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Geological Report

North Ashmore Claims

63A.39

LITTLE LONG LAC GOLD MINES LIMITED

GERALDTON, ONT.

ADDRESS ALL COMMUNICATIONS
TO THE COMPANY

GEOLOGICAL REPORT

North Ashmore Claims

The North Ashmore Claims comprise 91 claims in Ashmore Township. The property begins three-quarters of a mile east of Geraldton and north of the Canadian National Railways right-of-way and extends east to the boundary of Croll township. The north-south dimension is one mile on the west end and one and one-half miles on the east end.

The geological survey was confined to the north-west section of this ground; The survey covered twenty-nine claims and was made between July 1st. and August 31st, 1947. In Figure 3, attached to this report, the property is shown with the grouping of claims. The twenty-nine claims covered by this survey are underlined in blue.

The property is reached from Geraldton by the right-of-way of the Canadian National Railways east of town, a distance of three-quarters of a mile. An alternative route is by the road to the old cemetery north-east of Geraldton, a distance of two miles to Claim T.B.32807. From there the road has been continued along to diamond drill holes 13-A, 11-A and 10-A. These drill holes are shown in Figure 1, Sheet 1.

GENERAL GEOLOGY

The area of outcrop extending across the north and east part of the property is largely composed of greenstone. Along the south

boundary of this outcrop area are several exposures of greywacke and plate and one exposure of conglomerate.

In general the consolidated rocks of the area are greenstones, greywackes, slates and some conglomerate, intruded by diorites and diabases. Over these has been spread a mantle of glacial sand and gravel, leaving exposures in some parts. Individual outcrops trend generally N.E. - S.W., but the contact of the outcrop area with the low muskeg-covered area to the south trends N.W. - S.E.

Table of Formations
(E.L. Bruce, Vol XLIV, Part 111, 1935).

Quaternary
(Pleistocene - sand, gravel, tillite.
Unconformity

Pre-Cambrian
Keweenawan - Diabase dikes.
Intrusive contact.

Post - Timiskaming - Diorite dikes.
Intrusive contact.

Timiskaming - Greywacke, slate,
chlorite schists.
Unconformity

Keewatin - Greenstone, chlorite schists.

KEEWATIN

The rocks classed in this period are mainly lavas of intermediate to basic composition. They outcrop in the northern part of the claims north of the base line and form the high ground which extends across the property. The lavas show pillows along the Canadian National Railways track east of Hardrock station but no clear indication of attitude was discernable. Pillows were noted again along the north boundary of the property south of Ashmore Lake.

Generally the flows are of the composition of andesite, though in places they are so altered and re-crystallized that they may be readily confused with the diorites which intrude them. No detailed work has been done other than observation in the field, however it is felt by the writer that much that has been previously mapped as diorite might on closer investigation prove to be massive, re-crystallized flows. It was noted in places that pillows were seen in rock which in the hand specimen would be classed as diorite.

The flows strike generally a little north of west and the schistosity strikes the same way and dips vertically. Along the south contact of the greenstones there are in places outcrops of sediments. These sediments underly the swamp which occupies the south and west part of the property.

TIMISKAMING

The rocks classed in this period are fine to medium grained greywackes with interbedded slates and some conglomerates.

Exposures of greywacke were found 300 feet south of the railway

on the edge of the lake at #4 post, T.B.32972. The bedding here strikes N.75° W and dips 60° north. The rock is thinly bedded and no determination of attitude was possible. However on an outcrop on the island south of Hardrock station and near the #2 Post, T.B.10498 the greywacke shows the tops of the beds to the south. Again in drill hole #A-19, drilled south on Claim T.B.10498, at footage 250 there is a good determination of tops of the beds to the south. An observation south of Langmuir station on Claim T.B.32899 shows the same attitude in the sediments there.

Slates are found thinly interbedded with the greywackes. They were particularly noticed in Claim T.B.32814 where they are in contact with the greenstones. The well marked bedding here strikes N.75° W. and dips 70° S., this conforms to the general strike of the sediments west of Hardrock Station. It might be noted that this bedding is at an angle of 70° to the adjacent greenstone contact.

Conglomerate was noted in the outcrop near #3 post, T.B.32799. Here the pebbles are well rounded and one to two inches in diameter. Two hundred feet N.E. there is an outcrop of greenstone. No effort was made to classify the rocks forming the pebbles but the likelihood is that this is a basal conglomerate. In drill hole #A-20 on Claim T.B.10498 there is one foot of conglomerate at 311 feet in the hole.

POST - TIMISKAMING INTRUSIVES

These comprise the diorites which are well distributed across the property. The diorites vary from a very coarse grained basic rock, highly chloritized, to a speckled rock with a large proportion of acid feldspar presumably albite.

The diorites will be noted in Figure 1, Sheets 1 and 2, they appear tabular in outline and strike somewhat north of west parallel to the schistosity of the flows. As previously mentioned the lavas are so altered and recrystallized in some places as to be readily confused with diorite and in consequence endeavor has been made here to locate intrusive contacts where possibly before classification.

Diorites are also found in the sediments but do not appear as well distributed there. This may be due to the incompetent nature of most of the sediments encountered or again it may be that some of the rocks classified as diorites are massive flows.

KEWEENAWAN

Under this classification are the diabase dikes. As noted on this property these trend generally north and south and are the youngest consolidated rocks in the area.

The diabase shows a well-marked ophitic structure and it is fine to medium grained. On several exposures on the peninsula south of Langmuir station the diabase contains large phenocrysts, up to three-quarters inch in diameter, of a greenish feldspar, possibly labradorite.

PLEISTOCENE

This period is represented by the unconsolidated gravels, sands and clays which are spread over the older rocks. In the form of eskers and ground moraines these deposits are common throughout the district. At places the sand and gravel are of considerable depth, drill hole #5-A, drilled N. at 45° from the small island off the N.E. tip of Bell Island, penetrated 110 feet of sand and coarse gravel before being abandoned.

STRUCTURE

As far as can be determined from the small area studied and in the light of previous work done in the District, the structure here appears to be a small syncline. This would be a minor fold on the North limb of a synclinorium in which the major synclinal axis would be through MacLeod-Cockshutt Gold Mines or possibly farther south.

To support this hypothesis the following data are advanced. On the west of the property there is a wide band of greenstones banded on the south by a band of sediments outcropping on claim T.B.32807, and again on T.B.11576 (a conglomerate outcrop on the east edge of Geraldton) a width here of over a mile. At Hardrock station again there are the extensive greenstones to the north followed by sediments starting on claim T.B.32846 and extending south at least into claim T.B.37368, a minimum width of one-half mile. South of these outcrops of sediments and out of the area of this report there are outcrops of greenstones.

The few observations of attitude in the sediments indicated the beds facing South which place these sediments in the north limb of the syncline. If the axis of the syncline is assumed to pass midway between the known limiting outcrops in the west and somewhat south of the last known outcrop at the east end where the beds face south (on the island South of Hardrock Station), then roughly the strike would be N.70W. This is approximately parallel to the general strike of the bedding and to the average strike ^{of the edge} of the greenstone outcrop.

East of this area and south of Langmuir station the strike of the sediments and their contact with the greenstones has changed to N.70 E. This change in strike may have been caused by the granite intrusion to the South and East. It is interesting to note that on the

outcrop east of Hardrock Station at #4 post, T.B.32973 there are several small drag folds in the greywacke which strike N.80° E. and plunge N.E. at 65°. This may indicate a saddle at about this point with the syncline plunging west and east from here.

The fracturing into which the diorite dikes are intruded may have taken place at the time of the major folding. In a general way the fractures appear parallel to the strike of the folds.

The fracturing into which the diabase dikes are intruded is much later and would seem to be caused by tensional forces.

ECONOMIC GEOLOGY

The mineral being sought in this area is gold. The favorable places would be along the major contacts near local folding and in the area of major change in the strike of the contact. These places are being investigated.

SUMMARY OF WORK.

Geophysical Surveys

A report of the geophysical survey of this property is attached.

Claim Surveys

No claim surveys have been made of this property.

Diamond Drilling.

Eighteen holes have been drilled for a total footage of 9025.



LEGEND
 PRE-CAMBRIAN
 KEEWATIN Diabase
 TIMISKAMING
 KEEWATIN Greywacke
 Greenstone

SYMBOLS
 [Swamp symbol] Swamp
 [Claim symbol] Claim line & corner
 [Magnetometer symbol] Magnetometer line & profile
 [Schistosity symbol] Schistosity dip and strike
 [Bedrock symbol] Bedrock or contact, dip & strike
 [Inferred symbol] Inferred geological boundary
 [Shearing symbol] Shearing
 [Traverse symbol] Traverse line

FIGURE 1
 SHEET 7, WESTERN PART

NORTH ASHMORE GROUP
 ASHMORE TOWNSHIP
 LITTLE LONG LAC GOLD MINES LTD
 Plan - 1 in = 200'
 Magnetic
 Profile - 1 in = 500'
 Data July 13, 1968 L. Willow
 P. Eng.

Reduce Hill
 200' to 800'

