



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

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

Page: 1
Total # Pages: 2 (A - E)
Plus Appendix Pages
Finalized Date: 24-JUN-2017
This copy reported on
29-JUN-2017
Account: AAMICLSR

CERTIFICATE VA17108895

This report is for 12 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 31-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
LOG-24	Pulp Login - Rcd w/o Barcode

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

To: **ANGLOGOLD ASHANTI MINNESOTA INC.**
ATTN: ANDREW TYRELL
3404 15TH AVE E. UNIT#1
HIBBING CO 55476
USA

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



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

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

Page: 2 - A
 Total # Pages: 2 (A - E)
 Plus Appendix Pages
 Finalized Date: 24-JUN-2017
 Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

Sample Description	Method Analyte Units LOR	WEI-21	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05
		Recvd Wt. kg	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %	LOI %
		0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
R863585		1.70	47.9	13.50	13.75	9.77	5.54	2.29	0.10	0.02	1.21	0.21	0.10	0.01	<0.01	3.94
R863590		0.32	80.2	8.82	3.73	2.25	1.76	0.43	1.68	0.02	0.39	0.06	0.08	0.02	0.04	1.76
R863593		1.68	64.1	14.60	6.54	1.71	2.81	3.02	2.69	0.02	0.56	0.08	0.15	0.03	0.07	2.44
R863594		3.86	61.4	16.30	7.56	1.97	3.29	3.59	2.03	0.02	0.63	0.10	0.19	0.04	0.06	2.74
R863598		3.88	51.5	13.20	14.85	7.31	4.53	3.22	0.33	<0.01	1.32	0.22	0.10	0.01	0.01	2.94
R863601		3.08	42.6	14.25	15.35	12.60	5.15	2.50	0.16	<0.01	1.45	0.23	0.12	0.01	<0.01	4.09
R863621		0.36	51.5	13.85	12.85	8.86	5.31	2.82	0.33	0.02	1.06	0.24	0.09	0.02	0.01	1.45
R863622		0.28	49.2	13.15	14.15	4.69	7.67	3.11	2.82	0.01	1.36	0.24	0.10	0.01	0.03	2.48
R863633		7.88	49.5	13.25	14.55	8.64	4.48	2.36	0.58	0.01	1.73	0.19	0.15	0.01	0.02	4.13
R863640		3.80	51.0	13.30	16.15	9.05	5.09	2.24	0.15	0.01	1.84	0.21	0.16	0.01	<0.01	1.45
R863645		3.24	48.7	14.05	14.90	9.83	7.56	1.65	0.25	0.01	1.22	0.22	0.11	0.01	0.01	1.38
R863652		6.70	49.3	13.30	13.85	9.17	4.60	5.00	0.29	<0.01	1.31	0.18	0.14	0.03	0.01	2.35



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

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

Page: 2 - B
 Total # Pages: 2 (A - E)
 Plus Appendix Pages
 Finalized Date: 24-JUN-2017
 Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

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
R863585		98.34	0.74	0.13	29.0	12.6	110	0.09	5.32	3.46	1.03	17.7	4.33	<5	2.6	1.10
R863590		101.24	0.04	0.16	359	23.6	100	1.19	1.35	0.74	0.46	11.0	1.48	<5	1.5	0.25
R863593		98.82	0.04	0.04	615	46.2	140	1.59	2.26	1.33	0.89	18.1	2.70	<5	3.4	0.45
R863594		99.92	0.01	0.07	512	47.9	160	1.77	2.40	1.46	0.94	20.6	2.68	<5	3.6	0.46
R863598		99.54	0.35	0.14	82.5	12.6	10	0.21	4.94	3.16	1.05	16.8	4.15	<5	2.5	1.05
R863601		98.51	0.79	0.14	24.1	14.1	20	0.02	5.33	3.45	1.10	23.3	4.56	<5	2.6	1.18
R863621		98.41	0.27	0.06	77.3	12.9	130	0.13	4.31	2.79	0.92	17.7	3.92	<5	2.4	0.91
R863622		99.02	0.17	0.03	246	12.0	100	3.11	4.97	3.18	1.13	17.9	4.26	<5	2.5	1.07
R863633		99.60	0.58	0.07	192.0	26.3	50	1.07	6.02	3.58	1.68	24.9	5.69	<5	3.5	1.18
R863640		100.66	0.09	0.11	28.7	21.8	40	0.04	6.28	3.80	1.51	24.6	5.91	<5	3.5	1.26
R863645		99.90	0.06	0.15	47.4	14.1	100	0.13	5.75	3.71	1.11	17.9	4.89	<5	2.9	1.24
R863652		99.53	0.52	0.52	54.9	21.9	20	0.10	7.67	4.96	1.34	18.6	6.52	<5	4.4	1.59



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

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

Page: 2 - C
 Total # Pages: 2 (A - E)
 Plus Appendix Pages
 Finalized Date: 24-JUN-2017
 Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

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
R863585		4.8	0.51	3.7	9.8	2.02	1.9	3.23	1	115.0	0.1	0.82	0.44	0.50	0.13	344
R863590		11.9	0.07	3.6	10.2	2.82	69.1	2.07	1	132.5	0.1	0.26	3.25	0.08	1.04	75
R863593		23.8	0.18	5.8	19.3	5.34	80.7	3.42	1	283	0.3	0.41	7.02	0.18	1.30	117
R863594		23.4	0.20	6.2	20.0	5.73	65.9	3.60	1	364	0.3	0.40	8.06	0.21	1.30	138
R863598		4.8	0.46	3.8	9.7	2.01	7.6	3.32	1	104.0	0.1	0.77	0.41	0.46	0.12	391
R863601		5.6	0.49	3.8	11.2	2.23	1.0	3.67	1	72.1	0.1	0.84	0.43	0.53	0.10	415
R863621		5.4	0.39	3.0	9.3	1.98	6.4	2.93	1	215	<0.1	0.73	0.69	0.39	0.25	314
R863622		4.6	0.45	3.5	9.4	1.89	60.1	3.10	1	65.8	0.1	0.76	0.38	0.45	0.12	400
R863633		11.2	0.49	5.9	17.9	3.90	17.5	4.94	1	134.0	0.2	0.95	0.89	0.50	0.36	415
R863640		8.8	0.52	6.0	16.2	3.45	1.9	4.91	1	45.3	0.2	1.00	0.60	0.54	0.15	436
R863645		5.1	0.56	4.4	10.8	2.25	5.1	3.65	1	92.4	0.1	0.90	0.49	0.54	0.13	332
R863652		8.6	0.74	6.4	16.2	3.50	7.4	5.09	1	267	0.3	1.19	0.82	0.76	0.27	338



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

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

Page: 2 - D
 Total # Pages: 2 (A - E)
 Plus Appendix Pages
 Finalized Date: 24-JUN-2017
 Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

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
R863585		1	30.1	3.45	92	0.3	0.02	<0.005	0.022	0.001	<0.05	0.3	0.01	<0.02	<0.5	0.6
R863590		1	6.6	0.62	55	0.6	0.08	<0.005	0.017	0.001	<0.05	0.2	0.03	0.09	<0.5	<0.5
R863593		1	12.6	1.36	128	1.0	0.19	<0.005	0.028	0.001	0.08	0.4	0.02	0.03	<0.5	<0.5
R863594		1	12.5	1.47	137	1.1	0.22	<0.005	0.033	0.001	0.09	0.4	0.04	0.05	<0.5	<0.5
R863598		1	26.9	3.00	89	0.5	0.01	<0.005	0.013	0.001	<0.05	0.4	0.02	<0.02	<0.5	<0.5
R863601		1	30.8	3.22	91	0.3	0.01	<0.005	0.014	0.002	<0.05	0.5	0.01	<0.02	<0.5	0.8
R863621		2	24.8	2.74	82	0.2	0.01	<0.005	0.018	0.002	<0.05	0.2	0.01	0.02	<0.5	0.7
R863622		1	27.7	3.02	86	0.1	<0.01	<0.005	0.020	0.002	<0.05	0.3	<0.01	0.13	<0.5	2.2
R863633		180	31.2	3.25	129	0.7	0.03	<0.005	0.051	0.001	0.06	0.5	0.01	0.09	<0.5	<0.5
R863640		3	33.7	3.56	123	0.2	0.01	<0.005	0.022	0.002	<0.05	0.5	0.01	<0.02	<0.5	0.6
R863645		2	32.6	3.70	108	0.1	0.01	<0.005	0.017	0.001	<0.05	0.5	0.01	<0.02	<0.5	0.6
R863652		6	42.9	4.98	155	0.4	0.04	<0.005	0.014	0.002	0.06	0.6	0.04	<0.02	<0.5	0.6



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

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

Page: 2 - E
 Total # Pages: 2 (A - E)
 Plus Appendix Pages
 Finalized Date: 24-JUN-2017
 Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

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
R863585		46	120	10	<1	67	<2	40	107	<0.001
R863590		14	48	30	1	48	6	10	44	<0.001
R863593		20	51	20	1	59	13	13	78	<0.001
R863594		25	51	30	<1	68	14	15	86	<0.001
R863598		43	159	10	<1	28	<2	40	110	0.001
R863601		44	164	10	<1	33	<2	44	104	0.003
R863621		47	95	10	<1	90	<2	36	83	<0.001
R863622		43	114	20	<1	55	<2	40	94	<0.001
R863633		63	112	20	<1	34	<2	34	111	<0.001
R863640		41	133	10	<1	31	<2	36	121	<0.001
R863645		54	102	10	<1	115	<2	27	100	<0.001
R863652		39	61	10	1	35	2	39	124	<0.001



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

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

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 24-JUN-2017
Account: AAMICLSR

CERTIFICATE OF ANALYSIS VA17108895

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

LOG-24

ME-4ACD81

ME-ICP06

ME-MS42

ME-MS81

OA-GRA05

PUL-31

PUL-QC

S-IR08

SPL-21

TOT-ICP06

WEI-21