GEOLOGICAL REPORT
BATCH RIVER GOLD MINES LIMITED
gROUP OF CLAIMS
PICKEREL TOWNSHIP
NORTH-WESTERN ONTARIO.

## LOCATION OF PROPERTY:

The property covered by report is owned by Batch River Gold Mines Limited, 330 Bay Street, Toronto, and comprises 17 uneurveyod mining claims registered as Pa 9972 - 9988 inclusive. Nine claims of group are located in N.F. corner of Pickerel Township (Lot 1, Concession V1) and the remainder (8) adjoin to the East in unsurveyed territory, in the Patricia Mining Division, District of Kenora, Ontario.

MEANS OF ACCESS:
Provincial Highway No. 72 outs across the southern portion of the Group about $16 \frac{1}{2}$ miles southwest of Sioux Lookout, Ontario.

A direct water route from Sioux Lookout via Abram Lake could be utilized for transporting heavy mine machinery.

ACKNOWLEDGMENTS:
The writer wishes to thank A. W. Johnston, Consulting Geologist, and J. Landmark, prospector, for able assistance in the field. Reference has been made to M.E. Hurst's Report on the Sioux Lookout area (1933).

## PRELIMINARY SURVEY NOTES:

(a) Lin cutting:

East-West base lines wore established. The North surveyed boundary of Pickerel Township was cut out and extended easterly to northeast corner of property and used as base line.

The second Base line was out due East from the southwest corner of the property, and tied in with surveyed north boundary of mining claims K.R.L. 24529 and K.R.L. 24530.

Pioket lines at 330 ft . intervals wore turned off with North or South bearings from the base lines. These lines were out out and chained.

(b) Mapping:

Actual mapping commonood hugust 20th, and was completod by the ond of September, 1950.

Nost of rock outcroppings ar loonted alone eastorn boundary of property, where good cross-section of property was exposed.
(c) Topography:

Misfit Lake ocoupies the contre of the property.
Rook riages in morth-esstorly comer, rise steoply to about 150 feet above normal level.

The westorn half of group is mostly low lying sand ridges, muskeg, and clay covered terrain.

TABLE OF FORMATIONS:
LENOZOIC:
Recont and Pleistocone:
Boulder clay, sand and gravel.
PRECAMBRIAN:
Intrusives:
Quarte porphyry.
Sediments:
Groywack?

## Keowatin:

Andesite, basalt, pillow lava, rhyolite, iorite, voloanic tuff and agglomerate, feldspar, basalt porphyry, gabbro.

Undoternined zomes of altered material:
Sorioitio, ohloritic and oarbomated schists.
INTRUEIVES:
Quartz porphyry:
A quarts porphyry dike about $30^{\circ}$ in width and striking N. $70^{\circ}$ E. was found near south-east corner of Pa 9983. It is massive with light yellowish weathered surface, and very coarse-grained. It contained
many bluish quartz phenoorysts. No mineralization was noted or quarte filled orose-flacturing.

SEDIMENTS:

A granular, dark sedimontary rock was found near south-west cornor of Pa 9979, probably greywaoke.

## KEEWATIN

Greator part of andesite and lavas were fine to medius grained and quite massive. Intensive shearing was rare with oxception along south boundary at lake shore. Very few quarte stringers or veins were found, and mineralized zones were not common.

Dioritic textured rooks were flow type and were gradational. Thoy are likely a phese of the greenstone and not a true diorite.

Volosnio tuff wore dark basio types, and intermbeded with agglomerates, with exoeption of band of acid tuff near south-west comer of Pa 9979.

FELDSPAR BASALT PORPHYRY:

A zone similar to that desoribed by M. E. Hurst in his report, and known locally as "leopard rock", was found near northmest cormer of Pa 8986. The promiment "spots" are rounded phenoorysts of feldapar, usually grey to white in colour, and range in size from $\frac{7}{4}$ inch to 2 imohes in diameter in dark greos matrix. Zones grade into ooarse grained greenstones.

ALTERED SHEAR ZONES:

Shear zones were typed in the field, and olassified according to form of alteration, as it was impossible to determine origin.

FAULTING:

A north-south major transverse fault is indicated by prominent escarpment about oentre of north boundary of Pa 9977 . No evidence of faulting was found south of Misfit Lako. Lrea cast of escarpmont is drift covered.

STRUCTURE:

Strike of formation is quite constant, and does mot vary appreaiably from $N, 60^{\circ}$ E. and ijps steeply to north-west betweon $70^{\circ}$ and 850 .

Other than stringer zone described later, very few quartz ocourrences were found.

## SUMMARY OF EXPLORATION - 1950:

Prospecting was carried on in conjunction with mapping program, as well as thousand foet of diamond drilling on the property during the summer of 1950 . This represents all of the work done on the property to date. A minor mount of stripping and cross trenching was done to expose and extend discovery near north-west corner of Pa 9979.

## ECONOMIC GEOLOGY:

North-west corner of Pa 9979:
An interesting quartz stringer zone was found near northwest corner of Claim Pa 9979. It is conveniontly looated about forty feet south of highway, and about one hundred and thirty feet south of Misfit Lake. It is on Picket Line \#l0 at 0 plus 14001 This line is 330 foet oast of Township Line.

At iiscovery point, the zone has known width of fifteen feet. Irregular quartz veins and stringers from $1^{\prime \prime}$ to $6^{\text {" }}$ in width angle across a bad of acid tuff, bounded on each side by a dark basic cherty rock which may be rhyolite.

West face of zone outcrop is about $50 \%$ quartz with inclusions of ankerite, altered tuff, and a porphyritic material. The inclusions are angulor giving it a brecciated appearance. There may be a cross fault at this point, but outcrop dips steeply, and overburden is deep. Some fine specks of pyrite was noted in alteration quartz.

Nino seotions were channel sampled at discovery point acrose a width of 22.0 feet. A three foot seotion assayed 0.10 oz $/ \mathrm{au} / \mathrm{ton}$; other sections yielded low gold values from trace to 0.04 oz.

Following examination of surface showing, Mr. A. W. Johnston, Consulting Geologist, recommended l,000 feet of iamond irilling.

Subsequently, four shallow holes (1,014 foet) were drilled along strike to south-west of disoovery point. Zone was intersected at two horizons ( $\mathrm{B}-1, \mathrm{~B}-4$ ) bolow surface oxposure, and two holes ( $\mathrm{B}-2, \mathrm{~B}-3$ ) were drilled at 100 foot intervals to the south-west.
D.D.H. \#B-1: Stringer zone intersected at vertioal depth of 65 feet for core longth of 25.7 feet. It consisted of numerous quartz stringers in highly altered tuff. Mineralization was fairly well distributed, mostly pyrite and little tourmaline. Assay retums were negligible. Depth of hole - 224.5 feet.

165 feet. A $\frac{\text { D.D.H. } \# B-4 s}{\text { six foot section gave cold of zone at vertical depth of }}$ assay returns wor 0.05 and $0.04 \mathrm{oz} / \mathrm{au} / \mathrm{t}$ on across widths of $1.8^{\circ}$ and 2.0' respectively. Depth of hole -274.0 feet.
D.D.H. \#B-2: Zone intersected for core length of 9.8 feet. This hole located 100 feet southwest of $B-1$ and $B-4$. Assay returns were low. The best being 0.04 from two sections of $1.0^{\prime}$ and 2.0'. Depth of hole - 261.0 feet.
D.D.H. \#B-3: Located 100 feet southwest of B-2. Zone was not out in this hole. It had likely terminated between B-2 and B-3. Depth of hole - 254.0 feet.

RECOMMENDATIONS:
Cross-sectional diamond drilling in northern half of group to cover drift covered sections, is suggested as assessment work.

Two deep holes on reverse bearings from southeast corner of pa 9985 , each drilled to depth of 1,250 feet at ip of $-45^{\circ}$. The bearing of these holes should be N. 300 West, and S. $30^{\circ}$ East, to cut formation at right angles. This drilling would cover a horizontal distance of approximately 2,000 foot. Interesting geological data would bo compiled, and possibilities of intersecting a gold bearing zone are excellent. This area is on strike of major shear zone known to exist on adjoining Realmont property, and persistent grano-diorite dike extending through from Newlund and extended last season by drilling on the Villbona and Eaglelund properties.

MAPS:

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\text { Two sots of geological plans ( } 100 \text { scald ) accompany this }
$$ Report.



| LEGEND | SYMBOLS |
| :---: | :---: |
| esste-phow Lave | Sir |
| \% | strike of qeoding $\square$ |
|  | Daser |
| $\square$ | Rock outcroepme |
| "造 | E |
| $\stackrel{+0}{-1}$ |  |

$$
\begin{aligned}
& \text { MACHO RIVER GOLD MINES LTD. } \\
& \text { BATCH RIVER GOLDMINES LTD. } \\
& \text { GEOLOGICAL PLANS }
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