



52J08NW9222 52J07NE47A1 JUTTEN

010

GEOPHYSICAL REPORT

DONNER CLAIM GROUP

SAVANT LAKE, ONTARIO

Respectfully Submitted,

Chris D. Anderson, Ph.D., P.Eng.
June 8, 1971

Chris D. Anderson

INTRODUCTION

The Donner Claim Group is located on the South Arm of Savant Lake, Ontario about 40 miles NNE of Sturgeon Lake. The geological map of the area indicates on the basis of reconnaissance mapping that the area is underlain from the north to south by metasediments, mafic metavolcanics, and granite rocks. The contacts between these rock units strikes generally to the NE in this area. The metavolcanics are a continuation of the greenstone belt which contains the Sturgeon Lake Cu-Zn deposits.

A high-grade pit containing silver-lead mineralization is located on claim 202293 and its location is indicated on Map 7. In addition, a gossan showing is located on claim 309420.

A photogeological report by GHD Consultants, Ltd. (1969) on the Savant Lake area indicates that there is a prominent joint-fracture system with a general NE direction. The report also indicates a NNW lineament in the near vicinity of the Donner Claim Group. The Geological Map indicates EW faulting in the same area.

PREVIOUS GEOPHYSICAL WORK

Reconnaissance geophysical work was done by Central Geophysics Limited over the Donner Claim Group in 1963 and the results indicated on Maps 4 and 5 on the report dated Jan. 1963. Map 5 is included with this report. The results are in agreement with the more detailed work covered by this report. In addition, some diamond-drilling was done on the property in 1965.

GEOPHYSICAL SURVEYS

The geophysical surveys were conducted by Central Geophysics Limited of Winnipeg, Manitoba. The surveys conducted were: (1) Total-field magnetics; (2) Very-low Frequency Electromagnetics (VLF-EM16); and (3) Long-wire dip-angle Electromagnetics (DPM-1). The data and interpretation are indicated on the accompanying maps.

The total-field magnetic survey was done using a standard Barringer Proton-precession Magnetometer.

The VLF electromagnetic survey was done using a Ronka EM-16. The sources for the method are VLF transmitting stations located in Jim Creek, Washington (NPG-freq. 18.6 kHz) and

Cutler, Maine (NAA-17.8 kHz). The EM-16 data is in the form of dip-angle and Quadrature information and is plotted as profiles on the appropriate maps. The occurrence of a rapid change in slope of the profile indicates a conductor under the maximum slope position.

Some of the VLF data has been processed using a mathematical calculation called a Fraser-Filter. The results of these calculations give a measure of the slope of the profile data and the positive values have been contoured. A maximum value indicates a conductor.

The long-wire dip-angle electromagnetic survey was done using Central Geophysics Ltd. DPM-1 equipment. The source is a wire several thousand feet long laid approximately parallel to strike and grounded at both ends. A transmitter operating at 510 Hz is connected in series with the wire.

The DPM-1 receiving coils are rotated in a vertical plane at right angles to the wire and the angle at which a null in signal occurs is the recorded data. The data has been plotted as profiles on the appropriate maps. As in the case of the VLF data, a rapid change in slope of the profile indicates a conductor under the maximum slope position.

INTERPRETATION

Detailed geophysical interpretation was done on the data on Maps 7 and 8. The photogeological report mentioned earlier indicates the metasediment-metavolcanic contact crosses Map 8 a few hundred feet north of the baseline. The meta-volcanics would be south of the contact and would underlie all of Map 7.

Maps No. 7 and 7A

VLF, DPM-1 and magnetic measurements were done in this area. The map labelled 7 has the VLF Fraser-Filter data, DPM-1 dip-angle measurements, and conductor interpretation plotted on it. In addition, Map 7 also has the filtered VLF contours and recommended drill-hole locations indicated. The VLF data, VLF profiles, Magnetic data, and contour magnetics are plotted on Map 7A.

A shear or fracture zone has been interpreted to cross the map to the NW. This is based on the VLF anomalies in the SE corner of the map and the indication from the photo interpretation report mentioned earlier of a near parallel feature to the west of Map 7. Major DPM-1 and VLF anomalies occur along this line. In addition a line of anomalies on Map 8 terminate at the extension of this line.

The anomalies on Map 7 do not have magnetic correlation but this is not unexpected for the type of mineralization anticipated in this area.

Map No. 8

Only VLF and Magnetic measurements were done in this area and the values are plotted on the map. The VLF profiles, magnetic contours, and conductor interpretation are also shown on the maps.

The most prominent feature on the map is a series of magnetic highs and lows likely in the metasediments and trending to the NE. A series of conductors is indicated on the western portion of this feature.

Map No. 8A

This map covers claim 309416 and shows the VLF Fraser-Filter data and the DPM-1 dip-angle profiles. The conductors indicated on this map coincide with those appearing on Map 8.

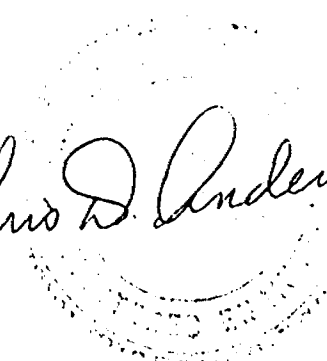
Map Nos. 9 and 10

The conductor responses on these two maps are limited. The locations of the responses are indicated on the maps.

CONCLUSIONS

The presence of anomalies at the junction between the general NE fracture-joint system and the NNW striking break on Maps 7 and 8 make these anomalies definite drill targets. The high-grade showing at the top of Map 7 approximately in line with these anomalies indicates mineralization along the zone. The recommended drill hole locations are indicated on Map 7.

Chris D. Anderson



CENTRAL GEOPHYSICS LIMITED

736 OSBORNE STREET
WINNIPEG 13 - MANITOBAReconnaissance Aimag Survey *
J. DONNER Property
South Arm, Savant Lake, Jutten Twp. Ontario

A rapid reconnaissance Aimag survey was made of a portion of claims nos. PA 32080, PA 32081, PA 32088, and PA 32144. The purpose of the survey was to determine whether any electrical conductors occurred in the vicinity of a pit on claim PA 32080.

The area was energized by using an insulated wire grounded at either end. The wire is in circuit with a 510 cycle alternating current power source. The dip angle of the field is picked up with an Aimag receiver. Conductors are indicated by sharp drops in the dip angle as the traverse proceeds away from the wire. The survey was done on pace and compass lines so station locations are approximate.

The showing has not been examined by the writer, but samples submitted by J. Donner show a galena-pyrite-sphalerite type of mineralization with minor chalcopyrite. This type of mineralization is usually a weak electrical conductor. The mineralized samples are very weakly magnetic. The showing is reported to have a very short strike length. The samples are slightly sheared and Mr. Donner reports that the shearing in the pit has a N 60° E strike and that the mineralization lies along the shear.

Ontario Department of Mines Map No. 37 j shows that the mineralized pit must lie close to a contact of Keewatin greenstone and Timiskaming sedimentary rocks.

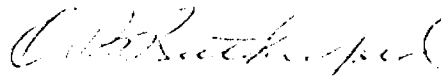
The results of the reconnaissance Aimag examination are shown on the accompanying map which has been shown as map No. 4 at the request of J. Donner.

The map shows conductors lying in two directions. A single, very strong conductor strike approximately N 20° E parallel to the length of the lake shore. This may be parallel to the trend of the formation, although this is not clear on the geological map. A second set of weak conductors strike approximately N 60° E, parallel to the reported strike of the showing. A weak conductor axis lies close to the mineralized showing in the pit. These conductors may represent a cross fracture system and as such are worthy of further prospecting for the sulphide mineralization. They are reported to be in covered areas.



This reconnaissance survey can only show that sub-surface electrical conductors occur in the area and are parallel to the strike of the showing. A geological examination of the showing and surrounding area should be made. If further exploration is justified, a proper geophysical examination should be made on cut grid lines so that the electrical conductors can be better located and evaluated.

* Long-wire E.M. method now designated DPM-1 by Central Geophysics Ltd.


Central Geophysics Limited

February 13th, 1963

CENTRAL GEOPHYSICS LIMITED

736 OSBORNE STREET
WINNIPEG 13 - MANITOBA

AFLEC - SURVEY *
DONNER PROPERTY
SOUTH ARM, SAVANT LAKE, JUTTEN TWP., ONTARIO

INTRODUCTION:

At the request of Mr. J Donner an Aflec Survey was carried out on claims 202296, 202297 and 202311 situated on the south-east side of Savant Lake.

The purpose of the survey was to examine the ground immediately west of and on strike with Aflec conductors located by Central Geophysics in 1963.

METHOD OF SURVEY:

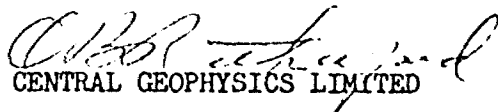
A Grounded wire was laid south of the claims and parallel to the base line. Aflec readings were taken at 50 foot intervals.

RESULTS:

The Aflec readings are plotted on the map. Several conductor responses were located and are labelled on the map. Conductors 1 and 4 probably join to form one conductor which appears to be an extension of the strong conductor found in 1963 in the lake. Conductors 2 and 3 probably represent a parallel conductive zone. This zone may possibly extend to the west as far as line 49E. These two conductive zones are interesting and warrant further investigation. Conductors 5 and 6 are isolated and it is difficult to determine their extent or direction. More detailed work would be necessary to properly outline these two conductors.

A map has been drawn showing the present work and the results of previous investigations. A discussion of previous work is found in a Central Geophysics Limited report of 1963 and which is reproduced here as an appendix to the present report.

* Long-wire E.M. method now designated DPM-1 by Central Geophysics Ltd.


CENTRAL GEOPHYSICS LIMITED

January 15, 1970



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GHD Consultants Limited, Suite 209, 185 Bay Street, Toronto 116, Canada

416/366-2914 Telex 02-29485

November 21st. 1969

TO : E. Rivers
FROM : P. E. Piazza
SUBJECT: Notes on the Photogeological Interpretation of Savant
Lake Area (52J/7)

Introduction:

A photogeological interpretation was done on four photographs covering the southeast side of Savant Lake (South Arm). This property lies in Jutten Township, District of Thunder Bay (52J/7), the Province of Ontario.

Geology:

The property is underlain by three main rock types, they are: Keewatin, volcanics, Timiskaming (Savant Group) sedimentary rocks and Algoman ? granitic rocks.

A north trending contact separates the Timiskaming rocks (Ts) from the Keewatin volcanics. This separation is clear on the aerial photographs by topographical and tonal differences.

A northeast trending contact which outlines the granitic rocks, from the other two lithologic units is clearly discernable on the photographs. The granitic rocks are for , the most part in contact with the Keewatin volcanics. This contact may be a fault contact.

Fracturing and/or joint systems are very prominent. The major direction is northeast, generally coinciding in direction with the possible fault contact of the granitic rocks.

Cont'd....

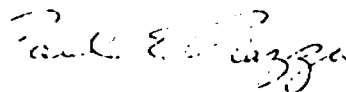
Mineralization:

Known mineralization is indicated on the photo-geological map. This mineralization is interpreted to occur along a northeast fracture within the Temiskaming sedimentary rocks and in close proximity to the contact with the Keewatin volcanics.

Favorable Zones:

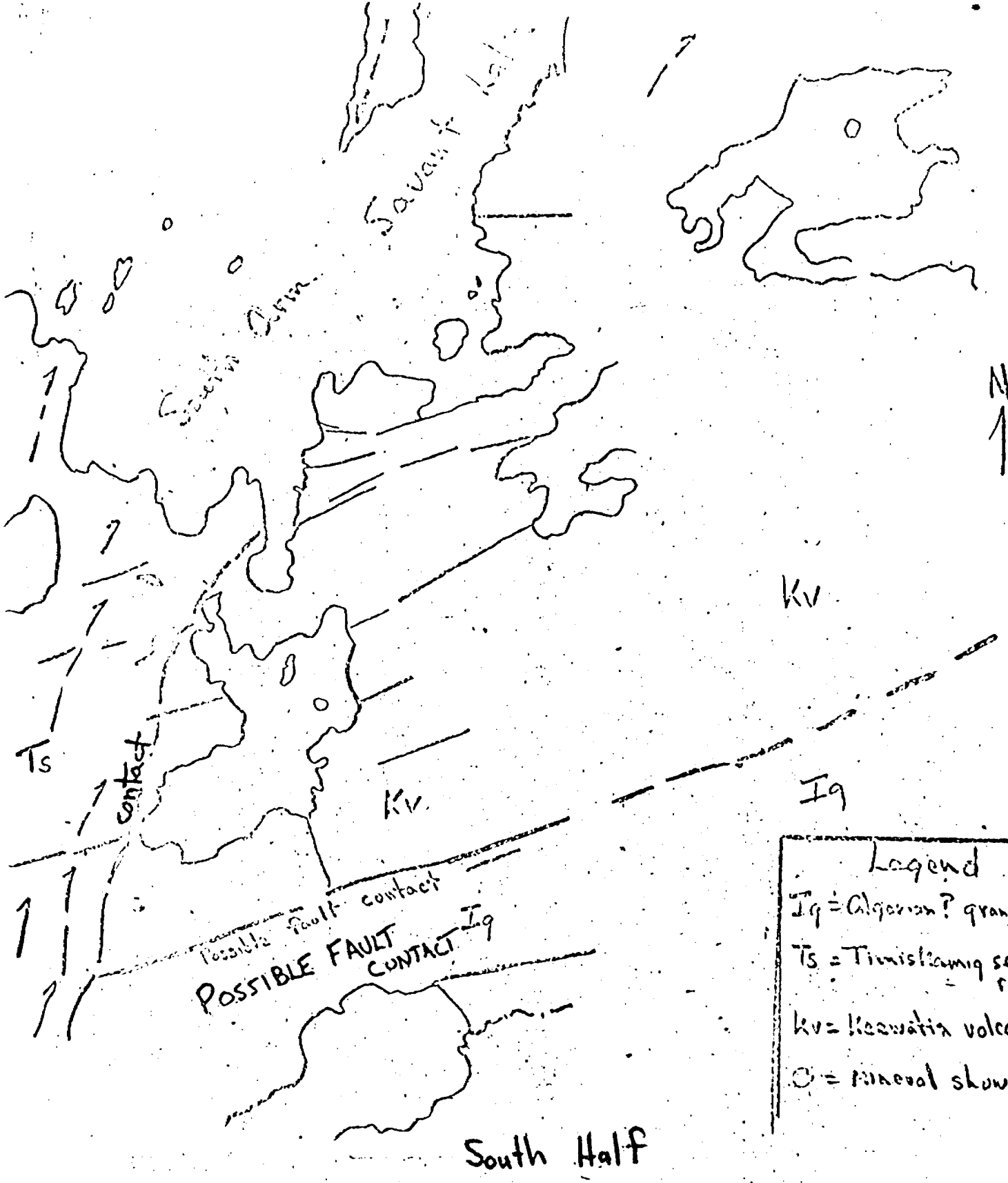
It is the writer's interpretation that the fracture-joint system is more continuous and prominent northeast of the mineral showing. It thus seems logical to assume that these zones should be investigated. The possible fault contact between the granitic rocks and the Keewatin volcanics also is potentially interesting and should be investigated.

It is my opinion that the geological environment is interesting and favorable and the ground should be picked up. Upon obtaining the property I would further recommend a regional photo-geological study followed by a electromagnetic survey over favorable zones.



Paul E. Piazza
Geologist

PEP/bm.



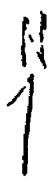
Legend

Iq = Algonian? granitic rocks

Ts = Timistkaming sed. rocks

Kv = Kewatin volcanic

O = Mineral showing



North Half



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040

D. T. ANDERSON

B.Sc., M.Sc., Ph.D., P.Eng.

Consulting Economic Geologist

Property Examinations

Photogeology

GEOLOGICAL REPORT ON THE DONNER GROUP, SAVANT LAKE, ONTARIO

Detailed geological maps are not available for the immediate area; the latest regional map was made by E.S. Moore in 1928 (Savant Lake Gold Area - Map O.D.M. 37J).

An examination of the rock specimens taken from various sections of the claim area indicate that the dominant rock type is an intermediate to basic metavolcanic rock. The attitude of the foliation in the southern section (Claim No. 309417) is parallel to the shear zone suggested by the E.M. conductor. The regional attitude is nearer E-W.

Specimens close to the conductor axes tend to be more highly altered and contain weakly disseminated sulphides.

SURFACE SAMPLING OF THE HIGH GRADE PIT

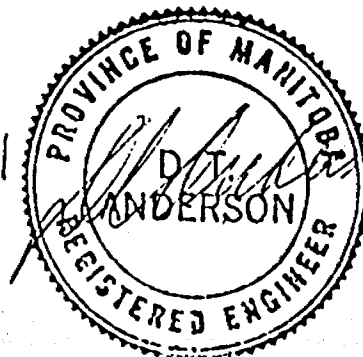
The property has been sampled by Mr. John Donner on two separate occasions; in October 1958 and again in October, 1969. The relative location of these samples is shown on the appended sampling sketch. The assays are as follows:

	Au	Ag	Pb	Zn	Length
1958 Series 21	0.10	22.0	1.92	2.2	24"
22	0.32	50.4	3.97	2.4	12"
23	0.02	4.2	0.43	0.5	6"
24	0.12	43.4	4.66	1.3	7"
25	0.04	11.2	1.06	0.5	12"
26	0.02	9.0	0.92	tr	18"
27	tr	tr	tr	nil	
28	0.01	tr	tr	nil	
22A	0.50	64.4	7.03	5.6	
28A	0.02	tr	0.45	tr	
1969 Series <u>06216</u>	<u>0.16</u>	<u>11.92</u>	<u>1.17</u>	<u>0.36</u>	
<u>06217</u>	<u>0.54</u>	<u>62.36</u>	<u>5.63</u>	<u>1.08</u>	

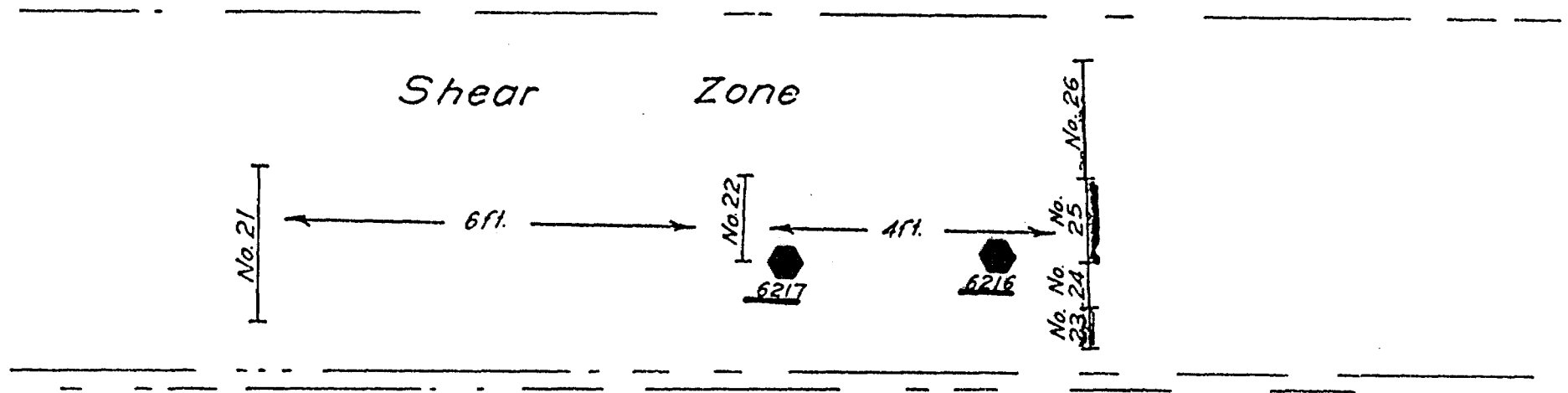
Samples 22A and 28A were selected samples from the larger channel samples. Representative specimen samples have been retained by Mr. Donner from this zone. Samples 06216 and 06217 were collected during 1969 resampling of the pit.

The area to the east of the sampled pit is covered by overburden, but a possible extension of the mineralized zone is suggested by EM-16 and DPM anomalies. The strongest conductivity on strike with the shear zone is in the vicinity of proposed DDH No. 2 indicated on Geophysical Plan No. 7 of Central Geophysics Limited.

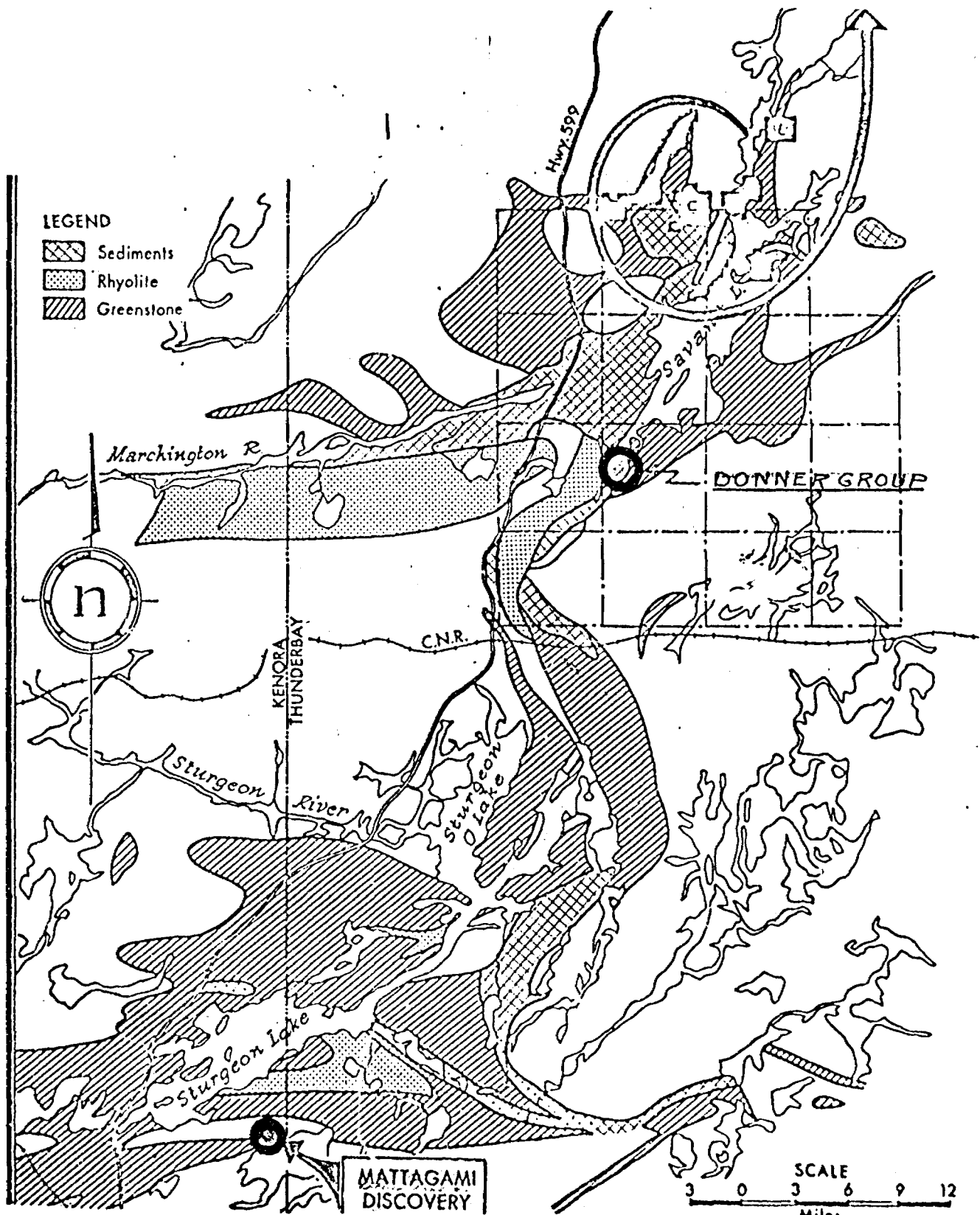
June 1, 1971



HIGH GRADE PIT
SURFACE SAMPLING
ON
DONNER GROUP
CLAIM No. 202293
SAVANT - STURGEON LAKE AREA
ONTARIO



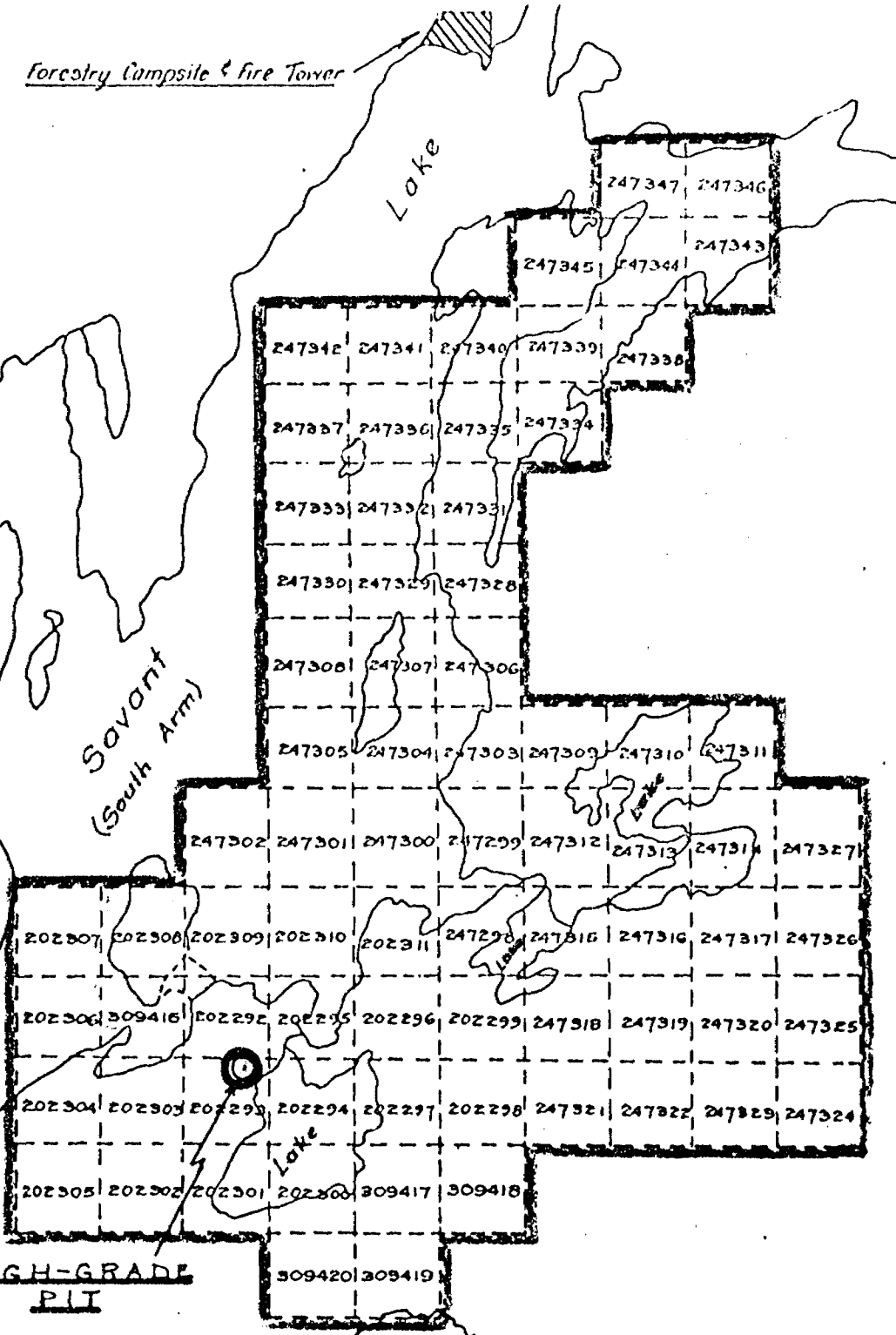
Exact location of high grade pit.
shown on Geophysical Map No. 7



Forestry Campsite & fire Tower

Lake

Savant
(South Arm)



HIGH-GRADE
PIT

DONNER GROUP

75 claims

SAYANT - STURGEON LAKE AREA

ONTARIO

1971

ONE MILE

SCALE: 1 mile = 2 inches

Jutton Lake

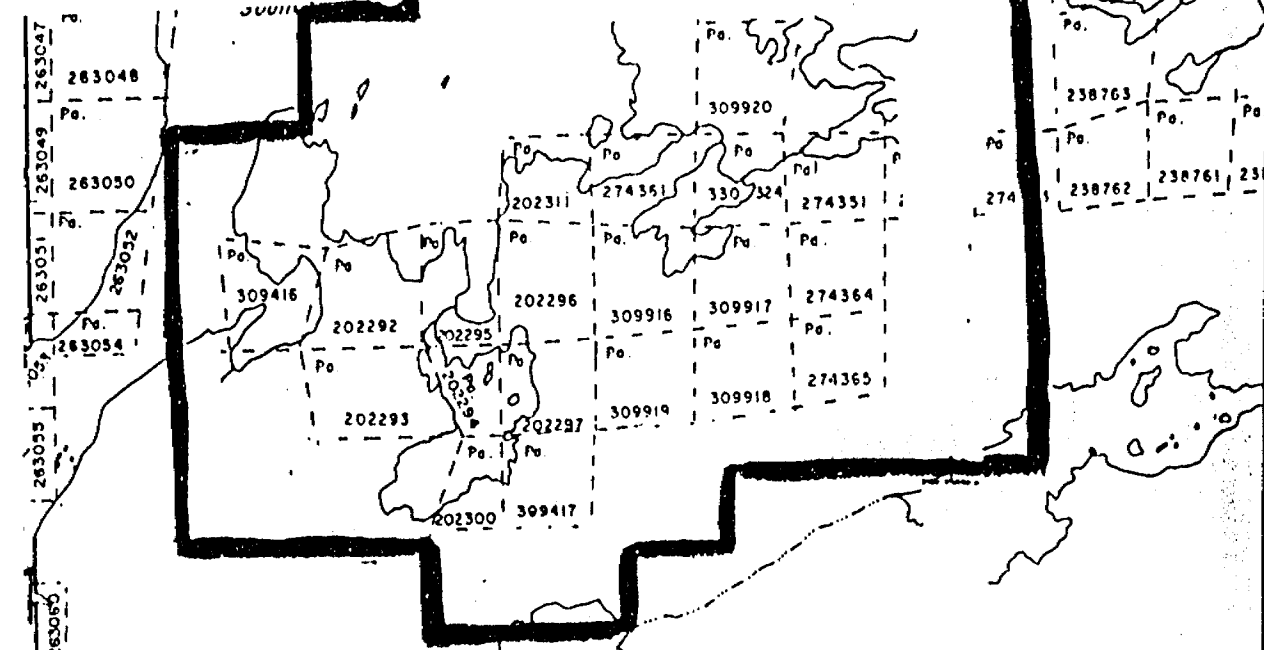
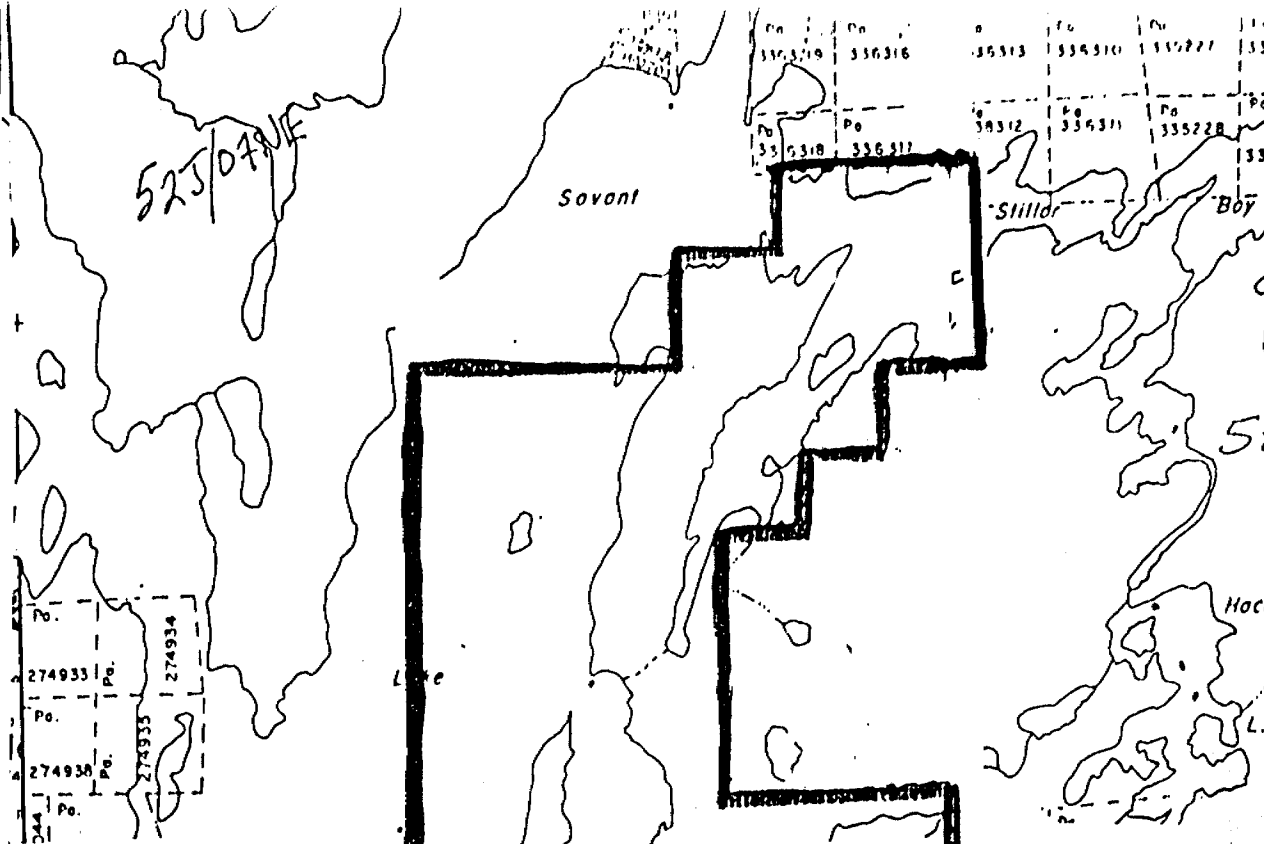
900



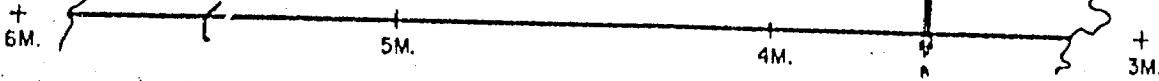
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CONANT TWP. M-1682

11



52J/07NE
 AREA OF GREBE LAKE
 JUTTEN TWP.
 M-1767
 SCALE: ONE INCH = 40 CHAINS
 40 CHAINS



JUTTEN TWP

CHEVRIER TWP. M-16
NOTE FILE # 6