SUITE 1707, BO RICHMOND STREET WEST


## FLINT LAKE CLAIMS - KENORA MINING DIVISION

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\text { GEOPFYSICAL SURVEYS, } 1969
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The Flint Lake claims were staked by A. O. Zeemel in April, 1968, to cover the old Falnora gold deposit. During the course of staking it was discovered that magnetic anomalies occur in the east portion of the claims. Subsequent electromagnetic surveying by Gunnéx located two anomailes, one in close proximity to the gold- and pyrite-bearing shear zone at the Falnora shaft, the second within the lake and possibly associated with faulting trending northwest through the lake. Further surveying and diamond driling is required. Due to very rough ground, the electromagnetic system used was found unsuitable for surveying of a portion of the southern and eastern part of the claim group.

GEOLOGY

- Reference: Map 42B ODM 1943

Following staking, a brief reconnaissance of the portions of the property of greatest interest was completed by two prospectors. Nothing in the way of new mineralization was found and panning of mineralized schist from old trenches on claims K42380 and K42390 gave negative results.

Previous work by Noranda in 1945, including 6,500 feet of drilling, outlined a shear zone in tuffaceous rocks striking $N .75^{\circ} \mathrm{E}$, dipping $85^{\circ}$ S and lying along the south side of the lake (claims K42379 and K42388). Within this shear are pyritized and silicified sections carrying free gold and gold-bearing pyrite. One 200 -foot section returned drill hole values between 0.11 and 0.37 oz Au over wiaths up to 11 feet. A second section 450 feet long gave some drill intersections up to 0.23 oz Au over 8 feet with one 5 -foot section returning 1.40 oz Au .

In view of the apparent relationship between sulphides and gold values, the electromagnetic survey was conducted over this zone and adjacent area.

According to Map 42B, a band of basic rock trending northeast enters the lake from the southwest and possibly extends eastward from the east shoreline.

## LINE CUTTING

A base line was established in an east-west direction and ines cut at 400-foot intervals over sufficient claims to test the Falnora shaft zone and the magnetic highs in the east part of the group. Section lines were picketed at 100-foot intervals. A total of 13.3 miles of picket line plus over 2 miles of base line were cut and chained by E. Sobiski, Bud Sobiski and John Harrison, all of Kenora, between February 1lth and March lst, 1969. Deep snow considerably hampered this phase of the project.

## MAGNETOMETER SURVEY

W. G. Langley, Gunnex geophysical operator, completed a magnetic survey over all section lines using an ABEM tortion-wire instrument and measuring the
vertical component of the magnetic field. Readings were corrected for diurnal variation and plotted at 1 inch to 200 feet. The sensitivity of the instrument is $\pm 10$ gammas.

Marked magnetic highs are present traversing claims K42390 and K42855 in a $N .75^{\circ}$ E direction and on both sides of the base line extending eastward from line 20E in an easterly direction. Several intermittent small but well marked highs trend northwest from line 20E and north of the base line.

The northeast and east-trending highs are likely due to the basic rock as shown on map $42 B$ and striking in the same direction. However, since the peak anomalies are in the order of 5000 to 8000 gammas above the surrounding tuffaceous rocks, the source material likely contains a notable amount of magnetite.

The west-northwest strike of the lake shorelines and the apparent termination of both magnetic highs within the lake suggests that a northwest fault may occupy the central axis of the lake itself.

## ELECTROMAGNETIC SURVEY

This survey was conducted by R. R. Smith, Gunnex geophysical operator, and John Harrison, assistant. Readings were taken every 100 feet along section lines with a Sharpe $S E-300$ at 1600 cycles and using the broadside method. Readings were plotted as dip angles at a scale of 1 inch to 200 feet.

Two anomalies of note were recorded. The first lies about 500 feet north of the Falnora shaft and lies sub-parallel to the shaft shear zone. Examination of dip angles indicates a possible south dip for the conductor. The anomaly is quite distinct over a 2,000 -foot length. This anomaly may represent a pyritized shear zone and if so could be gold-bearing.

The second anomaly lies 300 to 400 feet north of the south shoreline and within the lake. It too is about 2,000 feet long. A patch of open water on section 32 E precluded confirmation of the anomaly where it probably crosses this line. The anomaly could represent a mineralized portion of a fault zone, or parallel structure, striking at an acute angle to the northeast trending magnetic anomaly. It could also represent a steepening of the shoreline with a high angle contact between rock ledge and lake bottom deposits.

## CONCLUSIONS

Both electromagnetic conductors warrant diamond drilling. Further electrical work should be completed over the unfinished portion of the claim group. The Crone system or Ronke M16 equipment should be considered.

Detailed prospecting and geochemical sampling should be carried out on the magnetic peaks and their flanks.

Toronto, Ontario. April 15, 1969.


LINE CUTTING

| E. Sobiski | Kenora, Ontario | Feb 10th to March lst, 1969 incl. |
| :--- | :--- | :--- |
| Bud Sobiski | Kenora, Ontario | Feb 10th to March lst, 1969 incl. |
| John Harrison | Kenora, Ontario | Feb loth to March lst, 1969 incl. |
| Base line | 2.0 miles |  |
| Section line | $\frac{13.3 \text { miles }}{\text { Total: }}$ | 25.3 miles chained at $100^{\circ}$ intervals. |

MAGNETIC SURVEY
W. G. Langley, Gunnex Limited, Poronto March 6th to 15 th, 1969 incl.

Stations read (including some 50 -foot stations) - 820 readings
Miles surveyed - 13.3 miles

ELECTROMAGNETIC SURVEY
R. R. Smith, Gunnex Limited, Toronto

John Harrison, Kenora, Ontario March 8th - 15 th, 1969 incl.
Miles surveyed $\frac{8.01 \text { miles } \times 5,280}{100}=472$ rodA

NOTE: For assessment recorded April, 2969, only that portion of lines cut and surveyed within the claims under application was utilized.






