

SAVANT REGION PROJECT FINAL SUBMISSION 1992 SUMMARY TECHNICAL REPORT

by

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Thunder Bay Mining District

Townships: Poisson, Jutten, McCubbin Areas: Armit Lake. Evans Lake, Grebe Lake

90^o 54' longitude, 50^o 25' latitude to
90^o 27' longitude, 50^o 22' latitude

Field Program: June 15 to August 5, 1992

Report : September - November, 1992

SUMMARY

The 1992 OPAP-assisted Savant Region exploration program investigated a large number of precious and base metal targets in the general Savant Lake area located 240 kilometres northwest of Thunder Bay. It was a wide ranging effort that consisted of both first pass reconnaissance prospecting and follow up investigations of previously outlined geochemical and geophysical anomalies. This report outlines the results of that work. Appendix 4 - Structural setting and zoning of gold mineralization in the Savant Lake area, summarizes thoughts from our work in the area over a number of years.

The main accomplishments of the 1992 program were:

- 1. The major remaining geochemical anomalies from the 1991 program were investigated and explained.
- 2. Discrepancies between analytical results from the 1990 and 1991 programs were resolved.
- 3. Two new reconnaissance exploration programs were carried out the Handy Lake Massive Sulphide program and the Rolly Lake Gold program. The Rolly Lake Gold program produced some exciting results and will be continued in the future.
- 4. Extensive work was carried out on the DC Creek Property where separate zones of gold and nickel mineralization occur.
- 5. The best result from the 1992 program was from the newly exposed DC Creek Nickel Showing where chip samples returned 0.65% Ni across 6.5 metres.



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SAVANT REGION PROJECT

1991 PROSPECTING REPORT

1. INTRODUCTION

Documentation of the 1992 Savant Region Program as required under the Ontario Prospectors Assistance Program is in the attached appendices and map pockets. The following are background and summary reports on that information. Background reports by the Ontario Geological Survey and others are listed in the bibliography. A summary of observations and thoughts on gold mineralization in the general Savant Lake area is attached as Appendix 4.

CHANGES TO PROPOSED PROJECT: Reconnaissance prospecting for volcanic-hosted massive sulphide deposits in the nearby Handy Lake-Harold Lake area was added to the original proposed program through a telephone conversation and a letter dated June 29, 1992 to Ed Solonyka of the O.P.A.P. office.

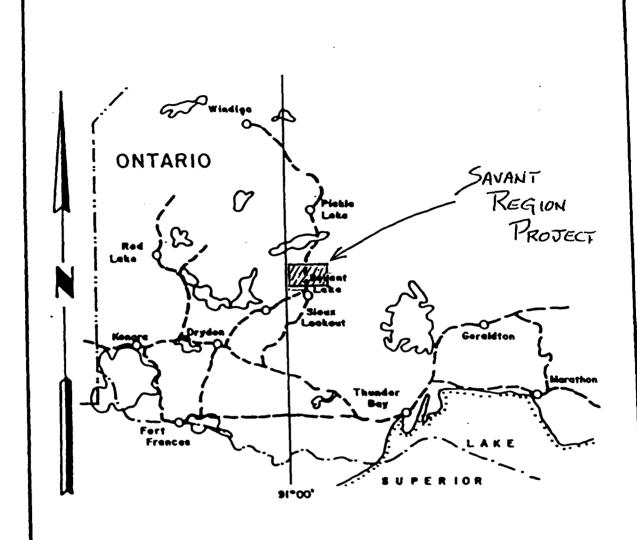
2. LOCATION AND ACCESS

The Savant Lake area is located 240 kilometres north-northwest of Thunder Bay and 25 kilometres north and northeast of the town of the village of Savant Lake (Figure 1). The recently closed Mattabi base metal mill complex is located 80 highway kilometres south of the area. Exploration work in 1992 ranged over much of this area located in the Patricia (Sioux Lookout) Mining District.

Some parts of the area are accessible by logging roads off Highway 599. Most other areas are accessible by canoe via the numerous, often interconnected lakes in the area and/or by float/ski plane from any of three local bases.

3. REGIONAL GEOLOGY

The Savant Lake area is underlain by by the Savant Lake Greenstone Belt and adjacent granitoid bodies. Bedrock exposure varies from poor to very good. The greenstone belt comprises several tectono-stratigraphic units (Figure 2). The oldest rocks in the area are dominantly mafic volcanics of the Jutten volcanic group (JVG). South and west of the JVG lies the Handy Lake volcanic group (HLVG), a dominantly felsic volcanic pile coeval with felsic volcanics of the Sturgeon Lake area to the south which hosted several economic Cu-Zn



PROJECT LOCATION MAP

SCALE |" = 100 ml

FIGURE

1

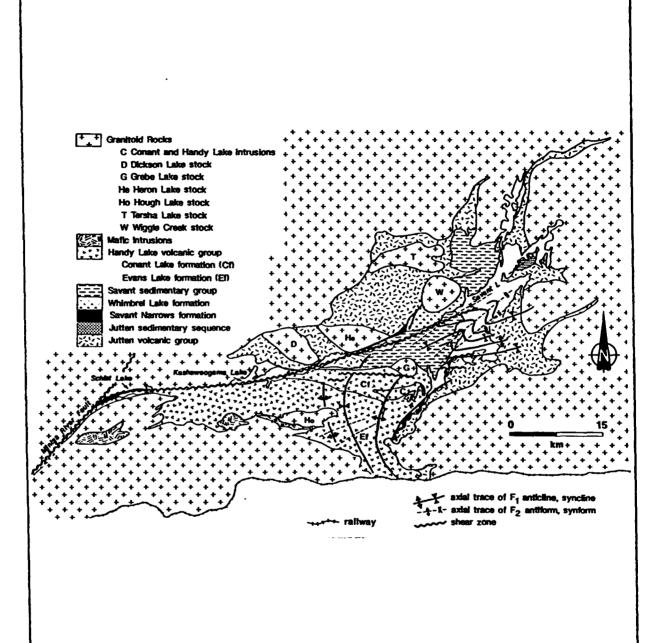


FIGURE 2: REGIONAL GEOLOGY AND STRUCTURE.

PRELIMINARY MAP FROM SANBORNE-BARRIE (1990).

massive sulphide deposits worked by Mattabi Mines Limited. Geographically between these two units lie rocks of uncertain age - the Whimbrel Lake formation (WLF) (felsic volcanics), the Savant Narrows formation (SNF) (a marker conglomerate), and the Savant sedimentary group (SSG) (which hosts large chert and magnetite iron formation horizons). Granitoids in the area are of various ages and compositions.

The area is complexly deformed and interpretation of the structural geology has been controversial. Several Ontario Geological Survey mapping parties have interpreted the structural geology of the area differently (Moore, 1929; Bond, 1977, 1978, 1980; Trowell, 1986; Sanborne-Barrie, 1990, 1991). observations largely concur with those of Sanborne-Barrie (1990, 1991) who describes two major folding/deformation events (F_1/D_1 and F_2/D_2) as broadly outlined on Figure 2. These D₁ and D₂ events are represented by widespread pervasive moderate to strong foliations (S₁ and S₂) with local isoclinal folioform folds. The Kashaweogama Lake Shear Zone (KLSZ) is most likely a post-D₂ (i.e. a D₃) steeply north-dipping structure with dominantly subvertical south side down displacement (Sanborne-Barrie, 1991). The Stillar Bay Shear Zone and other late easterly striking shears are also probably D₃ structures. Late northeast and northwest sets of fractures and small faults (S₃ of Ho, 1988) seen in much of the Kashaweogama Lake area are probably late stage D₃ structural adjustments to strain relaxation and/or intrusion of late granitoid bodies such as the second pulse of the Dickson Lake Pluton (Section 4.1.3).

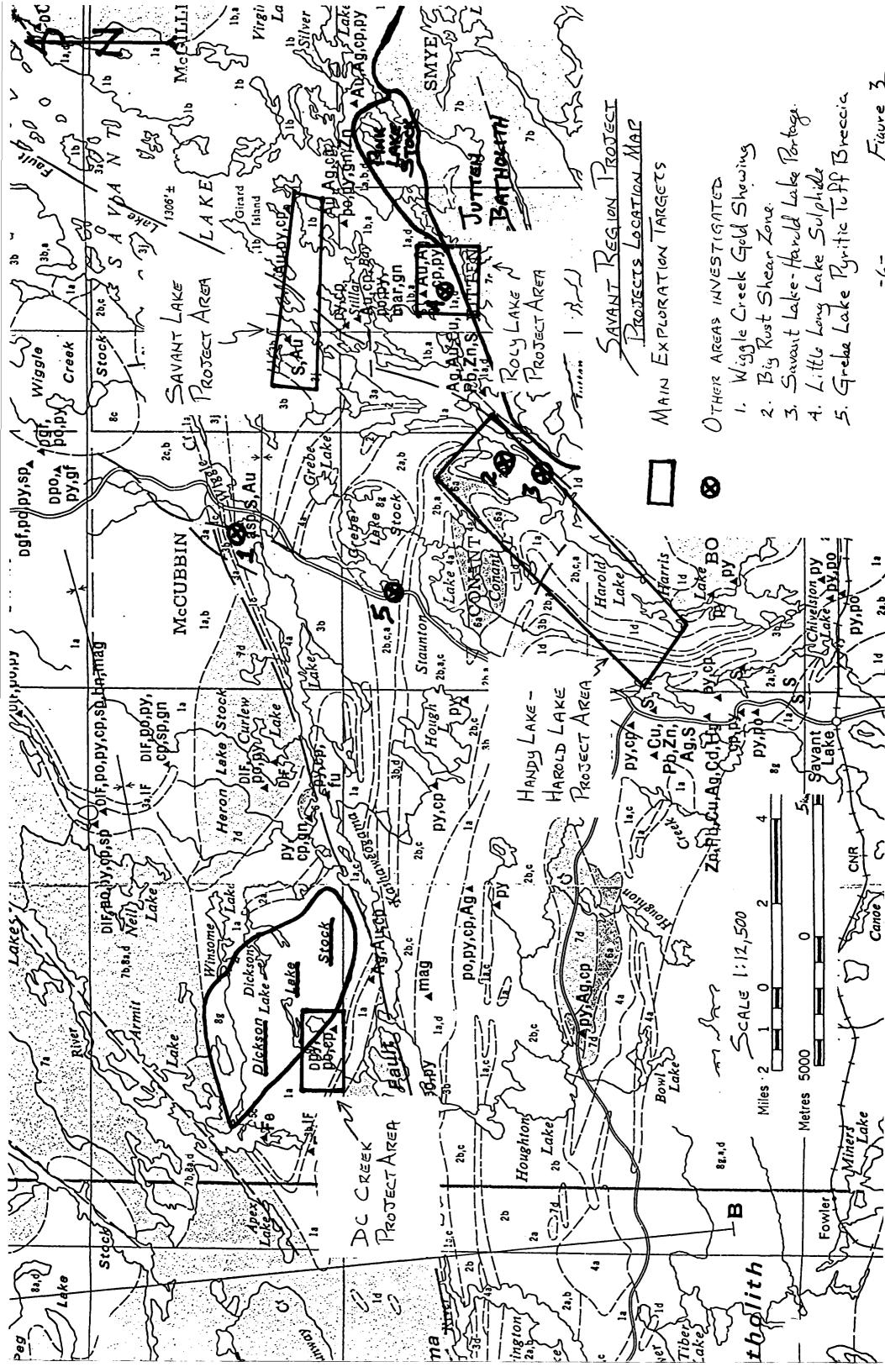
On Figure 2, note that the JVG is everywhere separated from the HLVG by a major shear zone (the KLSZ in the north and an unnamed shear zone near the Savant Lake-Harold Lake portage to the southeast). Ho (1988) suggests these are two unrelated terranes were juxtaposed during a major D_3 tectonic event. If this is true, pre- D_3 fabrics in the two terranes are not likely to be related. The $D_1/D_2/D_3$ structural scenario has largely been derived from studies in the HLVG. Our observations in the older JVG have so far noted only a single pre- D_3 deformation (labelled D_J) which therefore may not be related to the HLVG-defined D_1 and D_2 deformations. Reconnaissance observations suggest D_1 , D_2 and D_3 structures all occur in the SSG indicating close tectonic ties to the HLVG. The SNF conglomerates are typically marked by an intense S_3 foliation which obscures possible earlier structural fabrics. Trowell (1986), however, interprets the SNF to be the base of the SSG. Structural observations in the WLF felsic volcanics are too few to speculate on its geological affiliation.

The known gold and related occurrences of the area are mainly variably sulphidic quartz veins which are most often associated with D₃ shear zones but

are also locally found filling earlier structures. Detailed descriptions of the structural settings and zoning of gold and related occurrences in the area are summarised in Appendix 4.

4. MAIN EXPLORATION TARGETS

The 1992 program was a wide ranging effort during which four main targets and a number of minor targets were investigated (Figure 3). The results of these investigations are described below.



4.1 DC CREEK PROPERTY (ARMIT LAKE PROJECT)

4.1.1 INTRODUCTION

The DC Creek Property is located 25 kilometres northwest of the village of Savant Lake and 3 kilometres northwest of the west end of Kashaweogama Lake (Figure 3). It is also 90 highway and skid trial kilometres north of the recently closed Mattabi base metal mill complex. The property can be accessed by driving to the boat ramp just west of Highway 599 near the east end of Kashaweogama Lake and then boating to the Fairchild Lake portage at the west end of the lake. Boat rentals can be arranged in Savant Lake. Near the west end of the portage a good cat road runs one kilometre north to the property. Heavy equipment has been brought into the property in the past via a system of logging roads and skid trials south of the lakes, across the rapids between Kashaweogama Lake and Fairchild Lake, and then onto the DC Creek Property cat road.

The property comprises the following claims (Plate 2) on claim map G-1933 (Armit Lake):

Claim No.	Units	Expiry Date
1145083	2	July 17, 1993
1145086	16	July 31, 1994 (staked in 1992)

The claims are owned equally by the authors who acquired them by staking.

The 1992 work program was carried out by the authors. It consisted of widespread prospecting and detailed work (stripping, geochemistry, geophysics and prospecting) in the general vicinity of the BBM gold showing and the DC Creek nickel showing. The old grid was re-established through the areas worked and the skid trail into the property was cleared of deadfall. Results of this work are summarised below.

4.1.2 HISTORY

The "BBM" gold showing appears to have been discovered by prospectors working for Queenston Gold Mines Limited. Queenston probably dug the 17 trenches on the showing. They then drilled 16 core holes. The holes intersected narrow veins and silicified sections (0.25-7 inches wide) with local pyrite, pyrrhotite and

chalcopyrite (Queenston, 1958). No assays were reported.

- B.B.M. Investments acquired the BBM gold showing and appear to have re-excavated the Queenston trenches and then blasted open some of the better veins. They report numerous high grade chip samples (many over 1 opt Au) across 12-27 inches (B.B.M., 1976) although our cursory sampling could reproduce only sporadic high gold values (see Section 4.1.6.1).
- Dome Exploration (Canada) Limited cut a grid over most of the present property. A ground magnetometer and a HLEM survey were conducted (Racic, 1985). Numerous lithogeochemical samples were collected but not reported for assessment work. Eight diamond drill holes on various lithogeochemical and/or geophysical targets were drilled in search of gold with poor results (Brown, 1986).
- The BBM gold showing was staked by the authors.
- The property was expanded to cover the DC Creek nickel showing and work was carried out as described in this report.

4.1.3 GEOLOGY

The DC Creek Property is underlain by rocks of the Jutten volcanic group (JVG). These rocks consist of mafic and ultramafic volcanics with numerous intercalated large and small magnetite iron formations and metacherts on the property. The Dickson Lake Pluton is a granodioritic body which lies along the northeast edge of the property. The contact zone of the intrusion is a 50 m wide section of abundant greenstone xenoliths in a granitoid matrix. Granitoid dikes do not extend more than 50 m beyond the contact zone into the greenstone belt.

The structural geology of the property is mainly marked by a single weak to intense pervasive mineral foliation labelled S_J . This is a pre- D_3 fabric whose relationship to the S_1 and S_2 fabrics of the Sanborne-Barrie (1991) is not certain (Section 3). If any pre- S_J fabrics occur they have either been obscured by S_J or have not otherwise been observed. Typically S_J trends about $125^{\rm O}/90^{\rm O}$ but varies $110^{\rm O}-165^{\rm O}$ Az. An outcrop near the contact of the Dickson Lake Pluton (grid co-ordinate 15+15W, 4+55N) is marked by an intense S_J foliation ($130^{\rm O}/80^{\rm O}S$) with isoclinal fold axes at $130^{\rm O}/15^{\rm O}$ suggesting that the S_J fabric may have developed in response to subvertical intrusion of the pluton.

The Dickson Lake Pluton intruded in at least two phases - an earlier moderately foliated ($S_{J/2?}$) granodiorite and a later mineralogically similar massive granodiorite. Cross-cutting relationships between the second and first phase are best seen on the east shore of Round Lake (Plate 3; grid co-ordinate 14+25W, 6+50N). D_3 shear zones were not seen in the Dickson Lake Pluton but they probably underlie the many easterly oriented linear lakes and muskegs within the intrusion.

Gold mineralization at the BBM showing fills en echelon fractures (Plate 4 and Figure A4.6) which are, speculatively, in a D_3 shear zone where the shear diverges from a bent basalt-ultramafic contact. See Appendix 4, Section A4.3.2 for further details.

4.1.4 GEOCHEMISTRY

Rock grab and chip samples were collected as deemed appropriate in the course of field work. Samples ranged in size from <1 to 5 kilograms and comprised grab or chip samples as indicated in Appendix 1. Rock samples were sent to Acme Analytical Laboratories in Vancouver, B.C. where they were crushed and pulverized. All samples were run for gold by fire assay with an atomic absorption finish and for 30 element ICP analyses. Channel and chip samples from the DC Creek nickel showing were also assayed for nickel. Results are reported in Appendices 1 and 2 and plotted on Plates 3 and 4, and Figures 4 and 5. Significant results are discussed below under the headings 4.1.5 Results and 4.1.6 Conclusions.

Soil samples were collected both in the course of prospecting and locally along grid lines. Approximately 0.5 kilograms of B-horizon soil usually from thin veneers of basal till on bedrock, was collected with a mattock or rock pick from each site. Samples were sent to Acme Analytical Laboratories of Vancouver, B.C. There they were dried and sieved to retrieve the -80 mesh fine fraction for analysis. All the soil fine fraction samples were analysed for gold by fire assay with an atomic absorption finish and for 30 element induced cation plasma (ICP) analysis after digestion in aqua regia (see Appendix 2 for details). Results are recorded in Appendix 2 and on the Plates and Sketches. Significant results are discussed below under the headings 4.1.5 Results and 4.1.6 Conclusions.

4.1.5 GEOPHYSICS

An EM-16 electromagnetic survey was carried out over 7.8 km of the grid focussing mainly on the BBM gold showing and DC Creek nickel showing

areas. These surveys were carried out using a Ronka EM-16 instrument at a frequency of 24.0 KHz with using the Cutler, Maine signal.

Numerous anomalies of varying intensity and dimensions were detected, most of which occur under linear swamps and till-covered areas (Plate 5). Select anomalies are discussed below. The BBM gold showing has no associated EM-16 anomaly nor is it apparent on previously done ground magnetic and HLEM survey maps (Racic, 1985).

- <u>L25+25W, 0+95S</u>: DC Creek nickel showing. This cross-over occurs near the south edge of the showing where several small (<15 cm wide) shears occur. The anomaly appears to follow the shears rather than the nickel mineralization.
- <u>L25W, 3+00S</u>: This anomaly occurs under a linear east-west swamp that trends through L24W, 2+80S. A reconnaissance soil sample taken on the north edge of the swamp returned 531 ppm Ni and 81 ppm Cu.
- <u>L12W, 4+75N</u>: This strong multiple line anomaly occurs under Round Lake and a linear swamp which mark the Dickson Lake Pluton-greenstone belt contact.
- <u>L15W, 5+00S</u>: This strong anomaly coincides with a strong ground HLEM anomaly (Racic, 1985). Drill holes into the anomaly at 18+22W, 4+55S and 17+35W, 4+83S intersected large magnetite iron formations (Brown, 1986).

4.1.6 RESULTS

4.1.6.1 GOLD MINERALIZATION

The DC Creek Property was originally staked to cover the BBM gold showing which, after considerable effort, is still the only gold showing on the property. B.B.M. Investments (1976) reported the showing to consist of a 600 ft long vein, 12-27 inches wide with numerous chip samples returning values >1 opt Au. Our cursory examination of the showing revealed 17 trenches on a 600 ft long zone of discontinuous en echelon veins (Plate 4 and Appendix 4 - Figure A4.6). Two larger eastern veins are 12-24 inches wide while most of the western veins are <6 inches wide. Our samples returned sporadic high grade gold values in soils only (up to 0.28 opt Au) but could not reproduce any of the very high grade values reported by B.B.M. (1976). The zone has been drilled twice with disappointing results (Queenston, 1958; Brown, 1986). Further remarks on the structural setting of the showing are in Appendix 4 - Section A4.3.2.

No other areas of significant gold values in rocks or soils were found during the field program.

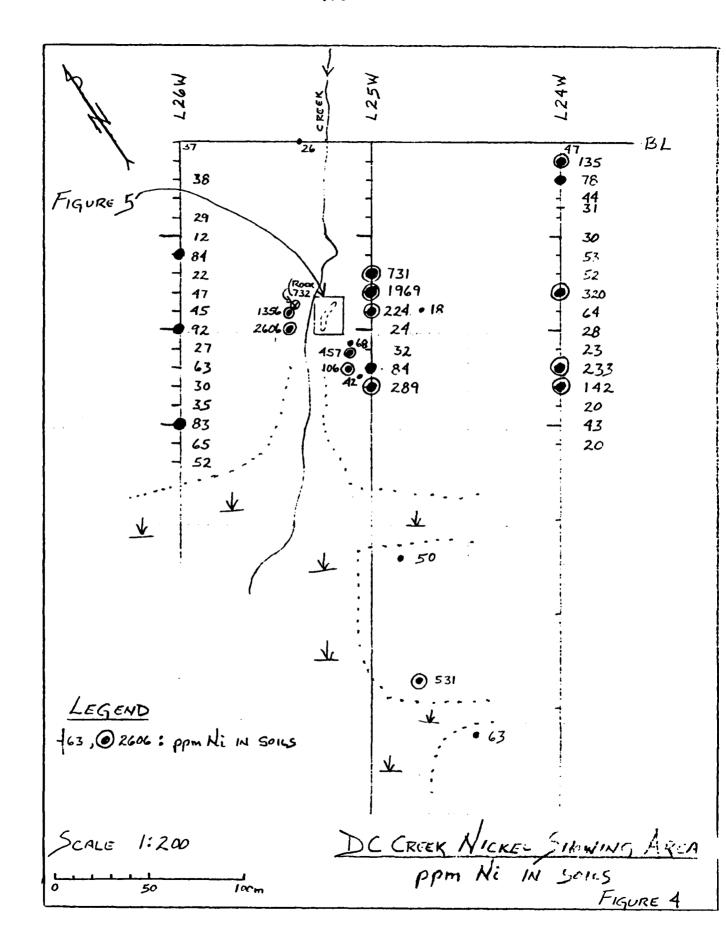
4.1.6.2 CHROMIUM MICA ALTERATION ZONES

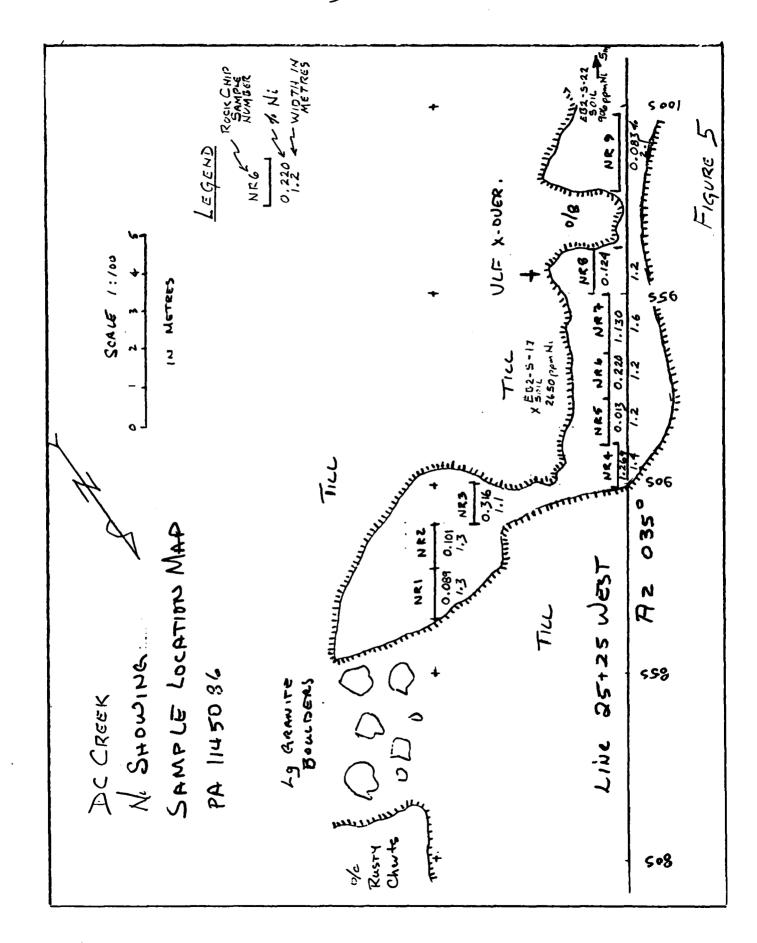
Spectacular large zones of apple green Cr mica occur on the property and beyond to Kashaweogama Lake in the southeast (Ho, 1988) and Armit Lake in the northwest. Most of the zones are hosted in metacherts and associated sericitic schists. They are commonly 1-2 m wide and locally are up to 10 m wide. Most of the subparallel zones occur in a 100 m wide belt centred on the cut baseline. None of the Cr mica zones sampled carried notable precious metal values. Only rarely do they contain up to 5% pyrite but no other significant mineralization.

Most of the Cr mica zones are adjacent to ultramafic horizons. They are probably products of hydrothermal solutions that drove chromium from the ultramafics and into the metacherts and schists. They occur in a linear belt 400-500 m from the contact of the Dickson Lake Pluton which may have been the heat engine that drove the hydrothermal solutions. It may be of exploration significance that the BBM gold showing occurs 100 m beyond the Cr mica belt (i.e. further from the pluton) and, speculatively, may be part of a parallel belt of gold showings.

4.1.6.3 NICKEL MINERALIZATION

The DC Creek nickel showing (Figures 4 and 5; grid co-ordinate 25+25W, 0+95S) is on a two meter high bluff on the eastern edge of DC Creek. Chip samples across the centre of the outcrop averaged 0.65% Ni over 6.5 m. Chip samples taken beyond this 6.5 m averaged ~0.1% Ni for 2.5 m to both the north and south. The zone is relatively low in sulphides (1-5%). Most of the mineralization is present as a white unidentified sulphide with accessory amounts of pyrrhotite. The sulphides occur as both fine fracture fillings and disseminations in a light green massive to foliated dunite (?). Soil anomalies and locally outcrop exposures suggest further nickel mineralization occurs to the north, east, and south but becomes weaker to the west where the zone may have been offset by a fault along DC Creek.





4.1.6.4 OTHER AREAS OF INTEREST

Reconnaissance soil samples collected in the course of gold prospecting were all analysed for 30 elements by I.C.P. A number of these samples which returned significant nickel values are described below. The areas around these samples should be prospected and further sampled for nickel mineralization.

- BL, 15+00W Area: A grid soil sample returned 173 ppm Ni and 94 ppm Cu. A second sample taken at 15W, 0+35S returned 321 ppm Ni. A third sample, GB1-S-1, taken at 15W, 0+15S returned 451 ppm Ni and 85 ppm Cu.
- 2. L12W, 1+20N Area: Soil sample GB2-S-8 taken on the south edge of an east-west linear gully returned 314 ppm Ni and 338 ppm Cu. Soil sample GB2-S-7 taken 70 m to the east returned 311 ppm Ni.
- 3. 10+85W, 1+30S Area : Soil sample GB2-S-78 returned 369 ppm Ni, 167 ppm Cu and 155 ppm Co.
- 4. 7+75W, 6+00S Area: Soil samples EB2-S-1,2,3 returned 100 ppm Ni, 352 ppm Ni (+ 146 ppm Cu) and 100 ppm Ni respectively.
- 5. 7W, 1+50S to BL, 6+00W Area: Soil samples GB2-S-50, 51, 52 returned 145 ppm Ni (+153 ppm Cu), 123 ppm Ni and 307 ppm Ni respectively from this area of shallow till and poor bedrock exposure.
- 6. The above nickel anomalies were discovered in reconnaissance soil samples taken in the search for gold. Systematic grid soil sampling will undoubtedly detect many more such anomalies.

4.1.7 CONCLUSIONS

- 1. The DC Creek nickel showing is a significant new discovery. The single exposure returned 0.65% nickel across 6.5 m with lesser values (~0.1% Ni) well into altered dunite (?) host rocks on either side. Many soil nickel anomalies occur in the area and elsewhere on the property.
- 2. The BBM gold showing contains sporadic high gold values. It consists of a series of small en echelon veins (0.5 60 cm wide) with no apparent economic potential. No other gold showings nor significant soil gold anomalies are known on the property.

- 3. A 100 m wide belt of spectacular Cr mica altered metacherts and sericitic schists occur along the baseline. They are products of hydrothermal alteration of adjacent ultramafic horizons. They do not host precious metal mineralization but may represent hotter parts of the gold mineralising system nearer the intrusion. There may be a parallel belt of gold mineralization southwest of this alteration belt along a BBM hydrothermal horizon.
- 4. Geophysics has been a variably effective tool on the property. Ground magnetics outline the magnetite iron formations, many of the metachert horizons, and some of the ultramatics units. Ground HLEM outlined a single strong anomaly on magnetite iron formation. Numerous EM-16 anomalies occur over shear zones, linear swamps and possibly sulphide mineralization.

4.1.8 RECOMMENDATIONS

- 1. A program of grid soil sampling should be carried out especially in the vicinity of known nickel mineralization and soil anomalies.
- Areas around 1992 soil nickel anomalies should be prospected keeping in mind that the DC Creek nickel showing contains relatively low sulphide abundances. Samples of ultramafics should be collected throughout the property to determine background Ni-Cu-Co contents and areas of possible enrichment.
- 3. Prospecting for nickel should continue to the northwest and southeast beyond the limits of the DC Creek Property.
- 4. Grid soil samples 50-250 m south of the baseline should be collected at wide line spacings to determine if a zone of gold mineralization exists along a possible BBM hydrothermal horizon southwest of the Cr mica alteration belt. These samples should also be analysed for 30 element I.C.P. in the search for nickel and other mineralization.

4.2 ROLY LAKE AREA

4.2.1 INTRODUCTION

The Roly Lake program was begun as a brief reconnaissance prospecting trip at the start of the field season and with encouraging initial results was visited again at the end of the season to better define the extent and mode of gold mineralization.

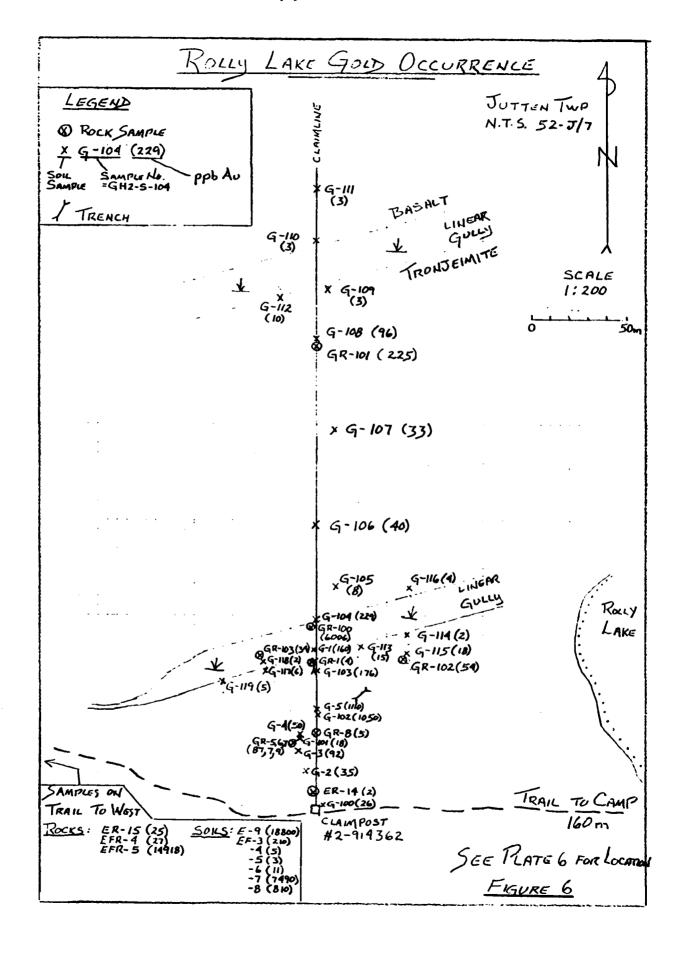
Roly Lake, a local name, is located 22 km northeast of the village of Savant Lake in Jutten Township (claim map G-2874) on N.T.S. map sheet 52 J/8 at 90°26' longitude and 50°22' latitude (Figure 3 and Plate 6). The area is presently open for staking. It is accessible only by float or ski-equipped plane from any one of three local float plane bases. The area is only 5 km off a major logging road (locally known as the Silviculture Camp Road) and a spur road or trail to the area could readily be built.

4.2.2 HISTORY

- 1983-84 Roland Moede, a local prospector, discovered quartz-tourmaline veins in the Jutten Batholith north of Roly Lake. Two of the veins assayed 0.14 and 0.06 opt Au. He blasted two small trenches (shown on Figure 6) on these veins (Moede, 1983; Huggins, 1984).
- The authors spent three days prospecting the area. Results of the work are described in this report.

4.2.3 GEOLOGY

The area occurs entirely within the Jutten Batholith (Figures 3 and 6). Throughout the area prospected, the batholith consists of a relatively homogeneous, massive to well foliated, medium to coarse grained trondhjemite. It is light grey on fresh surfaces and weathers to pale pink or grey. It typically comprises 55% feldspar, 20% grey quartz, 20% biotite and 5% blue quartz in handspecimen. No dikes or other phases of intrusive rocks were seen.



The foliation (S_m) typically trends $085^{\circ}/80^{\circ}N$ approximately parallel to the batholith-greenstone belt contact 225 m to the north. No earlier structural fabrics were observed. The S_m foliation is locally deformed into gentle S-flexures. Several discrete shears of schist and/or mylonite were also observed trending at $065^{\circ}/80^{\circ}N$ to $095^{\circ}/80^{\circ}N$. A similar shear underlies the prominent $080^{\circ}Az$ topographic linear forming the south end of Roly Lake. Other similar $080^{\circ}Az$ linears occur throughout the Jutten Batholith and by extrapolation, are all probably controlled by such shears. The S-flexures and discrete shears are probably coeval with D_3 structural fabrics in the greenstone belt (Section 3.) as is evident by their similar orientations and structural styles. The orientation and pervasive style of the S_m foliation suggest it may be a D_2 fabric. The quartz + tourmaline \pm gold veins cut the S_m foliation but their relationship to D_3 structures are uncertain. Further discussion on the structural setting of the Roly Lake gold occurrences can be found in Appendix 4, Section A4.3.3.

4.2.4 GEOCHEMISTRY

Rock grab samples <1 to 5 kilograms in size were collected as deemed appropriate in the course of field work. Some samples were sent to Accurassay Laboratories in Thunder Bay and others were sent to Acme Analytical Laboratories in Vancouver, B.C. where they were crushed and pulverized. All samples were run for gold by fire assay with an atomic absorption finish. Results are reported in Appendices 1 and 2 and plotted on the Figure 6 and Plate 6. Results are discussed below under the headings 4.2.5 Results and 4.2.6 Conclusions.

Soil samples were collected both in the course of prospecting and along or tied into an old north-south claim line (Figure 6). Approximately 0.5 kilograms of B-or C-horizon soil usually from thin veneers of basal till on bedrock, was collected with a mattock or rock pick from each site. Samples were sent to Acme Analytical Laboratories of Vancouver, B.C. There they were dried and sieved to retrieve the -80 mesh fine fraction for analysis. All the soil fine fraction samples were analysed for gold by fire assay with an atomic absorption finish and some for 30 element induced cation plasma (ICP) analysis after digestion in aqua regia (see Appendix 2 for details). Results are recorded in Appendices 1 and 2 and on Figure 6 and Plate 6. Results are discussed below under the headings 4.2.5 Results and 4.2.6 Conclusions.

4.2.5 RESULTS

The three Roly Lake gold occurrences (sample sites GH2-R-1 & -100 (6006 ppb Au in rock), EH2-S-9 (18,800 ppb Au in soil), and EF2-R-5 (14,918 ppb Au in rock); Plate 6 and Figure 6) are all small (≤ 1 m wide) rusty shears with pyritic quartz-tourmaline veins in variable orientations. These zones occur in an area of abundant randomly oriented quartz-tourmaline veins typically 5 cm wide and locally 50 cm wide which commonly form 2-10% of any given outcrop. These veins mainly occur in a 0.5 km+ long easterly trending belt between the camp trail and the southern linear gully (Figure 6). Most of the veins and shears carry negligible gold values. The three zones that do carry high gold values appear to be those in which veins host appreciable pyrite (1-5%). However, these three small veins could not have given rise to the widespread gold anomalies in soils of the area (Figure 6). Future work should determine if all these anomalies are the product of many small pyritic veins or if larger targets exist in the area.

4.2.6 CONCLUSIONS

- 1. The Roly Lake area is entirely underlain by relatively homogeneous trondhjemite of the Jutten Batholith
- 2. A large area of gold anomalies in soils occurs in the camp trail area north of Roly Lake. The source of most of these anomalies is uncertain.
- The camp trail area is host to abundant randomly oriented quartz-tourmaline veins and local rusty shears. Most of these veins and shears host negligible pyrite and negligible gold.
- 4. Three small gold occurrences with values up to 14,918 ppb Au in rock, were found in the area. All are ≤ 1 m wide rusty shears with pyritic (1-5%) quartz-tourmaline veins.

4.2.7 RECOMMENDATIONS

- 1. The encouraging results to date are the product of only three days of prospecting. Further detailed prospecting and sampling should be done.
- 2. Other areas of the Jutten Batholith along strike and elsewhere should be investigated for similar mineralization once the Roly Lake gold anomalies are better understood.

4.3 SAVANT LAKE PROJECT

4.3.1 INTRODUCTION

The Savant Lake project area (Figure 3 and Plate 7) was the main focus of our prospecting work in 1990 and 1991 (Gorzynski and Ewen, 1991a,b). During this time over 50 old pits and trenches dating back to the 1920's and 1940's were prospected and sampled, and numerous reconnaissance soil samples were collected elsewhere on geological targets. Most of the old pits and trenches were found not to host significant mineralization. Many of the 1990 soil samples, however, returned very anomalous gold values. Re-sampling of a number of these sites in 1991 failed to verify these anomalies. Further testing at the laboratory suggested the problem was an extreme gold nugget effect in the samples. See Section 4.3.3.1 and Gorzynski and Ewen (1991b) for details. Work in 1992 was aimed at resolving these analytical discrepancies as well as continuing work on some re-discovered old gold occurrences.

4.3.2 GEOLOGY

The general Savant Lake area is underlain by dominantly mafic volcanics of the Jutten volcanic group (JVG) to the east and various sediments of the Savant sedimentary group (SSG) including large magnetite iron formations to the west (Figure 2).

The area is complexly deformed. The SSG sediments host D_1 , D_2 and D_3 structural fabrics. The JVG rocks host at least two deformation fabrics (see Section 3. for discussion).

Gold mineralization throughout the area is structurally controlled. It occurs largely as variably sulphidic quartz veins in probable D_3 shear zones (see Section 3.).

4.3.3 DISCUSSION

4.3.3.1 THE "DISAPPEARING" GOLD ANOMALIES PROBLEM

Full details and history of this problem are given in Gorzynski and Ewen (1991b). Briefly the problem was as follows. In 1990 many reconnaissance

and grid soil samples were collected especially in the One Pine Lake area. Almost half of these samples returned highly anomalous values of over 100 ppb Au. On this basis the One Pine Lake property was staked (claim Pa. 1145082 on Plate 7). Re-sampling of many original sites in 1991 failed to verify the original anomalies. After further testing, the laboratory attributed the problem to be an extreme gold nugget effect. It was decided to address the problem with Bottle Leach Extractable Gold (BLEG) analyses on whole samples. Sample pulps and rejects from 1991 were retained by the laboratory with the intention of using them for BLEG, check gold assays and 30 element ICP analyses. These 1991 samples were, unfortunately, discarded by mistake. Given the circumstances, 21 new soil samples were collected in 1992 from original sample sites on the One Pine grid and the -10 mesh fractions were analysed for BLEG (Au). All samples analysed uniformly low (≤5ppb Au - Appendices 2 & 3).

After consideration of the multiple duplicate sample results (Appendix 3) taken over three years, it is concluded that the original 1990 reported anomalous gold assays were incorrect and that widespread gold anomalies in soils of the One Pine grid area as reported earlier (Gorzynski and Ewen, 1991a) do not exist. Most follow-up work on the One Pine grid proposed for 1992 was therefore cancelled. Some follow-up work was carried out on re-discovered old gold occurrences and is reported on below. Further discussion of the structural setting of these zones can be found in Appendix 4, Section A4.3.8 and A4.3.10.

4.3.3.2 OTHER GOLD SHOWINGS

4.3.3.2.1 L28W, 25S TRENCH

Location: One Pine grid as per co-ordinates (Plate 7 and Figure A4.1).

This old trench was found in 1991 (Gorzynski and Ewen, 1991b). It is 50 m southwest of and along strike from the small Shoal Gold Showing. The trench hosts a 1.8 metre wide zone with 25% deformed quartz veins in highly deformed felsic tuffs/wackes and magnetite iron formation with 10% pyrite and pyrrhotite. The zone is oriented at $060^{\circ}/70^{\circ}$ S. Initial grab samples from the zone returned 0.453 and 0.295 opt Au. Subsequently taken chip samples assayed in 1992 returned 0.053 opt Au / 6 ft (ES1-R-36) and 0.069 opt Au / 6 ft (ES1-R-37). A grab sample of highly pyritic iron formation from the trench muck pile returned 0.89 opt Au (ES1-R-38).

Several large old trenches were found for 300 m along strike to the southwest but the zone was not present in them where bedrock was exposed. Seven soil samples were collected along strike and in the trenches (GS1-S-

114,115,116,117 and L30W / 25+00S,25+50S,26+00S - Appendix 2). Six of these samples returned negligible gold values. One sample at L30W, 25+50S returned 120 ppb Au. It was taken over some small white quartz veins in a greywacke outcrop with local iron carbonate alteration.

Overall this showing is one with small pods of low to high grade gold mineralization. There are no indications that it has economic size potential.

4.3.3.2.2 FALSE STIBNITE TRENCHES

Location: Northwest corner of the large peninsula in southeastern Poisson Township. (Plate 7 and Figure A4.1).

Seven old trenches follow a wide chlorite schist/shear zone trending 085°/80°S for 90 m+ along the north side of a small linear gully. The shear is 6 m+ wide with local rusty, bleached lenses up to 0.6 m wide containing up to 1% pyrite and a prismatic arsenic mineral (incorrectly identified as stibnite in the field). A high graded sample of this material returned 5720 ppb Au and 3.3% As (EH2-R-31). The original 0.6 m chip sample across the best part of the zone in Trench #6 (sixth trench from the lake) returned 1441 ppb Au (ES1-R-28) and three soil samples (ES1-S-97,98,99) returned 7520, 177 and 5 ppb Au respectively (Plate 7). On a return visit consecutive chip samples in Trench #6 (GH2-R-23,24,25) returned 1870 ppb Au / 0.6m (re-sample of ES1-R-28), 103 ppb Au / 0.6 m, and 8 ppb Au / 0.6 m. A sample from Trench #5 returned 10,900 ppb Au / 0.6 m (EH2-R-32).

Some 1200 m east of the False Stibnite Trenches is another large trench in variably bleached chlorite schist with minor iron carbonate and pyrite (Plate 7). A soil sample from the trench returned 3,200 ppb Au (GS1-S-106). Follow-up soil samples from in and around the trench (GH2-S-25,26,27 and EH2-S-25,26) returned 980 ppb Au (re-sample of GS1-S-106), 2 ppb Au, 28 ppb Au, 1 ppb Au, and 2 ppb Au respectively. A rock grab sample of the rustiest material in the trench (from several 3 cm wide shears) returned 220 ppb Au (GH2-R-26). Although this rock sample is somewnat low in gold, it probably represents the source of the original gold anomaly in soil. The lack of anomalous gold values in soils from all around the trench also indicates the gold-bearing zone to be small.

Overall all both these zones are small and do not appear to have economic potential.

4.3.3.2.3 HORSESHOE TRENCH

Location: One Pine grid at 64+40W, 24+00N

This old trench was dug on a 2-4cm wide quartz vein oriented at approximately $010^{\rm O}/75^{\rm O}$ E. The vein occurs in highly folded greywacke and magnetite iron formation with minor sulphidation near the vein. A felsic dike, 0.2-1.0m wide, with moderate to intense sericite and iron carbonate alteration lies 5m west of the vein. The vein hosts visible gold and minor pyrite. A grab sample from the vein in 1990 returned 0.42 opt Au. Subsequent soil samples taken around the trench (GS1-S-108, 109, 110, 111) returned negligible gold values (21, 1, 4, and 1 ppb Au respectively). A rock sample (GS1-R-113) from a 3cm vein 30m to the northwest also returned a negligible gold value (2 ppb Au).

This appears to be an isolated vein with no economic size potential. Numerous other shallow old overburden trenches are found in the area but none host significant mineralization.

4.3.4 CONCLUSIONS

- 1. The One Pine grid area does not have widespread gold anomalies in soils as was indicated by earlier erroneous sample results. The area does host several small gold showings none of which appear to have economic size potential. These showings are the One Pine Lake showing (Gorzynski and Ewen, 1991a), the 28W, 25S Trench (this report), and the Horseshoe Trench (Gorzynski and Ewen, 1991b; this report).
- 2. The False Stibnite Trenches on the east side of Savant Lake are in a 6 m+ wide shear zone. Erratic, locally high grade (up to 10.9 g/t Au) gold mineralization occurs in scattered small lenses (up to 0.6 m wide) within the shear. This zone does not appear to have economic size potential.

4.3.5 RECOMMENDATIONS

1. No gold showings of economic significance were found in the area. No significant outstanding gold anomalies are known in the area.

No further work should be done in this area.

4.4 HANDY LAKE - HAROLD LAKE AREA

4.4.1 INTRODUCTION

A nine day reconnaissance prospecting program was undertaken in the Handy Lake - Harold Lake area to assess the base metal and gold potential of the local Handy Lake volcanic group (HLVG).

The area is located 15 km northeast of the village of Savant Lake (Figure 3 and Plates 8 and 9). Harold Lake is accessible by a rough road from Highway 599. Logging skid trails branch off the Harold Lake road and cover much of the area west of Harold Lake. Other parts of the area were accessed from Harold Lake by canoe and portages. The area can also be accessed by float / ski plane from any of three local bases.

Almost the entire area is open for staking (Plates 8 and 9).

4.4.2 GEOLOGY

The area is underlain by rocks of the Conant Lake formation of the Handy Lake volcanic group (Figure 2), a large unit of variable felsic pyroclastics with lesser matic volcanics and sediments. Near Handy Lake, the sequence is intruded by large subvolcanic porphyritic sills (Bond, 1980; Trowell, 1986).

The entire package is folded into a regional $F_2(?)$ anticline (Figure 2) with a steep northeast to east plunging fold axis (Bond 1979, 1980; Sanborne-Barrie, 1990). $D_1/D_2/D_3$ structural fabrics are all found in this area.

Good descriptions of property-scale geology and structure can be found in Hughes and Penno (1985).

4.4.3 METHODS

Prospecting targets were chosen on the basis of areas of known mineralization, geochemical anomalies and airborne HLEM anomalies (Ont. Geol. Surv., 1990). Reconnaissance rock and soil samples were collected as deemed appropriate in the course of field work. All samples were analysed for gold and 30 element ICP as described in Section 4.1.4.

4.4.4 DISCUSSION

4.4.4.1 BASE METAL EXPLORATION

- 1. In felsic rocks of the area, almost all airborne HLEM conductors (Ont. Geol. Surv., 1990) found on the ground or in assessment file drill logs, are exhalite massive sulphide zones. Most are pyrite and/or pyrrhotite zones with no significant base or precious metal values. The small Handy Lake sulphide zones are the only ones carrying base metals (see 2. below). In the Evans Lake formation to the west, a number of significant base metal occurrences are known, the largest of which is the Sabin Deposit which hosts 250,000 tons grading 10% Cu+Zn (Wallis, 1985).
- 2. A small base metal-rich sulphide zone just northwest of Handy Lake (sample site GH2-R-11 Plate 8) is well described in Hughes and Penno (1985). It is a 15-30 cm wide by 30 m long zone locally hosting 8% pyrite, 4% pyrrhotite and 4% chalcopyrite as clots and massive lenses (up to 1 x 3 cm) in well foliated crystal tuffs. The zone has the appearance of a small tectonically disrupted sulphide exhalite. A 25 cm chip sample (GH2-R-11) across the best exposure of the zone returned 1.2% Cu, 8240 ppb Au, 84.2 ppm Ag, and low Pb, Zn values. Teck Corporation (Hughes and Penno, 1985) drilled a conductor under a linear swamp 140 m to the north and intersected another small base-metal bearing massive sulphide zone. The area has good bedrock exposure but no other zones of significant mineralization were found.
- 3. In the mafic rock unit found just west and northwest of Harris Lake (Figure 3), the numerous airborne HLEM conductors (Ont. Geol. Surv., 1990) were found to be zones of pyrite and/or pyrrhotite, and graphitic shale horizons. No base metal-bearing zones are known in these rocks.
- 4. Airborne HLEM conductors near the HLVG-SSG contact east of Grebe Lake (Plate 9) were prospected. Some were found in place and others in angular float. Zones found varied from semi-massive pyrite in chert to disseminated pyrite in graphitic shale. Only low base metal (in the order of 0.05% Cu, 0.1% Zn) and negligible precious metal values were found in rock samples. Soil samples showed sympathetic values.
- One day was spent searching for a trench reported to carry lead and zinc mineralization west of Harris Lake (Lee and Scobie, 1970). Despite a protracted effort, neither the trench nor any indications of significant sulphide mineralization was found.

4.4.4.2 GOLD EXPLORATION

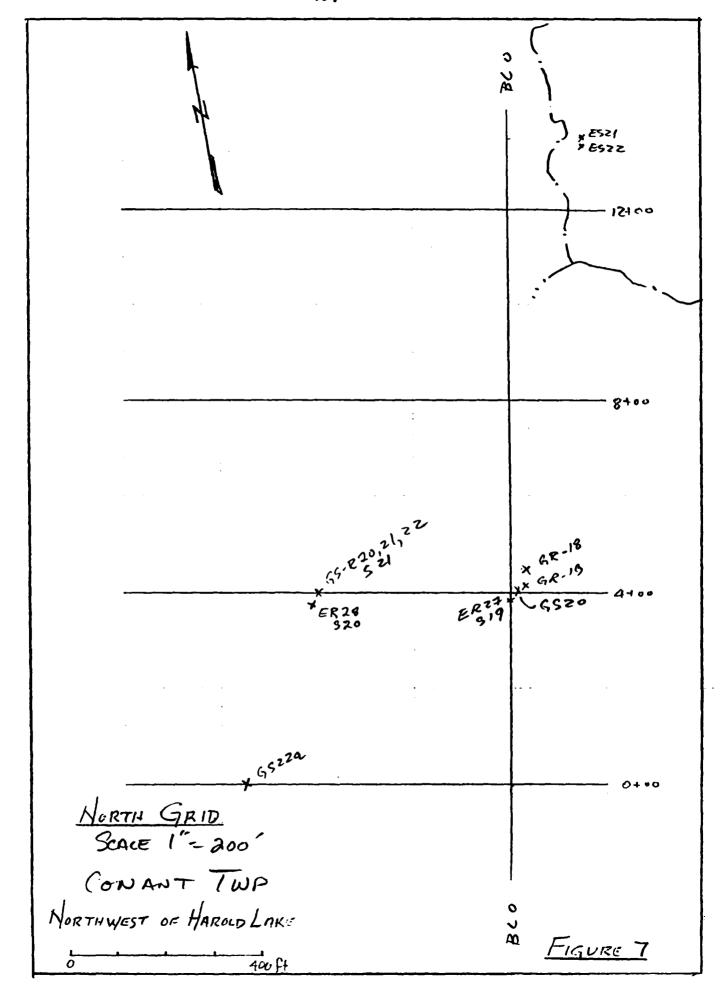
- 1. Base metal-bearing volcanic-hosted massive sulphides in the area carry significant gold values and are discussed above.
- 2. The Big Strip Area (Figure 8) hosts the only structurally-controlled gold occurrences in the area. This was a target where Teck Explorations (Hughes and Penno, 1985) detected a number of moderate to high gold anomalies in soils and was unable to adequately explain them in the normal course of follow-up work. They then bulldozer-stripped and washed an area of 60,000 square feet and exposed outcrop that averaged 2% barren white quartz veins and sparse small gold-bearing sulphidic shears and veins. Our sample (GH2-R-13) of the best looking vein (measuring 1 m wide by 8 m long) in the stripped area returned 1,162 ppb Au. Teck's sampling reported similar low to moderate gold values over the stripped area. Our prospecting also discovered other small (<0.5 m wide) anomalous shears and veins outside the stripped area (Figure 8). The Teck erratic gold anomalies in soils are probably derived from material eroded and glacially smeared from the many small gold-bearing shears and veins in the area. No focussed anomalies or other indications of larger zones of mineralization were found.

4.4.5 CONCLUSIONS

- No new zones of base metal sulphides were found during the 1992 Handy Lake-Harold Lake prospecting program. The known showings just northwest of Handy Lake were found to be small and were adequately tested in the past.
- 2. Gold anomalies in soils around the Big Strip Area west of Harold Lake are due to many small (<0.5 m wide) gold-bearing shears and veins. Nothing of economic interest was found.

4.4.6 RECOMMENDATIONS

1. There are no outstanding exploration targets in the Handy Lake-Harold Lake area amenable to prospecting. The program should be discontinued.



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5. OTHER AREAS OF INTEREST

5.1 WIGGLE CREEK GOLD SHOWING

Location: McCubbin Township. Between the east end of Kashaweogama Lake and Highway 599. Plate 10 and Figure A4.11.

The main showing is on the east side of Wiggle Creek just south of a prominent east-west logging slash. It is well described by Bond (1977, p.59) and (Hogg, 1983a,b). The area has been tested by 11 drillholes (Hogg, 1983b) and found to consist of discontinuous small lenses of vein quartz with disseminated to massive arsenopyrite, sporadic pyrite and local high grade gold values - Bond (1979, p.59) reports a grab sample assay of 0.22 opt Au. The zone does not appear to have a geophysical signature. Another smaller lens, the East Prospect, occurs 100m to the northeast.

West of Wiggle Creek and on strike with the main showing there are seven more unreported overgrown trenches (numbered here #1-#7 from east to west) over a strike length of 75 m. These trenches expose iron carbonate-altered metasediments, minor magnetite iron formation and chlorite schist/shear zones with small (<0.5 m wide) rusty lenses and quartz veins locally hosting pyrite and arsenopyrite. These zones are similar in style but smaller than the mineralised zone at the main showing. Our samples from these trenches were as follows:

Sample No.	Trench No.	Au (ppb)	Remarks
Rocks			
GW2-R-1	1	248	0.3m chip; 10% qz vns, 2% aspy, 2% py
GW2-R-2	7	7	Grab sample; minor qz vns
GW2-R-3	5	73	0.45m chip; 10% qz vns, 1% py + aspy
EW2-R-2	6	933	1.5 m chip
EW2-R-3	6	68	Grab sample
EW2-R-4	4	48,950	Massive aspy from 5 cm seams
Soils		. •	
GW2-S-1	7	46	
GW2-S-2	5	505	From gully just south of trench
EW2-S-2	6	2,777	North end of trench
EW2-S-3	6	13	South end of trench
EW2-S-4	4	1,206	North end of trench
EW2-S-5	4	577	South end of trench

Further discussion of the structural setting of this area is in Appendix 4, Section A4.3.12.

Overall the mineralised zones seen here are small, discontinuous and host erratic gold values. No economic potential is evident.

Note: The showing was staked by another party soon after our visit.

5.2 BIG RUST SHEAR ZONE

Location: Conant Township. 500 m west of southernmost bay of Savant Lake. Figure 9.

Bond (1979, p.67) first described this area of old trenches. The trenches are on a moderately to very rusty knoll of quartz-sericite schist/shear zone with ubiquitous 1 - 2% disseminated pyrite and trace to 3% disseminated magnetite. Adjacent outcrops are mainly foliated felsic tuffs and further east is a small band of magnetite iron formation (Figure 9). The shear is bleached and moderately silicified. Other similar but smaller shears were found up to 500 m NNE along strike from this zone. None of the rock or soil samples taken on the zone returned significant gold or base metal values. An orientation EM-16 line showed no anomaly over the zone but a small cross-over (+8% to -8% inphase response) was detected over the iron formation.

No further work is planned for this area.

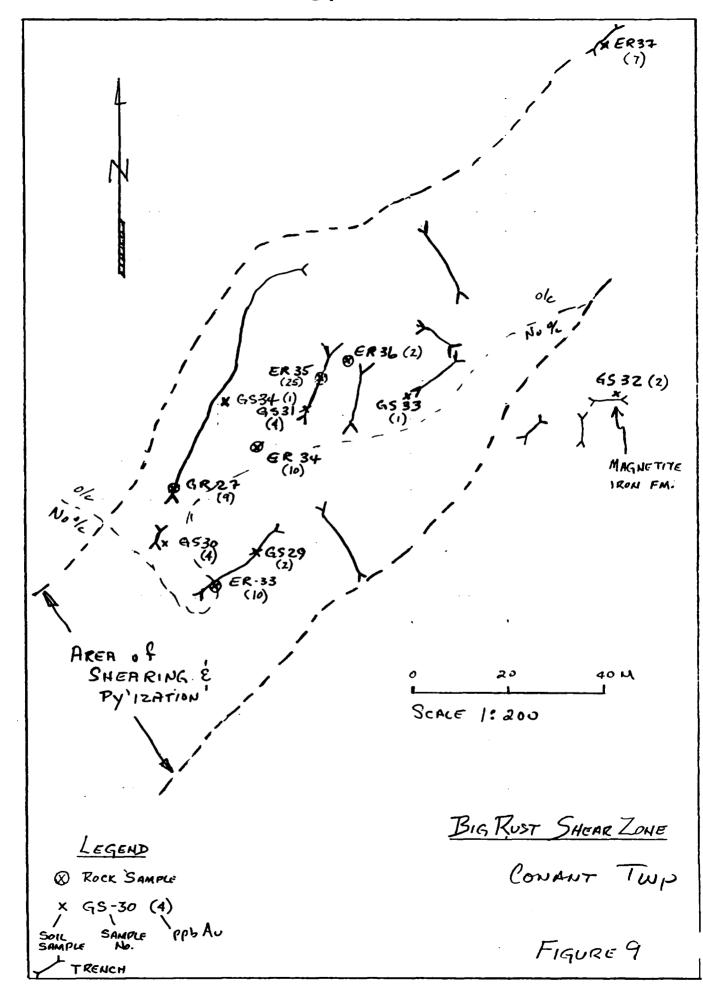
5.3 SAVANT LAKE - HAROLD LAKE PORTAGE AREA

Location: Conant Township. Plate 8.

There are several prominent large NNE-trending shear zones passing through this area. Some of these control the strong topographic linears outlined by swamps and shorelines.

A 10 m+ wide ferricrete zone (site EH2-R-47 (rock) and EH2-S-34,35,36,37 (soils)) appears to be a tectonically disaggregated pyrite exhalite in JVG sheared basalts. None of these samples returned significant precious or base metal values. The soils samples did return 213 ppm Cu and 93-305 ppm Zn but given that they were directly derived from decomposing ferricrete, they are probably not significant.

Overall this is a large deformation zone but it does not appear to host any



significant mineralization nor alteration. No further work is planned for this area.

5.4 LITTLE LONG LAKE SULPHIDE ZONE

Location: Jutten Township. Southeast of Hackett Lake. Plate 6 and Figure 10.

This is a prominent, very rusty zone all along the north shore of Little Long Lake (local name). It is a 15 m wide section of shale with 10-20% disseminated and locally semi-massive pyrite enclosed in JVG basalts. Local felsic igneous outcrops are probably dikes. Although the zone has not been previously reported, it has several pits in it and a few scattered AQ core boxes suggest it has been drilled. Our samples returned no significant precious or base metal values.

No further work is planned for this area.

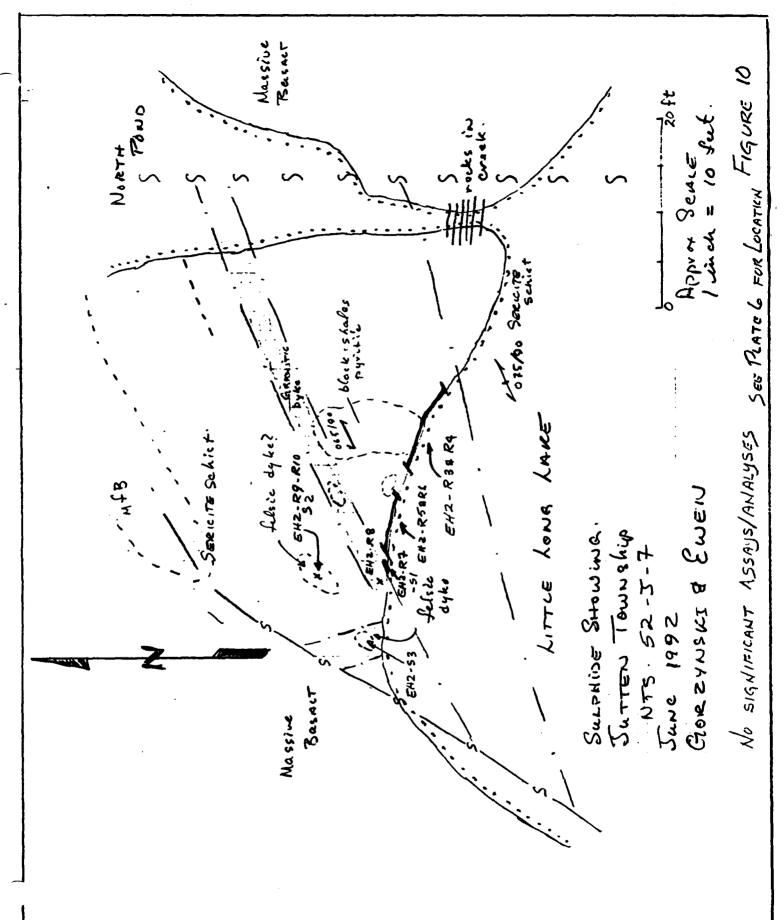
5.5 GREBE LAKE PYRITIC TUFF BRECCIA

Location: Conant Township. Just south of the southwest tip of Grebe Lake on the former highway loop. Plate 10.

This large very rusty felsic tuff breccia outcrop was first described by Bond (1979, p.67). It is a 25 m wide horizon with a variety of felsic tuff clasts up to 6 x 2 cm in size, in a felsic crystal tuff matrix with 2 - 5% disseminated pyrite and local pyrrhotite. Rare massive pyrite clasts occur in the zone indicating that the tuff breccia probably erupted through earlier pyrite (exhalite?) mineralization. Samples taken from the zone returned negligible precious and base metal values in rock (GW2-R-4) and negligible base metal but moderately anomalous gold values in soils (35 ppb Au in GW2-S-2 and 92 ppb Au in GW2-S-3 taken in a small blast trench). There is a strong broad EM-16 cross-over (+20% to -20% inphase response) on the zone.

Overall this zone reflects more base metal-poor sulphidic exhalite activity in the Conant Lake formation felsic volcanic pile. The moderate gold anomalies in soils may reflect nearby gold mineralization but more likely reflects small amounts of gold released from disseminated pyrite during weathering.

No further work is planned on this zone.



6. CONCLUSIONS

- 1. Numerous gold showings, some quite high grade, are present in the Savant Lake region. All the showings we have examined to date are small. The area, however, is structurally complex providing multiple scenarios in which undiscovered economic gold deposits may have formed.
- The DC Creek Nickel Showing is the first nickel mineralization found in the area. Its location, northwest of Kashaweogama Lake, is in an area which is underlain by abundant ultramafic horizons. This area has good potential for more nickel discoveries.
- 3. Base metal massive sulphide mineralization occurs mainly in the Evans Lake formation of the Handy Lake volcanic group. Only minuscule base metal sulphide zones were found in our examination of the Conant Lake formation near Handy Lake. Numerous zones of base metal-poor pyritic massive sulphides occur at several horizons in the Handy Lake volcanic group and in the Jutten volcanic group.

7. RECOMMENDATIONS

- 1. The following exploration projects should be continued:
 - A. Nickel and gold exploration on the DC Creek property and along strike
 - B. Gold exploration in the Roly Lake area and elsewhere in the Jutten Batholith.
- 2. The following exploration projects should not be continued:
 - A. Gold exploration in the Savant Lake area.
 - B. Precious and base metal exploration in the Harold Lake Handy Lake area.
 - C. Exploration on the various 1992 minor target areas described in Section 5.

Details regarding these recommendations are given in the individual project reports of Section 4 and 5.

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APPENDIX 1 PROSPECTING LOGS AND SAMPLE DESCRIPTIONS

PROSPECTING DAILY LOG H. ERIC EWEN

PROJECT AREA: SAVANT LAKE

DATE_	WORK PERFORMED AND SAMPLES COLLECTED
June 17	Prospected Wiggle Creek Trenches and area. Collected samples EW2-S1 to EW2-S5 and EW2-R1 to EW2-R4. Samples are plotted on McCubbin Twp. Map G-2053.
June 18	Prospected Hwy. 599 North of McCubbin Twp. and McCubbin Twp. Took rock samples EW2-R4 and R5 and plotted on McCubbin G 2053
June 20	Prospected Central Jutten Twp. Looked at old trenches on quartz vein containing sphalerite. Took samples EH2-R1 and R2 and plotted on Jutten G 2874.
June 21	Prospected a shale hosted massive sulphide area in Central Jutten Twp. Took samples EH2-R3 to EH2-R10 and EH2-S1 to EH2-S3. Plotted on a separate sketch, SKETCH 1.
June 22	Prospected Central Jutten Twp. south of Hackett Lake. Took samples EH2-S4 to S8 and EH2-R11 to EH2-R13. Also took AH2-R1 and R2 at the old Hackett Lake Showing and plotted on Jutten G 2874
June 23	Prospected near camp on lake we called Rolly Lake in SE Jutten Twp. Took samples EH2-S9 and EH2-R14 to EH2-R15 and plotted on Jutten G-2874.
June 24	Prospected the shore of Rolly Lake and the lake to the NE in the west half of Jutten Twp. Took samples EH2-S10 and S11 and EH2-R16 and R17 and plotted on Jutten G 2874.
June 25	Prospected road to Harold Lake on the North half of Boucher Twp. Took sample EH2-R18 and plotted on Evans Lake G 2031.
June 28	Prospected roads to and around Harold Lake on the North half of Boucher Twp. Took samples EH2-R19 and EH2-S12 and plotted on Evans Lake G-2031
June 29	Cut portage from Harold Lake to Savant Lake. Cut trail from Harold - Savant Portage to camp on Harold Lake.
June 30	Staked claim PA 1145084.

DATE WORK PERFORMED AND SAMPLES COLLECTED

July 1	Staked claim PA 1145085.
July 2	Prospected on old Tech grid West of the North end of Handy Lake on Central East half of Conant Twp. Took samples EH2-R20 and plotted on Evans Lake G 2031.
July 3	Prospected old Tech Trenched Area West of North end of Harold Lake on South half of Conant Twp. Samples taken EH2-R21 and EH2-S13 and plotted on SKETCH # 3.
July 5	Prospected old Tech Grid West of North end Harold Lake on South half Conant Twp. Took samples EH2-S12 to EH2-S18 and EH2-R22 to EH2-R24 and plotted on SKETCH # 3.
July 6	Prospected the North shore of Harold Lake on the South half of Conant Twp. Samples taken EH2-R25 to EH2-R26 and plotted on Evans Lake G-2031
July 8	Prospected old Tech Grid West of the North end of Harold Lake on the South half of Conant Twp. Samples taken EH2-R27 to R29 and EH2-S19 and S20 and plotted on Evans Lake G 2031 & SKETCH # 4.
July 9	Prospected old Tech Grid West of the North end of Harold Lake on the South half of Conant Twp. Samples taken EH2-R30 and EH2-S21 to EH2-S24 and plotted on Evans Lake G 2031 & SKETCH # 4.
July 10	Prospected One Pine Grid on SW Poisson Twp. Took soil samples at 10m intervals on BL from 300W to 400W. (see 1991 report plate 2E) Reprospected trenches of 1991 rock sample ES1-R28 in SE Poisson Twp. Took samples EH2-R31 and R32, EH2-S25 and S26 and plotted on Piosson G 2883.
July 11	Prospected area between Handy Lake and Savant Lake in and around an old trenched area in SE Conant Twp. Took samples EH2-R33 to R37and plotted on SKETCH #5.
July 12	Prospected shore of the South Arm of Savant Lake in SE Conant Twp. and SW Jutten Twp. Took samples EH2-R38 to EH2-R41 and EH2-S27 to EH2-S30 and plotted on Jutten G 2874.

DATE WORK PERFORMED AND SAMPLES COLLECTED July 13 Prospected area between Savant Lake and Grebe Lake in E. Conant Twp. Took samples EH2-R42 to EH2-R45 and EH2-S31 and plotted on McCubbin G 2053. July 14 Prospected the shore of the South Arm of Savant Lake in SE Conant Twp. and SW Jutten Twp. Took samples EH2-R46 and R47, EH2-S32 to EH2-S34 on plotted on Evans Lake G 2031. July 15 Prospected off of old logging road near Harris Lake in NW Boucher Twp. Took no samples. July 16 Prospected Savant Lake \ Harold Lake Portage in SE Conant Twp. Took samples EH2-S35 to EH2-S37 and plotted on Evane Lake G 2031. July 19 Slashed out old cat road from the Kashaweogama / Fairchild Portage to the old trenches on claim PA 1145083. Slashed brush from the trenches. July 20 Prospected old grid area on and near claim PA 1145083. Took samples EB2-R1 to EB2-R3 and EB2-S1 to EB2-S3. Samples are plotted on grid map plate B1. July 21 Prospected, slashed out and rechained B1 GRID. Took samples EB2-R4 and EB2-R5, EB2-S4 to EB2-S7. July 22 Prospected shore of the South bay of Armit Lake. Took sample EB2-S8. Sample plotted on Armit Lake Map G-1933. July23 Prospected, slashed out and rechained B1 GRID. Took samples EB2-R6 and EB2- R7, EB2-S9 and EB2-S10. July 24 Prospected, slashed out and rechained B1 GRID. Took samples EB2-S11 to EB2-S13. **July 25** Plotted roads, claims, old DDHs, and samples on B1 GRID MAP. July 26 Prospected, stripped and mucked out Ni Showing on creek just NW of NW corner of PA1145083 on Armit Lake Map G-1933. Took samples EB2-R8 and EB2-R9, EB2-S14 to S21. Samples plotted on B1 GRID. July 27 Prospected off of Hwy 599 just south of Evans Lake. Took no samples.

DATE WORK PERFORMED AND SAMPLES COLLECTED July 28 Prospected near Ni Showing. Channel sampled Ni Showing. Took samples NR-1 to NR-9 and EB2-S22. Samples plotted on plan of Ni Showing and on B1 GRID. July 29 Prospected, slashed out and rechained grid lines in the vicinity of Ni Showing. Took samples EB2-R10 and EB2-S23. Samples plotted on B1 GRID. July 30 Staked Ni Showing PA1145086. Took sample EB2-R11. Sample plotted on B1 GRID. **July 31 Staking PA1145086.** Aug1 Prospected, slashed out and rechained grid in area of Ni Showing. Took samples EB2-S24 to EB2-S29. Samples plotted on B1 GRID. Aug 2 Prospected, slashed out and rechained grid. took sample EB2-S30. Sample plotted on B1 GRID. Aug 3 Prospected Rolly Lake in SE Jutten Twp. in area of anomalous sample EH2-S9. Took samples EF2-R1 to EF2-R5 and EF2-S1 to S11. Samples plotted on Jutten G 2874.

PROSPECTING DAILY LOG

George Gorzynski

PROJECT AREA: Savant Lake

<u>DATE</u> (1992)

WORK PERFORMED AND SAMPLES COLLECTED

Highway 599 Area

June 17 Prospected Wiggle Creek trenches between Kashaweogama Lake and Highway 599. Collected rock samples GW2-R-1 to -R-3 and soils GW2-S-1 to -S-2. McCubbin Twp. Map G-2053.

June 18 Prospected along Highway 599 north of Marchington Road junction. Nothing of significance found. McCubbin Twp. Map G-2053.

Rolly Lake Area

June 20 Investigated old blast trenches (#5 and #6 on Sketch #2) on quartz-tourmaline veins in batholith north of Rolly Lake. Collected rock sample GH2-R-1 from vein in Trench #5 and soil sample GH2-S-1 from floor of gully 15m north of trench.

Investigated large old blasted trenches (Zinc Trench) on sphalerite+pyrite+(chalcopyrite) quartz vein north of Little Long Lake. Sampled by Eric. Jutten Twp. Map G-2874.

- June 21 Investigated pyrite-pyrchotite sulphide zone at north end of Little Long Lake. Sampled by Eric. Investigated airborne HLEM anomalies (Ont. Geol. Survey, 1990) east of and at south end of Little Long Lake. Nothing found in vicinity of two anomalies east of lake despite good bedrock exposure. Anomaly at south end of lake is under swamp. Sketch #1 and Jutten Twp. Map G-2874.
- June 22 Prospected area west of Little Long Lake. Collected rock samples GH2-R-2 to -R-4 in or near small old trench on minor rusty quartz veins and shears on north shore of pond. Jutten Twp. Map G-2874.
- June 23 Returned to further prospect vicinity of Trenches #5 and #6 north of Rolly Lake. Sampled large area of quartz-tourmaline stockwork veins rocks GH2-R-5 to -R-8 and soils GH2-S-2 to -S-5. Sketch #2.

DATE WORK PERFORMED AND SAMPLES COLLECTED (1992)

Rolly Lake Area

June 24 Prospected shores of Rolly Lake and Granite Lake to the northeast. Looked for old trenches noted by Moore (1929) north of Granite Lake but unable to locate them. Jutten Twp. Map G-2874.

Grebe Lake Area

June 25 Flew out to Savant Lake and investigated sulphide zone southwest of Grebe Lake just off Highway 599. Collected rock sample GW2-R-4 anc soil samples GW2-S-2 and -S-3. Grebe Lake Map G-2053.

Harold Lake Area

- June 28 Prospected vicinity of Harold Lake access road. Sampled two small semi-massive sulphide zones rocks GH2-R-9 and -R-10 and soils GH2-S-6 and -S-7. Evans Lake Map G-2031.
- July 2 Prospected north end of Handy Lake in vicinity of old massive sulphide showings. Collected rock samples GH2-10a and -R11. Evans Lake Map G-2031.
- July 3 Investigated very large area of stripping done by Teck on erratic gold mineralization west of Harold Lake. Sampled some Teck exposures, then prospected adjacent areas. Collected rock samples GH2-R-12 to R-16 and soil samples GH2-S-8 to -S-10. Sketch #3.
- July 5 Continued prospecting in vicinity of Teck stripping west of Harold Lake. Collected rock sample GH2-R-17 and soil samples GH2-S-11 to -S-17. Sketch #3.
- July 6 Prospected shorelines of northern Harold Lake. Collected soil sample GH2-S-18. Evans Lake Map G-2031.
- July 8 Prospected on old grid west of the north end of Harold Lake. Sampled zone of disseminated sulphides and a quartz vein rock samples GH2-R-18 to -R-22 and soil samples GH2-S-19 to -S-24. Sketch #4 and Evans Lake Map G-2031.

DATE WORK PERFORMED AND SAMPLES COLLECTED (1992)

Harold Lake Area

- July 9 Continued to prospect old grid west of the north end of Harold Lake, then prospected shorelines of southern half of Harold Lake. Evans Lake Map G-2031.
- July 10 Returned to collect check soil samples from 1991 One Pine Grid on North Savant Lake. Collected 10 grid soil samples on L36W. (Eric collected 11 samples along baseline.) Then prospected 1991 gold anomalies in southeastern Poisson Township. Collected rock samples GH2-R-23 to -R-26 and soil samples GH2-S-25 to -S-28. Poisson Twp. Map G-2883.
- July 11 Prospected large rusty shear zone between Handy and Savant Lakes. Collected rock samples GH2-R-27 and -R-28 and soil samples GH2-S-29 to -S-34. Sketch #5.

Investigated old blasted trench noted by Moore (1929) on island in Lower Savant Lake. Collected soil sample GH2-S-35. Jutten Twp. Map G-2874.

- July 12 Prospected various targets in south end of Savant Lake. Collected soil sample GH2-S-36. Jutten Twp. Map G-2874.
- July 13 Prospected between Savant and Grebe Lakes looking for source of airborne conductors (Ont. Geol. Survey, 1991). Collected rock sample GH2-R-29 and soil samples GH2-S-37 to -S-41. Grebe Lake Map G-2053.
- July 14 Prospected targets in south end of Savant Lake. Collected soil sample GH2-S-42. Evans Lake Map G-2031.
- July 15 Spent entire day looking for old zinc trench west of Harris Lake. Unable to find it. Evans Lake Map G-2031.
- July 16 Prospected Savant Harold Lake portage area. Eric sampled several small sulphide zones. Evans Lake Map G-2031.

DATE WORK PERFORMED AND SAMPLES COLLECTED (1992)

DC Creek Area

July 29

Slashed out old cat road and began excavating old trenches on July 19 BBM gold showing. Plate B1 and Sketch B1. July 20 Continue excavating and sampling BBM trenches and area. Collected rock samples GB2-R-1 to -R-5 and soil samples GB2-S-1 and -S-2. Sketch E1. Prospected on claim Pa. 1145083 beyond BBM trenches. July 21 Collected rock samples GB2-R-6 to -R-10 and soil samples GB2-S-3 to -S-14. Plate B1. July 22 Prospected south end of Armit Lake. Collected soil samples GB2-S-15 and -S-16. Armit Lake Map G-1933. Conducted EM-16 geophysical survey on L13W and L15W of BBM July 23 grid. Collected soil samples GB2-S-17 to -S-22. Plates B1 & B2. July 24 Conducted EM-16 geophysical survey on L14W and L16W. Looked at geology at intrusive contact and collected rock sample GB2-R-21 and soil samples GB2-S-23 to -S-26. Plate B1. July 25 Camp day spent plotting geophysics and samples. Conducted EM-16 geophysical survey on L11W, L12W, L17W, and July 26 L25+25W. Prospected and collected rock samples GB2-R-22 and -R-23 and soil samples GB2-S-27 to -S-31. Plate B1. July 27 Prospected along Highway 599 near Evans Lake. No samples collected. Evans Lake Map G-2031. July 28 Conducted EM-16 geophysical survey on L24W, L25W and L26W. Prospected same area and collected soil samples GB2-S-32 to -S-34. Plate B1.

Prospected near and north of L25+25W DC Creek Nickel Showing. Collected soil samples GB2-S-35 to -S-37. Plate B1.

DATE WORK PERFORMED AND SAMPLES COLLECTED (1992)

DC Creek Area

- July 30 Collected 40 soil samples on grid lines L24W, L25W and L26W to further delineate DC Creek Nickel Showing.
- Aug 1 More prospecting in vicinity of BBM Gold Showing and trenches. Collected rock samples GB2-R-24 to -R-26 and soil samples GB2-S-38 to -S-44. Plate B1 and Sketch B1.
- Aug 2 Prospected vicinity of L11W to L4W near baseline. Collected rock samples GB2-R-27 to -R-29 and soil samples GB2-S-45 to -S-52. Plate B1.

Rolly Lake Area

Aug 3 Flew into Rolly Lake and investigated area of gold soil anomalies in samples collected in June. Collected rock samples GH2-R-100 to -R-103 and soil samples GH2-S-100 to -S-119. Sketch #2.

End of Program.

DESCRIPTION OF ROCK SAMPLES (1992)

NO. EW2	LOCATION TWP.	ON TYPE	ROCK TYPEMINE	RALIZATION	ASSAY Au PPB
R1 R2 R3 R4 R5 R6	McCUBBIN McCUBBIN McCUBBIN McCUBBIN McCUBBIN McCUBBIN	GRAB RANDOM CHIP RANDOM CHIP GRAB RANDOM CHIP 15' CHIP	CHERTY IF SILIC. CARB. VOLC. SILIC. CARB. VOLC. CHLORITE SCHIST RHYOLITE BOULDER	10-20% py 2% asp 2% asp 20% asp 2% py massive sulphides	678 933 68 48950 16
AH2					
R1 R2	JUTTEN JUTTEN	GRAB RANDOM CHIP	QUARTZ VEIN QUARTZ VEIN	minor PbS, cpy, asp minor PbS, cpy, asp	20900 22300
EFF	2				
R1 R2 R3 R4 R5	JUITEN JUITEN JUITEN JUITEN JUITEN	RANDOM CHIP RANDOM CHIP SELECT CHIP CHIP 5' CHIP 8"	QUARTZ VEIN SHEARED GRANITE QUARTZ-TO VEIN SHEARED GRANITE TOURMALINE VEIN	10-20% to, rusty py tr. py 2-5% py. 20% q.v. minor rust minor q.v. 5% py	434 17 93 27 14918
<u>EH2</u>	<u>.</u>				
R1 R2 R3 R4	JUTTEN JUTTEN JUTTEN JUTTEN	GRAB GRAB CHIP 15' MUCK FROM TR.	QUARTZ VEIN QUARTZ VEIN SHALEY BLK. ARG. WEATHERED	10% ZnS minor cpy. as above high-graded 20% py. massive py.	1133 622 36 91
R5 R6 R7	JUTTEN JUTTEN JUTTEN	CHIP 7'	SHALEY BLK. ARG. SHALEY BLK. ARG. SHALEY BLK. ARG.	20% py. 20% py 10% py	7 8 3
R8 R9 R10	JUTTEN JUTTEN JUTTEN	GRAB RANDOM CHIP 15 GRAB	FELSIC DYKE FELSIC DYKE FELSIC DYKE	<5% py <5% py <5% py.	20 1 1
R11 R12 R13	JUTTEN JUTTEN JUTTEN	GRAB GRAB GRAB	SHEARED FELSIC FLO RUSTY Q.V. BLEACHED BASALT	1% py, po tr. cpy. 1% py, po. tr. cpy.	9 13 5
R14 R15 R16 R17	JUTTEN JUTTEN JUTTEN JUTTEN	GRAB OVER 50' CHIP CHIP 12" CHIP 30"	Q. To V. IN GRANITES Q. To. VEIN 6" SHEARED M.VOLC SHEARED BASALT	tr. sulphides 5% py. minor py. cpy. 1% sulphides	2 25 1560 344
R18 R19 R20	BOUCHER BOUCHER CONANT	CHIP 5' GRAB GRAB OF MUCK	SILIC. METASEDS. MAFIC VOLC. FELSIC TUFF	10% py. 1% py , rusty 15% py.	9 4 4140
R21 R22	CONANT CONANT	CHIP 10' CHIP 3'	SHEARED M. VOLC. CHERTY METASED	2% py. 10% py	99 31

NO. EH2	LOCATION TWP.	ON TYPE	ROCK TYPEMINE	<u>RALIZATION</u>	ASSAY Au PPB
R23	CONANT	CHIP 2'	SHEARED CHERT	very mely	41
R24	CONANT	RANDOM CHIP 5'	CHERT	very rusty 5-10% py.	34
R25	CONANT	CHIP 18"	Q. CARB. VEIN		4
R26	CONANT	ASSORTED FLOAT	-	tr.py tr. cpy.	15
R27	CONANT	GRAB	QUARTZ CARB.	2% py.	6
R28	CONANT	GRAB	VERY RUSTY CHERT	2-5% py.	331
R29	CONANT	GRAB	GRANITIC DYKE	q.v. 10% py.	7
R30	CONANT	CHIP 10'	METASED	2-5%py	, 10
R31	POISSON		CK CHLORITE SCHIST	10-20% asp	5720
R32	POISSON	CHIP 26"	24" FISSIL SCHIST	q.v. rust	10900
R33	CONANT	CHIP 15'	SHEARED FELSIC?	1-2% py, diss mag.	10
R34	CONANT	GRAB	SHEARED GRANITE?	5% py.	10
R35	CONANT	GRAB 25'	SHEARED GRANITE	1-2% py. rusty	25
R36	CONANT	GRAB	SHEARED GRANITE	5-10% py. rusty	2
R37	CONANT	CHIP 14"	SHEARED GRANITES	2" q.v. 1% py.	7
R38	JUTTEN	CHIP 4'	SHEAR IN M VOLC.	18" q.v. minor cpy.	4
R39	JUTTEN	CHIP 18"	Q.V. IN M. VOLC.	2% cpy.	190
R40	JUTTEN	CHIP 40'	FELSIC FLOW	1-2% py. rusty	26
R41	JUTTEN	CHIP 4"	M.VOLC.	4" q.v. very rusty	12
R42	CONANT	FLOAT	SHEARED FELSIC	rusty	29
R43	CONANT	FLOAT	SHEARED FELSIC	rusty	36
R44	CONANT	GRAB	BLK. GRAPHITIC SHAI	_	12
R45	CONANT	FLOAT	BLK. SHALES	50% banded py.	10
R46	CONANT	CHIP 4'	FELSIC DYKE	minor sulphides rusty	2
R47	CONANT	GRAB	SHEARED MAFICS	submassive py.	7
EB2		4.4.2		outsiles of pro-	·
R1	B1 GRID	CHIP 10"	CHERTY IF	fuchite, rust	19
R2	B1 GRID	CHIP 4"	CHERTY IF	very rusty	26
R3	B1 GRID	GRAB	MAFICS	py as fracture coats	414
R4	B1 GRID	CHIP 30'	CHERTY IF	fuchite, rust.	19
R5	B1 GRID	CHIP 30'	CHERTY IF	fuchite, rust.	17
R6	B1 GRID	CHIP 12"	CHERTY IF	1% py	5
R7	B1 GRID	CHIP 6"	CHERTY IF	2% py, fuchite	25
R8	B1 GRID	CHIP 5'	CHLORITE SCHIST	minor sulphides	6
R9	B1 GRID	CHIP 7'	CHLORITE SCHIST	nusty	34
R10	B1 GRID	CHIP 6"	BASALT	2% po, tr. cpy>	50
R11	B1 GRID	CHIP 12"	BASALT	2% po	206

NO. GWZ		ON TYPE	ROCK TYPE	EMINERALIZATION	ASSAY Au PPB
R1	McCUBBIN	CHIP 12"	METASED	2% py, 2% asp, FeCO ₃	248
R2 R3 R4	McCUBBIN McCUBBIN CONANT	GRAB CHIP 18" RANDOM CHIP	METASED METASED FELSIC V.	30% qtz. 1% py,asp 10% q.v. 1% py,asp. 2-5% py	7 73 2
GH2	į				
R1	JUITEN	GRAB	GRANITES	10cm q.v. 20% To	4
R2	JUTTEN	HIGHGRADED	BASALT	q.v. with sulphides	16
R3	JUTTEN	GRAB	BASALT	q.v. with sulphides	2
R4	JUTTEN	GRAB	BASALT	10cm shear, 10% py.	64
R5	JUTTEN	GRAB	GRANITES	q.v. with 3% To	87
R6	JUTTEN	CHIP	GRANITES	15% q.v. with To	7
R7	JUTTEN	HIGHGRADED	Q.To. VEINS	5% py.	9
R8	JUTTEN	RANDOM CHIP	GRANITES	10% q. To v tr. rust	5
R9	BOUCHER	GRAB	RHYOLITE	5% diss py.	6
R10	BOUCHER	GRAB	GRAP. SHALE	10-20% rust	24
R10a	CONANT	GRAB	EXHALITE?	rust	226
R11	CONANT	CHIP 25cm	EXH. SHEAR	rust, py, cpy	8240
R12	CONANT	CHIP 2X6m	METASED	15% q.v. 10% rust	100
R13	CONANT	CHIP 3'	QTZ. VEIN	5% dissem py.	1162
R14	CONANT	CHIP 10'X10'	QTZ. VEINS	carb, 3% rust	10
R15	CONANT	CHIP 12"	AMPHIBOLITE		26
R16	CONANT	CHIP 14"	CHL. SCHIST	4% rust, 2% py.	3790
R17	CONANT	CHIP 5'	CHERT	10% dissem. layered py.	383
R18	CONANT	CHIP 18"	BLK. SHALE	10% rust	151
R19	CONANT	CHIP 3'	SER. SCHIST	10% FeCO ₃ , 5% sulphides	19
R20	CONANT	GRAB	QTZ. VEIN 5"	1% rust	16
R21	CONANT	HIGHGRADE	QTZ. VEIN 5'	4% rusty clots	46
R22	CONANT	CHIP 12" SHEAR	SIL. SCHIST	10% rusty lens & dissem>	754
R23	POISSON	CHIP 24"	CHL. SCHIST	1% py, 2% asp	1870
R24	POISSON	CHIP 24"	CHL. SCHIST	1% py.	103
R25	POISSON	CHIP 24"	CHL SCHIST	1% py, 1% q.v.	8
R26	POISSON	GRAB	CHL. SCHIST	10% rust	220
R27	CONANT	GRAB	CHERTY SCH.	2% diss. py.	9
R28	CONANT	GRAB	GRANITES	sheared with 1% py.	5
R29	CONANT	FLOAT	Qz/CHERTY	20% layered py	13
R100	JUTTEN	BLAST MUCK	QTZ. VEIN	10% py lenses	6006
	JUTTEN	CHIP 15cm	QTZ. VEIN	10% chlorite lenses	225
	JUTTEN	CHIP 10m	MYLONITE	no sulphides	54
	JUTTEN	GRAB	MYLONITE	no sulphides	34

	LOCATIO TWP.	ON TYPE	ROCK TYPEMINE	RALIZATION	ASSAY AuPPB
R1	B1 GRID	CHIP 50cm	QUARTZ VEIN SHEAR		7
R2	B1 GRID	HIGHGRADE	QUARTZ VEIN SHEAR		4
R3	B1 GRID	CHIP 30cm	25cm VEIN	1% py>	40
R4	B1 GRID	HIGHGRADE	QUARTZ VEIN	5% py. 1% asp, tr cpy	9650
R5	B1 GRID	CHIP 20cm	QUARTZ VEIN	1% sulphides	17
R6 R7	B1 GRID B1 GRID	CHIP 1m CHIP 2m	CHERT CHERT	15% fuchite 5% fuchite	15 34
R8	B1 GRID	CHIP 2m	CHERT	5% carb.	12
R9	B1 GRID	CHIP 2m	CHERT	1-4 % rust	2
R10	B1 GRID	CHIP 2m	CHERT	25% cr. mica	13
R21	B1 GRID	CHIP 3cm	IN GRANIDIORITE	q.v. cr. mica	12
R22	B1 GRID	CHIP 25cm	CHL. SCHIST	15% rust	7
R23	B1 GRID	GRAB	CHERT BX.	10% limonite	7
R24	B1 GRID	CHIP 1.25m	BASALT SHEAR	2% py. tr. cpy	21
R25	B1 GRID	CHIP 1.1 m	BASALT SHEA	1% py, 1% po.	13
R26	B1 GRID	GRAB	QUARTZ VEIN	no sulphides	6
R27	B1 GRID	CHIP 10cm	QUARTZ VEIN	very rusty	8
R28	B1 GRID	CHIP 6X5m	SEC. SCHIST	q.v. To	2
R29	B1 GRID	GRAB	CHERT	cr. mica	13
					Ni in %
	B2 SKETCH		ULTRAMAFIC	chert lens, rusty shears	.089
	B2 SKETCH	CHANNEL 1.3m	ULTRAMAFIC	1% sulphides, rust	.101
	B2 SKETCH	CHANNEL 1.1m	ULTRAMAFIC	1% sulphides, rust	.316
	B2 SKETCH	CHANNEL 1.4m	ULTRAMAFIC	5% sulphides	1.269
	B2 SKETCH	CHIP 1.2m	BASALTIC DYKE?	minor rust	0.13
	B2 SKETCH	CHIP 1.2m	ULTRAMAFIC	rusty shears	.220
	B2 SKETCH	CHIP 1.6m	ULTRAMAFIC	5% sulphides	1.130
	B2 SKETCH	CHIP 1.2m	ULTRAMAFIC	vlf crossover	.124
NR-9	B2 SKETCH	CHIP 2.1m	CHL. SCHIST	10% q.v. minor py.	083

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DESCRIPTION OF SOIL SAMPLES (1992)

SAMPLE L	OCATION H	ORIZO	N DESCRIPTION	Au ASSAY IN PPB
EW2-S1	McCUBBIN	В	RUSTY BROWN SOIL	168
EW2-S2	McCUBBIN	В	FROM CRACKS IN O/C RUSTY	2777
EW2-S3	McCUBBIN	В	LIGHT RUST BROWN	13
EW2-S4	McCUBBIN	В	RUSTY EROWN	1206
EW2-\$5	McCUBBIN	В	RUSTY BROWN	577
EH2-S1	JUTTEN	В	VERY RUSTY	11
EH2-S2	JUTTEN	В	RUSTY FROM SOIL OVER FELS	
EH2-S3	JUTTEN	В	VERY RUSTY FROM FLOOD AR	
EH2-S4	JUTTEN	В	MED BR SILTY SOIL	2
EH2-S5	JUTTEN	В	MED RUST BR SILTY	8
EH2-S6	JUTTEN	Α	DARK BR	1
EH2-S7	JUTTEN	B ?	MED BR CLAY TILL	2
EH2-S8	JUTTEN	B?	GREY BR CLAY TILL	3
EH2-S9	JUTTEN	В	RUSTY SILT FROM CRACK IN C	
EH2-S10	JUTTEN	В	SANDY SILTY SOIL	1050
EH2-S11	JUTTEN	В	RUSTY FROM MULT SITES ON	-
EH2-S12	BOUCHER	В	RUSTY GRAVEL TILL	4
EH2-S13	CONANT	В	RUSTY FROM MULT SITES IN P	
EH2-S14	CONANT	В	RUSTY BR SOIL	9
EH2-S15	CONANT	В	RUSTY FROM MULT SITES	22
EH2-S16	CONANT	В	CARB RUST	22
EH2-S17	CONANT	В	CARB RUST	64
EH2-S18	CONANT	B-C	SULPHIDE RUST	5
EH2-S19	CONANT	В	CARB RUST	7
EH2-S20	CONANT	В	R-BR OVER SIL SHEAR	710
EH2-S21	CONANT	В	VERY RUSTY BR.	28
EH2-S22	CONANT	В	VERY RUSTY BR.	35
EH2-S23	CONANT	В	OVER IF	14
EH2-S24	CONANT	В	MULT SITES O/C WITH PY	9
EH2-S25	POISSON	В	SANDY TILL	1
EH2-S26	POISSON	В	SANDY TILL	2
EH2-S27	JUTTEN	В	RUSTY SOIL	3
EH2-S28	JUTTEN	В	RUSTY FROM 4" SHEAR	37
EH2-S29	JUTTEN	В	TAKEN ACROSS 40'	2
EH2-S30	JUTTEN	В	FROM RUSTY ZONE IN FELSIC	
EH2-S31	CONANT	В	VERY RUSTY 10' SHEAR	2
EH2-S32	CONANT	В	VERY RUSTY, FELSIC DYKE	5
EH2-S33	CONANT	В	RUSTY TILL	4
EH2-S34	CONANT	В	RUSTY SOIL MULT SITES	4
EH2-S35	CONANT	В	RUSTY SANDY SOIL	4
EH2-S36	CONANT	В	RUSTY GRAVEL	25
EH2-S37	CONANT	В	RUSTY GRAVEL	4

SAMPLE	LOCATION H	<u>ORIZO</u>	<u>DESCRIPTION</u>	Au ASSAY IN PPB
EB2-S1	B1 GRID	В	CARB RUST	5
EB2-S2	B1 GRID	В	CARB RUST SOIL	3
EB2-S3	B1 GRID	В	MED RUST BR	14
EB2-S4	B1 GRID	В	MED RUST BR SOIL OFF O/C	2
EB2-S5	B1 GRID	В	LIGHT RUST BR	1
EB2-S6	B1 GRID	В	LIGHT RUST BR	2
EB2-S7	B1 GRID	В	MED RUST BR	3
EB2-S8	ARMIT 1933	В	MED RUST BR	1
EB2-S9	B1 GRID	В	MED RUST BR	5
EB2-S10	B1 GRID	В	SOIL OVER IF	2
EB2-S11	B1 GRID	В	MED RUST BR SOIL	1
EB2-S12	B1 GRID	В	MED RUST BR	2
EB2-S13	B1 GRID	В	RUSTY BR	12
EB2-S14	B1 GRID	В	OVER CHERTY IF	1
EB2-S15	B1 GRID	В	Ni SHCWING RUSTY	2
EB2-S16	B1 GRID	В	Ni SHOWING RUSTY	10
EB2-S17	B1 GRID	В	NI SHOWING RUSTY	36
EB2-S18	B1 GRID	В	RUST BR TILL	2
EB2-S19	B1 GRID	В	RUST BROWN TILL	13
EB2-S20	B1 GRID	В	MED RUST BR	2
EB2-S21	B1 GRID	В	RUSTY SOIL	2
EB2-S22	B1 GRID	В	RUSTY SOIL OVER SHEAR	1
EB2-S23	B1 GRID	В	FROM 3' RUSTY ZONE	3
EB2-S24	B1 GRID	В	CARB RUST SOIL	7
EB2-S25	B1 GRID	В	MED RUST BR	1
EB2-S26	B1 GRID	В	MED RUST BR	3
EB2-S27	B1 GRID	В	DEEP RUST BR	2

EB2-S28	B1 GRID	В	LIGHT RUST BROWN	2
EB2-S29	B1 GRID	В	ORANGE RUST BR	3
EB2-S30	B1 GRID	В	RED RUSTY BROWN	2
EF2-S1	JUTTEN	В	LG RUST BR FROM CRACKS	64
EF2-S2	JUTTEN	В	RUST ER FROM CRACK	60
EF2-S3	JUTTEN	В	LG RUST BR	210
EF2-S4	JUTTEN	В	ACROSS 5' SHEAR RUST BR	5
EF2-S5	JUTTEN	В	RUSTY BR	3
EF2-S6	JUTTEN	В	RUSTY BR	11
EF2-S7	JUTTEN	В	DARK RUST BROWN	7490
EF2-S8	JUTTEN	В	RUSTY SOIL 3' FROM O/C	810
EF2-S9	JUTTEN	В	RUSTY SOIL FROM 3' SHEAR	49
EF2-S10	JUTTEN	В	MED RUST BR	3
EF2-S11	JUTTEN	В	MED RUST BR	5

SAMPLE L	OCATION H	ORIZO	N DESCRIPTION A	Au ASSAY IN PPB
GW2-S1	McCUBBIN	В	MED BROWN FROM FRACTURE	S 46
GW2-S2a	McCUBBIN	В		505
GW2-S2	CONANT	В	ORG. RUST BR. ON OVC	5
GW2-S3	CONANT	В	MED BR IN TRENCH	30
GH2.S1	JUTTEN	A	DARK BR.	160
GH2-S2	JUTTEN	В	LIGHT BR. BETWEEN OVC	35
GH2-S3	JUTTEN	В	MED. BR. ON OVC	92
GH2-S4	JUTTEN	В	MED BR.	50
GH2-S5	JUTTEN	В	MED BR	1110
GH2-S6	BOUCHER	В	MED BR SAND NEAR ROAD	3
GH2-S7	BOUCHER	B-C	RED RUST BR.+ ORG BR.	83
GH2-S8	CONANT	В	MED BR ON OVC	3
GH2-S9	CONANT	В	ORG RUST BR.	71
GH2-S10	CONANT	В	MED. BR. FROM TRENCH.	1270
GH2-S11	CONANT	В	MED. BR. ON RUSTY METASED	5
GH2-S12	CONANT	В	MED BR ON EDGE OF SWAMP	30
GH2-S13	CONANT	В	MED BR IN TILL	4
GH2-S14	CONANT	В	RED RUST BR SIDE OF TRENCH	91
GH2-S15	CONANT	В	RED RUST BR ON ONC	19
GH2-S16	CONANT	В	DARK BR ON OVC	3
GH2-S17	CONANT	В	ORG RUST BR	3
GH2-S18	CONANT	В	MED BR TILL	3
GH2-S19	CONANT	В	MED BR ON OVC	8
GH2-S20	CONANT	В	ORG RUST BR ON QTZ. VEIN	5
GH2-S21	CONANT	В	RED RUST BR ON OVC	850
GH2-S22	CONANT	В	DARK BR IN TILL	4
GH2-S23	CONANT	В	MED BR ON OVC	5
GH2-S24	CONANT	В	ORG RUST BR ON OVC	4
GH2-S25	POISSON	В	ORG RUST BR CRACKS IN SCHI	ST 980
GH2-S26	POISSON	В	DARK BR CLAYEY ON OVC	2
GH2-S27	POISSON	В	ORG RUST BR FROM MUCK	25
GH2-S28	PIOSSON	В	MED BR IN TILL	4
GH2-S29	CONANT	В	YELLOW BR FROM MUCK	2
GH2-S30	CONANT	В	MED BR FROM MUCK	4
GH2-S31	CONANT	В	ORG RUST BR FROM TR.	6
GH2-\$32	CONANT	В	ORG RUST BR FROM IF OVC	2
GH2-S33	CONANT	В	MED BR	1
GH2-S34	CONANT	В	MED TO DARK BR FROM MUCK	1
GH2-S35	JUTTEN	В	ORG RUST BR SIDE OF PIT	4
GH2-S36	JUTTEN	В	ORG RUST BR ON SHEAR	90
GH2-S37	CONANT	В	MED BR .IN TILL	4
GH2-S38	CONANT	В	ORG RUST BR ON OVC	4
GH2-S39	CONANT	C?	DARK BR. ON LAKE SHORE	4
GH2-S40	CONANT	В	ORG RUST BR	3
GH2-S41	CONANT	В	MED BR ON OVC	4
GH2-S42	CONANT	В	ORG RUST BR. PEBBLY TILL	4

SAMPLE LOCATION HORIZON DESCRIPTION AU ASSA	Y IN PPB
GB2-S1 B1 GRID B FROM TRENCH 977	
GB2-S2 B1 GRID B MED RUST BR FROM TRENCH 456	0
GB2-S3 B1 GRID B ORG RUST BR 34 GB2-S4 B1 GRID B ORG RUST BR 30	
GB2-S4 B1 GRID B ORG RUST BR 30	
GB2-S5 B1 GRID B LIGHT BR CLAYEY ON ONC 5	
GB2-S6 B1 GRID B ORG RUST BR ON OVC 26 GB2-S7 B1 GRID B ORG RUST BR ON OVC 2	
GB2-S7 B1 GRID B ORG RUST BR ON OVC 2	
GB2-S8 B1 GRID B MED RUST BR IN TILL 2	
GB2-S9 B1 GRID B MOD RUSTY ON EDGE OF SWAMP 2	
GB2-S10 B1 GRID B MED BR IN TILL 1	
GB2-S11 B1 GRID B MED BR IN TILL 63	
GB2-S10 B1 GRID B MED BR IN TILL 1 GB2-S11 B1 GRID B MED BR IN TILL 63 GB2-S12 B1 GRID B MED BR CLAYEY TILL 2 GB2-S13 B1 GRID B MED BR TILL 5 GB2-S14 B1 GRID B YELLOW BR TILL 1 GB2-S15 ARMIT- 1933 B MED RUST BR TILL 13 GB2-S16 ARMIT- 1933 B MED GREEN TILL FROM TR. 3 GB2-S17 B1 GRID B OPC BUST BR 2	
GB2-S13 B1 GRID B MED BR TILL 5	
GB2-S14 B1 GRID B YELLOW BR TILL 1	
GB2-S15 ARMIT- 1933 B MED RUST BR TILL 13	
GB2-S16 ARMIT- 1933 B MED GREEN TILL FROM TR. 3	
GB2-317 BI GRID B ORG RUST BR 2	
GB2-S18 B1 GRID B ORG RUST BR 1	
GB2-S19 B1 GRID B ORG RUST BR CLAYEY IN TILL 1	
GB2-S20 B1 GRID B GREY TILL ON OVC 14	
GB2-S21 B1 GRID B MED RUST BR 1	
GB2-S22 B1 GRID B MED RUST BR ON OVC 12	
GB2-S20 B1 GRID B GREY TILL ON ONC 14 GB2-S21 B1 GRID B MED RUST BR 1 GB2-S22 B1 GRID B MED RUST BR ON ONC 12 GB2-S23 B1 GRID B GREY SANDY TILL 1	
GB2-S24 B1 GRID B ORG RUST BR ON OVC EDGE 1	
GB2-S25 B1 GRID B MED BR IN TILL 4	
GB2-S25 B1 GRID B MED BR IN TILL 4 GB2-S26 B1 GRID B GREEN BR TILL 13	
GB2-S27 B1 GRID B RED RUST BR ON ONC 49	
GB2-S28 B1 GRID B VERY RUSTY ORG BR 17	
GB2-S29 B1 GRID B MED BR CLAYEY TILL 30	
GB2-S30 B1 GRID B GREEN CHLORITIC TILL 2	
GB2-S31 B1 GRID B MED BR FROM VLF X-OVER 1	
GB2-S32 B1 GRID B ORG RUST BR ON CREEK EDGE 2	
GB2-S33 B1 GRID B MED BR PEBBLY TILL 1	
GB2-S34 B1 GRID B MED BR AT VLF X-OVER 1	
GB2-S35 B1 GRID B DARK BR CLAYEY TILL 3	
GB2-S36 B1 GRID B DARK BR TILL 6	
GB2-S37 B1 GRID B ORG RUST BR 1	
GB2-S38 B1 GRID B MED BR CLAYEY TILL 3	
GB2-S39 B1 GRID B DARK BR CLAYEY TILL 2	
GB2-S40 B1 GRID B ORG RUST BR. FROM FRACTURES 63	
GB2-S41 B1 GRID B ORG RUST BR 16	
GB2-S42 B1 GRID B GREEN GREY CLAYEY TILL 2	
GB2-S43 B1 GRID B MED BR ON OVC 14	
GB2-S44 B1 GRID B ORG RUST BR 4	
GB2-S45 B1 GRID B ORG RUST BR 2	
GB2-S46 B1 GRID B ORG RUST BR 6	
GB2-S47 B1 GRID B MED BR IN TREE ROOTS 3	

SAMPLE LOCATION HORIZON DESCRIPTION Au ASSAY IN PPB GB2-S48 **B1 GRID** В MED BR TILL 1 GB2-S49 **B1 GRID** В ORG RUST BR 2 GB2-S50 5 **B1 GRID** В MED BR CLAYEY TILL GB2-S51 **BI GRID** В MED BR CLAYEY TILL 4 GB2-S52 **B1 GRID** В MED BR SILTY TILL 4 GH GH2-S100 В **ORG RUST BR** 26 JUTTEN GH2-S101 В JUTTEN MED BR GRITTY TILL 18 GH2-S102 В JUTTEN MED BR GRITTY TILL 1050 GH2-S103 JUTTEN В MED BR CLAYEY TILL 176 GH2-S104 JUTTEN В DARK BR CLAYEY TILL 229 GH2-S105 JUTTEN В MED BR TILL ON OVC 8 В GH2-S106 JUTTEN MED BR TILL 40 GH2-S107 JUTTEN В MED BR GRITTY TILL 33 GH2-S108 JUTTEN В ORG BR GRITTY TILL 96 GH2-S109 В MED GREY BR GRITTY TILL 3 JUTTEN GH2-S110 JUTTEN В MED BR 3 GH2-S111 JUTTEN В DARK BR CLAYEY TILL 3 GH2-S112 В 10 JUTTEN MED BR GH2-S113 В JUTTEN MED BR TILL 15 GH2-S114 JUTTEN В ORG RUST BR 2 GH2-S115 JUTTEN В ORG RUST BR IN TREE ROOTS 18 В GH2-S116 JUTTEN **ORG RUST BR** 4 GH2-S117 В 6 JUTTEN ORG RUST BR ON OVC GH2-S118 2 JUTTEN В MED. BR.GRUTTY TILL GH2-S119 R 5

MED. BR. SANDY TILL

JUTTEN

DESCRIPTION OF SOIL SAMPLES (1991-some assays done in 1992)

SAMPLE No. ES1-	LOCATION TWP.	HORIZON	DESCRIPTION ASSAY RESU IN PPB Au	
S1	Poisson	В	med. rust br. close to o/c 5	
S2	Poisson	B	lgt. rust br. close to o/c 5	
S 3	Poisson	В	med. rust br. close to o/c 5	
S4	Poisson	B?	lgt. br. pebbly clay 5	
S5	Poisson	В	dk. br. close to o/c 5	
S6	Poisson	В	lgt. rust br. 5	
S7	Poisson	В	lgt. rust br. 5	
S8	Poisson	В	med. rust br. 5	
S9	Poisson	В	rust br. rubbly granitic boulders 5	
S10	Poisson	В	lgt. rust br "heavy" till 5	
S11	Poisson	В	med. rust br.rubble 5	
S12	Poisson	В	med. rust br. in till area 5	
S13	Poisson	В	rust br. over quartz vein 5	
S14	Poisson	В	rust br. soil volcanic o/c 5	
S15	Savant	В	lgt. rust br. soil inter. volc. o/c 5	
S16	Savant	В	lgt. rust br. 26	Ď
S17	Savant	В	orange rust brown 5	
S18	Savant	В	orange rust brown 5	
S19	Savant	В	medium brown 5	
S20	Savant	В	org. rust br. boulder till 5	
S21	Savant	В	org. rust br. sandy boulder till 40	
S22	Savant	В	grey br. till 71	
S23	Savant	В	org rust br boulder till 19)
S24	Savant	В	org.rust br. bouler till 5	
S25	Savant	В	lgt. rust br. pebbly near o/c 5	
S26	Savant	В	bright org.rust sandy till 5	
S27	Savant	В	orange rust brown humocky 5	
S28	Savant	В	org. rust br. humocky 5	
S29	Savant	В	med.rust br. gravely till 23	3
S30	Savant	В	org. rust br. sandy boulder till 10)
S31	Savant	B	org. rust br. gravely 5	
S32	Savant	В	org rust br. gravely 5	
S33	Savant	В	med rust br. near o/c 5	
S34	Savant	В	org. rust br. near o/c 5	
S35	Savant	В	med rust br. gravely near o/c 5	
S36	Savant	В	orange rust brown gravely 5	
S37	Savant	В	br. sandy till near o/c 5	
S38	Savant	В	med.rust br. sandy till near o/c 5	

SAMPLE No. ES1-	LOCATION TWP.	<u>HORIZON</u>	DESCRIPTION	ASSAY RESULTS IN PPB Au
S39	Savant	В	med. br. local o/c	13
S40	Savant	B	dk. br. pebbly till	5
S41	Savant	В	med. br. local o/c	5
S42	Poisson	В	lgt. br. gravel local o/c	5
S43	Benner	В	med.br. local o/c	5
S44	Benner	В	org. rust br. no o/c	5
S45	Benner	В	org. rust br. IF o/c	5
S46	Savant	В	med. br. near o/c	16
S47	Savant	В	org rust br. sandy	5
S48	Savant	В	choc. rust br.near o/c	5
S49	Savant	В	org. rust sandy till	5
S50	Savant	В	org rust br. pebbly	38
S51	Savant	В	org. rust br. near o/c	5
S52	Savant	В	med. rust br. near o/c	12
S53	Savant	В	med rust br. coarse sand	
S54	Savant	B?	lgt. br. silty clay	97
S55	Poisson	В	med. rust br. local o/c	5
S56	Benner	В	rust br. local o/c	5
S57	McGillis	В	org rust br.	5
S58	McGillis	В	red rust br. silty sand	5
S59	McGillis	B?	dk. br. silty sand, pebble	
S60	McGillis	В	med. br. local o/c	5
S61	McGillis	В	org. rust br local o/c	8
S62	McGillis	В	choc. rust br. pebbly	5
S63	McGillis	В	org. rust br. local o/c	17
S64	McGillis	В	org. rust br. local o/c	5
S65	McGillis	В	org. rust br. silty sand	5
S66	McGillis	В	org. rust br. local o/c	5
S67	McGillis	В	red rust br. gossan?	5
S68	McGillis	В	org. rust br. local o/c	5
S69	McGillis	В	rust brown local o/c	5
S70	McGillis	В	med. rust br. local o/c	5
S71	Poisson	В	org. rust br. pebbly	5
S72	Poisson	В	org. rust br. pinky	5
S73	Poisson	В	org. rust br. pebbly	5
S74	Poisson	В	med. rust over o/c	5
\$75	Savant	В	rusty brown over o/c	11
S76	Savant	В	med. grey br. in a linear	
\$77	Savant	В	med. rust br. over o/c	9
\$78 \$70	Savant	В	med. rust br. silty sand	5
S79	Poisson	В	med. rust br. quartz kno	
S80	Poisson	В	lgt. rust br. local o/c	5
S81	Poisson	B ?	ed. rust br. nto o/c	5

SAMPLE No. ES1-	LOCATION TWP.	HORIZON	DESCRIPTION	ASSAY RESULTS IN PPB Au
S82	Poisson	В	red rust br. local o/c	7
S83	Poisson	В	lgt. rust. br.	5
S84	Poisson	В	red rust br. near o/c	5
S85	Poisson	В	red rust br.	6
S86	Poisson	В	med. rust br. local o/c	6
S87	Poisson	В	red rust br. no o/c	7
S88	Poisson	В	lgt. rust br. no o/c	8
S89	Poisson	В	red rust br. no o/c	8
S90	Poisson	В	red rust br. no o/c	5
S91	Poisson	В	red rust br. local o/c	5
S92	Poisson	В	red rust br. no o/c	5
S93	Poisson	В	red rust br. on o/c	5
S94	Poisson	В	red rust br. no o/c	5
S95	Poisson	В	lgt. rust br. sandy no o/c	8
S96 *	McGillis	В	rust br. sandy gravel	1
S97 *	Poisson	В	med. rust br. in linear	7520
S98 *	Poisson	В	rust br. near old trench	177
S99 *	Poisson	В	rust br. near old trench	5
S100 *	Jutten	В	org. br. soil from pit	15680
S101 *	McGillis	В	med.rust br. anomaly S	59 195
S102 *	McGillis	В	lgt. rust br. anomaly S	
S103 *	McGillis	В	med. rust br. anomaly	S59 5
S104 *	L24W 350S	В	carbonate rust	1
S105 *	L25W 300S	В	carbonated rusted soil	31
S106 *	6230W 2680N	В	med. rust br. ER35	77
S107 *	6230W 2680N	В	med rust br. ER35	10
S108 *	6230W 2680N	В	med. rust br. ER35	6
S109 *	Jutten	В	rusty soil from shear	6
n/a = samples	not vet assaved			

n/a = samples not yet assayed * = samples assayed in 1992

SAMPLE No. GS1-	LOCATION TWP.	HORIZON	DESCRIPTION ASSAY RE IN PPE	
S1	Poisson	В	lgt. rust br. clayey, bebbles	5
S2	Poisson	В	med. br. pebbly till	5
S 3	Poisson	В	bright orb. rust br.	5
S4	Savant	В	org. rust br.	5
S5	Savant	В	med. br. gritty	5
S 6	Savant	В	med. br. gritty	5
S7	Savant	В	med. br. till on o/c	181
S8	Savant	В	org. rust br. local o/c	5
S9	Savant	В	org. rust br. local o/c	5
S10	Savant	В	org. rust br. local o/c	5
S11	Savant	В	org. rust br. local o/c	5
S12	Poisson	В	org. rust br. over qtz. carb. vein	5
S13	Poisson	B?	sand from old placer pit	5
S14	Poisson	B?	org. rust br. sand from esker	48
S15	Poisson	B?	lt. br. sand from top of esker	5
S16	Poisson	B?	esker sand	5
S100	6425W 2100N	В	org. rust br. from old trench	5
S101*	McGillis	В	rust br. no o/c	2
S102*	Poisson	В	med. br. sandy till	4
S103*	Poisson	В	org. br. sand from sand bank	1
S104*	Poisson	B?	med. br. sand	4
S105*	Poisson	В	org. rust br. boulder till over o/c	3
S106*	Poisson	В	org. rust br. crack in shear	3260
S107*	McGillis	В	med. br. gritty till	19
S108*	Poisson	В	erg. rust br. boulder till above trenc	h 21
S109*	6350W2400N	В	med br. boulder till local o/c	1
S110*	6325W 2400N	В	med. br. boulder till from trench	4
S111*	6400W 2470N	В	org. rust br. boulder till	1
S112*	5420W 1370N	В	med. br. boulder till	1
S113*	5750W 1420N	В	org. rust br. boulder till	1
S114*	3125W 2450N	B ?	med. br. from muck pile	2
S115*	3150W 2525N	В	org. rust br. from muck pile	1
S116*	3320W 2500S	B ?	org. rust br. from muck pile	1
S117*	3330W 2540S	В	org. rust br. from muck pile	2
S118*	Jutten	B?	sand and pebbles from muck pile	5
S119*	Jutten	В	org.rust br. in gully	1
S120*	Jutten	В	org. rust br. in carbonate pit	3
S121*	Jutten	В	very org. rust br. almost ferrecrete	6

n/a = samples not yet assayed * = samples assayed in 1992

DESCRIPTION OF ROCK SAMPLES (1991-Some assug 3 done in 1992)

<u>No.</u> _ES1-	LOCATION TWP.	TYPE	ROCK TYPE	MINERALIZATION	ASSAYS IN PPB Au
R1	Poisson	chip (6")	quartz vein	To minor py.	5
R2	Savant	chip (3')	qtz. sec. schist	5% po	5
R3	Savant	grab	qtz. sec. schist	5- 10% po	8
R4	Savant	chip (1')	qtz. chl. schist	minor po cpy	5
R5	Savant	chip (2')	rusty volc. lens	5% po	36
R6	Savant	chip (10')	carb. alter. volc.	minor py	40
R7	Savant	chip (3')	qtz. v. chl.	5% py	69
R8	Benner	chip (1")	qtz. v. in grwke	5% py	7
R9	McGillis	chip (6")	sheared volc.	10% py	5
R10	McGillis	chip (6')	shear in volc.	20% py	35
R11	Poisson	chip (12")	qtz. carb. v.	5% py	163
R12	Savant	chip(18")	qtz. / sheared arg		17
R13	Savant	5 boulders	qtz. mtrx. bx.	20% py	58
R14	Savant	grab	silic. shear in per		8
R15	Savant	grab	rusty as above	rust	5
R16	Savant	grab	as above	rust	5
R17	Savant	grab	gabbro	5% py, po	9
R18	Savant	grab	sheared gabbro	2% po	5
R19	Savant	grab	sheared conglo.	fuscite	40
R20	Savant	•	ns) cr. mica qtz	tr. asp.	110
R21	Savant	chip (5')	same as above	1% sulf.	14
R22	Savant	chip (10')	same as above	1% sulf.	30
R23	Savant	boulders	chl. sch. qtz. carl	b. rust	7
R24	28W 25S	grab	qtz.vein shear	2" mass. py.	n/a
R25	28W 25S	grab	qtz. v. shear	7' 20% py, po	n/a
R26*	McGillis	chip (3')	carb. dacite conta	— · · · ·	30
R27*	McGillis	chip (3')	bull qtz.	-	10
R28*	Poisson	chip (3')	chlorite schist	5% stibnite	1441
R29*	Jutten	chip (6')	chlorite schist	10-20% sulf.	51
R30*	Jutten	grab (3')	shear qtz. carb.	mass. asp. py.	9284
R31*	Jutten	grab (3')	shear. qtz. carb.	10% asp. py.	485
R32*	McGillis	grab	shear. conglo.	tr. py. asp?	91
R33*	24W350S	chip (4")	qtz. v. in carb.	tr. sulf.	3
R34*	24W300S	chip (6")	qtz. IF chi. sch.	minor py.	55
R35*	6230W2680N		qtz.lens in chl. so	ch. tr. sulf.	120
R36*		chip (6')	qtz. & IF in shea	r 2" mass. sulf.	1817
R37*	28W 25S	chip (6')	same as above	5% sulf.	2362
R38*	28W 25S	grab	IF chl. schist	75% py	30400
R39*	Jutten	chip (18")	shear in chl. sch.		
R40*	Jutten	chip (12")	same as above	rust	205
	n	- '		= samples assayed i	

]	No	LOCATION	TYPE	ROCK TYPE	MINERALIZATION	ASSAYS
	GS1-	TWP.				IN PPB Au
]	R1	Poisson	grab	sch. fel. tuff	carb.	5
,	R2	Poisson	grab	numerous qtz. v.	5-10%py.	9
1	R3	Savant	grab	rusty volc.	5% py, po	5
	R4	Savant	chip (12")	qtz. chl. v	5% py, po	372
•	R5	Savant	chip (12")	silic. rhy. dike	2% py	100
1	R6	McGillis	grab	24' shear volc.	15% rust	31
	R7	McGillis	chip (3")	grwke, qtz.v	mass. py	9
	R8	Savant	grab	shear volc.	mass. py	71
	R9	Savant	grab	grey chert	10%ру. 1%ср	22
	R10	Savant	grab	felsic agg	rusty	6
	R11	Poisson	grab	sand		7
	R12	Poisson	grab	sand		6
	R13	Poisson	grab	sand		11
	R14	Poisson	grab	sand		12
	R100	62W900N	grab	schist	Fe carb	32
	R101*	Poisson	grab	schist	minor py.	38
	R102*	Poisson	grab	sheared dacite	10% FeCO3	38
	R103*	Poisson	grab	sand		38
	R104*	Poisson	grab	sand		6
	R105*	Poisson	chip (12')	carb schist	tr. py.	52
	R106*	Jutten	grab	carb schist	2% py. tr. asp	3675
	R107*	McGillis	boulders	shear schist	4% py	40
	R108*	Poisson	chip (12")	shear volc.	3% asp	189
	R109*	2385W450S	grab	chl schist	5% fe carb	28
	R110*	2460W360N	boulders	chl. schist	tr. py 20% fe car	b 36
	R111*	3595W360S	boulders	carb.schist	minor py	26
	R112*	36W300S	pebbles	schist	rusty	14
	R113*	6470W2510N	grab	qtz. carb. v.	rusty	2
	R114*		grab	muck from trench	▼	8
	R115*	Jutten	grab	same as above	same as above	12
	R116*	Jutten	grab	from muck pile	as above	8
	R117*	Jutten	grab	wh & blk carb.	10% asb.	4
			_			

n/a = samples not yet assayed *= samples assayed in 1992

APPENDIX 2 ASSAYS AND ANALYTICAL RESULTS

BACKGROUND TO GEOCHEMISTRY

ROCK SAMPLES:

Each sample typically weighed 1-2 kg Collected with geologic hammer/pick or rock chisel Preparation at lab - crush and pulverize to -100 mesh Analytical methods - noted on assay and analyses certificates

SOIL SAMPLES:

Each sample typically weighed 0.5-1 kg

Most samples are B-horizon - see sample descriptions (Appendix 1)

Collected with geologic pick or mattock

Preparation at lab- dry and sieve to recover -80 mesh fraction for analysis

Analytical methods - noted on assay and analyses certificates

SAMPLE NUMBERING SCHEME:

<u>G S 2 - R 8</u> 1 2 3 4 5

1 = Sampler = G = George Gorzynski E = H. Eric Ewen

2 = Project - B = DC Creek

F = Follow up

H = Handy Lake / Harold Lake

R = Roly Lake

S = Savant Lake Project

W = Wiggle Creek and miscellaneous

3 = Year - 1 = 19912 = 1992

4 = Sample type - R = rock S = soil

5 = Sample number

852 E. HASTINGS ST. VANCOUVER B.C. CAL LABORATORIES LID. ACME ANA

352 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 GEOCHEMICAL ANALYSIS CERTIFICATE

44

1253-1716

PHONE (604) 253-3158 FAX (f

George Gorzynski PROJECT BBM File # 92-1349 General Delivery, Savant Lake ON

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2 E	2,7
4 P	770
Mo Cu	49 211 50
운전	
SAMPLE#	G81-R-1 G81-R-2 RE G81-R-1

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 ROCK P2 SOIL AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE. Samples beginning 'RE' are dublicate samples.

DATE RECEIVED: JUN 8 1992 DATE REPORT MAILED: \$\frac{12}{9}\$ SIGNED BY ... ANY , 0.10YE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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George Gorzynski PROJECT BBM FILE # 92-1349

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Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 TICAL LABORATORIES LID. ACME ANA!

GEOCHEMICAL ANALYSIS CERTIFICATE

PHONE (604) 253-3158 FAX (('4) 253-1716

File # 92-3140 submitted by: G. GORZYNSKI G.G. Engineering Ltd. PROJECT SVT 3836 U. 16th Ave., Vencouver BC VGR 3C7

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR WH FE SR CA P LA CR MG 8A TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB 2N AS > 1%, AG > 30 PPM & AU > 1000 PPB. SOIL P6 TO P8 ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB. Samples beginning 'RE' are duplicate samples.

DATE REPORT MAILED: SEP 14 1992 DATE RECEIVED:

92 SIGNED BY ... STONED BY ... ASSAYERS

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G.G. Engineering Ltd. PROJECT SVT FILE # 92-3140

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Sample type: ROCK. Samples beginning 'RE' are duplicate samples. AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE.



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Sample type: ROCK.



G.G. Engineering Ltd. PROJECT SVT FILE # 92-3140

Page 8

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852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

LID.

PHONE(604)253-3158 FAX(6-4)253-1716

GEOCHEM PRECIOUS METALS ANALYSIS

File # 92-3140R G.G. Engineering Ltd. PROJECT SVT

SAMPLE#	NR-1 NR-2 NR-4 NR-5	NR-6 NR-7 NR-8 NR-9 RE NR-3	STANDARD FA-10R
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10 GRAM SAMPLE FIRE ASSAY AND ANALYSIS BY ICP/GRAPHITE FURNACE.
- SAMPLE TYPE: ROCK PULP
Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 3 1992 DATE REPORT MAILED: $\sqrt{646/9}$ SIGNED BY. ...

...... D. TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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HASTINGS ST. VANCOUVER B.C. V6A 1R6 GEOCHEMICAL ANALYSIS CERTIFICATE

PHONE (604) 253-3158 FAX (6' 1253-1716

George Gorgynski PROJECT SAVANT LAKE File # 92-1756
General Delivery, Savant Lake ON 250

Page 1

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AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. - SAMPLE TYPE: P1 ROCK P2 SOIL AU* ANALYS Samples beginning 'RE' are dublicate samples. George Gorgynski PROJECT SAVANT LAKE File # 92-1756 George George Delivery, Savant Lake ON POV 250 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 GEOCHEMICAL ANALYBIS CERTIFICATE CAL LABORATORIES LID.

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 MCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - 5AMPLE TYPE: P1 ROCK P2 SOIL Samples beginning 'RE' are duplicate samples. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: JUL 2 1992

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George Gorzynski PROJECT SAVANT LAKE FILE # 92-1756

Page 2

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB. - 5AMPLE TYPE: PI ROCK P2 SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Semples beginning 'RE' are duplicate semples. 17/92 SIGNED BY ... STONE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS DATE RECEIVED: JUL 13 1992 DATE REPORT MAILED:

KCAL LABORATORIES LID ACME ANA

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

GEOCHEMICAL ANALYSIS CERTIFICATE

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PHONE (604) 253-3158 FAX (60

George Gorzynski PROJECT SAVANT File # 92-2056 General Delivery, Savant Lake ON POV 250

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB. - SAMPLE TYPE: P1 ROCK P2 TO P4 SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED:



Page 2
92-2056
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George Gorzynski PROJECT SAVANT FILE # 92-2056

Page 3

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SAMPLE#	OP2 L36W 2+00N OP2 L36W 1+50N OP2 L36W 1+00N OP2 L36W 0+50N RE OP2 L36W 2+00S	OP2 L36W 0+50S OP2 L36W 1+60S OP2 L36W 1+50S OP2 L36W 2+00S OP2 L36W 2+50S	OP2 L36W 3+00S OP2 0 40W OP2 0 39W OP2 0 38W OP2 0 37W	OP2 0 36W OP2 0 35W OP2 0 34W OP2 0 33W	OP2 0 31W OP2 0 30W STANDARD AU#-S

AU# - 0.1% CYANIDE LEACH, SHAKE 2 MINUTES EVERY HOUR FOR 24 HRS., DIGEST IN AQUA REGIA, EXTRACT INTO MIBK, ANALYSIS BY GRAPHITE AA. - SAMPLE TYPE: PI ROCK P2 TO P4 SOIL <u>Samples beginning 'RE' are dublicate samples.</u>

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AU** ANALYSIS BY FA/ICP FROM 10 GM SAMPLE.
- SAMPLE TYPE: P1 ROCK P2-P3 SOIL
Samples beginning 'RE' are duplicate samples.

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Rock Samples

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	FA/AA3
Sample	рръ
EW2-R-1	6/8
EW2-R-2	933
FM2-K-3	68
LW2-R-4	48950
EW2-R-5	16
EW2-R-6	67
GW2-R-1	248
GW2-R-2	7
GM2-K-3	/3
EW2-5-1	168
EW2-5-2	2///
EW2-5-3	13
EW2-5-4	1206
EW2-5-5	577
GW2-5-1	46

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Rock Samples Νi Mo Cu ۲b Zn Ag LCAP 1CAP **TCAP** TCAP ICAP LCAP Sample ppm PPM PPM PPM PPM PPM 30 EW2-R-6 <1 199 61 0.6 48 Co As Mn Fе Hg 5r LCAP LCAP TCAP LCAP LUAP TCAP Sample ppm ppm% PPM PPM. PPM 92 ₹3 E W2-R-6 16 163 18.72 5 Cd V Ca ρ Sb Вi LCAP ICAP **ICAP** TCAP TCAP **ICAP** Sample PPM PPM ppm PPM % % 0.29 0.10 EW2-R-6 1 2 6 2 Ti ΑÌ La C۲ Mg Вa TCAP **ICAP** TCAP TCAP LCAP LCAP Sample PPM ppm% PPM % % EW2-K-6 <1 138 0.07 10 (0.01 0.04 Na Si ве W LCAP LCAP ICAP ICAP % % PPM PPM <u>Sample</u> (0.01 (0.01 29 1 LW2-R-6



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APPENDIX 3

RECONCILIATION OF 1990-92 ONE PINE GRID GOLD ASSAYS IN SOILS

APPENDIX 3 - COMPILATION OF REPEAT GOLD ASSAYS IN SOILS, ONE PINE LAKE AREA

The history of the "disappearing" gold anomalies in soils of the One Pine Lake area is described in Gorzynski and Ewen (1991b) and briefly outlined in Section 4.3.3.1 of this report. The following is a table of the multiple repeat assays and analyses carried out on the various samples collected.

GOLD (ppb) ASSAYS AND ANALYSES									
Sample Site	(1)	(2)	(3)	(4)					
•	Original 1990	- •		Resample 1992					
	FA/AA	Acid Leach	FA/AA	BLEG					
BL, 37+00W	107	8	<5	5.0					
38+00W	50	2	10	0.4					
32W, 12+00S	20 (check 20))		<5					
13+00\$	22`	•	<5						
36W,0+50S	614		<5	1.4					
1+00\$	6		<5	0.4					
1+50S	7	<2		0.4					
2+00S	60	<2	<5	0.2					
2+50\$	5			1.8					
3+00S	203	<2	<5	0.8					
36W,1+00N	9 (check 9)	<2	<5	2.4					
1+50N	81 ·	3		3.2					
38W,1+00S	105	2							

From the above comparisons it is concluded that, although a few sporadic gold anomalies occur, the extraordinary 'arge proportion of highly anomalous gold values in the 1990 results was due to analytical error. Further details on sampling and assaying techniques are found in Gorzynski and Ewen (1991b).

APPENDIX 4

OF GOLD MINERALIZATION IN THE SAYANT LAKE AREA

APPENDIX 4 - STRUCTURAL SETTING AND ZONING OF GOLD MINERALIZATION IN THE SAVANT LAKE AREA

A4.1 INTRODUCTION

Over a number of years our exploration activities in the Savant Lake area have lead to the realisation that gold mineralization here forms a structurally and chemically cohesive geological system with significant implications for exploration. Summarised below are brief descriptions of all the main gold showings and other structurally controlled zones of mineralization in the area. This is followed by thoughts on the structural framework, chemical zoning and possible genesis of this gold mineralising system.

A4.2 GEOLOGY

The regional geology is more fully described in Section 3. of the main report. In brief, the Savant Lake area is underlain by diverse, in part tectonically juxtaposed, packages of rocks which vary from mafic volcanics to felsic volcanics to metasediments and others. These greenstone belt rock packages are bounded and intruded by a variety of granitoid intrusives whose relationship to the supracrustal rocks varies from subvolcanic porphyry intrusions to metamorphosed batholiths to unmetamorphosed stocks.

Two to three phases of deformation ($D_1/D_2/D_3$) have affected the area. D_1 and D_2 were major folding events which produced common pervasively foliated rocks over large areas. D_3 was a shear event which produced large and small deformation/shear zones the most prominent of which is the Kashaweogama Lake Shear Zone (KLSZ).

A4.3 DESCRIPTIONS OF MINERALISED ZONES

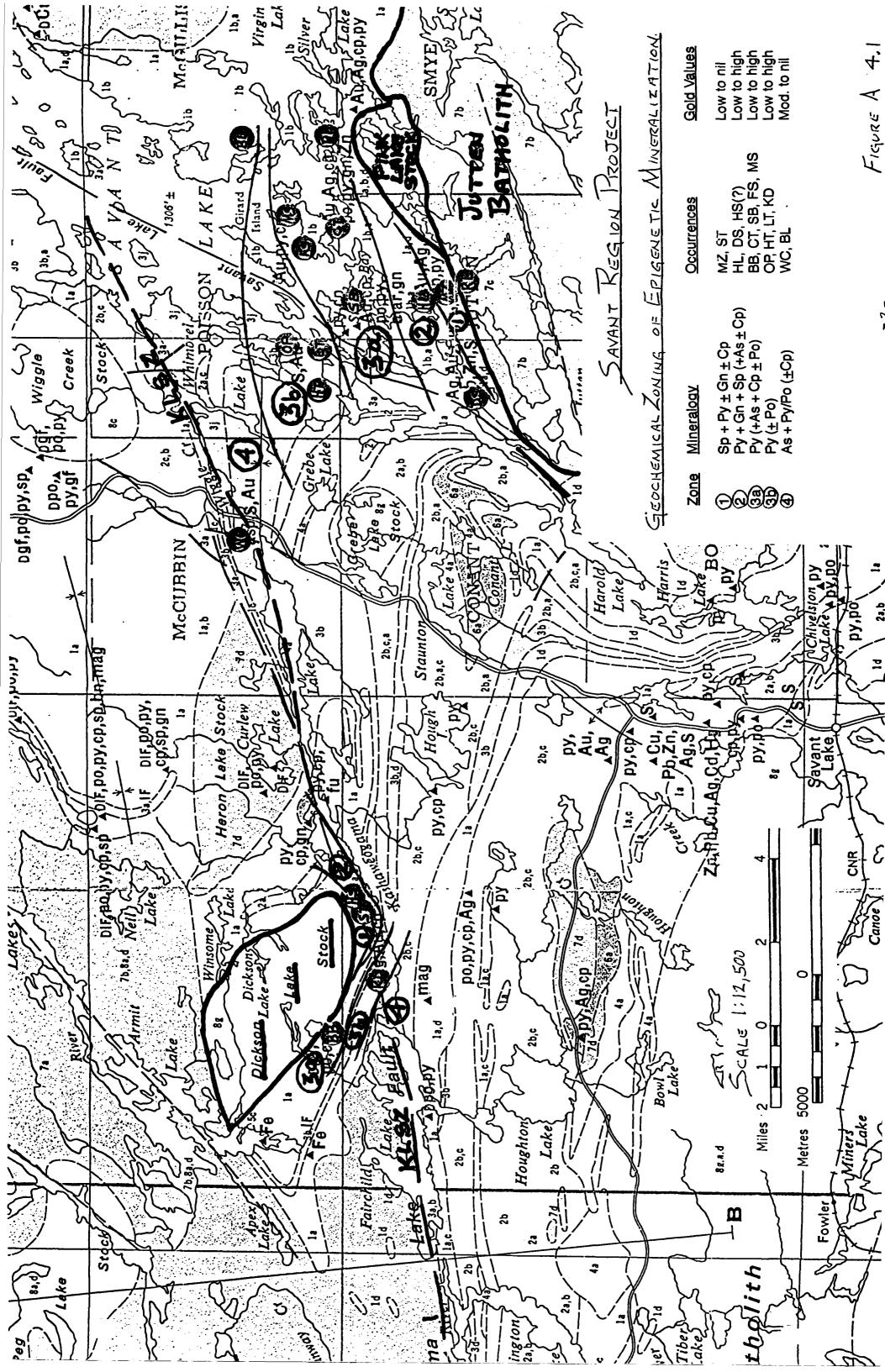
A4.3.1 HOEY GOLD SHOWING

(and other occurrences along Kashaweogama Lake)

Location: HS on Figure A4.1.

References: Ho (1988), Bond (1980, p.97), Sanborne-Barrie (1990, p.28).

The Hoey Gold Showing is well exposed in large washed overburden cuts and small blasted trenches. It comprises an Upper (northern) Zone and a Lower



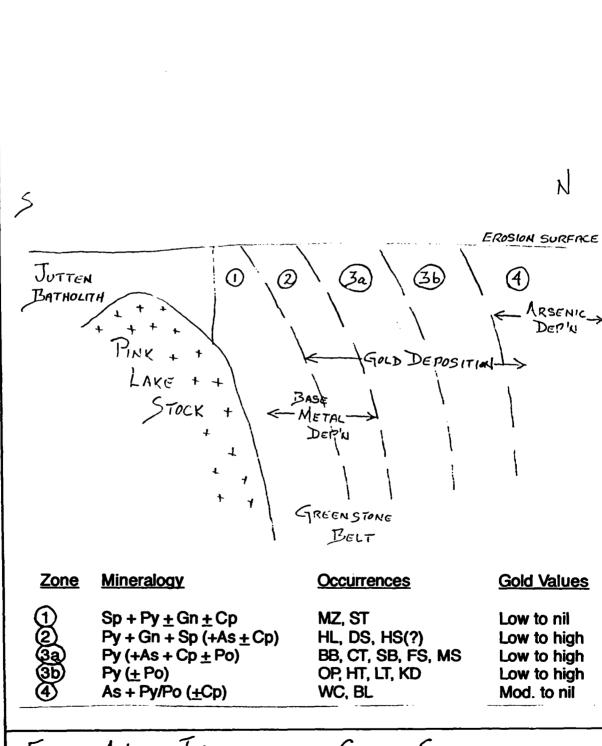


FIGURE A4.2: INTERPRETIVE CROSS-SECTION ACROSS
EPIGENETIC GEOCHEMICAL ZONES

(southern) Zone. The zones are subparallel, moderately altered shears about 25m apart, cutting pillowed basalts.

The Upper Zone is a <2m wide moderately bleached shear with scattered small quartz veins and silicified lenses <5cm wide, hosting <1% pyrite, <1% galena and low grade gold mineralization (typically <1000 ppb Au).

The main showing is the Lower Zone (Figure A4.3). This is a 1-3m wide weakly iron carbonate altered, moderately bleached and locally silicified shear. It hosts 15% folded and typically disaggregated white to grey quartz (+ iron carbonate) veins. These veins are 1-25cm wide and up to 4m long. They host 1% pyrite, <1% pyrrhotite, traces of chalcopyrite and sparse pockets of fine disseminated gold in sulphidic sections. Assays up to 1.47 opt Au have been obtained from the veins but typical grades are much lower.

The Lower Zone is located in a gentle S-flexure of the shear zone (Figure A4.3). The disaggregated veins indicate that the shear continued to move after those veins were emplaced. A late single vein cuts the shear foliation at the western end of the exposure indicating that some deposition of quartz continued after movement on the shear had ceased.

Several other occurrences are known in the area but only a select few are discussed here:

SPHALERITE TRENCH

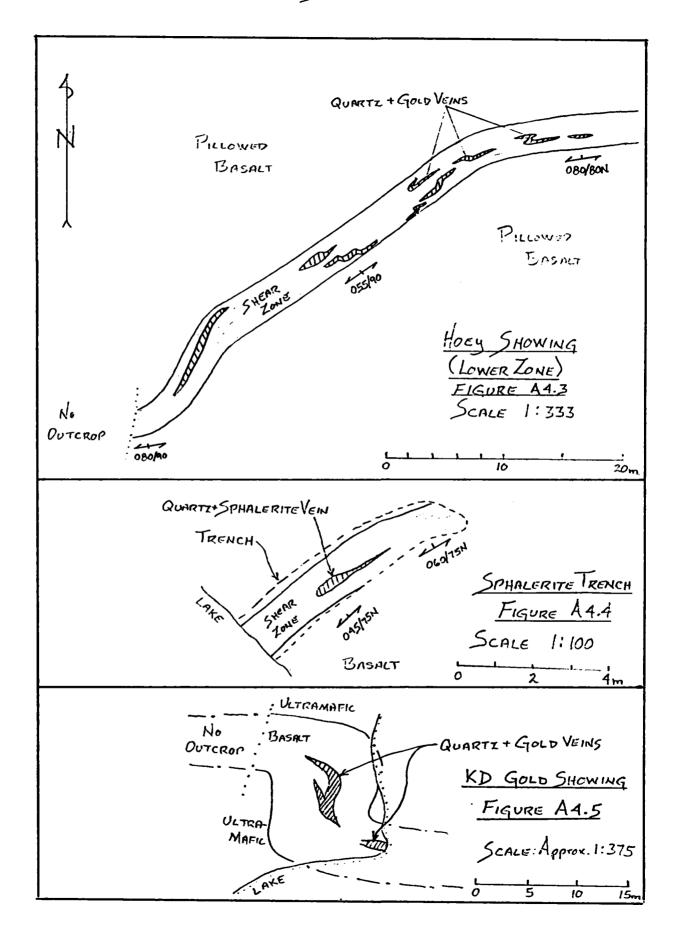
Location: ST on Figure A4.1.

Reference: Ho (1988).

This is a 2-20cm wide by 3m long quartz vein lens in a 1m wide chlorite schist/ shear cutting basalts (Figure A4.4). The vein hosts 3% pyrite/marcasite, and 2% sphalerite as inhomogeneously distributed clots in the vein. Disseminated sulphides form 10cm envelops on the veins. The chlorite schist is marked by only minor iron carbonate alteration and 2% Cr-mica. Samples from this zone and another pyritic quartz vein in a shear 20m to the north, all returned low to negligible gold values.

The Sphalerite Trench mineralization occurs in a gentle S-flexure in the host shear (Figure A4.4).

A 1m wide shear zone hosting disseminated pyrite and galena occurs in basalts beside the Dickson Lake Pluton contact about 150m north of the Sphalerite Trench. This zone carries only negligible gold values but may be indicative of a base metal to gold zoning of mineralization in the area.



KD GOLD SHOWING

Location: KD on Figure A4.1.

References: Ho (1988).

This is a 1-50cm wide pinch and swell white quartz + iron carbonate vein (Figure A4.5). The vein is in a 5m wide Z-folded massive to foliated basalt horizon enclosed in foliated ultramafics. The vein hosts <1% pyrite and locally grades 0.8 opt Au / 1m.

The vein has filled a dilation in a prominent Z-fold whose axis trends at 265°/65°. This axis may not be representative of structural settings for mineralization elsewhere in the area because the KD Gold Showing is located on the southeast edge of a large, disharmonically folded ultramafic body.

The prominent zones of Cr-mica alteration south and east of the showing are probably products of hydrothermal mobilisation of chromium from the ultramafic body into adjacent lithologies. Small arsenopyrite occurrences with low to negligible gold values occur on the island just south of the KD gold showing and in the Fairchild Lake Batholith 300m to the west.

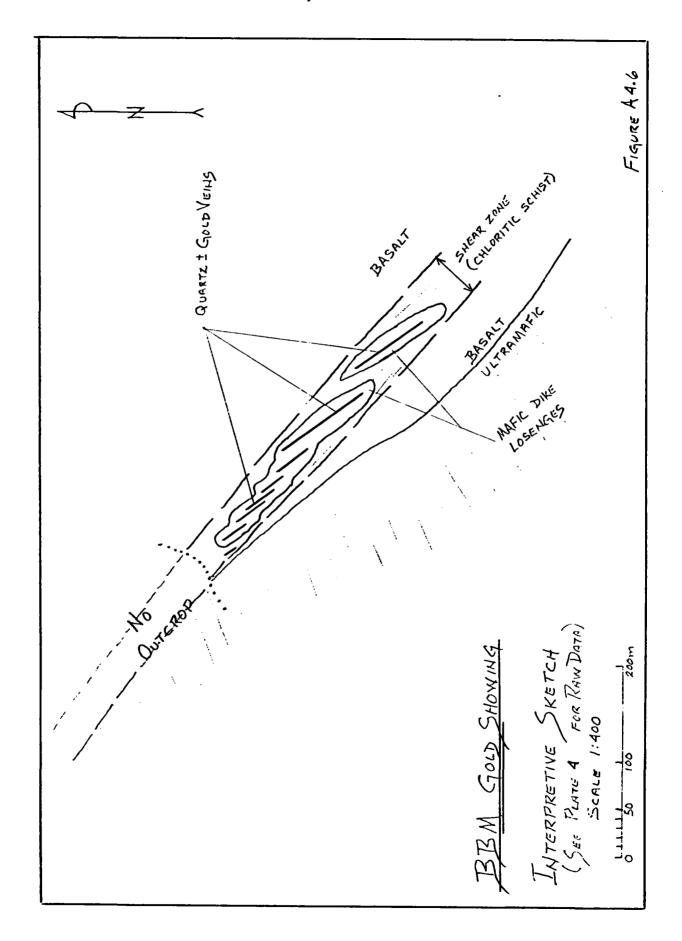
A4.3.2 BBM GOLD SHOWING

Location: BB on Figure A4.1.

References: Section 4.1 - this report, Brown (1986), B.B.M. (1976),

Queenston (1958).

This showing is located 3 km northwest of Kashaweogama Lake (Figure A4.1) in the Jutten volcanic group (JVG). It is exposed in 17 trenches over a strike length of 200 m and consists of a series of en echelon veins (Figure A4.6). The two larger eastern veins are 30-60 cm wide while most of the western veins are <15 cm wide. Our samples returned erratic gold values up to 0.28 opt Au (in soil). The individual veins are largely hosted in massive basaltic (dike) lozenges in a chloritic schist / shear zone cutting foliated to massive basalt. A large peridotite horizon occurs 20-50 m south of the showing. The veins and host dike lozenges trend at 145°/90° and sit in en echelon fashion in the 130°/90° trending shear zone. Veins are typically bull white quartz locally with 10% pyrite and <1% pyrrhotite, arsenopyrite and chalcopyrite. High gold values and visible gold may occur in sulphide-rich and sulphide-poor samples. Only minor alteration in the form of bleaching/sericite and iron carbonate were noted at the showing.



The peridotite-basalt contact is bent in the vicinity of the showing and it appears that this anisotropy was the catalyst for the formation of en echelon dilations during movement on the shear zone (Figure A4.6). The shear zone is probably localised along this contact to the northwest and where the contact bends near the showing, the shear zone diverges from the contact. Where this divergent ductile shear encountered one or more massive basaltic dikes, the dikes brittlely fractured and the en echelon dilations were subsequently filled with quartz, sulphides and gold to form the BBM showing. The relative sense of offset on the shear is not known.

An eight kilometre long, 100 m± wide belt of spectacular apple green Cr-mica alteration zones passes 100 m northeast of the BBM gold showing. These Crmica zones, commonly 1 - 2 m wide and locally up to 10 m wide, are largely confined to metachert and associated sericite schist horizons. They do not carry notable precious metal values and only rarely host minor disseminated pyrite. They appear to be products of hydrothermal solutions that carried chromium out of local ultramatic horizons and into the metacherts and sericite schists. The Crmica belt occurs 400-500 m southwest of and subparallel to the contact of the Dickson Lake Pluton which may have been the heat engine that drove the gold mineralising solutions. Similar extensive Cr-mica alteration zones, mainly in sericite schists, occur on the east side of the pluton. The location of the BBM gold showing just a short distance further from the pluton than the Cr-mica belt may indicate a genetic link. Although no other gold showings have yet been found along such a BBM hydrothermal horizon. Section A4.3.1 describes other mineral occurrences which also appear to have a genetic link to the Dickson Lake Pluton.

A4.3.3 ROLY LAKE GOLD OCCURRENCES

Location: RL on Figure A4.1.

References: Section 4.2 - this report, Moede (1983), Huggins (1984).

This area is located entirely within the Jutten Batholith 225 m south of the greenstone belt contact (Figure 6 in main text). These are recently discovered occurrences and very little work has been carried out on them to date. The three gold occurrences are small (≤1 m wide) rusty shears with pyritic (1-5%) quartz-tourmaline veins in variable orientations hosted by monotonous massive to foliated trondhjemite. These zones occur in an area of abundant randomly oriented quartz-tourmaline veins typically 5 cm wide and locally 50 cm wide, which commonly form 2-10% of any given outcrop. These veins mainly occur in an easterly trending belt, 80 m wide and 0.5 km+ long. Most of the veins and shears carry negligible precious and base metal values.

The structural setting of these zones is not yet understood. The veins do cut the pervasive foliation of the trondhjemite in this area and the occurrences are in later probable D_3 shears. This scenario is consistent with the style of gold mineralization in the greenstone belt and, at this early stage, suggests a genetic link.

A4.3.4 MOEDE ZINC TRENCHES

Location: MZ on Figure A4.1.

References: Personal visit (1992), Moede (1983), Huggins (1984).

These trenches are 15 m north of the middle of the north shore of a pond just north of Little Long Lake in Jutten Township. Four trenches varying in size from 2x1x<1 m deep to 15x2x1 m deep intermittently expose the zone over a strike length of 47 m. The zone pinches out in outcrop to the northeast and is only 3 cm wide on the edge of a cedar swamp to the southwest.

The zone is a 3 - 40 cm wide pinch and swell white quartz vein hosting <1-30% dark brown coarse clotty sphalerite, <1-10% pyrite, and <1% chalcopyrite. Rock samples from the zone (our samples EH2-R-1 and -2, and Huggins, 1984) returned values of \leq 11.7% Zn, \leq 540 ppm Pb, 490-5400 ppm Cu, 1.5-81 ppm As, \leq 3 ppm Mo, 44-1340 ppm Ag, and 430-1210 ppm Au.

The vein is hosted in a chlorite schist/shear zone 0.2-1 m wide and trending 075°/90°. This shear cuts through JVG massive monotonous basalts which locally grade to gabbros. No measurable consistent foliation was present outside the shear zone.

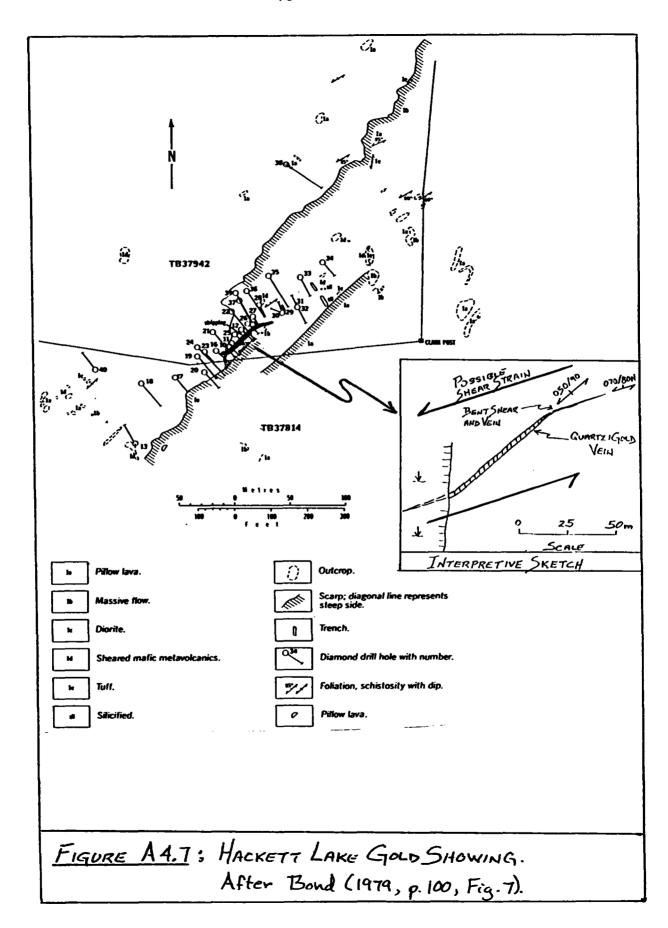
A4.3.5 HACKETT LAKE GOLD SHOWING

Location: HL on Figure A4.1.

References: Bond (1979, p.96-101).

This is the Northern Canada Mines gold showing of Bond (1979) from which Figure A4.7 is taken and supplemented with an interpretive sketch.

The showing is a 30 m long by 1 m wide quartz vein exposure on a benched cliff. The zone is intermittently exposed in trenches and drillholes to the northeast and tested by drillholes under a swamp to the southwest. The showing is a locally vuggy quartz vein with 30% black quartz which has been brecciated and healed by white quartz. The vein has clotty sulphide-rich



(>50%) and sulphide-poor (<1%) sections but overall it averages about 0.5% pyrite, 0.2% galena, 0.1% dark brown sphalerite, and <0.1% arsenopyrite. Chalcopyrite has also been reported but was not seen by us. Surface sampling of the zone in 1949 is reported to have averaged 3.13 opt Au across 3.7 ft over a strike length of 100 ft. Drilling indicated that the zone narrows and becomes lower grade with depth. Our surface samples returned 0.61 opt Au (AH2-R-1: high graded sulphides) and 0.65 opt Au (AH2-R-2: random chips over the entire 30 m exposed vein). These values suggest that gold may not be associated with the sulphide clots but perhaps to one of the vein quartz phases.

The vein trends 050°/90°. Both wall of the vein are marked by 10-30 cm wide chlorite schist/shear zones beyond which the host rocks are massive basalts of the JVG. There is no significant alteration in the area. The shear and thinning vein continue some 30 m to the northeast where the shear bends somewhat abruptly into a 070°/80°N orientation which is the regional foliation trend. This is an example where an S-flexure in a shear has probably dilated to accommodate a quartz-gold vein.

DONNER GOLD SHOWING

Location: DS on Figure A4.1. Reference: Bond (1979, p.79-83).

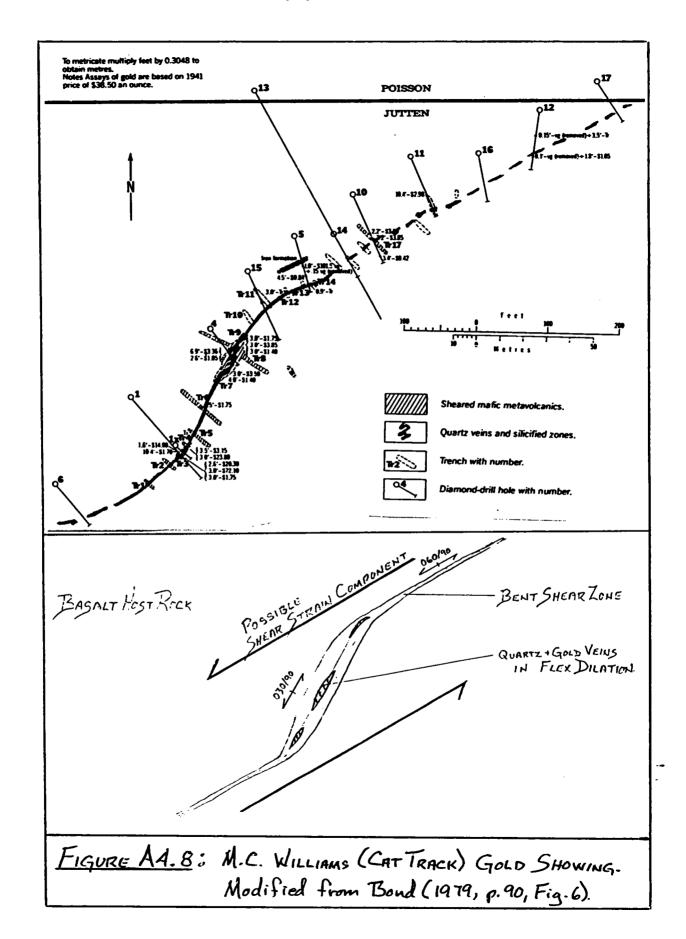
Several other smaller base metal-bearing occurrences are reported in the area but were not visited. The best of these is the Donner gold showing. The showing is reported to be a 0.3-0.9m wide by 4.3m long semi-massive sulphide lens in a 1.2m wide shear oriented at $060^{\circ}/80^{\circ}$ S. Mineralization is "largely pyrite, with accompanying sphalerite and galena". Reported metal values range from trace - 0.32 opt Au, trace - 50.4 opt Ag, trace - 4.66% Pb, and trace - 2.5% Zn over widths of 0.15-0.76m. Two 1965 drill holes below the showing cut "a few minor shears" with low metal values.

A4.3.6 M.C. WILLIAMS (CAT TRACK) GOLD SHOWING

Location: CT on Figure A4.1.

References: Bond (1979, p.88-92).

This is the United Macfie Mines Limited gold showing of Bond (1979). The main showing area (Figure A4.8) is exposed intermittently in some 25 pits and strippings. The zone consists of individual pinch and swell veins and locally en echelon veins. Some trenches across the zone host no veins. The veins vary in width from 1-100 cm and are locally 20 m+ long.



The veins are enclosed in a 3 m+ wide chlorite schist/shear zone. Beyond the shear, outcrops are largely foliated to massive basalts of the JVG. Near the veins the schist is moderately altered to sericite (bleached) and iron carbonate, and locally it is moderately silicified.

Moderate to abundant rust occurs within 30 cm of the veins. This is due to the weathering of pyrite, marcasite, pyrrhotite, sparse chalcopyrite, and rare sphalerite, all mainly in veins. Visible gold has been reported in veins but reported assays typically run <0.12 opt Au across 0.6 - 2 m. These low grade are typical of the entire Stellar Bay area.

The veins occur in a gentle S-flexure in the host shear zone (Figure A4.8). In large part they trend at $030^{\circ}/90^{\circ}$ to $050^{\circ}/90^{\circ}$. Beyond the mineralised zone, the host shear bends into the regional foliation at $060^{\circ}/90^{\circ}$ to $080^{\circ}/90^{\circ}$ where quartz veins are small and scarce. This is another example where an S-flexure has dilated to accommodate quartz-gold veins. Evidence for post-mineralization left-hand shear strain in the zone is found in the S-contortions of veins in Trench #7.

STILLAR BAY GOLD OCCURRENCES

Location SB on Figure A4.1. Reference: Bond (1979, p.101)

The M.C. Williams gold showing is the largest gold mineralised zone in the Stillar Bay Deformation Zone (SBDZ). The SBDZ is a system of anastomosing ENE-trending shears found over an area 0.3 km wide by 5 km+ long. Many other smaller gold showings and occurrences are found in the SBDZ and many exhibit the same S-flexure dilational geometry. These other veins typically carry small amounts of pyrite, chalcopyrite, and arsenopyrite in white quartz. Assays are typically low (<0.1 opt Au) but erratic high gold values are found locally. They occur in wide to narrow chloritic shear zones with weak to intense sericite/bleaching and iron carbonate alteration.

A4.3.7 PRIDE LAKE TRENCHES

Location: PL on Figure A4.1.

References: Moore (1929, p.76), Gorzynski and Ewen (1991a, Plate 2).

Numerous small to very large old blasted pits and trenches follow this eastern extension of the Stillar Bay Deformation Zone (see Section A4.3.6). Many zones of chlorite schist/shears cut the area and are marked by moderate to intense iron carbonate alteration. Most of these zones host sparse to abundant

quartz + iron carbonate veins up to 1m wide. The schists are locally impregnated with <1% pyrite and lesser arsenopyrite. The orientation of the shears wobbles considerably through the area from $075^{\circ}/90^{\circ}$ to $110^{\circ}/90^{\circ}$. Rock and soil samples collected from many of the zones all returned values of <500 ppb Au.

Preferential structural sites for development of quartz + iron carbonate veins were not determined in the field due to lack of time. The common wobbles in the host shear zones, however, were probably instrumental in siting zones of vein formation. The lack of any significant gold values in this eastern extension of the Stillar Bay Deformation Zone, especially given the strong development of alteration and veining, is unusual.

A4.3.8 FALSE STIBNITE TRENCHES

Location: FS on Figure A4.1.

Reference: Section 4.3.3.2.2 (this report).

This is one of many wide zones of chlorite schist/shearing seen in old trenches in the central Savant Lake area. It is exposed in seven old trenches over a strike length of 90m along the north edge of a linear gully and strikes at $085^{\circ}/80^{\circ}$ S subparallel to the regional foliation. The shear is 6m wide with sparse rusty bleached lenses 1-60cm wide containing up to 1% pyrite and locally a prismatic arsenic mineral. High graded samples have returned up to 0.32 opt Au but representative samples assay 0.05 opt Au or less over 0.6m.

This is an example of a shear zone that is subparallel to the major D_3 structures and hosts only minor mineralization. Most old trenches throughout the Savant Lake area expose other large and small shear zones which strike subparallel to D_3 structures and which host no mineralization at all (Gorzynski and Ewen, 1991a,b; Moore, 1929). It appears that in order for a shear to host notable mineralization it must be oriented at a "significant" oblique angle to the local trend of D_3 structures. This is discussed further in Section A4.4.

A4.3.9 McRAE - SIMMONS GOLD SHOWING

Location: MS on Figure A4.1.

References: Bond (1977, p.69), Moore (1929, p.76-77), Gorzynski and

Ewen (1991a, plates).

This is the best of several small gold occurrences on islands in this part of Savant Lake. The original discovery of "spectacular" free gold here in 1926 lead to the first large staking rush in the area. Today much of this vein and shear zone is still exposed in old trenches and a small shaft (Figure A4.9). The showing is a consistent 7-25 cm wide quartz + iron carbonate (+ tourmaline) vein with <1% pyrite and lesser arsenopyrite and chalcopyrite. Gold probably occurs in patches (shoots?) in the vein; two samples collected from the vein near the shaft both returned <100 ppb Au but fine flakes of visible gold are easily panned from a small muck pile on the shore of the lake. The vein is hosted in a 0.3-2.0m wide sericite + iron carbonate schist/shear cutting massive basalt. The altered shear dilates through the area of the vein and pinches to <0.3m wide as it bends into the regional foliation at either end.

The showing occurs in a dilated Z-flexure of the host shear zone (Figure A4.9). No veining is evident in the shear beyond the flexure. This is an example where a Z-flexure has dilated to accommodate a quartz+gold vein.

Several other sericitic, iron carbonate altered shear zones with small quartz veins occur on nearby islands. These shears are typically oriented at $080^{\circ}/90^{\circ}$ to $115^{\circ}/90^{\circ}$ with common small (<1 - 30 cm) pinch and swell quartz veins. No prominent flexures were noted in these shears where they were exposed. The veins and shear zones typically host <1% pyrite, local arsenopyrite, and minor chalcopyrite and sphalerite. Samples from these zones typically return low to negligible gold values but locally grab samples return 0.1 - 0.8 opt gold.

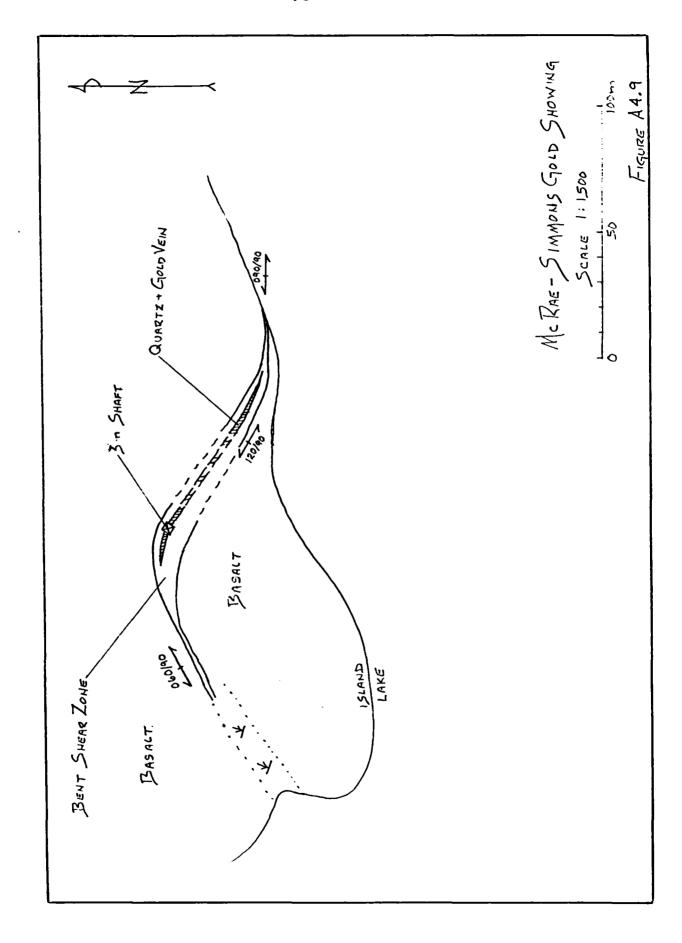
A4.3.10 ONE PINE LAKE GOLD SHOWINGS

Location : OP on Figure A4.1

References: Bond (1977, p.63-66), Gorzynski and Ewen (1991a,b), Sioux

Lookout assessment files.

Two subparallel gold showings occur about 80m apart on the east side of One Pine Lake. Past reports on "the showing" describe one zone or the other, seemingly unaware that two zones occur. The zones are oriented at about $050^{\circ}/90^{\circ}$ but extensive magnetite iron formation in the area make compass readings unreliable. Thus comparison of past reports on "the showing"



becomes very confusing with respect to location, description and orientation.

The West Showing is the original discovery beside the lake that, in 1940, lead to the second large staking rush in the Savant Lake area. The zone is still partially observable in 3 of 6 trenches over a strike length of 30m across a peninsula. Small quartz + iron carbonate veins occur over widths of 0.5-2m in sheared but relatively unaltered chloritic greywackes (?) and magnetite iron formation. Up to 30% pyrite occurs as envelops on the veins and as irregular patches in the shear. Only minor pyrite is found within the veins themselves. No visible gold was found but high graded pyrite samples are reported to contain 0.36-3 opt Au. Average values over a strike length of 24m were reported to be 0.44 opt Au across 1.4m. Eight short holes drilled in 1941 beneath the zone are reported to have returned only low gold values. The zone can also be seen to fade along strike into minor <1cm wide quartz + iron carbonate veins on shoreline outcrops north and south of the trenches.

The 1941 drill holes also intersected another quartz "stringer structure" 15m west of the West Showing, which returned trace to 0.76 opt Au over narrow (0.3 - 0.6m) widths. The probable surface expression of this zone is a small unaltered fracture system found 15m west of the trenches near the tip of the peninsula.

The East Showing is beside the main geophysical baseline about 80m east of, and slightly south of the West Showing. This is a 0.15m wide by 5m long lens of highly pyritic magnetite iron formation with small quartz + iron carbonate veins along strike. Grab samples taken by Bond (1977) returned 0.24 and 0.43 opt Au. The zone is in a package of highly deformed magnetite iron formation and greywackes. A 1989 Placer-Dome drill hole beneath the zone intersected only weak mineralization with local small quartz + iron carbonate veins and minor iron carbonate alteration. No assays were reported.

Other gold showings in the vicinity are discussed below.

HORSESHOE TRENCH

Location: HT on Figure A4.1.

References: Section 4.3.3.2.3 (this report), Gorzynski and Ewen (1991a,b).

This small quartz + gold vein is probably the "second [discovery in 1940] ... located approximately 1 mile ... to the west of the original [One Pine Lake] discovery" (Bond, 1977, p.65). It is a 2-4cm wide quartz vein oriented at approximately 010°/75°E in greywackes and magnetite iron formation. A moderately to intensely bleached and iron carbonate altered felsic dike lies 5m west of the vein. The vein hosts visible gold and minor pyrite. A grab sample from the vein returned 0.42 opt Au but other rock and soil samples taken in the

vicinity all returned negligible gold values.

L28W, 25S TRENCH

Location: LT on Figure A4.1.

References: Section 4.3.3.2.1 (this report), Gorzynski and Ewen (1991a,b).

This is a 1.8 m wide zone of 25% deformed quartz veins in highly deformed felsic tuffs/wackes and magnetite iron formation with 10% pyrite and pyrrhotite. The zone appears to lie in the foliation plane at about 060°/70°S. Chip samples returned assays of 0.053 opt Au / 1.8m and 0.069 opt Au / 1.8m but high graded pyritic samples returned values of 0.295 - 0.89 opt Au. Along strike to the northeast in Savant Lake is the small Shoal Gold Vein Showing. Both these small zones appear to be gold mineralized lenses in a northeasterly trending shear zone.

All these One Pine Lake area gold showings are examples of gold zones lying in the plane of the main foliation. The northeasterly orientation of that foliation is in contrast to the more common easterly foliations found elsewhere in the region. This anomalously oriented structural domain and the presence of abundant magnetite iron formations probably combined to provide structurally and chemically favourable sites for gold mineralization.

A4.3.11 BARNUM LAKE TRENCHES

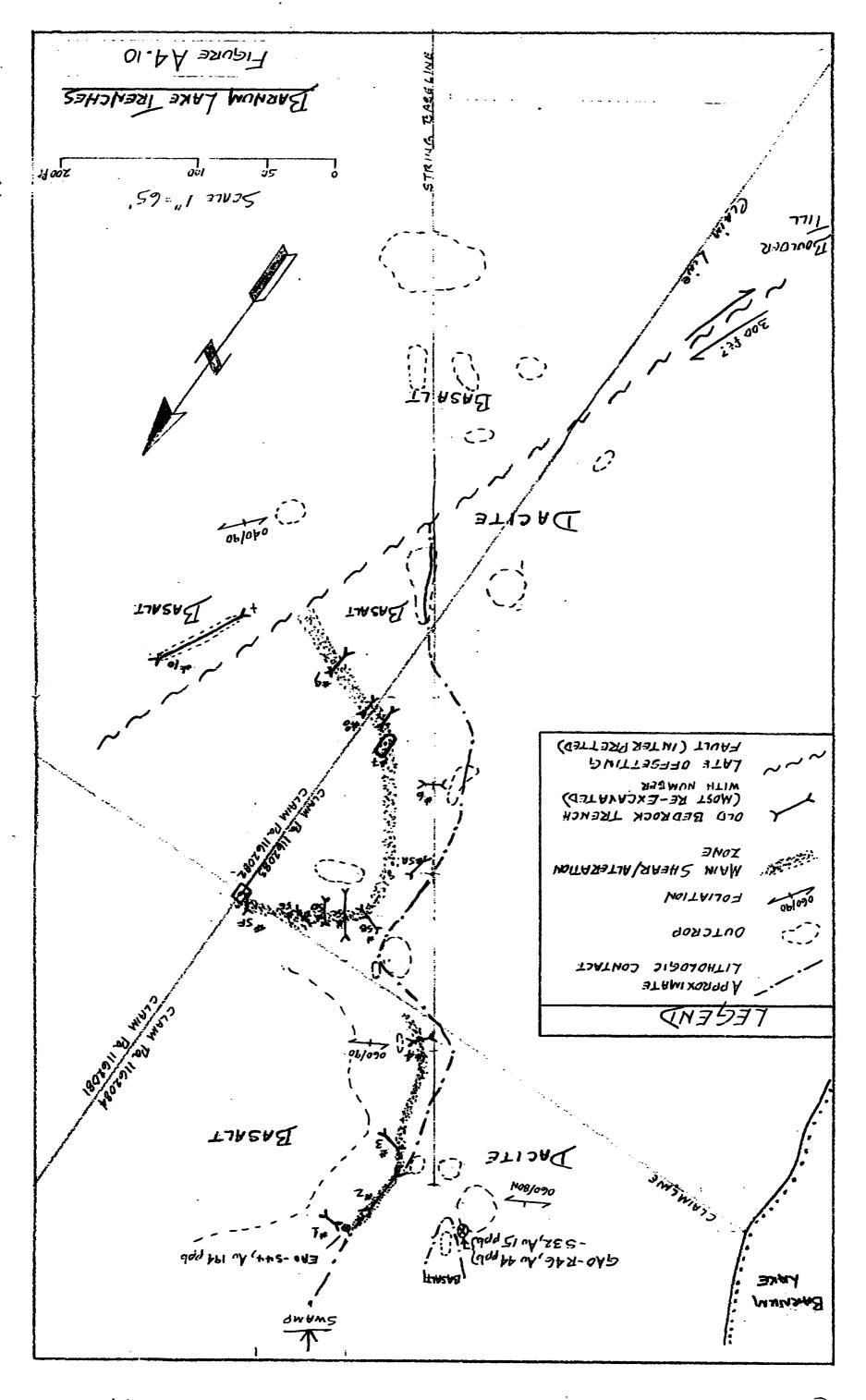
Location : BL on Figure A4.1.

References: Moore (1929), Gorzynski and Ewen (1991a,b).

This is a large, visually very good looking mineralized shear zone which hosts low to negligible gold values. Ten large, old trenches expose a 1.2 - 4.3m wide altered and deformed shear zone over a strike length of 150m (Figure A4.10).

The zone strikes 135°/90° on average and occurs in massive basalts very near and subparallel to the contact of a dacite porphyry stock. The shear is composed of chlorite schist with 30% large lenses of massive light brown iron carbonate and sericite. These lenses typically host 5% arsenopyrite, 2% pyrrhotite, and minor pyrite and chalcopyrite. The zone is cut by 5% late white quartz veins.

This is an example where assymetry associated with a massive intrusive contact has resulted in dilation and subsequent mineralization of a zone of shearing during tectonism.



A4.3.12 WIGGLE CREEK GOLD SHOWING

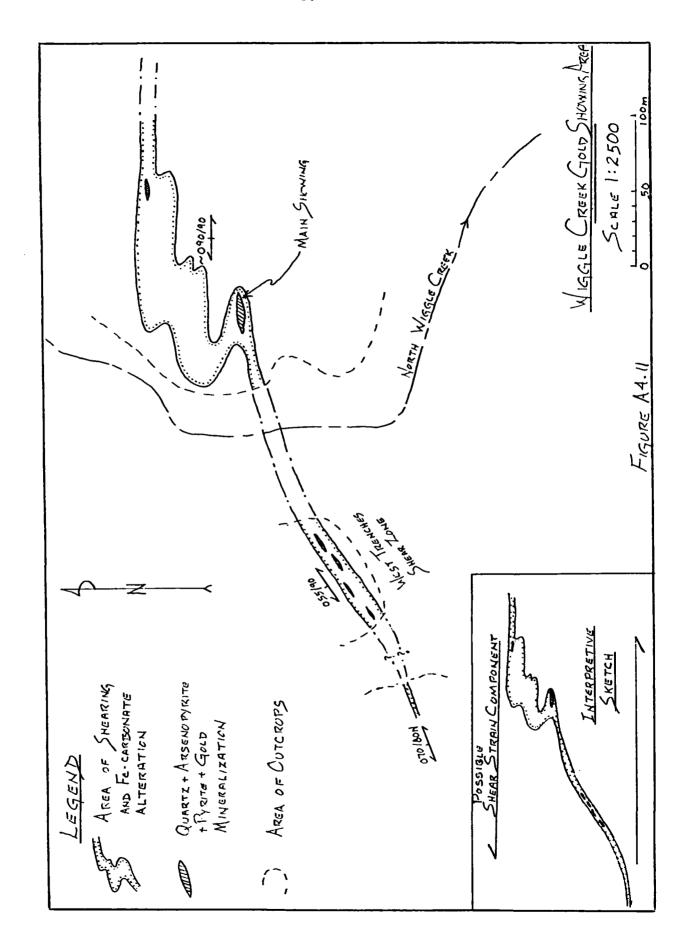
Location: WC on Figure A4.1

References: Section 5.1 (this report), Bond (1977, p.59), Hogg (1983a,b).

The Wiggle Creek gold showing area is underlain by massive to foliated basalts, greywackes and, mainly east of North Wiggle Creek, common magnetite iron formation. Numerous shallow trenches expose small lenses of disseminated to massive arsenopyrite (+pyrite) and vein quartz + arsenopyrite (+pyrite), in a deformed zone of shearing and iron carbonate alteration (Figure A4.11).

The largest mineralized area is the main showing. This is a well exposed 30m long discontinuous zone of pinch and swell mineralized lenses varying in size from <1cm x <1cm to 10m x 0.5m. It is hosted by deformed and altered magnetite iron formation and greywacke. The deformation is an intense mineral foliation with locally preserved folicform folds and the alteration is pervasive weak to moderate disseminated iron carbonate. Magnetite in the iron formation is also locally altered to pyrite on a minor scale. Samples of high graded massive arsenopyrite return values of 0.12 - 0.30 opt Au (Hogg, 1983a; Bond, 1977, p.59). Samples of disseminated arsenopyrite or abundant pyrite typically return values of <<0.1 opt Au. Drilling in the vicinity of the main showing indicates the zone is weak at depth (Hogg, 1983b). Trenches elsewhere on the zone all encountered only small scattered lenses of mineralization. Overall the zone is marked by small discontinuous lenses of mineralization which host erratic gold values.

The mineralized lenses occur in a dilated S-flexure of the host zone of shearing and alteration (Figure A4.11). Beyond the mineralized zones, the host shear and alteration zone appears to narrow considerably and bend into the regional foliation. This is another example where an S-flexure in a zone of deformation has dilated to accommodate incoming gold mineralization.



A4.4 DISCUSSION AND CONCLUSIONS

- 1. A genetic link between the various gold, arsenopyrite and base metal showings / occurrences in the area has not been definitively demonstrated but common structural setting, structural style, and a consistent regional geochemical zoning of the mineralization (Figure A4.1) indicate that such a link is probable.
- 2. GEOCHEMICAL ZONING: Figures A4.1 and A4.2 outline the empirical regional geochemical zoning pattern ("geochemical sets") of structurally controlled gold, arsenopyrite and base metal mineralization in the region:

<u>Zone</u>	Mineralogy	<u>Occurrences</u>	Gold Values
1	$Sp + Py \pm Gn \pm Cp$	MZ, ST	Low to nil Low to high Low to high Low to high Mod. to nil
2	$Py + Gn + Sp (+As \pm Cp)$	HL, DS, HS(?)	
3a	$Py (+As + Cp \pm Po)$	BB, CT, SB, FS, MS	
3b	$Py (\pm Po)$	OP, HT, LT, KD	
4	$As + Py/Po (\pm Cp)$	WC, BL	

Key: Zone: As marked on Figure A4.1.

Mineralogy: As=arsenopyrite, Cp=chalcopyrite, Gn=galena, Po=pyrrhotite,

Py=pyrite, Sp=sphalerite.

Occurrences: Per Section A4.3 and Figure A4.1.

Gold Values: Low=<0.05 opt, Mod.=0.05-0.20 opt, High=>0.20 opt in

typical samples.

The only significant exception to the pattern is the Roly Lake Gold Occurrences which are hosted by a tronhjemite batholith and are located entirely outside the greenstone belt.

This overall base metal - gold - arsenic zoning is very reminiscent of the vertical zoning associated with various gold deposits in the southwestern United States. In those deposits, ascending hot mineralising fluids deposited base metals and silver low in the system, gold was precipitated at intermediate levels in the system as the mineralising fluids cooled, and arsenic and mercury were deposited high in the system as the fluids cooled further.

A somewhat similar scenario can be applied to the Savant Lake area. Gold mineralization in the area appears to be a late to post-D₃ event (Section 3.). If the pattern of geochemical sets is due to cooling mineralising fluids, an appropriate heat center to set up a temperature gradient through which the fluids pass, may be late- to post-D₃ intrusions. Candidates for such

intrusions do occur at or near the base of both the West Geochemical Set (WGS) and the East Geochemical Set (EGS) (Figure A4.1).

The WGS is centered on the granodioritic Dickson Lake Pluton. The early phase of the pluton is probably a pre- to syn- $D_{J/2}$ intrusion and not a likely candidate. The second phase of the pluton is probably a syn- to post- D_3 intrusion (Section 4.1.3) and thus appropriate as the heat center candidate.

The EGS is zoned away from the greenstone belt - Jutten Batholith contact. The Jutten Batholith, however, is not a likely candidate for the heat center because it is probably a pre- to syn-D₂ body (Section 4.2.3) and it hosts the Roly Lake Gold Occurrences. Just to the east of Roly Lake there is an appropriate candidate. The Pink Lake Stock, a syn- to post-D₃ unfoliated quartz monzonite body, intruded along the greenstone belt - Jutten Batholith contact. This intrusion or related bodies may occur in the subsurface near the contact to the west and there act as the heat center associated with the EGS mineralization.

Note that this hypothesis puts no restrictions on the source of metals in the mineralising fluids. The metals may have been derived from deep crustal sources, from convective leaching of local greenstones or in magmatic waters from the candidate intrusions themselves. The intrusions only acted as heat centers away from which mineralising fluids cooled and deposited a zoned pattern of metals in appropriate structural settings.

- 3. STRUCTURAL SETTING: Most zones of epigenetic mineralization in the area are quartz veins hosted in shear zones of varying size (Section A4.3). The zones occur in a variety of structural settings. The most common is in S-flexures of shears, but Z-flexures, and various unflexed shears also occur. Despite this variety, there are some region-wide common structural themes:
 - 1. Mineralized shears tend to be oriented at a "significant" oblique angle to the Kashaweogama Lake Shear Zone (KLSZ) and other associated D₃ easterly trending structures (e.g.- almost all the zones discussed in Section A4.3). Shears that are oriented subparallel to these D₃ structures host little or no mineralization (e.g.- False Stibnite Trenches and the numerous (>30) other shears sampled in old trenches during the 1990/91/92 field seasons). The magnitude of the "significant" oblique angle that mineralized shears attain varies with a number of factors. In most cases, however, 20-30 azimuth degrees appears appropriate. In some cases like the BBM Gold Showing, smaller "significant" angles (15 azimuth degrees) apply and in other cases such as the Barnum Lake Trenches, larger "significant" angles (55 azimuth degree) apply. Both of these examples are the result of asymmetries induced by nearby

contacts between rocks of contrasting competencies.

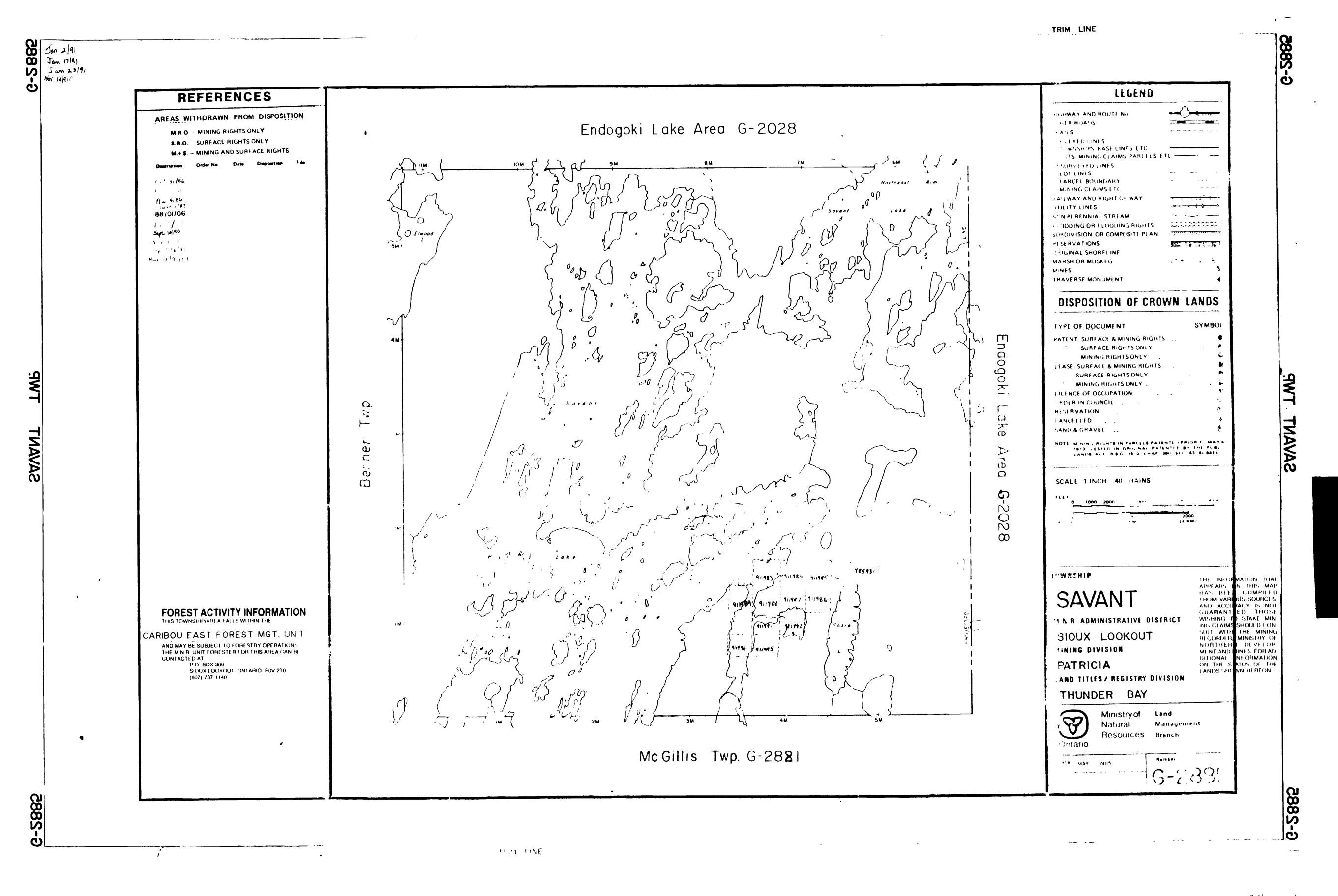
This 20-30 azimuth degree oblique orientation (commonly translated to $050^{\circ}-060^{\circ}/90^{\circ}$ and less commonly $100^{\circ}-120^{\circ}/90^{\circ}$) for dilated shear zones is consistent with a D_3 compression event perpendicular to the KLSZ or a post- D_3 relaxation phase.

- 2. The variety of structural settings of mineralized shears is consistent with dominantly vertical movement on the controlling D₃ structures such as the KLSZ (Sanborne-Barrie, 1991). The moderate preference of mineralization for S-flexure structures suggests a component of left hand horizontal movement was also important.
- 3. Reconciliation of the geochemical zoning of mineralization and structural setting requires that the heat source intrusions (Dickson Lake Pluton second phase and Pink Lake Stock) both had to have been emplaced as late- or slightly post-D₃ events.

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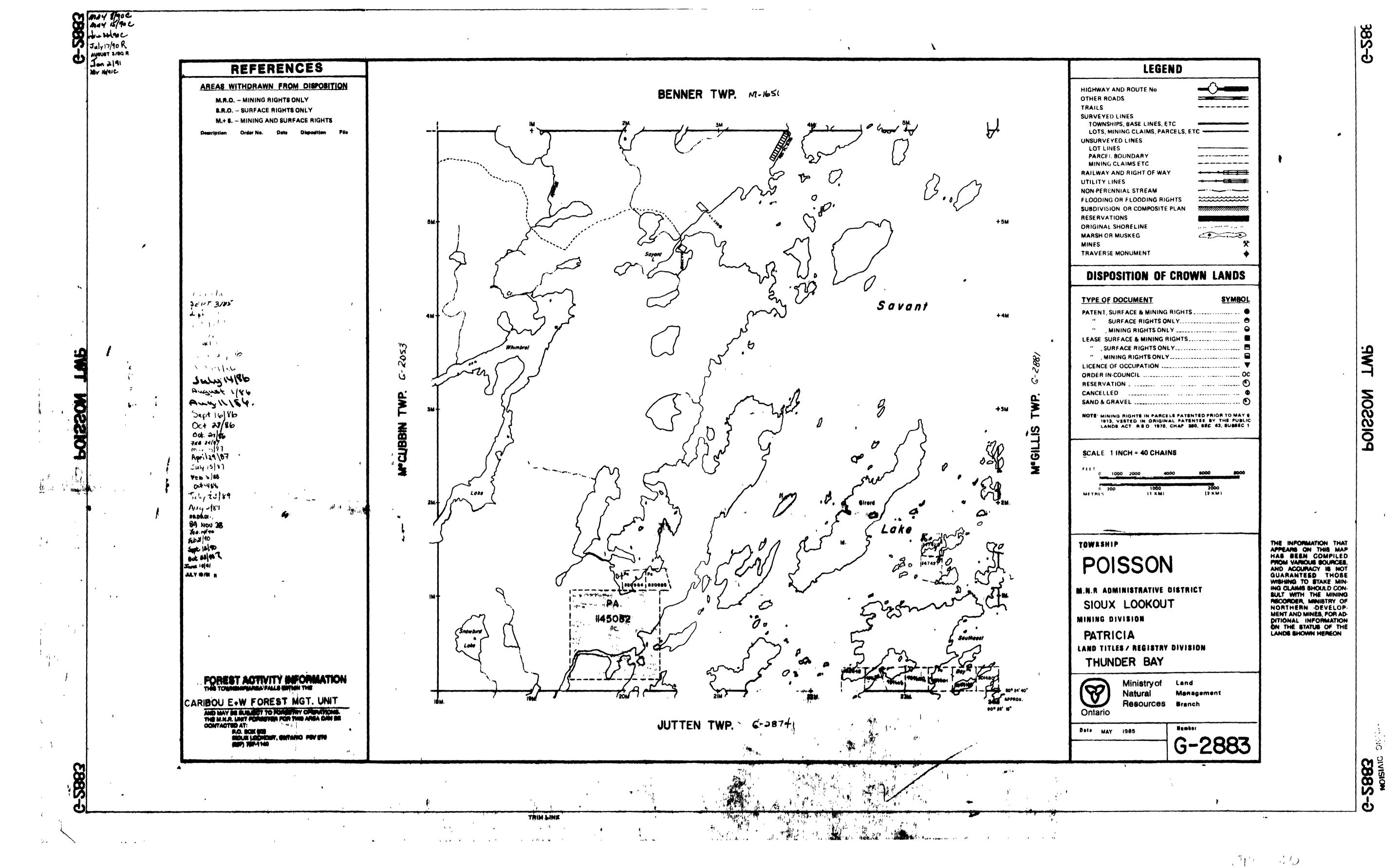
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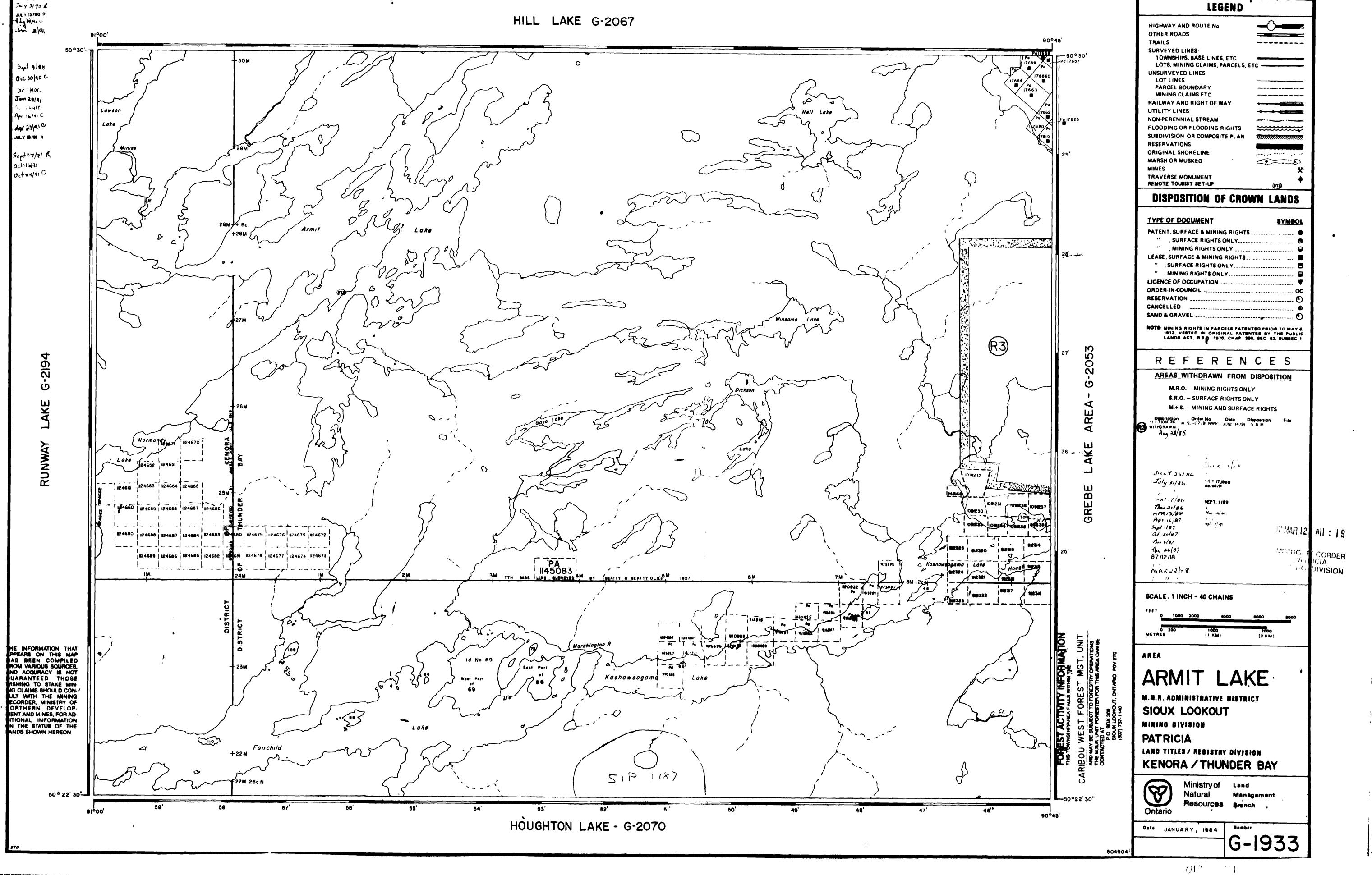
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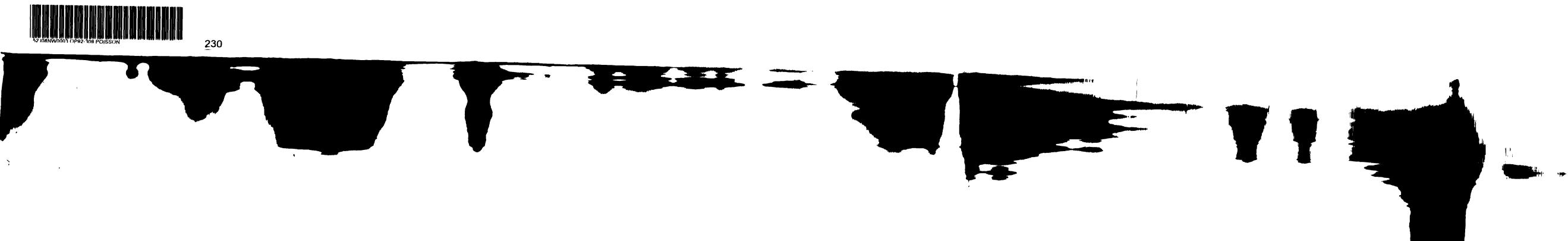
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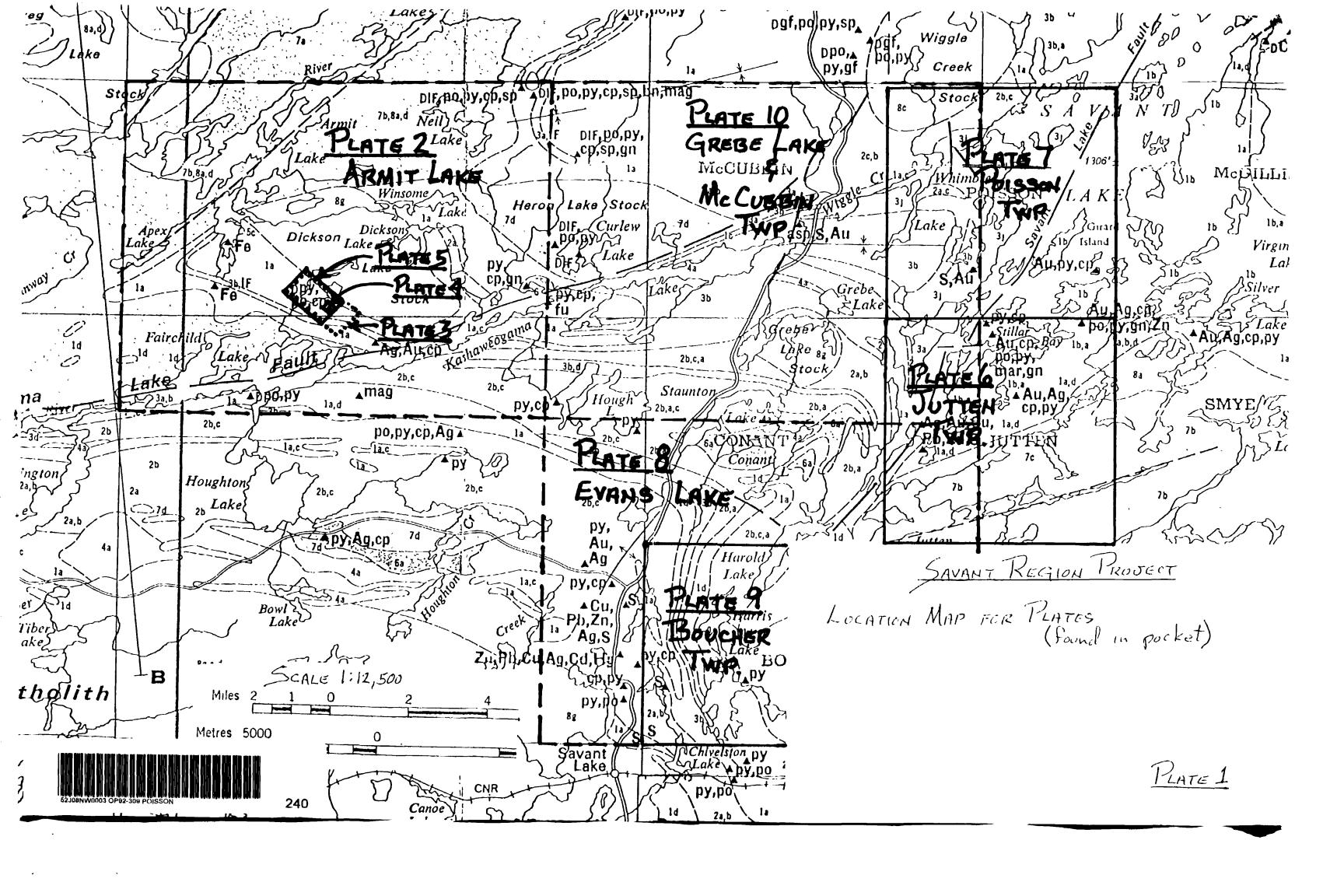


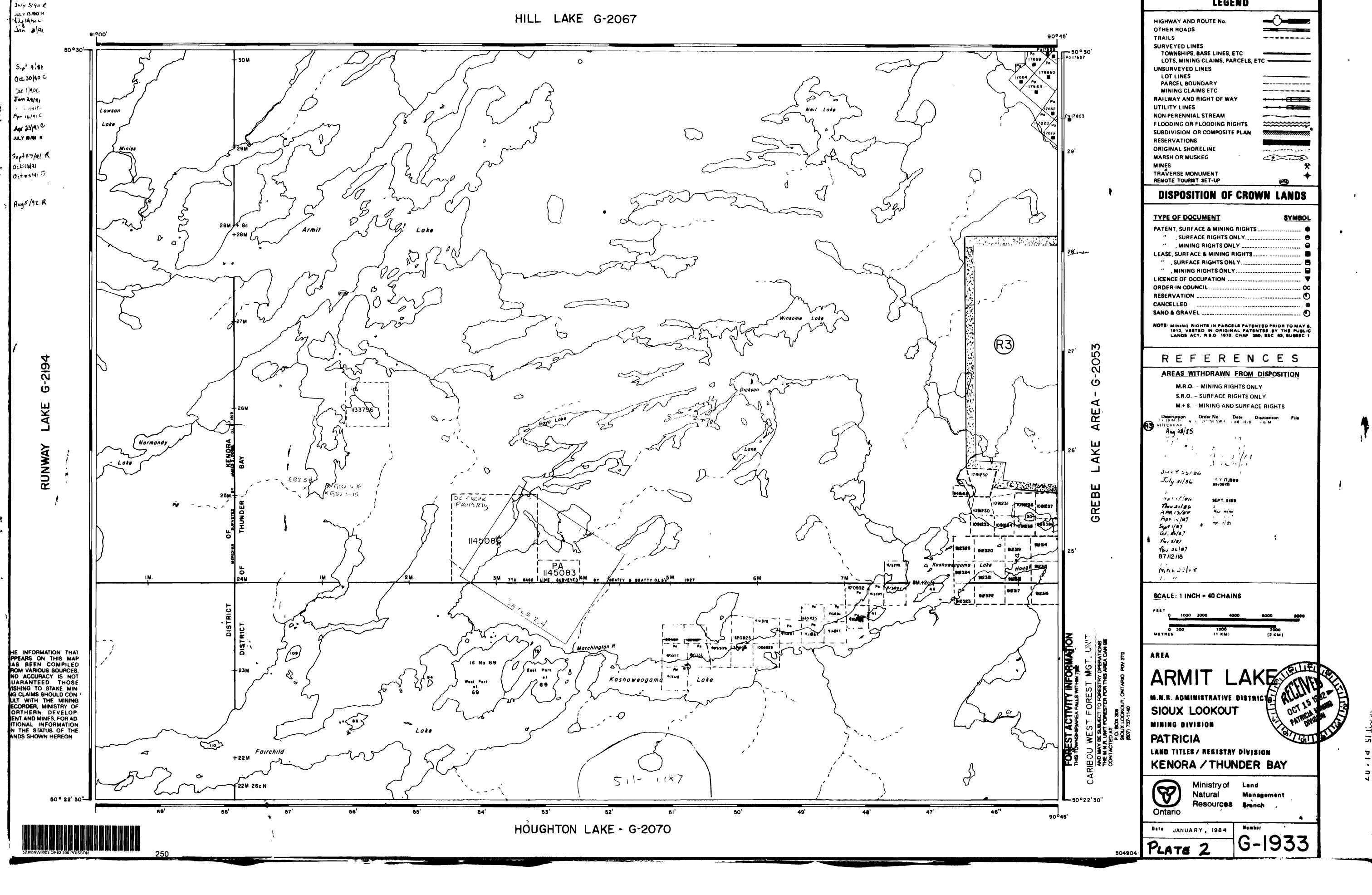
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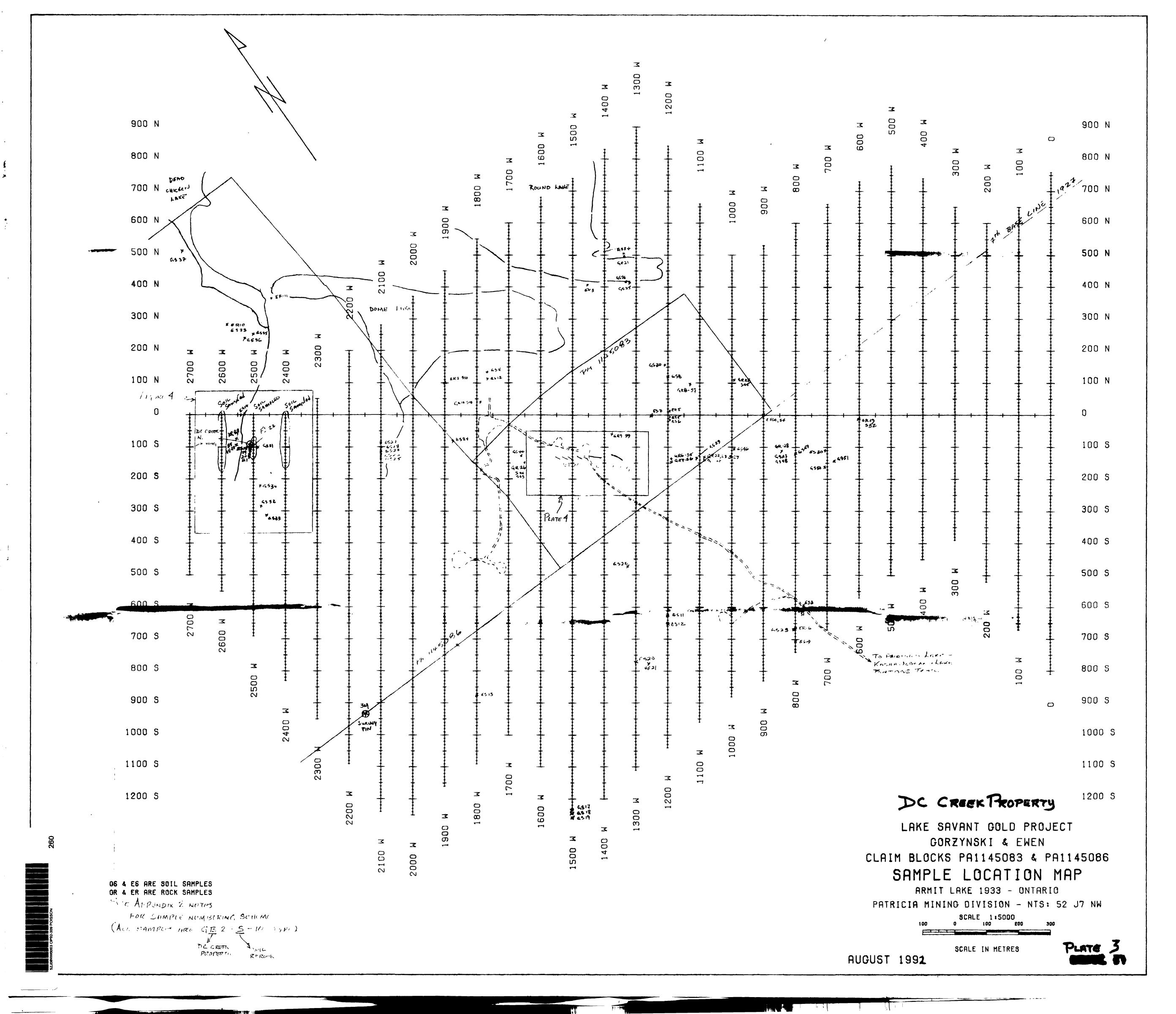


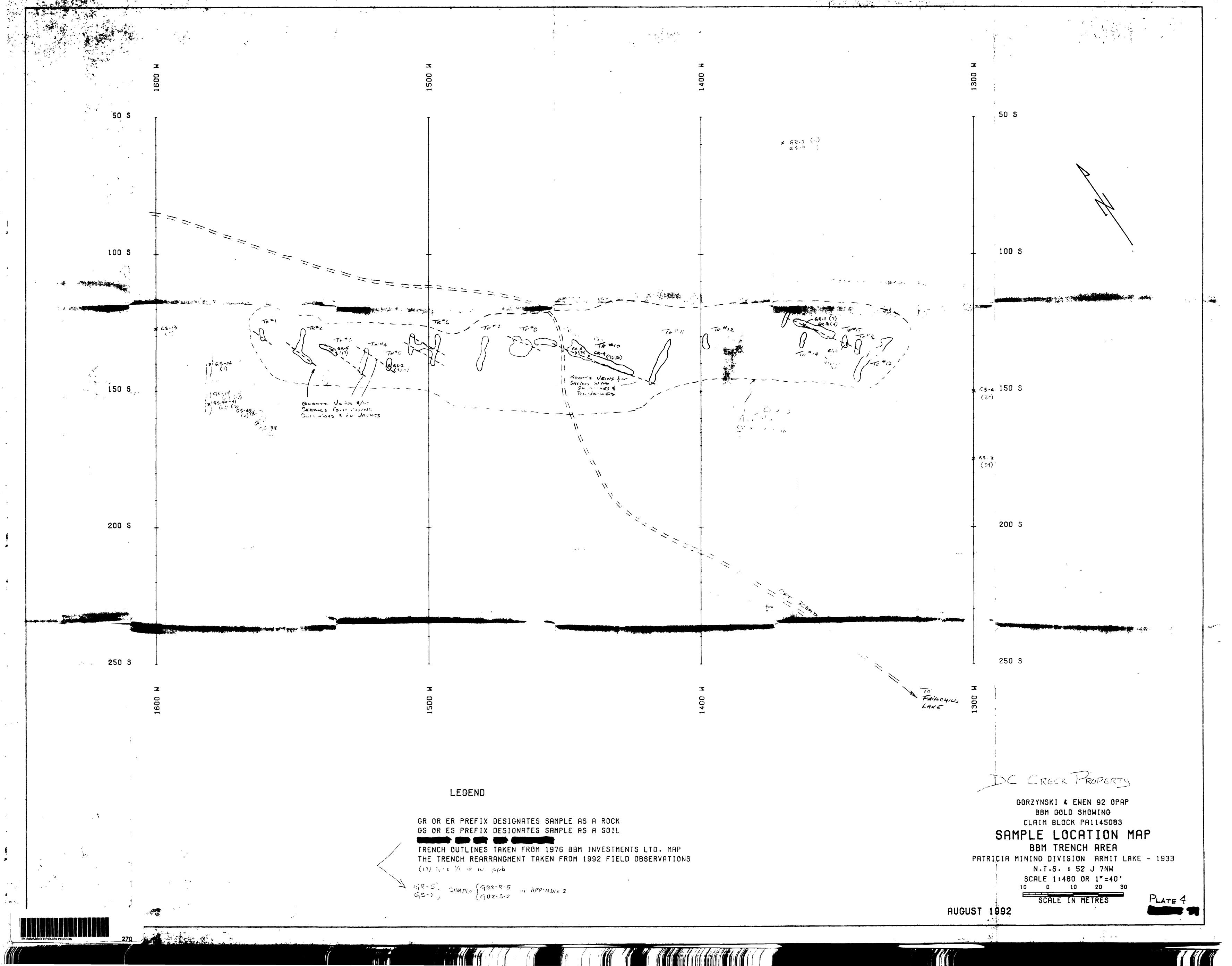


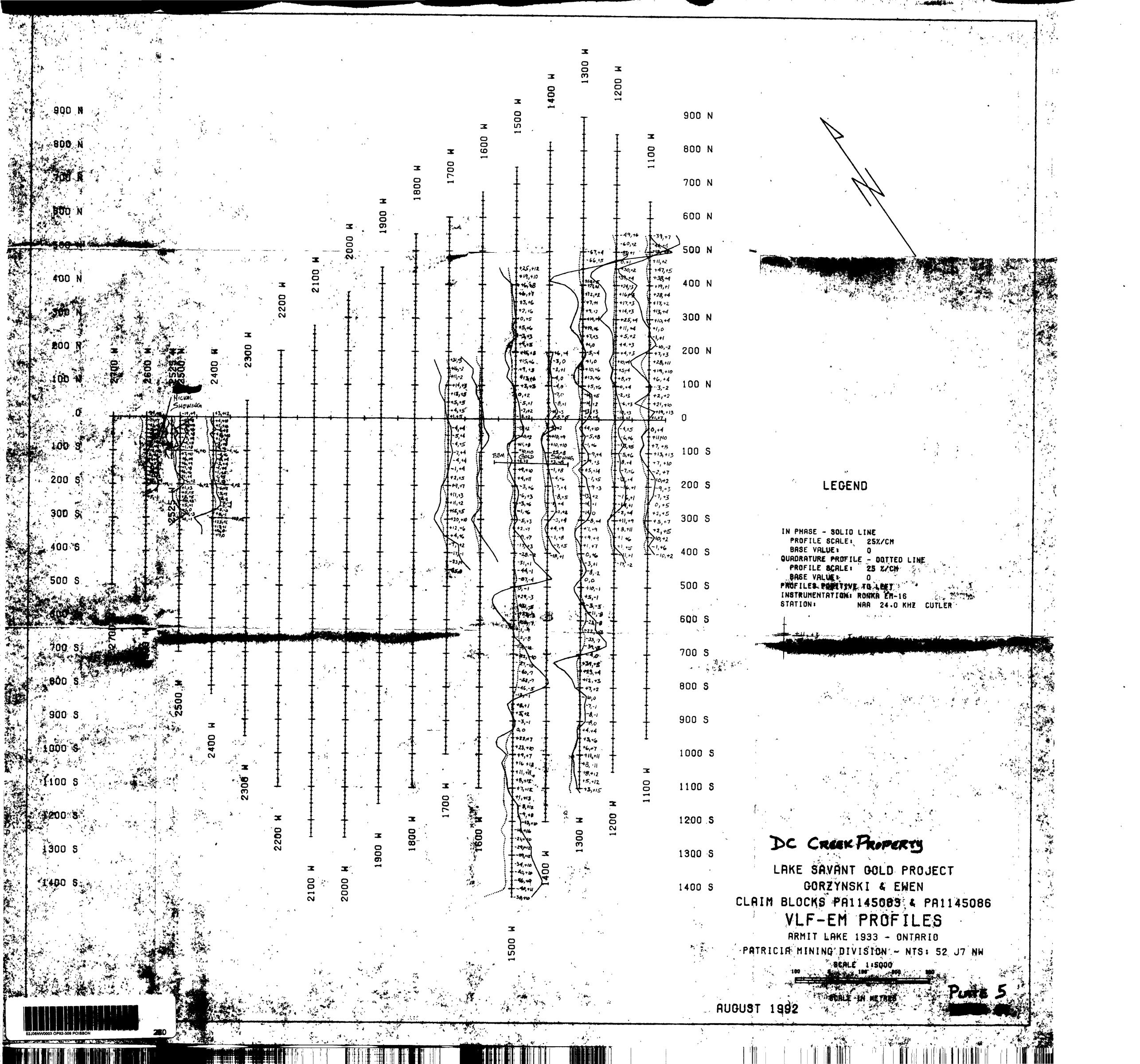


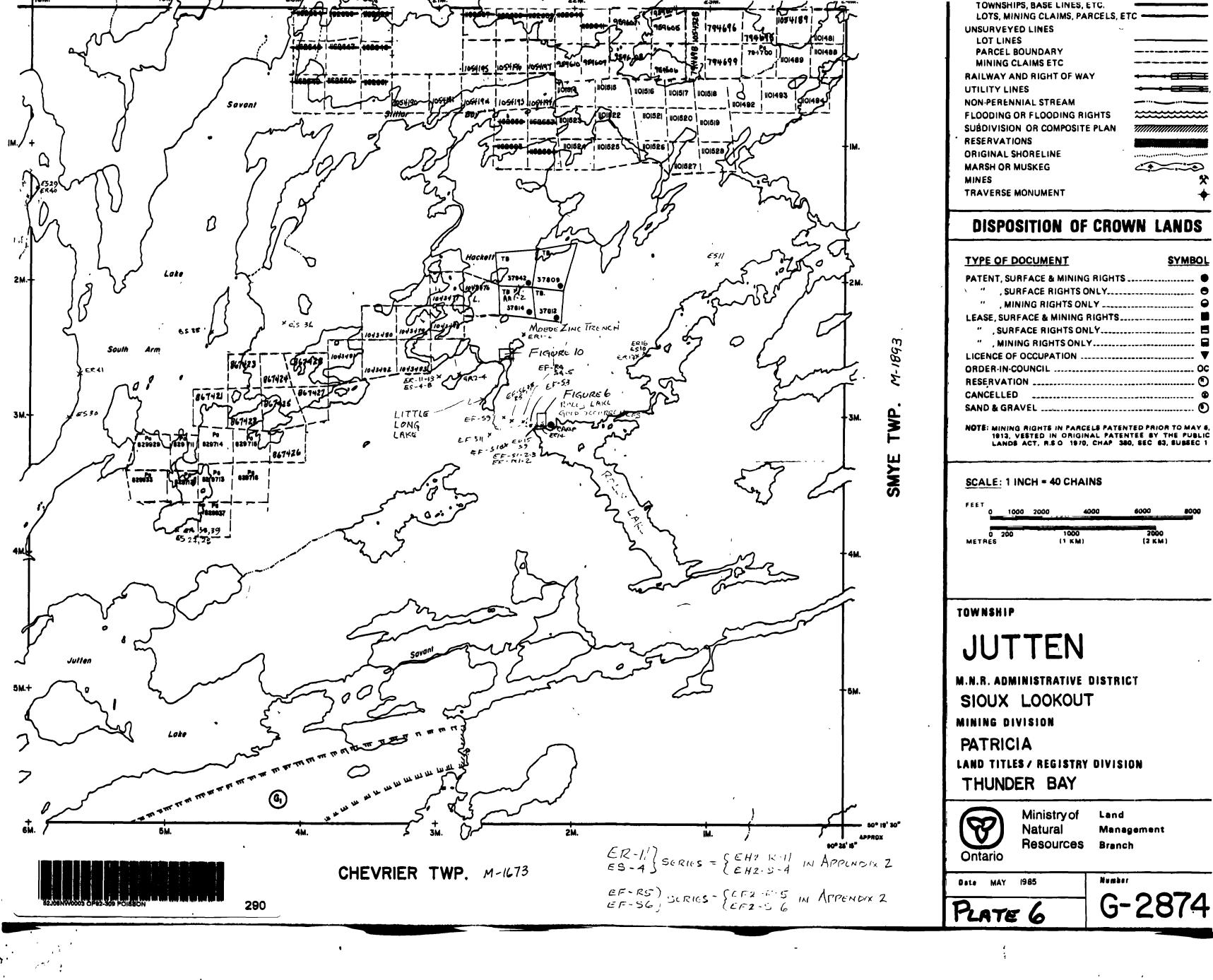
M- 8/40 C

LEGEND

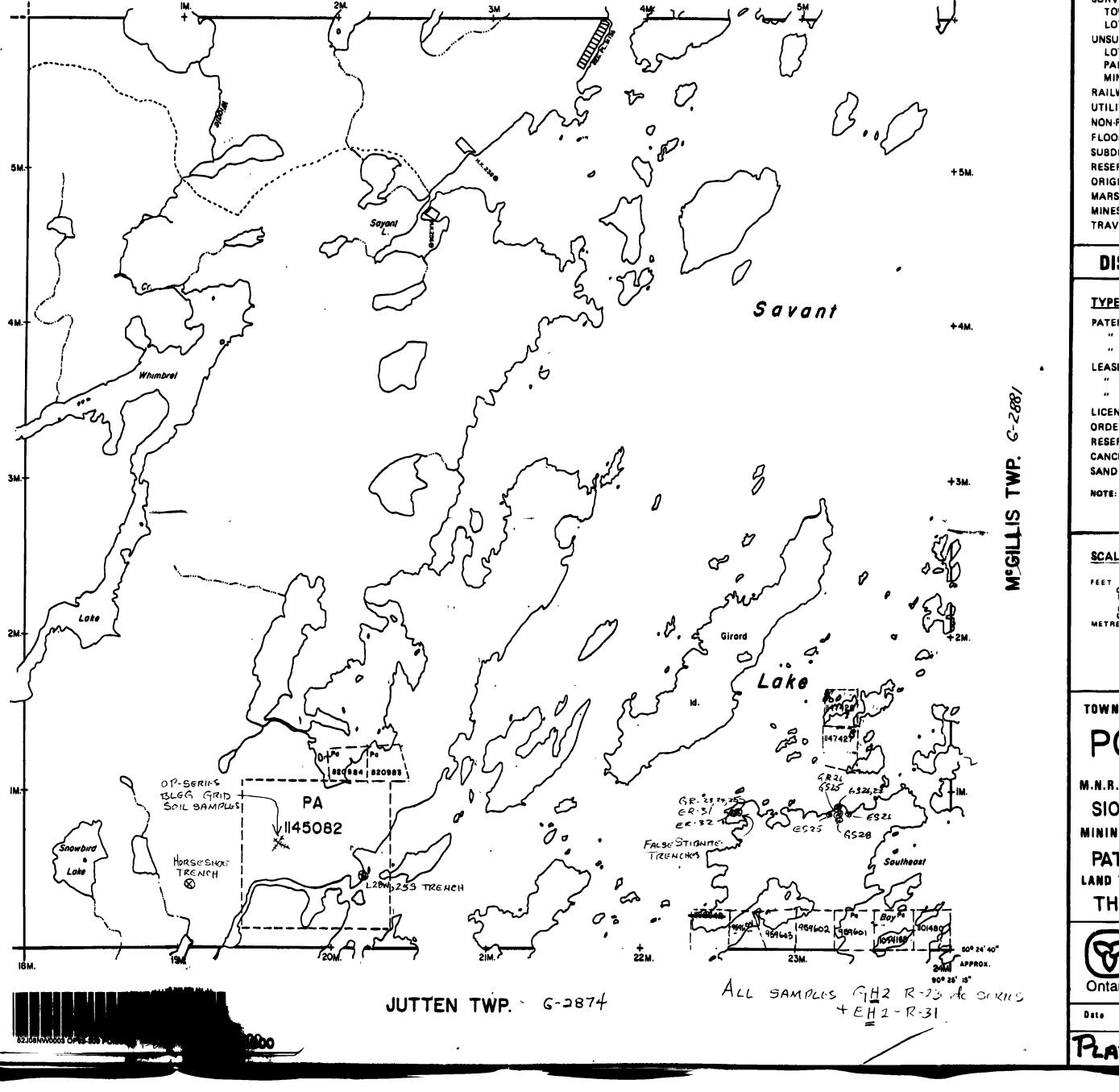








SYMBOL

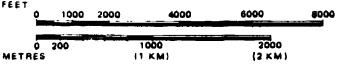


SURVEYED LINES. TOWNSHIPS, BASE LINES, ETC. LOTS, MINING CLAIMS, PARCELS, ETC. UNSURVEYED LINES LOT LINES PARCEL BOUNDARY MINING CLAIMS ETC **RAILWAY AND RIGHT OF WAY** UTILITY LINES NON-PERENNIAL STREAM **FLOODING OR FLOODING RIGHTS** SUBDIVISION OR COMPOSITE PLAN RESERVATIONS ORIGINAL SHORELINE MARSH 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 PRI 1913, VESTED IN ORIGINAL PATENTEE SY LANDS ACT, R.S.O. 1970, CHAP. 380, SEC.	THE PUBLIC

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP

POISSON

M.N.R. ADMINISTRATIVE DISTRICT

SIOUX LOOKOUT

MINING DIVISION

PATRICIA LAND TITLES / REGISTRY DIVISION THUNDER BAY



Ministry of Land

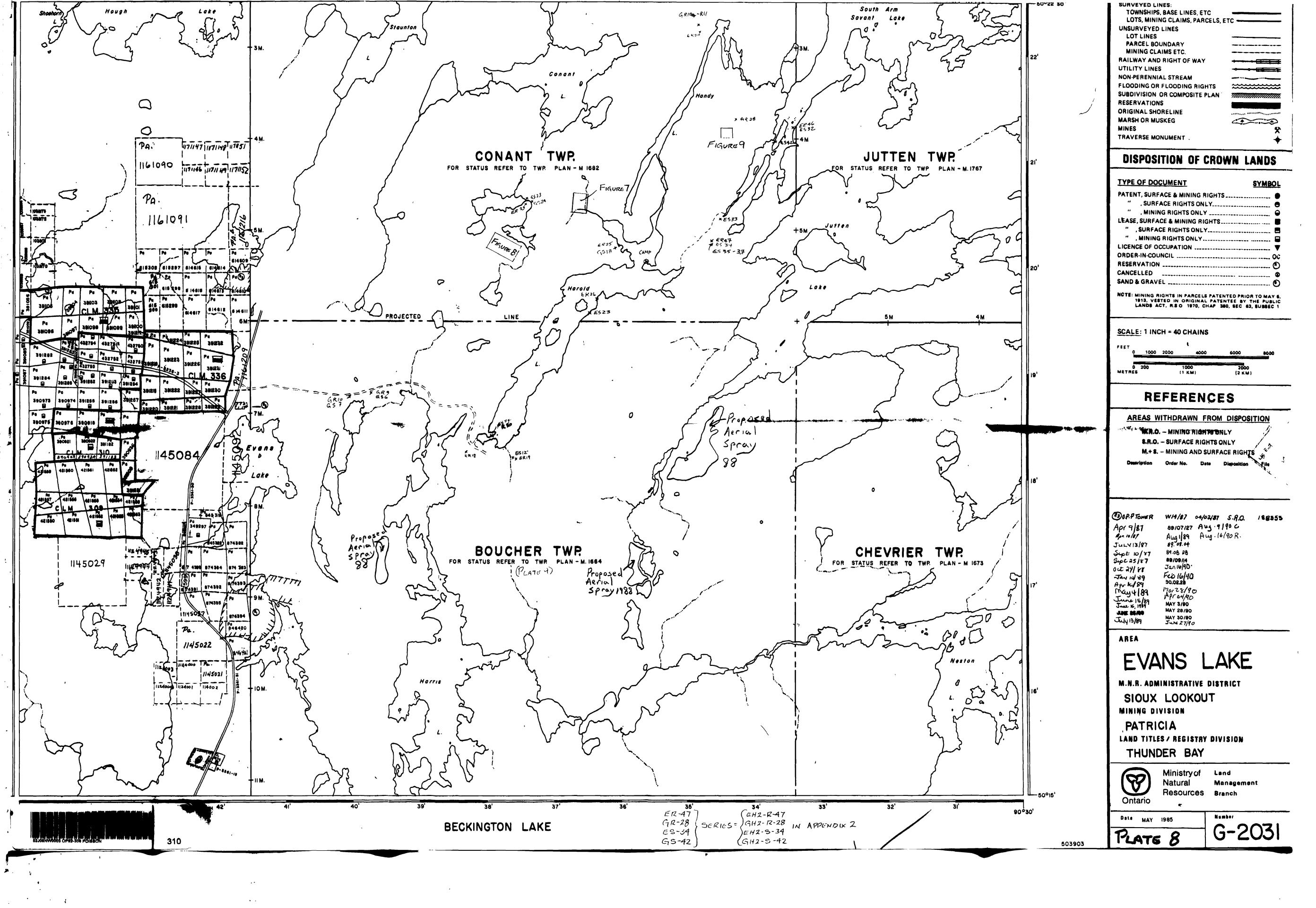
Natural Manage
Resources Branch

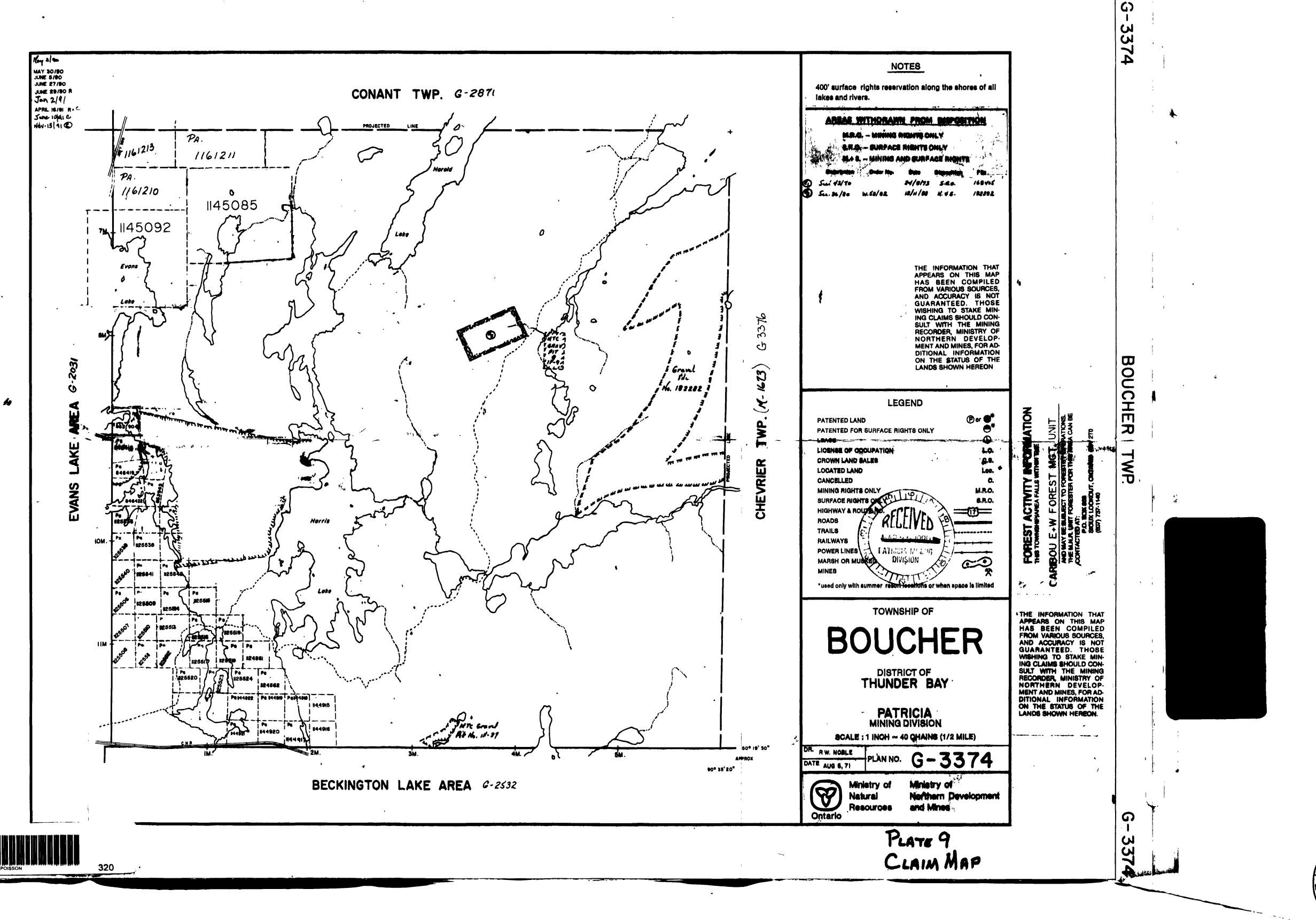
Date MAY 1985

Number

PLATE 7

G-2883





4 101 23/91 C

JULY 7/92 R

PATRICIAN FINANCE POR PRINCE POR

