BC Geological Survey Assessment Report 33991

# GEOPHYSICAL REPORT ON THE PRINCE GEORGE PORPHYRY PROJECT LYNX PROPERTY

Lynx Property – Omenica Mining Division – British Columbia

Tenure # 841107, 742942, 741962 NTS Sheet – 093K MTO Event Number - 5434711 UTM NAD 83 – Zone 10 – 429 155 E, 6 077 890 N (Centre)

XSTRATA CANADA CORPORATION

By
Troy Miller and Gordon Maxwell

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### 1.0 INTRODUCTION

The Lynx property is one of several properties in the Fort St James area belonging to Xstrata Copper Canada's (XCC) Prince George Porphyry Project focused on the discovery of a large Cu-Au porphyry deposit in the Quesnel Terrane of central British Columbia. The Lynx property was one of five properties that were part of an option agreement between XCC and Uwe Schmidt. This report summarizes the ground based magnetic geophysical survey program completed between February 13<sup>th</sup> and 16<sup>th</sup>, 2013 which consisted of 12.3 line kilometers over 10 lines on the Lynx property.

### 2.0 REGIONAL GEOLOGY

The Quesnel Terrane is an accreted arc Terrane lining the eastern margin of the Intermontane Belt at its tectonic boundary with the Omineca Belt. The Quesnel Terrane formed in an island arc setting outboard to the ancestral North American continental margin in the Early Jurassic (Panteleyev *et al.*, 1996). Early Mesozoic, alkaline and calc-alkaline island arc magmatism generated many porphyry copper deposits including: Mount Milligan, Mouse Mountain, Mont Polley, Copper Mountain, etc.

The Quesnel Terrane near Prince George is fault-bounded to the east by Late Paleozoic meta-sedimentary (volcanic and plutonic) oceanic rocks of the Slide Mountain Accreted Complex and the Cache Creek Accreted Complex to the west (forearc). This is most likely due to the southern extension of the Pinchi fault system (Bailey, 1988). In the Prince George region, the Quesnel Terrane is composed of Takla Group and/or Nicola group Mesozoic strata consisting of fine clastic sediments overlain by a thick sequence of Late Triassic alkaline volcanic and volcaniclastic rocks. Alkaline and calc-alkaline intrusions are sourced from magmatism in the Early Jurassic, Middle Jurassic and Mid-Cretaceous.

### 3.0 PROPERTY DESCRIPTION AND LOCATION

Lynx property is located in central British Columbia, approximately 47 kilometers north of the town of Fort St James. The property covers an area of 1358.8 hectares within the Omineca Mining Division. It is centered at 54° 50′ 39″ north latitude and 124° 6′ 11″ west longitude within the limits of NTS sheets 93K/16.

Lynx consists of three contiguous mineral tenures. The Lynx property is part of an option agreement between Uwe Schmidt and Xstrata Copper. At this stage in the option agreement, the tenures are being operated by Xstrata and have been transferred into Xstrata's name in trust of the agreement. A regional property location map and a claim tenure map are provided below in Figures 2 and 3. Table 1 lists the mineral tenures included in the Lynx property.

Tenure		Tenure Sub				
Number	Claim Name	Tenure Type	Type	Map Number	Issue Date	Area (ha)
741962	LYNX2	Mineral	Claim	093K	2010/apr/06	465.5625
742942		Mineral	Claim	093K	2010/apr/07	447.0359
841107	LYNX3	Mineral	Claim	093K	2010/dec/17	447.0239

Table 1 - Mineral tenure details for Lynx property

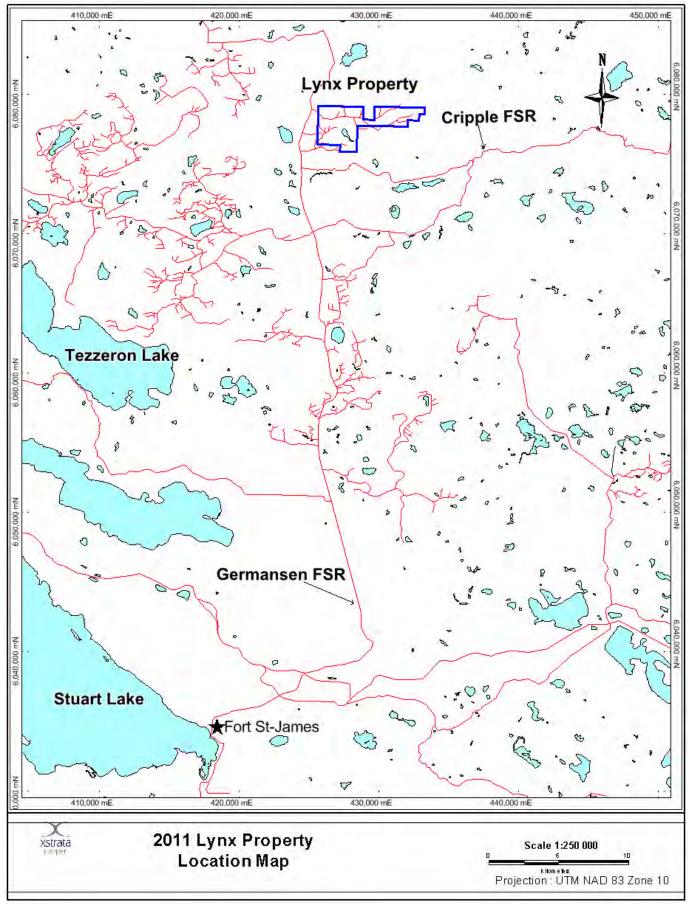


Figure 1 - Regional location and access of Lynx property

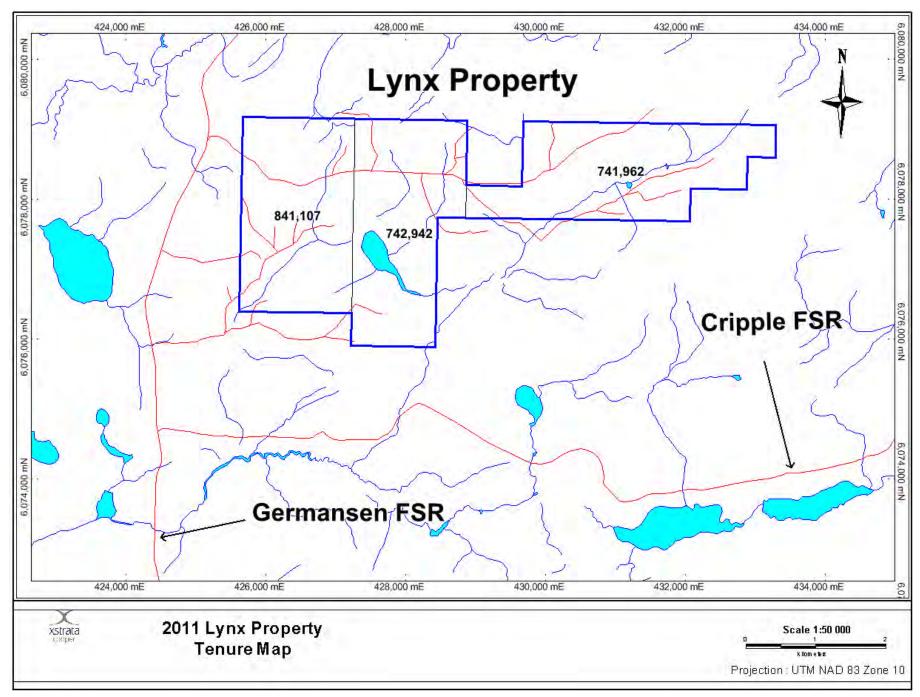


Figure 2 - Mineral tenure location for Lynx property

### 4.0 HISTORY

Historical work was completed on the Lynx property in 1992 by Rio Algom Exploration Inc. This work includes six IP lines that outlined a broad anomaly and was followed up with four drill holes totaling approximately 384 meters. Refer to Table 4.1 for a summary of historical work. Regional geochemical surveys (rock, soil, stream, lake, etc) and geophysical surveys have also been carried out in this area as part of the QuestBC geosciences initiative.

Owner	Operator	Year	Work Type	Region	N.T.S.	Work Details
Rio Algom Exploration Inc.	Rio Algom Exploration Inc.	11 (17/2)	Geophysical Survey and Diamond Drilling	East Lynx		A total of 6 IP lines were completed defining a broad chargeability anomaly. Four drill holes totaling 383.7m targeting this anomaly were drilled.

Table 2 - Historic work completed on Lynx property

### 5.0 Ground Magnetic Survey

The ground based magnetic survey was conducted by Peter E. Walcott & Associates and consisted of 10 lines for approximately 12.3 line kilometers. The targeted of the survey was to further define the nature and any smaller scale targets in the magnetic intrusive unit identified in a Figure 3.

The location of the lines, survey specifications, data processing, discussion and display of the results are located in completed is detailed in the report from Peter E. Walcott & Associates located in Appendix A.

### **6.0 STATEMENT OF COSTS**

A total cost of \$ 8 690.22 was incurred to conducted and report this program. Details of expenditures are in Appendix

### **B. 7.0 RECOMMENDATIONS AND CONCLUSIONS**

The survey identified a central relative magnetic high zone approximately 400m by 400 m within the anomaly targeted magnetic anomaly. Due to the size of the anomaly the follow up work recommended is to map the area that coincides with the anomaly and to complete a compilation of interpretation of historical data relevant to the Lynx property.

Due to the size of the anomaly it no longer falls within the scope of the XCC exploration program and no further work is planned.

### 8.0 REFERENCES

Bailey, D.G (1988): Geology of the central Quesnel belt, Swift River, south-Central British Columbia (93B/16, 93A/12, 93G/1); in Geological Fieldwork 2005, BC Ministry of Energy, Mines and Petroleum Resources, Paper 1989-1, pages 167-172.

Panteleyev, A., Bailey, D.G., Bloodgood, M.A. and Hancock, K.D. (1996): Geology and mineral deposits of the Quesnel River Horsefly map area, central Quesnel Trough, British Columbia; *BC Ministry of Energy, Mines and Petroleum Resources*, Bulletin 97, 156 pages.

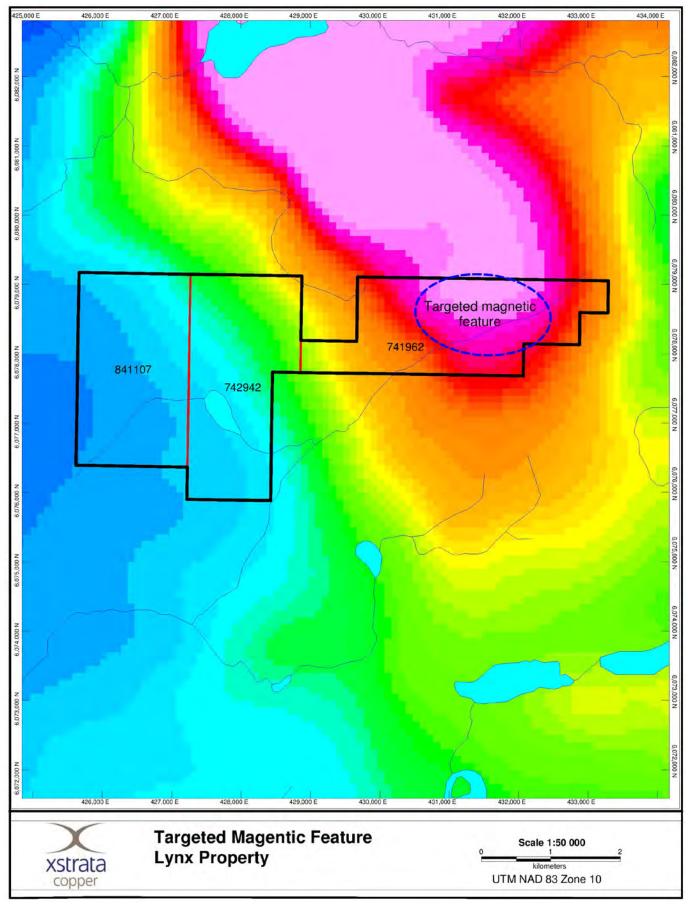


Figure 3 - Target of Lynx property ground magnetic survey

# 9.0 STATEMENT OF QUALIFICATIONS

- I, Gordon Maxwell, of the town of Timmins, Ontario do certify,
  - 1. I am a geologist residing at 118 Bergeron Court, Timmins, Ontario
  - 2. I graduated from the University of Manitoba in 1982 with BSc Hon. Geology
  - 3. I am a professional geologist, registered (0263) in good standing with the Association of Professional Geoscientists of Ontario (APGO)
  - 4. I have been practicing my profession since 1982 and I currently hold the position of Exploration Manager with Xstrata Canada Corporation.

Dated at Timmins, ON May 8<sup>th</sup>, 2013

Gordon Maxwell Exploration Manager Xstrata Canada Corporation



# AN ASSESSMENT REPORT

# $\underline{\mathbf{ON}}$

# **GROUND MAGNETIC SURVEYING**

# LYNX PROPERTY FORT ST. JAMES AREA, BRITISH COLUMBIA

OMINECA M.D. 54° 51'N, 124° 04'W NTS 93 K/16

**Claims Surveyed: 741962** 

**Survey Dates:** February 13<sup>th</sup> – 16<sup>th</sup>, 2013

## **FOR**

# XSTRATA COPPER CANADA DIVISION Timmins, Ontario

BY

PETER E. WALCOTT & ASSOCIATES LIMITED Coquitlam, British Columbia

**APRIL 2013** 

APPENDIX A
OF MAIN ASSESSMENT REPORT BY XSTRATA

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ACCOMPANYING MAPS		
Claim and Line Location Map	Scale	1:10,000
Line Location Map with Airborne Magnetics	Scale	1:10,000
Contour of Total Field Intensity	Scale	1: 2,000

# **INTRODUCTION.**

Between February 13<sup>th</sup> and 16<sup>th</sup>, 2013, Peter E. Walcott & Associates Limited undertook 12.3 kilometres of magnetic surveying over part of Lynx Property, located in the Fort St. James area of British Columbia, for Xstrata Copper Canada.

The surveying was carried out over 10 lines, orientated in a northeasterly direction, proximal to the Lynx showing.

Measurements were made a one second interval utilizing GSM-19W GPS walking magnetometers.

# **PROPERTY LOCATION AND ACCESS**

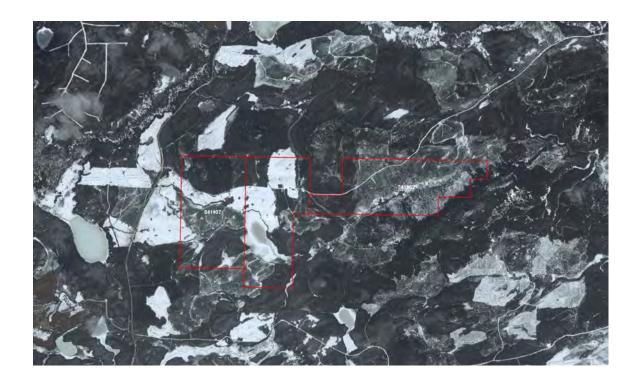
The Lynx property is located some 57 kilometres north of the community of Ft. St. James, British Columbia.

Access to the property was obtained via the Germansen Road from Ft. St James, and then via the Germansen-Cripple FSR.



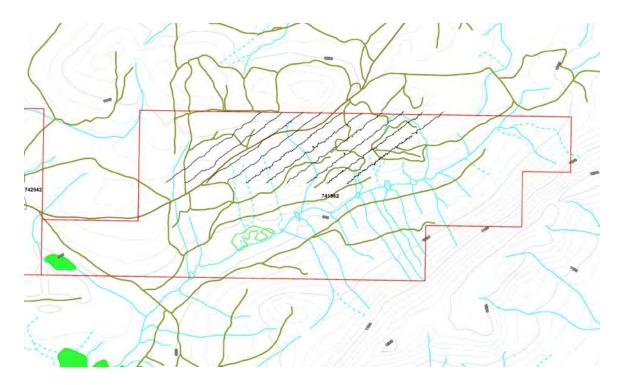
Property Location Map

# PROPERTY LOCATION AND ACCESS con't



Claim Location Map

# PROPERTY LOCATION AND ACCESS con't



Claim and Line Location Map

# **PURPOSE.**

The purpose of the survey was to fulfill assessment requirements on the property as well as to detail a small magnetic feature on the southwestern flank of a broad magnetic high, proximal to the Lynx showing.

# **SURVEY SPECIFICATIONS.**

## The Magnetic Survey.

The magnetic survey was conducted using a GSM-19W proton precession walking magnetometer equipped with GPS manufactured by Gem Systems of Markham, Ontario, Canada. The system consisted of a rover and base magnetometers.

## Field Procedure

A base station was established and data recorded daily at 5 second intervals, in order to monitor variations in the magnetic field over the course of the day.

The lines were established using a handheld Garmin GPS, and subsequently surveyed using a GSM-19W GPS equipped magnetometer. Reading were synchronized to the onboard GPS, and obtained at 1 second intervals.

## Data Processing.

The field data was subsequently downloaded from the respective instruments, utilizing GemLink. Rover data was then post processed using the base data in order to account for variations within the magnetic field during the course of the day. The data was subsequently loaded into to Geosoft, for additional processing and presentation.

The data is presented in plan map form of "Contours of Total Magnetic Intensity" at a scale of 1:2,000.

# **DISCUSSION OF RESULTS.**

The 2013 ground magnetic survey conducted over portions of Xstrata Copper's Lynx property identified a plug like magnetic anomaly some 400 meters in diameter centred at 430750E, 6078800N.

This feature has an elevated magnetic response of some 1000 nT at its centre relative the surrounding magnetic relief.

Given the limited coverage of the magnetic survey meaningful interpretation of the data is severely restricted at this time..

# **SUMMARY, CONCLUSIONS & RECOMMENDATIONS.**

Between February 13<sup>th</sup> and 16<sup>th</sup>, 2013, Peter E. Walcott & Associates Limited conducted ground magnetic surveying on the Lynx property, located in the Ft. St. James area of British Columbia, and held by Xstrata Copper Canada.

Some 12.3 kilometres of surveying was carried out over 10 northeast orientated lines.

The survey identified a discrete magnetic feature some 400 metres in diameter in the western portion of the survey grid.

Given the limited area covered by the magnetic survey, a detailed compilation of historic work proximal to the Lynx showing and magnetic anomaly should be undertaken in order to evaluate whether additional work should be undertaken to further examine the aforementioned feature.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LTD.

Alexander Walcott Geophysicist Peter E. Walcott, P.Eng. Geophysicist

Vancouver, B.C. April 2013

# **APPENDIX I**

# **COST OF SURVEY.**

Peter E. Walcott & Associates Limited undertook the survey programme on a daily basis providing two geophysicists, magnetometers, a GPS unit, and 4x4 trucks at a daily rate of \$1,600.00.

Accommodation and fuel costs were \$1,256.71, while mobilization, split with another small project in the area, was billed at \$2,100.00.

Reporting costs of \$700.00 were incurred so that the total cost of services provided was \$7,256.71.

# PERSONNEL EMPLOYED ON SURVEY.

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	111-17 Fawcett Rd. Coquitlam, B.C. V3K 6V2	April 4, 2013
A. Walcott	"	"	April 4, 2013
M. Welz	"	11	Feb. 13th-16th, 2013
P. Young	"	"	"

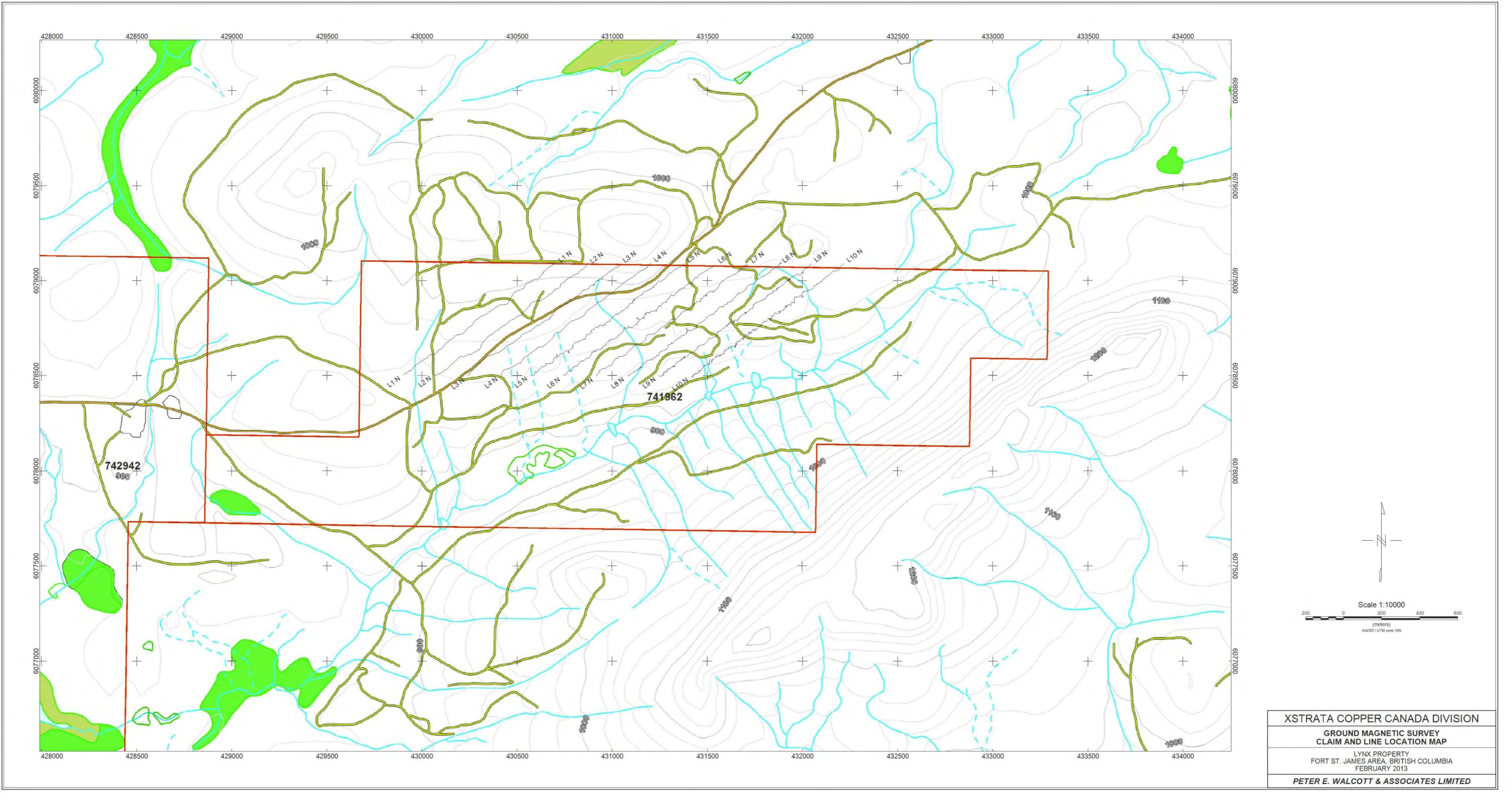
# **CERTIFICATION.**

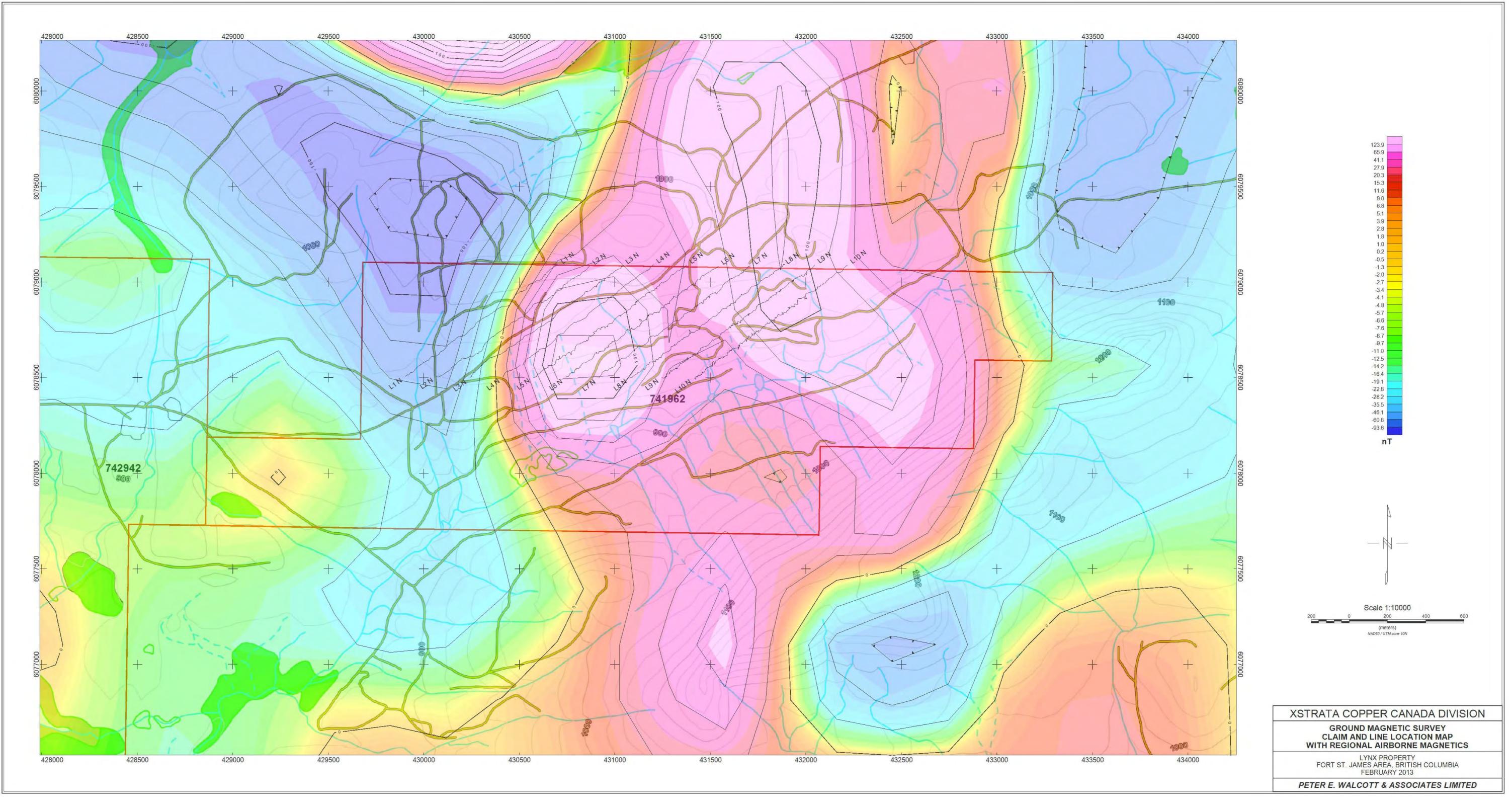
I, Peter E. Walcott, of 605 Rutland Court, Coquitlam, British Columbia, hereby certify that:

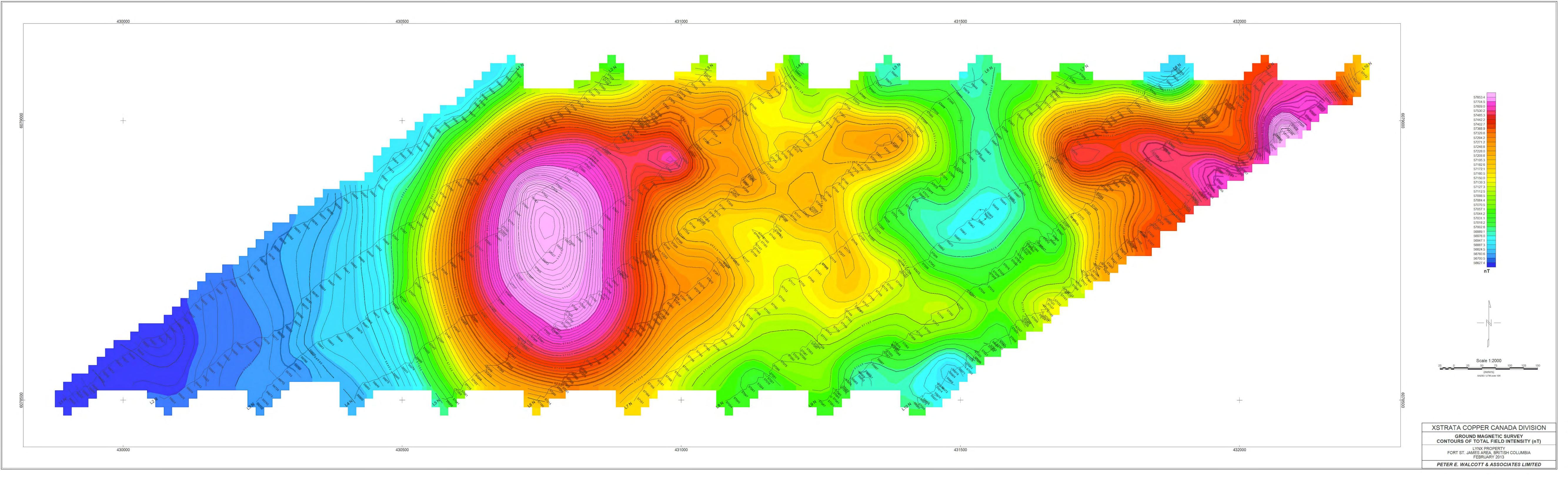
- 1. I am a graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.
- 2. I have been practicing my profession for the last fifty years.
- 3. I am a member of the Association of Professional Engineers of British Columbia and Ontario.
- 4. I hold no interest, direct or indirect, in Xstrata Copper Canada, nor do I expect to receive any.

Peter E.Walcott, P.Eng.

Vancouver, B.C. April 2013









Statement of Expenditures					
Geophysical Survey					
			<u>Cost</u>	<u>Total</u>	
Peter E. Walcott and Associates			\$7,256.71		
				\$7,256.71	
Report Preparation					
	<u>Days</u>	<u>Rate</u>	<u>Cost</u>	<u>Total</u>	
T. Miller	1	\$300.00	\$300.00		
				\$300.00	
Office Management Overhead					
		<u>Rate</u>	<u>Cost</u>	<u>Total</u>	
Prince George Field Office &					
Timmins Head Office		15.00%	\$1,133.51		
				\$1,133.51	
Grand Total				\$8,690.22	