COMINCO LTD.

EXPLORATION
NTS: 92L-14

WESTERN DISTRICT

GEOPHYSICAL SURVEYS

on the

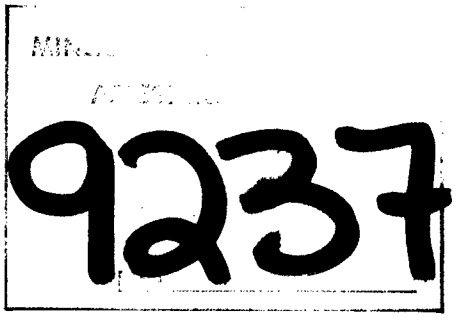
MAJOR BONANZA PROPERTY

VANCOUVER M.D., B.C.

LATITUDE: 50°58'N; LONGITUDE: 127°12.5'W

Work Performed: Nov. 4-7,1980

FOUNDIT CLAIM
BONANZA CLAIM



JANUARY 27, 1981

INGO JACKISCH

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ATTACHMENTS

Plate	199-80-1	Location Map
"	199-80-2	Claims Map
"	199-80-3	VLF-EM Profiles, Claim Map
"	199-80-4	Fraser Filtered VLF-EM Profiles
"	199-80-5	Magnetometer Survey

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EXPLORATION
NTS 92L-14

WESTERN DISTRICT
January 27, 1981

GEOPHYSICAL SURVEYS

on the

MAJOR BONANZA PROPERTY

INTRODUCTION

From Nov. 4-7, 1980, a VLF-EM and magnetometer survey was performed on the Major Bonanza Property. The purpose of the survey was to determine the location and extent of a mineralized shear zone.

LOCATION AND ACCESS

The Major Bonanza Property is located 25 miles NE of Port Hardy, Vancouver Island. The claims are situated on the mainland, near Mt. Bullock and can be reached by helicopter from Port Hardy. An area has been cleared on the survey grid for a helicopter to land, but many large, tall trees make take-off and landing difficult.

GEOPHYSICAL SURVEYS

VLF-EM - A Crone Radem electromagnetometer was used for the VLF-EM survey. The transmitter at Cutler, Maine, transmitting at a frequency of 17.8 KHZ, was found to be most suitable for the east-west conductor we were interested in. Readings were taken at a 40 meter line separation and a 20 meter station interval. In the vicinity of a cross-over (i.e. anomaly) and on the two western lines readings were taken at a 10 meter interval. Both the in-phase dip angle and horizontal field strength were measured (I.P. dip angle was taken facing directly towards transmitter station).

The dip angle readings were Fraser filtered and plotted in plan form. The filtering process converts a dip angle cross-over, which resembles a sine wave, into a positive bell curve which is contourable. The highest positive values locate the anomaly position.

MAGNETICS

A Scintrex MP-2 proton precession magnetometer was used to perform the magnetics survey. Lines were 20 meters apart with a station interval of 10 meters. The operator faced north for all readings.

Rainfall was considerable during the entire survey time, which probably attributed to the ± 20 gamma error in the readings. This might be due to a slight amount of shorting at the cable-sensor contacts because of moisture. 56,000 gammas has been subtracted from all plotted readings.

DESCRIPTION OF RESULTS

The VLF-EM data presented on Plate 199-80-3 shows both in-phase dip angle and horizontal field strength. A field strength peak coincides with a dip angle cross-over on virtually every line. The resulting conductor, which runs along very close to the baseline, has been dashed in across the grid lines. The cross-overs are indicative of uncomplicated, single conductors except in the vicinity of line 20W. Here the conductor divides or changes direction, yet continues uniformly on both sides to the east and west.

The Fraser filtered VLF-EM data, shown in plan form on Plate 199-80-4, is in good agreement as to the anomaly location. This data additionally indicates that the strongest part of the conductor occurs near the baseline on 120W to 160W and 20W. The complication in interpretation of the raw data on line 20W now appears to be caused by a fault which shifts the eastern part of the anomaly 30 meters to the south. The major part of the conductor, however, occurs as a continuous zone from line 260W to 00W along the baseline.

The magnetic data (Plate 199-80-5) is believed to respond to the pyrrhotite found in the shear zone. A weak anomaly of 200-300 gammas does occur on the baseline from line 100W to 60E. This anomaly overlaps the conductor indicated in the Fraser filtered VLF-EM data. The fault is also coincident on both surveys.

The large, rapidly changing magnetic readings on the northern and southern edges of the grid are due to mafic-intermediate metavolcanic rocks. The 3000 gamma anomaly in the NW corner of the grid makes the 300 gamma anomaly in the shear zone seem insignificant. This could simply be due to the larger anomaly responding to increased magnetite content (which will give larger, quickly changing magnetic readings) and the smaller anomaly responding to pyrrhotite (which gives variable, weak magnetic readings). The relatively flat response 60 meters to either side of the baseline is what one would expect for metasedimentary rocks.

CONCLUSIONS

The VLF-EM survey was successful in delineating the location of the mineralized shear zone on the grid area covered. The magnetics survey responded to only the eastern half of the zone of interest. Both surveys indicate a fault between lines 00E and 20E on the baseline which offsets the shear zone by 30 meters.

Since the zone is not closed off to the east, further lines in this direction should be added until the full extent has been determined.

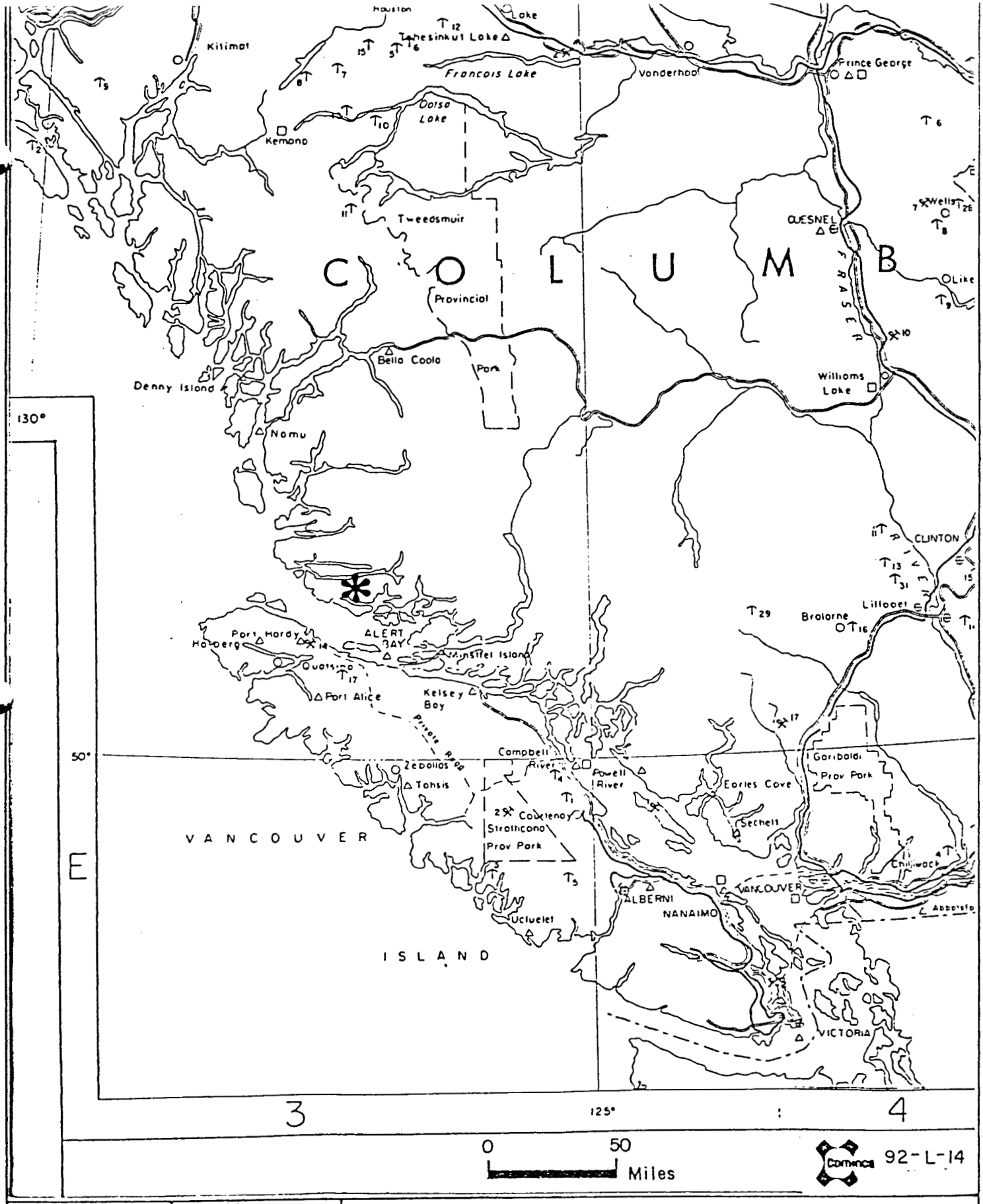
Respectively submitted by: Ingo Jackisch
Ingo Jackisch
Geophysicist

Alan Scott
Geophysicist

Approved for release by: W. J. Wolfe for
G. Harden
Manager, Western District

Distribution

Mining Recorder (2)
Western District (1)
Geophysics Field (1)



Drawn by:		Traced by:	
Revised By	Date	Revised By	Date

LOCATION MAP

MAJOR - BONANZA PROPERTY

Scale: 1 " = 50 miles

Date: Aug. 20 / 80

Plate 199-80-1

COMINCO LTD.

EXPLORATION
NTS: 92L-14

WESTERN DISTRICT
January 27, 1981

APPENDIX I

CERTIFICATION

I, INGO JACKISCH, OF 424 SOMERSET STREET, IN THE CITY OF VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, DO HEREBY CERTIFY THAT:

(1) I GRADUATED FROM THE UNIVERSITY OF B.C. IN 1975 WITH A B.Sc. IN GEOPHYSICS:

(2) I AM REGISTERED WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF B.C. AS AN ENGINEERING PUPIL, AND AM A MEMBER OF THE B.C. GEOPHYSICAL SOCIETY:

(3) I HAVE BEEN PRACTISING MY PROFESSION FOR THE PAST NINE YEARS.

Signed: Ingo Jackisch

Ingo Jackisch
Geophysicist

APPENDIX II

COST STATEMENT FOR VLF/MAGNETOMETER SURVEY

WORK ON MAJOR BONANZA PROPERTY

NOVEMBER 4-7, 1980

1) Salaries			
I. Jackisch, geophysicist	4 days @ 125	=	$ 500
2) Charges per survey day			
(towards drafting, report, supervision)			
	3 days @ 175	=	$ 525
3) Equipment rentals			
MP-2 magnetometer	3 days @ 10	=	$ 30
Crone Radem VLF	2 days @ 12.50	=	$ 25
	TOTAL PROJECT COSTS	=	$1,080

Signed: _____

Alan R. Scott
Geophysicist

51°00'

M92L/14E

WHELAKIS 1

420 (4)

MINE 2 614 (12)

MINE 1 613 (12)

LEE 2 425 (5)

Lee Lake

KIT 2 657 (4)

KIT 1 656 (4)

WHELAKIS 2 421 (4)

LEE 3 426 (5)

Nenahlmai Lagoon

I.R. 9

SILVERLOCK HILLS

Triangle Lagoon

DRURY 1

DRURY 2

OPAL 700(6)

AGATE 699(6)

TOPAZ 698(6)

BONANZA 800(11)

RUBY 701 (6)

BULLOCK MTN.

MT. ADAMS

Whelakis Lagoon

Creasy Cr.

England Pt.

Creasy Bay

Skeene Bay

Bond Peninsula

Actaeon Sound

Hand Bay

Bond Lagoon

MT. AMIES

Skeene Pt.

Cairie Lake

Charters Pt.

Charlotte Pt.

Dove I. I.R.12

Jenkins Pt.

MT. ELLIS

Bradley Lagoon

Sea Lion Lake

Sutherland Bay

Boone Pt.

MT. GARDINER

Adelaide Lake

MT. KERR

FARMER HILL

Cunningham Pt.

Blackney Pt.

Collinson Bay

Wilson I.

Drury

Creek

N

230° MAGNETIC

5

9237

MAJOR BONANZA PROPERTY

Cominco

N.T.S. 92L/14E

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

CLAIM MAP

VANCOUVER M.D., B.C.

Scale: 1 : 50,000 | Date: NOV. 1980 | Plate: 199-80-2

FOUNDIT CLAIM

BONANZA CLAIM

23° MAGNETIC

POND

L300W
L280W
L260W
L240W
L220W
L200W
L180W
L160W
L140W
L120W
L100W
L80W
L60W
L40W
L20W
L00E
L20E
L40E
L60E

100 N
80 N
60 N
40 N
20 N
Baseline 0+00N
20 S
40 S
60 S
80 S
100 S

(?)

CONDUCTOR

INSTRUMENT — CRONE RADEM NO. 204

CLAIM BOUNDARY
(APPROXIMATE LOCATION)

HORIZONTAL FIELD STRENGTH IN PHASE DIP ANGLE

-30 -20 -10 0 +10 +20 +30

0 +100

CUTLER, MAINE
17.8 KHz

9237

SCALE 0 5 10 20 30 50 m.

FOUNDIT CLAIM

BONANZA CLAIM

MAJOR-BONANZA PROPERTY

NTS 92L/14E

Drawn by: D.L.K.

Traced by:

Revised by	Date	Revised by	Date

VLF-EM SURVEY
CLAIM MAP
VANCOUVER M.D., B.C.

Scale: 1:500

Date: NOV. 1980

Plate: 1998-80-3

FORM 210 - 0880

MAJOR-BONANZA PROPERTY

NTS 92I/16E

Drawn by:	Traced by:
D.K.	
Revised by: Date:	Revised by: Date:

MAGNETOMETER SURVEY

VANCOUVER M.D., B.C.

Scale: 1:500 Date: NOV. 1980 Plate: 199-80-5

FORM 210-0660

SCALE 0 5 10 20 30 50 m.

INSTRUMENT - SCINTREX MP-2 PROTON PRECESSION MAGNETOMETER

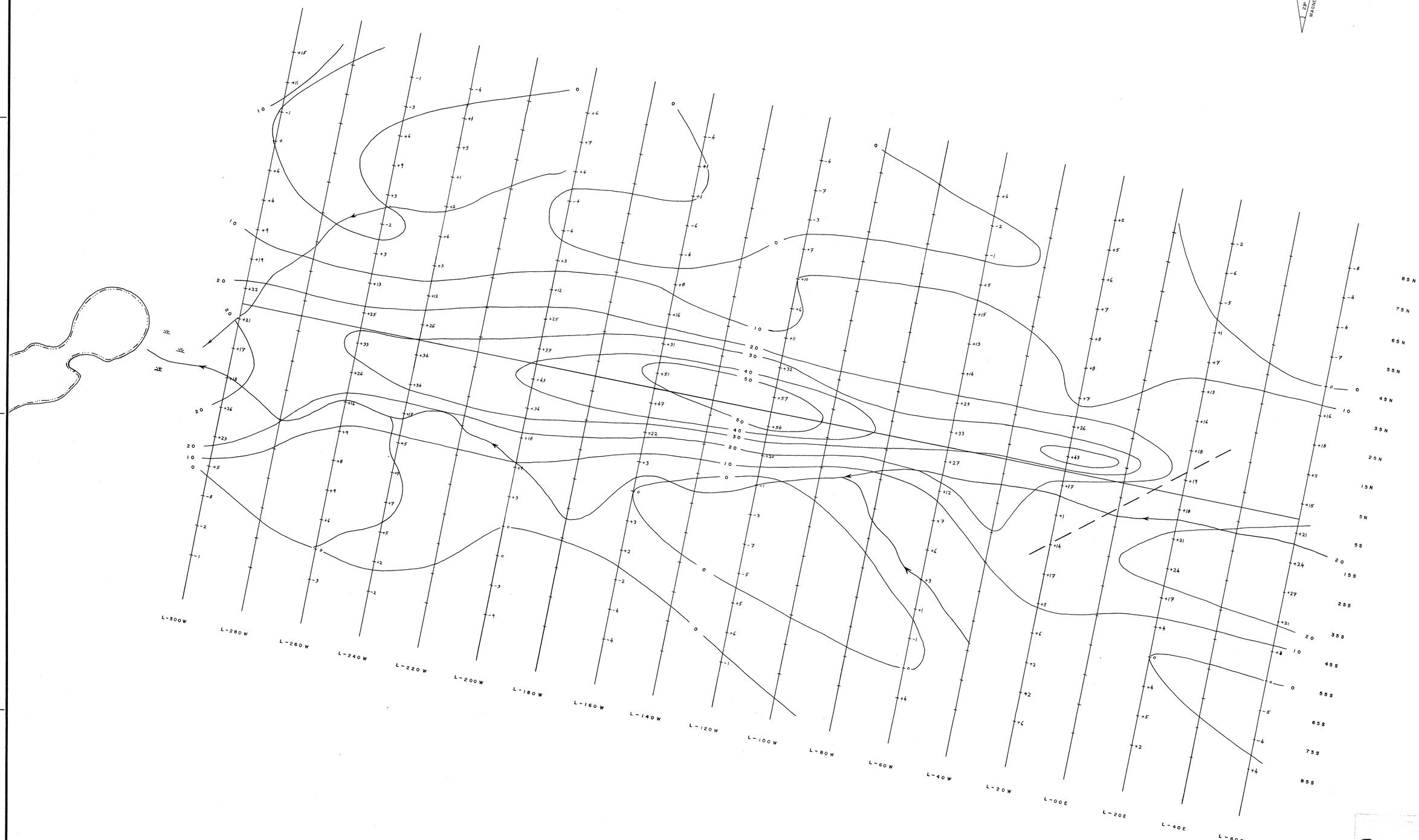
56,000 GAMMAS SUBTRACTED FROM ALL READINGS

500 GAMMA CONTOUR INTERVAL

FAULT

POND

MAGNETIC N 23°



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MAJOR BONANZA PROPERTY

NTS 92L/14E

Drawn by:	Traced by:	FRASER FILTERED VLF-EM SURVEY
Revised by / Date	Revised by / Date	Scale: 1:500 · Date: NOV. 1980 · Plate: 199-80-4

FORM 210 - 0680