GEOLOGICAL R[EPORT]

DENTON TOWNSHIP CLAIMS

LOCATION AND ACCESS:

The claims which are the subject of this report are located in Denton Township, District of Timiskaming, Province of Ontario, being about 20 miles southwest of the town of Timmins.

The new motor highway from Cook's Lake to Warren Lake passes within one-half mile of the northwest part of the property.

The southeastern portion of the area is reached most conveniently by means of an old lumbering road which extends southerly for 3 miles from the new highway. This old road is not fit for motor travel but it is connected with the old road along the north side of the Red Sucker River.

CLAIMS:

The claims are held by Dominion Gulf Company, 203 Bay Street, Toronto. There are 35 claims included in the property, numbered as follows: P-35696 to P-35719 inclusive and P-36239 to P-36249 inclusive.

PERSONNEL AND DATE OF SURVEY:

Geological mapping was done by A. W. Mullan and F. J. Sugden, both employed by Dominion Gulf Company.

Line-cutting was started on May 24, 1950. Geological mapping was done intermittently between July 9 and October 30, 1950.

PREVIOUS WORK:

Prospecting has been carried on at intervals in this area for the last 40 years. The general geology has been described by W. D. Harding & L. G. Berry in Ontario Department of Mines, Volume XLVII, Part IV, 1938, "Geology of the Keefer-Eldorado Area". Earlier work by E. W. Todd is published in Ontario Department of Mines, Volume XXXII, Part III, 1923, "Kenogamissi Lake Area including Denton and Keefer Townships".

TOPOGRAPHY:

The surface is generally level with some rolling sand and gravel ridges. The southern and southeastern portions are covered with glacial clay and boulders. The northern and central parts are largely composed of sand and gravel deposits. Cripple Creek, a small stream which flows easterly across the centre of the property occupies a well-defined valley. This depression which is the work of an earlier and larger stream has been cut down about 50 feet into the sand and gravel deposits.

There are considerable areas of cedar swamp and muskeg in the lower ground of the southern part of the property.

The timber has been cut, over much of the ground, a number of years ago, leaving a tangled slash which is difficult to traverse. A good growth of jack pine at the west end of the claims covers an old burned-over area. Rock exposures are extremely scarce on these claims. Most of the outcrop data included in this report has been obtained from rocky areas on or near the borders of the property. One such area lies along the northwest edge of the map and another includes the southeast corner of the property.

TABLE OF FORMATIONS:

Pre-Cambrian

Diabase dykes.
Granite, aplite dykes.
Peridotite.
Sediments - arkose, greywacke.
Basic dykes.
Volcanics - andesite, rhyolite, tuff.

DESCRIPTION OF FORMATIONS:

Volcanics - Typical andesitic or basaltic lavas occur between Cripple Creek and the highway, just beyond the northwestern part of the property. These rocks are generally massive and fine to medium-grained, bordering an extensive granite mass which terminates the volcanics between the highway and Cripple Creek.

Similar dark green lavas are exposed along the west boundary of Claim P-35696, just south of Cripple Creek on Claim P-35699, just north of this creek on Claim P-35717 and in the southwest corner of Claim P-35715.

A small rocky area about 500 feet east from Post 1 of Claim P-35719 exposes some greenstone, more or less altered to carbonate.

There are numerous large outcrops of massive greenstone just south of the southeastern portion of the claims, extending also across Claims P-36240, P-36242 and P-36244. This rock has been altered in many places by the development of fine-grained hornblende.

Rhyolite is known only near the northwestern corner of the claims. This rock is fine-grained and siliceous, weathering pale grey. It is massive with local zones of light shearing and carbonate alteration trending about N 60° E. The rhyolite band has a minimum width of about 1400 feet on the outcrop. Contact relations with the greenstone are not exposed.

Pyroclastics are known only on Claim P-35696 at the west end of the property. These rocks vary from massive, medium-grained and recrystallized to fine-grained, poorly-banded tuffs. They are associated with the greenstone and also with the sediments in this vicinity.

Basic Dykes - Narrow dykes of andesitic composition have been intruded into the rhyolite along fractures which trend N 40° to 60° E. These are known only within the rhyolite band. Small apophyses from a dyke demonstrate clearly its intrusive origin.

Sediments - Sediments are found at the west end and also in the southeastern part of the property. Greywacke is the predominant rock type, - fine to medium-grained, massive to well-bedded, and generally dark grey in colour. There is no notable lithologic distinction between greywacke from the western and southeastern outcrop areas.

Impure arkose is found associated with the greywacke of the southeastern outcrop area. This rock is pale grey to white weathering, composed largely of recrystallized grey feldspar and quartz. The quartz tends to occur as thin, sugary laminations. Sometimes the arkose is quite massive and recrystallization has developed feldspar metacrysts. Under such conditions, the rock might be mistaken readily for a feldspar porphyry.

Arkose has been distinguished from greywacke on the accompanying map. The former is seen to occur along the northern side of the southeastern sedimentary area.

All the sediments, both western and southeastern areas, dip rather steeply northwards. It was possible to determine the attitude of beds only in one place, about 400 feet north from Post 1 of Claim P-36241. At this place, distinct bedding gradation indicated that the beds faced north without being overturned. Strike varies from east-west to about N 65° E with local exceptions. The bedding does not differ much in strike between the two widely separated outcrop areas.

Sedimentary outcrops are not exposed along their contacts with adjacent rocks with one exception. This exposed contact occurs on Claim P-35696 where greywacke lies immediately south of schistose rhyolite.

Peridotite - There are no known outcrops of this rock on the property. It is merely mentioned because it is known on nearby ground as shown on the map. An outcrop of massive talc-carbonate rock occurs about 400 feet northeast from Post 1 of Claim P-35719. This outcrop represents probably an altered peridotite in contact with greenstone.

Another peridotite area is found from 1400 to 2400 feet south from Post 2 of Claim P-36242.

Granite, Aplite Dykes - Granite does not occur on the claims. However, the eastern nose of an extensive granite mass lies between the highway and Cripple Creek at the extreme northwest edge of the map.

Aplite dykes are quite numerous in the amphibolitized greenstone at the southeast corner of the claims. They vary from a few inches to a few feet in width, trending more or less east-west. A large granite mass outcrops about one mile farther south. Hence the amphibolitization of the greenstone and the aplite dykes are probably both related to this underlying intrusive.

Diabase Dykes - North-south diabase dykes are seen cutting sediments and greenstone on Claim P-35696 at the west end of the property. Another diabase dyke cuts arkose on Claim P-36248 in the south-central part of the claim block.

STRUCTURAL FEATURES:

Due to the lack of outcrops little is known regarding geological structure. There is an alternation of volcanics and sediments extending across the claims. Two sedimentary bands have been shown on the map. A single structural determination suggests a synclinal axis located somewhere north of the east-central part of the property.

Outcrops on Claims P-35706, P-35707 and P-35717 expose a broad zone of intense shearing striking N 60° E with steep dips to the northwest. The zone is at least 400 feet wide and it is composed of sericite-talc-carbonate schist. Alteration is so complete that the original rock is difficult to determine. However, examination of the least altered portions of the sheared zone and adjacent rocks leads the writer to the tentative conclusion that the rock was originally greenstone. It is possible that this line of weakness represents an important fault zone which may extend southwesterly from Bristol Township.

A strongly sheared and carbonatized zone of limited width trends slightly south of east near Post 4 of Claim P-36239.

Talc-carbonate schist is also indicated on the map in two places striking east-west near the south contact of the sediments on Claims P-36242 and P-36244. Minor drag-folding occurs in this vicinity in the sediments with the north side moving relatively eastwards.

ECONOMIC FEATURES:

Considerable pyrite mineralization and some grey quartz occur in the sheared zone on Claims P-35707 and P-35717. The pyrite fills fractures in the quartz and sometimes replaces it quite extensively. Pyrite is found also in narrow seams and disseminations in the sheared rock.

The massive arkose is well fractured locally with irregular white quartz filling and minor pyrite.

Gold values have not been found in any of the surface showings. Overburden is so extensive and thick that little additional surface exploration is possible. Drilling will be required to test the economic possibilities further.

November 17, 1950
lj

(s) F. J. Sugden.

F J Sugden

INTERPRETATION OF GROUND MAG
FOR DENTON TWP CLAIMS.
GROUP 1

INTERPRETATION OF GROUND MAGNETICS FOR DENTON TOWNSHIP CLAIMS, GROUP I

INTRODUCTION

The survey area consists of 35 claims located about 20 miles southwest from Timmins. A new highway extending southwest from Timmins provides an easy means of access. An Askania magnetometer was used in the survey, utilizing N-S picket lines apprxoimately 400 feet apart, with readings taken at 100 foot stations. Two maps on a scale of 1 inch = 400 feet accompany the report: (1) ground magnetic data contoured to 100 gamma intervals, (2) interpretation oversheet to be used in conjunction with the contoured magnetic data.

SUMMARY

Few outcrops are exposed over much of the claim area and since no distinction could be made magnetically between the sediments and volcanics, little has been added to the geologic picture. In general, the main magnetic bands are parallel to the geologic trends and have been interpreted as being due to alteration in both sediments and flows. The main shear zone could not be traced although its trace is parallel to the main magnetic trend. Some anomalies trending west of north have been interpreted as diabase dikes. Numerous small local magnetic highs have been interpreted as localised alteration zones. Many later cross-faults have been interpreted which may be interesting if they are pre-mineralization.

INTERPRETATION

On the interpretation overlay, contacts and faults are indicated, with anomalies numbered for ease of reference. Anomalies are numbered from 1 to 127 inclusive going from west to east.

In general, the magnetic relief is nowhere very great. The most

highly magnetic band occurs in the southeast corner. Elsewhere bands of less magnetic intensity occur, as well as numerous isolated anomalous highs. Three distinct magnetic trends are indicated as follows: (1) a strong series of magnetic bands striking approximately N 55° E, (2) a weaker trend striking E-W to N 70° W, (3) a weak trend striking roughly NW.

In the northern half of the claim block, including the area north of Anomalies 57, 58, 52, 55, and 56, the predominating trend is approximately N 55° E. This closely approximates the formational strike in this section. A major shear zone exposed in claim P-35706 (Geological Plan of Denton Township Claims, Group I, - F. J. Sugden) is also parallel to this trend. The anomalous bands probably represent alteration along formations or contacts in both the volcanics and sediments. In this area, it is impossible to distinguish sediments from volcanics magnetically. Anomalies 15, 16 and 17 strike approximately N 70° W. This direction is transverse to both the formational strike and the main shear. It is possible that they represent alteration localized by zones of weakness, possibly caused by faults or shears. Magnetic bands trending approximately N 50° W are indicated by Anomalies 22, 23, 48. These may be caused by diabase dikes. Numerous local isolated anomalous masses are indicated. These may be due to localized alteration. A fault has been indicated, offsetting Anomalies 43 and 44 from Anomalies 41 and 42. Two more indicated faults, offset Anomalies 50, 59 and 58 with the west side moving south in both cases. The main shear mentioned previously, cannot be traced magnetically.

The southern half of the claim block, extending south of Anomalies 68,70,60,61,63 and 67, is somewhat different in character from the above-described area. Magnetic masses, trend generally E-W with a few exceptions. Anomalies 69 and 70 strike about N 70° E. The geology as indicated by

f. J. Sugden consists of volcanics and sediments. No distinction can be made between sediments and volcanics on the basis of magnetics and magnetic bands occur in both rock types. Magnetic masses in the sediments may be due to alteration along certain horizons or lines of weakness. Anomalies 72 and 75 may be caused by intrusive plugs. In the volcanics, alteration appears to have been more severe with development of visible magnetite. A fault is indicated along Cripple Creek, offsetting Anomalies 65 and 84 south of Anomalies 63, 64 and 81. Other faults have been interpreted on the basis of offsets and interruptions of anomalous bands.

Respectfully submitted,

H. Reimer

H. Reimer,

November 27, 1950.

lj

Carlton L.

Crippple Creek

Denton L

HIGHWAY TO TIMMINS

Godon Lake

P-35699
P-35698
P-35696
P-35697
P-35700
P-35702
P-35706
P-35701
P-35705
P-35704
P-35703
P-35713
P-35710
P-35709
P-36249

gravel
clay
sand
bldrs.
sand + bldrs.
sand + bldr. ridges
low gravel ridge
bldrs. clay
alders
low clay
bldr. hill

DOMINION GULF COMPANY

GEOLOGICAL PLAN
DENTON TWP. CLAIMS

DENTON TOWNSHIP - PROV. OF ONTARIO

SCALE: 1"=400' DATE: NOV. 17, 1950

LEGEND

D	D	Diabase dykes
Z		Granite; aplite dykes
Pd	Pd	Peridotite
B		Basic dykes
Gy		Greywacke
Ark.		Arkose
T	T	Pyroclastics
R	R	Rhyolite
A		Andesite
SZ		Zone of intense shearing and alteration.

F.J.S.

CONTOURED GROUND MAGNETICS

TO ACCOMPANY REPORT BY H.R. NOVEMBER 27,1950

CONTOUR INTERVAL—100 GAMMA

DOMINION GULF COMPANY

GROUND MAGNETOMETER SURVEY

DENTON TWP. CLAIMS

GROUP I

DENTON TWP. ····· PROV. OF ONTARIO

SCALE: 1"=400' DATE: NOV. 21, 1950

63-218

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