



31M05SE0088 63A.46 GILLIES

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REPORT

ON

GEOLOGICAL MAPPING

MAYFAIR MINES LIMITED

GILLIES LIMIT

N.P.

DISTRICT of TEMISKAMING

July 2, 1948

Ralph I. Berner, BSc.



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REPORT

On

GEOLOGICAL MAPPING

On The Property Of

MAYFAIR MINES LIMITED

GILLIES LIMIT

DISTRICT OF TEMISKAMING

INTRODUCTION

Five claims of the 15 claim group owned by Mayfair Mines Limited in the Cobalt area, were geologically mapped between the dates May 17th, - June 18th, 1948.

The numbers of these claims are as follows:

T25709-12 incl., and T25715.

Using the East boundary of Gillies Limit as a base-line, East-west profile lines were turned every 300 feet, with pickets placed at 100 foot intervals.

The ground between the profiles was ranged at 300 foot intervals.

GEOGRAPHICAL

The claims are located in the north-east part of Gillies Timber Limit, Cobalt-Silver Area, District of Temiskaming, approximately four (4) miles south-east of the Town of Cobalt.

A complete mining plant is in operation in the south part of the main group.

A fair motor road to the Mayfair Mines shaft house passes within one-quarter mile of the group, but a road from the shaft to the group is now under construction.

GEOGRAPHICAL - cont'd.

The property is serviced with Hydro air and electric power.

REGIONAL GEOLOGY

The Cobalt-silver area is underlain by late precambrian, gently dipping to nearly horizontal sediments, (Conglomerates, arkose, greywacke, slates and quartzites) called "Cobalt Series", which rest upon older rocks of Temiskaming sediments, Algoman or Laurentian granites or gneiss, and Keewatin lavas or tuffs. These are all cut by a quartz diabase of Keweenawan age called Nipissing diabase. This diabase is the youngest precambrian rock of the region with the exception of some post-keweenawan olivine and quartz diabase dikes.

All the ore occurrences in the Temiskaming area are related to contacts between the Keewatin and Diabase, and Keewatin and Cobalt series and as a rule are confined to a zone within 300 feet either way from the contact and measured at right-angles to it.

The majority of the important silver veins in the Cobalt camp are parallel to the Keewatin structure even though they occur in the diabase or Cobalt series above or below the Keewatin rocks.

A feature of the utmost importance, is the pre-existing faults which limit or control ore deposition.

Original mapping of the Cobalt-silver area did not outline the structural trend of the Keewatin rocks as a whole.

TOPOGRAPHICAL

The claim group is fairly flat in profile with numerous outcrops that rise very little above the general level.

The west part of the group is largely covered with wet swamp.

Second growth birch and poplar cover the higher ground, with spruce and balsam in abundance in the swampy sections.

PREVIOUS WORK

The former operators did a considerable amount of surface trenching and several rock pits were sunk,

LOCAL GEOLOGY

Keewatin pillow lavas, acid and basic, underlay the entire group. From observations on pillows the formation swings from a westerly direction in the south part of the group to north on the north part. Tops were indicated as facing east.

The Nipissing diabase sill lays beneath the Keewatin surface. A drill hole at the extreme South-east corner of the group shows the contact between diabase and keewatin to be at 570'. A further drill hole, 1000 ft. to the North, intersects the contact at 520 ft. In the shaft, approximately 1300 feet to the South-east, the contact is at 315 ft. From these observations, the contact is seen to be dipping to the North-west.

A lamprophyre dike striking $045^{\circ}T$ occurs on claim T25915 on the South shore of the creek joining New Lake and Ibsens pond.

Veins

In all, six veins were noted on the group.

Fifteen feet to the east of claim T25611 a pit was sunk on a pink calcite vein one inch in width, barren of mineralization, and striking $059^{\circ}T$.

On claim T25715, a quartz vein striking $306^{\circ}T$, sparsely mineralized with pyrite, follows the West shore line of Ibsens pond for 50 feet. It is from 6" to 8" in width.

On claim T25709, a vein of calcite, well mineralized with galena, zincblende and pyrite, was discovered 375 feet West and 40 feet South on profile 11B. It strikes 040° but no dimensions could be obtained as no previous work has been done and the surface is well rusted. A sample of the mineralization, at one point, gave 3.2 Oz. of silver.

On claim T25709, 100 feet to the South of the above vein, is a rock pit. Samples of vein material in the dump showed 3" of calcite and fault breccia with a small amount of pyrite mineralization.

On claim T25709, 350 feet West and 70 feet North on profile 13B, a pit was sunk on a barren quartz vein 12" in width. The vein strikes $238^{\circ}T$ and dips $85^{\circ} S$.

On claim T25715, samples on the dump from a rock trench, on the South shore of the creek joining Ibsens pond and New Lake, showed 8" of calcite. The trench strikes $140^{\circ}T$.

Faulting

Four indicated faults are noted on the map. In each case a scarp was noticeable.

CONCLUSIONS

The claim group is located in the Cobalt area where a large amount of silver and cobalt have been produced. The nearest producers are the "Silver Miller" tied on to the NE, and the Beaver and Temiskaming one-half mile to the NE.

The favourable contact zone between the Nipissing diabase and Keewatin greenstones is at a depth of approximately 500 feet.

A number of veins are in evidence, one of which gave an assay of 3.2 ounces of silver. This assay is important in that it indicates silver bearing solutions have circulated in that vein. The most favourable location for concentration of silver values at that point is at least 200 feet below the surface.

Faulting is in evidence.

RECOMMENDATIONS

1. Rock trenching, of the vein off profile 118 with the silver assay, to expose a fresh surface.
2. Diamond drilling based on results of (1).
3. Detailed mapping of the area south of the Creek from Ibsens pond.
4. Diamond drilling based on results of (3).

July 2, 1948

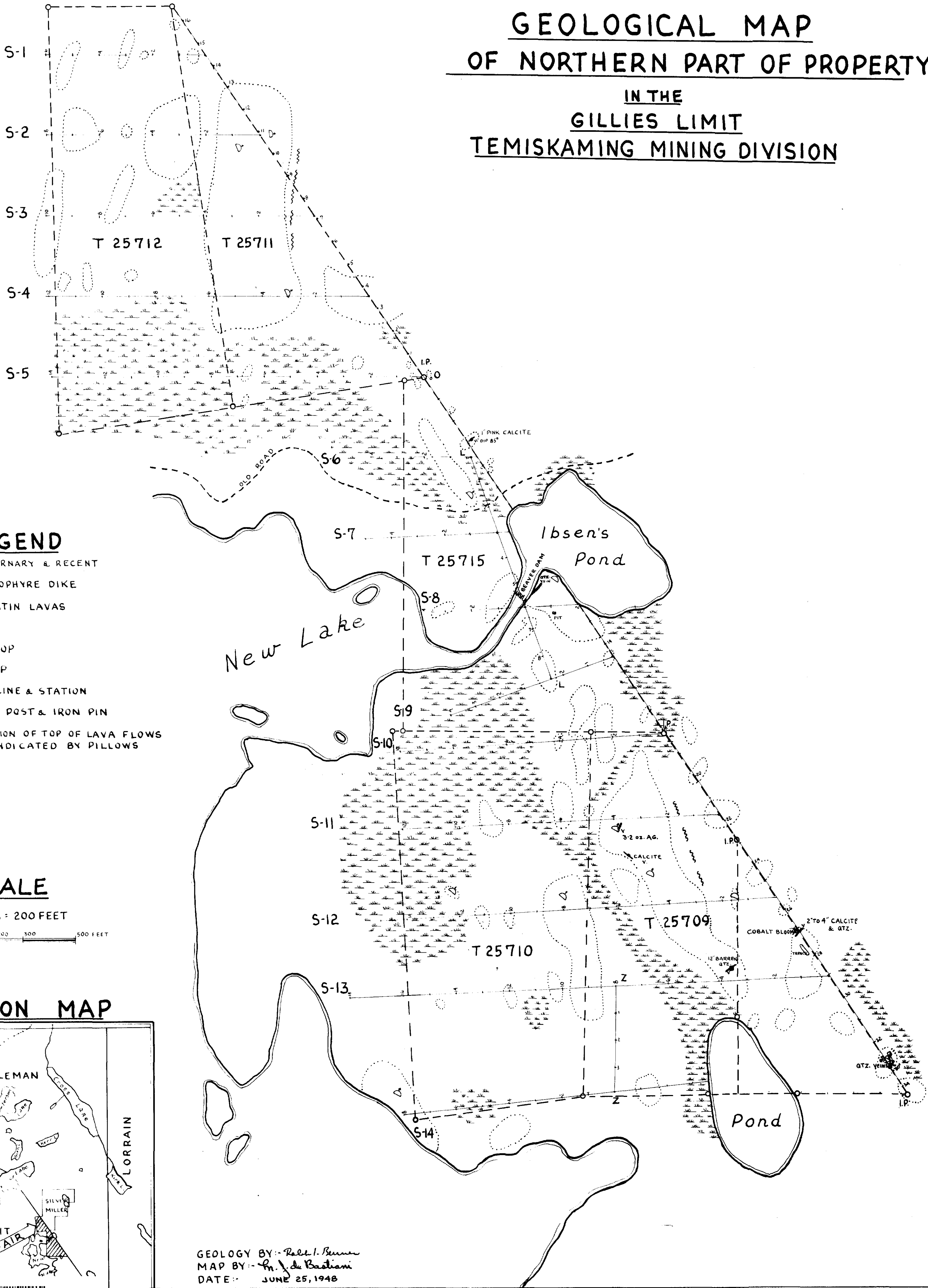
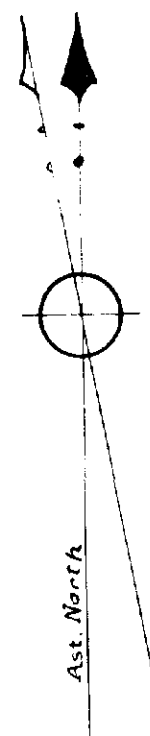
Ralph I. Benner
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MAYFAIR MINES

LIMITED

GEOLOGICAL MAP OF NORTHERN PART OF PROPERTY

IN THE
GILLIES LIMIT
TEMISKAMING MINING DIVISION

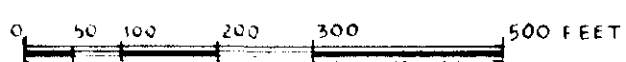


LEGEND

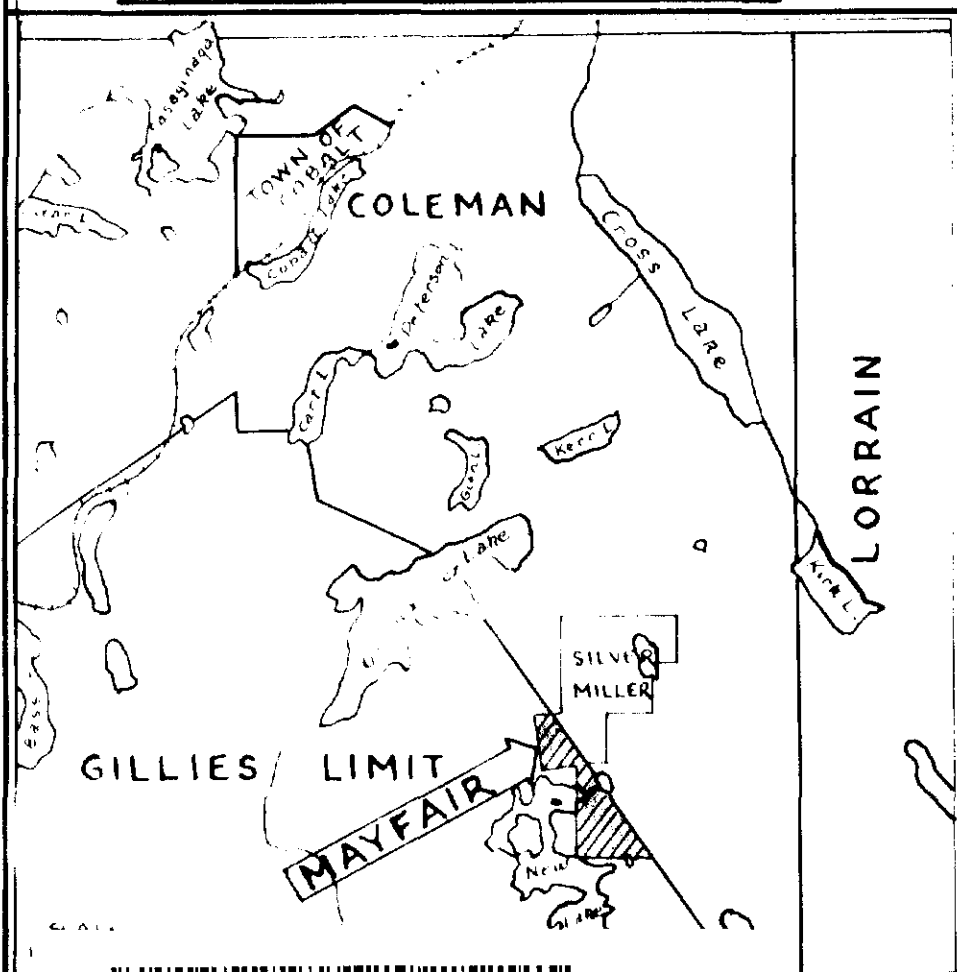
- QUATERNARY & RECENT
- LAMPROPHYRE DIKE
- KEEWATIN LAVAS
- VEIN
- OUTCROP
- SWAMP
- GRID LINE & STATION
- CLAIM POST & IRON PIN
- DIRECTION OF TOP OF LAVA FLOWS INDICATED BY PILLOWS

SCALE

1 INCH = 200 FEET



LOCATION MAP



GEOLOGY BY: R. I. Benner
MAP BY: G. J. de Bastiani
DATE: JUNE 25, 1948



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