

RP 159(A)

PRELIMINARY REPORT ON A PART OF BEAUCHASTEL TOWNSHIP, TEMISCAMINGUE COUNTY

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Énergie et Ressources
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Québec 

PRELIMINARY REPORT
ON
A PART OF BEAUCHASTEL TOWNSHIP
TEMISCAMINGUE COUNTY

Province of Quebec, Canada

DEPARTMENT OF LABOUR, MINES AND MARITIME FISHERIES

Honourable Edgar Rochette, Minister L.-A. Richard, Deputy-Minister

BUREAU OF MINES

A.-O. Dufresne, Director

DIVISION OF MINERAL DEPOSITS

Bertrand-T. Denis, Chief

PRELIMINARY REPORT

ON

A PART OF BEAUCHASTEL TOWNSHIP

TEMISCAMINGUE COUNTY

by

W. G. Robinson

QUEBEC

1941

P.R. No. 159

PART OF WESTERN BEAUCHASTEL TOWNSHIP

TEMISCAMINGUE COUNTY

by W.G. Robinson

INTRODUCTION

During the field season of 1940, the writer mapped the geology of a part of western Beauchastel township extending eastward from lot 1 to lot 22, inclusive, of ranges VI (north half), VII, VIII, and IX. Rock outcrops were mapped by plane-table on a scale of 400 feet to one inch. The map-area is adjoined on the east by the Halliwell Mine area (1), on the south by the Arntfield-Aldermac Mines area (2), and on the north, overlaps the Flavrian Lake area (3). Gold has been found at several localities within the area, and not far to the south are three producing mines - the Aldermac, Arntfield, and Francoeur.

Trails lead northward to the area from the Arntfield and Aldermac mines and westward from a road that follows range-line VIII-IX as far west as lot 29. By canoe, the area may be reached from Kanasuta, a station on the Canadian National railway, over a route that passes through Desvaux, Dasserat, and Arnoux lakes.

- (1) Halliwell Mines Map-Area, by G.S. MacKenzie; Que.Bur.Mines, P.R. 131, Map No.492, 1938 (Final report in press).
- (2) Bruce, E.L., Arntfield-Aldermac Mines Map-Area; Que.Bur.Mines, Ann. Rept., Part C, 1932, pp. 29-87.
- (3) Robinson, W.G., Flavrian Lake Map-Area; P.R. 143, 1939 (Final report in preparation).

GENERAL GEOLOGY

The consolidated rocks of the area are of Precambrian age. Volcanics of Keewatin type have been intruded by stocks or dykes of quartz diorite, syenite and syenite porphyry, feldspar-quartz porphyry, quartz porphyry, and diabase.

A band of acidic volcanics extends eastward in the north half of range VI from the line between Dasserat and Beauchastel townships to lot 16, where it terminates against the Aldermac stock of syenite porphyry. Much of the northeast part of the area is underlain by fine-grained siliceous rhyolitic rocks, some of which may be intrusive in origin. Elsewhere are intermediate and basic flows and occasional thin beds of pyroclastics. In the northwest part of the area the basic flows are ellipsoidal with well developed pillows. In the southern part of range VII, from lot 8 to lot 16, the andesites are markedly porphyritic, with phenocrysts of feldspar up to a quarter of an inch in length. In lot 16 the band of porphyritic andesite terminates against the Aldermac stock, but flows similar in appearance occur on the east side of the stock, in lot 22. Between the porphyritic andesite and the band of rhyolite to the south are light-green lavas and flow breccias of intermediate composition.

Three large bodies and several smaller masses of quartz diorite intrude the volcanics. The rocks is from medium to coarse in grain, and hornblende, feldspar and occasionally quartz can be discerned macroscopically. One body of quartz diorite extends easterly on range VII from lot 9 to the east boundary of the map-area, and is shown on the Halliwell Mine map-sheet to continue for another mile to the east.

The Aldermac stock of syenite porphyry intrudes the volcanics and the quartz diorites. It is composed of syenite and syenite porphyry and appears to be a composite stock.

The Twin Lake stock of feldspar-quartz porphyry adjoins the northern tip of the Aldermac stock. Phenocrysts of potash feldspar and of quartz occur in a microcrystalline groundmass. The intrusive resembles, and may be genetically related to, the Aldermac stock, but it has a much higher content of silica and appears to be a single intrusive unit.

Small bodies of quartz porphyry intrude the volcanics in several parts of the area, and at one locality dyke of mica lamprophyre was seen cutting the syenite porphyry.

A dyke of diabase, which averages about 80 feet wide, trends diagonally from the southeast to the northwest corner of the map-area. It intrudes all the other formations.

STRUCTURAL GEOLOGY

Determinations based on pillows and on a few beds of tuff indicate that, in general, the volcanics strike a little south of east, dip steeply south, and have their tops facing south, from which it is concluded that the area is on the south limb of an anticlinal fold. A short distance west of the Twin Lake stock, however, the pillows are elongated north and south and face east. This, and other deviations from the usual strike of the volcanics, occur near the larger intrusive masses and are probably local and caused by a scrumpling of the flows at the time of intrusion.

Most of the intrusive masses appear to be discordant to the structure of the volcanics. The large dyke of diabase dips vertically in most places. Diamond drilling on the Aldermac property indicates that the southern margin of the Aldermac stock dips to the north.

The probably locations of two faults are shown on the accompanying map. The presence of the more westerly fault is suggested by shearing of the adjoining rocks; the more easterly fault is indicated by the horizontal displacement of a horizon in the volcanics of about 300 feet, the east side having moved south.

ECONOMIC GEOLOGY

Gold-bearing mineralization, and some deposits of disseminated pyrite which contain a small amount of copper, have been found in the map-area, but no commercial bodies of ore have been developed.

Morgan-Piché Claims

On these claims, a zone of disseminated sulphides near the centre of lots 3 and 4, range VI, has been explored by trenching and by diamond drilling. Scattered mineralization occurs over an east-west length of about 500 feet and over a maximum width of about 280 feet. A band of silicified rhyolitic rock is succeeded on the south by a band, about 60 feet wide, of basic volcanics, and these are followed by a second band of rhyolite. The sulphide mineralization occurs in the rhyolite, which in most places is light grey in colour, but reddish where pyrite is abundant.

Intruding the northern band of rhyolite is a dyke of syenite porphyry which, as exposed in two north-south trenches, about 50 feet apart, has a width of 40 feet and 25 feet, narrowing toward the east. Both the rhyolite and syenite are mineralized with pyrite, and because of this and of their altered condition they are difficult to distinguish, except where blasting has exposed fresh

surfaces of the rock. The owners of the claims report that samples from the two trenches show an interesting but not commercial content of gold over 110 feet and 125 feet. Grab samples taken by the writer assayed 0.049 oz. and 0.053 oz. gold per ton (1). A vein of white quartz, striking N.72°E., and dipping 60° south cuts the rhyolite near the northern margin of the band. It is exposed for a length of 110 feet and is from 6 to 18 inches wide. A chip sample assayed 0.002 oz. gold per ton.

Samples from two trenches, about 15 feet apart, opened across the southern rhyolite band, are reported by the owners to have shown a small content of gold. A grab sample of the better mineralized material assayed 0.238 oz. gold per ton.

LES

La Mine^s D'Or Provencher LEE

A dyke of quartz diorite, which in places is 200 feet wide, trends easterly across lots 2, 3, and 4 of range VII, and is exposed for 1,500 feet. North of this dyke is quartz porphyry which has 'eyes' of dark quartz in a rhyolitic groundmass. In places, it contains angular fragments of more acidic rhyolitic rock. In lot 2, a wedge of andesite occurs between the porphyry and the quartz diorite. Along the southern edge of the quartz diorite dyke rock is more siliceous than the main body of the dyke. This may be a more acidic phase of the quartz diorite or it may be a separate, more siliceous intrusive.

A zone of carbonate alteration in the quartz diorite, striking N.40°E., is exposed for a length of about 200 feet, with a maximum width of 30 feet. The rock is partially silicified and contains white carbonate and a little disseminated pyrite. Trenches and pits have been opened in the zone and three diamond-drill holes have been put down to intersect it. Samples taken by the writer assayed from nil to 0.051 oz. gold per ton.

Trenches along the southeast margin of the quartz diorite dyke expose a silicified zone mineralized with disseminated pyrite. A sample taken from this zone assayed 0.01 oz. gold per ton. A second sample, taken from a stringer of quartz, 10 inches wide, which is exposed in one of the trenches, contained 0.099 oz. gold per ton.

(1) All grab and chip samples referred to in this report were collected by the writer and assayed in the Bureau of Mines Laboratories. They were taken solely to determine whether or not the mineralization carries gold, not to evaluate the deposits.

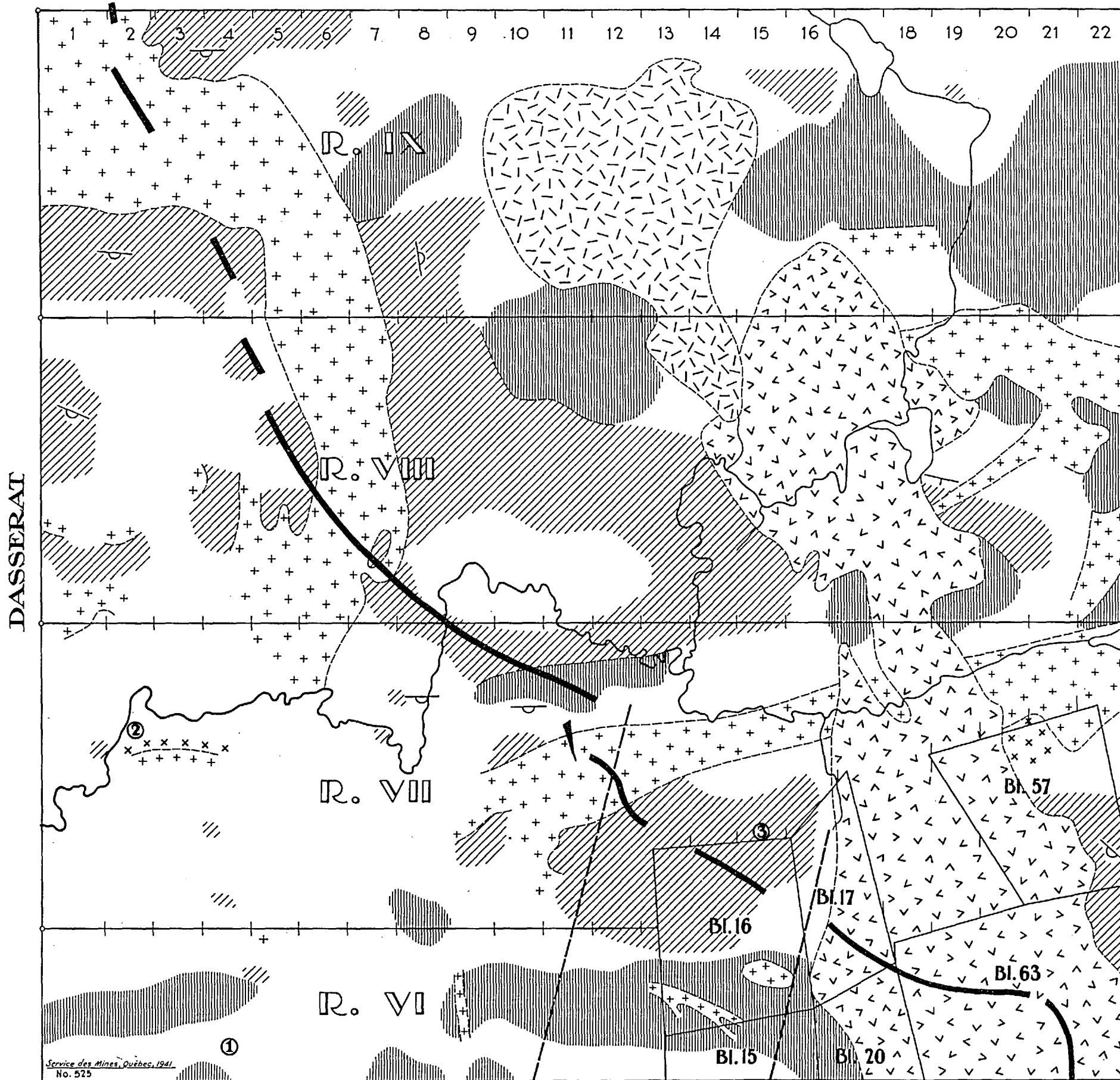
MacDonell Claims

In the southern part of lots 15 and 16, range VII, the volcanics have in places suffered a peculiar alteration, with rounded aggregates of greyish-weathering minerals standing out on the weathered surface of the rock which, as a consequence, resembles the Waite-Amulet "dalmatianite". Trenches and pits in the altered zone expose fractures which contain small veinlets of pyrite and a little chalcopyrite.

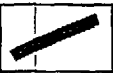
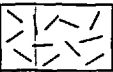
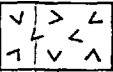
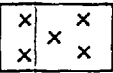
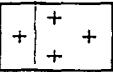
Other Prospects

In the central part of range VI, on lots 8, 9, and 10, zones in the rhyolite contain considerable pyrite. Samples from trenches and pits in these zones assayed only a 'trace' of gold.

A vein of white quartz which has a maximum of 85 feet is exposed in two outcrops about 1,400 feet apart on lots 7 and 8 of range IX. It strikes N.30°E. and appears to be the continuation of the large vein of quartz which was traced for more than a mile in the Flavrian Lake area to the north. No metallic mineralization was seen in this vein.



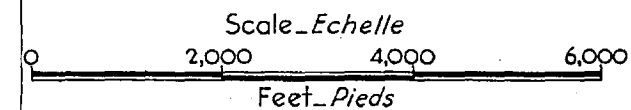
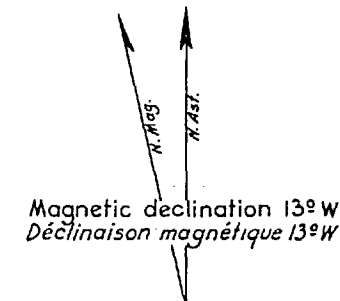
DASSERAT

-  Diabase
Diabase
-  Feldspar quartz porphyry
Porphyre feldspathique quartzifère
-  Syenite and syenite porphyry
Syénite et porphyre syénitique
-  Quartz porphyry
Porphyre quartzifère
-  Quartz diorite
Diorite quartzifère
-  Acidic volcanics
Roches volcaniques acides
-  Basic volcanics
Roches volcaniques basiques

-  Strike of pillows with direction of tops
Orientation des structures ellipsoïdales avec direction des sommets
-  Strike and dip of beds
Direction et pendage des couches
-  Probable fault
Faïlle probable

MINING PROPERTIES — PROPRIÉTÉS MINIÈRES

- ① MORGAN-PICHÉ
- ② LA MINE D'OR PROVENCHER
- ③ MACDONELL



PARTIE DU CANTON DE BEAUCHASTEL
COMTÉ DE TÉMISCAMINGUE
(PRÉLIMINAIRE)

PART OF BEAUCHASTEL TOWNSHIP
TEMISCAMINGUE COUNTY
(PRELIMINARY)