TECHNICAL ASSESSMENT REPORT

PREPARATION OF DETAILED TOPOGRAPHIC (5M) BASE MAPS

AIRBORNE MAGNETIC SURVEY

STIKINE CLAIMS

STIKINE ARCH, NORTH-WESTERN, B.C.

Gold Commissioner's Office
VANCOUVER, B.C.
APR 2 5 2007
RECEIVED

Map Sheet: 104G (052,053, 062, 063, 073)
UTM Centre: 6398000N / 350000E
Lat Long Centre: 57 44 00 / 131 31 00

Operator: Garibaldi Resources Ltd.,
301-788 Beatty St.
Vancouver, B.C., V6B-2M1

Report by: Ram Exploration Ltd.
Carl von Einsiedel, P.Geo.
1124 – 470 Granville St., Vancouver, B.C.

Statement of Work No: 4094880, 4099938, 4111505, 4122307

Submittal date: April 18, 2007

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
29,055

Table of Contents

List of Figures included in the text of this report

Summary

The Stikine Claims form a large, northeast oriented, staircase shaped block approximately 60 kilometers north of Novagold Resources Galore Creek Property. Figure 1 shows the general project location and Figure 2a and 2b shows the location of the subject claims. The regional geology is shown in Figure 3a and 3b. These drawings show the locations of the better known alkalic porphyry copper – gold occurrences in the Stikine Arch. Figure 5 shows the title reference numbers for all mineral claims which comprise the Stikine claim group.

In August 2005 Novagold Resources Inc. announced an updated resource estimate for the Galore Creek Project which estimate includes a total of 13 million ounces of gold, 156 million ounces of silver and 12.0 billion pounds of copper making it the largest undeveloped porphyry copper gold deposit in North America.

The subject claims were staked by the author of this report on April 27 and May 11, 2005 with additional staking carried out on January 14, 2006. The Stikine Claims were subsequently acquired by Garibaldi Resources Ltd. on January 20, 2006. At the time of the assessment work filings that are the subject of this report (Event No.s : 4094880, 4099938, 4111505, 4122307) the Stikine claim group comprised 16,680 ha.

According to regional geological maps available from the BC Department of Mines the subject claim groups cover a sequence of Triassic aged volcanic rocks (Stuhini Group) associated with regionally extensive northeast oriented shear zones.. The subject claims were acquired based on the potential to host porphyry copper mineralization similar to that developed at Novagold Resources Galore Creek Project. Figure 3a and 3b is a generalized geological map of the project area.

According to Ney and Hollister, 1976, alkalic porphyry deposits in the Canadian Cordillera appear to have formed only in the interval from 205 to 170 million years and invariably, comagmatic volcanic rocks appear with the mineralized intrusions. During the Triassic and Lower Jurassic (referred to as the Vancouver metallogenic epoch) the Nicola, Takla, Hazleton, Bonanza and Lewes River groups were formed and are the host rocks for all of the known alkalic porphyry deposits of the Canadian Cordillera. The mineralized plutons associated with these rocks are intrusive into at least some of the comagmatic volcanic rocks.

According to Seraphim and Hollister, 1976 some of the alkalic porphyry deposits in the cordillera appear to be related to separate north and northeast trending fault zones which are interpreted as possible zones of continental rifting. In the Stikine District Seraphim and Hollister further note that several of these regional breaks are accompanied by linear belts containing numerous litholgically similar syenite porphyries..

According to Barr, Fox, Preto and Northcote the association of magnetite with alkalic intrusions suggests that magnetic surveys may be useful in defining target areas. In addition, the authors note that the delineating the linear distribution of alkalic intrusions, regional faults and zones of brecciation may prove useful in defining areas for follow-up exploration work.

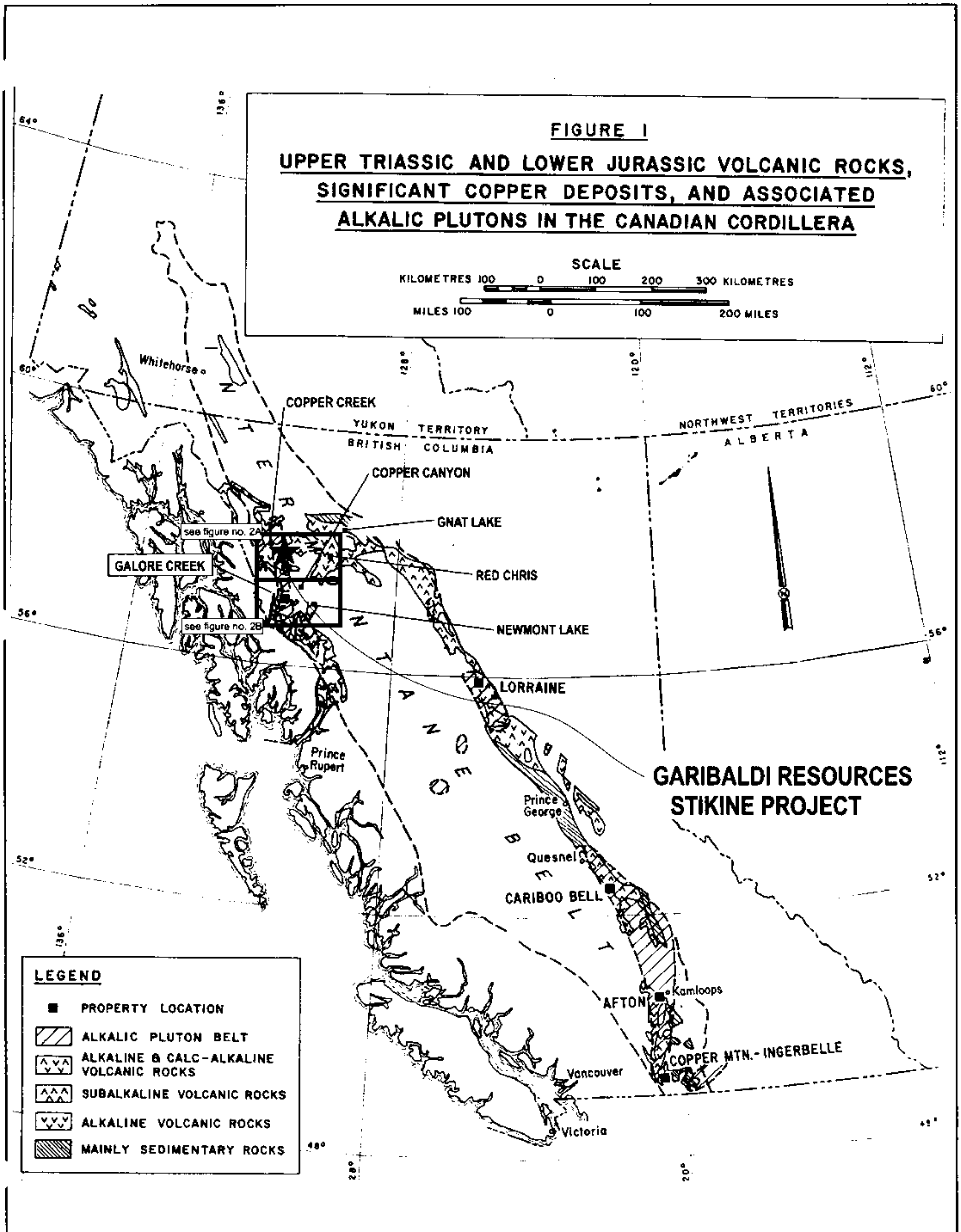
The objective of the current program was to prepare detailed 5 meter contour topographic maps utilizing base TRIM topographic mapping purchased from the BC Government and to complete a preliminary airborne magnetic survey over the central part of the Stikine Claim Group.

Figure.4 is a locator map showing Digital version TRIM Map sheets acquired for digital processing to complete the 5 meter contour interpolation. Figure 6 is a locator map showing the areas covered by the north and south large format topographic map sheets which will form the base maps for subsequent surveys. Figure 7 is a locator map showing the outline of airborne magnetic survey grid flown by Fugro Airborne Surveys.

The large format topgraphic maps / technical drawings are appended to this report. Fig.LF-N is the detail topographic (5m) base map for the north sheet and Fig.LF-S is the detail topographic (5m) base map for the south sheet . Reference figure no. 6 shows the areas covered by each sheet.

The report prepared by Fugro Airborne Surveys titled "Technical Report on Helicopter Borne Stinger-Mounted Magnetics Survey for Garibaldi Resources Ltd. Stikine Project" is included as Appendix 1. Reference figure No.7 shows the area covered by the airborne survey.

Airborne magnetic survey drawings showing flight lines, total magnetic field and calculated vertical magnetic gradient (prepared by Fugro Airborne Surveys) are attached



ADAPTED FROM PORPHYRY DEPOSITS OF THE CANADIAN CORDILLERA - SPECIAL VOLUME 15, 1976

Project Location, Access and Claim Description

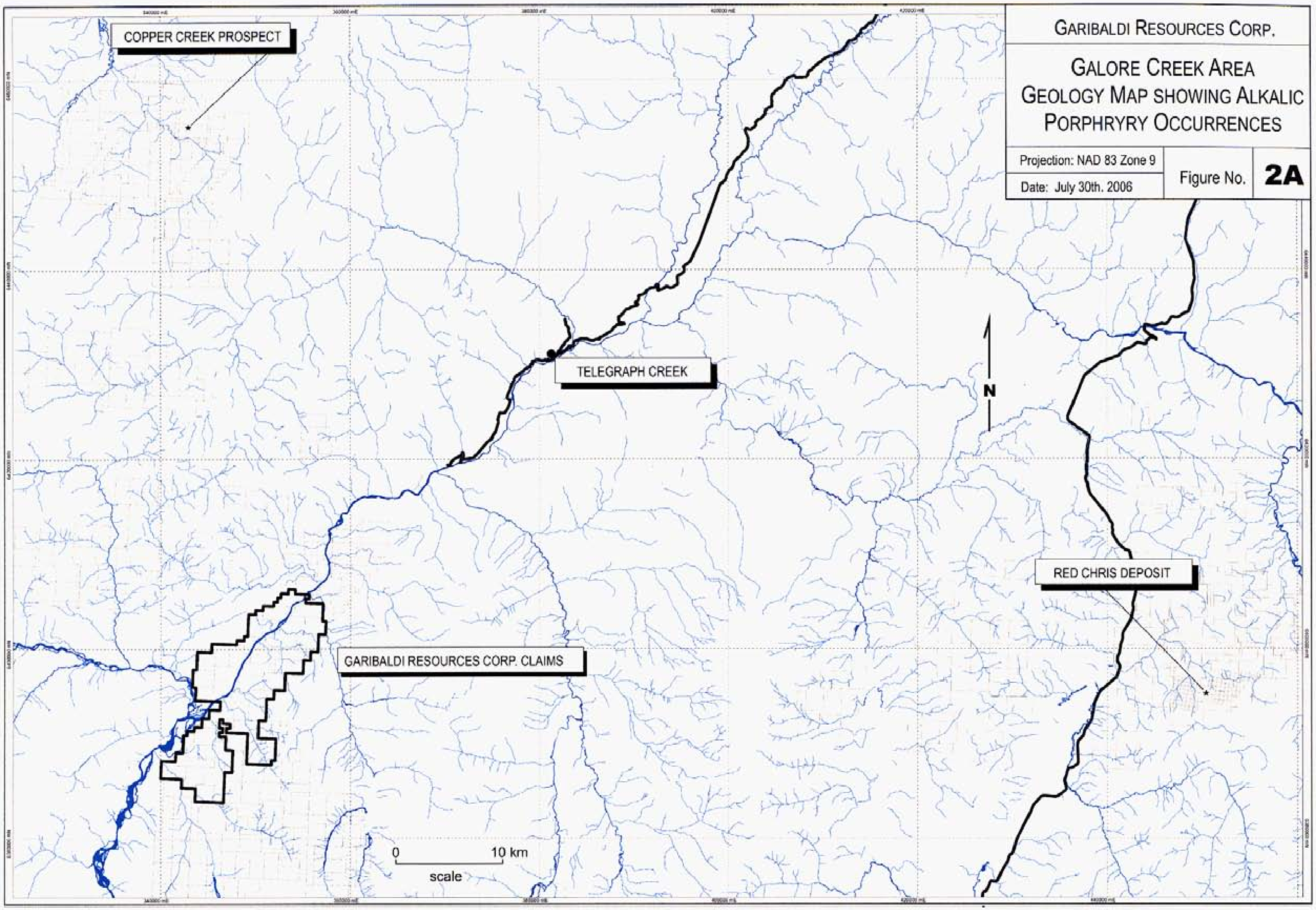
The Stikine Claims comprise a northeast oriented, staircase shaped block located approximately 60 kilometers north of Novagold Resources' Galore Creek Project. Figure 1 shows the general project location and Figure 2a and 2b show the location of the subject claims. Figure 7 shows the title reference numbers for all mineral claims located in the subject area. The assessment filing document s (SOW Event No.s : 4094880, 4099938, 4111505, 4122307) lists the title reference numbers and the number of hectares for each of the titles.

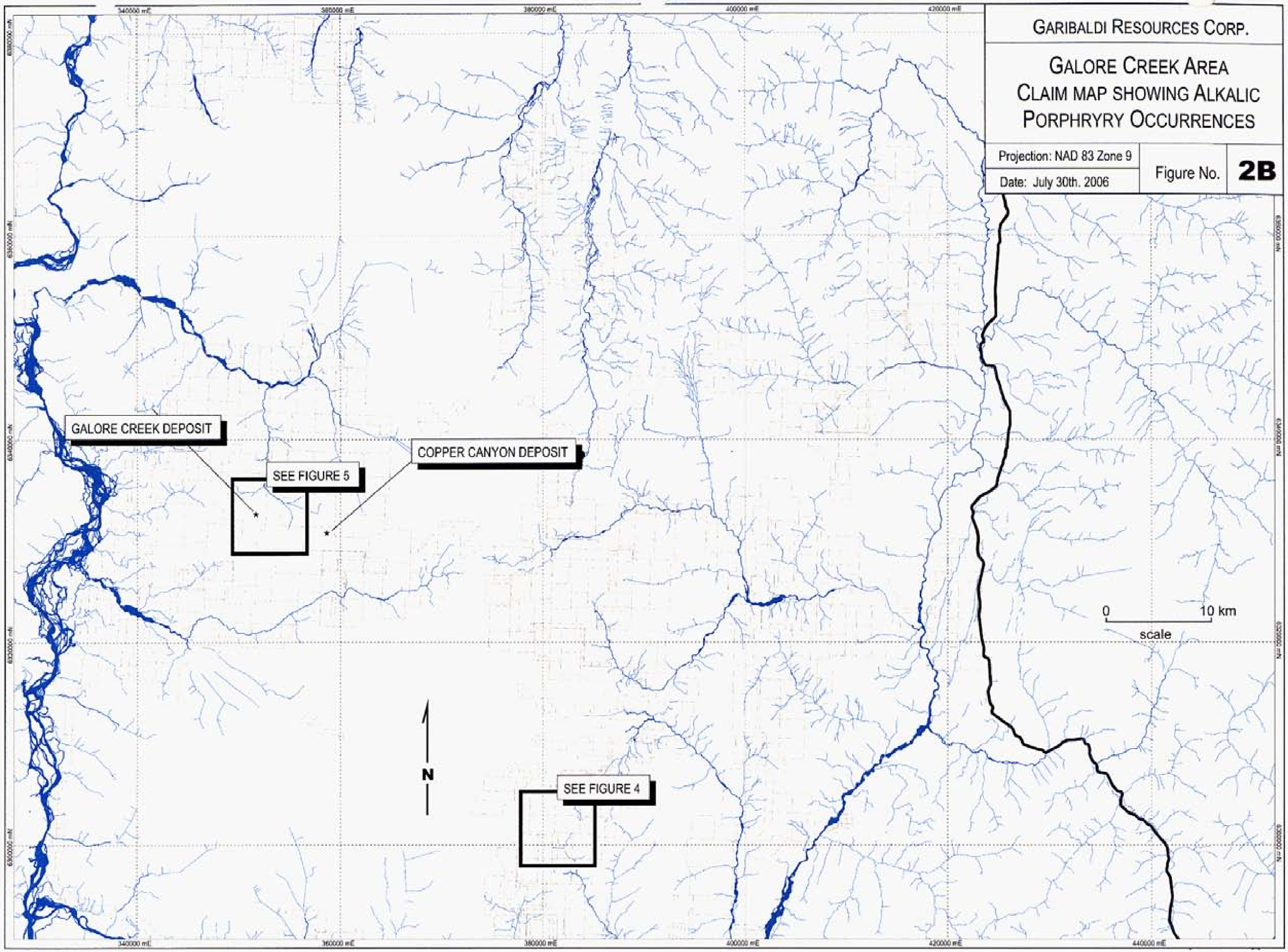
The claim group is approximately 20 kilometers long and varies from 5 to 8 kilometers in width. These claims were staked to cover possible northeast structural zones and possible small alkalic intrusions which may be prospective for alkalic porphyry copper mineralization.

The claim group straddles the Stikine River valley. Access is via helicopter from the community of Dease Lake or from Bob Quin airstrip on Highway 37.

The subject claims were staked by the author of this report on April 27 and May 11, 2005. Additional staking was completed on January 14 and the claims were subsequently acquired by Garibaldi Resources Ltd on January 20, 2006.

At the time of the assessment work filing that is the subject of this report (Event No.4074981) the Stikine Claim Group consisted of 16,6680 hectares.


GARIBALDI RESOURCES CORP.
GALORE CREEK AREA
GEOLOGY MAP SHOWING ALKALIC
PORPHRYRY OCCURRENCES
Projection: NAD 83 Zone 9
Date: July 30th. 2006
Figure No.
2A
COPPER CREEK PROSPECT
TELEGRAPH CREEK
N
RED CHRIS DEPOSIT
GARIBALDI RESOURCES CORP. CLAIMS
0
10 km
scale


GARIBALDI RESOURCES CORP.
GALORE CREEK AREA
CLAIM MAP SHOWING ALKALIC
PORPHRYRY OCCURRENCES
Projection: NAD 83 Zone 9
Date: July 30th. 2006
Figure No.
2B
GALORE CREEK DEPOSIT
SEE FIGURE 5
COPPER CANYON DEPOSIT
SEE FIGURE 4
N
0
10 km
scale
340000 mE
360000 mE
380000 mE
400000 mE
420000 mE
440000 mE

Assessment Filing Documents

List of mineral claims

Statement of Work No: 4094880, 4099938, 4111505, 4122307

Garibaldi Resources Stikine Project Tenure Listing

Tenure Number	Good to Date	Area in Ha
525499	20070701	433
525500	20070701	433
525501	20070701	138
525502	20070701	103
548864	20080107	398
549380	20080115	121
511733	20070701	415
511734	20070701	433
511735	20070701	415
511736	20070701	433
511737	20070701	433
511738	20070701	433
511739	20070701	433
511740	20070701	380
511741	20070701	363
511742	20070701	415
511743	20070701	432
511744	20070701	415
511745	20070701	415
511746	20070701	415
511747	20070701	415
511748	20070701	415
511749	20070701	432
511750	20070701	432
511751	20070701	347
511752	20070701	242
511753	20070701	414
511754	20070701	432
511755	20070701	397
511756	20070701	414
511757	20070701	414
512442	20070701	432
512443	20070701	363
512444	20070701	415
512445	20070701	397
512446	20070701	345
512447	20070701	380
512448	20070701	415
512449	20070701	380
512451	20070701	431
512452	20070701	414
512453	20070701	380
512454	20070701	345
512455	20070701	173
	Stikine Project Stage 2 Area in Ha	**16680**
	Stikine Project Stage 1 Area in Ha	**16251**

Regional Geology and Exploration Model

Geological Setting

Author's note: The majority of the information in this item is excerpted from Bulletin 104 and Bulletin 90 published by the British Columbia Ministry of Energy and Mines in October 2000. Bulletin 104 and Bulletin 90 covers the Forest Kerr - Mess Lake area and the Galore Creek Area.

Regional Geology

The study area for Bulletin 104 straddles the boundary between the Intermontane Belt and the Coast Belt and is underlain mainly by rocks of the Stikine Terrane (Stikinia). The westernmost terrane of the Intermontane Superterrane, Stikinia is the largest of the allochthonous terranes. Like other terranes of the North American Cordillera, its pre-Jurassic geological history, paleontological and paleomagnetic signatures are unique.

They have been interpreted to indicate that it originated far removed from the margin of ancestral North America (Gabrielse *et al.*, 1991) and was amalgamated with the Cache Creek, Quesnel and Slide Mountain terranes prior to accretion to the North American craton. Recent studies suggest that the Stikine terrane developed adjacent to the ancestral margin of North America (McClelland, 1992; Mihalynuk *et al., 1994).*

At this latitude Stikinia consists of well stratified middle Paleozoic to Mesozoic sedimentary rocks and volcanic and comagmatic plutonic rocks of probable island arc affinity which include: the Paleozoic Stikine assemblage, the Late Triassic Stuhini Group and the Early Jurassic Hazelton Group. These are overlapped by Middle Jurassic to early Tertiary successor-basin sediments of the Bowser Lake and Sustut Groups, Late Cretaceous to Tertiary continental volcanic rocks of the Sioko Group, and Late Tertiary to Recent bimodal shield volcanism of the Edziza and Spectrum ranges.

The Coast Plutonic Complex intrudes the western boundary of the Stikine Terrane. It is a long and narrow magmatic belt that extends the length of the Canadian Cordillera and is comprised predominantly of calcalkaline granitoid rocks of Jurassic to Paleogene age. Cooling ages and uplift history are complex across the belt. Plutonic rocks of the Coast Belt are mid-Cretaceous and are older on the west side of the belt and mainly Late Cretaceous and Tertiary on the east side.

In the study area, which is on the east of the complex, voluminous postorogenic Tertiary bodies obscure the western margin of Stikinia. Eocene Sioko Group continental volcanic rocks erupted from centres located north and northwest of the study area. Late Triassic to Early Jurassic intrusive rocks of the Copper Mountain Plutonic Suite (Woodsworth *et al.*, 1991) characteristically comprise small alkaline bodies, varying from monzodiorite to monzonite to syenite. The intrusions are lithologically complex with multiple intrusive phases, and are metalogenically important because they are copper and gold mineralizers in both Stikinia and Quesnellia. U-Pb ages are similar (circa 200 to 210 Ma) for intrusions associated with porphyry Cu-Au deposits in both terranes. Multiple alkaline intrusions and associated ultramafic phases are also present at Galore Creek (Barr, 1966; Allen *et al.*, 1976; Enns *et al.*, 1995) U-Pb dates of 205.1 ±2.3 (zircon) and 200.1 ±2.2 (titanite) for the potassium feldspar megacrystic syenite porphyry at Galore Creek (Mortensen *et al., 1995* constrain emplacement ages and brackets Cu-Au mineralization.

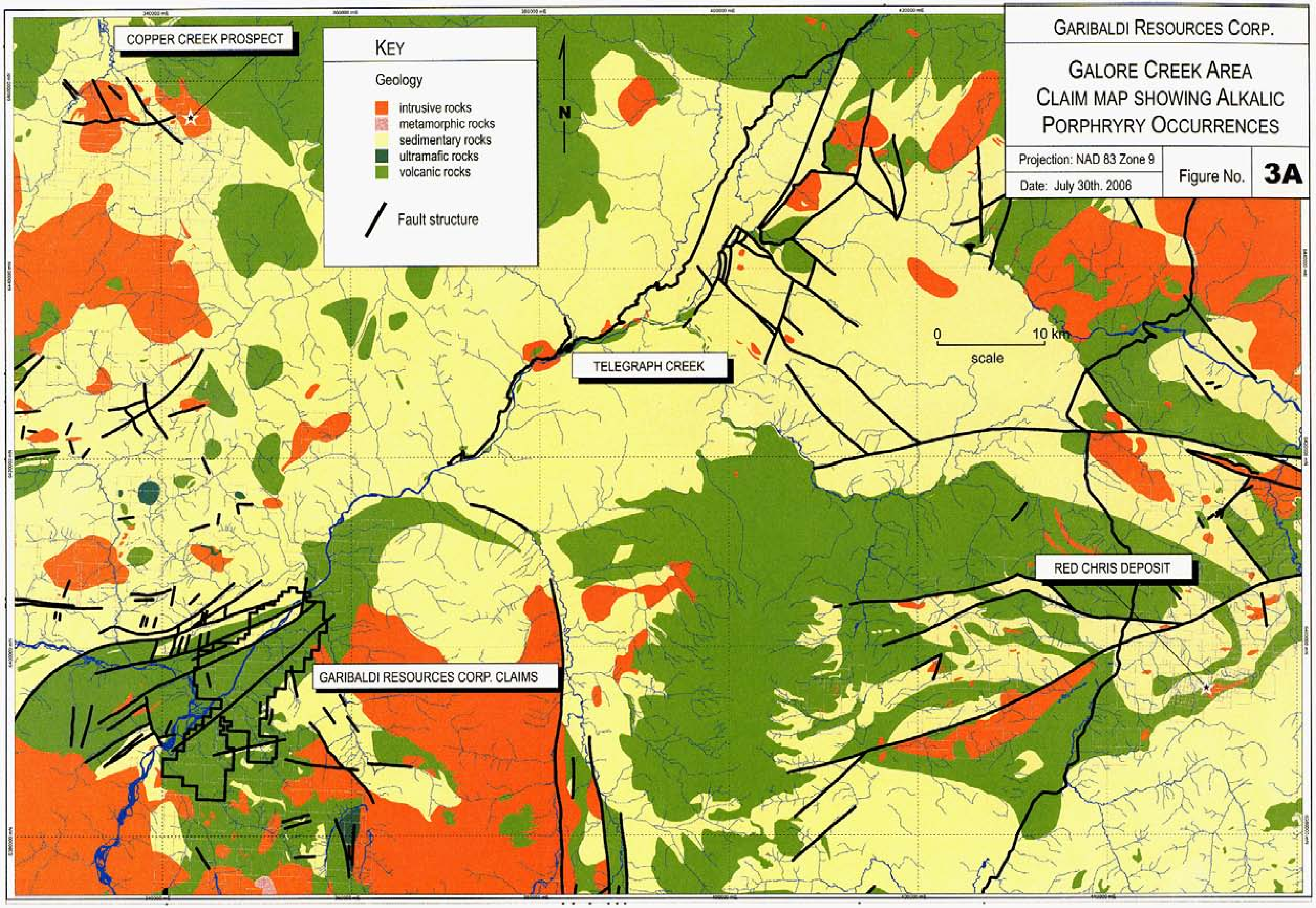
In the Galore creek Camp, a late Triassic alkaline magmatic centre comprising Stuhini Group volcanic rocks and comagmatic intrusives hosts more than 10 synvolcanic fracture controlled copper-gold deposits.

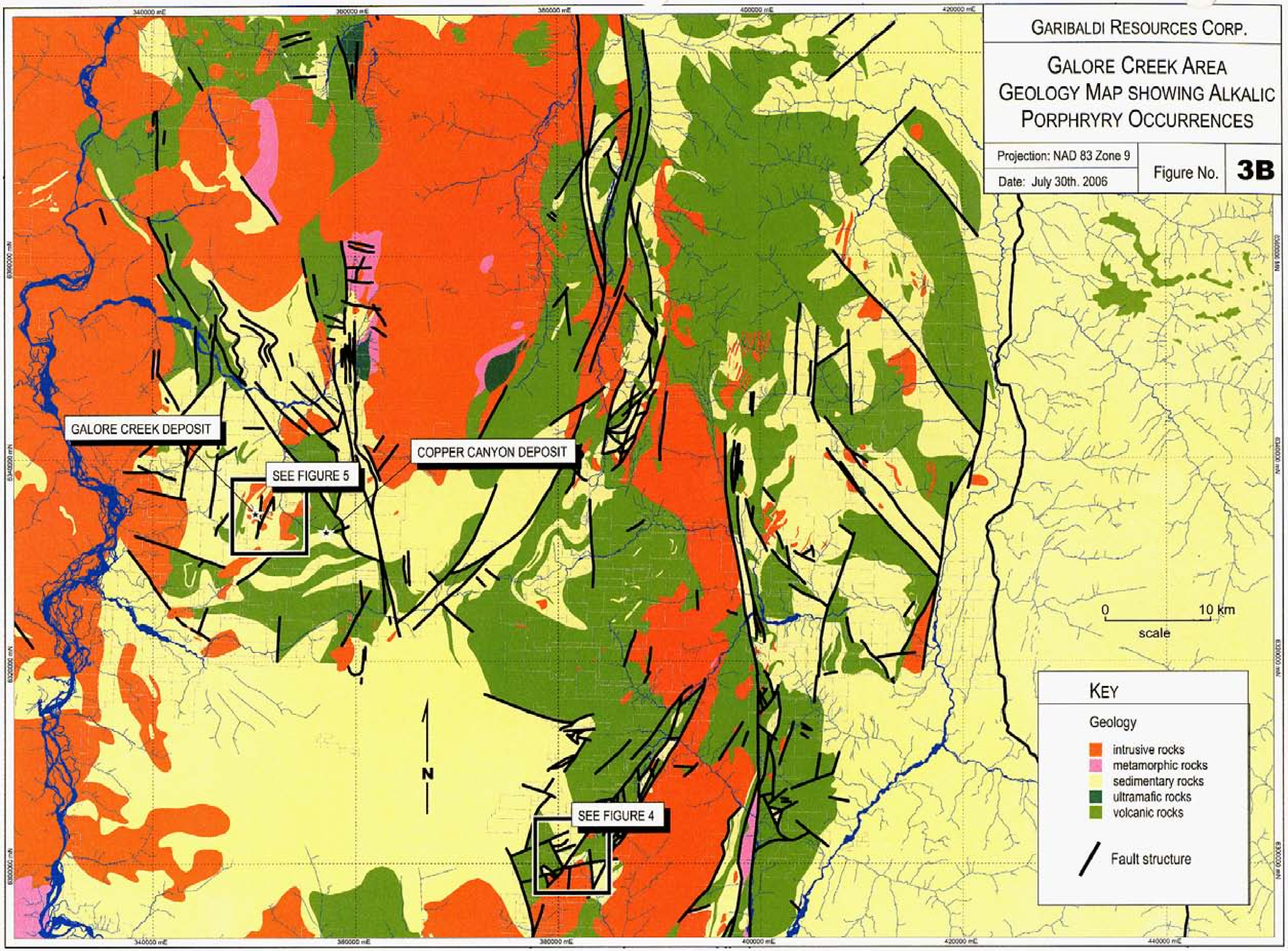
According to Ney and Hollister, 1976, alkalic porphyry deposits in the Canadian Cordillera appear to have formed only in the interval from 205 to 170 million years and invariably comagmatic volcanic rocks appear with the mineralized intrusions.

During the Triassic and Lower Jurassic (referred to as the Vancouver metallogenic epoch) the Nicola, Takla, Hazleton, Bonanza and Lewes River groups were formed and are the host rocks for all of the known alkalic porphyry deposits of the Canadian Cordillera. The mineralized plutons associated with these rocks are intrusive into at least some of the comagmatic volcanic rocks.

According to Seraphim and Hollister, 1976 some of the alkalic porphyry deposits in the cordillera appear to be related to separate north and northeast trending fault zones which are interpreted as possible zones of continental rifting. In the Stikine District Seraphim and Hollister further note that several of these regional breaks are accompanied by linear belts containing numerous litholgically similar syenite porphyries..

According to Barr, Fox, Preto and Northcote the association of magnetite with alkalic intrusions suggests that magnetic surveys may be useful in defining target areas. In addition, the authors note that delineating the linear distribution of alkalic intrusions, regional faults and zones of brecciation may prove useful in defining areas for follow-up exploration work


COPPER CREEK PROSPECT
KEY
Geology
intrusive rocks
metamorphic rocks
sedimentary rocks
ultramafic rocks
volcanic rocks
Fault structure
N
TELEGRAPH CREEK
0
10 km
scale
RED CHRIS DEPOSIT
GARIBALDI RESOURCES CORP. CLAIMS
GARIBALDI RESOURCES CORP.
GALORE CREEK AREA
CLAIM MAP SHOWING ALKALIC
PORPHRYRY OCCURRENCES
Projection: NAD 83 Zone 9
Date: July 30th. 2006
Figure No.
3A


GARIBALDI RESOURCES CORP.
GALORE CREEK AREA GEOLOGY MAP SHOWING ALKALIC PORPHRYRY OCCURRENCES
Projection: NAD 83 Zone 9
Date: July 30th. 2006
Figure No. 3B
GALORE CREEK DEPOSIT
SEE FIGURE 5
COPPER CANYON DEPOSIT
SEE FIGURE 4
N
0
10 km
scale
KEY
Geology
intrusive rocks
metamorphic rocks
sedimentary rocks
ultramafic rocks
volcanic rocks
Fault structure

Description of Assessment work Completed

Between December July 1 and December 30, 2006 a program of digital elevation mapping to produce 5 meter contour maps for the entire Stikne claim area (16,680 hectares) and a stinger mounted helicopter borne airborne magnetic survey was carried out.

The objective of the current program was to provide detailed 5 meter contour topographic base maps for follow-up ground based fieldwork and to determine, using airborne magnetic surveys, if small, resistive, topographic features (which may represent small alkalic intrusions) which are present within the Stikine Claim Area, exhibit an elevated magnetic response.

Spectrum Mapping Corporation was hired to produce topographic mapping with 5 metre contours from existing TRIM data. Terrain Resource Information Management (TRIM) mapping is a series of digital maps (~7,000) covering the province of British Columbia at a scale of 1:20,000. Digital data for 5 TRIM map sheets was purchased from Base Mapping and Geomatic Services, (BC Government) as follows: 104G 052, 053, 062, 063 and 073.

The digital elevation model (DEM) was extracted from the above map sheets, translated to Spectrum Mappings in-house software, and a triangulated irregular network (TIN) created. The TIN model represents a surface as a set of contiguous, non overlapping triangles. The TIN model was used for the derivation of 5 metre contours with an index contour every 5th contour (25, 50, 75, 100 etc).

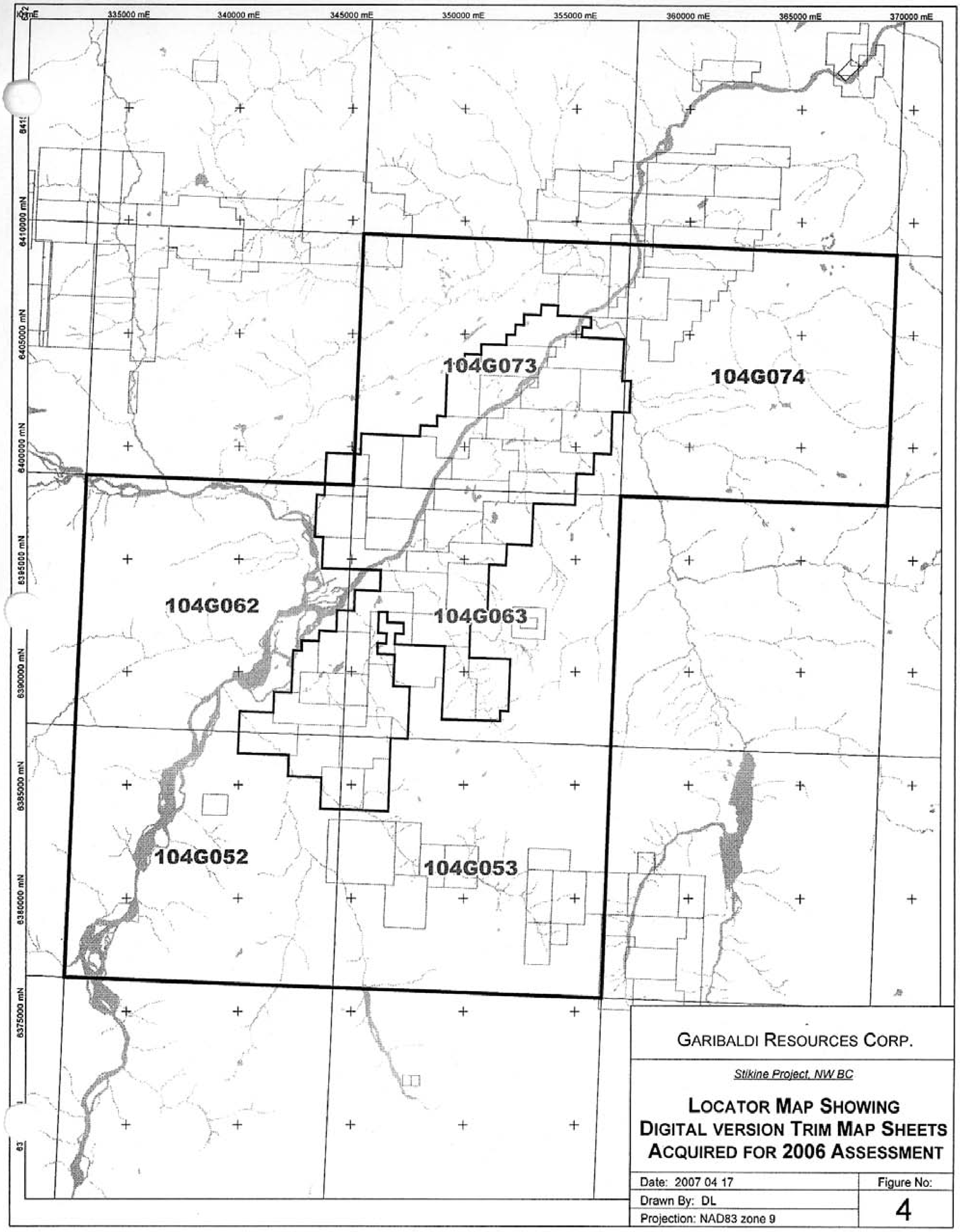
The newly derived contours were merged with the planimetric data (watercourses, trails, treelines, icefields etc), to produce a composite map. Contours were edited and labeled in the primary areas of interest. Mine claims as provided by the client, were merged to complete the mapping.Large format drawings are appended to this report.

There are two large format 1:10,000 scale 5 meter countour topographic maps (figures: LFN-N and LFN-S) attached to this report.

As noted in the geological section of this report Barr, Fox, Preto and Northcote note that the association of magnetite with alkalic intrusions suggests that magnetic surveys may be useful in defining target areas and also note that delineating the linear distribution of alkalic intrusions, regional faults and zones of brecciation may prove useful in defining areas for follow-up exploration work.

Fugro Airborne Surveys of Mississauga, Ontario was contracted to complete a stinger mounted airborne magnetic survey of the central part of the Stikine Claim Group. Figure 7 is a locator map that shows the area covered by the airborne survey.

A total of 123.4 line kilometers of airborne magnetic survey data was completed. The technical report prepared by Fugro Airborne Surveys is attached to this report as Appendix 1. The large format drawings (1:20,000 scale) prepared by Fugro are attached.



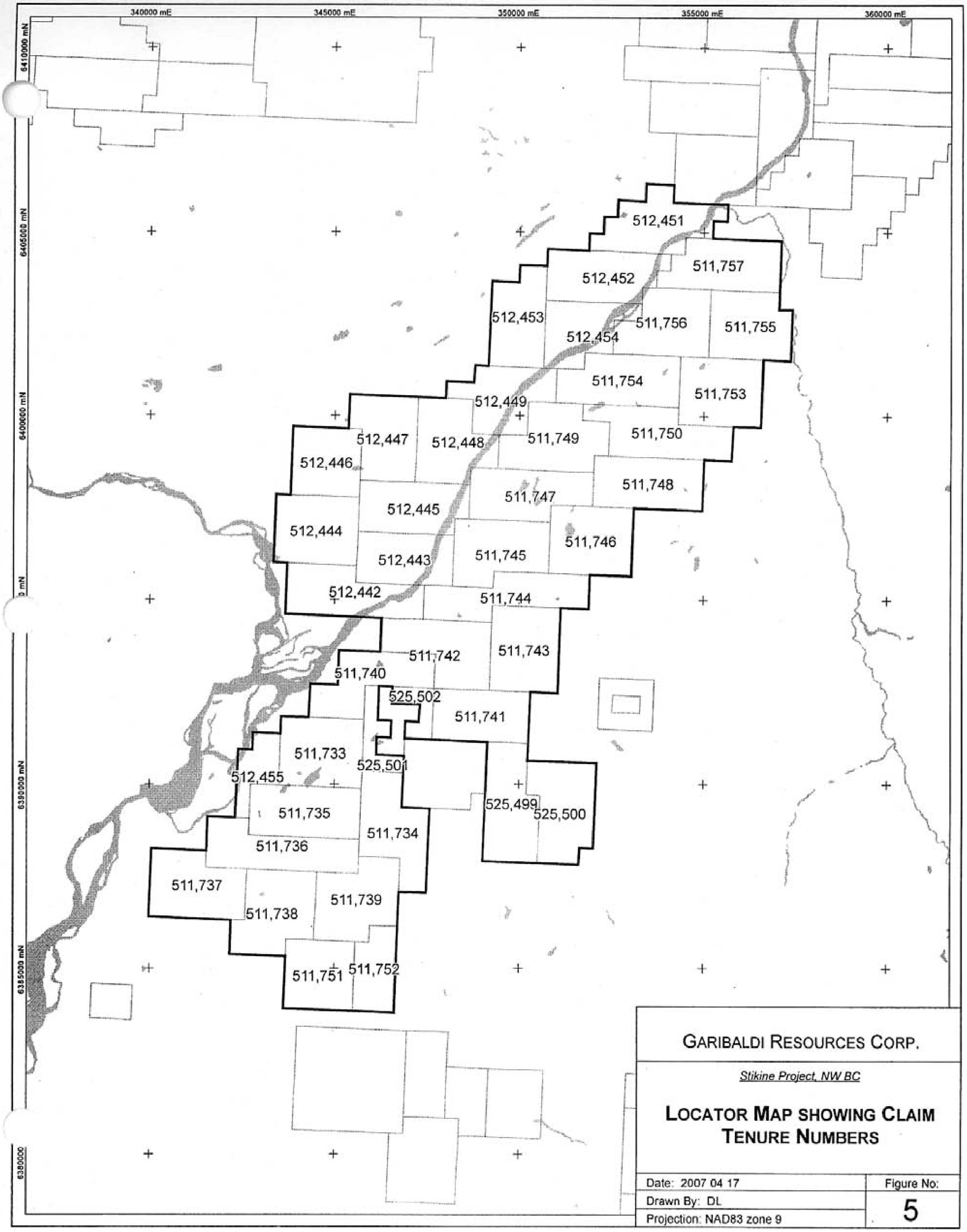
GARIBALDI RESOURCES CORP.

Stikine Project, NW BC

LOCATOR MAP SHOWING DIGITAL VERSION TRIM MAP SHEETS ACQUIRED FOR 2006 ASSESSMENT

Date: 2007 04 17
Drawn By: DL
Projection: NAD83 zone 9

Figure No: 4

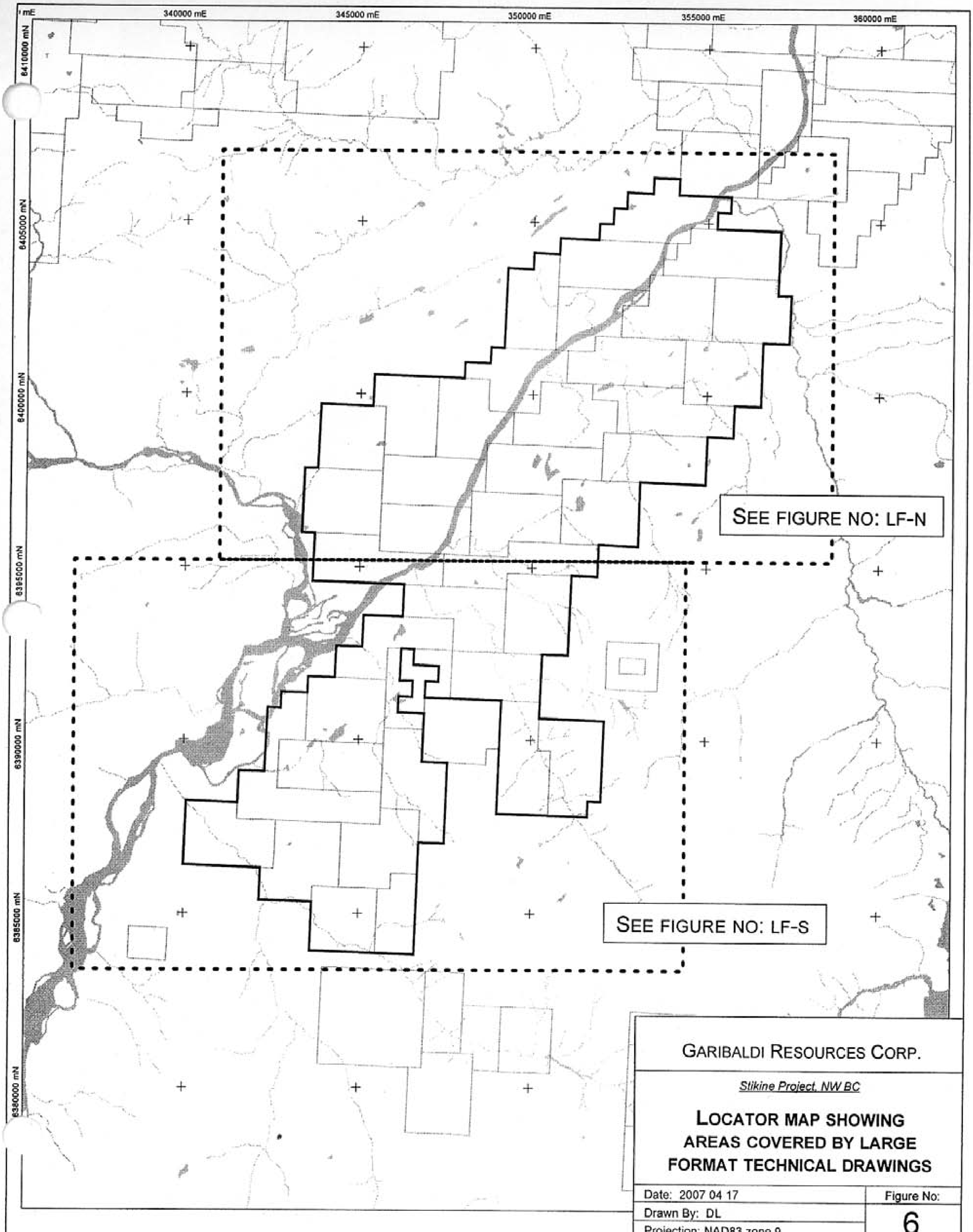


GARIBALDI RESOURCES CORP.

Stikine Project, NW BC

LOCATOR MAP SHOWING CLAIM TENURE NUMBERS

Date: 2007 04 17	Figure No:
Drawn By: DL	5
Projection: NAD83 zone 9	

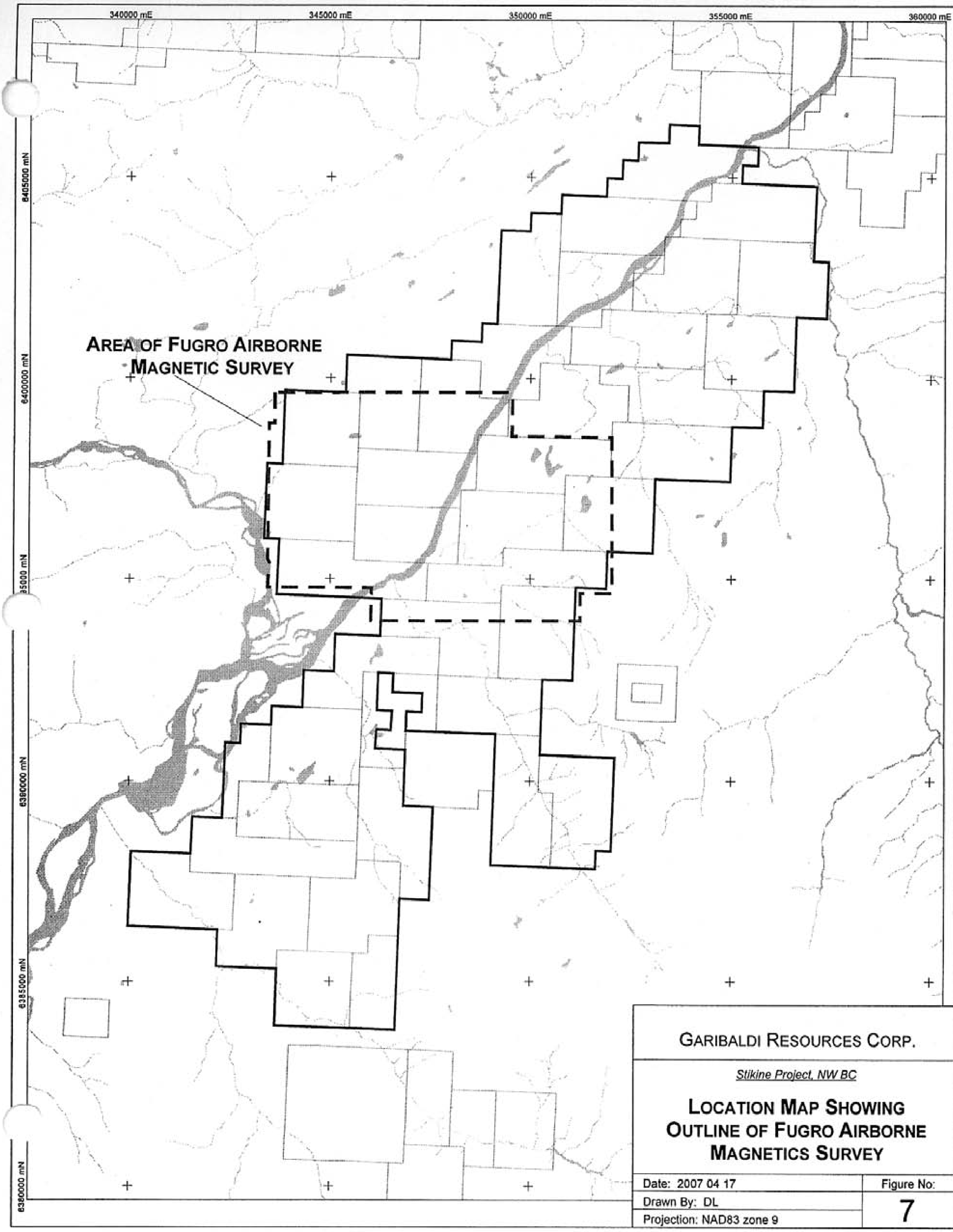


GARIBALDI RESOURCES CORP.

Stikine Project, NW BC

LOCATOR MAP SHOWING AREAS COVERED BY LARGE FORMAT TECHNICAL DRAWINGS

Date: 2007 04 17	Figure No:
Drawn By: DL	6
Projection: NAD83 zone 9	



GARIBALDI RESOURCES CORP.

Stikine Project, NW BC

LOCATION MAP SHOWING OUTLINE OF FUGRO AIRBORNE MAGNETICS SURVEY

Date: 2007 04 17	Figure No:
Drawn By: DL	7
Projection: NAD83 zone 9	

Statement of Costs

Spectrum Mapping charges for acquisition of digital TRIM Map Sheets 104G 052, 053, 062, 063 and 073, preparation of 5 meter digital elevation Model and integration of new elevation model with TRIM planimetric detail	$ 6,216.32
Fugro Airborne Surveys Charges	
-mobilization	11,550.00
-standby charges (weather related)	4,950.00
-123.4 line kilometers of airborne magnetic survey	15,610.78
Geological fees and supervision charges in connection with Spectrum Mapping And Fugro Airborne Surveys, preparation of assessment reports	4,736.00
Total expenditure allocated to Stikine Claim group:	$ 43,063.10
Total applied for assessment credit: Statement of Work No: 4094880, 4099938, 4111505, 4122307	$ 43,000.00

Recommendations

The airborne magnetic survey completed during the current program identified multiple areas of interest on the subject claim group.

Complex structural areas which exhibit extensive northeast and crosscutting north, northwest and east-west trending fracture zones as well as possible small alkalic intrusions are considered high priority exploration target areas.

Based on the results of the exploration work completed during the current program it is recommended that the Garibaldi proceed with a ground based reconnaissance geochemical sampling program to determine if alkalic type, porphyry copper – gold mineralization is associated with any of the areas of interest which have been identified.

References

W.E. Kelly, K. Kliparchuk and A. McIntosh, 2004: IMAGE ANALYSIS TOOLBOX AND ENHANCED SATELLITE IMAGERY INTERGRATED INTO MAP PLACE.

D.E. Barr, P.E. Fox, K.E. Northcote and V.A. Preto, 1976: ,The Alkaline Suite of Porphyry Copper Deposits – A Summary. PORPHYRY COPPER DEPOSITS OF THE CANADIAN CORDILLERA, Published by CIM, 1976.

C.S. Ney, V.F. Hollister, 1976: Geological Setting of Porphyry Copper Deposits in the Canadian Cordillera. PORPHYRY COPPER DEPOSITS OF THE CANADIAN CORDILLERA, Published by CIM, 1976.

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Bulletin 092: BC Ministry of Energy and Mines" 19994: Geology and Mineral Deposits of the Galore Creek Area (104G/34), J.M. Logan and V.M. Koyangi.

Bulletin 104: BC Ministry of Energy and Mines, October, 2000: Geology of the Forrest Kerr - Mess Creek Area, North Western British Columbia, J,M. Logan, J.R. Drobe, and W,C, McLelland.

CERTIFICATE

I, Carl von Einsiedel, of 1124 – 470 Granville St., Vancouver, B.C. hereby certify that:

1. I am an independent consulting geologist with offices located at 1124 – 470 Granville St., Vancouver, B.C., V6C-1V5
2. I graduated from the Carleton University in Ontario with a BSc. (1987) in Geology and have practised my profession continuously since graduation.
3. I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia since 1992 with membership number #122307.
4. I have practiced my profession as a geologist since my graduation from university in the private sector in Eastern and Western Canada, in parts of the United States and Mexico reporting on and managing several projects in mineral exploration.
5. I have prepared all sections of this report.
6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical report misleading.

Dated the 1st day of April, 2007.

Carl von Einsiedel, P.Geo.

Appendix 1: Technical Report on Helicopter Borne Stinger-Mounted Magnetics Survey for Garibaldi Resources Ltd. Stikine {Project

FUGRO AIRBORNE SURVEYS

Report #06081-4

HELICOPTER-BORNE STINGER-MOUNTED MAGNETICS SURVEY
FOR
GARIBALDI RESOURCES LTD.
STIKINE PROJECT
BRITISH COLUMBIA, CANADA

NTS: 104G/11,12

Fugro Airborne Surveys Corp.
Mississauga, Ontario

Chris Sawyer
Geophysicist

January 11, 2007

Fugro Airborne Surveys, 2270 Argentia Road, Unit 2, Mississauga, Ontario, Canada, L5N 6A6
Phone: 1 905 812 0212, Fax: 1 905 812 1504

SUMMARY

This report describes the logistics, data acquisition, processing and presentation of results of an airborne magnetic geophysical survey carried out for Garibaldi Resources Ltd. over their Stikine Project in British Columbia, Canada. The portion of the total survey was flown from November 21st to December 5th, 2006 with the total coverage of the survey blocks amounting to 123.4 km.

The purpose of the survey was to provide information that could be used to map the geology and structure of the survey area. This was accomplished by using a high sensitivity cesium magnetometer mounted on a stinger in front of the helicopter. The information from this sensor was used to produce maps that display the magnetic properties of the survey area. A GPS electronic navigation system ensured accurate positioning of the geophysical data with respect to the base maps. A GPS electronic navigation system ensured accurate positioning of the geophysical data with respect to the base map.

The survey data were processed and compiled in the Fugro Airborne Surveys Toronto office. Map products and digital data were provided in accordance with the scales and formats specified in the Survey Agreement.

On review of the survey results areas of interest may be assigned priorities on the basis of supporting geophysical, geochemical and/or geological information. After initial

investigations have been carried out, it may be necessary to re-evaluate the remaining anomalies based on information acquired from the follow-up program.

CONTENTS

APPENDICES

A. List of Personnel
B. Background Information
C. Data Archive Description
D. Data Processing Flowcharts
E. Tests and Calibrations
F. Glossary

1. INTRODUCTION

A magnetic survey was flown for Garibaldi Resources Ltd. from November 21st to December 5th, 2006, over their Stikine Project in British Columbia, Canada. The survey areas can be located on map sheets NTS: 104G/11,12 (Figure 2).

Survey coverage consisted of approximately 123.4 line-km, including 14.8 line-km of tie lines. Flight lines were flown in an azimuthal direction of 090°/270° with a line separation of 400 metres. Tie lines were flown orthogonal to the traverse lines with a line separation of 4000 metres.

The survey employed a stinger-mounted magnetometer. Other ancillary equipment included laser, radar and barometric altimeters, video camera, digital recorders, and an electronic navigation system. The instrumentation was installed in an AS350B2 turbine helicopter (Registration C-FZTA) that was provided by Questral Helicopters Ltd. The helicopter flew at an average groundspeed of 92 km/h with a sensor height of approximately 65 metres.

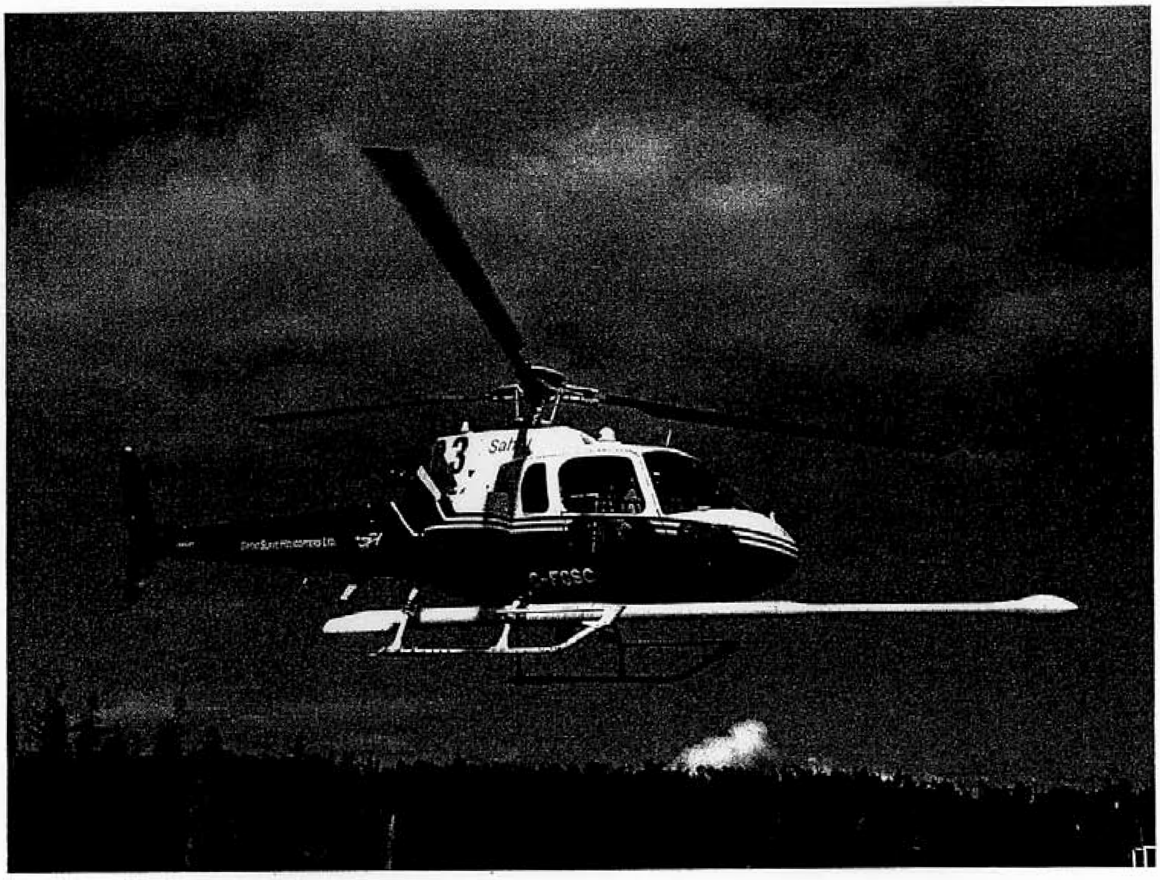


Figure 1
Fugro Airborne Surveys Stinger Mag System with AS350-B3

2. SURVEY OPERATIONS

The base of operations for the survey was established at Dease Lake, British Columbia, Canada. The survey area can be located on map sheets NTS: 104G/11,12 (Figure 2).

Table 2-1 lists the corner coordinates of the survey area in NAD 83, UTM Zone 9, and Central Meridian 129° west.

Table 2-1

Nad83 Utm zone 9

Block	Corners	X-UTM(E)	Y-UTM(N)
06081-4	1	343874	6399705
Stikine Project	2	349466	6399705
	3	349423	6398565
	4	352033	6398565
	5	351892	6394759
	6	351146	6394759
	7	351121	6393875
	8	346260	6393875
	9	346285	6394505
	10	343672	6394505

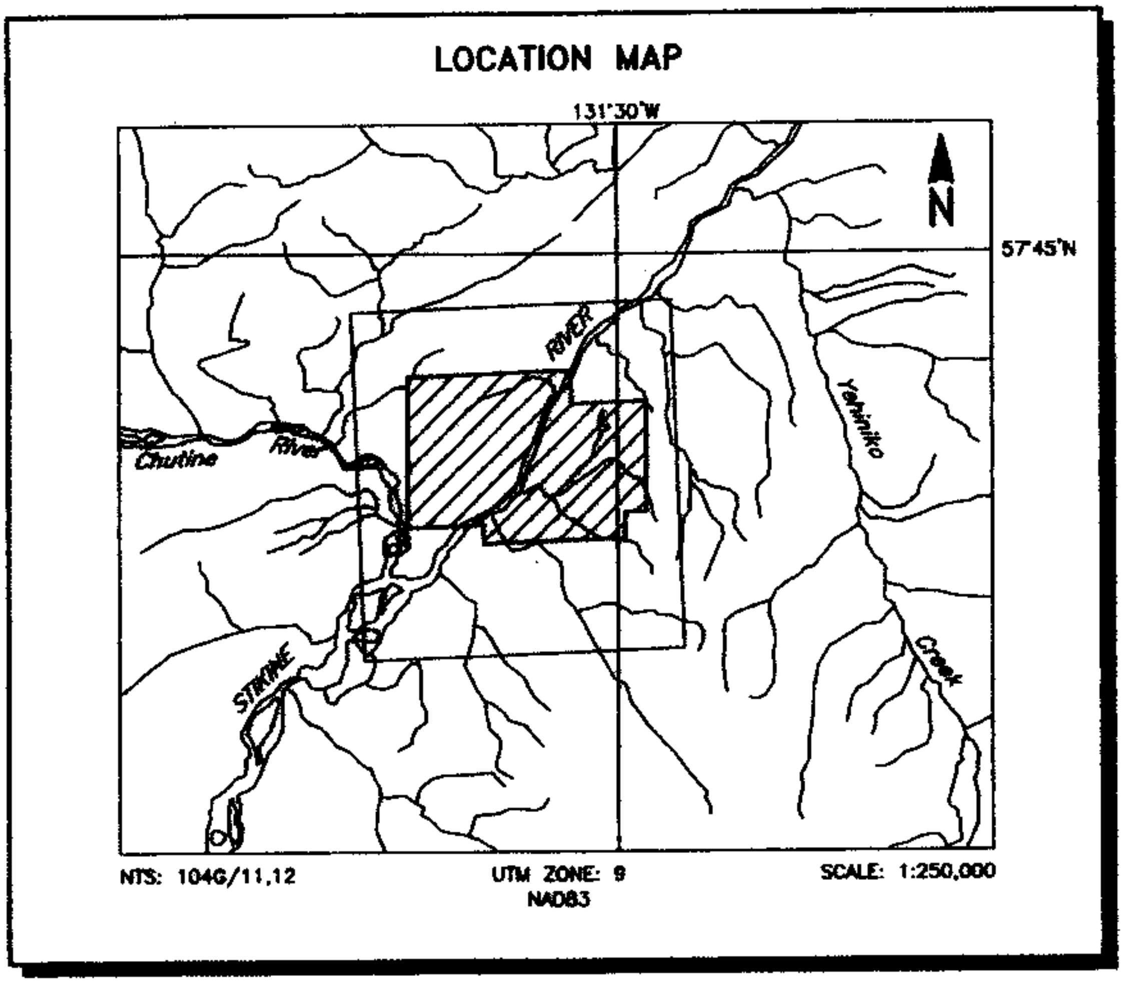


Figure 2
Location Map and Sheet Layout
Stikine Project, British Columbia, Canada
NTS: 104G/11,12
Job#06081-4

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	090°/270°
Traverse line spacing	400 m
Tie line direction	000°/180°
Tie line spacing	4000 m
Sample interval	10 Hz, 2.5 m @ 92 km/h
Aircraft mean terrain clearance	65 m
Mag sensor mean terrain clearance	65 m
Average speed	92 km/h
Navigation (guidance)	±5 m, Real-time GPS
Post-survey flight path	±2 m, Differential GPS

3. SURVEY EQUIPMENT

This section provides a brief description of the geophysical instruments used to acquire the survey data and the calibration procedures employed. The geophysical equipment was installed in an AS350B2 helicopter. This aircraft provides a safe and efficient platform for surveys of this type.

Airborne Magnetometer

Model:	Scintrex CS2 sensor with FUGRO D1344 magnetic counter
Type:	Optically pumped cesium vapour
Sensitivity:	0.01 nT
Sample rate:	10 per second

The magnetometer sensor is mounted on a boom attached to the skid gear of the helicopter.

Magnetic Base Station

Primary

Model:	Fugro CF1 base station with timing provided by integrated GPS	
Sensor type:	Scintrex CS-3	
Counter specifications:	Accuracy:	±0.1 nT
	Resolution:	0.01 nT
	Sample rate	1 Hz
GPS specifications:	Model:	Marconi Allstar
	Type:	Code and carrier tracking of L1 band, 12-channel, C/A code at 1575.42 MHz
	Sensitivity:	-90 dBm, 1.0 second update
	Accuracy:	Manufacturer's stated accuracy for differential corrected GPS is 2 metres

Environmental Monitor specifications:

Temperature:

- Accuracy: ±1.5°C max
- Resolution: 0.0305°C
- Sample rate: 1 Hz
- Range: -40°C to +75°C

Barometric pressure:

- Model: Motorola MPXA4115A
- Accuracy: ±3.0° kPa max (-20°C to 105°C temp. ranges)
- Resolution: 0.013 kPa
- Sample rate: 1 Hz
- Range: 55 kPa to 108 kPa

Backup

Traverse lines were corrected with data from the USGS site in Sitka, Alaska which is located approximately 270 km west-south-west of Telegraph Creek. These were then levelled with tie lines with diurnally data collected locally.

A digital recorder is operated in conjunction with the base station magnetometer to record the diurnal variations of the earth's magnetic field. The clock of the base station is synchronized with that of the airborne system, using GPS time, to permit subsequent removal of diurnal drift. The Fugro CF1 was the primary magnetic base station. It was located at latitude 58° 15' 44.19446" North, longitude 131° 47' 04.60321" West at an elevation 560.30 m above the WGS 84 ellipsoid.

Navigation (Global Positioning System)

Airborne Receiver for Real-time Navigation & Guidance and Flight Path Recovery

Model:	Novatel OEM IV
Type:	Code and carrier tracking of L1 band, 12-channel, dual frequency C/A code at 1575.2 MHz, and L2 P-code 1227 MHz, WAAS enabled for real time correction
Sample rate:	0.5 second update.
Accuracy:	Manufacturer's stated accuracy for differential corrected GPS is better than 1 metre.
Antenna:	Mounted on tail of Aircraft.

Primary Base Station for Post-Survey Differential Correction

Data from the Government GPS site in Juneau, Alaska was used for all post-survey differential correction

The Novatel OEM IV is a line of sight, satellite navigation system that utilizes time-coded signals from at least four of forty-eight available satellites. The mobile and base station raw latitude, longitude and height above ellipsoid data were recorded, thereby permitting post-survey differential corrections for theoretical accuracies of better than 2 metres. A Marconi Allstar GPS unit, part of the CF-1, was used as a secondary (back-up) base station.

Each base station receiver is able to calculate it's own latitude and longitude. For this survey, the primary GPS station was located at latitude 58° 21' 45.26146" N, longitude 134° 35' 08.45798" W at an elevation of 15.37 metres above the ellipsoid. The GPS records data relative to the WGS84 ellipsoid, which is the basis of the revised North American Datum (NAD83). Conversion software is used to transform the WGS84 coordinates to the NAD83 UTM system displayed on the maps.

Radar Altimeter

Manufacturer:	Honeywell/Sperry
Model:	AA 330 or RT220
Type:	Short pulse modulation, 4.3 GHz
Sensitivity:	0.3 m
Sample rate:	2 per second

The radar altimeter measures the vertical distance between the helicopter and the ground.

Barometric Pressure and Temperature Sensors

Model:	DIGHEM D 1300	
Type:	Motorola MPX4115AP analog pressure sensor AD592AN high-impedance remote temperature sensors	
Sensitivity:	Pressure: Temperature:	150 mV/kPa 100 mV/°C or 10 mV/°C (selectable)
Sample rate:	10 per second	

The D1300 circuit is used in conjunction with one barometric sensor and up to three temperature sensors. Two sensors (baro and temp) are installed in the EM console in the aircraft, to monitor pressure (1KPA) and internal operating temperatures (2TDC).

Laser Altimeter

Manufacturer:	Optech
Model:	ADMGPA100
Type:	Fixed pulse repetition rate of 2 kHz (First/Last pulse)
Sensitivity:	±5 cm from 10°C to 30°C ±10 cm from -20°C to +50°C
Sample rate:	10 per second

The laser altimeter is mounted on the helicopter, and measures the distance from the aircraft to ground.

Digital Data Acquisition System

Manufacturer:	Fugro Airborne Surveys
Model:	HELIDAS
Recorder:	San Disk CF-II

The stored data are downloaded to the field workstation PC at the survey base, for verification, backup and preparation of in-field products.

Video Flight Path Recording System

Type:	Axis 2420 Digital
Recorder:	Tablet Computer
Format:	NTSC (DVD)

Fiducial numbers are recorded continuously and are displayed on the margin of each image. This procedure ensures accurate correlation of data with respect to visible features on the ground.

4. QUALITY CONTROL AND IN-FIELD PROCESSING

Digital data for each flight was checked by the processor onsite, in order to verify data quality and completeness. A database was created and updated using Geosoft Oasis Montaj and proprietary Fugro Atlas software. This allowed the personnel to calculate, display and verify both the positional (flight path) and geophysical data on the field computer screen. Records were examined as a preliminary assessment of the data acquired for each flight.

Preliminary processing of Fugro survey data consists of differential corrections to the airborne GPS data, spike rejection and filtering of all geophysical and ancillary data, verification of flight videos, diurnal correction, and leveling of magnetic data.

All data, including base station records, were checked on a daily basis, to ensure compliance with the survey contract specifications. Reflights were required if any of the following specifications were not met.

Navigation - Positional (X,Y) accuracy of better than 10 m, with a CEP (circular error of probability) of 95%.

Flight Path - No lines to exceed ±25% departure from planned flight path over a continuous distance of more than 1 km, except for reasons of safety.

Clearance - Mean terrain sensor clearance of 60 m, except where precluded by safety considerations, e.g., restricted or populated areas, severe topography, obstructions, tree canopy, aerodynamic limitations, etc.

Airborne Mag - Figure of Merit for the magnetometer not to exceed 2.0 nT. Non-normalized 4^{th} difference not to exceed 1.6 nT over a continuous distance of 1 km excluding areas where this specification is exceeded due to natural anomalies

Base Mag - Diurnal variations not to exceed 10 nT over a straight-line time chord of 1 minute.

5. DATA PROCESSING

Flight Path Recovery

Both the base and mobile GPS units simultaneously record raw range data from at least four satellites. The geographic positions of both units, relative to the model ellipsoid, are calculated from this information. Differential corrections, which are obtained from the base station, are applied to the mobile unit data to provide a post-flight track of the aircraft, accurate to within 2 m. Speed checks of the flight path are also carried out to determine if there are any spikes or gaps in the data.

The corrected WGS84 latitude/longitude coordinates are transformed to the coordinate system used on the final maps. Images or plots are then created to provide a visual check of the flight path.

Total Magnetic Field

A fourth difference editing routine is applied to the magnetic data to remove any spikes. The aeromagnetic data is corrected for diurnal variation using the magnetic base station data. The results are then levelled using tie and traverse line intercepts. Manual adjustments are applied to any lines that required levelling, as indicated by shadowed images of the gridded magnetic data. The manually levelled data are then subjected to a microlevelling filter.

Calculated Vertical Magnetic Gradient

The diurnally corrected total magnetic field data is subjected to a processing algorithm that enhances the response of magnetic bodies in the upper 500 m and attenuates the response of deeper bodies. The resulting vertical gradient map provides better definition and resolution of near-surface magnetic units. It also identifies weak magnetic features that may not be evident on the total field map. However, regional magnetic variations and changes in lithology may be better defined on the total magnetic field map.

Digital Elevation

The radar altimeter values (ALTR - aircraft ground clearance) are subtracted from the differentially corrected and de-spiked GPS height above ellipsoid (Z) values to produce profiles of the height above the ellipsoid along the survey lines. These values are gridded to produce contour maps showing approximate elevations within the survey area. Any remaining subtle line-to-line discrepancies are manually removed. After the manual corrections are applied, the digital terrain data are filtered with a microleveling algorithm.

The accuracy of the elevation calculation is directly dependent on the accuracy of the two input parameters, ALTR and Z. The ALTR value may be erroneous in areas of heavy tree cover, where the altimeter reflects the distance to the tree canopy rather than the ground. The Z value is primarily dependent on the number of available satellites.

Although post-processing of GPS data will yield X and Y accuracies in the order of 1-2 metres, the accuracy of the Z value is usually much less, sometimes in the ±10 metre range. Further inaccuracies may be introduced during the interpolation and gridding process.

Because of the inherent inaccuracies of this method, no guarantee is made or implied that the information displayed is a true representation of the height above sea level. Although this product may be of some use as a general reference, THIS PRODUCT MUST NOT BE USED FOR NAVIGATION PURPOSES.

Contour, Colour and Shadow Map Displays

The magnetic geophysical data are interpolated onto a regular grid using a bi-directional Akima spline technique. The resulting grid is suitable for image processing and generation of contour maps. The grid cell size is 20% of the line interval.

Colour maps are produced by interpolating the grid down to the pixel size. The parameter is then incremented with respect to specific amplitude ranges to provide colour "contour" maps.

Monochromatic shadow maps or images are generated by employing an artificial sun to cast shadows on a surface defined by the geophysical grid. There are many variations in the shadowing technique. These techniques can be applied to total field or enhanced magnetic data, magnetic derivatives, resistivity, etc. The shadowing technique is also used as a quality control method to detect subtle changes between lines.

6. PRODUCTS

This section lists the final maps and products that have been provided under the terms of the survey agreement. Other products can be prepared from the existing dataset, if requested.

Base Maps

Base maps of the survey area were produced from digital topography (BC TRIM) supplied by Garibaldi Resources Ltd. This process provides a relatively accurate, distortion-free base that facilitates correlation of the navigation data to the map coordinate system. The topographic files were combined with geophysical data for plotting the final maps. All maps were created using the following parameters:

Projection Description:

Datum:	NAD 83		
Ellipsoid:	GRS80		
Projection:	UTM (Zone: 9 N)		
Central Meridian:	129° W		
False Northing:	0		
False Easting:	500000		
Scale Factor:	0.9996		
WGS84 to Local Conversion:	Molodensky		
Datum Shifts:	DX: 0	DY: 0	DZ: 0

The following parameters are presented on 1 map sheet at a scale of 1:20 000. All maps include flight lines and topography, unless otherwise indicated. Preliminary products are not listed.

Final Products

	No. of Map Sets		
	Mylar	Blackline	Colour
Total Magnetic Field			2
Calculated Vertical Magnetic Gradient			2

<u>Additional Products</u>

Digital Archive (see Archive Description)	1 CD-ROM
Survey Report	2 paper copies, 1 PDF
Flight Path Video (DVD)	1 DVD

7. SURVEY RESULTS

General Discussion

A Fugro CF-1 cesium vapour magnetometer was operated at the survey base 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 permit subsequent removal of diurnal drift. The daily average was used as a base level for diurnal removal processing.

The total magnetic field data have been presented as contours on the base map using a contour interval of 5 nT where gradients permit. The maps show the magnetic properties of the rock units underlying the survey area.

The total magnetic field data have been subjected to a processing algorithm to produce maps of the calculated vertical gradient. This procedure enhances near-surface magnetic units and suppresses regional gradients. It also provides better definition and resolution of magnetic units and displays weak magnetic features that may not be clearly evident on the total field maps.

There is some evidence on the magnetic maps that suggests that the survey area has been subjected to deformation and/or alteration. These structural complexities are evident on the contour maps as variations in magnetic intensity, irregular patterns, and as offsets or changes in strike direction.

If a specific magnetic intensity can be assigned to the rock type that is believed to host the target mineralization, it may be possible to select areas of higher priority on the basis of the total field magnetic data. This is based on the assumption that the magnetite content of the host rocks will give rise to a limited range of contour values that will permit differentiation of various lithological units.

The magnetic results, in conjunction with the other geophysical parameters, have provided valuable information that can be used to effectively map the geology and structure in the survey area.

8. CONCLUSIONS AND RECOMMENDATIONS

This report provides a very brief description of the survey results and describes the equipment, data processing procedures and logistics of the survey.

It is also recommended that image processing of existing geophysical data be considered, in order to extract the maximum amount of information from the survey results. Current software and imaging techniques often provide valuable information on structure and lithology, which may not be clearly evident on the contour and colour maps. These techniques can yield images that define subtle, but significant, structural details.

Respectfully submitted,

FUGRO AIRBORNE SURVEYS CORP.

Stephen Harrison per.

Chris Sawyer
Geophysicist

CS/sdp

R06081JAN.07-4

APPENDIX A

LIST OF PERSONNEL

LIST OF PERSONNEL

The following personnel were involved in the acquisition, processing, interpretation and presentation of data, relating to an airborne geophysical survey carried out for Garibaldi Resources Ltd, in British Columbia, Canada.

David Miles	Manager, Helicopter Operations
Emily Farquhar	Manager, Data Processing and Interpretation
John Douglas	Geophysical Operator
Amit Praharaj	Geophysical Operator
John Douglas	Geophysical Operator
Geoff Rawlins	Helicopter Pilot
Stephan Fortin	Helicopter Engineer
Laura Quigley	Geophysical Data Processor
Jeff Flemming	Geophysical Data Processor
Chris Sawyer	Geophysical Data Processor
Lyn Vanderstarren	Drafting Supervisor
Susan Pothiah	Word Processing Operator
Albina Tonello	Secretary/Expeditor

The survey consisted of 123.4 km of coverage, flown from November 21st to December 5th, 2006.

All personnel are employees of Fugro Airborne Surveys, except for the pilots and engineers who are employees of Questral Helicopters Ltd.

APPENDIX B

BACKGROUND INFORMATION

BACKGROUND INFORMATION

Magnetic Responses

The measured total magnetic field provides information on the magnetic properties of the earth materials in the survey area. The information can be used to locate magnetic bodies of direct interest for exploration, and for structural and lithological mapping.

The total magnetic field response reflects the abundance of magnetic material in the source. Magnetite is the most common magnetic mineral. Other minerals such as ilmenite, pyrrhotite, franklinite, chromite, hematite, arsenopyrite, limonite and pyrite are also magnetic, but to a lesser extent than magnetite on average.

In some geological environments, an EM anomaly with magnetic correlation has a greater likelihood of being produced by sulphides than one which is non-magnetic. However, sulphide ore bodies may be non-magnetic (e.g., the Kidd Creek deposit near Timmins, Canada) as well as magnetic (e.g., the Mattabi deposit near Sturgeon Lake, Canada).

Iron ore deposits will be anomalously magnetic in comparison to surrounding rock due to the concentration of iron minerals such as magnetite, ilmenite and hematite.

Changes in magnetic susceptibility often allow rock units to be differentiated based on the total field magnetic response. Geophysical classifications may differ from geological classifications if various magnetite levels exist within one general geological classification. Geometric considerations of the source such as shape, dip and depth, inclination of the earth's field and remanent magnetization will complicate such an analysis.

In general, mafic lithologies contain more magnetite and are therefore more magnetic than many sediments which tend to be weakly magnetic. Metamorphism and alteration can also increase or decrease the magnetization of a rock unit.

Textural differences on a total field magnetic contour, colour or shadow map due to the frequency of activity of the magnetic parameter resulting from inhomogeneities in the distribution of magnetite within the rock, may define certain lithologies. For example, near surface volcanics may display highly complex contour patterns with little line-to-line correlation.

Rock units may be differentiated based on the plan shapes of their total field magnetic responses. Mafic intrusive plugs can appear as isolated "bulls-eye" anomalies. Granitic intrusives appear as sub-circular zones, and may have contrasting rings due to contact metamorphism. Generally, granitic terrain will lack a pronounced strike direction, although granite gneiss may display strike.

Linear north-south units are theoretically not well-defined on total field magnetic maps in equatorial regions due to the low inclination of the earth's magnetic field. However, most stratigraphic units will have variations in composition along strike that will cause the units to appear as a series of alternating magnetic highs and lows.

Faults and shear zones may be characterized by alteration that causes destruction of magnetite (e.g., weathering) that produces a contrast with surrounding rock. Structural breaks may be filled by magnetite-rich, fracture filling material as is the case with diabase dikes, or by non-magnetic felsic material.

Faulting can also be identified by patterns in the magnetic total field contours or colours. Faults and dikes tend to appear as lineaments and often have strike lengths of several kilometres. Offsets in narrow, magnetic, stratigraphic trends also delineate structure. Sharp contrasts in magnetic lithologies may arise due to large displacements along strike-slip or dip-slip faults.

APPENDIX C

DATA ARCHIVE DESCRIPTION

ARCHIVE DESCRIPTION

This CD-ROM contains final data archives of an airborne survey conducted by Fugro Airborne Surveys on behalf of Garibaldi Resources Ltd in British Columbia, Canada.

Fugro Job # 06081

The archives contain 4 directories.

1. Database: Geosoft database and XYZ data in Geosoft format, along with format description.

2. Grids: Grids in Geosoft and Maps in PDF format for the following parameters:
   1. Total Magnetic Field
   2. Calculated Vertical Gradient

3. Pdf: pdf files of map products

4. Report: Project report in PDF format

Projection Description:

Datum:	NAD 83
Ellipsoid:	GRS80
Projection:	UTM (Zone: 9 N)
Central Meridian:	129° W
False Northing:	0
False Easting:	500000
Scale Factor:	0.9996
WGS84 to Local Conversion:	Molodensky
Datum Shifts:	DX: 0 DY: 0 DZ: 0

Geosoft Archive Summary

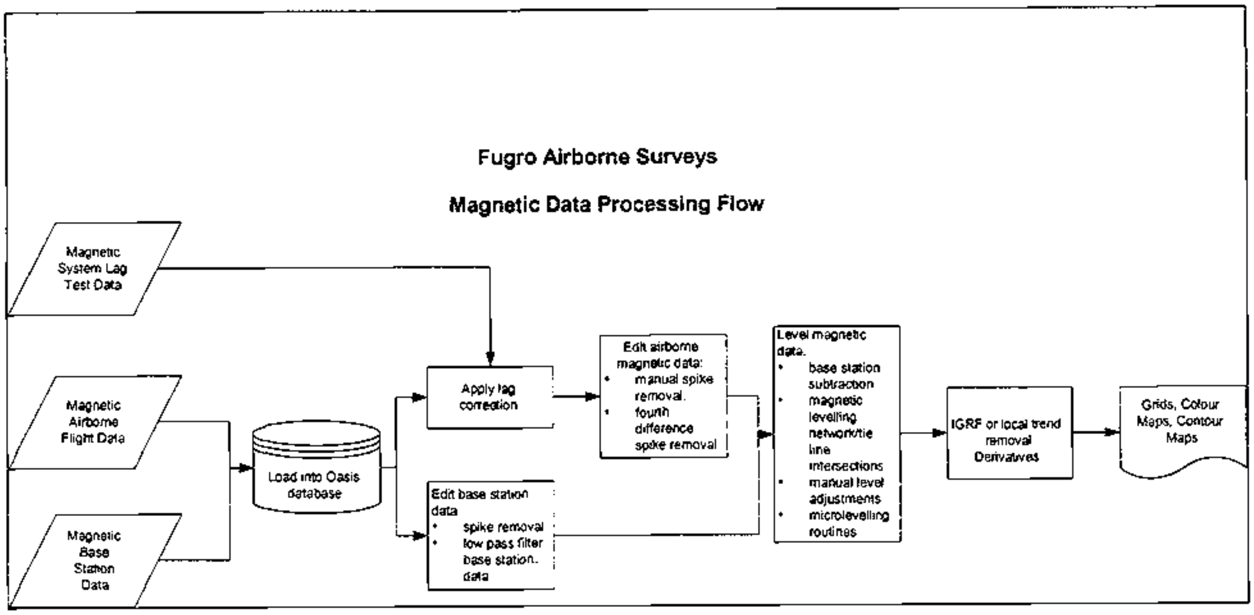
Job#: 06081-4 Garibaldi Resources Ltd January, 2007

Channel Name	Description	Sample Rate	Units
ALTL	Altitude from Laser Altimeter	0.1	m
ALTR	Altitude from Radar Altimeter	0.1	m
DATE	Date of flight	0.1	date
DIURNAL	Magnetic diurnal correction	0.1	nT
DTM	Digital Terrain Model (from Z and Radar Altimeter)	0.1	m
FID	Fiducial	0.1	
FLIGHT	Flight number	0.1	
KPA	Pressure	0.1	kilopascals
MAG_Comp	Raw Total Magnetic Field	0.1	nT
MAG_CLD	Total Magnetic Field lagged and diurnally corrected	0.1	celcius
MAG	Corrected Total Magnetic Field	0.1	nT
TEMP_EXT	External Temperature	0.1	celcius
X	Easting NAD83 UTM Z9	0.1	m
Y	Northing NAD83 UTM Z9	0.1	m
Z	GPS Height Above Ellipsoid	0.1	m

APPENDIX D

DATA PROCESSING FLOWCHARTS

Processing Flow Chart - Magnetic Data



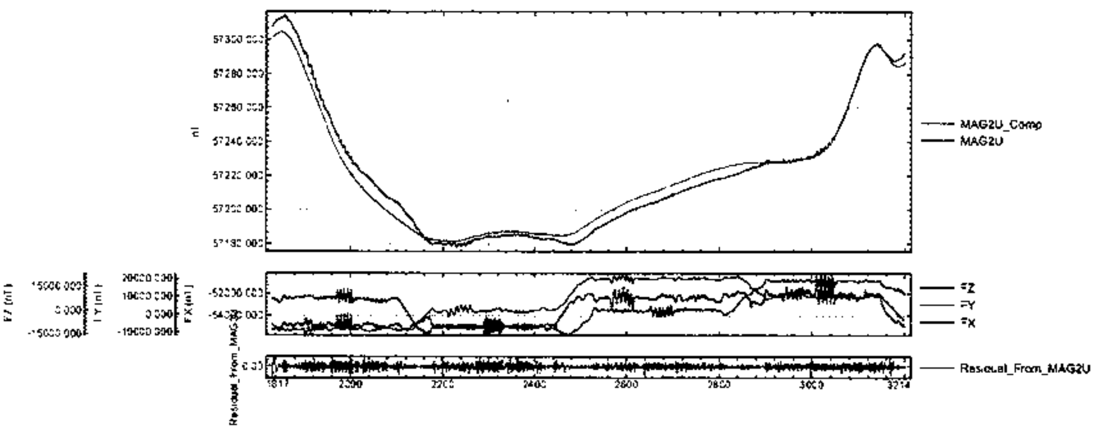
APPENDIX E

TESTS AND CALIBRATIONS

Compensation Flight

A compensation flight was performed to determine the compensation required on the magnetic sensor due to the aircraft movement. By using this compensation, the magnetic effects from the helicopter and its associated manoeuvres are removed. The Figure of Merit (FOM) is calculated by summing the amplitude of residual for each manoeuvre in all 4 directions of the survey. A value of 0.76 nT was calculated from the FOM and is acceptable for survey. A graph of residual values, fluxgate component amplitude, and compensated and un-compensated total magnetic field from the compensation flight is shown below.

Figure of Merit



APPENDIX F

GLOSSARY

GLOSSARY OF AIRBORNE GEOPHYSICAL TERMS

Note: The definitions given in this glossary refer to the common terminology as used in airborne geophysics.

altitude attenuation: the absorption of gamma rays by the atmosphere between the earth and the detector. The number of gamma rays detected by a system decreases as the altitude increases.

apparent- : the ***physical parameters*** of the earth measured by a geophysical system are normally expressed as apparent, as in "apparent ***resistivity***". This means that the measurement is limited by assumptions made about the geology in calculating the response measured by the geophysical system. Apparent resistivity calculated with ***HEM***, for example, generally assumes that the earth is a ***homogeneous half-space*** – not layered.

amplitude: The strength of the total electromagnetic field. In ***frequency domain*** it is most often the sum of the squares of ***in-phase*** and ***quadrature*** components. In multi-component electromagnetic surveys it is generally the sum of the squares of all three directional components.

analytic signal: The total amplitude of all the directions of magnetic ***gradient***. Calculated as the sum of the squares.

anisotropy: Having different ***physical parameters*** in different directions. This can be caused by layering or fabric in the geology. Note that a unit can be anisotropic, but still **homogeneous**.

anomaly: A localized change in the geophysical data characteristic of a discrete source, such as a conductive or magnetic body: something locally different from the **background**.

B-field: In time-domain **electromagnetic** surveys, the magnetic field component of the (electromagnetic) **field**. This can be measured directly, although more commonly it is calculated by integrating the time rate of change of the magnetic field **dB/dt**, as measured with a receiver coil.

background: The "normal" response in the geophysical data – that response observed over most of the survey area. **Anomalies** are usually measured relative to the background. In airborne gamma-ray spectrometric surveys the term defines the **cosmic**, radon, and aircraft responses in the absence of a signal from the ground.

base-level: The measured values in a geophysical system in the absence of any outside signal. All geophysical data are measured relative to the system base level.

base frequency: The frequency of the pulse repetition for a ***time-domain electromagnetic*** system. Measured between subsequent positive pulses.

bird: A common name for the pod towed beneath or behind an aircraft, carrying the geophysical sensor array.

bucking: The process of removing the strong ***signal*** from the ***primary field*** at the ***receiver*** from the data, to measure the ***secondary field***. It can be done electronically or mathematically. This is done in ***frequency-domain EM***, and to measure ***on-time*** in ***time-domain EM***.

calibration coil: A wire coil of known size and dipole moment, which is used to generate a field of known ***amplitude*** and ***phase*** in the receiver, for system calibration. Calibration coils can be external, or internal to the system. Internal coils may be called Q-coils.

coaxial coils: **[CX]** Coaxial coils in an HEM system are in the vertical plane, with their axes horizontal and collinear in the flight direction. These are most sensitive to vertical conductive objects in the ground, such as thin, steeply dipping conductors perpendicular to the flight direction. Coaxial coils generally give the sharpest anomalies over localized conductors. (See also ***coplanar coils***)

coil: A multi-turn wire loop used to transmit or detect electromagnetic fields. Time varying ***electromagnetic*** fields through a coil induce a voltage proportional to the strength of the field and the rate of change over time.

compensation: Correction of airborne geophysical data for the changing effect of the aircraft. This process is generally used to correct data in ***fixed-wing time-domain electromagnetic*** surveys (where the transmitter is on the aircraft and the receiver is moving), and magnetic surveys (where the sensor is on the aircraft, turning in the earth's magnetic field.

component: In ***frequency domain electromagnetic*** surveys this is one of the two **phase** measurements – ***in-phase or quadrature***. In "multi-component" electromagnetic surveys it is also used to define the measurement in one geometric direction (vertical, horizontal in-line and horizontal transverse – the Z, X and Y components).

Compton scattering: gamma ray photons will bounce off electrons as they pass through the earth and atmosphere, reducing their energy and then being detected by ***radiometric*** sensors at lower energy levels. See also ***stripping***.

conductance: See ***conductivity thickness***

conductivity: [σ] The facility with which the earth or a geological formation conducts electricity. Conductivity is usually measured in milli-Siemens per metre (mS/m). It is the reciprocal of ***resistivity***.

conductivity-depth imaging: see ***conductivity-depth transform***.

conductivity-depth transform: A process for converting electromagnetic measurements to an approximation of the conductivity distribution vertically in the earth, assuming a ***layered earth***. (Macnae and Lamontagne, 1987; Wolfgram and Karlik, 1995)

conductivity thickness: **[σt]** The product of the ***conductivity***, and thickness of a large, tabular body. (It is also called the "conductivity-thickness product") In electromagnetic geophysics, the response of a thin plate-like conductor is proportional to the conductivity multiplied by thickness. For example a 10 metre thickness of 20 Siemens/m mineralization will be equivalent to 5 metres of 40 S/m; both have 200 S conductivity thickness. Sometimes referred to as conductance.

conductor: Used to describe anything in the ground more conductive than the surrounding geology. Conductors are most often clays or graphite, or hopefully some type of mineralization, but may also be man-made objects, such as fences or pipelines.

coplanar coils: [CP] In HEM, the coplanar coils lie in the horizontal plane with their axes vertical, and parallel. These coils are most sensitive to massive conductive bodies, horizontal layers, and the ***halfspace***.

cosmic ray: High energy sub-atomic particles from outer space that collide with the earth's atmosphere to produce a shower of gamma rays (and other particles) at high energies.

counts (per second): The number of ***gamma-rays*** detected by a gamma-ray ***spectrometer.*** The rate depends on the geology, but also on the size and sensitivity of the detector.

culture: A term commonly used to denote any man-made object that creates a geophysical anomaly. Includes, but not limited to, power lines, pipelines, fences, and buildings.

current channelling: See current gathering.

current gathering: The tendency of electrical currents in the ground to channel into a conductive formation. This is particularly noticeable at higher frequencies or early time channels when the formation is long and parallel to the direction of current flow. This tends to enhance anomalies relative to inductive currents (see also ***induction***). Also known as current channelling.

daughter products: The radioactive natural sources of gamma-rays decay from the original "parent" element (commonly potassium, uranium, and thorium) to one or more lower-energy "daughter" elements. Some of these lower energy elements are also radioactive and decay further. ***Gamma-ray spectrometry*** surveys may measure the gamma rays given off by the original element or by the decay of the daughter products.

dB/dt: As the ***secondary electromagnetic field*** changes with time, the magnetic field **[B]** component induces a voltage in the receiving ***coil***, which is proportional to the rate of change of the magnetic field over time.

decay: In ***time-domain electromagnetic*** theory, the weakening over time of the ***eddy currents*** in the ground, and hence the ***secondary field*** after the ***primary field*** electromagnetic pulse is turned off. In ***gamma-ray spectrometry***, the radioactive breakdown of an element, generally potassium, uranium, thorium, or one of their ***daughter*** products.

decay constant: see time constant.

decay series: In ***gamma-ray spectrometry***, a series of progressively lower energy ***daughter products*** produced by the radioactive breakdown of uranium or thorium.

depth of exploration: The maximum depth at which the geophysical system can detect the target. The depth of exploration depends very strongly on the type and size of the target, the contrast of the target with the surrounding geology, the homogeneity of the surrounding geology, and the type of geophysical system. One measure of the maximum depth of exploration for an electromagnetic system is the depth at which it can detect the strongest conductive target – generally a highly conductive horizontal layer.

differential resistivity: A process of transforming ***apparent resistivity*** to an approximation of layer resistivity at each depth. The method uses multi-frequency HEM data and approximates the effect of shallow layer ***conductance*** determined from higher frequencies to estimate the deeper conductivities (Huang and Fraser, 1996)

dipole moment: [NIA] For a transmitter, the product of the area of a ***coil***, the number of turns of wire, and the current flowing in the coil. At a distance significantly larger than the size of the coil, the magnetic field from a coil will be the same if the dipole moment product is the same. For a receiver coil, this is the product of the area and the number of turns. The sensitivity to a magnetic field (assuming the source is far away) will be the same if the dipole moment is the same.

diurnal: The daily variation in a natural field, normally used to describe the natural fluctuations (over hours and days) of the earth's magnetic field.

dielectric permittivity: **[ε]** The capacity of a material to store electrical charge, this is most often measured as the relative permittivity [ε_r], or ratio of the material dielectric to that of free space. The effect of high permittivity may be seen in HEM data at high frequencies over highly resistive geology as a reduced or negative ***in-phase***, and higher ***quadrature*** data.

drape: To fly a survey following the terrain contours, maintaining a constant altitude above the local ground surface. Also applied to re-processing data collected at varying altitudes above ground to simulate a survey flown at constant altitude.

drift: Long-time variations in the base-level or calibration of an instrument.

eddy currents: The electrical currents induced in the ground, or other conductors, by a time-varying ***electromagnetic field*** (usually the ***primary field***). Eddy currents are also induced in the aircraft's metal frame and skin; a source of ***noise*** in EM surveys.

electromagnetic: **[EM]** Comprised of a time-varying electrical and magnetic field. Radio waves are common electromagnetic fields. In geophysics, an electromagnetic system is one which transmits a time-varying ***primary field*** to induce ***eddy currents*** in the ground, and then measures the ***secondary field*** emitted by those eddy currents.

energy window: A broad spectrum of ***gamma-ray*** energies measured by a spectrometric survey. The energy of each gamma-ray is measured and divided up into numerous discrete energy levels, called windows.

equivalent (thorium or uranium): The amount of radioelement calculated to be present, based on the gamma-rays measured from a **daughter** element. This assumes that the ***decay series*** is in equilibrium – progressing normally.

exposure rate: in radiometric surveys, a calculation of the total exposure rate due to gamma rays at the ground surface. It is used as a measurement of the concentration of all the **radioelements** at the surface. See also: **natural exposure rate**.

fiducial, or fid: Timing mark on a survey record. Originally these were timing marks on a profile or film; now the term is generally used to describe 1-second interval timing records in digital data, and on maps or profiles.

Figure of Merit: **(FOM)** A sum of the 12 distinct magnetic noise variations measured by each of four flight directions, and executing three aircraft attitude variations (yaw, pitch, and roll) for each direction. The flight directions are generally parallel and perpendicular to planned survey flight directions. The FOM is used as a measure of the **manoeuvre noise** before and after **compensation.**

fixed-wing: Aircraft with wings, as opposed to "rotary wing" helicopters.

footprint: This is a measure of the area of sensitivity under the aircraft of an airborne geophysical system. The footprint of an ***electromagnetic*** system is dependent on the altitude of the system, the orientation of the transmitter and receiver and the separation between the receiver and transmitter, and the conductivity of the ground. The footprint of a ***gamma-ray spectrometer*** depends mostly on the altitude. For all geophysical systems, the footprint also depends on the strength of the contrasting ***anomaly***.

frequency domain: An ***electromagnetic*** system which transmits a ***primary field*** that oscillates smoothly over time (sinusoidal), inducing a similarly varying electrical current in the ground. These systems generally measure the changes in the ***amplitude*** and ***phase*** of the ***secondary field*** from the ground at different frequencies by measuring the **in-phase** and **quadrature** phase components. See also ***time-domain***.

full-stream data: Data collected and recorded continuously at the highest possible sampling rate. Normal data are stacked (see ***stacking***) over some time interval before recording.

gamma-ray: A very high-energy photon, emitted from the nucleus of an atom as it undergoes a change in energy levels.

gamma-ray spectrometry: Measurement of the number and energy of natural (and sometimes man-made) gamma-rays across a range of photon energies.

gradient: In magnetic surveys, the gradient is the change of the magnetic field over a distance, either vertically or horizontally in either of two directions. Gradient data is often measured, or calculated from the total magnetic field data because it changes more quickly over distance than the ***total magnetic field***, and so may provide a more precise measure of the location of a source. See also ***analytic signal***.

ground effect: The response from the earth. A common calibration procedure in many geophysical surveys is to fly to altitude high enough to be beyond any measurable response from the ground, and there establish ***base levels*** or ***backgrounds***.

half-space: A mathematical model used to describe the earth – as infinite in width, length, and depth below the surface. The most common halfspace models are ***homogeneous*** and ***layered earth***.

heading error: A slight change in the magnetic field measured when flying in opposite directions.

HEM: Helicopter ElectroMagnetic, This designation is most commonly used for helicopter-borne, ***frequency-domain*** electromagnetic systems. At present, the transmitter and receivers are normally mounted in a ***bird*** carried on a sling line beneath the helicopter.

herringbone pattern: A pattern created in geophysical data by an asymmetric system, where the **anomaly** may be extended to either side of the source, in the direction of flight. Appears like fish bones, or like the teeth of a comb, extending either side of centre, each tooth an alternate flight line.

homogeneous: This is a geological unit that has the same ***physical parameters*** throughout its volume. This unit will create the same response to an HEM system anywhere, and the HEM system will measure the same apparent ***resistivity*** anywhere. The response may change with system direction (see ***anisotropy***).

HTEM: Helicopter Time-domain ElectroMagnetic, This designation is used for the new generation of helicopter-borne, ***time-domain*** electromagnetic systems.

in-phase: the component of the measured ***secondary field*** that has the same phase as the transmitter and the ***primary field***. The in-phase component is stronger than the ***quadrature*** phase over relatively higher ***conductivity***.

induction: Any time-varying electromagnetic field will induce (cause) electrical currents to flow in any object with non-zero ***conductivity***. (see ***eddy currents***)

induction number: also called the "response parameter", this number combines many of the most significant parameters affecting the ***EM*** response into one parameter against which to compare responses. For a ***layered earth*** the response parameter is $\mu\omega\sigma h^2$ and for a large, flat, ***conductor*** it is $\mu\omega\sigma th$, where μ is the ***magnetic permeability***, ω is the angular ***frequency***, σ is the **conductivity**, t is the thickness (for the flat conductor) and h is the height of the system above the conductor.

inductive limit: When the frequency of an EM system is very high, or the **conductivity** of the target is very high, the response measured will be entirely **in-phase** with no **quadrature** (**phase** angle =0). The in-phase response will remain constant with further increase in conductivity or frequency. The system can no longer detect changes in conductivity of the target.

infinite: In geophysical terms, an "infinite' dimension is one much greater than the ***footprint*** of the system, so that the system does not detect changes at the edges of the object.

International Geomagnetic Reference Field: **[IGRF]** An approximation of the smooth magnetic field of the earth, in the absence of variations due to local geology. Once the IGRF is subtracted from the measured magnetic total field data, any remaining variations are assumed to be due to local geology. The IGRF also predicts the slow changes of the field up to five years in the future.

inversion, or **inverse modeling**: A process of converting geophysical data to an earth model, which compares theoretical models of the response of the earth to the data measured, and refines the model until the response closely fits the measured data (Huang and Palacky, 1991)

layered earth: A common geophysical model which assumes that the earth is horizontally layered – the ***physical parameters*** are constant to ***infinite*** distance horizontally, but change vertically.

magnetic permeability: **[μ]** This is defined as the ratio of magnetic induction to the inducing magnetic field. The relative magnetic permeability [μ_r] is often quoted, which is the ratio of the rock permeability to the permeability of free space. In geology and geophysics, the ***magnetic susceptibility*** is more commonly used to describe rocks.

magnetic susceptibility: **[k]** A measure of the degree to which a body is magnetized. In SI units this is related to relative ***magnetic permeability*** by $k=\mu_r-1$, and is a dimensionless unit. For most geological material, susceptibility is influenced primarily by the percentage of magnetite. It is most often quoted in units of 10^{-6}. In HEM data this is most often apparent as a negative ***in-phase*** component over high susceptibility, high ***resistivity*** geology such as diabase dikes.

manoeuvre noise: variations in the magnetic field measured caused by changes in the relative positions of the magnetic sensor and magnetic objects or electrical currents in the aircraft. This type of noise is generally corrected by magnetic **compensation**.

model: Geophysical theory and applications generally have to assume that the geology of the earth has a form that can be easily defined mathematically, called the model. For example steeply dipping **conductors** are generally modeled as being **infinite** in horizontal and depth extent, and very thin. The earth is generally modeled as horizontally layered, each layer infinite in extent and uniform in characteristic. These models make the mathematics to describe the response of the (normally very complex) earth practical. As theory advances, and computers become more powerful, the useful models can become more complex.

natural exposure rate: in radiometric surveys, a calculation of the total exposure rate due to natural-source gamma rays at the ground surface. It is used as a measurement of the concentration of all the natural **radioelements** at the surface. See also: **exposure rate**.

noise: That part of a geophysical measurement that the user does not want. Typically this includes electronic interference from the system, the atmosphere (***sferics***), and man-made sources. This can be a subjective judgment, as it may include the response from geology other than the target of interest. Commonly the term is used to refer to high frequency (short period) interference. See also ***drift***.

Occam's inversion: an ***inversion*** process that matches the measured ***electromagnetic*** data to a theoretical model of many, thin layers with constant thickness and varying resistivity (Constable et al, 1987).

off-time: In a ***time-domain electromagnetic*** survey, the time after the end of the ***primary field pulse***, and before the start of the next pulse.

on-time: In a ***time-domain electromagnetic*** survey, the time during the ***primary field pulse***.

overburden: In engineering and mineral exploration terms, this most often means the soil on top of the unweathered bedrock. It may be sand, glacial till, or weathered rock.

Phase, phase angle: The angular difference in time between a measured sinusoidal electromagnetic field and a reference – normally the primary field. The phase is calculated from $\tan^{-1}$(***in-phase / quadrature***).

physical parameters: These are the characteristics of a geological unit. For electromagnetic surveys, the important parameters are ***conductivity, magnetic permeability*** (or ***susceptibility***) and ***dielectric permittivity***; for magnetic surveys the parameter is magnetic susceptibility, and for gamma ray spectrometric surveys it is the concentration of the major radioactive elements: potassium, uranium, and thorium.

permittivity: see ***dielectric permittivity***.

permeability: see ***magnetic permeability***.

primary field: the EM field emitted by a transmitter. This field induces ***eddy currents*** in (energizes) the conductors in the ground, which then create their own ***secondary*** **fields**.

pulse: In time-domain EM surveys, the short period of intense ***primary*** field transmission. Most measurements (the ***off-time***) are measured after the pulse. **On-time** measurements may be made during the pulse.

quadrature: that component of the measured ***secondary field*** that is phase-shifted 90° from the ***primary field***. The quadrature component tends to be stronger than the ***in-phase*** over relatively weaker ***conductivity***.

Q-coils: see ***calibration coil***.

radioelements: This normally refers to the common, naturally-occurring radioactive elements: potassium (K), uranium (U), and thorium (Th). It can also refer to man-made radioelements, most often cobalt (Co) and cesium (Cs)

radiometric: Commonly used to refer to ***gamma ray*** spectrometry.

radon: A radioactive daughter product of uranium and thorium, radon is a gas which can leak into the atmosphere, adding to the non-geological background of a gamma-ray spectrometric survey.

receiver: the ***signal*** detector of a geophysical system. This term is most often used in active geophysical systems – systems that transmit some kind of signal. In airborne ***electromagnetic*** surveys it is most often a ***coil***. (see also, ***transmitter***)

resistivity: **[ρ]** The strength with which the earth or a geological formation resists the flow of electricity, typically the flow induced by the ***primary field*** of the electromagnetic transmitter. Normally expressed in ohm-metres, it is the reciprocal of ***conductivity***.

resistivity-depth transforms: similar to ***conductivity depth transforms***, but the calculated ***conductivity*** has been converted to ***resistivity***.

resistivity section: an approximate vertical section of the resistivity of the layers in the earth. The resistivities can be derived from the ***apparent resistivity***, the ***differential resistivities***, ***resistivity-depth transforms***, or ***inversions***.

Response parameter: another name for the **induction number**.

secondary field: The field created by conductors in the ground, as a result of electrical currents induced by the ***primary field*** from the ***electromagnetic*** transmitter. Airborne ***electromagnetic*** systems are designed to create and measure a secondary field.

Sengpiel section: a ***resistivity section*** derived using the ***apparent resistivity*** and an approximation of the depth of maximum sensitivity for each frequency.

sferic: Lightning, or the ***electromagnetic*** signal from lightning, it is an abbreviation of "atmospheric discharge". These appear to magnetic and electromagnetic sensors as sharp "spikes" in the data. Under some conditions lightning storms can be detected from hundreds of kilometres away. (see ***noise***)

signal: That component of a measurement that the user wants to see – the response from the targets, from the earth, etc. (See also ***noise***)

skin depth: A measure of the depth of penetration of an electromagnetic field into a material. It is defined as the depth at which the primary field decreases to 1/e of the field at the surface. It is calculated by approximately 503 x √(resistivity/frequency). Note that depth of penetration is greater at higher ***resistivity*** and/or lower ***frequency***.

spectrometry: Measurement across a range of energies, where ***amplitude*** and energy are defined for each measurement. In gamma-ray spectrometry, the number of gamma rays are measured for each energy ***window***, to define the ***spectrum***.

spectrum: In ***gamma ray spectrometry***, the continuous range of energy over which gamma rays are measured. In ***time-domain electromagnetic*** surveys, the spectrum is the energy of the **pulse** distributed across an equivalent, continuous range of frequencies.

spheric: see ***sferic***.

stacking: Summing repeat measurements over time to enhance the repeating ***signal***, and minimize the random ***noise***.
stripping: Estimation and correction for the gamma ray photons of higher and lower energy that are observed in a particular ***energy window***. See also ***Compton scattering***.

susceptibility: See ***magnetic susceptibility***.

tau: [τ] Often used as a name for the ***time constant***.

TDEM: ***time domain electromagnetic***.

thin sheet: A standard model for electromagnetic geophysical theory. It is usually defined as a thin, flat-lying conductive sheet, ***infinite*** in both horizontal directions. (see also ***vertical plate***)

tie-line: A survey line flown across most of the ***traverse lines***, generally perpendicular to them, to assist in measuring ***drift*** and ***diurnal*** variation. In the short time required to fly a tie-line it is assumed that the drift and/or diurnal will be minimal, or at least changing at a constant rate.

time constant: The time required for an ***electromagnetic*** field to decay to a value of 1/e of the original value. In ***time-domain*** electromagnetic data, the time constant is proportional to the size and ***conductance*** of a tabular conductive body. Also called the decay constant.

Time channel: In ***time-domain electromagnetic*** surveys the decaying ***secondary field*** is measured over a period of time, and the divided up into a series of consecutive discrete measurements over that time.

time-domain: ***Electromagnetic*** system which transmits a pulsed, or stepped ***electromagnetic*** field. These systems induce an electrical current (***eddy current***) in the ground that persists after the ***primary field*** is turned off, and measure the change over time of the ***secondary field*** created as the currents ***decay***. See also ***frequency-domain***.

total energy envelope: The sum of the squares of the three ***components*** of the ***time-domain electromagnetic secondary field***. Equivalent to the ***amplitude*** of the secondary field.

transient: Time-varying. Usually used to describe a very short period pulse of ***electromagnetic*** field.

transmitter: The source of the ***signa***l to be measured in a geophysical survey. In airborne ***EM*** it is most often a **coil** carrying a time-varying electrical current, transmitting the ***primary field***. (see also ***receiver***)

traverse line: A normal geophysical survey line. Normally parallel traverse lines are flown across the property in spacing of 50 m to 500 m, and generally perpendicular to the target geology.

vertical plate: A standard model for electromagnetic geophysical theory. It is usually defined as thin conductive sheet, ***infinite*** in horizontal dimension and depth extent. (see also ***thin shee***t)

waveform: The shape of the ***electromagnetic pulse*** from a ***time-domain*** electromagnetic transmitter.

window: A discrete portion of a ***gamma-ray spectrum*** or ***time-domain electromagnetic decay***. The continuous energy spectrum or ***full-stream*** data are grouped into windows to reduce the number of samples, and reduce ***noise***.

Version 1.5, November 29, 2005
Greg Hodges,
Chief Geophysicist
Fugro Airborne Surveys, Toronto

Common Symbols and Acronyms

k Magnetic susceptibility
ε Dielectric permittivity
μ, μ_r Magnetic permeability, relative permeability
ρ, ρ_a Resistivity, apparent resistivity
σ,σ_a Conductivity, apparent conductivity
σt Conductivity thickness
τ Tau, or time constant
Ωm ohm-metres, units of resistivity
AGS Airborne gamma ray spectrometry.
CDT Conductivity-depth transform, conductivity-depth imaging (Macnae and Lamontagne, 1987; Wolfgram and Karlik, 1995)
CPI, CPQ Coplanar in-phase, quadrature
CPS Counts per second
CTP Conductivity thickness product
CXI, CXQ Coaxial, in-phase, quadrature
FOM Figure of Merit
fT femtoteslas, normal unit for measurement of B-Field
EM Electromagnetic
keV kilo electron volts – a measure of gamma-ray energy
MeV mega electron volts – a measure of gamma-ray energy 1MeV = 1000keV
NIA dipole moment: turns x current x Area
nT nanotesla, a measure of the strength of a magnetic field
nG/h nanoGreys/hour – gamma ray dose rate at ground level
ppm parts per million – a measure of secondary field or noise relative to the primary or radioelement concentration.
pT/s picoteslas per second: Units of decay of secondary field, dB/dt
S siemens – a unit of conductance
x: the horizontal component of an EM field parallel to the direction of flight.
y: the horizontal component of an EM field perpendicular to the direction of flight.
z: the vertical component of an EM field.

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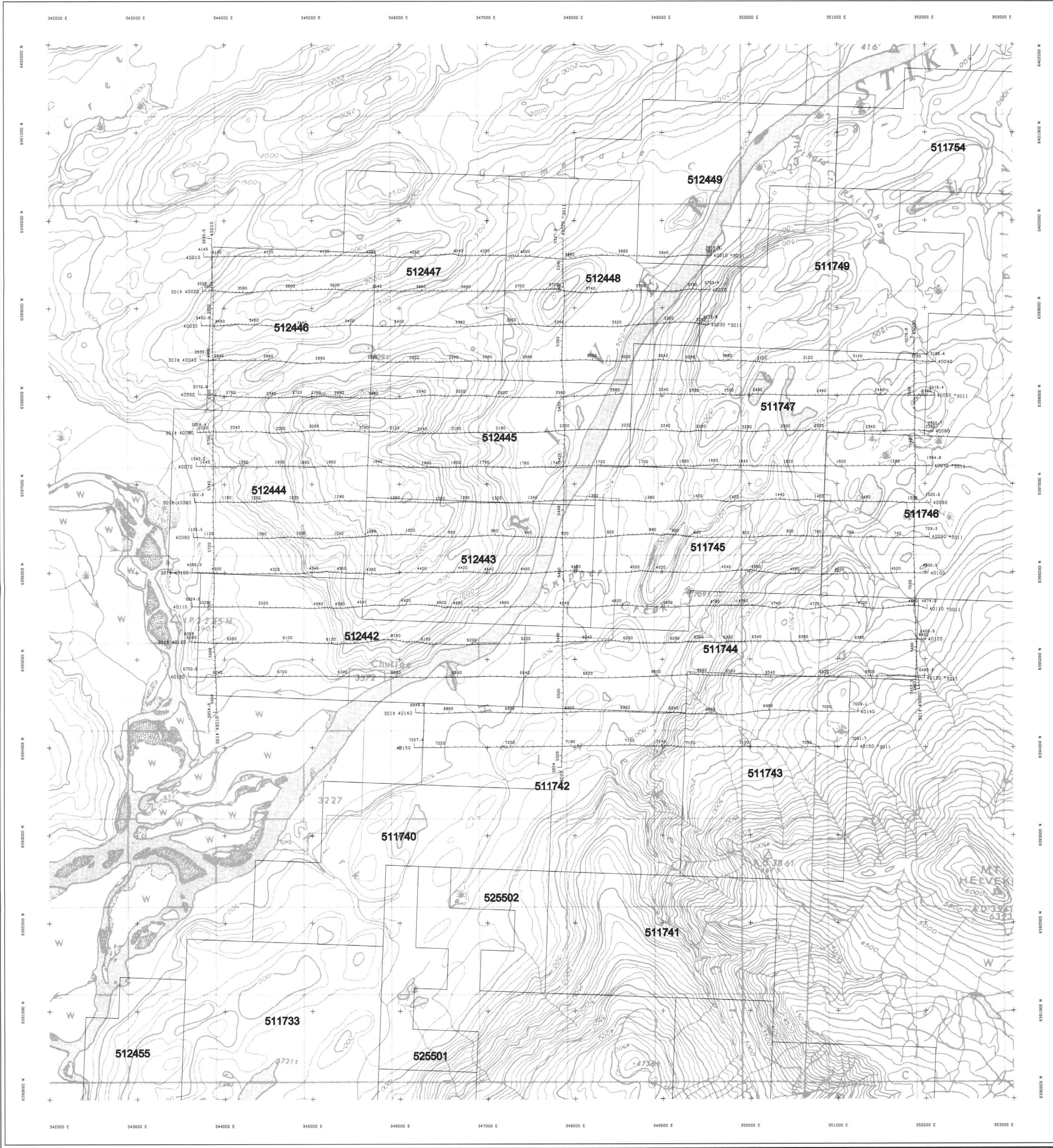
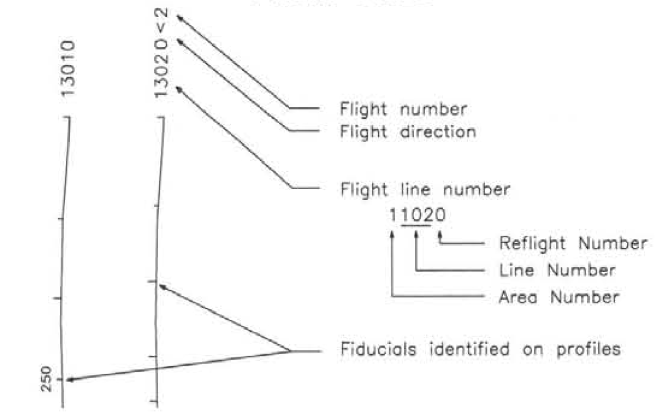
Yin, C. and Fraser, D.C. (2002), The effect of the electrical anisotropy on the responses of helicopter-borne frequency domain electromagnetic systems, Submitted to *Geophysical Prospecting*



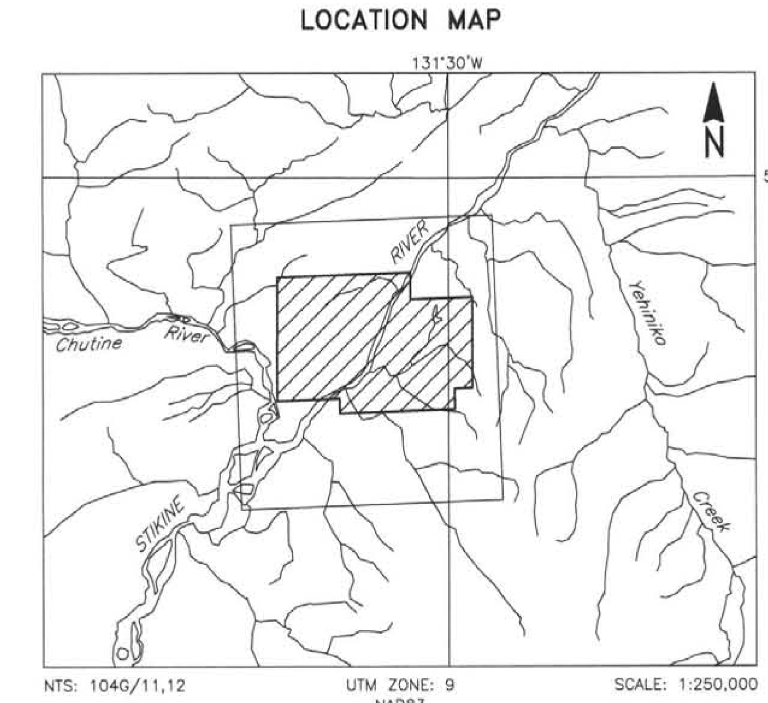
TECHNICAL SUMMARY

Navigation	Differentially-corrected GPS
Data reduction grid interval	80 metres
Terrain clearance	Helicopter 60 m Magnetometer 60 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Cesium / 0.01 nT

FLIGHT LINES



LOCATION MAP



NTS: 104G/11,12 — UTM ZONE: 9 NAD83 — SCALE: 1:250,000

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FLIGHT LINES

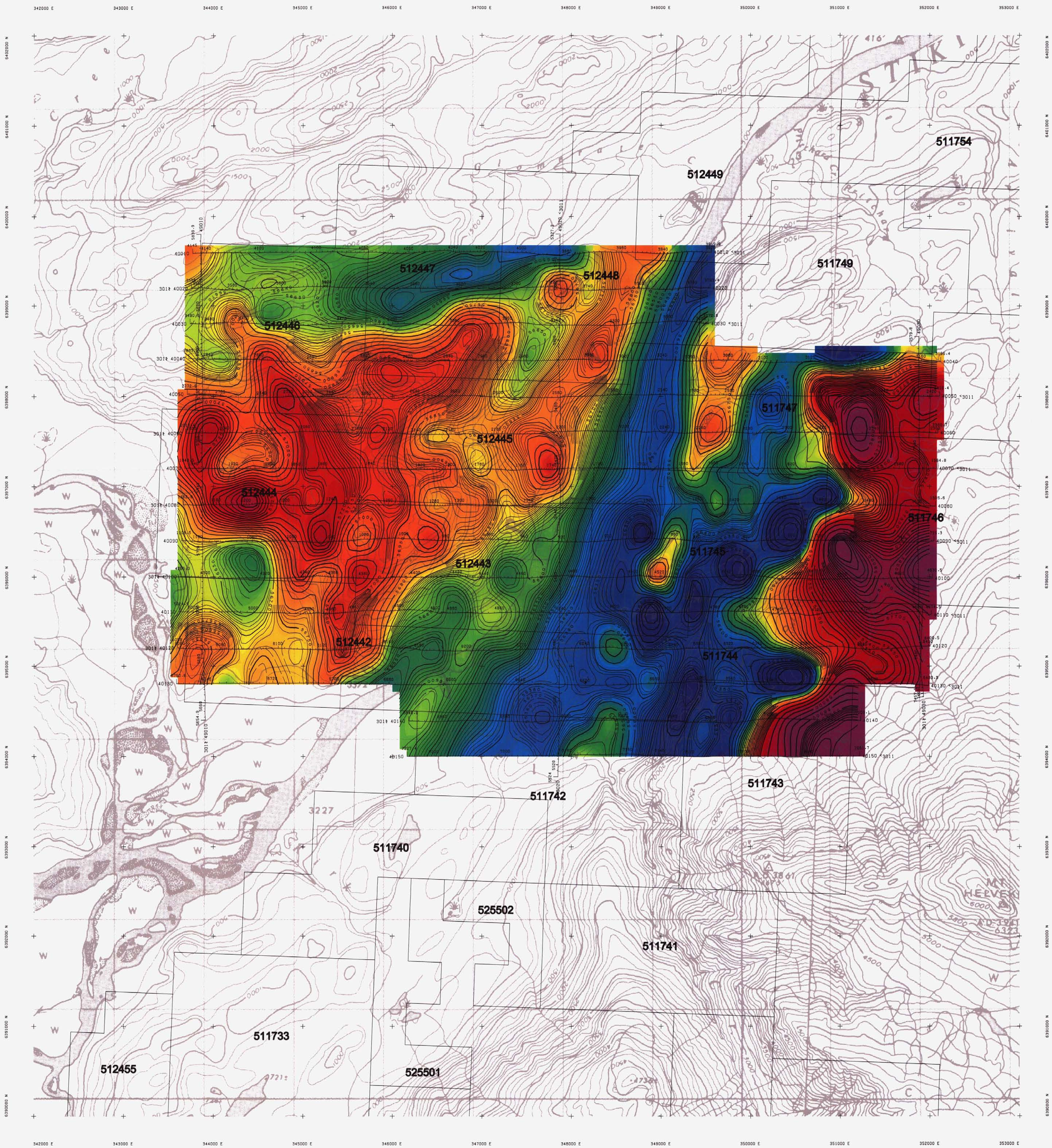
FUGRO MAG SURVEY	NTS: 104G/11,12	GEOPHYSICIST:
DATE: DECEMBER, 2006	JOB: 06081	SHEET: 1

Fugro Airborne Surveys

0 1 2 Km
0 1 Mi
Scale 1:20,000

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
29,055

FUGRO AIRBORNE SURVEYS



TECHNICAL SUMMARY

Navigation . . . . Differentially-corrected GPS
Data reduction grid interval . . . . 80 metres
Terrain clearance . . . . Helicopter 60 m
Magnetometer 60 m
Data sampling interval . . . . 0.1 second
Magnetometer / sensitivity . . . . . Cesium / 0.01 nT

nT

58111, 57887, 57720, 57560, 57444, 57370, 57278, 57219, 57171, 57125, 57091, 57066, 57045, 57021, 56990, 56959, 56933, 56907, 56883, 56863, 56848, 56834, 56819, 56804, 56786, 56773, 56760, 56749, 56737, 56726, 56712, 56697, 56683, 56670, 56660, 56649, 56638, 56629, 56618, 56608, 56599, 56588, 56577, 56562, 56549, 56536, 56518, 56501, 56484, 56469, 56454, 56439, 56424, 56407, 56394, 56384, 56376, 56364, 56347, 56322, 56299, 56271, 56235

FLIGHT LINES

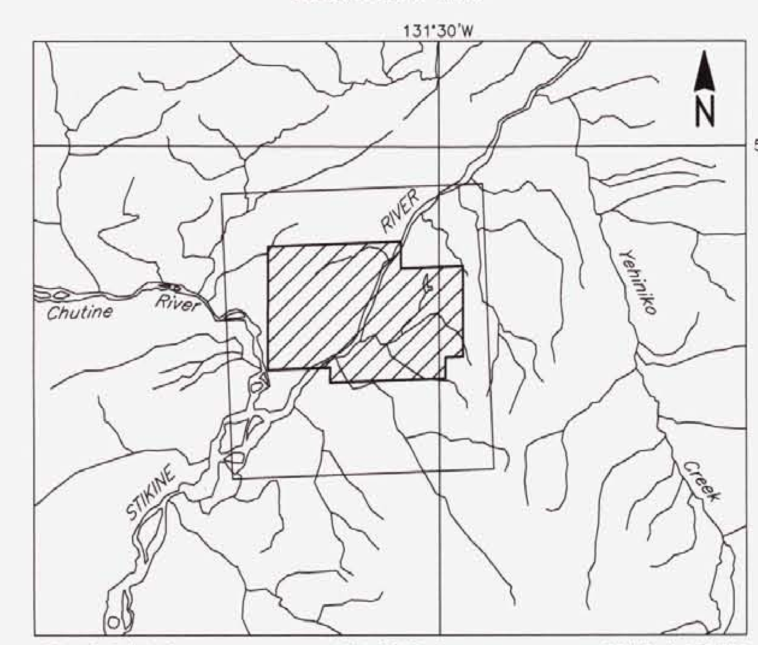
13010
13020 <2
Flight number
Flight direction
Flight line number
11020
Reflight Number
Line Number
Area Number
250
Fiducials identified on profiles

TOTAL MAGNETIC FIELD CONTOURS

. . . . 250 nT
. . . . 50 nT
. . . . 10 nT
. . . . 5 nT
. . . . magnetic low

Magnetic inclination within the survey area: 74 degrees N
Magnetic declination within the survey area: 22 degrees E

LOCATION MAP



NTS: 104G/11,12 UTM ZONE: 9 NAD83 SCALE: 1:250,000

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TOTAL MAGNETIC FIELD

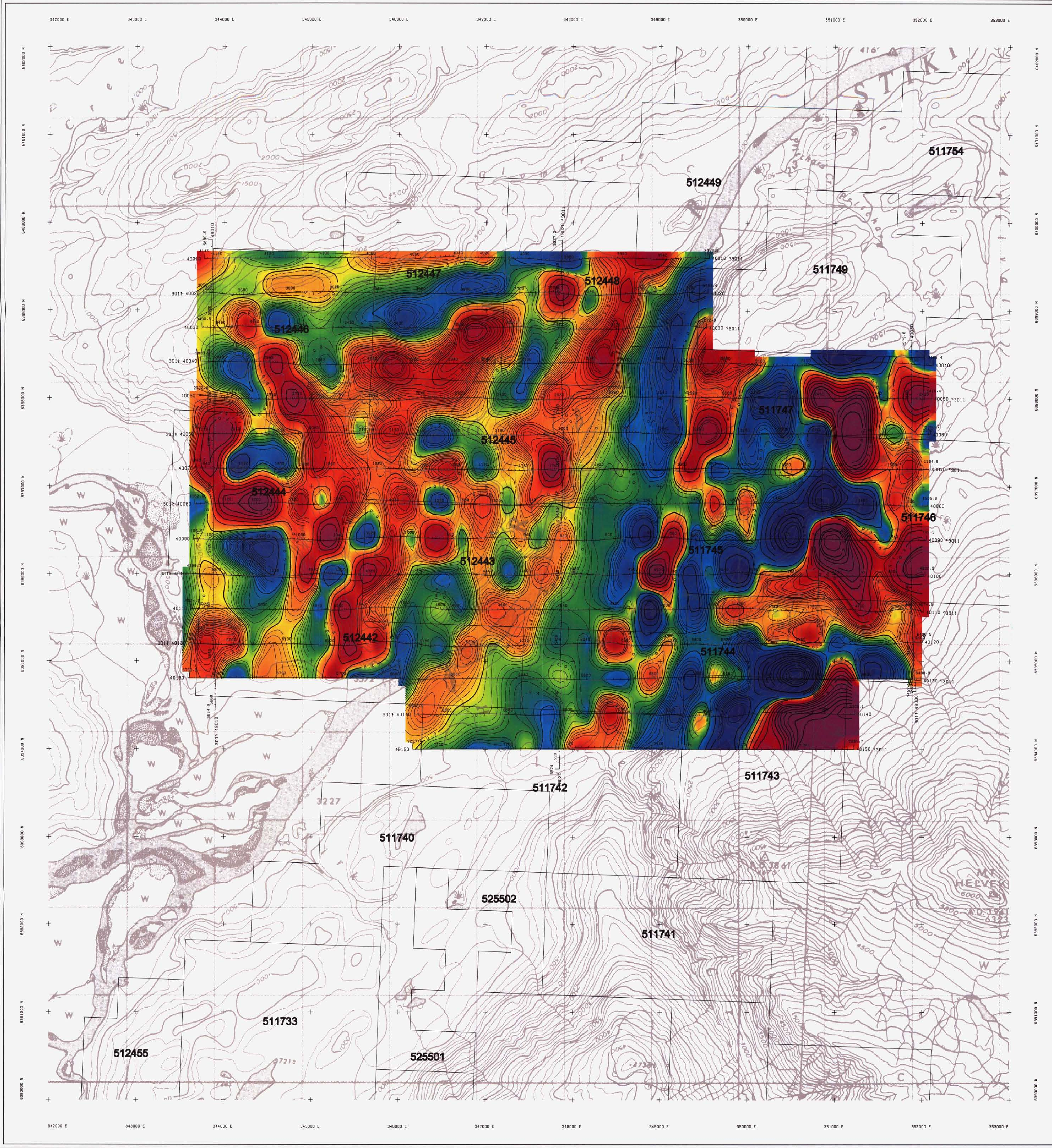
FUGRO MAG SURVEY	NTS: 104G/11,12	GEOPHYSICIST:
DATE: DECEMBER, 2006	JOB: 06081	SHEET: 1

Fugro Airborne Surveys

0 1 2 Km
0 1 Mi
Scale 1:20 000

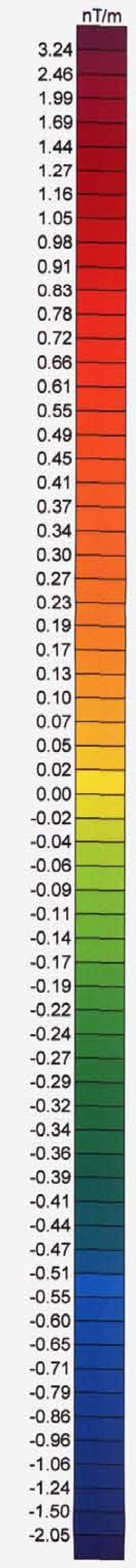
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
29,055

FUGRO AIRBORNE SURVEYS

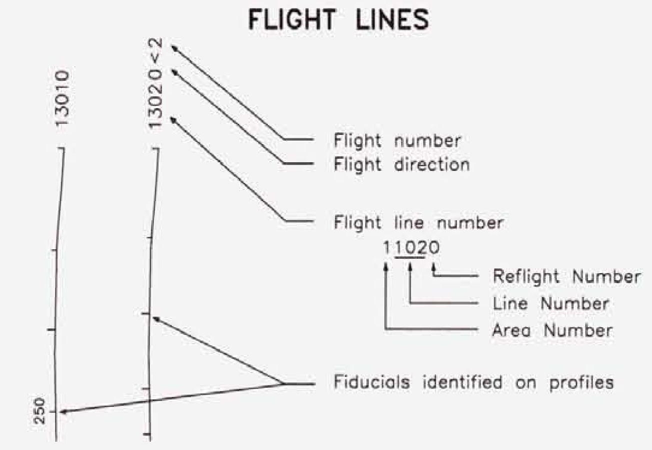


TECHNICAL SUMMARY

Navigation . . . . Differentially-corrected GPS
Data reduction grid interval . . . . 80 metres
Terrain clearance . . . . Helicopter 60 m
Magnetometer 60 m
Data sampling interval . . . . 0.1 second
Magnetometer / sensitivity . . . . . Cesium / 0.01 nT



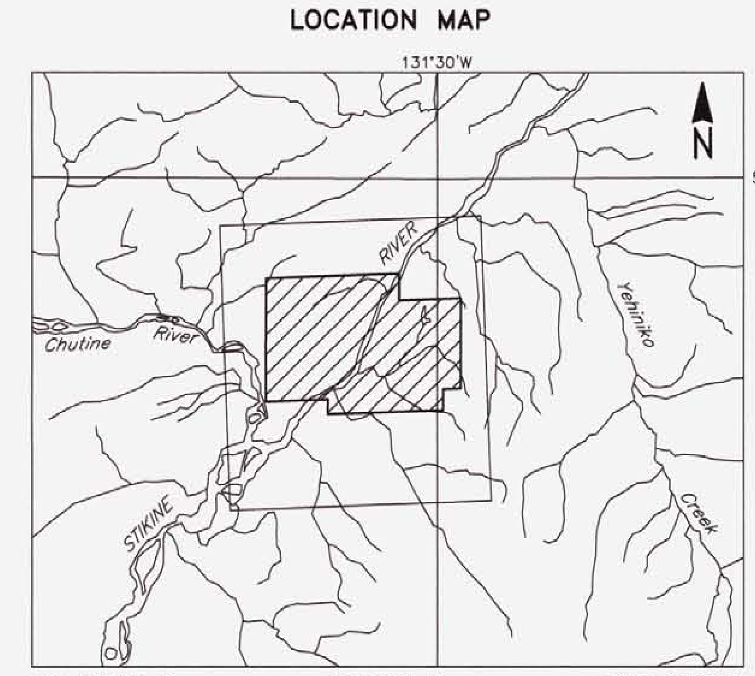
FLIGHT LINES



CALCULATED VERTICAL GRADIENT CONTOURS

. . . . 2.5 nT/metre
. . . . 0.5 nT/metre
. . . . 0.1 nT/metre
. . . . 0.05 nT/metre

LOCATION MAP



NTS: 104G/11,12 UTM ZONE: 9 NAD83 SCALE: 1:250,000

GARIBALDI RESOURCES LTD.

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CALCULATED VERTICAL MAGNETIC GRADIENT

FUGRO MAG SURVEY	NTS: 104G/11,12	GEOPHYSICIST:
DATE: DECEMBER, 2006	JOB: 06081	SHEET: 1

Fugro Airborne Surveys

0 1 2 Km
0 1 Mi
Scale 1:20 000

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
29,055

FUGRO AIRBORNE SURVEYS


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Garibaldi Resources Corp.
Large Format Detail Topographic
Plan (5m contour intervals)
South Block - Figure No. LF-S


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Large Format Detail Topographic
Plan (5m contour intervals)
North Block - Figure No. LF-N
29,055