

105-K-

Report on a Magnetometer Survey on
the Jo 1 to 37 Mineral Claims of
KIM EXPLORATIONS LTD.
Dynasty Area, Y. T.

ALRAE EXPLORATION LTD.

November 21, 1966

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MAPS

Scale

Location plan	1" = 3 miles
Plan and surface geology	1" = 500 feet
Magnetometer readings	1" = 500 feet
Magnetic contours	1" = 500 feet

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KIM EXPLORATIONS LTD.
Dynasty Area, Y. T.

INTRODUCTION

The Jo group consists of 37 contiguous, full size mineral claims, situated in the Rose Creek Valley, 45 miles northwest of Ross River, Y.T.

Alrae Exploration Ltd. was engaged by Kim Explorations Ltd. to carry out a line cutting program and magnetometer survey on the group. This work was carried out from August 6, 1966 to September 20, 1966. All work was done by Alrae personnel under field supervision of J. Mackie.

ACCESS

Personnel and supplies were trucked from Watson Lake to a semi-permanent camp on the Pae group of Kim Explorations Ltd., thence by helicopter, approximately 10 miles northwest, to the Jo group.

TOPOGRAPHY AND VEGETATION

The claim group occupies a south-facing slope, extending from Rose Creek to timber line opposite Rose Mountain. The hillside has a uniform slope of ten degrees. Most of the group is covered by stands of spruce and balsam, commonly one to three feet in diameter. Buckbrush and willows are common in all open places and creek bottoms.

GEOLOGY

Rock outcrops are extremely scarce. Hornfels was the pre-dominant rock observed with single outcrops of shale and chlorite schist also noted. Foliation generally dips gently to the southwest. A medium-grained quartz monzonite outcrops in the northwest corner of the claim group. Mississippian and Mid-Cretaceous ages have been tentatively assigned to the metamorphic and granitic

rocks, respectively, by the Geological Survey of Canada. (Reddick and Green, Map 13-1961, Tay River, Yukon Territory).

CLAIMS

Kim Explorations Ltd. owns the Jo 1 to 37 full size mineral claims, situated on claim sheet 105K-6, Whitehorse Mining Division, Y.T. Record numbers are as follows:

<u>Claims</u>	<u>Record Numbers</u>
Jo 1 to 16	95036 to 95051
Jo 17 to 24	95456 to 95463
Jo 25 to 30	95052 to 95057
Jo 31 to 37	Y10535 to Y10541

CONTROL GRID

Four base lines were cut in an east-west direction. Crosslines were cut at 400 foot intervals over the entire group. Approximately 40 line-miles were cut, chained and picketed. Pickets were placed at 100 foot intervals. Line cutting was performed by a three man crew using a powersaw and mechanical brushcutter. A staff-mounted Brunton compass and nylon chain were used for control.

TYPE OF MAGNETOMETER

A Sharpe, model MF-1, fluxgate magnetometer was employed. It is hand held and requires only coarse levelling. Extensive temperature compensations have been built into the instrument. Orientation has negligible effect on field readings.

The magnetometer is capable of measuring the earth's vertical magnetic field to 5 gammas on the lowest scale range. Full scale ranges vary progressively from a minimum of plus or minus 1,000 gammas to a maximum of plus or minus 100,000 gammas. Station values are read directly from an ammeter-type scale. A high latitude adjustment permits zeroing of the magnetometer in all but the most unusual circumstances.

FIELD PROCEDURES

The magnetometer was zeroed for this property. Base stations were established at 400 foot intervals along baselines, where cross-lines and baselines intersected. Two field readings were taken at each base station. The average at each base station was used in subsequent calculations. The elapsed time in loops establishing base stations seldom exceeded 30 minutes. As only one magnetometer was used, each loop ended at the same base station it began.

After base stations were established, magnetometer readings were taken at 100 foot intervals on all crosslines and baselines. Loops were limited to a maximum duration of one hour. Each loop was begun from an established base station. An overlap of at least one and commonly two or three stations of previous loops were incorporated in each loop. This procedure permitted a quick check of field work and survey accuracy.

Tolerable diurnal variation in any loop was one gamma per minute elapsed up to maximum of 50 gammas. All operators were stripped of metallic objects which may have biased the survey.

CORRECTIONS

Temperature compensations built into the instrument eliminate any need for temperature corrections being applied to the field readings. Thus, diurnal corrections were the only adjustments applied to field readings. Diurnal variation is determined by the difference between the initial and final reading at the base station each loop was begun. This variation is assumed to be linear. The correction added to each reading in a loop is the diurnal variation multiplied by the ratio: time elapsed when reading taken divided by total time elapsed in the loop. Hence, the initial and final readings in a loop will be identical after diurnal corrections have been added. Because the instrument can be read to only five gammas, all corrections are rounded to the nearest five.

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INTERPRETATION

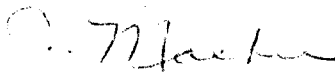
Four intense, but small anomalies have been outlined in the northern portion of the claim group. Residual magnetic values of these anomalies ranges from 400 to 1,300 gammas. There is no apparent structural relationship between the anomalies. Adjacent to three of the anomalies there is a fifth, much larger anomalous zone with a residual magnetic value of 150 gammas.

The limited areal extent of each anomaly suggests that they are all caused by near-surface concentrations of magnetic minerals. The anomalies may be caused by concentrations of pyrrhotite and/or magnetite in favourable metamorphic rocks or the instusion of small basic plugs. Both are common in the district.

RECOMMENDATIONS

In view of the success of finding economic sulphide ore bodies on the adjoining claims of Anvil Mining Corporation and the apparently favourable geological setting of the Jo group, it is recommended that further surveys be undertaken to thoroughly investigate this group for economic mineralization. A geochemical survey and electromagnetic survey should be carried out. These surveys should indicate the significance of the magnetic anomalies and outline other areas of economic importance.

Report submitted by



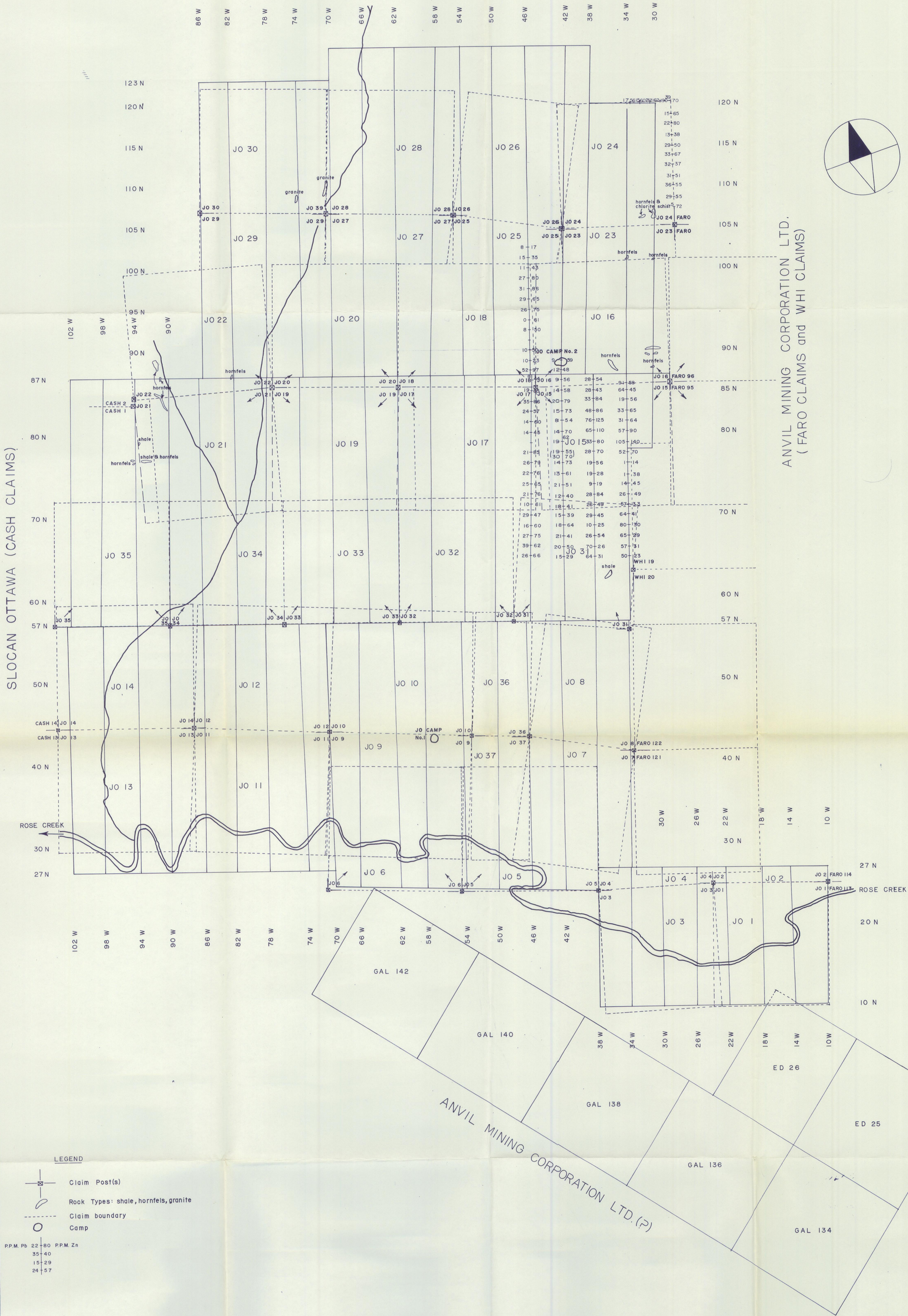
J. Mackie

Endorsed by



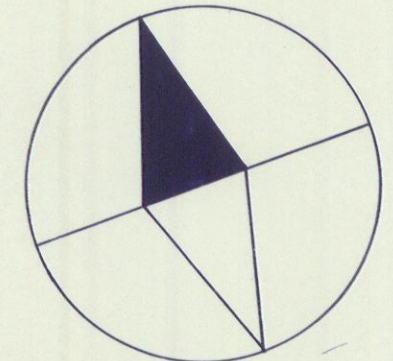
P. Philp, P. Eng.

FLAGSTONE (LEE CLAIMS)



SLOCAN OTTAWA (CASH CLAIMS)

ANVIL MINING CORPORATION LTD.
(FARO CLAIMS and WHI CLAIMS)

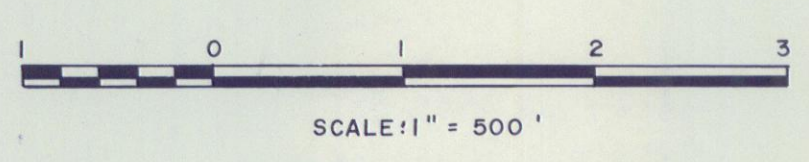


LEGEND

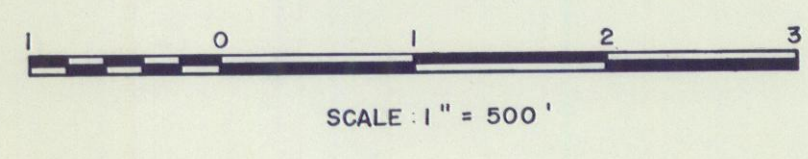
- Claim Post(s)
- Rock Types: shale, hornfels, granite
- Claim boundary
- Camp

PP.M. Pb 22-80 P.P.M. Zn
35-40
15-29
24-17

ANVIL MINING CORPORATION LTD. (P)



KIM EXPLORATIONS LTD.	
DYNASTY AREA-JO CLAIM GROUP Plan and Surface Geology	
ALRAE EXPLORATION LTD. GEOLOGISTS AND ENGINEERS VANCOUVER, B.C.	
DESIGNED: R. MACBEAN	SCALE: 1" = 500'
DRAWN: M. R. L.	HOR: VERT: 1" = 500'
CHECKED: J. M.	DATE: OCTOBER 1966
ALRAE EXP. LTD. DWG. No. 950-6	JOB No.



OVERLAY FOR JO CLAIM GROUP
PLAN AND SURFACE GEOLOGY

KIM EXPLORATIONS LTD.	
DYNASTY AREA - JO CLAIM GROUP Magnetic Contours	
ALRAE EXPLORATION LTD. GEOLOGISTS AND ENGINEERS VANCOUVER, B. C.	
DESIGNED..... J. MACKIE.....	SCALES HOR: 1" = 500' VERT: 1" = 500'
DRAWN..... M. R. L.....	DATE NOVEMBER 1966
CHECKED..... J. M.....	JOB No. REV.
ALRAE EXP. LTD. DWG. No. 959-B	
CONTOUR INTERVAL = 100 gammas	