Report on the Geological, Geochemical and Geophysical Surveys

Rowan Lake Property
District of Kenora, Ontario

for

CHARGER RESOURCES LTD.

November 26, 1983
Timmins, Ontario

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SUMMARY

The northern portion of the Charger Resources Ltd., Rowan Lake property is underlain by a south-facing sequence of easterly-trending, roughly vertically dipping, pillowed to massive mafic metavolcanic flows. Overlying the mafic flows is a lense of mafic to intermediate lapilli tuff overlain in turn by a sequence of rhyolitic agglomerates and tuffs. The southern portion of the property is underlain by pillowed to massive mafic metavolcanic rocks intruded by a granitoid complex in the extreme south. Gabbro sills and intrusive bodies intrude all rock units except the granitoid rocks.

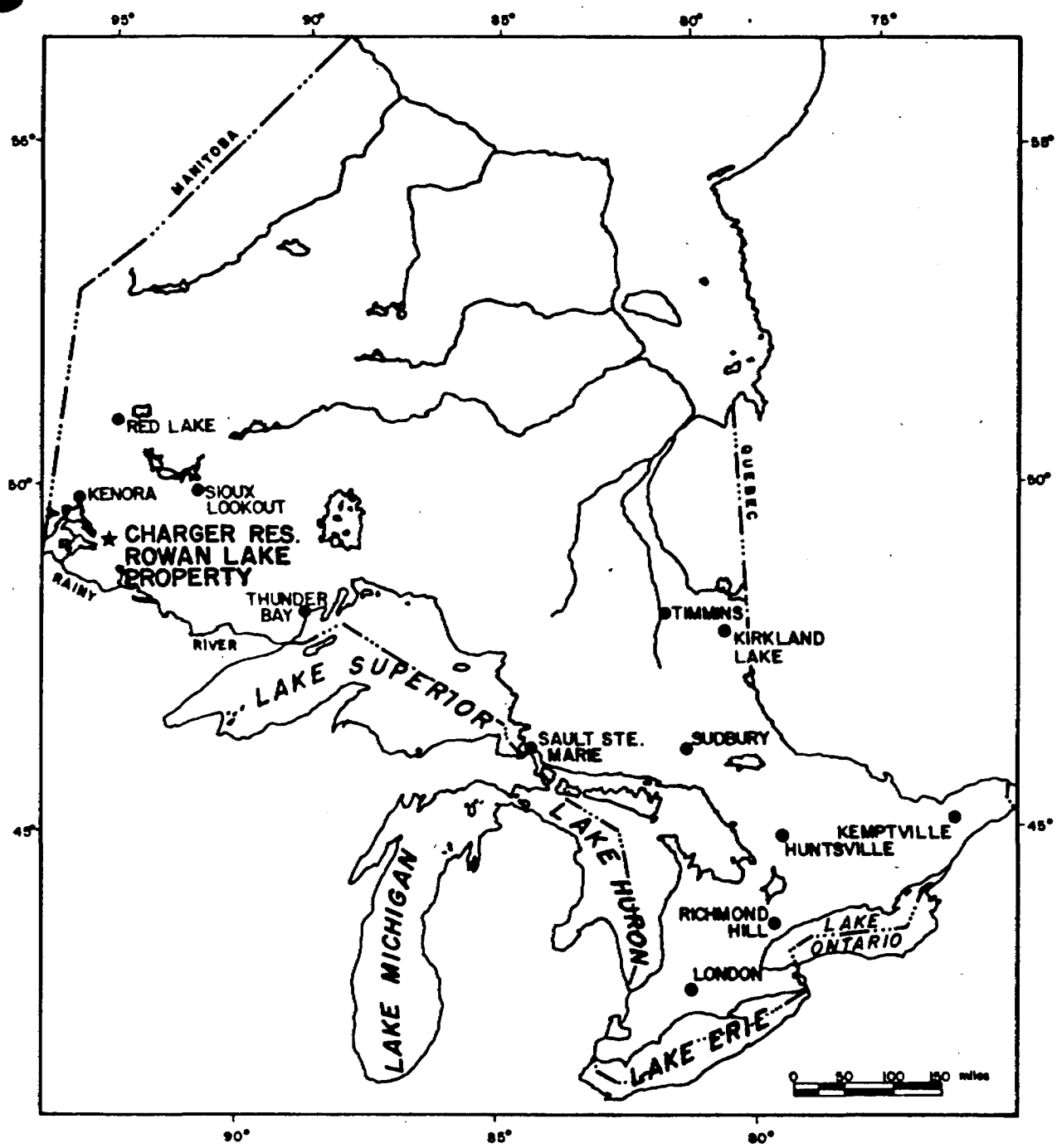
Two pyrite-bearing, altered sericite schist zones occur in mafic metavolcanic rocks on the north and south portions of the grid, and are anomalous in gold in addition to having corresponding I.P. chargeability anomalies. These alteration zones are similar in character to the alteration hosting the Lockwood - Nuinsco gold deposit to the west of the property.

More detailed I.P. surveys over the two alteration zones are recommended along with I.P. survey coverage of the area underlain by Sullivan Bay. Drilling targets can already be established on the basis of work completed to date and an initial program of 5-7 holes totalling 3,300 feet of drilling has been recommended.

INTRODUCTION

The nineteen unsurveyed claim group was geologically mapped from October 9th to 21st, 1983, for Charger Resources Ltd., Suite 403, 595 Howe St., Vancouver, B.C. The claims are held by Jacques Sawyer and Alain Thibault, and have been acquired by Charger Resources Ltd. under an option agreement. The claim group straddles part of Sullivan Bay in Rowan Lake. The northern part of the property consists of the following contiguous claims: K 690784, K 690785, K 612287 to K 612296 inclusive. The southern portion consists of the following contiguous claims: K 690696, K 690698, K 690758, K 690759, K 690786, and K 690787. A large part of claims K 612287, K 612290, K690696 and K 690786 are over water.

A grid was established by cutting a baseline running parallel to the stratigraphy at 070° AZ, just north of the north shore of Sullivan Bay. Lines were cut perpendicular to this baseline at 120 metre intervals. The lines were picketed every 20 metres and were tied in by three cross lines: TL 800N, TL 1100S and TL 1600S. A total of 21.9 kilometres of line were cut on the claims.



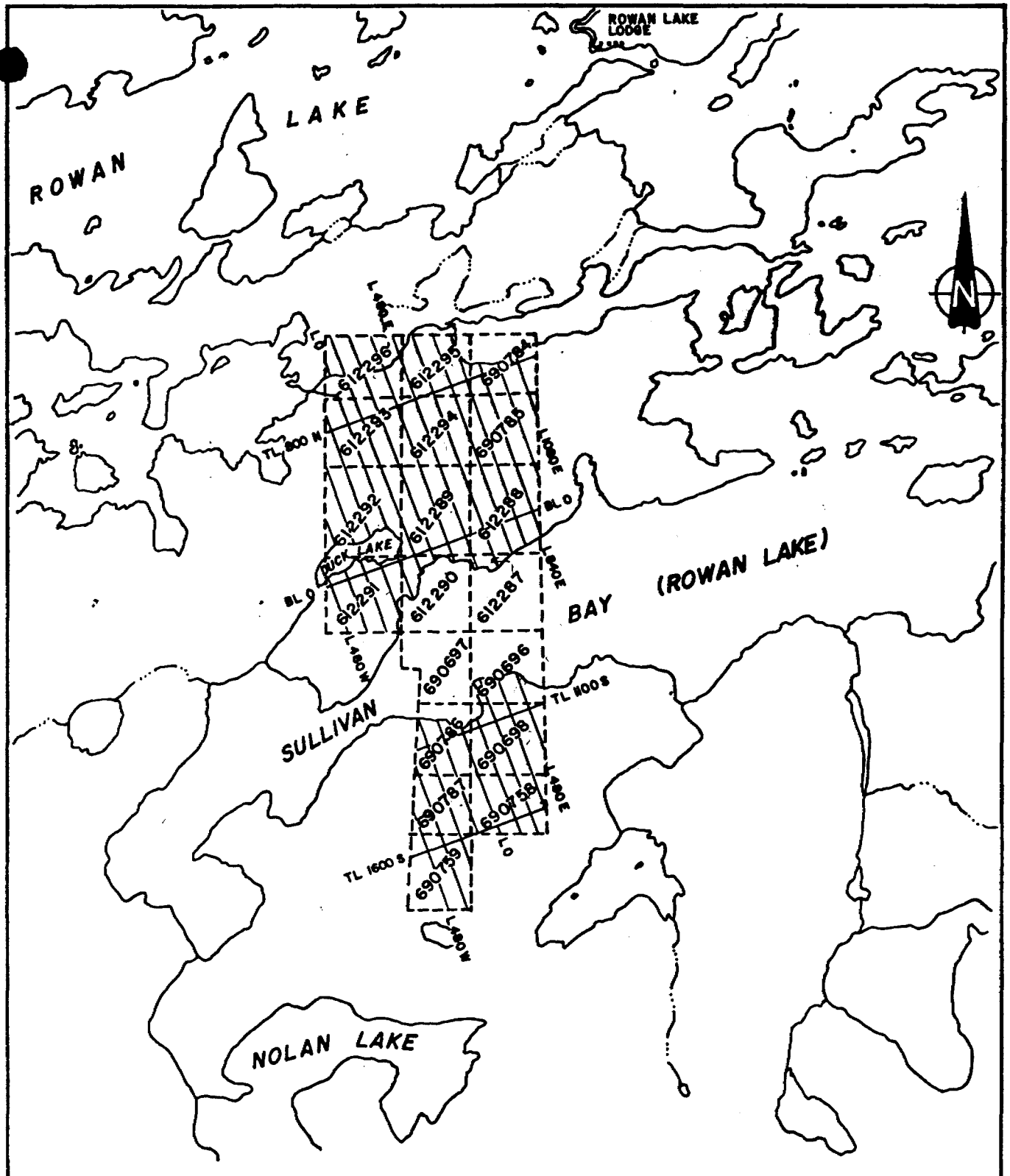
PROVINCE OF ONTARIO

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD.		
	Title **PROPERTY LOCATION** FIG. 1		
	Date: DEC. 83	Scale: 1:1 000 000	N.T.S.: 52 F/5
	Drawn: CJ	Approved:	File: M-28

LOCATION, ACCESS AND TOPOGRAPHY

The claim group straddles Sullivan Bay in the southwestern part of Rowan Lake, District of Kenora, Ontario. The property is approximately 40 km northeast of the town of Nestor Falls, Ontario, located on Highway 71, approximately 87 km southeast of Kenora, Ontario; and approximately 80 km north-northwest of Fort Frances, Ontario. The property is accessible by float plane, available in Nestor Falls. Rowan Lake Lodge, equipped with a radio telephone is about 2 km northeast of the property, about 5 km by boat.

Outcrop is abundant in the portion of the property north of Sullivan Bay. A series of easterly trending ridges of outcrop are separated by cedar swamp or low lying ground. A small lake covers the part of the property lying west of L120E from about 100 to 200 metres north of the baseline. The northern margin of the property is mostly covered by part of Rowan Lake in the east and by part of Baby Shingwak Lake in the west. The portion of the property south of Sullivan Bay is relatively flat and mostly covered by glacial deposits although scattered low outcrop occurs throughout the area.



From ROWAN LAKE claim sheet no. M-2580

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD.		
	Title **CLAIM INDEX MAP** FIG. 2		
	Date DEC. 83	Scale 1"=2640'	N.T.S. 52 F/5E
	Drawn CJ	Approved	File M-28

ACKNOWLEDGEMEMTS

The assistance of J. Bald and C. Jones during the mapping and sampling of this property is gratefully acknowledged.

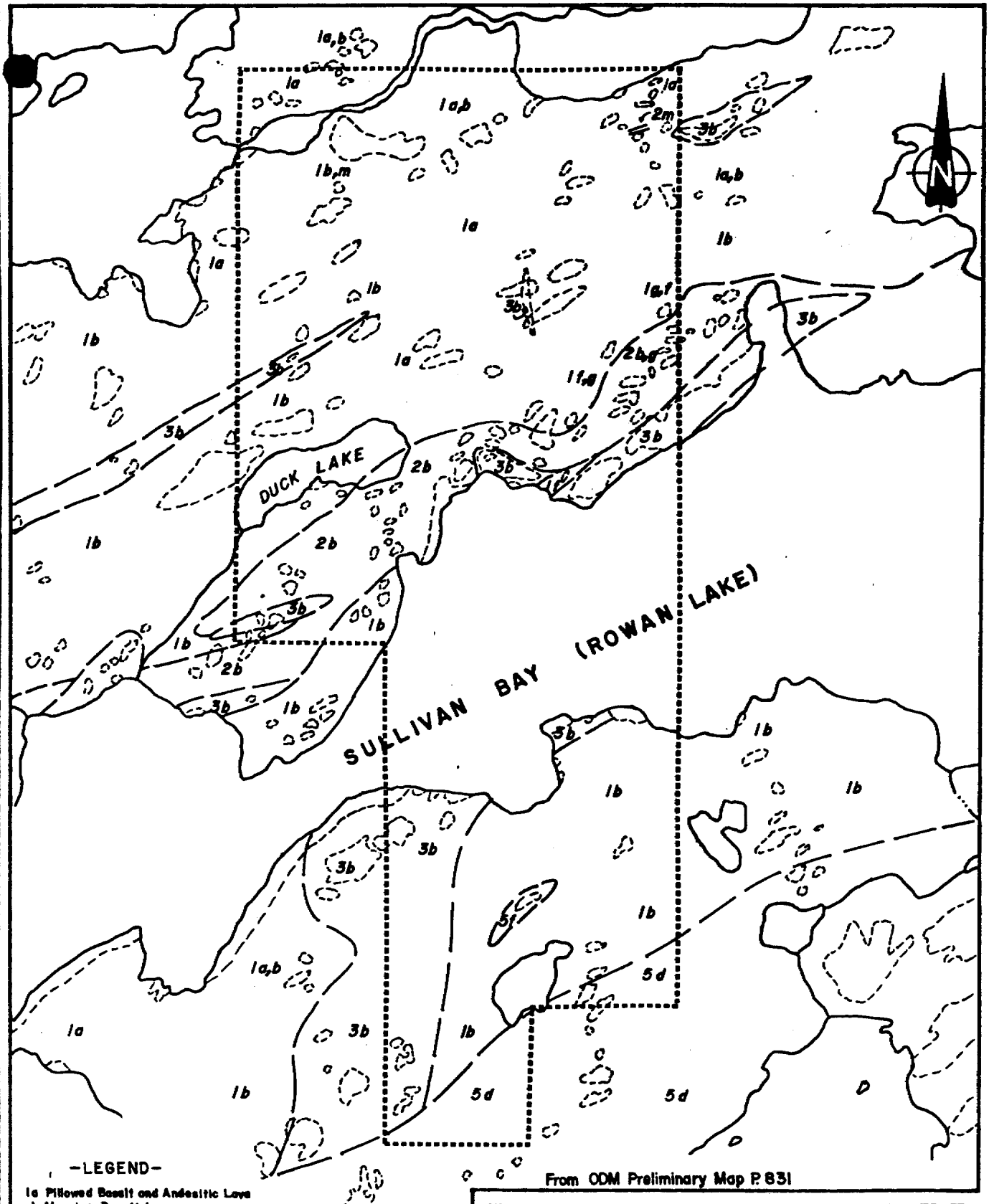
REGIONAL GEOLOGY

The Rowan Lake area was mapped by Kaye (1973) at a scale of 1 inch to 1/4 mile (Figure 3). The oldest units in the Rowan Lake area are felsic metavolcanic rocks. A thick sequence of pillowed to massive basalt and andesite flows are overlain by lesser amounts of intermediate to felsic pyroclastics and volcanogenic sediments. Rhyolitic and rhyodacitic flows are associated with silicic tuff and lapilli tuff. Feldspar porphyry and quartz feldspar porphyry, mapped as intrusive rocks, may in part be extrusive or cogenetic with extrusive rocks.

The metavolcanic rocks are intruded by concordant to subconcordant to ultramafic sills. The Nolan Lake Stock intrudes the sequence in the southern part of the area. It consists mainly of coarse-grained, porphyritic quartz monzonite.

The rocks in the Rowan Lake area are metamorphosed to middle to upper greenschist facies. The metamorphic grade is higher near granitic intrusive contacts.

The rocks have been folded into three major parallel fold



From ODM Preliminary Map P.831

-LEGEND-

- 1a Pillowed Basalt and Andesitic Lava
- 1b Massive Basalt Lava
- 1f Tuff
- 1g Lapilli Tuff
- 2b Silicic Tuff (quartz porphyry)
- 2g Dacitic Tuff
- 2m Sericite Schist
- 3b Gabbro, Hornblende Gabbro
- 5d Monzonite, Syenite
- 1f Carbonated Monzonitic Rock
- outcrop boundary
- geological contact, assumed

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD.		
	Title **REGIONAL GEOLOGY** FIG. 3		
	Date DEC. 83	Scale 1"=1320'	N.T.S. 52 F/5E
	Drawn CJ	Approved	File M-28

structures, generally trending 070° az. A large anticline closes near Shingwak Lake in the northern portion of the property. An anticlinal structure near Nolan Lake in the southern portion of the area is occupied by the Nolan Lake quartz monzonite stock. In between these two structures is a compressed synclinal keel, located through Sullivan Bay. A major fault zone trends roughly southeast through Cameron Lake.

PREVIOUS WORK

The Rowan Lake area was mapped by Burwash (1933) and Thomson (1935, 1938) for the Ontario Department of Mines at a scale of 1 inch to 1 mile. Mapping by Johnston (1960) at a scale of 1 inch to 1/2 mile, and Davies (1967) at a scale of 1 inch to 1/4 mile for the Ontario Department of Mines included parts of the Rowan Lake area. The area was most recently mapped by Kaye (1973) for the Ontario Division of Mines at a scale of 1 inch to 1/4 mile.

The area has been explored for gold since the turn of the century and for base metals, copper and nickel since 1950. Although a number of small gold deposits were mined in the early 1900's, no deposits of economic significance were outlined until recently by a drilling program undertaken by Nuinsco Resources on the previously drilled Noranda-Zahavy property. The Nuinsco property is now under option to Lockwood Petroleum and lies about

5 km to the west of the Charger Resources property. The drilling program has yielded several zones of gold mineralization, some showing impressive widths and grades. The company is planning more drilling and a bulk sampling test this winter. The Nuinsco discovery has spurred renewed interest in the area and many claims have been staked since late 1982.

No evidence of previous work such as drill holes, trenching or blasting were found on the property during the present mapping program. A search of the Toronto assessment files revealed a small amount of assessment work has been done on the property. An airborne geophysical survey using a fluxgate magnetometer was done over a large portion of the Rowan Lake area, including the Charger Resources property (File 2.5781 Toronto Assessment Files). A ground fluxgate magnetometer survey was done in March, 1974, on the ground now covered by claims K690 786 and K690 786 in the southern portion of the Charger property (File 2.1453, Toronto Assessment Files). Both surveys show relatively flat magnetic gradient over the Charger claims.

PROPERTY GEOLOGY

The northern portion of the property is underlain by a sequence of easterly trending (070° to 085° AZ), vertical steeply north dipping, pillowed to massive mafic metavolcanic flows.

Pillow shapes indicate south facing tops, thus the flows are overturned. Overlying the mafic flows are intermediate to felsic pyroclastic rocks, occurring from near the baseline, southward to the lake shore. The southern portion of the grid is underlain by mafic pillowed to massive metavolcanic rocks. Although no pillow shapes suitable for top determination were found, Kaye (1973) postulated that a "compressed, or otherwise deformed, synclinal keel is localized through Sullivan Bay", indicating the volcanic flows south of Sullivan Bay may face north. A gabbroic sill intrudes the metavolcanic flows in the northern portion of the property. Gabbroic bodies also intrude the felsic fragmental rocks close to the north shore of Sullivan Bay, and the metavolcanic rocks south of Sullivan Bay. An inhomogeneous granitoid intrusion, consisting of granitic, granodioritic and aplitic phases, intrudes the metavolcanic sequence in the extreme south portion of the property. Table 1 lists the lithological units in chronological order, from youngest to oldest.

Table 1: Table of Formations

Granodioritic - Granitic Intrusive Complex

Intrusive Contact

Gabbro

Intrusive Contact

Felsic Pyroclastic Rocks
- Finely laminated felsic tuff
- Rhyolitic tuff
- Rhyolitic agglomerate

Conformable Contact

Mafic to Intermediate Lapilli Tuff

Conformable Contact

Mafic Metavolcanic Flows
- Plagioclase phyric
- Amygdaloidal
- Massive
- Pillowed
- Amygdaloidal pillowed

Mafic Metavolcanic Flows

A large portion of the property is underlain by foliated to locally schistose, pillowed to massive, locally amygdaloidal mafic metavolcanic flows. South facing tops were determined from pillow shapes in the extreme northern part of the property. Broken pillow breccia was seen on one outcrop. The flows are locally magnetic near the south shore of Duck Lake. Rare plagioclase phyric flows consist of randomly oriented, equant to lath-shaped plagioclase crystals less than 3mm long in a dark greenish-grey chloritic matrix. Amygdules up to 5mm long are commonly filled with carbonate and tend to weather out, resulting in a pitted weathered surface. Rarely, amygdules are filled with quartz and pyrite. Locally, the amygdules are concentrated along the outer margin of the pillows and local development of pipe vesicles occur. The amygdules are stretched parallel to the foliation, ranging from 062°, dipping 88° south, to 84°, dipping 80° north. The flows are fine to medium-grained, light grey to green to black on fresh surfaces and buff to greenish to black on weathered surfaces. They are locally slightly to strongly carbonatized, and contain trace to about 1% fine to coarse-grained disseminated pyrite. The volcanic rocks locally contain up to 5% quartz (+ carbonate) veins up to 8cm wide. The veins are irregular to parallel to the foliation, and are usually

barren but locally contain about 1% fine to medium-grained disseminated pyrite. The quartz is milky white to glassy to grey, locally vuggy and rarely contains chlorite-rich host rock inclusions. Near the granite-volcanic contact, the metavolcanic unit is very hard and is cut by locally folded pink granite dikes up to 1.3 cm wide. Quartz-epidote veins up to 5cm wide containing trace, fine-grained pyrite also occur close to the contact.

Mafic Lapilli Tuff

The mafic fragmental unit consists of up to 15%, felsic clasts up to 15 cm long and rarely, 20% light green, fine to medium-grained intermediate clasts in a foliated, magnetic chlorite-rich matrix. The clasts are stretched parallel to the foliation, ranging from 060° to 084°, and dipping vertically. The angular to subangular felsic clasts are white to dark pink, fine-grained, cherty, rhyolitic clasts. Fine-grained magnetite crystals are disseminated in the chloritic matrix. The unit contains trace to 2% fine to medium-grained disseminated pyrite cubes and aggregates.

Felsic Fragmental Sequence:

Rhyolitic Agglomerate

The rhyolitic agglomerate and finely laminated tuff consists of up to 2% siliceous, cherty, stretched clasts up to 8cm long in a grey to locally greenish to purplish-tinged, aphanitic felsic matrix. The matrix contains from about 1% to 50% white, equant to lath-shaped plagioclase crystals and rare quartz phenocrysts. The unit is very hard and is grey on fresh surfaces and grey to white on weathered surfaces. It contains trace to 2% fine-grained pyrite, as disseminated crystals and as laminations along bedding planes; and locally about 2% rare, fine-grained pyrrhotite in elliptical aggregates. White to black, barren quartz (+ carbonate) veins up to 6mm wide are randomly oriented or locally cut the felsic fragmental rocks in a net pattern.

Very hard, finely laminated tuff units are locally interbedded with the felsic fragmental unit. They consist of dark grey, aphanitic to fine-grained, siliceous to locally carbonate-rich beds less than 3mm to 1.3cm wide. The strike of the bedding ranges from 075° dipping 88° south, to 080°, dipping 77° north and is parallel to the foliation. The finely laminated tuff rarely contains up to 4% fine-grained disseminated and patchy pyrite.

Rhyolitic Tuff

Rhyolitic tuff similar to quartz feldspar porphyry occurs on the north shore of Sullivan Bay. It is probably extrusive but may in part be intrusive. It consists of medium-to coarse-grained, up to 40% white plagioclase laths and up to 5% quartz phenocrysts in a dark grey to dark reddish aphanitic, cherty matrix. It is grey on fresh surfaces and brown-buff to pink on weathered surfaces. It is highly siliceous, very hard, massive to locally slightly foliated at about 076°, dipping vertically. It contains up to 2% fine to medium-grained disseminated pyrite and local quartz veins up to 10cm wide. A sharp, conformable contact with finely laminated felsic tuff was observed on the north shore of Sullivan Bay.

Gabbro

Gabbroic sills and irregular-shaped bodies intrude all units on the property except the granitoid complex. The gabbro is medium to coarse-grained and locally fine-grained near intrusive contacts. It is black to greenish grey to grey on fresh surfaces and black to grey to dark grey on weathered surfaces. The gabbro is massive to slightly foliated, locally magnetic, and consists of large black amphibole crystals and fine-grained white plagioclase laths. It is locally carbonatized and rarely contains 2% randomly oriented carbonated veinlets. Locally, it

contains irregular quartz (+ epidote) veins and pods, up to 2.5cm wide. The quartz veins are usually barren but locally contain trace coarse-grained pyrite aggregates. The quartz is white to glassy to rarely black. Trace fine-grained disseminated pyrite commonly occurs in the gabbro but locally, it contains up to 2% fine to coarse-grained disseminated pyrite.

Granitoid Complex

A multiphase granitic-granodioritic complex intrudes the mafic metavolcanic sequence in the extreme southern portion of the property. The oldest unit is massive to porphyritic, medium to coarse-grained granodiorite. It is white to pinkish on weathered surface and grey on fresh surface, and is locally cut by pink granitic dikes. Massive to porphyritic, medium to coarse-grained pink granite consists of about 70% pinkish feldspar, up to 1.3cm in diameter; about 20% quartz phenocrysts; and about 10% mafic minerals consisting of black amphibole up to 1.3cm in diameter or rarely, biotite. The granite contains fine to medium-grained mafic xenoliths up to 90cm in diameter. Both phases contain trace to 1% fine-grained disseminated pyrite. Up to 2%, pink aplitic dikes cut mafic metavolcanic flows close to the granite-volcanic contact.

ECONOMIC GEOLOGY

A Total of 63 rock samples, only two of which were collected from the southern portion of the property, were collected and analysed for gold and arsenic. A description of the samples and their location are given on Table 2.

Although a trace amount of disseminated pyrite is ubiquitous to the rocks on the property, two altered zones in the mafic metavolcanic rocks contain up to 3% pyrite. A roughly easterly trending sericitized and locally carbonatized and silicified schist zone was traced along the north side of a ridge from L840E to L600E, roughly between 220N and 245N West of L600E, outcrop gives way to a cedar swamp extending to Duck Lake. From the samples collected from this zone, the highest value obtained was 200 ppb Au, from sample 27198. In the southern portion of the property, two outcrops of locally finely laminated sericitic, siliceous and carbonaceous schistose tuff, containing up to 2% pyrite were located near the western boundary of the claim group, between 1120S and 1175S, about 40 metres west of L240W. One grab sample taken from this zone was not anomalous in gold. This unit was not traceable further east but this may be due to lack of outcrop. Both sericitic schist zones correspond to chargeability anomalies located during an induced polarization survey.

Table 2: Description and location of rock samples analysed for gold and arsenic.

SAMPLE #	ROCK TYPE	LOCATION	Au (ppb)	As (ppm)
27152	rhyol. aggl.,2%py	480W, 120S	25	15.2
27153	rhyol. aggl., qc veins	360W, 180S	10	6.5
27154	q.v. in rhyol. tuff	130W, 297S	10	8.0
27155	rhyolitic tuff	LO, 130S	75	6.3
27156	rholitic tuff, 2% py	LO, 004S	110	7.3
27157	rhyol. aggl., 1% py, 2%po	120W, 160S	20	6.8
21758	silicified zone in basalt	120W, 060N	5	3.3
27159	mafic tuff, 2%py	195E, BLO	^5	1.0
27160	q.v. in gabbro	425E, 210S	30	3.5
27161	gabbro	480E, 185S	10	4.8
27162	rhyolitic agglomerate	420E, BLO	10	1.3
27163	gabbro	735E, 085S	5	.3
27164	gabbro, q.c. veins	720E, 110N	5	1.6
27165	sericite schist, 3% py	720E, 220N	5	4.2
27166	gabbro, 2% py	720E, 380N	5	.5
27167	carbonatized basalt, 1% py	720E, 687N	5	.9
27168	silicified basalt, 2% py	600E, 245N	10	22.0
27169	carbonatized gabbro	840E, 240N	5	.4
27170	basalt, 1% q. veins	120E, 480N	5	.6
27171	basalt, less than 1% py	225W, 274N	10	1.9
27172	q.v. in basalt	LO, 544N	20	2.5
27173	basalt, 5% q. veins	110W, 271N	10	2.7
27174	q.c. vein in chlorite schist	012W, 630N	30	100
27175	basalt	016E, 299N	^5	.3
27176	q.v. in basalt, 1% py	120E, 555N	^5	2.7
27177	rusty basalt, 2% py	192E, 087N	5	3.1
27178	rhyol. tuff, 5% q. veins	240E, 400N	30	3.1
27179	q. vein in basalt	240E, 600N	10	7.3
27180	c.q.v. in basalt	360E, 745N	10	^.2
27181	carb. basalt, q.v.'s	360E, 640N	5	2.5
27182	silicified basalt	346E, 280N	5	.5
27183	sericite/carb. basalt	702E, 215N	5	2.2
27184	basalt, 2% py	096E, 240N	5	1.6
27186	basalt	025W, 740N	5	1.9
27187	q.v., tourmaline?	037W, 200N	^5	1.2
27188	basalt	240E, 907N	5	.3
27189	q.v. in basalt	120E, 940N	5	15.6

Table 2 (Continued)

SAMPLE	ROCK TYPE	LOCATION	Au (ppb)	As (ppm)
27190	basalt	LO,1012N	5	13.3
27191	carb. rhyol. tuff	114W, 215S	15	1.0
27192	gabbro, 1% py	100W, 190S	10	6.8
27193	rhoyol. aggl.	090W, 170S	5	1.9
27194	q.v., tourmaline?	116W, 283S	15	1.5
27195	gabbro, 1% py	090W, 160S	10	3.0
27196	basalt, 3% py	366W, 028S	5	3.1
27197	rhyol. agglomerate	340W, 100S	10	^.2
27198	sericitized basalt, 2% py	777E, 225N	200	1.5
27199	sericitized basalt, q.v.s, py	757E, 230N	10	2.0
27200	q.v. in basalt, 2% py	662E, 227N	15	3.9
27251	felsic tuff, 2% py	293W, 1180S	20	3.1
27252	q.v. in gabbro, 1% py	213E, 840S	15	2.3
27253	basalt, 2% py	035W, 185S	35	.3
27254	rhyol. tuff, 3% py, q.v.'s	007E, 240S	60	3.1
27255	finely laminated tuff, 4% py	070E, 160S	5	1.3
27256	gossan in basalt	517E, 147N	60	2.2
27257	basalt, 2% py	225E, 102N	5	1.7
27258	basalt, 1% py	718E, 174N	10	.9
27259	q.v. in basalt	705E, 500N	5	.8
27260	carb. basalt, 1% py, q.v.'s	503E, 980N	5	9.4
27261	carb basalt, 1% py	142E, 452N	10	^.2
27262	q.v. in basalt, 1% py	323E, 550N	^5	.3
27263	qcv, tourmaline?	379E, 530N	5	1.5

^ Symbol for "Less Than"

GEOCHEMICAL SURVEY

On October 9th, 10th and 18th, 1983, 92 soil samples were collected from points 300 metres north of the baseline, southward to the north shore where the B horizon was developed in the soil profile. The samples were analysed for gold. The survey was done to sample soil developed over the felsic pyroclastic rocks along the north shore of Sullivan Bay and a sericitic schist zone located between L840E and L600E, about 220 metres north of the baseline. The rock and soil samples were analysed at Barringer Research Ltd. using a hot acid extraction (Aquaregia 90 minute) technique and values were obtained by Atomic Absorbtion. Soils were screened to -80 mesh. Rocks were pulverized to -200 mesh.

The southern portion of the property was not suitable for soil sampling since it is extensively covered by glacial deposits. Table 3 gives the location of the samples and a map at the back of this report (Fig. 7) illustrates the distribution of samples.

Table 3: Location of Soil Samples and Gold Values

SAMPLE	LOCATION	Au ppb	(Ashed) Au-ppb
27101	LO 160S	^5	---
27102	LO 140S	^5	15
27103	LO 60S	40	60
27104	LO 40S	^5	---
27105	LO 20S	^5	---
27106	L480W 80S	^5	---
27107	L480W 100S	^5	---
27108	L480W 120S	^5	---
27109	L480W 140S	^5	---
27110	L480W 154S	^5	---
27111	L360W 160S	10	80
27112	L360W 80S	^5	---
27113	L360W 20N	^5	---
27114	BLO 340W	^5	---
27115	BLO 300W	^5	15
27116	BLO 260W	^5	---
27117	L240W 200S	^5	---
27118	BLO 200W	^5	---
27119	BLO 140W	^5	---
27120	L120W 40N	^5	---
27121	L120W 20N	^5	---
27122	L120W BLO	^5	---
27123	L120W 20S	^5	10
27124	BLO 40S	^5	---
27125	L120W 60S	^5	---
27126	L120W 140S	^5	---
27127	BLO 40E	^5	---
27128	BLO 80E	^5	---
27129	L120E 20S	^5	---
27130	BLO 120E	^5	---
27131	L120E 20N	^5	---
27132	BLO 200E	^5	20
27133	BLO 240E	110	715
27134	BLO 320E	^5	---
27135	BLO 340E	^5	---
27136	BLO 360E	^5	---
27137	L360E 20S	^5	---

Table 3 (Continued)

SAMPLE	LOCATION	Au ppb	(Ashed) Au-ppb
27138	L360E 40S	^5	---
27139	L360E 80S	^5	---
27140	L360E 120S	^5	---
27141	BLO 400E	^5	---
27142	BLO 480E	^5	10
27143	L480E 60S	5	10
27144	L480E 80S	^5	---
27145	L480E 100S	^5	---
27146	L480E 160S	^5	---
27147	L480E 180S	5	---
27148	L480E 200S	^5	---
27149	L480E 220S	^5	10
27150	L600E 200S	15	15
27201	L600E 140S	^5	---
27202	L600E 120S	^5	---
27203	L600E 100S	^5	---
27204	L600E 80S	30	---
27205	L720E 80S	^5	---
27206	L720E 20S	^5	45
27207	BLO 640E	^5	---
27208	BLO 600E	^5	---
27209	BLO 560E	^5	10
27210	BLO 500E	10	10
27211	L120E 240N	^5	---
27212	L120E 260N	5	---
27213	L120E 300N	5	---
27214	L240E 300N	^5	---
27215	L240E 280N	^5	---
27216	L240E 60N	^5	---
27217	L240E 40N	5	10
27218	L360E 20N	^5	---
27219	L360E 40NB	^5	---
27220	L360E 200N	^5	---
27221	L360E 280N	^5	---
27222	L360E 300N	^5	---
27223	L480E 300N	---	15
27224	L480E 160N	---	10
27225	L480E 140N	---	30
27226	L480E 120N	---	10
27227	L480E 40N	---	10

Table 3 (Continued)

SAMPLE	LOCATION	Au ppb	(Ashed) Au-ppb
27228	L480E 20N	---	10
27229	L600E 20N	---	10
27230	L600E 40N	---	15
27231	L600E 80N	---	25
27232	L600E 100N	---	10
27233	L600E 160N	---	10
27234	L600E 180N	---	10
27235	L600E 200N	---	10
27236	L600E 240N	---	10
27237	L600E 300N	---	10
27238	L720E 220N	---	10
27239	L720E 200N	---	10
27240	L720E 140N	---	10
27241	L720E 80N	---	10
27242	L720E 40N	---	20
27243	L720E 20N	---	10

^ Symbol for "Less Than"

GEOPHYSICAL SURVEYS

Magnetometer Survey

From October 25 to 29, 1983, a magnetometer survey was carried out by George Dubroy, Rayan Explorations Ltd., over a total of 25.1km of cut line on the Rowan Lake property. 18.2km of line were covered on the northern portion of the grid over approximately 11 claims and 6.94km of cut line were covered on the south part of the property over approximately 6 claims. A total of 1369 readings were taken, of which 878 were taken on the northern portion of the grid and 491 readings from the southern portion. A Geometrics G816 proton magnetometer was used during the survey. Diurnal drift was corrected by looping to base stations established along the baseline and tie lines.

North of Sullivan Bay, the magnetometer survey reveals magnetic relief of about 800 gammas. A relatively flat magnetic gradient occurs over the mafic metavolcanic rocks in the northern part of the grid. The gabbroic intrusion along the eastern portion of the lakeshore has slightly high magnetic susceptibility. Gabbro intrusions elsewhere on the north part of the property show isolated high magnetic susceptibility.

South of Sullivan Bay, the magnetic relief is about 1,000 gammas. The northern margin of the granitoid complex shows high

magnetic susceptibility, as do the mafic metavolcanic rocks and gabbroic intrusions within about 400 metres of the contact. The gabbro body along the south shore of Rowan Lake has relatively low magnetic susceptibility.

Induced Polarization Survey

From October 19 to 24, 1983, an induced polarization survey was carried out by Rayan Explorations Ltd., over a total of 7.16km of cut line on the Rowan Lake property. 6.2km of line were covered on the northern portion of the grid over parts of 11 claims, and 0.96km of cut line were covered on the south part of the property over parts of 5 claims. A total of 402 readings were taken, of which 300 were taken on the northern portion and 102 from the southern portion. The survey was run with a Crone N IV receiver and a Crone 250 Watt battery powered transmitter. A dipole-dipole array was used with an "a" spacing of 40 metres and n=1 and 2. George Dubroy, Tom Patterson and Howard McGowan carried out the I.P. survey for Rayan Explorations Ltd.

Six chargeability anomalies were located on the northern portion of the grid and three on the south grid, as shown on Table 4. Anomaly 1 correlates with a sericite schist zone located in outcrop but is partly located over cedar swamp. Two readings on L120E of 11 and 14 milliseconds, along strike from anomaly 1 could be the beginning of another anomaly continuing

westward under Duck Lake. Anomaly 2 is over locally magnetic gabbro and cedar swamp and may be caused by shallow bedrock and disseminated magnetite in the gabbro, since it is associated with high resistivity. Anomaly 3 correlates with rhyolitic agglomerate containing up to 1% pyrite and 2% pyrrhotite. Anomaly 4 is associated with high resistivity and correlates with mafic metavolcanic flows, however the peak of the anomaly is situated in a valley and sufficient space for a carbonatized zone to occur. Therefore a drill hole is suggested to test this possibility.

Anomaly 5 may be due to a slight general increase in pyrite content of the mafic metavolcanic rocks. Anomaly 6 also correlates with mafic metavolcanic rocks of which nothing of signifcance was observed in the field.

Three chargeability anomalies occur on the south part of the property. Anomaly 7 may be up to 480 metres long but is slightly offset between L0 and L120W. the western part of the anomaly correlates with a sericitized, silicified and carbonatized schistose tuff unit located in outcrop and is associated with relatively low resistivity. This western area should be tested by a drill hole. The eastern portion corresponds to high resistivity which may be in part caused by a bed rock ridge. Anomaly 8 is a broad chargeability anomaly within a resistivity

high. Although no outcrop occurs, the anomaly is believed to be located over mafic metavolcanic rocks with a small granitoid intrusive body to the south. Anomaly 9 is a single point anomaly on the edge of a resistivity high. Mafic metavolcanic rocks outcrop about 25 metres south of the anomaly.

The highest priority should be given to anomalies 1, 7, 4 and 3 on the basis of favourable rock type, presence of pyrite in outcrop and corresponding low resistivity values.

Table 4: Location and Description of I.P. Chargeability Anomalies.

ANOMALY	LOCATION	HIGH in MILLISECONDS	APPROX. LENGTH (m)	CORRELATION WITH HIGH RESISTIVITY
North Grid				
1	840E to 480E 150N to 250N	80	360	
2	720E to 480E 100S	53	240	High Resistivity
3	L0 to 120W 150S	44	120	
4	120W to 120E 425N 500N	44	240	High Resistivity
5	360E to 120E 900N	15	240	High Resistivity
6	840E, 700N	14	single point	High Resistivity
South Grid				
7	Possibly 2 parts 240W, 1175S to 120W, 1100S; L0, 1200S to 240E, 1220S	56	120 but could be up to 480	High Resistivity from L0 to L240E May be a ridge in part
8	240W, 1375S to 120W, 1350S	31	120	High Resistivity
9	240E, 1375S	42	single point	On edge of Resistivity High

CONCLUSIONS AND RECOMMENDATIONS

1. Two pyrite-bearing, altered, sericite schist zones, one north of Sullivan Bay and one south of Sullivan Bay in mafic metavolcanic rocks, have been located and are poorly exposed but have been found to contain anomalous Au and have corresponding I.P. chargeability anomalies. These zones require much more detailed follow up since they are similar in character to the alteration zones hosting the Lockwood - Nuinsco gold discovery to the west of the property. The I.P. anomaly north of Sullivan Bay on lines 600E, 220E and 840E, at 160N to 260N outlines the most significant part of the known alteration zones.

2. Local zones within the felsic pyroclastic rock sequence are also anomalous in gold.

3. Intermediate lines should be cut between the existing 120m lines from L360W to L840E, from BLO to about 800N, on the north part of the property; and between L480W and L480E, 200 metres north and south of the present chargeability anomalies, on the south part of the property.

4. Induced Polarization surveys should be done:

   a) over Sullivan Bay and Duck Lake during the winter by extending the present 120m line grid over the lakes and

   b) over the 60 metre fill-in lines during the winter if

electrode contact can be established.

5. A winter geophysical program at a cost of $15,000 is recommended. At least 3,300 feet of diamond drilling should be done to test the two known sericite-carbonate schist zones and any other favourable chargeability anomalies outlined during the winter fill-in I.P. survey. The following holes are recommended (see Table 5) at a cost estimated to be $100,000.00 which is roughly equivalent to the Phase III costs suggested by D. Esson, (1983).

Table 5: Initial Drill Holes

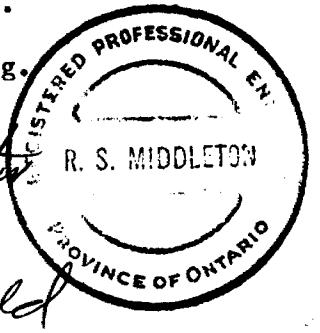
I.P. ANOMALY	COLLAR LOCATION	DIP	AZIMUTH	DEPTH FEET
7	Line 240W, 1150S	-50°	160°	300'
1	840E, 300N	-50°	160°	500'
1	720E, 280N	-50°	160°	800'
1	600E, 260N	-50°	160°	600'
Contingent Hole				
4	L120W, 480N	-50°	160°	300'
			Sub Total	2,700'
	Contingency for Anomalies in Sullivan Bay			600'
			TOTAL FEET	3,300'

Estimated Cost of Drilling Program $100,000.

Respectfully Submitted,

R. Bald, B.Sc.,M.Sc.

R. Middleton, P. Eng.



R. Middleton

Roberta Bald

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Declaration of Qualifications

I, Roberta Bald, submit this document to certify that the following statements are, to the best of my knowledge, true and correct:

1. That I mapped the geology and that I supervised C. Jones and J. Bald who assisted me in taking rock and soil samples on the Rowan Lake property.

2. That I was on the property while the geophysical surveys were being conducted by a geophysical crew from Rayan Explorations Ltd.

3. That I am the author of the attached report.

4. That I have received the following university degrees in geology: Honours B.Sc., Laurentian University, 1975 M.Sc., University of Manitoba, 1981.

5. That I have been working as a geologist since graduation.

6. That I am a member of the Geological Association of Canada.

Respectfully Submitted,

Roberta Bald

Roberta Bald

CERTIFICATION

I, Robert S. Middleton, P.Eng., of 136 Cedar Avenue South, in the City of Timmins, Province of Ontario, certify as follows concerning the Charger Resources Ltd. property and dated December 15, 1983.

1) I am a member in good standing of:

   a) Geological Association of Canada (FGAC)
   b) The Association of Professional Engineers of Ontario
   c) European Association of Exploration Geophysicists
   d) Society of Exploration Geophysicists
   e) Canadian Institute of Mining and Metallurgy

2) I am a graduate of the Michigan Technological University, Houghton, Michigan, U.S.A. with a B.S. degree in Applied Geophysics obtained in 1968, and an M.S. degree in Geophysics in 1969.

3) I have been practising my profession in Canada, occasionally in the United States, Central America, Europe and South Africa for the past 14 years.

Dated this December 15, 1983,
TIMMINS, Ontario

R. Middleton

Robert S. Middleton, P.Eng.

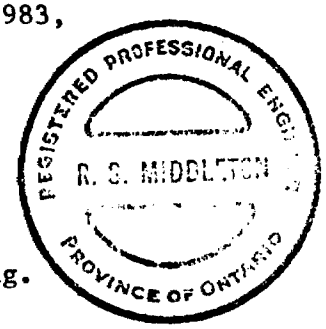


PHOTO DESCRIPTIONS

Photo 1. Camp as seen from peninsula west of camp location. Camp was set up at Line 0, 240 south.

Photo 2. View of Rowan Lake (Sullivan Bay) from BL 0+00 at 240E looking southeast.

Photo 3. Pillowed mafic metavolcanics flow, location is 6 metres north and 6 metres west of TL 800N, Line 960E, looking west, Hammer pick points approximately south; south facing tops from pillow shapes.

Photo 4. Lapilli tuff; with rhyolitic and feldspar crystal tuff fragments in a chlorite-rich matrix; location is L480E, 100 north; freshly stripped area, looking south.

Photo 5. Quartz feldspar porphyry (i.e.) massive feldspar crystal tuff; location is north shore of Sullivan Bay, between Line 0 and line 120E, looking approximately north.

Photo 6. Finely laminated tuff with cherty beds up to 1" wide; grades into "Quartz feldspar porphyry" to the east; location is on north shore of Sullivan Bay, 60m west along shore from L120E, 104m south; "Quartz feldspar porphyry" on right side of photo. Hammer is 34 cm long.

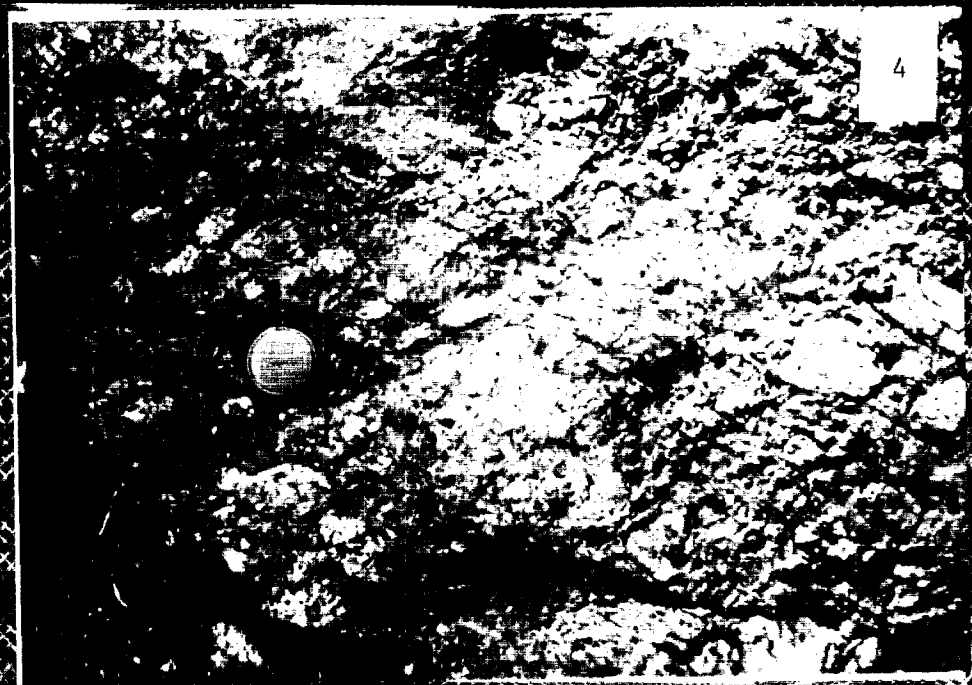
Photo 7. Feldspar crystal tuff intruded by fine to medium-grained gabbro; location is on north shore of Sullivan Bay, 15m west of L120E, 104m south.

Photo 8. Sericite-carbonate schist zone in mafic metavolcanic rocks on north face of small cliff, approximately 15m west of L720E at 220m north; looking south. Sample location 27165.

1

2

3



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APPENDICIES

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FILE: T3-0747
DATE: 06/12/83
MATRIX: AR REG.

R. S. MIDDLETON EXPLORATION SERVICES PROJ: N-28 (C. JONES) WO NO: 83-0747 PAGE:

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SAMPLE ID	AU PPB	AU-ASH PPB
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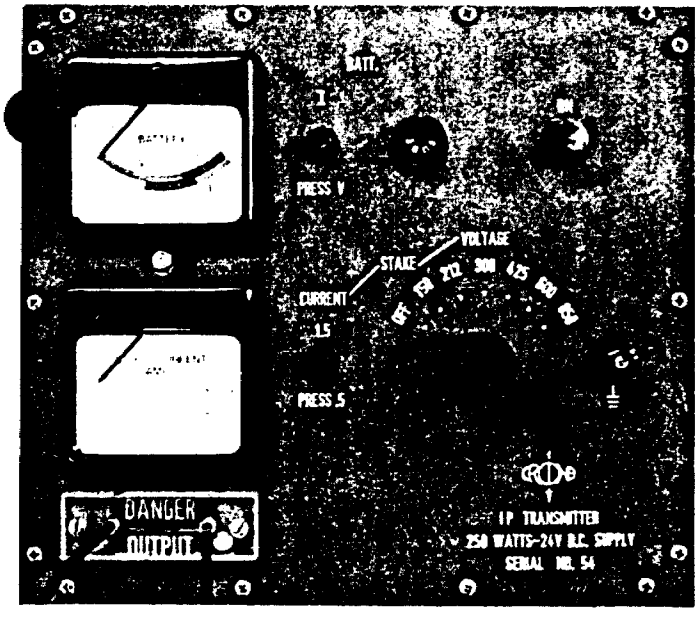
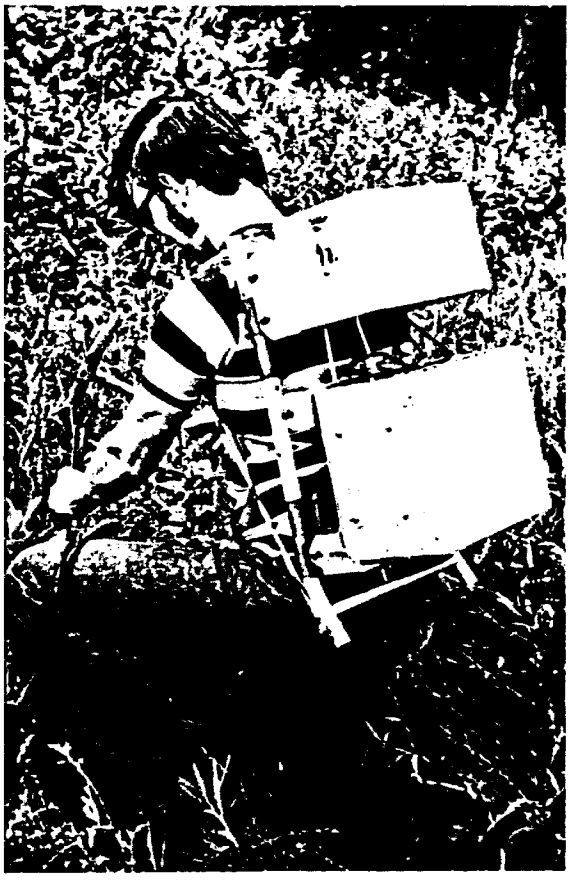


Battery Pack →

← I.P. Transmitter →



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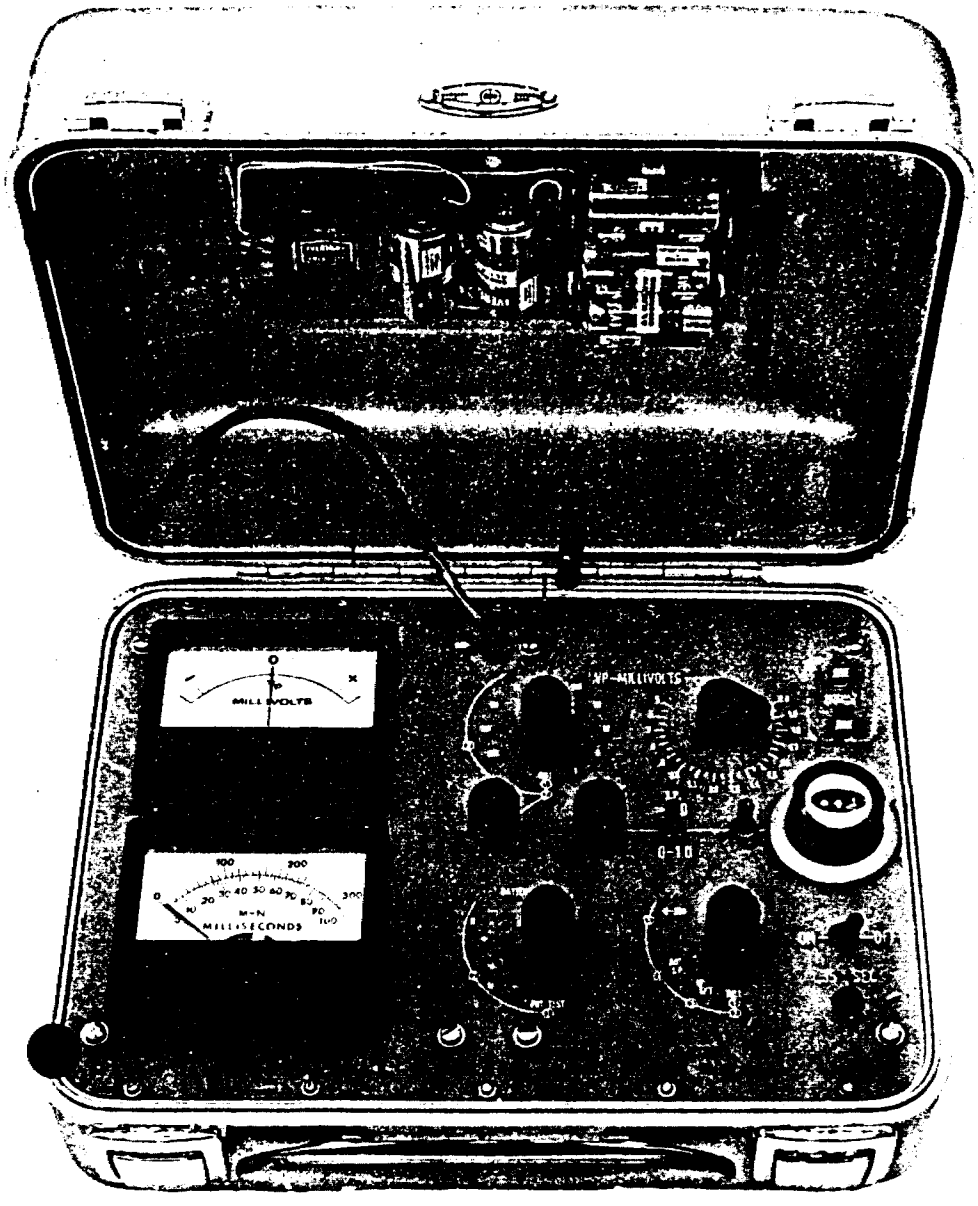

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  With shipping box – 8 kg.; 18 lbs.
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  – 5 of "C" cells, 1.5 volt each, 60MA drain, Eveready types E93 or 1035
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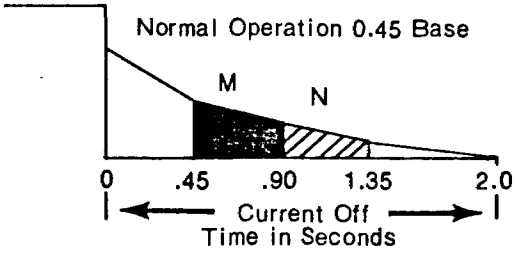
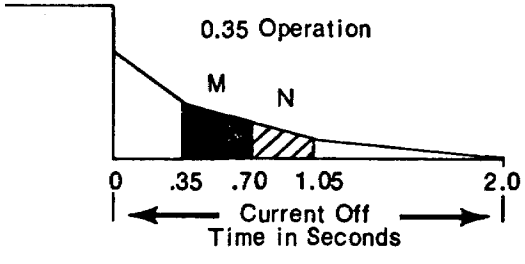
  Battery life – 3 months to 6 months

- Primary Voltage "Vp": .0005 to 60 volts, accuracy ± 5%
- Standard receivers set for 2.0 seconds on, 2.0 seconds off current cycle
  Off period must be greater than 1.8 seconds
- Chargeability M and N readings directly in milliseconds





- **Both M and N readings are automatically corrected to** the Newmont 33M1 Standard. M and N readings should be the same with a normal polarization decay. Unequal readings indicates the presence of inductive coupling and then the N reading should be used.
- Both M and N readings are taken for 3 current cycles (6 samples) then they are **automatically averaged and stored for direct read out.**
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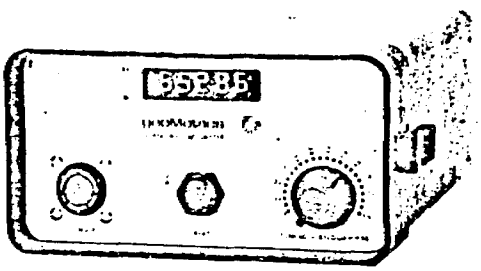

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2. Proton sensor and signal cable for attachment to carrying harness or staff.
3. Adjustable carrying harness.
4. 8 foot collapsible aluminum staff.
5. Instruction manual, complete set of spare batteries, applications manual, and rugged field suitcase.

Price and lease rates on the G-816 magnetometer are available upon request.

SPECIFICATIONS

Sensitivity: ±1 gamma throughout range

Range: 20,000 to 100,000 gammas (worldwide)

Tuning: Multi-position switch with signal amplitude indicator light on display

Gradient Tolerance: Exceeds 800 gammas/ft

Sampling Rate: Manual push-button, one reading each 6 seconds

Output: 5 digit numeric display with readout directly in gammas

Power Requirements: Twelve self-contained 1.5 volt "D" cell, universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.

Battery Type	Number of Readings
Alkaline	over 10,000
Premium Carbon Zinc	over 4,000
Standard Flashlight	over 1,500

NOTE: Battery life decreases with low temperature operation.

Temperature Range: Console and sensor: −40° to +85°C

Battery Pack: 0° to +50°C (limited use to −15°C; lower temperature battery belt operation—optional)

Accuracy (Total Field): ±1 gamma through 0° to +50°C temperature range

Sensor: High signal, noise cancelling, interchangeably mounted on separate staff or attached to carrying harness

Size: Console: 3.5 x 7 x 10.5 inches (9 x 18 x 27 cm)
Sensor: 3.5 x 5 inches (9 x 13 cm)
Staff: 1 inch diameter x 8 ft length (3 cm x 2.44 m)

Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor & signal cable:	4	1.8
Aluminum staff:	2	0.9
Total:	11.5	5.2

All magnetometers and parts are covered by a one year warranty beginning with the date of receipt but not to exceed fifteen months from the shipping date.

geoMetrics, INC. A SUBSIDIARY OF EG&G
395 JAVA DRIVE
SUNNYVALE, CA 94086 U.S.A.
TEL (408) 734-4616
CABLE "GEOMETRICS"
TELEX NO 357-435

geoMetrics SERVICES (CANADA) LTD.
436 LIMESTONE CRESCENT
DOWNSVIEW (TORONTO)
ONTARIO CANADA
TEL. (416) 661-1966
TELEX NO 06-22694

geoMetrics INTERNATIONAL CORP.
80 ALFRED ST.
MILSON S POINT
SYDNEY NSW 2061
AUSTRALIA
TEL 929-9942
TELEX NO 790 22624

WORLD-WIDE AGENTS: EUROPE • SCANDINAVIA • UNITED KINGDOM • JAPAN • SO. AFRICA • SO. AMERICA

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

2.6297

#27-84

The Mining

Instructions: — Please type or print

900

Type of Survey(s)
INDUCED POLARIZATION — Rowan Lake Mag 566

Claim Holder(s)
Jacque Sawyer, Alain Thibault.

Prospector's Licence No.
S5879/S5849

Address
c/o P.O. Box 1637 Timmins ONT.

Survey Company
RAYAN EXPLORATIONS

Date of Survey (from & to): 18 Day | 10 Mo. | 83 Yr. — 24 Day | 10 Mo. | 83 Yr.

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)
R. Bald P.O. Box 1637 TIMMINS ONT.

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other (IP)	14.5
	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 Prefix	Mining Claim Number	Expend. Days Cr.
K	612288	
	612289	
	612290	
	612291	
	612292	
	612293	
	612294	
	612295	
	612296	
	690696	
	690698	
	690758	
	690786	
	690787	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
FEB 8 1984
MINING LANDS SECTION

KENORA MINING DIV
RECEIVED
JAN 10 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 14.

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 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.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
203	Jan. 11/84	
	Date Approved 84.6.5	

Date: Jan 7/84

Recorded Holder or Agent (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
Allan Wells P.O. Box 1637 Timmins ONT

Date Certified: Jan 7 84

Certified (Signature)

FWM

M-28

Feb. 3rd #152-83

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

2.6297

The Mining Act

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.

Type of Survey(s)	Township or Area
GEOLOGICAL	ROWAN LAKE. M2500

Claim Holder(s)	Prospector's Licence No.
JACQUES SAWYER ALAIN THIBAULT	S5879 / S5849

Address	
C/O ROBT. S. MIDDLETON EXPLORATION SERVICES	P.O. BOX 1637 TIMMINS ONTARIO

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
ROBT. S. MIDDLETON EXPLORATION SERVICES	3 10 83 (Day / Mo. / Yr.) 21 10 83 (Day / Mo. / Yr.)	13.7 miles.

Name and Address of Author (of Geo-Technical report)
ROBERTA BOLD C/O R.S. MIDDLETON EXPLORATION SERVICES P.O. Box 1637 TIMMINS ONT.

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

RECEIVED
MINING LANDS SECTION

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 Prefix	Mining Claim Number	Expend. Days Cr.
X.	690698	
	690758	
	690759	
	690784	
	690785	
	690787	
	612288	
	612289	
	612291	
	612292	
	612293	
	612294	
	612295	
	612296	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

KENORA MINING DIV. RECEIVED DEC 5 1983 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

612288

Total number of mining claims covered by this report of work. 14.

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 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.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
560	Dec 5/83	
	Date Approved as Recorded	Approved by
	84.6.1	

Date	Recorded Holder or Agent (Signature)
DEC 2/83	

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
P.O. 1637 TIMMINS ONTARIO

Date Certified	Certified by (Signature)
DEC 2/83	

M-28

July 3rd #15 3-83

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

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.

The Mining Act 2.6297

Type of Survey(s)	Township or Area
MAGNETOMETER	M 2580 ROWAN LAKE
Claim Holder(s)	**Prospector's Licence No.**
JAQUES SAUVER, ALAIN THIBAULT	S5879/S5849
Address	
% ROBT. S. MIDDLETON EXPLORATION SERVICES P.O. Box 1637 Timmins ONTARIO	
Survey Company	**Date of Survey (from & to)** / **Total Miles of line Cut**
ROBT S. MIDDLETON EXPLORATION SERV.	25 Day / 10 Mo. / 83 Yr. — 29 Day / 10 Mo. / 83 Yr.
Name and Address of Author (of Geo-Technical report)	
ROBERTA BALD P.O. Box 1637 Timmins ONTARIO	

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
MINING LANDS SECTION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
K	690618	
	690758	
	690759	
	690784	
	690785	
	690787	
	612288	
	612289	
	612291	
	612292	
	612293	
	612294	
	612295	
	612296	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

KENORA MINING DIV. RECEIVED DEC 5 1983 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 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.

612287

Total number of mining claims covered by this report of work. 14.

Date	Recorded Holder or Agent (Signature)
DEC 2/83	

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
280	Dec 5/83	
	84.6.3	

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
ALLAN WELLS P.O. 1637 TIMMINS ONTARIO

Date Certified	Certified by (Signature)
DEC 2	

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

45-84

Apr. 21

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.

Fred Matthews

The Mining Act 2.6297

Type of Survey(s)	Township or Area
Geochemical.	M-2530 Raven Lake Area.

Claim Holder(s)	Prospector's Licence No.
Jacques Sawyer, [redacted]	S 5879/S5849

Address: C/O P.O. Box 1637 Timmins Ontario P4N 7W8

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
M.S. Middleton Exploration Services	09 Day / 10 Mo. / 83 Yr. — 18 Day / 10 Mo. / 83 Yr.	

Name and Address of Author (of Geo-Technical report)
R. Bald P.O Box 1637 Timmins Ontario

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- 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 Prefix	Mining Claim Number	Expend. Days Cr.
K.	612287	10.7
	612288	10.7
	612289	10.7
	612290	10.7
	612291	10.7

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAR [illegible] 1984
MINING LANDS SECTION

ONTARIO
MINING DIV.
FEB 21 1984
PM
1 2 3 4 5 6

Expenditures (excludes power stripping)

Type of Work Performed: Geochem Soil Sampling

Performed on Claim(s): see list.

Calculation of Expenditure Days Credits

Total Expenditures			=	Total Days Credits
$ 807.75	÷	15	=	53.5

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.

612287

Total number of mining claims covered by this report of work. 5

Date	Recorded Holder or Agent (Signature)
Jan 6/84	[signature]

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
53.5	Feb 21/84	[signature]
	Date Approved as Recorded	Director
	84.2.1	[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

ROBERT S. MIDDLETON EXPLORATION SERVICES INC.

EPHONE (705) 264-4246
(705) 264-4247

P.O. BOX 1637
TIMMINS, ONTARIO
P4N 7W8

2.6297

April 18, 1984

Mr. F.W. Matthews
Ministry of Natural Resources
Land Management Branch
Whitney Block, Room 6643
Queen's Park
TORONTO, Ontario M7A 1W3

Dear Mr. Matthews:

Please find enclosed corrected duplicate copies of the Induced Polarization plans for the Geophysical (Magnetometer and Induced Polarization) and Geological Survey and Assaying Data submitted on Mining Claims K612287 et al in the Area of Rowan Lake (File number 2.6297).

Respectfully Submitted,

Roberta Bald

RB/mt

R. Bald

Ministry of
Natural
Resources
Ontario

April 17, 1984

Your File: 153-83, 27-84, 45-84
Our File: 2.6297

Mr. Jaques Sawyer 819 - 762-9825
126 Tardiff
Rouyn, Quebec
J9X 3R2

Dear Sir:

RE: Geophysical (Magnetometer and Induced Polarization) and Geological Survey and Assaying Data submitted on Mining Claims K 612287 et al in the Area of Rowan Lake

---

Enclosed are the Induced Polarization plans, in duplicate, for the above-mentioned survey. Please indicate on the plans what kind of units are measured and return them to this office.

For further information, please contact Mr. F.W. Matthews at (416)965-6918.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

D. Kinvig:mc

cc: Mr. Alain Thibault
R.R.#1
Rouyn, Quebec

cc: Mining Recorder
Kenora, Ontario

cc: R.S. Middleton Exploration Services Inc
P.O. Box 1637
Timmins, Ontario
P4N 7W8

April 17, 1984

Your File: 153-83, 27-84, 45-84
Our File: 2.6297

Mr. Jaques Sawyer
126 Tardiff
Rouyn, Quebec
J9X 3R2

Dear Sir:

RE: Geophysical (Magnetometer and Induced Polarization) and Geological Survey and Assaying Data submitted on Mining Claims K 612287 et al in the Area of Rowan Lake

---

Enclosed are the Induced Polarization plans, in duplicate, for the above-mentioned survey. Please indicate on the plans what kind of units are measured and return them to this office.

For further information, please contact Mr. F.W. Matthews at (416)965-6918.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

D. Kinvig:mc

cc: Mr. Alain Thibault
R.R.#1
Rouyn, Quebec

cc: R.S. Middleton Exploration Services Inc
P.O. Box 1637
Timmins, Ontario
P4N 7W8

cc: Mining Recorder
Kenora, Ontario

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.6297

Mining Lands Comments

☐ To: Geophysics Mr K [illegible]

Comments

- needs IP coils on map

☐ Approved ☑ Wish to see again with corrections | Date Feb 22/84 | Signature [signature]

☑ To: Geology - Expenditures Mr Cukta

Comments

☒ Approved ☐ Wish to see again with corrections | Date Feb 29/84 | Signature [signature]

☐ To: Geochemistry

Comments

L.D.

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

M. Anderson Feb 15/84

Assessed D.K. - June 1/84

Approved Reports of Work sent out _____

Notice of Intent filed _____

Approval after Notice of Intent sent out _____

Duplicate sent to Resident Geologist _____

Duplicate sent to A.F.R.O. _____

BARRINGER MAGENTA LIMITED

304 CARLINGVIEW DRIVE
METROPOLITAN TORONTO
REXDALE, ONTARIO
CANADA M9W 5G2
PHONE: 416-675-3870
TELEX: 06-989183

SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

DATE: Dec. 11, 1983

PROJECT: 100.41

PERIOD COVERED:

SALES ORDER:
PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 83-746
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

R.S. Middleton Exploration Services
P.O. Box 1637
Timmins, Ontario
P4N 7W8

TERMS: NET 30 days

AUTHORITY: R.S. Middleton, proj. M28

TO: ANALYSIS

93 Soil Samples			
Preparation - drying/sieving	@ $0.75	$ 69.75	
Au with ashing	@ $6.00	558.00	
Surcharge on repeats		180.00	
TOTAL INVOICE			$807.75

INVOICE Nº 10469

ROBERT S. MIDDLETON
EXPLORATION SERVICES INC.
P.O. BOX 1637, 136 CEDAR ST. S.
TIMMINS, ONTARIO P4N 7W8

DATE	REFERENCE	AMOUNT	
Dec 11	10469	193	75
Dec 12	10464	936	50
Dec 11	10465	529	95
Dec 16	10462	131	30

0235

PAY — THREE THOUSAND ONE HUNDRED EIGHTY THREE — 60/100 DOLLARS

TIME WK'G	DATE	TO THE ORDER OF	DESCRIPTION	NET AMOUNT	
	January 3, 1997	BARRINGER MAGENTA LIMITED		3183	60

304 Carlingview Drive
REXDALE, ONT. M9W 5G2

ROBERT S. MIDDLETON EXPLORATION SERVICES INC.

PER _____

CANADIAN IMPERIAL BANK OF COMMERCE 375
Pine & Third, Timmins, Ontario

⑈0002350⑈ ⑆00492⑉010⑆ 65⑉01613⑈ ⑈000318360⑈

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey: Induced Polarization.

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
29	X	7	=	203	+	—	=	203	÷	14	=	14.5

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		÷		=	

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		÷		=	

Type of Survey:

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
	X	7	=		+		=		÷		=	

ASSESSMENT WORK BREAKDOWN

1. Type of Survey Induced Polarization

2. Township or Area Rowan Lake Area (M2580

3. Numbers of Mining Claims Traversed by Survey

K 612288 - 612296 (inclusive)

K 690696, 690698, 690786, 690787

690758

TOTAL 14 claims

4. Number of Miles of Line Cut _____ Flown _____

*5. Number of Stations Established 201

*6. Make and type of Instrument Used Rx: Crone MK IV Tx Crone 250w

*7. Scale Constant or Sensitivity _____

*8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 29

Total 8 hour Line-Cutting Days _____

Calculation

$\frac{29}{\text{Technical}} \times 7 = 203 + \frac{-}{\text{Line-cutting}} = 203 \div \frac{14}{\text{Number of claims}} = \frac{14.5}{\text{Assessment credits per claim}}$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims ☒ Check

If otherwise, please explain _____

Dated: Jan 7/84 Signed: [signature]

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

Type Work	Name & Address	Dates Worked	Number of 8 hour days
Induced Polarization	G. Dubrey	Oct 18-19	7
"	Thom Patterson	"	7
"	Howard McGowan	"	7
"			
All of RAZAN EXPLORATION			
RR# 2 North Bay, ONTARIO			

2. CONSULTANTS

Name & Address	Dates Worked (specify in field or office)	Number of 8 hour days
R. Bald	Nov 3,4 office	2

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

Name & Address	Type of Work	Dates Worked	Number of 8 hour days
Chris James	Draughting	Dec 6-9/83	4
David Horst	Draughting	Dec 9,10/83	2
All of R.S. MIDDLETON EXPLORATION SERVICES P.O. 1637 Timmins ONT.			

TOTAL 8 HOUR TECHNICAL DAYS 29

4. LINE-CUTTING

Name	Address	Dates Worked	Number of 8 hour days

TOTAL 8 HOUR LINE-CUTTING DAYS _____

ASSESSMENT WORK BREAKDOWN

1. Type of Survey Induced Polarization

2. Township or Area Rowan Lake Area (M2580

3. Numbers of Mining Claims Traversed by Survey

K 612288 - 612296 (inclusive)

K 690696, 690698, 690786, 690787

690758

TOTAL 14 claims

4. Number of Miles of Line Cut _____ Flown _____

*5. Number of Stations Established ~~1000~~ 201

*6. Make and type of Instrument Used Rx: Crone MK IV Tx Crone 250w

*7. Scale Constant or Sensitivity _____

*8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 29

Total 8 hour Line-Cutting Days _____

Calculation

$\frac{29}{\text{Technical}} \times 7 = 203 + \frac{-}{\text{Line-cutting}} = 203 \div \frac{14}{\text{Number of claims}} = \frac{14.5}{\text{Assessment credits per claim}}$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims ☒ Check

If otherwise, please explain _____

Dated: Jan 7/84 Signed: [signature]

Note: (A) * Complete only if applicable.
(B) Complete list of names, addresses and dates on reverse side.
(C) Submit separate breakdown for each type of survey.
(D) Submit in duplicate.

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

Type of Work	Name & Address	Dates Worked	Number of 8 hour days
Induced Polarization	G. Dubroy	Oct 18-29	7
"	Thom Patterson	"	7
"	Howard McGowan	"	7
"			
All of RAZAN EXPLORATION			
RR# 2. North Bay, Ontario			

2. CONSULTANTS

Name & Address	Dates Worked (specify in field or office)	Number of 8 hour days
R. Bald.	Nov. 3,4 office	2

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

Name & Address	Type of Work	Dates Worked	Number of 8 hour days
Chris James	Draughting	Dec. 6-9/83	4
David Horst	Draughting	Dec 9, 10/83	2
All of R.S. MIDDLETON EXPLORATION SERVICES P.O. 1657 Timmins Ont.			

TOTAL 8 HOUR TECHNICAL DAYS 29

4. LINE-CUTTING

Name	Address	Dates Worked	Number of 8 hour days

TOTAL 8 HOUR LINE-CUTTING DAYS _____

1984 01 26

Your File: 152, 153
Our File: 2.6297

Mr. Wade Mathew
Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5160
Kenora, Ontario
P9N 3X9

Dear Sir:

We have received reports and maps for a Geophysical (Magnetometer and Induced Polarization), Geological and Geochemical Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 690698 et al in the Area of Rowan Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

A. Barr:mc

cc: Jaques
Sayyer
126 Tardiff
Rouyn, Quebec

cc: Alain Thibault
R.R.#1
Royyn, Quebec

cc: R.S. Middleton Exploration Services Inc
P.O. Box 1637
Timmins, Ontario
P4N 7W8

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Induced Polarization Geochemical / Geological, MAGNETOMETER

Township or Area Rowan Lake Area (142580)

Claim Holder(s) Jacques Sawyer
Alain Thibault.

Survey Company R.S. MIDDLETON EX. SERV. / RATAIN EXPLOR.

Author of Report R. Bull.

Address of Author P.O. Box 1637 TIMMINS ONT.

Covering Dates of Survey AUG 15 - NOV 26/83
(linecutting to office)

Total Miles of Line Cut 13.14 miles 21.9 Km.

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	20
–Magnetometer	
–Radiometric	
–Other	
Geological	40
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Jan 7/84 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
K	690698
	690758
	690759
	690784
	690785
	690787
	612288
	612289
	612291
	612292
	612293
	612294
	612295
	612296

If space insufficient, attach list

TOTAL CLAIMS 14

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

	Mag	I.P		Mag	I.P
Number of Stations	1369	201	Number of Readings	1369	402
Station interval	20 m	40m	Line spacing	120 m	
Profile scale					
Contour interval	100 nT Mag, 10 msec I.P.				

MAGNETIC

Instrument Geometrics G816.
Accuracy - Scale constant ± 1 nT
Diurnal correction method Looping to Baseline
Base Station check-in interval (hours) 1
Base Station location and value Values along Baseline.

ELECTROMAGNETIC

Instrument
Coil configuration
Coil separation
Accuracy
Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line
Frequency (specify V.L.F. station)
Parameters measured

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location
Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument Rx Crone MIV Tx Crone 25 W
Method ☑ Time Domain ☐ Frequency Domain
Parameters - On time 2 sec — Frequency
- Off time 2 sec — Range
- Delay time 0 - 0.45 sec.
- Integration time 0.45 - 0.95 sec.

Power 250.
Electrode array Dipole - Dipole.
Electrode spacing 40 m
Type of electrode Stainless steel Rods

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken K 62287 - 62291 (inclusive)

Total Number of Samples 92.

Type of Sample soil - till
(Nature of Material)

Average Sample Weight 500 g

Method of Collection grub hoe

Soil Horizon Sampled B-Horizon

Horizon Development Ao is present

Sample Depth 2" - 5"

Terrain Hilly

Drainage Development Moderate.

Estimated Range of Overburden Thickness

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis 80 mesh

General

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☒

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others Au

Field Analysis (_____ tests)

Extraction Method

Analytical Method

Reagents Used

Field Laboratory Analysis

No. (_____ tests)

Extraction Method

Analytical Method

Reagents Used

Commercial Laboratory (_____ tests)

Name of Laboratory Barringer Research

Extraction Method Hot Acid (Aqua regia)

Analytical Method Atomic Absorption

Reagents Used

General

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

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.

Type of Survey(s)	Township or Area
Geochemical.	M-2590 Rowan Lake Area.

Claim Holder(s)	Prospector's Licence No.
Jacques Sawyer, Alain Thibault.	S5879/S5849

Address: c/o P.O. Box 1637 Timmins Ontario P4N 7W8

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
M.S. Middleton Exploration Services	09 Day / 10 Mo. / 83 Yr. — 18 Day / 10 Mo. / 83 Yr.	

Name and Address of Author (of Geo-Technical report): R. Bald P.O Box 1637 Timmins Ontario

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- 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 Prefix	Mining Claim Number	Expend. Days Cr.
K.	612287	10.7
	612288	10.7
	612289	10.7
	612290	10.7
	612291	10.7

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

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

Expenditures (excludes power stripping)

Type of Work Performed: Geochem Soil Sampling

Performed on Claim(s): see list.

Calculation of Expenditure Days Credits

Total Expenditures			=	Total Days Credits
$ 807.75	÷	15	=	53.85

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	Recorded Holder or Agent (Signature)
Jan 6/84	

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: Alan Wells PO Box 1637 Timmins Ont P4N 7W8

Date Certified	Certified by (Signature)
Jan 6/84	

1362 (81/9)

2.6297

	Mag.	I.P. (Pseudo 1.5)	GEOL	Soil Sampling
K-690698	✓	✓	✓	
690758	✓	✓	✓	
690759	✓		✓	
690784	¼ (½)	✓	¼ (½)	
690785	✓	✓	✓	
690787	✓	✓	✓	
612288	✓	✓	✓	✓
612289	✓	✓	✓	✓
612291	~¼✓	✓	¼✓	✓
92	✓	✓	~✓	
93	✓	✓	✓	
94	✓	✓	✓	
95	✓	✓	✓	
612296	✓	✓	✓	
612290		✓		✓
690696		~✓		
690786		✓		
612287				✓

D. K.

ATIKWA LAKE (GRAPNEL BAY) M.2629

DOGPAW LAKE M.2585

LAWRENCE LAKE M.2579

BROOKS LAKE M.2473

93°45' 93°30' 49°22'30" 49°15'

SURFACE and MINING RIGHTS WITHDRAWN from STAKING
Sec 36 of Mining Act
22/12/82 File 18852
Order No. W.67/82

Denmark Lake
Rainmaker Lake
Isinglass Lake
Cameron Lake
Knutson Lake
Sullivan Bay
Nolan Lake
Sickle Lake
Otterskin Lake
Wompum Lake
Newman Lake
Brooks Bay

AREA OF

ROWAN LAKE

DISTRICT OF
KENORA

KENORA
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C S
LEASES	(L)
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L O
MINING RIGHTS ONLY	M R O
SURFACE RIGHTS ONLY	S R O
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C
PATENTED S R O	

NOTES

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

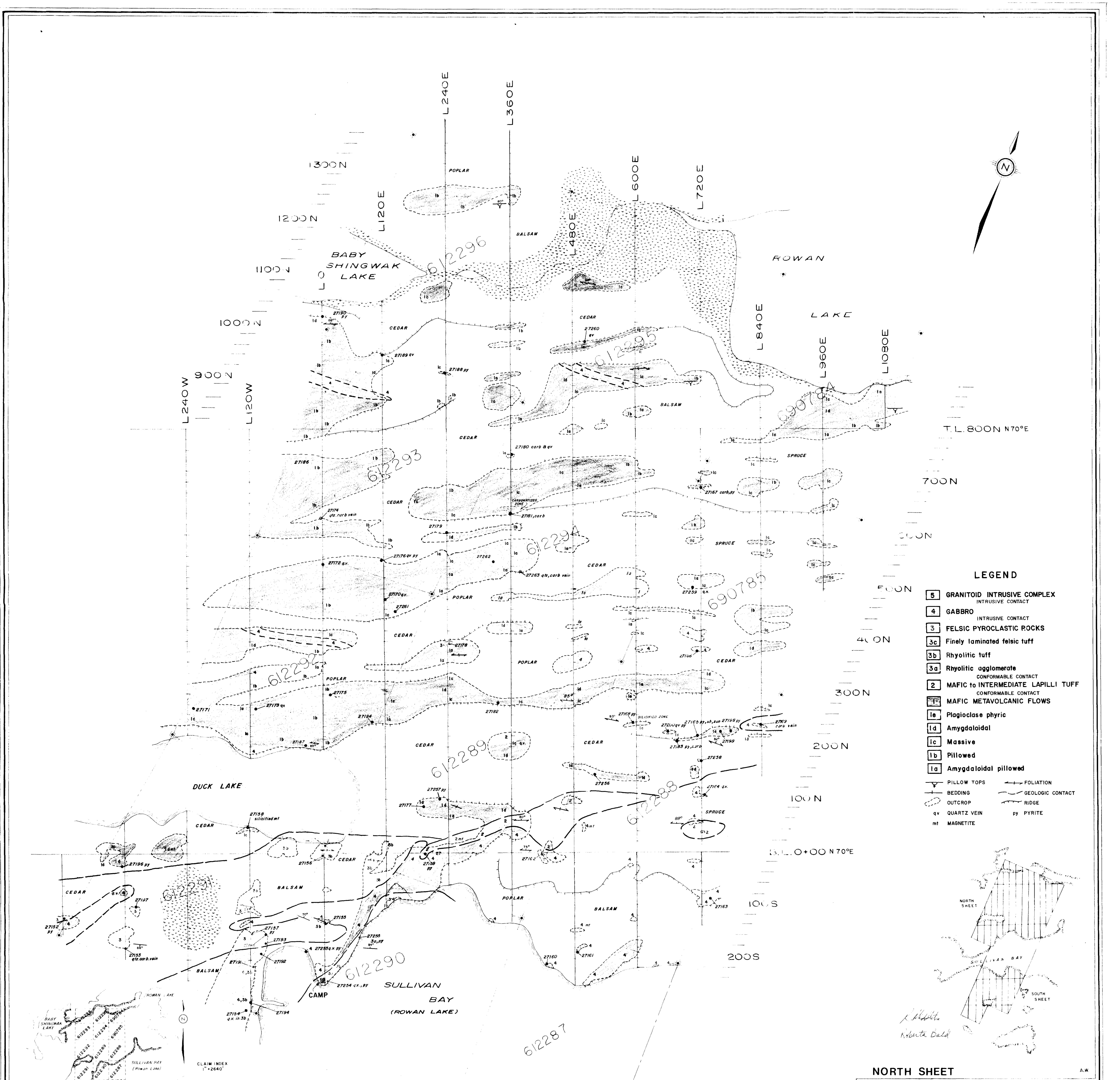
Effective as shown

NATIONAL TOPOGRAPHIC SERIES 52 F 5

PLAN NO. M.2580

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

49.1933


L 240E
L 360E
L 480E
L 600E
L 720E
L 840E
L 960E
L 1080E
L 120E
L 0
L 120W
L 240W
1300N
1200N
1100N
1000N
900N
700N
500N
400N
300N
200N
100N
B.L. 0+00 N70°E
100S
200S
T.L. 800N N70°E
BABY SHINGWAK LAKE
ROWAN LAKE
DUCK LAKE
SULLIVAN BAY (ROWAN LAKE)
CAMP
POPLAR
BALSAM
CEDAR
SPRUCE
612296
612295
612293
612294
690784
690785
612292
612289
612288
612291
612290
612287
27190 py
27189 qv
27188 py
27260 qv
27180 carb & qv
27186
27174 qtz.carb vein
27181, carb
CARBONATIZED ZONE
27179
27262
27263 qtz, carb vein
27172 q.v.
27176 qv py
27170 q.v.
27261
27167 carb, py
27259 q.v.
27178
27166
27171
27173 qv
27175
27184
27187
27182
27168 py
SILICIFIED ZONE
27200 qv py
27165 py, sh, zon
27198 py
27169 carb vein
27183 py, carb
27199
27258
27256
27164 q.v.
27257 py
27177
27158 silicified mt
27196 py
27156
27159 py
27162
27197
27152 py
27153 qtz.carb.vein
27157 py
27193
27192
27191
27155
27255 3a, py
27253 q.v. py
27254 q.v., py
27154 q.v. in 3b
27194
27160
27161
27163
ROWAN LAKE
BABY SHINGWAK LAKE
SULLIVAN BAY (Rowan Lake)
CLAIM INDEX 1" = 2640'
612293
612294
690785
612292
612289
612288
612291
612290
612287
690697
690696
690786
690698
690787
690758
690759
NORTH SHEET
SOUTH SHEET
SULLIVAN BAY
LEGEND
5 GRANITOID INTRUSIVE COMPLEX
INTRUSIVE CONTACT
4 GABBRO
INTRUSIVE CONTACT
3 FELSIC PYROCLASTIC ROCKS
3c Finely laminated felsic tuff
3b Rhyolitic tuff
3a Rhyolitic agglomerate
CONFORMABLE CONTACT
2 MAFIC to INTERMEDIATE LAPILLI TUFF
CONFORMABLE CONTACT
1 MAFIC METAVOLCANIC FLOWS
1e Plagioclase phyric
1d Amygdaloidal
1c Massive
1b Pillowed
1a Amygdaloidal pillowed
PILLOW TOPS
FOLIATION
BEDDING
GEOLOGIC CONTACT
OUTCROP
RIDGE
qv QUARTZ VEIN
py PYRITE
mt MAGNETITE
R. Middleton
Roberta Bald

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION GEOLOGY		
	FIG. 4		
	Date: DEC 83	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: J.S., A.W.	Approved:	File: M-6

52F05SE8155 2.6297 ROWAN LAKE

210

LEGEND

- 5 GRANITOID INTRUSIVE COMPLEX
  - INTRUSIVE CONTACT
- 4 GABBRO
  - INTRUSIVE CONTACT
- 3 FELSIC PYROCLASTIC ROCKS
- 3c Finely laminated felsic tuff
- 3b Rhyolitic tuff
- 3a Rhyolitic agglomerate
  - CONFORMABLE CONTACT
- 2 MAFIC to INTERMEDIATE LAPILLI TUFF
  - CONFORMABLE CONTACT
- 1 MAFIC METAVOLCANIC FLOWS
- 1e Plagioclase phyric
- 1d Amygdaloidal
- 1c Massive
- 1b Pillowed
- 1a Amygdaloidal pillowed

PILLOW TOPS · FOLIATION
BEDDING · GEOLOGIC CONTACT
OUTCROP · RIDGE
qv QUARTZ VEIN · py PYRITE
mt MAGNETITE

690697 · 690786 · 690787 · 690698 · 690759 · 690758

L 240 W · L 120 W · L 120 E · L 240 E · L 360 E · L 480 E · L 360 W · L 480 W

SULLIVAN BAY (ROWAN LAKE)

27252 silicified zone, qv, py
15/2.3

27251
20/3.1

BIRCH · POPLAR · PINE · TAG ALDER · SPRUCE

900S · 1000S · 1200S · 1300S · 1400S · 1500S · 1700S · 1800S · 1900S

T.L. 1100S N 70°E

T.L. 1600S N 70°E

ROWAN LAKE · BABY · SHINGWAK LAKE · SULLIVAN BAY (Rowan Lake)

CLAIM INDEX
1"=2640'

NORTH SHEET · SOUTH SHEET

ROCK SAMPLE NUMBER AND LOCATION
27156
110/7.3
GOLD VALUE IN PART PER BILLION (PPB)
ARSENIC VALUE IN PARTS PER MILLION (PPM)

Robert Bald

SOUTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION GEOLOGY		FIG. 5
	Date: DEC 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: J.S. A.W.	Approved:	File: M-28

L240W L120W L0 L120E L240E L360E L480E L600E L720E L840E L960E L1080E

900N 1000N 1100N 1200N 1300N

T.L.800N N70°E 700N 600N 500N 400N 300N 200N 100N B.L.0+00 N70°E 100S 200S

POPLAR BALSAM CEDAR SPRUCE

BABY SHINGWAK LAKE

ROWAN LAKE

DUCK LAKE

SULLIVAN BAY (ROWAN LAKE)

CAMP

6122296 6122295 6122294 6122293 6122292 6122291 6122290 6122289 6122288 6122287 6907855 6907856 6907857 6907858 6907859

27186 5/1.9 | 27174 30/100 qtz carb vein | 27178 30/3.1 | 27156 110/7.3 | 27160 30/3.5 | 27256 60/2.2 | 27254 qv, py 60/3.1 | 27253 qv py 55/3 | 27155 75/6.3 | 27198 py 200/1.5

27180 carb & qv 10/A2 | 27181 carb 5/2.5 | 27179 10/7.3 | 27262 <5/.3 | 27263 qtz, carb vein 5/1.5 | 27182 5/1.5 | 27183 py, carb 5/2.2 | 27184 5/1.6 | 27187 <5/2 | 27188 py 5/7.3 | 27189 qv 5/15.6 | 27180 py 5/13.3 | 27260 qv 5/9.4 | 27167 carb, py 5/9 | 27259 q.v. 5/1.8 | 27166 5/1.5 | 27165 py, sh, carb 5/4.2 | 27169 py 10/22 | 27200 qv py 5/4.2 | 27199 10/2.0 | 27256 10/.9 | 27164 q.v. 5/1.6 | 27168 10/1.3 | 27159 py <5/1.9 | 27163 5/1.3 | 27161 10/4.8 | 27162 10/1.5 | 27169 5/.4 carb vein

27176 qv py <5/2.7 | 27178 q.v. 20/2.5 | 27170 qv. 5/.6 | 27261 10/.2 | 27175 <5/1.3 | 27173 qv 10/2.7 | 27171 10/1.9 | 27177 5/3.1 | 27257 py 5/1.7 | 27158 5/33 silicified mt | 27196 py 5/3.1 | 27197 10/1.2 | 27152 py 25/15.2 | 27153 10/6.5 qtz. carb. vein | 27157 py 20/6.8 | 27193 5/1.2 | 27195 10/3 | 27191 15/1.0 | 27192 10/6.8 | 27194 15/1.5 | 27154 q.v. in 3b 10/.8

CARBONATIZED ZONE | SILICIFIED ZONE

LEGEND

- 5 GRANITOID INTRUSIVE COMPLEX
  - INTRUSIVE CONTACT
- 4 GABBRO
  - INTRUSIVE CONTACT
- 3 FELSIC PYROCLASTIC ROCKS
- 3c Finely laminated felsic tuff
- 3b Rhyolitic tuff
- 3a Rhyolitic agglomerate
  - CONFORMABLE CONTACT
- 2 MAFIC to INTERMEDIATE LAPILLI TUFF
  - CONFORMABLE CONTACT
- 1 MAFIC METAVOLCANIC FLOWS
- 1e Plagioclase phyric
- 1d Amygdaloidal
- 1c Massive
- 1b Pillowed
- 1a Amygdaloidal pillowed

PILLOW TOPS | BEDDING | OUTCROP | qv QUARTZ VEIN | mt MAGNETITE | FOLIATION | GEOLOGIC CONTACT | RIDGE | py PYRITE

NORTH SHEET

SOUTH SHEET

SULLIVAN BAY

CLAIM INDEX 1" = 2640'

ROCK SAMPLE NUMBER AND LOCATION
27156
110/7.3
GOLD VALUE IN PART PER BILLION (PPB)
ARSENIC VALUE IN PARTS PER MILLION (PPM)

R. Middleton
Roberta Bald

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION ROCK GEOCHEMICAL SAMPLES		FIG. 5
	Date: DEC 83	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: J.S., A.W.	Approved:	File: M-28

52F05SE0155 2.6297 ROWAN LAKE

L240W
L120W
900N
1000N
1100N
1200N
1300N
L0
L120E
L240E
L360E
L480E
L600E
L720E
L840E
L960E
L1080E
T.L.800N
700N
600N
500N
400N
300N
200N
100N
B.L.0+00 N70°E
100S
200S

BABY SHINGWAK LAKE

ROWAN LAKE

DUCK LAKE

SULLIVAN BAY (ROWAN LAKE)

6/2296
6/2295
6/2293
6/2294
6/2292
6/2289
6/2291
6/2290
6/2288
6/2287
690785
690788

27113 5
27114 5
27115 5
27116 5
27118 5
27119 5
27120 5
27121 5
27122 5
27123 10
27124 10
27125 5
27126 5
27127 5
27128 5
27129 5
27130 5
27131 5
27132 20
27133 5
27134 5
27135 5
27136 5
27137 5
27138 5
27139 5
27140 5
27141 5
27142 10
27143 10
27144 5
27145 5
27146 5
27147 5
27148 5
27149 10
27150 15
27101 5
27102 15
27103 60
27104 5
27105 5
27106 5
27107 5
27108 5
27109 5
27110 5
27111 80
27112 5
27117 5
27201 5
27202 5
27203 5
27204 30
27205 5
27206 5
27207 5
27208 5
27209 10
27210 10
27211 5
27212 5
27213 5
27214 5
27215 5
27216 5
27217 10
27218 5
27219 5
27220 5
27221 5
27222 5
27223 15
27224 10
27225 30
27226 10
27227 10
27228 10
27229 10
27230 15
27231 25
27232 15
27233 10
27234 10
27235 10
27236 10
27237 10
27238 10
27239 10
27240 10
27241 10
27242 20
27243 10

ROWAN LAKE
BABY SHINGWAK LAKE
SULLIVAN BAY (Rowan Lake)
CLAIM INDEX
1" =2640'

SAMPLE NUMBER
27220 <5
GOLD VALUE IN PARTS PER BILLION (PPB)

NORTH SHEET
SOUTH SHEET
SULLIVAN BAY

R Middleton
Roberta Bald

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION 2.6297 SOIL GEOCHEMICAL SAMPLES FIG. 7		
	Date: DEC. 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: CJ,JS	Approved:	File: M-28

52F05SE0155 2.6297 ROWAN LAKE

240

L240W
L120W
900N
1000N
1100N
1200N
1300N
L240E
L360E
L120E
L480E
L600E
L720E
L840E
L960E
L1080E
T.L.800N
700N
600N
500N
400N
300N
200N
100N
B.L.0+00 N70°E
100S
200S
BABY SHINGWAK LAKE
ROWAN LAKE
DUCK LAKE
SULLIVAN BAY (ROWAN LAKE)
612296
612295
612293
612294
612292
612289
612290
612287
690785
690786
690787
690788
690789
690790
690791
690792
690793
690794
690795
690796
690797
690798
690799
612232
612231
612230
612288
SULLIVAN BAY (Rowan Lake)
CLAIM INDEX 1"=2640'
NORTH SHEET
SOUTH SHEET
R. Middleton
Roberta Baird

MAGNETOMETER SURVEY
Proton Precession Magnetometer
Total field 59,500 nt
Instrument: **Geometrics G-816**
Operator: **G. Dubroy**
Survey date: **OCT. 83**
Plotted by: **D.H.**

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for **CHARGER RESOURCES LTD**		
	Title ROWAN LAKE AREA KENORA MINING DIVISION 2(077) **CONTOURED MAGNETIC DATA**		FIG.8
	Date: DEC. 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: CJ	Approved:	File: M-28

L240W L120W L0 L120E L240E L360E L480E L600E L720E L840E L960E L1080E

1300N 1200N 1100N 1000N 900N 800N 700N 600N 500N 400N 300N 200N 100N B.L.0+00N 100S 200S

T.L.800N N70E

N

BABY SHINGWAK LAKE

ROWAN LAKE

DUCK LAKE

SULLIVAN BAY (ROWAN LAKE)

612290 612291 612292 612293 612294 612295 612296 612287 612288 612289 690785 690786

INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS

C1 C2 P1 P2 P3

SCHEME OF PULSES

ON + 2 sec
OFF
ON − 2 sec

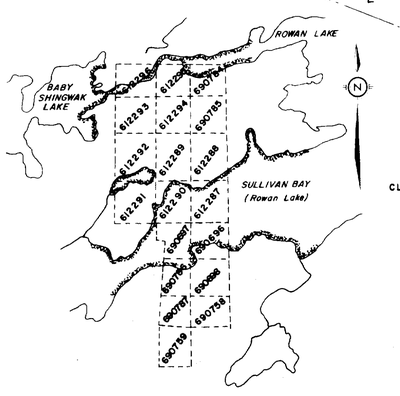
a = 40m

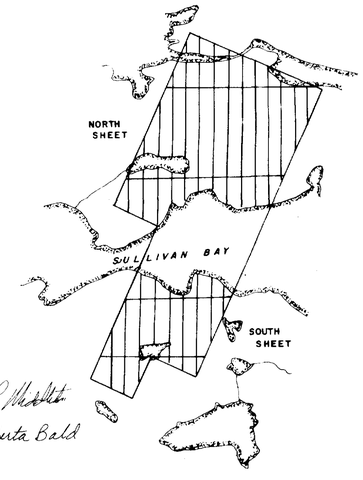
detail I.P. chargeability reading n_1 & n_2 mv/v

EQUIPMENT USED

Tx – Scintrex 250 watt
Rx – Crone Mk IV Newmont type

CLAIM INDEX
1" = 2640'





R. Middleton
Roberta Bald

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION CHARGEABILITY N1 DETAIL I.P.		FIG. 10
	Date: DEC. 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

S2FSSE8155 2.6297 ROWAN LAKE

L240E L360E L120E L480E L600E L720E L840E L960E L1080E

1300N 1200N 1100N 1000N 900N

L240W L120W

BABY SHINGWAK LAKE

L 0

ROWAN LAKE

612296 612295 612293 612294A 612292 612289 612288 612287 612290

690785 690786

DUCK LAKE

612291

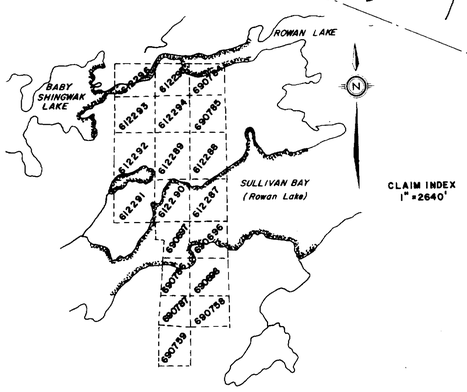
SULLIVAN BAY (ROWAN LAKE)

T.L. 800N N70E

700N 600N 500N 400N 300N 200N 100N

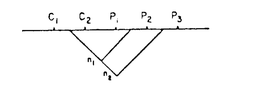
B.L. 0+00 N70E

100S 200S

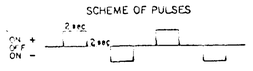


INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



SCHEME OF PULSES

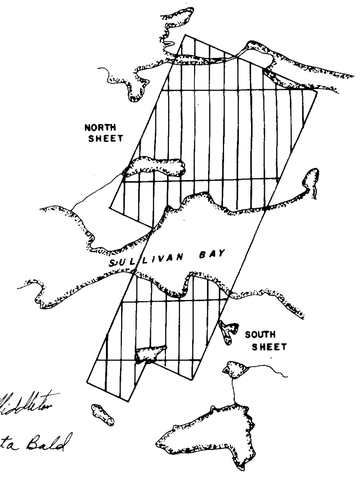


a = 40m

detail I.P. chargeability reading n_1 & n_2 mv/v

EQUIPMENT USED

Tx – Phoenix IPT-1
Rx – Crone Mk IV Newmont type



R. Middleton
Roberta Bald

NORTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION CHARGEABILITY N_2 DETAIL I.P.		
	2.6297 FIG. 11		
	Date: DEC. 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

690697

L 240 W

L 120 W

SULLIVAN BAY (ROWAN LAKE)

690786

L 0

L 120 E

L 240 E

L 360 E

L 480 E

690696

690698

L 360 W

L 480 W

690787

690758

690759

900S

1000S

T.L. 1100S N70E

1200S

1300S

1400S

1500S

T.L. 1600S N70E

1700S

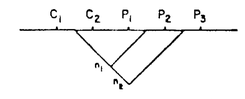
1800S

1900S

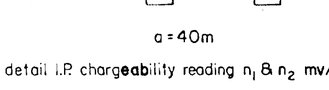
N

INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



SCHEME OF PULSES

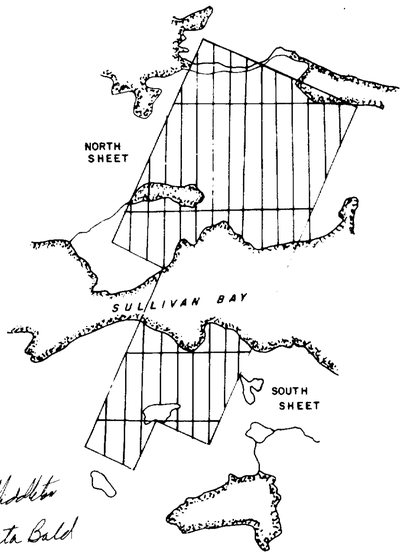


a = 40m

detail I.P chargeability reading n_1 & n_2 mv/v

EQUIPMENT USED

Tx – Phoenix IPT-1
Rx – Crone Mk IV Newmont type



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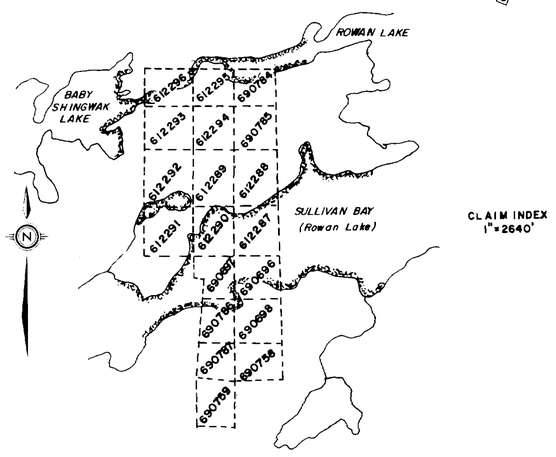


CLAIM INDEX
1"=2640'

SOUTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION CHARGEABILITY N1 DETAIL I.P.		
	Date: DEC. 88	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

2.6297 FIG. 12

L 480 W
L 360 W
L 240 W
L 120 W
L 120 E
L 240 E
L 360 E
L 480 E

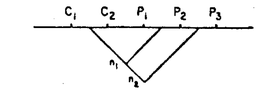
690697
690696
690698
690786
690787
690758
690759

SULLIVAN BAY (ROWAN LAKE)

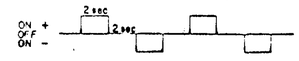
900S
1000S
T.L. 1100S N70E
1200S
1300S
1400S
1500S
T.L. 1600S N70E
1700S
1800S
1900S

INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



SCHEME OF PULSES

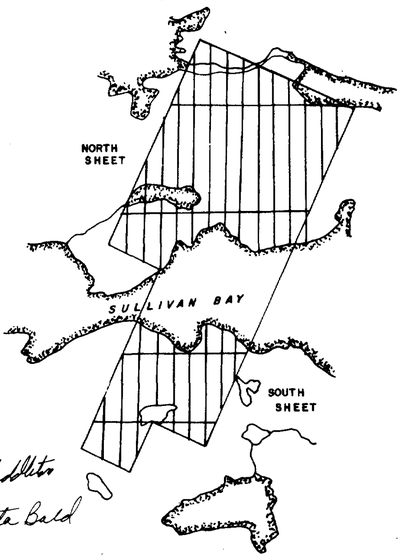


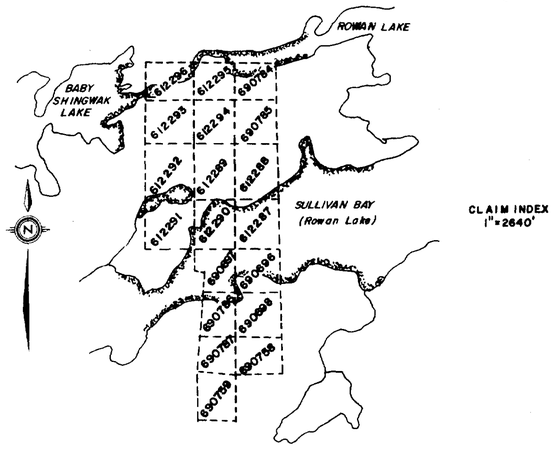
a = 40m

detail I.P. chargeability reading n_1 & n_2 mv/v

EQUIPMENT USED

Tx – Phoenix IPT-1
Rx – Crone Mk IV Newmont type





CLAIM INDEX
1"=2640'

R. Middleton
Roberta Bald

SOUTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION CHARGEABILITY N2 DETAIL I.P.		
			2 6297 FIG. 13
	Date: DEC. 83	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

L240W L120W L0 L120E L240E L360E L480E L600E L720E L840E L960E L1080E

1300N 1200N 1100N 1000N 900N 800N 700N 600N 500N 400N 300N 200N 100N B.L.0+00 N70E 100S 200S T.L.800N N70E

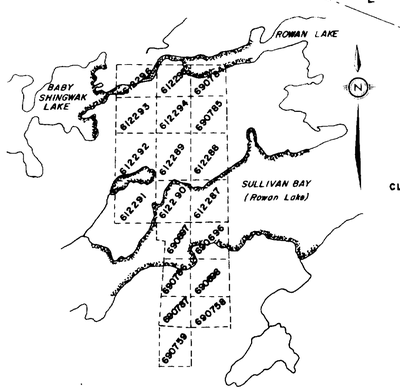
BABY SHINGWAK LAKE

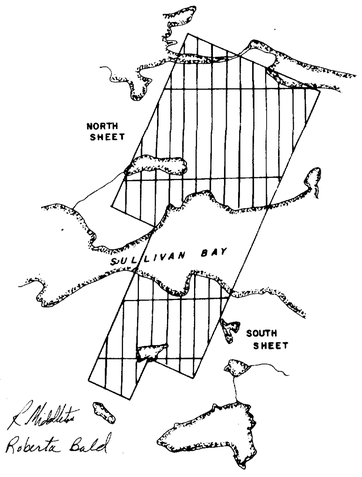
ROWAN LAKE

DUCK LAKE

SULLIVAN BAY (ROWAN LAKE)

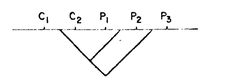
612296 612295 612294 612293 612292 612289 612288 612290 612287 690785





INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



a = 40m

detail I.P. **resistivity** reading n_1 & n_2 in ohm/m

EQUIPMENT USED

Tx – Scintrex 250 watt
Rx – Crone Mk IV Newmont type

NORTH SHEET A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for **CHARGER RESOURCES LTD**		
	Title ROWAN LAKE AREA KENORA MINING DIVISION RESISTIVITY N_1 DETAIL I.P. 26297 FIG. 14		
	Date: DEC. 83	Scale: 1 2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

L240W L120W L0 L120E L240E L360E L480E L600E L720E L840E L960E L1080E

900N 1000N 1100N 1200N 1300N

T.L.800N N70E

700N 600N 500N 400N 300N 200N 100N

B.L.0+00 N70E

100S 200S

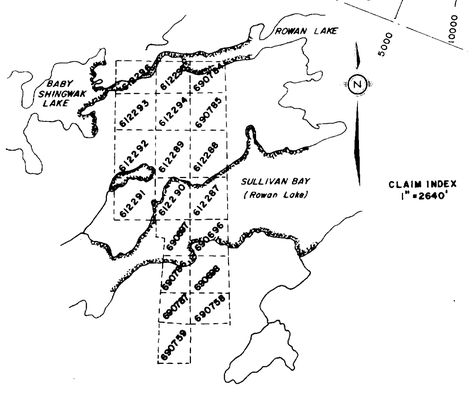
BABY SHINGWAK LAKE

ROWAN LAKE

DUCK LAKE

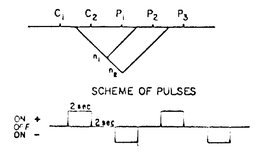
SULLIVAN BAY (ROWAN LAKE)

6122296 6122295 690778 6122293 6122294 690785 6122292 6122289 6122288 6122290 6122287



INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS

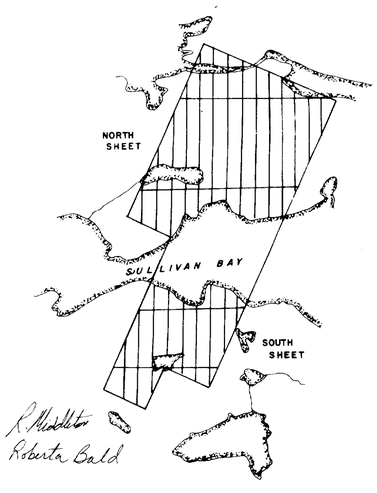


a = 40m

detail I.P. resistivity reading n_1 & n_2 in ohm/m

EQUIPMENT USED

Tx - Phoenix IPT-1
Rx - Crone Mk IV Newmont type



NORTH SHEET

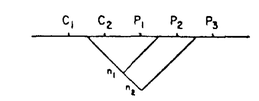
A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION RESISTIVITY N_2 DETAIL I.P. 2697 FIG. 5		
	Date: DEC. 83	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: CJ	Approved:	File: M-28

L 240 W
L 120 W
L 120 E
L 240 E
L 360 E
L 480 E
L 360 W
L 480 W
690697
690696
690786
690787
690698
690758
690759
SULLIVAN BAY (ROWAN LAKE)
900S
1000S
1200S
1300S
1400S
1500S
1700S
1800S
1900S
T.L. 1100S N70E
T.L. 1600S N70E

INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



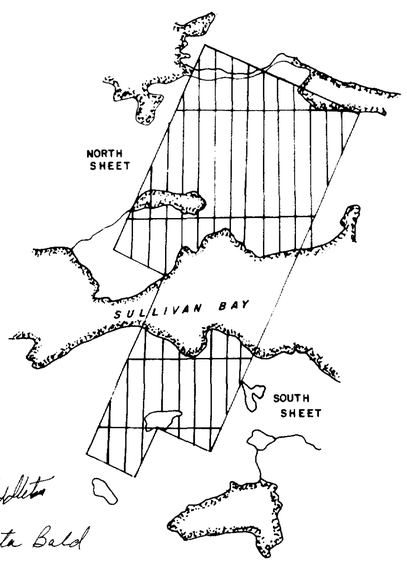
SCHEME OF PULSES

a = 40m

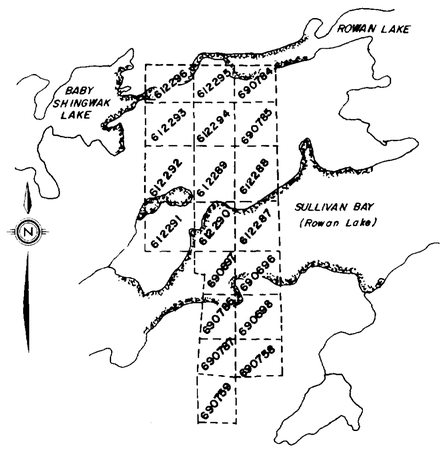
detail I.P. resistivity reading n_1 & n_2 in ohm/m

EQUIPMENT USED

Tx - Phoenix IPT-1
Rx - Crone Mk IV Newmont type



R. Middleton
Roberta Bald



CLAIM INDEX
1"=2640'

SOUTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION RESISTIVITY N_1 DETAIL I.P. 2.6297 FIG. 16		
	Date: DEC. 83	Scale: 1:2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28

690697

L 240E

L 360E

L 480E

L 120W

L 240W

L 360W

L 480 W

SULLIVAN BAY (ROWAN LAKE)

690786

690696

690698

690787

690758

690759

900S

1000S

T.L. 1100S N70°E

1200S

1300S

1400S

1500S

T.L. 1600S N70E

1700S

1800S

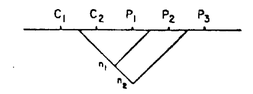
1800S

1900S

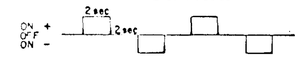
N

INDUCED POLARIZATION

TIME DOMAIN MODE
DIPOLE-DIPOLE ARRAY
PLOTTING POSITIONS



SCHEME OF PULSES

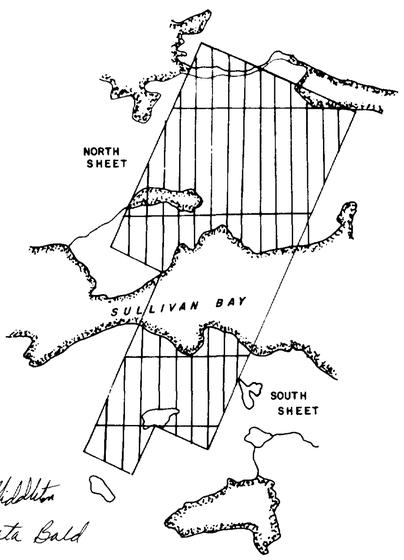


a = 40m

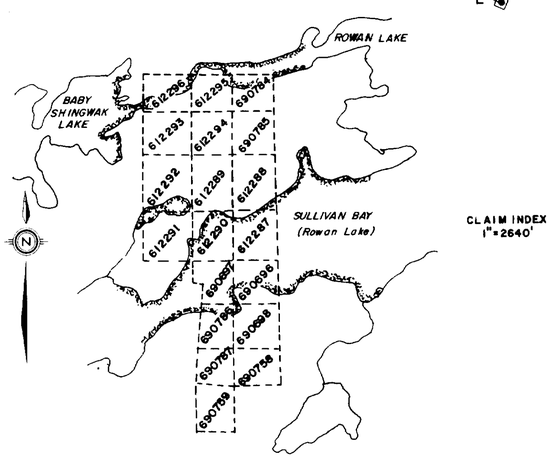
detail I.P. resistivity reading n_1 & n_2 in ohm/m

EQUIPMENT USED

Tx – Phoenix IPT-1
Rx – Crone Mk IV Newmont type



R. Middleton
Roberta Bald



CLAIM INDEX
1"=2640'

SOUTH SHEET

A.W.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for CHARGER RESOURCES. LTD		
	Title ROWAN LAKE AREA KENORA MINING DIVISION RESISTIVITY N_2 DETAIL I.P. 26297 FIG. 17		
	Date: DEC. 83	Scale: 1.2500	N.T.S.: 52 F/5
	Drawn: D.H.	Approved:	File: M-28