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To: VESTERHEIM GEOSCIENCE PLC
 120 GREENWOOD LANE
 DULUTH MN 55803
 USA

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 Plus Appendix Pages
 Finalized Date: 10-NOV-2018
 This copy reported on
 30-NOV-2018
 Account: VGPMEBKL

QC CERTIFICATE WH18246286

Project: WHDM BIG ALEX
 P.O. No.: wh1816
 This report is for 82 Sediment samples submitted to our lab in Whitehorse, YT, Canada on 1-OCT-2018.
 The following have access to data associated with this certificate:
 RODNEY HUNT PHIL LARSON

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	
ME-MS61	48 element four acid ICP-MS	
Au-ICP22	Au 50g FA ICP-AES finish	ICP-AES

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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QC CERTIFICATE OF ANALYSIS WH18246286

Sample Description	Method Analyte Units LOD	Au-ICP22	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
STANDARDS																
EMOG-17			67.6	4.72	599	100	1.82	5.72	1.88	20.6	45.8	757	55	7.13	8220	4.72
Target Range - Lower Bound			59.5	4.18	515	310	1.60	5.31	1.72	18.15	42.9	686	49	6.56	7750	4.42
Upper Bound			72.7	5.13	629	440	2.06	6.51	2.12	22.2	52.5	838	62	8.12	8910	5.42
G913-10	7.24															
G913-10	7.10															
Target Range - Lower Bound	6.66															
Upper Bound	7.52															
GAu-12a	0.019															
GAu-12a	0.019															
GAu-12a	0.020															
Target Range - Lower Bound	0.019															
Upper Bound	0.023															
JK-17	1.995															
Target Range - Lower Bound	1.875															
Upper Bound	2.12															
MRGeo08		4.47	7.85	36.2	1150	3.43	0.66	2.66	2.47	72.9	20.6	91	13.05	641	4.01	
MRGeo08		4.33	7.62	34.2	1090	3.43	0.65	2.71	2.37	74.4	19.9	95	12.90	628	4.05	
Target Range - Lower Bound		4.00	6.64	29.5	920	2.98	0.60	2.35	2.00	66.2	17.7	81	11.20	587	3.55	
Upper Bound		4.92	8.14	36.5	1270	3.76	0.76	2.90	2.48	81.0	21.9	102	13.80	675	4.37	
OREAS 503c	0.691															
Target Range - Lower Bound	0.655															
Upper Bound	0.741															
OREAS 905		0.91	7.89	37.4	2950	3.09	5.85	0.61	0.40	100.5	15.5	20	7.41	1570	4.16	
OREAS 905		0.57	7.74	36.1	2750	2.97	5.58	0.62	0.39	96.4	15.0	21	7.04	1530	4.15	
Target Range - Lower Bound		0.46	6.67	31.0	2280	2.69	5.14	0.52	0.30	82.8	13.2	16	6.05	1425	3.66	
Upper Bound		0.58	8.17	38.4	3110	3.39	6.30	0.66	0.42	101.0	16.4	22	7.51	1640	4.50	
OREAS 920		0.12	8.39	5.5	600	2.80	0.62	0.51	0.05	101.5	15.8	87	9.19	112.5	4.23	
Target Range - Lower Bound		0.08	6.91	4.4	450	2.54	0.61	0.44	0.04	84.6	13.9	70	7.72	104.0	3.72	
Upper Bound		0.13	8.47	5.8	640	3.22	0.77	0.56	0.12	103.5	17.3	88	9.54	120.0	4.56	
PMP-18	0.306															
PMP-18	0.297															
Target Range - Lower Bound	0.281															
Upper Bound	0.319															



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Project: WHDM BIG ALEX

QC CERTIFICATE OF ANALYSIS WH18246286

Sample Description	Method Analyte Units LOD	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm
STANDARDS																
EMOG-17		12.10	0.11	1.9	0.900	1.61	23.4	24.6	0.92	745	1095	1.08	14.1	7420	830	7310
Target Range - Lower Bound		10.75	0.07	1.6	0.823	1.49	20.7	23.9	0.86	670	997	0.99	12.7	6820	700	6570
Upper Bound		13.25	0.29	2.2	1.015	1.85	26.4	29.7	1.08	830	1220	1.23	15.7	8330	880	8030
G913-10																
Target Range - Lower Bound																
Upper Bound																
GAu-12a																
Target Range - Lower Bound																
Upper Bound																
JK-17																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		20.5	0.10	3.4	0.174	3.17	35.6	34.0	1.34	575	15.95	2.01	22.1	712	1090	1140
Target Range - Lower Bound		19.10	0.14	3.2	0.178	3.27	36.1	33.7	1.34	565	13.75	2.06	21.7	711	1040	1110
Upper Bound		17.50	<0.05	2.8	0.155	2.79	31.1	29.5	1.17	497	13.65	1.76	19.0	622	930	971
OREAS 503c		21.5	0.27	3.6	0.201	3.43	39.1	36.5	1.45	619	16.75	2.18	23.4	760	1160	1185
Target Range - Lower Bound																
Upper Bound																
OREAS 905		26.9	0.11	7.3	0.692	2.99	50.2	20.9	0.27	400	3.50	2.47	19.4	9.8	290	31.3
Target Range - Lower Bound		25.1	0.17	7.1	0.666	3.04	47.7	21.2	0.27	382	3.77	2.52	18.5	13.8	270	33.6
Upper Bound		22.5	<0.05	6.1	0.571	2.58	40.9	17.8	0.24	333	2.89	2.15	16.2	8.4		26.9
OREAS 920		27.7	0.27	7.6	0.709	3.18	51.1	22.2	0.31	418	3.65	2.65	20.0	10.7		33.9
Target Range - Lower Bound		21.6	0.14	5.0	0.084	3.00	51.0	29.4	1.37	638	0.37	0.66	18.6	41.1	790	23.5
Upper Bound		18.65	0.06	4.0	0.070	2.59	41.0	26.0	1.23	535	0.34	0.56	15.6	37.4		20.7
PMP-18		22.9	0.28	5.2	0.098	3.19	51.2	32.2	1.53	665	0.58	0.71	19.2	46.2		26.4
Target Range - Lower Bound																
Upper Bound																



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Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm
STANDARDS																
EMOG-17		107.5	0.318	3.25	790	8.0	6	2.7	208	0.88	1.43	10.35	0.318	2.21	2.9	73
Target Range - Lower Bound		98.9	0.286	2.91	643	7.2	4	2.2	184.5	0.78	1.10	10.35	0.294	1.89	2.8	67
Upper Bound		121.0	0.354	3.57	869	9.0	9	3.2	226	1.08	1.46	12.65	0.370	2.61	3.7	84
G913-10																
Target Range - Lower Bound																
Upper Bound																
GAu-12a																
Target Range - Lower Bound																
Upper Bound																
JK-17																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		196.5	0.007	0.32	4.84	12.1	1	4.2	323	1.63	<0.05	19.60	0.513	1.02	5.5	112
Target Range - Lower Bound		188.5	0.008	0.31	3.90	11.7	1	4.1	306	1.52	<0.05	18.20	0.503	1.05	5.3	109
Upper Bound		173.5	0.005	0.27	3.89	11.1	<1	3.5	277	1.39	<0.05	17.90	0.443	0.89	4.9	97
OREAS 503c		212	0.013	0.35	5.39	13.7	4	4.7	339	1.81	0.14	21.9	0.553	1.25	6.2	121
Target Range - Lower Bound																
Upper Bound																
OREAS 905		146.5	<0.002	0.07	2.27	5.6	3	4.2	168.5	1.41	0.09	15.85	0.126	0.68	5.2	10
Target Range - Lower Bound		136.5	<0.002	0.07	2.13	5.0	3	4.0	157.0	1.36	0.08	13.95	0.125	0.74	4.7	10
Upper Bound		124.0	<0.002	0.04	1.61	4.3	<1	3.4	141.0	1.16	<0.05	13.15	0.105	0.59	4.4	8
OREAS 920		152.0	0.004	0.09	2.29	5.5	5	4.6	173.0	1.52	0.19	16.05	0.139	0.85	5.6	13
Target Range - Lower Bound		183.0	<0.002	0.03	1.67	14.7	<1	5.3	88.3	1.38	<0.05	19.40	0.500	0.96	3.8	103
Upper Bound		158.5	<0.002	<0.01	1.22	12.8	<1	4.3	73.6	1.08	<0.05	17.35	0.434	0.76	3.3	86
PMP-18		193.5	0.004	0.05	1.76	15.8	2	5.7	90.4	1.43	0.10	21.2	0.542	1.08	4.2	108
Target Range - Lower Bound																
Upper Bound																



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QC CERTIFICATE OF ANALYSIS WH18246286

Sample Description	Method Analyte Units LOD	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm	ME-MS61 Zr ppm
		0.1	0.1	2	0.5
STANDARDS					
EMOG-17		4.4	15.9	7490	63.8
Target Range - Lower Bound		3.3	14.3	6800	55.6
Upper Bound		4.7	17.7	8320	76.4
G913-10					
Target Range - Lower Bound					
Upper Bound					
GAu-12a					
Target Range - Lower Bound					
Upper Bound					
JK-17					
Target Range - Lower Bound					
Upper Bound					
MGeo08		4.9	27.5	827	113.0
Target Range - Lower Bound		4.1	23.8	722	92.2
Upper Bound		5.8	29.3	886	126.0
OREAS 503c					
Target Range - Lower Bound					
Upper Bound					
OREAS 905		2.8	16.8	147	271
Target Range - Lower Bound		2.3	14.0	122	214
Upper Bound		3.3	17.4	154	290
OREAS 920		3.5	35.9	126	168.5
Target Range - Lower Bound		2.5	29.8	102	128.0
Upper Bound		3.7	36.6	130	174.0
PMP-18					
Target Range - Lower Bound					
Upper Bound					

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Sample Description	Method Analyte Units LOD	Au-ICP22 Au ppm 0.001	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
BLANKS																
BLANK		<0.001														
BLANK		<0.001														
BLANK		0.002														
Target Range - Lower Bound		<0.001														
Upper Bound		0.002														
BLANK			<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	0.01	<0.1	1	<0.05	<0.2	<0.01
BLANK			<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	1	<0.05	<0.2	<0.01
BLANK			<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	0.01	<0.1	<1	<0.05	0.2	<0.01
Target Range - Lower Bound			<0.01	<0.01	<0.2	<10	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2	<0.01
Upper Bound			0.02	0.02	0.4	20	0.10	0.02	0.02	0.04	0.02	0.2	2	0.10	0.4	0.02
DUPLICATES																
ORIGINAL		0.011														
DUP		0.014														
Target Range - Lower Bound		0.011														
Upper Bound		0.014														
ORIGINAL		0.008														
DUP		0.006														
Target Range - Lower Bound		0.006														
Upper Bound		0.008														
ORIGINAL		0.014														
DUP		0.014														
Target Range - Lower Bound		0.012														
Upper Bound		0.016														
ORIGINAL		0.002														
DUP		0.003														
Target Range - Lower Bound		<0.001														
Upper Bound		0.004														
ORIGINAL		<0.001														
DUP		<0.001														
Target Range - Lower Bound		<0.001														
Upper Bound		0.002														

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Method Analyte Units LOD	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5
Sample Description	BLANKS														
BLANK															
BLANK															
BLANK															
Target Range - Lower Bound															
Upper Bound															
BLANK	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5
BLANK	<0.05	0.06	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5
BLANK	<0.05	0.08	<0.1	<0.005	<0.01	<0.5	0.3	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5
Target Range - Lower Bound	<0.05	<0.05	<0.1	<0.005	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2	<10	<0.5
Upper Bound	0.10	0.10	0.2	0.010	0.02	1.0	0.4	0.02	10	0.10	0.02	0.2	0.4	20	1.0
	DUPLICATES														
ORIGINAL															
DUP															
Target Range - Lower Bound															
Upper Bound															
ORIGINAL															
DUP															
Target Range - Lower Bound															
Upper Bound															
ORIGINAL															
DUP															
Target Range - Lower Bound															
Upper Bound															
ORIGINAL															
DUP															
Target Range - Lower Bound															
Upper Bound															

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Sample Description	Method Analyte Units LOD	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1	1
BLANKS																
BLANK																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<0.1	<0.002	<0.01	0.07	<0.1	1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
BLANK		<0.1	<0.002	<0.01	0.07	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
BLANK		0.1	<0.002	<0.01	0.11	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
Target Range - Lower Bound		<0.1	<0.002	<0.01	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	<0.005	<0.02	<0.1	<1
Upper Bound		0.2	0.004	0.02	0.10	0.2	2	0.4	0.4	0.10	0.10	0.02	0.010	0.04	0.2	2
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																

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Sample Description	Method Analyte Units LOD	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm	ME-MS61 Zr ppm
		0.1	0.1	2	0.5
BLANKS					
BLANK					
BLANK					
BLANK					
Target Range - Lower Bound					
Upper Bound					
BLANK		<0.1	<0.1	<2	<0.5
BLANK		<0.1	<0.1	<2	<0.5
BLANK		<0.1	<0.1	5	<0.5
Target Range - Lower Bound		<0.1	<0.1	<2	<0.5
Upper Bound		0.2	0.2	4	1.0
DUPLICATES					
ORIGINAL					
DUP					
Target Range - Lower Bound					
Upper Bound					
ORIGINAL					
DUP					
Target Range - Lower Bound					
Upper Bound					
ORIGINAL					
DUP					
Target Range - Lower Bound					
Upper Bound					
ORIGINAL					
DUP					
Target Range - Lower Bound					
Upper Bound					

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Sample Description	Method Analyte Units LOD	Au-ICP22 ppm	ME-MS61 Ag ppm	ME-MS61 Al %	ME-MS61 As ppm	ME-MS61 Ba ppm	ME-MS61 Be ppm	ME-MS61 Bi ppm	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %
		0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
DUPLICATES																
ORIGINAL		<0.001														
DUP		<0.001														
Target Range - Lower Bound		<0.001														
Upper Bound		0.002														
ORIGINAL			0.14	7.11	0.6	560	0.65	<0.01	2.40	0.02	21.9	8.8	7	0.48	602	2.67
DUP			0.16	6.86	0.3	540	0.75	<0.01	2.31	0.03	21.3	8.2	6	0.49	574	2.57
Target Range - Lower Bound			0.13	6.63	<0.2	500	0.62	<0.01	2.23	<0.02	20.5	8.0	5	0.41	567	2.48
Upper Bound			0.17	7.34	0.7	600	0.79	0.02	2.48	0.04	22.7	9.0	8	0.56	609	2.76
V999308		1.970														
DUP		0.723														
Target Range - Lower Bound		1.280														
Upper Bound		1.415														
V999328			0.04	2.55	10.0	260	0.61	0.18	0.24	0.10	44.1	14.9	90	1.10	21.5	2.68
DUP			0.04	2.60	11.8	270	0.63	0.17	0.25	0.11	45.6	12.0	68	1.14	20.7	2.69
Target Range - Lower Bound			0.03	2.44	10.2	240	0.54	0.16	0.22	0.08	42.6	12.7	74	1.01	20.2	2.54
Upper Bound			0.05	2.71	11.6	290	0.70	0.19	0.27	0.13	47.1	14.2	84	1.23	22.0	2.83
V999344		3.91														
DUP		2.42														
Target Range - Lower Bound		3.01														
Upper Bound		3.32														
V999364		0.002	0.08	3.16	11.5	330	1.06	0.21	0.25	0.17	44.9	9.8	79	2.05	18.0	2.48
DUP			0.08	3.10	11.0	320	0.85	0.21	0.25	0.15	42.6	8.3	112	1.97	17.2	2.44
Target Range - Lower Bound			0.07	2.96	10.5	290	0.86	0.19	0.23	0.13	41.6	8.5	90	1.86	16.8	2.33
Upper Bound			0.09	3.30	12.0	360	1.05	0.23	0.27	0.19	45.9	9.6	101	2.16	18.4	2.59



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Sample Description	Method Analyte Units LOD	ME-MS61 Ga ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5
ORIGINAL DUP Target Range - Lower Bound Upper Bound	DUPLICATES															
ORIGINAL DUP Target Range - Lower Bound Upper Bound	17.15 16.20 15.80 17.55	0.06 0.07 <0.05 0.10	0.2 0.3 <0.1 0.4	0.056 0.055 0.048 0.063	0.91 0.88 0.84 0.95	8.2 8.1 7.2 9.1	10.1 9.4 9.1 10.4	0.78 0.76 0.72 0.82	446 432 412 466	45.9 44.3 42.8 47.4	2.45 2.34 2.27 2.52	1.7 1.6 1.5 1.8	4.3 3.9 3.7 4.5	470 450 430 490	2.5 2.3 1.8 3.0	
V999308 DUP Target Range - Lower Bound Upper Bound																
V999328 DUP Target Range - Lower Bound Upper Bound	6.08 6.22 5.79 6.51	0.05 0.07 <0.05 0.10	1.0 1.0 0.9 1.2	0.024 0.027 0.019 0.032	0.59 0.60 0.56 0.63	20.7 21.6 19.6 22.7	18.8 18.1 17.3 19.6	0.31 0.31 0.28 0.34	357 361 336 382	0.84 0.83 0.74 0.93	0.50 0.51 0.47 0.54	4.2 4.4 4.0 4.6	18.7 18.7 17.6 19.8	230 250 220 260	10.0 10.2 9.1 11.1	
V999344 DUP Target Range - Lower Bound Upper Bound																
V999364 DUP Target Range - Lower Bound Upper Bound	8.36 7.89 7.67 8.58	0.07 0.14 <0.05 0.16	0.9 1.0 0.8 1.1	0.023 0.018 0.014 0.027	0.96 0.94 0.89 1.01	21.9 21.1 19.9 23.1	28.4 25.9 25.6 28.7	0.36 0.35 0.33 0.38	499 500 470 529	0.81 0.66 0.65 0.82	0.52 0.51 0.48 0.55	7.5 7.1 6.8 7.8	18.1 16.4 16.2 18.3	250 250 230 270	11.9 15.9 12.7 15.1	

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Sample Description	Method Analyte Units LOD	ME-MS61 Rb ppm	ME-MS61 Re ppm	ME-MS61 S %	ME-MS61 Sb ppm	ME-MS61 Sc ppm	ME-MS61 Se ppm	ME-MS61 Sn ppm	ME-MS61 Sr ppm	ME-MS61 Ta ppm	ME-MS61 Te ppm	ME-MS61 Th ppm	ME-MS61 Ti %	ME-MS61 Tl ppm	ME-MS61 U ppm	ME-MS61 V ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1	1
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL		16.8	0.017	0.38	0.28	8.3	1	1.8	299	0.12	<0.05	1.25	0.199	0.06	0.9	73
DUP		16.3	0.019	0.36	0.27	7.8	1	1.7	288	0.13	<0.05	1.26	0.192	0.05	0.9	71
Target Range - Lower Bound		15.6	0.015	0.34	0.20	7.5	<1	1.5	279	0.07	<0.05	1.18	0.181	0.03	0.8	67
Upper Bound		17.5	0.021	0.40	0.35	8.6	2	2.0	308	0.18	0.10	1.33	0.210	0.08	1.0	77
V999308																
DUP																
Target Range - Lower Bound																
Upper Bound																
V999328		31.6	<0.002	<0.01	1.12	3.9	<1	1.2	41.1	0.36	<0.05	5.46	0.148	0.22	1.2	31
DUP		31.6	<0.002	<0.01	1.18	4.0	<1	1.1	42.5	0.40	<0.05	5.59	0.152	0.21	1.2	32
Target Range - Lower Bound		29.9	<0.002	<0.01	1.01	3.7	<1	0.9	39.5	0.31	<0.05	5.24	0.138	0.18	1.0	29
Upper Bound		33.3	0.004	0.02	1.29	4.2	2	1.4	44.1	0.45	0.10	5.81	0.163	0.25	1.4	34
V999344																
DUP																
Target Range - Lower Bound																
Upper Bound																
V999364		57.4	<0.002	<0.01	1.03	5.1	<1	1.7	57.8	0.73	<0.05	6.41	0.210	0.35	1.6	33
DUP		52.5	0.002	0.01	1.00	4.6	<1	1.7	55.0	0.75	<0.05	6.52	0.208	0.37	1.6	33
Target Range - Lower Bound		52.1	<0.002	<0.01	0.89	4.5	<1	1.4	53.4	0.65	<0.05	6.13	0.194	0.31	1.4	30
Upper Bound		57.8	0.004	0.02	1.14	5.2	2	2.0	59.4	0.83	0.10	6.80	0.224	0.41	1.8	36

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QC CERTIFICATE OF ANALYSIS WH18246286

Sample Description	Method Analyte Units LOD	ME-MS61 W ppm	ME-MS61 Y ppm	ME-MS61 Zn ppm	ME-MS61 Zr ppm
		0.1	0.1	2	0.5
DUPLICATES					
ORIGINAL DUP Target Range - Lower Bound Upper Bound					
ORIGINAL DUP Target Range - Lower Bound Upper Bound		0.9 0.8 0.7 1.0	15.8 15.2 14.6 16.4	41 40 36 45	2.9 3.0 2.2 3.7
V999308 DUP Target Range - Lower Bound Upper Bound					
V999328 DUP Target Range - Lower Bound Upper Bound		101.0 61.1 74.9 87.2	5.9 6.1 5.6 6.4	46 47 42 51	33.8 38.9 33.1 39.6
V999344 DUP Target Range - Lower Bound Upper Bound					
V999364 DUP Target Range - Lower Bound Upper Bound		28.1 21.3 22.7 26.7	7.2 6.8 6.6 7.5	54 73 58 69	35.4 32.7 31.0 37.1

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CERTIFICATE COMMENTS									
	<p style="text-align: center;">ANALYTICAL COMMENTS</p> <p>Applies to Method: REE's may not be totally soluble in this method. ME-MS61</p>								
	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.</p> <table><tr><td>CRU-31</td><td>CRU-QC</td><td>LOG-21</td><td>PUL-31</td></tr><tr><td>PUL-QC</td><td>SPL-21</td><td>WEI-21</td><td></td></tr></table>	CRU-31	CRU-QC	LOG-21	PUL-31	PUL-QC	SPL-21	WEI-21	
CRU-31	CRU-QC	LOG-21	PUL-31						
PUL-QC	SPL-21	WEI-21							
	<p>Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tr><td>Au-ICP22</td><td>ME-MS61</td></tr></table>	Au-ICP22	ME-MS61						
Au-ICP22	ME-MS61								