

2898

A GEOPHYSICAL REPORT ON  
AN INDUCED POLARIZATION SURVEY

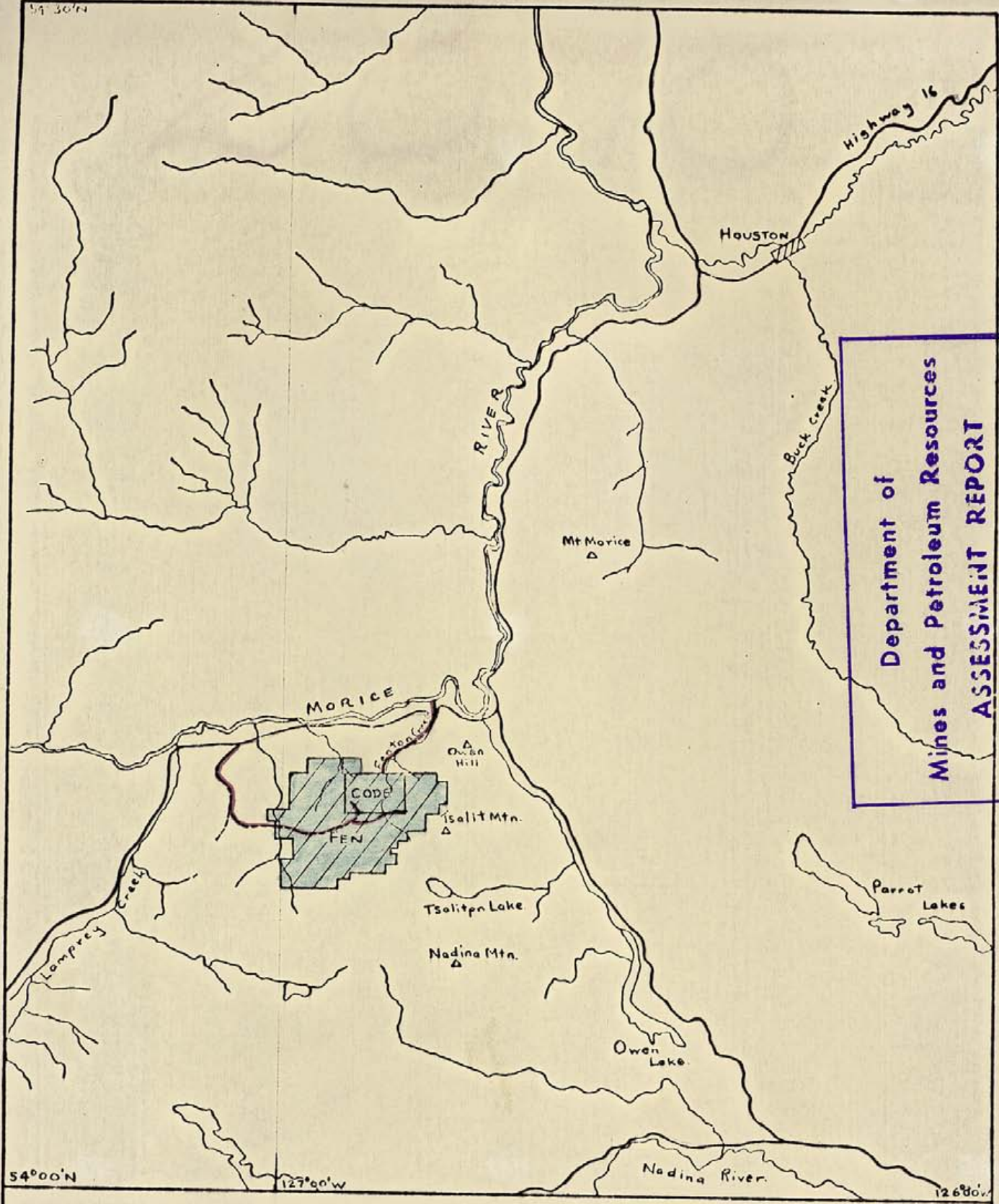
93L/2W

Property: Code & Fen Claims  
Location: 21 miles SW of Houston B.C.  
54°10'N 126°50'W  
Mining Div.: Omineca  
Province: British Columbia  
Claim Owner: Anaconda American Brass Limited &  
Julian Mining Co. Ltd.  
Date-Work: Sept. 20 - Nov. 27, 1970  
Date-Report: Feb. 15, 1971  
Report by: T. A. Conto B.Sc.  
Rod Macrae P. Eng.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2898 ..... MAP .....

54° 30' N



Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 2898 MAP #1

54° 00' N

127° 00' W

126° 30' W

CODE AND FEN CLAIMS  
 OMINECA M.D., B.C.  
 LOCATION MAP  
 SCALE 1 INCH = 4 MILES.

Nov. 1970.

FIG. 1.

CONTENTS

	Page
#1 Location Map.....	Frontispiece
Introduction .....	1
Location and Accessibility .....	1
Survey Equipment and Field Procedure .....	1
Purpose of Survey .....	1
Details of Survey .....	2
Results of Induced Polarization Survey .....	2
Appendix I - Assessment Detail .....	3
Appendix II - Statement of Costs .....	4
Certificate .....	5
Statement of Operator's Qualifications (P. French).....	6
Statement of Operator's Qualifications (A. Saxberg).....	7
Statement of Operator's Qualifications (H. Holm).....	8

MAPS

#2 Claim and Line Location Map .....	In Pocket
#3 Induced Polarization Map .....	In Pocket
#4 Resistivity Map .....	In Pocket

## Introduction

The Code-Fen property consists of 201 claims which have been consolidated into six groups (see grouping notices Plate I). During the period Sept. 20 - Nov. 27, 1970, an Induced Polarization Survey was carried out over parts of the claims as shown in Plate II - claim map. The field work was under the general supervision of Thomas A. Conto, B.Sc. and Roderick Macrae, P. Eng. The instrument operators were Allan Saxberg, Patrick French and Harold Holm.

## Location and Accessibility

The Code-Fen claims are located at the headwaters of Fenton Creek, approximately 21 miles southwest of the town of Houston in the Omineca Mining Division, B.C. (see Fig. 1). Access to the property is provided by two logging roads leading off the Maurice River Road. During 1970 one of these was extended 4.5 miles to provide access to the central part of the property.

## 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 five (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.

## Purpose of the Survey

Geological and geochemical work performed in the area provided evidence of possible economic mineralization. The induced polarization survey was conducted as an aid in the evaluation of the economic potential of the property and as such was designed to detect sulfide mineralization of suitable grade, volume and disposition to be of interest to Anaconda.

Details of Survey

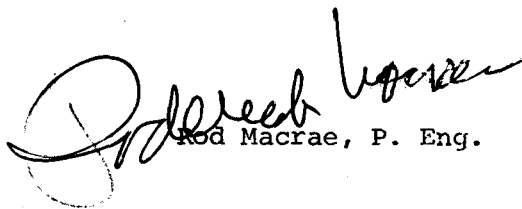
Chain and compass lines were used for control of the survey grid. Readings were taken every 200 feet on each line with a pole-dipole electrode configuration using an "a" of 200 and an "n" of one and two. The results are shown in profile form with the plot point midway between the current electrode and the near potential electrode. The vertical scale is one inch to 50 minutes and the horizontal scale is one inch to 400 feet.

Results of the Induced Polarization Survey

The 1970 induced polarization survey conducted on the Code-Fen property collaborated an anomalous trend located on an earlier induced polarization survey (north end of line 320 E) and extended the area of potential interest to the northwest (north end of lines 272E and 280E). Other responses above the background of 15 to 25 minutes are considered to be either of too limited spacial extent to be of interest to Anaconda or the result of occasional poor signal to noise ratios which can produce uncorrelatable spurious spikes.



Thomas A. Conto, B.Sc.



Rod Macrae, P. Eng.

APPENDIX I  
ASSESSMENT DETAIL

Property:	Code & Fen Claims
Owner:	Anaconda American Brass Limited & Julian Mining Co. Ltd.
Mining Division:	Omineca
Province:	British Columbia
Date of Work:	Sept. 20 - Nov. 27, 1970
Location:	21 miles SW of Houston B.C. 54°10'N, 126°50'W
Type of Survey:	Geophysical (Induced Polarization)
Operating Field Man Shifts:	187
Operating Field Crew Shifts:	46
Supervisory Shifts:	15
Data Processing Shifts:	5
Accounting Shifts:	8
Map Compilation Shifts:	5
Drafting & Typing Shifts:	3

PERSONNEL EMPLOYED ON SURVEY

Supervision	R. Macrae, Thomas A. Conto
Data Processing	A. Saxberg, M. Deyelle
Map Compilation	P.C. Emery, J. Vinnell
Drafting	P.C. Emery, J. Vinnell
Accounting	J. Vinnell
Typing	R. Broderick

Field Technicians:

<u>Name</u>	<u>Category</u>	<u>Mo. *Rate</u>	<u>Days Worked</u>	<u>Period (1970)</u>	<u>Wage &amp; Fringe @ 11%</u>
P. French	operator	525	9	Sept. 20-Oct. 5	194.06
K. Mathers	helper	475	47	Sept. 20-Nov. 27	917.42
B. Riley	helper	450	9	Sept. 20-Oct. 5	166.50
M. Bartley	helper	450	41	Sept. 20-Nov. 27	758.24
A. Saxberg	operator	525	19	Oct. 12-Nov. 4	409.68
R. Humphrey	helper	450	38	Oct. 12-Nov. 27	702.80
H. Holm	operator	525	22	Nov. 5-27	474.36
D. Hett	helper	450	2	Nov. 15-17	36.96
					<u>\$3,660.02</u>

\* Based on a 27 day work month

Declared before me at the city  
of Vancouver, in the  
Province of British Columbia, this 10  
day of March, 1971, A.D.

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

Joan Turner  
Sub-Mining Recorder

APPENDIX II

STATEMENT OF COSTS

Field Crew:

Salaries (as per Appendix I)	\$3,660.02
Room & Board @\$11.86/man/day	2,217.82
Transportation @ 19.90/crew/day	915.40
Communications (radio phone) @\$60/mo.	102.18
Equipment Depreciation @ \$300/mo.	510.90
Supervision @ \$35/day + Fringes @ 11%	<u>582.75</u>
	7,989.07

Interpretation & Report Preparation:

Map Compilation \$30/day + Fringes @ 11%	165.00
Data Processing \$30/day + Fringes @ 11%	165.00
Drafting \$30/day + Fringes @ 11%	66.60
Typing \$25/day + Fringes @ 11%	27.75
Accounting \$30/day + Fringes @ 11%	<u>266.40</u>
	690.75

Total \$8,679.82

<u>Group</u>	<u>Line Feet</u>	<u>% of Total</u>	<u>Cost</u>
Fen 70-1	nil	nil	
2	7,300	4.34	376.70
3	52,000	30.90	2,682.06
4	29,400	17.50	1,518.97
5	35,600	21.17	1,837.52
6	30,000	17.83	1,547.61
Outside Claims	<u>13,900</u>	<u>8.26</u>	<u>716.96</u>
Total	168,200	100.00	\$8,679.82

Total funds applicable to claims \$7,962.86

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 10  
day of March 1971, A.D.



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

*John Turner*

Sub-Mining Recorder.

CERTIFICATE

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 active member of the Society of Exploration Geophysicists.
4. I have been practicing my profession for eight 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 Limited.
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 15th day of February 1971



Thomas A. Conto, B.Sc. Geophysics



STATEMENT OF OPERATOR'S QUALIFICATIONS

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

1. Patrick French was the instrument operator for the Geophysical Induced Polarization conducted on the Code & Fen claims from September 20 to October 5, 1970.
2. Patrick French worked as an Induced Polarization crew member for the 1969 season and as Crew Chief for the 1970 season.
3. Patrick French has been trained by Anaconda personnel to be an instrument operator and I consider him to be fully qualified.



Thomas A. Conto

STATEMENT OF OPERATOR'S QUALIFICATIONS

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

1. Allan Saxberg was the instrument operator for the Geophysical Induced Polarization conducted on the Code & Fen claims from October 12 to November 4, 1970.
2. Allan Saxberg has worked as a geophysical instrument operator for the past five years and qualified to act as Crew Chief when occasion arises.
3. Allan Saxberg has been trained by Anaconda personnel to be an instrument operator and I consider him to be fully qualified.



Thomas A. Conto

STATEMENT OF OPERATOR'S QUALIFICATIONS

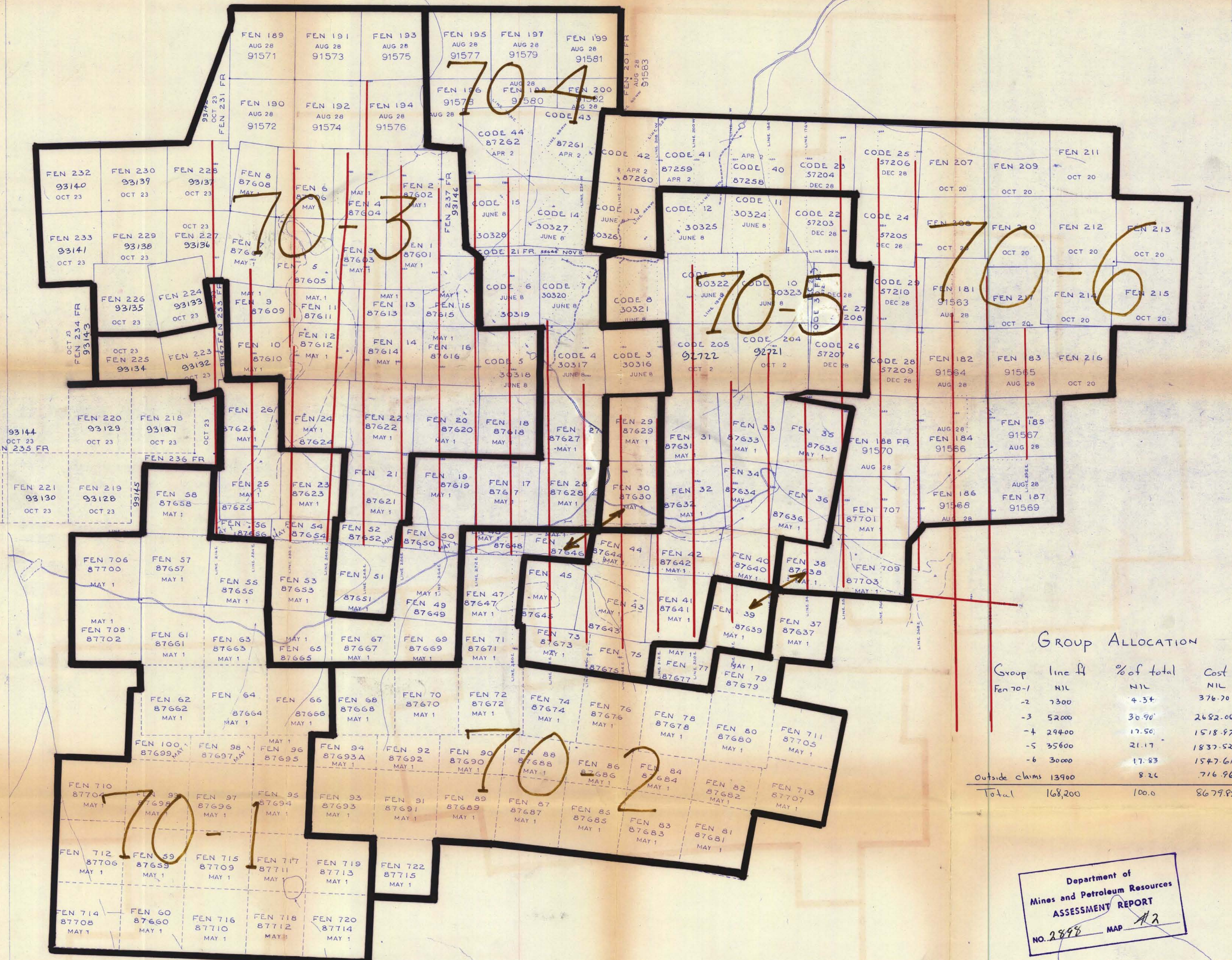
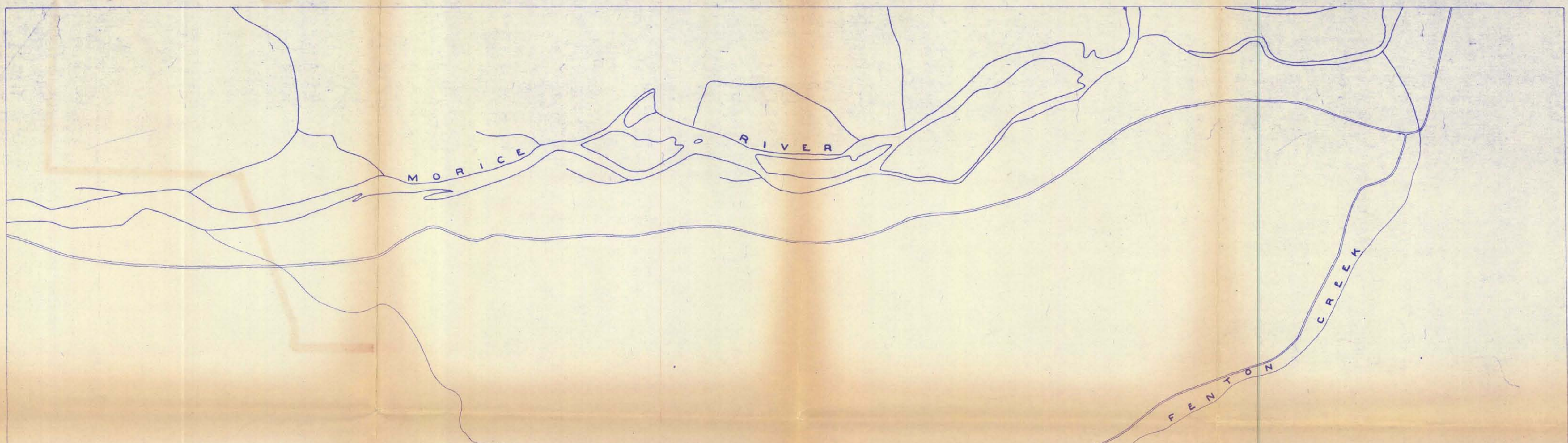
I, Thomas A. Conto, do make the following statement:

1. Harold Holm was the instrument operator for the Geophysical Induced Polarization conducted on the Code & Fen claims from November 5 to November 27, 1970.
2. Harold Holm worked as an Induced Polarization crew member for the 1969 season and as Crew Chief for the 1970 season.
3. Harold Holm has been trained by Anaconda personnel to be an instrument operator and I consider him to be fully qualified.



Thomas A. Conto





GROUP ALLOCATION

Group	line #	% of total	Cost
Fen 70-1	NIL	NIL	NIL
-2	7300	4.34	376.70
-3	52000	30.90	2682.00
-4	24400	17.50	1518.97
-5	35600	21.17	1837.52
-6	30000	17.83	1547.61
Outside claims	13900	8.26	716.96
<b>Total</b>	<b>168,200</b>	<b>100.0</b>	<b>8679.82</b>

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 2898 MAP. A2

TSALITPN  
LAKE

2898 M-2

To accompany Geophysical Report by T.A. Conto and Rod Macrae dated 15 Feb. 1971. P.Eng.

CLAIM NAMES AND RECORD NUMBERS ARE SHOWN.

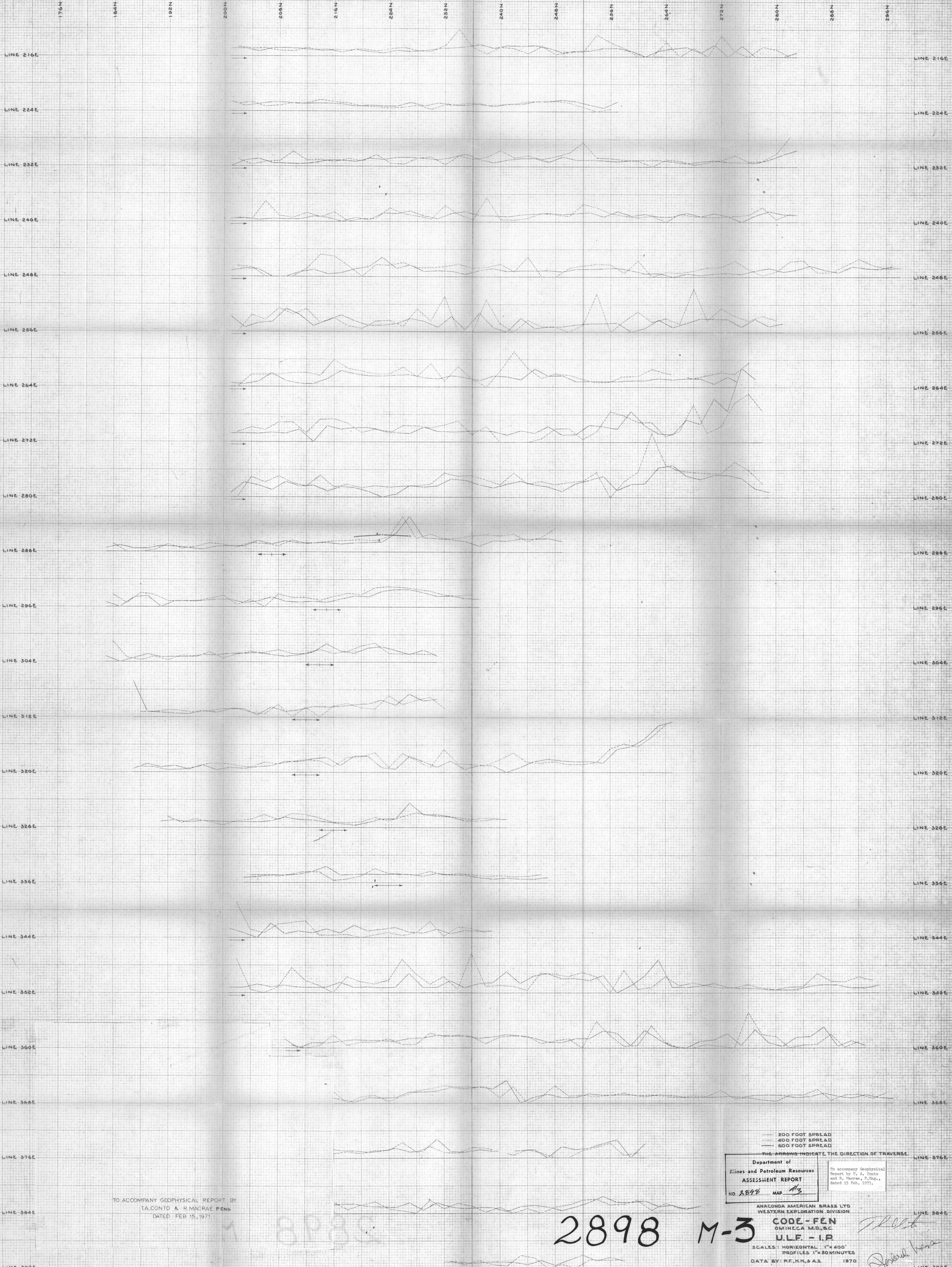
REVISED BY  
April 1972 J. Linnell

ANACONDA AMERICAN BRASS LTD. WESTERN EXPLORATION DIVISION

CODE-FEN  
OMINECA M.D., B.C.  
SCALE: 1"=1000'

MINERAL CLAIMS





TO ACCOMPANY GEOPHYSICAL REPORT BY  
 T.A. CONTO & R. MACRAE PENG  
 DATED FEB 15, 1971

1 8P88

2898 M-3

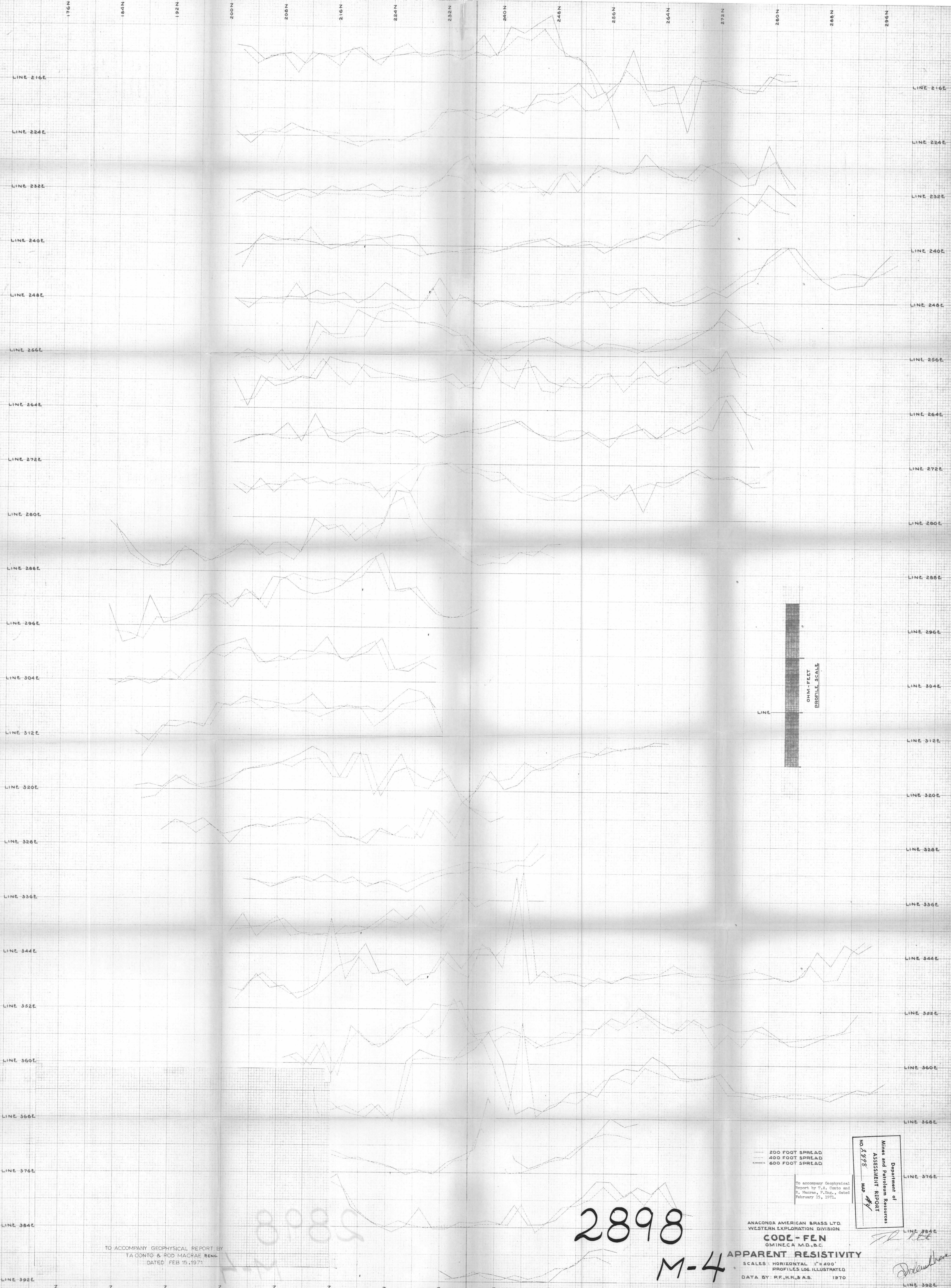
Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 No. 2898 MAP 113  
 To accompany Geophysical  
 Report by T.A. Conto  
 and R. Macrae, P.Eng.,  
 Dated 15 Feb. 1971.

ANACONDA AMERICAN BRASS LTD  
 WESTERN EXPLORATION DIVISION  
 CODE - FEN  
 OMINICA M.D., B.C.  
 U.L.F. - I.P.  
 SCALES: HORIZONTAL 1" = 400'  
 PROFILES 1" = 50 MINUTES  
 DATA BY: R.F., H.M., & A.S. 1970

*Thick*  
*Robert Peng*

2  
 0  
 8  
 2  
 0  
 8





TO ACCOMPANY GEOPHYSICAL REPORT BY  
 TA CONTO & ROD MACRAE BENG.  
 DATED FEB 15, 1971

8982

2898

M-4

— 200 FOOT SPREAD  
 - - 400 FOOT SPREAD

To accompany Geophysical  
 Report by T.A. Conto and  
 R. Macrae, P.Eng., dated  
 February 15, 1971.

ANACONDA AMERICAN BRASS LTD.  
 WESTERN EXPLORATION DIVISION

CODE - FEN  
 OMINICA M.D., B.C.

APPARENT RESISTIVITY

SCALES: HORIZONTAL 1" = 400'  
 PROFILES LOG ILLUSTRATED  
 DATA BY: P.F.H.H., B.A.S. 1970

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 8982  
 M.D.

*Dr. [Signature]*