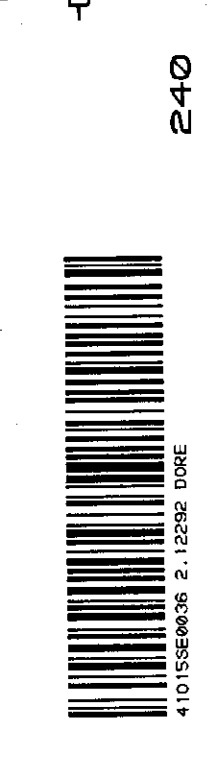
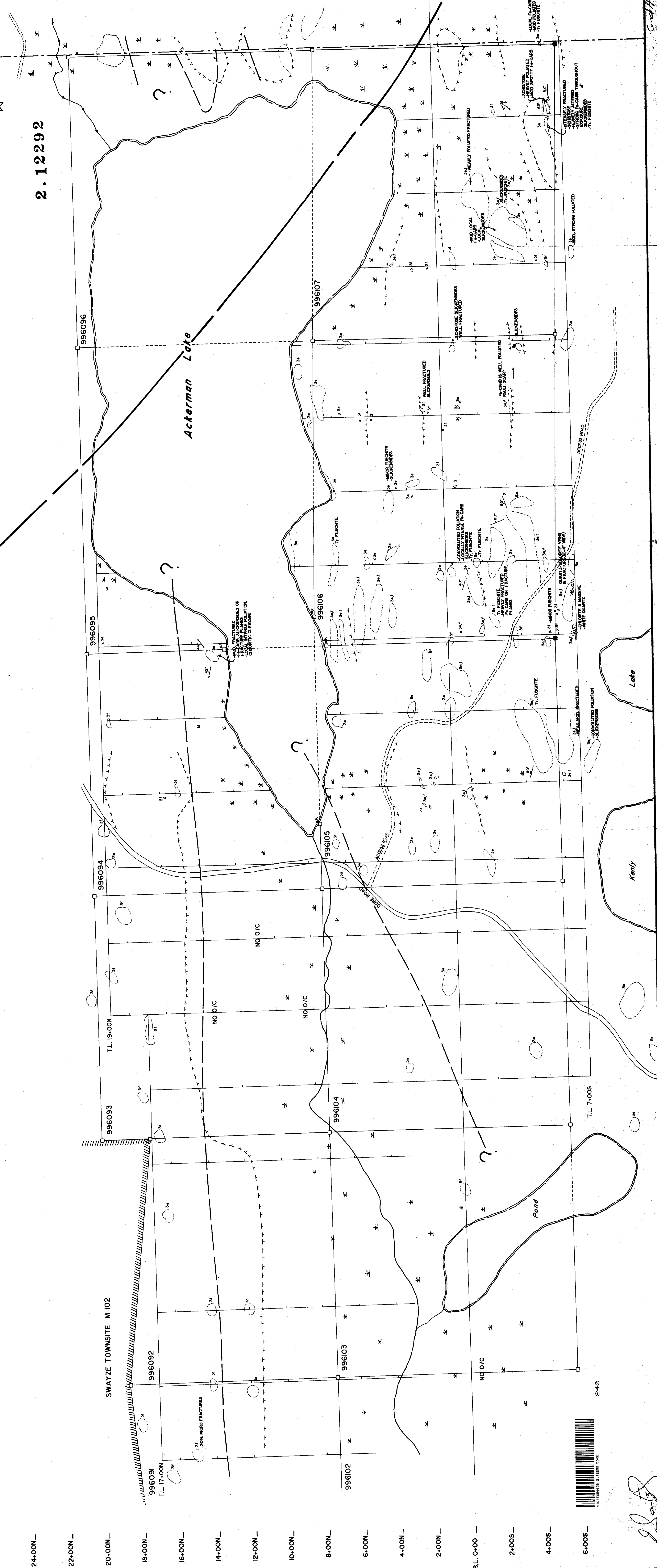
# CHARET SYNDICATE SWAYZE AND DORE TOWNSHIPS PROPERTY

**GEOLOGY**  
GRID "A" WEST  
PORCUPINE MINING DIVISION ONTARIO  
BY : NORWIN RESOURCES LTD.  
DATED : NOV. 1988



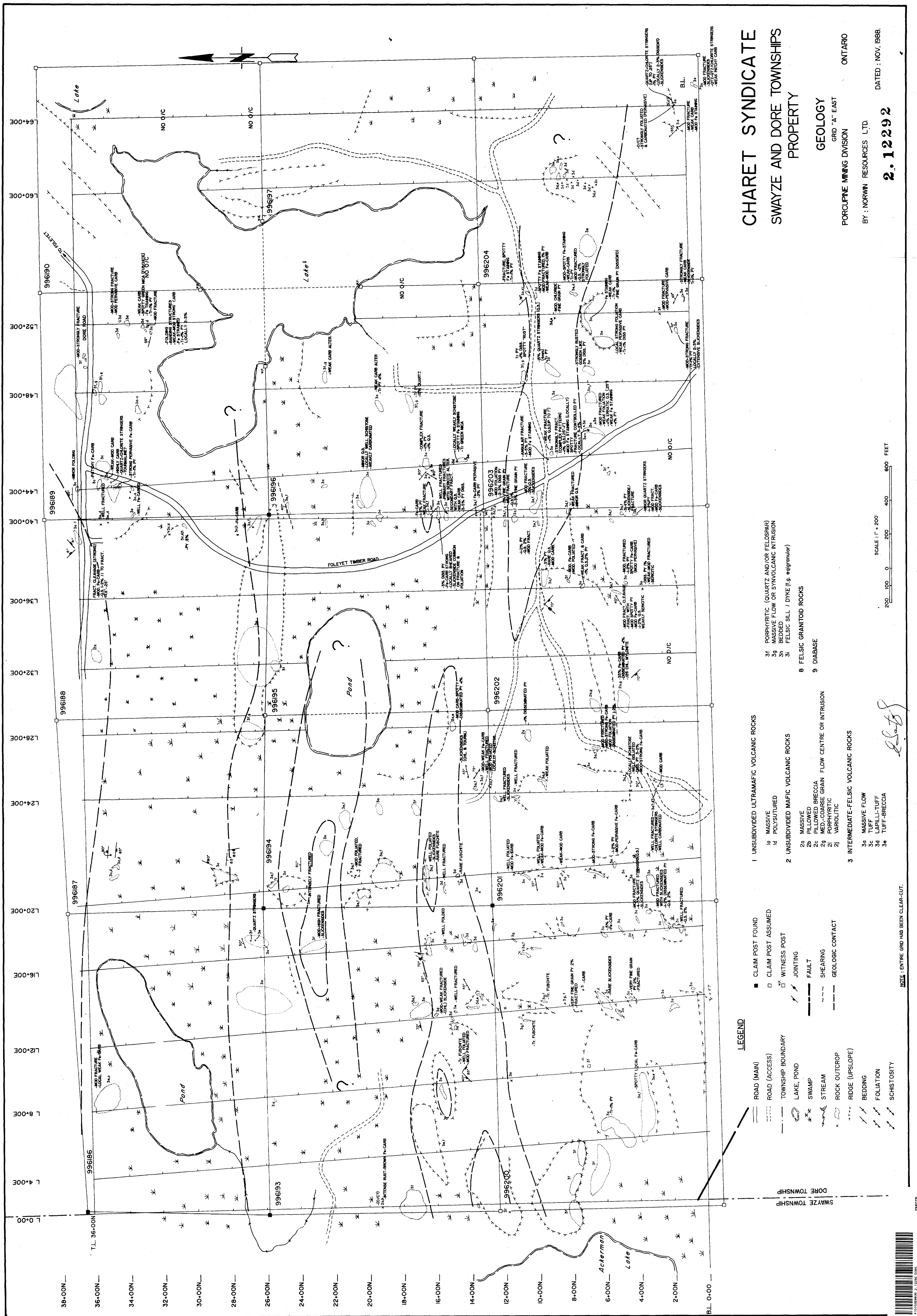
2. 12292

- LEGEND**
- ROAD (MAIN)
  - ROAD (ACCESS)
  - TOWNSHIP BOUNDARY
  - LAKE, POND
  - SWAMP
  - STREAM
  - ROCK OUTCROP
  - RIDGE (UP-SLOPE)
  - BEDDING (DIP, VERTICAL)
  - FOLIATION (DIP, VERTICAL)
  - SCHISTOSITY (DIP, VERTICAL)
  - JOINTING (DIP, VERTICAL)
  - CLAIM POST FOUND
  - CLAIM POST ASSUMED
  - WITNESS POST
  - FAULT
  - SHEAR
  - GEOLOGIC CONTACT
- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
    - 1a MASSIVE
    - 1d POLYSUTURED
  - 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS
    - 2a MASSIVE
    - 2b PILLOWED
    - 2c MED.-COARSE GRAIN FLOW CENTRE OR INTRUSION
    - 2d PORPHYRITIC
    - 2j VARIOLITIC
  - 3 INTERMEDIATE-FELSIC VOLCANIC ROCKS
    - 3a MASSIVE FLOW
    - 3c TUFF
    - 3d LAPILLI-TUFF
    - 3e TUFF-BRECCIA
    - 3f PORPHYRITIC (QUARTZ AND/OR FELDSPAR)
  - 4 MASSIVE FLOW OR STYVOLCANIC INTRUSION
  - 5a BEDDED
  - 5b FELSIC SILL / DYKE (f.g. oligoclase)
  - 6 FELSIC GRANITOID ROCKS
    - 9 DIABASE



2-40





# CHARET SYNDICATE

## SWAYZE AND DORE TOWNSHIPS

### PROPERTY

**GEOLOGY**  
GRID "A" EAST  
PORCUPINE MINING DIVISION ONTARIO

BY: NORWIN RESOURCES LTD. DATED: NOV. 1988

# 2.12292

- LEGEND**
- ROAD (MAIN)
  - ROAD (ACCESS)
  - TOWNSHIP BOUNDARY
  - LAKE, POND
  - SWAMP
  - STREAM
  - ROCK OUTCROP
  - RIDGE (UPSLOPE)
  - BEDDING
  - FOLIATION
  - SCHISTOSITY
  - CLAIM POST FOUND
  - CLAIM POST ASSUMED
  - WITNESS POST
  - JOINTING
  - FAULT
  - SHEARING
  - GEOLOGIC CONTACT
- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS**
- 1a MASSIVE
  - 1d POLYSUTURED
- 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS**
- 2a MASSIVE
  - 2b FOLLOVED BRECCIA
  - 2g MED-COARSE GRAIN FLOW CENTRE OR INTRUSION
  - 2i PORPHYRITIC
  - 2j VARIOLITIC
- 3 INTERMEDIATE-FELSIC VOLCANIC ROCKS**
- 3a MASSIVE FLOW
  - 3c TUFF
  - 3d LAPILLI-TUFF
  - 3e TUFF-BRECCIA
- 8 FELSIC GRANITOID ROCKS**
- 8 DIABASE
- 9 PORPHYRITIC (QUARTZ AND/OR FELDSPAR)**
- 9a MASSIVE FLOW OR SYN-VOLCANIC INTRUSION
  - 9b BEDDED
  - 9c FELSIC SILL / DYKE (f.g. eugranular)

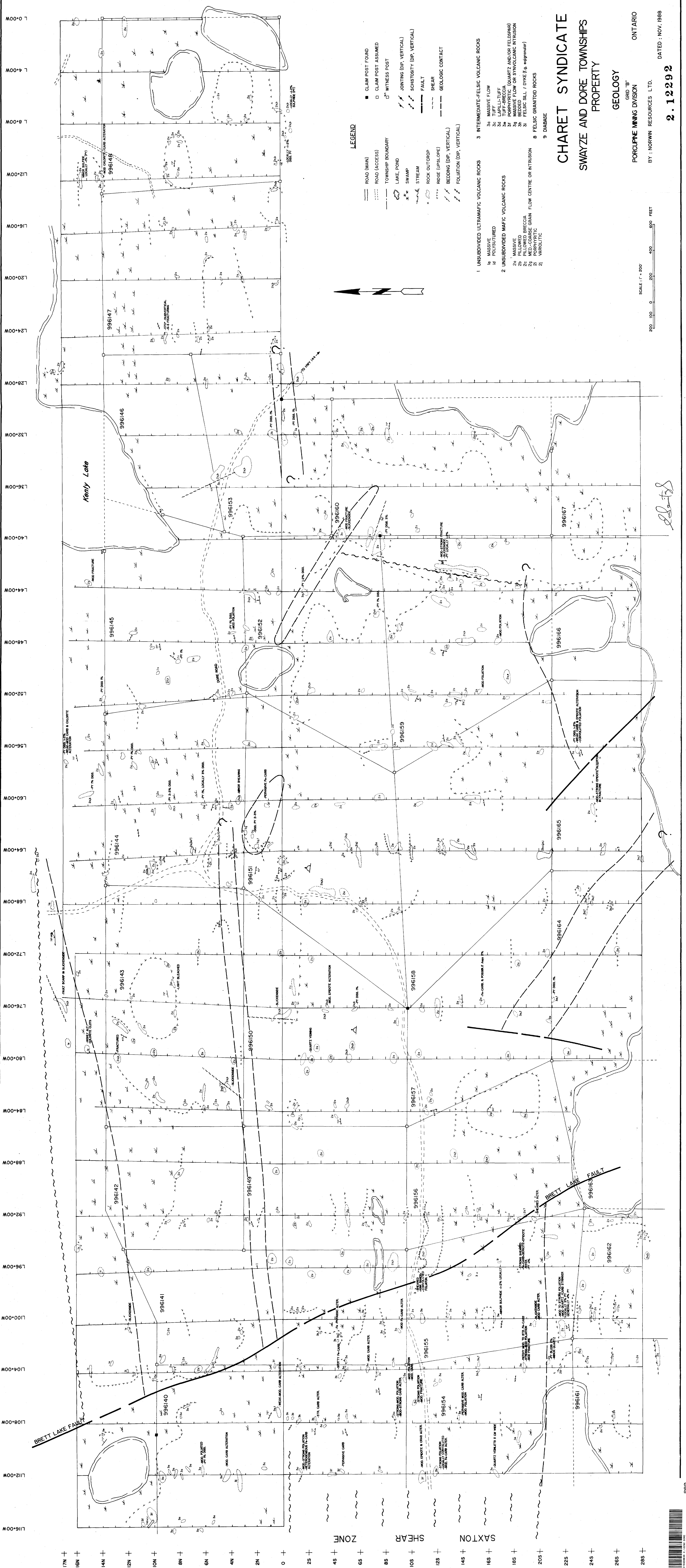
SCALE: 1" = 200 FEET

200 100 0 200 400 600 FEET

NOTE: ENTIRE GRID HAS BEEN CLEAR-CUT.







**LEGEND**

- ROAD (MAIN)
- ROAD (ACCESS)
- TOWNSHIP BOUNDARY
- LAKE, POND
- SWAMP
- STREAM
- ROCK OUTCROP
- RISE (UPSLOPE)
- BEDDING (DIP, VERTICAL)
- FOLIATION (DIP, VERTICAL)
- CLAIM POST FOUND
- CLAIM POST ASSUMED
- WITNESS POST
- JOINTING (DIP, VERTICAL)
- SCHISTOSITY (DIP, VERTICAL)
- FAULT
- SHEAR
- GEOLOGIC CONTACT

- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
  - 1a MASSIVE
  - 1b POLYSTRUCTURED
- 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS
  - 2a MASSIVE
  - 2b FLOWED BRECCIA
  - 2c MED-COARSE GRAIN PORPHYRITIC
  - 2d FINE-GRAINED PORPHYRITIC
  - 2e VARICLITIC
- 3 INTERMEDIATE-FELSIC VOLCANIC ROCKS
  - 3a MASSIVE FLOW
  - 3b TUFF
  - 3c LAPILLI CLIFF
  - 3d LAPILLI CONE
  - 3e PORPHYRITIC (QUARTZ AND/OR FELDSPAR)
  - 3f MASSIVE FLOW OR SYNVOLCANIC INTRUSION
  - 3g BEDDED BRECCIA
  - 3h FELSIC SILL / DYKE (e.g. egsgrander)
- 4 FELSIC GRANITOID ROCKS
  - 4a DIABASE

**CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS  
PROPERTY**

**GEOLOGY**  
GRID "B"  
**PORCUPINE MINING DIVISION**

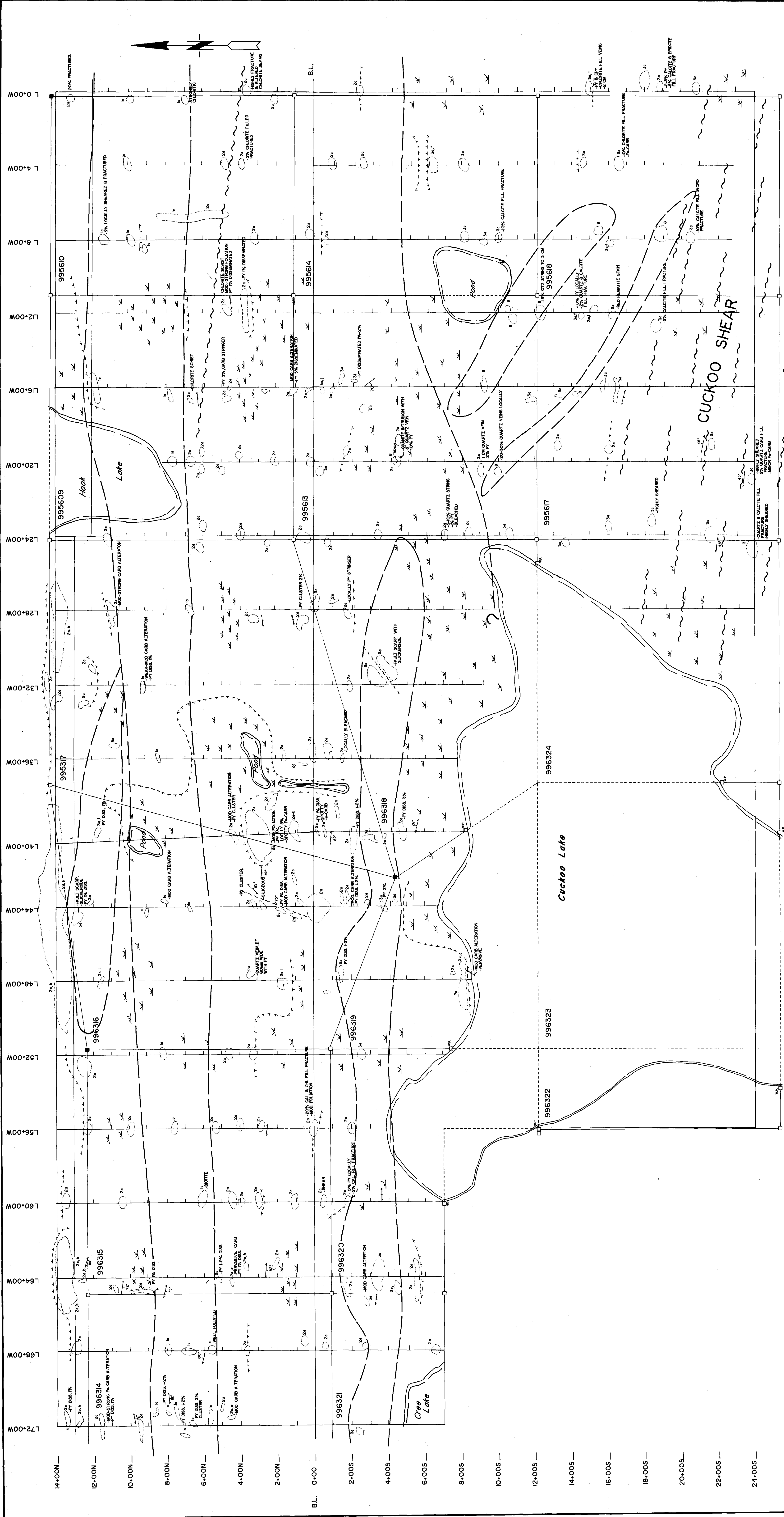
ONTARIO

BY : NORWIN RESOURCES LTD.

DATED : NOV. 1988

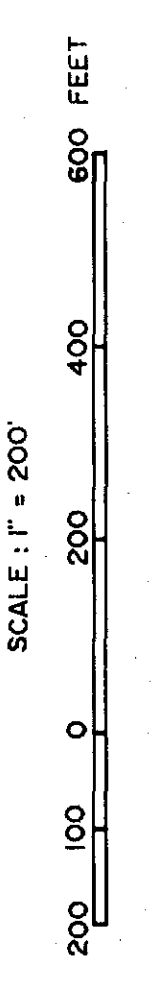
SCALE: 1" = 200'  
0 200 400 600 FEET

*Handwritten signature*



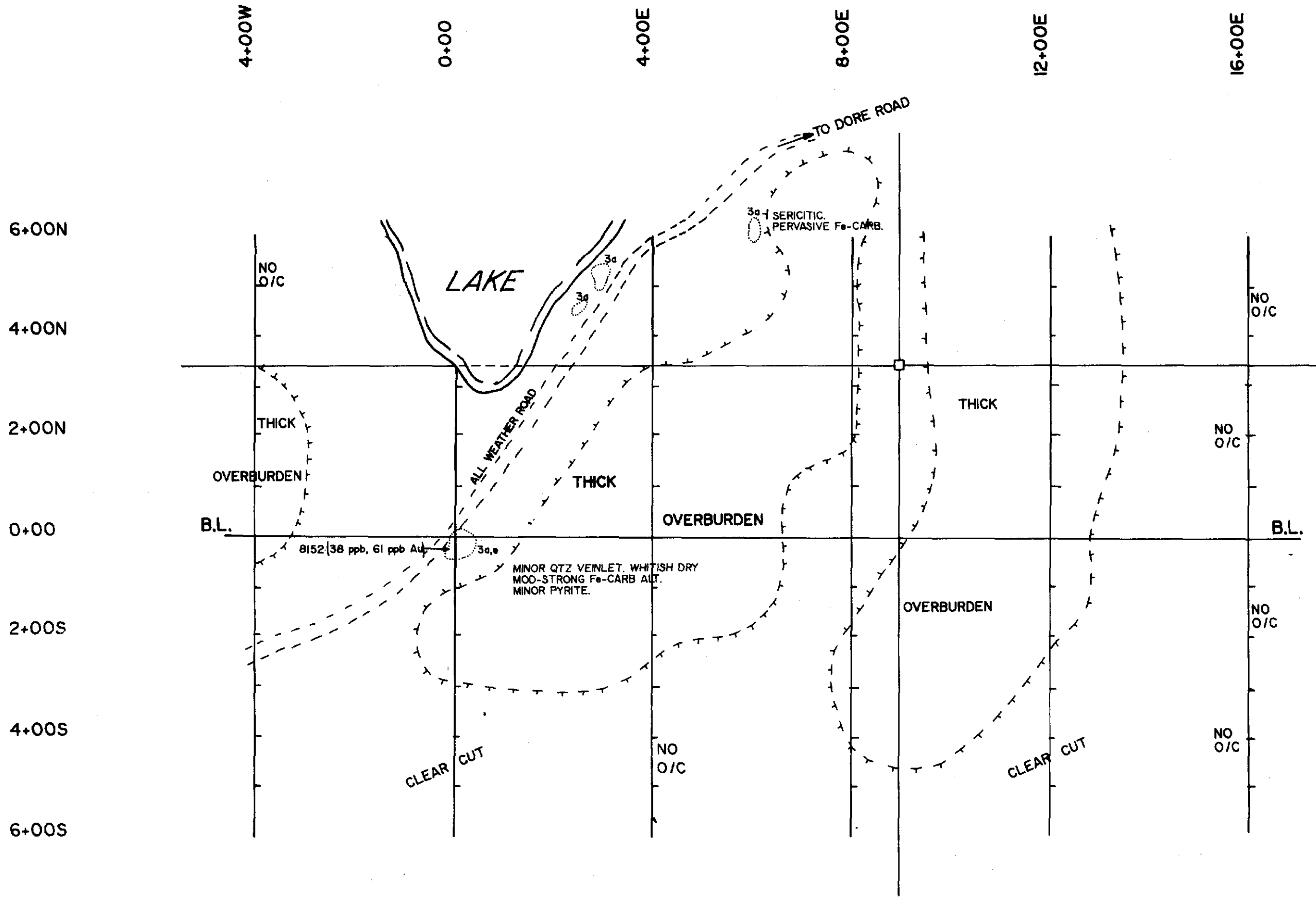
**CHARET SYNDICATE**  
**SWAYZE AND DORE TOWNSHIPS**  
**PROPERTY**  
**GEOLOGY**  
 Grid "C"

**PORCUPINE MINING DIVISION**      **ONTARIO**  
 BY: NORWIN RESOURCES LTD.      DATED: NOV. 1988  
**2.12292**



- LEGEND**
- ROAD (MAIN)
  - ROAD (ACCESS)
  - TOWNSHIP BOUNDARY
  - LAKE, POND
  - SWAMP
  - STREAM
  - ROCK OUTCROP
  - RIDGE (UP-SLOPE)
  - BEDDING (DIP, VERTICAL)
  - FOLIATION (DIP, VERTICAL)
  - SCHISTOSITY (DIP, VERTICAL)
  - CLAIM POST FOUND
  - CLAIM POST ASSUMED
  - WITNESS POST
  - FAULT
  - SHEAR
  - GEOLOGIC CONTACT
- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
    - 1a MASSIVE
    - 1b POLYSTRUCTURED
  - 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS
    - 2a MASSIVE
    - 2b FLOWED
    - 2c FLOWED BRECCIA
    - 2g MED-COARSE GRAIN
    - 2i PORPHYRITIC
    - 2j VAROLITIC
  - 3 INTERMEDIATE-FELSIC VOLCANIC ROCK
    - 3a MASSIVE FLOW
    - 3c TUFF
    - 3d LAPILLI-TUFF
    - 3e TUFF-BRECCIA
  - 4 PORPHYRITIC (QUARTZ AND/OR FELDSPAR)
  - 5 MASSIVE FLOW OR STYVOLCANIC INTRUSION
  - 6 BEDDED
  - 7 FELSIC SILL / DYKE (f.g. eugranular)
  - 8 FELSIC GRANITOID ROCKS
  - 9 DIABASE





**LEGEND**

- LAKE, POND
- ROCK OUTCROP
- RIDGE (UPSLOPE)
- CLAIM POST FOUND
- CLAIM POST ASSUMED

**3 INTERMEDIATE-FELSIC VOLCANIC ROCKS**

- 3a MASSIVE FLOW
- 3e TUFF-BRECCIA

*[Handwritten signature]*

**CHARET SYNDICATE  
SWAYZE AND DORE TOWNSHIPS  
PROPERTY**

**GEOLOGY**

GRID "D"  
PORCUPINE MINING DIVISION      ONTARIO

BY: NORWIN RESOURCES LTD.

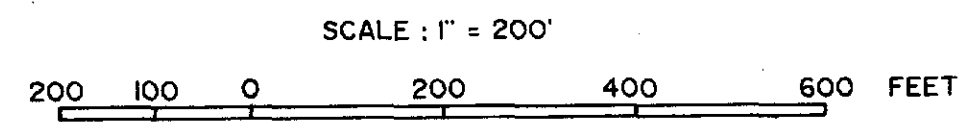
**2.12292**

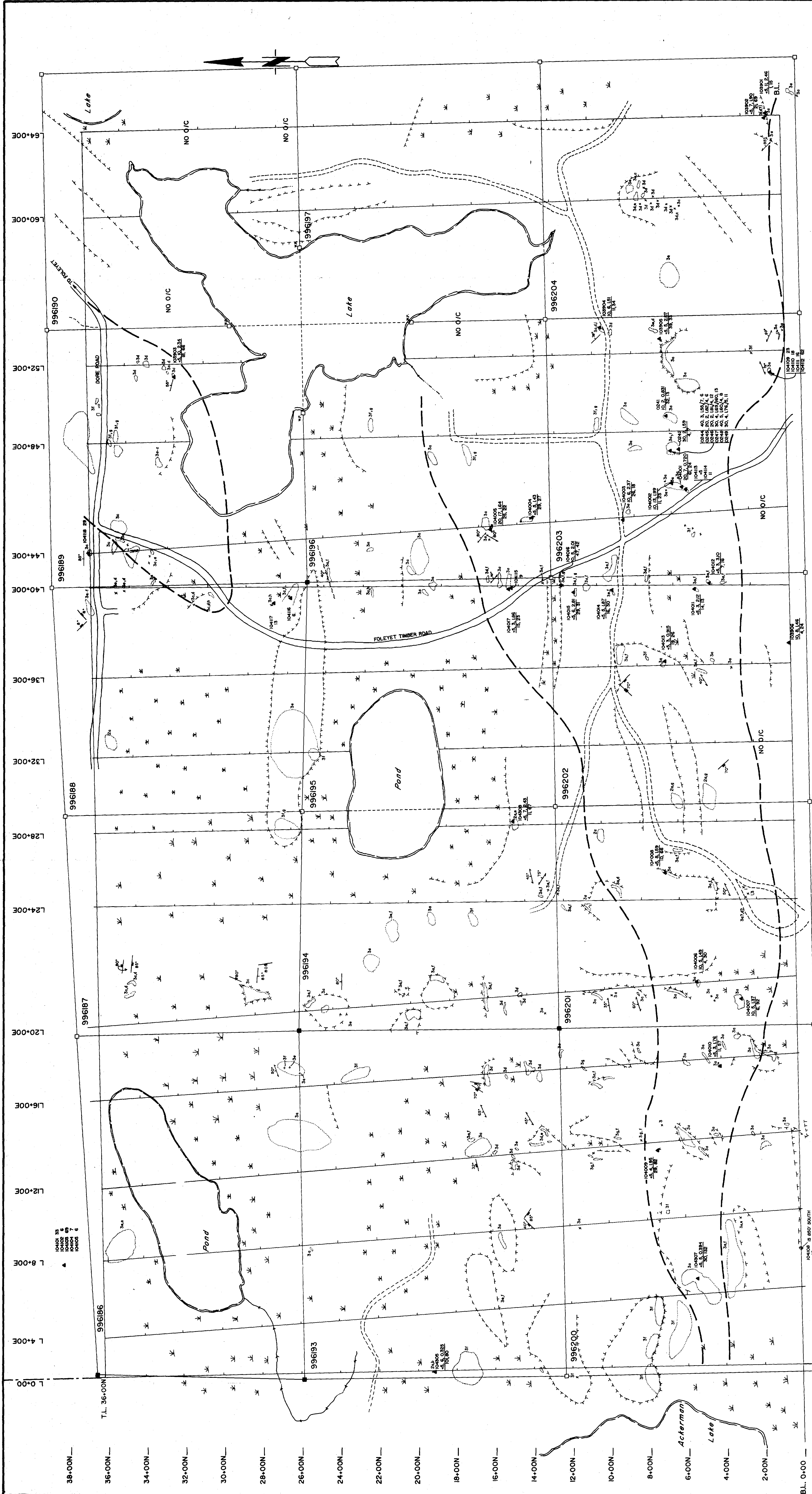
DATED: NOV. 1988.



280

**NOTE:** Terrain consists of rolling topography with locally thick overburden cover. Entire grid is clear cut.

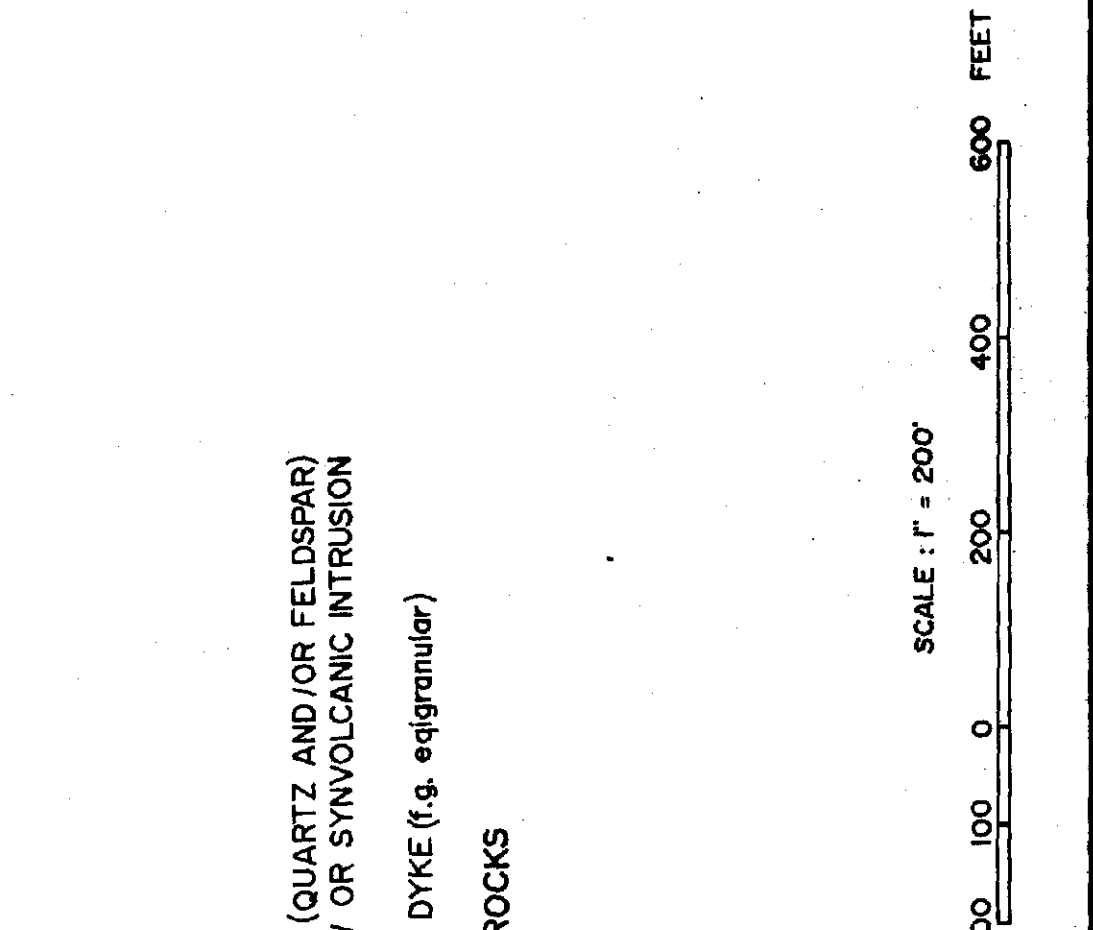




**CHARET SYNDICATE**  
**SWAYZE AND DORE TOWNSHIPS**  
**PROPERTY**  
**SAMPLE LOCATION & ANALYSIS**

GRID "A" EAST  
 PORCUPINE MINING DIVISION ONTARIO  
 BY: NORWIN RESOURCES LTD. DATED: NOV. 1988.

**2.12292**



- LEGEND**
- 2500 ROAD (MAIN)
  - ROAD (ACCESS)
  - TOWNSHIP BOUNDARY
  - LAKE, POND
  - SWAMP
  - STREAM
  - ROCK OUTCROP
  - RIDGE (UPSLOPE)
  - BEDDING
  - FOLIATION
  - SCHISTOSITY
  - CLAIM POST FOUND
  - CLAIM POST ASSUMED
  - WITNESS POST
  - JOINTING
  - LINEAMENT
  - SHEARING
  - ZONE OF SULPHIDE MINERALIZATION
  - UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
    - 1a MASSIVE
    - 1d POLYSTRUCTURED
  - UNSUBDIVIDED MAFIC VOLCANIC ROCKS
    - 2a MASSIVE
    - 2b PILLOWED
    - 2c MED-COARSE GRAIN
    - 2d FLOW CENTRE OR INTRUSION
    - 2e PORPHYRITIC
    - 2f VARIOLITIC
  - INTERMEDIATE-FELSIC VOLCANIC ROCKS
    - 3a MASSIVE FLOW
    - 3b TUFF
    - 3c LAPILLI-TUFF
    - 3d TUFF-BRECCIA
  - FELSIC GRANITOID ROCKS
    - 8 DIABASE
    - 9
  - PORPHYRITIC (QUARTZ AND/OR FELDSPAR)
  - MASSIVE FLOW OR SYNVOLCANIC INTRUSION
  - FELSIC SILL / DYKE (f.g. egrgranular)
- NOTE: ENTIRE GRID HAS BEEN CLEAR-CUT.

38+00N —  
 36+00N —  
 34+00N —  
 32+00N —  
 30+00N —  
 28+00N —  
 26+00N —  
 24+00N —  
 22+00N —  
 20+00N —  
 18+00N —  
 16+00N —  
 14+00N —  
 12+00N —  
 10+00N —  
 8+00N —  
 6+00N —  
 4+00N —  
 2+00N —  
 BL. 0+00 —  
 2+00S —  
 4+00S —  
 6+00S —

- LEGEND**
- ROAD (MAIN)
  - ROAD (ACCESS)
  - TOWNSHIP BOUNDARY
  - LAKE, POND
  - SWAMP
  - STREAM
  - ROCK OUTCROP
  - RIDGE (UPSLOPE)
  - BEDDING (DIP, VERTICAL)
  - FOLIATION (DIP, VERTICAL)
  - SCHISTOSITY (DIP, VERTICAL)
  - JOINTING (DIP, VERTICAL)
  - CLAIM POST FOUND
  - CLAIM POST ASSUMED
  - WITNESS POST
  - LINEAMENT
  - SHEAR
  - UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
    - 1a MASSIVE
    - 1d POLYSUTURED
  - UNSUBDIVIDED MAFIC VOLCANIC ROCKS
    - 2a MASSIVE
    - 2b PILLOWED
    - 2c MED-COARSE GRAIN
    - 2i PORPHYRITIC
    - 2j VAROLITIC
  - INTERMEDIATE-FELSIC VOLCANIC ROCKS
    - 3a MASSIVE FLOW
    - 3c TUFF
    - 3d LAPILLI-TUFF
    - 3e TUFF-BRECCIA
    - 3f PORPHYRITIC (QUARTZ AND/OR FELDSPAR)
  - MASSIVE FLOW OR SYNVOLCANIC INTRUSION
    - 3g BEDED
    - 3h FELSIC SILL / DYKE (f.g. eugranular)
  - FELSIC GRANITOID ROCKS
    - 8 DIABASE
    - 9

- 3g MASSIVE FLOW OR SYNVOLCANIC INTRUSION
- 3h BEDED
- 3h FELSIC SILL / DYKE (f.g. eugranular)
- 8 FELSIC GRANITOID ROCKS
- 9 DIABASE

- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
- 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS
- 3 INTERMEDIATE-FELSIC VOLCANIC ROCKS

- 3g MASSIVE FLOW OR SYNVOLCANIC INTRUSION
- 3h BEDED
- 3h FELSIC SILL / DYKE (f.g. eugranular)
- 8 FELSIC GRANITOID ROCKS
- 9 DIABASE

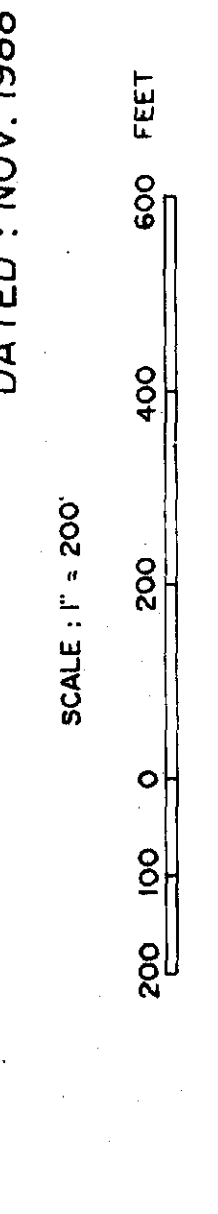
- 3g MASSIVE FLOW OR SYNVOLCANIC INTRUSION
- 3h BEDED
- 3h FELSIC SILL / DYKE (f.g. eugranular)
- 8 FELSIC GRANITOID ROCKS
- 9 DIABASE

**CHARET SYNDICATE**  
 SWAYZE AND DORE TOWNSHIPS  
 PROPERTY

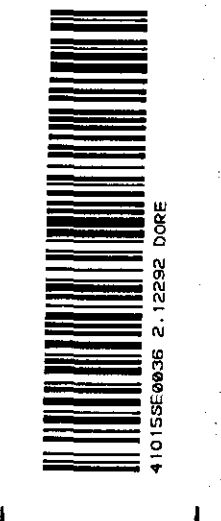
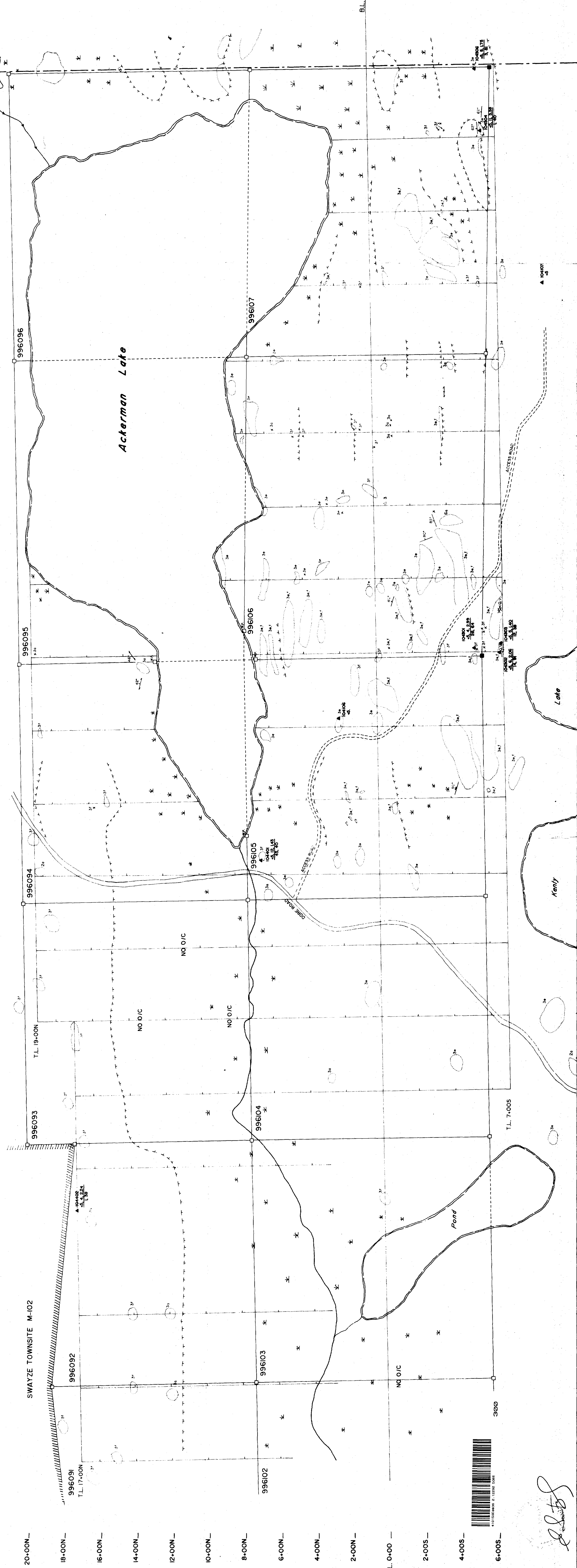
**SAMPLE LOCATION & ANALYSIS**

GRID "A" WEST  
 PORCUPINE MINING DIVISION  
 ONTARIO

BY: NORWIN RESOURCES LTD.  
 DATED: NOV. 1988

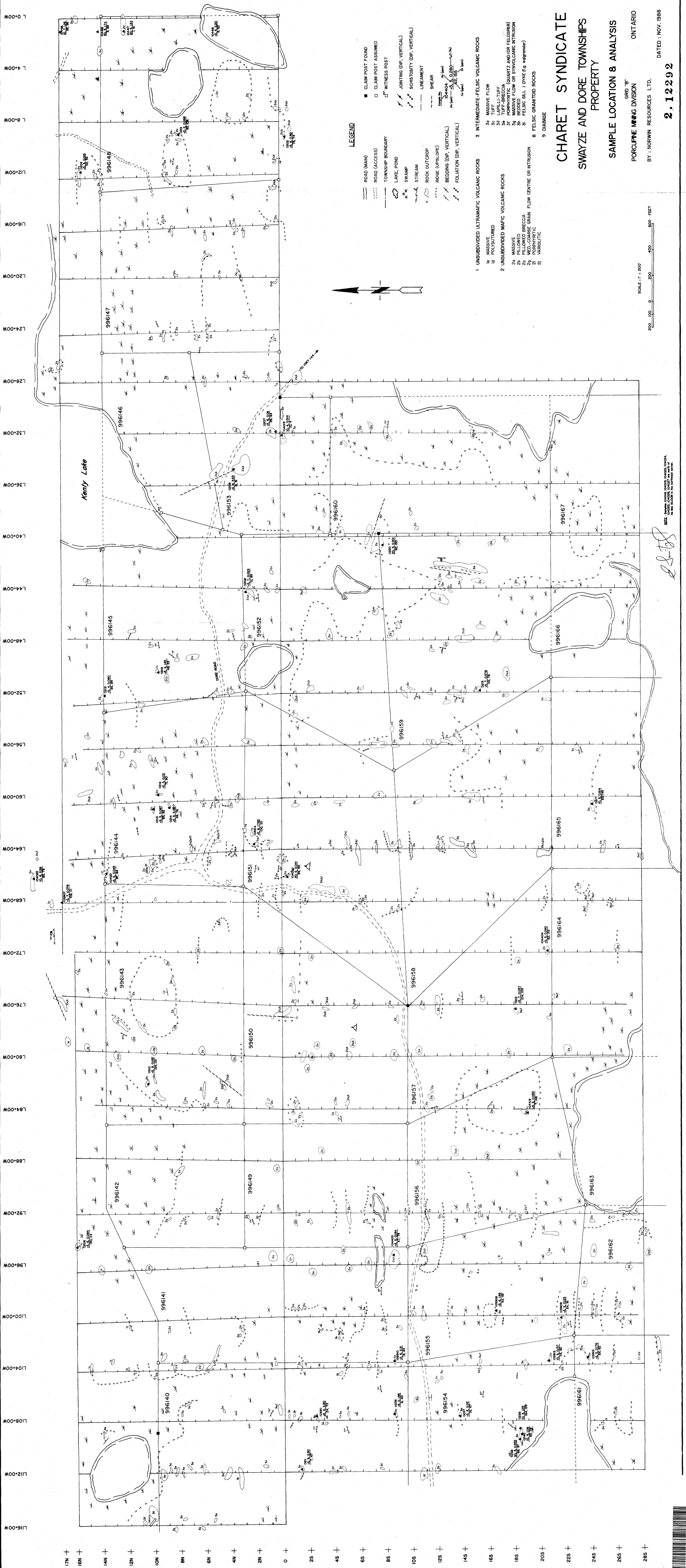


**2.12292**



*[Handwritten signature]*





**CHARET SYNDICATE**  
**SWAYZE AND DORE TOWNSHIPS**  
**PROPERTY**  
**SAMPLE LOCATION & ANALYSIS**

PORCUPINE MINING DIVISION  
 ONTARIO  
 BY: NORWIN RESOURCES LTD.  
 DATED: NOV. 1988

2. 12292

17N +  
 16N +  
 14N +  
 12N +  
 10N +  
 8N +  
 6N +  
 4N +  
 2N +  
 0 +  
 25 +  
 45 +  
 65 +  
 85 +  
 105 +  
 125 +  
 145 +  
 165 +  
 185 +  
 205 +  
 225 +  
 245 +  
 265 +  
 285 +

L116+00W  
 L112+00W  
 L108+00W  
 L104+00W  
 L100+00W  
 L96+00W  
 L92+00W  
 L88+00W  
 L84+00W  
 L80+00W  
 L76+00W  
 L72+00W  
 L68+00W  
 L64+00W  
 L60+00W  
 L56+00W  
 L52+00W  
 L48+00W  
 L44+00W  
 L40+00W  
 L36+00W  
 L32+00W  
 L28+00W  
 L24+00W  
 L20+00W  
 L16+00W  
 L12+00W  
 L8+00W  
 L4+00W  
 0+00W

**LEGEND**

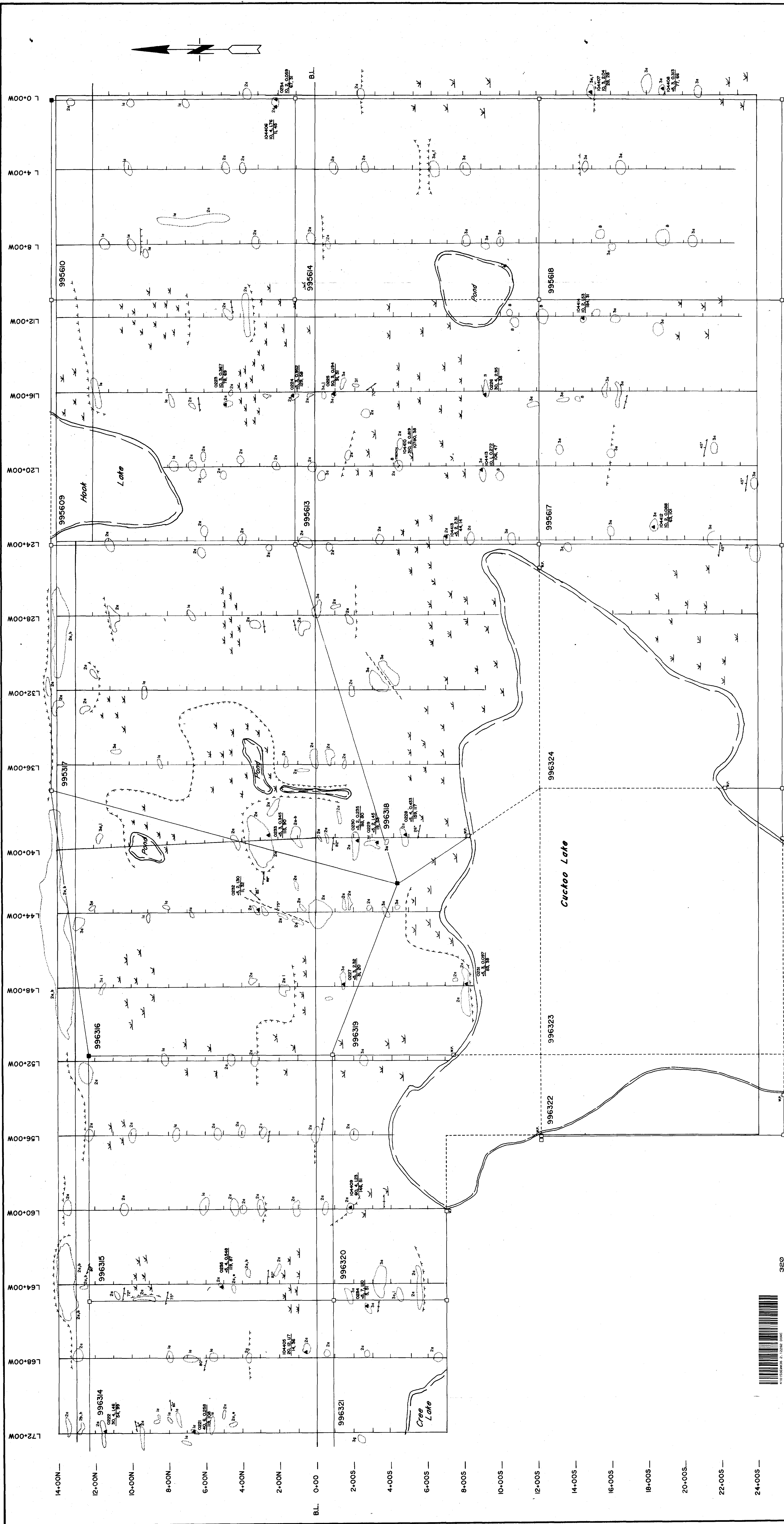
- ROAD (MAIN)
- ROAD (ACCESS)
- TOWNSHIP BOUNDARY
- LAKE, POND
- SWAMP
- STREAM
- ROCK OUTCROP
- ROGE (UP-SLOPE)
- BEDDING (DIP, VERTICAL)
- FOLIATION (DIP, VERTICAL)
- CLAIM POST FOUND
- CLAIM POST ASSUMED
- WITNESS POST
- JOINTING (DIP, VERTICAL)
- SCHISTOSITY (DIP, VERTICAL)
- LINEAMENT
- SHEAR
- UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
- INTERMEDIATE-FELSIC VOLCANIC ROCKS
- MASSIVE FLOW
- TUFF
- LAPILLI-TUFF
- TUFF-BRECCIA
- UNSUBDIVIDED QUARTZ AND/OR FELSPATH
- MASSIVE FLOW OR STYVOLCANIC INTRUSION
- BEDDED
- FELSIC SILL / DYKE (i.e. engramite)
- FELSIC GRANITOID ROCKS
- DIABASE
- UNSUBDIVIDED MAFIC VOLCANIC ROCKS
- POSSUTURED
- MASSIVE
- PILLOWED
- FOLLOWED BRECCIA
- GRAIN FLOW CENTRE OR INTRUSION
- PORPHYRYC
- VARIOLITIC

SCALE: 1" = 200'

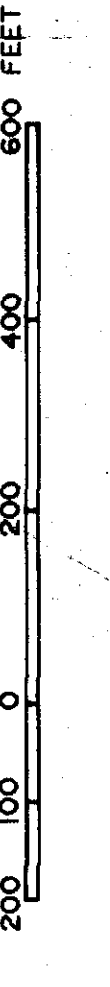
0 100 200 300 400 500 FEET

NOTE: APPROXIMATE COORDINATES SHOWN ON THIS MAP ARE BASED ON THE 1983 CANADIAN DATUM.

*Handwritten signature/initials*



**CHARET SYNDICATE**  
**SWAYZE AND DORE TOWNSHIPS**  
**PROPERTY**  
**SAMPLE LOCATION & ANALYSIS**  
Grid "C"  
**FORCUPINE MINING DIVISION**      **ONTARIO**  
BY: NORWIN RESOURCES LTD.      **DATED: NOV. 1988**



*[Handwritten signature]*

320

**LEGEND**

- ROAD (MAIN)
- ROAD (ACCESS)
- TOWNSHIP BOUNDARY
- LAKE, POND
- SWAMP
- STREAM
- ROCK OUTCROP
- RIDGE (UPSLOPE)
- BEDDING (DIP, VERTICAL)
- FOLIATION (DIP, VERTICAL)
- SCHISTOSITY (DIP, VERTICAL)
- CLAIM POST FOUND
- CLAIM POST ASSUMED
- WITNESS POST
- LINEAMENT
- SHEAR
- Sample No. 104409, 104410, 104411, 104412, 104413, 104414, 104415, 104416, 104417, 104418, 104419, 104420, 104421, 104422, 104423, 104424, 104425, 104426, 104427, 104428, 104429, 104430, 104431, 104432, 104433, 104434, 104435, 104436, 104437, 104438, 104439, 104440, 104441, 104442, 104443, 104444, 104445, 104446, 104447, 104448, 104449, 104450, 104451, 104452, 104453, 104454, 104455, 104456, 104457, 104458, 104459, 104460, 104461, 104462, 104463, 104464, 104465, 104466, 104467, 104468, 104469, 104470, 104471, 104472, 104473, 104474, 104475, 104476, 104477, 104478, 104479, 104480, 104481, 104482, 104483, 104484, 104485, 104486, 104487, 104488, 104489, 104490, 104491, 104492, 104493, 104494, 104495, 104496, 104497, 104498, 104499, 104500, 104501, 104502, 104503, 104504, 104505, 104506, 104507, 104508, 104509, 104510, 104511, 104512, 104513, 104514, 104515, 104516, 104517, 104518, 104519, 104520, 104521, 104522, 104523, 104524, 104525, 104526, 104527, 104528, 104529, 104530, 104531, 104532, 104533, 104534, 104535, 104536, 104537, 104538, 104539, 104540, 104541, 104542, 104543, 104544, 104545, 104546, 104547, 104548, 104549, 104550, 104551, 104552, 104553, 104554, 104555, 104556, 104557, 104558, 104559, 104560, 104561, 104562, 104563, 104564, 104565, 104566, 104567, 104568, 104569, 104570, 104571, 104572, 104573, 104574, 104575, 104576, 104577, 104578, 104579, 104580, 104581, 104582, 104583, 104584, 104585, 104586, 104587, 104588, 104589, 104590, 104591, 104592, 104593, 104594, 104595, 104596, 104597, 104598, 104599, 104600, 104601, 104602, 104603, 104604, 104605, 104606, 104607, 104608, 104609, 104610, 104611, 104612, 104613, 104614, 104615, 104616, 104617, 104618, 104619, 104620, 104621, 104622, 104623, 104624, 104625, 104626, 104627, 104628, 104629, 104630, 104631, 104632, 104633, 104634, 104635, 104636, 104637, 104638, 104639, 104640, 104641, 104642, 104643, 104644, 104645, 104646, 104647, 104648, 104649, 104650, 104651, 104652, 104653, 104654, 104655, 104656, 104657, 104658, 104659, 104660, 104661, 104662, 104663, 104664, 104665, 104666, 104667, 104668, 104669, 104670, 104671, 104672, 104673, 104674, 104675, 104676, 104677, 104678, 104679, 104680, 104681, 104682, 104683, 104684, 104685, 104686, 104687, 104688, 104689, 104690, 104691, 104692, 104693, 104694, 104695, 104696, 104697, 104698, 104699, 104700, 104701, 104702, 104703, 104704, 104705, 104706, 104707, 104708, 104709, 104710, 104711, 104712, 104713, 104714, 104715, 104716, 104717, 104718, 104719, 104720, 104721, 104722, 104723, 104724, 104725, 104726, 104727, 104728, 104729, 104730, 104731, 104732, 104733, 104734, 104735, 104736, 104737, 104738, 104739, 104740, 104741, 104742, 104743, 104744, 104745, 104746, 104747, 104748, 104749, 104750, 104751, 104752, 104753, 104754, 104755, 104756, 104757, 104758, 104759, 104760, 104761, 104762, 104763, 104764, 104765, 104766, 104767, 104768, 104769, 104770, 104771, 104772, 104773, 104774, 104775, 104776, 104777, 104778, 104779, 104780, 104781, 104782, 104783, 104784, 104785, 104786, 104787, 104788, 104789, 104790, 104791, 104792, 104793, 104794, 104795, 104796, 104797, 104798, 104799, 104800, 104801, 104802, 104803, 104804, 104805, 104806, 104807, 104808, 104809, 104810, 104811, 104812, 104813, 104814, 104815, 104816, 104817, 104818, 104819, 104820, 104821, 104822, 104823, 104824, 104825, 104826, 104827, 104828, 104829, 104830, 104831, 104832, 104833, 104834, 104835, 104836, 104837, 104838, 104839, 104840, 104841, 104842, 104843, 104844, 104845, 104846, 104847, 104848, 104849, 104850, 104851, 104852, 104853, 104854, 104855, 104856, 104857, 104858, 104859, 104860, 104861, 104862, 104863, 104864, 104865, 104866, 104867, 104868, 104869, 104870, 104871, 104872, 104873, 104874, 104875, 104876, 104877, 104878, 104879, 104880, 104881, 104882, 104883, 104884, 104885, 104886, 104887, 104888, 104889, 104890, 104891, 104892, 104893, 104894, 104895, 104896, 104897, 104898, 104899, 104900, 104901, 104902, 104903, 104904, 104905, 104906, 104907, 104908, 104909, 104910, 104911, 104912, 104913, 104914, 104915, 104916, 104917, 104918, 104919, 104920, 104921, 104922, 104923, 104924, 104925, 104926, 104927, 104928, 104929, 104930, 104931, 104932, 104933, 104934, 104935, 104936, 104937, 104938, 104939, 104940, 104941, 104942, 104943, 104944, 104945, 104946, 104947, 104948, 104949, 104950, 104951, 104952, 104953, 104954, 104955, 104956, 104957, 104958, 104959, 104960, 104961, 104962, 104963, 104964, 104965, 104966, 104967, 104968, 104969, 104970, 104971, 104972, 104973, 104974, 104975, 104976, 104977, 104978, 104979, 104980, 104981, 104982, 104983, 104984, 104985, 104986, 104987, 104988, 104989, 104990, 104991, 104992, 104993, 104994, 104995, 104996, 104997, 104998, 104999, 105000
- 1 UNSUBDIVIDED ULTRAMAFIC VOLCANIC ROCKS
  - 1a MASSIVE
  - 1d POLYSUTURED
- 2 UNSUBDIVIDED MAFIC VOLCANIC ROCKS
  - 2a MASSIVE
  - 2b FLOWED BRECCIA
  - 2c FLOWED BRECCIA
  - 2d FLOW-CENTRE OR INTRUSION
  - 2e FLOW-CENTRE OR INTRUSION
  - 2f VARIOLITIC
- 3 INTERMEDIATE-FELSIC VOLCANIC ROCK
  - 3a MASSIVE FLOW
  - 3b TUFF
  - 3c LAPILLI-TUFF
  - 3d TUFF-BRECCIA
- 4 PORPHYRY (QUARTZ AND/OR FELDSPAR)
- 5 MASSIVE FLOW OR STYVOLCANIC INTRUSION
- 6 BEDDED
- 7 FELSIC SILL / DYKE (e.g. eegranular)
- 8 FELSIC GRANITOID ROCKS
- 9 DIABASE