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# TECHNICAL REPORT FOR WS CLAIMS

# TARGET EVALUATION PROGRAM CARMACKS AREA YUKON

YMIP # 09-163

**Whitehorse Mining District** 

Report for Period of Work: July 10<sup>th</sup> – September 18<sup>th</sup> 2009

Location:

1. 31 km NNW of Carmacks, Yukon

2. NTS Map Area 115 I-07

3. Easting: 416 500 Northing: 6 912 000

By:

**BCGOLD CORP** 

Suite 1400, 625 Howe Street

Vancouver, BC

V6C 2T6 Gary Sidhu

March 16<sup>th</sup>, 2010



### YUKON MINING INCENTIVES PROGRAM (YMIP)

### **FINAL SUBMISSION FORM**

### Submit completed form by March 31st to:

Yukon Mining Incentives Program	YMIP #09	YMIP #09-163			
Energy, Mines and Resources					
Government of the Yukon					
	- 300 Main Street PROJECT NAME: _WS				
Box 2703 (K102), Whitehorse, Yukon, Y1A 2C6					
E-mail: <u>vmip@gov.yk.ca</u>					
NAME AND ADDRESS	Please indicate an	y changes or omissions			
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E-mail: Correct e-n	nail if it has changed:				
	NICAL REPORT CHE	CKLIST			
<ul> <li>Please check ✓ appropriate section.</li> </ul>					
• MUST be completed and submitted with your	final report.				
• Ensure all required information is attached to prevent	delays in processing your c	laim			
INFORMATION	INCLUDED	NOT APPLICABLE			
1. Description/implementation of work	X	NOT ATTEICABLE			
2. Location map(s) of completed work	^				
3. Colored maps at adequate scale showing	·				
- Geology	x				
- Geophysics	x	·			
- Geochemistry		x			
4. Results		<del></del>			
- Drill core assays		x			
- Geochemistry data		x			
- Geophysical data	x	<del></del>			
5. Drill collar location map(s)		x			
6. Drill hole sections		x			
7. Typewritten drill logs		x			
8. Longitudinal Section(s)		x			
9. Recommendations	x				
10. Future Plans	<del></del>				
11. Detailed list of project expenditures	<del> </del>				
12. Copies of receipts					
13. Final submission form signed and dated	x				
14. Hardcopy of report with maps and data	x				
15. Electronic version of report, etc in <b>PDF</b> format	X				

### Access to Information and Protection of Privacy Act

The information requested on this form is collected under the authority of and used for the purpose of administering the Yukon Mining Incentives Program. Questions about the collection and use of this information can be directed to the Mineral Development Geologist, Department of Energy, Mines and Resources, Yukon Government, Box 2703 (K102), Whitehorse, Yukon Territory, Y1A 2C6 (867) 456-3828.

	epartment of Energy, Mines and Resources may visly submitted reports, interim claims and in the Southeat;						
1.	I am the person, or the representative of the company or partnership, named in the Application for Funding and in the Contribution Agreement under the Yukon Mining Incentives Program.						
2.	I am a person who is nineteen years of age or older, and I have complied with all the requirements of the said program.						
<b>4</b> .	I hereby apply for the final payment of a contribution (YMIP) and declare the information contained we summary Report to be true and accurate.	ution unde vithin the S	r the Yuk ummary	on Mining l or Technic	Incentives P al Report an	rogram d the Financia	
_	ure of Applicant	Da	te _Ma	rch 18, 200	9	_	
Name	(print) Brian Fowler						
admini 1. Hav	pinions are requested to help evaluate the formal of stration and delivery and to determine if any change be you previously applied for financial assistance the	ges or impi	rovement	s are indica	ted.	n with regard t	
	YES, proceed to 'Question 2'. NO, what was your reason for not applying:	n Desire to	, maintai	n confident	iality		
0. 11 1		<ul> <li>□ Desire to maintain confidentiality</li> <li>□ Moral objection to YMIP</li> <li>□ Thought it was a hardrock program</li> <li>□ Not aware of YMIP</li> <li>□ To much work to apply</li> <li>□ Other</li> </ul>					
			-				
2. How	important was YMIP funding to your decision to	undertake	the prop Strongly Agree	osed project Somewhat Agree	t'? Somewhat Disagree	Strongly Disagree	
a. Without YMIP the project would not have gone ahead.					_	_ 	
b. The project would have gone ahead, but on a reduced scale.					ΧÞ		
c. Th	e project would have gone ahead with or without	YMIP.				0	
Com	ments:						
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	YMIP help to lever additional funding and/or secu	_					
IfY	ES, please provide details:						
	arding the YMIP application/approval process, ple owing statements:	ease indica	te your a	greement or	disagreeme	nt with the	
			Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	
	a. Written program information and forms were	clear.	Xi			Disagree	
	b. Questions and inquiries were answered promp		X				
	c. Applications were fairly and consistently hand		¥	_	_	_	
	d. Project evaluations were done in a timely mar	nner	X	0	Ō		
	e. Interim claims and payments were processed	on time		<b>X</b> 0		0	
	ou have any suggestions for improvements or chan ments, please include them below.	iges to YM	IP or any	other addi	tional		
		<u>.</u>					

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### 1.0 SUMMARY

The WS property, comprised of 208 contiguous claims, located approximately adjacent to the Carmacks Copper deposit in the Whitehorse Mining District of central Yukon. The claims were originally staked by Shawn Ryan of Dawson City, Yukon and are currently optioned to BCGOLD Corporation ("BCG"). The history of exploration in the area stretches back to the turn of the century when copper mineralization was first discovered at Williams Creek some 40 km south of the Minto copper-gold deposit. Foliated and non-foliated granitic rocks of the Early Jurassic Aishihik Suite underlie most of the property although rock exposures are poor comprising less than 5% of the area. Work completed in 2009 included mapping, prospecting, 17.3 km of line cutting, and a pole dipole geophysical induced polarization (IP) survey.

#### 2.0 INTRODUCTION AND TERMS OF REFERENCE

The WS Claim group is owned 100 % by Shawn Ryan of Dawson City Yukon subject to an option agreement with BCG whereby BCG can earn a 100% interest in the WS Claims as part of a larger 845 claims located in the Carmacks copper-gold belt which hosts the Minto and Williams Creek deposits.

The purpose of this report is to summarize the work completed during the months of July to September which consisted of mapping, prospecting, 17.3 km of line cutting, and a pole dipole geophysical induced polarization (IP) survey.

### 3.0 RELIANCE ON OTHER EXPERTS

This report is based upon the results of fieldwork partially supervised by the author, publicly-available assessment reports, and certain private reports prepared for and provided by BCG. There is no reason to believe that any of this information is incorrect.

The author has relied on information provided by the Yukon Mining Recorder to describe the mineral tenure status of the property and believes, to the best of his knowledge, that this information is correct.

This report is based upon the results of geophysical fieldwork supervised by Andre Lebel of Aurora Geosciences Ltd. ("Aurora") and a geophysical summary report by Frank Dziuba of Aurora for BCGold. The line cutting was done by Coureur Des Bois (CDB)and sample data compilation and plotting was completed by Gary Lustig, M.Sc., P. Geo. of G. N. Lustig Consulting Ltd.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

The WS mineral claims are located 31 kilometres NW of Carmacks and 3 km ESE of the Carmacks Copper deposit. The WS claim adjoin the W and WCC claims, which are owned by Carmacks Copper Corp on the southern end of their land holdings. (Figs. 1, 2). The property falls within the Whitehorse Mining District on NTS map sheets 115I/07 and is centred at an easting of 416 500 and a northing of 6 912 000. The claims cover favourable geology and regional airborne magnetic anomalies and regional stream sediment anomalies that are

prospective for Minto-Williams Creek style copper-gold mineralization. The mineral claims are registered to Shawn Ryan of Dawson City, Yukon and are under an option agreement to BCG.

In accordance with the Yukon Quartz Mining Act, yearly extensions to the expiry dates of quartz claims are dependent upon conducting \$100 of work per claim or paying the equivalent cash in lieu of work. Work must be filed in the year the work was completed. Excess work can be used to extend expiry dates up to maximum of four years. Assessment costs can be applied to adjoining claims through filing grouping certificates. Filing a statement of work and costs and submission of an assessment report to the Whitehorse Mining Recorder verifying completion of the work, are also required no later than six months after the anniversary date of the claim.

The claims are located within the Traditional Territory of the Little Salmon Carmacks First Nation, which has a land claim settlement Agreement under the Yukon Umbrella Final Agreement.

# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the property is by helicopter from Carmacks. Low precipitation and a wide temperature range characterize the climate. Winters are cold, and temperatures of -30° C to -40° C are common. Summers are moderately cool to hot, with daily highs of 15° C to 30° C. The Town of Carmacks is the closest centre for obtaining groceries, fuel, accommodation and some limited rental and contracted exploration services. Trans North Helicopters maintains a summer helicopter base at Carmacks

### 6.0 HISTORY

The area covered by the WS claims has seen some prior reconnaissance exploration work as part of the property work around the Williams Creek deposit primarily by Hudson Bay Exploration. There are three Minfile occurrences within the WS claim bounds; Merrice (115I 009), Bishi (115I 006) and Taslar (115I 007). All three were staked in the early 1970's on aeromagnetic anomalies.

In 2007 BCGold completed an airborne magnetic and radiometric survey was flown over the entire belt claims.

A total of 1618 MMI<sup>TM</sup> soil samples and 5 rock samples were collected by BCGold during the 2007 field season on the WS Claims

In 2007 BCGold Corp. collected 614 MMI<sup>™</sup> soil samples and 16 rock samples on the ICE claims. Four diamond drill holes totalling 859.23m. Drilling on ICE 07-03 and ICE 07-04 intersected discreet zones of copper mineralization that returned assays of 1.2 % Cu over 1.69 m in Ice 07-02 and 0.20 m of 1.41% Cu in Ice 07-04 (Doherty, 2008).

In 2008 BCGold Corp. conducted two geophysical surveys on the WS property. A 14 km winter IP survey was conducted on the western side of the property along with a 22.1 km IP survey in the summer. A total of 465 MMI<sup>TM</sup> samples were collected by Ryanwood crews and a 1,300 metre diamond drill program was

undertaken. The MMI<sup>TM</sup> resulted in multiple new copper and gold anomalies coincident with IP chargeability zones. Six diamond drill holes were all located in the north western part of the property and copper sulphide mineralization was intersected in 2 holes.

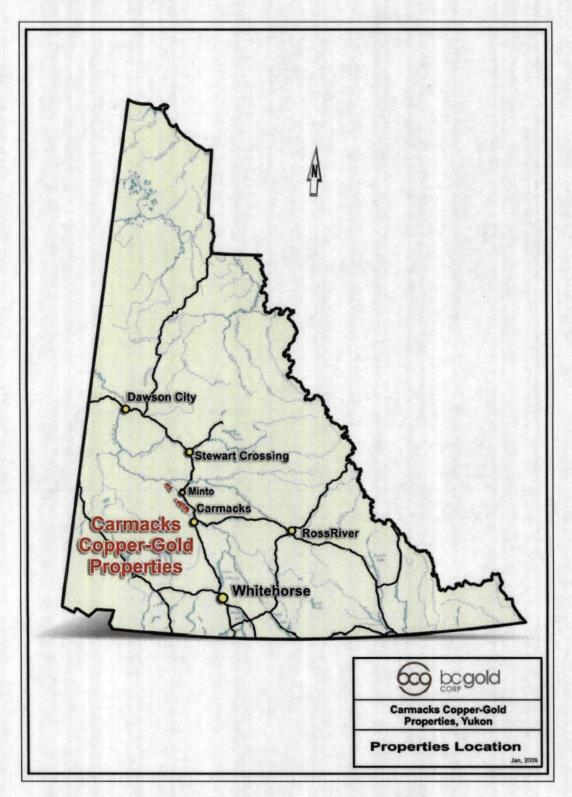


Figure 1: Carmacks area location map.

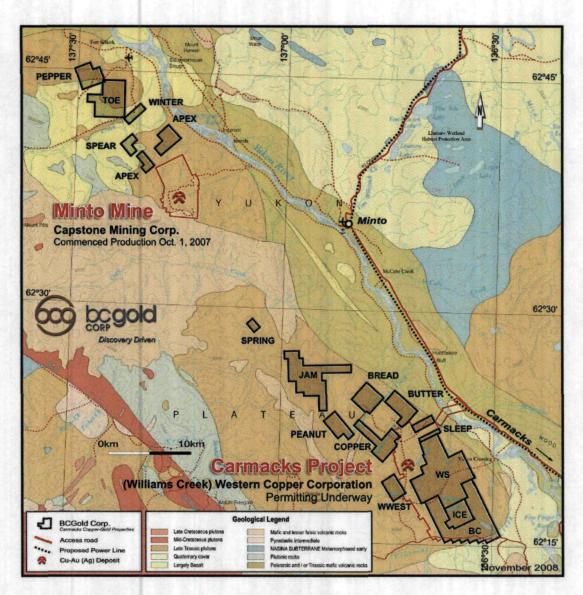


Figure 2: Carmacks regional geology and claim location map.

### 7.0 GEOLOGICAL SETTING

### 7.1 Regional Geology

The WS claims are located approximately 4 kilometres South of the Williams Creek (Carmacks Copper Corp) copper-gold deposits. This area of the Yukon is bounded by the Stikinia Terrane rocks to the east, Yukon Tanana Terrane rocks to the north and the Coast Plutonic Complex rocks to the west. The Minto and Williams Creek copper-gold deposits are hosted within foliated biotite rich granodiorite and granitic rocks of the early Jurassic Aishihik Suite.

### 7.2 Property Geology

The WS claims are located south of the Williams Creek deposit and north of the Freegold Road. Rocks underlying the property are primarily foliated to nonfoliated hornblende-biotite granodiorite with aplite dykes. Traces of malachite were noted in a few locations. Magnetite and 1-2% epidote were noted in a number of locations. Outcrop is scarce (< 5%) and normally confined to rounded ridge tops and stream cuts.

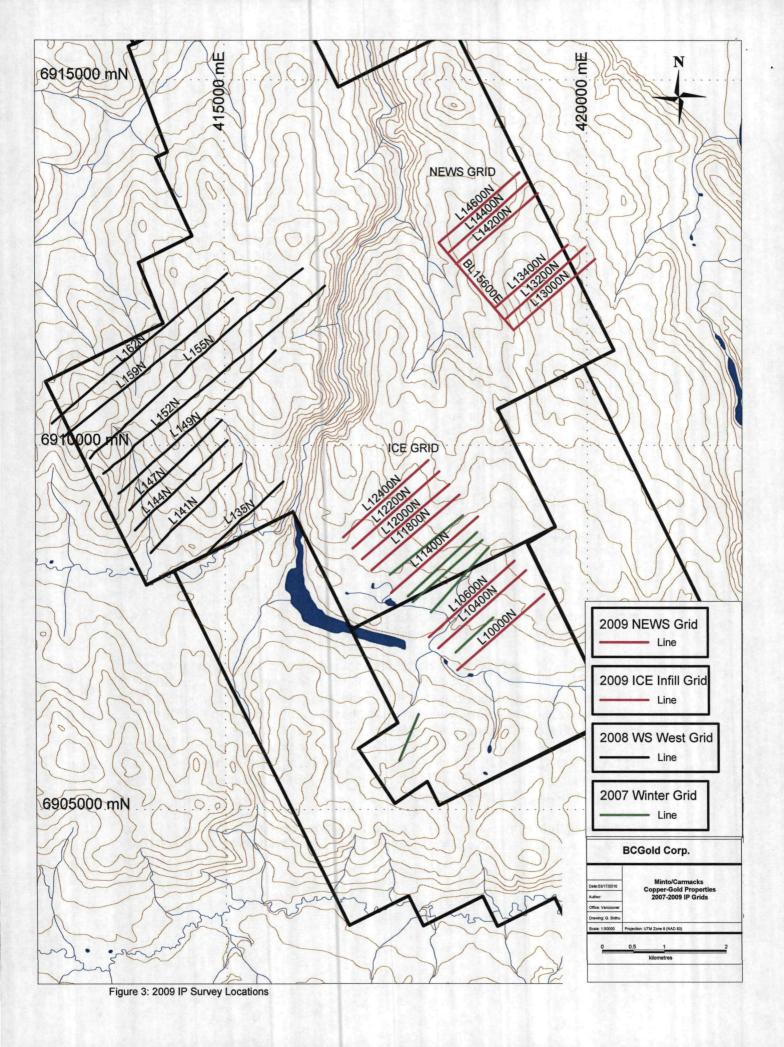
### 8.0 EXPLORATION PROGRAMS

### 8.1 Induced Polarization (IP) Survey

They IP survey was conducted by Aurora Geoscience during August 15<sup>th</sup> – September 11<sup>th</sup>, 2009 under the supervision of crew chief Andre Lebel. Over 28 days 17.3 km of line was surveyed in the Southern and Northeast part of the WS property (Fig. 3). A modified pole-dipole array was used with 50m dipole spacing on all lines. Handheld GPS points at line ends and every 200m minimum averaged 60s or until estimated accuracy < 10m, whichever was longer. All coordinates are in NAD83 UTM Zone 8N.

Eleven survey lines oriented in a northeast-southwest direction were run over the property. The five lines in the Southern part of the property were positioned to fill in lines between covered by previous IP surveys and are situated as groups of lines spaced 200m to 400m apart. Three additional lines were run on the ICE claims which are contiguous with the WS claims. The eight survey lines completed in the Southern part of the property over the WS and ICE claims will be discussed as one survey and the six survey lines completed in the Northeastern part of the WS claims will be discussed separately due to the different measured chargeability values.

The lines in the Northeast part of the property were surveyed based on anomalous copper and gold MMI<sup>TM</sup> sampling from the previous year.



### 9.0 RESULTS AND CONCLUSIONS

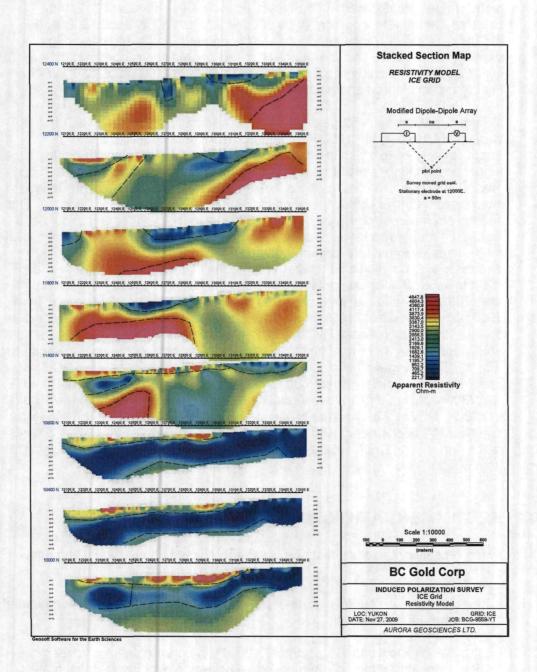
The survey done in Southern part of the property identifies multiple resistivity highs, values greater than 4000 ohm-m, on the northern parts of L12400N, L12200N, and on the southern parts of L11400N, L11800N and L12000N (Fig. 4). These resistivity highs appear to be striking north-south and occurring at a depth of 50 to 100m. The chargeability values on this grid range from 0-14 mV/V with a background value of 3.5mV/V. Chargeability anomalies of 10.0mV/V or higher are considered anomalous (Dzuibia, 2009).

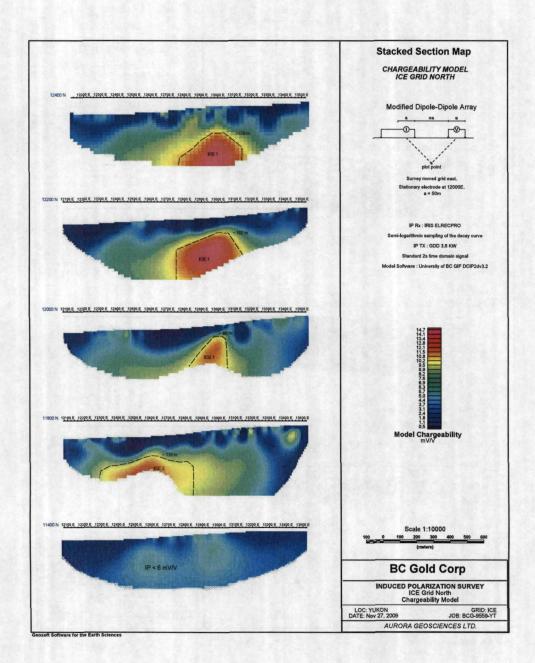
Figure 5 outlines two chargeability zones. The first approximately 300m wide, starting at L12400N to L12000N, centered near station 13000E and approximately 80 to 150m in depth. This anomaly is coincident with a total magnetic field high, elevated copper MMI, open to the north where foliated granodiorite is interpreted to occur. The total field magnetic high is however, interpreted as being Upper Cretaceous Carmacks Group volcanics (Fig. 6). The second chargeable zone (Fig. 5) on L11800N is much broader and occurs at a depth of 130m, however has poorer resolution of the anomaly. This chargeability high occurs proximal to a larger MMI anomaly and a total field magnetic high The resistivity model in Northeastern part of the claims (Fig. 7) shows a sharp north to south striking contact that separates material with resistivities of less than 1000 ohm-m to the southeast from materials with resistivities greater than 1000 ohm-m (Dzuibia, 2009). In the chargeability model (Fig. 8) a similar feature arises with lower chargeability zones to the southeast and higher values in the northwest. This feature may be caused by a vertical gradient magnetic lineament (Fig. 6). The chargeability model also outlines three different anomalies all occurring approximately around 80 to 120m and identified as NEWS 1, 2 and 3. NEWS 1 is proximal to a total magnetic field high and elevated copper MMI on L14200N, NEWS 2 is proximal to elevated copper MMI and magnetic lineament and NEWS 3 is coincident with a total magnetic field high. NEWS 2 has IP values ranging from 8-14 mV/V where as NEWS 1 and 3 have lesser values ranging from 8-9.5 mV/V.

### 10.0 RECOMMENDATIONS

The following recommendations should be considered based on the recent and past exploration work:

- Further geophysical surveys north of L12400N in order to define the open ended IP chargeability anomaly
- ii) Further geophysical surveys south of L10000N in order to define the open ended IP chargeability anomaly and get some coverage over the MMI anomalies.
- iii) Infill the NEWS geophysical grid.
- iv) Top priority for drilling should be the coincident anomalies occurring near L12400N at station 12900E to test for economic mineralization to a minimum depth of 150m.





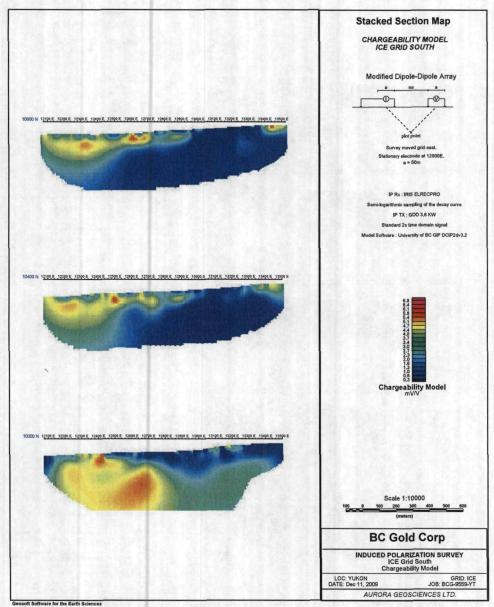
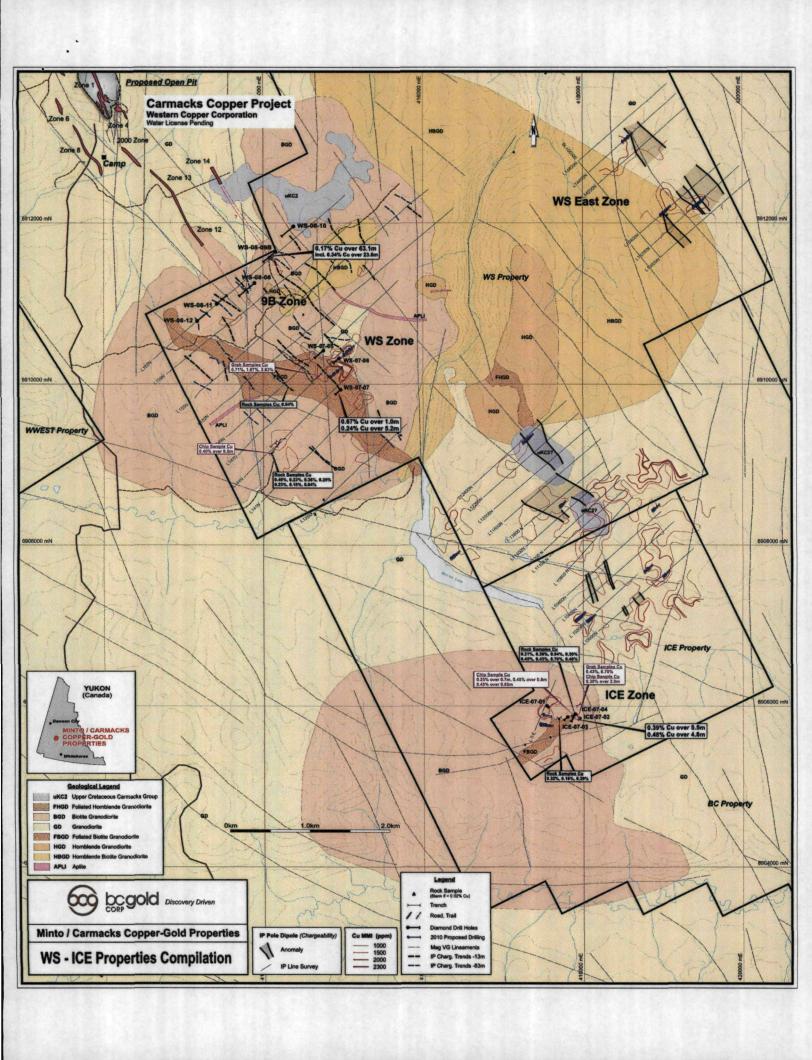


Figure 5: WS-ICE Chargeability Model



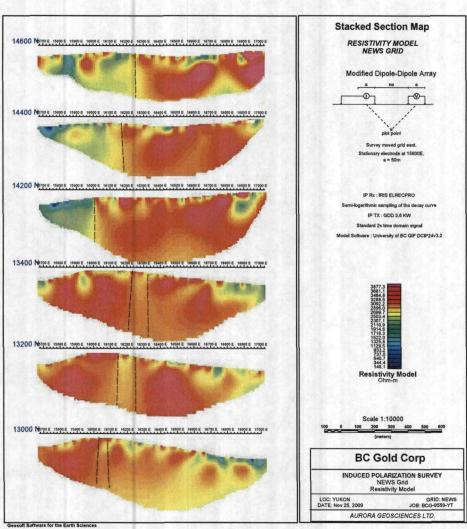


Figure 7: NEWS Resistivity Model

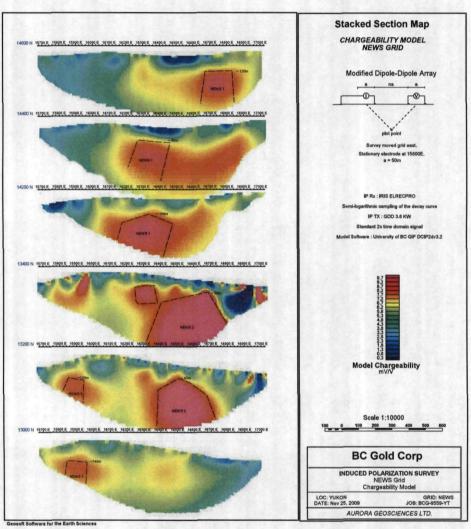


Figure 8: NEWS Chargeability Model

### 11.0 REFERENCE

 Dzuibia, Frank. 2009. Memorandum: Carmacks 2009 IP Surveys. December 15, 2009. Aurora Geosciences.