A Geological Rep

MACLEOD-COCKSHUTT GOLD MINES LIMITED in

KEITH Township, District of Sudbury, Ontario.

Location

During the period of 19 June to 5 August, 1947, a geological survey was conducted under the supervision of C.P. Robertson, (Geologist, Hoodoo Lake Mines Limited) of a group of 19 unsurveyed claims in the central sector of Keith Township, District of Sudbury, Ontario, which are controlled by MacLeod-Cockshutt Gold Mines Limited (Suite 504 - 357 Bay Street, Toronto, Ontario). These claims are numbered S43785 to S43802 inclusive and S46278. They are bounded on the south by the 4½ mile east-west township line, and include largely that ground formerly designated as Lots 15 to 19 inclusive of Concession VII, and small sections of Lots 15, 16, and 17 of Concession VIII, (see accompanying map).

Access

The southeast corner of the property is located some 1200 feet west of the north end of Hoodoo Lake, where the Hoodoo Creek enters. A poorly cut trail follows the 4½ mile township line westward from the lake. Another trail has been cut from the northwest bay of Hoodoo Lake, across the MacLeod-Cockshutt ground to the camp of Concord Mines Limited. Hoodoo Lake is reached readily by water from Groundhog River station on the Canadian National Railways. It is also large enough for aircraft, but care is required due to floating debris from the flooded shores of the lake.

The easiest and best means of access to the claims is via a wagon road which leads from the Concord camp across Wejack, Garnet, Joburke, and Palomar ground to the Canadian National Railways siding and station at Joburke, Ontario, some 5 miles to the east. A diamond drill road leads southerly from this wagon road to D.D. Hole #7 on Garnet Gold Mines Limited, and ends only 700 feet from the approximate centre of the north boundary of MacLeod-Cockshutt ground. No road has been cut on the property, although several blazed trails cross it. A bulldozer could clear a road readily through many of the more open places on higher ground. Little cutting in the open swamps would give a good winter road.

Topography

The terrain is typical of the western sector of the Groundhog area. There is a heavy mantle of glacial deposits, varying from level bouldery clay on the east to rolling sand and gravel ridges on the west. Much of the eastern part of the property is poorly drained and overlain by swamp ground which locally resembles muskeg. Too frequently, small outcrops are low-lying in the swamp, which necessitates close traversing where the underbrush is heavier. Larger outcrops are usually covered by moss and a thin layer of soil, which makes stripping and trenching necessary. Commonly, the larger outcrops rested gently sloping glacial deposits on their southerly and southwesterly sides.

Mapping Methods

A base map of the claims was prepared by using data from the old Ontario Land Surveys, (annulled 7 March, 1947), and the results of a chain and compass survey of the claim lines. Joburke coordinates were projected to this property using chainages of the survey of 1917 and are open to minor errors. For compass work, a Brunton compass was used with a declination setting of 5° west, readings being taken at 200 foot intervals as measured by a steel chaining tape. Marked pickets were placed at each position for future reference. Pace and compass traverses were then made by two- or three-man parties at a traverse interval of 100 feet or less, crossing the property in a north-south direction, and tying-in position wherever surveyed lines were crossed. This method gave excellent results, errors in pacing and line being small.

Geology

The outcrops on this group of claims are localized along a band extending in a north-south direction through their centre. The rocks are basic volcanic flows which have been locally intruded by porphyry and lamprophyre dykes. Outcrops to the south show replacement breccia. The rock types observed include:

Lamprophyre
Replacement Breccia
Porphyry Dykes
Dioritic Flows (?)
Andesitic Flows

The general easterly strike of the volcanic flows, and their presence across the property in a north-south direction, tend to the belief that such rocks underlie most, if not all, of the ground.

The andesitic rocks are mainly massive, fine grained, and of a dark gray to gray green colour. In several places remnants of pillow structure were observed, but no top determinations were made. Along the south boundary the rocks are somewhat sheared and banded, and are locally altered to meta-diorite. Here, too, are found the replacement breccias, mentioned below. This evidence, and local changes in strike, seem to indicate a close approach of the granite which outcrops less than one mile to the southeast.

The dioritic rocks appear at first sight to be of an intrusive origin, possibly a sill. Commonly they are massive, medium grained, gray green in colour, and show a mottled appearance due to hornblende crystals. However, on the east side of the large outcrop in the centre of the claims, there is a flow breccia which can be traced into typical dioritic rock, which has an exposed width of some 100 feet. The top of this flow is to the southeast. The strike is 038° at this point, although regional strike is closer to 090°. It is believed that other dioritic rocks in the area, except for meta-diorite mentioned above, are probably interflows of same origin as andesitic flows.

Intruding into the andesitic and dioritic rocks are feldspar, and quartz-feldspar, porphyry dykes of variable width and strike. A twenty foot dyke of the latter type was traced some 300 feet across the dioritic flow mentioned above, following the strike of 038°, and dipping steeply. Minor amounts of barren quartz were seen along the walls. A ten foot feldspar porphyry dyke was noted some 400 feet to the west, striking easterly.

A replacement breccia was identified at several points near the south boundary. It is composed of uniformly small fragments of chloritic material, of shadowed margins, which are cemented in a felsitic matrix, probably closely related to the porphyritic dykes mentioned above. A minor amount of mineralisation was noted at one point. The contacts of the breccia seem to strike in a northerly direction. One zone was but 5 feet in width. The others were not exposed full width.

A single dyke of lamprophyre was located. It is one and one half feet in width, strikes 038° through dioritic flow, and parallels within a few feet the larger dyke of quartz-feldspar porphyry mentioned previously. They are probably complementary. A little fine mineralization occurs in the lamprophyre.

No veins or mineralised zones of economic interest were observed on any of the outcrops examined.

Summary The group of claims held by MacLeod-Cockshutt Gold Mines Limited in the central sector of Kieth Township, Ontario, appear to be underlain by massive volcanic flows of andesite-diorite type, which trend easterly and dip steeply. These flows have been intruded at several observed points by porphyry dykes varying in width up to 20 feet. Some indications of proximity to a granite mass were found along the south boundary. No shear zones, quartz veins or mineralized zones of economic interest were observed.

Recommendations

This ground is favorably located in a new, interesting, and relatively unexplored area. Several neighbouring properties are doing, or plan to do work, and increased knowledge about the district will be gathered. Formations known to be favorable host rocks in the area underlie the property. Sufficient assessment work has been done to maintain the ground in good standing for one year. Therefore, it is recommended that no further work be done on the MacLeod-Cockshutt ground at the present time, and that a program of waiting be followed until more data is available from neighbours.

Yours sincerely,

Cameron P Robertson

6 August, 1947

Cameron P. Robertson, M.Sc.,
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GEOLOGICAL PLAN OF
MacLEOD-COCKSHUTT
GOLD MINES LIMITED
BASE PLAN FROM CHAIN & COMPASS AND OLD O.L.S. SURVEYS.
SCALE - 300'=1"
SYMBOLS
Outcrop
Geological Contact
Slope
Swamp Margin
Swamp
Muskeg
Stream
Lake
Claim Post
Claim Line
Claim No.
O.L.S. Post
Picket Line
Trail
Strike & dip
LEGEND-
Lamprophyre
Replacement Breccia
Quartz Feldspar Porphyry
Andesitic Flow
N
10,000 N
5,000 N
1,000 W
0
1,000 E
5,000 E
LOT 19 LOT 18
LOT 16 LOT 15
4-5 MILE TWP LINE
S43383
S43384
S43377
S43381
S43380
S43533
S43532
S43529
S43528
S43527
S43526
S43525
S43629
S46278
S43802
S43801
S43800
S44282
S43794
S43795
S43796
S43797
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S44336
S44333
13 June, 1947 &
5 August, 1947
200