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ADVANCE REPORT, WEST HALF OF VAUQUELIN TOWNSHIP

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ADVANCE REPORT
WEST HALF OF VAUQUELIN TOWNSHIP

128

PROVINCE OF QUEBEC, CANADA
DEPARTMENT OF MINES AND FISHERIES

HONOURABLE ONESIME GAGNON, MINISTER.

L.-A. RICHARD, DEPUTY-MINISTER.

BUREAU OF MINES
A. DUFRESNE, DIRECTOR.

ADVANCE REPORT

WEST HALF OF VAUQUELIN TOWNSHIP

by Carl Tolman

- 1938 -



QUEBEC

1939

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INTRODUCTION

During the 1938 field season, the west half of Vauquelin township, Abitibi County, was geologically mapped and the mineral deposits within the area studied. For some years a variable amount of prospecting and development work has been carried on within the area, but in the summer of 1937 interest was considerably heightened as a result of the discovery of impressive surface showings of gold by the McDonough Mining Syndicate, Limited, on a property which was later transferred to the newly organized Maniwaki Mines, Limited. It was in response to this increased interest and consequent activity that the geological work of the 1938 field season was undertaken.

The northern boundary of the area is about 17 miles due south of Senneterre, a town on the Quebec-Cochrane line of the Canadian National railway. From Senneterre, the Senneterre-Mont Laurier highway leads southward and passes through the eastern part of Louvicourt township at or near the Vauquelin boundary. Access to the area by canoe is best made from the highway bridge over Louvicourt river. This river joins the Bell, which traverses the area from north to south and which, with the associated lakes Simon, Villebon, and Gueguen, affords a convenient means of access to most parts of the area.

The area is covered throughout by green bush and there are considerable stretches of swamp and other low ground entirely devoid of outcrop.

GENERAL GEOLOGY

The consolidated rocks of the area are all Precambrian and include a thick series of volcanics, with closely related intrusives, referred to the Keewatin; a series of sediments regarded as Temiscamian; and a variety of younger intrusives.

Table of Formations

Pleistocene and Recent		Sand, gravel, boulders, boulder clay, lake clays, muskeg, and swamp deposits
Precambrian		Quartz gabbro
		Granite, quartz monzonite, granodiorite, diorite, quartz diorite, and their porphyries
	Temiscamian	Greywacke, conglomerate, and altered equivalents
	Keewatin	Acid to basic lava flows and associated tuffs, agglomerates, and intrusives

Keewatin

Keewatin rocks are the most widespread and they predominate in the western and south-central parts of the area. They consist largely of volcanics of intermediate and basic composition, although more acidic types such as rhyolite are represented. A very distinctive band of breccia of intermediate composition, with which minor amounts of tuff are associated, strikes eastward across the area from Felix creek just south of Simon lake. In this zone, also, are numerous dioritic sill-like intrusives, some of which strongly

resemble the breccia in many respects. Dioritic bodies occur elsewhere in the Keewatin and represent either sills or thick, relatively coarse, flows.

Temiscamian

Two bands of sedimentary rock occur in the area. One, in the southern part, stretches southeastward into Villebon and Denain townships. The other extends eastward across the area near its northern boundary and continues through Pershing township. The rocks of the two bands are lithologically similar and consist predominantly of greywacke with some conglomerate, all in various stages of metamorphism.

Granitic Intrusive Rocks

The southwestern part of the Vauquelin-Pershing batholith lies within the east-central part of the area, and the Pascalis-Tiblemont batholith occupies the northeastern corner. These batholiths are dominantly quartz monzonite but they include more acidic and also more basic types, such as granite, diorite, quartz diorite, and their porphyries, which occur especially as marginal facies and as dykes in the surrounding rock.

Quartz Gabbro

The youngest rocks of the area are quartz-gabbro dykes that are exposed in several places, cutting Keewatin and Temiscamian rocks. None are more than 250 feet wide. They are typical late Precambrian dykes, such as are found elsewhere in the general region.

STRUCTURE

Structural determinations suggest that an anticlinal axis strikes slightly south of east through the central part of the area. The belts of sediments would represent infolds in synclines on each side of the axis. No structural discordance between the Temiscamian sediments and the underlying Keewatin volcanics was noted. Rather, the contact appears gradational, in that bands of volcanics were found within the lower part of the sedimentary series.

ECONOMIC GEOLOGY

The general geology and structure of the area can be considered favourable for significant mineralization - particularly its situation at the nose of the two bodies of batholithic rock, which are of the type to which important ore deposits in this region have been shown to be genetically related. Mineralization is widespread. It includes quartz veins, commonly carrying tourmaline and barren, or nearly so, of sulphides; and shear-zones variously carbonatized and silicified and in most places containing sulphides in appreciable amount. However, over large parts of the area effective prospecting is seriously hindered by scarcity of outcrops. During the field season, Maniwaki Mines, Limited, Bruell Gold Mines, Limited, and the Consolidated Mining and Smelting Company of Canada, Limited, were most active in prospecting and exploration. A brief statement of the activity within the area follows.

McDonough Mining Syndicate, Limited (Maniwaki Mines, Limited)

This Company holds a group of 25 surveyed claims (Nos. A-66010-24, 66035-39, and 71068-72) in the southwestern quarter of Vauquelin township. They were staked by the McDonough Mining Syndicate, Limited, in the fall of 1936. In June 1937, interesting gold showings were discovered and shortly afterward Maniwaki Mines, Limited, was formed to take over the property. This Company carried on exploration, including the sinking of test-pits and diamond drilling, until August, 1938, when work was suspended and the property transferred back to the McDonough Mining Syndicate.

In the region of the discovery, on claim A-66010, an area about 300 feet long east-west, parallel to the general strike, and ranging from 30 to 75 feet wide, was completely stripped of overburden. Some cross-trenches, also, were made farther east along

the strike. The prevailing country rock is a coarse dioritic tuff, containing sparsely distributed fragments which range up to some feet in diameter, and within it is the main structural feature of the deposit, a conspicuous fracture striking S.83°W., dipping 55°E., and extending uninterruptedly for about 200 feet. A discontinuous, somewhat lens-like, acidic porphyry intrusion with a maximum exposed width of 15 feet parallels the fracture about 35 feet to the south. The fracture is mineralized to a maximum width of two feet with quartz, plentiful tourmaline, and sparsely distributed pyrite, together with a little chalcopyrite, sphalerite, and ankerite. Along the footwall side of the main fracture there are fairly numerous intersecting cross-fractures containing narrow lenses of quartz, and both ends of the main fracture, as exposed in the stripping, appear to become dissipated or frayed-out into such subordinate fractures. Coarse native gold was found at the surface in the cross-fractures, and particularly in those near the ends of the main fracture. Shallow diamond-drill holes, most of which were closely confined to the vicinity of the showing, and three test-pits which were bulk sampled, failed to indicate ore at the depths reached. Cross-fractures were found, but they tended to be low-grade or barren.

In view of the fact that the surface mineralization is so attractive, and inasmuch as the exploration to date has been largely confined to the close vicinity of the surface indications, the desirability may be suggested of more extended exploration to determine more fully the general structural relations, and to seek further mineralization.

Bruell Gold Mines, Limited

This property comprises a group of claims in the northwest part of Vauquelin township, a short distance east of the Bell river. Work on the property in earlier years has included trenching, test-pitting, and the sinking of two shallow shafts. During the summer of 1938, a programme of diamond drilling was in progress. The mineralization is in the Keewatin, which at this point is intruded by a number of dykes of quartz-albite porphyry and a small elongated boss of similar rock. The principal deposits are of two types: (1) Lenticular occurrences of quartz with associated pyrite, which follow steeply dipping east-west fractures; coarse visible gold is reported in these and some high though erratic assays have been obtained. (2) Carbonatized shear-zones ranging up to several tens of feet in width and mineralized with pyrite; these occur in an area of swamp and have been revealed largely by diamond drilling. Low, but interesting, gold values over considerable widths are reported from drill cores.

Avocalon Mining Syndicate, Limited

This property adjoins the Bruell on the south. In 1934, gold was discovered in lenticular veins traversing Keewatin volcanics near an elongated stock of quartz-albite porphyry. A shaft was sunk and about 800 feet of lateral work carried out at a depth of 125 feet. Underground operations were discontinued early in 1936, but since that time a geophysical survey and some diamond drilling have been carried out and further surface work has exposed quartz veins and carbonatized shear-zones traversing the volcanics. Operations were suspended at the time of the writer's visit in the summer of 1938, and the underground workings were inaccessible.

Quemartic Mines, Limited

A group of claims lying immediately south of the easternmost claims of the McDonough Syndicate, and belonging to Quemartic Mines, Limited, were actively prospected following the McDonough discovery. Considerable trenching and rock-pitting were done and two diamond-drill holes were put down. Work was suspended in the spring of 1938.

In the northern part of the property, within tuff, flows, and dioritic members of the Keewatin, some white quartz veins were exposed which appear generally barren. To the south, near the Keewatin-Temiscamian contact, trenching was done on approximately east-west shears mineralized with quartz, carbonate, and very little pyrite. Some native gold was also observed. At the western boundary of the property, two drill holes were put down jointly by Quemartic Mines and the Consolidated Mining and Smelting Company, who had the Leblancq property (Blue Grass option) to the west under option. Significant assay values were not obtained.

Leblancq Group (Blue Grass Option)

This group of claims, lying south of the McDonough Syndicate group and west of Quemartic, has been actively prospected by the Consolidated Mining and Smelting Company under option. The option was allowed to lapse in the summer of 1938. The work done consisted of general prospecting, with trenching of overburden at promising localities, drilling jointly with Quemartic Mines of two diamond-drill holes at the eastern boundary of the property, and a concentration of trenching, pitting, and diamond drilling on two adjacent and roughly parallel mineralized shear-zones on claim A-66227. These zones, striking roughly east-west, occur in Temiscamian greywacke and conglomerate. They are mineralized to a variable extent by quartz and carbonate, with some arsenopyrite, pyrite, and pyrrhotite. Native gold was encountered in some surface pits. Most of the drilling was planned to intersect the zones at depth.

Other Work

During the summer of 1938, the Consolidated Mining and Smelting Company of Canada carried on systematic prospecting, with trenching at favourable points, on a group of claims lying north of the McDonough Syndicate holdings. They also did similar work on the E.M.F. group, adjoining the Bruell on the east, which they held under option for a short time.

Some prospecting, trenching, and pitting was done in the early summer on the claims of Wisewell Gold Mines, Limited, west of the Bruell Mines property.

During the winter of 1937-38, the Inspiration Mining and Development Company, Limited, carried out a programme of diamond drilling on a group of claims adjoining the McDonough Syndicate group on the west. The holes were put down along the supposed strike of the McDonough mineralization.

Some diamond drilling was done in 1937 by Ventures Limited on the 'Russian Kid' group of claims, on which at that time they held an option. The claims are south of Gueguen lake, in the eastern part of the area. Since then, the owners, Frank Mytto and associates, have done some stripping and pitting on a number of mineralized zones on the property.
