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A REPORT ON PROSPECTING
IN THE
RIDOUT-SWAYZE AREA

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PORT ARTHUR, Ontario,
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M.W. Bartley, P. Eng.,
Consultant.

A REPORT ON PROSPECTING IN THE RIDOUT-SWAYZE AREA

INTRODUCTION

From the abundance of published data, the Ridout and Swayze areas appear to be both geologically and mineralogically favourable for the occurrence of gold and base metal deposits. The large anticlinal fold which deformed the rocks of the Ridout-Swayze sedimentary series contains most of the numerous and widespread known gold occurrences. In addition, lead and zinc deposits occur in the Keewatin rocks, particularly in Cunningham Township.

This report is prepared for the purpose of broadly outlining the potential of the area to exploration companies contemplating both large and small scale investigation for gold and base metals. The Company's exploration was of necessity only a reconnaissance and therefore not complete or conclusive.

LOCATION AND ACCESS

The Ridout-Swayze area, for the purpose of this report, comprises all or portions of the townships of Crockett, Raney, Rollo, Halcrow, Denyes, Swayze, Tooms, Greenlaw, Cunningham, Eisenhower and Number 22. This is an area of approximately 250 square miles with maximum dimensions of 18 miles east-west by 24 miles.

Easiest access to the central and northern portions of the area is by float-equipped aircraft from Chapleau, a divisional

point on the Canadian Pacific Railway. The southern section is readily accessible by water from Kormak and Ridout and by water or road from Sultan, all flag stops on the railway.

CONCLUSIONS

The area is a potential gold producer, but because of the considerable overburden in several of the townships, new deposits may be difficult to locate using conventional exploration methods. Sulphide-bearing shear zones and disseminations, many of which will bear further investigation, were noted at several places throughout the territory. Lead-zinc mineralization is associated with the iron formation in Cunningham township but the major occurrences are presently staked.

Geophysical and geochemical exploration appear to be the logical methods of determining the location and potential of individual mineral deposits.

GENERAL GEOLOGY

The basement rocks of the Ridout-Swayze area consist of a volcanic-sedimentary complex. Keewatin greenstones consisting of intermediate to basic volcanic flows and tuffs are enfolded with bands of sedimentary rocks interfingered with rather acid flows and pyroclastics. There are two main bands of these sediments, the southern known as the Ridout series and the other as the Swayze series.

The volcanic and sedimentary rocks have been tightly folded into anticlinal and synclinal folds with a general east-west strike. The folds were intruded later by basic eruptive rocks consisting of diorite, diabase, gabbro, peridotite and lamprophyre followed by granites, porphyries and related rocks of Algomian age. The last intrusions are by diabase dikes of Keweenawan age.

The literature is controversial concerning the relative ages of the greenstones and sediments. This is due to their stratigraphic relationship being rather obscure owing to the intense folding. Emmons and Thompson¹ classed the Ridout series as Keewatin, with the greenstones both above and below. Furse² from the initial mapping of the Swayze series concluded that both series are similar and are probably of identical age. He also classed them as Keewatin but placed them stratigraphically above the greenstones. More detailed mapping by Rickaby³ tended to confirm their identical age and led to their classification as Temiskaming on evidence which is somewhat contradictory but probably generally correct.

- 1 - R.C. Emmons and Ellis Thompson, "Preliminary Report on Woman River and Ridout Map Areas, Sudbury District, Ontario" GSC Memoir 157, 1929.
- 2 - G.D. Furse, "Geology of the Swayze Area" ODM Vol. 41, Pt. 3, 1932
- 3 - H.C. Rickaby, "Geology of the Swayze Gold Area" ODM Vol. 43, Pt. 3, 1934

NOTES ON EXPLORATION

Prospecting on behalf of the Canadian Pacific Railway Company was carried out by A.E. Rissanen and Robert Knapp under the supervision of N.H. Black, geologist. The following are detailed notes on specific occurrences.

Eisenhower Township - Rissanen located an old sulphide showing on the east bank of the Kinogama River a few hundred feet north of the small lake on which he first camped. The showing consists of a series of en echelon lenses up to 100 feet long and 12 feet wide in a total zone length of about 300 feet. Copper mineralization is present but no gold could be panned from the gossan.

Halcrow Township - The showing on the old Halcrow-Swayze property consists of narrow white quartz stringers in a sheared diorite. Panning of the rust in the shears yielded colours of gold in varying quantities.

Nine pits and trenches in a quartz-feldspar porphyry were found north of the Halcrow Lake camp. These contained narrow quartz stringers mineralized with pyrite. Some of the veins are gold-bearing and the gold is finely divided.

A trench on the Lyall-Beidelman property one mile due north of Shunshy Lake yielded rich gold pannings from the rust. The property had been restaked in 1958 and is in good standing.

The outcrops around Vice Lake very rarely extend farther inland than 300 feet. Heavy drift covers the surrounding country and there are some excellent ridges of sand and gravel which might be suitable for concrete aggregate.

A quartz vein six feet wide was discovered one-half mile north of Vice Lake. The vein was traced for a distance of 200 feet. It is barren of sulphides in this distance and many pannings failed to yield any gold.

An 18 inch quartz vein occurs on the face of the fault at the falls at the outlet of Vice Lake. The vein is mineralized with pyrite along fractures.

Denyes Township - Numerous narrow quartz veins were found in the vicinity of Denyes Lake. Heavy drift prevented a satisfactory appraisal of their extent or mineralization. This section warrants further study.

Well fractured andesitic lava outcrops on the southeast shore of Sylvanite Lake and the fractures are filled with pink and white calcite. Minor amounts of pyrite were noted in the lava.

One mile east of the Vice Lake camp a mineralized granodiorite dike 30 feet wide on the old Sylvanite property had been trenched at regular intervals. The gossan in the trenches is gold-bearing as evidenced by panning.

Raney Township - In general, the area around Raney Lake is drift covered with most of the exposures along the lake shores or on the north side of the hills.

Two quartz veins were located at a small beaver pond about one mile north of Raney Lake. One vein, on the south side of the pond, is 18 inches wide and mineralized with pyrite and chalcopyrite. It strikes northeast in a narrow band of chlorite schist for a traceable distance of 70 feet. The rust panned colours of visible gold. The second vein is located at the east end of the pond. It is only four inches wide, white and glassy with no visible mineralization. It occurs in a similar shear and was traced for 60 feet.

Considerable disseminated pyrite and pyrrhotite occur in the fault located on the Kinogama River where it crosses into Crockett township about half way between Raney Lake and the Ivanhoe River.

A group of 18 claims covers a sulphide showing located in the fault zone which dislocates the greenstone-sediment contact on the north side of the southeast arm of Raney Lake.

Rollo Township - One-quarter mile north of Camp 7 some old pits have been sunk on a slaty graphite shear mineralized with cubic pyrite. This was traced for three-quarter mile northeast where a trench 20 feet by 6 feet by 14 feet deep was found. A narrow seam of massive pyrite occurs in the centre of the six foot band of disseminated pyrite. No gold was noted in the pans.

Pyrite and pyrrhotite, locally massive, occur in graphite schist and slate on the north shore of a lake on the Rollo-Swayze boundary about one and one-half miles west of the south end of Rollo Lake. The zone is 60 feet wide.

Cunningham Township - The iron formation horizons in both Greenlaw and Cunningham townships were examined and found to be very lean in iron content. They have been prospected for iron, gold and base metal sulphides, the latter particularly in the Keewatin iron formation of Cunningham. Abundant iron sulphides, locally massive, comprise a large portion of the formations. Locally siderite plus quartz, chlorite and sericite occur in sheared and brecciated zones.

The iron formation north of the Wakami River and south of Cree Lake has been staked presumably for the included sulphide bodies.

The lead-zinc deposits associated with the Keewatin iron formation were not examined when it was learned that all the ground is staked.

Greenlaw Township - Three large white quartz veins in sheared chlorite schist were located one mile south of the east end of Little Ridout Lake. The veins mineralized with pyrite are 20 feet wide and were traced for 200 feet before disappearing under the overburden.

A pyritiferous zone in chlorite schist has been staked on Sultan Creek about one and one-half miles east of the Wakam River.

A sulphide iron formation on the east side of the Ridout River near the south boundary of the township has also been staked. The formation is composed of short lenses of pyrite, pyrrhotite and quartz up to 10 feet wide in a total zone width up to 80 feet.

Minor amounts of pyrite in the lavas were seen to the west of the Ridout River, but no quartz veins or gold-bearing formation.

Respectfully submitted,

(Sgd.) Dr. M.W. Bartley

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