

HOLLOWAY CLAIMS

Magnetic & Geological Report

December 8, 1950SUMMARY

The claim group consists of 7 claims in the northwest corner of Holloway Twp., L.L.M.D. Ontario. They are accessible from a wagon road which branches to the north from gravel highway at the Harker-Holloway Twp. mutual boundary, about 34 miles east of Matheson, Ontario on the ONR.

The claims cover the serpentine band or belt for a strike distance of 7000 feet. This serpentized phase of gabbro lies between the Ghost Mtn. gabbro mass to the north and the complex of volcanics, and sediments with acidic to basic intrusives to the south. Outcrops are sparse on the claims and thus contact relations are hidden. The only exposure of serpentine-volcanic contact is an E-W near vertical fault contact on claim L-27222.

A series of relative 'magnetic highs' occurs along or near the north boundary of the serpentine band, while a 'low' seems to follow near the south contact, a steep dipping fault contact in part.

Mineralization consists of a ubiquitous lean pyritization, with very minor chalcopyrite in places, in sheared altered and or carbonatized areas of volcanics. Some of the serpentized gabbro contains minute threadlike asbestos 'seams', in very minor quantity. In sheared fractured portions of serpentine, as at fault contact, a few small knots and fragments of harsh fibred asbestos were noted.

LOCATION and ACCESS

These claims are in the northwest corner of Holloway Twp. with the Holloway Harker Twp. line being the west boundary and the Holloway-Frecheville Twp. line being the north boundary. The southern and eastern boundaries are claims as noted on map accompanying report.

The claims are crossed by and accessible from the old wagon road which connects with the gravel highway at Holloway-Harker Twp. mutual boundary. The wagon road goes northward past old Teddy Bear Camp to 'Abitibi Landing'. The road junction is about 34 miles west from Matheson, and the claims are about $\frac{3}{4}$ mile north of the gravel highway.

PROPERTY and OWNERSHIP

The seven claim group consists of the following claims: L-55516, L-55517, L-55518, L-55519, L-55520, L-55521 L-55522 in Holloway Twp., Larder Lake Mining Division, Ontario.

The claims were staked and recorded by N. Strong of Swastika or Kirkland Lake, Ontario, in October, 1949.

The geological, geophysical, and prospecting and trenching work has been done by Lesjack Exploration Co. Ltd., Haileybury, Ontario, under the direction and supervision of J. M. Powelson, (P.Eng., Mining Branch, Ontario).

PURPOSE OF WORK

The claims were staked to cover an inferred serpentized zone along the edge of a gabbro intrusive contact with volcanics. It was presumed that this serpentized zone could be a favorable place for the occurrence of asbestos mineralization under certain conditions of structure, related to faulting, and the usual attendant mineral alteration and possible mineralization. Exploration was scheduled to search for asbestos or other minerals of potential economic worth.

PROGRAM

1) Reconnaissance geology and some preliminary magnetic (dip needle) work.

This showed a dearth of outcrop except on north and south of claim block. However, it was determined that the magnetic attraction of rocks was pronounced in some instances. The serpentized zone conformed to a topographic low.

2) Because of 'grain' of topography and rocks, it was decided close spacing of lines for survey and dip needle readings would be duplicate or wasted effort, that is, the results would not justify lines too close in initial work. Only broad outlines would result from even detailed magnetometer work, and results from same would only confuse 'picture', for, as is usual, magnetic work is at best a guide to project known geology, and usually indicates only broad targets for more precise definition by exploration drilling.

PROGRAM (cont'd)

Consequently there were no apparent justifiable reasons for detailed magnetic work in initial exploration. Thus dip needle work was recommended, which work was faster, cheaper, and quite adequate as related to possible information of value at this stage, or prior to drilling.

Also, it was necessary to carry work beyond strict claim boundaries in order to obtain a proper framework of information.

The above general program would thus point to areas where more detail might be necessary or justified.

3) Prospecting and trenching were done at various places on claim group where conditions suggested and circumstances of overburden, etc. allowed.

GEOLOGY

General

The claims are in northwest corner of Holloway Twp., Lightning River district, Ghost Mountain, along and north of north boundary of Harker & Holloway Twps., is referred to in the literature on the area as a gabbro sill with a serpentine differentiate at the base. To the south of the gabbro sill are east-west trending, steeply southerly dipping, Keewatin type medium to basic volcanics with some rhyolite flows. Temiskaming type sediments occur in northern Holloway - to the south of group referred to in this report.

Structurally, the rocks trend E-W with steep southerly dips. Local variations are present. Strike and cross faulting have been noted.

Local

Outcrops are few on the claims in question (L-55516 to L-55522 incl.) other than along their north boundary where gabbro outcrops are locally abundant. To obtain an adequate idea of what might lie on the claims, the east-west trending series of mainly volcanic knolls and knots immediately south of claims had to be mapped in part.

GEOLOGY (cont'd.)

Gabbro:

A - A medium to coarse grained rather feldspathic gabbro with little apparent alteration (megascopic) occurs in a series of outcrops along the northern part of the claims to the west of north-south flowing stream along the east boundary of claim L-55521. Here a slightly west of north trending fault has thrown gabbro relatively south on east side of fault. Offset not determined but could be substantial.

B - Diorite or Gabbro

On claims L-27221, L-27222, and L-27220 is an intrusive mass of rather more basic and altered diorite or gabbro than that along the Holloway Twp. boundary, about 3000 to the north. Locally this rock is rather well chloritized, sheared, and altered with in places some carbonate alteration. Pyritization, lean but widespread, was noted.

Serpentine or Serpentinized Gabbro:

Only two areas of 'serpentine' outcrop were located.

- 1) East and West of line G between 1000 & 1100 feet south of twp. boundary.

Here some trenches and stripping expose an altered serpentinized basic gabbro which in places contains numerous minute thread-like streaks of asbestos-like material.

- 2) About midway between lines H & I and 2500 feet south of Holloway Twp., north boundary, and on claims L-27222 (patented). Here there is a fault contact between an altered medium to basic volcanic to the south and a highly altered and serpentinized gabbro. (There is no megascopically discernible evidence that this could not be a serpentinized basic lava, as is a common occurrence in serpentinized belts in other areas.) However, its spatial relation to gabbro to north and other district evidence suggests that the serpentinized rock is likely related to gabbro.

GEOLOGY

Serpentine or Serpentine Gabbro (cont'd.)

Here too was noted the occurrence of the very fine thread-like 'veinlets' of asbestos. Also along fractures and slips in or near fault or shear were seen the odd fragment or knots of harsh slip-fibre or actinolite asbestos.

The topographically low area, between the east-west series of gabbro knolls along the north boundary of the claims and the east-west series of greenstone knolls and bluffs to the south of the claims, covers the serpentine belt lying between the gabbro and the greenstones. The serpentine is stated in literature to be a basic phase of a gabbro sill. The only exposed contact with volcanics seen was a near vertical slightly south of west striking fault contact on claim L-27222.

Volcanics (Keewatin type)

Andesitic volcanics, with in places well developed pillow structures comprise the bulk of the series of abrupt hills and knolls (commonly with north facing steep bluffs or scarps) extending across claims L-27221, L-27222, L-27220, L-27223, L-43923 and further eastward. The volcanics are intruded in part by the diorite or gabbro referred to in B above. The volcanic contact with the serpentine rocks was seen in only one place - on claim L-27222 where occurs a fault contact.

Structures

North-south faults are present at the east boundary of claims L-55521 and L-55522, and at central part of claim L-55520.

East-west to northeast trending shears schistose zones and faults occur in volcanics and diorite-gabbro to the south of these claims on L-27221, L-27222, L-27220, L-27223.

Mineralization

Nearly ubiquitous lean pyritization, with very minor

GEOLOGY

Mineralization (cont'd.)

chalcopyrite in altered and more sheared portions of volcanics.

Serpentinization and associated asbestos, in very minor quantity as exposed, in altered or basic phase of gabbro.

Carbonate rich altered zones are present in some parts of sheared, altered volcanics and sheared, altered, chloritized diorite or gabbro, to south of serpentine gabbro, on claims L-27221 and L-27222.

MAGNETIC RESULTS

Dip needle readings were taken at 100-foot intervals along the N-S picket lines which were run across the grain of topography and nearly normal to the strike of the rocks and known structurally prominent features. In some instances local 'highs' and 'lows' were followed out laterally with chain and compass or pace and compass traverse. Results were plotted on a 1" = 200' map with the geology as mapped and contours drawn in on a contour interval of 2 degrees.

Contouring showed:

- 1) An E-W trending series of relative 'magnetic highs' just to south of gabbro outcrops on north part of claims. Without drilling, the significance of these highs cannot be determined. One can assume, from meagre evidence of outcrop of serpentinized gabbro (on line G) western part of claim L-55518, 1000 to 1100 feet south of north township boundary line), that there is a concentration of magnetite along or near upper contact of the serpentine phase of the gabbro.
- 2) An E-W trending relative low, in general conformable with topographic low, occurs just to the north or along the south serpentine contact, which in only place exposed is a steeply dipping fault contact.
- 3) The pattern of 'highs' and 'lows' along lines C and D in relation to steep N-S fault? scarp of volcanic outcrop, on south boundary of L-55520, could be interpreted as indicating a N-S fault in this area.

MAGNETIC RESULTS(cont'd.)

- 4) The 'high' and 'low' on claim L-27221 is probably due to a higher magnetite content of the diorite or gabbro relative to the volcanics.

Without more information of bedrock geology, which can only be obtained by drilling, little else can be concluded about relation of geology to magnetics. As serpentinization and sometimes related asbestos association are in places spatially related to a complex of shearing and faulting, the 'low - high' area on claims L-55519 & L-55520 could be an area of possible interest. Until more bedrock geology information is available, more detailed or other magnetic information is of questionable worth.

References:

- 3) T. L. Gledhill, Ont. Dept. Mines Vol. XXXIV,
Pt. VI, 1925
Lightning River Gold Area.
- 2) C. W. Knight, Ont. Dept. Mines Vol. XXXIII,
Pt. 3, 1924
Lightning River Gold Area.
- 1) Vol. XXVIII,
Pt. 2,
Abitibi Night Hawk Lake Area.

Attach:

Claim Map 1" = 200'

Magnetics and Geology.


J. M. Powelson

Statements:

- 1) Statement Man Days for Geophysics & Geology
- 2) Time and Cost Distribution.

Date: December 8, 1950

Rpt. by


J. M. Powelson

Certified Copy
J. M. Powelson

LESJACK EXPLORATION CO. LTD.

HAILEYBURY, ONT.

December 11, 1950

STATEMENT OF MAN DAYS, LINES CUT, Etc.

for GEOPHYSICS & GEOLOGY

		<u>Man-days</u>
a) Line Cutting, chaining, etc.		
	A. Leroux	15
	R. Aubuchon	15
b) Instrument Operator	J. M. Powelson (July-Oct.-Nov. 1950)	7
c) Draughtsman	J. M. Powelson (Nov.-Dec. 1950)	7
d) Geologist & Misc.	J. M. Powelson (Oct.-Nov. 1949, July-Oct.-Nov.1950)	14 <u>58</u>

Dip Needle - Hughes - Owens #7339

Stations Established on Picket Lines-400

Stations read from chain & compass survey off
picketed lines (Estimated) (See note below)

100

Total stations (approx) 500

Lines cut 50659 = 9.6 (approx.) miles.

5280

Eight miles of this in very heavy bush
and dense second growth.

General

Note: Under 5), "Requirements governing submission of geophysical surveys as Assessment work", are some statements which are subject to variable interpretation, for example;

'-----all station points are accurately located' -

Accurately is at best a relative term, and in reconnaissance work, there is little or no need for precise location. That is, it is quite satisfactory, and more than justifiable expense wise, to make dip

50
232
21.1

General (cont'd.)

needle or magnetometer traverse with chain & compass or pace & compass from main control lines to follow out local patterns. Whether results plot, within \pm 50 feet of actual position on ground is academic. This is particularly true of dip needle or magnetometer work in areas where detailed magnetic nature of various rock types are unknown variables. The chain & compass or pace & compass procedure has been proved adequate time and again in field in Michigan & Minnesota and other areas.

The spacing of lines and stations is essentially a matter of 'grain' of rock and or topography, and what is object of survey. In this case, the initial thought was that lines 400 feet apart and station intervals at 100 foot intervals would be needed. Some geological and dip-needle reconnaissance indicated that such close line spacing was unnecessary, for pattern would show with a further line spacing. Consequently 660 feet spacing was used, and proved adequate to indicate pattern.

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J. M. Powelson

LESJACK EXPLORATION CO. LTD.

HAILEYBURY, ONT.

December 11, 1950

HOLLOWAY CLAIM SURVEY & PROSPECTING

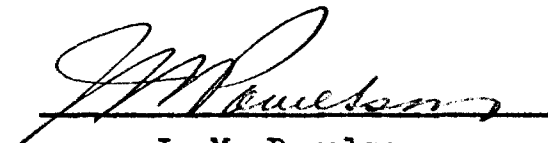
<u>TIME & COST</u>	<u>DISTRIBUTION</u>	<u>STATEMENT</u>	
		<u>Time</u> <u>Survey</u>	<u>Costs</u> <u>Prospecting</u> <u>& Trenching</u>
Wages:			
Albert Leroux	15		\$100.00
		60	\$400.00
Rene Aubuchon	15		75.00
		60	300.00
Engineering, Geology, Magnetics (Pro-rata)			
J. M. Powelson			400.00
Magnetics & Geology	21		
Draughting & Office	<u>7</u>	28	
Supplies, Eqpt. Trans'n. (Est.)	-	-	200.00
			200.00
		<u>58</u>	<u>775.00</u>
		<u>120</u>	<u>900.00</u>

Assessment Credits for group of 7 claims

Survey 58 x 4	232		
Other		120	352
Per claim	33.1	17.2	\$110.70

Certified Copy

Date: December 8, 1950


J. M. Powelson

December 11, 1950

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for GEOPHYSICS & GEOLOGY

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Dip Needle - Hughes - Owens #7339

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COPY



J. M. Powelson

December 11, 1950

HOLLOWAY CLAIM SURVEY & PROSPECTING

<u>TIME & COST</u>	<u>DISTRIBUTION</u>	<u>STATEMENT</u>	
		<u>Time</u> <u>Survey</u>	<u>Costs</u> <u>Prospecting</u> <u>& Trenching</u>
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Draughting & Office	7	28	
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		<u>58</u>	<u>775.00 900.00</u>

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58
4
232
221 days

Date: December 8, 1950


J. M. Powelson

#1-55517
#1 55518
Holloway Top N. Boundary

Holloway Top N. Boundary

#1-55518
4-55519
100
200

Picket Line G.

Picket Line E.

Picket Line D.

CLAIM
1-55519

CLAIM 1-55518

1000' pit

Trenches
27' deep

1200'

Line D

#1-27223
#1-10873
WP 1-55520

2400

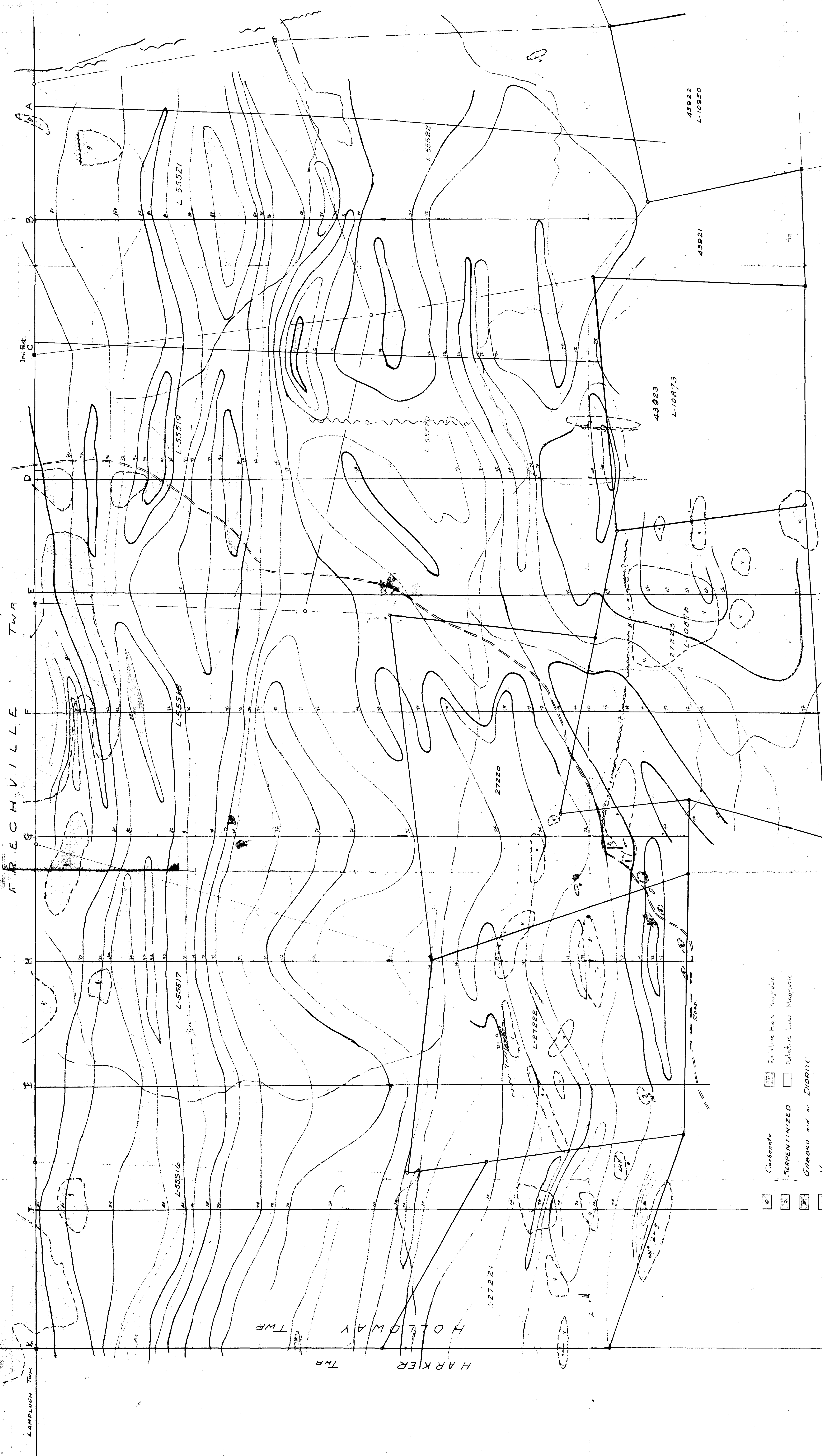
CLAIM 1-55520

3000

Trench

SCALE 1"=200

1-4



HOLLOWAY CLAIMS
 GEOLOGY & DIP NEEDLE
 SCALE 1"=200
 J.M.P. Nov 1950
 HOLLOWAY TWP L.L.M.D. ONT.
 Certified Copy
 63-225
 N. STRONG PROPERTY, LESJICK EXPLORATION CO., LTD.

- Carbonate
- SERPENTINIZED
- Gabbro and/or DIORITE
- VOLCANICS
- Fault
- Contour interval 2 degrees
- Relative High Magnetic
- Relative Low Magnetic

