

REPORT ON
TURAM ELECTROMAGNETIC SURVEY
OVER THE A. A. CLAIMS
IN THE
GALENA HILL AREA, YUKON TERRITORY

for

SILVER TITAN MINES

by

HUNTING SURVEY CORPORATION LIMITED

Toronto, Ontario

October, 1962

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INTRODUCTION

Between July 13th. and July 26th., 1962, Hunting Survey Corporation Limited carried out a Turam electromagnetic survey over the A.A. group of claims held by Silver Titan Mines. This claim group is located near the highway from Mayo to Elsa, Yukon Territory.

The survey was carried out by Mr. W. J. Scott and Mr. A. Skeoch of Hunting Survey Corporation Limited and helpers provided by Silver Titan Mines.

A total of approximately 19 line miles was surveyed using an A.B.E.M. type 1182 Turam electromagnetic prospecting unit. This instrument uses two horizontal search coils, separated by 100 feet, to record the distortions in an electromagnetic field generated by an alternating current which passes through a long grounded cable. The quantities measured are (a) the ratio of the field strength at each coil, and (b) the phase difference of the field between the two coils. The grounded cable was laid out along a base line and readings were taken along picketed cross lines perpendicular to the base line. Readings were plotted at the center of the 100-foot spread. The plotting was done in the field and a preliminary interpretation was provided to the client. The data were checked and replotted at the Toronto office of Hunting Survey Corporation Limited and a final interpretation was carried out.

GEOLOGICAL SETTING

The following geological description is taken from a report by Dr. A. E. Aho. The general area is underlain by Precambrian formations which can be divided into three major units:

- Upper Schists: quartz-mica schists with small lenses of limestone and thin layers of quartzite near its base.
- Central Quartzites: hard, blue grey, grey and white, thick bedded quartzites with minor intercalations of thin bedded quartzites, graphite schists, quartz-mica schists, quartz-mica-chlorite schists and greenstones. This series covers almost the entire survey area.
- Lower Schists: thick schist-greenstone belt.

The formations strike approximately east-west and dip 20-40 degrees to the south. Mineralization is mainly concentrated in the Central Quartzites and occurs mostly in northeast-trending vein-fault systems dipping moderately to steeply south. The ore tends to be localized in the most massive members, particularly where the vein-faults intersect with each other. One of the mineralized veins which occurs in the area, the Gerlitzki vein, has been explored by trenching and drilling. The encountered mineralization consists of pyrite, siderite, sphalerite and galena. The galena is rich in silver.

SURVEY RESULTS

Numerous anomalous trends were detected by the Turam survey. Mutual interference between the anomalies has given a very complex pattern of results. We have tried to locate the position of each individual anomaly and to construct the anomalous trends. However, the interpretation given can only be regarded as one of several possibilities.

The survey indicated a large anomalous area some 9,200 feet in length and 1,800 feet wide to the south of the base line. This anomalous zone, which is still open to the east and west, suggests a series of parallel fractures or shear zones carrying either mineralization or graphitic schists; although the results present a complex pattern it has been possible to outline a total of 27 anomalous trends and two groups of trends. The anomalies associated with these trends vary in intensity from weak to strong. In addition to the above-mentioned zones a number of individual anomalies have also been located. It must be pointed out that the trends indicated are one possible solution.

In general the trends indicated are parallel to each other and strike in an east-northeast direction, which is the favoured direction of the mineralized vein-faults found in the area. The inferred geology of the claims group indicates that the anomalous zone is located within the favourable Central Quartzite formations.

A series of north-south cross faults are interpreted from the survey results; these are shown on the accompanying interpretation map.

Due to the large number of anomalies detected, it is difficult to obtain the exact shape of any anomaly and therefore the exact location of its peak. The position, therefore, of the various conductors is not exact, it is estimated that a variation of up to 50 feet on either side of the indicated position is possible. Calculations of the depth to the causative body may also be in error, the better defined anomalies point to depths of between 100 and 200 feet to the conductor.

Of the anomalous trends defined by the survey, seven, designated on the accompanying map by numbers 1, 2, 11, 13, 14, 23 and 24, are the strongest and warrant first priority in any further exploration. Should the results of this further work be encouraging then, of course, the other anomalies should be drilled.

SUMMARY AND RECOMMENDATIONS

The Turam electromagnetic survey of the A. A. group of claims detected a large number of anomalies. Due to the complexity of the anomalies, it is difficult to outline the various trends; in fact, more than one solution is possible. Geologically the anomalous zones are located within the favourable Central Quartzite formation. It is thought that the conductors defined by the survey could be due to either a series of parallel vein-faults carrying mineralization or to a series of graphitic schists.

These conductors, divided into the various trends, warrant further investigation. It is recommended that the major anomalous trends be tested first, however, this does not mean that the other trends are not significant. Drilling is recommended on the following:

Trend 1 - Line 80+00E to intersect at a depth of 150 feet

Trend 14 - Line 36+00E to intersect at a depth of 150 feet

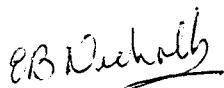
Cross Section Trends:

Trends 14 & 23 - Line 16+00E to intersect at a depth of 200 feet

Trend 11 - Line 64+00E

Should the results of this further exploration prove encouraging then, of course, investigation of the other trends would be warranted.

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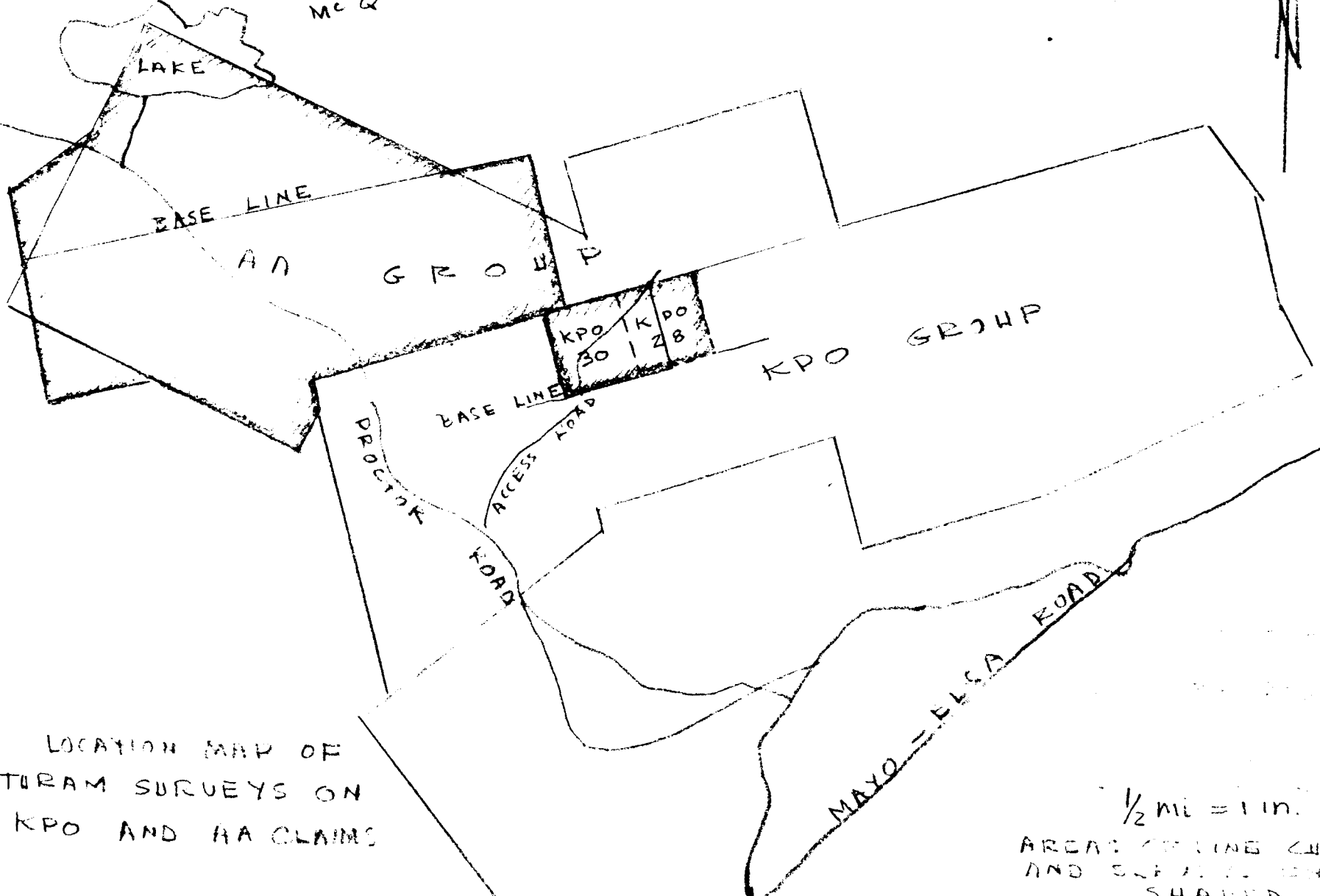
E. B. Nicholls,
Geophysicist.

Mc QUESTEN RIVER

Claim Sheet No. 105M13

Longitude 135°45'W

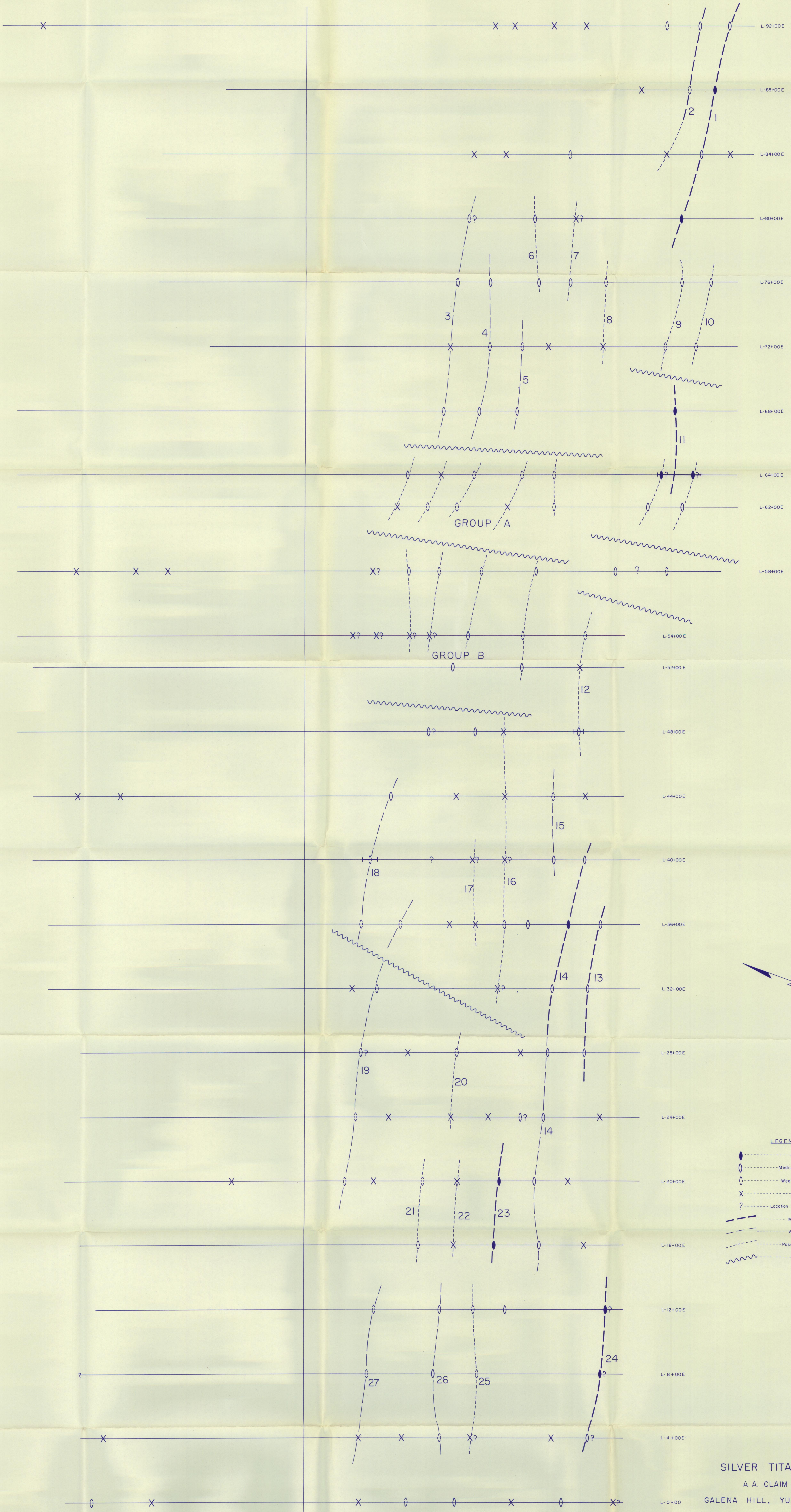
Latitude 63°55'N



LOCATION MAP OF
TERRAM SURVEYS ON
KPO AND HA CLAIMS

1/2 mile = 1 in.
AREAS OF LINE CUTTING
AND SURVEYED ZONE
SHADED

18+00N 16+00N 14+00N 12+00N 10+00N 8+00N 6+00N 4+00N 2+00N 0+00 2+00S 4+00S 6+00S 8+00S 10+00S 12+00S 14+00S 16+00S 18+00S 20+00S 22+00S 24+00S 26+00S 28+00S



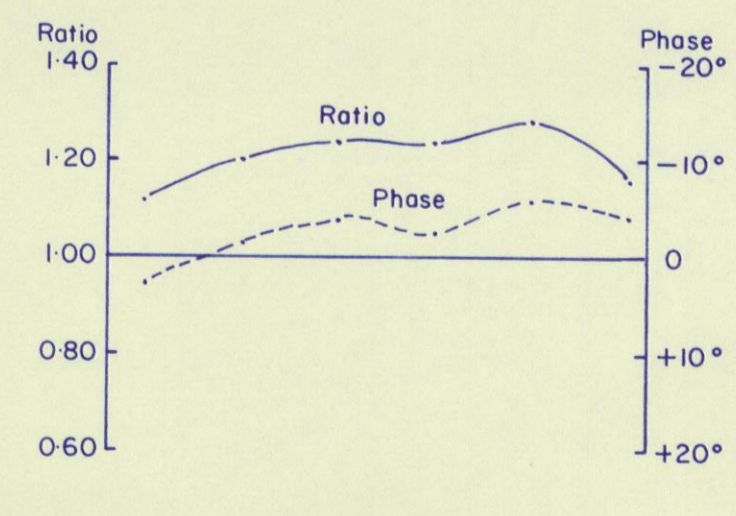
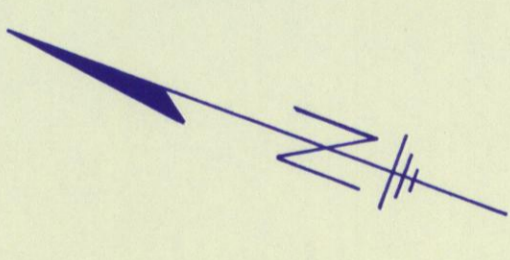
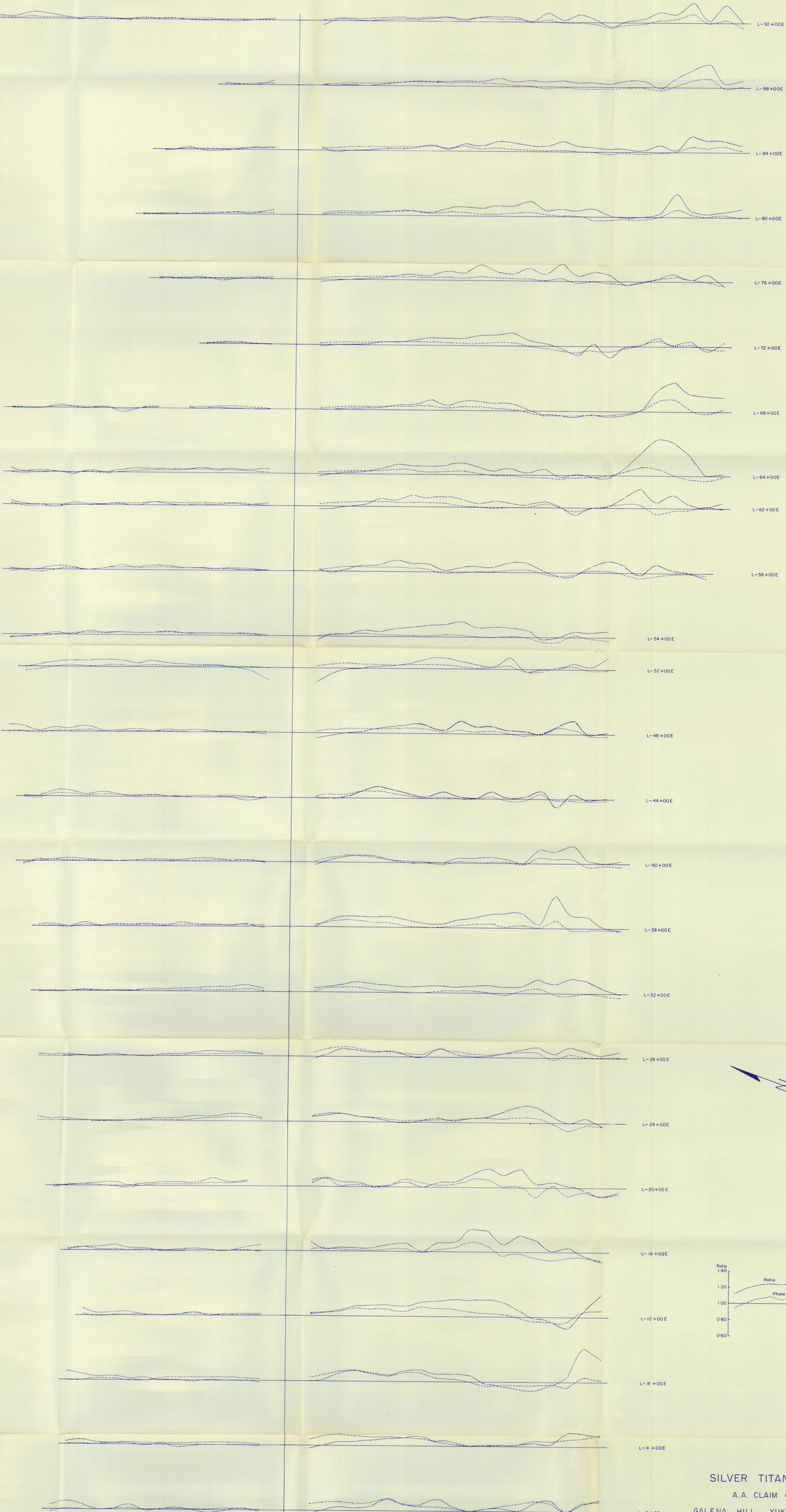
LEGEND

- Strong anomaly
- Medium to strong anomaly
- Weak to medium anomaly
- Very weak anomaly
- Location of anomaly uncertain
- Major anomalous trend
- Weak anomalous trend
- Possible anomalous trend
- Possible fault zone

SILVER TITAN MINES
A. A. CLAIM GROUP
GALENA HILL, YUKON TERRITORY
TURAM ELECTRO-MAGNETIC SURVEY
INTERPRETATION
BASELINE NUMBER 3

18+00N 16+00N 14+00N 12+00N 10+00N 8+00N 6+00N 4+00N 2+00N 0+00 2+00S 4+00S 6+00S 8+00S 10+00S 12+00S 14+00S 16+00S 18+00S 20+00S 22+00S

18+00N 16+00N 14+00N 12+00N 10+00N 8+00N 6+00N 4+00N 2+00N 0+00 2+00S 4+00S 6+00S 8+00S 10+00S 12+00S 14+00S 16+00S 18+00S 20+00S 22+00S 24+00S 26+00S 28+00S



SILVER TITAN MINES
 A.A. CLAIM GROUP
 GALENA HILL, YUKON TERRITORY
 TURAM ELECTRO-MAGNETIC SURVEY
SURVEY RESULTS
 BASELINE NUMBER 3
 Scale: 1 inch = 200 feet
 HUNTING SURVEY CORPORATION LIMITED, TORONTO, CANADA
 SEPTEMBER, 1962

18+00N 16+00N 14+00N 12+00N 10+00N 8+00N 6+00N 4+00N 2+00N 0+00 2+00S 4+00S 6+00S 8+00S 10+00S 12+00S 14+00S 16+00S 18+00S 20+00S