



REPORT ON AIRBORNE MAGNETIC SURVEY
ON THE
"JAC - TEA - M.T.C. CLAIM GROUP"
WHITEHORSE AREA, YUKON TERRITORY
ON BEHALF OF
PINE LAKE MINING CO. LIMITED (N.P.L.)
017747

GEOLOGICAL SURVEY
JUN 30 1967
Resident Geologist
Whitehorse, Y. T.

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:
P. J. G. G. G.
RESIDENT GEOLOGIST
Approved as to cost in the amount
of: \$ 3200.00
A. S. P. P.
RESIDENT MINING ENGINEER
Accepted as representation work
under Section 53(4) Yukon Quartz
Mining Act.
[Signature]
ADMINISTRATOR
COMMISSIONER OF YUKON

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SEIGEL ASSOCIATES LIMITED

GEOPHYSICAL CONTRACTORS AND CONSULTANTS

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REPORT ON AIRBORNE MAGNETIC SURVEY
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PINE LAKE MINING CO. LIMITED (N.P.L.)

INTRODUCTION:

During the period from April 10 to April 14, 1967 an airborne magnetometer survey of some mineral claims, called the "Jac - Tea - M.T.C. Group" in the Whitehorse Area, Yukon Territory, was performed by Seigel Associates Limited. Field supervision was provided by Mr. Richard O. Crosby, B.Sc., P.Eng., of the staff of Seigel Associates.

These claims are held by Pine Lake Mining Co. Limited (N.P.D.) and are designated:

Jac 1 to 8 incl.	Y8032 to Y8039 incl.
B. Jac 1 to 8 incl.	Y8423 to Y8430 incl.
Go Jac 1 to 8 incl.	Y8431 to Y8438 incl.
R.A.G. 1 to 2 incl.	Y11311 to Y11312 incl.
Tea 1 to 8 incl.	Y11894 to Y11901 incl.
Tea 9 to 16 incl.	Y11902 to Y11909 incl.
M.T.C. 1 to 4 incl.	Y11996 to Y11999 incl.
M.T.C. 5 to 12 incl.	Y12104 to Y12111 incl.
M.T.C. 13 to 16 incl.	Y12112 to Y12115 incl.
M.T.C. 21 to 24 incl.	Y12116 to Y12119 incl.
M.T.C. 17 to 20 incl.	Y12120 to Y12123 incl.
M.T.C. 25 to 28 incl.	Y12124 to Y12127 incl.

The property lies 27 air miles north of Whitehorse, Yukon and one mile east of the eastern shore of Lake Laberge and approximately opposite Richthofen Island. The topography is not especially rugged and access is by a recently completed "cat" road from Whitehorse.

A total field, nuclear precession magnetometer of Newmont design was employed on the survey. This unit has a relative accuracy of about 5 gammas over the operating range. The magnetometer was mounted in a Bell 47C31 helicopter furnished by Klondike Helicopters of Whitehorse.

INTRODUCTION: (Continued)

Flight lines were oriented east-west across the property at intervals of 660 feet. The aircraft was flown at a mean terrain clearance of 300 feet. Two control lines were flown normal to the flight lines at the eastern and western limits of the survey area. A vertical-force, fluxgate Sharpe MF-1 portable magnetometer was used as a base station. Readings were taken every 15 minutes during the aircraft's flying time.

Magnetic data are plotted on overlays to aerial photographs. Lines 1 through 10 are plotted at a scale of 1:3000 and overlay aerial photograph number 1522-346. Lines 11 through 31 are at a scale of 1:2000 and overlay aerial photograph number A10559 -128. Data are contoured at 100 gamma intervals and have not been corrected for regional gradient. The total intensity of the earth's magnetic field in the survey area is about 57,800 gammas. The inclination is about 77° north.

The purpose of the magnetometer survey was to map the distribution of magnetic anomalies in the survey area.

GEOLOGY:

Steeply dipping sedimentary rocks striking generally north-northwest underlie the survey area. Extrusive rocks are reported to underlie the eastern periphery of the claim group. The sediments and volcanics have been faulted and fractured and intruded by both acidic and basic plugs. The intrusion of these granitic rocks was accompanied by the formation of mineral deposits.

DISCUSSION OF RESULTS:

Plate 1, on the scale of 1" = 2000 feet and 1" = 3000 feet shows the contoured magnetic data and the survey area. Plate 2, on the same scale as Plate 1 is the interpretation overlay of the magnetic map and Plate 3, on the scale of 1" = 2000 feet shows the claims involved and their relation to the survey area.

The magnetic map is dominated by a positive anomaly on the east side of the survey area extending southward from line 8 to line 13. The anomaly strikes generally northeast and is abruptly terminated on the northern flank. An east-west fault is interpreted as limiting the northern extent of the anomaly. Depth calculations indicate the source of the anomaly to be around 500 feet below the plane of observation or about 200 feet below the surface of the ground. The contour map suggests that the causative source has a near vertical dip. The remainder of the map is quite featureless with the magnetic background ranging between 1600 and 1800 gammas.

DISCUSSION OF RESULTS: (Continued)

The interpretation overlay shows 6 minor anomalous areas which warrant ground checking.

Mr. Hrkac of Pine Lake Mining Co. Ltd. has indicated the presence of a skarn zone rich in copper, underlying line 14 about 4000 feet west of Lake Laberge. A 50 gamma anomaly was recorded at this position. Five additional anomalies of near equal amplitude and shape were noted on the records and are indicated as anomalous areas to be field checked.

CONCLUSIONS AND RECOMMENDATIONS:

The present survey has revealed one strong anomalous zone which had been previously noted by a ground magnetic survey. Six minor anomalous zones, one occurring over a known copper showing, have also been recorded.

These minor zones should be detailed by ground magnetic traverses spaced 200 feet with observations recorded every 50 feet.

Respectfully submitted,

SEIGEL ASSOCIATES LIMITED

R. O. Crosby per [Signature]

Richard O. Crosby, B.Sc., P.Eng.

ROC:ef

SEIGEL ASSOCIATES, LIMITED

GEOPHYSICAL CONTRACTORS AND CONSULTANTS

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May 26, 1967

AFFIDAVIT OF EXPENDITURE

This is to certify that an airborne magnetometer survey executed by Seigel Associates Limited on the JAC-TEA-M.T.C. Claim group Whitehorse area, Yukon territory on behalf of Pine Lake Mining Co. Limited (N.P.L.) during the period from April 10, 1967 to April 14, 1967.

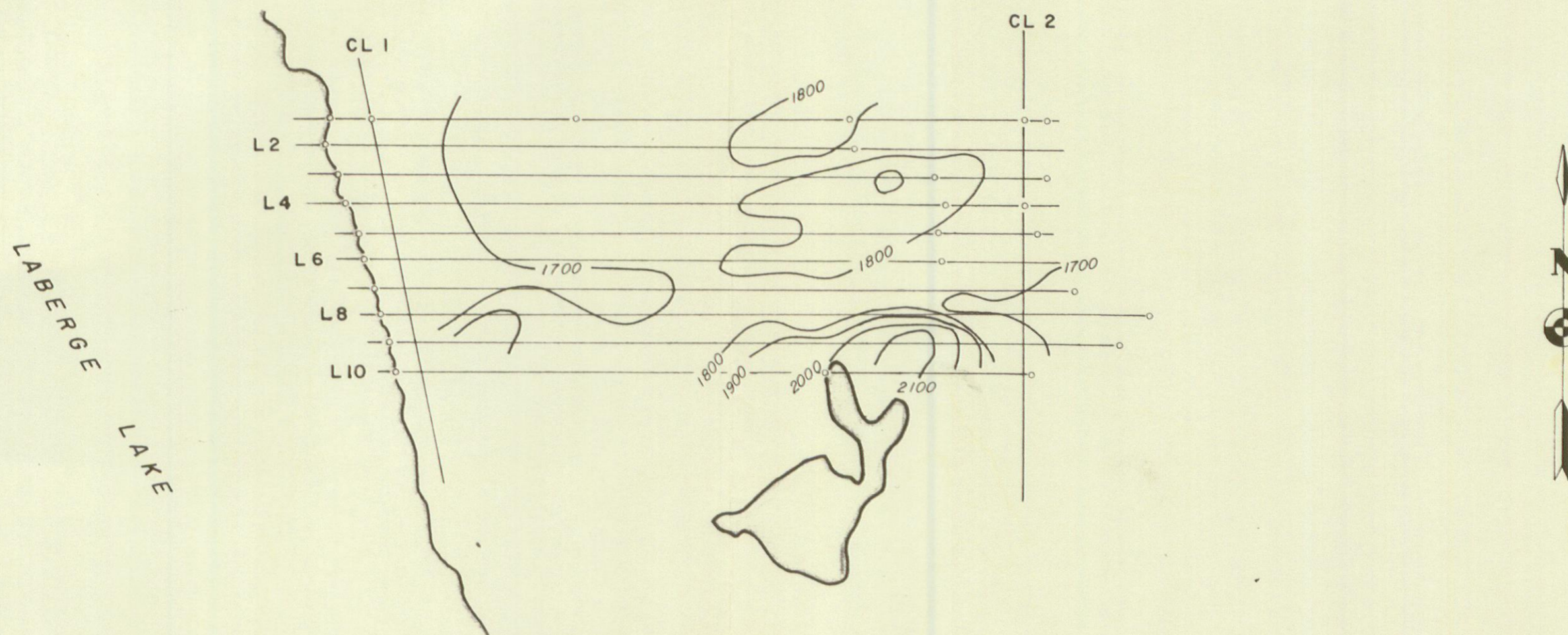
The charge levied for this survey by Seigel Associates Limited is \$3,200.00.

Certified Correct

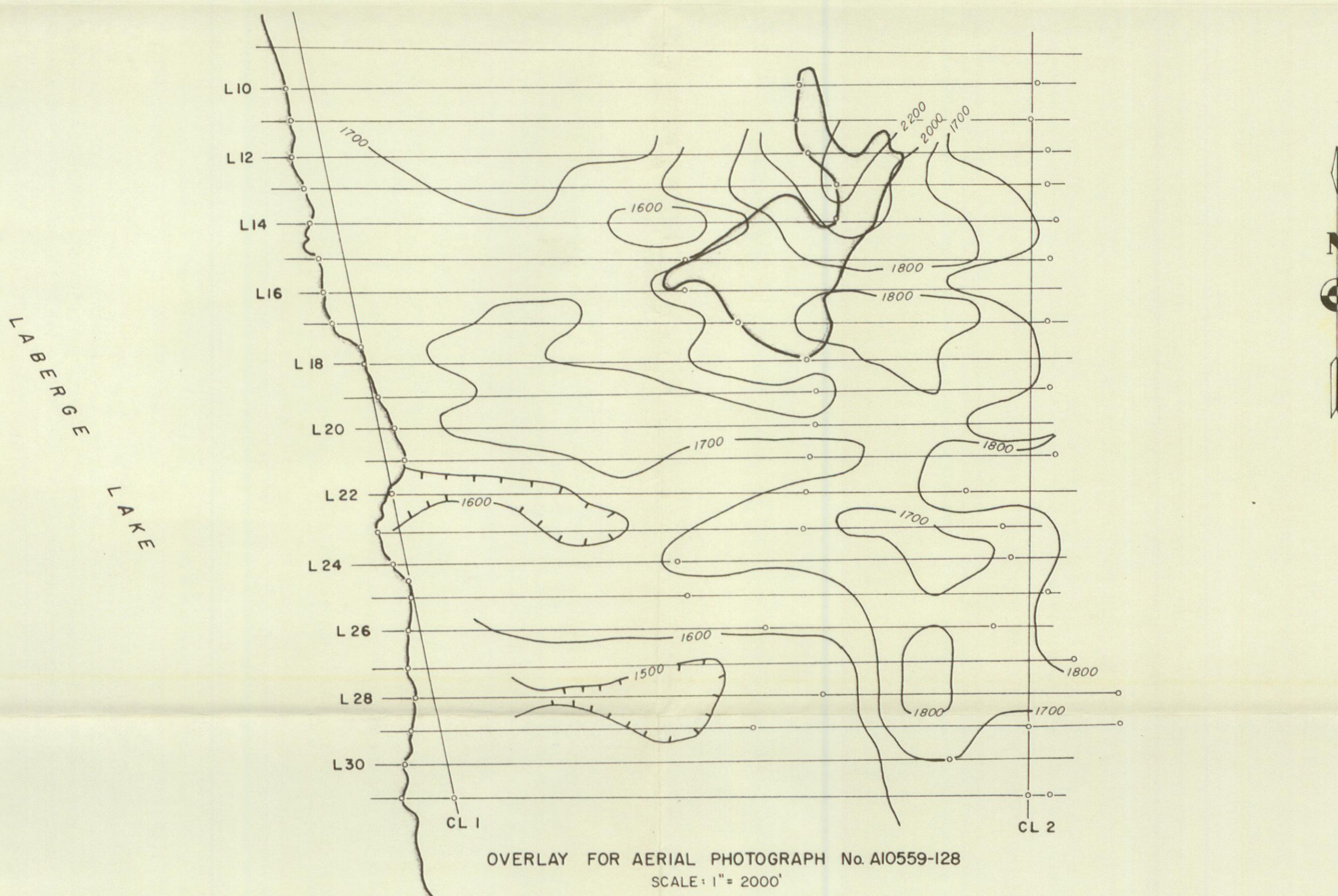
SEIGEL ASSOCIATES LIMITED

Harold O. Seigel
Per: Harold O. Seigel, Ph.D., P.Eng.
President

§



OVERLAY FOR AERIAL PHOTOGRAPH No. 1522 346
SCALE: 1" = 3000'



OVERLAY FOR AERIAL PHOTOGRAPH No. A10559-128
SCALE: 1" = 2000'

LEGEND:

○—○—○ FLIGHT LINE WITH VISUAL TIE POINTS

—1700— ISOMAGNETIC CONTOUR

⊖ MAGNETIC DEPRESSION

NORMAL TERRAIN CLEARANCE 300 FEET

NO CORRECTION HAS BEEN MADE FOR REGIONAL VARIATION

PLATE I

PINE LAKE MINING CO. LTD.

WHITEHORSE MINING DISTRICT, YUKON
LABERGE PROJECT

AIRBORNE MAGNETIC SURVEY

ISOMAGNETIC CONTOURS

SURVEY BY SEIGEL ASSOCIATES LIMITED
APRIL, 1967

LABERGE LAKE

POSSIBLE FAULT

(3)

(2)

ZONE A



OVERLAY FOR AERIAL PHOTOGRAPH No. 1522 346
SCALE: 1" = 3000'

LABERGE LAKE

(3)

(2)

ZONE A

(4)

(5)

(6)

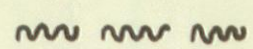


OVERLAY FOR AERIAL PHOTOGRAPH No. A10559-128
SCALE: 1" = 2000'

LEGEND:

(3)

ANOMALOUS AREAS



POSSIBLE FAULT

PLATE 2

PINE LAKE MINING CO. LTD.

WHITEHORSE MINING DISTRICT, YUKON

LABERGE PROJECT

AIRBORNE MAGNETIC SURVEY

INTERPRETATION OVERLAY

SURVEY BY SEIGEL ASSOCIATES LIMITED
APRIL, 1967

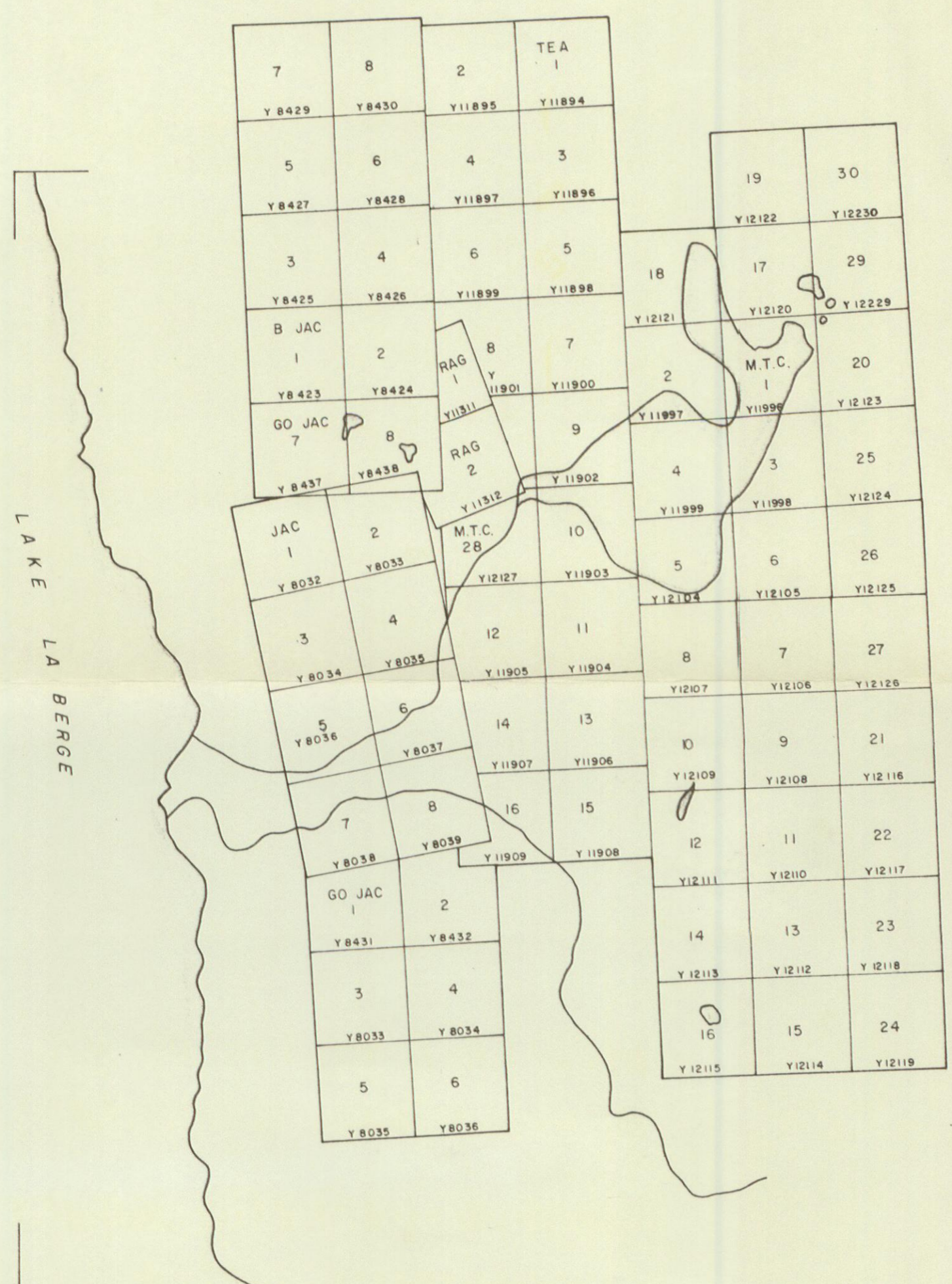


PLATE 3
PINE LAKE MINING CO. LTD.
 WHITEHORSE MINING DISTRICT, YUKON
 LA BERGE PROJECT
AIRBORNE MAGNETIC SURVEY
 CLAIM LOCATIONS

SCALE : 1" = 2000'

SURVEY BY SEIGEL ASSOCIATES LIMITED
 APRIL, 1967

OVERLAY FOR AERIAL PHOTOGRAPHY No. A10559-128
 NOTE: CLAIMS ARE NOT SURVEYED.