Report on a Magnetometer Survey on
the OK Claim Group
of
KIM EXPLORATIONS LTD.
Dynasty Area, Y. T.

ALRAE EXPLORATION LTD.

November 23, 1966

GEOLOGICAL SURVEY

This report has been examined by
the Geologist of this Unit.

APPROVED AND ACCEPTED
by:

[Signature]

APPROVED AND ACCEPTED ON: $ 66.03
RECEIVED
[Signature]

Subject to review under No. 50 Mining Act. Quartz

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ALRAE EXPLORATION LTD., VANCOUVER, B.C.
ENGINEERS & GEOLOGISTS
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MAPS

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Report on a Magnetometer Survey on
the OK Claim Group of
KIM EXPLORATIONS LTD.
Dynasty Area, Y. T.

INTRODUCTION

The OK claim group of Kim Explorations Ltd. consists of 26 contiguous, full size mineral claims, situated in the Blind Creek Valley, 35 miles northwest of Ross River, Y.T. Claims in the OK group are:

OK 1 to 8
OK 25 to 32
OK 55 to 64
all inclusive.

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 done during July and August, 1966. All work was performed by Alrae personnel under field supervision of J. Mackie.

ACCESS

Personnel and supplies were flown from Watson Lake to Swim Lake by fixed-wing aircraft. Thence, they were flown by helicopter to the campsite.

TOPOGRAPHY AND VEGETATION

Most of the claims are situated in the Blind Creek Valley floor. The remainder of the claims extend a short distance up the western valley wall. Maximum relief is 500 feet.

All the group is densely covered with buckbrush, willow, spruce and balsam. A fire, more than 30 years ago, burned over much of the valley. As a result, snags and windfalls are numerous.

GEOLOGY

Overburden is extensive in the area. However, regional mapping by the Geological Survey of Canada indicates the claim
group is underlain by flat lying metamorphic and volcanic rocks of Mississippian age (Poddick and Green, Map 13-1961, Tay River, Y.T.)

CLAIMS

Kim Explorations Ltd. owns the OK 1 to 8, OK 25 to 32 and OK 55 to 64 full size mineral claims situated in the Whitehorse Mining Division, claim sheet 105K-7. Record numbers are as follows:

<table>
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<tr>
<td>OK 1 to 8</td>
<td>94980 to 94987</td>
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<tr>
<td>OK 25 to 32</td>
<td>95004 to 95011</td>
</tr>
<tr>
<td>OK 55 to 64</td>
<td>95026 to 95035</td>
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</table>

CONTROL GRID

Base lines were cut in east-west directions. Crosslines were cut at 400 foot intervals over the entire group. Approximately 27.5 line-miles of base lines and crosslines were cut. All lines were picketed at 100 foot intervals.

Line cutting was performed by a 3-man crew using a power saw 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. 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 five 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 area. Then, base stations were established at 400 foot intervals along baselines. Two field readings were taken at each base station and the average reading used for subsequent calculations. The elapsed time in loops establishing base stations seldom exceeded 30 minutes. Each loop ended at the same base station it was begun.

After base stations were established, field readings were taken at 100 foot intervals on all crosslines and base lines. Loops were limited to a maximum duration of one hour. Each loop was begun from a previously 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 a 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 these corrections. Thus, diurnal corrections were the only adjustment necessary to field readings. Diurnal variations, which are assumed to be linear, are determined by the difference between the initial and final reading at the base station each loop was begun. The correction added to each field reading in a loop is the diurnal variation multiplied by the ratio: time elapsed when reading taken by total time elapsed in the loop. Diurnal corrections were usually very small.
Because the instrument can be read to only five gammas, all corrections are rounded to the nearest five. Each corrected reading is adjusted to avoid any negative values.

INTERPRETATION

An anomalous area with residual magnetic values in excess of 300 gammas occurs along the northwest corner of the claim group. Limited areal extent of the anomalous zone suggests that it is caused by near-surface concentrations of magnetic minerals. Two common causes of magnetic anomalies in the district are concentrations of pyrrhotite and/or magnetite in favourable metamorphic rocks and basic intrusive rocks. It is not known which of the above situations causes the anomaly.

RECOMMENDATIONS

It is recommended that a geochemical survey and an electromagnetic survey be carried out on the claim group. These surveys will aid in determining the cause of the magnetic anomaly and may detect mineralization not associated with magnetic minerals. The geochemical survey should be confined to the western portion of the claims where the topography is suitable for this survey. However, the entire group should be covered by the electromagnetic survey.

Report submitted by
J. Mackie

Endorsed by
P. Philp, P. Eng.
TIME AND COST DISTRIBUTION

LABOUR

Line cutting

C. Pete,  
Lower Post, B.C.

F. McMillan,  
Lower Post, B.C.

T. Allan,  
Watson Lake, Y.T.

contracted line cutting at $50.00  
(fifty dollars) per line-mile.  
work carried out from July 18, 1966  
to August 3, 1966  
27.5 line miles @ 50.00/line mile  
$ 1,375.00

Magnetometer Survey

B. MacBean  
Vancouver, B.C.  
July 25 to August 10, 1966  
10 days @ $15.00/day  
$ 240.00

J. Mackie  
Vancouver, B.C.  
July 18 to August 3, 1966  
17 days @ $23.50/day  
$ 400.00

TRANSPORTATION

Helicopter  
$ 1,591.00

Fixed Wing  
$ 785.00

Camp costs, ground transportation, miscellaneous  
$ 1,312.00

Total  
$ 5,703.00

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