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52J08NW0167 52J08NW0030 GREBE LAKE

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A REPORT ON THE SAVANT LAKE GOLD PROPERTY
OF
SAVANT EXPLORATIONS LIMITED,
LOCATED IN POISSON TOWNSHIP,
PATRICIA MINING DIVISION OF ONTARIO.

Ministry of Natural Resources

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MINING LANDS SECTION

Sudbury, Ontario
March 31, 1982

G.J. Hinse, P.Eng.

NTS 52J/7-0304
Pjt 1401

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G. J. Hinse



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SUMMARY

This report on the Savant Lake gold property of Savant Exploration Limited has been prepared by G.J. Hinse, P.Eng., at the request of that Company. The property lies in the southwestern part of Poisson Township, in the District of Thunder Bay, Ontario. It is located approximately 24 kilometers northeast of the community of Savant Lake, and Highway 599 passes six kilometers to the west.

The property consists of 25 unpatented and unsurveyed mining claims located in the southeastern portion of the Savant metasedimentary basin. Numerous gold occurrences are known in the vicinity, and several are contained within the property. One of these, the Shoal Prospect, has yielded assays from pyritic vein material ranging from 0.23 ounce of gold to 1.20 ounces of gold per ton, and the narrow veining has been observed over a width of approximately 14 feet in poor exposure.

Gold in the area, as far as is known, is restricted to a carbonate-rich sulfide facies of iron formation. It appears stratabound, and is probably of sedimentary origin. The formation of auriferous pyritic vein systems is believed structurally controlled, and represents weak remobilization of original rock constituents. The favourable host rock, an iron formation, is grossly recognizable and traceable magnetically.

VLF-EM surveys in the property area have defined a number of structurally complex locations, within the iron formation units, and gold occurrences are known in proximity to some of these. Such areas are interpreted to define locations of intersection of formational conductivity, and that related to structural features. As such, they are considered to be worthy of further exploration.

A program which will effect a reasonable evaluation of the Savant Explorations property has been recommended. This includes an initial phase, which provides for the drill testing of anomalous areas, and for limited drilling of the Shoal prospect. The cost of this work is estimated at \$300,440. A provisional phase of the program, to be undertaken only if the initial phase proves sufficiently encouraging, is estimated to cost an additional \$233,595.

A REPORT ON THE SAVANT LAKE GOLD PROPERTY
OF
SAVANT EXPLORATIONS LIMITED,
LOCATED IN POISSON TOWNSHIP,
PATRICIA MINING DIVISION OF ONTARIO.

INTRODUCTION

This report on the Savant Lake gold property of Savant Explorations Limited has been prepared by G.J. Hinse, P.Eng., at the request of the directors of that Corporation. The property, consisting of 25 unpatented mining claims, is located approximately 24 kilometers northeast of the Town of Savant Lake, in the southwest portion of Poisson township, Ontario.

The occurrence of gold in this area has been known since the early 1900's, but it was not until the 1940's that the first serious attempt to evaluate the area was undertaken. At that time Northern Canada Mines Limited carried out trenching and limited drilling within, and in the vicinity of, the Savant Explorations' property. The purpose of the present study is to provide an assessment of the economic potential of this property, and to recommend an appropriate program for its further evaluation.

Information available on the property includes that published by, and retained in the assessment files of the Ministry of Natural Resources of Ontario, that supplied by Savant Explorations Ltd., and that acquired by the writer through personal observation. The property was visited by the writer on March 14, 1983.

The available data on the property is considered of sufficient detail and accuracy to support the conclusions reached herein. It includes geological mapping and geophysical surveying performed on behalf of Mr. R.G. Ramsay and Ram Petroleum Ltd., the original owners. The aid and

cooperation of Savant Explorations Ltd., and the personnel of the Ministry of Natural Resources of Ontario in the performance of this study are gratefully acknowledged. Sources of information utilized in this study are listed in Appendix I. to this report.

PROPERTY LOCATION AND ACCESS

The twenty-five unpatented and unsurveyed mining claims included in the Savant Explorations property are located in the extreme southwestern part of Poisson township, Ontario, within the Patricia Mining Division of the Administrative District of Thunder Bay. The property lies near the southern end of Savant lake, at the intersection of latitude $50^{\circ}25'N$, and longitude $90^{\circ}31'W$ (Figure 1).

Highway 599, connecting the communities of Ignace, Savant Lake and Pickle Lake passes six kilometers west of the property, and an unimproved bush road runs from the highway to the Stillar Bay area of Savant Lake. Access to the property area is via boat or snowmobile on Savant Lake. It is also accessible by bush aircraft which are available at Ignace or Sioux Lookout.

The area is well wooded with spruce, poplar and pine. Scattered rock outcrops occur throughout the property area, but it is outcrop-poor in the central portion. Savant lake covers the southern part of the property.

The elevation of Savant lake is 398 meters above sea level, and the maximum local relief in the property area is approximately 25 meters. The area drains into Savant lake, and thence into the Albany River system of the Hudson Bay watershed.

No mining operations exist in the vicinity of the property, but gold and base metal prospects and concentrations of magnetic iron formation are known throughout the general area. The St. Anthony gold mine, closed during the early 1940's after several years of operation, lies

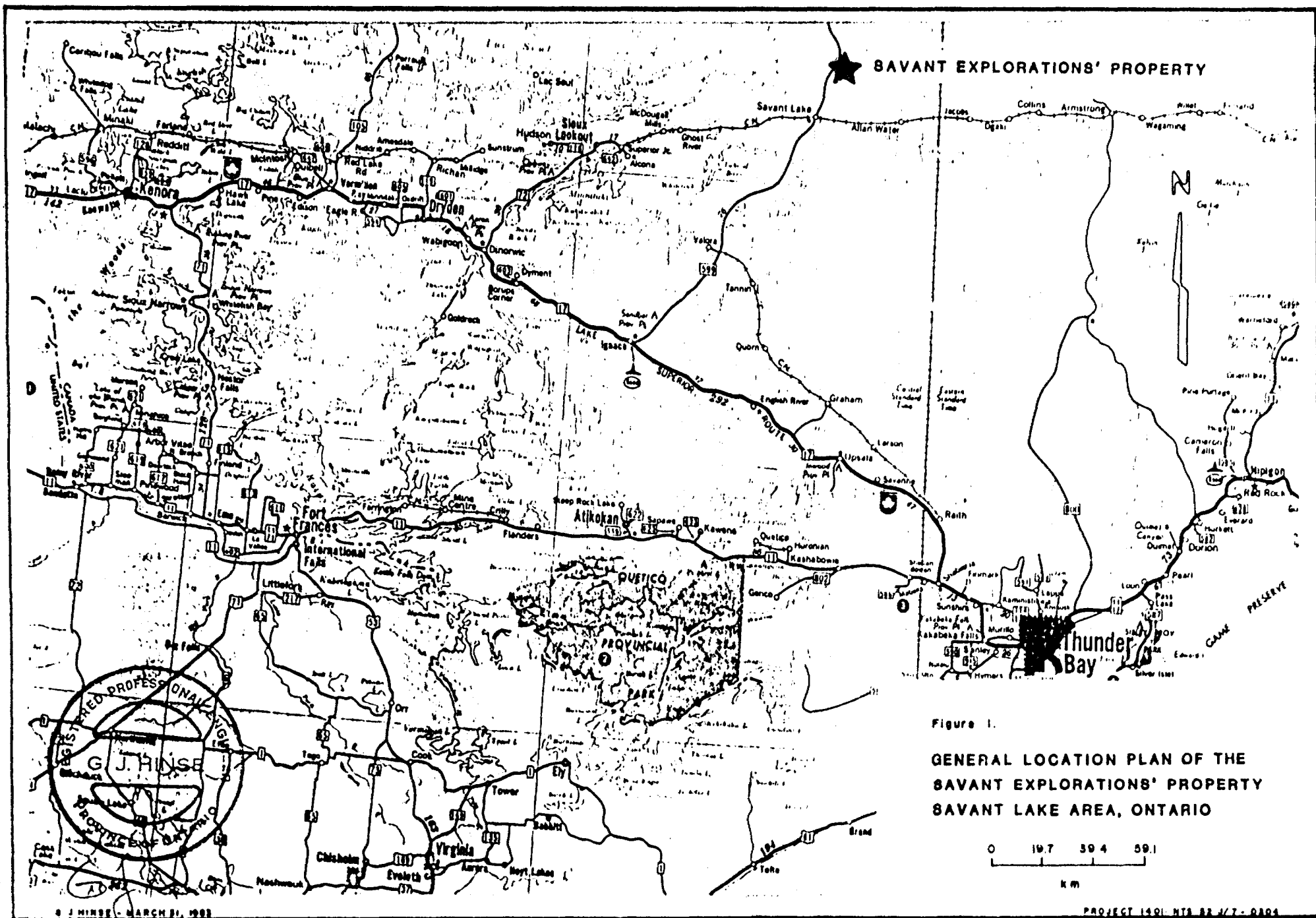


Figure 1.

GENERAL LOCATION PLAN OF THE
SAVANT EXPLORATIONS' PROPERTY
SAVANT LAKE AREA, ONTARIO

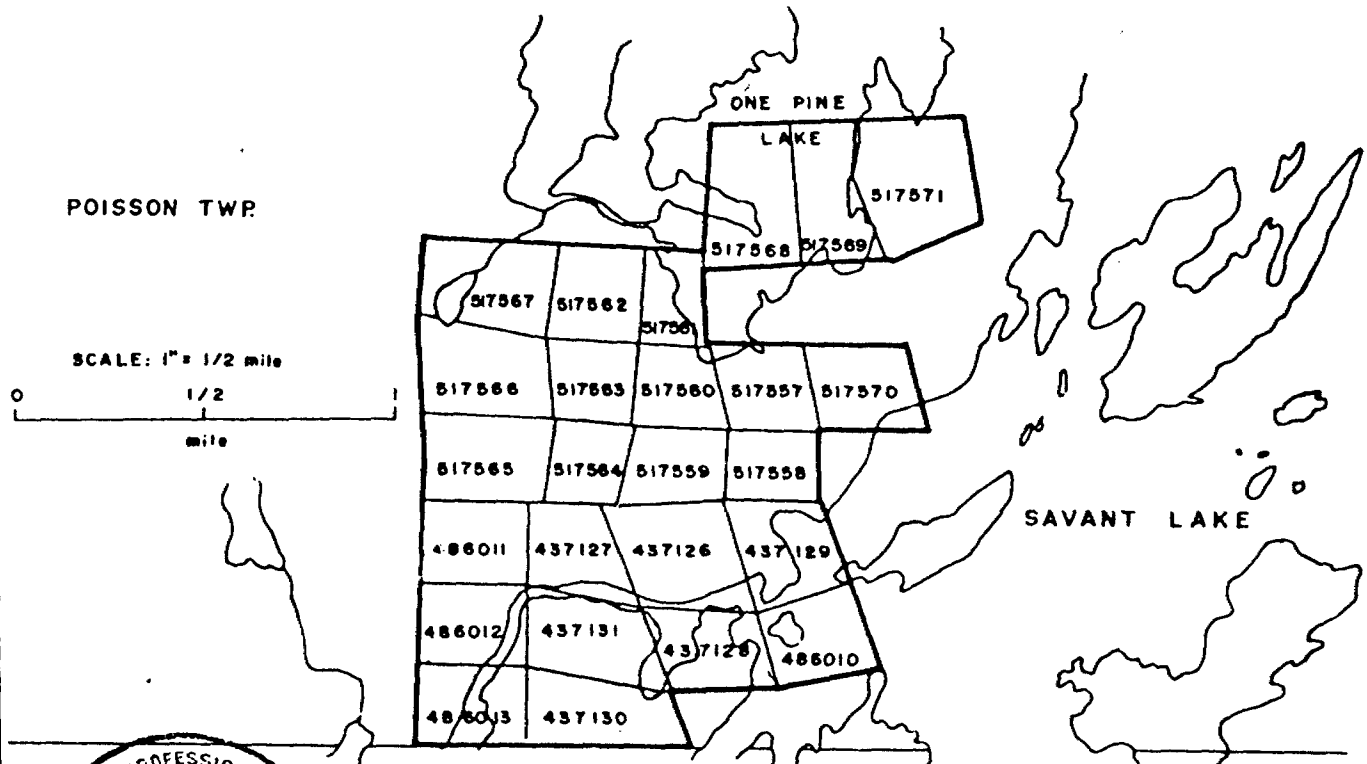
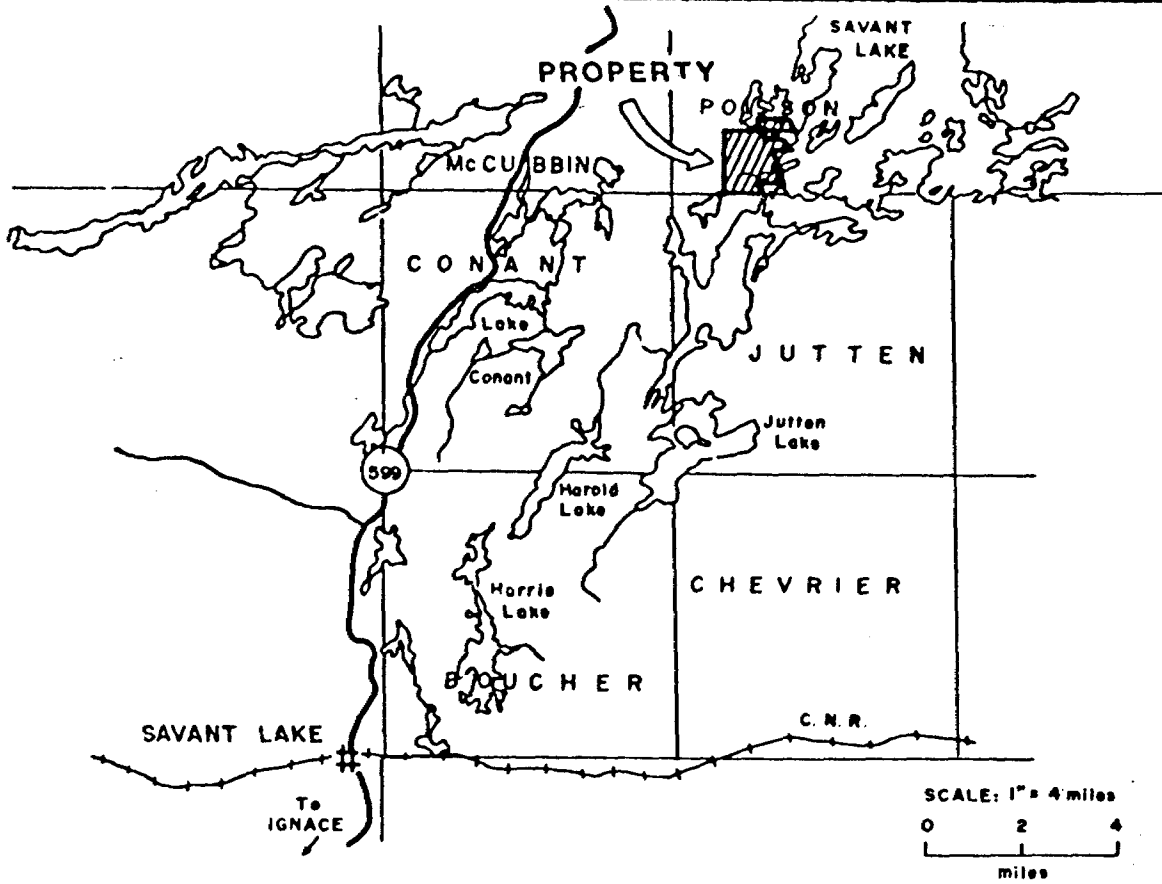
approximately 40 kilometers to the south, and the Mattabi base metal mine 60 kilometers south. Both of these deposits lie within the Sturgeon Lake area. Thus labor and supply points suitable for the support of a mining operation exist in the general area. Electrical power is also readily available with the installation of a short transmission facility.

LAND TENURE AND OWNERSHIP

The Savant Explorations property consists of twenty-five (25) unsurveyed and unpatented mining claims, comprising 1,000 acres (400 hectares), more or less. The claims are contiguous, and their locations are shown in Figure 2 to this report.

The claims included in the property may be listed as follow:

<u>Claim Number</u>	<u>Area</u>	<u>Recording Date</u>	<u>Assessment Work Recorded</u>	<u>Anniversary Date</u>
Pa 486010	40 acres	Feb. 18, 1980	100	Feb. 18, 1984
Pa 486011	40 acres	Feb. 18, 1980	100	Feb. 18, 1984
Pa 486012	40 acres	Feb. 18, 1980	100	Feb. 18, 1984
Pa 486013	40 acres	Feb. 18, 1980	100	Feb. 18, 1984
Pa 437126	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 437127	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 437128	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 437129	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 437130	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 437131	40 acres	Feb. 12, 1980	100	Feb. 12, 1984
Pa 517557	40 acres	July 13, 1979	100	July 13, 1983
Pa 517558	40 acres	July 13, 1979	100	July 13, 1983
Pa 517559	40 acres	July 13, 1979	100	July 13, 1983
Pa 517560	40 acres	July 13, 1979	100	July 13, 1983
Pa 517561	40 acres	July 13, 1979	100	July 13, 1983
Pa 517562	40 acres	July 13, 1979	100	July 13, 1983
Pa 517563	40 acres	July 13, 1979	100	July 13, 1983
Pa 517564	40 acres	July 13, 1979	100	July 13, 1983
Pa 517565	40 acres	July 13, 1979	100	July 13, 1983
Pa 517566	40 acres	July 13, 1979	100	July 13, 1983
Pa 517567	40 acres	July 13, 1979	100	July 13, 1983
Pa 517568	40 acres	July 13, 1979	80	Under extension
Pa 517569	40 acres	July 13, 1979	80	Under extension
Pa 517570	40 acres	July 13, 1979	100	July 13, 1983
Pa 517571	40 acres	July 13, 1979	80	Under extension



M-1865

Figure 2.

LOCATION AND PROPERTY PLAN OF THE SAVANT EXPLORATIONS' PROPERTY SAVANT LAKE AREA, ONTARIO

Our examination of the claim records of March 15, 1983, shows the claims registered jointly to Mr. R.G. Ramsay, and Ram Petroleum Ltd. Each holds a 50 percent ownership interest in the lands. There are no liens or claims registered against title to the lands noted.

We understand that title to the claims is to be transferred to Savant Explorations Ltd. under an agreement with the registered owners. This will involve the retention of a 3 percent net smelter royalty on mineral production from the lands by Ram Petroleum Ltd., and a vendor's share consideration for Mr. R.G. Ramsay.

The claims are in good standing, with the earliest date requiring additional assessment work submission on or before July 13, 1983. Claims 517568, 517569 and 517571 are under extension of time to and including December 15, 1983. At this time there has been no additional work completed on the claims which would qualify for assessment credit.

HISTORY OF PROPERTY

The Savant Lake area was first prospected for gold during the early 1900's, as was the Sturgeon Lake area to the south. Such work was continued intermittently through the 1920's and 1940's, with some trenching and diamond drilling completed in various locations during the period. Reference to exploration in the area is found in the Ontario Department of Mines Annual Report, vol. 37, pt. IV, 1938 (E.S. Moore), and the Ministry of Natural Resources, Geoscience Report 160 (W.D. Bond).

The date of discovery of gold associated with pyrite and iron formation in the vicinity of the Savant Exploration property is uncertain. However, the One Pine gold prospect in this area was acquired by Northern Canada Mines Ltd. in 1940 and tested to some degree, and this Company carried out extensive exploration throughout the One Pine Lake-Stillar Bay area. At that time, of course, surface prospecting and trenching were the chief exploration methods applied.

During the 1960's Algoma Steel Corporation and Pershland Gold Mines Ltd., among others, carried out considerable evaluation work on the iron formation of the area. While little encouragement was obtained in the Savant Lake area in this work, the Kashaweogama magnetite deposits, lying approximately 10 kilometers west of Savant Lake were located and

tested at the time.

Through the late 1960's and the 1970's, prompted by the discovery of the Mattabi zinc-copper-silver deposits at Sturgeon Lake to the south, considerable base metal exploration was carried out in the Savant-Kasha-weogama area. Some of the active companies were INCO, Noranda Exploration Company, Dome Exploration Ltd. and Amalgamated Rare Earth Properties Ltd. Aerogeophysical surveying was completed over a large part of the area, and some "anomaly drilling" done. While the exploration work of the period was essentially base metal-oriented some evaluation of gold prospects was carried out, particularly in the Stillar Bay area where some volcanic-associated veining is known.

Recently, with increased gold prices and the resulting renewal of interest in the metal, Mr. R.G. Ramsay and Ram Petroleums Ltd. acquired claims along the southern part of what may be termed the Savant Lake metasedimentary basin. Raylloyd Mines & Explorations Ltd. and Stargazer Resources Ltd. also acquired claim areas within the basin. These interests performed considerable exploratory work during the 1981-82 period, including prospecting, mapping, aerogeophysical surveying, and biogeochemical surveying.

In respect to the Savant Explorations property, recently acquired from Mr. Ramsey and Ram Petroleums Ltd. under agreement, the Ramsay-Ram Petroleum interests have completed magnetic and VLF-EM aerosurveying, ground magnetic and VLF-EM surveying, geological mapping and prospecting over the property area. Prospecting work during 1981 resulted in the location of an entirely new gold prospect within the property area, now termed the "Shoal Prospect", as well as the relocation of several old showing areas. The original "One Pine Prospect", drilled by Northern Canada Mines Ltd. in 1940, does not lie within the Savant Explorations holdings, but on a small three-claim group held by private interests.

GENERAL GEOLOGY

The Savant Exploration property is located in the southeastern part of the Kashaweogama-Savant Lake metasedimentary basin, as shown in Figures 3 and 4. The contained metasediments are surrounded by granitic rocks and mafic to felsic volcanics, and consist mainly of magnetite iron formation, arenaceous to argillitic sediments, and mafic tuffaceous units. All rocks of the area are classed as Archean in age.

The metasediments and surrounding volcanics are believed to represent the deeply infolded remnant of such rocks originally deposited on an ancient paleosurface. The metasediments appear to be the product of shallow marine sedimentation, deposited on a predominantly volcanic terrain. Deep infolding of these rocks resulted from orogenic activity, probably at the time of formation of the surrounding granitic rocks. There is some measure of continuity between the Kashaweogama-Savant basin, and the Sturgeon Lake basin to the south, but the extensive development of iron formation which characterizes the Kashaweogama-Savant basin is lacking in the Sturgeon Lake area. Such rocks, in fact, appear to lens out to the south in the vicinity of Stillar Bay at the south end of Savant Lake, marking this area as one of structural complexity.

In general terms, failure of the basinal rocks under orogenic stress appears to be manifest chiefly in folding, however, in the southern Savant Lake area, structural discontinuity is evident on northerly and northwesterly lineaments, probably indicating the presence of faulting.

The distribution and character of iron formation within the metasedimentary basin shows interesting, and perhaps significant, variation. In the Kashaweogama Lake area rather thick concentrations of cherty magnetite iron formation are present. To the west, likely representing different conditions of sedimentation, the cherty magnetite iron formation beds become progressively thinner, and show increasing intercalation with carbonate-rich arenites which are often tuffaceous and pyritic. This latter condition is common in the Savant Exploration

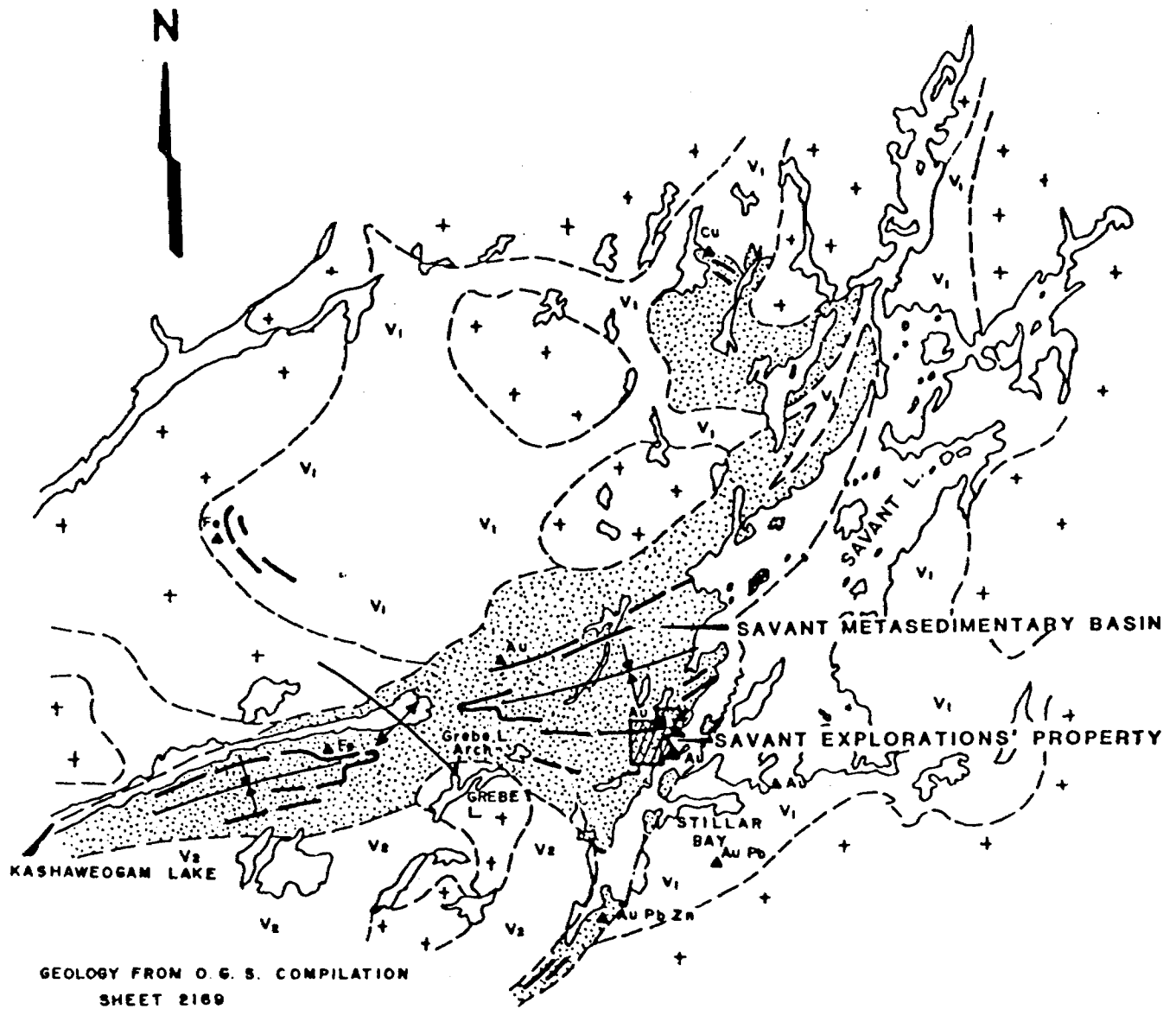
property area.

The geology of the Savant Explorations property is shown on Map No. 1 (in pocket), which is derived from the mapping of C.R. Bowdidge, M.A., Ph.D., completed during 1982. Additional information has been obtained from O.D.M Preliminary Map P.723 (1972), and M.N.R. Geoscience Report 160 (1977), both by W.D. Bond. Some re-interpretation has been completed by the writer, with the benefit of ground geophysical data (maps No. 2, 3, and 4, in pocket).

As indicated in Map No. 1, two bands of the iron formation complex strike in a general southwesterly direction across the property. Where observed, these rocks and the containing impure arenites and argillites strike in a west to southwest direction, and dip steeply to the south. They are intricately folded, however, and at least two WNW - trending fault zones appear to extend across the map area. In detail then, the geology of the property is highly complex, and lacking any marker horizons other than the irregular iron formation, interpretation is thus difficult.









It is suggested that two periods of major folding are indicated in the property area. The first, contemporaneous with early basinal formation, consisted of open folding along axes parallel to the basin rim. This produced repetition of the iron formation depositional horizon as noted. The second, more complex period of folding action produced strong deformation along westerly-trending axes, some of which are indicated on map No. 1. Dominant in the property area is a large anticlinal fold lying in the central part of the claim group. Faulting probably took place during this latter period of adjustment.

Metamorphism is really of a low order, marked by the development of chlorite, sericite, and occasionally, amphibole, depending on the original rock composition. Locally some redistribution of constituents is evidenced by the development of quartz-carbonate veining, often with associated pyrite.



GEOLOGY FROM O. G. S. COMPILATION
SHEET 2169

LEGEND

-  Granite
-  Felsic Volcanics
-  Mafic Volcanics
-  Metasediments
-  Iron Formation
-  Major Anticlinal Axis
-  Major Synclinal Axis
-  Prospect

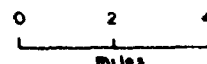


G. J. Hinse
G. J. HINSE - MARCH 31, 1983

Figure 3

**GENERAL GEOLOGICAL PLAN OF THE
SAVANT EXPLORATIONS' PROPERTY
SAVANT LAKE AREA, ONTARIO**

SCALE: 1" = 4 miles



PROJECT M01 B7S 82/7-0804

ECONOMIC GEOLOGYGENERAL CONSIDERATIONS:

Iron, base metal and gold occurrences are known in the Savant Lake area. Some of these are shown in Figure 3 to this report.

Cherty magnetite iron formation of the Algoma type occurs in the Savant Lake vicinity. However, as observed, it is not sufficiently concentrated, as far as is known to offer economic viability to a mining operation. Sulphide concentrations carrying low amounts of copper, zinc, and/or nickel are also known in the area, particularly in volcanic environments. These too have proven economically unimportant thus far.

Gold occurrences are known throughout the area, mainly associated with iron formations of the Savant metasedimentary basin. Occurrences have also been reported in the underlying mafic volcanics, but these appear restricted to the eastern side of the basin area, and are most common in the Stillar Bay vicinity to the southwest.

Interestingly, work completed by Raylloyd Mines & Explorations Ltd. and Stargazer Resources Ltd. in the western and northern parts of the metasedimentary basin has indicated a strong association of gold with arsenopyrite mineralization. This is not the case in the southeastern basin area, where gold is clearly associated with pyrite. In fact, little arsenopyrite has been reported present in this area, and none has been observed by the writer.

As listed in Appendix I to this report, there are a number of references available on the gold prospects known within and in the vicinity of the Savant Exploration property. An adequate summary of this information is given in the Ontario Ministry of Natural Resources O.G.S. Report No. 160, 1977, by W.D. Bond (pages 63-66 inclusive). The pertinent extract from O.G.S. Report No. 160 is included herein as Appendix II. As has been noted the discovery, or main, showing of Northern Canada Mines Ltd. described in this extract (the One Pine Lake prospect) does not lie

within the Savant Explorations property. The others do, however, and the locations of old trenched areas as mapped by C.R. Bowdidge are shown on Map No. 1 (in pocket).

In addition to the prospects described by W.D. Bond, R.G. Ramsay located a new gold prospect within the property during 1981. This is known as the "Shoal Prospect", and will be described in more detail in the following section of the report.

It is important to note that in all cases observed, gold in the Savant Exploration property vicinity is very closely associated with a carbonate-rich pyritized facies of iron formation. The same relationship is recognized by G.M. Hogg (1983) in a recent report on the Wiggle Creek gold property of Raylloyd Mines & Explorations Ltd. in the western part of the Savant basin. This strongly suggest the gold of the general area to be stratabound in character, and very likely of sedimentary origin.

PROSPECTING, GEOLOGICAL MAPPING:

R. G. Ramsay carried out prospecting within the Savant Exploration property subsequent to acquisition of the claims, and as a result of this work located the Shoal Prospect in late 1981. It actually comprises a reef area in Savant Lake, and is exposed during periods of low water level. The prospect lies on Line 9+80 feet W at 24+00 feet S on the existing grid of the property (see map No. 1, in pocket). Mr. Ramsay's original grab samples of pyritic vein material from this location returned values ranging from 0.23 oz. Au/ton to 1.20 oz. Au/ton, with low silver content. These are listed with sample description in appendix III to this report.

Mr. Ramsay also took samples of weakly-veined argillitic iron formation from the approximate grid location at line 36+00 W, 16+50 S at that time. These are also listed in Appendix III. The samples proved auriferous, although no high values were reported.

In March, 1982, Mr. W. Benham of Riocanex Inc. examined the Shoal prospect. Fortuitously the reef was relatively well-exposed at the time, and the resulting map and sampling of the prospect are the most detailed available. The geological sketch, sampling locations and assay results are shown in Figure 5, and a copy of the assay certificate is included with the report as Appendix IV. In reference to Figure 5, the arithmetic average of nine grab samples taken from veined and mineralized iron formation over a 14 foot width is 0.199 oz. Au/ton. This cannot be construed as an accurate determination of the grade of the mineralized zone, but demonstrated it to be substantially auriferous.

The writer examined the prospect in March, 1983, under poor conditions of exposure. However, some samples of the veined and mineralized material were taken, with assay values ranging from 0.02 to 0.505 oz. Au/ton. The certificate of analysis is included herein as Appendix V. The host rock was noted as a carbonate-rich, sericitic, and somewhat chloritic arenite, containing some pyrite and occasional narrow bands of magnetite iron formation.

C.R. Bowdidge of Bowdidge and Associated Ltd., Consulting Geologists, mapped the Savant Explorations property area during October, 1982. It is from this work that the geological map of the property has been largely derived (Map No. 1, in pocket). Reported gold prospects at the following grid locations were located by Dr. Bowdidge in the course of the mapping:

1. Line 9+80'W, 24+00'S: The Shoal prospect located by R.G. Ramsay. The available exposure was limited by water level at this time.

2. Line 4+00'E, 9+00'N: The One Pine Prospect area noted in Appendix II. Exposure limited to old, overgrown trenches.

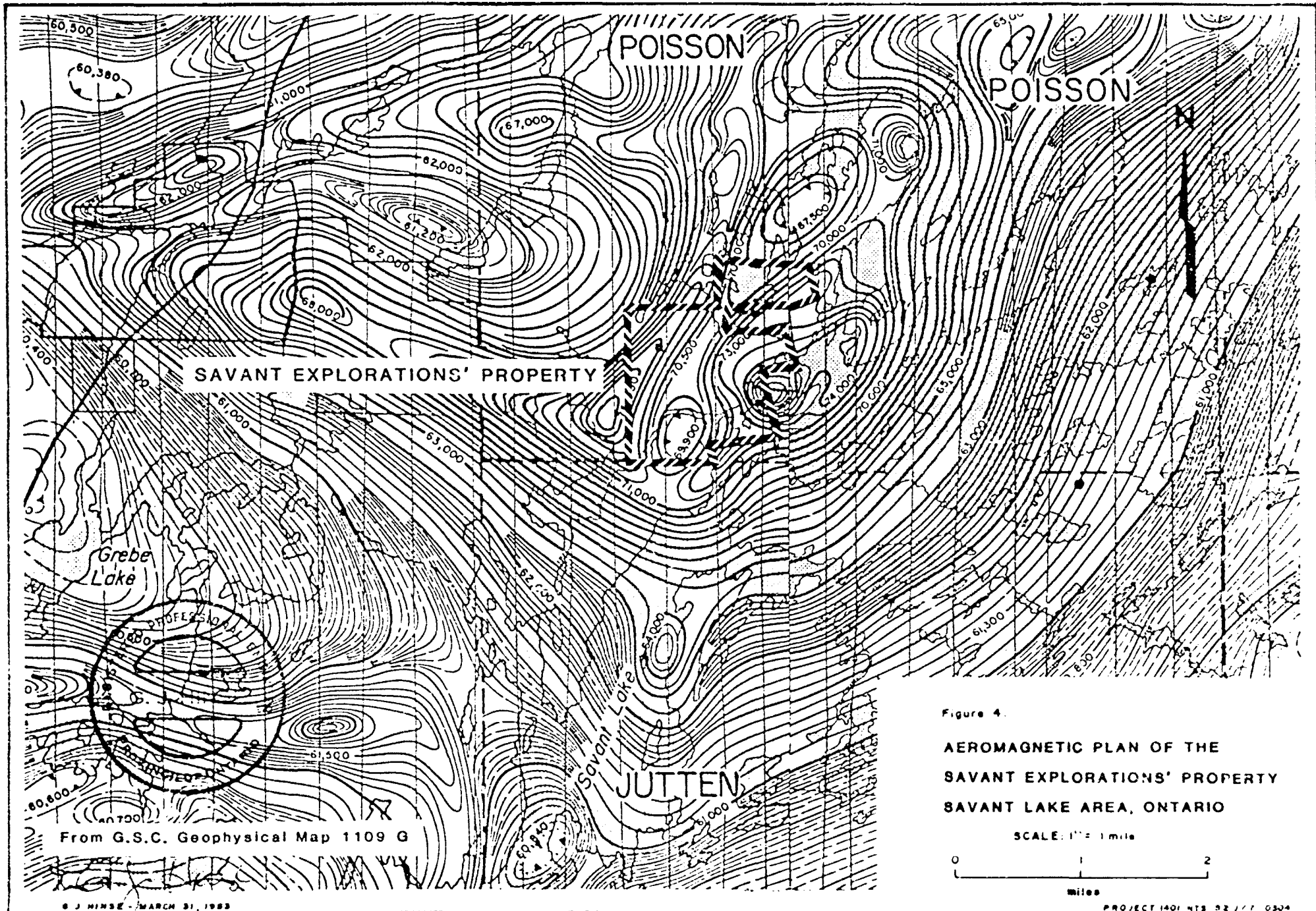
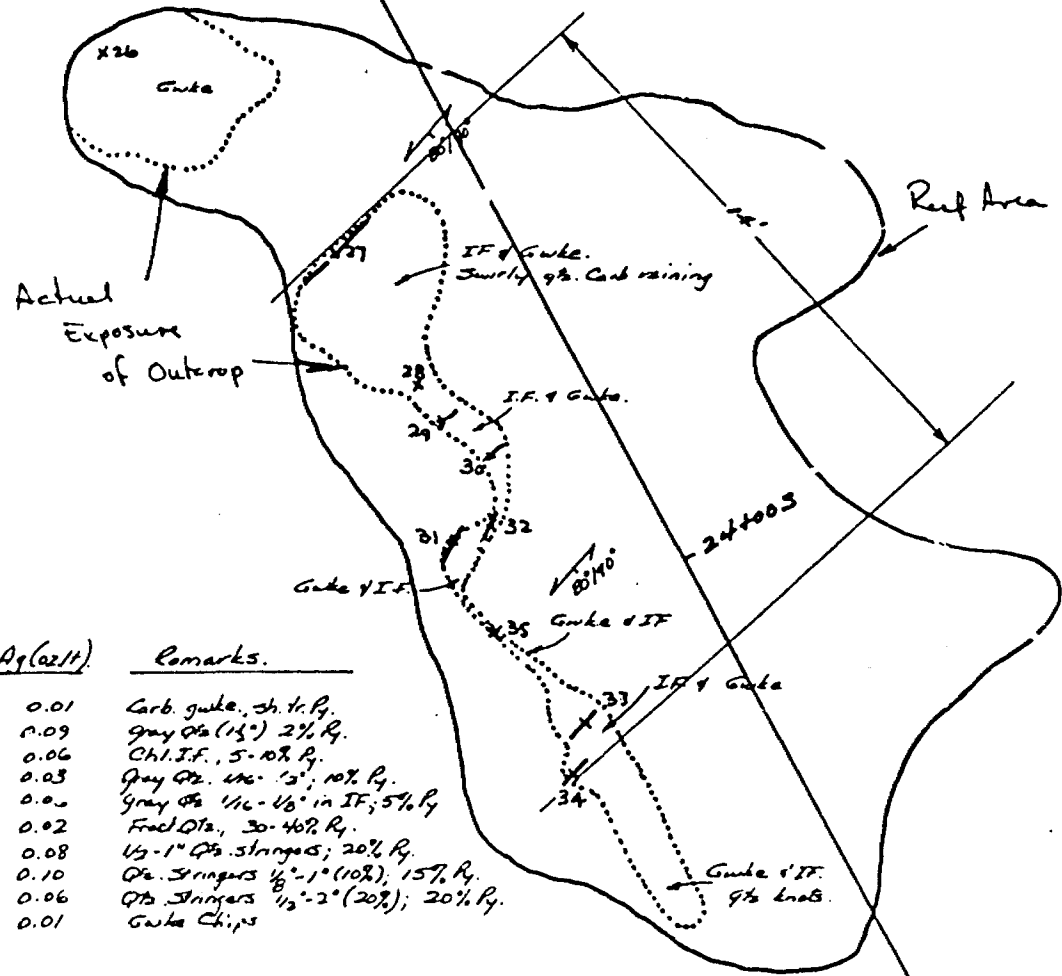


Figure 4.
**AEROMAGNETIC PLAN OF THE
 SAVANT EXPLORATIONS' PROPERTY
 SAVANT LAKE AREA, ONTARIO**
 SCALE: 1" = 1 mile
 0 1 2
 Miles
 PROJECT 1401 418 32 / / / 0304



S+80W

SAVANT LAKE



SAMPLE NO.	As (oz/ft)	Ag (oz/ft)	Remarks.
R 013326	0.002	0.01	Carb. gulch, sh. tr. P.
27	0.26	0.09	gray Qz (1 1/2") 2% P.
28	0.013	0.06	Chl. I.F., 5-10% P.
29	0.019	0.03	gray Qz. 1/16-1/8" 10% P.
30	0.067	0.02	gray Qz 1/16-1/8" in IF; 5% P.
31	0.16	0.02	Frac. Qz., 30-40% P.
32	0.78	0.08	1/2-1" Qz. stringers; 20% P.
33	0.19	0.10	Qz. stringers 1/8"-1" (10%); 15% P.
34	0.30	0.06	Qz. stringers 1/2"-2" (20%); 20% P.
35	0.006	0.01	Gulch Ch.; P.

ARITH. AVERAGE OVER 14 OF. 0.20 oz. Sulfur.

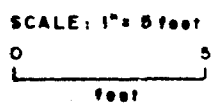
FROM: MAPPING & SAMPLING BY W. BENHAM



G. J. HINSE - MARCH 31, 1983

Figure 5.

SKETCH OF THE SHOAL SHOWING
for
SAVANT EXPLORATIONS LIMITED
SAVANT LAKE AREA, ONTARIO



3. Line 48+00'W, 23+00'N: West prospect area noted in Appendix II. Exposure limited to old, overgrown trenches.

4. Line 20+00'W, 4+50'N: Prospect southwest of One Pine Lake noted in Appendix II. Exposure limited to old, overgrown trench.

No sampling of these prospect locations was carried out by Dr. Bowdidge, but he noted the consistent association of pyritic quartz-carbonate veining with a sulphide facies of iron formation in all cases, as well as structural irregularity.

AEROGEOPHYSICAL SURVEYING:

The area was surveyed aeromagnetically by government agencies in 1961. The resulting compilation of areal data is shown in Figure 4 (from G.S.C. Geophysical Sheets 1109G, 1119G).

During 1981 Geophysical Surveys Inc. completed an aerosurvey of the general area on behalf of the Ramsay-Ram Petroleum interests, including the present Savant Explorations property. This survey was helicopter-borne, utilizing a Geonics EM-33 electromagnetic unit, a Geometrics G803 proton magnetometer, and a Hertz Industries TOTEM-1A VLF-EM system. North-south flight line orientation at an approximate line spacing of 600 feet was used in this survey.

The results of the aerogeophysical survey have been largely superseded by the much more detailed ground geophysical survey data. However, it may be noted that weak aero-electromagnetic response was indicated in only one location within the property area. This lies at about 40+00'W in the base line area, and is confirmed by later VLF-EM ground survey (see Map No. 4, in pocket). Considering the rather extensive VLF-EM response shown on Map No. 4, it appears that normal electromagnetic survey methods are ineffective in this environment.

Also, the aeromagnetics show some irregularity, possibly folding, in the iron formation in the One Pine prospect location. This area was not covered by ground geophysical survey.

MAGNETIC SURVEYING:

Initial ground magnetic surveying was carried out by Paterson, Grant & Watson Ltd., Consulting Geophysicists, during early 1981, covering most of the property area. A Scintrex MF-2 Fluxgate magnetometer was used, with grid lines bearing N 20° W, at 400 foot spacing. Readings were taken at 100 foot stations, closing to 50 foot intervals in areas of anomalous activity. R.G. Ramsay extended the original survey to cover the Shoal Prospect location (Line 9+80'W, 24+00'S), in early 1982.

The magnetic survey results are shown on map No. 2 (in pocket). The values indicated are vertical magnetic field intensity in 1,000's of gammas. Variations in values range from 9,000 to 100,000 gamma levels, the higher ranges reflecting the presence of magnetite iron formation.

Relating magnetic data to known geology, areas indicated in excess of the 20,000 gamma levels on map No. 2 are believed underlain by higher concentrations of magnetite iron formation. The lower values define areas underlain mainly by arenaceous to argillitic metasediments. As such, it is assumed valid to consider the magnetically-defined magnetite iron formation areas (20,000+ gammas) as gross marker horizons for structural analysis. The formational "marker" is not readily identifiable on the basis of geology alone, because of the lensitic nature of the oxide facies of the iron formation.

On this basis, two major bands of iron formation are identifiable within the property area. They are folded along major westerly-trending axes, and much minor subsidiary folding is in evidence. This is corroborated geologically both in terms of rock type distribution, and the presence of ubiquitous westerly-trending shearing throughout the property area.

The strong WNW fault system postulated in the central part of the property (see map No. 1, in pocket), is thought to have produced discontinuity within the iron formation in the vicinity of the base line at 16+00'W. This has resulted in very confused magnetic response in this locale, suggesting fragmentation of the iron formation.

Importantly, all of the significant gold prospects identified in the property area are closely associated with the iron formation, and appear to lie in areas in which minor folding is prominent.

VLF-EM SURVEYING:

VLF-EM surveying over the main grid area was also completed by Paterson, Grant & Watson Ltd. in early 1981. A Geonics EM-16 unit was employed, utilizing the VLF transmission signal from Cutler, Maine (17.8 kHz). The transmission signal from Seattle, Washington (18.6 kHz) was tested, but considered to yield an inferior response in this instance. R. G. Ramsay extended the original survey over the Shoal Prospect location (Line 9+50'W, 24+00'S) in early 1982.

The VLF-EM profiles using the Cutler transmission signal are shown on map No. 4 (in pocket). The contourable values were developed by Paterson, Grant & Watson Ltd. using the Cutler-derived data, and applying the Fraser Filter method of data processing. This process involves the calculation of the horizontal gradient of the in-phase component of the actual VLF-EM readings.

In reference to the VLF-EM contour plan (map No. 4), two main populations of conductors can be recognized. As there is no direct evidence allowing firm identification of the source of conductivity in either case, interpretation is necessary. In this regard it will be recognized that the VLF-EM survey method is at times susceptible to extraneous features such as topographic variation and certain overburden conditions. Also, response to heavy magnetite concentrations is known. The latter case, however, does not seem to be of consequence in this area.

The most common conductor population appears generally sinuous, and lies adjacent to the main iron formation horizons as defined by magnetics. These are likely a response to pyritic or argillitic formations peripheral to magnetite iron formation. In places some of these conductive zones appear directly associated with magnetite iron formation, and may indicate intercalation of such conductive strata, or simply their infolding on minor fold structures.

The second anomalous population is linear in nature, and essentially unrelated to magnetic configuration. One such anomaly can be traced from Line 4+00'W, 2+25'S to Line 44+00'W, 24+25'N; and another from Line 12+00'W, 30+25'S to Line 56+00'W, 4+75'S (see Map No. 4). These are interpreted as WNW trending fault systems. It will be recognized, however, that the southernmost lineament lies in a topographically irregular area, and the indicated anomalous condition may be a topographic or cultural effect.

What may be of great significance, however, is the peculiar conductor configuration best exemplified in the vicinity of Line 40+00'W, 20+00'N. Here it appears that a "linear" conductor intersects a "formational" conductor, with a broadening and strengthening of VLF-EM response. This and similar situations, all iron formation-related, are located on map No. 4, and may be listed as follows with their general locations indicated:

- A - Line 40+00'W, 20+00'N; gold prospect associated.
- B - Line 16+00'W, 32+00'N; environment unknown.
- C - Line 4+00'E, 10+00'N; One Pine prospect area. Data lacking, but condition projected.
- D - Line 16+00'W, 4+00'N; gold occurrence reported in area. This is a multiple case, extending to the southeast.
- E - Line 52+00'W, 10+00'S; quartz veining in vicinity, otherwise unknown.
- F - Line 28+00'W, 23+00'S; weak veining with low gold known to the west, otherwise conditions unknown.

G - Line 12+00'W, 18+00'S; Shoal Prospect associated.
Otherwise geology unknown.

A series of irregular VLF-EM responses of good strength is also indicated in the area covered by One Pine lake in the northern part of the claim area. These appear of formational origin, but are not associated with iron formation.

The Shoal Prospect (location G, above) affords the best example available of the detailed relationship between significant gold mineralization and conductivity. As shown on map No. 4 the prospect actually lies approximately 150 feet southwest of a sinuous zone of moderate to strong conductivity, but well within a highly magnetic area. While additional evaluation in this area is clearly required, it is evident that higher conductivity does not necessarily coincide with strong gold mineralization. A close spatial relationship exists in this case, however, and the conductive zone exhibits irregularity.

INTERPRETIVE CONSIDERATIONS

Previous work in the Savant Explorations property area has resulted in the location of remarkably widespread gold occurrences, all closely associated with a carbonate-rich sulphide facies of iron formation. Without exception, gold occurs with pyrite in quartz-carbonate veining within the iron formation. The veining is generally narrow within a mineralized zone, but frequent. Vein systems, so composed, are developed within fractured and schistose zones within sulphide iron formation. These zones are believed formed mainly through folding action, but possibly to a lesser extent through faulting.

There is little information available at this time which would allow estimation of the lateral and vertical extent of such vein systems. Some shallow drilling was carried out in the past on the One Pine prospect, in the property vicinity, where lateral zonal continuity of 2,000 feet on a NNE trend was originally claimed (see Appendix 11).

However, the interpretation shown on map No. 1 (in pocket) suggests that a series of minor folds exist in the iron formation at this location. If related to folding as suggested, associated fracturing, veining and mineralization would of course assume a quite different configuration from that postulated at the time, and the prospect area would obviously not have been effectively tested. In fact, the drilling results and later observations are fully consistent with this interpretation.

As mineralization in this area shows strong formational affinities, and there are no intrusive rocks or alteration effects present which would qualify an additive mode of genesis, we are of the opinion that the gold occurrences of the area are stratabound of sedimentary origin. Mild redistribution and concentration of original rock constituents, including gold, pyrite and silica, appears to have taken place in structurally dilatant locations under low grade metamorphic conditions.

In more broad terms, it is suggested that gold emanating from a volcanic source to the southeast of the property area was transported surficially into the shallow marine environment of the Savant paleobasin, to be deposited in an early carbonate-rich, pyritic facies of iron formation. Later basinal subsidence promoted the deposition of overlying oxide iron formation at somewhat greater depths. The later subsidence does not appear to have been profound, and perhaps reversals took place producing the intercalation of the iron formation facies as observed. This would account for the general association of gold with areas of high magnetics.

It is also possible that very early basinal sedimentation formed muddy surficial accumulations containing some carbonaceous material and pyrite, marking local depressions or channels which may also have been favoured in later sedimentation. Hence the stronger formational conductors noted in the Savant Explorations property area may be important indicators of potentially auriferous depositional centers. Whether they are auriferous in themselves remain to be seen.

EVALUATION REQUIREMENTSGENERAL CONSIDERATIONS:

The Savant Explorations property has been adequately explored by prospecting, geological mapping and geophysical surveying. Widespread gold occurrence has been noted, and several exploratory target areas have been identified geologically and geophysically. The Shoal prospect in itself may prove to be economically significant.

It is our opinion that there is little else that can be done at this stage to further refine identified target areas for drill testing. Accordingly, an evaluation program consisting essentially of drilling is recommended for the property, which can be undertaken at any time. The initial program consists of two phases; one designed to test anomaly areas, and the other to test the Shoal prospect. There is one limitation in respect to the Shoal prospect, as it is water-covered drill testing will have to be carried out during winter months.

The anomaly areas to be tested in the initial program are limited in outcrop exposure, and we are aware that it is difficult to identify mineralized horizons with precision on the basis of geophysical data. Thus test drilling in these areas is designed to traverse formations of interest completely, employing holes from 400 to 500 feet in depth, and sometimes requiring more than one hole on a drill section. There is no provision for follow-up drilling in any of these areas within the initial program.

It is recommended that the Shoal prospect be tested with a series of five shorter holes, spaced at 100 foot intervals along strike, and three deeper holes as part of the initial program. There is no allowance for further drilling of this prospect in the initial program.

As follow-up drilling will likely be required, but cannot be estimated with accuracy at this time, it is suggested that financing arrangement for work on the property include funding for a provisional drill

program. These funds would be utilized only if sufficient encouragement were obtained in the initial program to justify further work.

EVALUATION PROGRAM:

Anomaly areas requiring evaluation within the Savant Exploration property are shown on map No. 4, designated as areas A and B, and areas D to H. In all cases but one, structural irregularity is indicated, and in most cases gold mineralization is known in the vicinity. Anomaly area H is interpreted as a formational conductor of good strength, and was actually indicated by the aeroelectromagnetic survey completed during 1981. Thus, although regular in configuration, it is thought that this location would afford a good test of the character of the formational type of conductor proximal to iron formation.

In the case of the Shoal prospect, the indicated zonal strike is N 55° E, with a steep dip to the south. The more shallow holes, to be drilled at 100 foot intervals along strike, should be drilled first. The location of the deeper holes, designed to test zonal plunge and extension, can be modified depending on the results of the shallow drilling.

Wireline drilling is recommended to ensure good core recovery, and BQ core size is desirable. It will provide a better sample at little extra cost. Sludge samples should be taken at 10 foot intervals as available, and analyzed for gold content. It is quite possible in this environment that gold values may be present without substantial vein development. Core samples should be analyzed for gold and silver content only in general, but other elements may be included if their presence is noted in the core.

The recommended drilling program is as follows:

Initial Program:

<u>Hole No</u>	<u>Location</u>	<u>Bearing</u>	<u>Dip</u>	<u>Depth (ft)</u>	<u>Remarks .</u>
R-1	48W,20+50N	N 20° W	-50°	400	Anomaly, Area A
R-2	44W,22+50N	N 20° W	-50°	400	"
R-3	40W,23+50N	N 20° W	-50°	500	"
R-4	40W,19+00N	N 20° W	-50°	500	"
R-5	40W,15+00N	N 20° W	-50°	500	"
R-6	20W,32+50N	N 20° W	-50°	400	Anomaly, Area B
R-7	16W,20+00N	N 20° W	-50°	500	"
R-8	24W, 2+00N	N 20° W	-50°	500	Anomaly, Area D
R-9	16W, 2+00N	N 20° W	-50°	400	"
R-10	28W, 8+00S	S 20° E	-50°	500	Anomaly, Area H
R-11	52W,10+50S	N 20° W	-50°	500	Anomaly, Area E
R-12	46W,14+00S	N 20° W	-50°	500	"
R-13	12W,14+50S	N 20° W	-50°	400	Anomaly, Area G
R-14	11W,19+00S	N 20° W	-50°	400	"
R-15	28W,22+50S	S 20° E	-50°	400	Anomaly, Area F

Anomaly Drilling, 15 Holes for 6,800 ft.

S-1	0, 1+00S *	N 35° W	-45°	300	Shoal Prospect
S-2	1W, 1+00S *	N 35° W	-45°	300	"
S-3	2W, 1+00S *	N 35° W	-45°	300	"
S-4	1E, 1+00S *	N 35° W	-45°	300	"
S-5	2E, 1+00S *	N 35° W	-45°	300	"
S-6	1W, 1+50S *	N 35° W	-60°	400	"
S-7	0, 1+50S *	N 35° W	-60°	400	"
S-8	1E, 1+50S *	N 35° W	-60°	400	"

Prospect drilling, 8 Holes for 2,700 ft.

* denotes locations on sub-grid with base line at N 55° E, and 0+00 point on the shoal on center line of prospect (9+80W, 24+00S on main grid).

Total Initial Program - 23 Holes for 9,500 ft.

Provisional Program:

A provisional drilling requirement of 7,500 feet is estimated for follow-up drilling on the Savant Exploration property. Hole locations are unspecified at this time.

ESTIMATED PROGRAM COST:

Initial Program:

Diamond drilling (9500'BQ @ @22.50/ft).....	\$ 213,750.
Mobilization, demobilization cost.....	4,000.
Supervision, logging.....	7,500.
Core handling, storage.....	4,000.
Analysis (sludge, 500 @ \$10.00 ea.).....	5,000.
Analysis (core, 400 @ \$17.50 ea.).....	7,000.
Accomodation, travel.....	7,500.
Consulting services.....	8,000.
Administration.....	4,500.
	Sub total.....\$ 261,250.
Contingencies, (@15%)	39,190.
Estimated Cost of Initial Program.....	\$ 300,440.

Provisional Program:

Diamond drilling (7,500'BQ @ \$22.50/ft).....	\$ 168,750.
Supervision, logging.....	6,000.
Core handling, storage.....	2,500.
Analysis (core, 250 @ \$17.50 ea.).....	4,375.
Accomodation, travel.....	7,500.
Consulting services.....	10,000.
Administration.....	4,000.
	<hr/>
Sub Total.....	\$ 203,125.
Contingencies, (@15%).....	30,470.
	<hr/>
Estimated Cost of Provisional Program.....	\$ 233,595.

Total Program:

Estimated Cost of Initial Program.....	\$ 300,440.
Estimated Cost of Provisional Program.....	\$ 233,595.
	<hr/>
Total Estimated Cost.....	\$ 534,035

CONCLUSIONS & RECOMMENDATIONS

The Poisson Township property of Savant Explorations Ltd. contains a number of gold occurrences closely associated with a carbonate-rich pyritic facies of iron formation. These are considered to be stratabound in nature, and of sedimentary origin.

Gold in this area occurs closely associated with pyrite in quartz-carbonate vein systems within the iron formation. Such zones are believed to have formed through weak remobilization of original rock constituents controlled by folding action, and to some extent, faulting. The favourable iron formation units have been traced magnetically throughout the property area, and structurally complex areas within them are recognizable geophysically. Seven such areas, some with associated gold occurrences in proximity, have been identified for further testing.

One gold occurrence within the property area, known as the Shoal prospect, has yielded gold values of over 1.00 oz. Au/ton from grab samples of veining, and the vein system may average in the range of 0.20 oz. Au/ton over a 14 foot width in limited exposure. Detailed drilling is recommended at this location.

Prospecting, geological mapping and geophysical surveying have already been completed over the property. The recommended program for further evaluation thus consists chiefly of diamond drilling, and has been developed in two stages. The initiation program, consisting of 23 drill holes comprising 9,500 feet, is estimated to cost \$300,440. A provisional drilling program providing for follow-up drilling if sufficient encouragement is obtained in the initial program, is estimated to cost an addition \$233,595.



Respectfully Submitted,

G. J. Hinse

G. J. Hinse, P. Eng.

Sudbury, Ontario
March 31, 1983

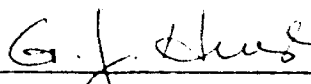
CERTIFICATE OF QUALIFICATIONS

I, G.J. Hinse, hereby certify that:

- 1) I reside at 9 Gloucester Ct., Sudbury, Ontario, P3E 5M2
- 2) I am a qualified geologist, having received my training at Laval University.
- 3) I am a registered Professional Engineer of the Province of Ontario.
- 4) I have been continuously engaged in my profession for the last twenty-five years.
- 5) The foregoing report to Savant Explorations Ltd. on its Poisson Township Gold property is based on the records of work done by previous owners, published geological maps and reports and assessment work files and a visit to the property and the area from March 13 to 16, 1983.
- 6) I do not have, nor do I expect to receive any interest in the property described in the foregoing report or in the securities of Savant Explorations Limited or any company concerned with this property.
- 7) I hereby consent to the use of the foregoing report by the Company in a prospectus or a statement of material facts relating to the raising of funds for this project.

Sudbury, Ontario
March 31, 1982




G.J. Hinse, P.Eng.

APPENDIX I.

Listing of Sources of Information on the Savant
Lake area, and the Savant Exploration Property

APPENDIX I.

Listing of Sources of Information on the Savant
Lake area, and the Savant Exploration Property

- | | |
|---|--|
| O.D.M. Vol. 37, Pt.IV, 1928 | - Lake Savant Area, District of Thunder Bay by E.S. Moore. |
| O.D.M.-G.S.C. Geophysical Maps
1109G,1119G, 1961 | - Kashawegama Aeromagnetic Sheet.
Barrington Lake Aeromagnetic Sheet. |
| G.S.C. Economic Geology Report
No. 22, 1965 | - Geology of Iron Deposits in Vol. 1,
by G.A. Gross. |
| O.D.M. Geol. Map 2442, 1979 | - Geological Compilation Series, Sioux
Lookout-Armstrong Sheet by F.W.
Breaks et al. |
| M.N.R. Ont. Geoscience Report | - Geol. of McCublin, Poisson and
McGillis Townships (Savant Lake Area)
District of Thunder Bay; W.D. Bond. |
| O.D. M. Preliminary Map
P. 723, 1972 | - Poisson Township, District of
Thunder Bay by W. D. Bond. |
| Northern Miner Press, Northern
Miner Issues, 1940-41 | - References to Exploration
Activities in the Savant Lake Area.
Sept. 5, 1940 Issue, pg. 1
Sept. 19, 1940 Issue, pg. 1
Sept. 26, 1940 Issue, pg 6
Oct. 3, 1940 Issue, pg. 1
Oct. 31, 1940 Issue, pg. 1
Nov. 21, 1940 Issue, pg. 1
Dec. 12, 1940 Issue, pg. 7
Mar. 20, 1941 Issue, pg 19 |
| Private Report, April 1980 | - Report on Geophysical Surveys, One
Pine Lake Area; Paterson, Grant
Watson Ltd., |
| P.D.A. Recorder, July, 1981 | - Stargazer Resources Exploration
Program, Savant Lake Area, 1981. |
| Private Report, April, 1981 | - Savant Lake Airborne Geophysical
Survey for Ram Petroleum Ltd.;
Geophysical Surveys Inc. (available
in MNR Assessment Files). |
| Private Report, April, 1981 | - Savant Lake Airborne Geophysical
Survey for Stargazer Resources
Ltd.; Geophysical Surveys Inc.
(available in MNR Assessment Files). |

- Private Report, Nov. 30, 1981 - A Report on the Raylloyd-Ram
Petroleums Gold Property, Savant
Lake, Ontario; G.M. Hogg &
Associates Ltd.

- Private Report, Aug. 6, 1982 - A Report on Geophysical Surveys
on the Raylloyd-Ram Petroleums
Property, Savant Lake, Ontario;
G. M. Hogg & Associates Ltd.

- Private Report, Oct. 27, 1982 - Summary Report on Geochemical Sampling
of the Raylloyd Property, McCubbin
Township, Ontario; G.M. Hogg &
Associates Ltd.

- M.N.R. Ont. Claim Map,
March 1983. - Poisson Twp. Map M.1865

- Private Report, Nov. 14, 1982 - Report on Geological Mapping, One Pine
Lake Gold Project, Poisson Township
Northwest Ontario. C.R. Bowdidge,
M.A. Ph.D.

- Private Report, Jan. 19, 1983 - A report on the Wiggle Creek Gold
Property of Raylloyd Mines and
Explorations Ltd. Savant Lake area
Ontario; G. M. Hogg & Associates Ltd.

APPENDIX II.

Extract from Ontario Geoscience Report No. 160, One Pine Lake Area.

APPENDIX II

Extract from O.G.S. Report 160, W.D. Bond, 1977. Pages 63-66 incl.

During the 1940s, Northern Canada Mines Limited conducted an extensive exploration program encompassing much of the Savant Lake area. The first discovery was made in early September 1940 by two officials of the Northern Canada Mines Limited named Mosher and Garvey. The two prospectors discovered gold on the eastern side of One Pine Lake; the lake is also sometimes referred to as Lone Pine Lake in the early geological company reports. There is a well cut portage approximately 2,000 feet (600 m) in length into the lake beginning at the old cabin located 1 mile (1.6 km) north of the narrows on the west side of Savant Lake. The events that followed were well documented in the Northern Miner (1940 a,b,c,d,e,f,g).

The main showing is located 350 feet (110 m) east of One Pine Lake in southwestern Poisson Township where a shear zone is traceable for 250 feet (76 m). The shear zone which trends north-northeast and dips 80 degrees to the southeast is concordant to its metasedimentary host rocks. The shear zone, exposed for 250 feet (76 m) is marked by discontinuous quartz and minor carbonate veins, veinlets and stringers. Concentrations of massive and euhedral pyrite layers are interbedded with iron formation and greywacke. Although the original find was reported to have been extended to nearly 2,000 feet (600 m) (Northern Miner 1940b), no evidence of lateral continuity of the zone was observed in the field by the author. Initial assays of selected samples by the company employees ran as high as 3 ounces of gold per ton (Northern Miner 1940b). No visible gold was observed in the quartz and this was confirmed by assay results of samples taken by the author. According to the Northern Miner (1940c):

The quartz carries little or no gold. Though no visible gold shows, values in ounces have been had from character samples of the pyrite sections. Where that mineral is sparse, values are low.

The main sulphide-rich zone is 5 inches (12.5 cm) in width and is traceable for approximately 15 to 20 feet (4.5 to 6 m). Selected samples taken by the author containing pyrite and iron formation, when assayed by the Mineral Research Branch of the Ontario Division of Mines, gave values of 0.24 and 0.43 ounce of gold per ton.

In September 1940, the discovery led to the biggest staking rush that Ontario had experienced in several years (Northern Miner, September 1940b). The original discovery was made about 300 feet (90 m) east of the shore line of One Pine Lake (Northern Miner 1940a). At that time, the discovery zone was found to extend for about 2,000 feet (600 m) (Northern Miner 1940b) in a north-northeast trend, although this lateral extension was not found during the present mapping. A second discovery was made soon after and much of the surrounding area was staked by numerous mining companies (Northern Miner 1940b,e). The second showing was located approximately 1 mile (1.6 km) to the west of the original discovery. Two trenches that probably originated at that time were found during the present mapping, and are located midway between One Pine Lake and Snowbird Lake. The trenches, which are caved in and largely overgrown, are poorly exposed. Essentially the original discovery was located near a shear zone with an associated quartz vein in iron formation-bearing metasediments. The gold was found intermixed with the sulphide minerals while the quartz produced only low values of gold (Northern Miner 1940c). Four test pits were blasted out in the original discovery area and showed the mineralized, quartz-bearing zone to be 12 to 14 feet (3.7 to 4.3 m) wide (Northern Miner 1940d). Several of the surrounding claims reported gold-bearing quartz veins and

veinlets (Northern Miner 1940d,e). Northern Canada Mines Limited decided to diamond-drill the initial showing (Northern Miner 1940f). The work in 1940 was summarized by the Northern Miner (1940g):

Approximately 95% of the work done at Savant Lake was completed on the 25-claim group embracing the original discovery. This showing consists of a highly altered mineralized zone, associated with iron formation in the sediments. The values are contained in the sulphide mineralization and the quartz itself does not carry.

...sampling of three trenches covering a length of 80 feet (24 m) north from the original discovery at the lake shore gave an average of \$9.00 across 4.7 feet (1.4 m).

Some distance to the west of the original find a series of narrow quartz veins were found which appear to persist over a length of 4,000 feet (1,200 m). Visible gold is in evidence in the quartz but the wallrock doesn't carry appreciable values. One of these quartz veins showing a width of two to five inches (5 to 13 cm) was stripped for a length of 68 feet (20 m) and sampled to show an average of \$21.80 across 0.73 feet (2.2 m).

At that time the value of an ounce of gold was \$20.67. Evidence of stripping was found in the area, and while some secondary quartz veins were observed in the field during the present survey, no visible gold was seen by the field party. The two trenches shown on the preliminary map of Poisson Township 4,000 feet (1200 m) southwest of One Pine Lake were probably excavated at this time. According to the Northern Miner (1941), Northern Canada Mines Limited diamond-drilled 3,512 feet (1070.5 m), but no record of this was found in the assessment files. The results were published in the Northern Miner (1941) as follows:

Eight holes were drilled on the No. 1 zone, the scene of the original find on the One Pine Lake group. Holes drilled under the surface exposure cut quartz stringers at a vertical depth of about 50 feet (15 m) but in all cases assays were low. Three of the holes, however, showed a stringer structure lying 50 feet (15 m) to the west of where the projected downward extension of the surface showing would be expected. These intersections may represent an altogether new zone or the surface showing may have taken a very flat roll to the west.

The first hole cut the stringer structure, lying 50 feet (1.5 m) west of the vertical downward projection of the surface outcropping, at an incline depth of 156 feet (54 m) where 2.2 feet (0.7 m) of vein matter assayed 0.01 oz. followed by 1.5 feet (0.46 m) assaying 0.76 oz. Five feet (1.5 m) of sludge covering these two intersections assayed 0.53 oz. Along strike the extension was cut in a hole drilled 50 feet (15 m) to the northeast but assays were low grade. The extension 50 feet (15 m) to the southwest, was cut in a hole which gave consecutive assays of 0.14 oz. across 1.4 feet (0.43 m), trace across 2 feet (0.6 m), 0.05 across one foot (0.3 m), trace across 1.2 feet (0.4 m), and 0.07 oz. across 1.3 feet (0.4 m). Low grade stringers were encountered in a hole spotted to cut the structures at the 150-foot (46 m) horizon at a point just southwest of the hole which gave the best values.

Two short holes were drilled north of this point to test for a northerly extension of some auriferous pyrite occurring at the shore but these holes returned no intersections of interest.

APPENDIX III.

Memorandum from G.M. Hogg, P.Eng., to R.G. Ramsey re. samples
submitted for examination and analysis, November 17, 1981.

G.M. HOGG & ASSOCIATES LTD.

APPENDIX III

Memorandum from G.M. Hogg, P.Eng., to R.G. Ramsay re samples submitted for examination and analysis, November 17, 1981.

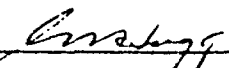
This memorandum is prepared as a record of samples taken by yourself during October, 1981, and the analytical results received from those samples.

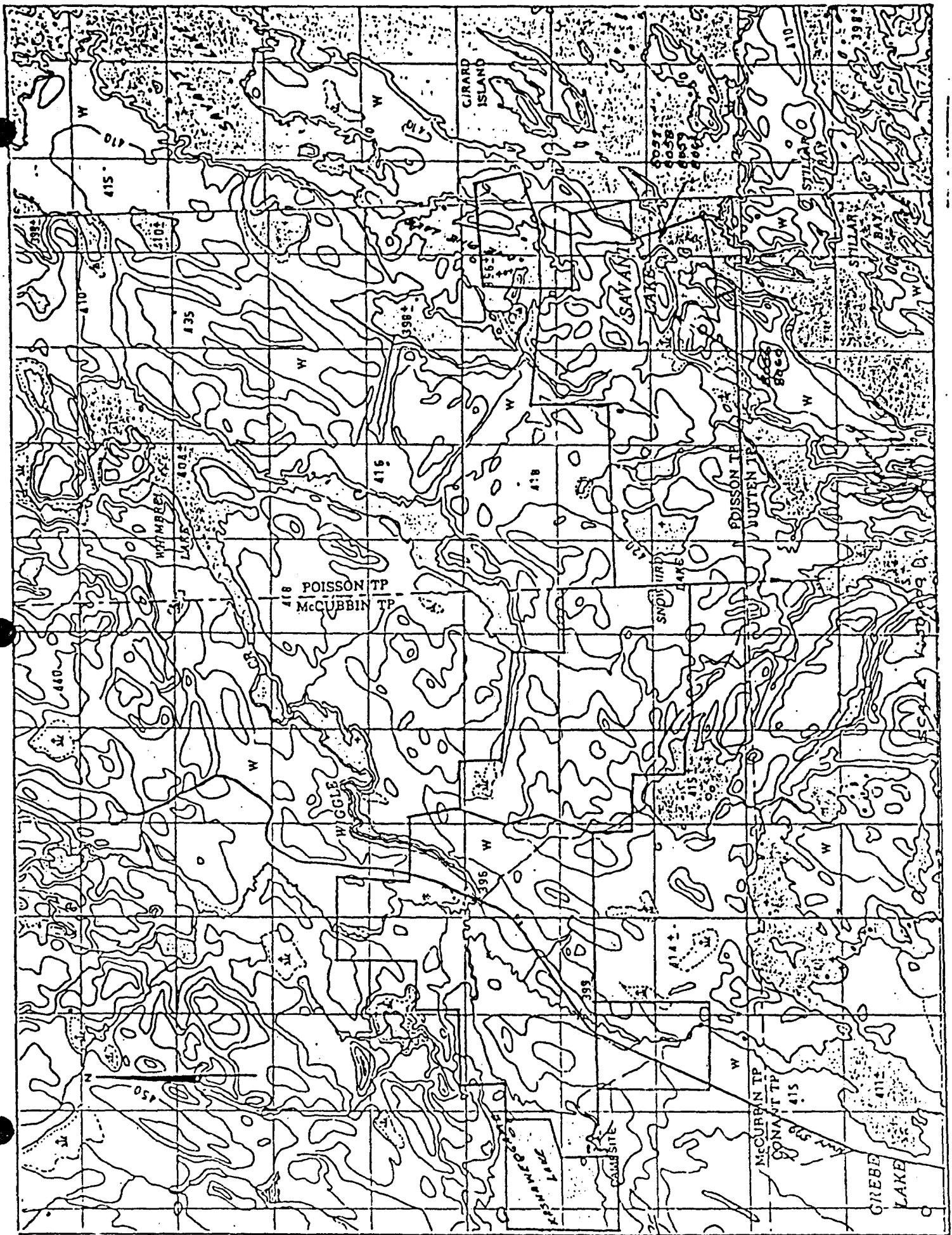
Samples 8057, 8058, 8059 and 8061 consisted of carbonated and sericitic rock containing variable amounts of quartz, pyrite and chlorite. These you reported were taken from a small reef in Savant Lake, exposed during a period of low water level. Samples 8057, 8058 and 8059 correspond to your sample numbers OP-39, OP-40 and OP-41 respectively, and presumably represent the best mineralized material available to you at this location. Sample 8061 consisted of similarly mineralized material from a specimen left with me. It was submitted for assay as a check on receipt of assay values from the first three samples, and contained somewhat less pyrite.

Samples 8056 and 8060 are identified as argillitic iron formation, containing some weak quartz veining and low pyrite. They were taken from a sample which you report taken from the north side of an inlet of Savant Lake, about 1 mile west of the first sampling location. Sample 8060 was submitted as a check on the results reported from sample 8056.

The reported sample locations are shown on the accompanying sketch, and the values reported by Assayers (Ontario) Limited are as follows:

<u>Sample No.</u>	<u>Description</u>	<u>oz.Au/ton</u>	<u>oz.Ag/ton</u>
8056	Slatey I.F., minor qtz. Py est. at 2-3%	0.052	0.01
8057	Ser. & Chlor. rock. High qtz., Py est. at 15-20%	1.20	0.04
8058	As 8057. Py est. at 10-15%	0.58	0.01
8059	As 8057. Py est. at 10-15%	0.90	0.05
8060	As 8056.	0.014	0.035
8061	Ser. & chlor. rock. High qtz., Py est. at about 10%	0.23	0.044


G.M. Hogg, P.Eng.



U.S. GOVERNMENT PRINTING OFFICE: 1963



ASSAYERS (ONTARIO) LIMITED

33 CHAUNCEY AVENUE TORONTO, ONTARIO M8Z 2Z2 · TELEPHONE (416) 239-3527

32

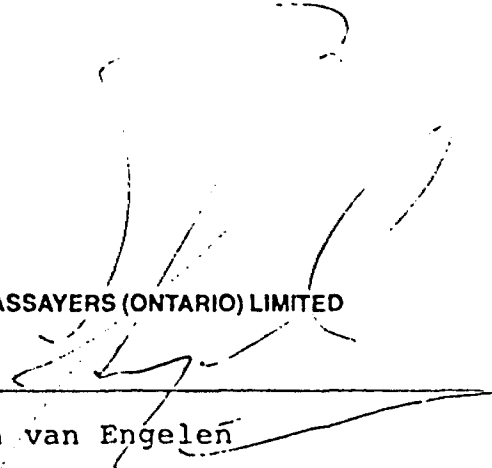
Certificate of Analysis

Certificate No. MI-63 Date: October 29, 1981
Received October 21, 1981 4 Samples of Rock
Submitted by G. M. Hogg & Associates

Sample #	Au oz/ton	Ag oz/ton
8056	0.052	<0.01
8057	1.20	0.04
8058	0.58	0.01
8059	0.90	0.05

ASSAYERS (ONTARIO) LIMITED

Per


John van Engelen



ASSAYERS (ONTARIO) LIMITED

33 CHAUNCEY AVENUE TORONTO, ONTARIO M8Z 2Z2 · TELEPHONE (416) 239-3527

Certificate of Analysis

Certificate No. MI-64

Date: November 3, 1981

Received October 30, 1981 2 Samples of Rock

Submitted by G. M. Hogg & Associates

Sample #	Au oz/ton	Ag oz/ton
8060	0.014	0.035
8061	0.23	0.044

ASSAYERS (ONTARIO) LIMITED

Per _____

John van Engelen
John van Engelen

APPENDIX IV.

Certificate of Analysis, Riocanex Examination, Shoal Prospect.



ASSAYERS (ONTARIO) LIMITED

...35

33 CHAUNCEY AVENUE TORONTO, ONTARIO M 7Z 2 · TELEPHONE (416) 231 3527

APPENDIX IV - Samples From Savant Shoal Prospect, March, 1982.

Certificate of Analysis

Certificate No. MI-102/ #1423

Date: March 29, 1982

Received March 23, 1982 14

Samples of Rock

Submitted by RioCanex Inc.

Att'n: Mr. W. Benham

Shoal Prospect, Savant Lake,
Poisson Twp., R.G. Ramsay Claims.

<u>Sample #</u>	<u>Au oz/ton</u>	<u>Ag oz/ton</u>	<u>Cu ppm</u>	<u>As ppm</u>
01326	0.002	0.01	88	<1
01327	0.26	0.09	75	28
01328	0.013	0.06	62	31
01329	0.019	0.03	47	9
01330	0.064	0.06	43	<1
01331	0.16	0.02	83	19
01332	0.78	0.08	92	10
01333	0.19	0.10	67	3
01334	0.30	0.06	142	3
01335	0.006	0.01	35	<1
01336	0.002	0.03	61	2
01337	<0.001	0.01	65	2
01338	<0.001	0.05	175	12
For — 01339	0.001	0.07	121	7

Note: Samples 01326 to 01335 from Savant Shoal Prospect. Others from unknown location.

ASSAYERS (ONTARIO) LIMITED

Per

John van Engelen

ANALYTICAL CHEMISTS · ASSAYING · CONSULTING · ORE DRESSING · REPRESENTATION

APPENDIX V.

Certificate of Analysis, G.J. Hinse Examination, March, 1983.



ASSAYERS LIMITED

QUEBEC: 183 RUE GAMBLE O., C.P. 685 - ROUYN, J9X 2R8 - TEL: (819) 782-3010

ONTARIO: 20 VICTORIA STREET, SUITE 508 - TORONTO, M5C 2N8 - TEL: (416) 366-3100

CERTIFICATE OF ANALYSIS

FOR G. H. Hinse

Sudbury, Ontario

LAB NO.	SAMPLE NO.	GOLD OZ. PER TON	SILVER OZ. PER TON	COPPER %	ZINC %			
13010	8095	0.02						
1	6	0.505						
2	7	0.10						
13013	8098	0.27						

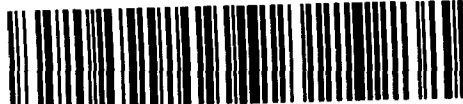
DATE

March 23, 1983

CERTIFIED CORRECT

UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS
SAUF MENTION CONTRAIRE, LES ESSAIS POUR L'OR ET L'ARGENT, NE SONT PAS CORRIGES POUR LES PERTES ET GAINS QUI SONT INHERENTS AU PROCÉDÉ D'ANALYSE.





52J08NW0167 52J08NW0030 GREBE LAKE

900

Sept 13 1983

D.M.
Ontario

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

2-5788

83-86

Instructions -

Note - Expenditures and credits in the "Expenditures" column may be entered in the "Expend. Days Cr." columns. Do not use them in the areas below.

Mining Lands

The Mining Act

Type of Survey(s) EXPENDITURES SECTION 77-19	Township or Area POISSON TWP
Claim Holder(s) R.G. RAMSAY & RAM PETROLEUMS LTD.	Prospector's Licence No. A 38000
Address 10 COOK ST. BARRIE ONTARIO	
Survey Company SAVANT EXPLORATIONS LTD.	Date of Survey (from & to) Day Mo. Yr. Day Mo. Yr.
Name and Address of Author (of Geo-Technical report) G.M. HOGG & G.J. HINES, 9 GLOUCESTER COURT SUDBURY ONT P3E 5M2 28 THOMPSON AVE TORONTO, M8Z 3T3	

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

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

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
PA.	517557	40			
	517558	40			
	517559	40			
	517560	40			
	517561	40			
	517562	40			
	517563	40			
	517564	40			
	517565	40			
	517566	40			
	517567	40			
	517568	60			
	517569	60			
	517570	40			
	517571	53			

RECEIVED
AUG 8 1983
MINING LANDS

PATRICIA MINING DIV.
RECEIVED
JUL 15 1983
A.M. P.M.
7 8 9 10 11 12 1 2 3 4 5 6

Expenditures (excludes power stripping)

Type of Work Performed **Section 77-19**
GEOLOGICAL STUDIES

Performed on Claim(s)
PA 456010 - 13 incl. PA 437126 - 31 incl.
PA 517557 - 71 incl.

Calculation of Expenditure Days Credits

Total Expenditures **\$ 9807.10** ÷ Total Days Credits **15** = **653**

Pa. 517557 Total number of mining claims covered by this report of work. **15**

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

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
653	JULY 15, 1983	<i>[Signature]</i>
Date Approved	Approved As Recorded	Approved As Noted
84.1.86		

Date **JULY 8 1983** Recorded Holder or Agent (Signature) **R.S. Ramsay**

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

Name and Postal Address of Person Certifying
R.G. RAMSAY 10 COOK ST BARRIE ONT L4M 4E9

Date Certified **JULY 11 1983** Certified by (Signature) **R.S. Ramsay**

G. M. HOGG & ASSOCIATES LTD.

8 THOMPSON AVENUE.
TORONTO, CANADA M8Z 3T3

TELEPHONE:
(416) 233 3255

June 11, 1983

Invoice 899

Savant Exploration Ltd.,
c/o Mr. D.H. Nicholson,
1800- 155 University Avenue,
Toronto, Ontario
M5H 3M3

RECEIVED

SEP 7 1983

MINING LANDS SECTION

STATEMENT OF ACCOUNT

Re: Preparation and supply of technical report on the Savant Lake gold property of Savant Exploration Ltd. (R.G. Ramsay), Poisson Township, Ontario. Claims Pa 486010-13; Pa 437126-31; Pa 517557-71, all inclusive.

Professional Fees:

G.J. Hinse, P.Eng. (as per attached invoice 366).....	\$ 3,650.00 ✓
G.M. Hogg, P.Eng. - Visit to property Mar.13-16/83, 3 days @ \$400/day.....	1,200.00
- Geol. & geophy. data preparation and compilation for G.J. Hinse Geol. Services Ltd., April 3-10, 1983. 7 days @ \$400,00/day.....	2,800.00

Disbursements:

G.J. Hinse, P.Eng. (as per attached invoice 366).....	1,059.43
G.M. Hogg, P.Eng. - Airfare Thunder Bay return.....	307.70
Ignace Airways Ltd., Mar.14-15/83...	345.00
Accomodation, Ignace, Mar.13-16/83..	117.00
Meals, Ignace, Mar 13-16, 1983.....	50.00
Printing, shipping, telephone.....	31.40
Car rental, Thunder Bay, Mar. 13-16..	246.57

Total Due.....\$ 9,807.10

Respectfully Submitted,

G.M. Hogg, P.Eng.

Payment received June 28/83
[Signature]

April 30, 1983

Invoice No. 366
Project 1401

Savant Exploration Limited
c/o Mr. G.M. Hogg
28 Thompson Avenue
Toronto, Ontario
M8Z 3T3

INVOICE

Re professional services rendered:

Preparation of a technical report on your Poisson Township
Gold property, Patricia Mining Division of Ontario,

Fees, 10 days @ \$350/day	\$ 3,500.00
3 hours @ \$50/hr.	150.00

Disbursements:

Mar. 13 - Travelling to Ignace, Air		
Canada	\$ 261.35	
Meal	7.51	
Abstracts at Sioux Lookout	7.22	
Samples to Assayers, Purolator	10.34	
Assayers Ltd.	43.00	
Copies, 920 @ 15c	138.00	
Prints, 440 sq.ft. @ 15c	66.00	
Drafting, 31 hrs. @ \$15.	465.00	
Report covers, 20 @ \$1.50	30.00	
Telephone calls	15.00	
Purolator	16.01	1,059.43

Total \$ 4,709.43

Kindly remit

G.J. Hinse

G.J. Hinse

410 3,650.00
430 1,059.43

*Paid on behalf of
Savant Expl. May 11/83
Cheque #76.
M. Wolff*

A-11...82

10 Cook St
Barrioint
L4M 4E9
Sept. 6 1983

Mr E F Anderson
Director

Land Management Branch
Whitby Block Room 6450
Quens Park Toronto ON M7A 1W3

RECEIVED
SEP 7 1983
MINING LANDS SECTION

Dear Sir

Please find enclosed Reports,
maps, and receipts for geological
studies (section 77-19) re claims
no PA 517557 - 71 ^{Poisson Exp} inclusive which work
was filed with the Mining Recorder
during Lookout July 15 1983. Report
by G M Hoyle + G Mines.

Sept 9/83
130 Adelaide St
M5H 8P5

Yours truly
R. B. Ramsey

83-86
2.5788

1983 09 12

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Sioux Lookout, Ontario
POV 2T0

Dear Sir:

We have received data for Assaying and Geological Studies submitted under Section 77(19) of the Mining Act, R.S.O. 1980 for mining claims PA 517557 et al in the Township of Poisson.

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

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-1380

A. Barr:mc

cc: R.G. Ramsay
10 Cook Street
Barrie, Ontario
L4M 4E9

cc: Ram Petroleum
Suite 918
130 Adelaide Street West
Toronto, Ontario
M5H 3P5



Ministry of
Natural
Resources

Geotechnical
Report
Approval

File **2.5788**

Mining Lands Comments

2/27/83

- maps need to be updated

- but may should be done!

To: Geophysics

Comments

Approved Wish to see again with corrections

Date _____ Signature _____

To: Geology - Expenditures *Mr. Kustra*

Comments *9k up to you guys! Good report that I can live w/ it!*

Approved Wish to see again with corrections

Date *Oct 25/83* Signature *C Kustra*

To: Geochemistry

Comments *L.D.*

Approved Wish to see again with corrections

Date _____ Signature _____

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

December 7, 1983

2.5788

R.G. Ramsay
10 Cook Street
Barrie, Ontario
L4M 4E9

Dear Sir:

RE: Assay~~ing~~ and Geological surveys submitted on
mining claims PA 517557 et al in the Township
of Poisson

Enclosed are the plans, in duplicate, for the above-mentioned
survey. Please show all claim lines and numbers and designate
geological outcrops by colour and return reports to this office.

For further information, please contact Mr. F.W. Matthews at
(416)965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

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

M. Anderson:mc

Encl.

cc: Mining Recorder
Sioux Lookout, Ontario

2.578-8

G. M. HOGG & ASSOCIATES LTD.

THOMPSON AVENUE.
TORONTO, CANADA M8Z 3T3

TELEPHONE:
(416) 233-3255

December 20, 1983

Mr. E.F. Anderson,
Director,
Land Management Branch, M.N.R.,
Room 6643, Whitney Block,
Queen's Park,
Toronto, Ontario
M7A 1W3

Dear Sir,

Re: Surveys on mining claims PA 517557 et al, Poisson Twp.,
File 2.5788.

Enclosed please find two sets of four plans concerning the above claims,
returned to Mr. R.G. Ramsay, Barrie, Ontario, for modification.

Mr. G.J. Hinse, P.Eng., who prepared the report has been contacted
on the matter, and the necessary modifications and additions made.
We hope they are found satisfactory.

Yours very truly,


G.M. Hogg.

RECEIVED

DEC 20 1983

MINING LANDS SECTION

January 12, 1984

Our File: 2.5788

R.G. Ramsay
10 Cook Street
Barrie, Ontario
L4M 4E9

Dear Sir:

RE: Assaying and Geological Surveys submitted on Mining
Claims 517557 et al in the Township of Poisson.

We have not received receipts or cancelled cheques required in order to assess work performed on Mining Claims listed above. Please provide receipts verifying payment of the expenditure of \$9,807.10 for Assaying as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

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

M.E. Anderson:sc

cc: Mining Recorder
Sioux Lookout, Ontario

FOR ADDITIONAL
INFORMATION

SEE MAPS:

52J/08 NW-0030 # 1-4



Explanation
 Magnetic readings are vertical magnetic intensity in 1000's of gammas
 From: Survey completed by Paterson, Grant and Watson Ltd., February, 1980.
 ● Au Gold Occurrence

POISSON TWP.
 JUTTEN TWP.

Narrow Bay
 to Shilar Bay

525/08NW-0030

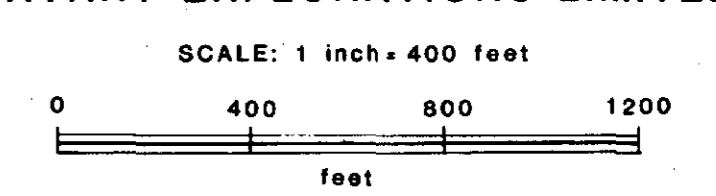
#2



G. J. Hinse

To accompany report by G. J. Hinse, March 1983.

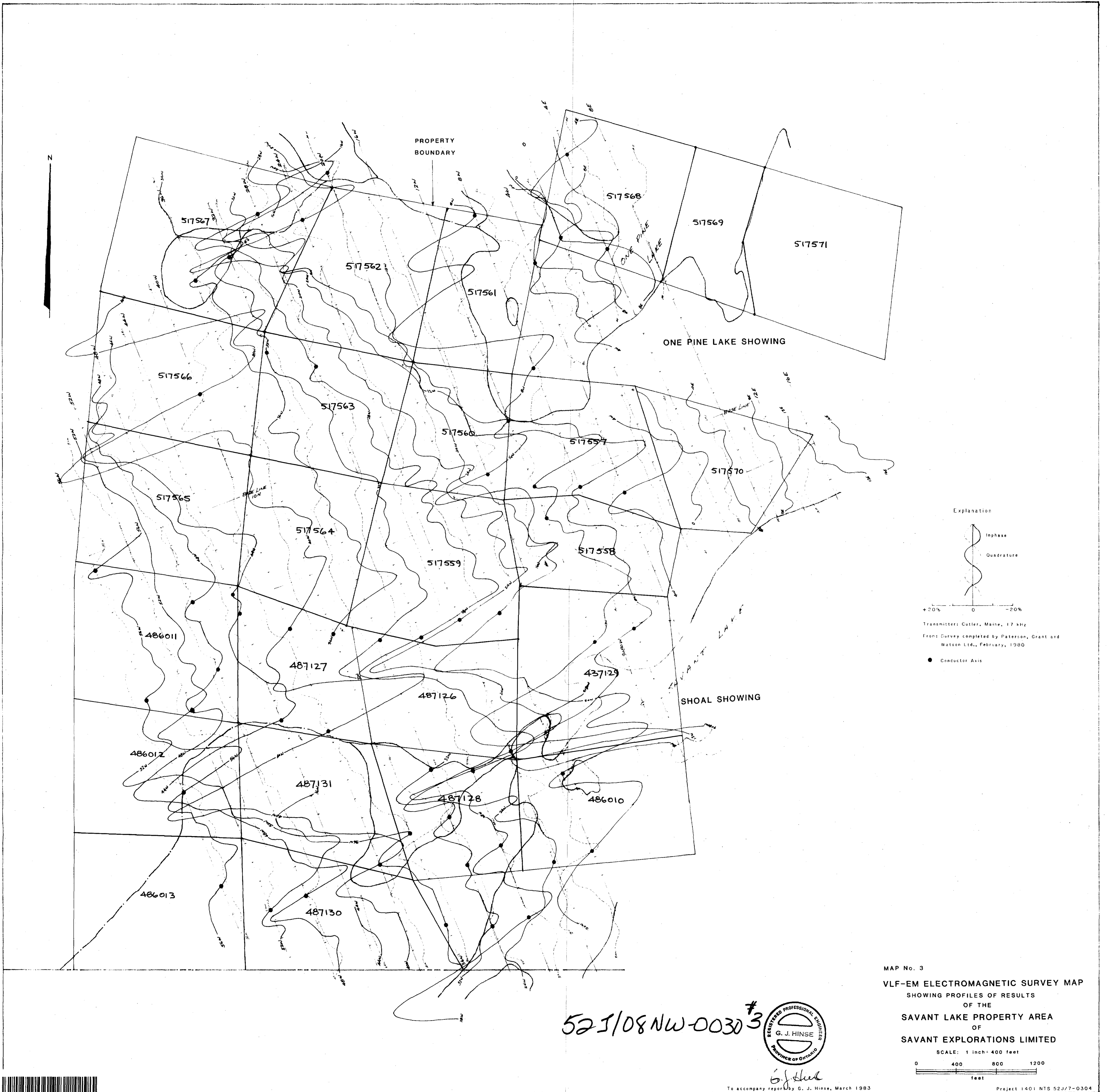
MAP No. 2
 MAGNETIC SURVEY MAP
 OF THE
 SAVANT LAKE PROPERTY AREA
 OF
 SAVANT EXPLORATIONS LIMITED



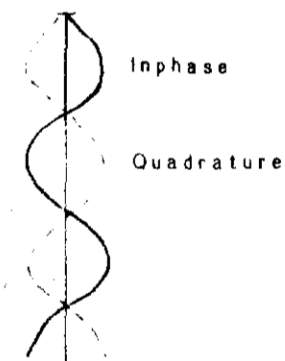
Project 1401 NTS 62J7-0304



25788clp



Explanation



+20% 0 -20%

Transmitter: Cutler, Maine, 17 kHz
 From: Survey completed by Paterson, Grant and Watson Ltd., February, 1980

● Conductor Axis

MAP No. 3
 VLF-EM ELECTROMAGNETIC SURVEY MAP
 SHOWING PROFILES OF RESULTS
 OF THE
 SAVANT LAKE PROPERTY AREA
 OF
 SAVANT EXPLORATIONS LIMITED

SCALE: 1 inch = 400 feet



52 J/08 NW-0030 #3

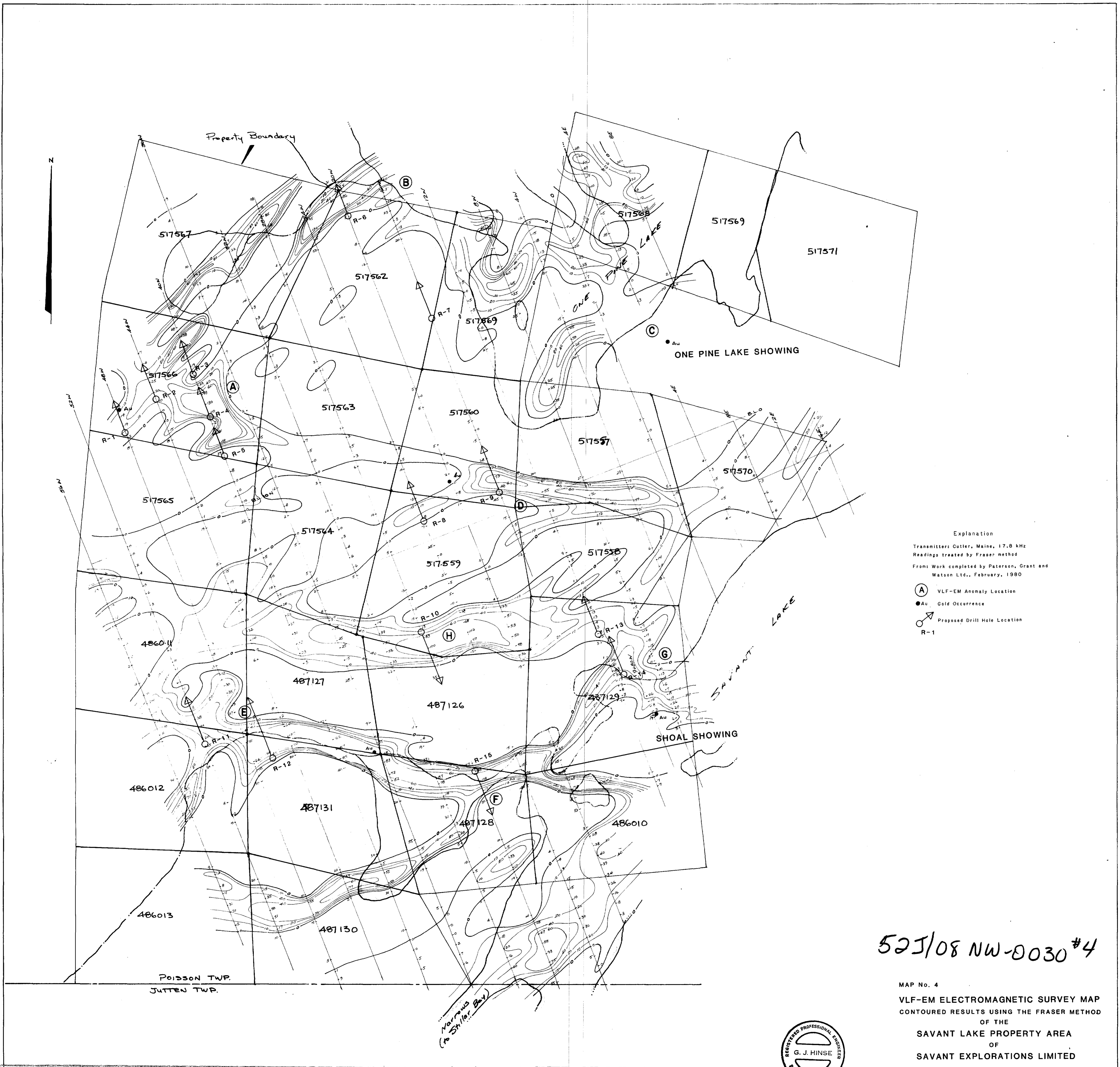


G. J. Hinse

To accompany report by G. J. Hinse, March 1983

Project 1401 NTS 52J/7-0304



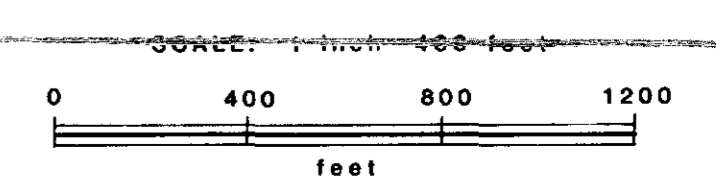


Explanation
 Transmitter: Cutler, Maine, 17.8 kHz
 Readings treated by Fraser method
 From: Work completed by Paterson, Grant and
 Watson Ltd., February, 1980

(A) VLF-EM Anomaly Location
 ● Au Gold Occurrence
 ⚡ Proposed Drill Hole Location
 R-1

52J/08 NW-0030 #4

MAP No. 4
 VLF-EM ELECTROMAGNETIC SURVEY MAP
 CONTOURED RESULTS USING THE FRASER METHOD
 OF THE
 SAVANT LAKE PROPERTY AREA
 OF
 SAVANT EXPLORATIONS LIMITED



To accompany report by G. J. Hinse, March 1983

Project 1401 NTS 52J/7-0304



2008/03/15