



ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7  
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218  
www.alsglobal.com/geochemistry

To: PACIFIC RIDGE EXPLORATION LTD.  
SUITE 1100 - 1111 MELVILLE STREET  
VANCOUVER BC V6E 3V6

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Plus Appendix Pages  
Finalized Date: 7-SEP-2017  
Account: PARIEX

**QC CERTIFICATE WH17161510**

Project: RC PROPERTY

This report is for 32 Soil samples submitted to our lab in Whitehorse, YT, Canada on 2-AUG-2017.

The following have access to data associated with this certificate:

GERRY CARLSON

COR COE

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

To: PACIFIC RIDGE EXPLORATION LTD.  
ATTN: GERRY CARLSON  
SUITE 1100 - 1111 MELVILLE STREET  
VANCOUVER BC V6E 3V6

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 WH17161510**

Sample Description	Method Analyte Units LOR	Au-ICP21 Au ppm 0.001	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01	ME-ICP41 Ga ppm 10
<b>STANDARDS</b>																
AMIS0099		0.077														
Target Range - Lower Bound		0.083														
Upper Bound		0.095														
CDN-PGMS25		0.474														
Target Range - Lower Bound		0.453														
Upper Bound		0.513														
G912-1		7.38														
Target Range - Lower Bound		6.85														
Upper Bound		7.73														
LEA-16		0.494														
Target Range - Lower Bound		0.470														
Upper Bound		0.532														
MRGeo08		4.7	2.76	34	<10	470	0.8	<2	1.13	2.1	20	96	655	3.73	10	
Target Range - Lower Bound		3.8	2.44	27	<10	370	<0.5	<2	1.00	1.1	16	81	586	3.22	<10	
Upper Bound		5.1	3.00	39	20	530	1.9	5	1.24	3.4	22	102	676	3.96	30	
OGGeo08		20.9	2.26	125	<10	70	0.7	10	0.89	19.6	100	86	8640	5.34	10	
Target Range - Lower Bound		18.0	2.05	105	<10	60	<0.5	6	0.82	16.2	86	75	7800	4.51	<10	
Upper Bound		22.4	2.53	133	30	110	1.8	15	1.02	21.0	108	93	8980	5.53	30	
OREAS 602		>100	0.65	687	<10	20	<0.5	63	0.56	26.3	10	32	5170	2.11	<10	
Target Range - Lower Bound		106.0	0.57	577	<10	<10	<0.5	50	0.46	22.2	7	26	4810	1.94	<10	
Upper Bound		100.0	0.71	709	20	50	1.3	66	0.59	28.2	12	34	5530	2.40	30	
OREAS-45b		0.2	4.30	3	10	150	0.7	2	0.30	<0.5	77	675	464	16.00	20	
Target Range - Lower Bound		<0.2	3.73	<2	<10	120	<0.5	<2	0.25	<0.5	65	599	417	13.60	<10	
Upper Bound		0.6	4.58	7	20	190	1.8	4	0.33	1.1	82	735	481	16.60	40	
<b>BLANKS</b>																
BLANK		<0.001														
Target Range - Lower Bound		<0.001														
Upper Bound		0.002														
BLANK		<0.2	<0.01	<2	<10	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
BLANK		<0.2	<0.01	<2	<10	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
Target Range - Lower Bound		<0.2	<0.01	<2	<10	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
Upper Bound		0.4	0.02	4	20	20	1.0	4	0.02	1.0	2	2	2	0.02	20	



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**QC CERTIFICATE OF ANALYSIS WH17161510**

Sample Description	Method Analyte Units LOR	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 Ni ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1	ME-ICP41 Th ppm 20
<b>STANDARDS</b>																
AMIS0099																
Target Range - Lower Bound																
Upper Bound																
CDN-PGMS25																
Target Range - Lower Bound																
Upper Bound																
G912-1																
Target Range - Lower Bound																
Upper Bound																
LEA-16																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		<1	1.32	30	1.22	435	14	0.35	724	1070	1150	0.33	2	7	85	20
Target Range - Lower Bound		<1	1.12	20	1.03	378	12	0.30	621	900	957	0.27	<2	5	71	<20
Upper Bound		2	1.40	60	1.29	473	17	0.39	761	1130	1175	0.35	8	10	89	60
OGGeo08		1	1.11	30	0.98	406	930	0.30	9080	860	7580	2.91	19	6	66	20
Target Range - Lower Bound		<1	0.94	<10	0.84	350	810	0.26	7760	700	6510	2.51	15	4	59	<20
Upper Bound		3	1.18	50	1.05	438	992	0.34	9480	880	7970	3.09	27	9	74	60
OREAS 602		1	0.09	10	0.11	221	4	0.03	60	250	888	2.08	67	1	49	<20
Target Range - Lower Bound		<1	0.07	<10	0.08	193	2	<0.01	54	210	768	1.81	46	<1	44	<20
Upper Bound		3	0.12	30	0.13	247	7	0.05	68	280	944	2.23	68	3	56	40
OREAS-45b		<1	0.07	20	0.12	806	1	0.02	223	470	22	0.03	<2	43	18	<20
Target Range - Lower Bound		<1	0.05	<10	0.09	727	<1	<0.01	188		16	<0.01	<2	37	14	<20
Upper Bound		2	0.09	40	0.15	899	3	0.04	232		26	0.06	4	47	20	50
<b>BLANKS</b>																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<1	<0.01	<10	<0.01	<5	<1	0.01	<1	<10	<2	<0.01	<2	<1	<1	<20
BLANK		1	<0.01	<10	<0.01	<5	<1	<0.01	1	<10	<2	<0.01	<2	<1	<1	<20
Target Range - Lower Bound		<1	<0.01	<10	<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<2	<1	<1	<20
Upper Bound		2	0.02	20	0.02	10	2	0.02	2	20	4	0.02	4	2	2	40



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**QC CERTIFICATE OF ANALYSIS WH17161510**

Sample Description	Method Analyte Units LOR	ME-ICP41 Ti %	ME-ICP41 Ti ppm	ME-ICP41 U ppm	ME-ICP41 V ppm	ME-ICP41 W ppm	ME-ICP41 Zn ppm
		0.01	10	10	1	10	2
<b>STANDARDS</b>							
AMIS0099							
Target Range - Lower Bound							
Upper Bound							
CDN-PGMS25							
Target Range - Lower Bound							
Upper Bound							
G912-1							
Target Range - Lower Bound							
Upper Bound							
LEA-16							
Target Range - Lower Bound							
Upper Bound							
MRGeo08		0.39	<10	<10	107	<10	822
Target Range - Lower Bound		0.33	<10	<10	90	<10	708
Upper Bound		0.43	20	30	112	20	870
OGGeo08		0.32	<10	<10	85	10	7340
Target Range - Lower Bound		0.27	<10	<10	70	<10	6500
Upper Bound		0.36	20	30	88	20	7950
OREAS 602		0.01	<10	<10	11	10	4230
Target Range - Lower Bound		<0.01	<10	<10	8	<10	3680
Upper Bound		0.03	20	20	14	20	4500
OREAS-45b		0.22	<10	<10	227	<10	182
Target Range - Lower Bound		0.19	<10	<10	198	<10	154
Upper Bound		0.25	20	20	244	20	192
<b>BLANKS</b>							
BLANK							
Target Range - Lower Bound							
Upper Bound							
BLANK		<0.01	<10	<10	<1	<10	<2
BLANK		<0.01	<10	<10	<1	<10	<2
Target Range - Lower Bound		<0.01	<10	<10	<1	<10	<2
Upper Bound		0.02	20	20	2	20	4



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Sample Description	Method Analyte Units LOR	Au-ICP21 Au ppm 0.001	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01	ME-ICP41 Ga ppm 10
DUPLICATES																
ORIGINAL			0.9	0.40	30	<10	20	<0.5	<2	10.50	1.4	7	9	15	2.46	<10
DUP			0.9	0.40	30	<10	20	<0.5	<2	10.80	1.4	7	11	16	2.51	<10
Target Range - Lower Bound			0.7	0.37	27	<10	<10	<0.5	<2	10.10	0.8	6	9	14	2.35	<10
Upper Bound			1.1	0.43	34	20	30	1.0	4	11.20	2.0	8	12	17	2.62	20
ORIGINAL		0.001														
DUP		<0.001														
Target Range - Lower Bound		<0.001														
Upper Bound		0.002														
W425036		0.008														
DUP		0.006														
Target Range - Lower Bound		0.006														
Upper Bound		0.008														
W424945			0.6	0.97	40	<10	70	<0.5	<2	0.10	<0.5	10	22	33	3.20	<10
DUP			0.3	1.05	43	<10	70	<0.5	<2	0.12	<0.5	10	23	35	3.41	<10
Target Range - Lower Bound			<0.2	0.95	37	<10	50	<0.5	<2	0.09	<0.5	9	20	32	3.13	<10
Upper Bound			0.7	1.07	46	20	90	1.0	4	0.13	1.0	12	25	36	3.48	20
W424948		0.010														
DUP		0.009														
Target Range - Lower Bound		0.008														
Upper Bound		0.011														



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**QC CERTIFICATE OF ANALYSIS WH17161510**

Sample Description	Method Analyte Units LOR	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 Ni ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1	ME-ICP41 Th ppm 20
DUPLICATES																
ORIGINAL		<1	0.09	10	0.31	1805	7	0.04	18	590	135	2.67	2	6	114	<20
DUP		<1	0.09	10	0.32	1820	7	0.04	18	610	136	2.72	2	6	116	<20
Target Range - Lower Bound		<1	0.08	<10	0.29	1715	6	0.03	16	560	127	2.55	<2	5	108	<20
Upper Bound		2	0.10	20	0.34	1910	8	0.05	20	640	144	2.84	4	7	122	40
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
W425036																
DUP																
Target Range - Lower Bound																
Upper Bound																
W424945		<1	0.08	20	0.32	350	1	0.01	19	620	14	0.05	<2	2	10	<20
DUP		<1	0.08	20	0.35	370	1	0.01	20	670	15	0.05	<2	2	12	<20
Target Range - Lower Bound		<1	0.07	<10	0.31	337	<1	<0.01	18	600	12	0.04	<2	<1	9	<20
Upper Bound		2	0.09	30	0.36	383	2	0.02	21	690	17	0.06	4	3	13	40
W424948																
DUP																
Target Range - Lower Bound																
Upper Bound																



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		0.01	10	10	1	10	2
DUPLICATES							
ORIGINAL		<0.01	<10	<10	28	<10	198
DUP		<0.01	<10	<10	28	<10	198
Target Range - Lower Bound		<0.01	<10	<10	26	<10	186
Upper Bound		0.02	20	20	30	20	210
ORIGINAL							
DUP							
Target Range - Lower Bound							
Upper Bound							
W425036							
DUP							
Target Range - Lower Bound							
Upper Bound							
W424945		0.04	<10	<10	37	<10	65
DUP		0.05	<10	<10	39	<10	69
Target Range - Lower Bound		0.03	<10	<10	35	<10	62
Upper Bound		0.06	20	20	41	20	72
W424948							
DUP							
Target Range - Lower Bound							
Upper Bound							



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**QC CERTIFICATE OF ANALYSIS WH17161510**

## CERTIFICATE COMMENTS

### LABORATORY ADDRESSES

Applies to Method:	Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada. LOG-22	SCR-41	WEI-21
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. Au-ICP21	ME-ICP41	