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REDAURUM RED LAKE MINES LTD

GEOLOGICAL & GEOCHEMICAL SURVEY

Kashaweogama Lake Project Ontario

April 28, 1988

Peter A. Fernberg

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INTRODUCTION

General

A gold exploration program was undertaken by Redaurum Red Lake Mines Ltd on 29 contiguous mining claims situated on Kashaweogama Lake, Ontario. Line-cutting, geological mapping, geochemical soil survey and a geophysics (VLF-EM, Mag) survey were completed. Twenty-seven of these claims were acquired by option agreement.

This report provides details on the 1987 Fall exploration program and its results, plus recommendations.

Location - Access

The property straddles the central portion of Kashaweogama Lake which is 20 miles north of the Savant Lake townsite, northwestern Ontario (see Figure 1). Claim maps Armit Lake (G-1933) and Grebe Lake (G-2053), Patricia Mining Division, indicate the claim locations (see Figure 2).

Paved Highway 599, extending from Ignace northwards to Pickle Lake, passes 5 miles east of the claim block. Best access to the property is by boat departing from the landing, adjacent to the highway, on Kashaweogama Lake. An old bush / logging road starting from the landing comes within a half - mile of the property's southern boundary.

Physiography is typical of northwestern Ontario, consisting of flat to rolling forest covered terrain. Boggy spruce forest with a heavy moss groundcover occurs over much of the western half of the claim block, resulting in sporadic rock exposures. Rising out of this lowland are 10 -30 ft high ridges and hills made of glacial deposited sands and boulders.

On the eastern half, forest cover is a mature spruce and balsam with areas of birch and poplar. Occasional pines are present. Rock exposures are abundant, especially along the 30 - 60 ft high hillsides paralleling Kashaweogama Lake. Heavy moss and a veneer of glacial derived sandy soil blankets much of the rock in this area. Extensive clear-cut logging over the eastern half of the claim block in the past 10 years has left a large area of scrub brush and alders. Mounds of glacial detritus are common to the logged region.

Claims

The Kashaweogama property comprises 29 contiguous mining claims of which 27 optioned from Mr. R. Ramsay of Barrie, Ontario. An additional ten claims were acquired by staking during the autumn in order to cover the western extension of an anticipated drill target.

Claim standing is listed on Table I. Table II lists the claim numbers on which geological mapping and geochemical sampling were completed.

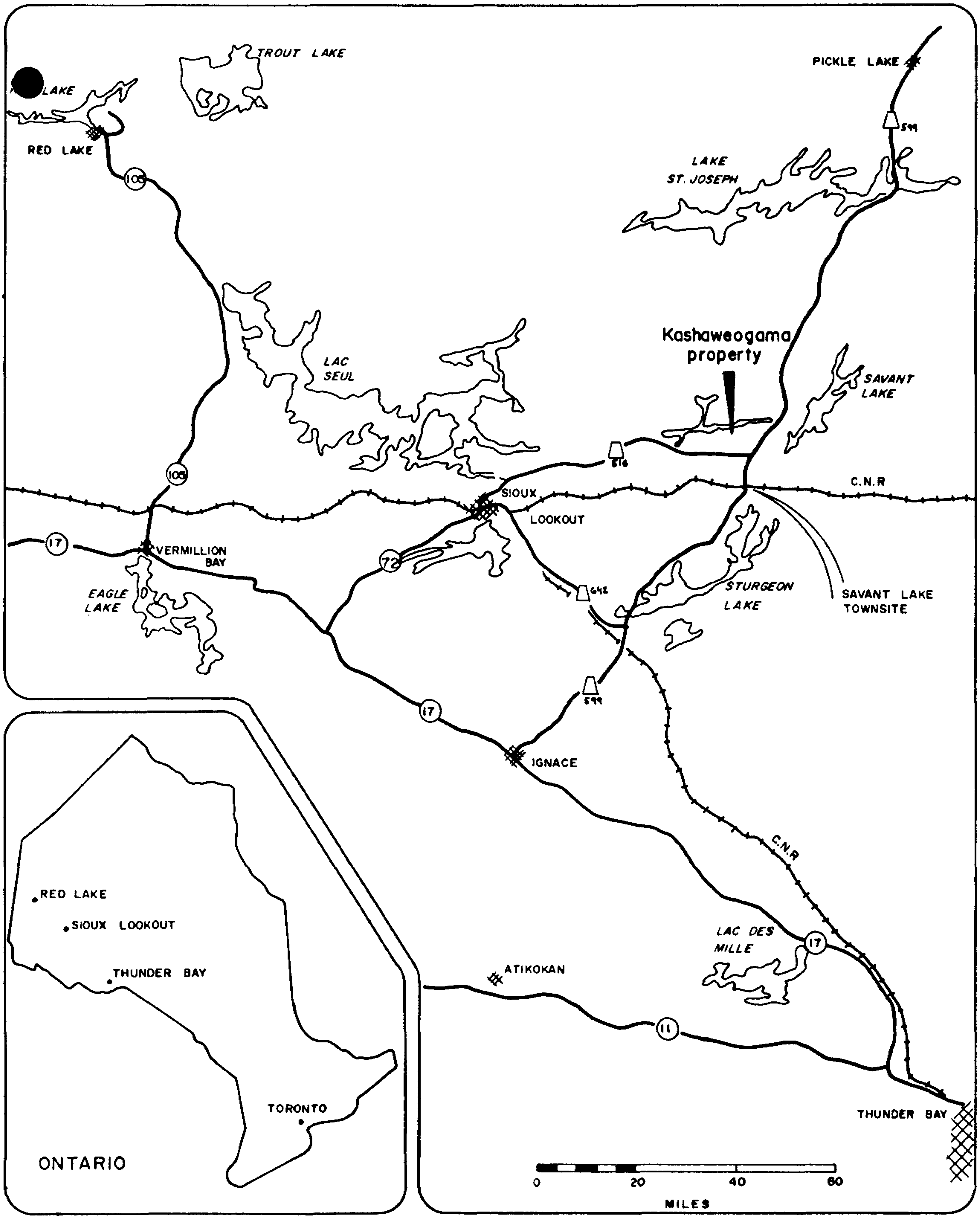
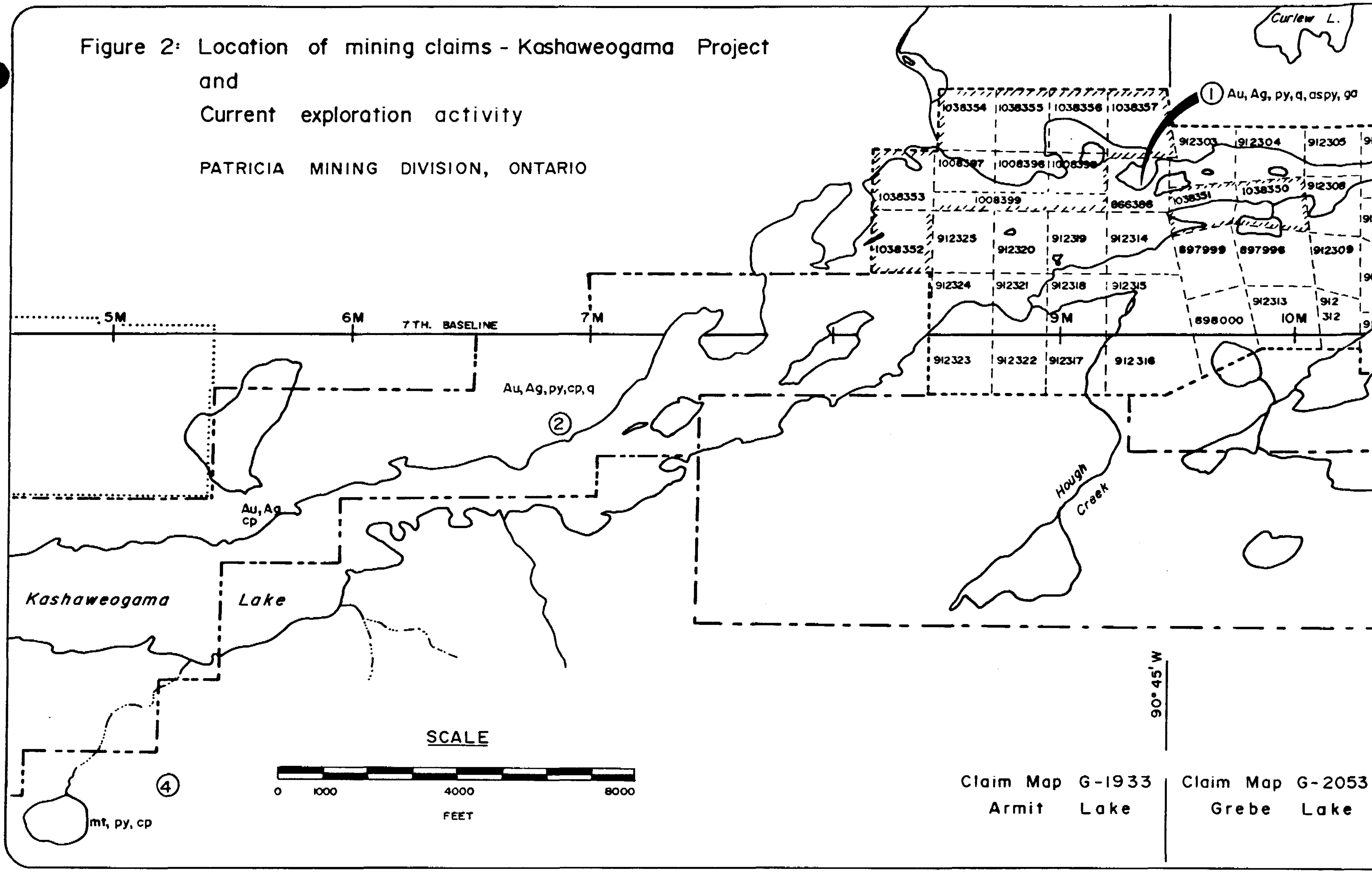


Figure I: Location of the Kashaweogama Project

Figure 2: Location of mining claims - Kashaweogama Project
and
Current exploration activity

PATRICIA MINING DIVISION, ONTARIO



PROPERTY HOLDINGS

REDAURUM RLM LTD
- acquired under option.
- 1987 staking by RRLM

NORTHERN DYNASTY EXPLORATION LTD

DOME EXPLORATION LTD

R. RAMSAY & G. HOGG

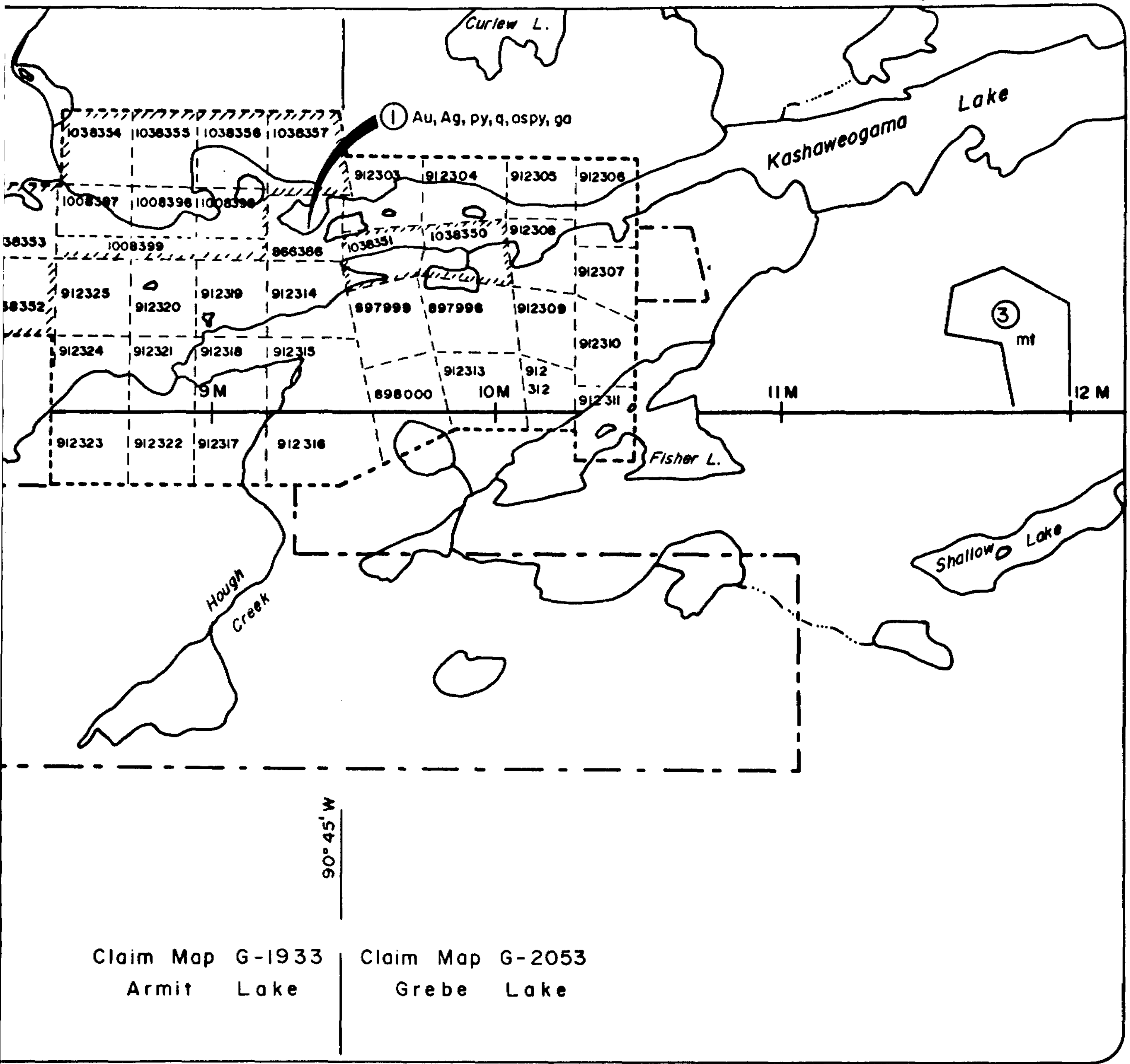
R. RAMSAY

① JOHNSON SHOWING

② HOEY, F. SHOWING

③ KASHAWEOGAMA LAKE IRON PROSPECT

④ CANEX AERIAL EXPLORATIO[N] BLACK GIANT MINES JOINT VENTURE (defunct)



①	JOHNSON SHOWING
②	HOEY, F. SHOWING
③	KASHAWEOGAMA LAKE IRON PROSPECT
④	CANEX AERIAL EXPLORATION BLACK GIANT MINES JOINT VENTURE (defunct)

Au	gold
Ag	silver
aspy	arsenopyrite
cp	chalcopyrite
ga	galena
mt	magnetite
py	pyrite
q	quartz

TABLE I: Kashaweogama Lake Property Mining Claim Data.
CLAIM STANDING

Claim No.	Staked By	Staking Date	Recording Date	Work Due	Township or Area
866386	R.Ramsay	July 16/86	July 25/86	May 9/88	Armit Lake
897997	R.Ramsay	Sept 29/86	Oct 21/86	June 30/88	Grebe Lake
897998	R.Ramsay	Sept 29/86	Oct 21/86	June 30/88	Grebe Lake
898000	R.Ramsay	Oct 1/86	Oct 21/86	June 30/88	Grebe Lake
912303	R.Ramsay	Oct 27/86	Nov 21/86	June 30/88	Grebe Lake
912304	R.Ramsay	Oct 27/86	Nov 21/86	June 30/88	Grebe Lake
912305	R.Ramsay	Oct 27/86	Nov 21/86	June 30/88	Grebe Lake
912306	R.Ramsay	Oct 27/86	Nov 21/86	June 30/88	Grebe Lake
912307	R.Ramsay	Oct 26/86	Nov 21/86	June 30/88	Grebe Lake
912308	R.Ramsay	Oct 30/86	Nov 21/86	June 30/88	Grebe Lake
912309	R.Ramsay	Oct 30/86	Nov 21/86	June 30/88	Grebe Lake
912310	R.Ramsay	Oct 26/86	Nov 21/86	June 30/88	Grebe Lake
912311	R.Ramsay	Oct 26/86	Nov 21/86	June 30/88	Grebe Lake
912312	R.Ramsay	Oct 30/86	Nov 21/86	June 30/88	Grebe Lake
912313	R.Ramsay	Oct 30/86	Nov 21/86	June 30/88	Grebe Lake
912314	R.Ramsay	Oct 28/86	Nov 21/86	June 30/88	Armit Lake
912315	R.Ramsay	Oct 28/86	Nov 21/86	June 30/88	Armit lake
912316	R.Ramsay	Oct 28/86	Nov 21/86	June 30/88	Armit lake
912317	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912318	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912319	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912320	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912321	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912322	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912323	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912324	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
912325	R.Ramsay	Oct 29/86	Nov 21/86	June 30/88	Armit Lake
1038350	P.Fernberg	Dec 10/87	Dec 18/87	Dec 18/88	Grebe Lake
1038351	P.Fernberg	Dec 10/87	Dec 18/87	Dec 18/88	Grebe Lake
1008396	P.Fernberg	Nov 7/87	Dec 3/87	Dec 3/88	Armit Lake
1008397	P.Fernberg	Nov 7/87	Dec 3/87	Dec 3/88	Armit Lake
1008398	P.Fernberg	Nov 7/87	Dec 3/87	Dec 3/88	Armit Lake
1008399	P.Fernberg	Dec 12/87	Dec 18/87	Dec 18/88	Armit Lake
1038352	P.Fernberg	Dec 11/87	Dec 18/87	Dec 18/88	Armit Lake
1038353	P.Fernberg	Dec 11/87	Dec 18/87	Dec 18/88	Armit Lake
1038354	P.Fernberg	Dec 12/87	Dec 18/87	Dec 18/88	Armit Lake
1038355	P.Fernberg	Dec 12/87	Dec 18/87	Dec 18/88	Armit Lake
1038356	P.Fernberg	Dec 13/87	Dec 18/87	Dec 18/88	Armit Lake
1038357	P.Fernberg	Dec 13/87	Dec 18/87	Dec 18/88	Armit Lake

NOTE: Claims 866386, 897997 - 897998, 898000, 912303 - 912325 optioned to Redaurum Red Lake Mines Ltd.

Claims 1008396 - 1008399, 1038350 - 103857 held by Redaurum Red Lake Mines Ltd.

Claims 1008396 - 1008399, 1038350 - 103857: northwest buffer zone.

TABLE II: Kashaweogama Lake Property Mining Claim Data.
CLAIMS COVERED BY GEOLOGICAL MAPPING
and GEOCHEMICAL SAMPLING

Claim No.	Recording Date	Work Due	Township or Area
866386	July 25/86	May 9/88	Armit Lake
897997	Oct 21/86	June 30/88	Grebe Lake
897998	Oct 21/86	June 30/88	Grebe Lake
898000	Oct 21/86	June 30/88	Grebe Lake
912303	Nov 21/86	June 30/88	Grebe Lake
912304	Nov 21/86	June 30/88	Grebe Lake
912305	Nov 21/86	June 30/88	Grebe Lake
912306	Nov 21/86	June 30/88	Grebe Lake
912307	Nov 21/86	June 30/88	Grebe Lake
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912311	Nov 21/86	June 30/88	Grebe Lake
912312	Nov 21/86	June 30/88	Grebe Lake
912313	Nov 21/86	June 30/88	Grebe Lake
912314	Nov 21/86	June 30/88	Armit Lake
912315	Nov 21/86	June 30/88	Armit lake
912316	Nov 21/86	June 30/88	Armit lake
912317	Nov 21/86	June 30/88	Armit Lake
912318	Nov 21/86	June 30/88	Armit Lake
912319	Nov 21/86	June 30/88	Armit Lake
912320	Nov 21/86	June 30/88	Armit Lake
912321	Nov 21/86	June 30/88	Armit Lake
912322	Nov 21/86	June 30/88	Armit Lake
912323	Nov 21/86	June 30/88	Armit Lake
912324	Nov 21/86	June 30/88	Armit Lake
912325	Nov 21/86	June 30/88	Armit Lake

NOTE: Claims 866386, 897997 - 897998, 898000, 912303 - 912325 optioned to Redaurum Red Lake Mines Ltd.

Claims 1008396 - 1008399, 1038350 - 103857 held by Redaurum Red Lake Mines Ltd.

EXPLORATION HISTORY

Previous Exploration

At the beginning of the century gold prospectors mainly worked on and nearby Sturgeon Lake, but also spread northwards to Savant Lake itself. Several local gold rushes have occurred in the past, however not on Kashaweogama Lake. In the 1940's several gold prospects were reported along the southern margins of Savant Lake.

Exploration for iron deposits has been carried out from the 1920's until the 1960's along the southeastern part of Kashaweogama Lake. Numerous small test pits / trenches can be found on the claim group.

Since the late 1950's exploration emphasis shifted to searching for base metals. The 1968 Mattabe discovery on Sturgeon Lake created renewed interest for base - metals such that during the 1970's large acquisitions of ground where undertaken by major companies.

Increasing gold prices in the 1980's attracted Stargazer Resources whom undertook a massive gold exploration program around the Kashaweogama - Savant Lake Basin structure. After staking nearly 1000 claims, the area was subjected to an airborne geophysics survey (EM, Mag, VLF - EM) and a humus geochemical survey. Follow-up work consisted of mapping trenching, ground geophysics and some limited drilling.

With respect to the Kashaweogama property, the Stargazer Resource's program covered about half of the claims. Work performed consisted of limited VLF-EM geophysics surveying, several IP test lines and reconnaissance mapping.

The Stargazer program was apparently terminated due to financial problems, with the claims being allowed to lapse. Subsequently, the ground was acquired on the basis of previous results and a favourable geological setting imposed by an infolded contact area between mafic volcanics and carbonate - rich sediments. Stargazer's work had located coincident anomalous gold values in both humus and rock over areas with a VLF-EM and IP geophysical response.

Current Activity

In addition to Redaurum Red Lake Mines, several companies have conducted gold and base - metal exploration programs either in the vicinity or adjacent to the claim group. Figure 2 illustrates current property holdings as of December 1987.

1987 AUTUMN EXPLORATION PROGRAM

Line-cutting

All of the old 1981 Stargazer Resources grid was brushed out, re-picketed, and extended both to the northeast and southwest. Cross lines were set at 200 ft intervals with picket stations every 100 ft. A total of 55.7 miles of line were established (36.3 miles on land and 19.4 miles on ice).

Due to severe magnetism the baseline alignment check was done using a solar observation. This was completed by Stephen Nicholson, Ontario Land Surveyor, of Sioux Lookout. The baseline is oriented 070 degrees true north.

Geology

Geological mapping was carried out from September 18 to November 8, 1987. The analysis, preparation of reports and maps was done intermittently from December 1987 - April 1988.

All cross lines, except those watercovered, plus the baseline were traversed. Since the grid lines could not be extended prior to freeze-up along the north shore of Kashaweogama Lake, claims 912303 - 9123306 were mapped only along the shoreline.

A geological map, scale 1"=200', was produced illustrating outcrop location, lithology and stratigraphy.

Geophysics

A geophysics survey (VLF-EM, Mag) was completed on all of the grid by Techterrex Inc of Mississauga, Ontario. Survey results are described within a separate report, dated April 30, 1988.

Geochemistry

Rock Sampling

Concurrent with geological mapping, a total of 152 samples were taken. All samples were analyzed for gold content with 74 of the samples also analyzed for Cu-Pb-Zn content.

Technical details are summarized below:

Detection Limit: Gold - 5 parts per billion (ppb)
Cu/Pb/Zn - 1 part per million (ppm)

Laboratory: Accurassay Laboratories Ltd; Kirkland Lake, Red Lake

Assay Technique: Atomic Absorption

Sample Decompostion Method: Acid digestion (Aqua Regia)

Soil Sampling

A total of 390 samples were collected. All were analyzed for gold and Cu-Pb-Zn content. Analytical details are the same as above for rock except only the minus 80 mesh fraction was analyzed. Material above minus 80 mesh was discarded.

Sample spacing was at 100 ft intervals wherever possible. Each sample of the B-horizon (at an average depth of 8 - 10 inches) was taken using a grub hoe. Sample size was approximately 500 grams. A majority of the soil was a sandy loam. Infrequent samples were of a clayey soil.

Contoured geochemical results are illustrated on 1/200 and 1/400 scale maps. Appendix I lists the assay values.

REGIONAL GEOLOGY

Structure & Stratigraphy

The region is underlain by rocks of Early Precambrian (Archean) age and lies at the boundary of the Wabigoon and English River Subprovinces of the Superior Province of the Canadian Shield.

Bond (1980) has identified two distinct sequences of supracrustal rocks separated by the fault - bounded Kashaweogama Lake. Each sequence is summarized below.

Jutten Volcanics
- North of Kashaweogama Lake.
- Mafic metavolcanic flows with interculated cherty metasediments.
- Local pillowed flows indicate a subaqueous origin.
- Possibly the oldest stratigraphic sequence.
- Belt is approximately 3900 feet wide.
- Early deformation resulted in overturning the sequence.
- North facing stratigraphy, but modified by the intrusion of felsic plutonic stocks.

A *polymictic conglomerate* characterized by granitoid and volcanic clasts,and finer-grained clastic metasediments, is unconformably deposited on top of the overturned Jutten Volcanics. These sediments are believed to face south towards the north facing Handy Lake Volcanics. Also the conglomerate is discordant to the Handy Lake formations due to faulting.

Handy Lake Basin Sequence
- South of Kashaweogama Lake.
- Complex layered succession of mafic to felsic metavolcanic formations with interculated arenaceous, argillaceous, and ferruginous metasedimentary formations becoming more prevalent towards the top.
- Volcanics are predominantly fine-grained pyroclastic debris and local flow units.
- A distal facies environment is surmised.
- Thickness of sequence varies from 12,300 ft to 34,000 ft.
- Repetition of lithology by folding is not suspected.

Central to the region is the anticlinal Kashaweogama - Savant Lake Basin Structure (see Figure 3), about 15 miles in length and 6 miles wide. The basin rocks are isoclinaly folded, north facing, and plunge moderately to steeply to the east - northeast. Two distinct lobes are present (see Figure 3). On the claim group, south of Kashaweogama Lake, the Handy Lake Volcanic Sequence forms the upper lobe.

On a regional scale, although not observed on the property, the Handy Lake Volcanic Sequence has been intruded by sills of felsic to intermediate subvolcanic porphyritic rocks. Subsequent intrusions of mafic to felsic plutonic rocks formed sills, stocks and batholiths. Along the northern margin of the claim group, the Dickson granodiorite stock intrudes the Jutten Volcanics.

Metamorphism

Greenschist facies regional metamorphism is prevalent. Upper Greenschist to amphibolite facies contact metamorphism prevails close to intrusive bodies.

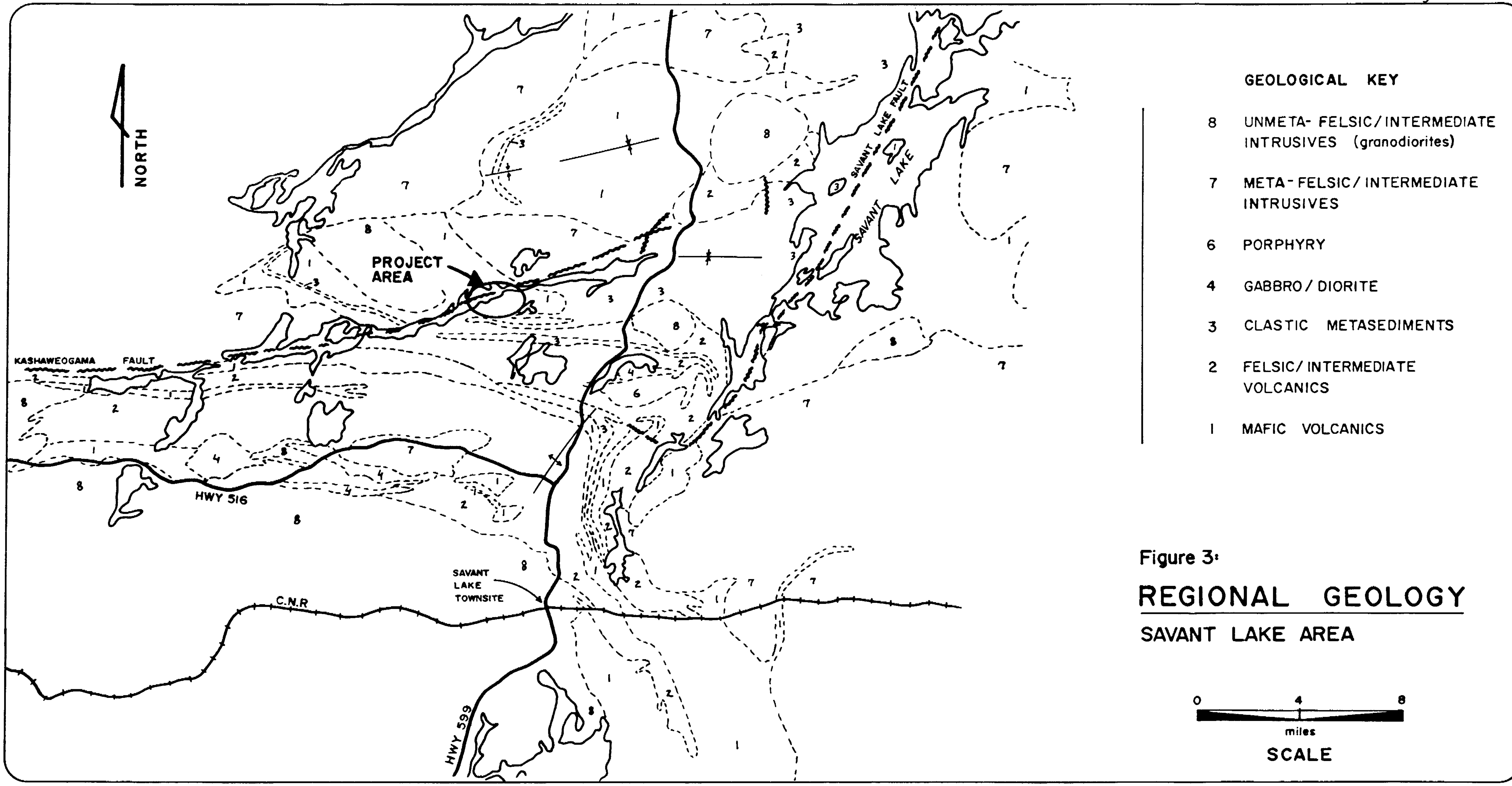

Figure 3:

REGIONAL GEOLOGY

SAVANT LAKE AREA

Mineralization

Within the region, gold, silver, molybdenite, iron, and copper - lead - bearing sulphides occur. Sand and gravel deposits associated with two eskers are extensive.

1) Gold & Silver

Precious metal mineralization uncovered to date occurs as gold bearing quartz vein / stringers infilling fractures in both volcanic sequences, at contacts to intrusive bodies, and within shears. Jutten Volcanics tend to contain gold, silver and minor copper associated with epigentic quartz veins and their silicified host rocks. In the Handy Lake Basin Sequence copper and lead bearing sulphides are common and may locally contain associated gold and molybdenite. These are usually associated with a base metal environment intermediate / felsic flows with pyroclastic rocks, and with quartz-feldspar porphyritic subvolcanic rocks.

2) Base - Metal

South and south-east of the property, base metal (Cu,Zn,Ag + Pb) volcanogenic lenses and pods occur in the intermediate / felsic flows and pyroclastics of the Handy Lake Basin Sequence along the fold axis of the major antiformal structure. Umex Ltd is known to hold a deposit of approximately a half - million tons grading 4% combined Cu, Zn, Pb and 2 oz Ag/ton.

3) Iron

The only iron prospect of economic potential occurs 2 miles southeast of the claim group. Work in 1957 optimistically indicated reserves of 500 million tons. Other ferruginous metasedimentary sequences, although of high quality, are thought to be too diluted with interbedded clastic metasediments to be of economic importance.

GEOLOGY OF THE KASHAWEOGAMA LAKE PROJECT

Lithology

The proximity of the Kashaweogama Lake Fault has resulted in rocks having a moderate to severe degree of schistosity which in most cases obscures the original lithology. An attempt has been made to distinguish wherever possible the protolith stratigraphy. In many cases it was only possible to broadly classify rock exposures as either being sheared mafic to felsic metavolcanics or clastic metasediments.

South of Kashaweogama Lake the property is underlain by predominantly mafic metavolcanic flows and subordinate tuffs, lapilli/tuffs, with interlayered felsic pyroclastics and polymictic conglomerates. Close to the southern shore of Kashaweogama Lake, a major lithological change occurs between metavolcanics to the south and a metasedimentary package. These sediments are predominantly mudstones / siltstones with interlayered and reworked pyroclastics and narrow bands of magnetite iron formation.

Although all lithologies are metamorphosed to the greenschist facies, the prefix meta will be eliminated in subsequent remarks for brevity.

METAVOLCANICS

Mafic Volcanics

The mafic volcanics are typical of the Superior Province "greenstones", consisting of greenschist metamorphosed flows, tuffaceous zones and agglomerate.

A distinctive medium to coarse grained amphibole porphyritic flow is present throughout much of the volcanics exposed north and southeast of the baseline. This lithology is characterized by 1-5mm anhedral to subhedral amphibole grains (with replacement by biotite and/or chlorite) becoming subsequently elongated depending on the degree of deformation. Where the shear fabric is intense, the amphibole phenocrysts are less than 1mm wide and up to 5mm long. Carbonate infilled amygdules are infrequent. Weathering results in a coarsely pitted surface. Carbonate alteration is common.

Immediately south of the baseline, between L22E - L30E, is a concentration of flow breccia and/or agglomerate. An amphibole porphyritic groundmass (same as above) hosts 5 - 10% mafic clasts (1/2" - 6" size) and a minor amount of felsic clasts. Clast shape is generally rounded. A band of finer sized clasts of chloritized mafic volcanic flow(?) within an amphibolitic porphyritic matrix (from L14E/3+50S - L22E/4+50S) contains a small shear with up to 20% pyrite.

Mafic pyroclastic debris form a central core (extending from Pyramid Rock Bay to L0/Baseline) of tuffs, lapilli/tuff and lapilli stone interlayered with felsic pyroclastics. Definite pyroclastic textures and associated accessory felsic clasts were used as criteria to classify a mafic volcanic as being tuffaceous. Commonly weathered surfaces exhibit a wispy to frothy nature. Lapilli stone sub-units contain well-flattened 1/2" - 1" clasts. Narrow (up to several inches) localized bands of grit-stone and pebbly clasts can occur.

Another distinctive pyroclastic breccia occurs at L38E/2+00N. Differential weathering of intermediate clasts has resulted in a knobby surface within an amphibolitic and feldspar groundmass containing 5% amphibole phenocrysts. Clasts are subrounded to angular with a bimodal size range; 1"-2", 1/8" - 1/2".

Jutten volcanics exposed along the north shore are dark-green, massive fine to medium - grained flows with little to no schistosity. One occurence of pillows and breccia was observed at L14E/23N.

Intermediate Volcanics

Only localized occurrences were observed. In several areas it appears that areas noted as intermediate volcanics may in fact be highly sheared mafic tuffs undergone potassic and sericitic alteration. An example would be at L54W/7+50N. A similar situation is also postulated for some felsic volcanic outcrops.

Definite intermediate pyroclastics outcrop at L18E/6+00S and L20E/6+00S. Fine grained (<1mm) lithic (feldspar) fragments are contained in a matrix of similar composition. At L18/6+00S several tear-drop shaped cobble sized clasts with twisted tail-ends can be observed. Other exposures of tuff can contain up to 5% pebble sized mafic clasts.

Felsic Volcanics

Mapped in the past (Stargazer Resources 1981) volcanics are predominantly a very schistose and sericitic altered pyroclastic. Outcrop exposures distinctly weather a buff-pink and whitish colour, occasionally with a frothy surface texture. Much of the pyroclastic texture is obliterated by an intense shear fabric in most exposures. Where discernible the tuffaceous component is usually pink weathering feldspars less than 1 mm size; lapilli appear as wispy, slightly chlorinated clasts. Exposures classified as crystal tuff are relatively homogeneous in appearance with mainly very fine grained to fine grained feldspars and 5-10% quartz grains, also fine-grained. Disseminated pyrite is ubiquitous, with localized 5-10% pyrite along shears especially on the shear structure extending along the north side of Hough Creek. Fuchsite can occasionally be present.

METASEDIMENTS

Mudstones / Siltstones

The largest concentration of laminated mudstones / siltstones occur along east - west trending ridges from L12/19+00N to L38E/Baseline. Iron formation and reworked tuffaceous epiclastics also outcrop on the same ridges. Interlayered with the buff-weathering mudstones / siltstones are infrequent bands (several inches to feet) of sandstone / greywacke. Occasional pebble clasts occur in the mudstones as can infrequent 1/4" wide cherty interbands. Disseminated pyrite cubes, 1%, are common with localized 3% concentrations. Infrequent narrow and barren quartz veins were noted. Carbonate alteration is common along the shear structure extending eastwards from Norway Bay.

At the clastic sediment - mafic volcanic contact is a narrow (50 ? ft) sub-unit of reworked mafic/intermediate tuffs and occasional lapilli.

Bedding attitudes strike east - westerly with steep dips to the north. One scouring channel with a southerly facing top direction suggests than an overturned lithology is present.

Tuffaceous Metasediments and Associated Felsic/Intermediate Pyroclastics

Stratigraphically adjacent and interlayered with the laminated mudstones / siltstones is a 100 - 300 ft wide sequence of tuffaceous metasediments. Areas of crystal tuff and lapilli-stone occur as localized interlayers. Iron formation beds also occur in this unit. Mapping of the Houghton - Hough Lake area by Bond (1980) noted the interbedding of IF with all types of arenaceous and argillaceous sediments, but particularly at the top of massive sandstone and sandstone - siltstone sequences. Part of Unit 7 may in part be similar "sandstones".

Most exposures of reworked tuffs are comprised of rhythmically bedded (1/4 - 1/2" wide) pink weathering feldspar grains ranging in size from silt to fine sand. Interlayers (1 - 3") of laminated mudstones are fairly common. Lapilli/tuffs to lapilli-stone exhibit severe flattening of felsic clasts (0.5-1mm high, 1-5mm long). Mafic clasts are so flattened by deformation that they appear to seem part of the mafic groundmass. Weathering results is a pitted/frothy surface. Minor sericitic alteration can occur.

The crystal tuffs contain predominantly fine-grained feldspar crystals with 5%

quartz grains. A white pitted weathering surface is common.

Iron Formation

Chemical sediments occur mainly in the northeast quadrant along the southern shore of Kashaweogama Lake. East of L16E four iron formation beds have been identified, whereas two beds occur west of L16E.

The iron formation is oxide facies (magnetite) and occurs as 20 - 50 ft wide beds within a mudstone / siltstone suite and contemporaneous reworked pyroclastic sediments. Occasional very thin (1/2"-2") bands of almost pure magnetite occur within the clastic sediments. Mapping indicates the IF as being laterally continuous, however localized disharmonic folding occurs.

Bedding is well developed with magnetite, chert, hematitic layers varying between 0.2 - 20 cm. Magnetite layers are generally thicker than the chert. Almost 90% pure magnetite is located at L10W/17+00N. Rusty surfaces can occur on bedding portions but otherwise than isolated concentrations of 3% pyrite cubes no sulphidized IF was noted. Occasional bedding parallel bull quartz veins (1/4"-5" wide) and nodules occur in the IF beds closest to the shore.

The south-central portion of the property exhibits severe magnetic interference, however in this sparse region of outcrop only two localities (L26W/17+00S and L22W/14+00S) of magnetite IF were located.

Conglomerate

Polymictic conglomerates are common within the mafic volcanics as interflow units, varying between 10 - 200 ft in thickness. Narrow mudstone interbands also occur in the conglomerates. One outcrop (L32E/1+80S) contains a gradational change to a mafic tuff.

Clasts make up to 20 - 40% of the framework and are predominantly felsic (usually granitoids, occasionally pyroclastic). Mafic volcanic clasts are usually less than 5% of the total clast population. Clast size ranges from pebble (1"-3" long by 1/4"-1" wide) to cobbles (up to 7"). Invariably due to deformation clasts are elongated parallel to schistosity with at least a 5:1 length vs width ratio. Exposures close to Kashaweogama Lake such exhibit extreme flattening that a pebbly conglomerate superficially resembles a sheared mafic lapilli-stone. Groundmass is very fine grained and mafic (identified by Bond, 1980, as greywacke) which can contain localized thin felsic clasts up to 3mm long. Carbonate alteration is is common.

A mafic clast dominant conglomerate at L30W/12+40N may in part be agglomeratic. Clasts are chloritized, pebble sized, and have a blocky to angular shape, with the occasional rounded clast.

Polymictic conglomerates exposed along the northern shore and on the small islands are characterized by their greater frequency of well-rounded, ovoid shaped granitoid pebbles.

Granitioid clasts within the north shore conglomerates are cobble-sized, up to 1 foot long by 4 inch diameter. Pyroclastics form the remaining clast population with occasional cherty clasts. Groundmass is a greywacke and supports the clasts. Gradiational bedding observed on First and Third Islands fines to the north.

Extending eastwards from the Johnston Showing, the conglomerate groundmass is arenitic. Coarse sand sized quartz is predominant. This particular sub-unit is approximately 150 feet wide and can be traced 1500 feet to the east.

Structure

The stratigraphic trend is essentially east - west striking, and steeply dipping to the north. Pervasive shearing and a strong schistosity obscure primary bedding features, however in a few isolated outcrops top determinations (eg: graded bedding, scour channels) suggest that the beds are overturned.

Although a broad fold nose to the east is suggested by the geophysics survey, mapping does not confirm it. There is however smaller scale disharmonic folding within the iron formation beds. At L40W/26+50N, converging bands of iron formation (geophysically detected) strongly suggest a tight fold nose.

Overall, the schistosity is parallel to sub-parallel to stratigraphy. This being best observed in the clastic metasediments north of Duck Pond. A secondary orientation of schistosity is present in a few places in the metasediments. As the Kashaweogama Lake shoreline is approached the intensity of schistosity increases such that difficulties can occur in defining various sedimentary lithologies. Polymictic conglomerates lose their distinctive clast shape and become a "streaky" mass. Neverless, conglomeratic interbeds can be identified by observing the weathered felsic component.

The Kashaweogama Lake Fault is the predominant structure traversing the property. Bond (1980) has remarked that it is a late zone of fracturing that was in part structurally controlled along the contact between the Jutten Volcanic Sequence and the Handy Lake Basin Sequence. Well sheared mafic volcanics and conglomerate along the shoreline are evidence of this fault.

Two additional major shear zones were delineated, and are thought to be related to the development of the Kashaweogama Lake Fault / Shear structure. The Norway Bay Shear zone occurs at the stratigraphic contact between the mafic volcanics and the clastic metasediments. Traced by geophysics, the Norway Bay Shear merges to the west with the Kashaweogama structure.

Traceable predominantly by geophysical methods is the Beaver Pond Shear, generally occurring at the contact between felsic and mafic volcanics (eg: L22W - L40W/12+00N - 5+00N). Inaddition to the three major shears, numerous narrow shears are present throughout the property.

Two shear structures bracket the Johnston Showing. On the north is a strong geophysically tracable conductor which coincides with a topographic linearment. Its strike and style of geophysical response suggests that it may be related to the Kashaweogama Fault, in a manner similar to those shears in the southern half of the property.

The shear zone hosting the mineralization at the Johnston Showing would appear to change its strike moderately as it continues westward. Geophysical data suggests that this shear zone has a potential strike continuity of 1400 ft west of the Showing.

Several northerly to NNW striking faults are inferred from offsets in the geophysics data. Geological mapping offers some confirmation. These transverse faults are suspected to be a post-shearing event.

Mineralization

Instead of one wide iron formation band originally indicated by previous mapping, four thin beds of IF are present. Prospecting did not locate any major cross-cutting structures with accompanying sulphide - replacement mineralization. However, at L10W/17N a grab of pyritiferous magnetite iron formation along a small north trending slip assayed 330 ppb. In the immediate vicinity is a small trench exposing contorted quartz veining with patchy sulphides (5 - 15%) in the magnetite. Assays were 5 - 20 ppb gold. Elsewhere small discontinous quartz veins and veinlets were occasionally noted but only contained low geochem gold values.

Pyrite (1-3%) is ubiquitous to the mudstones / siltstones, especially in the vicinity of the Norway Bay Shear. Concentrations up to 20% can be found in narrow (less than 2 feet wide) shears in the other lithologies. Isolated rock samples from two shears in the vicinity of L62W/12N returned higher than normal background geochem values for gold. Moderately higher gold values were also obtained form a sheared felsic pyroclastic at L12W - L10W/2S. A cautionary note is that the felsics appear to have a higher background value in gold than the mafic volcanics. Both sites are associated with a VLF-EM response attributed to underlying shear structures.

The Beaver Pond shear structure, immediately north of Hough Creek, contains isolated quartz stringers containing occasional galena and pyrite. Sulphide staining is common on the weathered surfaces. Rock and soil sampling returned gold values slightly above the normal background level.

At the Johnston Showing (L2W/28N) gold mineralization is associated with several quartz veins (6-10" wide) hosted in a 30 ft wide shear zone undergone carbonate and sericite alteration. Host rock is a conglomeratic sandstone horizon (minimum 150 ft wide) traceable for 250 feet along a small peninsula. The veins contain patchy galena, pyrite, and minor arsenopyrite.

Several grab samples did not achieve economic grades (<0.002 - 0.03 opt Au) but visible gold was noted. Previous grab samples by Stargazer Resources and the Ontario Geological Survey reported values as high as 1.12 opt Au and 2.2 opt Ag.

Further to the east at L10E/27N a 18 inch wide fuchsite-quartz vein is exposed in a narrow (1-1.5 ft) carbonatized shear. Assay values were neglible.

GEOCHEMICAL SAMPLING RESULTS

Rock Sampling

Detailed sampling, between L12W - L4W and L12E - L18E, across the stratigraphy was done to establish background values of bedrock. Particular attention was directed towards locating mafic volcanic bedrock with anomalous gold geochem values similar to loose slabs of mafic volcanics located at L15W/12+50W.

Results of the sampling are as follows:

1) Felsic volcanics have slightly higher background gold geochem values (15 - 25 ppb) than the mafic volcanics. However, this is partially attributable to a low density of samples from the felsic volcanics and a sampling bias for pyritic mineralization within the felsics.

2) Increased geochem gold would appear to occur at the contact between mafic and felsic volcanics, particularly where sheared, with some sericitic alteration, and sulphide mineralization.

   A significant area is at L12W/2S - L10W/2S where increased geochem gold value is limited to a particular area of the contact but not further to the east.

3) The iron formation has a very low background (less than 5 ppb) except where sulphide mineralization is present. Refer to the section on mineralization for additional details.

4) Cu-Pb-Zn geochem values tend to reflect the underlying bedrock.
   - higher Pb content in felsic volcanics and metasediments.
   - higher Zn content in the metavolcanics.
   - other than a slight linear coincidence with the Norway Bay Shear, anomalous copper values tend to be scattered.

Soil

Soil sampling was used primarily to detect areas of unusual concentration or patterns of geochem values as opposed to isolated site-specific "highs". Base - metals were utilized to detect possible geochem leakage halos associated with auriferous structures. Previous work (Stargazer Resources, 1981) has shown that anomalous Cu and Zn values can occur 100-200 ft from such an auriferous structure.

Sampling was carried out over: geophysical conductors previously delineated by Stargazer Resources; highland areas; the western part of the claim group not underlain by boggy spruce forest.

Results are itemized below:

1) Two intriguing areas of higher gold geochem values were located (see Map 3). In both cases the soil is a distinctive reddish-brown, possibly having been an oxidized paleo-surface that has undergone decomposition and transportation.

   (A) Gold Cluster I:- L16E/2S - L19E/1+50S
   Values range from 17 - 1216 ppb

Only isolated anomalous zinc geochem values are coincident. This area is a ridge covered by sand and boulder glacial debris. However, it lies in a general down ice direction from several high amplitude VLF anomalies possibly related to the Norway Bay Shear structure.

(B) Gold Cluster II:- L4W/2N - L0/8N
Values range from 19 - 622 ppb

A linear feature with several nearby moderate to highly anomalous values that is down ice from the Norway Bay Shear and an area of magnetic depression. Coinciding is a "bulls-eye" (L4W/2N) of higher than normal lead and zinc geochem values. Geological mapping indicates a rapidly changing lithology.

2) Note that two important precautionary factors have to be considered. First, it is possible that the gold geochem clusters are due to particulate gold of a transported origin and not linked to any geophysical conductor. Secondly, repeated sampling and re-assay failed to duplicate the original high values.

3) An additional suggestion of the down ice transport of particulate gold occurs at L74W - L60W/shoreline to 4S and at L28W - L38W/shoreline to 8N. In both areas the pattern is transverse to stratigraphy.

   A central core of moderately anomalous gold geochem values are bounded by higher background values. Contour pattern approximately coincides with the SSW trending glacially shaped sand and boulder ridges.

4) East of L22W, the Cu-Pb-Zn contours tend to reflect the underlying stratigraphy. Whereas west of L22W the contours are transverse to stratigraphy, the shear zones and reflect the topography, a situation similar to gold geochem values.

   Map 4 illustrates anomalous Cu-Pb-Zn values in soil.

5) Zinc and Pb patterns tend to be more linear than the copper.

   One zone warranting further investigation is at L42W - L32W/ 9 - 14N where both Zn and Pb results reveal a strong, linear NNE-SSW trending pattern. Gold values have a similar trend.

7) Mudstone / siltstone lithologies, overall, have higher Cu-Pb-Zn values than the volcanics. This is most evident in the NE quadrant of the southern area.

Previous Sampling

Humus sampling by Stargazer Resources (1981) detected several positive to highly anomalous site (see Map 4). Only two humus sample sites coincide with anomalous geochem gold sites detected by Redaurum RLM Ltd. At L32/3N a 176 ppb Au assay in soil coincides with a 4 ppb humus sample. The better coincidence is at L16E/12S where a 19 ppb humus sample occurs in an area of 749 and 17 ppb Au in soils.

TARGET SELECTION CRITERIA

The following criteria (listed in decreasing order of priority) were used to select areas with the potential of delineating auriferous mineralization:

Presence of gold mineralization	- highest priority to rock samples - next priority for soil samples, especially clustering
Favourable geological setting	- shear zones, lithological contacts, dilation zone, cross faulting
Information from previous exploration programs	
VLF-EM geophysical conductor	- highest priority if underlying known mineralization (eg. gold, pyrite) - high priority if due to a geological response

Presence of a relatively homogeneous soil geochem pattern of anomalous gold copper and zinc values

EXPLORATION TARGETS

Table III lists areas requiring additional exploration. Refer to Map 4 for locations.

CONCLUSIONS & RECOMMENDATIONS

Albeit that samples collected from the Johnson Showing were disappointing, the presence of visible gold; documented gold mineral- ization; favourable geological setting; and being an untested target with the potential of strike continuity make this site the best drill target currently available.

A potentially folded iron formation with cross-cutting faults at L42W - 44W/26N is a favourable setting for iron formation hosted gold mineralization. The presence of pyritic sulphides, quartz veining, and geochemically anomalous gold values warrant additional examination. Only one drill hole has ever tested this area.

The strong VLF-EM responses (L18E-22E/1-5N) in the vicinity of an IP anomaly at L18/4N which is situated on a major shear requires drill testing to determine the quanity of suspected disseminated sulphide mineralization. A suspected cross fault also occurs in the area.

Redaurum RLM should consider doing some limited bulldozer stripping. This may upgrade several of the priority 2 areas. Inaddition it would resolve the question of whether the two gold geochem sites have been transported from afar or reflect a nearby buried mineralized source. A large bulldozer should be able to strip the overburden.

TABLE III: Exploration Targets

PRIORITY RATING	TARGET IDENTIFICATION	GEOLOGICAL & GEOPHYSICAL SETTING	GEOCHEM RESULTS
1	Johnston Showing	Gold mineralization associated with narrow quartz veins within a 30 ft wide shear along the contact between volcanics and conglomerate.	Assayed 0.002 - 0.03 Au opt Previous sampling; 0.72, 0.60, and 1.12 Au opt.
1	A11 A12	Previously drill tested (one DDH) VLF and IP anomaly. Intersected magnetite IF with very pyritic sections and pyritic argillite. Potential fold nose in IF at L42W-44W/26N with possible cross-cutting fault.	Assayed 0.003 - 0.004 Au opt
1	A40, east end A40b A40c	Strong VLF response associated with major shear at lithological contact. Area of cross faulting. Associated IP anomaly (previous work). Increased pyrite mineralization in the area.	Immediately down ice of A40c is a cluster of anomolous gold geochem values in soil.
2	L5W-L3W BL-2N	Rapidly changing lithology. Minor shearing is present nearby. Within area of magnetic depression. values in soils.	Broad clustering of Au values nearby a bulls eye cluster of higher than normal Cu-Pb-Zn
2	L10W/1S-3S to L4W/4S-7S	Area of felsic pyroclastics with up to 10% localized Py in shears. Loose float of pyroclastic with Py alteration. Partially coincident VLF anomalies. Localized high amplitude VLF cross over. (eg: anomaly A37, L10W/6S)	Linear trend of higher than background Cu-Zn values in soil. Several higher than normal Au (10-31ppb) values in rock samples.
2	A31	Short strike length (550 ft) VLF anomaly with a high amplitude response. Occurs at contact zone of intensely sheared conglomerate, mafic volcanic and mudstone/siltsone.	NE from A31 along the lakeshore is a float of mafic volcanic rock with 458 - 1200ppb Au. (site located by R.Ramsay).
3	A3	Long strike length (1400 ft) shear structure.	Widespread high background Copper and Zinc values in soil Isolated sample site with anomalous Au in rock at shear contact.
3	A19 A30	Apparently faulted, strong amplitude VLF anomaly. Potential IF. Possible relation to target A31. ?.	

Abbreviations: IF - Iron Formation
IP - Induced Polarization (Geophysical Survey)
VLF - Very Low Frequwency (Geophysical Survey)
DDH - Diamond Drill Hole
opt - ounce per ton

Therefore it is recommended that;

1) the Johnston Showing be drill tested below the surface trenches and laterally along its strike projection to the west.

2) the iron formation at L42W-44W/26N be drill tested.

3) VLF anomaly A40 east end, A40b, A40c and A65 be drill tested.

4) prior to undertaking a drill program, bulldozer stripping, washing and sampling be carried out on the following targets;
   (i) Gold geochem anomaly 1:- L16E-L19E / 1S-2+50S
   (ii) Gold geochem anomaly 2:- L5W-L3W / Baseline - 2N
   (iii) L10W / 1S-3S to L4W / 4S-7S

5) prior to undertaking a drill program, limited IP surveying be carried out in the vicinity of VLF anomalies A40b and A65 to better define the location and extent of suspected sulphide mineralization.

April 28, 1988
Red Lake, Ontario

Peter A. Fernberg

REFERENCES

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Bond, W.D.
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1982: Summary Report 1982 Savant Lake Project; GML Minerals Consulting Ltd, Unpublished Report, Sioux Lookout Resident Geologist Assessment Files.

CERTIFICATE OF QUALIFICATIONS

I, Peter A. Fernberg, of Red Lake, Ontario, certify that:

1) I have received a Bachelor's of Science (Honours) degree in geology from Carleton University, Ottawa, Ontario in 1979; a Master's of Mineral Exploration degree, Queen's University, Ontario in 1985.

2) This report is based on; the records of work done by previous owners, published geological maps and reports, assessment work files, geological mapping of the property by myself, supervision and collection of geochemical samples, and supervision of the geophysical survey.

3) I have been employed in mineral exploration since 1979.

4) I do not have, nor expect to receive any interest in the property described in this report.

Red Lake, Ontario
April 28, 1988

Peter A. Fernberg

Peter A. Fernberg

APPENDIX I

GEOCHEM ASSAY (Cu - Pb - Zn) VALUES

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ACCURASSAY LABORATORIES LTD.

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9618 P.O. Box 934
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POV 2MO

Page #1

Date: 11/16/87 19

Work Order 870737
Soils

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Copper ppm	Lead ppm	Zinc ppm
74878	1062	14	13	36
74879	1063	12	14	33
74880	1064	11	16	30
74881	1065	13	14	27
74882	1066	14	14	26
74883	1067	13	12	21
74884	1068	11	11	22
74885	1069	14	18	25
74886	1070	13	13	19
74887	1071	33	23	60
74888	1072	10	15	27
74889	1073	35	23	90
74890	1074	28	24	106
74891	1075	25	19	75
74892	1076	14	21	62
74893	1077	11	14	28
74894	1078	20	23	74
74895	1079	20	29	71
74896	1080	17	19	31
74897	1104	9	18	19
74898	1109	12	12	36
74899	1110	25	26	47
74900	1111	6	11	5
74901	1112	17	24	20
74902	1113	27	28	80
74903	1114	13	20	27
74904	1115	19	27	83
74905	1116	6	12	22
74906	1117	6	12	3
74907	1118	11	30	41
74908	1119	15	22	43
74909	1120	11	14	28
74910	1140	10	17	54
74911	1141	8	12	47

Per:

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14820 Redaurum Red Lake Mines
Box 934
Red Lake, Ontario
POV 2M0

Page #1

Date: 01/21/88 19

Work Order 870841

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Zinc ppm	Lead ppm	Copper ppm
82357	1340	110.0	48.0	38.4
82358	1341	45.8	26.9	40.4
82359	1342	71.2	24.0	30.4
82360	1343	50.8	36.8	48.0
82361	1344	84.4	27.6	52.8
82362	1345	56.2	28.8	40.0
82363	1346	57.5	26.3	43.8
82364	1347	110.0	48.8	58.8
82365	1348	80.7	29.3	44.1
82366	1349	82.7	29.2	24.2
82367	1350	24.0	19.9	17.6
82368	1401	16.9	15.8	12.3
82369	1402	28.4	24.4	15.6
82370	1403	24.6	23.8	10.8
82371	1404	25.2	23.6	21.2
82372	1405	89.6	29.2	29.6
82373	1406	123.6	30.4	73.2
82374	1407	83.8	39.2	41.5
82375	1408	73.6	29.6	36.0
82376	1409	71.5	34.2	36.5
82377	1410	47.9	24.2	19.6
82378	1411	52.8	26.4	31.6
82379	1412	98.8	39.6	32.3
82380	1413	38.1	21.5	15.4
82381	1438	34.6	23.8	14.6
82382	1439	134.0	38.0	63.2
82383	1440	73.1	38.5	63.5
82384	1441	61.2	35.6	26.4
82385	1442	73.6	36.4	15.6
82386	1443	102.4	43.6	49.2
82387	1445	47.3	37.7	39.6

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Page #2

Date: 01/21/88 19

Work Order 870841

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Zinc ppm	Lead ppm	Copper ppm
82388	1446	56.9	35.4	18.1
82389	1447	111.7	64.2	56.7
82390	1448	89.6	46.3	32.1
82391	1449	87.7	51.9	77.3
82392	1450	125.0	51.3	62.1
82393	1501	51.2	34.8	26.0
82394	1502	60.4	46.4	32.4
82395	1503	54.8	33.2	20.8
82396	1504	101.2	44.4	116.8
82397	1505	86.7	40.4	38.8
82398	1506	76.0	46.0	46.4
82399	1507	88.4	51.2	42.4
82400	1508	40.8	24.8	13.2
82401	1509	82.5	38.8	41.3
82402	1510	55.2	43.2	19.6
82403	1511	52.8	39.6	26.8
82404	1512	70.8	41.3	34.8
82405	1513	87.6	44.8	19.6
82406	1514	59.6	33.9	50.0
82407	1515	61.2	44.8	22.8
82408	1516	34.6	29.2	21.9
82409	1517	45.6	34.4	27.2
82410	1518	67.5	42.5	24.6
82411	1519	100.0	50.8	24.4
82412	1520	55.2	40.4	28.4
82413	1521	55.8	37.7	22.7
82414	1522	123.1	47.3	59.6
82415	1523	34.6	33.5	13.5
82416	1524	182.4	43.6	35.6
82417	1525	42.5	39.6	22.5
82418	1526	34.4	35.2	24.0

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Page #3

Date: 01/21/88 19

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Assay results are as follows:

SAMPLE NUMBER		Zinc	Lead	Copper
Accurassay	Customer	ppm	ppm	ppm
82419	1527	58.0	43.6	24.8
82420	1528	43.8	39.6	29.6
82421	1529	*	*	*
82422	1601	34.0	33.6	27.6
82423	1602	25.6	28.0	8.0
82424	1603	36.2	34.2	18.8
82425	1604	21.2	32.7	11.5
82426	1605	48.8	33.2	12.4
82427	1606	66.0	32.8	22.0
82428	1607	52.5	38.8	17.9
82429	1608	29.2	29.6	13.6
82430	1609	18.8	27.3	14.6
82431	1610	21.5	30.8	16.5
82432	1611	35.4	31.5	14.6
82433	1612	21.2	28.0	12.8
82434	1613	20.0	27.6	18.8
82435	1614	22.7	24.6	16.2
82436	1615	34.4	34.0	15.2
82437	1616	13.6	21.2	6.4
82438	1617	36.4	34.4	16.8
82439	1618	15.6	26.4	7.2
82440	1619	21.2	27.2	10.0
82441	1620	21.5	29.2	10.0
82442	1621	13.8	25.4	7.3
82443	1622	36.5	32.7	11.5
82444	1623	25.6	32.0	14.4
82445	1624	15.6	28.8	9.2
82446	1625	31.6	32.8	15.6
82447	1626	30.8	30.4	14.8
82448	1627	25.2	28.4	10.4
82449	1628	56.5	45.7	17.8

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14823 Redaurum Red Lake Mines
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POV 2M0

Page #4

Date: 01/21/88 19

Work Order 870841

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Zinc ppm	Lead ppm	Copper ppm
82450	1629	48.5	35.8	27.7
82451	1630	86.7	42.5	27.9
82452	1631	35.8	36.5	16.2
82453	1444	50.8	38.8	18.3

* Sample Missing.

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16474 Redaurum Red Lake Mines Ltd.
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Page #1

Date: 12/30/87 19

Work Order 870755A

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Copper ppm	Lead ppm	Zinc ppm
76090	001132	10.8	<5.0	34.4
76091	001133	13.3	<5.0	50.0
76092	001134	18.8	<5.0	50.0
76093	001135	20.8	<5.0	79.6
76094	001155	21.3	<5.0	63.3
76095	001156	11.6	<5.0	54.8
76096	001157	26.8	<5.0	96.4
76097	001158	17.1	<5.0	51.3
76098	001159	14.4	<5.0	38.8
76099	001160	7.6	<5.0	25.2
76100	001219	9.2	<5.0	18.5
76101	001220	Insufficient sample		
76102	001221	14.2	<5.0	49.2
76103	001222	21.2	<5.0	74.4
76104	001223	14.2	<5.0	30.8
76105	001224	10.8	<5.0	36.4
76106	001225	8.3	<5.0	35.4
76107	001227	40.4	6.4	153.2
76108	001228	27.6	<5.0	79.2
76109	001229	25.4	<5.0	86.7
76110	001230	13.3	<5.0	30.8
76111	001231	25.8	<5.0	54.6
76112	001232	34.0	<5.0	183.2
76113	001233	19.2	<5.0	75.8
76114	001278	28.8	<5.0	77.1
76115	001279	33.8	<5.0	68.8
76116	001280	Insufficient sample		

Per: ____________________

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SOILS

Certificate of Analysis

17546 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
POV 2MO

Page #1

Date: 02/09/88 19

Work Order 870681

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1001	1.6	49.2	32.4	<1.0
	1002	<1.0	19.6	18.4	<1.0
	1003	<1.0	40.8	31.6	90.8
	1004	<1.0	<1.0	11.2	<1.0
	1005	<1.0	<1.0	22.0	78.0
	1006	<1.0	9.2	25.2	78.0
	1007	<1.0	<1.0	14.4	<1.0
	1008	<1.0	<1.0	12.4	<1.0
	1009	<1.0	<1.0	11.6	<1.0
	1010	<1.0	<1.0	28.4	40.0
	1011	<1.0	<1.0	20.0	<1.0
	1012	<1.0	<1.0	6.4	<1.0
	1013	<1.0	<1.0	20.0	<1.0
	1014	<1.0	<1.0	16.8	<1.0
	1015	<1.0	16.8	24.0	8.4
	1016	<1.0	<1.0	15.6	<1.0
	1017	<1.0	<1.0	22.8	<1.0
	1018	<1.0	<1.0	26.0	<1.0
	1019	<1.0	<1.0	20.8	<1.0
	1020	<1.0	14.8	23.6	8.4
	1021	<1.0	4.8	20.4	<1.0
	1022	<1.0	<1.0	26.4	<1.0
	1023	1.6	10.8	19.2	<1.0
	1024	<1.0	<1.0	32.8	40.0
	1025	<1.0	<1.0	10.4	<1.0
	1026	<1.0	<1.0	35.2	40.0
	1027	<1.0	4.8	31.2	<1.0
	1028	<1.0	<1.0	33.6	52.8
	1029	<1.0	32.4	35.2	78.0
	1030	<1.0	<1.0	21.6	<1.0
	1031	5.6	45.2	23.2	78.0
	1032	<1.0	16.8	6.8	<1.0
	1033	<1.0	<1.0	6.8	<1.0

Per: G. Duncan

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SOILS

Certificate of Analysis

17547 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
POV 2MO

Page #2

Date: ~~02/09/88~~ 19

Work Order 870681

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1034	<1.0	40.8	15.2	27.2
	1035	<1.0	<1.0	24.4	28.8
	1036	<1.0	<1.0	14.0	65.6
	1037	<1.0	39.2	11.2	26.2
	1038	<1.0	32.4	16.0	<1.0
	1039	<1.0	14.4	14.4	78.0
	1040	5.4	16.2	13.8	63.1
	1041	5.6	32.4	9.2	20.4
	1051	5.4	<1.0	7.3	50.8
	1052	<1.0	<1.0	4.4	<1.0
	1053	<1.0	<1.0	3.1	<1.0
	1054	<1.0	<1.0	4.0	<1.0
	1055	1.6	<1.0	6.2	38.5
	1056	<1.0	6.5	5.8	<1.0
	1057	<1.0	<1.0	15.6	19.2
	1058	<1.0	<1.0	12.8	27.2
	1081	37.6	<1.0	26.8	<1.0
	1082	15.0	<1.0	28.0	19.2
	1083	8.6	<1.0	28.0	27.2
	1084	<1.0	<1.0	24.6	20.0
	1085	<1.0	21.2	36.0	90.8
	1086	<1.0	16.8	44.0	103.2
	1087	<1.0	<1.0	4.8	<1.0
	1088	Sample missing			
	1089	<1.0	<1.0	23.8	75.0
	1090	<1.0	12.8	24.0	65.6
	1091	<1.0	6.8	22.8	90.8
	1092	<1.0	20.4	18.8	78.0
	1093	<1.0	36.8	17.2	90.8
	1094	<1.0	20.4	13.2	<1.0
	1095	<1.0	11.9	10.0	<1.0
	1096	<1.0	8.8	14.8	<1.0
	1097	<1.0	20.4	16.2	<1.0

Per: G. Duncan

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SOILS

Certificate of Analysis

17548 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
POV 2MO

Page #3

Date: 02/09/88 19

Work Order 870681

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1098	<1.0	37.8	18.9	74.1
	1099	<1.0	46.8	10.4	78.0
	1100	11.8	26.0	12.8	<1.0
	1101	11.8	10.8	18.4	<1.0
	1107	Insufficient sample			

Per: G. Duncan

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Certificate of Analysis

17550 Redaurum Red Lake Mines Ltd.
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POV 2MO

Page #1

Date: 02/08/88 19

Work Order 870783A

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1121	5.4	37.7	26.9	49.8
	1122	3.6	34.4	19.6	39.2
	1123	7.3	32.4	17.8	64.4
	1124	5.5	60.4	17.0	89.8
	1125	7.3	114.4	17.6	89.8
	1126	1.8	56.4	16.8	39.1
	1127	3.6	14.5	6.4	20.0
	1128	1.8	62.4	14.2	64.5
	1129	1.8	38.4	22.0	58.1
	1130	<1.0	48.4	12.2	45.4
	1131	<1.0	34.4	13.0	39.1
	1136	1.8	44.4	20.6	77.2
	1137	<1.0	34.4	13.0	32.7
	1138	<1.0	38.4	20.2	77.2
	1141	Sample missing			
	1142	<1.0	28.5	18.4	70.8
	1143	<1.0	24.5	17.2	64.5
	1144	<1.0	32.5	16.6	83.5
	1145	3.6	64.4	13.6	45.4
	1146	1.8	4.5	18.8	45.4
	1147	3.6	12.5	18.2	20.0
	1148	3.6	114.4	21.6	70.8
	1149	5.5	32.5	24.2	89.9
	1150	5.5	58.4	24.0	102.6
	1151	3.6	58.4	20.4	58.1
	1152	<1.0	32.4	23.8	70.8
	1153	5.5	18.5	28.4	58.1
	1154	5.5	14.5	25.4	26.4
	1162	1.8	58.4	15.8	89.9
	1163	7.3	26.5	7.4	26.4
	1164	5.5	20.5	18.0	70.8
	1165	<1.0	42.4	23.2	83.5
	1166	5.5	20.5	10.2	51.8

Per: G. Duncan

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SOILS

Certificate of Analysis

17551 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
POV 2MO

Page #2

Date: 02/08/88 19

Work Order 870783A

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1167	<1.0	26.5	13.8	102.6
	1168	3.6	54.4	16.6	70.8
	1169	14.5	4.5	7.8	13.7
	1170	12.7	28.5	14.4	39.1
	1171	9.1	16.5	22.6	64.5
	1172	<1.0	8.5	12.8	32.7
	1173	<1.0	34.4	20.8	83.5
	1174	7.3	18.4	10.6	32.7
	1175	5.5	32.5	11.4	32.7
	1176	<1.0	26.5	10.8	32.7
	1201	5.3	14.6	11.5	<1.0
	1202	<1.0	16.4	27.2	7.6
	1203	9.6	10.8	26.4	10.8
	1204	41.0	32.4	26.8	78.0
	1205	<1.0	6.8	20.0	<1.0
	1214	2.5	32.4	14.4	52.8
	1215	<1.0	17.1	10.8	<1.0
	1216	2.4	22.7	20.0	76.9
	1217	2.5	16.8	20.4	52.8
	1218	2.4	15.8	10.8	<1.0
	1251	<1.0	<1.0	8.1	18.5
	1252	<1.0	4.8	22.4	7.6
	1253	<1.0	10.8	4.0	12.8
	1254	<1.0	<1.0	9.2	<1.0
	1255	<1.0	15.8	22.3	<1.0
	1256	<1.0	22.8	16.4	<1.0
	1265	<1.0	16.4	8.8	<1.0
	1266	<1.0	14.2	12.3	<1.0
	1267	<1.0	170.0	51.7	<1.0
	1268	<1.0	28.0	8.0	40.0
	1269	<1.0	12.4	8.0	<1.0
	1270	2.4	31.2	12.7	<1.0
	1271	20.9	38.3	26.3	32.9

Per: G. Duncan

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SOILS

Certificate of Analysis

17552 Redaurum Red Lake Mines Ltd.
P.O. Box 934
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POV 2MO

Page #3

Date: 02/08/88 19

Work Order 870783A

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1272	6.0	26.0	26.0	65.6
	1273	<1.0	70.8	23.2	40.0
	1274	<1.0	36.4	24.4	90.8
	1275	<1.0	84.2	29.6	14.2
	1276	<1.0	49.2	19.2	4.8
	1277	<1.0	28.4	24.0	<1.0
	1278	Sample missing			
	1279	Sample missing			
	1280	Sample missing			
	1281	<1.0	139.2	34.4	52.8
	1282	<1.0	130.0	23.2	52.8
	1283	<1.0	55.8	32.7	56.5
	1284	<1.0	40.8	19.2	27.2
	1285	<1.0	46.3	65.0	<1.0
	1286	<1.0	33.8	18.3	<1.0
	1287	<1.0	84.3	81.4	97.1
	1301	<1.0	18.8	56.2	246.1
	1302	<1.0	11.2	26.2	75.2
	1303	6.5	35.0	25.0	62.9
	1304	<1.0	23.4	13.8	45.5
	1315	3.3	80.3	18.7	75.7
	1316	<1.0	6.8	14.0	27.4
	1317	<1.0	43.1	17.7	26.3
	1318	<1.0	8.1	7.3	62.9
	1319	4.6	133.8	15.8	75.2
	1320	<1.0	16.3	17.0	44.0
	1321	<1.0	<1.0	11.2	26.3
	1322	<1.0	8.3	14.0	33.4
	1323	<1.0	26.9	19.2	26.3
	1324	<1.0	13.1	12.2	<1.0
	1325	<1.0	6.8	17.6	40.0
	1326	<1.0	12.7	18.3	22.8
	1327	<1.0	51.8	15.4	<1.0

Per: G. Duncan

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SOILS

Certificate of Analysis

17553 Redaurum Red Lake Mines Ltd.
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POV 2MO

Page #4

Date: 02/08/88 19

Work Order 870783A

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1328	Insufficient sample			
	1329	<1.0	37.5	155.0	171.0
	1330	<1.0	59.0	17.7	118.0
	1331	<1.0	98.8	24.7	51.1
	1332	<1.0	101.1	44.4	181.8
	1333	<1.0	4.3	9.6	35.7
	1334	<1.0	55.8	25.8	50.7
	1335	<1.0	55.4	16.2	26.3
	1336	<1.0	16.2	18.8	75.2
	1337	<1.0	50.0	16.6	100.2
	1338	<1.0	12.7	17.3	22.8
	1339	<1.0	55.6	18.8	78.2
	1414	<1.0	16.9	17.9	67.4
	1415	<1.0	32.4	18.4	40.0
	1416	<1.0	83.6	26.4	103.6
	1417	<1.0	91.0	19.3	75.7
	1418	<1.0	23.3	12.7	22.8
	1419	<1.0	34.1	18.1	<1.0
	1420	<1.0	36.4	17.6	14.6
	1421	<1.0	63.3	48.3	<1.0
	1422	<1.0	23.3	15.3	12.2
	1423	<1.0	43.8	30.0	125.1
	1424	<1.0	42.4	14.5	23.6
	1425	<1.0	9.3	13.1	12.6
	1426	<1.0	30.0	48.0	<1.0
	1427	<1.0	16.3	19.7	44.0
	1428	<1.0	73.3	16.0	54.5
	1429	<1.0	26.9	25.4	<1.0
	1430	<1.0	14.1	13.3	25.3
	1431	<1.0	39.0	19.3	23.6
	1432	<1.0	9.0	17.3	54.5
	1433	<1.0	<1.0	27.2	34.5

Per: G. Duncan

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Certificate of Analysis

17549 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
POV 2MO

Page #1

Date: 02/09/88 19

Work Order 870955

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
	1434	<1.0	79.4	76.0	408.0
	1435	<1.0	9.0	26.0	75.7
	1436	<1.0	16.2	13.0	54.7
	1437	<1.0	6.3	2.7	21.2
	1633	<1.0	9.7	19.6	35.0
	1634	<1.0	20.8	9.2	26.8
	1635	<1.0	<1.0	14.4	32.2
	1636	<1.0	23.3	2.7	33.3
	1637	<1.0	6.3	6.5	<1.0
	1638	<1.0	6.1	3.7	48.5
	1639	<1.0	9.3	3.4	12.8
	1640	<1.0	26.9	11.0	44.0
	1641	<1.0	16.2	14.7	118.0
	1642	<1.0	<1.0	3.8	38.5

Per: G. Duncan

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Certificate of Analysis

8923 Redaurum Red Lake Mines Ltd.
P.O. Box 934
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P0V 2M0

Date: 10/09/87 19
Work Order 870634

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Cu ppm	Pb ppm	Zn ppm
69378	100	23	11	33
69379	101	32	5	104
69380	102	12	1	70
69381	103	<1	<1	36
69382	104	4	2	92
69383	105	24	1	116
69384	106	<1	1	69
69385	107	21	<1	104
69386	108	4	1	70
69387	109	7	1	80
69388	110	4	1	96
69389	111	7	1	94
69390	112	12	1	107
69391	113	12	1	116
69392	114	44	1	123
69393	115	4	1	91
69394	116	20	1	114
69395	117	Missing	Missing	Missing
69396	118	<1	<1	74
69397	119	4	1	107
69398	120	35	2	124
69399	121	12	1	108
69400	122	12	1	89
69401	123	<1	1	106
69402	124	8	1	112
69403	125	4	2	86
69404	126	19	2	135
69405	127	16	3	109
69406	128	12	2	92
69407	129	4	1	108
69408	130	13	2	123
69409	131	15	3	62
69410	132	19	1	77

Per: ____________________

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ROCK

Certificate of Analysis

8924 ATT: Peter Fernberg
Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
P0V 2M0

Page #2

Date: 10/09/87 19

Work Order 870634

Assay results are as follows:

SAMPLE NUMBER		Cu	Pb	Zn
Accurassay	Customer	ppm	ppm	ppm
69411	133	19	2	76
69412	134	23	2	73
69413	135	14	1	76
69414	136	12	1	77
69415	137	14	2	81
69416	138	8	1	57
69417	139	<1	1	61
69418	140	20	2	63
69419	141	11	2	94
69420	142	<1	3	53
69421	143	14	2	71
69422	144	11	1	80
69423	145	<1	1	79
69424	146	17	1	74
69425	147	8	2	56
69426	148	20	1	55
69427	149	29	1	62
69428	150	<1	1	92
69429	151	<1	1	63
69430	152	<1	3	86
69431	153	<1	1	17
69432	154	4	2	90
69433	155	<1	1	77
69434	156	<1	2	37
69435	157	<1	<1	39
69436	158	16	1	74
69437	159	8	<1	72
69438	160	7	<1	67
69439	161	<1	1	21
69440	162	7	1	51
69441	163	<1	<1	41
69442	164	<1	1	21
69443	165	11	1	60

Per: ______________________

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ACCURASSAY LABORATORIES LTD.

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

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

ROCK

Certificate of Analysis

8927 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
PØV 2MØ

Page #1

Date: 1Ø/Ø9/87 19

Work Order 87Ø651

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Copper ppm	Lead ppm	Zinc ppm
7Ø976	166	8	47	7Ø
7Ø977	167	<1	65	42
7Ø978	168	<1	36	57
7Ø979	169	<1	45	42
7Ø98Ø	17Ø	<1	26	64
7Ø981	171	<1	17	56
7Ø982	172	<1	15	38
7Ø983	173	8	15	6Ø
7Ø984	174	12	15	64
7Ø985	175	8	1Ø	62
7Ø986	176	8	12	62
7Ø987	177	<1	4	2Ø
7Ø988	178	8	13	65
7Ø989	179	<1	13	61
7Ø99Ø	18Ø	<1	16	51
7Ø991	181	8	14	71
7Ø992	182	<1	16	67
7Ø993	183	<1	17	54
7Ø994	184	15	11	72
7Ø995	185	<1	15	42
7Ø996	186	8	38	63
7Ø997	187	26	18	66
7Ø998	188	<1	15	6Ø
7Ø999	189	<1	14	32
71ØØØ	19Ø	<1	18	53
71ØØ1	191	8	13	54
71ØØ2	192	8	22	64
71ØØ3	193	<1	22	57
71ØØ4	194	8	15	57
71ØØ5	195	<1	25	49
71ØØ6	196	<1	17	5Ø
71ØØ7	197	4	27	68
71ØØ8	198	<1	13	56

Per: ______________________

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ACCURASSAY LABORATORIES LTD.

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ROCK

Certificate of Analysis

8928 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
PØV 2MØ

Page #2

Date: 1Ø/Ø9/87 19

Work Order 87Ø651

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Copper ppm	Lead ppm	Zinc ppm
71ØØ9	199	8	18	59
71Ø1Ø	2ØØ	<1	12	55
71Ø11	2Ø1	<1	14	52
71Ø12	2Ø2	<1	12	53
71Ø13	2Ø3	<1	1Ø	38
71Ø14	2Ø4	4Ø	1Ø	86
71Ø15	2Ø5	8	13	63
71Ø16	2Ø6	7	1Ø	41
71Ø17	2Ø7	<1	4	2Ø
71Ø18	2Ø8	12	3Ø	75
71Ø19	2Ø9	<1	12	53
71Ø2Ø	21Ø	8	8	61
71Ø21	211	<1	17	28
71Ø22	212	<1	11	61
71Ø23	213	8	18	58
71Ø24	214	<1	47	57
71Ø25	215	<1	8	35
71Ø26	216	<1	21	58
71Ø27	217	12	9	72
71Ø28	218	<1	3	24
71Ø29	219	38	9	55
71Ø3Ø	22Ø	<1	9	6Ø
71Ø31	221	<1	13	68
71Ø32	222	<1	12	43
71Ø33	223	23	14	69
71Ø34	224	<1	13	65
71Ø35	225	<1	5	33
71Ø36	226	<1	1Ø	3Ø
71Ø37	227	<1	15	57
71Ø38	228	<1	4	29
71Ø39	229	<1	17	63
71Ø4Ø	23Ø	<1	12	61
71Ø41	231	<1	8	64

Per: __________

CUSTOMER COPY

ACCURASSAY LABORATORIES LTD.
P.O. BOX 604
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5
TEL.: (705) 567-6343
President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

ROCK

Certificate of Analysis

8929 Redaurum Red Lake Mines Ltd.
P.O. Box 934
Red Lake, Ontario
P0V 2M0

Page #3

Date: 10/09/87 19

Work Order 870651

Assay results are as follows:

SAMPLE NUMBER Accurassay	Customer	Copper ppm	Lead ppm	Zinc ppm
71042	232	7	17	30
71043	233	21	8	79

Per:

CUSTOMER COPY

Ministry of Northern Development and Mines

Ontario

Ministère du Développement du Nord et des Mines

52J07NE8877 2.11221 GREBE LAKE

900

June 20, 1988

Your File: W8803-151
Our File: 2.11221

Mining Recorder
Ministry of Northern Development and Mines
Court House
P.O. Box 3000
Sioux Lookout, Ontario
POV 2TO

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
OFFICE
JUL 12 1988
RECEIVED

Dear Sir:

Re: Notice of Intent dated June 2, 1988
Geological & Geochemical Survey and Data for Assaying submitted on Mining Claims PA 866386 et al in the Areas of Armit Lake and Grebe Lake

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

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

Yours sincerely,

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

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

AB AB:pl
Enclosure: Technical Assessment Work Credits

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

Resident Geologist
Sioux Lookout, Ontario

Mr. Ray Ramsay
10 Cooke Street
Barrie, Ontario
L4M 4E9

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File
2.11221

Date	Mining Recorder's Report of Work No.
June 2, 1988	W8803-151

Recorded Holder

Ray Ramsay

~~Township or~~ Area

Armit Lake and Grebe Lake

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic ______ days	
Magnetometer ______ days	
Radiometric ______ days	PA 866386
Induced polarization ______ days	897997-98
	898000
Other ______ days	912303 to 18 inclusive
	912321 to 24 inclusive
Section 77 (19) See "Mining Claims Assessed" column	
Geological 12.18 days	
Geochemical ______ days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[ ] Credits have been reduced because of partial coverage of claims.	
[ ] Credits have been reduced because of corrections to work dates and figures of applicant.	

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

No credits have been allowed for the following mining claims

[X] not sufficiently covered by the survey [ ] insufficient technical data filed

PA 912319-20-25

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

828 (85/12)

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File
2.11221

Date	Mining Recorder's Report of Work No.
June 2, 1988	W8803-151

Recorded Holder
Ray Ramsay

~~Township~~ Area
Armit Lake and Grebe Lake

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	PA 897997-98 898000 912304-07-09-10 912312 to 18 inclusive 912321 to 24 inclusive
Electromagnetic ______ days	
Magnetometer ______ days	
Radiometric ______ days	
Induced polarization ______ days	
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ______ days	
Geochemical 6.61 days	
Man days [X] Airborne [ ]	
Special provision [ ] Ground [X]	
[ ] Credits have been reduced because of partial coverage of claims.	
[ ] Credits have been reduced because of corrections to work dates and figures of applicant.	

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

No credits have been allowed for the following mining claims

[X] not sufficiently covered by the survey [ ] insufficient technical data filed

PA 866386
912303-05-06-08-11
912319-20
912325

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

828 (85/12)

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File
2.11221

Date	Mining Recorder's Report of Work No.
June 2, 1988	W8803-151

Recorded Holder

Ray Ramsay

XXXXXXX Area

Armit Lake and Grebe Lake

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic ______ days	$8,068.50SPENT ON ASSAYING SAMPLES TAKEN FROM MINING CLAIMS:
Magnetometer ______ days	PA 897997-98 898000 912304-06-07-09-10-12 912314 to 18 inclusive 912321 to 24 inclusive
Radiometric ______ days	
Induced polarization ______ days	
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ______ days	
Geochemical ______ days	
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	537.9 DAYS CREDIT ALLOWED WHICH MAY BE GROUPED IN ACCORDANCE WITH SECTION 76(6) OF THE MINING ACT R.S.O. 1980.
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

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

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

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

828 (85/12)

Ministry of Northern Development and Mines
Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. W8803·151

MINING LANDS

2.11221 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): GEOLOGICAL & GEOCHEMICAL

Township or Area: G 1933, G 2053 Armit Lake, Grebe Lake

Claim Holder(s): Ray Ramsay

Prospector's Licence No.: A38000

Address: 10 Cooke St. Barrie, Ontario L4M 4E9

Survey Company: Redaurum Red Lake Mines Limited Suite 908 111 Richmond St. W Toronto

Date of Survey (from & to): 18 Day 9 Mo. 87 Yr. | 28 Day 4 Mo. 88 Yr.

Total Miles of line Cut: 47.8

Name and Address of Author (of Geo-Technical report): Peter Fernberg, P.O. Box 611, Red Lake, Ontario POV 2M0

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	12.18
	Geochemical	6.61

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MAY 24 1988
MINING LANDS SECTION

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

Expenditures (excludes power stripping)

Type of Work Performed: SECTION 77-19 Geochemical (soil & rock) Assays

Performed on Claim(s): 866386, 897997, 898000

912303 - 912325 inclusive

Calculation of Expenditure Days Credits

Total Expenditures				Total Days Credits
$ 8068.50	÷	15	=	537.9

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: May 9, 1988

Recorded Holder or Agent (Signature): Peter A. Fernberg

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
PA	866386	19.92
	897997	19.92
	897998	19.92
	898000	19.92
	912303	19.92
	912304	19.92
	912305	19.92
	912306	19.92
	912307	19.92
	912308	19.92
	912309	19.92
	912310	19.92
	912311	19.92
	912312	19.92
	912313	19.92
	912314	19.92
	912315	19.92
	912316	19.92
	912317	19.92
	912318	19.92
	912319	19.92
	912320	19.92
	912321	19.92

Prefix	Number	Expend. Days Cr.
	912322	19.92
	912323	19.92
	912324	19.92
	912325	19.92

RECEIVED
MAY 19 1988
PATRICIA MINING DIVISION

Total number of mining claims covered by this report of work: 27

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
1045.17	MAY 19, 1988	
	Date Approved as Recorded	Branch Director
	See Revised Statement. AB	

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: Peter Fernberg, P.O. Box 611, Red Lake, Ontario POV 2M0

Date Certified: May 9, 1988

Certified by (Signature): Peter A. Fernberg

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
GEOLOGICAL (includes mapping, field & formal drafting, report preparation, typing etc)

Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
47	X	7	=	329	+	N/A	=	329	÷	27	=	12.18

Type of Survey
GEOCHEM (includes sampling, drafting, report preparation, typing etc)

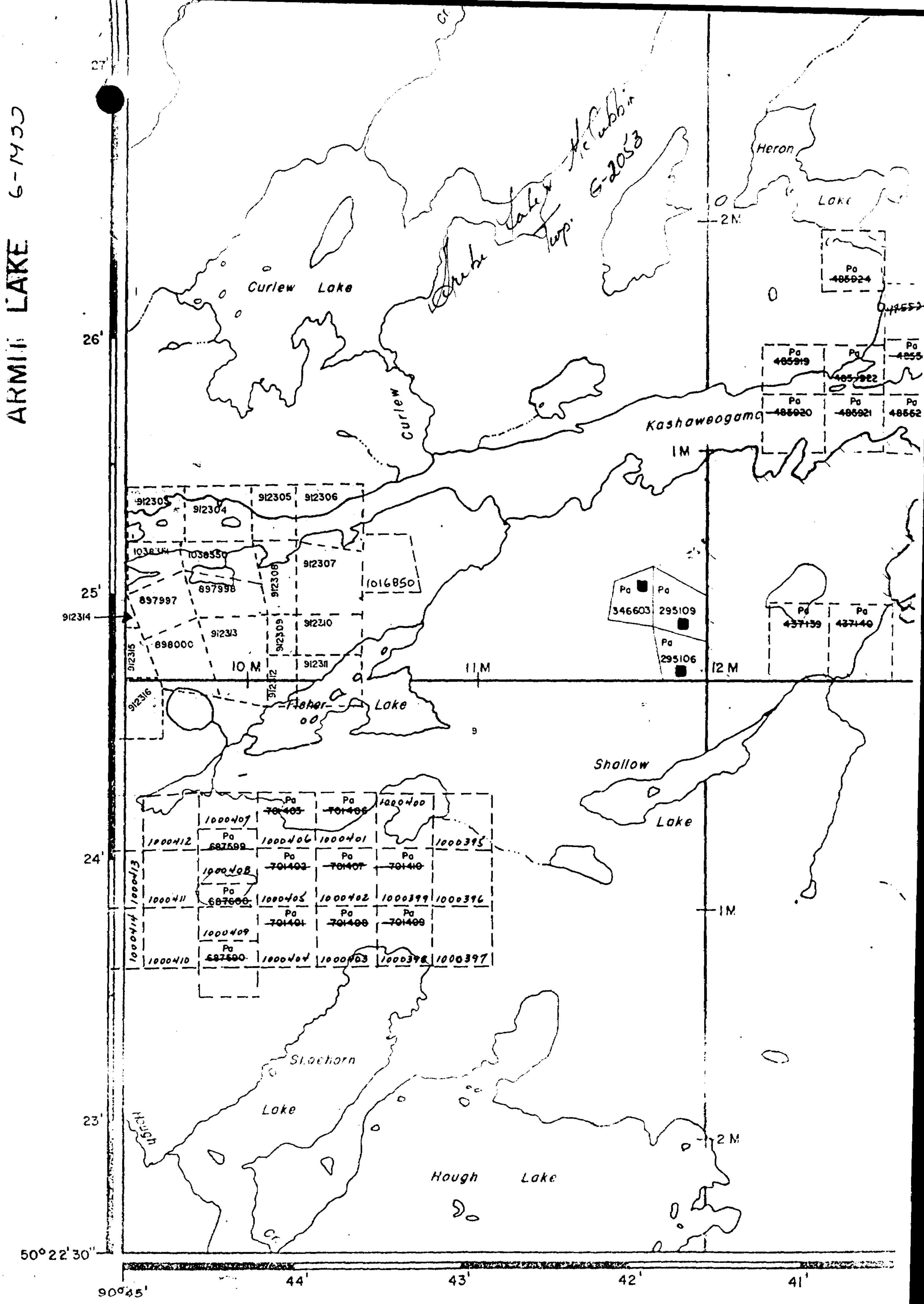
Technical Days				Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
25.5	X	7	=	178.5	+	N/A	=	178.5	÷	27	=	6.61

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	=		+		=		÷		=	


ARMIT LAKE
G-1422
Curlew Lake
Curlew
Heron Lake
Kashaweogama
Fisher Lake
Shallow Lake
Stockhorn Lake
Hough Lake
2 M
1 M
10 M
11 M
12 M
27'
26'
25'
24'
23'
50°22'30"
90°45'
44'
43'
42'
41'
912303
912304
912305
912306
912307
912308
912309
912310
912311
912312
912313
912314
912315
912316
1038351
1038350
897997
897998
898000
1016850
Pa 485924
Pa 485919
Pa 485922
Pa 485920
Pa 485921
Pa 346603
Pa 295109
Pa 295106
Pa 437139
Pa 437140
1000407
1000412
Pa 687599
1000408
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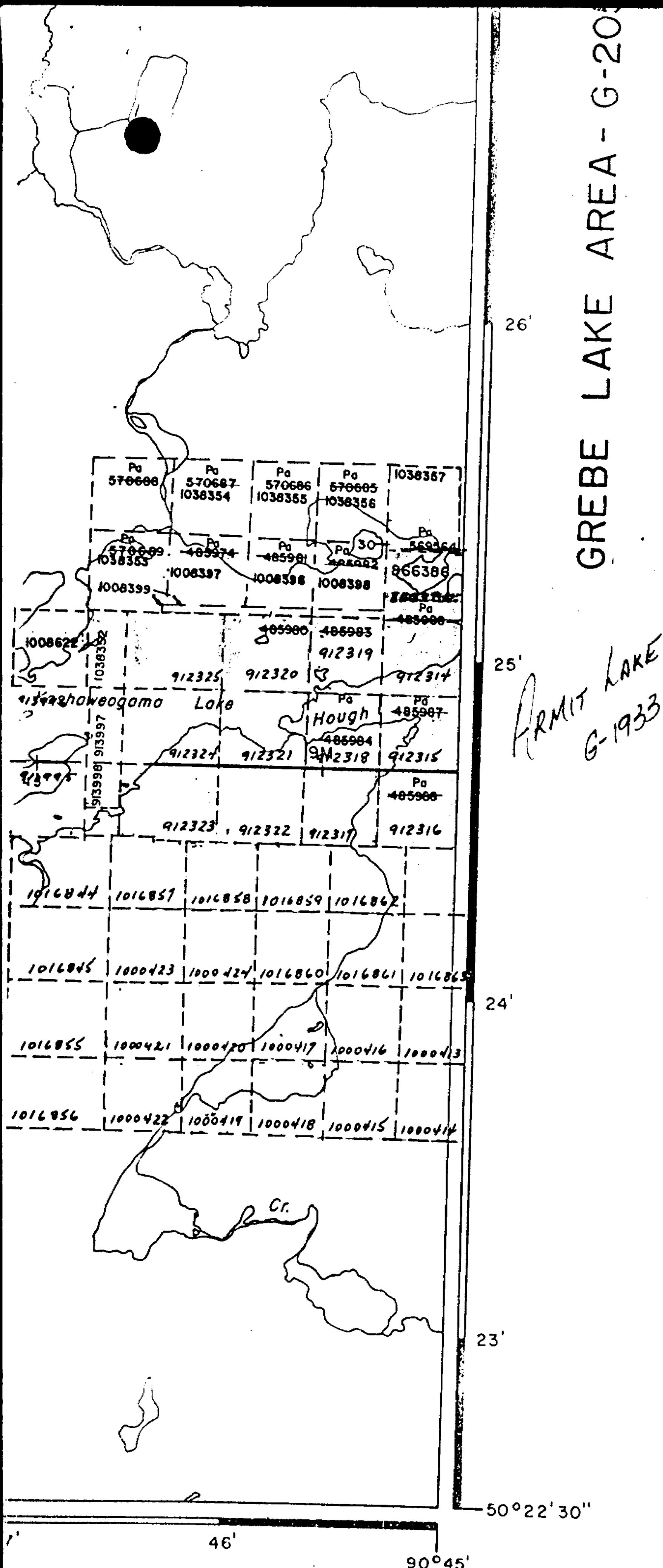


R E F E R E N C

AREAS WITHDRAWN FROM DIS

M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.+ S. – MINING AND SURFACE RI

Description	Order No.	Date	Disposit
Aug 28/85			
Sept 5/85			
[illegible]			
DEC 16/85			
July 11/86			
JULY 25/86			
July 31/86			
Sept 10/86			
Sept 17/86			
Nov 21/86			
APR 13/87			
Apr. 15/87			
Sept 1/87			
Oct. 20/87			
Nov. 5/87			
Nov. 26/87			
87/12/18			
Feb 1/88			
MAR 22/88			

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000

METRES 0 200 1000 (1 KM) 20 (2 K

AREA

ARMIT LAKE

M.N.R. ADMINISTRATIVE DISTRICT

SIOUX LOOKOUT

MINING DIVISION

PATRICIA

LAND TITLES / REGISTRY DIVISION

KENORA / THUNDER B

Ontario

Ministry of Natural Resources

Land Manageme Branch

Date JANUARY, 1984

Number

G-19

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File ______

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) Geochemical & Geological

Township or Area Armit Lake, Grebe Lake

Claim Holder(s) Ray Ramsay (see attached sheet for details)
Redaurum Red Lake Mines Limited (see attached sheet)

Survey Company Redaurum Red Lake Mines LIMITED

Author of Report Peter Fernberg

Address of Author P.O. Box 611, Red Lake, Ontario, P0V 2M0

Covering Dates of Survey Sept 18/87 - April 28/88 (linecutting to office)

Total Miles of Line Cut ~~58.7~~ 47.8 miles (36.3 miles on land)

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	
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: May 12, 1988 SIGNATURE: Peter A. Fernberg
Author of Report or Agent

OFFICE USE ONLY

Res. Geol. ______ Qualifications 2.7637

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
PA 866386	PA 912321
897997	912322
897998	912323
898000	912324
912303	912325
912304	
912305	
912306	
912307	
912308	
912309	
912310	
912311	
912312	
912313	
912314	
912315	
912316	
912317	
912318	
912319	
912320	

If space insufficient, attach list

TOTAL CLAIMS 27

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations ______ Number of Readings ______

Station interval ______ Line spacing ______

Profile scale ______

Contour interval ______

MAGNETIC

Instrument ______

Accuracy – Scale constant ______

Diurnal correction method ______

Base Station check-in interval (hours) ______

Base Station location and value ______

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 ______

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time ______ Frequency ______

– Off time ______ Range ______

– Delay time ______

– Integration time ______

Power ______

Electrode array ______

Electrode spacing ______

Type of electrode ______

TABLE II: Kashaweogama Lake Property Mining Claim Data.
CLAIMS COVERED BY GEOLOGICAL MAPPING
and GEOCHEMICAL SAMPLING

Claim No.	Recording Date	Work Due	Township or Area
866386	July 25/86	May 9/88	Armit Lake
897997	Oct 21/86	June 30/88	Grebe Lake
897998	Oct 21/86	June 30/88	Grebe Lake
898000	Oct 21/86	June 30/88	Grebe Lake
912303	Nov 21/86	June 30/88	Grebe Lake
912304	Nov 21/86	June 30/88	Grebe Lake
912305	Nov 21/86	June 30/88	Grebe Lake
912306	Nov 21/86	June 30/88	Grebe Lake
912307	Nov 21/86	June 30/88	Grebe Lake
912308	Nov 21/86	June 30/88	Grebe Lake
912309	Nov 21/86	June 30/88	Grebe Lake
912310	Nov 21/86	June 30/88	Grebe Lake
912311	Nov 21/86	June 30/88	Grebe Lake
912312	Nov 21/86	June 30/88	Grebe Lake
912313	Nov 21/86	June 30/88	Grebe Lake
912314	Nov 21/86	June 30/88	Armit Lake
912315	Nov 21/86	June 30/88	Armit lake
912316	Nov 21/86	June 30/88	Armit lake
912317	Nov 21/86	June 30/88	Armit Lake
912318	Nov 21/86	June 30/88	Armit Lake
912319	Nov 21/86	June 30/88	Armit Lake
912320	Nov 21/86	June 30/88	Armit Lake
912321	Nov 21/86	June 30/88	Armit Lake
912322	Nov 21/86	June 30/88	Armit Lake
912323	Nov 21/86	June 30/88	Armit Lake
912324	Nov 21/86	June 30/88	Armit Lake
912325	Nov 21/86	June 30/88	Armit Lake

NOTE: Claims 866386, 897997 - 897998, 898000, 912303 - 912325 optioned to Redaurum Red Lake Mines Ltd.

Claims 1008396 - 1008399, 1038350 - 103857 held by Redaurum Red Lak Mines Ltd.

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 866386, 897997, 897998, 898000,
912303 - 912325 inclusive

Total Number of Samples 390 (soil) 152 (rock)

Type of Sample Soil , Rock chips
(Nature of Material)

Average Sample Weight Soil:- 500 gm Rock:- 1/2 kg

Method of Collection Soil:- grubhoe
Rock:- hammer

Soil Horizon Sampled B-horizon

Horizon Development

Sample Depth 8-10"

Terrain Rolling Precambrian shield, forested with spruce + birch/poplar/pine, glacial detritus is common

Drainage Development poor

Estimated Range of Overburden Thickness
Several inches to indefinate

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

Mesh size of fraction used for analysis
Soil:- material below -80 mesh analyzed
Rock:- total rock pulverized

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 - expressed in ppb

Field Analysis (N/A tests)
Extraction Method
Analytical Method
Reagents Used

Field Laboratory Analysis
No. (N/A tests)
Extraction Method
Analytical Method
Reagents Used

Commercial Laboratory (tests)
Name of Laboratory Accurassay Laboratories
Extraction Method Acid digestion
Analytical Method Atomic Absorption
Reagents Used Aqua Regia

General

MINING LANDS: PLEASE COMPLETE THIS FORM & RETURN IT WITH REPORT TO THE GEOSCIENCE DATA CENTRE

DATE REMOVED: (from GDC) June 3/92

DATE RETURNED: (to GDC) ____________

REPORT # : 2. 11221

FICHE NO. : ____________ (where applicable)

REASON FOR REQUESTING REPORT (complete #1-4 below):

1. INFORMATION ADDED TO EXISTING PAGES OF REPORT: ☐

IF YES, SPECIFY PAGES: ____________

: ____________

: ____________

2. a) PAGES/MAPS ADDED TO THIS REPORT: ____ TOTAL PAGES ADDED

: ____ TOTAL MAPS ADDED

b) TYPE OF PGS ADDED: ________ CORRESPONDENCE

: ________ WORK REPORTS (AMENDED)

: ________ WORK RPTS (NEW)

: ________ MISSING PAGES OF TEXT

: ________ OTHER (PLEASE SPECIFY)

3. a) REMOVAL OF PGS FROM REPORT: ________ TOTAL PGS REMOVED

b) TYPE OF PAGES REMOVED : ________ CORRESPONDENCE

: ________ WORK REPORTS

: ________ PGS OF TEXT

: ________ OTHER (PLEASE SPECIFY)

4. REPORT NEEDED FOR REFERENCE ONLY: ☑

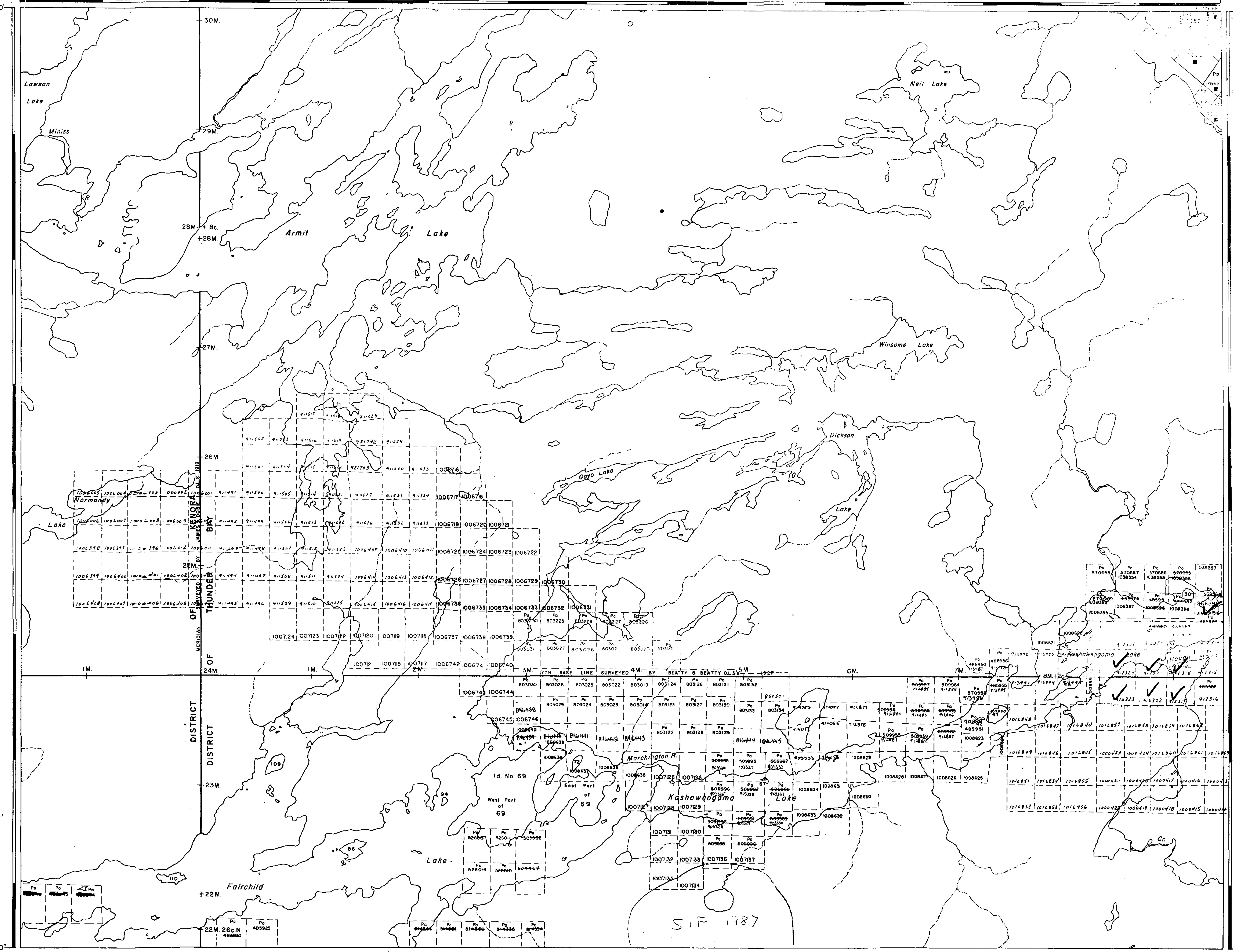
NO INFORMATION ALTERED : ☑

NO INFORMATION ADDED : ☑

NO INFORMATION DELETED : ☑

*NOTE: ENTER "X" IN APPLICABLE BOXES

HILL LAKE G-2067



LEGEND

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

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT — SYMBOL

PATENT, SURFACE & MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LEASE, SURFACE & MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ORDER-IN-COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

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

Description	Order No.	Date	Disposition	File

Aug 28/85

Sept 17/86
Nov 21/86
APR 13/87
Apr 15/87
Sept 1/87
Oct 26/87
Nov 5/87
87/12/18

RECEIVED MAR 3 1 1988 PATRICIA MINING DIVISION

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

ARMIT LAKE

M.N.R. ADMINISTRATIVE DISTRICT
SIOUX LOOKOUT
MINING DIVISION
PATRICIA
LAND TITLES / REGISTRY DIVISION
KENORA / THUNDER BAY

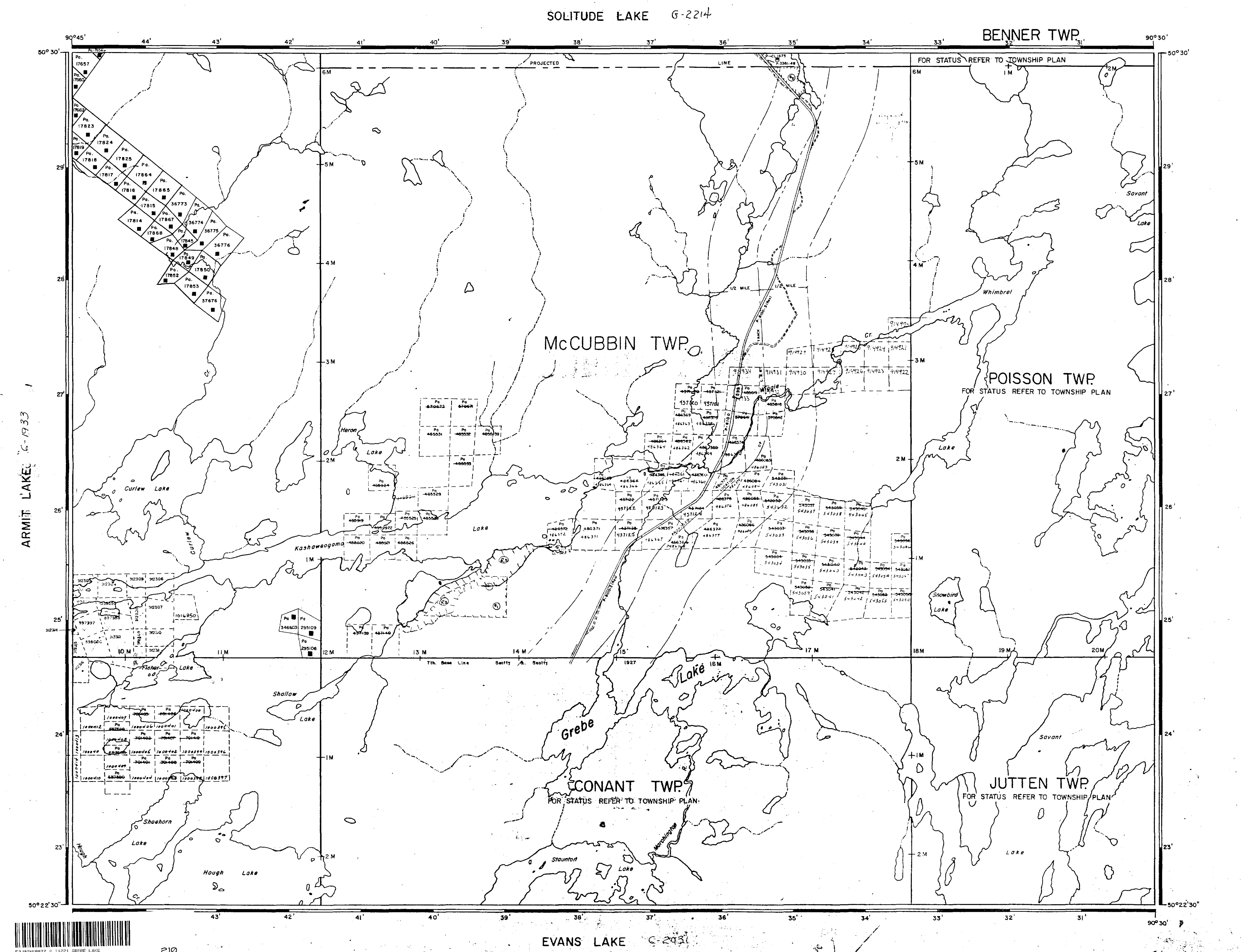
Ontario — Ministry of Natural Resources — Land Management Branch

Date JANUARY, 1984 — Number G-1933

52J07NE8677 2.11221 GREBE LAKE

200

504904



LEGEND

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

DISPOSITION OF CROWN LANDS

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

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

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

Description	Order No.	Date	Disposition	File
		5/9/72	S.R.O.	163474

R_2 – M+S. WITHDRAWN – SEC. 31(b)

SAND AND GRAVEL

QUARRY PERMIT
M.T.C. GRAVEL PIT
M.T.C. PIT Nº 731

NOTES

ONE MILE WIDE C.N.R. RESERVE – S.R.O. WITHDRAWN UNDER SECTION 42 OF MINING ACT 13 SEPT. 1960 FILE 168405

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA
GREBE LAKE & McCUBBIN TWP.

M.N.R. ADMINISTRATIVE DISTRICT
SIOUX LOOKOUT
MINING DIVISION
PATRICIA
LAND TITLES / REGISTRY DIVISION
THUNDER BAY

Ministry of Natural Resources Ontario — Land Management Branch

Date FEBRUARY, 1984. Number G-2053

RECEIVED APR 21 199[illegible] PATRICIA MINING DIVISION

52J07NE8877 2.11221 GREBE LAKE 210

EXPLORATION TARGET

Priority Rating

SOIL ANOMALY

Gold

Copper (≥40 ppm)

Lead (≥31 or 41 ppm)

Zinc (≥71 ppm)

Humus sample (Stargazer Resoures, 1981)

Arsenic, ppb

Gold, ppb

GEOPHYSIC SYMBOLS

VLF anomaly axis station NAA

A26 Conductor identification number (VLF)

IP anomaly, Stargazer Resources 1981

Previous DDH, Stargazer Resources 1981

Magnetic anomaly axis

Magnetic depression

2.11221

REDAURUM RED LAKE MINES

KASHAWEOGAMA PROJECT

GEOCHEMICAL and GEOPHYSICAL COMPILATION

EXPLORATION TARGETS

4

220

SYMBOLS

- Beaver Dam
- Flooded
- Swamp
- Grass
- Boggy Spruce Forest
- Creek
- Logging Limits
- 912309 Claim Number
- Claim Post, located
- Claim Post, location assumed
- Claim Post, witness
- Claim Line; approx. not surveyed
- Grid Line; permanent, ice grid

GEOLOGICAL KEY[b]

HANDY LAKE BASIN SEQUENCE[a]

MAFIC METAVOLCANICS

1 Unsubdivided
1a Fine - medium grained flows
1b Porphyritic; medium - coarse grained amphibole
1c Tuffaceous
1d Tuff / lapilli
1e Lapilli stone
1f Pyroclastic breccia
1g Sheared porphyritic (amphibole) flow; medium - coarse grained
1h Sheared fine - medium grained flow
1j Agglomerate / flow breccia?
1m Pillow breccia
1n Narrow interflow tuffaceous sediments
1p May in part be sheared margins of Unit 6 (extremely elongated coarse clasts)

INTERMEDIATE METAVOLCANICS

2 Unsubdivided
2a Pyroclastic; 5% mafic clasts, occasional bombs
2b Crystal tuff

FELSIC METAVOLCANICS

3 Unsubdivided
3a Massive flow?
3b Tuff
3c Lapilli - tuff
3d Mafic clasts
3e Lapilli - stone
3f Crystal - tuff
3g Pyroclastic breccia

CHEMICAL SEDIMENTS

4 Unsubdivided
4a Magnetite iron formation
4b Magnetite - chert iron formation
4c Magnetite - chert IF with interbedded sandstone, siltstone
4d Magnetite - chert IF with interbedded tuffaceous and lapilli - tuff
4e Magnetite - chert IF - sandstone / siltstone ± hematite ± siderite

CLASTIC METASEDIMENTS

MUDSTONES, SILTSTONES

5 Unsubdivided
5a Mudstone and/or siltstone
5b Tuffaceous metasediments; may in part overlap Unit 7.
5c Sandstone interlayer
5d Banded, laminated

CONGLOMERATES

6 Unsubdivided
6a Polymictic
c 6b Polymictic; arenitic matrix, felsic clasts predominent
6c Polymictic; wacke matrix, felsic clasts predominent
6e Extremely flattened clasts
6f Cobble sized clasts
6g Granitoid cobbles / pebbles

TUFFACEOUS SEDIMENTS and PYROCLASTICS

7 Unsubdivided
7a Tuff
7b Lapilli - tuff
7c Lapilli stone
7d Crystal tuff
7e Reworked intermediate / felsic tuff and / or lapilli ± interbedded mudstones / siltstones
7f Reworked mafic tuff / lapilli

JUTTEN VOLCANIC SEQUENCE

MAFIC METAVOLCANICS[a]

8 Unsubdivided
8a Fine - medium grained, massive
8b Pillowed flow
8c Flow breccia, pillow breccia

NOTES:

a Jutten Volcanic Sequence is older than the Handy Lake Basin Sequence
b Rocks divided lithologically, order does not imply age relationships
c May possibly be genetically unrelated to the Handy Lake Basin Sequence

The letter 'G' proceeding a rock code indicates that the lithology is inferred from geophysical data

GEOLOGICAL SYMBOLS

- Outcrop site, area of outcrop
- Boulder (?)
- Rock sample site #401
- O/c Outcrop
- Pit, trench
- Boulder ridge or edge of boulder field
- Geological boundary; defined, approximate, inferred
- Geological boundary; inferred from geophysics survey
- Shear zone
- Bedding attitude; c = compiled from previous mapping
- Schistosity; with dip, unknown dip

Aspy - arsenopyrite	Cbt - carbonate alteration
Cpy - chalcopyrite	Pts - potassic alteration
Fc - fuchsite	Ser - sericitic alteration
Mt - magnetite, disseminated	Ty - talcy
Py - pyrite	Sh - Sheared
Qv - quartz vein	( ) - minor
Sid - siderite	

SHEET INDEX

WEST	EAST

REDAURUM RED LAKE MINES LTD

KASHAWEOGAMA PROJECT

Title:

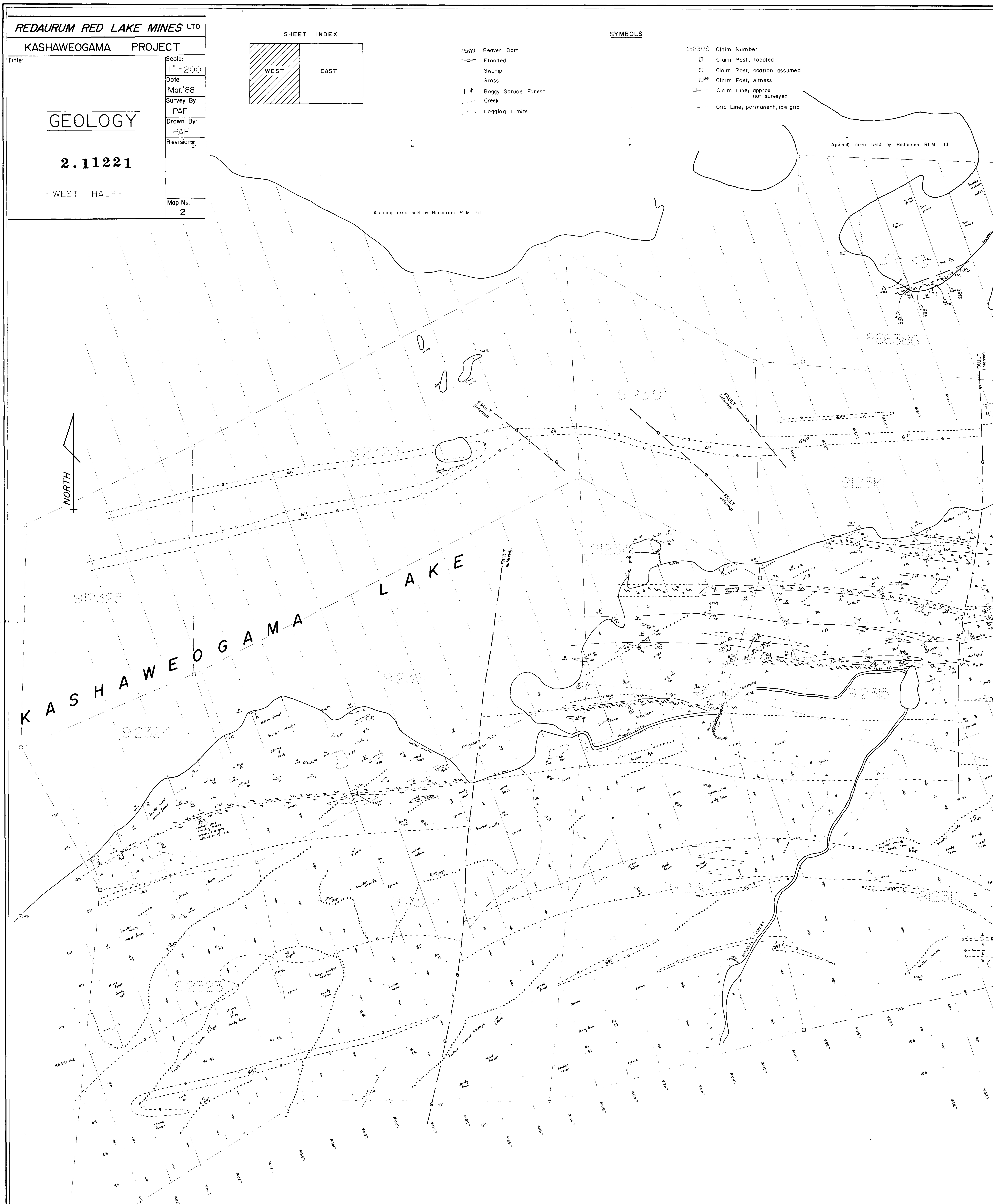
GEOLOGY

2.11221

- EAST HALF -

Scale:	1" = 200'
Date:	Mar. '88
Survey By:	PAF
Drawn By:	PAF
Revisions:	
Map No.	1

230



52J07NE0077 2.11221 GREBE LAKE

240

KASHAWEOGAMA LAKE
NORTH
Scale: 1/2000
North
KASHAWEOGAMA LAKE
SOUTHERN AREA
DUCK POND
ROUND POND
NORWAY BAY SHEAR
BEAVER POND SHEAR
HOUGH CREEK
912304
912319
912321
912322
912324
912314
912315
912316
912317
912313
897 997
897 998
898 000
912 307
912 308
912 309
912 310
POOR OUTCROP EXPOSURE
AREA OF UNCERTAIN GEOLOGY
3P or 2P
SYMBOLS
Rock Sample
COLOUR CODE - Rock
≤5ppb Background
5 - 15ppb High Background
16 - 25ppb Moderately Anomalous
26 - 100ppb Anomalous
>100ppb Extremely Anomalous
COLOUR CODE - Soil
≤5ppb
5 - 10ppb
11 - 25ppb
26 - 100ppb
>100ppb
GEOLOGICAL KEY
1 Mafic Metavolcanics (flows, tuffs)
2 Intermediate Metavolcanics (pyroclastics)
3 Felsic Metavolcanics (pyroclastics)
4 Iron Formation (magnetite)
5 Clastic Metasediments (mudstones / siltstones and tuffaceous sediments)
6 Polymictic Conglomerate
G Lithology inferred from geophysics
REDAURUM RED LAKE MINES
KASHAWEOGAMA PROJECT
Title:
GEOCHEM SAMPLE SITES
ROCK AND SOIL
GOLD
VALUES
parts per billion
2.11221
- SOUTHERN AREA -
Scale: 1" = 200'
Date: NOV/87
Survey By: PAF
Drawn By: PAF MAR. 88
Revisions:
Map No. 3
2.11221 GREBE LAKE
250