010

GEOLOGICAL REPORT

ON THE

RIDOUT LAKE PROPERTY

GREENLAW TOWNSHIP

DISTRICT OF SUDBURY

ONTARIO

2.15050

FOR

KERVIN MCDONOUGH

Orval # 2.6412

E.G. Sawitzky
Norwin Geological Ltd.
January 13, 1993

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SUMMARY

Kervin McDonough holds two (2) claim groups totalling 62 mining claims within Greenlaw and Cunningham Townships, Porcupine Mining Division, Ontario. The writer was asked to carry out a geological mapping program on a grid established in the northeast sector of the East Ridout Claim Group. Access to the property is by road followed by a short boat ride.

The property is underlain by Early Precambrian - Archean supracrustal rocks of the Abitibi Subprovince of the Canadian Shield within the Swayze greenstone belt.

The property is underlain by a sequence of steeply dipping and easterly trending mafic and intermediate-felsic volcanic and sedimentary rocks which have been intruded by mafic to felsic intrusive rocks. Ultramafic volcanic and chemical sedimentary rocks make up a minor component of the stratigraphy. Of particular significance to gold exploration is the recognition of a felsic sill intruding along the contact between mafic volcanic and sedimentary rocks in the south end of the property.

A major deformation zone transects the property and has affected to some degree all lithologies on the property resulting in the development of moderate to strong schistose rocks and mylonitic fabrics.

Similarly it appears that all lithologies have been affected to some degree by hydrothermal alteration consisting of mainly carbonatization and chloritization and to a lesser degree sericitization, hematitization, epidotization and silicification. North of Ridout Lake a laterally extensive unit of massive to schistose ankerite-chlorite, the protolith of which may have been a mafic or ultramafic volcanic rock, attests to the degree of alteration the rocks have been subjected to.

Historically, four (4) auriferous quartz veins (grading up to 0.173 oz./ton) have been found in intermediate to felsic volcanic rocks localized in a narrow easterly trending zone including Gold Island and the north shoreline of Ridout Lake. This study revealed that geochemically anomalous gold (approximately 0.02 oz./ton) occurs at the northern contact of a felsic sill located in the south end of the property. Also geochemically anomalous gold was found immediately to the north of the massive to schistose carbonate-chlorite alteration zone situated north of Ridout Lake.

Gold mineralization appears to be controlled by the deformation zone and a possible cross-structure defined by a broad open flexure.

Recommendations are made for further follow-up work especially to determine the significance of the gold mineralization related to the felsic intrusion at the south end of the property.

1. INTRODUCTION

Mr. Kervin McDonough holds two (2) claim groups totalling 62 contiguous unpatented mining claims within Greenlaw and Cunningham Townships, Porcupine Mining Division, Ontario (Figure 1). The writer was requested by Mr McDonough to carry out a mapping program to help assess the potential of the property for gold mineralization of economic significance. The property was mapped between September 17 and October 2, 1992 by the writer. Geological mapping and geochemical sampling were carried out on the East Ridout claim group.

The following report summarizes the regional and property geology based on a review of the literature and the current field work.

2. PROPERTY LOCATION AND ACCESS

The property consists of 62 unpatented mining claims in two groups in good standing as illustrated in Figure 2. The claims are as listed below.

Hotsone West Claims

P.1129270	
P.1129271	
P.1129272	
P.1129273	
P.1129274	
P.1129275	
TOTAL	6 Claims

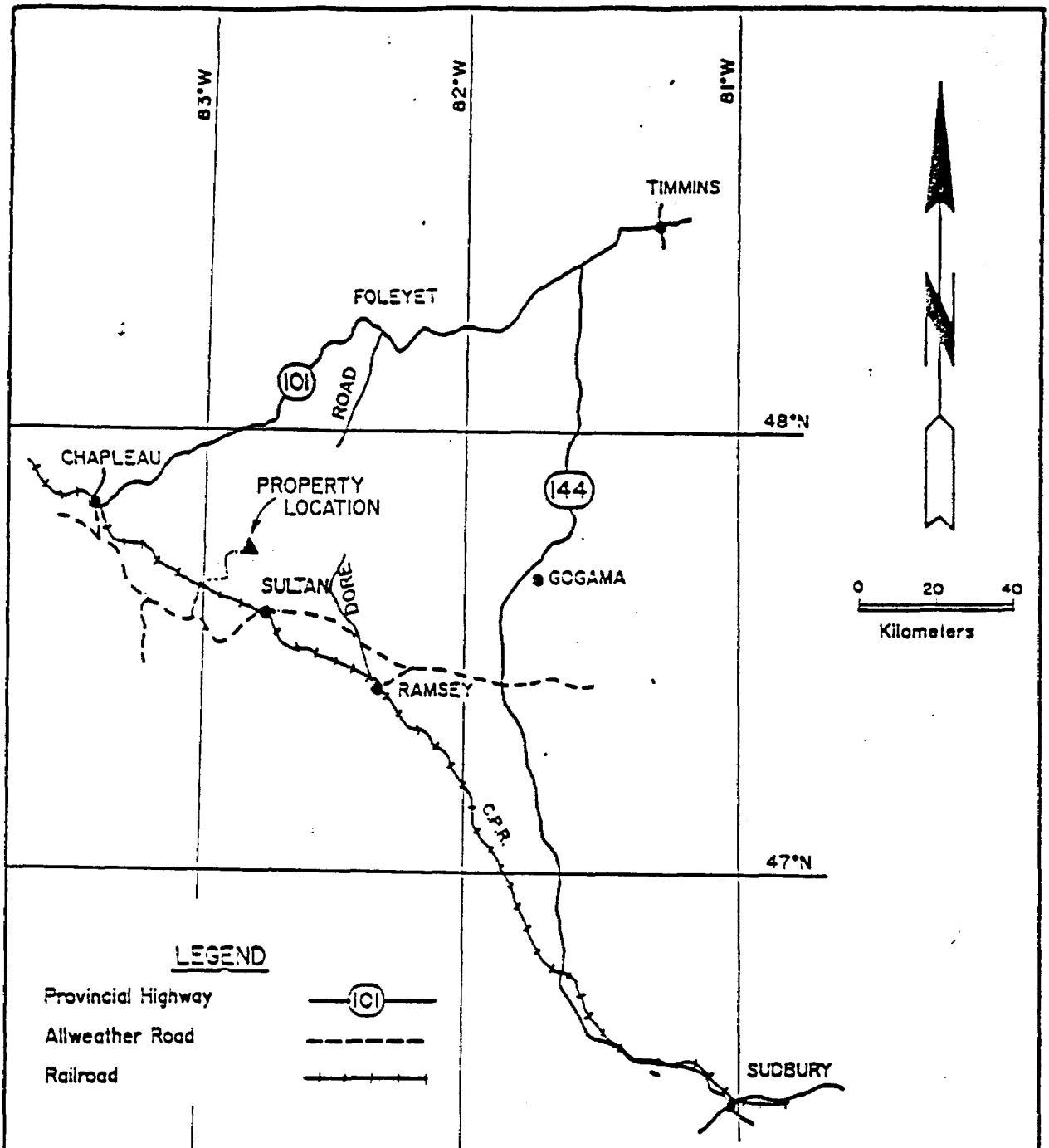

FIGURE 1

GREENLAW TOWNSHIP CLAIMS

SWAYZE AREA, ONTARIO

LOCATION MAP

DEC., 1992

DENYES TWP.

GREENLAW TWP.

EAST
RIDOUT
CLAIM
GROUP

RIDOUT LAKE

HOTSTONE LAKE

WEST
HOTSTONE
CLAIM
GROUP

WAKAMI RIVER

PATENTED CLAIMS
RHODES RESOURCES

GREENLAW TWP.

CUNNINGHAM TWP.

N

0 200 1000 2000

METERS

FIGURE 2

GREENLAW TOWNSHIP CLAIM GROUP

K. McDONOUGH

SWAYZE AREA, ONTARIO

DEC., 1992

Ridout East Claims

P.1155697*
P.1155698*
P.1155699*
P.1155700*
P.1155701*
P.1155702*
P.1155703*
P.1155704*
P.1155705*
P.1155706*
P.1155707*
P.1155708*
P.1155709*
P.1155710*
P.1155711
P.1155712
P.1155713
P.1155714
P.1155715
P.1155716
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P.1155735
P.1155736
P.1155737
P.1155738
P.1155739
P.1155740
P.1155741
P.1155742
P.1155743

P.1155106
P.1155107
P.1155108
P.1155109
P.1155110
P.1155111
P.1155112
P.1155113
P.1155114
P.1155115
P.1155117

* Cunningham Township

TOTAL 56 Claims

The property is located in the central and eastern part of Greenlaw township and the extreme northwestern corner of Cunningham township in the District of Sudbury, Porcupine Mining Division of northeastern Ontario at 47° 43'N latitude, 82° 48'W longitude. This is approximately 130 km southwest of Timmins and 200 km northwest of Sudbury, Ontario (Figure 1).

The property can be readily accessed by vehicle from Provincial Highway 667 running west from Sultan to Chapleau. Approximately 20 km west of Sultan the Kormack Road provides access to the Betty Lake Road which leads to Toombs township from which an east trending road leads directly to the west shore of Hotstone Lake. From here, the West Hotstone claim group can be accessed on foot and the Ridout East property can be accessed by boat or canoe.

3. GRID DESCRIPTION

Linecutting established a grid with a northeast oriented baseline that parallels the center of Ridout Lake. Grid lines are oriented northwest, perpendicular to the baseline, and spaced at 100 meter intervals. The grid lines extend to the north 400 meters and to the south 500 meters with 25 meter stations. The grid extends from L 2+00W to L 19+00E. A partial tie-line was cut at 4+00N in the west part of the grid.

4. REGIONAL GEOLOGY

The subject claims are underlain by Early Precambrian - Archean rocks of the Abitibi Subprovince of the Canadian Shield within the Swayze Greenstone Belt which is about 45 km long and 29 km wide. It is truncated at its western extremity by the Kapuskasing structural zone and 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

areas.

Within Greenlaw township, all of the rocks occur in steeply-dipping fold structures whose axes trend in a general but sinuous east-west path. Tholeiitic volcanics and clastic to chemical metasediments are present. 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 dykes intrude the greenstone supracrustals.

Chemical and clastic sedimentation occurred during the development of the volcanic pile. Chert, cherty iron-formation and sulphide-rich exhalitive units, often graphitic, are present. Spatially associated with the main chert units are small bodies of feldspar porphyry considered to be subvolcanic 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 subvertically. Shearing parallels regional east-west foliation. North-northwest trending faults are indicated by lithological displacements. East-northeast trending faults are also present.

5. PROPERTY GEOLOGY

5.1 INTRODUCTION

The terrain on the property is mainly flat to gently undulating and slightly more 'rugged' at the north end of the property. Swampy ground occurs mainly south of Ridout Lake. Bedrock exposure ranges from approximately 5% to 10% north of Ridout Lake to about 5% south of the lake.

The property is underlain by a sequence of greenschist facies volcanic and sedimentary rocks intruded by mafic and felsic rocks. The predominate rock type is volcanic and ranges in composition from ultramafic to felsic. The volcanic rocks are in contact with sediments to the south, the latter unit forming about 10%-15% of rock exposure. Mafic and felsic intrusive rocks form approximately 5%-10% of outcrop exposure.

The stratigraphic sequence developed on the property is described below, sequentially from north to south and includes: mafic volcanics rocks followed by a narrow unit of massive to schistose ankerite-chlorite followed in turn by intermediate to felsic volcanic rocks then mafic volcanic rocks and lastly conglomeratic sediments. A felsic intrusion (?) occurs at the latter mafic volcanic and sedimentary contact. Mafic intrusions, dominantly diabase, occur throughout the sequence. The McDonough Fault separates a distinct unit of 'undeformed' mafic volcanic rocks east of the fault from a strongly deformed sequence of rocks west of the fault.

Other than intrusive contacts, contacts between major lithological units were not observed.

LEGEND

- 9 DIABASE
  - 9a Unsubdivided
  - 9b Xenolithic
- 8 FELSIC INTRUSIVE ROCKS
  - 8a Massive
  - 8b Schistose
  - 8c Porphyritic
- 7 MAFIC INTRUSIVE ROCKS
- 6 CHEMICAL SEDIMENTARY ROCKS
  - Chert
- 5 CLASTIC SEDIMENTARY ROCKS
  - 5 Unsubdivided
  - 5a Argillite-siltstone
  - 5b Wacke(fine-medium grained)
  - 5c Conglomerate
  - 5e Gossan (cherty)
- 4 FELSIC METAVOLCANIC ROCKS
  - 4 Unsubdivided
  - 4a Massive
  - 4b Phyric (feldspar) flow
  - 4c Tuff
  - 4d Lapilli-tuff, Tuff breccia
  - 4e Crystal tuff
- 3 INTERMEDIATE METAVOLCANIC ROCKS
  - 3 Unsubdivided
  - 3a Massive
  - 3b Phyric (feldspar) flow
  - 3c Tuff
  - 3d Lappilli-tuff, tuff breccia
  - 3e Crystal tuff
- 2 MAFIC VOLCANIC ROCKS
  - 2 Unsubdivided
  - 2a Massive
  - 2c Pillowed
  - 2d Pillow breccia
  - 2g Hypabyssal intrusive, c.g. phase
- 1 ULTRAMAFIC VOLCANIC ROCKS
  - 1 Unsubdivided
  - 1a Spinifex

5.2 LITHOLOGICAL UNITS

5.2.1 MAFIC VOLCANIC ROCKS

Mafic volcanic rocks occur in three (3) distinct units, one unit occurs north or Ridout Lake another south of the lake and the third unit occurs east of McDonough Fault.

Mafic volcanic rocks north of Ridout Lake are generally moderately altered and deformed such that primary mineralogy and textures are obliterated. These rocks are fine to medium grained, massive, and have a dark green to pale grey green colour on the fresh surface and a grey-green weathering surface. Mafic flows are generally equigranular but a phyric texture with 1mm to 3mm plagioclase grains (15%-20%) may occur. Locally primary or secondary, fine-medium grained, magnetite (2%-4%) occurs disseminated in the rock. Layering or banding is common as a result of alteration and deformation (discussed below).

Mafic volcanic rocks south of Ridout Lake are also moderately to strongly deformed and altered as those to the north. Rarely are primary structures such as pillows preserved. These mafic rocks are predominately flows and are fine grained, equigranular, rarely plagioclase phyric, and have a green to pale grey green colour on the fresh surface and a pale brownish green weathering surface. Quartz-filled amygdules were observed in one area. Disseminated magnetite up to 5% occurs in several outcrops. Banding in these rocks is fairly common as a result of alteration and deformation (discussed below).

In stark contrast to the highly deformed and altered mafic volcanic rocks west of the McDonough Fault, the mafic volcanic rocks east of the fault are relatively `undeformed' and though altered only calcite carbonate occurs, never Fe/Mg carbonates.

Also east of the fault only mafic volcanic rocks are present. These mafic rocks are predominately fine grained, equigranular, amygdaloidal, pillowed flows that commonly display concentric cooling cracks within pillows. Variolites occur but are uncommon. They have a characteristically pale green-grey coloured fresh surface due to a pervasive carbonate alteration and a pale buff brown weathering surface. Hypabyssal coarse grained intrusive phases occur but do not appear to be common.

5.2.2 INTERMEDIATE AND FELSIC VOLCANIC ROCKS

Intermediate and felsic volcanic rocks are 'sandwiched' between the two mafic volcanic units that occur west of the McDonough Fault. Rocks of intermediate and felsic composition are grouped together and discussed as one unit because of the difficulty in separating these two compositions due to the degree of alteration (chloritization) present.

Intermediate to felsic rocks form extrusive flows and pyroclastic deposits. Extrusive flows are massive, fine to medium grained, equigranular, amygdaloidal to non-amygdaloidal and phyric (feldspar) to aphyric. Phyric flows contain from 15% to 20% subhedral lathes of feldspar ranging in size from about 1mm to 3mm. These rocks have a grey-green fresh surface and weather to a cream-buff colour.

Pyroclastic rocks are represented by fragmental rocks of tuff, lapilli-tuff and rarely tuff-breccia size range. The distinction between air-fall and flow material was not made. Bedding can be discerned in some areas within finer fragmental rocks. Mylonitic fabrics may produce a banded structure in these rocks which 'resembles' bedding. Where discernable fragments appear to be felsic and intermediate in composition while the matrix is chloritic in composition. Fragments are highly

attenuated due to deformation.

5.2.3 ULTRAMAFIC VOLCANIC ROCKS

Ultramafic volcanic rocks form a very minor component of the stratigraphy of the area. They occur only north of Ridout Lake near the north contact of the intermediate and felsic volcanic rock unit. Specifically they occur between the latter felsic rocks and the massive ankerite-chlorite unit to the north. The best exposure of these rocks is on L 5+00E, 1+25N on the shoreline of Ridout Lake. These rocks weather a chocolate brown colour and have a grey fresh surface. They are medium grained, massive and characterized by a spinifex texture.

5.2.4 SEDIMENTARY ROCKS

Clastic sediments are in contact with mafic volcanic rocks at the south end of the property and extend across the full length of the property. The dominant rock type is a polymictic matrix-supported conglomerate consisting of subrounded, strongly attenuated, cobble to pebble-sized clasts. Felsic clasts are most abundant (80%) with quartz porphyry clasts predominating. Minor mafic volcanic, gabbroic and other felsic intrusive clasts are also present. Clasts range in size from 2cm. to 60cm. The matrix is difficult to discern due to extensive chloritization. Bedding was not observed. There appears to be a general decrease in clast size across this unit to the north, however, since the entire unit was not seen top determinations from this observation are premature. The conglomerate 'grades' to a fine grained, massive, non-bedded wacke towards the north contact of this unit. Where this wacke is altered and deformed it is difficult to distinguish from the mafic volcanic rocks it is in contact with to the north.

5.2.5 MASSIVE TO SCHISTOSE ANKERITE-CHLORITE UNIT

The ankerite-chlorite unit occurs north of Ridout Lake at the interface between mafic and intermediate-felsic volcanic units. This unit can be traced across the length of the property. Outcrop widths of massive carbonate may reach 10 meters. However, up to 100 meters of highly altered and schistose rock may envelop the massive ankeritic unit.

This unit is characterized by a fine to medium grained, massive ankerite with a chocolate brown weathering. Ankerite\dolomite may constitute from 90% to 30% of the rock as massive carbonate, carbonate seams or stringers\veins. Chlorite almost always accompanies carbonate and may constitute up to 40% of the rock. Other common constituents include sericite, quartz and minor pyrite. Quartz occurs in late crosscutting stockwork stringers and veins. Fuschite in minor amounts is present locally. On L 15+00E, 2+25N magnetite forms up to 20% of the massive carbonate rock.

The protolith of this altered rock is uncertain, however, mafic and ultramafic volcanic rocks are the most likely precursors.

5.2.6 FELSIC INTRUSIONS

South of Ridout Lake at the contact between mafic volcanic and sedimentary rocks a felsic intrusion of approximately 100 meter width extends across most of the property. These rocks are generally as strongly altered and deformed as the surrounding host rocks. This unit appears to form a sill-like body where exposed.

The felsic rocks are fine grained, equigranular or porphyritic with 20% to 30%, subhedral, 2-5mm, feldspar grains. Quartz phenocrysts are locally developed. The rocks weather a pale

cream-buff colour and have a grey-green fresh surface. Mafic xenoliths are present locally.

Throughout the property most rock types and units are intruded by narrower bodies of felsic intrusive rocks which range in width from less than 10 cm up to 30 meters.

5.2.7 MAFIC INTRUSIONS

Mafic intrusive rocks occur as relatively small dikes and sills throughout the property but are more abundant north of Ridout Lake. Diabase dikes and sills form the major portion of these mafic rocks and are preferentially distributed along the contact between mafic and intermediate-felsic volcanic rocks. These rocks are medium to coarse grained, equigranular, massive, non-foliated and weather to a grey brown colour. Locally these rocks may be inclusion-rich (30%), hosting a variety of rock types including quartz vein material.

In the northeast corner of the property a fine to coarse grained, equigranular, gabbroic-textured intrusive rock forms a dike-like body (?). This rock contains minor amounts of magnetite and has a dark green fresh surface and a brownish-green weathering surface. This unit is poorly exposed.

5.2.8 CHEMICAL SEDIMENTARY ROCKS

North of Ridout Lake e.g. between L 6+00 and 7+00 E, 70 N minor narrow bands of chert are intercalated with intermediate to felsic volcanic rocks. Massive to crudely laminated these rocks weather a dull grey colour and contain from trace to 15% pyrite.

5.3 STRUCTURE

At the east end of the property between L 17+00E and 18+00E the northwesterly trending McDonough Fault separates two structural domains; to the west a highly altered, deformed and lithologically diverse sequence of schistose rocks and to the east a relatively undeformed and uniformally altered mafic volcanic unit.

To the west lithological units trend, in general, easterly and have a vertical to subvertical dip (north dipping). However, there appears to be a change, a flexure in lithologic trends between the west and east parts of the property; in the west the trend is westerly and changes to a northeast trend to the east.

Schistosities trend northeast and dip to the north, discordant to lithological contacts. Schistosities are moderate to strongly developed across the property. Mineral lineations plunge to the northeast.

Determination of tops and stratigraphic facing have not been resolved for this area.

Faulting is common on the property with north to northwest trending faults predominating. These structures appear to displace and or control lithological contacts. It appears that a left-lateral displacement along these structures is most commonly developed. Kink banding characteristic of fault\shear zones is developed in many parts of the property. Slickenside development is ubiquitous in this area.

All lithologies, north and south of Ridout Lake and west of the McDonough Fault, lie in a west northwest trending deformation zone. The dimensions of this deformation zone extend

beyond the limits of the property because rocks at the north, south and west ends of the property are all still strongly deformed. The rocks in this deformation zone are in general strongly schistose or have a mylonitic fabric developed; kink banding, crenulation cleavage, slickensides, and isoclinal folding are all common features in this zone. Alteration within this deformation zone is both diverse and varied in intensity (discussed below). Of particular note is the abrupt termination of this deformation zone at the McDonough Fault. It is the writers belief that the McDonough Fault displaces (not terminates) the deformation zone probably to the north.

East of the McDonough Fault lithologies consist of a simple sequence of weakly foliated mafic volcanic rocks that are pervasively altered by calcite carbonate. Pillows are well-developed and indicate overturned tops to the north.

5.4 ALTERATION AND MINERALIZATION

Alteration varies in both degree or intensity and composition, east and west of the McDonough Fault. To the west alteration is more diverse, widespread, and intense affecting virtually all rock types to some degree. To the east alteration is also widespread and pervasive but consists of solely or mainly calcium carbonate.

Mineralization i.e. gold and/or sulphides appears to be restricted to the area west of the McDonough Fault.

West of the McDonough Fault approximately 75% to 85% of the exposed lithologies have been altered to some degree. The dominant alteration is carbonate either as a calcium and\or an iron-magnesium variety. Chloritization and sericitization occur to a lesser degree.

North of Ridout Lake a well-defined unit delineated as massive to schistose ankerite-chlorite exemplifies the degree to which hydrothermal alteration has totally altered and replaced the original protolith. This unit varies in width but attains a thickness of up to 100 meters. The envelope of alteration surrounding the massive carbonate core (up to 10 meter width) consists of the following assemblage Fe\Mg carbonate + chlorite + quartz +\- sericite +\- fuschite +\- calcite +\- pyrite. The altered rock may be massive, `colour' banded, schistose or veined. If the altered rock is massive, carbonate rhombs may dominate or a colour banding may be developed due to an alternating alteration mineral assemblages. This unit generally contains only minor amounts of sulphides (pyrite). Beyond the latter zone of intense alteration moderate to weakly altered rocks prevail.

Between L 0+00 and 2+00E from 3+00N to 4+00N rocks are strongly sheared and altered with sericitization prevailing. The following assemblage occurs, here: sericite + chlorite + carbonate +\- quartz +\- pyrite. Quartz veining may reach 15% to 20% locally in this area. Tourmaline may be present at L 0+00, 3+75N. Altered felsic intrusive rocks underlie part of this area.

Unlike the area north of Ridout Lake where a well-defined intense zone of alteration surrounded by less intense altered rocks is present, the area south of the lake is characterized by separate narrow lenticular zones of intense alteration surrounded by moderate to weak altered rocks. These zones of intense alteration consist of mainly carbonatization and chloritization but locally hematitization, sericitization and silicification may occur. Generally the intense alteration occurs in mylonitized rocks. The mafic volcanic rocks in this area are characterized by a `colour' banding, due to alteration and deformation. Alternating bands\layers of chloritized, carbonated, sericitized or veining material occur in highly tectonized rock. Sulphide content in these

DENYES TWP.

GREENLAW TWP.

DEFORMATION ZONE

EAST RIDOUT CLAIM GROUP

McDONOUGH FAULT

RIDOUT LAKE

WEST HOTSTONE CLAIM GROUP

HOTSTONE LAKE

WAKAMI RIVER

GOLD FLOAT

PATENTED CLAIMS RHODES RESOURCES

GREENLAW TWP.

CUNNINGHAM TWP.

0 200 1000 2000

METERS

- GOLD MINERALIZATION
- TOPOGRAPHIC DEPRESSION / LINEMENT - INTERPRETED FAULT

FIGURE 3

GEOLOGICAL COMPILATION

GREENLAW TOWNSHIP CLAIMS

K. McDONOUGH

DEC., 1992

rocks is generally low.

The felsic sill south of Ridout Lake is often strongly altered and characterized by the following alteration assemblage: hematite +\- sericite +\- chlorite +\- carbonate +\- quartz +\- pyrite. These rocks have also been mylonitized locally.

The sedimentary rocks at the south end of the property have been weak to moderately altered by chlorite +\- sericite +\- carbonate +\- pyrite. Sulphides (pyrite) are common in this unit. Quartz veining (rusty in colour) also increases here.

Sulphide mineralization north of Ridout Lake is found in the following areas:

a) massive to schistose ankerite-chlorite unit; associated quartz veining (2% to 15%), pyrite (trace to 2%), disseminated or in stringers.

b) chert horizon; between L 6+00E and 7+00E, 1+00N; between L 10+00E and 11+00E , 0+80N; brecciation, quartz veining; pyrite (1% to 15%) v.f.g., disseminated.

c) intrusive and extrusive felsic rocks between L 0+00E and 2+00E, and 3+00N and 4+00N; silicification (up to 20% locally), pyrite (trace to 2%).

Sulphide mineralization south of Ridout Lake is found in the following areas:

a) sedimentary rocks; L 15+00E 3+50N, L 2+00W 4+00S, L 0+00 4+25S; increased quartz veining, brecciation locally; pyrite (trace to 10%) fine grained, disseminated.

b) intermediate volcanic rocks, gossaneous and cherty, L2+00W, 2+60N; at contact with sediments; pyrite (2%) disseminated, fine grained.

c) mafic and felsic volcanic (intrusive in part ?) intruded by diabase, L 9+00E, 3+25S; shearing, quartz veining (10% locally); pyrite semi-massive layers and disseminated, poorly exposed.

d) mafic volcanic rock intruded by felsic intrusive rocks, between L 14+00E and L 16+00E, 1+50S; increased quartz veining, carbonatization and hematitization in both of the latter rock types; pyrite (0.5% to 2%), fine grained, disseminated.

6. GEOCHEMISTRY

During the mapping program twenty-five (25) rock samples were collected and analyzed for gold at the Chauncey Assay Laboratories Ltd., in Toronto, Ontario. The analysis were done by classical Fire Assay with an A.A. finish. Sample numbers and descriptions are given in Table 1.

Historically auriferous quartz veins (4) ranging up to 0.173 oz./ton have been found in the area, one located on Gold Island and the remaining three on the north shore of Ridout Lake, pers. comm. Kervin McDonough (Figure 3). All gold values occur in a narrow zone within one lithologic unit i.e. intermediate to felsic volcanic rocks which lie in a major west northwest trending deformation zone.

The present sampling program returned three geochemically anomalous gold values 158 ppb, 193 ppb, and 790 ppb (Geology Map).

The sample containing 158 ppb gold occurs in a narrow

quartz vein which parallels the main auriferous gold vein on Gold Is.

The sample containing 193 ppb gold occurs in altered (chlorite, carbonate) and gossaneous mafic volcanic rock located on L 5+00E, 2+25N immediately north of the massive to schistose ankerite-chlorite unit. On L 4+00E, 2+25N is a series of old trenches in highly altered and sheared mafic volcanic rocks with sulphide mineralization, these rocks were not sampled during this work program. On strike with this area to the northwest is a highly altered and deformed felsic intrusion which has been only partially stripped and trenched.

The sample containing 790 ppb gold occurs in a sequence of poorly exposed rocks consisting of mafic volcanic, felsic and mafic intrusive rocks located on L 9+00E, 3+25S. Both quartz veining and pyrite increase in abundance in this area. Pyrite occurs in semi-massive layers (several centimeters in width) or disseminated in the rock. This anomalous gold value occurs at the north contact of the felsic intrusive sill.

To date, all known anomalous gold values occur in a deformation zone localized between L 5+00E and 10+00E, north and south of Ridout Lake. The area bounded by L 5+00E and 10+00E corresponds to a broad open flexure where lithological trends change. This 'flexure' may represent a cross-structure that in part controls gold mineralizing processes.

Table 1

Sample Descriptions

Field Sample No.	Map Code	Assay (Au ppb)	Description
R-92-15E-375S	1	41	5c, W (cb) 0.5 - 2% py
R-92-15E-150S	2	39	8, W (hem, sh, cb) qs, 0.5% py
R-92-13E-250S	3	30	2a, M (ch, cb) qv, 1% py
R-92-14E-065S	4	42	2a, W (sh, sil, cb) qs 0.5% py
R-92-2W-400S	5	79	5; 3% py
R-92-16E-400N	6	58	7, M (ch, cb) mag tr py
R-92-12E-225N	7	39	ank-ch-ser-qtz tr py
R-92-2W-250S	8	18	5; gossan, cherty, py
R-92-14E-275N	9	61	chl-ank-ser sch. tr-1% py
R-92-3E-175N	10	70	4, ser-ank sch., tr py
R-92-3E-425S	11	53	2a; W (cal), 0.5% py
R-92-4E-425S	12	41	2, gn+ch+bi, cb, mylonitic
R-92-1W-175S	13	29	2; cb, cal, mylonitic, py tr-3%
R-92-5E-160N	14	20	2, cb, ch, qtz
R-92-7E-125N	15	18	ank-ch-qtz, 0.5% py
R-92-1E-425S	16	25	5; f.g. wacke, bx, qs, 1-10% py, hem
R-92-9E-250N	17	63	ank-ch-ser-qtz
R-92-1E-425S	18	30	5, f.g. wacke, bx, qs, 1-10% py, hem
R-92-7E-325S	19	23	8, hem., qs
R-92-10E-200N	20	35	ch-ank-sch-qtz, tr py
R-92-5E-225N	21	193	2, M (ch, cb), gossan, 1% py
R-92-9E-325S	22	790	2, 8; qv, semi-mag py layers
R-92-6E-1S	23	158	3, QV; tr py
R-92-8E-50S	24	40	QV (in 3); dark, tr py
R-92-10E-10S	25	51	chert; qv's; bx, 2% py

7. RECOMMENDATIONS

The writer recommends the following work be carried on the Ridout East Claim Group as a consequence of the findings of this study and the historical gold occurrences discovered by Mr. McDonough.

1). Map, prospect and sample in detail the felsic intrusive sill (?) near the south end of the property. Since felsic intrusions are commonly associated with gold mineralization the nature of the felsic body on this property must be determined. The anomalous gold value found at the north contact of this altered and deformed felsic body makes the north contact a highly prospective area.

2) Prospect and sample in detail the area immediately north of the contact of the massive to schistose ankerite-chlorite unit particularly from L 8+00E to 0+00. Geochemically anomalous gold, old trenching that has not been recently sampled, and highly altered and deformed volcanic rocks intruded by a felsic intrusion all make this area a good area to examine for gold mineralization. Exposure in this area is poor.

3) Map, prospect and sample in detail the area between L 13+00E and 16+00E from 2+00N to 1+00N. This is also a highly prospective area because the rocks are strongly altered and deformed and there is a general increase in quartz veining and sulphide content. The presence of a felsic intrusion is also encouraging. The quartz veining in this area may correlate with the veining on Gold Is. as veining also occurs on several islands between the latter areas.

4) Determine the significance of the structural 'flexure' on the control (if any) on gold deposition.

5) A major and significant deformation zone localized along Ridout Lake appears to abruptly terminate at the McDonough Fault. This is unlikely; the eastward continuation of this deformation zone should be determined and explored as prospective ground.

CERTIFICATE OF QUALIFICATION

I, Edward George Sawitzky do hereby certify:

1. that I am a geologist and reside at 1290 Bancroft Drive, Sudbury, Ontario, P3B 4G9,

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 16 years,

5. that my report on the Ridout Lake Property, Greenlaw Township, District of Sudbury, Ontario is based on my personal knowledge of the area, property visit on September 17 to October 2, 1992, and a review of published information of the area.

E. Sawitzky
B.Sc., F.G.A.C.
January 13, 1993

020

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

ASSESSMENT REPORT

RIDEOUT EAST PROPERTY

GREENLAW TOWNSHIP

NTS 41 O/10

47 43'N LATITUDE
82 48'W LONGITUDE

2.15050

BARRY MCDONOUGH
MAY 3, 1993

TABLE OF CONTENTS

020C

ILLUSTRATIONS

SUMMARY

This report outlines the geophysical and geological exploration programs done on a group of claims in Greenlaw and Cunningham Townships of the Porcupine Mining Division (NTS Reference 41 O/10) at 47 43'N latitude, 82 48'W longitude and is being submitted to the Ministry of Northern Development and Mines for assessment credits on unpatented claims as required under the Ontario Mining Act.

The area discussed in this submission consists fifty-seven unpatented claims stretching from the eastern extent of Ridout Lake to Hotstone Lake held by Kervin McDonough, prospector, of 24 Greenmeadow Court, St. Catharines, Ontario.

The initial aim of the program for the 1992 season was to enhance the database on the property. This was accomplished by a systematic exploration program which took the following form:

i) A winter geophysical program was executed over the ice on Ridout Lake between March 7 and March 12, 1992 by the author and David Skelton of London, Ontario.

ii) Twelve kilometres of line was cut by Gabriel Sutherland of Timmins, Ontario between June 3 and June 15, 1992 with the assistance of the author. This grid tied into the grid established on the ice surface during the course of the winter program.

iii) A magnetometre survey was done between June 12 and June 15, 1992 by the author with the assistance of Mr. David Maclean of Noranda Exploration Company, Limited (Timmins).

iv) Mr. Ed Sawitzky, a geologist from Norwin Geological Services in Sudbury, Ontario was employed to map the established grid between September 17 and October 2, 1992.

Winter magnetometer and VLF results indicate the gold bearing trend observed on Gold Island is not isolated and continues below the lake and may suggest an en echelon system.

Ground magnetometre data reinforces airborne results north of Ridout obtained in 1982. Likewise, geophysical results correspond with lithographic units identified by the ground geological survey.

Gold mineralization appears to be controlled by a deformation zone and possible cross-structure defined by a broad open flexure.

Recommendations are made for follow-up work.

1.0 INTRODUCTION

This report outlines the geophysical and geological exploration programs done on a group of claims in Greenlaw and Cunningham Townships of the Porcupine Mining Division (NTS Reference 41 O/10) at 47 43'N latitude, 82 48'W longitude. This report is being submitted to the Ministry of Northern Development and Mines for assessment credits on unpatented claims as required under the Ontario Mining Act.

The area discussed in this submission consists fifty-seven unpatented claims stretching from the eastern extent of Ridout Lake to Hotstone Lake (designated Ridout East). Eleven unpatented claims that are part of the Ridout East block are held 50% by Kervin McDonough, prospector, of 24 Greenmeadow Court, St. Catharines, Ontario and 50% by the author (Barry McDonough, 24 Greenmeadow Court, St. Catharines, Ontario). All the claims included in this submission are presently in good standing. (Please see Appendix A).

Exploration has been concerned with the discovery of a precious metal (Gold) ore body, but the potential for base metals exists in the area. The initial aim of the program for the 1992 season was to enhance the database on the property. This was accomplished by a systematic exploration program which took the following form:

i) A winter geophysical program was executed over the ice on Ridout Lake between March 7 and March 12, 1992 by the author and David Skelton of London, Ontario.

ii) Twelve kilometres of line was cut by Gabriel Sutherland of Timmins, Ontario between June 3 and June 15, 1992 with the assistance of the author. This grid tied into the grid established on the ice surface during the course of the winter program.

iii) A magnetometre survey was done between June 12 and June 15, 1992 by the author with the assistance of Mr. David Maclean of Noranda Exploration Company, Limited (Timmins).

iv) Mr. Ed Sawitzky, a geologist from Norwin Geological Services in Sudbury, Ontario was employed to map the established grid between September 17 and October 2, 1992.

2.0 PURPOSE OF PROGRAM

The geophysical program was undertaken in the March 1992 to take advantage of ice conditions on Ridout Lake.

The main goal of the winter geophysical survey was to establish a geophysical signature relating to the Gold Island Shear and to develop targets suitable for diamond drilling. The summer program had the same purpose except it attempted to locate the signature on the north and south shores of the Ridout Lake.

Ultimately it was hoped that, by geophysical methods, an ore body could be established. The reader is referred to Mr. Sawitzky's report which outlines the purpose and methods involved in the geological survey.

3.0 PROPERTY HISTORY

In January 1990 the original six claim block known as Hotstone West was staked (Figure 2). In June 1990 eleven additional claims were staked on Ridout Lake. An OPAP grant was received from the Ministry of Northern Development and Mines and later an agreement was entered into with Corona Corporation of Toronto. As a part of this agreement Corona staked forty-six claims contiguous to the original eleven on Ridout Lake. This block of fifty-seven claims was designated Ridout East (Figure 2). This agreement was later terminated when Corona divested itself of its exploration interests in Canada. At that time all interest in the claims were transferred to Mr. McDonough.

In March 1991 a fifty percent interest in the original eleven Ridout East claims were transferred to the author with the purpose of applying for a second OPAP grant. In May of 1991 an option agreement was entered into with Consolidated Rhodes Resources of Vancouver. This agreement was terminated October 17, 1991. All interest in the ground is still held by Mr. McDonough save the eleven claims which are owned in 50% partnership with the author.

The status of exploration must still be classified as preliminary.

Please refer to Appendix B for further information regarding past work done in this area.

4.0 LOCATION AND ACCESS

The property is located within Greenlaw and Cunningham Townships which is a part of the Porcupine Mining Division. Situated fifty miles east of Chapleau, Ontario the property is accessible by four-wheel drive vehicle (Figure 1). The claim block is accessible by canoe along the Wakami River or from a portage on the northeast edge of Hotstone Lake. Logging activity in the immediate area will increase access substantially in the future. Air Service is available year-round (both fixed and rotary wing) from Timmins. Seasonal bases are in operation from Chapleau and Foleyet during the summer months.

5.0 GENERAL GEOLOGY

The property is characterized by east-west trending intermediate to mafic volcanic flows and tuffs interbedded with sediments, chert and iron formation. The sediments include finely laminated argillite (some units containing thinly banded ankerite), greywackes and conglomerate.

Strata generally strikes 080 to 090 degrees and dips vary from moderate to steeply north to steeply south.

Structure plays a significant role in any mineralization. A number of structural elements are at play on this property. The most prominent is the Ridout Lake Shear Zone which trends 090 degrees. Extensively investigated in the past it has yielded few encouraging results.

Of particular interest is the Gold Island Shear, bearing 065 degrees. It intersects the Ridout Lake Shear obliquely. At this

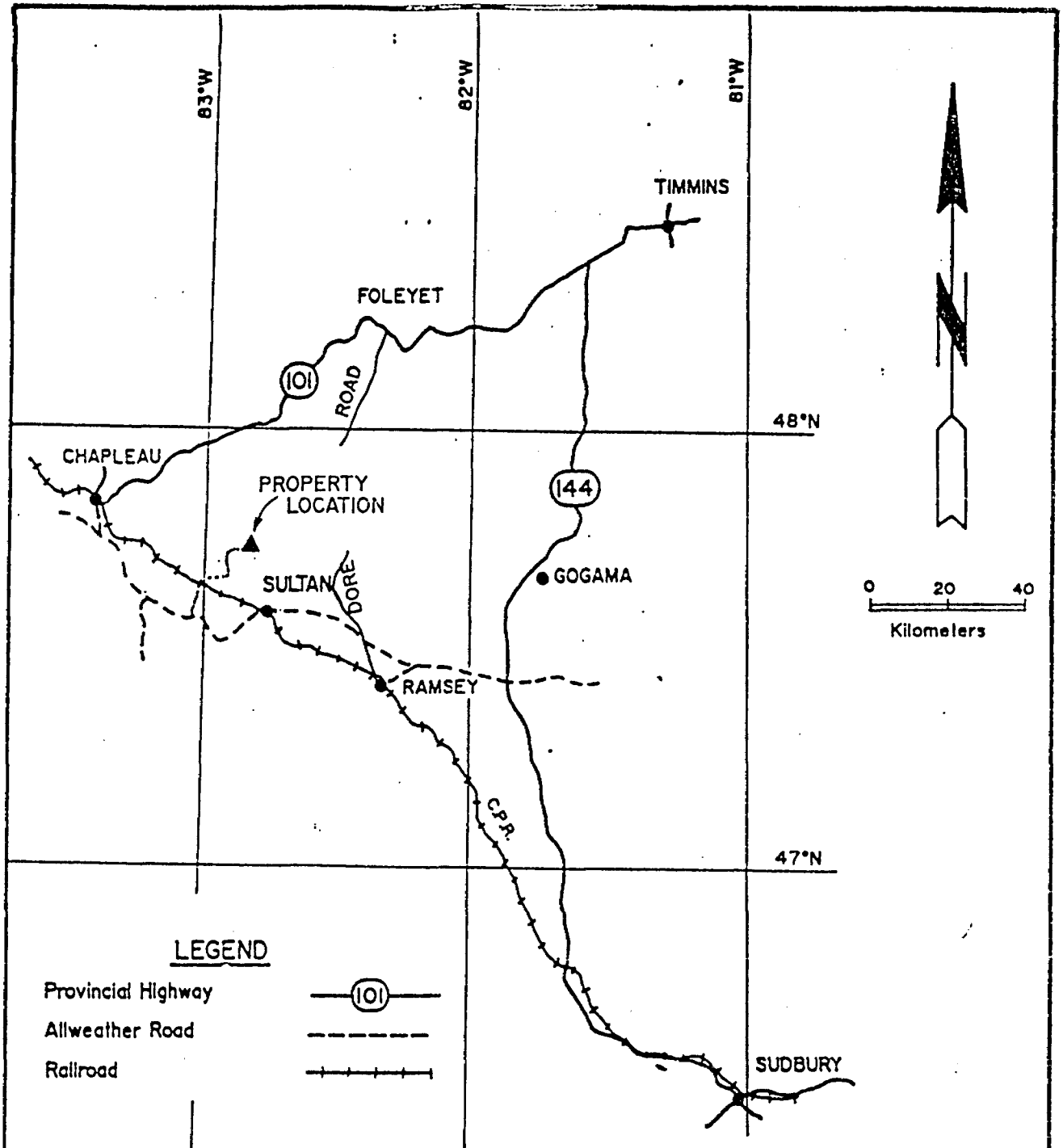

FIGURE 1

GREENLAW TOWNSHIP CLAIMS

SWAYZE AREA, ONTARIO

LOCATION MAP

JUNE, 1991

junction significant gold values were obtained. Until this time little work has been done along this trend. Additional claims were staked by Corona to fully cover this structure. The eleven claims whose interest was transferred from Mr. McDonough encompasses Gold Island.

Another structure of interest is the Engineer Lake Fault (referred to a the "McDonough Fault" by Mr. Sawitzky) which trends approximately 350 degrees and truncates not only the Ridout Lake Shear but all other structures as well. This fault runs subparallel to the Wakami River Fault which cuts the Hotstone Lake Carbonate Zone and displaces it some 1700 metres. The amount of movement along the McDonough Fault is presently unknown. This structure inhabits to far eastern extent of the eleven claims and carries over to Mr.McDonough's ground to the east.

Chloritization is the most prevalent form of alteration in the area. Sericitization and carbonitization are abundant as well. Silicification has been noted in several local areas.

6.0 WORK DONE

The primary focus of the program was to consolidate the previously collected data and the results of the most recent field season into a cohesive package. As a part of the program completed in the spring of 1992 a temporary grid was emplaced and a winter geophysical survey, consisting of magnetometer and VLF, was conducted between March 7 and March 12, 1992 by the author and David Skelton of London, Ontario. Subsequently the grid was

DENYES TWP.

GREENLAW TWP.

EAST RIDOUT CLAIM GROUP

DEFORMATION ZONE

McDONOUGH FAULT

RIDOUT LAKE

HOTSTONE LAKE

WEST HOTSTONE CLAIM GROUP

GOLD FLOAT

PATENTED CLAIMS RHODES RESOURCES

WAKAMI RIVER

GREENLAW TWP.

CUNNINGHAM TWP.

0 200 1000 2000

METERS

- GOLD MINERALIZATION
- TOPOGRAPHIC DEPRESSION / LINEMENT - INTERPRETED FAULT

FIGURE 2.

GEOLOGICAL COMPILATION

GREENLAW TOWNSHIP CLAIMS

K. McDONOUGH

DEC., 1992

extended into the bush along the north and south shores of Ridout Lake. The grid was cut by Gabriel Sutherland from Timmins, Ontario between June 3 and June 15, 1992 with the assistance of the author.

The summer program consisted of extending both the magnetometer and VLF surveys across this new grid. The magnetometer survey was conducted between June 12 and June 15, 1992 by the author with the assistance of Mr. David Maclean of Noranda Exploration Company (Timmins). The winter geophysical data was then integrated into that of the summer program. Due to the problems encountered with the VLF this was only done with the magnetometer data. The survey covered a total of 20.2 kms.

Between September 17 and October 2, 1992 a geological survey was conducted over the grid. This geological survey was done by Mr. Ed Sawitzky of Norwin Geological Services of Sudbury, Ontario in the absence of the author. The geological report accompanies this submission.

7.0 INSTRUMENTS AND METHODS

The instruments used in the winter surveys were the Geometrix G-816 proton precession magnetometer and the Crone "RADEM" VLF. The Geometrix G-816 measures the earth's total magnetic field with an accuracy of 1NT. A base magnetometer station was established at BL0+00 and L0+00 on the Main Grid and grid lines were done in loops with a base station reading being done periodically (approximately every 30-60 minutes). A second base station was established on the East Grid and the same method

was employed. Corrections were done by Noranda Exploration with a component of their geophysical plotting program.

The RADEM VLF measures field strength with an accuracy of 1%. The survey utilized the NAA (Cutler, Maine) frequency of 17.8kHz.

The summer geophysical program was initially intended to consist of both magnetometer and VLF surveys but only the magnetometer survey was completed due to mechanical problems with the VLF instrument. The instruments used in the summer geophysical surveys were a Geometrix G-816 proton precession magnetometer and a Geonics EM-16.

The resulting maps were produced using the facilities of Noranda Exploration in Timmins with the assistance of Mr. David Maclean. Diurnal corrections were done automatically by Noranda's geophysical program using the base station readings.

A great deal of support and technical assistance was provided by Noranda Exploration Company, Limited of Timmins, Ontario. Mr. John Wakeford, area manager, Mr. Wayne Corstorphine, project geologist and Mr. David Maclean, field foreman, were instrumental in allowing the author access to their equipment and technical facilities.

8.0 RESULTS TO DATE

To date, several small gold occurrences have been encountered in quartz veins along the Gold Island Shear or subparallel lineaments.

An assay of 0.455 ounce per ton Au was discovered as well as

assays of 0.267 and 0.032 ounce per ton Au in an adjacent schist. They were followed up with a small blasting program in 1991 and values ranging up to 0.67 ounces per ton Au were encountered.

Corona cut a 3.5 kilometre baseline along this shear on the mainland on the south shore of Rideout Lake. Only superficially investigated at this point values returned have been disappointing.

Anomalous gold values of 0.11, 0.061 and 0.046 ounce per ton Au were encountered on the north shore of Ridout along what is believed to be a structure parallel to the Gold Island Shear. Work done in the summer of 1991 established a bulldozer road north of Ridout and a number of trenches were dug along it. Limited sampling has returned a high value of 189 ppb Au.

9.0 RESULTS OF PROGRAM

Winter Survey

Magnetometer and VLF surveys conducted between March 7 and March 12, 1992 were complicated by poor ice conditions and mechanical difficulties. The size of the program, only 8.15 kilometres, with respect to the expenses of supplies, wages, mobilization and demobilization made for higher than usual per unit costs.

The conditions of the ice at the time program was executed necessitated the establishment of two grids. The "Main grid" encompassed most of the area of interest. Very slushy and open ice made portions of the lake unsafe for traversing so a second "East grid" was established.

Main Grid

Conductor A (See Map 2) is a weak to moderate VLF-EM conductor with little associated magnetic signature and may be interpreted as possible fault or shear zone. The general trend of 090 degrees gives is the approximately the same orientation as the Ridout Lake Shear. Although misinterpreted on the map it is truncated and slightly offset by a fault bearing approximately 030 degrees on the western extent of Map 2.

Conductor B is also a weak VLF-EM conductor with no apparent magnetic expression. It seems to more closely mimic the 060 to 065 orientation observed with respect to the Gold Island Shear.

Both Conductors A and B are broken along Line 500E. This may be due to a fault zone or non-magnetic dyke (Map 3).

East Grid

Only one weak VLF-EM conductor was encountered along L200 at 0+87N. It had no significant magnetic expression (See Maps 4 and 5).

Summer Survey

The summer magnetometer survey confirmed results from an airborne survey conducted in 1982. A magnetic high follows along the north shore of Ridout Lake between lines 1000 E and 1700 E which coincides with an Iron Formation that has been encountered in trenching (Map 6). A complete absence of any magnetics east of line 1700 E could suggest that the Iron Formation has been faulted off. Strong magnetometer readings south of Ridout Lake along L900 E may be a large mafic dyke or

perhaps a strike extension of the same Iron Formation encountered on the north shore after it has undergone extensive folding. It difficult to draw conclusions without the benefit of the electromagnetic data.

Geological Survey

As for the geological survey, the following is an excerpt of the report by Mr. Sawitzky of Norwin Geological Services:

" The property is underlain by a sequence of steeply dipping and easterly trending mafic and intermediate-felsic volcanic and sedimentary rocks. Ultramafic volcanic and chemical sedimentary rocks make up a minor component of the stratigraphy. Of particular significance to gold exploration is the recognition of a felsic sill intruding along the contact between mafic and sedimentary rock in the south end of the property...A major deformation zone transects the property and has affected to some degree all lithologies on the property resulting in the development of moderate to strong schistose rocks and mylonitic fabrics...Gold mineralization appears to be controlled by the deformation zone and possible cross-structure defined by a broad open flexure."

Please refer to accompanying report for full details regarding the geological mapping survey.

10.0 CONCLUSIONS

Winter magnetometer and VLF results indicate the gold bearing trend observed on Gold Island is not isolated and continues below the lake and may suggest an en echelon system.

Only a diamond drilling program could properly assess the potential of these structures hosting auriferous quartz veins and the possibility of an ore body of economic grade.

Ground magnetometre data reinforces airborne results north of Ridout obtained in 1982. Likewise, geophysical results correspond with lithographic units identified by the ground geological survey including the north-south trending diabase dyke on L900 E and the Iron Formation encountered in trenching along the north shore of Ridout Lake.

The trend of the Gold Island Shear was weakly expressed in the shore magnetometer data. Unfortunately the program was handicapped by the malfunction of the VLF unit which would have greatly assisted interpretation.

Please refer to Mr. Sawitzky's accompanying report for his conclusions regarding the geological survey.

11.0 RECOMMENDATIONS

Structurally complex, possessing local zones of known gold mineralization and containing areas of pervasive silica and carbonate alteration, the Hotstone/Ridout region has abundant potential for hosting a gold deposit of economic value. In addition the presence of ultramafic volcanic rocks makes it a potential base metal target. Further exploration is warranted on the Ridout East property.

The following programs are suggested by Mr. Sawitzky for the Ridout East area:

"1. Map, prospect and sample in detail the felsic intrusive sill (?) near the south end of the property...The anomalous gold value found at the north contact of this altered and deformed felsic body makes the north contact a highly prospective area.

2. Prospect and sample in detail the area immediately north of the contact of the massive to schistose ankerite-chlorite unit particularly from L8+00E to 0+00. Geochemically anomalous gold, altered and deformed volcanic rocks intruded by a felsic intrusion all make this area a good area to examine for gold mineralization...

3. Map, prospect and sample in detail the area between L13+00E and 16+00E from 2+00N to 1+00N...because the rocks are strongly altered and deformed and there is general increase in quartz veining and sulphide content...

4. Determine the significance of the structural 'flexure' on the control (if any) on gold deposition.

5. A major and significant deformation zone localized along Rideout Lake appears to abruptly terminate at the 'McDonough Fault' (quotations are author's)...the eastward continuation of this deformation should be determined and explored as prospective ground."

The following recommendations are suggested by the author:

6. The completion of the geophysical program initiated in 1992. The survey should be run over the existing grid and

incorporated along with data collected in 1992 in both winter and summer programs.

7. A geochemical program over the existing cut grid with special emphasis on areas recommended by Mr. Sawitzky of Norwin Geological Services.

8. A mechanical trenching program to follow up any anomolous values encountered.

Respectfully submitted,

Barry McDonough
Geologist

APPENDIX A

CLAIM NUMBERS

CLAIM NUMBERS

RIDEOUT EAST

P.1155697*
P.1155698*
P.1155699*
P.1155700*
P.1155701*
P.1155702*
P.1155703*
P.1155704*
P.1155705*
P.1155706*
P.1155707*
P.1155708*
P.1155709*
P.1155710*
P.1155711
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P.1155738
P.1155739
P.1155740
P.1155741
P.1155742
P.1155743

P.1155106+
P.1155107+
P.1155108+
P.1155109+
P.1155110+
P.1155111+
P.1155112+
P.1155113+
P.1155114+
P.1155115+
P.1155116+

* Cunningham Township
+ Ownership = 50% Kervin McDonough/
50% Barry McDonough

APPENDIX B

PREVIOUS WORK

Greenlaw Twp.

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Hotstone Minerals Ltd. T-2100							56 (Prospectus)												
T. Clement Property T-2097								57											
Anaconda Co. Can. Ltd. T-2093	59											59							
Anaconda Co. Can. Ltd. T-2045	59			60								59							
Canadian Nickel Co. Ltd. T-2096				67															
Wm. Allen Property T-2092											71	71							
											~~71~~	~~71~~							

GDIF FORM NO. 2

Greenlaw Twp

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Dome Exploration T-2098				71	71														
Broadscope Dev. Ltd. T-2095				72	72						72	72							
Canex Aerial Expln. T-2198	72										72	72							
Greenlaw Developments Ltd. T-2099							72				72	72 (VLF)							
~~Union Miniere Expln. T-1732~~																			
Granges Expln. AB. T-1774				77 78	77														
Granges Expln AB T-1773				77															

VLF = very low frequency EM.

GDIF FORM NO. 2

Greenlaw Twp.

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Grange Expln AB				77	77														
T-1997				80	80														
				81	81														
		85			85														
Hollinger Argus Ltd.				82															
T-2484.																			
Collingwood Energy Inc.	83		83								83	83							
T-2607.	84			84	84			84	84			(VLF)							
Dejour Mines	83	83									83	83							
T-2762																			
Highland Crow Resources		82			82														
T-2493.	83		83								83								
(aka Quinterra)			84	85-	84			84-	84-					84					
				86*				85	85										
				87					(VLF)										

*overburden (RC) drilling

GDIF FORM NO. 2

Gowganda Twp.

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Kidd Creek Mines Ltd. T-2512	82- 83										82 83- 84	82 83- 84	EM + VLF						
Noranda Explo T-2823				83	83.						84	84 (VLF)							
Kirkland Res - Noranda Explo. T-2853.				85							83- 84	83- 84 (VLF)							
J. Larche Property T-2876								84	84 (EM+VLF)										
Noranda Explo. T-2782	83										83	83 (HLEM)							
Noranda Explo T-2854.				85							84	84 (VLF+HLEM)							

HLEM = horizontal loop Em.

GDIF FORM NO. 2

Greenlaw Twp.

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Regal Petroleum Ltd. T-2878	84				84			84	84										
Folkstone Resources Ltd. T-2656	85	85			85						84-85	84-85 (VLF)		84-85					
Greyhawk Resources T-3041	85	85																	
Patrie/Tremblay Property T-3318	89	89			89			89	89 (VLF)										
M. Tremblay Property T-3312											89								
K. McDonough prop. T-3415	90-91-92		90-91		90-91														

GDIF FORM NO. 2

Greenlaw Twp.

TYPE OF WORK	Numbers below represent the year in which the work was done; e.g., 68 for 1968.																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATON	SELF POTENTIAL	RESISTIVITY			
Kennecott Canada Inc T-3481	92										92	92 (HLEM)							

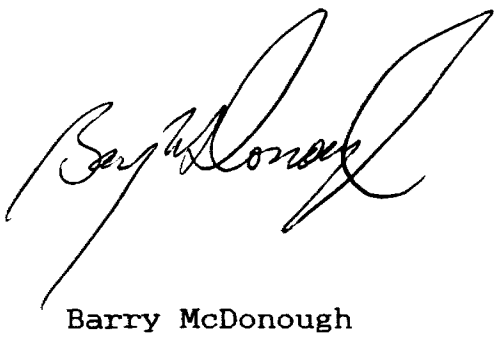
GDIF FORM NO. 2

CERTIFICATE OF QUALIFICATION

I, Barry McDonough reside at 24 Greenmeadow Court, in the city of St. Catharines, Ontario, L2N 6Y8.

I have been practising my profession for seven years and am a graduate of McMaster University B.Sc (1986) in Geology. I am a fellow of the Geological Association of Canada.

I am the owner of 50% interest in eleven claims covered in this report. The report is based on work personally performed or directly supervised by myself or my father, K. J. McDonough. Mr. McDonough owns 100% of all claims covered in this report save for the above mention eleven claims for which he holds the remaining 50% interest.



Barry McDonough

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

CERTIFICATE OF ANALYSIS

CERTIFICATE NO.: MI-3301 **DATE:** NOVEMBER 19, 1992

SUBMITTED BY: NORWIN GEOLOGICAL LIMITED

ATTENTION: MR. ED SAWITZKY

DATE RECEIVED: NOVEMBER 18, 1992 **SAMPLES OF:** ROCKS

2.15050

SAMPLE NO.:	Au ppb	SAMPLE NO.:	Au ppb
R-92-15E-375-S	41 ppb	R-92-1W-175-S	29 ppb
R-92-15E-150-S	39 ppb	R-92-5E-160-N	20 ppb
R-92-13E-250-S	30 ppb	R-92-7E-125-N	18 ppb
R-92-14E-065-S	42 ppb	R-92-1E-425-S	25 ppb
R-92-2W-400-S	79 ppb	R-92-9E-250-N	63 ppb
R-92-16E-400-N	58 ppb	R-92-1E-425-S	30 ppb
R-92-12E-225-N	39 ppb	R-92-7E-325-S	23 ppb
R-92-2W-250-S	18 ppb	R-92-10E-200-N	35 ppb
R-92-14E-275-N	61 ppb	R-92-5E-225-N	193 ppb
R-92-3E-175-N	70 ppb	R-92-8E-325-S	790 ppb
R-92-3E-425-S	53 ppb	R-92-6E-1-S	158 ppb
R-92-4E-425-S	41 ppb	R-92-8E-50-S	40 ppb
		R-92-10E-10S	51 ppb

J. van Engelen Mgr

900

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Section
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

July 30, 1993

Our File: 2.15050
Transaction #: W9360.00098

Mining Recorder
Ministry of Northern
Development and Mines
60 Wilson Avenue
1st Floor
Timmins, Ontario
P4N 2S7

Dear Sir/Madam:

Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS P1155106 ET AL IN GREENLAW & CUNNINGHAM TOWNSHIPS

The assessment work credits for Geology and Geophysics, Sections 12 and 14 of the Mining Act Regulations, have been approved as outlined on the original submission.

The approval date is July 29, 1993.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705) 670-5855.

Yours sincerely,

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

/lj/dm

cc: Resident Geologist
Timmins, Ontario

Assessment Files Library
Toronto, Ontario

Ministry of Northern Development & Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9360.00098

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

2.15050

Recorded Holder(s): KERVIN McDONOUGH / BARRY McDONOUGH (167387)		Client No. 167370
Address: 24 GREENMEADOW COURT, ST. CATHARINES, ONT L2N 6Y8		Telephone No. (416)937-5073
Mining Division: PORCUPINE	Township/Area: GREENLAW / CUNNINGHAM.	M or G Plan No.
Dates Work Performed: From: March 6, 1992	To: October 2, 1992	

Work Performed (Check One Work Group Only)

	Work Group	Type
✓	Geotechnical Survey	Geophysical (VLF, Magnetometer) Surveys, Geological Surveys
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

RECEIVED
JUN 03 1993
MINING LANDS BRANCH

RECORDED
MAY - 6 1993
Receipt _____

Total Assessment Work Claimed on the Attached Statement of Costs $ ~~9698.99~~ 9699.00 2nd

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
BARRY McDONOUGH	24 Greenmeadow Court St. Catharines, Ontario L2N 6Y8
GABRIEL SUTHERLAND	Bartleman Avenue Timmins, Ontario
DAVID SKELTON	625 Elias Street London, Ontario N5W 3N5
ED SAWITZKY	560 Notre Dame Avenue Sudbury, Ontario P3C 5L2

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

	Date	Recorded Holder or Agent (Signature)
I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	May 5/93	K.J. McDonough

Certification of Work Report

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

Name and Address of Person Certifying: SAME AS ABOVE

Telepone No.	Date	Certified By (Signature)
(416)937-5073	May 5, 1993	K.J. McDonough

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
$9699.00	MAY 6th/93	S. White	RECEIVED MAY 6 1993 NORTH BAY MINING DIVISION
	Deemed Approval Date: AUG. 4th/93	Date Approved	May 6/93 (c) 11:10
	Date Notice for Amendments Sent		

0241 (03/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	1155106	1	600	400	200	
	1155107	1	699	400	200	
	1155108	1	~~699~~ 699 BMCD	400	200	~~99.99~~ 99.99 BMCD
	1155109	1	600	400	200	
	1155110	1	600	400	200	
	1155116	1	600	400	200	
	1155699	1	600	~~All~~ 400 BMCD	~~600~~ 200 BMCD	
	1155700	1	600	~~All~~ 400 BMCD	~~600~~ 200 BMCD	
	1155703	1	600	400	200	
	1155704	1	600	400	200	
	1155705	1	600	400	200	
	1155708	1	600	400	200	
	1155709	1	600	400	200	
	1155710	1	600	400	200	
	1155712	1	600	400	200	
	1155713	1	600	400	200	
	16		~~9699~~	~~6400~~	~~3200~~	
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

0241 (03/91)

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

S · 1202

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: Work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Signature

Date

W7360.00018

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
2.1505	1155111	1	N.I	400		
	1155112	1	N.I	400		
	1155113	1	N.I	400		
	1155114	1	N.I	400		
	1155115	1	N.I	400		
	1155707	1	N.I	400		
	1155711	1	N.I	N.I ~~400~~ BMD		
	1155715	1	N.I	N.I ~~400~~ BMD		
	1155718	1	N.I	400		
	1155719	1	N.I	400		
			~~9600~~ 9600 BMD	~~9600~~ 9600 BMD	3200 ~~3600~~ BMD	~~100~~ 99
	34		~~9600~~ 9600	~~9600~~ 9600 BMD	~~4000~~ BMD	~~100~~ 99 BMD
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

RECEIVED
JUN 03 1993
MINING LANDS BRANCH

RECEIVED
PORCUPINE MINING DIVISION
MAY 6 1993

Credits: you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletion(s), please indicate which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: **Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.**

Note 2: **If work has been performed on patented or leased land, please complete the following:**

I certify that the recorded holder had a beneficial interest in the patented or lease land at the time the work was performed.

Signature

Date

0241 (03/91)

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W9360.00098

2.15050

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Linecutting	2250.00	
	Geology	2500.00	
	Magnetometer Survey 20.2 Kms @ $125	2525.00	
Supplies Used Fournitures utilisées	Type VLF Survey 8.15 kms @ $125	1018.75	
	Rough laths, paint		
	Propane, Naptha	135.49	
Equipment Rental Location de matériel	Type		
	Total Direct Costs Total des coûts directs		6429.24

2. Indirect Costs/Coûts indirects

** **Note:** When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type Mileage 3000 Kms @ $.30/Km	900.00	
Food and Lodging Nourriture et hébergement		369.70	
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		
	Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) / **Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)**		Bkgd

RECORDED
MAY 06 1993
RECEIVED
JUN 03 1993
MINING LANDS BRANCH

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Recorded Holder I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

RECEIVED
MAY 6 1993
MINING LANDS SECTION

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
K.J. McDonough	May 5 1993

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

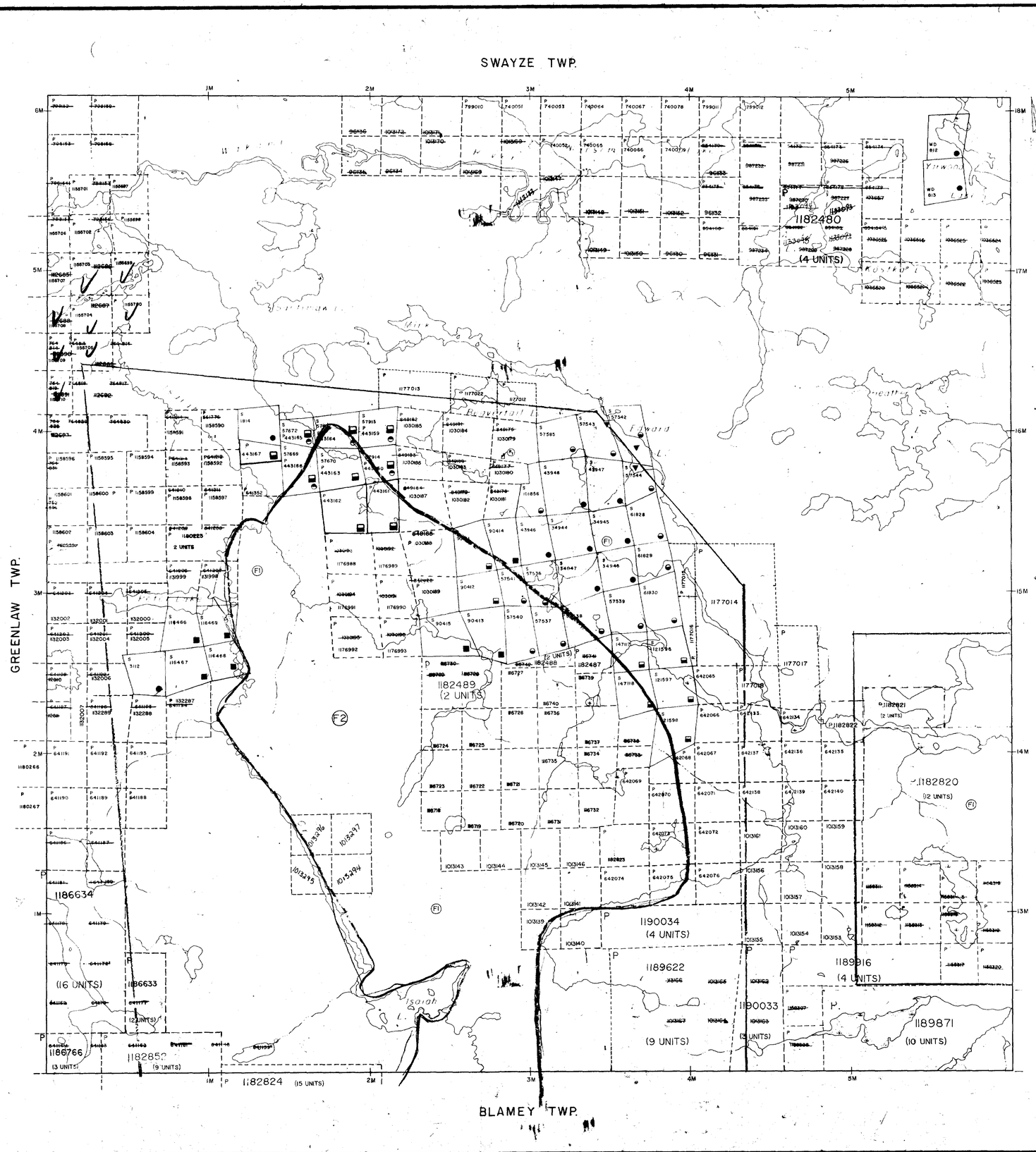
AREAS WITHDRAWN FROM DISPOSITION

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

Description	Order No.	Date	Disposition	File

(R) CROWN RESERVE

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



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES ETC.
LOTS, MINING CLAIMS, PARCELS ETC.
UNSURVEYED LINES
LOTS, ETC.
PATENT 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	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)

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. 380, SEC. 63, SUBSEC. 1.

Metres 500 0 1000 Metres
Chains 10 0 10 20 30 40 50 60 70 Chains
Feet 500 0 1000 2000 3000 4000 5000 Feet

SCALE 1:20 000

(F) THIS TWP. IS SUBJECT TO FOREST ACTIVITIES IN 1992/93. FURTHER INFORMATION AVAILABLE ON FILE.

(F) THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1993/94. FURTHER INFORMATION ON FILE.

RECEIVED
MAY 19 1993

2.15050

TOWNSHIP
CUNNINGHAM

M.N.R. ADMINISTRATIVE DISTRICT
CHAPLEAU

MINING DIVISION
PORCUPINE

LAND TITLES / REGISTRY DIVISION
SUDBURY Received Sept 15/86

Ontario Ministry of Natural Resources
Ministry of Northern Development and Mines

Date AUGUST, 1986
Number G-1095

CK-Copies Sept 15/86

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

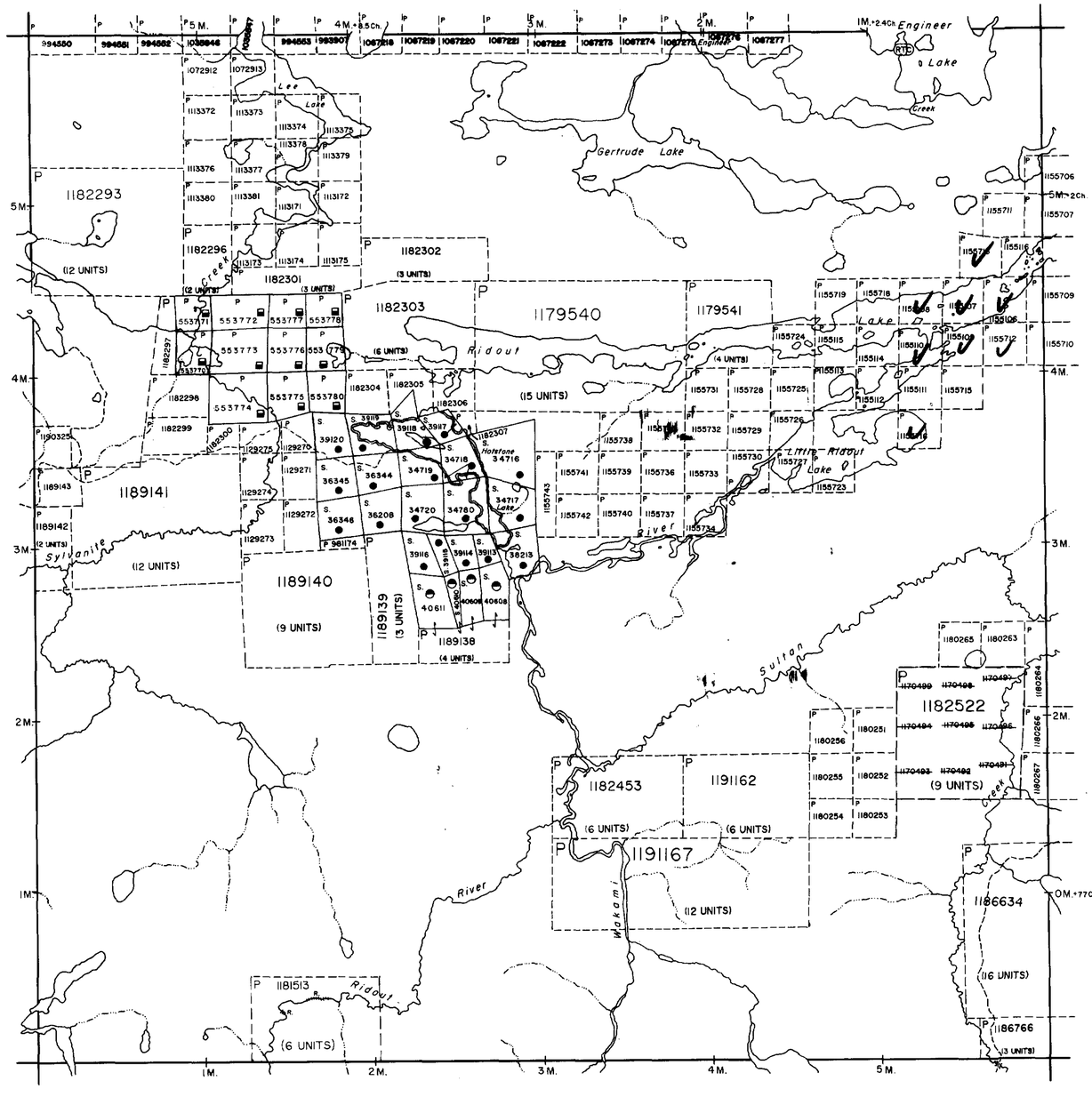
S.R.O. – SURFACE RIGHTS ONLY

M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

(RTC)–REMOTE TOURIST CAMP

Denyes Twp.



MAGNETIC DECLINATION 9° WEST

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	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)

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. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 2000 (3 KM.)

TOWNSHIP

GREENLAW

2.15050

M.N.R. ADMINISTRATIVE DISTRICT

CHAPLEAU

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario Ministry of Natural Resources | Ministry of Northern Development and Mines

Date MARCH, 1985

ACTIVATED OCTOBER 21, 1992 BY D.C.

CHECKED BY B.B.

Number G-3235

LEGEND

9 DIABASE
- 9a Unsubdivided
- 9c Xenolithic

8 FELSIC INTRUSIVE ROCKS
- 8b Massive
- 8b Schistose
- 8c Porphyritic

7 MAFIC INTRUSIVE ROCKS

6 CHEMICAL SEDIMENTARY ROCKS
- Chert

5 CLASTIC SEDIMENTARY ROCKS
- 5 Unsubdivided
- 5a Argillite-siltstone
- 5b Wacke(fine-medium grained)
- 5c Conglomerate
- 5e Gossan (cherty)

4 FELSIC METAVOLCANIC ROCKS
- 4 Unsubdivided
- 4a Massive
- 4b Phyric (feldspar) flow
- 4c Tuff
- 4d Lapilli-tuff, Tuff breccia
- 4e Crystal tuff

3 INTERMEDIATE METAVOLCANIC ROCKS
- 3 Unsubdivided
- 3a Massive
- 3b Phyric (feldspar) flow
- 3c Tuff
- 3d Lapilli-tuff, tuff breccia
- 3e Crystal tuff

2 MAFIC VOLCANIC ROCKS
- 2 Unsubdivided
- 2a Massive
- 2b Pillowed
- 2c Pillow breccia
- 2g Hypabyssal intrusive, e.g. phase

1 ULTRAMAFIC VOLCANIC ROCKS
- 1 Unsubdivided
- 1a Spinifex

ALTERATION

W	weak
M	moderate
S	strong
ch	chlorite
cb	carbonate
cal	calcite
ser	sericite
qv	quartz veins
qs	quartz stringers
hem	hematite
epid	epidote
py	pyrite
fu	fuschite
sil	siliceous
mag	magnetite

CLAIM POST
#3-III2682 — CLAIM NUMBER
#2-III2681

SAMPLE LOCATION — Au IN PARTS PER BILLION
R-92-23 158 ppb — SAMPLE NUMBER

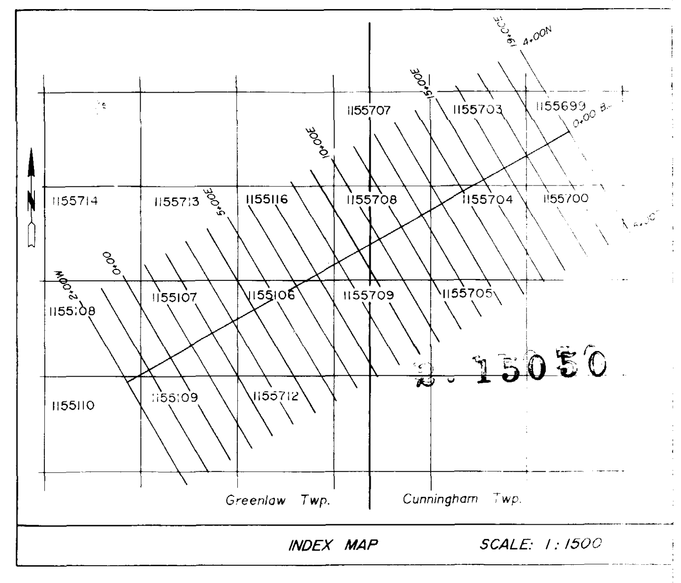
Geologic contact

Faults

Shear
Foliation
Lineation
Jointing (inclined, Vertical)
Bedding
Pillows

McDONOUGH FAULT

RIDOUT FAULT?



INDEX MAP SCALE: 1:1500

RIDOUT EAST CLAIM GROUP

K. McDONOUGH

SWAYZE AREA, ONTARIO

GEOLOGY

BY: NORWIN GEOLOGICAL LTD.
SCALE: 1:2500
PREPARED BY: E.S. DRAWN BY: E.P.
DATE: DEC., 1992

SURFACE RIGHTS ONLY

MINING AND SURFACE RIGHTS

Order No	Date	Disposition	File

SPIST CAMP

2.15050

GREENLAW TWP

MAP #1

RIDEOUT EAST CLAIM BLOCK

SCALE 1:15840

Tooms Twp.

Engineer

Lake

Gertrude Lake

Creek

Ridout Lake

Little Ridout Lake

River

Sylvanite

Holstrom

Sutton

Creek

River

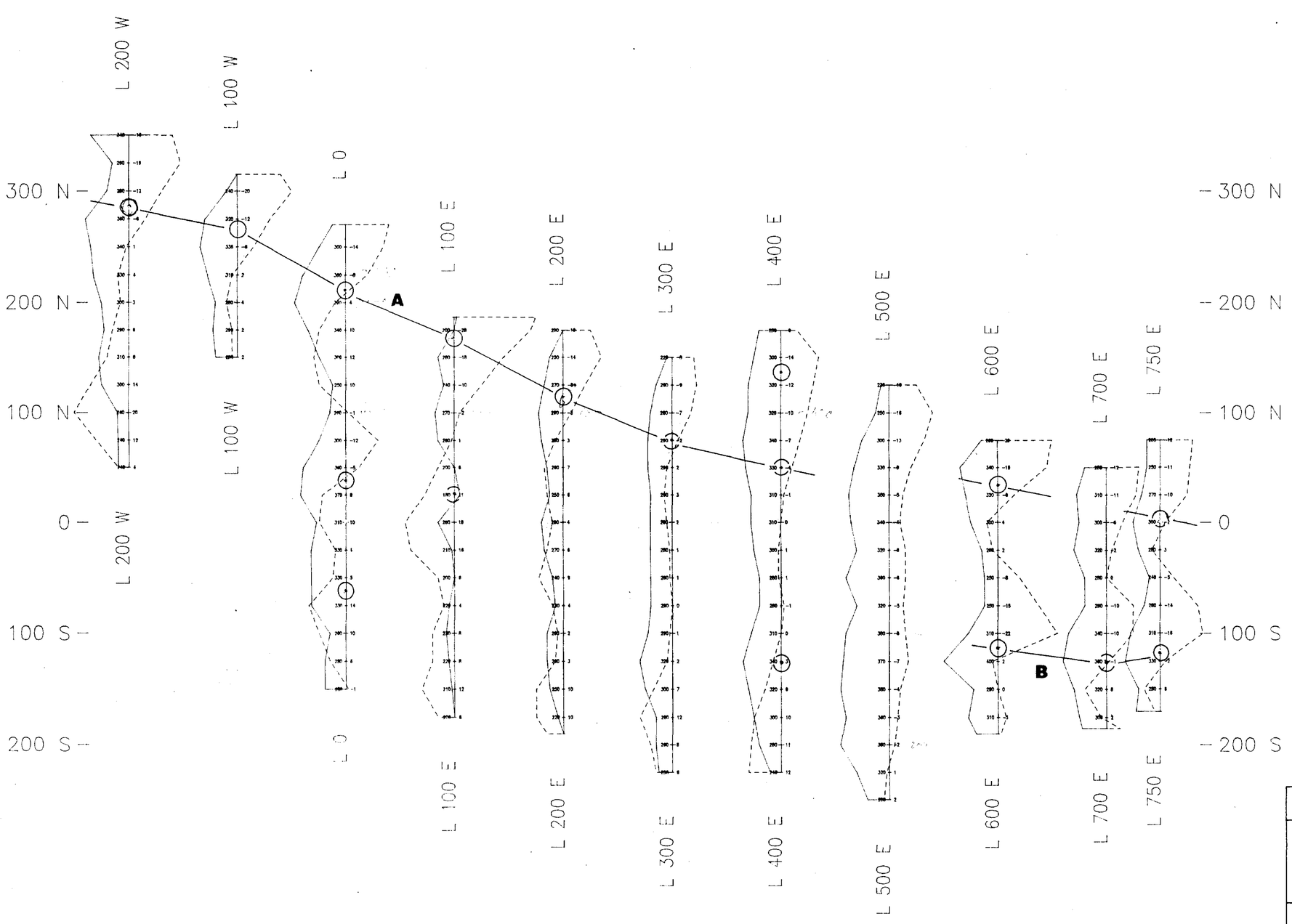
Lake

Creek

CUNNINGHAM TOWNSHIP

41010NE9212 2.15050 GREENLAW

230



2.15050

MAP #2

Instrument : Crone RADEM
Tx Station Cutler Maine
Frequency : 24kHz
Field Strength : Left - ——
Profile Scale : 1cm = 100 Base Value 200
Dip Angle : Right - - - - -
Profile Scale : 1cm = 10%

○ VLF-EM conductor

Scale 1:2500
25 0 25 50 75 100
(metres)

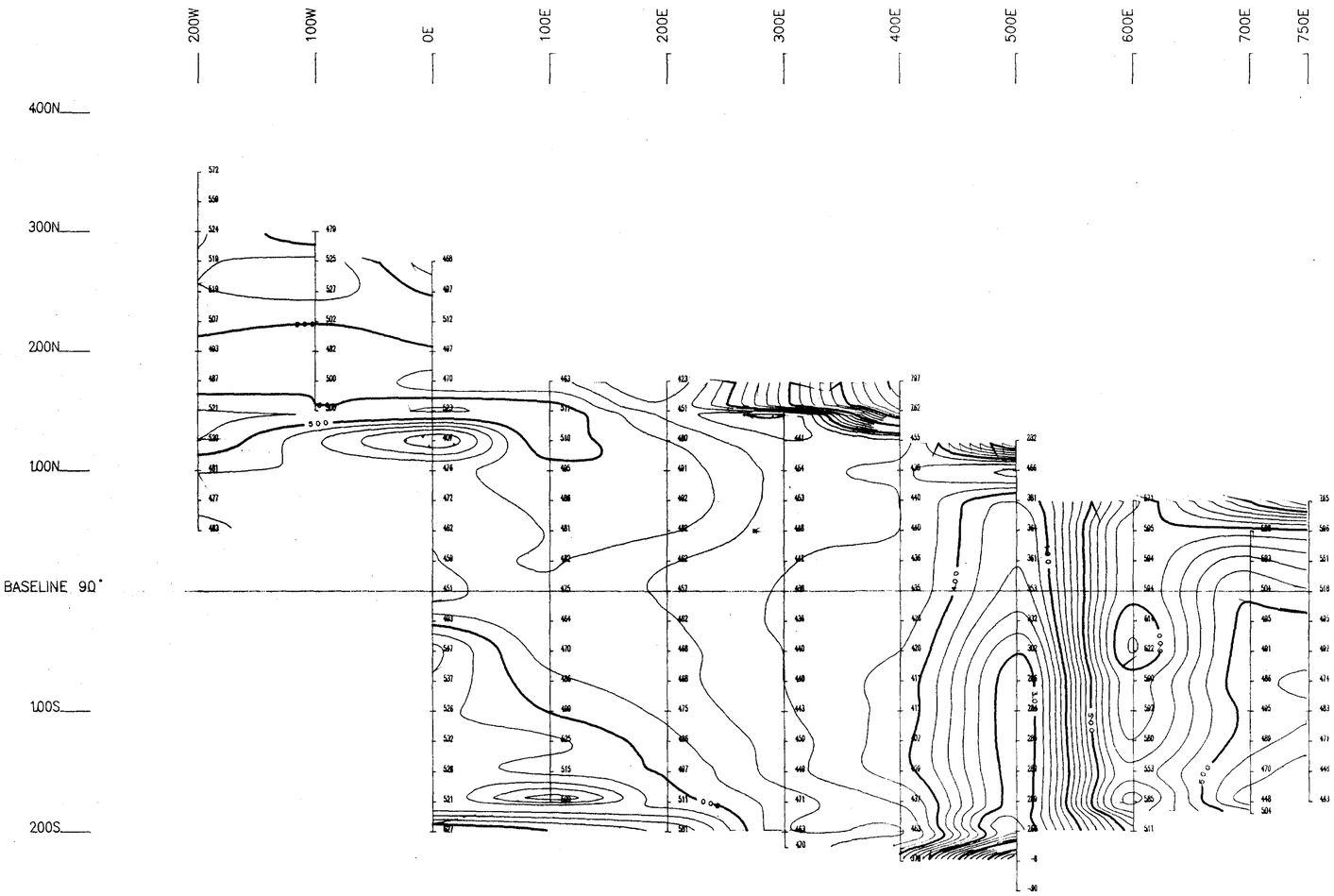
RIDOUT LAKE (MAIN)

VLF SURVEY

PROJECT: PM GENEX PROJECT # 100
BASELINE AZIMUTH: 90 Deg.

SCALE = 1: 2500 DATE 17/03/92
SURVEY BY : B. McDONOUGH NTS :
FILE : VRIDEM.XYZ

NORANDA EXPLORATION



2.15050

MAP #3

Instrument	: PROTON G-816
Field	: TOTAL
Datum	: 58000.0 nT
Contour Interval	:
Conductor Axis	:

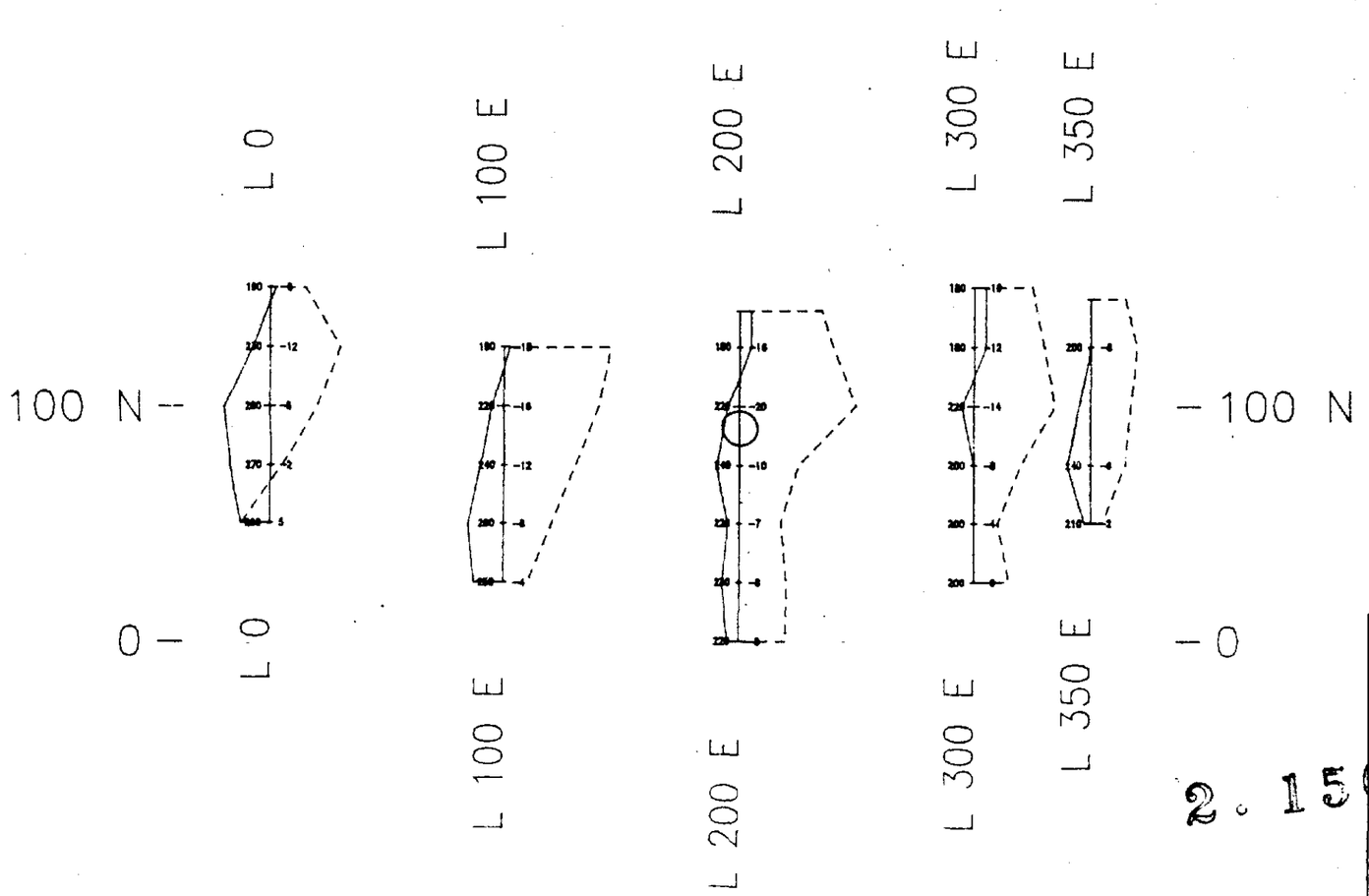
50m 25m 0m 50m 100m

RIDOUT-MAIN GRID

MAGNETOMETER SURVEY

PROJECT: RIDOUT PROJECT # : 101
BASELINE AZIMUTH : 90 Deg.

SCALE = 1 : 2500 DATE : 3/18/92
SURVEY BY : BM NTS :
FILE: MRIDM
NORANDA EXPLORATION



MAP #4

Instrument : Crone RADEM
Tx Station Cutler Maine
Frequency : 24kHz
Field Strength : Left ——
Profile Scale : 1cm = 100 Base Value 200
Dip Angle : Right - - - -
Profile Scale : 1cm = 10%

Scale 1:2500
25 0 25 50 75 100
(metres)

RIDOUT LAKE (EAST)

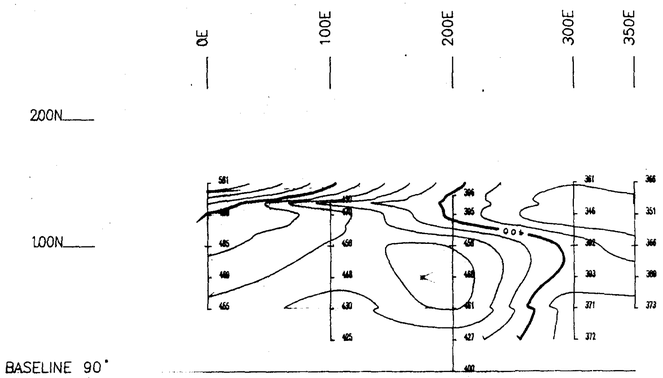
VLF SURVEY

PROJECT: PM GENEX PROJECT # 100
BASELINE AZIMUTH: 90 Deg.

SCALE = 1: 2500 DATE 17/03/92
SURVEY BY : B. McDONOUGH NTS :
FILE : VRIDEE.XYZ

NORANDA EXPLORATION

2.15050



2.15050

MAP #5

Instrument	: PROTON G-816
Field	: TOTAL
Datum	: 58000.0 nT
Contour Interval	:
Conductor Axis	:

50m 25m 0m 50m 100m

RIDOUT-EAST GRID

MAGNETOMETER SURVEY

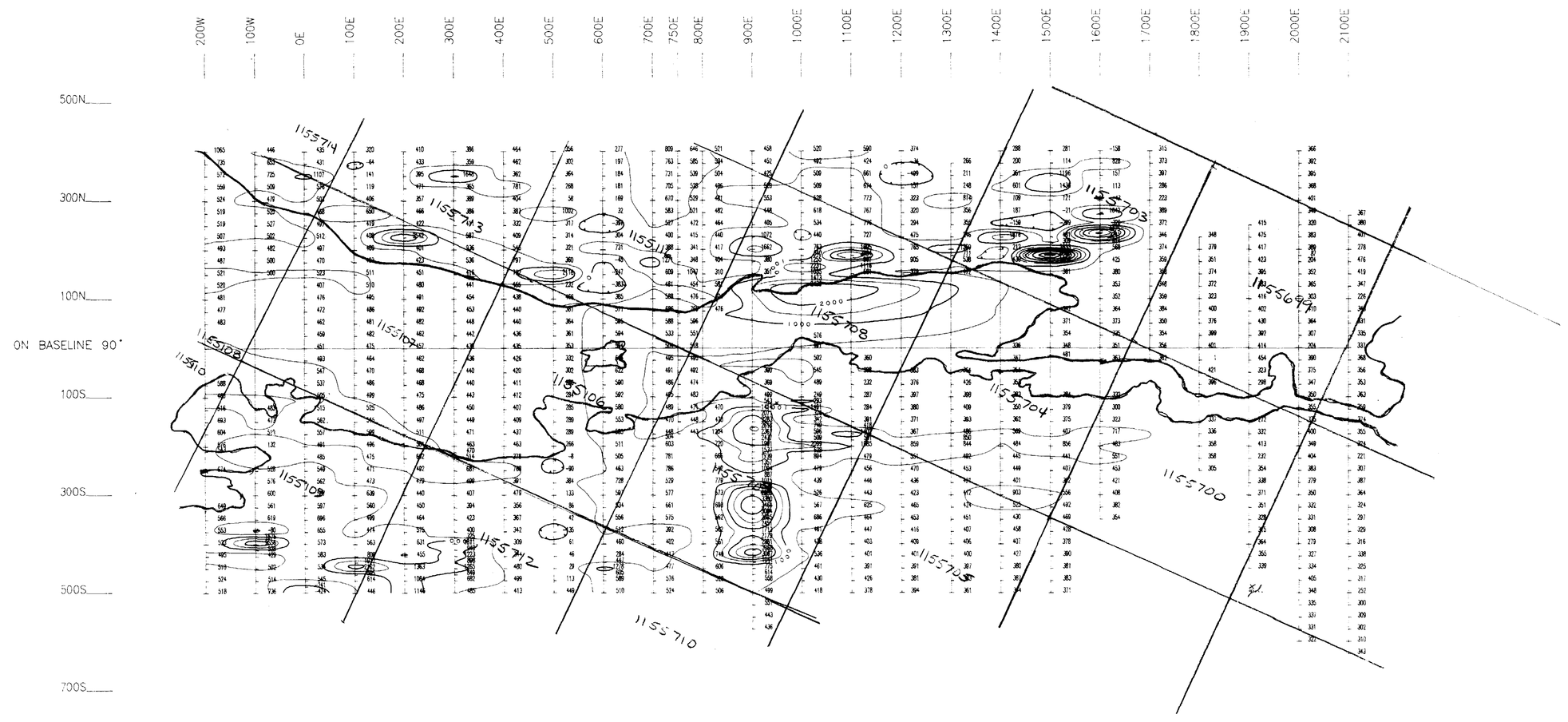
PROJECT: RIDOUT PROJECT # : 101
BASELINE AZIMUTH : 90 Deg.

SCALE = 1 : 2500 DATE : 3/18/92
SURVEY BY : BM NTS :
FILE: MRIDE

NORANDA EXPLORATION

41018NE9212 2.15050 GREENLAW

270



MAP #6

Instrument	: PROTON G-816
Field	: TOTAL
Datum	: 58000.0 nT
Contour Interval	:
Conductor Axis	:

100m 50m 0m 100m 200m

RIDOUT–MAIN GRID

MAGNETOMETER SURVEY

PROJECT: RIDOUT PROJECT # : 101
BASELINE AZIMUTH : 90 Deg.

SCALE = 1 : 5000 DATE : 3/18/92
SURVEY BY : BM NTS :
FILE: MRIDM

NORANDA EXPLORATION