



ALS Canada Ltd.
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 www.alsglobal.com

To: COPPER NORTH
 1120 - 1095 W. PENDER STREET
 VANCOUVER BC V6E 2M6

Page: 1
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 7-JUL-2016
 Account: COPNOR

CERTIFICATE VA16095703

Project: CARMACKS COPPER

This report is for 4 Rock samples submitted to our lab in Whitehorse, YT, Canada on 16-JUN-2016.

The following have access to data associated with this certificate:

HARLAN MEADE	JACK MILTON
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SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	VARIABLE
Cu-AA62	Ore grade Cu - four acid / AAS	AAS
Cu-AA05	Cu (nonsulfide) - sulfuric	AAS
Au-AA23	Au 30g FA-AA finish	AAS

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS VA16095703

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-AA23 Au ppm	ME-ICP61 Ag ppm	ME-ICP61 Al %	ME-ICP61 As ppm	ME-ICP61 Ba ppm	ME-ICP61 Be ppm	ME-ICP61 Bi ppm	ME-ICP61 Ca %	ME-ICP61 Cd ppm	ME-ICP61 Co ppm	ME-ICP61 Cr ppm	ME-ICP61 Cu ppm	ME-ICP61 Fe %	ME-ICP61 Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
S045051		0.42	0.603	8.9	8.18	6	8140	1.3	5	5.04	0.5	31	45	>10000	11.30	20
S045052		2.22	0.089	3.4	8.98	5	1240	1.3	11	7.00	0.6	41	38	7020	8.97	20
S045053		1.78	0.802	6.9	8.38	5	6720	1.0	10	5.73	0.6	39	19	>10000	12.80	20
S045054		0.52	0.358	4.4	8.65	<5	3210	1.3	5	6.00	<0.5	29	40	7370	7.93	20

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Sample Description	Method Analyte Units LOR	ME-ICP61 K %	ME-ICP61 La ppm	ME-ICP61 Mg %	ME-ICP61 Mn ppm	ME-ICP61 Mo ppm	ME-ICP61 Na %	ME-ICP61 Ni ppm	ME-ICP61 P ppm	ME-ICP61 Pb ppm	ME-ICP61 S %	ME-ICP61 Sb ppm	ME-ICP61 Sc ppm	ME-ICP61 Sr ppm	ME-ICP61 Th ppm	ME-ICP61 Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
S045051		0.62	10	2.51	1450	1	3.31	37	1170	6	0.22	<5	26	1245	<20	0.43
S045052		0.80	10	3.18	1300	7	2.81	29	2290	4	0.03	5	47	694	<20	0.84
S045053		0.55	10	2.47	1240	3	3.08	35	1960	8	0.29	<5	26	900	<20	0.67
S045054		0.60	10	3.04	1205	6	3.40	24	1730	6	0.10	<5	32	1025	<20	0.68



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Sample Description	Method Analyte Units LOR	ME-ICP61 Ti ppm 10	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2	Cu-OG62 Cu % 0.001	Cu-AA62 Cu % 0.001	Cu-AA05 Cu % 0.001
S045051		<10	<10	315	<10	141	1.280	1.239	1.175
S045052		<10	<10	445	<10	86		0.684	0.611
S045053		<10	<10	438	<10	151	1.830	1.772	1.560
S045054		<10	<10	317	<10	100		0.716	0.616



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CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.		
	Au-AA23	CRU-31	CRU-QC
	Cu-AA62	Cu-OG62	LOG-21
	ME-OG62	PUL-31	PUL-QC
	WEI-21		
		Cu-AA05	
		ME-ICP61	
		SPL-21	