

RP 105(A)

FIELD REPORT ON THE CURRIE TOWNSHIP MAP-AREA

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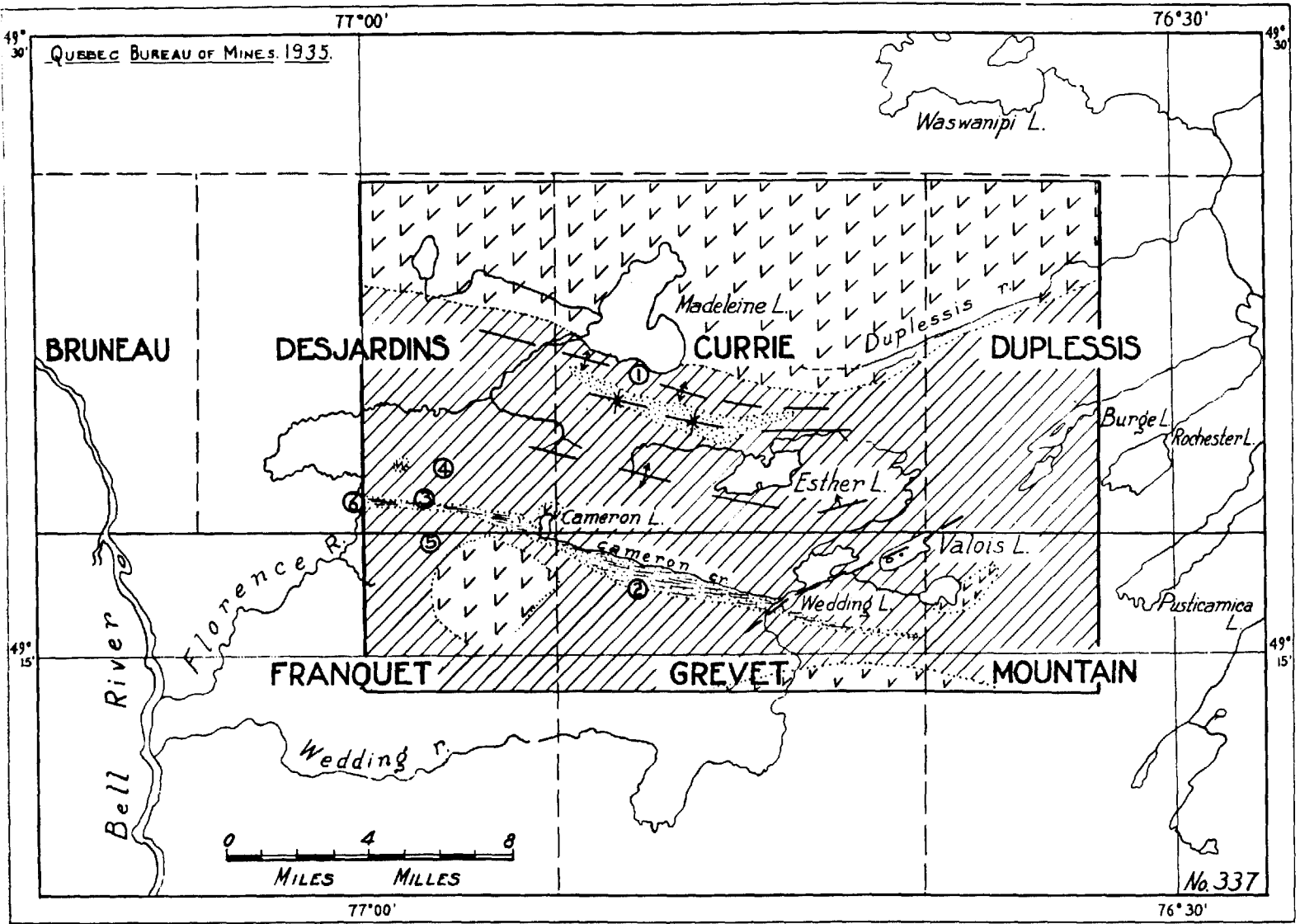
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by

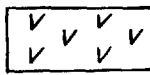

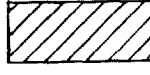
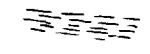


G.S. MacKenzie

Issued by

Quebec Bureau of Mines, December 1935.



LEGEND-LÉGENDE.

-  Granitic rocks.
Roches granitiques.
-  Sedimentary rocks and iron formation.
Roches sédimentaires et formation ferrifère.
-  Lavas, tuffs, some basic intrusives.
Laves, tufs éruptifs avec intrusions basiques
-  Zone of shearing.
Zone de laminage.
-  Anticline, assumed axis.
Anticlinal, axe présumé.
-  Syncline, assumed axis.
Synclinal, axe présumé.

DISCOVERIES-DÉCOUVERTES

- ① — Prospectors Airways.
- ② — Cameron.
- ③ — Woods.
- ④ — Jolin.
- ⑤ — Bush.
- ⑥ — Metcalfe.

FIELD REPORT ON THE CURRIE TOWNSHIP MAP-AREA

by

G.S. MacKenzie

The Currie township area was geologically examined during the field season of 1935 for the Quebec Bureau of Mines by G.S. MacKenzie. The area is in the territory of Abitibi, about 70 miles north of Senneterre on the Quebec-Cochrane branch of the Canadian National Railways. It embraces the township of Currie and portions of the townships of Desjardins, Duplessis, Franquet, Grevet and Mountain, and has an extent of some 250 square miles. Accompanying the report is a map indicating the location of the area and the general features of the geology.

General Geology:

The major portion of the area is underlain by Keewatin volcanics mostly of intermediate composition. Pyroclastics, chiefly tuffs, interbedded with the flows, are of common occurrence, particularly in the area between Descoteaux and Wedding lakes.

Arkose, greywacke and slate with interbedded iron formation, outcrop northwest of Esther lake, and similar sediments without iron formation were found south of the west end of Madeleine or Rose lake. These sediments overlie some, if not all, of the volcanics in the area and may be of Temiscamian age. Other minor outcrops of greywacke and slate were noted between Descoteaux and Wedding lakes and westward from the former lake.

The Keewatin rocks are intruded by large and small, often sill-like, bodies of gabbro and diorite.

Granite and affiliated intrusives, younger than the above formations, comprise a number of rock types. Across the northern part of the area and in the southeastern corner are granitic and syenitic gneisses which are portions of batholithic areas of these rocks known to extend some miles beyond the limits of the area. In the northeast corner of Franquet township is a stock of massive granite some three miles in diameter. The granite in the band which crosses Grevet township is likewise massive. Smaller stocks of markedly porphyritic syenite

with a little associated granite occur at the north end of Descoteaux lake and in the south part of Desjardins township near the Florence river. Intrusive bodies of quartz-diorite, similar to the one at the Madeleine or Rose lake property of Prospectors Airways, were not noted elsewhere in the area. A great variety of dyke rocks are present generally over the area. These vary in composition from diorite to quartz porphyry. The more acid types appear in general to occur across the southern part of the area, while those in the northern part tend to be of intermediate composition. On the whole the assemblage of intrusive rocks indicates fairly complete differentiation. No pegmatite dykes were observed. Diabase dykes, which were abundant in the Pusticamica area to the east appear also to be absent, though in one place a rock with a markedly ophitic texture was found. This rock was considered a phase of the older gabbro but may represent a younger diabase.

Quartz veins are not abundant, the greatest number occurring across the northern part of the area.

Structure:

Present conclusions are that the sediments northwest of Esther lake lie in a depressed synclinal trough into which pitch the volcanics to the N.N.W. and E.N.E. The volcanics south of Madeleine or Rose lake and east and west from there form the north limb of an anticline which may well be the major one complementary to the syncline in which the sediments occur. Drag-folding and minor shearing are a marked feature along this north limb as exemplified at the Rose lake property of Prospectors Airways.

In the southern part of the area the structure is less clear because of the local disturbances around granitic and gabbroic intrusives. However another major complementary anticline to the south of the sediments appears to be present. The south limb would seem to extend east-southeastwards and west-northwestwards from Descoteaux lake. This limb is the locus of a zone of intense shearing and drag-folding. The Cameron and Woods showings occur along this zone.

Wedding lake appears to mark the locus of a northeast trending fault or zone of shearing. Drag-folding and intense schistosity are a feature of the southeast shore of the lake and northeastwards therefrom, around and beyond Mirabeau lake.

Two remarkably persistent sets of cross-fractures were noted in the area. One set has a nearly north-south direction and the other a direction of 25 to 45 degrees east of north. Displacements of a few inches were frequently noted and less often displacements of a few feet. In places quartz was observed along the fractures which, in one place, was seen to transect one of the more common east-west trending quartz veins. At the

Jolin showing, about one mile north of the Woods showing, free gold occurs in a narrow quartz veinlet along one of these north-south fractures. Fractures with directions other than those in the above two sets were also noted.

Economic Geology:

To date gold is the only metal which gives promise of occurring in commercial quantities in the area, though chalcopyrite is present with some iron sulphides in disseminated mineralization. The same minerals, and in places sphalerite and galena as well, were found in several quartz veins in the area.

Prospectors Airways' Rose Lake Property:

On October 5th, 1935, when the writer last visited the property, the tunnel had been driven a distance of 951 feet from the portal. Work had ceased short of the 1000-foot objective in favour of drifting along two quartz veins which were encountered in the tunnel. The first of these is at 633 feet from the portal. It had been followed to the west for 34 feet over which length the quartz had a width of 0.8 feet. No assay returns were available but free gold was to be seen in the quartz. The second vein is at 681 to 684 feet from the portal and had been drifted on for 40 feet to the west and 10 feet to the east, over which length (50 feet) the quartz had an average width of 1.75 feet and the north wall was mineralized for distances up to three feet from the vein. Sampling from the west face of the vein at the tunnel gave an average value in gold of \$150 per ton for over a width of 5.5 feet. Both veins dip steeply (85-90°) to the north and though of a lenticular character they have a stronger appearance than the veins on the surface. Quartz diorite was not encountered in the tunnel, though dykes of diorite porphyry were met and the larger of the two veins occur along and partly in such a dyke. The quartz in the veins is mineralized with considerable pyrrhotite and a little chalcopyrite.

Cameron Showing:

This showing was discovered in the latter part of May, 1935, by Messrs. Cameron and Beck prospecting for Mr. J.H.C. Waite of Toronto. It is located in Grevet township about three miles southeast of Descoteaux lake.

Mineralization occurs in a series of tuffs of acid to intermediate composition. The tuffs have a strike of a few degrees south of east and in general a steep dip (85-90°) to the north. To the south they are succeeded by andesitic schist and gabbro. From this contact the tuffs, with some narrow intercalated flows and sills of basic rock, have been found by trenching to extend northward for some 200 feet and they may have a greater extent as further exploration is limited by swamp and overburden. Irregular dykes of acid material also occur following the bedding of the tuffs as well as a few small veins and stringers of quartz. The largest of the quartz veins is approximately 100 feet in length

and averages less than one foot in width. The tuffs are brittle and highly cross-fractured, with displacements along the fractures up to $\frac{1}{2}$ foot, while the interbedded flows and intruded acid and basic rocks are more sheared than fractured.

The mineralization consists of pyrite disseminated in the tuffs, in the intrusives and in some of the quartz veins. The mineralization occurs at intervals and in varying proportions across the whole width (200 feet) of the tuffs so far uncovered. Considerable yellowish carbonate occurs in the quartz in places and in the sheared basic rocks which are also partially epidotized. An unusual feature of the mineralization is the occurrence of blue fluorite along some of the cross-fractures. Quartz occurring along these cross-fractures is later than the quartz which follows the east-west bedding.

Systematic sampling has not as yet disclosed ore zones of commercial size. Values up to 1.67 ounces of gold per ton over widths of six inches and up to 0.31 ounce over one foot were obtained along one zone with a length of approximately 100 feet. Channel samples over the wider mineralized portions in the tuff, however, yielded only values from nil up to 0.05 ounce per ton. The higher values shown were obtained where the tuff had been highly silicified in the vicinity of the largest quartz vein so far uncovered. The quartz in this vein was found to carry values up to 0.25 ounce of gold per ton over widths up to 1.1 feet.

The mineralized zone in the tuffs has been explored on the surface over a length of about 1,000 feet along the strike. Further exploration in the immediate vicinity is impeded by swamp and overburden as is the case to the north. The possibility of finding silicified zones or quartz veins of commercial size and value in these directions might warrant exploration by diamond drilling.

Woods Showing:

The Woods showing was discovered in the early part of September 1935 by J.M. Woods of Toronto. It is located in the southern part of Desjardins township about $\frac{5}{8}$ of a mile north of mileage 66 $\frac{1}{2}$ on the base line which forms the southern boundary of the township. The showing consists of a series of mineralized veins and lenses of quartz occurring in a wide zone of highly schisted and sheared andesitic volcanics with some interbedded tuffs. Dykes of sheared to massive porphyry with phenocrysts of feldspar (not as yet identified) also occur along the zone and border some of the quartz veins. The whole zone has been traced across the Woods claims for a distance of some 3,500 feet, with outcroppings of quartz and sheared volcanics at intervals over that distance. In places several hundred feet of low ground separate the outcroppings. To the west the zone has a nearly east-west strike which becomes 10 to 15 degrees south of east towards the east side of the property. The quartz veins are lenticular in character. Some are mere stringers one or two inches wide while others have widths of six and seven feet in

places. Sufficient work has not yet been done to determine the length of the individual veins, or their number. Present indications, however, suggest that there may be continuous veins for 300 to 400 feet and possibly for greater distances. At the west end of the property two zones of veins have been partially uncovered, one zone being about 250 feet north of the other. The quartz in the smaller veins is well mineralized with pyrite, as are the margins of the larger veins. The middle portions of the larger veins appeared only sparingly mineralized. The quartz is white and finely crystalline.

Pyrite is disseminated in varying proportions in the schist adjacent to the veins and in some of the porphyry dykes. Free gold was observed by the writer in one of the smaller veins and it was panned from other veins and the rusty schist in the writer's presence. At the time of examination neither Mr. Woods nor any of his men were at the property so no definite information as to assay results was obtained.

Shearing, quartz injection and pyrite mineralization similar to the above occur two miles to the west in the Florence river on the Metcalfe claims, and to the east on the Cartwright claims. Indeed, a general zone of shearing and mineralization can be traced east and southeastward to Descoteaux lake and beyond to the Cameron discovery and possibly farther.

Jolin Showing:

In the summer of 1935 the Harricana Basin Mining Company of Amos, Quebec, acquired from Mr. H. Bush the control of 15 claims in Desjardins township south of the Florence river. Mr. Ed. Jolin of that Company located free gold in small quartz stringers along nearly north-south cross-fractures near the southeast corner of claim A-55833, about one mile north of the Woods showing. The stringers, which are only from $\frac{1}{4}$ to 2 inches in width, were found over a length of 100 feet in silicified and carbonated volcanics just north of an east-west zone of pyrite impregnation some 200 feet wide. Dykes of diorite and syenite porphyry intrude the volcanics in the vicinity. No gold values were indicated in the sulphide zone on preliminary sampling by Mr. Jolin and only low values in the silicified volcanics adjacent to the quartz stringers. Little work has been done on the property and there is room for further exploration.

Gold was panned by the writer from a small quartz vein on the Perron claims (?) northwest of Madeleine or Rose lake. The vein occurs in drag-folded volcanics about $\frac{1}{4}$ to $\frac{1}{2}$ mile south of the contact with granite gneiss. Low gold values were reported by Mr. Henri Boulanger from small quartz veins in drag-folded volcanics and tuffs on the Boulanger-Potter group of claims east of Madeleine or Rose lake near the portage from the Wedding river to Otter creek.

Some gold values were also reported from a small quartz vein on a group of claims held by Mr. H. Bush in Franquet township about $\frac{1}{2}$ mile south of mileage 66 on the base line.

Other companies which did exploratory work on claims in the area during the summer or past winter were Langevin & Co.; the Consolidated Mining & Smelting Co., Limited; the Engineers' Exploration Co., Limited; the O'Brien Mine, Limited; the Ceres Exploration Co., Limited; the Karl Springer Exploration Co., Ltd. Most of the above companies did work on some sort of showings, results of which were unfavourable or are yet to be reported. In addition many prospectors working for companies or privately were in the area. Others came to the area merely to stake claims.

Sand and Gravel:

Areas of several square miles of sand occur southeast of Madeleine or Rose lake and in the northwest corner of Mountain township. Gravel, usually with some proportion of clay, occurs in a few eskers and morainic ridges. Otherwise the glacial deposits of the area are boulder clay.
