

1664

A GEOPHYSICAL REPORT ON
AN INDUCED POLARIZATION SURVEY

CL CLAIM GROUP 92P-15/10

KAMLOOPS MINING DIV. BRITISH COLUMBIA

PROPERTY: CL CLAIM GROUP

LOCATION: 76 MILES NORTH OF KAMLOOPS
59° 120 N.W.

REPORT BY: PETER HIRST, P. Eng.

CLAIM OWNER: ANACONDA AMERICAN BRASS LTD.

DATE OF WORK: 1 JUNE - 22 AUG. 1968

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Maps:

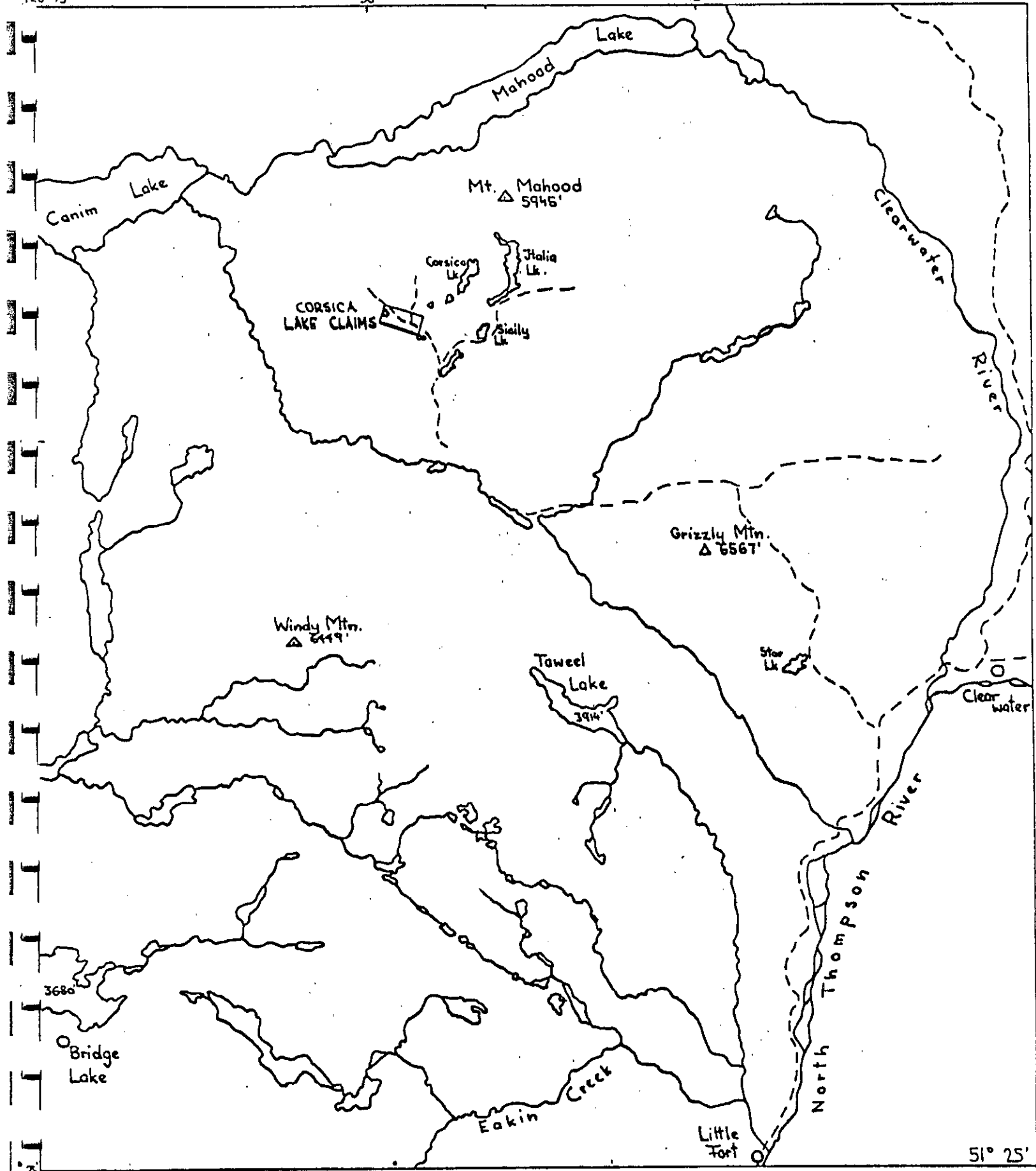
Location Map	Front Plate
1" = 400' I.P. Map	In Pocket
1" = 400' Claim & Line Location Map	In Pocket

120° 45'

30'

15'

120°



LOCATION & ACCESSIBILITY CORSICA LAKE CLAIMS

- Roads
 - Streams
 - Claims
- Scale: 1 inch = 4 miles

51° 25'

Introduction

A geophysical induced polarization survey was made over parts of the CL claim group during the period 1 June to 22 August 1968. The field work was under the general supervision of P. E. Hirst and the instrument operator was Paul Cartwright.

Location and Accessibility

8

The Corsica Lake claims are located at latitude $51^{\circ} 48'$ N and longitude $120^{\circ} 20'$ W, approximately 76 miles north of Kamloops, B. C. (see location map). A gravel logging road which leaves B. C. Highway #5 at Clearwater, B. C., provides access to the claim group. The claims are located at approximately mile 26 on the logging road.

Purpose of the Induced Polarization Survey

Geochemical surveys in the area produced anomalous results in molybdenum values. Outcrop on the CL claims is very scarce. The cause of the geochemical anomaly could therefore not be determined. Induced polarization will locate "metallic" mineralization in covered areas and was therefore used to locate specific areas of "metallic" mineral concentration.

Survey Equipment and Field Procedure

The geophysical concept of Induced Polarization (I.P.) is thought to be the electro-chemical phenomenon that occurs at a solution - "metallic" mineral interface when the mode of conduction changes from ionic to electronic. When a D.C. current is transmitted through a "grounded" dipole the measured voltage in a nearby dipole will not drop instantly to the S.P. voltage, but will decay with time. This voltage decay is the measurable I.P. effect which results from various types of polarization or blocking. The most predominant type is the solution - "metallic" mineral interface.

This effect is measured in various ways and is reported as the I.P. parameter. The variation in instrumentation and mathematical treatment of the method results in such terms as "percent frequency effect", "chargeability", "phase angle" and "metal factor". The parameter used in our equipment is the concept of phase angle. The phase angle is the angle whose tangent is the area under the voltage decay curve of the receiver dipole when the current is off divided by the area when the current is on, assuming the current on and off times are equal.

The equipment used for the survey was manufactured by Anaconda. The transmitter uses a pulse time of 5 seconds. The receiver responds to the current on and off voltages and from this information a phase angle is calculated. The measurements are made along a surveyed line using a pole-dipole electrode configuration with a variable spacing between current and near leg of the receiver dipole. Normally at least two "a" spacings are used for each traverse. The plotting point is midway between the current electrode and the near potential electrode. The phase angle is reported in minutes of phase shift.

Details of the Survey

Chain and compass lines were cut and surveyed with stations marked at 100 foot intervals along each line. (See Claim and Line Location Map). Readings were taken every 200 feet with spreads of 200 and 400 feet. The plotting point is midway between the current electrode and the near potential electrode.

Results of the Induced Polarization Survey

The location of the I.P. lines relative to the claim boundary is shown on the claim and line location map. The readings are plotted in profile form for each line traversed (see I.P. map). The horizontal scale is one inch to 400 feet. The vertical scale on each profile is one inch to 50 minutes of phase shift. Readings in excess of 30 minutes are considered anomalous.

The induced polarization survey indicated several areas of weak "metallic" mineral concentration. Further evaluation of the anomalous area will require some form of physical testing such as trenching or drilling.



P. E. Hirst P. Eng.

PEH:rb
Sept. 30, 1968

APPENDIX I
ASSESSMENT DETAILS

Property: CL Claim Group Mining Division: Kamloops
 Owner: Anaconda American Brass Ltd. Province: British Columbia
 Location: 76 miles North of Kamloops, Date of work: 1 June to 22 Aug, 1968
 B. C.

Type of Survey: Geophysical (Induced Polarization)
 Operating Man Days: 71
 Operating Crew Days: 17.75
 Supervisory Man Days: 4
 Drafting & Typing: 2

Personnel Employed on Survey

Supervision and Interpretation: P. E. Hirst
 Drafting and Typing: Phil Emery
 Ruth Broderick

Field Technicians:

<u>Name</u>	<u>Category</u>	<u>Rate</u>	<u>Days Worked</u>	<u>Period</u>	<u>Wage</u>
Paul Cartwright	Instrument Operator	\$500/mo.	17.75	June 1, 4, 5(.5), 6, 7 (.25), 9, July 11, 12, 13, 14, 15, 21 to 26, Aug. 21, 22	\$335.50
Al Stewart	Helper	475/mo.	17.75	same	314.95
Terry Hammel	Helper	475/mo.	15.75	June 1, 4, 5(.5), 6, 7(.25), 9, July 11, 12, 13, 14, 15, 21 to 26	279.95
Norm Burhoe	Helper	475/mo.	15.75	same	279.95
Peter Maughan	Helper	425/mo.	2	Aug. 21, 22	31.40
Frank Skelton	Helper	450/mo.	2	Aug. 21, 22	<u>33.00</u>
					\$ 1,274.75

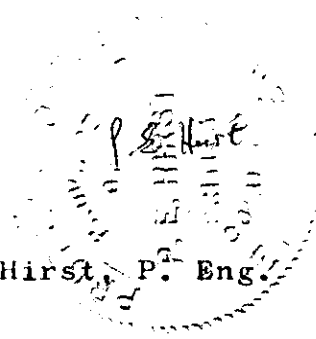
P. E. Hirst

P. E. Hirst, P. Eng.

APPENDIX II
STATEMENT OF COSTS

Field Crew:

Salaries (As per Appendix I)	\$ 1,274.75
Transportation @ \$15.00/crew/day	266.25
Room & Board @ \$8.00/man/day in camp (4.75 days)	152.00
@\$11.00/man/day in motel (13 days)	572.00
Overhead @ 0.5 (Salaries + Room + Board)	999.37
Drafting and typing	50.00
Supervision	<u>100.00</u>
	\$ 3,414.37



P. E. Hirst, P. Eng.

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 1st
day of October 1968, A.D.

P. E. Hirst

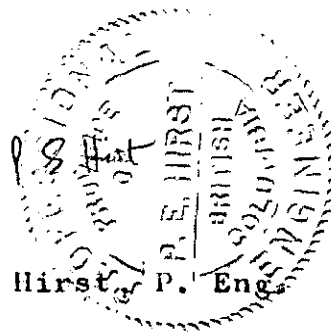
Julie Jensen
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.
SUB - MINING RECORDER

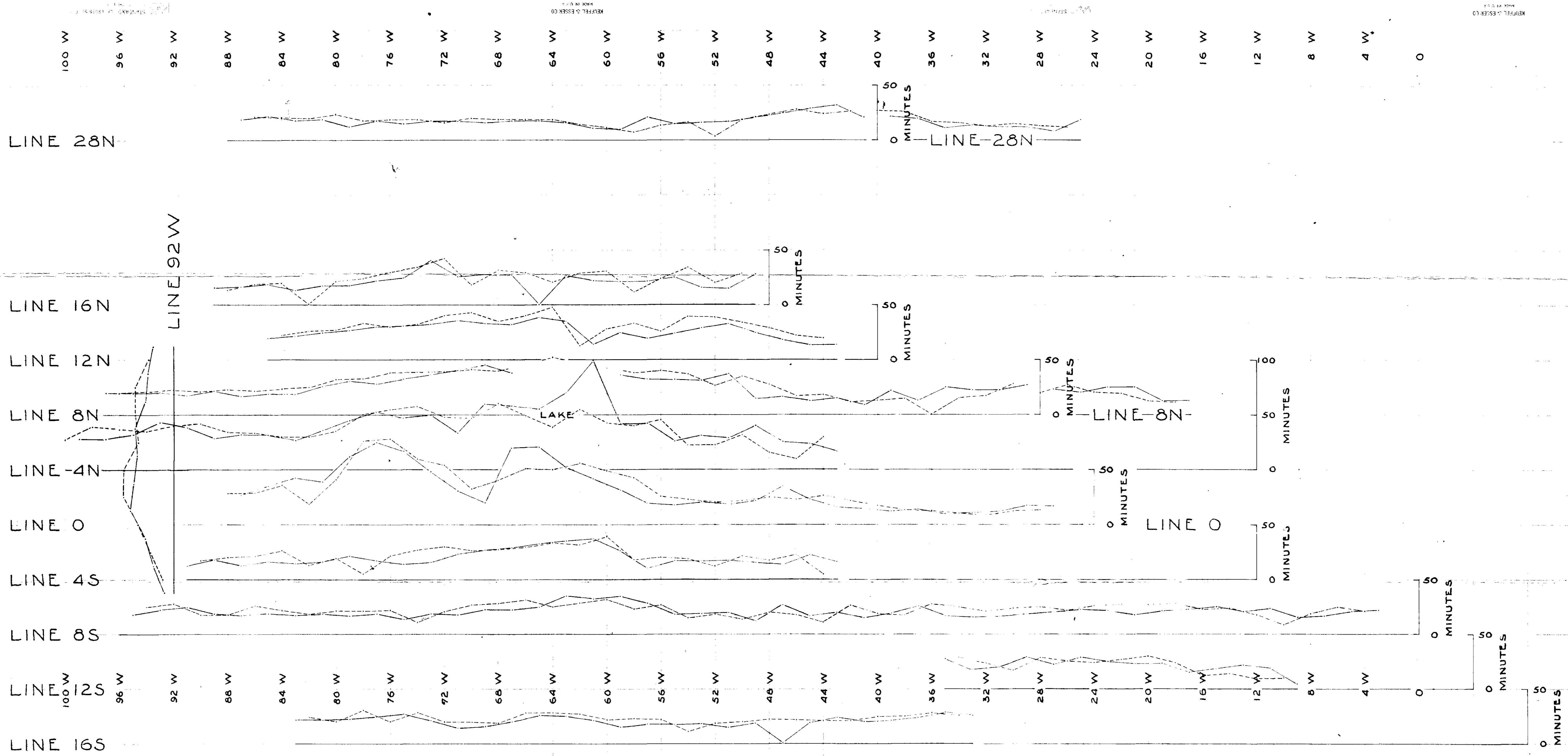
STATEMENT OF OPERATOR'S QUALIFICATIONS

I, P. E. Hirst, do make the following statement:

- 1) Paul Cartwright was the instrument operator for the geophysical survey conducted by Anaconda American Brass Ltd. on the CL claims.
- 2) Paul Cartwright had been working as an instrument operator for five months prior to this survey.
- 3) Paul Cartwright has been trained by Anaconda personnel to be an instrument operator and I consider him fully qualified.

P. E. Hirst P. Eng.





TO ACCOMPANY GEOPHYSICAL REPORT BY P.E. HIRST DATED SEPT. 30, 1968
(P. ENG.)

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 11991
MAP 1

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION

CORSICA LAKE
KAMLOOPS M.D., B.C.

5 SECOND U.L.F.

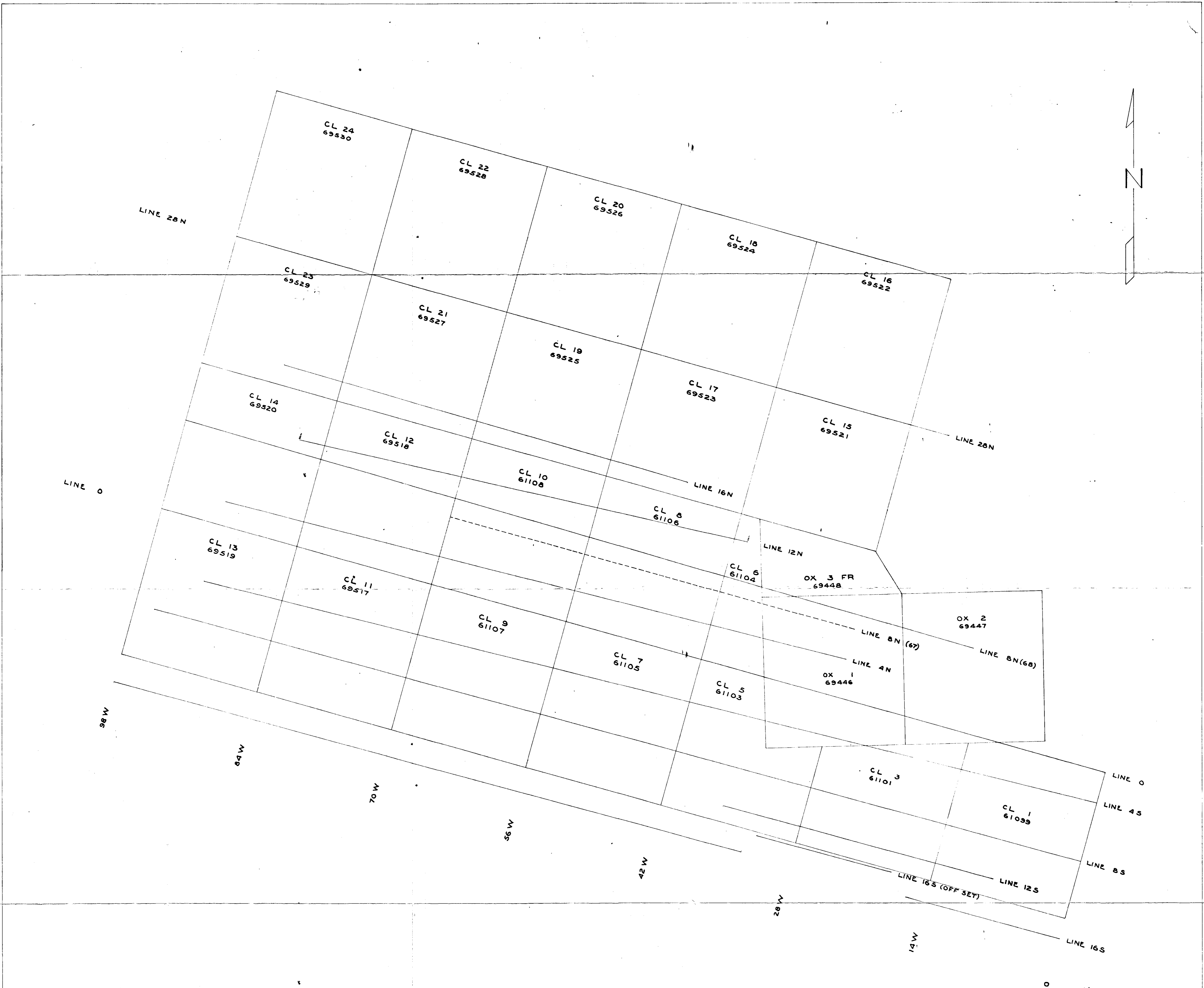
SCALES: HORIZONTAL 1" = 400' — VERTICAL 1" = 50 MINUTES
— 200 FOOT SPREAD — 400 FOOT SPREAD

MAY-JUNE, 1968 DATA BY PAUL CARTWRIGHT
REVISED JULY 30, 1968
AUGUST 22, 1968

P.E. Hirst
Sept. 30, 1968

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TO ACCOMPANY GEOPHYSICAL REPORT BY P.E. HIRST DATED SEPT. 30, 1968
(P. ENG.)

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1664 MAP 2

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

CORSICA LAKE
KAMLOOPS M. D., B. C.
SCALE: 1" = 400'

Y.S. Hirst
Sept. 30, 1968
FIG. 11

MAP SHOWS MINERAL CLAIMS AND PICKET LINE RELATIONSHIP. CLAIM NAME AND RECORD NUMBER ARE GIVEN.

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