83-#754 ~ # ~~#2~~

11382

REPORT ON THE

AIRBORNE GEOPHYSICAL SURVEY

ON THE

JAMBOREE PROPERTY

HORSEFLY RIVER AREA, B.C.

E & B EXPLORATIONS INC.

52° 19'00N 120° 52'00W

N.T.S. 93 A 7

Part 1 of 3

J.T. WALKER

J.T. WALKER MINING GEOPHYSICS

CARIBOO MINING DIVISION

JULY 12, 1983

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AIRBORNE GEOPHYSICAL SURVEY

on the

JAMBOREE PROPERTY

E & B EXPLORATIONS INC.

INTRODUCTION

On June 13 and 14, 1983, J.T. Walker Mining Geophysics carried out an airborne geophysical survey in the Horsefly River Area, B.C. The survey area lies 35 kilometers due east of Horsefly, B.C. The area flown is outlined on the Location Map, which depicts the N.T.S. sheet 93 A 7 at a scale of 1:250,000. This map is located at the bottom right of Drawing No. 3.

The Jamboree claims lie within the survey area. The Jamboree claims are held by agreement between E & B Explorations Inc. and Geo-Ex Resources Ltd. The claims are optioned to Monte Christo Resources Ltd. A list of claim names and record number follows:

CLAIM NAME	RECORD NUMBER
Jamboree 1	3783
Jamboree 2	3784
Jamboree 3	3785
Jamboree 4	3786
Jamboree 5	3787
Jamboree 6	3788
Jamboree 7	4176
Jamboree 8	4177
Jamboree 9	4178
Jamboree 10	4185
Jamboree 11	4179
Jamboree 12	4180
Jamboree 13	4181
Jamboree 14	4186
Jamboree 15	4182
Jamboree 16	4183
Jamboree 17	4184
Jamboree 18	4353

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The purpose of the survey was to provide data for compiling a low level aeromagnetic contour map and to locate zones of conductivity at the VLF frequencies (17.8 kHz. - 24.8 kHz.).

Three measurements were recorded during the survey:

(1) Total magnetic field intensity.
(2) Relative field strength of the horizontal component of the VLF electromagnetic field, utilizing two transmitters simultaneously.
    (a) Lines 1 - 29 Tx. Seattle & Tx. Cutler
    (b) Lines 30 - 43 Tx. Hawaii & Tx. Cutler

The change to Transmitter Hawaii was made when Transmitter Seattle experienced a break-down and was "off the air" for a three day period. The frequencies of the VLF transmitters are: Seattle - 24.8 kHz. Hawaii - 23.4 kHz. Cutler - 17.8 kHz.

A Bell 206 B helicopter, chartered from Highland Helicopters, Williams Lake, B.C. was used to fly the survey. Forty-three survey lines were flown in an east - west direction. A total of 294 line kilometers were flown covering an area of approximately 8800 hectares. A line spacing of 300 meters was maintained throughout the survey. The helicopter terrain clearance was 60 meters. Air speed of 100 kilometers per hour was maintained where possible.

SURVEY PERSONNEL

Pilot: R. Huff (Highland Helicopters)
Navigator: R. Simpson (E & B Explorations Inc.)
Operator: T. Walker (J.T. Walker Mining Geophysics)

Data reduction, compilation, drafting and interpretation was carried out by J.T. Walker

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SURVEY PROCEDURE AND NAVIGATION

A flight line base map of the survey area was prepared by enlarging a 1:50,000 N.T.S. topographic map to a scale of 1:20,000. Proposed flight lines and topographically located control points were plotted and numbered prior to flying the survey. During the survey, flight line path deviations were noted and corrected on the flight line base map. Flight line and control point information was announced by the navigator and recorded on magnetic tape. This information was also noted by the operator directly on the magnetic and VLF-EM analog charts during the course of the survey to provide correlation between the flight line control points and the recorded data.

INSTRUMENTATION

The following instruments are installed in the helicopter for measuring and recording the geophysical data:

(a) Proton Magnetometer (ELSEC - Type 595)

The magnetometer was manufactured by the Littlemore Scientific Engineering Co., Oxford, U.K. The magnetometer measures the total magnetic field at a one second cycle rate. The measurement is displayed digitally to one gamma and has an analog output of 100, 1000, or 10,000 gammas full scale. The 1000 gamma full scale output was used for the survey. The Toroidal wound detector was installed in a fibreglass "bird", towed beneath the helicopter on a 12 meter cable.

(b) Electromagnetic Receiver (VLF-EM)

The Two frequency VLF-EM receiver was manufactured by Sabre Electronic Instruments Ltd., Burnaby, B.C. Two omni-directional antenna arrays, (mounted in the fibreglass "bird", which also carries the magnetometer detector) are used. The antenna arrays are designed to detect the total horizontal magnetic component of the VLF fields.

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VLF signals originating from U.S. Navy transmitters near Seattle (24.8 kHz), Hawaii (23.4 kHz) and Cutler, Maine (17.8 kHz) were utilized for this survey. Two signals are measured simultaneously. The amplitudes of the horizontal component of the fields are measured continuously and displayed as relative field strengths. Two analog outputs are provided for recording.

(c) Recording System

Two chart recorders and a magnetic tape Frequency Modulated system are employed simultaneously during the survey.

(1) A one-pen chart recorder, (Hewlett Packard-Model 7155 B) is used to record the aeromagnetic data in profile. The recorder is calibrated to provide a full scale deflection of 1000 gammas.

(2) A two-pen chart recorder (Soltec - Model VP6723S) is used to record the VLF-EM field strength data from two transmitters.

(3) The tape recording system utilizes a stereo cassette recorder (Marantz Superscope - Model 330) and a frequency modulator (Sabre Electronic Instruments Ltd.). All in-flight conversation between navigator, pilot and operator was recorded on the right stereo channel. The VLF-EM data, in addition to being recorded on strip charts, is recorded, after frequency modulation, on the left stereo channel. The tape recorded voice and VLF-EM data is used as a back-up system only. The playback system utilizes the Marantz stereo tape recorder and speaker for voice information. A frequency demodulator provides analog outputs of the two VLF-EM signals which may be recorded on the two-pen Soltec recorder or digitized for computer application.

(d) Radar Altimeter

A radar altimeter (Mark 10 - Bonzer Inc.) was installed to measure and display the helicopter terrain clearance during the survey. The visual meter display assists the pilot in maintaining a constant aircraft-ground clearance.

DATA REDUCTION AND PRESENTATION

All survey data is presented on plan maps at a scale of 1:20,000. Corrected flight lines and control points are plotted and numbered. Flight line direction is indicated by an arrow at the beginning of each line.

(a) Aeromagnetic Data

The aeromagnetic data is presented as an aeromagnetic Contour Map (Drawing No. 1). The contour values are referenced to a base of 57,000 gammas total magnetic field. The results were not corrected for diurnal variation. The magnetic data was transferred manually from the strip charts to the flight lines using a standard graphic method, whereby magnetic contour interval points are transcribed to the plan map on the appropriate flight line. Contour lines were drawn through points of equal magnetic intensity. Contour intervals of 50 and 100 gammas were used. The contour line thickness designates the contour interval.

(b) Electromagnetic Data (VLF-EM) (Drawing No. 2)

The VLF-EM data is recorded as a continuous profile of the relative field strength. A significant anomaly is a definitive increase in the relative field strength. The VLF-EM anomalies are shown on the VLF-EM Anomaly Map by a hollow bar along the flight lines. The length of the bar corresponds to the anomalous profile width at the half height. The number enclosed within the bar represents the percent increase of the field strength at the maximum profile height. The anomalous locations are transcribed to the flight lines using the graphic method described under Aeromagnetic Data. Anomalous responses

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from Transmitters Seattle and Hawaii are plotted with the anomaly bar north of the flight line. Responses from Transmitter Cutler are plotted south of the flight line.

(c) Composite Map

Drawing No. 3 at a scale of 1:20,000 is a composite map showing aeromagnetic contours, VLF-EM anomaly locations and topography as an underlay. A location map, with the survey area outlined, is located at the bottom right corner of the sheet. The Location Map covers the 93 A 7 map area at a scale of 1:250,000.

DISCUSSION OF RESULTS

Results of the airborne magnetometer survey are plotted as an aeromagnetic contour map using contour intervals of 50 and 100 gammas. A wider contour line accentuates the 500 gamma contour. Contour values are referenced above 57,000 gammas, total magnetic field.

The magnetic background ranges between 1000 to 1200 gammas over much of the survey area; however, several prominent magnetic features stand out. A circular magnetic "high" centered on Control Point 1A, Line 19 has a maximum value of 2000 gammas. The shape and intensity of this anomaly suggests a basic intrusive plug. Three small (200 - 500 gamma) anomalies are located on the western and eastern flanks of the centre "high". The small "high" centred toward the west end of Line 11 has a coincident VLF-EM response with a 12% increase in Field Strength.

The strong magnetic dipole in the southeast corner of the survey area ranges from a low of 700 gammas to a high of 3500 gammas. Two VLF-EM anomalies are located along the strike of the magnetic dipole to the southeast on Line 4. A third VLF-EM anomaly also on Line 4 lies on the south gradient of the magnetic "high".

The VLF-EM survey indicates 39 anomalies. They are listed in Appendix "A" together with % increase of field strength and VLF - Transmitters producing the anomaly. The anomaly number defines the location by referring first to the flight line number - second, the control point number and the distance toward the next control point in tenths.

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Ten of the anomalies coincide with topographic ridges, abrupt changes in terrain or swamp areas; however, they may indicate zones of conductivity.

The most significant VLF-EM anomalies, in addition to those mentioned in association with the magnetic anomalies, are a group centred west of the magnetic dipole on Lines 2, 3 and 4.

CONCLUSIONS AND RECOMMENDATIONS

The Airborne Geophysical survey has provided data for the low level aeromagnetic contour map and has indicated conductive zones defined by the VLF-EM anomaly map.

The magnetic features will assist in developing a geological map of the area as well as defining areas for further prospecting.

The more significant magnetic and VLF-EM anomalies should be investigated on the ground, utilizing geochemical and geological methods as well as magnetic and electromagnetic techniques. The Induced Polarization method should be considered if disseminated sulphides are the prime target.

July 12, 1983

J.T. WALKER

J.T. WALKER MINING GEOPHYSICS

APPENDIX A

LIST OF VLF-EM ANOMALIES

Anomaly No.	% increase of F.S.	Tx.	Remarks
1 - 2.4	20	SEATTLE	
1 - 3.9	12	SEATTLE	
2 - 0.2	12	SEATTLE	
2 - 0.9	22	CUTLER	
2 - 1A.4	18	SEATTLE	
2 - 1A.9	10	SEATTLE	
2 - 2.2	14	SEATTLE	
3 - 0.4	24	SEATTLE	
3 - 0.5	28	SEATTLE	
3 - 0.7	16	SEATTLE	
4 - 0.3	12	CUTLER	
4 - 0.5	24	CUTLER	
4 - 0.9	30	CUTLER	
4 - 2.2	6	SEATTLE	
6 - 1.7	15	SEATTLE	Topo?
8 - 1.6	20	SEATTLE	Topo?
11 - 0.5	12	SEATTLE	
11 - 1.2	7	SEATTLE	
11 - 2.5	18	CUTLER	
16 - 1.6	15	CUTLER	
17 - 1A.6	15	SEATTLE	Topo?
17 - 3.3	20	SEATTLE	
22 - 1.4	15	SEATTLE	Swamp?
25 - 2.9	8	SEATTLE	
27 - 2.0	10	SEATTLE	
27 - 2.2	9	SEATTLE	
27 - 2.4	7	SEATTLE	
27 - 2.6	12	CUTLER	
31 - 1.1	16	CUTLER	Topo?
31 - 1.1	18	HAWAII	Topo?
37 - A.7	5	HAWAII	Topo?
37 - 1.3	10	HAWAII	Topo?
37 - 1.9	8	CUTLER	
38 - 1.1	16	CUTLER	Topo?
38 - 1.1	15	HAWAII	Topo?
38 - 2.5	6	HAWAII	
39 - 1.6	8	HAWAII	
39 - 1.6	15	CUTLER	
40 - 0.3	8	CUTLER	
40 - 0.3	7	HAWAII	
40 - 1.2	8	HAWAII	
41 - 1.0	14	HAWAII	
41 - 1.0	8	CUTLER	
43 - 1.6	4	CUTLER	
43 - 1.6	10	HAWAII	

STATEMENT OF EXPENDITURES

AIRBORNE GEOPHYSICAL SURVEY

ON THE

JAMBOREE 1 - 18 MINERAL CLAIMS

Field Work: June 12 - 15, 1983

Line kilometers surveyed - 294 km.

Line kilometer charge - $ 34.00

TOTAL CHARGE - 294 @ $ 34.00 = $9,996.00

July 12, 1983

J.T. Walker

J.T. Walker Mining Geophysics

STATEMENT OF QUALIFICATIONS

I, James T. Walker of the Municipality of Richmond, Province of British Columbia do certify that:

1. I have been engaged in Mining Geophysics since June, 1965.

2. I have been engaged in Airborne Geophysical surveying since April, 1973.

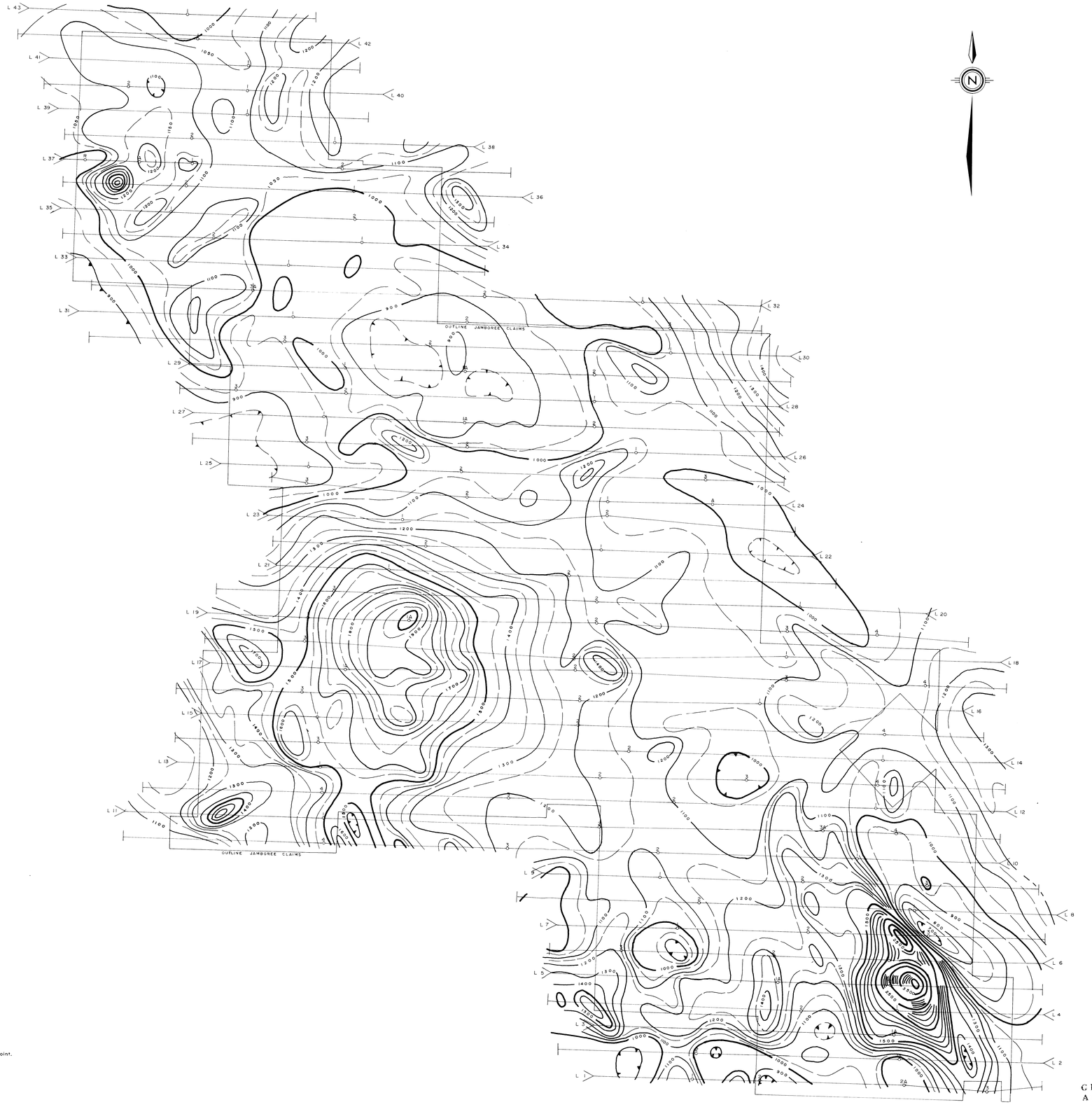
3. I am a member of the Canadian Institute of Mining and Metallurgy.

4. I am a member of the British Columbia Geophysical Society.

5. I am a member of the Society of Exploration Geophysicists.

J. T. Walker

J.T. Walker
J.T. Walker Mining Geophysics



LEGEND

L 11 — Flight line number and direction, numbered control point.

Measurement is total magnetic field.

Reference level – 57,000 gammas (nT)

Contour interval: 500 nT
100 nT
50 nT

Helicopter terrain clearance – 60 meters

Flight line spacing – 300 meters

AEROMAGNETIC CONTOUR MAP

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,382

Part 1 of 3

To accompany Airborne Geophysical Report by J.T. Walker (Walker Mining Geophysics) on the Jamboree Claims, Cariboo M.D. Dated: July 12, 1983.

J. Walker

MAP SCALE
1: 20,000
400 0 400 800 meters 1200

NTS 93 A 7

REVISIONS	No	Date	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
July 4th, 1983	J.T. Walker		

E & B Explorations Inc.

OFFICE	DEPARTMENT

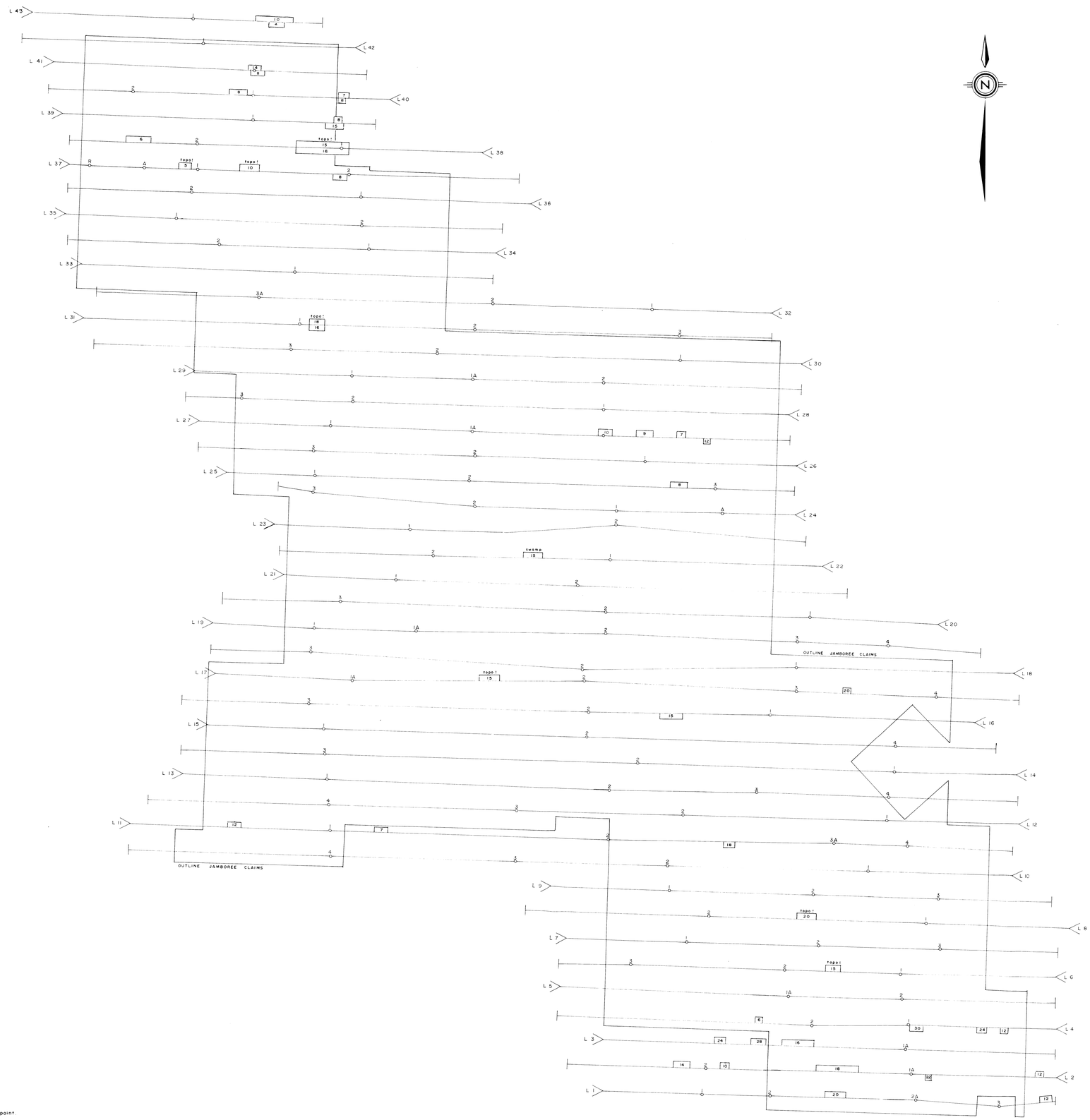
JAMBOREE PROPERTY

AIRBORNE MAGNETOMETER SURVEY

WALKER MINING GEOPHYSICS

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1: 20,000	1

VANCAL 6548



LEGEND

L 11 — Flight line number and direction, numbered control point.

V L F - E M Measurement - Field Strength (horizontal component)

V L F Transmitters : lines 1-29 Seattle, Cutler.
lines 30-43 Maw6ii, Cutler.

10 / 6 — Tx- Sea. or Max. / Tx- Cut. — V L F - E M Anomaly, showing % increase in F.S.

AIRBORNE VLF-EM ANOMALY MAP

HORIZONTAL FIELD STRENGTH

GEOLOGICAL BRANCH
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MAP SCALE

400 0 meters 400 800 1200

NTS 93A 7

REVISIONS	No	Date	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
July 4th 1983	J.T. Walker		

E & B Explorations Inc.

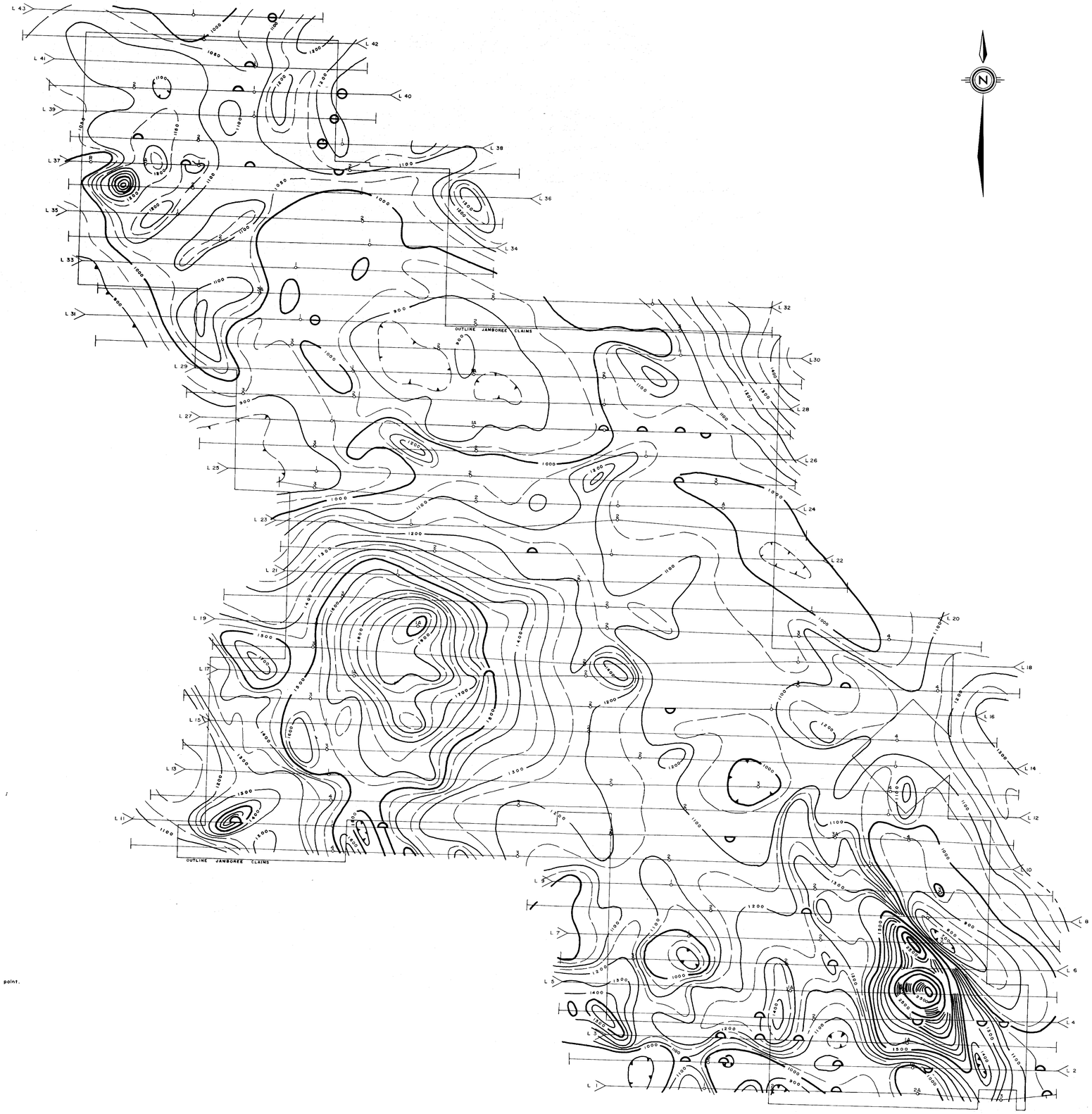
OFFICE	DEPARTMENT

JAMBOREE PROPERTY

AIRBORNE V L F - E M SURVEY

WALKER MINING GEOPHYSICS

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1 : 20,000	2



LEGEND

L 11 — Flight line number and direction, numbered control point.

Measurement is total magnetic field.

Reference level – 57,000 gammas (nT)

Contour interval: 500 nT
100 nT
50 nT

VLF-EM Measurement - Field Strength (horizontal component)

VLF Transmitters - lines 1-29 Seattle, Cutler.
lines 30-43 Hawaii, Cutler.

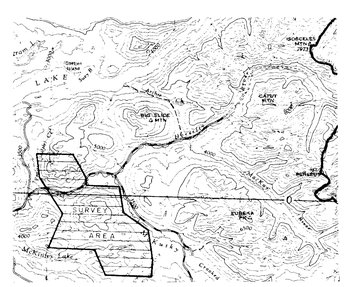
Tx-Sea. or How. Tx-Cut. VLF-EM Anomaly

Helicopter terrain clearance – 60 meters

Flight line spacing – 300 meters

AEROMAGNETIC CONTOUR MAP

SHOWING LOCATION OF VLF-EM ANOMALIES



LOCATION MAP 1:250,000

GEOLOGICAL BRANCH ASSESSMENT REPORT

93 A 7

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Part 1 of 3

To accompany Airborne Geophysical Report by J.T. Walker (Walker Mining Geophysics) on the Jamboree Claims, Cariboo M.D. Dated: July 1983

MAP SCALE
1: 20,000
400 0 400 800 meters 1200

NTS 93 A 7

REVISIONS	No	Date	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
July 4th 1983	J.T. Walker		

E & B Explorations Inc.

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JAMBOREE PROPERTY

AIRBORNE SURVEY COMPOSITE MAP

WALKER MINING GEOPHYSICS

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1 : 20,000	3

VANCAL 1748