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GEOLOGICAL REPORT  
MOSHER LONG LAC GOLD MINES  
ECHO & PICKEREL TWPS  
RED LAKE MINING DIVISION  
ONTARIO.

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MOSHER LONG LAC GOLD MINES LIMITED

Echo and Pickerel Twmps.

Red Lake Mining Division,

Ontario  
.....

INTRODUCTION: The claim group under discussion is held by Mosher Long Lac Gold Mines Limited, the business address of the Company is 1003-67 Yonge Street, Toront. The Geological work and this report were prepared by the company geologist, J. P. McGregor.

The Geologic mapping was carried out during June and the first part of July, 1947.

The Claim group, consisting of 18 claims is located in concessions 2 & 3 of Echo and Pickerel Townships. The following claims are located in Echo Twnp. KRL 22832, 22833, 22834, 22835, 22836, 22837, 22838, 22839, 22840, 22845, 23060, 23061. The following claims are located in Pickerel Twnp. KRL 22841, 22842, 22843, 22844, 22846, 22847.

According to the township survey the claim group entails the following lands:

ECHO TOWNSHIP:

The north half of lot 1, concession 2  
The north east quarter of lot 2, concession 2  
All of lot 1, concession 3  
The north east quarter of the south half of lot 2, concession 3  
The north east quarter of the north half of lot 2, concession 3

PICKEREL TOWNSHIP

The north west quarter of the north half of lot 12, concession 2  
The north half of lot 12, concession 3  
The north east and the north west quarters of the north half of lot 18, concession 3.

SUMMARY: The purpose of the Geologic mapping of the property was to obtain an accurate correlation of the Geologic conditions and rock type on the claims with the results of a magnetometer survey which was carried

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MOSHER LONG LAC GOLD MINES LIMITED

Beho and Pickeral Towns.  
Red Lake Mining Division,  
Ontario.  
.....

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The Claim group, consisting of 18 claims is located in concessions 2 & 3 of Beho and Pickeral Townships. The following claims are located in Beho Twp. KRL 22832, 22833, 22834, 22835, 22836, 22837, 22838, 22839, 22840, 22845, 23060, 23061. The following claims are located in Pickeral Twp. KRE 22841, 22842, 22843, 22844, 22846, 22847.

According to the township survey the claim group entails the following lands:

BEHO TOWNSHIP:

- The north half of lot 1, concession 2
- The North east quarter of lot 2, concession 2
- All of lot 1, concession 3
- The north east quarter of the south half of lot 2, concession 3
- The north east quarter of the north half of lot 2, concession 3

PICKERAL TOWNSHIP

- The North west quarter of the north half of lot 12, concession 2
- The north half of lot 12, concession 3
- The north east and the north west quarters of the north half of lot 12, concession 3.

SUMMARY: The purpose of the Geologic mapping of the property was to obtain an accurate correlation of the geologic conditions and rock type on the claims with the results of a magnetometer survey which was carried

out earlier in the year.

In addition an attempt was made to locate the possible extension of the ore zone of the Linward Gold Mines Limited, which property adjoins the Mosher claim group on the South and West.

HISTORY OF WORK ON CLAIM GROUP: All the work done previously on the property, excluding the magnetometer survey, consisted of stripping and prospecting. No indications were found of any former intensive prospecting or diamond drilling.

ACCESS: The property is easily accessible from Sioux Lookout via Provincial highway No. 72. The work camp site was adjacent to the central east side of the property and was located on claim KRL 23102 at mileage 22 on the highway.

TOPOGRAPHY: The most prominent topographical feature of the claims in a N.W. - S.E. trending esker ridge which cuts approximately diagonally across the property. This ridge was formerly treed with jackpine, but it was cut off during the winter of 1946 by the Dryden Pulp and Paper Company. Not it is an area of extensive slash.

To the south west of the ridge the terrain is flat and the topsoil consists of heavy yellow clay. This area supports a growth of heavy poplar and a few spruce, birch and balsam.

Franciscan Lake is located along the south central fringe of the property. To the east of the lake the ground is low and swampy. The timber growth consists mainly of swamp spruce.

The North West part of the property is a greenstone outcrop area. To the east of this outcrop area, and to the north of the esker, there is a large wet spruce and cedar swamp. To the east of the swamp

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Franciscan Lake is located along the south central fringe of the property. To the east of the lake the ground is low and swampy. The timber growth consists mainly of swamp spruce.

The North West part of the property is a greenstone outcrop area. To the east of this outcrop area, and to the north of the eaker, there is a large wet spruce and cedar swamp. To the east of the swamp there



is an area of outcrop and to the east of the outcrop the area is high and flat (the north east part of the property). Here the overburden is sandy clay. This supports a heavy timber growth which varies locally with either jackpine or birch or poplar predominating.

SURVEY PROCEDURE: A magnetometer survey was performed on the property immediately before it was geologically mapped. The magnetometer picket lines were used as control lines in mapping.

The picket lines were out at 400' intervals to the north and south from the concession line between concessions 2 and 3. All picket lines were set with a Brunton compass using a magnetic declination of 5°E. Pulpwood cutting operations obliterated the concession line so that it was necessary to recut it.

The intersection of the Echo-Pickerel townships line and the concession line was used as a zero point. All north-south lines were cut at 400' intervals from this zero point. The picket lines were pegged at 50' intervals.

Also, where the claims controlled by Mosher Long Lac were north of the concession line, but not directly joined to it, east-west lines were out from the nearest picket line and then the necessary north-south lines were out from the subsidiary base line.

In addition, east west tie in lines were put in at the north and south ends of the property to check the amount of directional change in any of the picket lines.

In the Geologic mapping the claims were traversed in an east-west direction by the writer and his helper, between the

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is an area of outcrop and to the east of the outcrop the area is high and flat (the north east part of the property). Here the overburden is sandy clay. This supports a heavy timber growth which varies locally with either jack pine or birch or poplar predominating.

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In addition, east west tie in lines were put in at the north and south ends of the property to check the amount of directional change in any of the picket lines.

In the geologic mapping the claims were traversed in an east-west direction by the writer and his helper, between the

north south picket lines at 100' intervals. It was felt that this close traversing would remove all chances of small outcroppings being missed.

In addition, some outcrops, which are out of the claim group, but which were found in general reconnaissance work, and which added somewhat to the Geologic picture, were tied in and mapped.

REGIONAL GEOLOGY: The claim group lies in the central belt of volcanics located in the south east part of the Sioux Lookout Map area. This Keewatin volcanics belt lies between two bands of Timiskaming sediments. In such a position it appears that it contains the axis of a major north west-north east trending anticline.

PROPERTY GEOLOGY: The property is located to the north and east of the Lunward Gold Mines Limited. It is on the projected line of strike of the Lunward ore zone and as such it has a strategic and potentially valuable location.

Attempts have been made by prospecting work and geologic mapping to pick up the eastward extension of the Lunward ore zone. However, neither of these methods succeeded in locating and structure either because of its lack of continuation or , as seems more likely, because of the heavy overburden conditions.

Generally, outcroppings are not prominent. In the northern part of the property outcrops are the most prominent. Here the exposed rock consists of basic greenstone, probably basaltic, and conspicuous well defined bands of agglomerate.

In the north central part of the property the greenstone is cut by numerous intrusive porphyry dikes. These dikes consist of quartz,

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In the north central part of the property the greenstone is cut by numerous intrusive porphyry dikes. These dikes consist of quartz,

porphyry, quartz and feldspar porphyry and feldspar porphyry.

In the south part of the property on the east side of Franciscan Lake there is an outcrop of greywacke. A short distance from the greywacke outcrop there is an outcrop of quartz porphyry which looks to be the same as and is on the line of strike with, the porphyry mass on the south west part of the lake.

All rocks appear to have a general regional strike of  $55^{\circ}$  and all defialtely dip to the north at a very steep angle.

Occasionally the greenstone shown a fairly well developed pillow structure. From a few flow top determination it appears that the beds face north. These top determinations are not conclusive so no definite conclusion regarding the structural possibilities have been made.

The large number of small intrusive dikes in the north east part of the property all appear to conform to the general regional schistosity. One of these dikes shows cross fracturing. The fractures are filled with barren white quartz, and being quite evenly spaced, they give and dike a ladder-like appearance. In the south central part of the property some of the dikes show a tendency to cut across the structure.

It appears that the Keewatin greenstone - Timiskaming sediment contact cuts across the south eastern part of the property. This interpretation is drawn from the small outcrop of greywacke on the south east short of Franciscan Lake, and the general low magnetometer readings which were obtained in this area.

Economically, only one area was found which appeared to offer possibilities. This is located on the township line 1650' north of the concenssion line. It is a zone of small partz stringers in the greenstone.

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porphyry, quartz and feldspar porphyry and feldspar porphyry.

In the south part of the property on the east side of Franciscan Lake there is an outcrop of greywacke. A short distance from the greywacke outcrop there is an outcrop of quartz porphyry which look to be the same as, and is on the line of strike with, the porphyry mass on the south west part of the lake.

All rocks appear to have a general regional strike of  $65^{\circ}$  and all definitely dip to the north at a very steep angle.

Occasionally the greenstone shows a fairly well developed pillow structure. From a few flow top determination it appears that the beds face north. These top determinations are not conclusive so no definite conclusions regarding the structural possibilities have been made.

The large number of small intrusive dikes in the north east part of the property all appear to conform to the general regional schistosity. One of these dikes shows cross fracturing. The fractures are filled with barren white quartz, and being quite evenly spaced, they give the dike a ladder-like appearance. In the south central part of the property some of the dikes show a tendency to cut across the structure.

It appears that the Keewatin greenstone - Tainiakung sediment contact cuts across the south eastern part of the property. This interpretation is drawn from the small outcrops of greywacke on the south east shore of Franciscan Lake, and the general low magnetometer readings which were obtained in this area.

Economically, only one area was found which appeared to offer possibilities. This is located on the township line 1680' north of the concession line. It is a zone of small quartz stringers in the greenstone.

Some sulfide are associated locally, however no assays were obtained from the showing and no pannings were obtained from the general area. Colors were obtained from the pan from two small quartz stringers in the north west part of the property. However, the stringers were very narrow and did not show any length.

ROCK FORMATIONS:

ALGOMAN:

Quartz porphyry: This rock is a coarse grained firm hard porphyry greyish to greyish green in color. The quartz phenocrysts are well developed in size, often attaining the size of a large pea. As would be expected all phenocryst edges are rounded.

Quartz-Feldspar porphyry: This rock is greyish in color and shows well developed quartz and feldspar phenocrysts. The quartz crystals are much smaller in size than they are in the quartz porphyry.

Feldspar porphyry: This rock varies from grey to greyish green. Also the grain size varies from coarse to fine.

TEMISKAMING:

Greywacke: This rock, a medium buff color, and is quite fine grained, very firm and very hard. No bedding was discernible in the small outcrop exposed.

KEEWATIN:

Basic greenstone: This is a dense, fine to medium grained, dark green rock. Locally it exhibits pillow structure. The rock probably is on the basaltic side as several pieces were mortared and panned. From this a large amount of magnetite was obtained.

Agglomerate: This rock is a medium green color. It has a definite characteristic nodular appearance which makes it look like a cobblestone road. The fragments are well preserved and to a large extent are of uniform size.

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ROCK FORMATIONS:

AIGONAN:

Quartz porphyry: This rock is a coarse grained firm hard porphyry greyish to greyish green in color. The quartz phenocrysts are well developed in size, often attaining the size of a large pea. As would be expected all phenocryst edges are rounded.

Quartz-feldspar porphyry: This rock is greyish in color and shows well developed quartz and feldspar phenocrysts. The quartz crystals are much smaller in size than they are in the quartz porphyry.

Feldspar porphyry: This rock varies from grey to greyish green. Also the grain size varies from coarse to fine.

TEWISKAMING:

Greywacke: This rock, a medium buff color, and is quite fine grained, very firm and very hard. No bedding was discernible in the small outcrop exposed.

KERRATIN:

Basic greenstone: This is a dense, fine to medium grained, dark green rock. Locally it exhibits pillow structure. The rock probably is on the basaltic side as several pieces were mortared and panned. From this a large amount of magnetite was obtained.

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SUMMARY OF WORK

<u>Work Report</u>	Credit for line cutting	Geologic Mapping	Daughting & Report
J. McGregor		32	6
H. Brennan	13	24	3
G. A. Wright		29	
V. Smith	31		
W. Gravelle	<u>31</u>		
	75	<u>65</u>	<u>9</u>

Actual days worked @ 10 hours per day =  $\frac{149 \times 10}{8} = 186\frac{1}{8}$

Days worked at 4 days credit per man =  $186\frac{1}{8} \times 4 = 745$  days

Part or time spent in cutting lines for the Geophysical survey is credited on the Geological survey.

A total of 40 days work was credited to each claim worked on. The excess time was necessary for finish the job.

RECOMMENDATIONS: The property enjoys a strategic location in respect to the Linward Gold Mines Limited. Because of the potentially valuable location it is recommended that the necessary assessment work be done on the claim group to hold it in good standing until general conditions are more favorable to do diamond drill cross section work.

MOSHER LONG LAC GOLD MINES, LIMITED

J. P. McGregor, B.A., M.A.

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<u>WORK REPORT</u>			
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MOSHER LONG LAC GOLD MINES, LIMITED

J. P. McGregor, B.A., M.A.



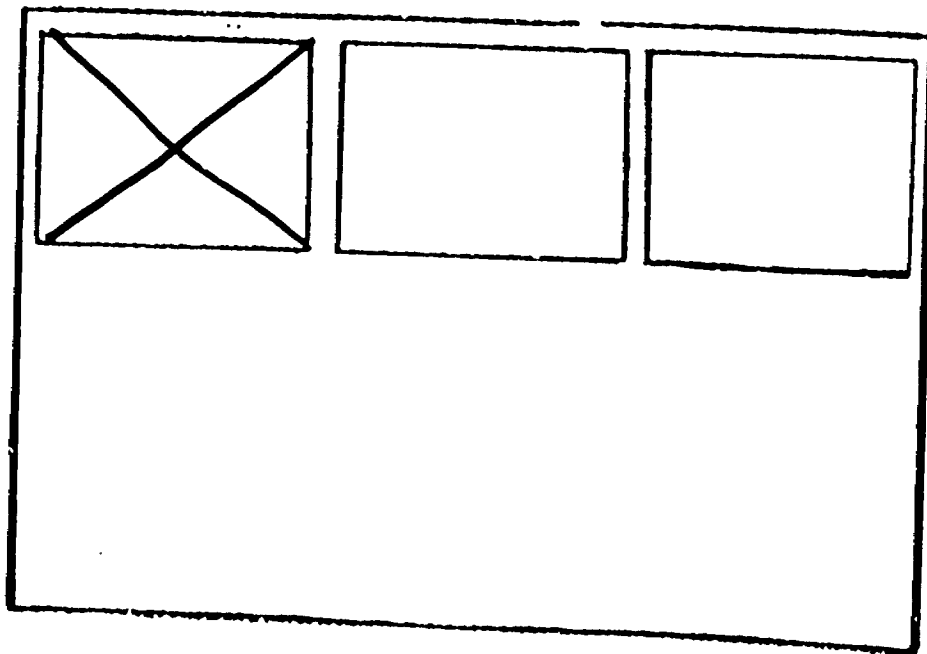
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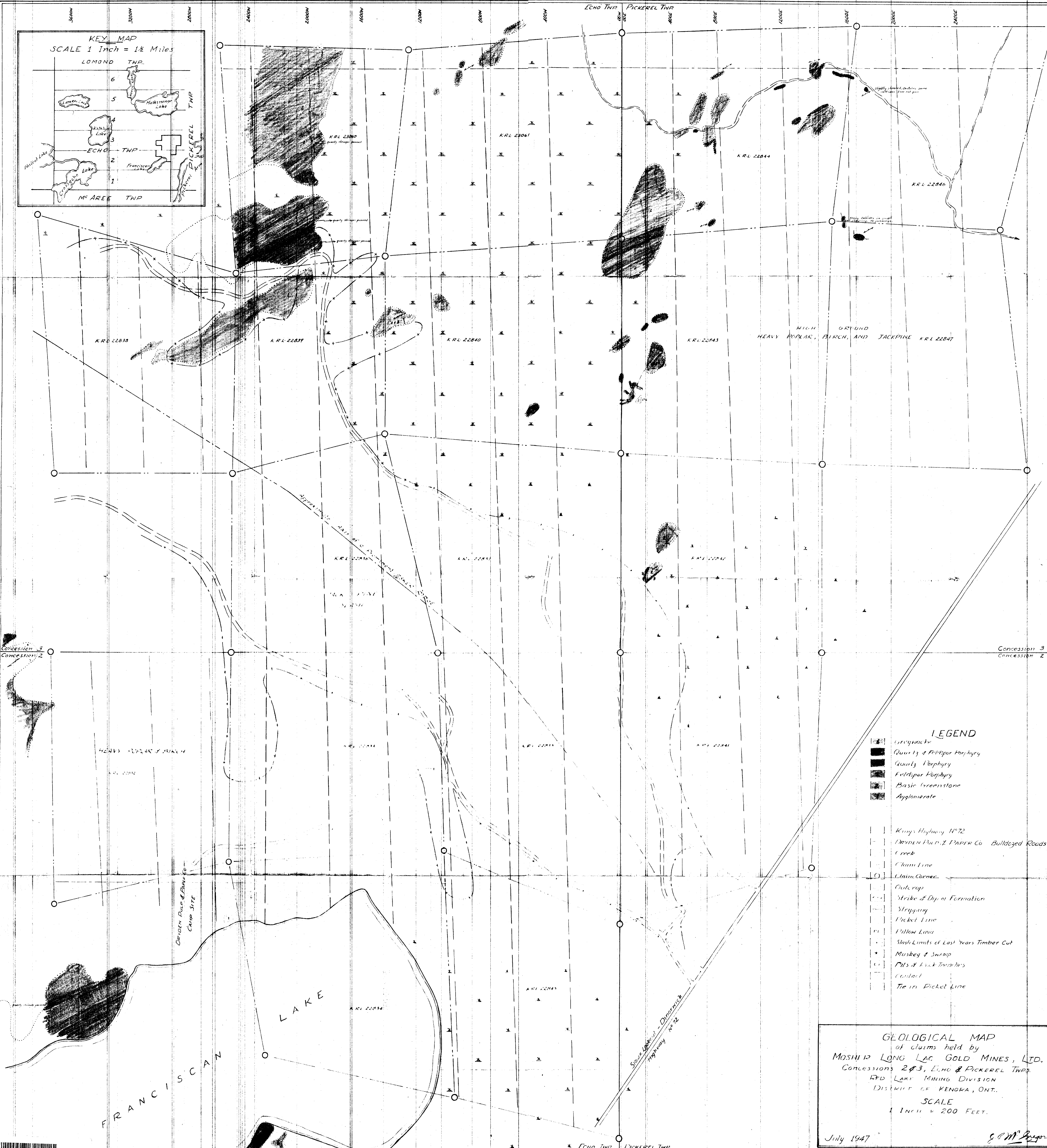
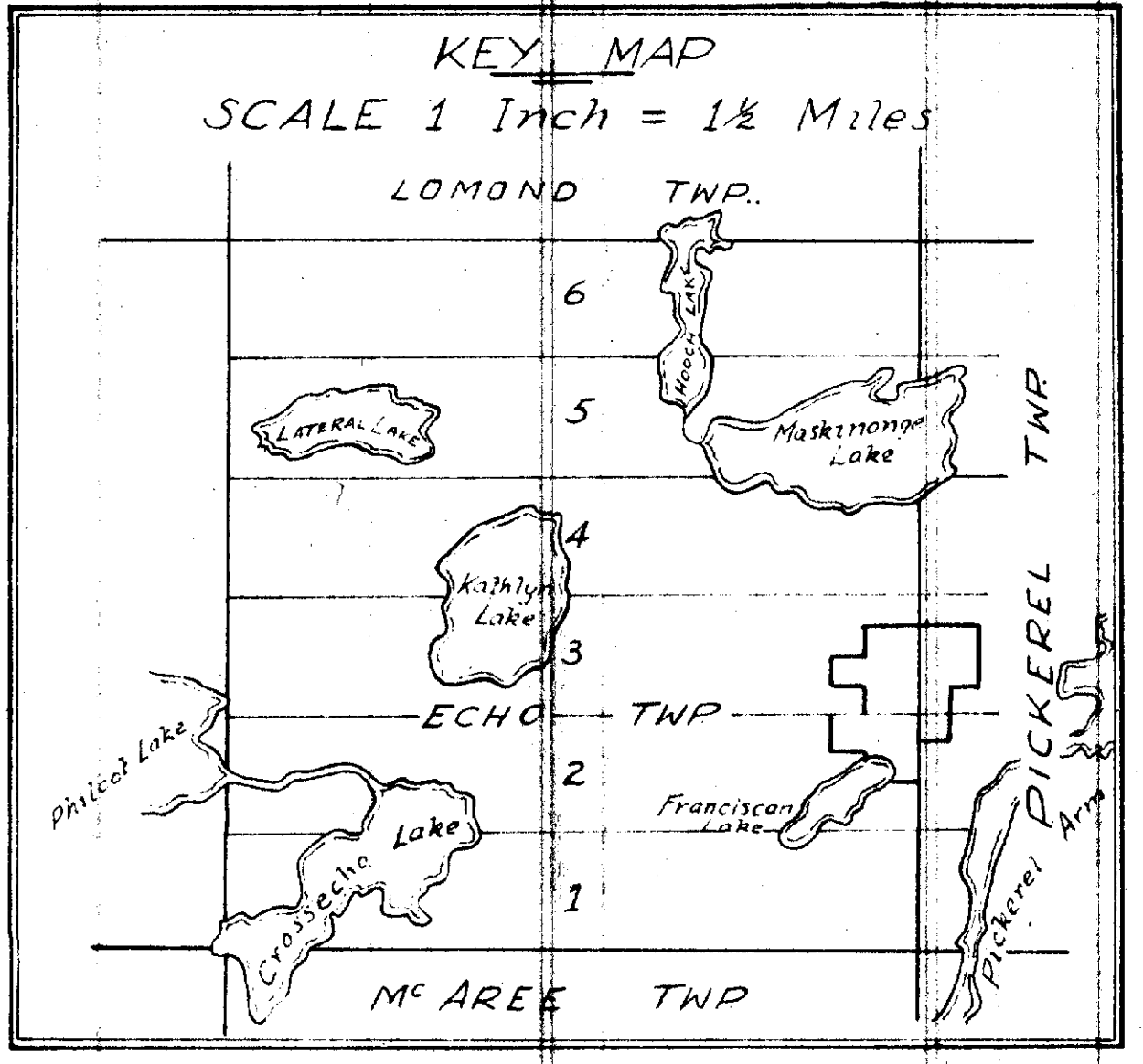
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LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (X)





- LEGEND**
- Agglomerate
  - Quartz Porphyry
  - Felspar Porphyry
  - Basic Greenstone
  - Conglomerate
  - King Highway No. 72
  - Bulldozed Roads
  - Creek
  - Claim Line
  - Claim Corner
  - Outcrop
  - Strike & Dip of Formation
  - Stripping
  - Picket Line
  - Pillow Lava
  - Slash Limits of Last Years Timber Cut
  - Muskeg & Swamp
  - Pits & Rock Trenches
  - Contact
  - Tie in Picket Line

**GEOLOGICAL MAP**  
of claims held by  
**MOSHIER LONG LAC GOLD MINES, LTD.**  
Concessions 2 & 3, ECHO & PICKEREL TWP.  
RD LAKE MINING DIVISION  
DISTRICT OF KENORA, ONT.  
SCALE  
1 INCH = 200 FEET.  
July 1947  
G. M. [Signature]