

942

REPORT ON
GROUND MAGNETIC SURVEY
BILL 7 - 14 INCLUSIVE & BILL 17 - 28 INCLUSIVE
BRENDA AREA, BRITISH COLUMBIA, 49° 119° N.W.
ON BEHALF OF
TRO-BUTTLE EXPLORATIONS LTD. (N.P.L.)

82E/13W

by
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Richard O. Crosby, B.Sc.
Consulting geophysicist

Vancouver, B. C.

April 4, 1967.

TABLE OF CONTENTS

	<u>Page</u>
Summary	
Introduction	1
General Geology	2
Discussion of Results	3
Affidavit of Expenditure	5
Maps In back pocket.	
✓ Plate 1: Location Map and Survey Grid & Claim Map	
✓ Plate 2: Grid Map with data plotted	
✓ Plate 3: Contour Map of Vertical Magnetic Intensity	
✓ Plate 4: Interpretation Overlay of Magnetic Survey	

SUMMARY

The ground magnetic survey has located one magnetic anomaly associated with a previously known mineral showing.

In addition, the survey has given some insight into the subcrop geology, indicating two possible igneous intrusives into the sedimentary rocks of the area.

SEIGEL ASSOCIATES, LIMITED

GEOPHYSICAL CONTRACTORS AND CONSULTANTS

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**REPORT ON A GROUND MAGNETIC SURVEY
CLAIMS 9879(0) - 9886(0) INCLUSIVE
AND
CLAIMS 9889(0) - 9900(0) INCLUSIVE
BRENDA AREA, BRITISH COLUMBIA
ON BEHALF OF
TRO-BUTTLE EXPLORATION LTD. (N.P.L.)**

INTRODUCTION:

During the period March 8, through March 13, 1967, a ground magnetic survey was executed by Mr. Roger Gedde, with the assistance of Mr. Pete Bland. The survey was conducted on behalf of Tro-Buttle Exploration Ltd. (N.P.L.) and covered the following claims, in whole or in part:

Bill 7 - 14 inclusive, record numbers 9879(0) - 9886(0)

Bill 17 - 28 inclusive, record numbers 9889(0) - 9900(0)

These claims are located approximately 12 miles west-northwest of Peachland, B. C. (see Plate 1) in the Brenda area, Osoyoos mining district. Access to the property is via road from Peachland.

For the present survey an MF-1 magnetometer was employed. This instrument is a small, hand-held magnetometer of the flux-gate type manufactured by Sharpe Instruments of Canada Limited. The quantity measured by the MF-1 is the vertical component of the earth's magnetic field in gammas relative to an arbitrary setting. It does not measure the absolute value of the magnetic field.

8

INTRODUCTION: (Continued)

The field procedure followed in executing the survey was as follows. The magnetometer was set to read on the lowest scale (1000 gammas full scale, readability to the nearest 5 gammas) at a non-anomalous station on the property. This station was taken as the main-basestation and all measurements on the property were accurately tied into the main basestation and a convenient baseline station was checked into at intervals of one hour or less while the survey was in progress, thus enabling any diurnal variations or instrumental drift to be corrected. Measurements were taken at 100 foot intervals along survey lines oriented northwest and cut at 400 foot centers.

The purpose of the present survey was to map changes in the earth's magnetic field in the vicinity of the lines covered. Such changes, in the main, reflect variation of the magnetic susceptibility of the rocks underlying the survey lines, and as a result reflect variation in the lithology of the subcrop. The magnetic data may then be used effectively to gain information of the geology.

In this area anomalous magnetic intensities may be associated with economic mineralization, e.g. sulphide zones containing pyrrhotite or magnetite.

GENERAL GEOLOGY:

The best available published geological information on this area is presented on Map 538A, Kettle River, Similkameen and Osoyoos Districts, B. C. published by the Geological Survey of Canada.

GENERAL GEOLOGY: (Continued)

No detailed geology of the property is available. Map 538A at a scale of 1" = 4 miles indicates the area under study is a combination of Jurassic intrusives, primarily granodiorite, and sedimentary rocks, primarily limestones.

DISCUSSION OF RESULTS:

The vertical magnetic intensities measured, corrected for diurnal variations, are presented on Plate 2. These are plotted in their respective locations on a grid map of the property. Plate 3 is a contour map of these values, contour interval 100 gammas. On Plate 4, an interpretation overlay, the property has been divided into 5 zones on the basis of different magnetic characteristics.

Zone A, of somewhat higher intensity than zones B and C is probably due to an intrusive. Calculations give a volume magnetic susceptibility of 4700×10^{-6} c.g.s. units. This suggests an intrusive of intermediate nature, i.e. granodiorite or diorite.

Zones B and C are magnetically similar and probably underlain by sediments. Correlation with the regional geology indicates limestone is the most likely type of sedimentary rock in this area.

Zone D, on the east corner of the property, is not completely closed in by the survey. As a result there is insufficient information to calculate a volume susceptibility. However, this zone is of higher magnetic intensity than zone A and may result from an intrusive somewhat more basic than the intrusive of Zone A.

DISCUSSION OF RESULTS: (Continued)

Zone E has a maximum measured intensity of 2380 gammas whereas the average background is about 100 gammas. This occurs over a previously known mineralized zone in skarn. Calculations indicate a depth below surface of approximately 15 feet. A calculated susceptibility of 0.07 c.g.s. units suggests a source of 1 to 4% magnetite by volume, over an area somewhat less than outlined by zone E. The source is perhaps magnetite, in a skarn zone near the contact of the limestone of zone C and the intrusive of Zone D.

Two probable faults, trending westerly across the property, are indicated by the magnetic data.

Respectfully submitted,

SEIGEL ASSOCIATES LIMITED



Roger W. Gedde, M.Sc.
Geophysicist

Richard O. Crosby, B.Sc.
Consulting Geophysicist

AFFIDAVIT OF EXPENDITURE

FOR PROFESSIONAL SERVICES RENDERED

Instrument Operator March 7 through March 14, 1967 Roger W. Gedde at 30.00/day	\$ 240.00
Magnetometer 2 weeks at 60.00/week	120.00
Compilation of data, 18 miles at 20.00/mile	360.00
Drafting 10 hours at 4.00/hour	40.00
Interpretation & report writing	500.00
Typing of report	10.00
Transportation - Vancouver - Peachland & Return	<u>30.00</u>
	\$1,290.00
Profit	390.00
	<u> </u>
	\$1,680.00

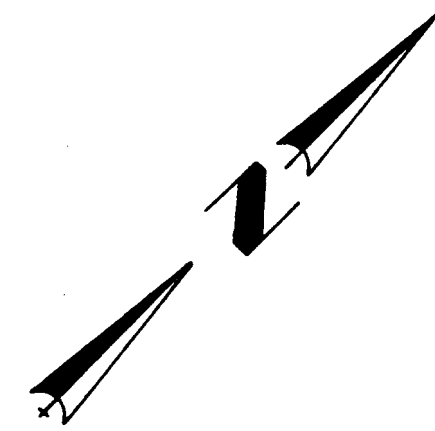
And I make this solemn declaration conscientiously believing
it to be true, and knowing that it is of the same force and effect
as if made under oath and by virtue of the "Canada Evidence Act"

Declared before me at the *City*)
of *Vancouver*, in the)
Province of British Columbia, this *7*)
day of *April* 1967, A. D.)

Richard O. Crosby

Julie Turner

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.
Sub-mining Recorder



TRO-BUTTLE EXPLORATIONS LTD.(N.P.L.)

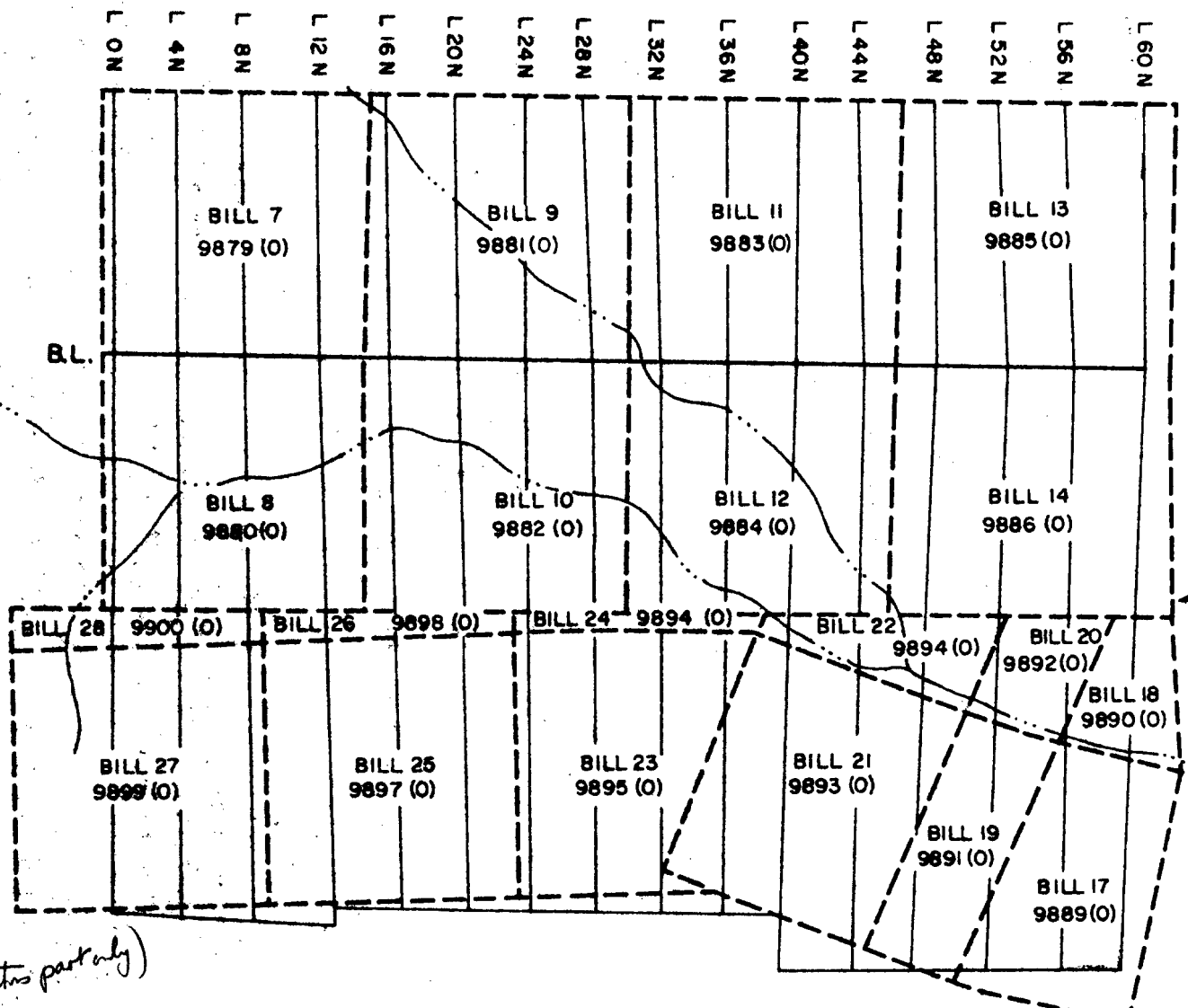
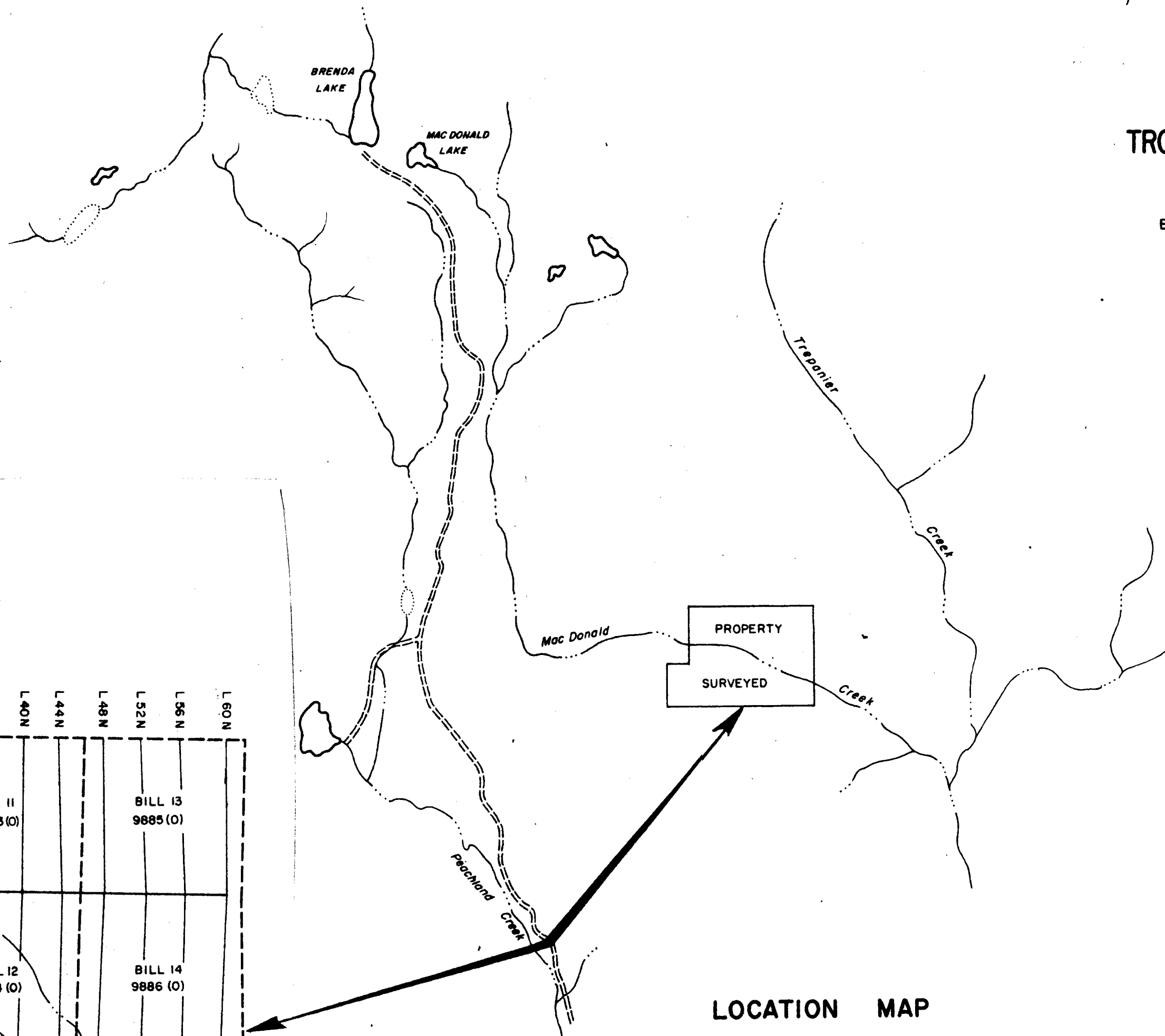
BILL CLAIMS

BRENDA AREA

BRITISH COLUMBIA

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 942 MAP 1

copy please



LOCATION MAP

SURVEYED BY:
SEIGEL ASSOCIATES LIMITED
MARCH, 1967

SURVEY GRID & CLAIM MAP

BILL CLAIM 7-12 & 17-28

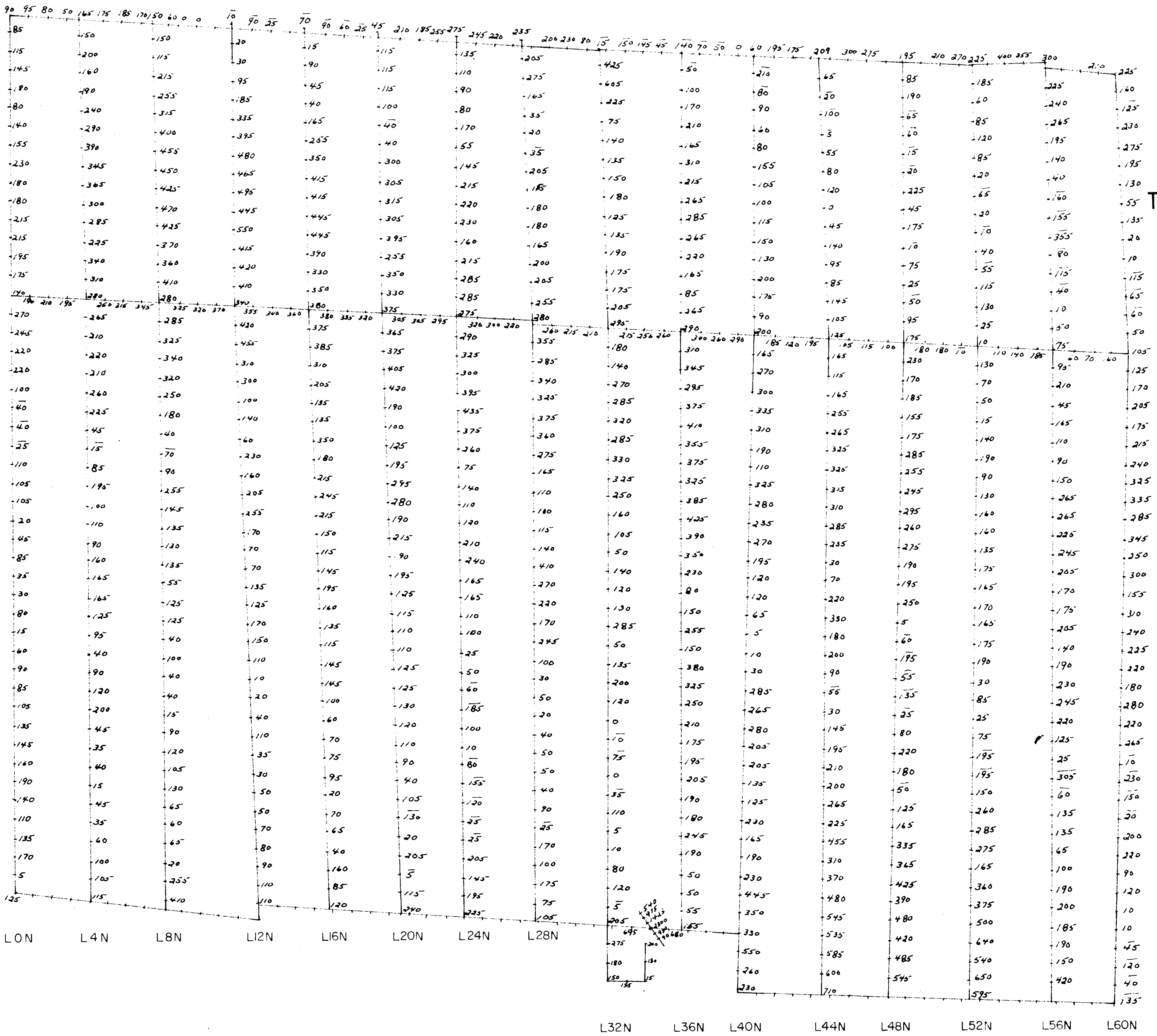
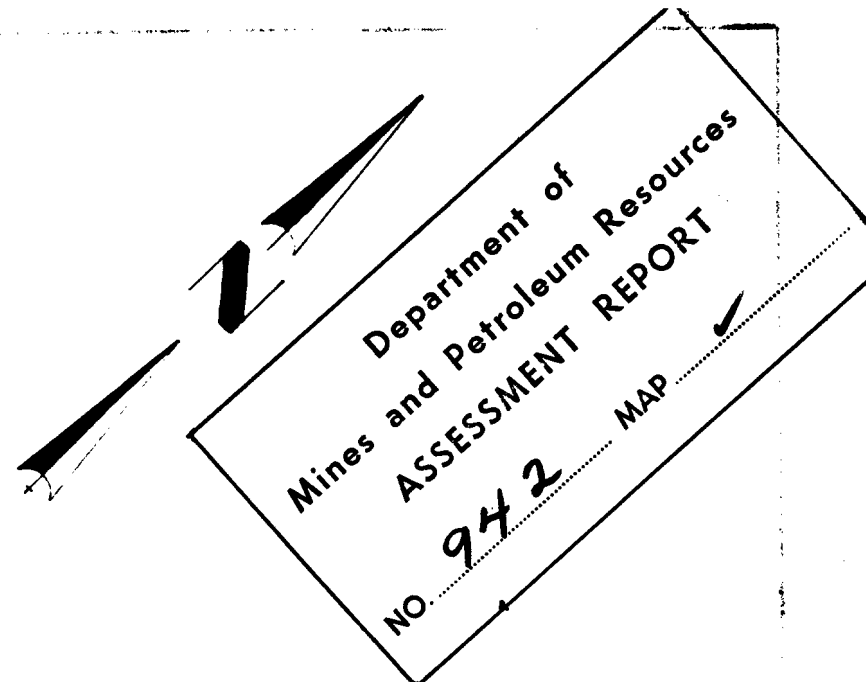
RECORDED NUMBERS 9879(0) - 9886(0) & 9889(0) - 9900(0)

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Assess. Report
#942

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PLATE I

TO ACCOMPANY GEOPHYSICAL REPORT BY RICHARD O. CROSBY,
CONSULTING GEOPHYSICIST, ON THE BILL GROUP, OSOYOOS M.D.
DATED APRIL 4, 1967



TRO-BUTTLE EXPLORATIONS LTD.(N.P.L.)

BILL CLAIMS

BRENDA AREA

BRITISH COLUMBIA

GRID MAP
WITH RELATIVE VALUES
OF VERTICAL MAGNETIC
INTENSITY

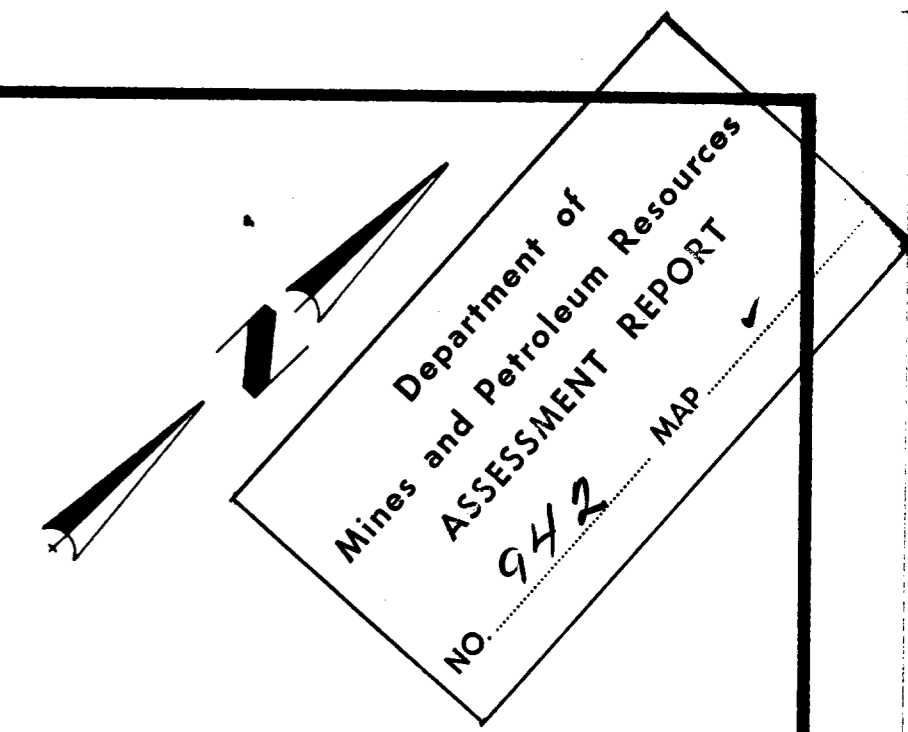
SCALE: 1" = 400'

SURVEYED BY:
SEIGEL ASSOCIATES LIMITED
MARCH, 1967

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PLATE 2

TO ACCOMPANY GEOPHYSICAL REPORT BY RICHARD O. CROSBY
CONSULTING GEOPHYSICIST, ON THE BILL GROUP, OSOYOOKS M.D.
DATED APRIL 4, 1967



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 942 MAP

TRO-BUTTLE EXPLORATIONS LTD.(N.P.L.)

BILL CLAIMS

BRENDA AREA BRITISH COLUMBIA

CONTOUR MAP
OF
VERTICAL MAGNETIC INTENSITY

LEGEND

— 200 — CONTOUR LINES CONNECTING
POINTS OF EQUAL
MAGNETIC INTENSITY

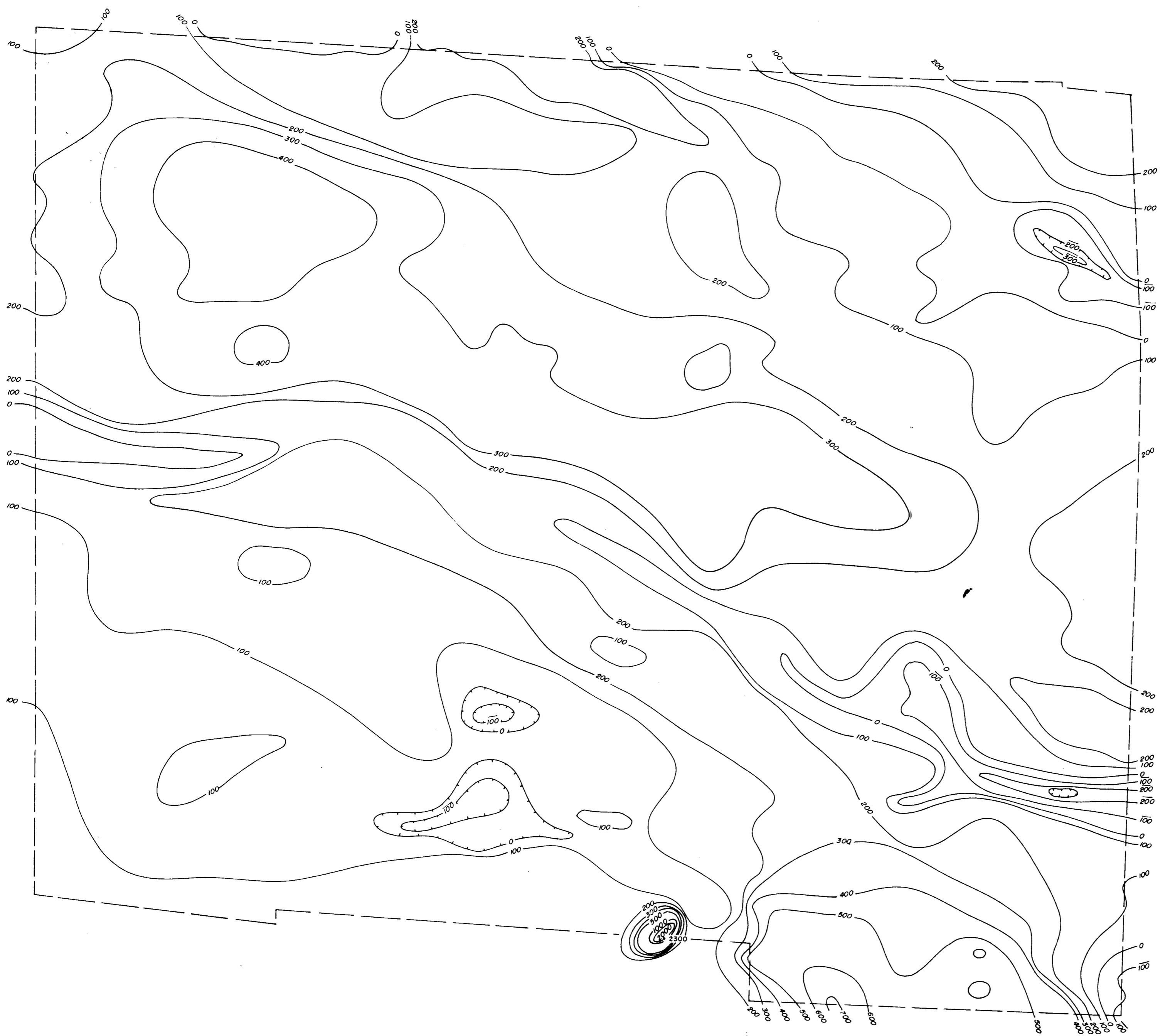
SCALE 1" = 400'

SURVEYED BY:
SEIGEL ASSOCIATES LIMITED
MARCH, 1967

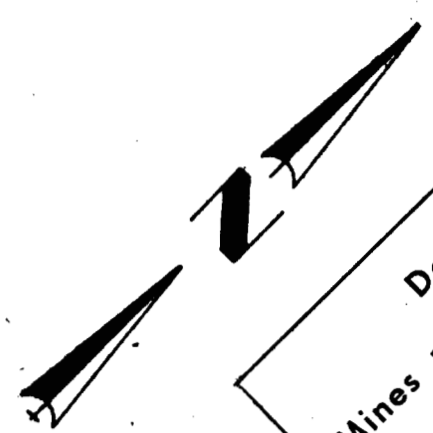
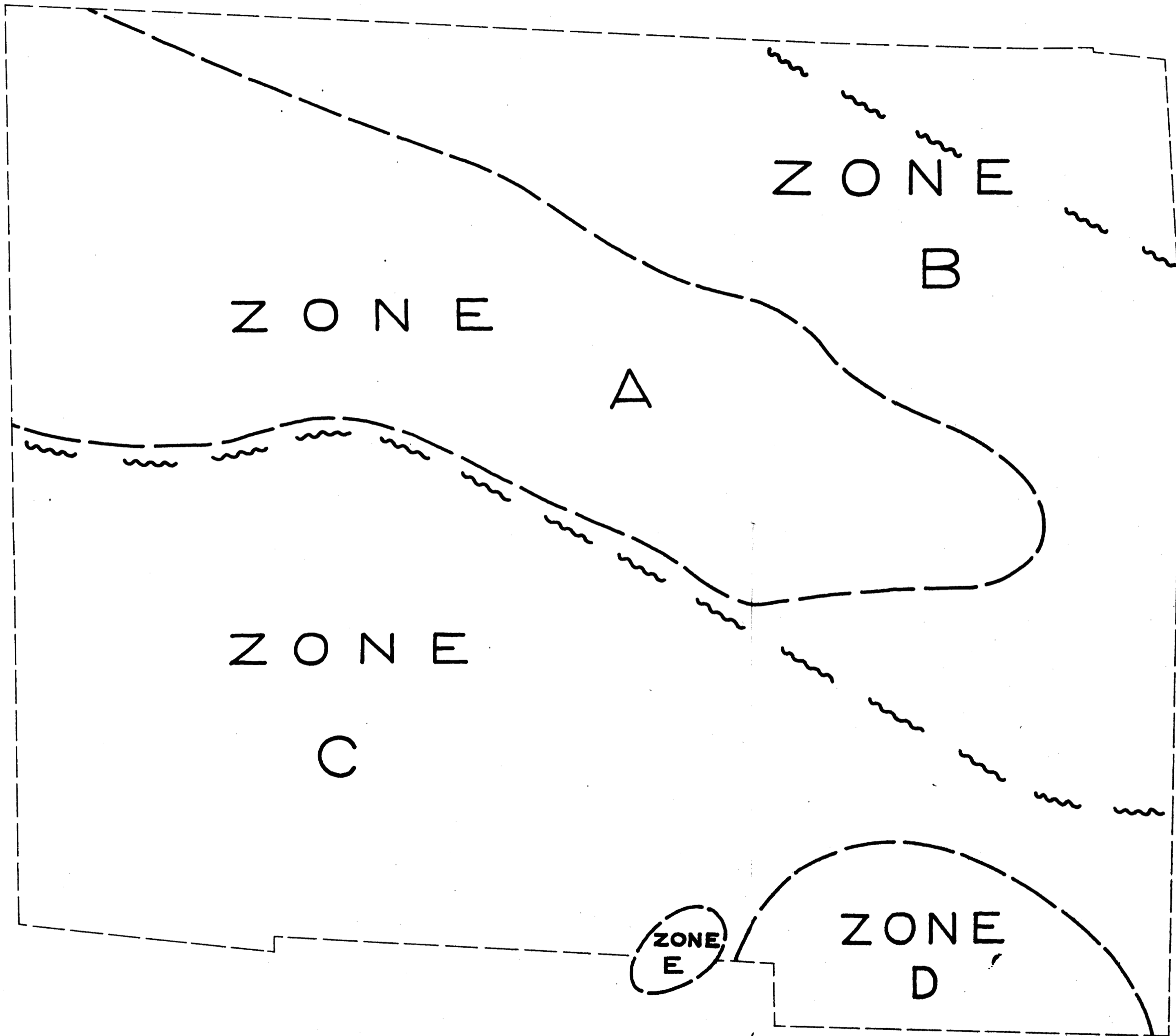
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PLATE 3

TO ACCOMPANY GEOPHYSICAL REPORT BY RICHARD O. CROSSBY,
CONSULTING GEOPHYSICIST, ON THE BILL GROUP, OSOYOOB M.D.
DATED APRIL 4, 1967



246 # 942



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 942 MAP

TRO-BUTTLE EXPLORATIONS LTD.(N.P.L.)



BILL CLAIMS

BRENDA AREA

BRITISH COLUMBIA

INTERPRETATION OVERLAY
OF
MAGNETIC SURVEY

LEGEND

-  PROBABLE FAULT.
-  BOUNDARY BETWEEN ZONES OF DIFFERENT MAGNETIC CHARACTERISTICS

SCALE: 1" = 400'

SURVEYED BY:
SEIGEL ASSOCIATES LIMITED
MARCH, 1967

942

PLATE 4

TO ACCOMPANY GEOPHYSICAL REPORT BY RICHARD G. ROSBY,
CONSULTING GEOPHYSICIST, ON THE BILL GROUP, OSWEGO M.D.
DATED APRIL 4, 1967