

A GEOPHYSICAL REPORT ON
AN INDUCED POLARIZATION SURVEY
JM #1 CLAIM GROUP

OSOYOOS MINING DIVISION, BRITISH COLUMBIA

PROPERTY: JM #1 CLAIM GROUP

LOCATION: 6 MILES NW OF HEDLEY, B.C.
49° 120° SE

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

CLAIM OWNER: Anaconda American Brass Lt

DATE OF WORK: 30 May - 22 June 1968

1617

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Plate No. 1.	(In Pocket)
Plate No. 2.	(In Pocket)
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Introduction

The 78 claims of the original JM claim area were staked during the 1967 field season.

The 40 claims referred to as the JM No. 1 Claim Group consist of the following 40 claims:

JM 1 to JM 8, JM 12, JM 14, JM 23, JM 25 to JM 30, JM 43 to JM 46, JM 48, JM 50, JM 52, JM 54, JM 58, JM 61 to JM 64, JM 66 to JM 72, JM 74, JM 75, and JM 77.

A geophysical induced polarization survey was made over portions of the NM No. 1 Claim Group during the period of 30 May to 22 June 1968. The field work was under the general supervision of Thomas A. Conto and the instrument operator was David Broswick.

Location and Accessibility

The JM claims are due west of McNulty Creek and approximately six miles northwest of Hedley in the Osoyoos Mining Division, B. C. (See location insert Plate No. 1) The group can be reached by a fire access road which leaves the main Hedley-Princeton Highway two miles west of Hedley.

Purpose of the Induced Polarization Survey

Geochemical surveys in the area produced anomalous results in copper, lead, zinc and molybdenum. Outcrop on the JM Claims is very scarce. The cause of the geochemical anomaly could therefore not be determined. Induced polarization will locate "metallic" mineralization 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. 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 Plate No. 1. The readings are plotted in profile form for each line traversed. (See Plates 2 and 3) The horizontal scale is one inch to 400 feet. The vertical scale of each profile is one inch to 50 minutes of phase shift. Readings in excess of 30 minutes are considered anomalous.

The S.W. grid (Plate 3) did not exhibit anomalous readings. The N.E. grid (Plate 2) exhibited moderate to strong anomalous conditions over portions of the lines. It is not possible to evaluate the economic potential of the indicated "metallic" mineralization without further physical testing of the mineralized areas.



Thomas A. Conto

TAC:rb
29 August 1968

APPENDIX I

ASSESSMENT DETAILS

Property: JM No. 1 Claim Group Mining Division: Osoyoos
 Owner: Anaconda American Brass Ltd. Province: British Columbia
 Location: 6 miles NW of Hedley Date of Work: May 30-June 22/68

Type of Survey: Geophysical (Induced Polarization)
 Operating Man Days: 91
 Operating Crew Days: 27
 Supervisory Man Days: 6
 Drafting and Typing: 2

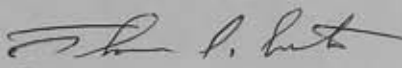
Personnel Employed on Survey

Supervision and Interpretation: Thomas A. Conto

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>
David Broswick	Instrument Operator	475/mo.	19	May 30, 31, June 1, 4(3/4), 5-10, 12-15, 16(1/3), 17(1/3), 18(4/5), 19-22.	\$ 358.20
Peter Bruce	Helper	425/mo.	21	May 30, 31, June 1-3, 4(3/4), 5-15, 16(1/3), 17(1/3), 18(4/5), 19-21.	354.20
Jim Rutter	Helper	450/mo.	20	May 31, June 1-3, 4(3/4), 5-15, 16(4/5), 17(1/3), 18(4/5), 19-21.	358.60
Don James	Helper	450/mo.	19	May 30, 31, June 1-3, 4(3/4), 5-15, 16(4/5), 17(1/3), 18(4/5) 19-21	339.20
Ray Armstrong	Line Cutter	2.15/hr.	6	May 30, 31, June 3,4,5,6 (10 hr. days)	141.90
Wayne Armstrong	Line Cutter	1.65/hr.	6	same	<u>78.90</u>
Total					\$ 1,631.00


 Thomas A. Conto

STATEMENT OF COSTS

Field Crew:

Salaries (as per Appendix I)	\$ 1,631.00
Room & Board @ \$11.00/man/day	1,001.00
Transportation @ \$15.00/crew/day	405.00
Overhead @ 0.5 (Salaries + Room & Board)	1,316.00
Drafting and Typing	50.00
Supervision	<u>150.00</u>
Total	\$ 4,553.00

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *30th*
day of *August, 1968*, A.D.

Thomas A. Conto
Thomas A. Conto

J. Paul
A Commissioner for taking Affidavits within 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 29th day of August 1968



Thomas A. Conto, B.Sc. Geophysics

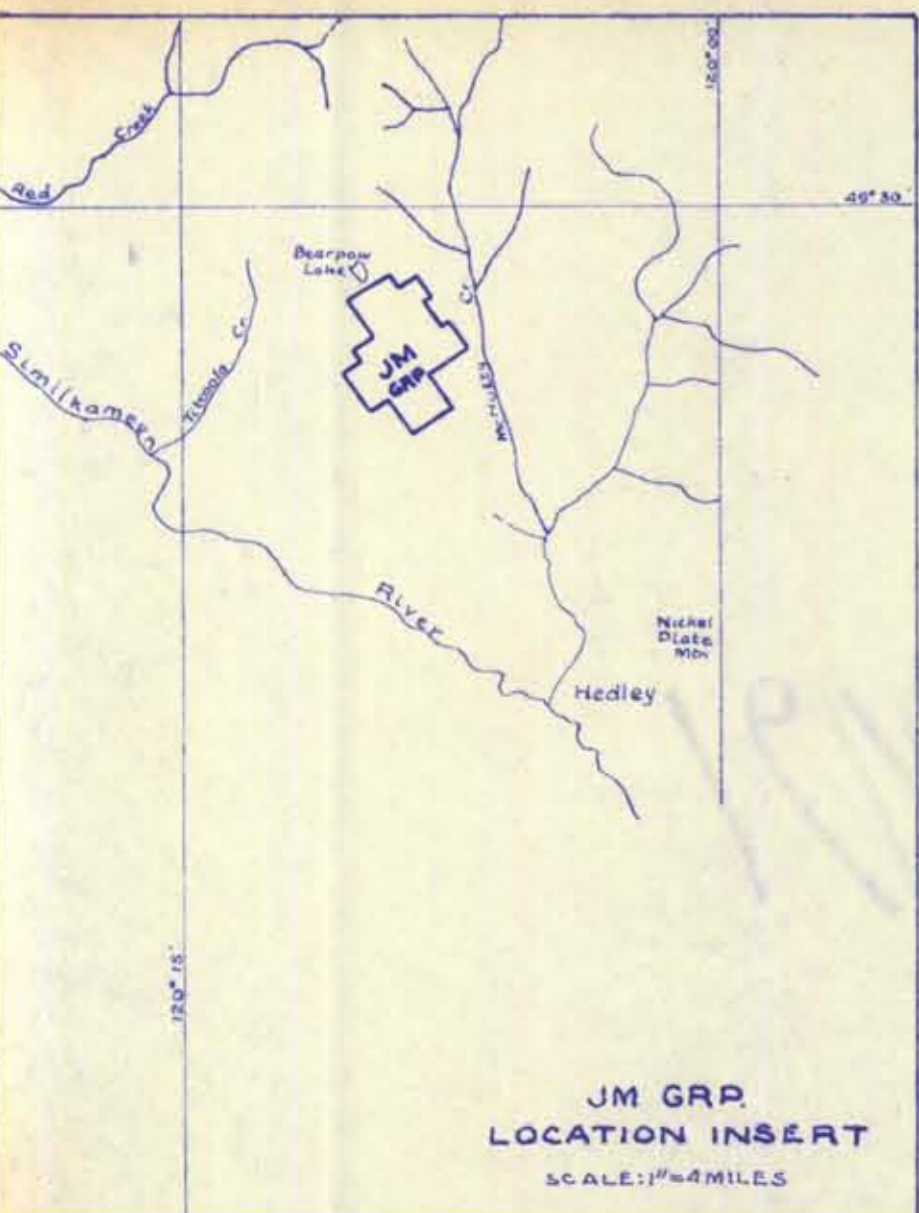
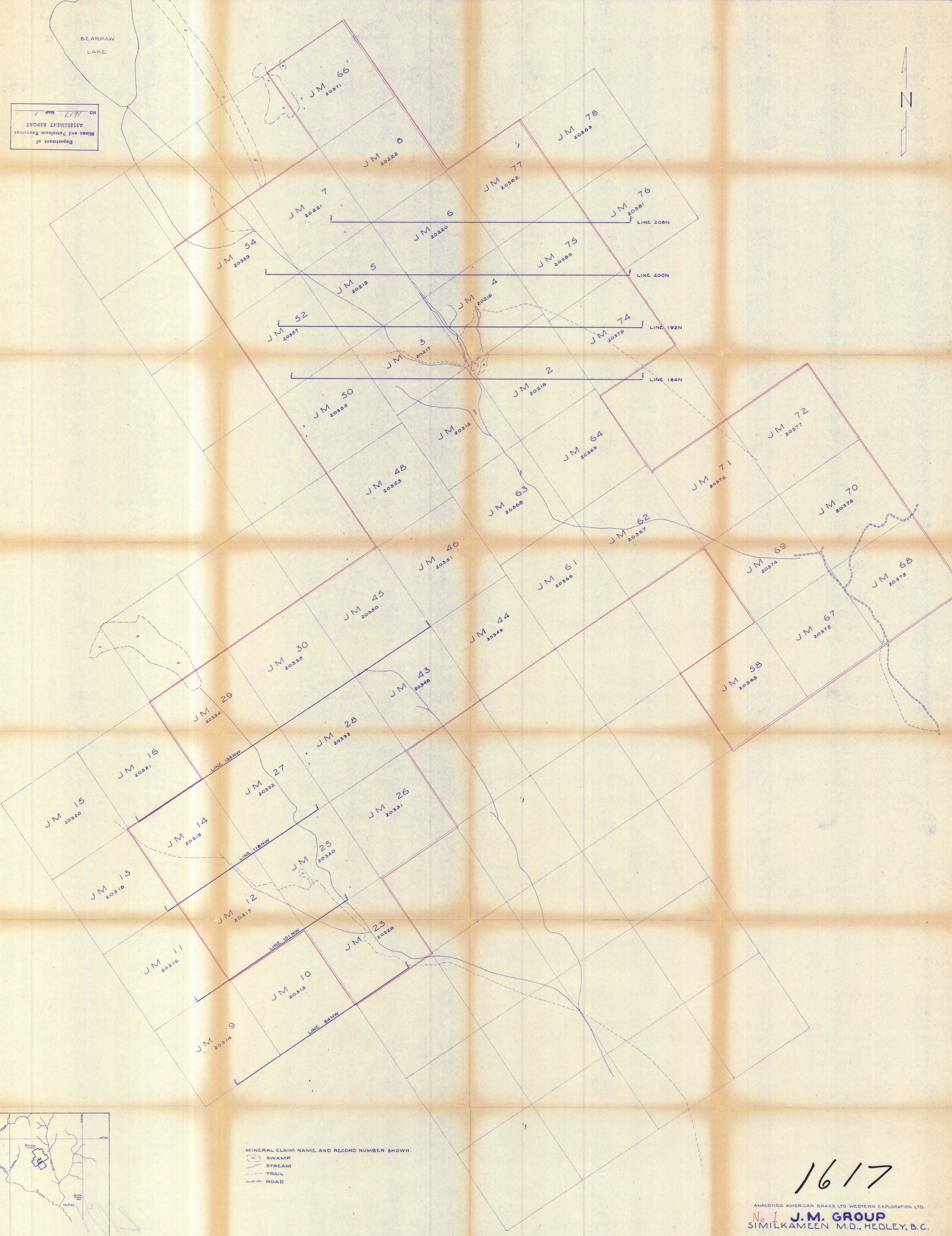
STATEMENT OF OPERATOR'S QUALIFICATIONS

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

- 1) David Broswick was the instrument operator for the Geophysical Survey conducted by Anaconda American Brass Ltd. on the JM Claim Group.
- 2) David Broswick had been working on an Induced Polarization Crew for ten months prior to the start of this survey. He worked as an instrument operator for six of the ten months.
- 3) David Broswick has been trained by Anaconda personnel to be an instrument operator and I consider him fully qualified.


Thomas A. Conto

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1617
MAP 1



1617

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION LTD.
No 1 **J.M. GROUP**
SIMILKAMEEN M.D., HEDLEY, B.C.
TO ACCOMPANY GEOPHYSICAL REPORT
DATED AUGUST 29, 1968, BY T.A. CONTO
SCALE: 1"=400'
PLATE 1

TO ACCOMPANY GEOPHYSICAL REPORT
DATED AUGUST 29, 1968, BY T.A. CONTO

Department of
Mines and Petroleum Resources
No. 1617
Map 3

ANACONDA AMERICAN BRASS LTD.
WESTERN EXPLORATION DIVISION

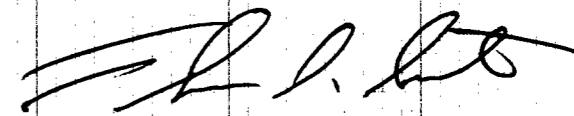
J.M. CLAIM GROUP
SIMILKIMEEN M.D. HEDLEY B.C.
JUNE 1968 HOR. SCALE = 1" = 400'

ULF ~ IP

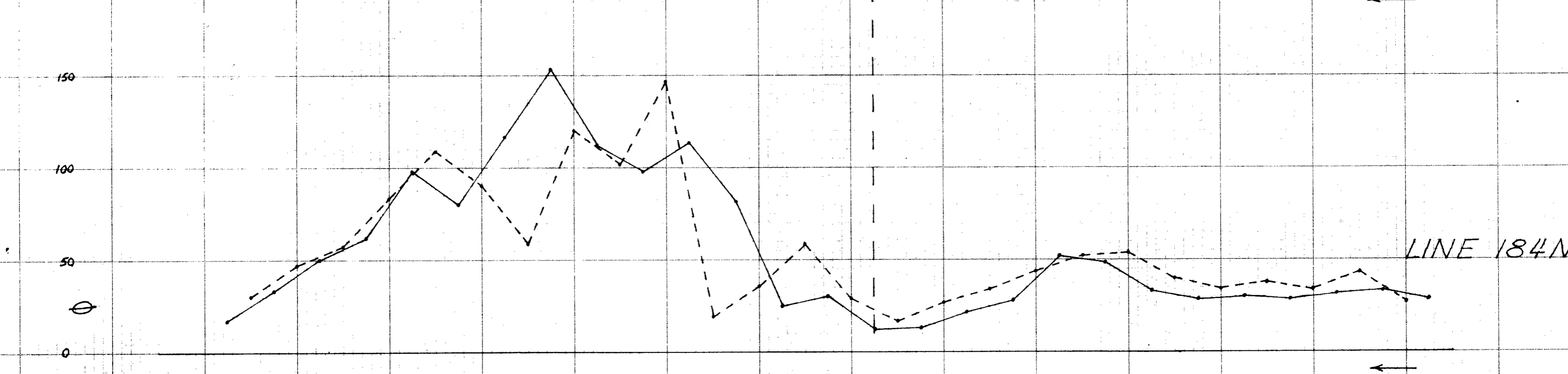
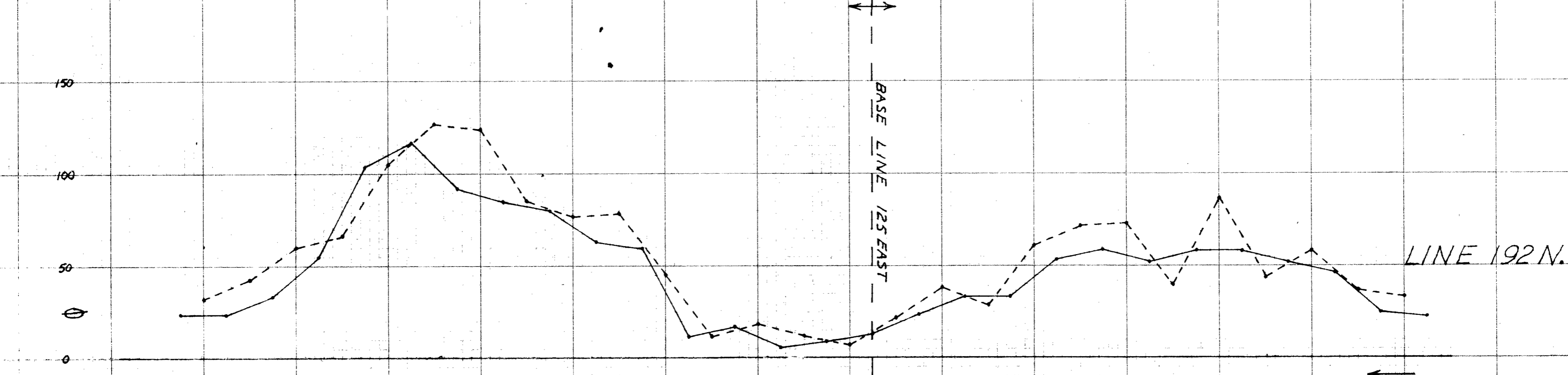
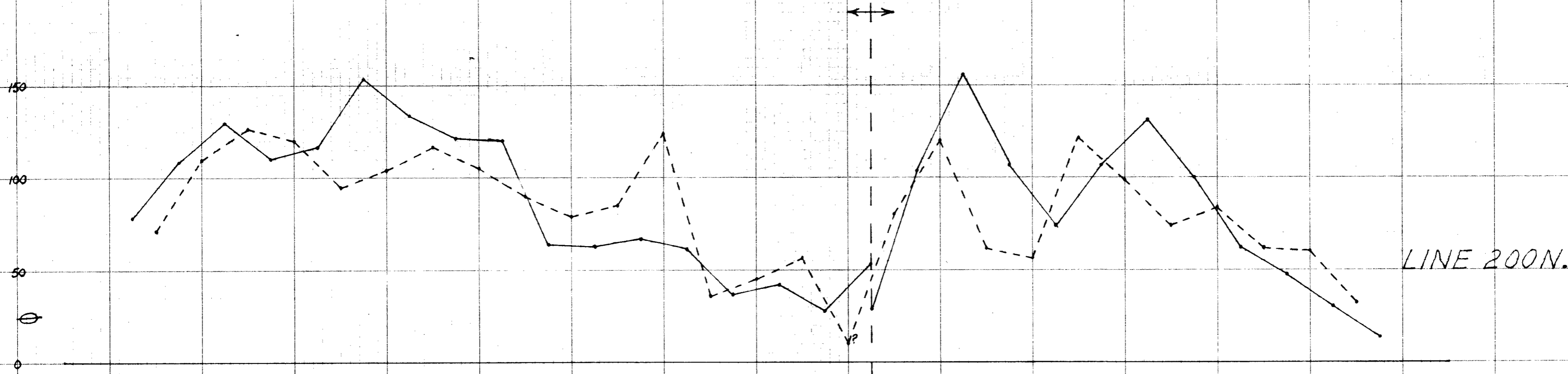
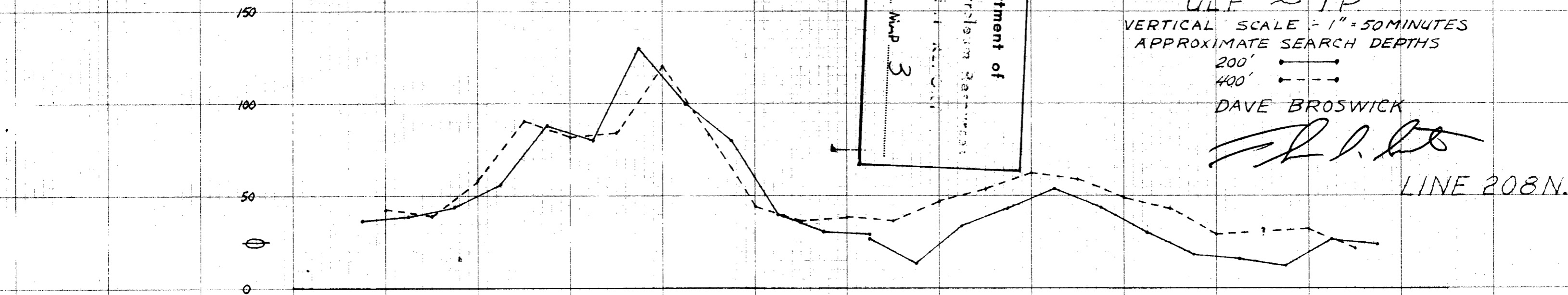
VERTICAL SCALE = 1" = 50 MINUTES
APPROXIMATE SEARCH DEPTHS

200' ———
400' - - -

DAVE BROSWICK

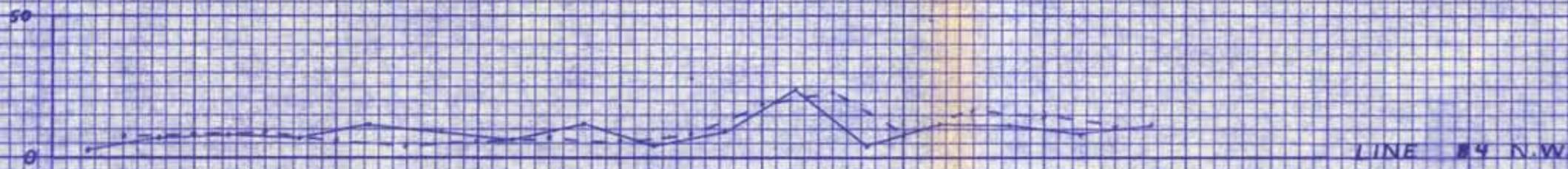
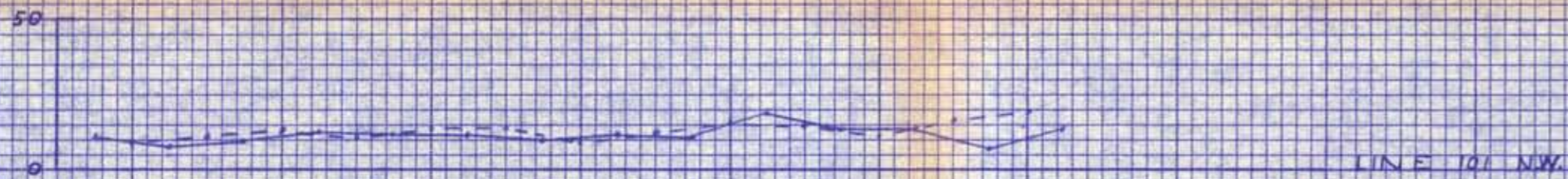
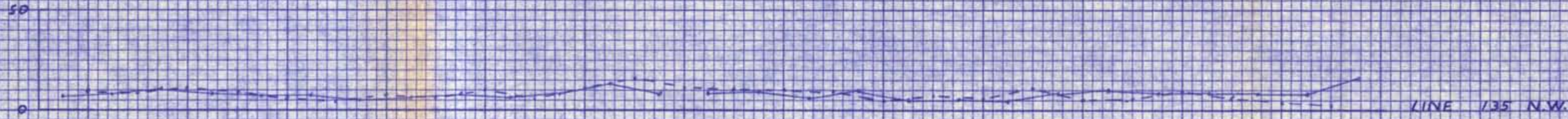


LINE 208N.



1617

64 NE 72 NE 80 NE 88 NE 96 NE 104 NE 112 NE 120 NE 128 NE



64 NE 72 NE 80 NE 88 NE 96 NE

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 1617 MAP 2

I.P. 1617

ANACONDA AMERICAN BRASS LTD WESTERN EXPLORATION DIVISION

J.M. GROUP
 SIMILKAMEEN M.D., HEDLEY, B.C.

3 SECOND U.L.F.

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

DATA BY: DAVE BROSWICK

JUNE 1968

TO ACCOMPANY GEOPHYSICAL REPORT DATED AUGUST 29, 1968, BY T.A. CONTO

PLATE 3

T.A. Conto