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PROJECTS
SECTION

Assessment Work Report
on
Anderson Lake Claim Group
Lorrain township
Larder Lake Mining Division
Ontario
by
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Haileybury, Ont.
June 20, 1972



Anderson Lake Claim Group

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Assessment Work Report
Anderson Lake Claim Group

Introduction

This report is submitted to the Ontario Dept. of Mines along with accompanying geological plan for assessment work credit.

In what follows this geological plan (scale one inch to 200 feet) of the Anderson Lake claim group is referred to as the Geological Plan.

Location

As shown on inset Key Map on the Geological Plan the Anderson Lake claim group lies in the southwest corner of Lorrain township about 13 miles southeast of the Town of Cobalt.

Access

A gravel road, the Hound Chutes road, extends from Cobalt to South Lorrain; for a considerable part of this distance it follows the east bank of Montreal river. At about fourteen miles from Cobalt, in Lot 2, Concession I, Lorrain township, a wagon road, commonly known as the Giroux road, goes off to the Giroux shaft in Lot 5, Concession II, Lorrain township. Pot lake, at about the centre of the Anderson Lake property, is about one and a half miles along the Giroux road from the Hound Chutes road. In 1971 the writer shared equally with Chukuni Gold Mines Ltd. about \$1000 expense in rehabilitating the Giroux Road as far as Pot lake; it can be used by light pick-up trucks at present.

Property ownership

The claims were staked and are held by Robert Thomson who is submitting this report.

Claim numbers

The numbers of the claims actually covered by the survey are as follows: Concession II, Lot 3, N 1/2, NE 1/4 316421, N 1/2 SE 1/4-316420, S 1/2, NE 1/4 264045 Lot 4, N 1/2, NE 1/4 264046, N1/2 SE 1/4 (part) 264047, N 1/2 NW 1/4 264051, N 1/2 SW 1/4 264048 S 1/2 NE 1/4 264043 S 1/2 NW 1/4 264044, Lot 5, N 1/2 NW 1/4 264049.

Cadastral survey

Lorrain township was surveyed into lots and concessions in 1885 and the lot corners were not marked originally by iron pins; the wooden posts have in general disappeared. On and near the Anderson Lake group only five iron pins were found. On the Geological Plan the writer shows what he considers the correct position of the lot and concession lines as well as the claim and picket lines.

Covering dates of survey

The writer had made occasional geological investigations of the area covered by the Geological Plan in the period 1950 to 1970. In 1970 some picket lines were cut and geological traverses made; most of the lines and the geological work was done in 1971, two traverses were made in 1972.

Table of formations

TABLE OF FORMATIONS

Pleistocene and Recent- Till, sand, gravel, muskeg.

Great unconformity

Precambrian- Proterozoic

Nipissing diabase

Intrusive contact

Huronian- Cobalt Group

Lorrain- arkose and quartzite (not exposed on group but present nearby).

Firstbrook- argillite (not exposed on group but present nearby).

Coleman- conglomerate, grit

Great unconformity

Archean

Haileyburian- lamprophyre dikes

Intrusive contact

Lorrain intrusives- granite (not exposed on group but present nearby).

hornblende syenite- large bodies and numerous small dikes.

Keewatin

Mafic intrusives- probably dioritic to diabasic originally, in large irregular to somewhat sill-like form.

Intrusive contact

Volcanics- andesitic to more mafic lavas, in part pillow, amygdaloidal, porphyritic; in part schisted. No interflow sedimentary beds found.

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Description of formations

Keewatin volcanics.

Volcanic Keewatin rocks on the group are andesitic to basaltic lavas with varying textures and structures as pillow, amygdaloidal, variolitic, porphyritic as well as more even grained types. The absence of interflow sedimentary bands made tracing of the individual flows difficult to impossible. Presumably most of the lavas were poured out on a land surface. Distinctive porphyritic andesite with plagioclase phenocrysts up to half and inch occurs along the north shore of Anderson lake.

Keewatin mafic intrusives.

An extensive irregular outcrop area of altered Keewatin diorite or diabase intrusive is situated on Claim 264047 and extends into the Chukuni Gold Mines property to the east. That the band of similar rock extending northerly from the east end of Pot lake is an extension of the intrusive is not proved but seems probable to the writer. Obviously these basic rocks have undergone very considerable deformation and probably folding.

Lorrain intrusives

The typical Lorrain granite as exposed near Cobalt and in the north part of Lorrain township is markedly coarse grained and with very low dark mineral content. Such granite does not outcrop on the Anderson Lake group but the south contact of a band of such rock lies at about one quarter mile north of Claim 264046.

Hornblende syenite in large body does not outcrop on the Anderson Lake group but is exposed a few feet northeast of Post 1, Claim 264043 and is thought to underlie the overburden in the east part of the claim. An inclusion of hornblende syenite (about 70 feet by 30 feet on surface) in Nipissing diabase is exposed at the Paul shaft, Claim 264043. Large inclusions in the Nipissing diabase are known near Cobalt but are rare. The hornblende syenite is regarded as closely related- a satellite body- of the Lorrain granite batholiths.

Hornblende syenite, feldspar porphyry, and feldspathic dikes to a few inches in width traverse Keewatin volcanics in places.

Haileybury intrusives.

Haileyburian biotite lamprophyre dikes intersect Keewatin volcanics on the group. Those seen by the writer were less than 20 feet wide and in general had a northeasterly strike. A number of exposures are situated along the Giroux road where this traverses Claim 264044; although the exposures are nearly colinear they may not belong to one dike.

Huronian - Cobalt Group

Coleman sediments

The Coleman formation (the lowest part of the Cobalt Group) is exposed in the southwest corner of the Anderson Lake group (Claim 264045) and as a small outlier (200 feet by 100) in Claim 264044 on the north shore of

Anderson lake, and as a small outcrop in the southeast corner of Claim 264043. Of significance is the area of Coleman sediments off the Anderson Lake claim group at about 500 feet north of Claim 264051. The thickness of the Coleman sediments on the claim group is probably everywhere less than 200 feet. The lower part of the formation is conglomerate similar to that at Cobalt; a rather well sized grit along the Giroux road in Claim 264045 lies above the conglomerate.

Nipissing diabase

Nipissing diabase occupies only a small part of the Anderson Lake group.

In the Timiskaming area the Nipissing diabase is a sill-like body or bodies about 1000 feet thick which has basin and arch forms. All the diabase on the Anderson Lake group is in the vicinity of the bottom contact of the sill and all the solid rocks other than diabase were at one time overlain by the diabase. The greatest thickness of the diabase on the group is probably less than 300 feet.

The Nipissing sill, prior to erosion, at the site of the Anderson Lake claim group had an arch form the direction of whose axis (about N. 60 degrees E.) traversed the south part of the site of Pot lake. What remains of the south limb of the arch is for the most part along the south shore of Anderson lake. A remnant of the north limb of the arch extends from the west

boundary of the claim group to the north end of Pot lake. An outlier of diabase, a remnant of the south limb, (in extent about 600 feet by 200) lies on Claim 264043 and 4 on the north shore of Anderson lake; it is probably everywhere less than 50 feet thick. A remnant of the north limb, about 100 feet by 100, overlying Coleman sediments is shown on the Geological Plan just north of the Anderson Lake group(about 500 feet north of Claim 264051). The arch of the Nipissing diabase sill prior to erosion on the site of the Anderson Lake group directly overlay Cobalt Group sediments in part; in part Keewatin rocks were directly overlain. The distance from present rock surface to the bottom contact of the diabase sill prior to erosion ranges from 0 to an uncertainly estimated 800 feet.

Pleistocene and Recent

The topography of much of the property is determined by bed rock and outcrops are in general numerous but in places overburden is heavy. The maximum relief is probably less than 100 feet.

The direction of glaciation as indicated by glacial striae lies between 170 and 190 degrees astronomic.

Much of the drift is sandy bouldery till. Small gravel deposits are present in a few places but difficulty was met in getting suitable gravel for the Giroux road. The till on Claim 264043 north of Anderson lake is characterized by the unusually large amount of boulders contained.

Structure

Keewatin structure has not been delineated. The Keewatin volcanics were folded along an axis of direction approximately N.60 Degrees E. as is shown by the schistosity developed in places. The dips of the Keewatin lava flows are in all likelihood near vertical but the strikes in general could not be determined. A clue to the nature of the folding would be afforded if the Keewatin intrusive in Claim 264947 were shown to be part of the intrusive in Claim 264046.

Many linear topographic features commonly referred to as lineaments occur on the property. Many of these lineaments are due to erosion along lines of structural breakage, as faults. In places as at 620 feet E. and 170 feet S. of Post 1-264043 fault breccia is exposed along the side of a lineament. A prominent lineament is indicated by Bouck and Pot lakes and a small but marked topographic depression extending through Claim 264043; banded finely brecciated rock at 200 feet south and 330 feet E. of the wooden Claim post 3-264043 on the side of the lineament shows its fault origin.

The Nipissing diabase structure is outlined in the 'Description of Formations' section of this report.
Economic Geology

Silver is the only metal sought on the Anderson Lake claim group. The veins are of the kind occurring at the Cobalt camp. Work done prior to the staking of the claim group by the writer led to the discovery of

two silver-cobalt occurrences--the Paul shaft, and the Vanadium Exploration Syndicate, to be described later.

Summary of exploration and development

In the 1920s the surface was carefully prospected.

Numerous trenches were excavated particularly in the general vicinity of the Paul shaft, Claim 264043.

The deepest working is the Paul shaft- 50 feet deep.

Four pits, of estimated depth between 20 and 25 feet were put down; three of these are at the Vanadium Exploration Syndicate occurrence, the fourth is in Claim 264044 at the Giroux Road veins.

Diamond drilling was done by McKinley-Darragh Mines about 1923. Three drill holes are said to have been drilled but the writer found the stand pipe of only one. This, situated at 380 feet at N.33 degrees W. from the Paul shaft was drilled northwesterly; no records of results are obtainable.

A drill hole V-1 on Claim 264046 was put down in 1950 by Vanadium Exploration Syndicate. The hole, of 162 footage intersected Keewatin volcanics; nothing of economic significance was encountered.

In 1970 three diamond drill holes totalling 286 footage were put down in the vicinity of the Paul shaft on Claims 264043 and 4. The results of this drilling were submitted to the Ontario Dept. of Mines for assessment work on 19 Feb.1971. Nothing of economic significance was intersected.

Geochemical work

Geochemical work, soil sampling, was done in 1971.

Vein occurrences

(1) Paul Shaft silver-cobalt occurrence

This occurrence is situated about 50 feet east of the west boundary of Claim 264043 and central in a north-south direction. The discovery was made in the early 1920s by a Mr. Richardson, who, on pulling off moss, discovered a conspicuous rich silver occurrence. McKinley-Darragh the well-known Cobalt mining company, took an option on the property, trenched, put down a 50-foot shaft, and drilled three diamond drill holes. On expiration of the option the owners refused an extension. Eye witnesses have told the writer that High -grade silver mineralization was exposed at surface. Following is an item from the NORTHERN MINER of Oct. 13, 1923: "The surface silver showing in a vein two feet wide was blasted out with the first round and while from time to time in shaft sinking silver was found the quantities were small." The vein was tested by a trench now caved, which extends 75 northeasterly from the shaft.

(2) Vanadium Exploration Syndicate showing

This is situated in Claim 264046 at about 300 feet south and 650 east of the No. 4 post. Three pits, of depth possibly between 20 and 25 feet, over a strike length of 80 feet, plus additional trenches over a total length of about 160 feet were put down to test a vein striking 263 degrees astronomic and traversing Keewatin lavas. Vanadium Exploration Syndicate held in 1950 the ground on which the vein is situated but

BUCKE TWP. (M.432)

XII
XI
X
IX
VIII
VII
VI
V
IV
III
II
I

COLEMAN TWP. (M.454)

GILLIES LIMIT TWP. (M.483)

SOUTH LORRAIN TWP (M.591)

Lake

Timiskaming

PROVINCE OF QUEBEC

TWP. OF
LORRAIN
DISTRICT OF
TIMISKAMING
LARDER LAKE
MINING DIVISION
SCALE: 1 INCH = 40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (CS)
- LEASES (L)
- LOCATED LAND (Loc)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (MRO)
- SURFACE RIGHTS ONLY (SRO)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSHEG
- MINES
- CANCELLED

NOTES

400' surface rights reservation around all lakes and rivers

FEBRUARY 13, 1928
One chain reservation from high water mark to be made in all future surveys of lands bordering on Lake Timiskaming

Boundary by D.L.S. O'Henry & O'Dwyer between the Province of Ontario and the Province of Quebec with reference to the 400' surface rights reservation on Ontario side of the Province of Quebec

Reserve flooding rights to the P.C. to control the flow of water of the Province of Ontario

DATE OF ISSUE
FEB 13 1928
MINES AND NORTHERN AFFAIRS

2.912

PLAN NO. **M.536**

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS



