ARIS SUMMARY SHEET

District Geologist, Kamloops Off Confidential: 89.03.01

ASSESSMENT REPORT 17651 MINING DIVISION: Revelstoke Slocan

PROPERTY: Denny
LOCATION: LAT 50 46 20 LONG 117 24 28
UTM 11 5624356 471245
NTS 082K14W 082K11W
CLAIM(S): Black Warrior 1,Ellsmere 1,Galena,Horne,Blackburn,Ellsmere,Morgan
Silver Leaf 1,Edna No.2 (L.5698),Celtic,Canadian Girl (L.4705)
OPERATOR(S): Golden Range Res.
AUTHOR(S): Hlava, M.
REPORT YEAR: 1988, 30 Pages
COMMODITIES
SEARCHED FOR: Lead,Zinc,Silver,Copper,Gold
GEOLOGICAL
SUMMARY: The claims appear to be underlain by folded rocks of the Cambrian-Devonian Lardeau Group and Cambrian Hamill Group including the Marsh Adams and Mohican Formations.

WORK
DONE: Geophysical
EMAB 150.0 km;VLF
Map(s) - 1; Scale(s) - 1:10 000
MAGA 150.0 km
Map(s) - 3; Scale(s) - 1:10 000

RELATED
REPORTS: 16643
MINFILE: 082KNW081,082KNW160,082KNW166,082KNW188

LAFOREST-HLAVA EXPLORATION SERVICES LTD.

(705) 268-2511

24 Pine Street South, P.O. Box 1163, TIMMINS, ONTARIO P4N 7H9

AIRBORNE ELECTROMAGNETIC AND MAGNETIC

SURVEY

ON

DENNY CLAIMS

SLOCAN/REVELSTOKE MINING DIVISIONS

NTS: 82 k/11 & 14

LATITUDE: 50° 45' 25"

LONGITUDE: 117° 24' 45"

FOR

OPERATOR: GOLDEN RANGE RESOURCES INC.

OWNER: JACK DENNY AND ERIC DENNY

BY

MILAN HLAVA, B. Sc., F.G.A.S.

APRIL, 1988

ASSESSMENT REPORT

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MAPS

INTRODUCTION

The following report describes the results of an Airborne VLF EM and Magnetometer Survey by Aerodat Limited for Golden Range Resources Inc. on the Denny claims in the Lardeau Area of southeastern British Columbia. (Figure 1)

LOCATION AND ACCESS

The Denny claims are located at the head waters of Galena Creek, 15.5 air kilometers north-northeast of the community of Trout Lake, NTS 82 K/11 and 14, Latitude 50°45'25" and Longitude 117°24'45".

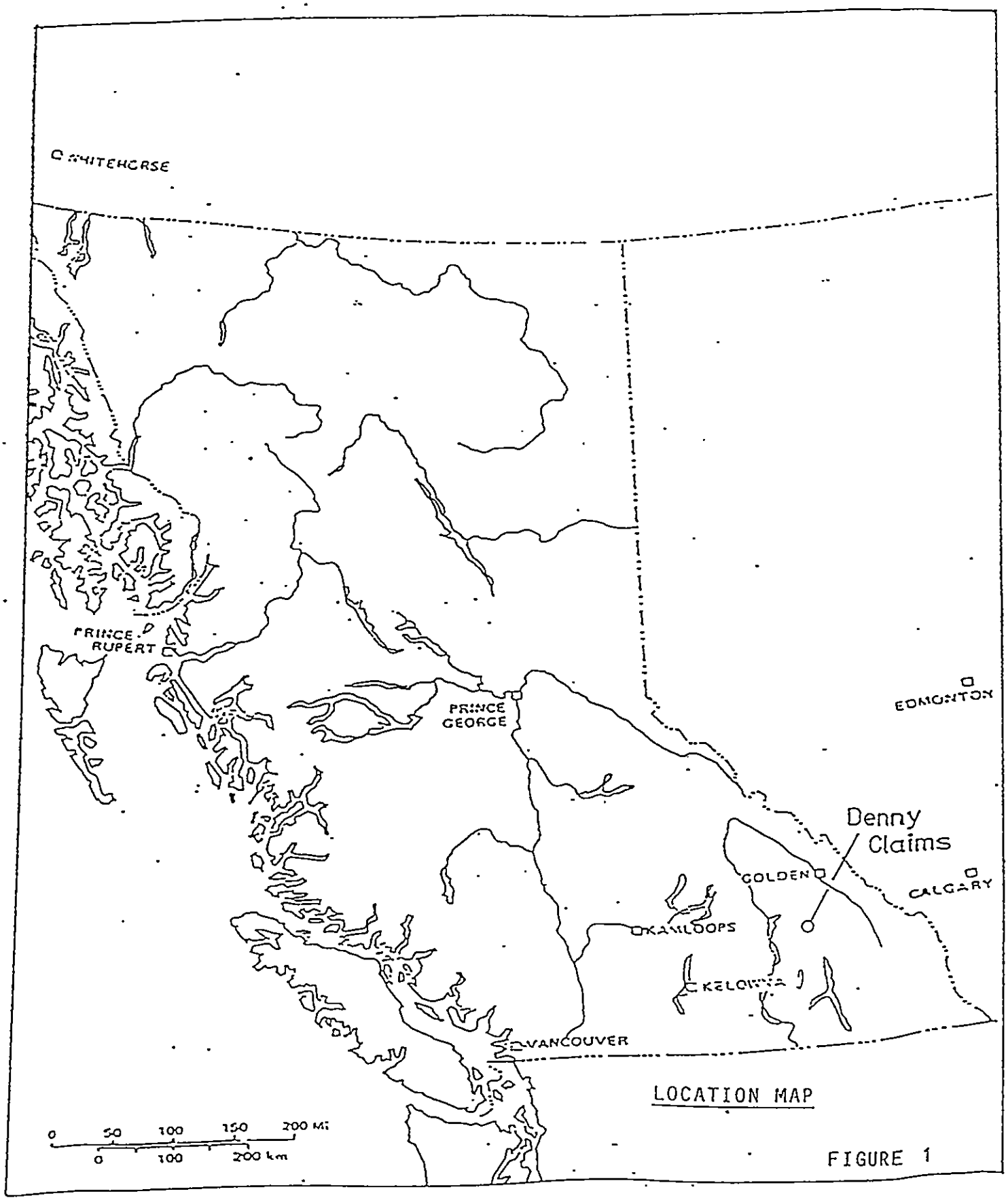
Elevations on the claims range from 4,000 feet A.S.L. to over 8,800 feet (1,200 meters to 2,680 meters).

The most practical access to the claims is by helicopter from Nakusp (60 air km) or Revelstoke (65 air km).

PROPERTY DESCRIPTION - Figure 2

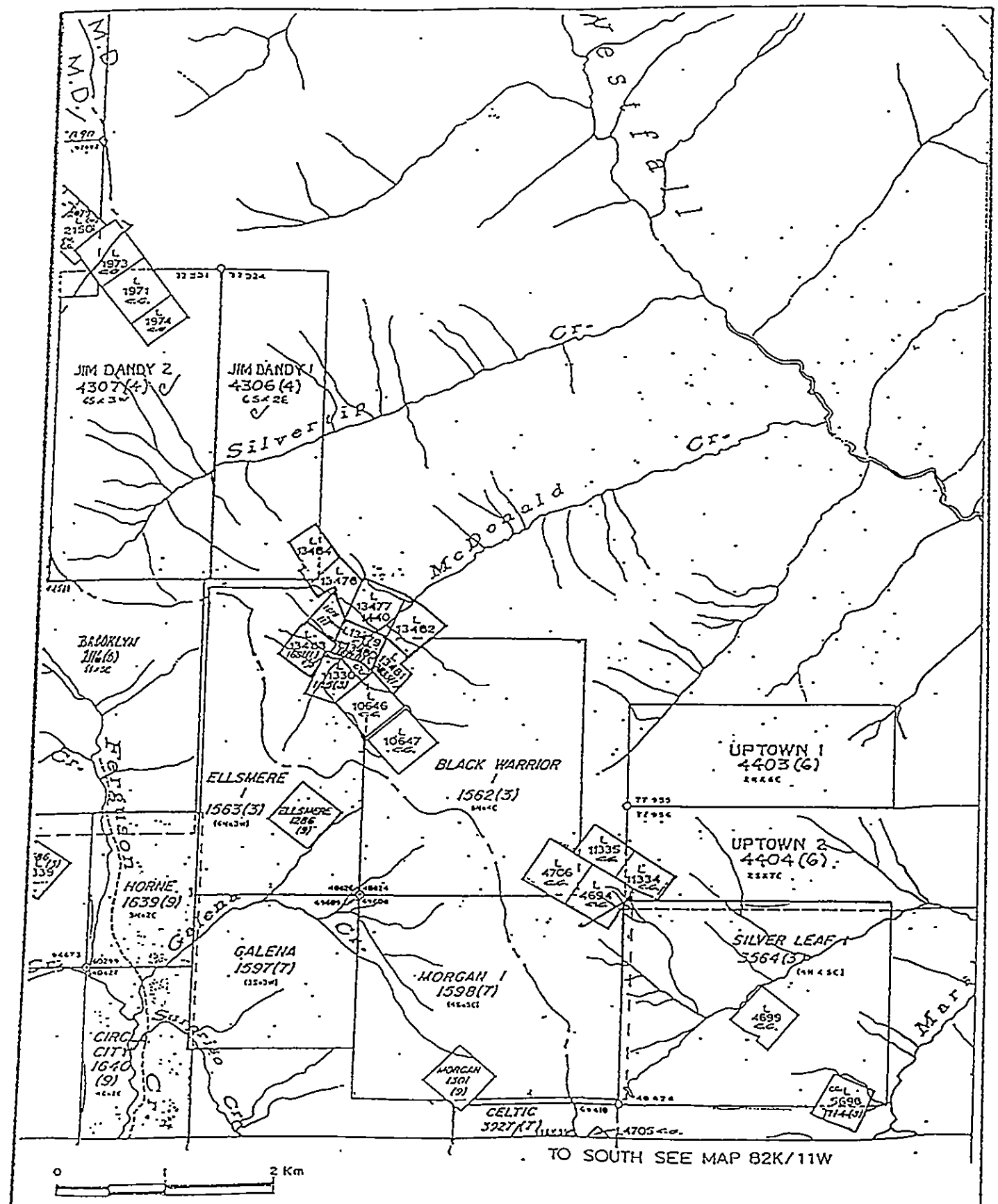
The Denny property consists of 116 claim units including three Crown grants, optioned from Eric Denny and Jack Denny. The summary of claims follows:

CLAIM NAME	RECORDING DATE	UNITS	RECORD NO.	LOT NO.
Black Warrior #1	83-03-01	20	1562	N/A
Ellsmere #1	83-03-01	18	1563	"
Silver Leaf #1	83-03-01	20	3564	"
Blackburn	87-07-16	20	2423	"
Galena	83-07-08	9	1597	"
Celtic	83-07-07	3	3927	"
Circle City	83-09-15	8	1640	"
Horne	83-09-15	6	1639	"
Ellsmere	81-09-08	1	1286	"
Morgan	81-09-29	1	1301	"
Edna No. 2	79-03-02	1	1114	(5698)
White Star	79-03-02	1	1115	(11330)



LOCATION MAP

FIGURE 1



PORTION OF MINERAL CLAIM MAP

82 K/14 W

FIGURE 2

SUMMARY OF CLAIMS (Cont'd)

CLAIM NAME	RECORDING DATE	UNITS	RECORD NO.	LOT NO.
Copper Glance	80-01-17	1	1681	(13483)
Victoria	80-01-17	1	1678	(13479)
Gladstone	80-01-17	1	1679	(13480)
Snowstorm	82-01-18	1	2833	(13481)
Canadian Girl	83-01-24	1	3439	(4705)
Black Warrior	Crown 1913	1	-	(10646)
Eva May	Crown 1913	1	-	(10647)
Silver Leaf	Crown 1901	1	-	(4699)
	Total	116		

PREVIOUS WORK

The Galena Creek area was actively explored during the period 1893 to 1917. During that period many claims were recorded and Crown granted. Gordon Turner's 1983 assessment report summarizes the history of exploration in this region and the reader is referred to his report for information on previous work.

In 1985 Nakusp Resources conducted an eight-day exploration program on the property.

HELICOPTER-BORNE MAGNETOMETER AND VLF-EM SURVEYS

The Logistics Report on the surveys is appended to this report (Appendix 1).

SURVEY RESULTS - MAGNETOMETER

The results of the magnetometer survey are presented on Map 1 in a back pocket.

SURVEY RESULTS - MAGNETOMETER (Cont'd)

The magnetics within the survey area clearly show a NW-SE stratigraphical trend. The major N-S magnetic low in the western portion of the property is interpreted as a fault. The isolated concentric magnetic highs are indicative of the presence of blind intrusives.

SURVEY RESULTS VERTICAL GRADIENT MAGNETICS

The results are presented on Map 2 in a back pocket.

The areas of high magnetic intensity have been clearly broken up to unique trends as a result of computation of the vertical gradient. The areas of oval shaped high magnetic gradients are indicative of the presence of near surface skarn.

The zero contour interval coincides directly or very close to geological contacts. It is because of this phenomenon that the calculated vertical magnetic gradient map can be compared to a pseudo-geological map. This is true for vertical bedding. However, with the bedding dipping, it will be found that the geological contacts will be closer to the magnetic peaks.

Using known or accurate geological information and combining this data with the vertical gradient data, one can use the presented map as a pseudo-geological map. Obviously, the more that is known about an area geologically, the closer this type of presentation is to what the rock types are.

This type of presentation is an invaluable tool in helping to define complex geology, especially in drift covered areas.

SURVEY RESULTS VERTICAL GRADIENT MAGNETICS (Cont'd)

The nature of the computation of the vertical gradient data results in magnetic anomalies produced by near surface features being emphasized with respect to those resulting from more deeply buried rock formations. Much more detail is obtained however, providing a better opportunity to recognize fault zones. Some fault zones can be interpreted at the present time, however, it will become more apparent to the client as more field geological information is obtained, that other fault zones do exist.

SURVEY RESULTS VLF-EM

The results are presented on Maps 3 and 4 in a back pocket. A total of 35 main EM conductors were interpreted and are numbered numerically on Map 4. All the anomalies should be investigated in detail.

CONCLUSIONS AND RECOMMENDATIONS

The airborne survey defined a minimum 35 EM anomalies which should be investigated in detail. The complete exploration proposal will be submitted in the near future.

Respectfully submitted,

Milan Hlava

Milan Hlava, B.Sc.,F.G.A.S.
Consulting Geologist

CERTIFICATE

CERTIFICATE

I, Milan Hlava of the City of Timmins, Province of Ontario, Canada and the Town of Surrey, Province of British Columbia, Canada do state:

1. That I am a practising consulting geologist with offices at 24 Pine St., South, P.O. Box 1163, Timmins, Ontario P4N 7H9 and 14746 90A Avenue, Surrey, B. C. V3R 1B2.

2. That I am a graduate of Komensky University, Bratislava, Czechoslovakia (1968) with a degree of Bachelor of Science in Exploration Geology.

3. That I have practised my profession as a Geologist continuously since 1968 and as a Consulting Geologist continuously since 1984.

4. That I am a Fellow of the Geological Association of Canada since 1982.

5. That I have no interest directly, indirectly nor anticipated in Golden Range Resources Inc. or the properties in this report.

6. That I am familiar with the material contained in this report, having examined all the material myself and visited the property myself in the field.

7. That the conclusions reached in this report are my own.

Respectfully submitted,

Milan Hlava

Milan Hlava, B.Sc.,F.G.A.S.

APPENDIX 1

LOGISTICS REPORT

LOGISTICS REPORT ON
COMBINED HELICOPTER-BORNE
MAGNETIC AND VLF-EM
SURVEY
REVELSTOKE,
BRITISH COLUMBIA

for
GOLDEN RANGE RESOURCES INC.
by
AERODAT LIMITED
December, 1987

8766

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(Scale: 1:20,000)

Maps

1. Base Map

2. Total Field Magnetic Contours

3. Vertical Magnetic Gradient Contours

4. VLF-EM Total Field Contours.

1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Golden Range Resources Inc. by Aerodat Limited. Equipment operated included a proton precession magnetometer, a VLF-EM system, a tracking camera, and a radar altimeter.

The survey area was located approximately 65 km south south east of Revelstoke, B.C. The survey was flown between November 5th and 9th, 1987. At a nominal Line spacing of 250 metres, 40 lines oriented at 30 degrees/210 degrees spanning 150 line kilometres were flown to provide coverage of the survey area. The quality of the recorded geophysical data was considered to be within the specifications described in the contract.

2. SURVEY AREA LOCATION

The survey area is depicted on the index map shown below. The flight line direction was 30/210.

3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

The helicopter used for the survey was an Aerospatiale A-Star 350B operated by Ranger Helicopters Limited, with registration CGBBX. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 75 metres.

3.2 Equipment

3.2.1 VLF-EM System

The VLF-EM system was a Herz Totem 2A. This instrument measured the total field and quadrature components from two transmitting stations, providing two channels of both line and orthogonal information.

The sensor was towed in a bird 10 metres below the helicopter, 65 metres above the terrain. The transmitting station used for the line channels was NSS (Annapolis, Maryland, 21.4kHz), and NPM (Lualualei, Hawaii, 23.4). For the orthoganal direction, station NAA (Cutler, Maine, 24.0) was received.

3.2.2 Magnetometer

The magnetometer was a Geometrics G803 proton precession type. The sensitivity of the instrument was 1 gamma at a 0.5 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

3.2.3 Magnetic Base Station

A Geometrics 803 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

3.2.4 Radar Altimeter

A King Air radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.5 Tracking Camera

A Panasonic video tracking camera was used to record flight path on VHS video tape. Real time and fiducial numbers (manual and camera) were encoded on the film for cross reference with analog and digital data.

3.2.6 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	Input	Scale
MAGF	Magnetometer Sensor-Fine	2.0 nT/mm
RALT	Radar Altimeter	10 ft./mm
VOQ	VLF-EM Quadrature - Ortho	2.5%/mm
VOT	VLF-EM Total Field - Ortho	2.5%/mm
VLQ	VLF-EM Quadrature - Line	2.5%/mm
VLT	VLF-EM Total Field - Line	2.5%/mm
MAGC	Magnetometer Sensor-Coarse	20.0 nT/mm

3.2.7 Digital Recorder

An RMS DGR 33 digital acquisition system recorded the survey on magnetic tape. Information recorded was as follows:

Equipment	Interval
VLF-EM	0.5 second
Magnetometer	0.5 second
Altimeter	1.0 second

4. DATA PRESENTATION

4.1 Base Map and Flight Path

A photomosaic base at a scale of 1:20,000 was prepared by enlargement of aerial photographs of the survey area. This base was used in part for navigation as well as for registration of the flight path.

4.2 Total Field Magnetic Contours

The aeromagnetic data were corrected for diurnal variations by subtraction of the digitally recorded base station magnetic profile. No correction for regional variation was applied.

The corrected profile data were interpolated onto a regular grid at a 25m true scale interval using an akima spline technique. The grid provided the basis for threading the presented contours at a 1 gamma interval.

The aeromagnetic data have been presented in contour form with flight path on a greyflex copy of the photo base map.

4.3 Vertical Magnetic Gradient Contours

The vertical gradient was computed from the total field magnetic data to obtain values in nanoTeslas/metre. These calculated gradient profile data were then interpolated onto a regular grid at a 25m true scale interval, again using an akima spline technique.

The gridded data were, in turn, contoured at an interval of 0.5 nanoTesla per metre and presented with flight path on a greyflex copy of the photo base map, as well as in coloured grids with contours and flight path.

4.4 VLF-EM Total Field Contours

The line VLF-EM total field signals were also gridded at a 25 metre interval and presented on a greyflex copy of the photo base map along with the flight lines.

5. GENERAL INTERPRETIVE CONSIDERATIONS

Total Field Magnetics

The total field magnetic map shows contours of the total field using a proton precession magnetometer, at a fine contour interval of one gamma.

The magnetic map is characterized by numerous magnetic features and should be carefully correlated with existing geologic maps of the area. Such correlations should prove extremely useful for updating the known geology of the area.

Measured Vertical Gradient

The vertical gradient map has the inherent advantage of defining contacts between different lithologic units as well as enhancing shorter spatial wavelength features due to near surface bodies of finite dimensions. Hence, the vertical gradient map is a useful supplement to the total field map.

VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is elliptically polarized in the vicinity of electrical conductors. The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and

vertical quadrature component of the polarization ellipse.

The relatively high frequency of VLF (15-25 kHz) provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measureable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground the depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically, it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the

flight direction are most clearly rendered and usually dominate the map presentation.

The total field response is an indicator of the existence and position of a conductivity anomaly. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

The vertical quadrature component over steeply dipping sheet-like conductors will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the depth.

The amplitude of the quadrature response, as opposed to shape is function of target conductance and depth as well as the conductivity of the overburden and host rock. As the primary field

travels down to the conductor through conductive material it is both attenuated and phase shifted in a negative sense. The secondary field produced by this altered field at the target also has an associated phase shift. This phase shift is positive and is larger for relatively poor conductors. This secondary field is attenuated and phase shifted in a negative sense during return travel to the surface. The net effect of these 3 phase shifts determine the phase of the secondary field sensed at the receiver.

A relatively poor conductor in resistive ground will yield a net positive phase shift. A relatively good conductor in more conductive ground will yield a net negative phase shift. A combination is possible whereby the net phase shift is zero and the response is purely in-phase with no quadrature component.

A net positive phase shift combined with the geometrical cross-over shape will lead to a positive quadrature response on the side of approach and a negative on the side of departure. A net negative phase shift would produce the reverse. A further sign reversal

occurs with a 180 degree change in instrument orientation as occurs on reciprocal line headings. During digital processing of the quadrature data for map presentation this is corrected for by normalizing the sign to one of the flight line headings.

Respectfully submitted,

AERODAT LIMITED

Keith Fisk

December, 1987

Keith P. Fisk

B. Sc., Geophysicist

APPENDIX I

CERTIFICATE OF QUALIFICATIONS

I, KEITH P. FISK, certify that: -

1. I hold a B. Sc. in Geological Geophysics from the University of Western Ontario.

2. I reside at 1009-26 Carluke Cres. in the city of North York, Ontario.

3. I have been engaged in a professional role in the minerals industry in Canada for the past two years.

4. I have been a member of the Prospectors & Developers Association since 1985.

5. The accompanying report was prepared from information supplied by Golden Range Resources Inc. and from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Golden Range Resources Inc. I have not personally visited the property.

6. I have no interest, direct or indirect, in the property described nor do I hold securities in Golden Range Resources Inc.

Signed,

Keith Fisk

Mississauga, Ontario

Keith P. Fisk

December, 1987

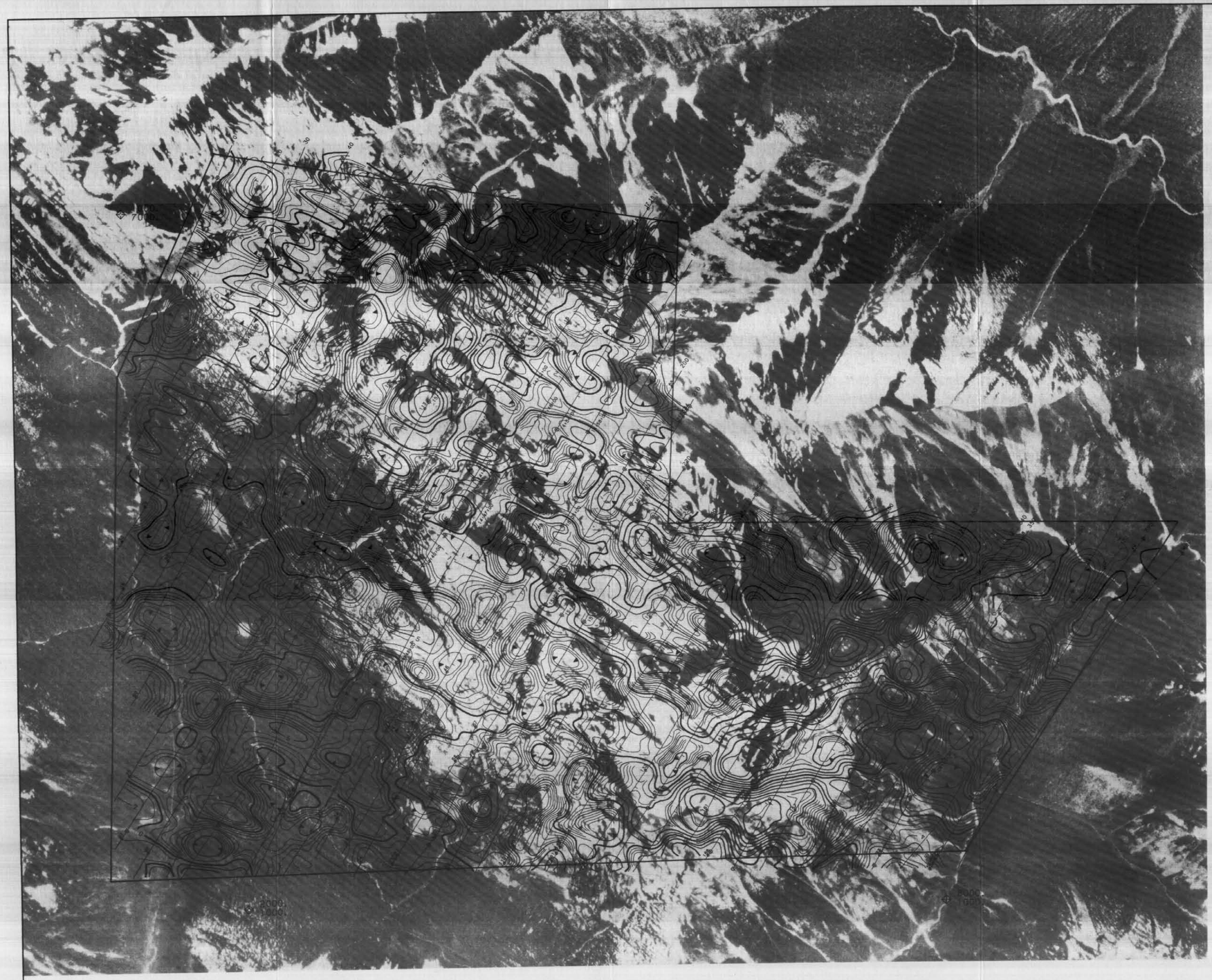
APPENDIX 2

SUMMARY OF EXPENDITURES

APPENDIX 2

SUMMARY OF EXPENDITURES

Helicopter Borne Magnetometer and VLF EM Surveys	$ 26,200.00
Compilation, Drafting and Printing Report Preparation	3,900.00
TOTAL EXPENDITURES	$ 30,100.00



N

CONTOUR INTERVAL:

10 % .....

5 % .....

1 % .....

VLF-EM

VLF-EM Total Field Intensity in percent

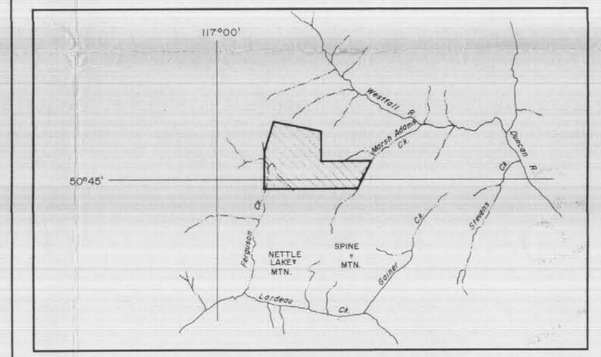
Station: NSS (Annapolis, Md.)
21.4 kHz

Sensor elevation 45m

Flight Path

Navigation and recovery using Motorola Mini-Ranger (MRS III) radar navigation system

Average terrain clearance 60m
Line spacing = 100m



GOLDEN RANGE RESOURCES INC.

VLF-EM TOTAL FIELD CONTOURS

REVELSTOKE

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 1/2 MILE

0 100 200 500 1 KILOMETRE

AERODAT LIMITED

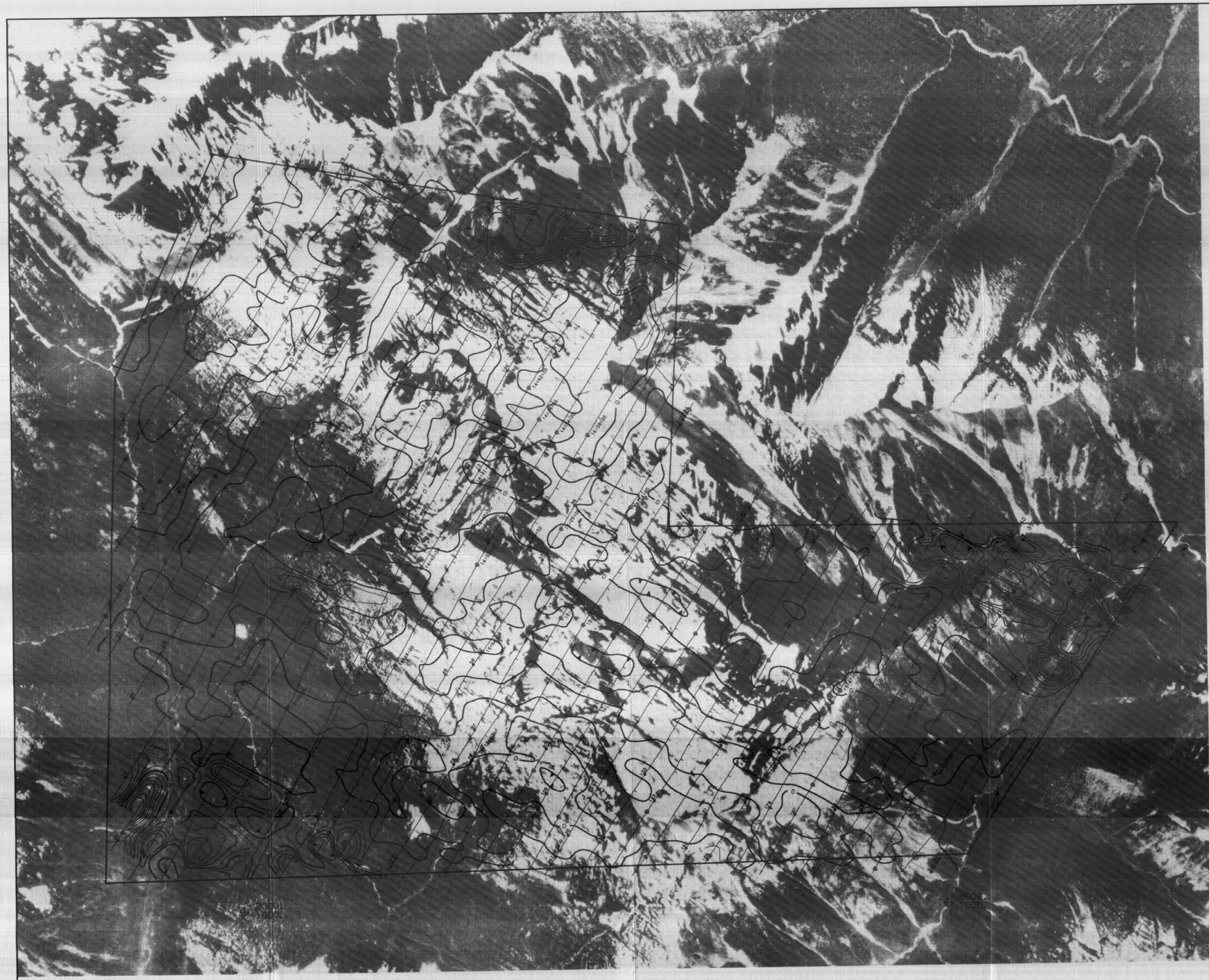
DATE: NOV 1987

NTS No: 82 K

MAP No: 3 J8766

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,651



N

CONTOUR INTERVAL:

10.0 nT/m .....

1.0 nT/m .....

0.5 nT/m .....

Vertical Gradient

Vertical magnetic gradient calculated from the total field magnetic intensity

Contours in nT/m

Cesium high sensitivity magnetometer
Sensor elevation 45m

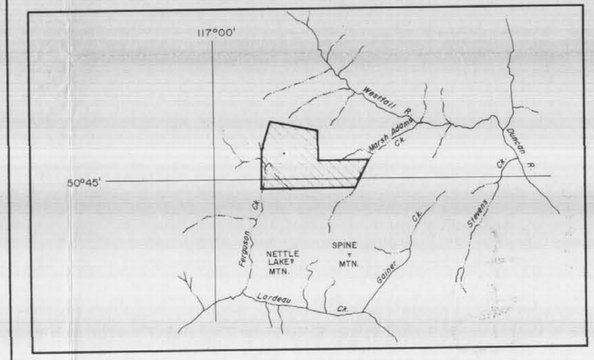
Flight Path

Navigation and recovery using Motorola Mini-Ranger (MRS III) radar navigation system

Average terrain clearance 60m
Line spacing = 100m

17,651

GEOLOGICAL BRANCH
ASSESSMENT REPORT



GOLDEN RANGE RESOURCES INC.

CALCULATED VERTICAL MAGNETIC GRADIENT

REVELSTOKE

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 1/2 MILE

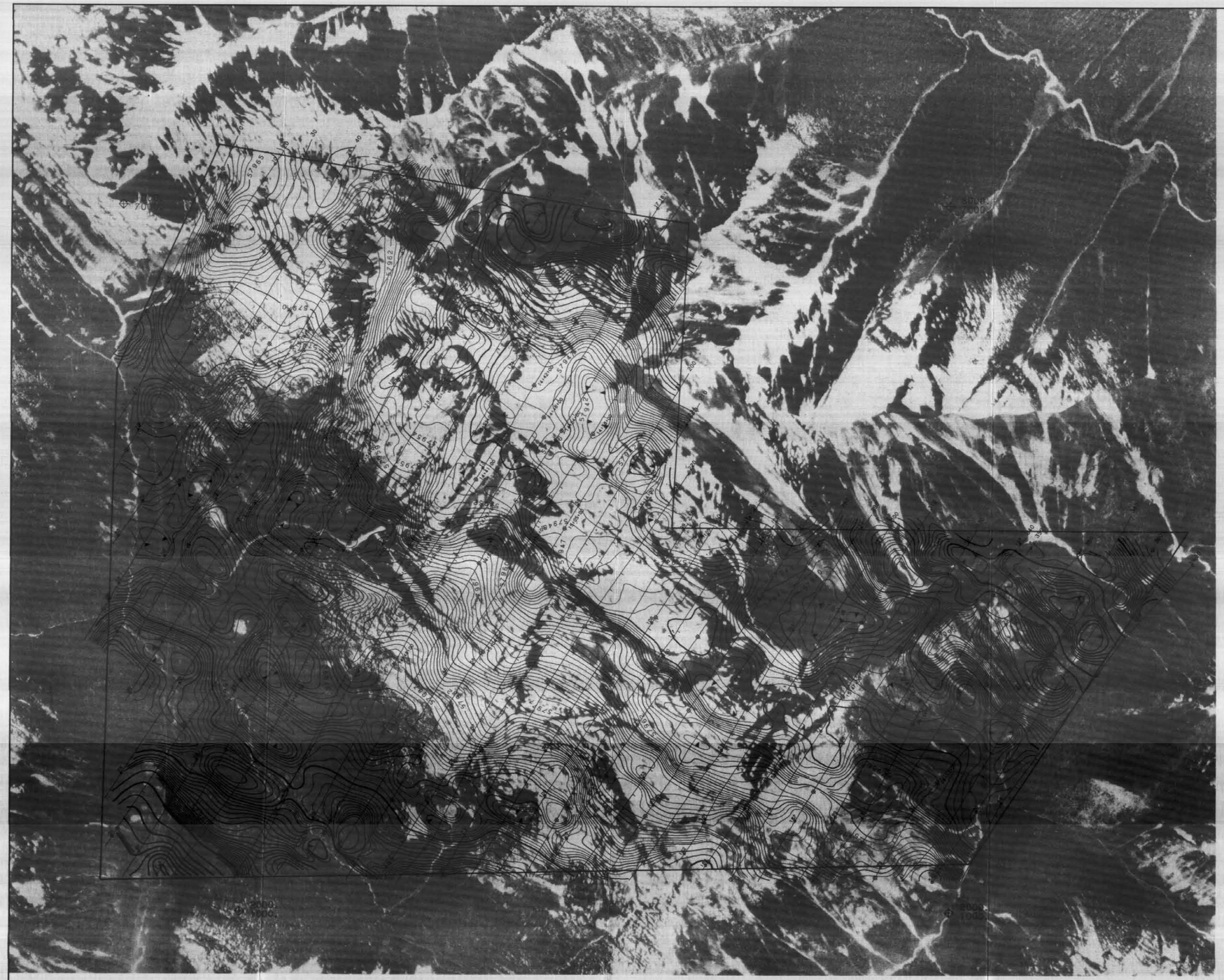
0 100 200 500 1 KILOMETRE

AERODAT LIMITED

DATE: NOV 1987

NTS No: 82 K

MAP No: 2 J8766



CONTOUR INTERVAL:

100 nT

50 nT

5 nT

1 nT

Magnetics

Proton precession magnetometer
Sensor elevation 50m

Total Field Magnetic Intensity
Contours in nT

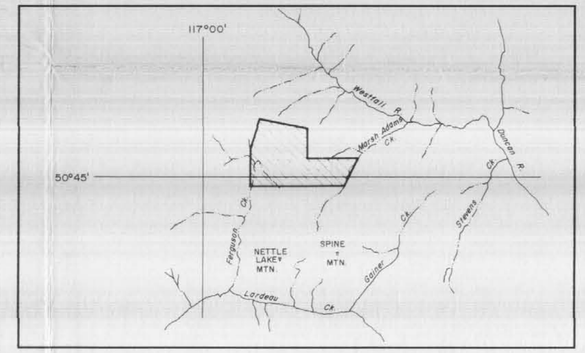
Flight Path

Navigation and recovery using Motorola Mini-Ranger (MRS III) radar navigation system

Average terrain clearance 60m
Line spacing = 100m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,651



GOLDEN RANGE RESOURCES INC.

TOTAL FIELD MAGNETIC CONTOURS

REVELSTOKE

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 1/2 MILE

0 100 200 500 1 KILOMETRE

AERODAT LIMITED

DATE: NOV 1987

NTS No: 82 K

MAP No: 1 J8766