



ALS Canada Ltd.
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www.alsglobal.com

To: **ANGLOGOLD ASHANTI MINNESOTA INC.**
6300 S. SYRACUSE WAY #500
CENTENNIAL CO 80111
USA

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Total # Pages: 2 (A - E)
Plus Appendix Pages
Finalized Date: 20-JUN-2017
Account: AAMICLSR

CERTIFICATE VA17104676

Project: Minnesota

This report is for 12 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 26-MAY-2017.

The following have access to data associated with this certificate:

TREVOR BURR

PERTH DATA

ANDREW TYRELL

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS81	Lithium Borate Fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	ICP-AES
ME-4ACD81	Base Metals by 4-acid dig.	ICP-AES
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (Leco)	LECO
S-IR08	Total Sulphur (Leco)	LECO

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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 VA17104676

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	ME-ICP06 SiO2 %	ME-ICP06 Al2O3 %	ME-ICP06 Fe2O3 %	ME-ICP06 CaO %	ME-ICP06 MgO %	ME-ICP06 Na2O %	ME-ICP06 K2O %	ME-ICP06 Cr2O3 %	ME-ICP06 TiO2 %	ME-ICP06 MnO %	ME-ICP06 P2O5 %	ME-ICP06 SrO %	ME-ICP06 BaO %	OA-GRA05 LOI %
R863532		1.90	60.8	17.70	6.48	4.68	2.85	3.67	1.99	0.02	0.57	0.12	0.17	0.08	0.05	0.91
R863535		0.50	58.6	18.30	8.40	2.34	4.03	3.27	3.02	0.03	0.70	0.10	0.18	0.04	0.10	2.33
R863538		4.18	47.7	12.40	6.07	7.88	8.45	2.89	3.72	0.04	0.59	0.11	0.68	0.11	0.12	7.30
R863545		1.34	55.8	11.10	10.85	1.01	11.85	0.22	0.58	0.29	0.58	0.11	0.37	0.01	0.01	7.79
R863549		0.78	48.4	13.60	16.70	9.06	5.51	2.54	0.75	0.02	1.94	0.25	0.17	0.02	0.02	1.05
R863553		3.00	45.8	11.30	10.20	7.75	16.70	1.31	0.39	0.32	0.41	0.17	0.12	0.01	0.01	5.84
R863559		1.58	47.9	13.05	13.15	11.05	6.33	1.67	0.19	0.03	1.31	0.24	0.11	0.03	0.01	4.70
R863562		0.74	48.7	13.85	15.25	8.31	7.01	2.33	0.46	0.02	1.62	0.25	0.15	0.01	0.01	1.64
R863564		0.32	47.8	14.05	15.20	10.20	6.68	1.79	0.29	0.02	1.70	0.24	0.16	0.02	0.01	0.90
R863567		3.26	50.5	13.40	16.10	7.36	5.46	2.69	0.54	<0.01	1.48	0.23	0.11	0.01	0.02	1.81
R863573		0.96	48.1	15.60	13.60	10.75	5.87	2.38	0.69	0.05	1.26	0.24	0.05	0.01	0.01	1.76
R863582		6.36	46.7	7.80	9.95	10.95	18.55	0.74	0.35	0.33	0.31	0.20	0.09	0.02	0.01	4.00



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Sample Description	Method Analyte Units LOR	TOT-ICP06	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Total	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd	Ge	Hf	Ho
		%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.01	0.01	0.5	0.5	10	0.01	0.05	0.03	0.03	0.1	0.05	5	0.2	0.01
R863532		100.09	0.05	0.16	459	62.1	150	4.03	2.21	1.12	1.23	19.5	3.19	<5	3.5	0.43
R863535		101.44	0.05	0.33	857	63.1	180	3.68	2.95	1.51	1.29	23.2	3.64	<5	3.6	0.56
R863538		98.06	1.51	0.03	979	81.4	240	6.64	3.67	1.35	2.33	15.0	6.62	<5	4.5	0.56
R863545		100.57	0.07	<0.01	91.3	29.8	2040	4.66	2.54	1.43	0.99	12.6	3.17	<5	1.7	0.49
R863549		100.03	0.04	0.15	132.0	18.2	100	1.48	5.88	3.37	1.49	19.1	4.98	<5	3.1	1.19
R863553		100.33	0.38	<0.01	57.6	16.5	2150	0.19	1.63	0.92	0.53	11.6	1.55	<5	1.2	0.32
R863559		99.77	0.55	0.19	52.0	13.4	190	0.13	3.78	2.22	1.03	16.3	3.36	<5	2.1	0.79
R863562		99.61	0.03	0.12	62.7	12.7	140	0.12	5.72	3.47	1.35	18.4	5.01	<5	3.0	1.20
R863564		99.06	0.02	0.15	38.8	14.0	140	0.13	5.79	3.46	1.21	17.9	4.89	<5	3.1	1.22
R863567		99.71	0.07	0.05	164.0	13.7	20	0.07	5.27	3.10	1.13	18.7	4.63	<5	2.6	1.06
R863573		100.37	0.03	<0.01	88.1	4.3	340	0.42	2.26	1.44	0.64	17.2	1.80	<5	0.9	0.51
R863582		100.00	0.23	<0.01	52.5	11.2	2220	0.11	1.42	0.85	0.49	8.5	1.67	<5	0.9	0.29



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Sample Description	Method Analyte Units LOR	ME-MS81 La ppm 0.5	ME-MS81 Lu ppm 0.01	ME-MS81 Nb ppm 0.2	ME-MS81 Nd ppm 0.1	ME-MS81 Pr ppm 0.03	ME-MS81 Rb ppm 0.2	ME-MS81 Sm ppm 0.03	ME-MS81 Sn ppm 1	ME-MS81 Sr ppm 0.1	ME-MS81 Ta ppm 0.1	ME-MS81 Tb ppm 0.01	ME-MS81 Th ppm 0.05	ME-MS81 Tm ppm 0.01	ME-MS81 U ppm 0.05	ME-MS81 V ppm 5
R863532		29.8	0.18	4.8	26.4	7.27	69.8	4.51	1	625	0.3	0.42	5.81	0.15	1.64	115
R863535		30.8	0.23	6.7	26.3	7.16	98.2	4.79	1	334	0.5	0.51	8.15	0.23	2.37	164
R863538		35.5	0.12	4.0	44.9	10.80	117.0	9.39	1	861	0.2	0.84	4.47	0.16	1.28	108
R863545		13.5	0.22	2.8	15.5	3.83	27.4	3.51	1	78.4	0.1	0.43	2.56	0.20	0.81	117
R863549		6.8	0.47	6.3	13.4	2.83	28.8	4.48	1	193.5	0.4	0.89	0.60	0.48	0.16	444
R863553		8.0	0.15	1.9	8.4	2.08	6.3	1.79	1	67.8	0.1	0.25	2.02	0.14	0.71	159
R863559		5.3	0.32	4.4	9.4	2.00	7.4	2.76	1	254	0.3	0.57	0.57	0.31	0.15	354
R863562		4.7	0.53	4.5	10.7	2.13	17.0	3.53	1	142.0	0.3	0.84	0.48	0.52	0.17	423
R863564		5.0	0.55	4.5	11.4	2.24	8.7	3.79	1	146.0	0.3	0.90	0.48	0.52	0.13	425
R863567		5.0	0.47	3.9	10.6	2.14	13.8	3.32	1	107.0	0.2	0.80	0.45	0.49	0.12	424
R863573		1.5	0.25	1.0	4.0	0.72	35.8	1.34	<1	110.5	<0.1	0.34	<0.05	0.21	<0.05	394
R863582		4.7	0.12	1.4	7.1	1.54	6.8	1.75	<1	173.5	<0.1	0.25	0.63	0.10	0.18	119



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Sample Description	Method Analyte Units LOR	ME-MS81 W ppm 1	ME-MS81 Y ppm 0.5	ME-MS81 Yb ppm 0.03	ME-MS81 Zr ppm 2	ME-MS42 As ppm 0.1	ME-MS42 Bi ppm 0.01	ME-MS42 Hg ppm 0.005	ME-MS42 In ppm 0.005	ME-MS42 Re ppm 0.001	ME-MS42 Sb ppm 0.05	ME-MS42 Se ppm 0.2	ME-MS42 Te ppm 0.01	ME-MS42 Ti ppm 0.02	ME-4ACD81 Ag ppm 0.5	ME-4ACD81 Cd ppm 0.5
R863532		1	11.7	1.15	137	1.6	0.11	<0.005	0.027	0.001	0.11	0.3	0.01	0.38	<0.5	<0.5
R863535		1	15.3	1.51	137	0.4	0.19	<0.005	0.047	0.002	0.14	0.4	0.04	0.34	<0.5	<0.5
R863538		1	16.6	0.98	168	1.5	0.51	<0.005	0.038	0.001	0.10	0.3	0.01	0.67	<0.5	<0.5
R863545		4	14.2	1.38	61	0.8	0.06	<0.005	0.041	<0.001	0.08	0.2	<0.01	0.18	<0.5	<0.5
R863549		1	31.8	2.98	113	0.4	0.03	<0.005	0.015	0.002	0.11	0.5	<0.01	0.03	<0.5	0.7
R863553		1	9.3	0.95	44	<0.1	0.01	<0.005	0.015	<0.001	0.07	0.2	0.01	<0.02	<0.5	<0.5
R863559		<1	20.0	2.08	76	0.5	0.02	<0.005	0.013	0.001	0.10	0.5	<0.01	<0.02	<0.5	0.6
R863562		1	32.5	3.38	107	0.6	0.02	<0.005	0.023	0.001	0.08	0.4	0.01	<0.02	<0.5	0.6
R863564		1	34.1	3.54	106	0.8	0.01	<0.005	0.016	0.002	0.08	0.6	0.03	<0.02	<0.5	0.6
R863567		1	30.2	3.13	95	0.6	0.01	0.007	0.017	0.001	0.09	0.5	<0.01	<0.02	<0.5	0.6
R863573		<1	13.7	1.47	28	0.3	0.01	<0.005	0.011	<0.001	0.11	0.2	0.02	0.03	<0.5	<0.5
R863582		1	8.2	0.83	29	0.1	0.01	<0.005	<0.005	<0.001	0.08	0.2	<0.01	<0.02	<0.5	0.5



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Sample Description	Method Analyte Units LOR	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	Au-ICP21
		Co	Cu	Li	Mo	Ni	Pb	Sc	Zn	Au
		ppm 1	ppm 1	ppm 10	ppm 1	ppm 1	ppm 2	ppm 1	ppm 2	ppm 0.001
R863532		19	43	20	2	68	13	11	79	0.001
R863535		29	71	70	2	94	14	18	60	0.002
R863538		29	111	40	1	178	9	12	80	0.002
R863545		53	8	40	<1	454	12	27	92	<0.001
R863549		48	97	10	1	63	6	37	155	<0.001
R863553		61	17	20	<1	470	3	23	83	<0.001
R863559		44	107	20	1	85	11	40	127	<0.001
R863562		47	58	10	1	77	2	38	123	0.004
R863564		45	67	<10	1	82	<2	40	117	0.001
R863567		45	142	10	1	33	<2	39	112	0.002
R863573		49	28	10	1	128	<2	43	103	<0.001
R863582		64	53	20	1	542	2	27	83	0.001



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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-ICP21

C-IR07

CRU-31

CRU-QC

LOG-22

ME-4ACD81

ME-ICP06

ME-MS42

ME-MS81

OA-GRA05

PUL-31

PUL-QC

S-IR08

SPL-21

TOT-ICP06

WEI-21