1193

A GEOPHYSICAL REPORT ON AN INDUCED POLARIZATION SURVEY P.C. CLAIM GROUP, WILLOW CREEK AREA KAMLOOPS MINING DISTRICT, BRITISH COLUMBIA

92P/9W

PROPERTY: PC CLAIM GROUP PC 1-92

LOCATION: 14 MILES WNW OF LITTLE FORT, B.C. 51° 120° NE

REPORT BY: Thomas A. Conto, B.Sc.

CLAIM OWNER: Anaconda American Brass Ltd.

DATE OF WORK: 30 July-30 August 1967

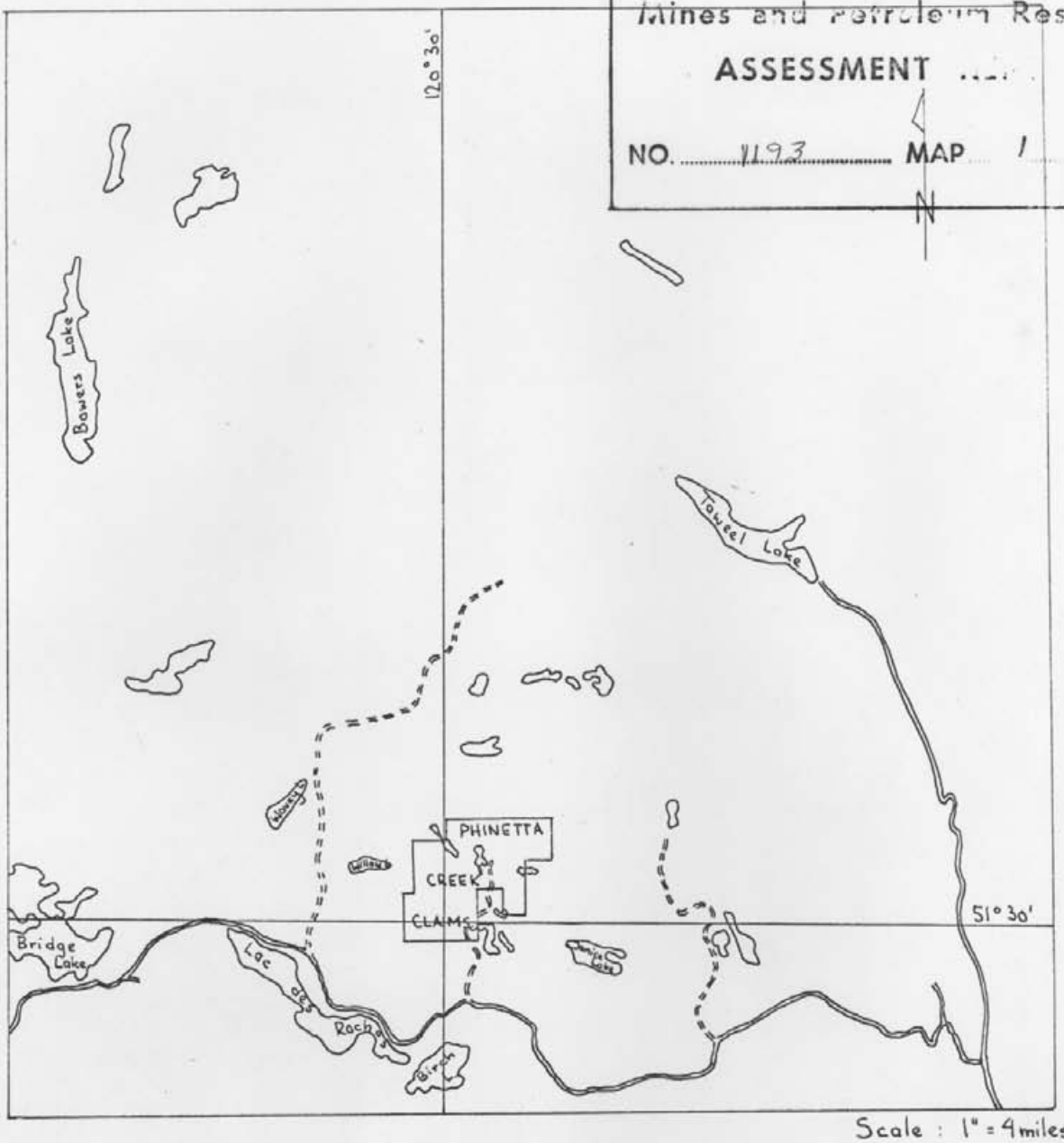
92 P - 7/E/4/16

9 February 1968

CONTENTS

MAPS

Department of
Mines and Petroleum Resources
ASSESSMENT ... 1
NO. 1193 MAP 1



LOCATION MAP

PHINETTA CREEK CLAIMS
WILLOW CREEK AREA
KAMLOOPS M.D. B.C.

Introduction

Anaconda American Brass Limited staked a group of claims in the Willow Creek area of British Columbia during the 1967 field season. The PC Claim Group as regrouped will consist of the following 38 claims:

PC 2, PC 4, PC 6, PC 8, PC 10, PC 14, PC 16, PC 18
PC 19, PC 20, PC 21, PC 22, PC 23, PC 24, PC 26, PC 28
PC 30, PC 35, PC 37, PC 38, PC 39, PC 40, PC 41, PC 42
PC 43, PC 44, PC 45, PC 46, PC 47, PC 49, PC 53, PC 54
PC 55, PC 56, PC 57, PC 58, PC 59, PC 60

A geophysical induced polarization survey was made over part of the PC claim group during the period July 30 to August 29, 1967. A four-man crew spent 19 days conducting the survey over the claim group. The field work was under the general supervision of Thomas A. Conto and the instrument operator was Paul Cartwright.

Location and Accessibility

The PC claims are located at latitude 51°30' and longitude 120°30', approximately 14 miles WNW of Little Fort, British Columbia (See Fig. 1). They are approximately 3 miles north of the gravel road that connects Bridge Lake and Little Fort, B.C. A logging road leads from this road to the center of the claim group.

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 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 equal to 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. From an alternate point of view a phase angle difference can be measured from a R-C bridge tripole; each leg of the bridge being influenced by different

Survey Equipment and Field Procedure (cont.)

equipotential surfaces.

The equipment used for the survey was manufactured by Anaconda. The transmitter has a cycling rate of 1 cycle per second. The receiver is a simple R-C bridge network which is manipulated to a null position for each movement of the various electrodes. The measurements are made along a surveyed line with a variable spacing between the near current electrode and middle potential electrode. The plotting point is midway between the mid-potential electrode and the current electrode. The phase angle is reported in minutes of phase shift and represents the difference between the two legs of the tripole.

Purpose of the Geophysical Survey

Geochemical reconnaissance in the Willow Creek area during the 1966 field season produced some anomalous results. The PC Claim area is 95% covered by glacial drift which makes visual evaluation difficult. Induced polarization was used to indicate areas of concentrated "metallic" mineralization. These areas in turn will be evaluated in terms of economic mineralization.

Details of the Survey

Claim lines were primarily used for station control. Additional chain and compass lines were surveyed where necessary. Stations were marked at 100-foot intervals along each line. Readings were taken at 200-foot intervals with electrode spreads of both 200 and 400 feet. The plotting point is midway between the mid-potential electrode and the current electrode.

Results of the Induced Polarization Survey

The results are plotted in profile form for each line traversed. The line number indicates the north or west position of the line on our grid. The station number indicates the west or north position of each plotting point. The horizontal scale for the station positions is 400 feet per inch. The vertical scale represents the difference in phase shift between the far and near leg. Readings in excess of 30 minutes are considered anomalous.

The anomalous areas indicate zones where there is a concentration of "metallic" mineralization. Since most of the areas are covered by glacial drift, additional testing is necessary to evaluate the economic potential of the anomalous areas.

Thomas A. Conto

TAC:bs
9 February 1968

APPENDIX I

ASSESSMENT DETAILS

Property:	PC Claim Group	Mining Division:	Kamloops
Owner:	Anaconda American Brass Ltd.	Province:	British Columbia
Location:	14 Miles WNW of Little Fort, B.C.	Date Started:	30 July 1967
		Date Finished:	29 August 1967

Type of Survey:	Geophysical (Induced Polarization)
Operating Man Days:	76
Operating Crew Days:	19
Supervisory Man Days:	8
Drafting & Typing:	2

Personnel Employed on Survey

Supervision & Interpretation:
Thomas A. Conto

Drafting & Typing:
Phil Emery
Betty Saunders

Field Technicians:

NAME	CATEGORY	RATE	DAYS WORKED	PERIOD	WAGE
Paul Cartwright	Instrument Operator	425/mo	19	July 30, 31 Aug. 1, 2, 3, 5, 8, 9, 10, 11, 14, 15, 16, 17, 20, 21, 22, 23, 29	300.09
Sidey Timmins	Helper	425/mo	19	Same	300.09
Larry Blain	Helper	425/mo	19	Same	300.09
Harold Marsden	Helper	375/mo	19	Same	265.14
				Total	$1,165.41

Thomas A. Conto

APPENDIX II

STATEMENT OF COSTS

Field Crew:		
Salaries (as per Appendix I)		1,165.41
Transportation @ $15.00/day		285.00
Room and Board @ $5.00/man/day		380.00
Drafting and Typing		50.00
Supervision		200.00
	Total	$2,080.41

Thomas A. Conto

Declared before me at the City of Vancouver, in the Province of British Columbia, this 16 day of February 1968, A.D.

P. S. Hirt

A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder

C E R T I F I C A T E

I, Thomas A. Conto, of the town of Britannia Beach, Province of British Columbia, do hereby certify that:

1) I am a geophysicist residing at Britannia Beach, British Columbia.

2) I am a graduate of the University of Utah with a B.Sc. Degree (1960) in Geophysics.

3) I am an associate member of the Society of Exploration Geophysicists.

4) I have been practising my profession for five years.

5) I have no direct or indirect interest, nor do I expect to receive any interest, direct or indirect, in the property of Anaconda American Brass Ltd.

6) The statements made in this report are based on a study of published literature and unpublished private reports and geophysical data.

Dated at Britannia Beach
this 9th day of February 1968

Thomas A. Conto, B.Sc. Geophysics

STATEMENT OF OPERATOR'S QUALIFICATIONS

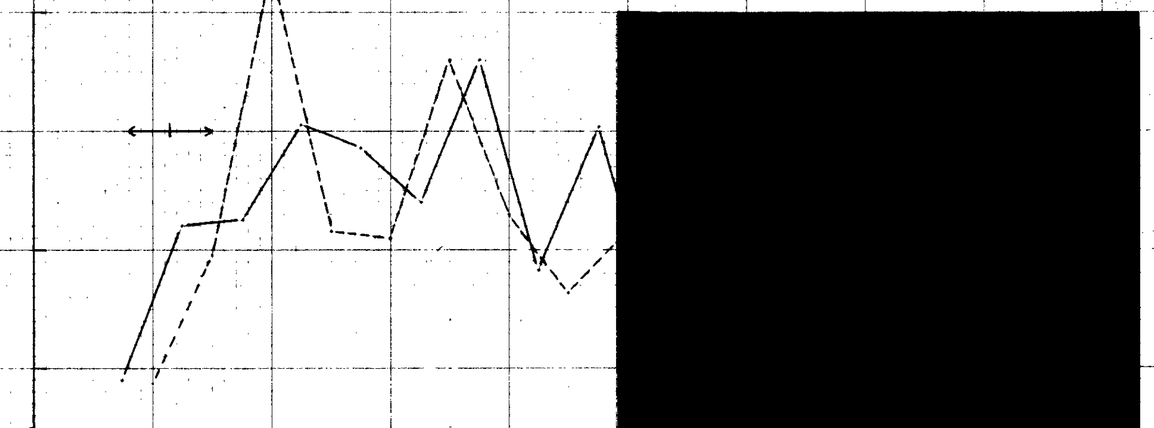
I, Thomas A. Conto, do make the following statement:

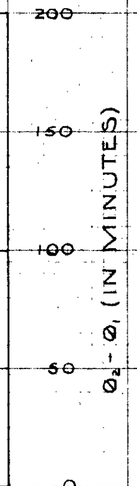
1) Paul Cartwright was the instrument operator for the Geophysical Survey conducted by Anaconda American Brass Ltd. on the PC Claim Group.

2) Paul Cartwright is an undergraduate student at the University of British Columbia majoring in geophysics.

3) I trained Paul Cartwright to operate the instrument and consider him fully qualified.

Thomas A. Conto





80n 84n 88n 92n 96n 100n 104n 108n 112n 116n 120n

LINE 76W

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS M.D., B.C.

P.D.R.-H.

SCALES:
HORIZONTAL- 1" = 400'
VERTICAL - 1" = 50 MINUTES

——— 200 FOOT SPREAD
- - - - - - - 400 FOOT SPREAD

DATA BY P. CARTWRIGHT AUGUST 1967

1193

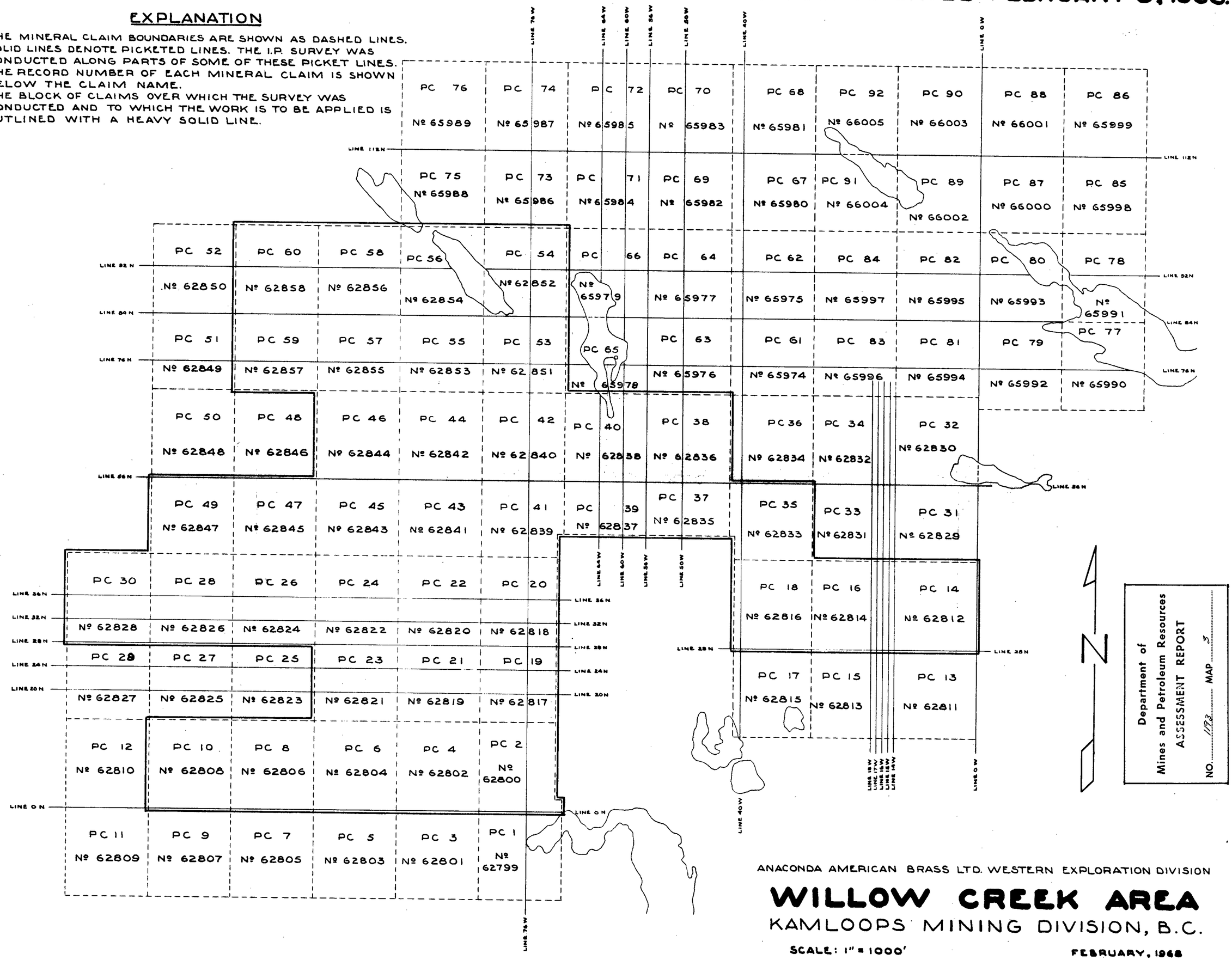
THIS MAP IS TO ACCOMPANY THE GEOPHYSICAL REPORT BY T.A. CONTO DATED FEBRUARY 9, 1968.

KEUFFEL & ESSER CO.
MADE IN U.S.A.

THIS MAP IS TO ACCOMPANY THE GEOPHYSICAL REPORT BY T.A.CONTO DATED FEBRUARY 9, 1968.

EXPLANATION

THE MINERAL CLAIM BOUNDARIES ARE SHOWN AS DASHED LINES. SOLID LINES DENOTE PICKETED LINES. THE I.P. SURVEY WAS CONDUCTED ALONG PARTS OF SOME OF THESE PICKET LINES. THE RECORD NUMBER OF EACH MINERAL CLAIM IS SHOWN BELOW THE CLAIM NAME.
THE BLOCK OF CLAIMS OVER WHICH THE SURVEY WAS CONDUCTED AND TO WHICH THE WORK IS TO BE APPLIED IS OUTLINED WITH A HEAVY SOLID LINE.



ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS MINING DIVISION, B.C.

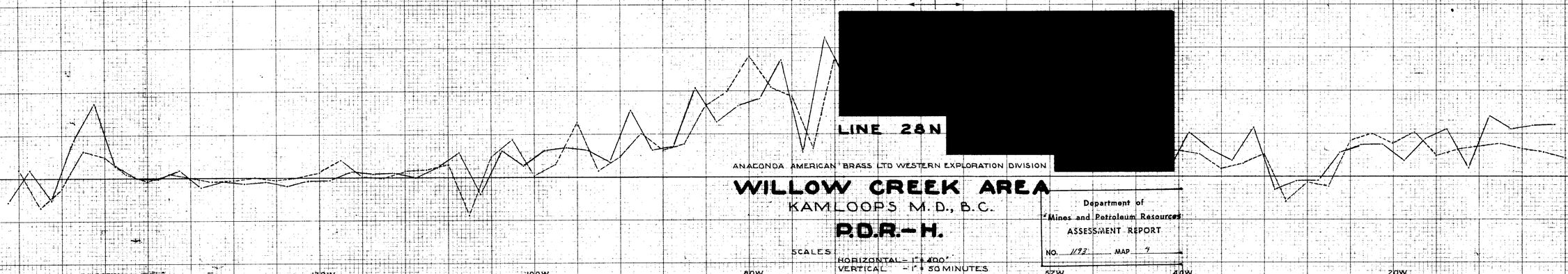
SCALE: 1" = 1000'

FEBRUARY, 1968

1193

PLATE 1

THIS MAP IS TO ACCOMPANY THE GEOPHYSICAL REPORT BY T.A.CONTO DATED FEBRUARY 9, 1968.



LINE 28N

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS M.D., B.C.

P.D.R.-H.

SCALES

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VERTICAL - 1" = 50 MINUTES

——— 200 FOOT SPREAD
- - - - - 400 FOOT SPREAD

DATA BY P.CARTWRIGHT AUGUST 1967

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1193 MAP 4

KEUFFEL & ESSER CO. MADE IN U.S.A. STANDARD @ CROSS SECTION 8 X 10 TO THE INCH

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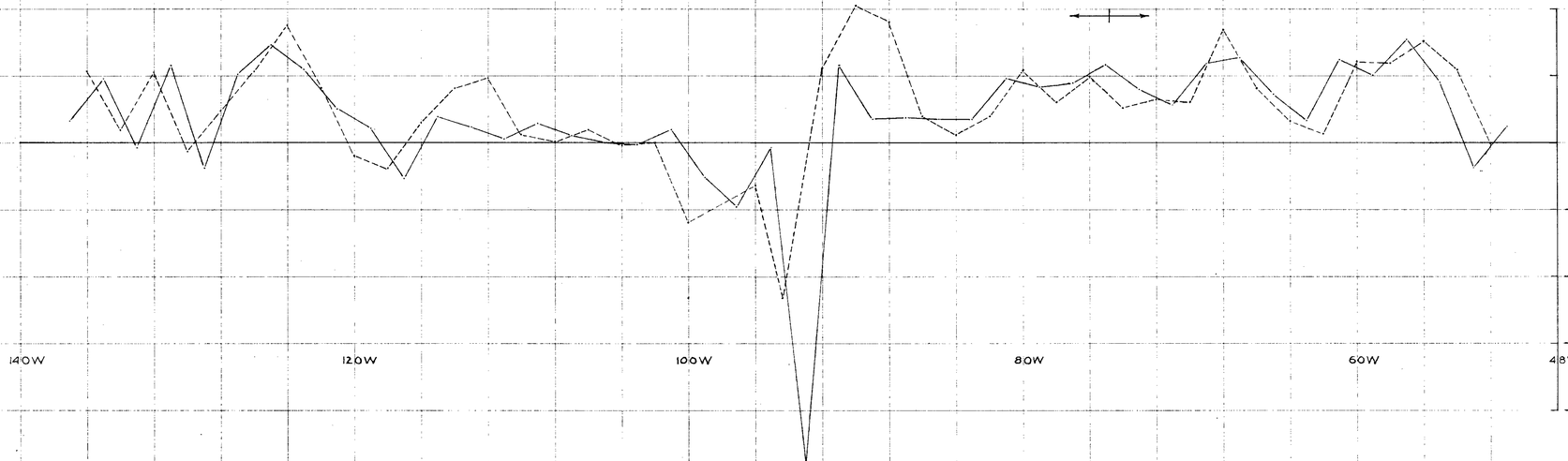

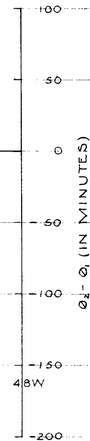

LINE 56 N

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS M.D., B.C.

P.D.R.-H.

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

DATA BY P. CARTWRIGHT AUGUST 1967

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1193 MAP

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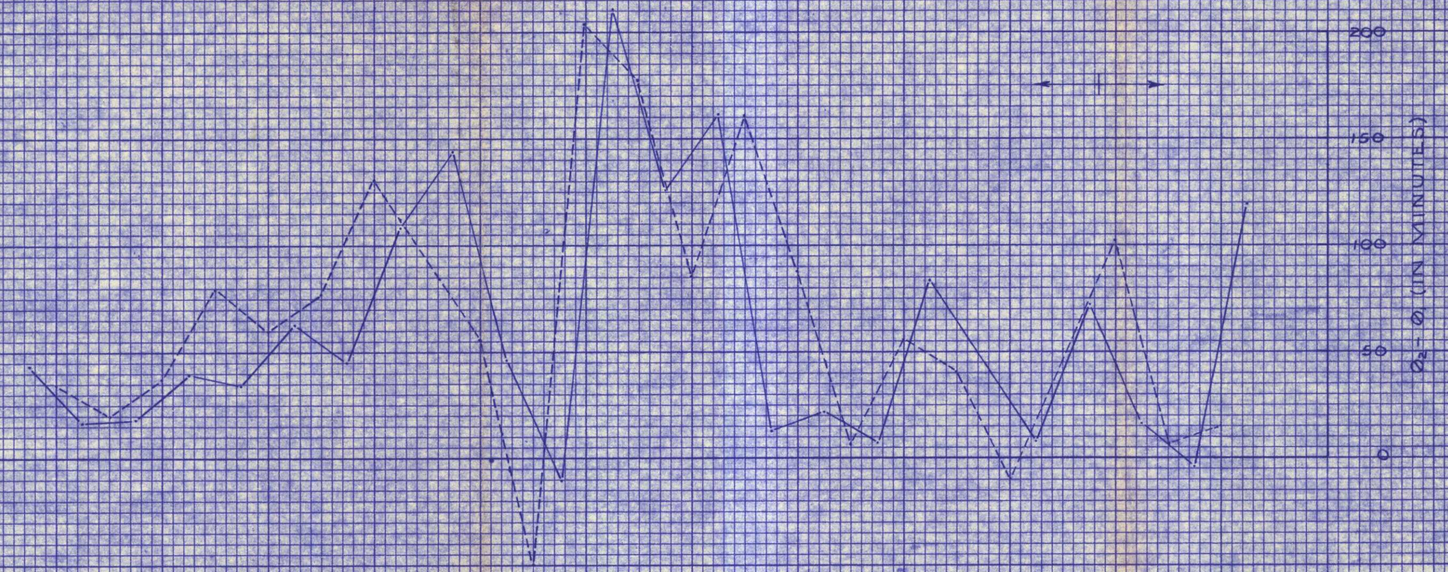

LINE 76 N

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS M.D., B.C.

P.D.R.-H.

SCALES:
HORIZONTAL = 1" = 400'
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200 FOOT SPREAD
400 FOOT SPREAD

DATA BY P. CARTWRIGHT AUGUST 1967

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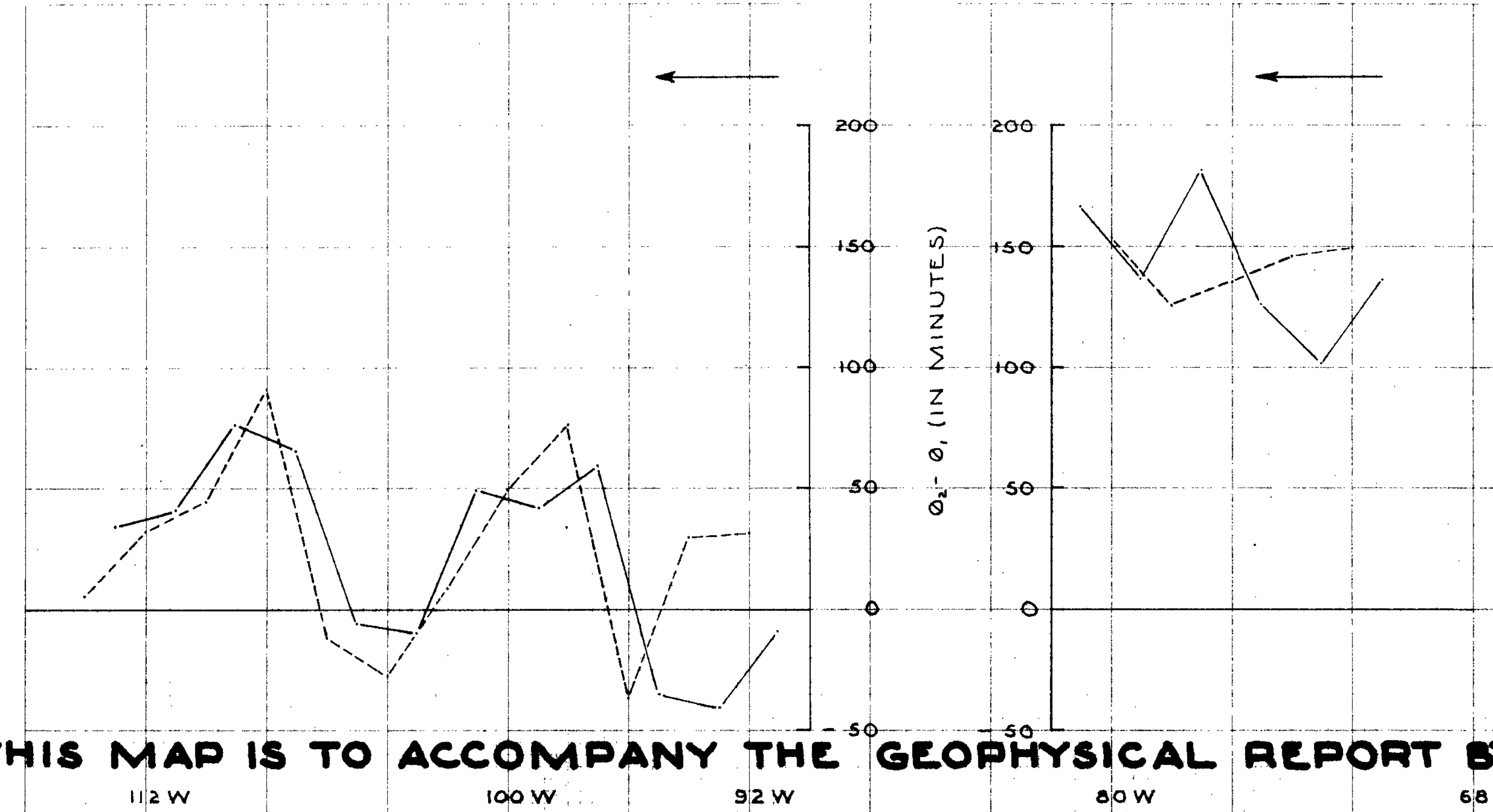

LINE 92 N

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

WILLOW CREEK AREA

KAMLOOPS M.D., B.C.

P.D.R.—H.

SCALES:

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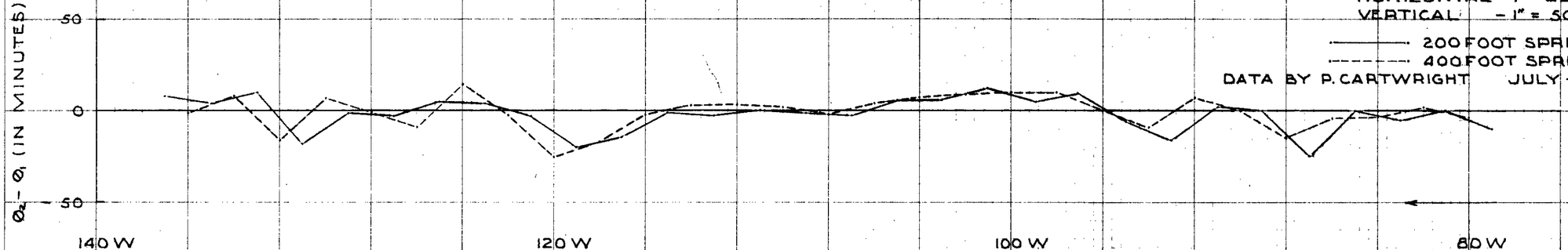
DATA BY P. CARTWRIGHT JULY - AUGUST 1967



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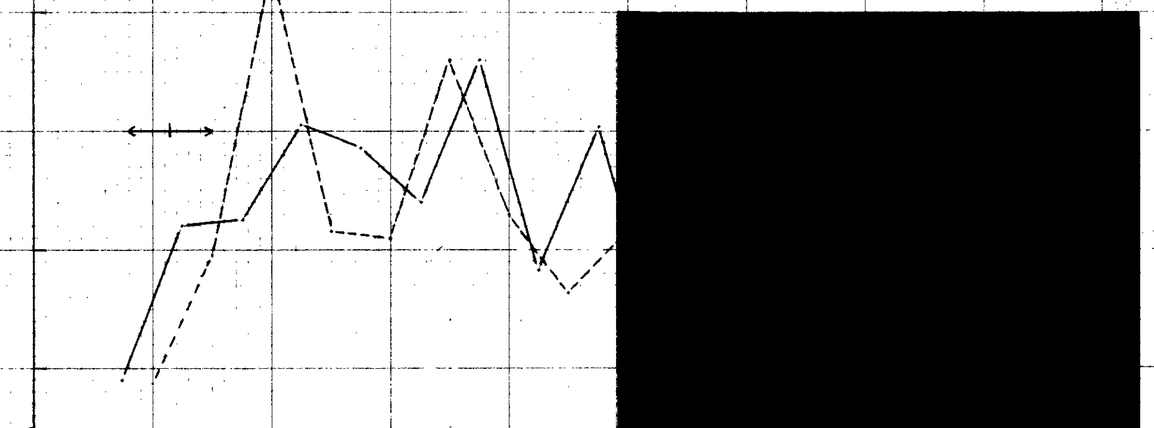

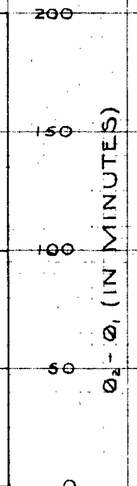

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