63A.108

COPY.

PRELIMINARY REPORT

REXORA MINING CORPORATION LIMITED

Gi-Bi Lake Property

010

LOCATION -

This group of claims was staked in the winter of 1949-50 and are recorded in the name of Rexora Mining Corporation Limited. They are situated west and adjoining Gi-Bi Lake in the Province of Ontario, District of Kenora, Code Township. The property is approximately 28 miles from Kenora and is easily accessible from Kenora via the Kenora-Fort Frances highway and the Wendigo Mine road, or by car from the highway and thence by boat on Gi-Bi Lake.

CLAIMS -

This group consists of claims K. 13737 to 13749 inclusive, claims K. 13834 to 13837 inclusive and K.13777, 13781 and 13782.

HISTORY -

The surrounding area in the past has seen the operations of the Wendigo Mine on Witch Bay, west of the Rexora property, also the Stella Lake Mine and the operations of the Witch Bay Mining Company. To date I have been unable to find any mention of the property now held by Rexora in detail in geological reports. However, from several extracts from the Rat Portage Miner (now the Kenora Miner and News) some knowledge of the history of the property can be gleaned.

In 1900 the property was in the possession of the Triggs Gold Mining Company. Among some of their properties were claims McA 129, 56 and 130, and it is on these claims that they apparently confined most of their work. On McA 129 a shaft was sunk to a depth of 220 ft. and at the 108 ft. level a 58 ft. crosscut was made in a northwesterly direction and drifting was undertaken from the strike of the formation. The more southerly drift (from the main shaft) was directed toward an air shaft. At that time bulk samples were sent to the Ottawa Milling and Mining Company at Keewatin, Ontario, and the results appeared to be most encouraging. The Triggs Mining bought the adjoining claims and although the previous owners had sunk 3 shafts on McA 130, Inspector Jas. A. Bow reported in 1900 that they had not at the time of his visit commenced work on the then newly acquired properties. The reasons and exact date that the Triggs Gold Mining Company ceased operations is unknown to me at this time.

GEOLOGY -

The country rock in the claims under discussion is a very dense dark rock generally classified as a greenstone of Keewatin age. Mineralogically it appears to have the composition of dacite flow, however in certain localized zones it appears to be an altered diorite. This rock shows no obvious schistosity, but rather it exhibits two planes of cleavage resulting from stresses brought upon the mass from two directions and the rock accommodating itself accordingly. This type of cleavage is manifested in the sphenoidal appearance of the rock fragments when removed from the main body.

The afore-mentioned formation is intruded by granitic bosses possibly of Laurentian age. This granite is not of a uniform type but varies both in texture and in mineral content as far as can be ascertained megascopically. The more acid phase of this granite is composed primarily of quartz. It has the appearance of quartzite and varies in color from white grey to a rusty color due to the weathering of disseminated pyrite mineralization. Another type of granite has a gneissic texture and the biotite content accentuates this texture in a striking fashion. In one place the intrusive contact shows xenolithic inclusions of greenstone, while in others the contact is smooth and fairly well defined. The latter contact appears when the intrusion is paralleling the strike of the greenstone, the former when it is cutting across the strike.

Although both these types of granite are exposed in places very close together, the genetic relationship of the two is not clear. However, it would appear that they are gradational phases of the same intrusion.

Numerous shearings occur in the greenstone and it is in these shearings that the quartz veins arose. The shearings themselves appear to have taken place along incompetent planes and the movement resulted in the fracturing of the country rock. As a result of this phenomenon the quartz occurs not only in veins conforming to the strike of the shearing but also in outbursts where the quartz has apparently flowed out through the fractured greenstone as through a brecciated zone.

VEINS & SHOWINGS -

The No. 1 Shaft is situated on McA 129 and was sunk by the Triggs Gold Mining Co. as previously mentioned. On the wall of the shaft a quartz vein is exposed in the shearing. This vein appears to broaden with depth and at the 16 ft. level it is over 2 ft. wide. This quartz is well mineralized in placed with pyrite, pyrrhotite and chalcopyrite, and some very good values in Au. have been attained from this vein and off the adjoining ore dump.

The No. 2 Shaft is the Air shaft which is in no condition to sample or examine in any detail due to the weathering of its sheared walls. However an encouraging tail of gold is produced when this shearing is panned from a small trench N.E. of No. 2 shaft. Colors were seen when a weathered sample was taken over 6 ft. from a shearing in Pit No. 1. Pit No. 2 consists of a blow out of quartz through the greenstone and shows pyrite, pyrrhotite and chalcopyrite mineralizations. A sample taken from this pit gave ϕ.16 oz. of Au.

The No. 3 Shaft is approximately 12 ft. deep. It is situated in a shearing and contains a quartz vein of approximately 6" width. A channel sample taken at the 9 ft. level across the shear zone and including the quartz vein gave an assay of 0.04 oz. in Au.

The No. 4 Shaft is entirely timbered and although reported to be 67 ft. deep no inspection of the shaft is possible at present. However, a quartz vein 10" wide appears to enter the shaft. A grab sample from the dump of this shaft gave .01 oz. Au. Pit No. 3 contains a quartz vein that is well mineralized with the characteristic sulphides of the other veins. This vein was traced for 54 ft. and appears to originate in the shearing on which Shaft No. 3 is situated. Samples from this pit gave an assay of .04 oz. in Au.

Shaft No. 5 is 30 ft. deep and is inclined 80 degrees N. This shaft was de-watered and exposed a shear zone 6 ft. in width of which 4 ft. is quartz at the 15 ft. level. This vein is exposed on the surface for 200 ft. approximately. The overhanging shearing made a proper examination of the mineral content of the shaft walls unsafe. A grab sample from the dump, however, gave a value of 0.25 oz. of Au.

Generally speaking, all the shear zones strike N. 65° E. and dip 80° N.W. although surface slumping may give an exaggerated picture of the dip. The shear zones appear to be laterally displaced, one from the other, so as to produce an echeloned configuration, rather than one continuous zone throughout.

CONCLUSIONS & RECOMMENDATIONS -

The geological structure would indicate that the veins have their genesis in the granites. This situation is favourable in this area for the deposition of gold.

I recommend that drilling be done S.W. of the air shaft in order to attempt to trace the zone of favourable values in that direction. The trenches in the drift in this area should be cleaned out so that a better picture of this zone could be gained.

If possible, the drilling to determine the auriferous zone should commence between Shafts 1 and 2 in order that misleading assumptions as to the direction of the quartz vein from the No. 1 Shaft may be averted.

(Signed) Finley A. Campbell, B.Sc.

June 1950.

COPY.

REPORT ON REXORA MINING CORP(
at
GI-BI LAKE
Ontario

INTRODUCTION -

This report covers a study of the geology at the Rexora Mining Corporation property between Gi-Bi Lake and Stella Lake. This area is in the Province of Ontario, the District of Kenora, and Code Township. The purpose of the work in this area was to investigate the gold occurrences once held by the Triggs Gold Mining Company, and to prospect for new deposits.

The mapping of this property was carried out by the pace and compass method, and in this report I will deal primarily with the showings uncovered on claims K. 13737, 13777 and 13781.

GEOLOGY -

The rocks in this area are all of Precambrian age. They fall naturally into two groups: (a) an early group of basic lavas, and (b) a later group of intrusive igneous rocks which cut the earlier lavas. In the following description of the various formations, they are arranged in order according to age, the earliest one first.

Basic Lavas:

An extensive portion of the property is underlain by lavas of the Keewatin series. These are all of the basic type commonly referred to as "greenstone" and have suffered a high degree of alteration. Over the area of these claims the composition of this rock type varies. In the preliminary report the rock around the old Triggs property was described as a dacite. An oustanding feature of the property is the high hills and vertical cliffs surrounding Ess Lake; here the greenstone may have been an old intrusion that is more resistant to erosion than the surrounding flows. However, if this is so the alteration is so great that no definite information covering the original composition could be gained in the field megascopically.

Another interesting type is found along the east shore of Trembe Lake: here the lava is very dark and dense and is rusty on a freshly broken surface. All this pointing toward a basalt flow of lampophyre dyke. In one place at the southeast corner of Trembe Lake porphyritic lava was noted. The phenocrysts were composed of a light coloured feldspar which is probably albite.

The actual contacts of these various bands were not discernable due to the overburden and in some places a gradation from one type to another was noted.

Intrusive Rocks:

Diorite: The diorite is a massive granitoid rock consisting of milky white feldspar and dark green hornblende in approximately equal proportions. This rock occurs in large masses that stand up higher than the surrounding lavas. The contact between the lavas and the diorite appears to be brecciated in places and greenstone inclusions are found in the diorite in these places. In others the contact is more gradational and small stringers of diorite are seen running through the lava. In all of these the diorite maintains its normal coarseness of texture, a fact which suggests no rapid loss of heat when it was intruded.

Granite: The youngest rock on the claims is a granite often described as of Laurentian age. This rock was described in some detail in the preliminary report. It varies from a fine sugary granite containing no biotite to a gneissic type having a considerable amount of biotite flakes oriented so as to display the gneissic texture very nicely.

General Structure:

The entire area appears to be the north limits of a syncline. This is indicated by a sedimentary band on the south shore of Gi-Bi Lake in which the tops of the beds were facing the north. Also, although no ellipsoidal greenstones were noted on the property itself, some were seen to be well developed in the porphyritic lava north of the Wendigo Mine. The tops of these pillows were facing north also. Since the sedimentary beds are younger than the lavas, this points to a synclinal structure with the axis to the south. The beds in this area have undergone extensive folding since they were laid down. The general dip is now 80 degrees N with a strike of from 60 degrees E of N to 85 degrees E of N. This folding took place before the intrusions, the diorite being first, then the granites.

ECONOMIC GEOLOGY -

The ore bodies in this area occur in veins formed by hydrothermal solutions rising from depth along those channels that offered the easiest passage in their upward movement. These passageways were for the most part shear zones that formed along incompetent planes in the lavas. The forces that caused the shearings to take place were the intrusions, either the diorite or granite or possibly both at different ages. Thus it is highly desirable to determine which of these intrusions was the parent magma for the hydrothermal solutions and in this way find the source of the existing values.

RECOMMENDATIONS -

The recommendations for the eastern area around the old Triggs mine have already been made, so they will be omitted in this report.

(1) For the purpose of general prospecting it is obvious from the above discussion of economic geology that the most favourable areas are near the contacts of the intrusions. Shear zones should be thoroughly investigated and such indicators as talcy alteration in the lavas should be taken as signs of hydrothermal changes in the lavas. Unfortunately such zones are less resistant to erosion and will often underly depressions, so a very careful and thorough prospecting programme is necessary.

(2) Of the shearings and veins uncovered during this survey the shear zones along the south shore of Kite Lake appear to be the most favourable for investigation. Here there are two shear zones each approximately 500 ft. long. One strikes E.W. and the other is 65 degrees E. of N. They have an average width of 3 ft. and contain well mineralized quartz. The reasons for their favourability are as follows:

(a) The proximity of the diorite and granite intrusions.

(b) The possibility of the junction of the two zones at depth as they dip and strike toward one another as is indicated on the map.

(c) The presence of a considerable amount of chalcopyrite in the quartz is a good indicator in this area. An example of this is the Wendigo Mine, in which gold values were encountered as long as chalcopyrite was an associate but dropped off sharply when the pyrrhotite was encountered at depth; the reason for this is that pyrrhotite is a high temperature mineral that is formed at a temperature very high for the deposition of any large values in gold. Since the chalcopyrite mineralization is quite heavy in the shearings south of Kite Lake, these shearings merit further investigation. Such investigation could only be done by drilling in order to determine the underground structure. The values encountered should be used to determine the extent of such a drilling programme.

ACKNOWLEDGMENTS -

This work was done with the aid of H. N. Hawes, prospector, William Hawes, and Ernest K. Shaw, geological student, who was of great assistance and most efficient at all times. I thank Mr. B. J. Cavanagh for the opportunity of making a study of this area.

(Signed) F. A. Campbell, B.Sc.

July 28, 1950.

TREMBE LAKE

KITE LAKE

K-13777

K-13781

K-13737

K-13740

K-13741

K-13744

K-13747

K-13746

K-13745

RILEY LAKE

TRAMP

K-13738

K-13739

K-13742

K-13743

K-13748

K-13782

ESS LAKE

K-13749

GI-BI LAKE

K-13834

K-13835

K-13836

K-13837

ALLDIGO ROAD

TURTLE CREEK

1. – GREENSTONE
2. – DIORITE
3 – GRANITE
– SHEARING
V – QUARTZ VEIN
– SWAMP
– STRIKE OF FORMATION
– GEOLOGIC BOUNDARY
– CLAIM BOUNDARY
– SHAFT
– PIT
– TRAIL

1/200

SCALE

REXORA CLAIMS

Geology by F.A. Campbell. B.Sc.