ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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www.alsglobal.com/geochemistry

To: **AVALON ADVANCED MATERIALS INC.**
130 ADELAIDE ST. W, SUITE 1901
TORONTO ON M5H 3P5

Finalized Date: 25-SEP-2017
This copy reported on
23-NOV-2017
Account: OPG

QC CERTIFICATE TB17180531

Project: 0518

This report is for 68 Vegetation samples submitted to our lab in Thunder Bay, ON, Canada on 25-AUG-2017.

The following have access to data associated with this certificate:

CINDY HU	BILL MERCER	VOLKER MOELLER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
VEG-MILL01	Maceration of dry plant material
LOG-21	Sample logging - ClientBarCode
DRY-22	Drying - Maximum Temp 60C

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME-VEG41	Vegetation - HNO3/HCl ICPAES-ICPMS

To: **AVALON ADVANCED MATERIALS INC.**
ATTN: BILL MERCER
130 ADELAIDE ST. W, SUITE 1901
TORONTO ON M5H 3P5

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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Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Au ppm 0.0002	ME-VEG41 Ag ppm 0.001	ME-VEG41 Al % 0.01	ME-VEG41 As ppm 0.01	ME-VEG41 B ppm 1	ME-VEG41 Ba ppm 0.1	ME-VEG41 Be ppm 0.01	ME-VEG41 Bi ppm 0.001	ME-VEG41 Ca % 0.01	ME-VEG41 Cd ppm 0.001	ME-VEG41 Ce ppm 0.003	ME-VEG41 Co ppm 0.002	ME-VEG41 Cr ppm 0.01	ME-VEG41 Cs ppm 0.005	ME-VEG41 Cu ppm 0.01
STANDARDS																
NIST 1515		0.0008	0.003	0.01	<0.01	29	48.0	0.02	0.003	1.52	0.014	3.13	0.072	0.08	<0.005	5.07
NIST 1515		0.0004	0.003	0.01	0.03	29	47.9	0.02	0.004	1.52	0.013	3.20	0.089	0.11	0.005	5.51
Target Range -	Lower Bound	<0.0002	0.004	<0.01	0.02	23	41.6	<0.01	0.002	1.37	0.010	2.72	0.075	0.10	<0.005	5.07
	Upper Bound	0.0011	0.008	0.05	0.06	31	56.5	0.04	0.006	1.69	0.016	3.34	0.097	0.16	0.013	6.21
NIST 1575a		0.0008	0.011	0.05	0.01	9	5.3	0.01	0.002	0.24	0.236	0.068	0.055	0.19	0.259	2.86
Target Range -	Lower Bound	<0.0002	0.009	0.04	0.02	8	5.0	<0.01	<0.001	0.22	0.209	0.060	0.053	0.17	0.250	2.51
	Upper Bound	0.0008	0.015	0.08	0.06	13	7.0	0.03	0.004	0.29	0.257	0.080	0.069	0.23	0.316	3.09
VEG-2		0.0011	0.009	0.13	1.16	17	8.7	0.06	0.016	1.88	0.040	4.30	1.740	8.86	0.095	7.26
Target Range -	Lower Bound	0.0026	0.008	0.11	1.19	13	6.7	0.04	0.017	1.59	0.032	3.94	1.510	8.50	0.094	6.97
	Upper Bound	0.0037	0.013	0.16	1.47	19	9.3	0.08	0.023	1.96	0.042	4.83	1.850	10.40	0.125	8.55
VEG-6		0.0018	0.007	<0.01	0.06	18	7.3	<0.01	0.002	0.40	0.015	0.016	0.040	0.09	0.154	1.72
VEG-6		<0.0002	0.009	<0.01	0.03	18	7.4	<0.01	0.001	0.41	0.014	0.016	0.027	0.07	0.165	1.72
Target Range -	Lower Bound	<0.0002	0.006	<0.01	0.02	14	6.0	<0.01	<0.001	0.33	0.008	0.008	0.029	0.08	0.119	1.54
	Upper Bound	0.0004	0.010	0.02	0.06	20	8.4	0.02	0.005	0.42	0.014	0.022	0.041	0.13	0.157	1.91
BLANKS																
BLANK		<0.0002	<0.001	<0.01	<0.01	<1	<0.1	<0.01	<0.001	<0.01	0.001	<0.003	<0.002	0.01	<0.005	0.02
BLANK		<0.0002	<0.001	<0.01	0.01	<1	0.1	<0.01	<0.001	<0.01	<0.001	<0.003	<0.002	0.01	<0.005	0.01
BLANK		<0.0002	<0.001	<0.01	0.01	<1	0.1	<0.01	0.001	<0.01	<0.001	<0.003	<0.002	0.01	<0.005	<0.01
Target Range -	Lower Bound	<0.0002	<0.001	<0.01	<0.01	<1	<0.1	<0.01	<0.001	<0.01	<0.001	<0.003	<0.002	<0.01	<0.005	<0.01
	Upper Bound	0.0004	0.002	0.02	0.02	2	0.2	0.02	0.002	0.02	0.002	0.006	0.004	0.02	0.010	0.02
DUPLICATES																
ORIGINAL		0.0081	0.154	0.10	0.64	9	15.0	0.04	0.007	0.33	0.015	2.19	0.419	2.91	0.217	1.94
DUP		0.0065	0.159	0.12	0.80	8	15.5	0.03	0.008	0.31	0.016	2.46	0.466	2.39	0.230	1.80
Target Range -	Lower Bound	0.0067	0.148	0.09	0.67	7	14.0	0.02	0.006	0.29	0.014	2.21	0.418	2.51	0.207	1.77
	Upper Bound	0.0079	0.165	0.13	0.77	10	16.5	0.05	0.009	0.35	0.017	2.44	0.467	2.79	0.240	1.97
V671498		<0.0002	0.053	<0.01	0.07	20	149.5	<0.01	0.003	0.69	0.066	0.061	0.093	0.18	0.025	2.54
DUP		0.0002	0.061	<0.01	0.06	19	149.0	<0.01	0.002	0.67	0.073	0.063	0.103	0.20	0.025	2.57
Target Range -	Lower Bound	<0.0002	0.053	<0.01	0.05	18	138.0	<0.01	<0.001	0.64	0.065	0.056	0.091	0.17	0.019	2.42
	Upper Bound	0.0004	0.061	0.02	0.08	21	160.5	0.02	0.004	0.72	0.074	0.068	0.105	0.21	0.031	2.69

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To: **AVALON ADVANCED MATERIALS INC.**
130 ADELAIDE ST. W, SUITE 1901
TORONTO ON M5H 3P5

Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Fe ppm 1	ME-VEG41 Ga ppm 0.004	ME-VEG41 Ge ppm 0.005	ME-VEG41 Hf ppm 0.002	ME-VEG41 Hg ppm 0.001	ME-VEG41 In ppm 0.005	ME-VEG41 K % 0.01	ME-VEG41 La ppm 0.002	ME-VEG41 Li ppm 0.1	ME-VEG41 Mg % 0.001	ME-VEG41 Mn ppm 0.1	ME-VEG41 Mo ppm 0.01	ME-VEG41 Na % 0.001	ME-VEG41 Nb ppm 0.002	ME-VEG41 Ni ppm 0.04
STANDARDS																
NIST 1515		58	0.039	0.013	0.005	0.042	<0.005	1.59	21.3	0.1	0.245	50.7	0.09	0.061	0.003	0.69
NIST 1515		61	0.038	0.011	0.004	0.044	<0.005	1.59	22.0	0.1	0.245	52.1	0.08	0.058	0.004	0.74
Target Range -	Lower Bound	53	0.030	0.006	<0.002	0.036	<0.005	1.44	18.55	<0.1	0.233	48.5	0.07	0.053	<0.002	0.78
	Upper Bound	67	0.050	0.028	0.006	0.052	0.015	1.78	22.7	0.3	0.287	59.5	0.11	0.067	0.006	1.04
NIST 1575a		40	0.009	<0.005	0.002	0.031	<0.005	0.38	0.032	0.1	0.085	447	0.01	0.066	<0.002	1.27
Target Range -	Lower Bound	35	<0.004	<0.005	<0.002	0.033	<0.005	0.37	0.026	<0.1	0.080	439	<0.01	0.004	<0.002	1.28
	Upper Bound	45	0.019	0.016	0.005	0.047	0.015	0.47	0.038	0.3	0.100	537	0.04	0.009	0.006	1.66
VEG-2		2160	0.420	0.021	0.033	0.049	<0.005	0.16	2.23	0.5	0.104	365	0.18	0.059	0.043	5.42
Target Range -	Lower Bound	1880	0.416	0.209	0.032	0.036	<0.005	0.14	2.07	0.3	0.089	326	0.16	0.063	0.036	5.28
	Upper Bound	2300	0.518	0.267	0.044	0.051	0.019	0.19	2.53	0.7	0.111	399	0.21	0.079	0.048	6.55
VEG-6		21	<0.004	<0.005	<0.002	0.019	<0.005	0.37	0.008	<0.1	0.106	384	0.02	0.064	<0.002	0.71
VEG-6		20	<0.004	<0.005	<0.002	0.012	<0.005	0.36	0.008	<0.1	0.109	403	0.02	0.055	0.002	0.63
Target Range -	Lower Bound	19	<0.004	<0.005	<0.002	0.012	<0.005	0.32	0.004	<0.1	0.091	338	<0.01	0.021	<0.002	0.60
	Upper Bound	25	0.014	0.015	0.004	0.019	0.010	0.41	0.012	0.3	0.113	413	0.04	0.027	0.007	0.83
BLANKS																
BLANK		1	<0.004	<0.005	<0.002	0.002	<0.005	<0.01	<0.002	<0.1	<0.001	<0.1	<0.01	0.055	<0.002	<0.04
BLANK		<1	<0.004	<0.005	<0.002	0.002	<0.005	<0.01	<0.002	<0.1	<0.001	<0.1	<0.01	0.055	<0.002	<0.04
BLANK		<1	<0.004	<0.005	<0.002	<0.001	<0.005	<0.01	<0.002	<0.1	<0.001	<0.1	<0.01	0.046	<0.002	<0.04
Target Range -	Lower Bound	<1	<0.004	<0.005	<0.002	<0.001	<0.005	<0.01	<0.002	<0.1	<0.001	<0.1	<0.01	<0.001	<0.002	<0.04
	Upper Bound	2	0.008	0.010	0.004	0.002	0.010	0.02	0.004	0.2	0.002	0.2	0.02	0.002	0.004	0.08
DUPLICATES																
ORIGINAL		1070	0.235	0.019	0.027	0.032	<0.005	0.23	0.966	0.8	0.057	52.3	0.23	0.050	0.087	1.91
DUP		1230	0.281	0.019	0.033	0.040	<0.005	0.18	1.075	0.9	0.051	51.4	0.20	0.036	0.091	1.73
Target Range -	Lower Bound	1090	0.241	0.013	0.027	0.032	<0.005	0.18	0.967	0.7	0.050	49.2	0.19	0.040	0.083	1.69
	Upper Bound	1210	0.275	0.025	0.034	0.040	0.010	0.23	1.075	1.0	0.058	54.5	0.24	0.046	0.095	1.95
V671498		40	0.007	<0.005	<0.002	0.018	<0.005	0.44	0.033	0.1	0.058	1230	0.02	0.054	0.004	1.09
DUP		39	0.008	<0.005	<0.002	0.014	<0.005	0.44	0.033	0.1	0.057	1210	0.02	0.056	0.003	1.06
Target Range -	Lower Bound	37	<0.004	<0.005	<0.002	0.014	<0.005	0.41	0.029	<0.1	0.054	1160	<0.01	0.051	<0.002	0.98
	Upper Bound	42	0.008	0.010	0.004	0.018	0.010	0.47	0.037	0.2	0.061	1280	0.03	0.059	0.004	1.17

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TORONTO ON M5H 3P5

Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 P % 0.001	ME-VEG41 Pb ppm 0.01	ME-VEG41 Pd ppm 0.001	ME-VEG41 Pt ppm 0.001	ME-VEG41 Rb ppm 0.01	ME-VEG41 Re ppm 0.001	ME-VEG41 S % 0.01	ME-VEG41 Sb ppm 0.01	ME-VEG41 Sc ppm 0.01	ME-VEG41 Se ppm 0.005	ME-VEG41 Sn ppm 0.01	ME-VEG41 Sr ppm 0.02	ME-VEG41 Ta ppm 0.001	ME-VEG41 Te ppm 0.02	ME-VEG41 Th ppm 0.002
STANDARDS																
NIST 1515		0.164	0.38	<0.001	0.002	9.24	<0.001	0.18	0.02	0.09	0.069	0.05	24.5	0.001	<0.02	0.005
NIST 1515		0.165	0.38	<0.001	<0.001	9.96	<0.001	0.18	0.01	0.09	0.052	0.05	25.2	0.001	<0.02	0.007
Target Range -	Lower Bound	0.142	0.37	0.006	<0.001	8.54	<0.001	0.16	<0.01	<0.01	0.038	0.04	22.5	<0.001	<0.02	<0.002
	Upper Bound	0.176	0.47	0.010	0.002	10.45	0.003	0.22	0.04	0.04	0.063	0.08	27.5	0.002	0.06	0.010
NIST 1575a		0.108	0.14	<0.001	<0.001	14.80	<0.001	0.08	0.01	0.10	0.124	0.03	6.38	<0.001	<0.02	0.008
Target Range -	Lower Bound	0.095	0.14	<0.001	<0.001	14.30	<0.001	0.08	<0.01	<0.01	0.084	0.02	5.83	<0.001	<0.02	0.005
	Upper Bound	0.119	0.20	0.002	0.002	17.50	0.003	0.14	0.05	0.03	0.114	0.06	7.17	0.003	0.06	0.013
VEG-2		0.037	0.84	<0.001	<0.001	2.12	<0.001	0.11	0.03	0.61	0.162	0.07	109.0	0.001	<0.02	0.551
Target Range -	Lower Bound	0.033	0.80	<0.001	<0.001	2.04	<0.001	0.08	<0.01	0.62	0.347	0.04	94.9	<0.001	<0.02	0.546
	Upper Bound	0.043	1.01	0.005	0.003	2.52	0.002	0.13	0.06	0.79	0.435	0.09	116.0	0.004	0.06	0.672
VEG-6		0.115	0.09	<0.001	0.009	9.50	<0.001	0.08	0.02	0.10	0.021	0.01	4.81	0.002	<0.02	<0.002
VEG-6		0.116	0.08	<0.001	<0.001	9.58	<0.001	0.08	0.01	0.10	0.008	<0.01	4.91	0.002	<0.02	<0.002
Target Range -	Lower Bound	0.100	0.06	<0.001	<0.001	8.18	<0.001	0.05	<0.01	0.05	0.054	<0.01	4.22	<0.001	0.03	<0.002
	Upper Bound	0.124	0.11	0.003	0.003	10.00	0.002	0.10	0.06	0.10	0.080	0.03	5.20	0.004	0.12	0.006
BLANKS																
BLANK		<0.001	0.01	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.005	<0.01	0.02	<0.001	<0.02	<0.002
BLANK		<0.001	0.01	<0.001	<0.001	<0.01	<0.001	<0.01	0.01	<0.01	<0.005	<0.01	0.04	<0.001	<0.02	<0.002
BLANK		<0.001	0.01	<0.001	<0.001	<0.01	<0.001	<0.01	0.01	<0.01	<0.005	<0.01	0.03	<0.001	<0.02	<0.002
Target Range -	Lower Bound	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.005	<0.01	<0.02	<0.001	<0.02	<0.002
	Upper Bound	0.002	0.02	0.002	0.002	0.02	0.002	0.02	0.02	0.02	0.010	0.02	0.04	0.002	0.04	0.004
DUPLICATES																
ORIGINAL		0.036	0.58	<0.001	<0.001	1.38	<0.001	0.05	0.04	0.29	0.075	0.04	9.70	0.005	<0.02	0.109
DUP		0.034	0.63	<0.001	<0.001	1.48	<0.001	0.03	0.05	0.34	0.100	0.05	9.17	0.003	<0.02	0.138
Target Range -	Lower Bound	0.032	0.56	<0.001	<0.001	1.35	<0.001	0.03	0.03	0.29	0.078	0.03	8.94	0.003	<0.02	0.115
	Upper Bound	0.038	0.65	0.002	0.002	1.51	0.002	0.05	0.06	0.34	0.097	0.06	9.93	0.005	0.04	0.132
V671498		0.148	0.13	<0.001	0.001	5.77	<0.001	0.06	0.01	0.08	0.037	0.02	23.5	0.003	<0.02	0.004
DUP		0.145	0.11	<0.001	<0.001	5.59	<0.001	0.06	0.01	0.06	0.040	0.01	23.4	0.003	<0.02	0.005
Target Range -	Lower Bound	0.138	0.10	<0.001	<0.001	5.39	<0.001	0.05	<0.01	0.06	0.032	<0.01	22.3	0.002	<0.02	<0.002
	Upper Bound	0.155	0.14	0.002	0.002	5.97	0.002	0.07	0.02	0.08	0.045	0.02	24.6	0.004	0.04	0.007

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Finalized Date: 25-SEP-2017
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QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Ti % 0.001	ME-VEG41 Tl ppm 0.002	ME-VEG41 U ppm 0.005	ME-VEG41 V ppm 0.05	ME-VEG41 W ppm 0.01	ME-VEG41 Y ppm 0.003	ME-VEG41 Zn ppm 0.1	ME-VEG41 Zr ppm 0.02
STANDARDS									
NIST 1515		<0.001	0.013	<0.005	0.13	<0.01	9.94	11.4	0.04
NIST 1515		<0.001	0.011	<0.005	0.15	0.01	10.50	12.0	0.04
Target Range -	Lower Bound	<0.001	0.005	<0.005	0.09	<0.01	9.31	11.2	0.03
	Upper Bound	0.002	0.015	0.016	0.31	0.03	11.40	13.9	0.13
NIST 1575a		<0.001	0.018	<0.005	0.13	0.01	0.026	35.4	0.03
Target Range -	Lower Bound	<0.001	0.013	<0.005	<0.05	<0.01	0.018	34.1	<0.02
	Upper Bound	0.003	0.025	0.015	0.21	0.03	0.032	41.9	0.10
VEG-2		0.002	0.016	0.149	4.52	0.05	1.305	21.1	1.09
Target Range -	Lower Bound	<0.001	0.012	0.146	4.38	0.04	0.125	19.4	0.94
	Upper Bound	0.004	0.023	0.189	5.47	0.09	0.160	24.0	1.32
VEG-6		<0.001	0.003	<0.005	0.05	0.15	0.005	30.6	0.02
VEG-6		<0.001	0.004	<0.005	0.05	0.14	0.004	32.5	<0.02
Target Range -	Lower Bound	<0.001	<0.002	<0.005	<0.05	0.09	<0.003	26.9	<0.02
	Upper Bound	0.002	0.007	0.010	0.16	0.15	0.011	33.0	0.04
BLANKS									
BLANK		<0.001	<0.002	<0.005	<0.05	<0.01	<0.003	0.1	<0.02
BLANK		<0.001	<0.002	<0.005	<0.05	<0.01	<0.003	0.1	<0.02
BLANK		<0.001	<0.002	<0.005	<0.05	<0.01	<0.003	0.1	<0.02
Target Range -	Lower Bound	<0.001	<0.002	<0.005	<0.05	<0.01	<0.003	<0.1	<0.02
	Upper Bound	0.002	0.004	0.010	0.10	0.02	0.006	0.2	0.04
DUPLICATES									
ORIGINAL		0.004	0.010	0.033	1.90	0.55	0.763	11.1	1.25
DUP		0.004	0.012	0.036	2.26	0.35	0.858	11.0	1.53
Target Range -	Lower Bound	0.003	0.008	0.028	1.93	0.41	0.767	10.4	1.27
	Upper Bound	0.005	0.014	0.041	2.23	0.49	0.854	11.7	1.51
V671498		<0.001	0.008	<0.005	0.08	0.38	0.016	69.0	0.02
DUP		<0.001	0.009	<0.005	0.10	0.39	0.017	68.3	0.03
Target Range -	Lower Bound	<0.001	0.006	<0.005	<0.05	0.35	0.013	65.1	<0.02
	Upper Bound	0.002	0.011	0.010	0.10	0.42	0.020	72.2	0.04

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

ALS Canada Ltd.

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To: **AVALON ADVANCED MATERIALS INC.**
130 ADELAIDE ST. W, SUITE 1901
TORONTO ON M5H 3P5

Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Au ppm 0.0002	ME-VEG41 Ag ppm 0.001	ME-VEG41 Al % 0.01	ME-VEG41 As ppm 0.01	ME-VEG41 B ppm 1	ME-VEG41 Ba ppm 0.1	ME-VEG41 Be ppm 0.01	ME-VEG41 Bi ppm 0.001	ME-VEG41 Ca % 0.01	ME-VEG41 Cd ppm 0.001	ME-VEG41 Ce ppm 0.003	ME-VEG41 Co ppm 0.002	ME-VEG41 Cr ppm 0.01	ME-VEG41 Cs ppm 0.005	ME-VEG41 Cu ppm 0.01
DUPLICATES																
V671513		0.0002	0.008	<0.01	0.05	12	43.6	0.01	0.005	0.85	0.029	0.116	0.349	0.15	0.073	6.34
DUP		0.0002	0.011	<0.01	0.04	11	40.7	<0.01	0.006	0.79	0.030	0.123	0.337	0.18	0.076	6.21
Target Range -	Lower Bound	<0.0002	0.008	<0.01	0.03	10	38.9	<0.01	0.004	0.77	0.027	0.111	0.324	0.15	0.066	5.95
	Upper Bound	0.0004	0.011	0.02	0.06	13	45.4	0.02	0.007	0.87	0.032	0.128	0.362	0.18	0.083	6.60
V671533		<0.0002	0.004	<0.01	0.06	16	25.6	0.01	0.007	0.57	0.028	0.059	1.465	0.30	0.794	5.17
DUP		0.0002	0.002	<0.01	0.04	16	25.6	0.01	0.006	0.56	0.029	0.057	1.440	0.23	0.770	5.06
Target Range -	Lower Bound	<0.0002	0.002	<0.01	0.04	14	23.6	<0.01	0.005	0.53	0.026	0.052	1.380	0.24	0.738	4.85
	Upper Bound	0.0004	0.004	0.02	0.06	18	27.6	0.02	0.008	0.60	0.031	0.064	1.525	0.29	0.826	5.38
V671548		<0.0002	0.071	<0.01	0.04	18	138.0	<0.01	0.002	0.76	0.027	0.097	0.206	0.16	0.344	2.29
DUP		0.0002	0.071	0.01	0.01	19	140.0	<0.01	0.002	0.78	0.029	0.111	0.225	0.16	0.329	2.40
Target Range -	Lower Bound	<0.0002	0.066	<0.01	<0.01	17	128.5	<0.01	<0.001	0.72	0.026	0.096	0.203	0.14	0.315	2.22
	Upper Bound	0.0004	0.076	0.02	0.04	20	149.5	0.02	0.003	0.82	0.030	0.112	0.228	0.18	0.358	2.47

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TORONTO ON M5H 3P5

Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Fe ppm 1	ME-VEG41 Ga ppm 0.004	ME-VEG41 Ge ppm 0.005	ME-VEG41 Hf ppm 0.002	ME-VEG41 Hg ppm 0.001	ME-VEG41 In ppm 0.005	ME-VEG41 K % 0.01	ME-VEG41 La ppm 0.002	ME-VEG41 Li ppm 0.1	ME-VEG41 Mg % 0.001	ME-VEG41 Mn ppm 0.1	ME-VEG41 Mo ppm 0.01	ME-VEG41 Na % 0.001	ME-VEG41 Nb ppm 0.002	ME-VEG41 Ni ppm 0.04
DUPLICATES																
V671513		48	0.006	<0.005	<0.002	0.010	<0.005	0.27	0.086	<0.1	0.085	322	0.03	0.056	<0.002	0.68
DUP		45	0.005	<0.005	<0.002	0.010	<0.005	0.26	0.089	<0.1	0.081	309	0.03	0.054	<0.002	0.68
Target Range -	Lower Bound	43	<0.004	<0.005	<0.002	0.008	<0.005	0.24	0.081	<0.1	0.078	300	0.02	0.051	<0.002	0.61
	Upper Bound	50	0.008	0.010	0.004	0.012	0.010	0.29	0.094	0.2	0.088	331	0.04	0.059	0.004	0.75
V671533		47	0.004	<0.005	<0.002	0.007	<0.005	0.28	0.042	<0.1	0.106	217	0.06	0.054	0.003	1.52
DUP		45	0.005	<0.005	<0.002	0.009	<0.005	0.28	0.034	<0.1	0.106	218	0.06	0.051	0.002	1.43
Target Range -	Lower Bound	43	<0.004	<0.005	<0.002	0.006	<0.005	0.26	0.034	<0.1	0.100	207	0.05	0.049	<0.002	1.36
	Upper Bound	49	0.008	0.010	0.004	0.010	0.010	0.30	0.042	0.2	0.112	228	0.07	0.056	0.004	1.59
V671548		59	0.011	<0.005	<0.002	0.018	<0.005	0.24	0.049	0.1	0.045	1250	0.01	0.059	0.005	0.22
DUP		65	0.012	<0.005	<0.002	0.021	<0.005	0.24	0.055	0.1	0.046	1280	0.01	0.056	0.002	0.22
Target Range -	Lower Bound	58	0.007	<0.005	<0.002	0.017	<0.005	0.22	0.047	<0.1	0.042	1200	<0.01	0.054	<0.002	0.17
	Upper Bound	66	0.016	0.010	0.004	0.022	0.010	0.26	0.057	0.2	0.049	1330	0.02	0.061	0.004	0.27

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Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 P % 0.001	ME-VEG41 Pb ppm 0.01	ME-VEG41 Pd ppm 0.001	ME-VEG41 Pt ppm 0.001	ME-VEG41 Rb ppm 0.01	ME-VEG41 Re ppm 0.001	ME-VEG41 S % 0.01	ME-VEG41 Sb ppm 0.01	ME-VEG41 Sc ppm 0.01	ME-VEG41 Se ppm 0.005	ME-VEG41 Sn ppm 0.01	ME-VEG41 Sr ppm 0.02	ME-VEG41 Ta ppm 0.001	ME-VEG41 Te ppm 0.02	ME-VEG41 Th ppm 0.002
DUPLICATES																
V671513		0.065	0.11	<0.001	<0.001	13.40	<0.001	0.08	0.01	0.06	0.031	0.01	47.8	0.001	<0.02	0.004
DUP		0.062	0.11	<0.001	<0.001	13.30	<0.001	0.07	0.01	0.06	0.024	<0.01	44.9	<0.001	<0.02	0.004
Target Range -	Lower Bound	0.059	0.09	<0.001	<0.001	12.65	<0.001	0.06	<0.01	0.05	0.021	<0.01	44.0	<0.001	<0.02	<0.002
	Upper Bound	0.068	0.13	0.002	0.002	14.05	0.002	0.09	0.02	0.07	0.034	0.02	48.7	0.002	0.04	0.006
V671533		0.080	0.14	0.001	<0.001	41.0	<0.001	0.08	0.01	0.06	0.018	0.01	25.1	<0.001	<0.02	0.004
DUP		0.080	0.11	<0.001	<0.001	39.7	<0.001	0.09	0.01	0.06	0.022	0.01	23.9	<0.001	<0.02	0.004
Target Range -	Lower Bound	0.075	0.11	<0.001	<0.001	38.3	<0.001	0.07	<0.01	0.05	0.014	<0.01	23.3	<0.001	<0.02	<0.002
	Upper Bound	0.085	0.14	0.002	0.002	42.4	0.002	0.10	0.02	0.07	0.026	0.02	25.7	0.002	0.04	0.006
V671548		0.052	0.16	<0.001	<0.001	9.38	<0.001	0.05	0.01	0.08	0.040	0.01	47.1	0.001	<0.02	0.011
DUP		0.052	0.17	<0.001	<0.001	9.86	<0.001	0.06	0.01	0.10	0.045	0.01	48.6	0.001	<0.02	0.011
Target Range -	Lower Bound	0.048	0.15	<0.001	<0.001	9.13	<0.001	0.04	<0.01	0.08	0.035	<0.01	45.4	<0.001	<0.02	0.008
	Upper Bound	0.056	0.18	0.002	0.002	10.10	0.002	0.07	0.02	0.10	0.050	0.02	50.3	0.002	0.04	0.014

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Finalized Date: 25-SEP-2017
Account: OPG

Project: 0518

QC CERTIFICATE OF ANALYSIS TB17180531

Sample Description	Method / Analyte / Units / LOR	ME-VEG41 Ti % 0.001	ME-VEG41 Tl ppm 0.002	ME-VEG41 U ppm 0.005	ME-VEG41 V ppm 0.05	ME-VEG41 W ppm 0.01	ME-VEG41 Y ppm 0.003	ME-VEG41 Zn ppm 0.1	ME-VEG41 Zr ppm 0.02
		DUPLICATES							
V671513		<0.001	0.031	<0.005	0.07	0.02	0.021	36.5	0.02
DUP		<0.001	0.028	<0.005	0.09	0.02	0.029	34.9	0.04
Target Range - Lower Bound		<0.001	0.025	<0.005	<0.05	<0.01	0.021	33.8	<0.02
Upper Bound		0.002	0.034	0.010	0.10	0.03	0.029	37.6	0.04
V671533		<0.001	0.004	<0.005	0.07	0.02	0.015	38.8	<0.02
DUP		<0.001	0.003	<0.005	0.09	0.01	0.012	37.8	0.03
Target Range - Lower Bound		<0.001	<0.002	<0.005	<0.05	<0.01	0.010	36.3	<0.02
Upper Bound		0.002	0.004	0.010	0.10	0.02	0.017	40.3	0.04
V671548		<0.001	0.005	<0.005	0.15	0.06	0.033	57.4	0.03
DUP		<0.001	0.005	<0.005	0.14	0.07	0.029	59.1	0.05
Target Range - Lower Bound		<0.001	0.003	<0.005	0.09	0.05	0.026	55.2	<0.02
Upper Bound		0.002	0.007	0.010	0.20	0.08	0.036	61.3	0.06

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Finalized Date: 25-SEP-2017
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QC CERTIFICATE OF ANALYSIS TB17180531

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Thunder Bay located at 645 Norah Crescent, Thunder Bay, ON, Canada
WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
DRY-22 LOG-21 ME-VEG41 VEG-MILL01