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MINING LANDS SECTION



41P14SW0355 2.3773 BURROWS

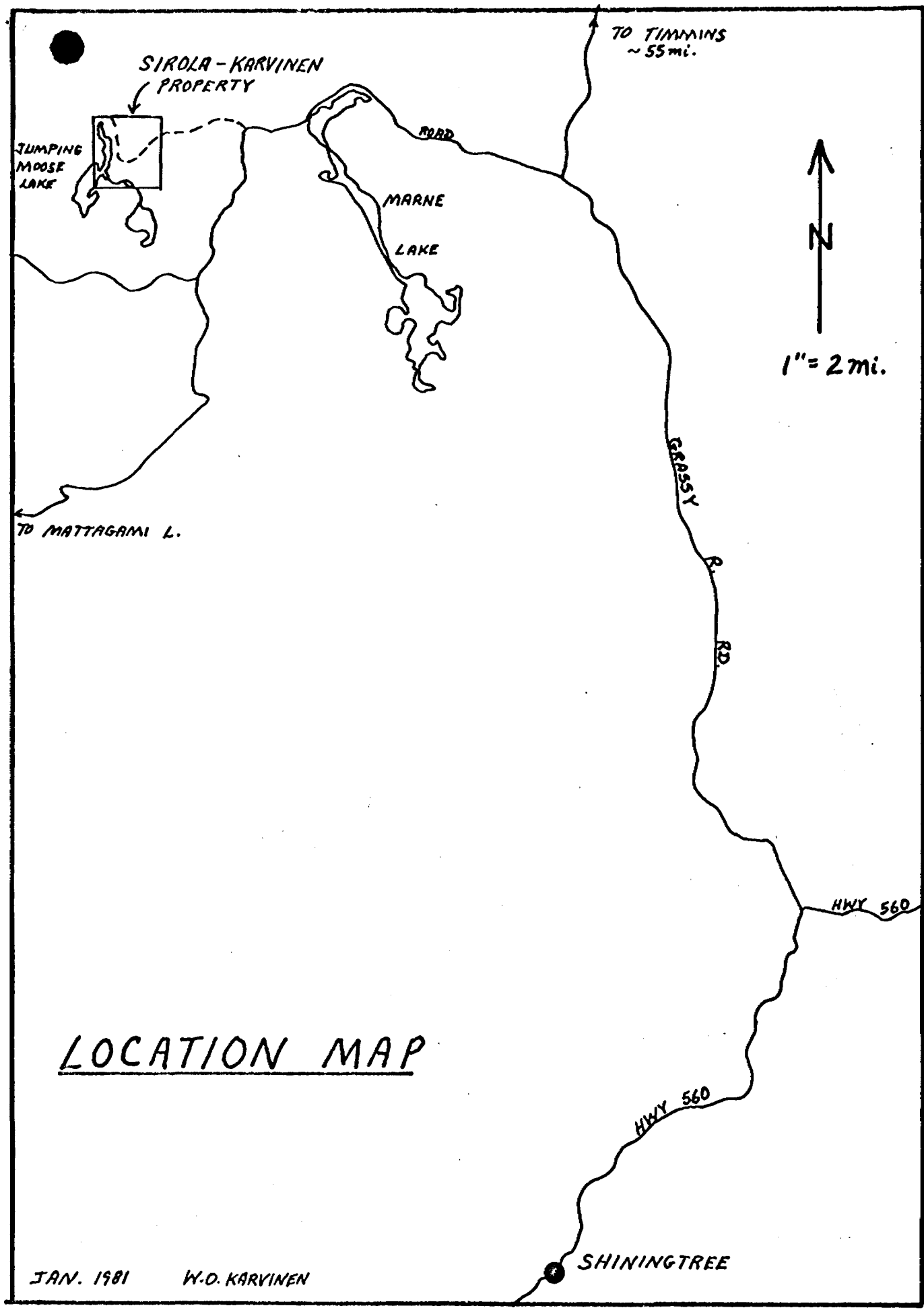
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Geology Report on the Sirola - Karvinen  
Property, Burrows Township, Ontario

by

W. O. Karvinen, Ph.D.

January 1981



SIROLA-KARVINEN  
PROPERTY

JUMPING  
MOOSE  
LAKE

ROAD

MARNE  
LAKE

TO MATTAGAMI L.

TO TIMMINS  
~ 55 mi.



1" = 2 mi.

GRASSY  
RD

RD

HWY 560

HWY 560

SHININGTREE

LOCATION MAP

JAN. 1981

W.O. KARVINEN

## Introduction

In 1950, a "large jagged block of rusty float (about the size of a small car) was found near the northwest corner of claim S-55400" (Dominion Gulf claim) in Burrows Township, about 20 miles north of Shiningtree. "The rock appears to have been a basic volcanic with well developed gneissosity cut by an irregular series of quartz veins some of which are up to 6" in width. The quartz is well pyritized and contains visible gold. Fine stringers of a silvery white mineral which might be a telluride can also be seen. One grab sample is said to have given a gold assay of over \$100.00 per ton."

The above quote is from a property report by W. S. Savage who at the time was ODM Resident Geologist in Kirkland Lake. Subsequent to his visit, Dominion Gulf, after trenching and a magnetometer survey, drilled four diamond drill holes in the vicinity of the float but no source was found (holes labeled DG on enclosed map).

The property remained idle until 1975 when Hollinger Mines Ltd., drilled 4 holes (labeled BU-1 on map) in the area to test some geophysical conductors and possible float sources. Again, results were negative.

Sixteen claims were staked in the area of the float in the fall of 1979 by D.E. Sirola, B.D. Sirola and W.O. Karvinen. During the past year, the group, under the direction of W. O. Karvinen & Associates Ltd., has carried out detailed overburden and bedrock investigations, trenching and overburden blasting to locate the source of the float. The enclosed

map and the following summary is the culmination of this work. Results indicate an untested area where the source is believed to be located.

#### Location and Access

The group consists of 16 contiguous claims (no. L547207 to L547222 inclusive) located immediately east of Jumping Moose (or Mouse) Lake in central Burrows Township, approximately 25 miles by road north of Shiningtree (Fig.1). Access is possible during summer months either from Timmins or Shiningtree via the Grassy River road and a westward branch of that road which leads to Mattagami Lake. The final two miles of road is accessible only by 4-wheel drive vehicles.

#### Bedrock Geology

The bedrock comprises a sequence of garnitiferous felsic tuff, iron formation, chloritic blue quartz-eye tuff, altered to fresh ultramafic rocks (flows?) and chloritic mafic pillowed to massive volcanic flows. At the east end, these rocks appear to be intruded by a mafic gabbroic body (early diabase?).

Alteration is present in the form of intense chloritization of some felsic rocks (e.g. chloritic blue quartz eye-tuff) and as garnetiferous zones in felsic tuff. Also, parts of the mafic volcanics and ultramafic rocks are intensely chloritized and in places carbonatized.

The rocks have been folded about southeasterly trending synform which plunges about 55 degrees in a 120 direction. At least two major faults displace the rocks over several hundred feet.

### Overburden and Float

The numerous high-grade vein quartz boulders are located in hammocky till, along a north-south ridge. In the immediate area, the overburden is a till which has been modified partly by melt waters associated with the nearby glaciofluvial deposits (e.g. esker). The average thickness is about 15 feet.

The mineralized boulders are predominantly vein quartz with some carbonate in country rock of chloritic mafic volcanic and chloritic blue quartz-eye tuff. Pyrite is common, and in some, particularly in high-grade boulders, the predominant sulfide is chalcopyrite. The boulders have now been found in 15 different locations spread over an area of approximately 900 feet by 500 feet. They are generally angular and range in size from a few inches to over 4 feet. Samples assayed from these boulders averaged 0.27 oz. Au/ton.

In addition to vein quartz boulders, a large (~8' dia) boulder of green carbonate with quartz veinlets is found on the hammocky till ridge. Because of its size and the lack of any other boulders of this type in the area, it appears to have been rafted in from a more distant source.

### Present Survey

An early investigation of the overburden and mineralized boulders in the area confirmed previous convictions that the source could not be far. Thus a grid was cut and all outcrops, mineralized boulders and previous diamond drill holes were tied in. Some glacial striations and the general 190 degree trend of ridges in the area suggested a west of south direction

of ice. However subsequent blasting of overburden in a 000° to 010° direction from the last exposed boulders failed to turn up any new boulders. In addition, the Dominion Gulf work in 1950-51, had already tested this possibility with a diamond drill hole (DG-2 on map).

A re-examination of ice direction suggested instead an east of south ice direction. This was later confirmed by till fabric analyses to be approximately 165 degrees. Following this trend up-ice, additional boulders were found. These have now been traced to the edge of the glaciofluvial cover where the source is postulated to occur.

Another important piece of evidence supporting this area as the source is provided by the very distinct chloritic blue quartz-eye tuff. This tuff is found in boulders near the source area, in a Dominion Gulf diamond drill hole to the east (along strike) of the postulated source area and most importantly in the wall rocks of the mineralized boulders.

A poorly exposed outcrop (Vein 1), west-northwest of the main mineralized boulders was partly stripped and trenched. Here, numerous quartz veins with pyrite and chalcopyrite occur along the contact between felsic tuff and chloritic blue quartz-eye tuff. This outcrop is interpreted as the faulted westward extension of the source area which has been displaced by a northerly-trending left hand fault.

Because of faulting, glaciofluvial cover and probably the presence of several veins from which the boulders originate, an exact target cannot be outlined. However, the area at the

Head of the boulder fan is most likely to host the source.

This area is covered with overburden approximately 12 feet deep.

In addition to mineralized boulders, gold-bearing massive to disseminated pyritic beds with some chalcopyrite occur within the sequence of iron formation. One such bed was trenched and sampled (see map). This bed measures approximately 15 feet in thickness. It was sampled across strike over a strike length of approximately 20 feet. Shallow blast holes were put down to obtain fresh samples. The bulk of the material is massive pyrite with less than  $\frac{1}{2}\%$  chalcopyrite.

Trenching was also carried out on Vein 2, immediately north of Dominion Gulf's diamond drill hole No. 2. The vein, averages about 12 inches thick, consists mainly of quartz with heavy pyrite and trends approximately N60°E. It cuts a sequence of chloritic and pyritic iron formation. The vein was followed for a distance of 20 feet and sampled using shallow blast holes.

*W O Karvinen*

January 29, 1981

Dr. W. O. Karvinen





GEOPHYSICAL TECHNICAL DATA

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

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_

Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

MAGNETIC

Instrument \_\_\_\_\_

Accuracy - Scale constant \_\_\_\_\_

Diurnal correction method \_\_\_\_\_

Base Station check-in interval (hours) \_\_\_\_\_

Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

Instrument \_\_\_\_\_

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

GRAVITY

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

INDUCED POLARIZATION RESISTIVITY

Instrument \_\_\_\_\_

Method  Time Domain  Frequency Domain

Parameters - On time \_\_\_\_\_ Frequency \_\_\_\_\_

- Off time \_\_\_\_\_ Range \_\_\_\_\_

- Delay time \_\_\_\_\_

- Integration time \_\_\_\_\_

Power \_\_\_\_\_

Electrode array \_\_\_\_\_

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_

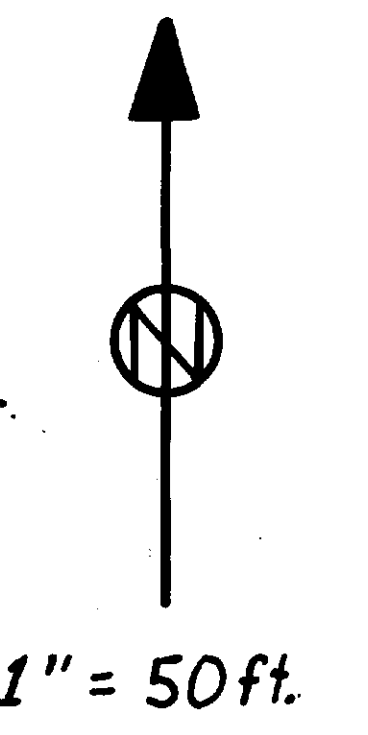
JUMPING MOOSE LAKE

CLAIM NO. L547211

ESKER RIDGE

GLACIOFLUVIAL DEPOSITS OVERLYING TILL (AVERAGE DEPTH: 12 FEET)

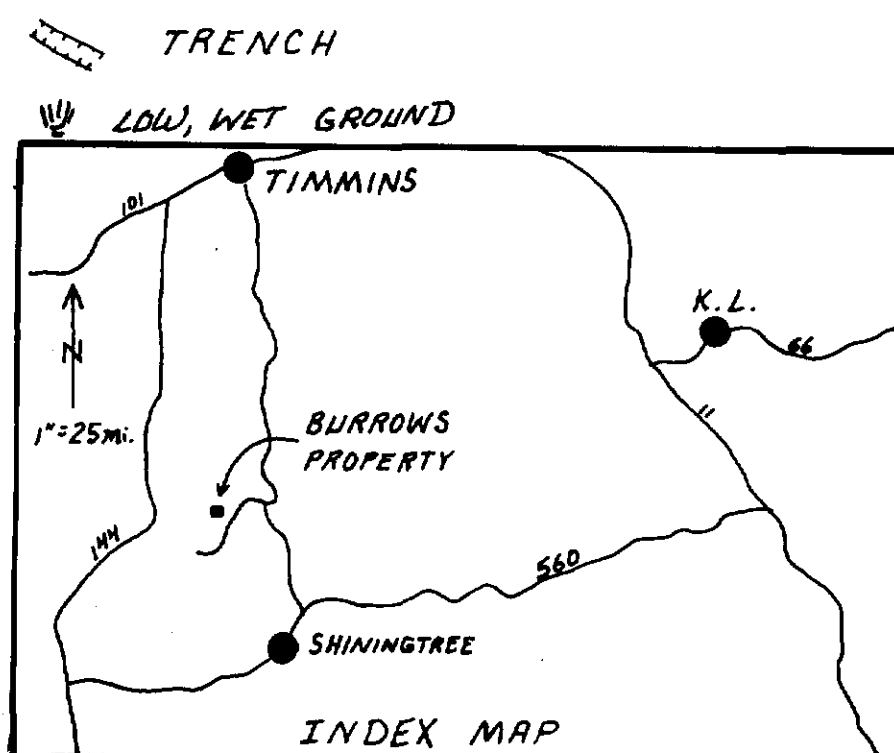
CLAIM NO. L547212



**GEOLOGY OF SIROLA-KARVINEN GOLD PROPERTY, BURROWS TOWNSHIP**

**LEGEND**

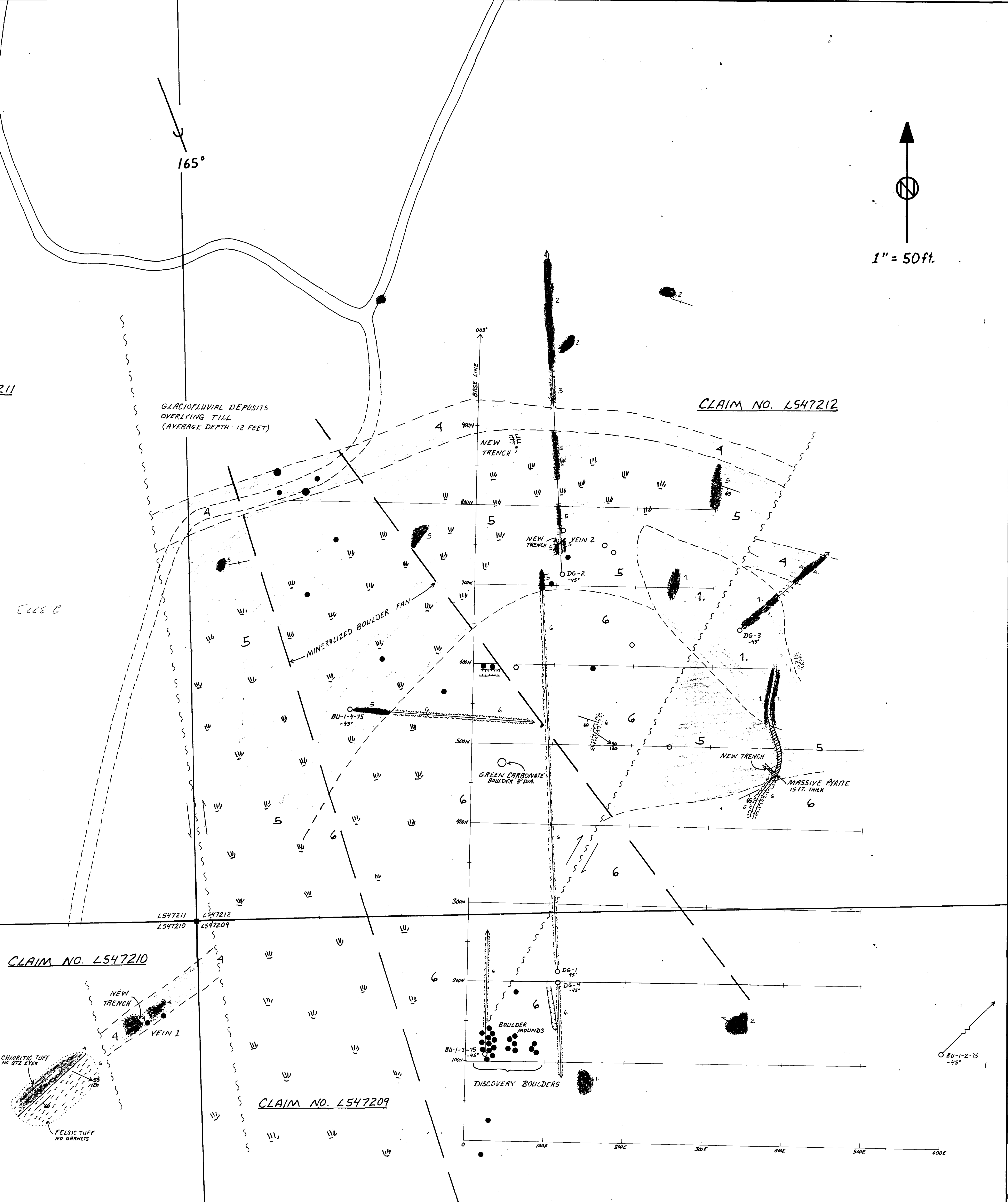
- |    |  |  |                                 |
|----|--|--|---------------------------------|
| 1. | META-GABBRO                                    |  | PRIMARY LAYERING                |
| 2. | MAFIC PILLOW LAVA CHLORITE SCHIST              |  | FOLIATION                       |
| 3. | ULTRAMAFIC FLOW(?)                             |  | LINATION                        |
| 4. | BLUE QTZ-EYE CHLORITIC TUFF                    |  | FAULT                           |
| 5. | IRON FORMATION - CHERT SULFIDE-OXIDE-SILICATE  |  | OUTCROP                         |
| 6. | GARNETIFEROUS FELSIC PYROCLASTICS; FELSIC TUFF |  | BLUE QUARTZ-EYE TUFF BOULDER    |
|    | QUARTZ-CARB VEIN                               |  | VEIN QUARTZ BOULDER             |
|    |  |  | I.F. AND TALC-CHLORITE BOULDERS |
|    |  |  | DIAMOND DRILL HOLE              |



CLAIM NO. L547210

CLAIM NO. L547209

CHLORITIC TUFF NO QTZ EYES  
FELSIC TUFF NO GARNETS



GEOLOGY BY W.O. KARVINEN 1980



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1981