010

D O M I N I O N G U L F C O M P A N Y

Geological Report

Claims S-73608, -09, -10, S-72562 and 63.

BALDWIN IV

BASE MAP 41I/5S

NORTH CHANNEL AREA ONTARIO

C. McAULAY Dec. 10, 1954.

L I S T O F C O N T E N T S

SUMMARY AND CONCLUSIONS

This report deals with a detailed geological survey of five claims - S-73608, -09, -10, S-72562 and -63 - in lots 1, 2 and 3, concession V, Baldwin Township in the Sudbury Mining Division, Ontario.

They are accessible by road from McKerrow on the C.P.R. and Highway 17 about 44 miles west of Sudbury.

The topography is relatively rugged with a maximum relief of 450 feet. Rock exposures are numerous and are locally quite large. Most of the rock is bare of moss.

The area is underlain by steep-dipping Mississagi type quartzite complexly folded and intruded by dikes and irregular shaped bodies of diorite and/or gabbro and derived schists.

Locally there are small lens like concentrations of radioactive minerals in the quartzites.

On the surface, they do not appear to be of sufficient size and high enough grade to be mineable at the present time.

INTRODUCTION

This report deals with a detailed geological survey of five mining claims, S-73608, -09,-10, S-72562 and -63, in Baldwin Township in the Sudbury Mining Division, Ontario. They cover specifically the north half of the north half of the south half of lot 3, concession V. They are each approximately 40 acreas in area.

They are close to Espanola Bay on Lake Agnew which is at the end of a good gravel road from McKerrow, a railway junction on the C.P.R. and Highway 17 about 44 miles west of Sudbury.

They can best be reached by boat in summer along Lake Agnew or by way of a good trail running east to the Fire Lookout Tower at the east side of claim S-72563.

The area was mapped at a mile to the inch by geologists of the G.S.C. It is included on map no. 291A, "Espanola Sheet", Canada Department of Mines and Resources.

It was mapped in greater detail recently by geologists of the Ontario Department of Mines. (Map no. 1952-1 of Baldwin Township.)

The present mapping was done in much greater detail at four hundred feet to one inch. Topographical features and exposure outlines were tied into chainage points on picket lines by pacing. This was supplemented to a limited extent by the use of aerial photographs at one inch to four hundred feet where the ruggedness of the topography made pacing impossible.

The mapping was done by the writer assisted by M. G. Parsons mainly and to a lesser extent by W. Cannon and R. Linton in the fall of 1954.

The boundaries of claims S-72562 and -63 were located by measuring from the Tower. Its location with respect to the southeast corner of lot 3, concession V was obtained from the Survey Department, Ontario Department of Lands and Forests at Toronto.

TOPOGRAPHY

The relief in the area is relatively high. The elevation difference between the highest and lowest points is in the order of four hundred and fifty feet.

Steep slopes and up to fifty foot high near-vertical cliffs are common.

The western group is for the most part on the highest hill in the area. It is composed mainly of a fairly massive, resistant quartzite flanked on the west by a large less resistant diorite mass that forms a lower part of the hill.

The southern part of the eastern group consists of several short ridges with peaks about 100 feet lower in elevation than the Lookout Tower hill.

They are formed of steep-dipping resistant quartzites and trend in a direction conformable with the average strike of the bedding between east and northeast.

The northern half of this section consists of lower rolling hills with some sand ridges and flats and scattered rock exposures. It is underlain by a complex of quartzites and diorites and derived schists.

The vegetation consists of a mixed varied stand of birch and poplar with some hardwoods. Small clumps of pins are common on the outcrop areas.

Outcrops are large and numerous and, except some of the small ones in the lower areas, are bare and require no stripping.

Approximately 65% of the five claims is exposed rock.

GEOLOGY

General

The claims lie in an area of complexly folded Mississagi quartzites cut by large irregular shaped basic intrusives.

The western two are underlain mainly by a near-vertical, north-striking quartzite. This is intruded on the west by a huge diorite mass and by one irregular dikelike offshoot that together occupy about one half of the westermost claim. Almost ninety percent of this area is bare rock.

The eastern three claims are underlain mainly by quartzite which forms large ridges of bare rock in the southern part. The northern part is underlain by a complex of quartzite, diorite and derived schists.

Table of Formations

a) Basic Intrusives

b) Schists derived from basic intrusives

c) Quartzite

Description of Formations

a) Basic Intrusives and b) derived schists

The basic intrusives are in the form of large irregular-shaped masses and irregular dikes and sills. The eastern margin of a large mass protrudes into the west side of claim S-72562 and almost half way across it. The eastern quarter of the same claim is also occupied by a dikelike offshoot from the same body. The rock is a grey-green weathering, medium grained, massive diorite or gabbro that is locally diabasic in texture. In a few places, a fine grained chilled edge was noted against the quartzite. Tiny irregular barren bluish quartz veins in fractures are common.

There are a few exposures of diorite in the complex area in the northern half of the eastern group. Locally angular and sub-rounded quartzite inclusions are common and often form a large part of the rock. One such area was shown as conglomerate on map 1952-1 (O.D.M.)

The schists thought to be derived from the basic intrusives are found mainly in the northern half of the eastern group but there are a few exposures amongst the quartzites to the south. For the most part, they are quite massive in appearance and soft. They are very fine grained and weather dark grey. Locally, they are lineated and contorted. Quartzite inclusions are numerous in parts as in the basic intrusives.

Their contacts with the quartzite are sharp and with the diorite usually sharp but occasionally obscure and gradational.

c) Quartzites

The quartzites are the most abundant rocks in the area. They are well exposed in unusually large bare outcrops. They are composed mainly of quartz with some feldspar. They weather white or very light buff. The grain size varies from fine to medium. Crossbedding was noted in some areas but was not distinct enough for top determinations. Some areas are quite massive and the structure is obscure. Other areas are well banded with greywacke like interbeds.

Structure

The area is composed mainly of steeply dipping complexly folded quartzites. In the western part, they strike close to north and in the eastern part vary from east to northeast on the average which is close to the regional strike.

The quartzites are intruded by basic intrusives in various forms. The largest is a hughe irregular mass to the west that protrudes several hundred feet into the westernmost claim. A wide dikelike offshoot cuts through the eastern quarter of the same claim.

Ill-defined irregular dikes and sills altered to schists for the most part are common in the northern half of the eastern group.

Mineralization

Barren bluish quartz veins are common in the larger basic intrusives.

Some small lenslike areas in the quartzites west and north of the Fire Tower contain low concentrations of uranium and thorium minerals which give scintillometer counts in spots as high as 1,000 to 3,700 counts/second.

However, the widths of the best parts are only a few inches and the lengths are short. They do not appear to be economic deposits.

CMcA/BJ

D. McAuley.

REFERENCES

1.) Map 291A "Espanola Sheet - Sudbury District Ontario" Canada Department of Mines and Resources - Issued 1938.

2.) "Geology of Baldwin Township" by Jas. E. Thomson Vol. LXI, Part 4, 1952, Ontario Department of Mines.

ATTACHMENTS

Map

D.G.C. "Detailed Geology of Claims S-73608,-09,-10, S-72562 and -63, Baldwin Township, Base Map 41I/58, Sudbury Mining Division, Ontario - Geology by E. McAuley and M. G. Parsons - Dec. 8, 1954.

I am also enclosing a copy of our Schedule "A" which accompanied each work report filed with the Mining Recorder. This schedule shows the complete listing of the men employed on the survey and the dates during which the work was performed.

Very truly yours,

Sgd.

JHS:jm

E. W. Westrick.

Attachments follow in this order:

(1) Schedule "A" showing employees engaged in work reported.
(2) Geological report written by C. McAulay.
(3) Geological map, scale 400' to the inch.

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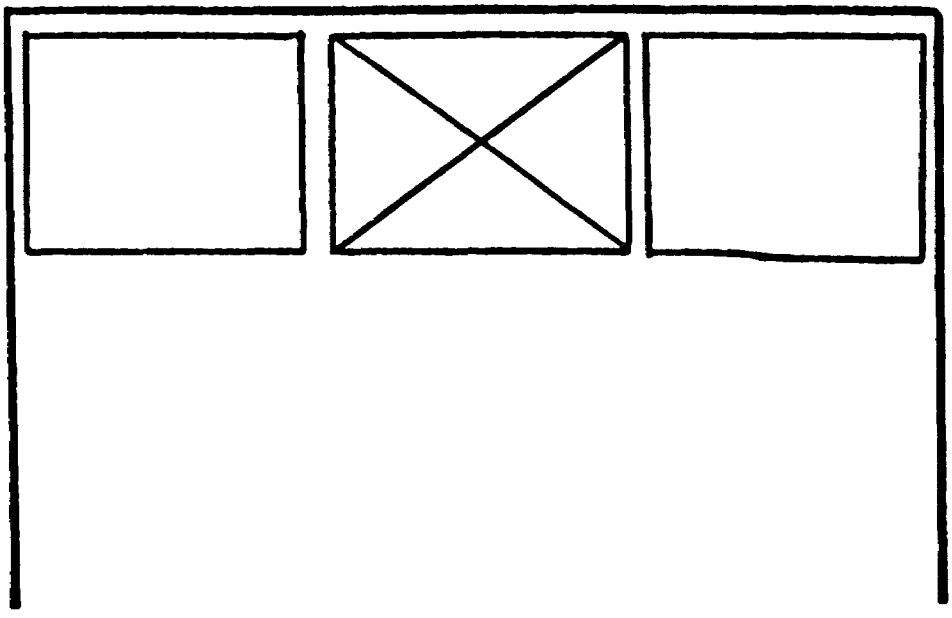
SCHEDULE "A"

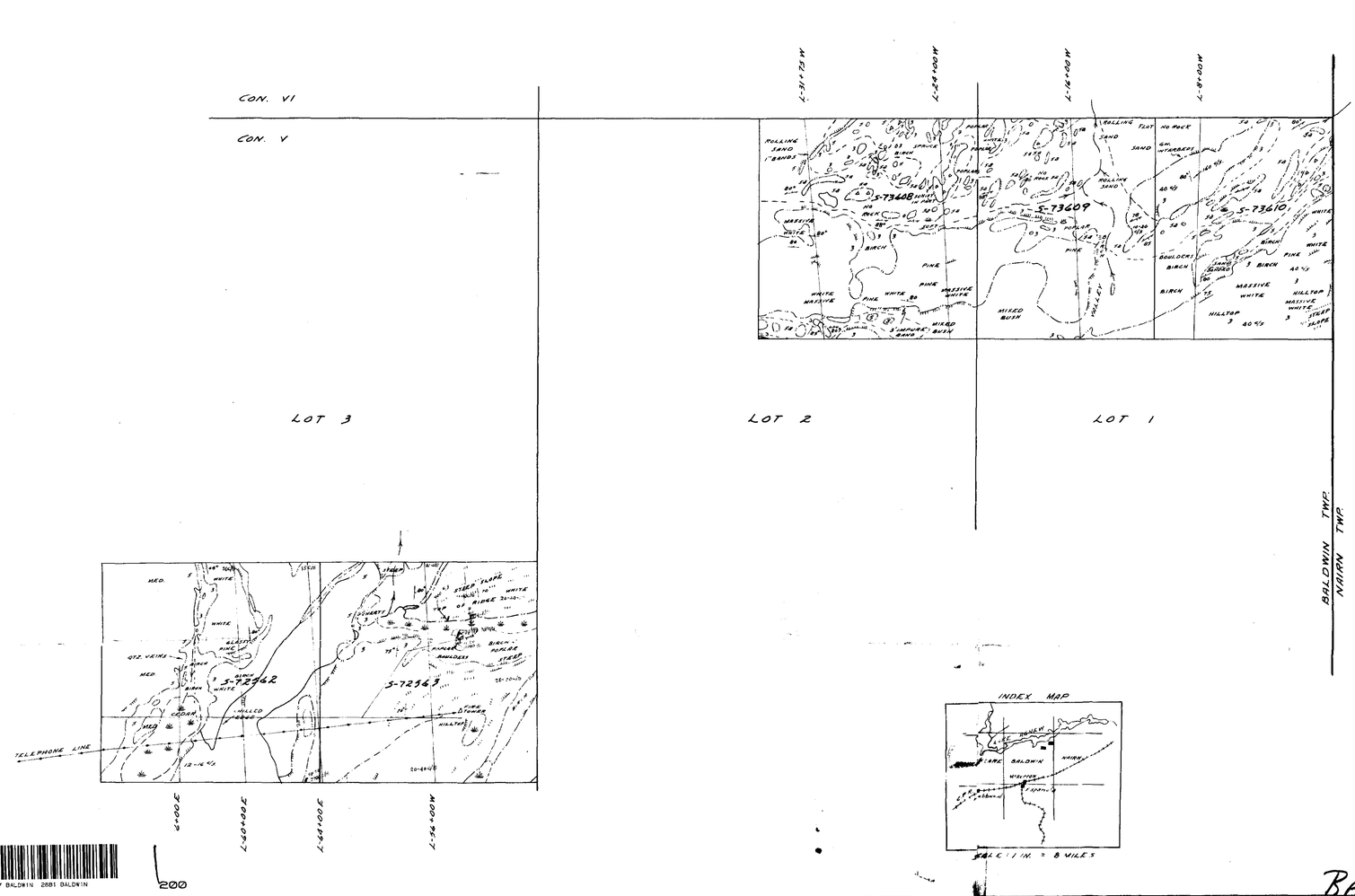
	1954	
	October	November
Detailed Geology		
Field Work		
C. McAulay	x	
M. G. Parsons	x	
G. E. Tupper	x	
W. J. Gannon	x	
C. R. Linton	x	
G. E. Parsons	x	
Drafting and Report		
C. McAulay	x	x
M. G. Parsons	x	
N. G. Hunt	x	x
Linecutting		
M. G. Parsons	x	
W. J. Gannon	x	
C. R. Linton	x	

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

BALDWIN-0028-BI, #1

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





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LEGEND

- 3 Diorite & Quartzite inclusions
- 3a Schist
- 3 Quartzite
- Radioactive quartzite

SYMBOLS

- Strike and dip
- Strike and dip of schistosity
- Outcrop area
- Trail
- Scarp
- Creek
- Intermittent creek
- 40 c/s Scintillometer counts per second

DOMINION GULF COMPANY

DETAILED GEOLOGY OF CLAIMS S-73608,-09-10, S-72562 & -63

BALDWIN TOWNSHIP

BASE MAP 41 I/15 S

SUDBURY MINING DIVISION ONTARIO

GEOLOGY BY C.McAULAY & M.G.PARSONS DATE: DEC. 8, 1934

DRAFTING BY N.HUNT SCALE: 1 IN. = 400 FEET

To accompany report by C.McAulay, Dated: Dec 8, 1934.

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BALDWIN-0028-81, #1