



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Fireweed Zinc Ltd.**  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6 Canada

Submitted By: Confirmation & Email Distribution List  
Receiving Lab: Canada-Whitehorse  
Received: July 10, 2019  
Report Date: August 03, 2019  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

WHI19000186.1

### CLIENT JOB INFORMATION

Project: MacMillan Pass  
Shipment ID: FWZ19-BV-008  
P.O. Number  
Number of Samples: 107

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days  
RTRN-RJT Return After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-500	103	Crush, split and pulverize 500g rock to 200 mesh			WHI
SLBHP	4	Sort, label and box pulps			WHI
CRUBW	103	Extra clean rock wash between samples in crusher			WHI
PULSW	103	Extra Wash with Silica between each sample			WHI
AQ270	107	1:1:1 Aqua Regia digestion ICP-ES/ICP-MS analysis	1	Completed	VAN
LF725	107	Li2B4O7/LiBO2 fusion, analysis by XRF		Completed	VAN
TC000	107	Total C/S Analysis by Leco	0.1	Completed	VAN
TC007	107	Graphite and Organic C by Leco After Ignition	0.1	Completed	VAN
TC006	107	Inorganic Carbon	0.2	Completed	VAN
TC009	107	Sulfide and Sulfate	0.1	Completed	VAN
SHP01	107	Per sample shipping charges for branch shipments			VAN

### ADDITIONAL COMMENTS

V205 from LF725 is Qualitative Data only.

Invoice To: Fireweed Zinc Ltd.  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6  
Canada

CC: Gilles Dessureau  
Moir Cruickshanks



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Page:

2 of 5

Part:

1 of 3

# CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202058	Rock	1.94	52.4	768.0	68.9	396	3.4	111.9	21.3	817	8.63	111	23.2	5.5	46	2.0	5.2	<0.5	235	0.31	0.192
3202059	Rock	1.53	85.4	1426.4	87.3	384	3.6	155.7	16.9	976	12.38	176	13.6	2.5	17	1.8	6.5	<0.5	288	0.16	0.214
3202060	Rock Pulp	0.03	4.1	466.8	33413.7	49439	59.4	17.2	43.4	2246	7.34	152	1.5	6.2	25	170.7	46.8	<0.5	15	4.91	0.050
3202061	Rock	1.57	46.3	230.5	147.2	149	1.3	278.8	35.9	2338	8.97	206	25.2	7.8	134	0.8	12.8	<0.5	252	0.99	0.373
3202062	Rock	2.03	59.9	390.1	120.8	193	1.7	239.1	36.5	2172	9.61	176	30.9	8.3	123	1.2	12.2	<0.5	334	0.99	0.369
3202063	Rock	2.22	26.0	144.3	77.1	137	1.4	139.5	14.8	1048	4.76	105	12.2	5.3	208	<0.5	13.9	<0.5	141	3.67	0.698
3202064	Rock	2.14	12.8	66.3	42.4	273	0.8	116.4	10.5	1245	3.65	81	6.4	4.4	265	1.7	9.3	<0.5	93	4.91	0.683
3202065	Rock	2.04	4.6	101.7	40.5	868	0.7	119.7	8.9	302	1.61	118	6.8	4.1	190	5.7	8.0	1.1	48	3.37	1.052
3202066	Rock	2.11	11.6	125.2	53.7	543	1.5	89.5	8.5	376	2.41	85	9.6	3.8	147	4.4	8.7	<0.5	115	2.02	0.866
3202067	Rock	1.65	4.2	64.4	52.0	85	1.0	69.7	4.3	145	1.27	59	4.9	2.5	95	0.7	6.5	<0.5	60	1.48	0.629
3202068	Rock	1.27	12.0	112.4	69.1	181	1.3	97.7	8.8	460	2.29	84	10.6	3.8	128	1.5	7.4	<0.5	113	1.75	0.745
3202074	Rock	2.85	15.5	123.8	26.3	129	0.8	82.8	20.0	1576	5.35	35	3.6	8.8	82	3.0	11.7	<0.5	30	1.41	0.142
3202075	Rock	2.28	9.5	202.0	48.1	125	1.2	70.7	16.4	2415	5.03	41	4.0	8.8	210	3.8	7.1	<0.5	57	3.75	0.381
3202076	Rock	3.04	4.9	126.1	23.1	46	0.6	57.0	23.6	737	2.86	62	2.2	7.0	73	1.0	5.6	<0.5	30	1.11	0.115
3202077	Rock	4.00	5.5	143.7	17.6	119	0.7	50.1	18.0	1035	3.62	34	2.0	7.1	52	0.8	5.9	<0.5	29	0.76	0.233
3202078	Rock	3.18	5.5	111.5	19.1	59	<0.5	82.0	21.3	1325	4.51	56	2.3	7.0	21	0.8	4.8	<0.5	24	0.36	0.074
3202079	Rock	2.75	7.1	68.2	16.9	72	<0.5	54.0	17.7	957	3.17	46	2.1	8.0	21	0.5	4.7	<0.5	31	0.33	0.055
3202080	Rock	0.80	1.4	54.4	2.6	41	<0.5	4.8	10.8	454	3.10	<5	0.9	2.6	105	<0.5	<0.5	<0.5	110	1.20	0.059
3202083	Rock	3.37	6.2	404.6	24.4	102	0.6	57.9	21.5	2199	3.19	31	3.2	7.8	11	3.0	6.2	<0.5	30	0.11	0.128
3202084	Rock	3.69	5.8	364.5	23.0	82	0.7	54.3	20.9	1835	3.11	29	3.1	8.3	11	2.7	6.4	<0.5	30	0.10	0.118
3202085	Rock	3.53	7.6	289.2	25.7	90	0.8	94.1	25.7	1811	5.26	50	2.4	7.7	21	3.6	6.1	<0.5	34	0.31	0.084
3202086	Rock	4.98	3.7	156.9	12.0	85	<0.5	46.4	12.5	466	2.73	45	1.5	5.2	23	1.1	3.5	<0.5	21	0.24	0.056
3202087	Rock	4.29	3.6	168.4	11.4	65	<0.5	43.7	12.6	654	2.64	41	1.4	5.4	46	1.0	3.4	<0.5	25	0.46	0.077
3202088	Rock	4.50	2.4	120.2	8.3	52	<0.5	26.9	9.1	1064	3.54	21	0.8	1.9	39	0.8	2.3	<0.5	13	1.03	0.035
3202089	Rock	2.91	1.8	96.6	3.9	30	<0.5	17.4	7.8	934	2.69	15	0.9	1.3	85	0.9	2.2	<0.5	14	1.42	0.040
3202090	Rock	2.77	8.2	119.5	16.9	30	<0.5	26.7	12.3	664	2.19	22	1.0	1.3	40	0.5	4.3	<0.5	19	0.77	0.031
3202091	Rock	2.58	21.3	43.0	46.0	6	0.7	21.1	3.4	66	0.67	7	1.3	1.5	16	<0.5	3.7	<0.5	66	0.03	0.013
3202092	Rock	1.68	22.2	114.9	59.9	<5	0.8	13.9	3.0	57	0.54	5	1.4	1.3	29	<0.5	3.2	<0.5	72	0.01	0.011
3202093	Rock	2.81	22.1	380.4	47.3	8	3.2	37.0	10.7	54	1.09	33	1.1	1.2	16	<0.5	4.9	<0.5	67	0.01	0.008
3202094	Rock	2.38	14.9	219.7	63.0	35	1.6	43.2	18.5	70	2.40	57	2.0	1.7	43	<0.5	14.8	<0.5	56	0.10	0.066



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Page:

2 of 5

Part:

2 of 3

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Method Analyte Unit MDL		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
3202058	Rock	30.8	27.0	0.05	247	0.006	0.77	<0.01	0.10	<0.5	0.20	5.9	<0.5	0.62	<5	15	68.06	7.50	13.43	0.46	0.24
3202059	Rock	11.5	19.9	0.05	215	0.003	0.37	<0.01	0.11	1.2	0.20	4.0	<0.5	1.14	<5	33	65.28	4.55	19.22	0.24	0.18
3202060	Rock Pulp	21.7	14.6	2.60	226	0.017	0.99	0.01	0.66	0.5	0.72	3.2	45.9	8.00	<5	<2	38.33	7.64	10.89	6.90	4.88
3202061	Rock	51.0	53.6	0.24	261	0.009	1.25	<0.01	0.12	0.8	0.17	8.1	<0.5	2.46	<5	11	59.03	9.79	13.65	1.47	0.55
3202062	Rock	56.8	66.7	0.24	317	0.011	1.51	<0.01	0.15	1.5	0.20	9.3	<0.5	1.81	<5	13	56.37	10.27	14.38	1.43	0.52
3202063	Rock	21.7	27.3	0.99	170	0.004	0.60	<0.01	0.14	1.5	0.25	2.8	<0.5	1.88	<5	4	60.58	7.32	7.31	5.28	1.91
3202064	Rock	18.5	22.7	1.23	260	0.004	0.50	<0.01	0.18	0.6	0.25	3.3	<0.5	1.30	<5	2	60.60	6.14	5.59	6.98	2.29
3202065	Rock	17.9	16.8	0.43	180	0.005	0.44	<0.01	0.19	0.8	0.61	1.4	<0.5	1.12	<5	3	71.95	5.00	2.57	4.89	0.97
3202066	Rock	18.2	23.7	0.12	172	0.007	0.58	<0.01	0.14	1.8	0.37	2.0	0.5	1.12	<5	7	77.96	4.21	3.78	2.96	0.33
3202067	Rock	10.5	17.3	0.08	116	0.003	0.25	<0.01	0.12	1.3	0.17	1.0	<0.5	0.86	<5	4	84.07	3.20	2.02	2.23	0.25
3202068	Rock	23.5	31.0	0.10	178	0.007	0.66	<0.01	0.14	1.9	0.20	2.5	<0.5	0.85	<5	5	78.31	4.90	3.55	2.59	0.31
3202074	Rock	24.5	5.3	0.49	174	0.002	0.38	<0.01	0.21	<0.5	0.25	4.8	<0.5	0.49	<5	3	63.46	11.62	8.24	2.10	1.24
3202075	Rock	20.9	11.9	1.10	256	0.003	0.58	<0.01	0.28	0.6	0.15	5.1	<0.5	0.77	<5	7	56.92	11.27	7.84	5.27	2.23
3202076	Rock	23.4	7.7	0.34	191	0.002	0.42	<0.01	0.23	<0.5	0.16	3.6	<0.5	1.20	<5	3	69.48	11.80	4.72	1.64	0.95
3202077	Rock	27.2	9.5	0.28	249	0.003	0.49	<0.01	0.30	0.6	0.11	3.1	<0.5	0.88	<5	<2	71.71	10.40	5.81	1.12	0.75
3202078	Rock	21.6	6.8	0.25	155	0.003	0.38	<0.01	0.20	0.8	0.13	3.4	<0.5	1.14	<5	4	70.86	11.26	7.22	0.52	0.66
3202079	Rock	25.6	6.7	0.15	160	0.001	0.38	<0.01	0.25	<0.5	0.10	2.3	<0.5	0.99	<5	5	70.62	12.38	5.23	0.49	0.55
3202080	Rock	8.0	5.2	0.90	186	0.198	2.16	0.31	0.32	<0.5	<0.05	3.6	<0.5	<0.05	6	<2	61.04	16.92	6.44	6.24	2.93
3202083	Rock	28.5	9.0	0.02	193	0.002	0.41	<0.01	0.21	1.2	0.14	4.9	<0.5	0.22	<5	<2	72.53	12.15	5.23	0.18	0.36
3202084	Rock	27.1	8.2	0.02	218	0.002	0.46	<0.01	0.22	1.1	0.12	4.4	<0.5	0.23	<5	3	72.43	11.98	5.10	0.16	0.37
3202085	Rock	22.6	8.5	0.13	201	0.002	0.39	<0.01	0.22	0.5	0.14	4.9	<0.5	0.46	<5	3	69.58	11.28	8.28	0.46	0.50
3202086	Rock	17.2	7.3	0.06	141	0.003	0.38	<0.01	0.21	0.6	0.07	2.4	<0.5	0.50	<5	<2	79.00	9.13	4.47	0.37	0.33
3202087	Rock	14.5	7.8	0.13	324	0.002	0.31	<0.01	0.17	1.4	<0.05	2.7	<0.5	0.53	<5	<2	78.73	7.80	4.31	0.68	0.41
3202088	Rock	6.6	8.5	0.42	66	<0.001	0.15	<0.01	0.08	6.8	<0.05	2.2	<0.5	0.29	<5	<2	82.79	3.39	5.61	1.60	0.81
3202089	Rock	4.6	7.2	0.46	63	0.001	0.14	<0.01	0.07	5.3	0.05	2.6	<0.5	0.42	<5	<2	84.69	2.18	4.13	2.07	0.81
3202090	Rock	6.3	7.6	0.25	59	0.001	0.14	<0.01	0.08	16.8	0.07	1.8	<0.5	0.44	<5	<2	86.65	3.23	3.49	1.15	0.50
3202091	Rock	14.4	6.4	<0.01	99	0.001	0.18	<0.01	0.11	1.0	0.14	<0.5	<0.5	0.20	<5	6	88.24	3.61	1.20	0.06	0.10
3202092	Rock	13.3	7.3	<0.01	102	0.001	0.16	<0.01	0.08	2.6	0.13	2.2	<0.5	0.14	<5	9	90.57	2.84	0.98	0.03	0.10
3202093	Rock	10.8	7.7	<0.01	93	<0.001	0.14	<0.01	0.09	2.6	0.13	1.0	<0.5	0.68	<5	14	89.75	2.69	1.91	0.04	0.08
3202094	Rock	14.8	9.1	<0.01	114	0.001	0.17	<0.01	0.09	1.9	0.41	1.3	<0.5	1.50	<5	13	86.87	2.99	3.74	0.17	0.09



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**Page:** 2 of 5

**Part:** 3 of 3

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	Method Analyte Unit MDL	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05
3202058	Rock	0.93	0.12	0.66	0.47	0.01	0.08	0.06	<0.01	0.04	7.51	99.62	0.22	3.14	0.59	2.53	0.55	0.22	0.42
3202059	Rock	0.98	0.16	0.24	0.31	<0.01	0.06	0.21	<0.01	0.03	8.15	99.71	0.26	3.49	1.12	2.83	0.52	0.49	0.87
3202060	Rock Pulp	3.57	0.30	0.26	0.12	<0.01	0.09	0.03	3.49	4.94	16.56	99.69	<0.01	3.22	7.94	0.46	<0.02	10.08	4.31
3202061	Rock	0.88	0.33	0.98	0.86	0.02	0.09	0.03	<0.01	0.01	12.07	99.80	0.16	4.64	2.40	3.37	0.46	2.96	1.86
3202062	Rock	0.96	0.31	1.03	0.84	0.02	0.09	0.02	<0.01	0.02	12.17	98.46	0.20	4.91	1.83	3.69	0.48	2.70	1.32
3202063	Rock	1.57	0.16	0.58	1.10	0.02	0.12	0.04	<0.01	0.01	12.95	98.98	0.12	6.72	1.93	4.79	0.67	4.61	1.38
3202064	Rock	1.45	0.18	0.41	1.62	0.01	0.11	<0.01	<0.01	0.03	13.65	99.11	0.06	6.92	1.31	4.75	0.46	6.26	0.89
3202065	Rock	1.27	0.06	0.24	2.55	<0.01	0.09	<0.01	<0.01	0.09	9.84	99.59	0.04	6.96	1.18	5.16	1.31	1.82	0.93
3202066	Rock	0.87	0.07	0.27	1.94	0.01	0.06	0.02	<0.01	0.06	7.10	99.68	0.09	4.86	1.18	4.33	0.37	0.57	0.98
3202067	Rock	0.81	0.04	0.17	1.46	<0.01	0.07	<0.01	<0.01	<0.01	5.22	99.56	0.06	3.92	0.91	2.69	1.14	0.32	0.81
3202068	Rock	0.94	0.08	0.34	1.73	0.02	0.08	<0.01	<0.01	0.02	6.85	99.74	0.09	4.64	0.92	3.81	0.66	0.62	0.75
3202074	Rock	3.10	0.21	0.48	0.34	0.01	0.20	<0.01	<0.01	0.01	8.67	99.77	0.04	3.94	0.51	3.18	0.15	2.24	0.11
3202075	Rock	2.99	0.32	0.46	0.84	0.02	0.21	0.12	<0.01	<0.01	10.75	99.35	0.07	3.55	0.80	1.92	0.08	5.70	0.30
3202076	Rock	3.18	0.12	0.63	0.31	0.01	0.21	<0.01	<0.01	<0.01	6.00	99.13	0.05	1.74	1.23	1.01	0.12	2.22	0.92
3202077	Rock	2.80	0.16	0.56	0.48	0.01	0.20	<0.01	<0.01	<0.01	5.33	99.40	0.04	1.46	0.87	0.86	0.07	1.92	0.60
3202078	Rock	3.01	0.18	0.64	0.14	0.01	0.18	<0.01	<0.01	<0.01	5.70	100.48	0.03	1.48	1.16	0.79	0.11	2.13	0.83
3202079	Rock	3.36	0.14	0.69	0.14	0.01	0.20	<0.01	<0.01	<0.01	5.10	98.99	0.06	1.33	0.94	0.80	0.12	1.46	0.72
3202080	Rock	1.59	0.15	0.57	0.14	<0.01	0.07	<0.01	<0.01	<0.01	0.92	100.39	0.03	0.05	<0.02	0.03	<0.02	0.09	<0.05
3202083	Rock	3.21	0.29	0.64	0.29	0.02	0.20	0.02	<0.01	<0.01	3.98	99.17	0.05	0.89	0.22	0.79	0.08	<0.08	0.10
3202084	Rock	3.18	0.26	0.66	0.28	0.02	0.22	0.03	<0.01	<0.01	4.10	98.87	0.05	0.89	0.22	0.79	0.08	<0.08	0.12
3202085	Rock	3.03	0.27	0.61	0.18	0.02	0.21	0.02	<0.01	<0.01	5.36	99.86	0.06	1.38	0.44	1.01	0.10	0.99	0.15
3202086	Rock	2.42	0.08	0.54	0.14	0.01	0.15	<0.01	<0.01	<0.01	3.64	100.35	0.03	1.09	0.50	0.81	0.17	0.38	0.35
3202087	Rock	2.04	0.10	0.46	0.18	0.01	0.15	0.08	<0.01	<0.01	3.62	98.64	0.03	1.04	0.49	0.61	0.11	1.16	0.27
3202088	Rock	0.87	0.16	0.23	0.09	<0.01	0.05	<0.01	<0.01	<0.01	4.54	100.14	<0.01	1.53	0.29	0.52	0.05	3.54	0.08
3202089	Rock	0.56	0.14	0.14	0.09	<0.01	0.02	<0.01	<0.01	<0.01	3.78	98.59	<0.01	1.26	0.42	0.33	<0.02	3.35	0.19
3202090	Rock	0.83	0.11	0.21	0.07	<0.01	0.06	<0.01	<0.01	<0.01	3.22	99.53	0.03	1.39	0.44	0.78	0.11	1.84	0.28
3202091	Rock	0.96	0.04	0.16	0.03	<0.01	0.08	<0.01	<0.01	<0.01	4.96	99.40	0.15	4.22	0.22	2.99	1.22	<0.08	0.21
3202092	Rock	0.76	0.03	0.15	0.03	<0.01	0.06	<0.01	<0.01	<0.01	4.68	100.22	0.16	4.09	0.16	2.50	1.58	<0.08	0.15
3202093	Rock	0.73	0.03	0.12	0.02	<0.01	0.06	0.11	<0.01	<0.01	4.35	99.93	0.13	3.47	0.70	2.70	0.77	<0.08	0.68
3202094	Rock	0.80	0.04	0.14	0.15	<0.01	0.06	<0.01	<0.01	<0.01	4.70	99.76	0.10	2.98	1.59	2.61	0.36	<0.08	1.55



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Fireweed Zinc Ltd.**  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6 Canada

**Project:** MacMillan Pass

**Report Date:** August 03, 2019

**Page:** 3 of 5

**Part:** 1 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

Method Analyte Unit MDL		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202095	Rock	2.39	13.8	274.9	43.0	27	1.5	44.9	14.0	273	2.28	51	1.4	2.0	28	<0.5	9.0	<0.5	50	0.06	0.033
3202098	Rock	3.61	0.9	38.1	16.7	110	<0.5	46.1	22.8	270	5.28	9	1.2	19.7	22	<0.5	0.9	<0.5	16	0.16	0.078
3202099	Rock	4.23	<0.5	29.5	44.6	108	<0.5	43.1	21.2	270	5.23	8	1.6	21.3	23	<0.5	<0.5	<0.5	16	0.18	0.084
3202100	Rock Pulp	0.03	3.2	343.8	>40000	107204	101.6	24.2	23.6	1371	7.94	147	1.3	7.4	18	336.6	171.4	0.6	<10	3.93	0.043
3202101	Rock	4.52	1.0	13.6	62.4	102	<0.5	32.4	20.8	321	4.84	15	1.1	19.0	18	<0.5	<0.5	<0.5	12	0.15	0.069
3202102	Rock	4.79	<0.5	36.0	17.1	101	<0.5	44.2	19.4	289	5.09	9	1.4	20.8	23	<0.5	0.6	<0.5	14	0.20	0.080
3202103	Rock	5.97	<0.5	33.4	29.4	98	<0.5	44.2	21.5	276	4.97	9	1.4	20.3	23	<0.5	0.9	<0.5	13	0.19	0.088
3202104	Rock	5.37	0.7	23.5	46.1	90	<0.5	39.9	25.6	223	4.35	13	1.1	19.4	18	<0.5	0.6	<0.5	12	0.13	0.059
3202105	Rock	5.68	<0.5	20.7	30.8	95	<0.5	38.0	21.0	271	5.14	6	1.2	20.6	18	<0.5	0.7	<0.5	13	0.15	0.065
3202106	Rock	4.79	<0.5	31.9	26.1	97	<0.5	44.0	24.5	259	4.97	11	1.3	21.3	21	<0.5	1.0	<0.5	13	0.17	0.075
3202107	Rock	4.44	<0.5	37.0	17.5	112	<0.5	45.3	23.0	232	5.18	5	1.2	20.1	23	<0.5	1.3	0.5	12	0.22	0.094
3202108	Rock	3.34	0.6	39.4	32.8	108	<0.5	48.5	25.7	218	4.77	7	1.4	19.5	18	<0.5	1.4	<0.5	12	0.14	0.056
3202109	Rock	2.52	0.7	23.7	41.9	126	<0.5	41.1	29.5	215	5.08	16	1.1	19.0	15	<0.5	0.8	<0.5	11	0.12	0.054
3202110	Rock	2.79	<0.5	23.0	13.9	118	<0.5	39.7	20.9	249	4.71	7	1.3	22.4	21	<0.5	0.9	<0.5	12	0.19	0.089
3202111	Rock	2.32	<0.5	22.1	14.3	110	<0.5	41.5	20.7	242	4.64	7	1.4	21.1	20	<0.5	0.9	<0.5	12	0.19	0.086
3202115	Rock	2.61	7.2	85.7	48.1	350	<0.5	100.3	30.7	166	5.01	80	1.9	12.3	21	<0.5	3.2	0.7	21	0.37	0.023
3202116	Rock	2.60	17.0	57.9	14.7	379	<0.5	75.6	27.5	287	3.36	44	2.7	13.4	42	0.6	1.3	<0.5	27	1.05	0.021
3202117	Rock	2.60	5.2	50.5	20.4	259	<0.5	56.2	21.4	261	3.01	37	2.1	12.9	47	<0.5	2.6	<0.5	21	1.15	0.025
3202118	Rock	1.78	6.5	63.0	84.7	272	<0.5	70.0	24.4	407	4.97	90	2.0	11.2	125	<0.5	6.1	0.6	21	1.96	0.021
3202119	Rock	4.85	5.5	49.2	101.3	334	<0.5	53.2	19.8	486	3.98	778	2.1	12.0	142	<0.5	3.7	0.5	18	2.16	0.030
3202126	Rock	2.24	<0.5	13.4	14.5	74	<0.5	24.6	6.8	401	3.98	14	1.1	18.6	12	<0.5	<0.5	<0.5	11	0.06	0.058
3202127	Rock	2.05	0.7	12.1	23.5	76	<0.5	25.5	7.3	404	4.06	10	1.6	22.2	13	<0.5	<0.5	<0.5	13	0.05	0.051
3202128	Rock	2.91	1.3	35.7	63.2	134	<0.5	26.5	7.6	429	5.05	28	2.4	22.2	14	<0.5	0.8	<0.5	14	0.06	0.094
3202129	Rock	2.58	1.0	21.2	12.2	100	<0.5	22.0	6.7	395	4.16	7	0.9	17.8	10	<0.5	<0.5	<0.5	12	0.07	0.056
3202130	Rock	3.26	1.2	11.2	41.4	109	<0.5	21.8	6.9	506	5.01	6	0.9	17.5	18	<0.5	<0.5	<0.5	16	0.11	0.054
3202131	Rock	2.99	0.5	15.6	17.5	110	<0.5	23.2	9.0	452	4.47	7	1.3	23.2	13	<0.5	<0.5	<0.5	15	0.12	0.067
3202132	Rock	2.61	1.9	29.3	25.3	111	<0.5	25.2	9.8	450	4.73	11	1.1	16.5	9	<0.5	<0.5	<0.5	14	0.09	0.056
3202133	Rock	2.78	0.7	14.0	79.5	122	<0.5	26.1	8.8	510	4.68	10	1.0	18.6	13	<0.5	<0.5	<0.5	16	0.10	0.069
3202134	Rock	2.25	1.6	16.6	125.9	117	<0.5	25.9	10.1	442	4.20	10	1.1	16.5	13	<0.5	<0.5	<0.5	15	0.09	0.081
3202135	Rock	2.10	0.9	24.5	18.2	125	<0.5	35.8	12.3	474	4.51	9	1.3	20.8	14	<0.5	<0.5	<0.5	16	0.06	0.073



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

Project:

MacMillan Pass

Report Date:

August 03, 2019

Page:

3 of 5

Part:

2 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

	Method Analyte Unit MDL	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
3202095	Rock	14.1	9.8	0.03	107	0.001	0.18	<0.01	0.11	2.2	0.30	1.8	<0.5	1.35	<5	12	85.97	3.89	3.62	0.11	0.15
3202098	Rock	61.7	32.1	0.89	54	0.002	2.52	<0.01	0.18	<0.5	<0.05	1.9	<0.5	0.42	6	<2	55.98	22.35	8.11	0.27	1.71
3202099	Rock	61.6	34.6	0.90	55	0.002	2.69	<0.01	0.26	<0.5	<0.05	1.9	<0.5	0.36	7	<2	53.21	24.26	8.10	0.28	1.77
3202100	Rock Pulp	18.1	12.6	2.11	83	0.012	0.76	<0.01	0.47	<0.5	4.59	2.5	44.5	11.15	<5	3	34.13	6.98	11.46	5.37	3.92
3202101	Rock	54.3	22.4	0.72	42	0.002	2.24	<0.01	0.20	0.9	<0.05	2.9	<0.5	0.54	6	<2	61.40	19.45	7.19	0.22	1.41
3202102	Rock	67.9	29.4	0.84	69	0.002	2.72	0.01	0.31	<0.5	<0.05	2.4	<0.5	0.43	7	<2	55.35	23.57	7.60	0.28	1.62
3202103	Rock	65.1	31.0	0.81	70	0.002	2.47	<0.01	0.24	<0.5	<0.05	3.3	<0.5	0.60	7	<2	56.78	22.17	7.40	0.27	1.61
3202104	Rock	62.0	27.0	0.68	68	0.002	2.27	0.01	0.31	0.6	<0.05	3.3	<0.5	0.66	6	<2	58.97	21.39	6.57	0.20	1.35
3202105	Rock	62.7	27.5	0.80	54	0.002	2.46	<0.01	0.21	<0.5	<0.05	3.2	<0.5	0.70	6	<2	58.10	21.32	7.77	0.23	1.55
3202106	Rock	65.0	30.7	0.78	130	0.002	2.49	0.01	0.28	<0.5	<0.05	2.8	<0.5	0.66	7	<2	57.22	22.45	7.47	0.23	1.51
3202107	Rock	62.1	32.5	0.84	53	0.002	2.53	<0.01	0.21	<0.5	<0.05	3.0	<0.5	0.80	6	<2	54.49	23.68	7.88	0.32	1.63
3202108	Rock	60.7	29.9	0.74	72	0.001	2.37	0.01	0.28	<0.5	<0.05	3.1	<0.5	0.85	6	<2	53.23	24.91	7.24	0.22	1.47
3202109	Rock	56.9	25.4	0.71	47	0.001	2.23	<0.01	0.22	<0.5	0.06	3.2	<0.5	1.25	5	<2	56.64	22.60	7.63	0.18	1.39
3202110	Rock	66.3	29.8	0.72	66	0.002	2.37	0.01	0.28	<0.5	<0.05	3.6	<0.5	0.78	7	<2	56.03	23.70	7.08	0.27	1.45
3202111	Rock	63.3	28.3	0.72	51	0.001	2.29	<0.01	0.23	<0.5	<0.05	3.1	<0.5	0.73	6	<2	55.78	23.48	6.96	0.27	1.40
3202115	Rock	36.3	10.4	0.49	110	0.002	1.03	<0.01	0.30	<0.5	<0.05	3.2	<0.5	3.03	<5	2	59.15	17.52	7.91	0.51	1.49
3202116	Rock	40.4	10.1	0.78	114	0.002	0.97	<0.01	0.33	<0.5	<0.05	2.9	<0.5	1.41	<5	<2	59.05	17.73	5.57	1.45	1.96
3202117	Rock	42.9	8.8	0.71	111	0.002	0.96	<0.01	0.38	<0.5	<0.05	2.8	<0.5	1.09	<5	<2	58.61	18.40	5.00	1.58	1.86
3202118	Rock	33.0	6.8	0.92	87	0.001	0.73	<0.01	0.25	<0.5	<0.05	3.1	<0.5	2.73	<5	<2	55.83	16.34	7.80	2.70	2.16
3202119	Rock	34.7	7.7	0.95	105	0.002	0.78	<0.01	0.30	<0.5	<0.05	3.1	<0.5	1.73	<5	<2	56.18	16.31	6.23	2.88	2.20
3202126	Rock	47.1	22.2	0.84	55	0.001	2.26	0.01	0.19	0.8	<0.05	2.5	<0.5	0.16	6	<2	63.43	19.47	5.95	0.10	1.57
3202127	Rock	66.4	27.4	0.90	69	0.001	2.54	0.02	0.24	0.5	<0.05	2.8	<0.5	0.06	6	<2	52.87	26.43	6.16	0.09	1.75
3202128	Rock	59.1	22.3	0.89	55	0.001	2.52	0.01	0.20	2.3	<0.05	3.4	<0.5	0.06	7	<2	57.54	22.36	7.57	0.12	1.68
3202129	Rock	38.5	20.4	0.86	38	0.001	2.24	<0.01	0.14	4.4	<0.05	2.3	<0.5	0.17	6	<2	71.61	13.52	6.18	0.12	1.57
3202130	Rock	44.0	24.7	1.11	48	0.002	2.87	0.01	0.19	2.1	<0.05	3.8	<0.5	0.08	8	<2	69.73	13.22	7.32	0.20	1.94
3202131	Rock	55.3	28.0	0.97	51	0.001	2.64	0.01	0.20	1.5	<0.05	2.9	<0.5	0.14	8	<2	62.49	19.73	6.81	0.19	1.81
3202132	Rock	29.8	27.1	0.95	38	0.001	2.48	<0.01	0.14	3.2	<0.05	3.1	<0.5	0.31	7	<2	68.70	14.46	7.02	0.15	1.73
3202133	Rock	41.3	26.5	1.01	49	0.003	2.71	0.01	0.19	2.9	<0.05	3.1	<0.5	0.17	7	<2	65.22	17.06	7.01	0.18	1.84
3202134	Rock	39.2	27.0	0.83	43	0.001	2.24	<0.01	0.16	6.3	<0.05	2.7	<0.5	0.27	6	<2	66.80	16.82	6.42	0.16	1.56
3202135	Rock	60.1	32.9	0.89	71	0.001	2.60	0.02	0.27	<0.5	<0.05	3.2	<0.5	0.26	6	<2	57.99	22.35	6.80	0.12	1.68



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

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Report Date:

August 03, 2019

Page:

3 of 5

Part:

3 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

Method Analyte Unit MDL		LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05
3202095	Rock	1.04	0.05	0.19	0.09	<0.01	0.09	<0.01	<0.01	<0.01	4.76	100.00	0.10	2.84	1.38	2.29	0.47	0.30	1.31
3202098	Rock	5.09	0.05	0.83	0.17	0.02	0.10	<0.01	<0.01	0.01	5.00	99.85	0.01	0.59	0.41	0.55	0.04	<0.08	0.35
3202099	Rock	5.51	0.06	0.87	0.20	<0.01	0.09	<0.01	<0.01	0.01	4.89	99.45	0.01	0.40	0.34	0.37	0.03	<0.08	0.28
3202100	Rock Pulp	3.51	0.19	0.25	0.10	<0.01	0.06	0.02	4.82	10.71	10.80	95.57	<0.01	2.57	10.93	0.40	<0.02	7.93	5.56
3202101	Rock	4.35	0.06	0.82	0.15	<0.01	0.08	<0.01	<0.01	<0.01	3.95	99.31	0.01	0.34	0.55	0.30	0.03	<0.08	0.50
3202102	Rock	5.39	0.06	0.89	0.21	0.01	0.10	<0.01	<0.01	<0.01	4.35	99.68	0.01	0.31	0.40	0.28	0.02	<0.08	0.35
3202103	Rock	5.04	0.06	0.83	0.20	0.01	0.09	<0.01	<0.01	<0.01	4.22	98.92	0.02	0.30	0.57	0.27	0.02	<0.08	0.53
3202104	Rock	4.96	0.05	0.82	0.13	0.01	0.09	<0.01	<0.01	<0.01	4.04	98.83	0.01	0.27	0.64	0.24	0.03	<0.08	0.58
3202105	Rock	4.81	0.06	0.82	0.15	<0.01	0.09	0.02	<0.01	<0.01	4.18	99.34	0.01	0.21	0.64	0.18	<0.02	<0.08	0.58
3202106	Rock	5.11	0.06	0.83	0.17	<0.01	0.10	<0.01	<0.01	<0.01	4.25	99.65	0.01	0.26	0.60	0.23	0.02	<0.08	0.55
3202107	Rock	5.38	0.05	0.83	0.22	0.01	0.10	<0.01	<0.01	0.01	4.60	99.46	0.01	0.31	0.80	0.25	0.05	<0.08	0.73
3202108	Rock	5.86	0.06	0.84	0.13	0.01	0.12	<0.01	<0.01	<0.01	4.73	99.14	0.01	0.32	0.81	0.25	0.06	<0.08	0.74
3202109	Rock	5.21	0.05	0.82	0.13	0.01	0.09	<0.01	<0.01	0.01	4.51	99.53	0.01	0.25	1.25	0.21	0.03	<0.08	1.17
3202110	Rock	5.46	0.05	0.85	0.20	<0.01	0.09	<0.01	<0.01	<0.01	4.49	99.95	0.01	0.31	0.79	0.26	0.04	<0.08	0.73
3202111	Rock	5.46	0.05	0.85	0.18	0.01	0.10	<0.01	<0.01	<0.01	4.42	99.20	0.02	0.29	0.70	0.25	0.03	<0.08	0.64
3202115	Rock	5.04	0.04	0.76	0.06	0.01	0.13	<0.01	<0.01	0.03	6.80	99.58	0.04	1.63	2.93	1.37	0.08	0.65	2.61
3202116	Rock	5.16	0.06	0.77	0.05	<0.01	0.14	0.04	<0.01	0.04	7.60	99.77	0.05	2.62	1.39	1.92	0.20	1.87	1.13
3202117	Rock	5.47	0.06	0.78	0.06	<0.01	0.14	<0.01	<0.01	0.02	7.25	99.38	0.05	2.28	1.10	1.55	0.10	2.30	0.89
3202118	Rock	4.80	0.08	0.70	0.04	<0.01	0.14	<0.01	<0.01	0.03	8.82	99.58	0.05	2.57	2.74	1.36	0.14	3.93	2.35
3202119	Rock	4.80	0.08	0.71	0.05	<0.01	0.14	<0.01	<0.01	0.03	8.33	98.07	0.04	2.69	1.72	1.35	0.20	4.18	1.41
3202126	Rock	4.08	0.08	0.73	0.12	<0.01	0.09	<0.01	<0.01	<0.01	3.76	99.69	0.02	0.24	0.16	0.20	0.03	<0.08	0.10
3202127	Rock	5.78	0.08	0.92	0.12	0.02	0.12	<0.01	<0.01	<0.01	4.69	99.47	0.01	0.31	0.06	0.26	0.04	<0.08	<0.05
3202128	Rock	4.59	0.08	0.87	0.21	0.01	0.10	<0.01	<0.01	0.01	4.40	99.89	0.01	0.25	0.05	0.23	<0.02	<0.08	<0.05
3202129	Rock	2.48	0.07	0.61	0.11	<0.01	0.06	<0.01	<0.01	<0.01	2.89	99.45	<0.01	0.15	0.15	0.12	<0.02	<0.08	0.10
3202130	Rock	2.11	0.08	0.60	0.11	<0.01	0.04	<0.01	<0.01	<0.01	2.90	98.46	<0.01	0.18	0.07	0.14	<0.02	<0.08	<0.05
3202131	Rock	3.93	0.08	0.81	0.16	0.01	0.09	<0.01	<0.01	<0.01	3.88	100.31	0.01	0.29	0.13	0.24	0.04	<0.08	0.09
3202132	Rock	2.62	0.08	0.62	0.13	<0.01	0.05	<0.01	<0.01	<0.01	3.17	98.96	<0.01	0.14	0.29	0.10	0.04	<0.08	0.22
3202133	Rock	3.16	0.08	0.68	0.15	<0.01	0.06	<0.01	<0.01	0.01	3.51	99.20	<0.01	0.20	0.16	0.14	0.05	<0.08	0.09
3202134	Rock	3.32	0.08	0.64	0.16	<0.01	0.07	0.01	0.01	<0.01	3.53	99.86	0.01	0.22	0.25	0.13	0.08	<0.08	0.18
3202135	Rock	4.71	0.08	0.85	0.17	<0.01	0.10	<0.01	<0.01	0.01	4.37	99.56	0.01	0.26	0.23	0.20	0.06	<0.08	0.13





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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

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MacMillan Pass

Report Date:

August 03, 2019

Page:

4 of 5

Part:

1 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

Method Analyte Unit MDL		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202136	Rock	3.94	1.1	18.2	31.3	114	<0.5	34.5	11.6	503	4.70	9	1.3	22.8	14	<0.5	<0.5	<0.5	17	0.09	0.089
3202138	Rock	4.84	0.7	32.3	13.4	97	<0.5	29.8	16.5	409	5.37	6	1.3	16.3	16	<0.5	<0.5	<0.5	18	0.10	0.054
3202139	Rock	4.04	0.8	28.0	11.9	93	<0.5	31.0	15.2	397	5.51	<5	1.3	17.1	13	<0.5	<0.5	<0.5	17	0.09	0.045
3202140	Rock Pulp	0.03	7.1	1317.9	>40000	170308	199.7	21.4	112.4	3542	11.83	229	0.8	2.4	26	591.4	114.6	<0.5	<10	4.34	0.029
3202141	Rock	4.54	<0.5	51.4	15.0	151	<0.5	44.5	19.0	400	5.62	<5	1.4	17.4	13	<0.5	<0.5	<0.5	17	0.11	0.056
3202142	Rock	4.20	<0.5	48.3	12.6	141	<0.5	42.2	18.6	385	5.14	<5	1.6	18.2	16	<0.5	<0.5	<0.5	16	0.19	0.084
3202143	Rock	3.74	<0.5	44.1	24.8	146	<0.5	44.6	21.5	374	4.96	10	1.5	17.8	13	<0.5	<0.5	<0.5	14	0.14	0.058
3202144	Rock	4.04	<0.5	45.9	21.6	151	<0.5	46.1	20.5	431	5.15	<5	1.5	18.2	16	<0.5	<0.5	<0.5	16	0.18	0.082
3202145	Rock	4.26	<0.5	44.7	25.2	137	<0.5	38.0	15.8	420	5.09	<5	1.7	19.0	16	<0.5	<0.5	1.3	14	0.13	0.075
3202146	Rock	4.82	<0.5	35.6	36.6	187	<0.5	32.9	13.3	343	4.74	<5	1.7	17.4	17	<0.5	0.5	1.3	13	0.12	0.079
3202147	Rock	4.45	0.5	19.8	66.7	113	<0.5	32.9	29.0	333	4.14	23	1.4	18.4	16	<0.5	0.5	0.8	12	0.08	0.063
3202148	Rock	4.46	0.6	16.6	37.1	255	<0.5	34.6	17.0	381	4.46	20	1.4	19.1	19	<0.5	<0.5	0.5	14	0.10	0.079
3202149	Rock	4.72	0.8	20.6	33.2	266	<0.5	37.7	16.7	357	4.46	18	1.4	19.4	17	<0.5	<0.5	0.5	13	0.15	0.098
3202150	Rock	4.33	<0.5	34.5	35.5	159	<0.5	41.6	19.5	413	4.81	13	1.7	20.4	23	<0.5	<0.5	0.6	16	0.16	0.101
3202151	Rock	3.59	<0.5	37.1	14.8	140	<0.5	33.9	18.4	457	5.08	<5	1.6	18.9	17	<0.5	<0.5	<0.5	17	0.21	0.099
3202155	Rock	2.30	9.0	65.8	59.0	349	0.7	45.8	6.6	158	2.53	54	3.1	7.5	65	3.8	6.6	<0.5	55	1.50	0.328
3202156	Rock	2.62	5.8	107.4	40.3	317	1.4	41.2	8.5	230	2.55	41	2.7	7.7	145	4.5	3.5	<0.5	50	4.20	0.440
3202157	Rock	1.89	3.9	101.6	32.0	229	1.3	47.6	11.9	206	2.93	40	2.6	9.5	97	2.3	3.5	<0.5	35	2.77	0.302
3202158	Rock	2.48	6.1	110.3	18.1	306	1.4	35.8	10.0	232	2.90	33	3.6	9.1	114	3.8	3.7	<0.5	38	3.54	0.313
3202159	Rock	2.72	3.3	116.0	17.9	305	1.4	32.6	8.8	225	2.71	29	3.2	8.2	128	4.0	3.0	<0.5	39	3.91	0.481
3202160	Rock	0.95	1.1	48.8	1.9	35	<0.5	4.4	9.8	482	2.91	<5	0.9	2.6	100	<0.5	<0.5	<0.5	101	1.21	0.057
3202161	Rock	2.37	7.4	91.4	18.3	348	1.2	36.2	9.0	230	2.99	34	3.5	8.5	118	5.0	3.2	<0.5	46	3.50	0.291
3202162	Rock	1.73	7.3	91.5	17.7	335	1.1	35.7	9.8	215	2.90	33	3.3	8.0	111	4.3	3.2	<0.5	37	3.33	0.288
3202163	Rock	3.32	17.6	87.2	18.8	445	1.0	38.2	11.3	267	2.98	33	4.1	8.6	131	6.2	3.1	<0.5	49	4.09	0.226
3202164	Rock	2.59	6.8	89.1	16.4	347	1.2	31.7	10.1	266	2.73	32	3.1	8.1	161	4.2	3.1	<0.5	36	4.84	0.288
3202168	Rock	4.55	9.8	108.5	44.3	254	1.2	41.4	6.7	257	2.46	50	2.7	5.9	72	3.3	7.7	<0.5	46	2.75	0.365
3202169	Rock	4.67	11.9	153.4	24.1	264	1.3	51.2	7.1	212	1.92	42	5.1	5.3	122	3.7	11.2	<0.5	40	5.88	1.004
3202170	Rock	5.24	14.3	153.8	20.4	113	1.3	52.3	8.2	227	1.89	37	4.5	5.0	131	0.9	14.8	<0.5	37	6.57	0.955
3202171	Rock	3.20	11.2	164.7	22.6	414	1.4	55.2	8.6	165	2.08	38	4.3	4.6	109	4.3	8.0	<0.5	41	5.49	0.841
3202172	Rock	3.48	15.3	177.0	25.3	598	1.5	54.7	8.4	175	1.77	39	5.0	4.4	100	6.5	9.3	<0.5	52	4.99	0.772





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

Project:

MacMillan Pass

Report Date:

August 03, 2019

Page:

4 of 5

Part:

2 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

Method Analyte Unit MDL		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
3202136	Rock	56.5	35.3	0.97	60	0.002	2.68	0.01	0.21	1.0	<0.05	3.0	<0.5	0.23	7	<2	55.88	23.66	7.03	0.16	1.80
3202138	Rock	33.0	38.2	1.06	110	0.002	3.18	0.02	0.29	0.5	<0.05	3.1	<0.5	0.45	9	<2	56.73	22.08	8.08	0.16	1.94
3202139	Rock	34.2	41.1	1.11	95	0.002	3.14	0.01	0.23	<0.5	<0.05	2.2	<0.5	0.47	9	<2	54.64	22.61	8.09	0.15	2.02
3202140	Rock Pulp	6.8	13.7	2.01	148	0.006	0.45	<0.01	0.17	<0.5	2.23	2.1	66.1	19.08	<5	<2	14.45	2.51	17.49	6.09	3.60
3202141	Rock	37.8	36.9	1.16	59	0.002	3.18	0.01	0.23	<0.5	<0.05	2.7	<0.5	0.50	8	<2	54.48	23.21	8.37	0.17	2.12
3202142	Rock	36.9	37.3	1.08	70	0.002	3.13	0.02	0.28	<0.5	<0.05	2.7	<0.5	0.31	8	<2	55.41	23.31	7.72	0.28	1.99
3202143	Rock	31.8	35.0	1.01	50	0.001	2.74	0.01	0.24	<0.5	<0.05	3.4	<0.5	0.67	7	<2	56.13	22.95	7.44	0.20	1.82
3202144	Rock	34.1	40.0	1.09	59	0.002	3.13	0.02	0.28	<0.5	<0.05	3.9	<0.5	0.36	8	<2	55.06	23.66	7.77	0.26	2.03
3202145	Rock	40.5	36.6	1.04	57	0.002	2.95	<0.01	0.23	<0.5	<0.05	3.5	<0.5	0.26	8	<2	55.25	22.81	7.46	0.20	1.88
3202146	Rock	39.0	32.3	0.88	70	0.001	2.71	0.01	0.26	<0.5	<0.05	3.4	<0.5	0.10	7	<2	58.03	22.43	7.11	0.19	1.64
3202147	Rock	36.9	30.7	0.83	77	0.003	2.49	0.01	0.27	<0.5	<0.05	3.8	<0.5	0.60	7	<2	57.92	22.81	6.47	0.14	1.59
3202148	Rock	45.0	31.1	0.89	70	0.003	2.67	0.01	0.27	<0.5	<0.05	3.3	<0.5	0.46	7	<2	58.93	21.16	6.93	0.15	1.68
3202149	Rock	40.2	30.9	0.89	59	0.002	2.56	0.01	0.22	<0.5	<0.05	3.1	<0.5	0.44	7	<2	59.64	21.02	7.01	0.23	1.67
3202150	Rock	43.8	33.5	0.95	79	0.002	2.86	0.01	0.31	<0.5	<0.05	3.2	<0.5	0.37	8	<2	56.18	23.08	7.28	0.26	1.75
3202151	Rock	45.3	35.5	1.06	60	0.002	3.05	0.01	0.23	<0.5	<0.05	3.4	<0.5	0.15	8	<2	56.21	22.81	7.69	0.31	1.94
3202155	Rock	25.1	15.5	0.36	1193	0.008	0.80	<0.01	0.31	1.0	0.13	2.8	<0.5	0.19	<5	<2	71.66	10.40	4.12	2.22	1.15
3202156	Rock	25.7	15.8	1.57	541	0.006	0.68	<0.01	0.33	3.8	0.07	3.7	<0.5	0.59	<5	6	58.97	10.78	4.32	6.13	3.38
3202157	Rock	20.5	14.0	1.29	484	0.005	0.71	<0.01	0.41	2.6	0.10	3.8	<0.5	0.81	<5	5	60.47	12.13	4.86	3.90	2.98
3202158	Rock	19.0	8.7	1.69	322	0.004	0.63	<0.01	0.34	<0.5	0.07	3.7	<0.5	0.60	<5	6	57.70	12.24	4.81	5.01	3.61
3202159	Rock	24.8	11.8	1.68	404	0.006	0.75	<0.01	0.43	0.7	0.05	3.8	<0.5	0.50	<5	6	56.99	11.80	4.58	5.64	3.61
3202160	Rock	7.9	6.7	0.87	179	0.198	2.03	0.26	0.30	<0.5	<0.05	4.1	<0.5	<0.05	6	<2	60.99	16.90	6.28	6.32	2.88
3202161	Rock	18.1	9.9	1.75	385	0.004	0.69	<0.01	0.41	<0.5	0.08	3.5	<0.5	0.56	<5	7	57.12	11.81	5.04	5.09	3.74
3202162	Rock	16.9	9.0	1.66	311	0.004	0.57	<0.01	0.34	<0.5	0.06	3.3	<0.5	0.58	<5	7	57.23	11.75	5.07	5.02	3.72
3202163	Rock	16.7	9.6	1.98	331	0.004	0.67	<0.01	0.37	0.6	<0.05	3.6	<0.5	0.57	<5	7	55.24	11.66	5.03	5.98	4.17
3202164	Rock	17.8	8.4	2.16	313	0.004	0.49	<0.01	0.32	1.1	0.10	4.0	<0.5	0.53	<5	5	52.33	11.62	4.69	7.05	4.49
3202168	Rock	20.2	18.1	1.02	578	0.006	0.87	<0.01	0.31	0.8	0.16	2.9	<0.5	0.45	<5	6	67.27	9.54	3.96	3.97	2.17
3202169	Rock	17.3	13.6	1.78	289	0.009	0.71	<0.01	0.35	<0.5	0.12	3.1	<0.5	0.77	<5	8	55.83	9.16	3.11	8.22	3.51
3202170	Rock	17.6	18.2	2.28	304	0.010	0.79	<0.01	0.42	<0.5	0.09	3.7	<0.5	0.85	<5	6	53.50	9.00	3.12	9.44	4.44
3202171	Rock	14.7	15.7	1.74	240	0.008	0.69	<0.01	0.36	<0.5	0.09	3.0	<0.5	1.44	<5	10	57.22	9.41	3.37	7.79	3.57
3202172	Rock	15.7	15.8	1.70	265	0.008	0.74	<0.01	0.39	0.9	0.11	2.8	<0.5	1.09	<5	9	58.94	9.03	2.91	7.40	3.50



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

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Page:

4 of 5

Part: 3 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

Method Analyte Unit MDL		LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-	SO4
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05
3202136	Rock	4.96	0.09	0.91	0.20	0.01	0.11	<0.01	<0.01	<0.01	4.66	99.84	0.01	0.30	0.21	0.25	0.04	<0.08	0.14	0.20
3202138	Rock	4.42	0.08	0.83	0.14	0.01	0.09	<0.01	<0.01	<0.01	4.57	99.44	0.02	0.31	0.42	0.25	0.05	<0.08	0.34	0.24
3202139	Rock	4.52	0.07	0.83	0.12	0.01	0.10	<0.01	<0.01	<0.01	4.89	98.37	0.01	0.45	0.44	0.38	0.06	<0.08	0.37	0.21
3202140	Rock Pulp	0.94	0.48	0.08	0.06	<0.01	0.14	0.12	12.83	17.37	11.99	93.59	<0.01	3.03	18.73	0.68	<0.02	8.58	11.26	22.43
3202141	Rock	4.63	0.08	0.84	0.13	0.01	0.10	<0.01	<0.01	0.01	4.78	99.26	0.02	0.37	0.51	0.29	0.08	<0.08	0.41	0.29
3202142	Rock	4.74	0.08	0.85	0.20	0.01	0.09	<0.01	<0.01	0.01	4.63	99.63	0.02	0.41	0.29	0.33	0.07	<0.08	0.23	0.17
3202143	Rock	4.74	0.07	0.82	0.16	0.02	0.10	<0.01	<0.01	0.02	4.89	99.69	0.02	0.53	0.67	0.42	0.10	<0.08	0.60	0.20
3202144	Rock	4.82	0.07	0.83	0.20	<0.01	0.09	<0.01	<0.01	0.02	4.93	100.10	0.02	0.44	0.34	0.33	0.09	<0.08	0.29	0.17
3202145	Rock	4.69	0.07	0.81	0.18	0.02	0.10	<0.01	<0.01	0.05	4.64	98.48	0.02	0.37	0.25	0.25	0.10	<0.08	0.19	0.16
3202146	Rock	4.70	0.07	0.82	0.18	<0.01	0.10	<0.01	<0.01	0.02	4.54	100.17	0.02	0.38	0.08	0.29	0.08	<0.08	<0.05	0.16
3202147	Rock	4.94	0.06	0.84	0.16	<0.01	0.10	<0.01	<0.01	0.03	4.38	99.77	0.02	0.35	0.60	0.25	0.08	<0.08	0.54	0.19
3202148	Rock	4.42	0.07	0.79	0.20	<0.01	0.09	<0.01	<0.01	0.03	4.19	98.92	0.02	0.33	0.46	0.23	0.09	<0.08	0.39	0.23
3202149	Rock	4.36	0.07	0.83	0.25	<0.01	0.09	<0.01	<0.01	0.03	4.08	99.59	0.02	0.30	0.46	0.18	0.10	<0.08	0.38	0.24
3202150	Rock	4.87	0.07	0.86	0.25	0.01	0.11	<0.01	<0.01	0.02	4.48	99.56	0.03	0.33	0.37	0.21	0.11	<0.08	0.29	0.23
3202151	Rock	4.64	0.08	0.85	0.26	0.02	0.10	<0.01	<0.01	0.01	4.31	99.54	0.03	0.33	0.15	0.20	0.11	<0.08	0.10	0.14
3202155	Rock	2.94	0.04	0.46	0.77	<0.01	0.34	<0.01	<0.01	0.04	4.77	99.08	0.08	1.64	0.20	1.15	0.10	1.41	<0.05	0.54
3202156	Rock	3.28	0.05	0.42	1.04	<0.01	0.29	<0.01	<0.01	0.03	10.56	99.37	0.09	3.52	0.64	1.54	0.06	7.02	0.42	0.68
3202157	Rock	3.74	0.05	0.49	0.68	0.01	0.31	<0.01	<0.01	0.02	8.99	98.72	0.06	2.62	0.86	1.18	0.07	5.05	0.62	0.72
3202158	Rock	3.79	0.05	0.46	0.69	0.01	0.29	<0.01	<0.01	0.03	10.70	99.53	0.09	3.33	0.64	1.43	0.08	6.68	0.47	0.51
3202159	Rock	3.69	0.05	0.44	1.06	<0.01	0.29	0.01	<0.01	0.03	10.90	99.19	0.06	3.39	0.53	1.51	0.08	6.59	0.33	0.59
3202160	Rock	1.53	0.15	0.51	0.14	<0.01	0.07	<0.01	<0.01	<0.01	0.90	100.08	0.04	0.06	<0.02	<0.02	<0.02	0.15	<0.05	0.11
3202161	Rock	3.70	0.05	0.43	0.66	<0.01	0.28	<0.01	<0.01	0.04	11.32	99.40	0.09	3.68	0.61	1.59	0.11	7.26	0.40	0.64
3202162	Rock	3.64	0.05	0.44	0.67	0.01	0.28	<0.01	<0.01	0.04	11.18	99.20	0.08	3.64	0.67	1.55	0.19	6.96	0.47	0.59
3202163	Rock	3.58	0.06	0.47	0.53	<0.01	0.26	<0.01	<0.01	0.05	12.59	99.72	0.09	4.13	0.61	1.67	0.17	8.39	0.42	0.58
3202164	Rock	3.65	0.06	0.47	0.66	<0.01	0.27	<0.01	<0.01	0.04	13.25	98.68	0.07	4.00	0.57	1.27	0.12	9.57	0.39	0.56
3202168	Rock	2.57	0.05	0.45	0.83	<0.01	0.22	<0.01	<0.01	0.03	8.08	99.27	0.05	3.00	0.51	1.74	0.21	3.85	0.27	0.73
3202169	Rock	2.82	0.05	0.40	2.27	0.01	0.16	<0.01	<0.01	0.03	12.07	97.69	0.05	4.72	0.86	2.50	0.14	7.60	0.63	0.69
3202170	Rock	2.78	0.05	0.40	2.10	0.01	0.15	0.01	<0.01	0.01	14.45	99.53	0.04	5.53	0.98	2.92	0.19	8.85	0.75	0.69
3202171	Rock	2.93	0.04	0.40	2.01	0.01	0.16	0.02	<0.01	0.04	12.06	99.07	0.05	4.56	1.59	2.29	0.36	7.04	1.28	0.95
3202172	Rock	2.81	0.04	0.38	1.77	0.01	0.14	0.02	<0.01	0.07	12.06	99.14	0.06	4.63	1.21	2.56	0.15	7.03	0.92	0.89



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

Project:

MacMillan Pass

Report Date:

August 03, 2019

Page:

5 of 5

Part:

1 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

	Method Analyte Unit MDL	WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202173	Rock	4.62	7.6	172.1	20.6	229	1.5	47.5	8.2	224	1.98	38	4.4	4.8	123	2.1	15.9	<0.5	39	6.73	0.849
3202174	Rock	3.66	7.8	159.9	22.0	146	2.0	44.6	7.5	277	2.17	42	4.0	4.7	123	1.4	31.1	<0.5	35	7.13	0.541
3202175	Rock	4.20	22.0	76.9	24.7	395	2.0	35.7	6.7	397	2.19	41	3.7	3.8	141	4.2	23.9	<0.5	58	9.25	0.101
3202176	Rock	4.00	12.2	40.0	11.7	257	0.9	28.4	3.9	375	2.44	20	2.1	2.1	157	2.7	12.3	<0.5	34	8.15	0.035
3202177	Rock	4.51	24.1	69.2	21.1	611	1.1	44.6	6.4	330	2.26	47	4.9	3.0	129	6.8	10.5	<0.5	64	7.58	0.229
3202178	Rock	3.85	20.6	112.7	17.2	474	1.0	38.8	2.7	126	1.19	35	7.3	1.5	85	5.4	6.9	<0.5	106	3.46	0.758
3202179	Rock	3.79	9.8	181.9	14.2	300	1.2	37.4	2.3	76	1.09	35	6.9	1.7	79	3.2	9.5	<0.5	94	3.09	1.301
3202180	Rock Pulp	0.03	2.6	231.9	17720.8	28736	32.5	25.0	19.9	1826	5.45	82	1.6	6.9	23	89.5	49.5	<0.5	11	5.16	0.057
3202185	Rock	3.02	7.3	95.2	56.2	334	1.3	45.5	8.7	229	2.81	35	3.1	6.5	103	3.0	4.7	<0.5	46	3.04	0.357
3202186	Rock	2.84	4.9	116.1	37.4	188	1.6	42.3	10.3	193	2.87	40	3.3	8.6	95	1.0	4.0	<0.5	27	2.75	0.215
3202187	Rock	1.97	15.4	93.4	50.2	644	1.3	38.0	11.2	244	2.91	31	5.3	7.3	148	6.9	4.9	<0.5	68	4.60	0.366
3202188	Rock	2.05	5.0	130.0	43.0	202	1.5	39.7	10.5	244	3.50	44	3.7	8.4	125	2.1	13.5	<0.5	35	4.09	0.434
3202189	Rock	2.84	54.1	96.8	50.2	491	1.3	41.5	12.8	271	3.30	42	5.3	7.3	129	5.3	5.4	<0.5	43	4.06	0.393
3202190	Rock	2.63	4.9	153.9	40.3	743	1.3	35.1	9.2	254	2.95	51	5.1	8.7	135	9.7	4.6	<0.5	36	4.19	0.643
3202191	Rock	3.69	1.2	105.6	10.4	164	0.6	26.0	7.1	208	2.57	27	2.0	8.4	81	1.7	2.5	<0.5	15	2.51	0.165
3202192	Rock	5.25	2.3	67.3	12.9	299	0.6	34.5	8.8	188	2.67	35	2.5	8.3	90	2.8	3.1	<0.5	20	2.74	0.192
3202193	Rock	4.26	1.0	73.5	18.6	235	0.7	36.5	13.0	217	2.83	33	2.7	9.0	108	2.3	4.1	<0.5	27	3.28	0.233



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Fireweed Zinc Ltd.  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6 Canada

**Project:** MacMillan Pass

**Report Date:** August 03, 2019

**Page:** 5 of 5

**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

	Method Analyte Unit MDL	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
3202173	Rock	15.8	16.7	2.40	240	0.008	0.67	<0.01	0.36	<0.5	0.09	3.5	<0.5	1.07	<5	8	50.88	9.70	3.23	9.65	4.73
3202174	Rock	16.3	14.5	2.95	234	0.006	0.63	<0.01	0.34	<0.5	0.08	3.1	<0.5	1.03	<5	5	49.61	9.09	3.56	10.14	5.59
3202175	Rock	11.6	8.1	4.43	128	0.003	0.31	<0.01	0.18	<0.5	0.12	2.3	<0.5	0.61	<5	5	40.84	7.32	3.58	13.31	8.14
3202176	Rock	5.5	6.7	3.77	75	0.002	0.15	<0.01	0.11	0.9	0.07	2.0	<0.5	0.74	<5	3	52.82	3.84	3.93	11.74	6.82
3202177	Rock	9.6	9.1	3.37	151	0.004	0.36	<0.01	0.20	1.4	0.10	2.0	<0.5	0.84	<5	4	52.50	5.88	3.73	10.88	6.17
3202178	Rock	8.9	12.4	0.80	154	0.006	0.30	<0.01	0.16	1.6	0.09	1.1	<0.5	0.56	<5	6	78.09	2.64	1.87	4.98	1.55
3202179	Rock	11.2	18.6	0.26	158	0.008	0.41	<0.01	0.20	2.1	0.09	0.8	<0.5	0.63	<5	6	82.21	2.63	1.74	4.47	0.57
3202180	Rock Pulp	24.7	15.8	2.84	135	0.020	1.06	0.01	0.75	1.0	0.99	2.6	26.4	4.66	<5	<2	43.81	8.67	8.31	7.39	5.38
3202185	Rock	22.5	16.2	1.33	855	0.007	0.66	<0.01	0.27	2.3	0.16	3.1	<0.5	0.41	<5	4	62.91	10.26	4.69	4.44	2.87
3202186	Rock	16.2	11.0	1.49	458	0.004	0.64	<0.01	0.36	1.7	0.15	3.0	<0.5	0.80	<5	7	60.15	11.91	4.80	3.98	3.30
3202187	Rock	19.2	9.7	2.12	366	0.004	0.55	<0.01	0.30	0.8	0.09	3.1	<0.5	0.75	<5	10	53.80	10.69	4.89	6.69	4.39
3202188	Rock	22.3	11.2	1.88	565	0.004	0.64	<0.01	0.36	<0.5	0.13	3.7	<0.5	1.44	<5	7	55.08	11.57	5.87	5.96	4.08
3202189	Rock	19.5	8.0	1.98	308	0.004	0.47	<0.01	0.28	<0.5	0.09	3.0	<0.5	0.96	<5	14	55.08	10.92	5.46	5.83	4.10
3202190	Rock	25.9	7.8	1.73	300	0.005	0.45	<0.01	0.26	<0.5	0.06	3.2	<0.5	0.76	<5	9	56.04	10.87	5.05	6.32	3.77
3202191	Rock	19.4	6.5	1.44	330	0.003	0.43	<0.01	0.29	<0.5	<0.05	3.6	<0.5	0.44	<5	2	59.74	13.05	4.48	3.69	3.41
3202192	Rock	17.8	4.7	1.49	264	0.003	0.40	<0.01	0.25	<0.5	<0.05	2.3	<0.5	0.81	<5	6	58.93	12.73	4.63	4.04	3.43
3202193	Rock	25.9	6.4	1.71	338	0.003	0.50	<0.01	0.32	<0.5	<0.05	3.2	<0.5	0.73	<5	5	56.89	12.32	4.77	4.70	3.77



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

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**Page:** 5 of 5

**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

WHI19000186.1

	Method Analyte Unit MDL	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-	SO4
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
3202173	Rock	2.97	0.05	0.43	1.93	<0.01	0.16	0.01	<0.01	0.02	14.86	98.71	0.05	5.39	1.20	2.39	0.27	10.00	0.95	0.75
3202174	Rock	2.81	0.05	0.39	1.22	0.01	0.15	<0.01	<0.01	0.02	16.48	99.19	0.04	5.61	1.17	2.18	0.11	12.13	0.85	0.93
3202175	Rock	2.30	0.07	0.33	0.25	<0.01	0.12	<0.01	<0.01	0.04	22.46	98.79	0.08	7.37	0.71	2.13	0.10	18.86	0.51	0.59
3202176	Rock	1.19	0.07	0.19	0.08	<0.01	0.06	<0.01	<0.01	0.03	18.34	99.13	0.04	5.86	0.86	1.25	0.03	16.76	0.63	0.68
3202177	Rock	1.82	0.07	0.29	0.54	0.01	0.11	<0.01	<0.01	0.07	17.54	99.66	0.08	6.09	0.95	2.21	0.04	14.04	0.70	0.77
3202178	Rock	0.82	0.03	0.10	1.71	<0.01	0.06	<0.01	<0.01	0.05	6.21	98.16	0.08	3.10	0.64	2.13	0.07	3.26	0.49	0.45
3202179	Rock	0.83	0.03	0.11	2.78	0.01	0.05	0.01	<0.01	0.03	3.64	99.15	0.06	2.17	0.72	1.88	0.04	0.90	0.60	0.35
3202180	Rock Pulp	4.18	0.25	0.26	0.12	<0.01	0.09	0.02	1.80	3.08	12.75	97.23	0.02	3.27	5.01	0.34	<0.02	10.74	2.60	7.24
3202185	Rock	2.90	0.05	0.46	0.79	0.01	0.30	0.02	<0.01	0.03	8.67	98.55	0.07	2.86	0.46	1.48	0.06	4.85	0.23	0.68
3202186	Rock	3.58	0.05	0.51	0.46	<0.01	0.30	<0.01	<0.01	0.02	9.20	98.39	0.05	2.57	0.90	1.05	0.04	5.43	0.63	0.81
3202187	Rock	3.26	0.05	0.44	0.83	<0.01	0.27	<0.01	<0.01	0.07	12.87	98.32	0.12	4.26	0.84	1.81	0.08	8.67	0.58	0.77
3202188	Rock	3.52	0.05	0.50	1.02	<0.01	0.32	<0.01	<0.01	0.02	11.14	99.23	0.06	3.26	1.61	1.22	0.06	7.26	1.20	1.21
3202189	Rock	3.34	0.05	0.46	0.86	<0.01	0.28	<0.01	<0.01	0.05	12.14	98.66	0.09	3.95	1.08	1.77	0.08	7.69	0.80	0.82
3202190	Rock	3.35	0.05	0.46	1.48	<0.01	0.28	0.01	<0.01	0.08	11.39	99.25	0.07	3.86	0.71	1.80	0.11	7.14	0.47	0.74
3202191	Rock	4.00	0.05	0.53	0.41	0.01	0.33	0.01	<0.01	0.02	9.49	99.32	0.03	2.77	0.43	1.23	0.04	5.53	0.25	0.55
3202192	Rock	3.91	0.04	0.50	0.47	<0.01	0.34	<0.01	<0.01	0.03	9.67	98.80	0.06	2.86	0.79	1.24	0.07	5.71	0.58	0.63
3202193	Rock	3.74	0.05	0.54	0.54	<0.01	0.32	<0.01	<0.01	0.02	10.37	98.11	0.06	2.91	0.69	1.15	0.03	6.31	0.50	0.57



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

# QUALITY CONTROL REPORT

WHI19000186.1

	Method	WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202076	Rock	3.04	4.9	126.1	23.1	46	0.6	57.0	23.6	737	2.86	62	2.2	7.0	73	1.0	5.6	<0.5	30	1.11	0.115
3202118	Rock	1.78	6.5	63.0	84.7	272	<0.5	70.0	24.4	407	4.97	90	2.0	11.2	125	<0.5	6.1	0.6	21	1.96	0.021
3202164	Rock	2.59	6.8	89.1	16.4	347	1.2	31.7	10.1	266	2.73	32	3.1	8.1	161	4.2	3.1	<0.5	36	4.84	0.288
Pulp Duplicates																					
3202061	Rock	1.57	46.3	230.5	147.2	149	1.3	278.8	35.9	2338	8.97	206	25.2	7.8	134	0.8	12.8	<0.5	252	0.99	0.373
REP 3202061	QC																				
3202074	Rock	2.85	15.5	123.8	26.3	129	0.8	82.8	20.0	1576	5.35	35	3.6	8.8	82	3.0	11.7	<0.5	30	1.41	0.142
REP 3202074	QC																				
3202079	Rock	2.75	7.1	68.2	16.9	72	<0.5	54.0	17.7	957	3.17	46	2.1	8.0	21	0.5	4.7	<0.5	31	0.33	0.055
REP 3202079	QC		7.7	70.6	17.8	82	<0.5	53.6	17.2	987	3.17	50	2.1	7.9	22	0.5	4.8	<0.5	31	0.33	0.059
3202080	Rock	0.80	1.4	54.4	2.6	41	<0.5	4.8	10.8	454	3.10	<5	0.9	2.6	105	<0.5	<0.5	<0.5	110	1.20	0.059
REP 3202080	QC																				
REP 3202085	QC																				
3202090	Rock	2.77	8.2	119.5	16.9	30	<0.5	26.7	12.3	664	2.19	22	1.0	1.3	40	0.5	4.3	<0.5	19	0.77	0.031
REP 3202090	QC																				
3202093	Rock	2.81	22.1	380.4	47.3	8	3.2	37.0	10.7	54	1.09	33	1.1	1.2	16	<0.5	4.9	<0.5	67	0.01	0.008
REP 3202093	QC																				
3202102	Rock	4.79	<0.5	36.0	17.1	101	<0.5	44.2	19.4	289	5.09	9	1.4	20.8	23	<0.5	0.6	<0.5	14	0.20	0.080
REP 3202102	QC																				
3202111	Rock	2.32	<0.5	22.1	14.3	110	<0.5	41.5	20.7	242	4.64	7	1.4	21.1	20	<0.5	0.9	<0.5	12	0.19	0.086
REP 3202111	QC																				
3202126	Rock	2.24	<0.5	13.4	14.5	74	<0.5	24.6	6.8	401	3.98	14	1.1	18.6	12	<0.5	<0.5	<0.5	11	0.06	0.058
REP 3202126	QC		0.5	13.3	13.9	74	<0.5	27.8	7.8	423	3.92	11	1.0	18.8	12	<0.5	<0.5	<0.5	11	0.06	0.056
3202127	Rock	2.05	0.7	12.1	23.5	76	<0.5	25.5	7.3	404	4.06	10	1.6	22.2	13	<0.5	<0.5	<0.5	13	0.05	0.051
REP 3202127	QC																				
3202129	Rock	2.58	1.0	21.2	12.2	100	<0.5	22.0	6.7	395	4.16	7	0.9	17.8	10	<0.5	<0.5	<0.5	12	0.07	0.056
REP 3202129	QC																				
3202136	Rock	3.94	1.1	18.2	31.3	114	<0.5	34.5	11.6	503	4.70	9	1.3	22.8	14	<0.5	<0.5	<0.5	17	0.09	0.089
REP 3202136	QC																				



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

**Project:**

MacMillan Pass

**Report Date:**

August 03, 2019

**Page:**

1 of 6

**Part:**

2 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

	Method Analyte Unit MDL	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
3202076	Rock	23.4	7.7	0.34	191	0.002	0.42	<0.01	0.23	<0.5	0.16	3.6	<0.5	1.20	<5	3	69.48	11.80	4.72	1.64	0.95
3202118	Rock	33.0	6.8	0.92	87	0.001	0.73	<0.01	0.25	<0.5	<0.05	3.1	<0.5	2.73	<5	<2	55.83	16.34	7.80	2.70	2.16
3202164	Rock	17.8	8.4	2.16	313	0.004	0.49	<0.01	0.32	1.1	0.10	4.0	<0.5	0.53	<5	5	52.33	11.62	4.69	7.05	4.49
Pulp Duplicates																					
3202061	Rock	51.0	53.6	0.24	261	0.009	1.25	<0.01	0.12	0.8	0.17	8.1	<0.5	2.46	<5	11	59.03	9.79	13.65	1.47	0.55
REP 3202061	QC																59.22	9.79	13.67	1.49	0.55
3202074	Rock	24.5	5.3	0.49	174	0.002	0.38	<0.01	0.21	<0.5	0.25	4.8	<0.5	0.49	<5	3	63.46	11.62	8.24	2.10	1.24
REP 3202074	QC																				
3202079	Rock	25.6	6.7	0.15	160	0.001	0.38	<0.01	0.25	<0.5	0.10	2.3	<0.5	0.99	<5	5	70.62	12.38	5.23	0.49	0.55
REP 3202079	QC	25.2	8.4	0.15	176	0.002	0.40	<0.01	0.25	<0.5	0.15	2.6	<0.5	0.97	<5	5					
3202080	Rock	8.0	5.2	0.90	186	0.198	2.16	0.31	0.32	<0.5	<0.05	3.6	<0.5	<0.05	6	<2	61.04	16.92	6.44	6.24	2.93
REP 3202080	QC																				
REP 3202085	QC																69.59	11.25	8.29	0.46	0.53
3202090	Rock	6.3	7.6	0.25	59	0.001	0.14	<0.01	0.08	16.8	0.07	1.8	<0.5	0.44	<5	<2	86.65	3.23	3.49	1.15	0.50
REP 3202090	QC																				
3202093	Rock	10.8	7.7	<0.01	93	<0.001	0.14	<0.01	0.09	2.6	0.13	1.0	<0.5	0.68	<5	14	89.75	2.69	1.91	0.04	0.08
REP 3202093	QC																				
3202102	Rock	67.9	29.4	0.84	69	0.002	2.72	0.01	0.31	<0.5	<0.05	2.4	<0.5	0.43	7	<2	55.35	23.57	7.60	0.28	1.62
REP 3202102	QC																55.43	23.70	7.61	0.28	1.63
3202111	Rock	63.3	28.3	0.72	51	0.001	2.29	<0.01	0.23	<0.5	<0.05	3.1	<0.5	0.73	6	<2	55.78	23.48	6.96	0.27	1.40
REP 3202111	QC																				
3202126	Rock	47.1	22.2	0.84	55	0.001	2.26	0.01	0.19	0.8	<0.05	2.5	<0.5	0.16	6	<2	63.43	19.47	5.95	0.10	1.57
REP 3202126	QC	45.0	22.6	0.84	52	0.001	2.19	0.01	0.19	0.6	<0.05	2.5	<0.5	0.16	6	<2					
3202127	Rock	66.4	27.4	0.90	69	0.001	2.54	0.02	0.24	0.5	<0.05	2.8	<0.5	0.06	6	<2	52.87	26.43	6.16	0.09	1.75
REP 3202127	QC																				
3202129	Rock	38.5	20.4	0.86	38	0.001	2.24	<0.01	0.14	4.4	<0.05	2.3	<0.5	0.17	6	<2	71.61	13.52	6.18	0.12	1.57
REP 3202129	QC																71.77	13.65	6.18	0.13	1.55
3202136	Rock	56.5	35.3	0.97	60	0.002	2.68	0.01	0.21	1.0	<0.05	3.0	<0.5	0.23	7	<2	55.88	23.66	7.03	0.16	1.80
REP 3202136	QC																				





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

# QUALITY CONTROL REPORT

WHI19000186.1

	Method Analyte Unit MDL	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-	SO4
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
3202076	Rock	3.18	0.12	0.63	0.31	0.01	0.21	<0.01	<0.01	<0.01	6.00	99.13	0.05	1.74	1.23	1.01	0.12	2.22	0.92	0.93
3202118	Rock	4.80	0.08	0.70	0.04	<0.01	0.14	<0.01	<0.01	0.03	8.82	99.58	0.05	2.57	2.74	1.36	0.14	3.93	2.35	1.15
3202164	Rock	3.65	0.06	0.47	0.66	<0.01	0.27	<0.01	<0.01	0.04	13.25	98.68	0.07	4.00	0.57	1.27	0.12	9.57	0.39	0.56
Pulp Duplicates																				
3202061	Rock	0.88	0.33	0.98	0.86	0.02	0.09	0.03	<0.01	0.01	12.07	99.80	0.16	4.64	2.40	3.37	0.46	2.96	1.86	1.64
REP 3202061	QC	0.90	0.34	0.99	0.86	0.02	0.09	0.02	<0.01	0.01	12.07	100.04	0.16							
3202074	Rock	3.10	0.21	0.48	0.34	0.01	0.20	<0.01	<0.01	0.01	8.67	99.77	0.04	3.94	0.51	3.18	0.15	2.24	0.11	1.20
REP 3202074	QC													3.92	0.50					
3202079	Rock	3.36	0.14	0.69	0.14	0.01	0.20	<0.01	<0.01	<0.01	5.10	98.99	0.06	1.33	0.94	0.80	0.12	1.46	0.72	0.65
REP 3202079	QC																			
3202080	Rock	1.59	0.15	0.57	0.14	<0.01	0.07	<0.01	<0.01	<0.01	0.92	100.39	0.03	0.05	<0.02	0.03	<0.02	0.09	<0.05	0.09
REP 3202080	QC																			0.10
REP 3202085	QC	3.01	0.24	0.64	0.18	0.01	0.20	<0.01	<0.01	<0.01	5.36	99.87	0.05							
3202090	Rock	0.83	0.11	0.21	0.07	<0.01	0.06	<0.01	<0.01	<0.01	3.22	99.53	0.03	1.39	0.44	0.78	0.11	1.84	0.28	0.48
REP 3202090	QC																	1.85		
3202093	Rock	0.73	0.03	0.12	0.02	<0.01	0.06	0.11	<0.01	<0.01	4.35	99.93	0.13	3.47	0.70	2.70	0.77	<0.08	0.68	<0.05
REP 3202093	QC																0.96			
3202102	Rock	5.39	0.06	0.89	0.21	0.01	0.10	<0.01	<0.01	<0.01	4.35	99.68	0.01	0.31	0.40	0.28	0.02	<0.08	0.35	0.13
REP 3202102	QC	5.41	0.06	0.87	0.20	0.02	0.09	<0.01	<0.01	<0.01	4.35	99.90	0.01							
3202111	Rock	5.46	0.05	0.85	0.18	0.01	0.10	<0.01	<0.01	<0.01	4.42	99.20	0.02	0.29	0.70	0.25	0.03	<0.08	0.64	0.17
REP 3202111	QC													0.28	0.71					
3202126	Rock	4.08	0.08	0.73	0.12	<0.01	0.09	<0.01	<0.01	<0.01	3.76	99.69	0.02	0.24	0.16	0.20	0.03	<0.08	0.10	0.19
REP 3202126	QC																			
3202127	Rock	5.78	0.08	0.92	0.12	0.02	0.12	<0.01	<0.01	<0.01	4.69	99.47	0.01	0.31	0.06	0.26	0.04	<0.08	<0.05	0.13
REP 3202127	QC																			0.09
3202129	Rock	2.48	0.07	0.61	0.11	<0.01	0.06	<0.01	<0.01	<0.01	2.89	99.45	<0.01	0.15	0.15	0.12	<0.02	<0.08	0.10	0.15
REP 3202129	QC	2.49	0.07	0.61	0.11	<0.01	0.05	<0.01	<0.01	<0.01	2.89	99.71	<0.01							
3202136	Rock	4.96	0.09	0.91	0.20	0.01	0.11	<0.01	<0.01	<0.01	4.66	99.84	0.01	0.30	0.21	0.25	0.04	<0.08	0.14	0.20
REP 3202136	QC																	<0.08		



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

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**Page:**

2 of 6

**Part:**

1 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
3202141	Rock	4.54	<0.5	51.4	15.0	151	<0.5	44.5	19.0	400	5.62	<5	1.4	17.4	13	<0.5	<0.5	<0.5	17	0.11	0.056
REP 3202141	QC																				
3202146	Rock	4.82	<0.5	35.6	36.6	187	<0.5	32.9	13.3	343	4.74	<5	1.7	17.4	17	<0.5	0.5	1.3	13	0.12	0.079
REP 3202146	QC																				
3202159	Rock	2.72	3.3	116.0	17.9	305	1.4	32.6	8.8	225	2.71	29	3.2	8.2	128	4.0	3.0	<0.5	39	3.91	0.481
REP 3202159	QC																				
3202168	Rock	4.55	9.8	108.5	44.3	254	1.2	41.4	6.7	257	2.46	50	2.7	5.9	72	3.3	7.7	<0.5	46	2.75	0.365
REP 3202168	QC		10.0	106.4	44.3	268	1.2	41.0	7.0	258	2.50	51	2.9	6.1	72	3.0	8.0	<0.5	47	2.77	0.365
3202169	Rock	4.67	11.9	153.4	24.1	264	1.3	51.2	7.1	212	1.92	42	5.1	5.3	122	3.7	11.2	<0.5	40	5.88	1.004
REP 3202169	QC																				
3202170	Rock	5.24	14.3	153.8	20.4	113	1.3	52.3	8.2	227	1.89	37	4.5	5.0	131	0.9	14.8	<0.5	37	6.57	0.955
REP 3202170	QC																				
3202178	Rock	3.85	20.6	112.7	17.2	474	1.0	38.8	2.7	126	1.19	35	7.3	1.5	85	5.4	6.9	<0.5	106	3.46	0.758
REP 3202178	QC																				
3202185	Rock	3.02	7.3	95.2	56.2	334	1.3	45.5	8.7	229	2.81	35	3.1	6.5	103	3.0	4.7	<0.5	46	3.04	0.357
REP 3202185	QC																				
3202187	Rock	1.97	15.4	93.4	50.2	644	1.3	38.0	11.2	244	2.91	31	5.3	7.3	148	6.9	4.9	<0.5	68	4.60	0.366
REP 3202187	QC																				
3202192	Rock	5.25	2.3	67.3	12.9	299	0.6	34.5	8.8	188	2.67	35	2.5	8.3	90	2.8	3.1	<0.5	20	2.74	0.192
REP 3202192	QC																				
3202193	Rock	4.26	1.0	73.5	18.6	235	0.7	36.5	13.0	217	2.83	33	2.7	9.0	108	2.3	4.1	<0.5	27	3.28	0.233
REP 3202193	QC																				
Core Reject Duplicates																					
3202085	Rock	3.53	7.6	289.2	25.7	90	0.8	94.1	25.7	1811	5.26	50	2.4	7.7	21	3.6	6.1	<0.5	34	0.31	0.084
DUP 3202085	QC		7.0	258.6	24.6	92	0.8	83.3	24.4	1882	5.32	45	2.3	7.6	22	3.9	5.7	<0.5	34	0.31	0.070
3202130	Rock	3.26	1.2	11.2	41.4	109	<0.5	21.8	6.9	506	5.01	6	0.9	17.5	18	<0.5	<0.5	<0.5	16	0.11	0.054
DUP 3202130	QC		1.1	12.1	41.9	111	<0.5	22.0	6.7	497	4.93	7	0.9	16.7	14	<0.5	<0.5	<0.5	16	0.10	0.058
3202171	Rock	3.20	11.2	164.7	22.6	414	1.4	55.2	8.6	165	2.08	38	4.3	4.6	109	4.3	8.0	<0.5	41	5.49	0.841
DUP 3202171	QC		11.3	163.6	24.2	401	1.4	56.3	8.8	170	2.05	38	4.5	4.8	116	4.4	8.9	<0.5	41	5.48	0.895



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

Project:

MacMillan Pass

Report Date:

August 03, 2019

Page:

2 of 6

Part:

2 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		AQ270 La ppm 0.5	AQ270 Cr ppm 0.5	AQ270 Mg % 0.01	AQ270 Ba ppm 5	AQ270 Ti % 0.001	AQ270 Al % 0.01	AQ270 Na % 0.01	AQ270 K % 0.01	AQ270 W ppm 0.5	AQ270 Hg ppm 0.05	AQ270 Sc ppm 0.5	AQ270 Ti ppm 0.5	AQ270 S % 0.05	AQ270 Ga ppm 5	AQ270 Se ppm 2	LF725 SiO2 % 0.01	LF725 Al2O3 % 0.01	LF725 Fe2O3 % 0.01	LF725 CaO % 0.01	LF725 MgO % 0.01
3202141	Rock	37.8	36.9	1.16	59	0.002	3.18	0.01	0.23	<0.5	<0.05	2.7	<0.5	0.50	8	<2	54.48	23.21	8.37	0.17	2.12
REP 3202141	QC																				
3202146	Rock	39.0	32.3	0.88	70	0.001	2.71	0.01	0.26	<0.5	<0.05	3.4	<0.5	0.10	7	<2	58.03	22.43	7.11	0.19	1.64
REP 3202146	QC																57.54	22.26	7.02	0.18	1.62
3202159	Rock	24.8	11.8	1.68	404	0.006	0.75	<0.01	0.43	0.7	0.05	3.8	<0.5	0.50	<5	6	56.99	11.80	4.58	5.64	3.61
REP 3202159	QC																				
3202168	Rock	20.2	18.1	1.02	578	0.006	0.87	<0.01	0.31	0.8	0.16	2.9	<0.5	0.45	<5	6	67.27	9.54	3.96	3.97	2.17
REP 3202168	QC	20.7	18.3	1.04	576	0.006	0.90	<0.01	0.33	0.8	0.15	2.6	<0.5	0.46	<5	6					
3202169	Rock	17.3	13.6	1.78	289	0.009	0.71	<0.01	0.35	<0.5	0.12	3.1	<0.5	0.77	<5	8	55.83	9.16	3.11	8.22	3.51
REP 3202169	QC																				
3202170	Rock	17.6	18.2	2.28	304	0.010	0.79	<0.01	0.42	<0.5	0.09	3.7	<0.5	0.85	<5	6	53.50	9.00	3.12	9.44	4.44
REP 3202170	QC																53.50	8.98	3.11	9.41	4.46
3202178	Rock	8.9	12.4	0.80	154	0.006	0.30	<0.01	0.16	1.6	0.09	1.1	<0.5	0.56	<5	6	78.09	2.64	1.87	4.98	1.55
REP 3202178	QC																				
3202185	Rock	22.5	16.2	1.33	855	0.007	0.66	<0.01	0.27	2.3	0.16	3.1	<0.5	0.41	<5	4	62.91	10.26	4.69	4.44	2.87
REP 3202185	QC																				
3202187	Rock	19.2	9.7	2.12	366	0.004	0.55	<0.01	0.30	0.8	0.09	3.1	<0.5	0.75	<5	10	53.80	10.69	4.89	6.69	4.39
REP 3202187	QC																53.84	10.68	4.87	6.71	4.42
3202192	Rock	17.8	4.7	1.49	264	0.003	0.40	<0.01	0.25	<0.5	<0.05	2.3	<0.5	0.81	<5	6	58.93	12.73	4.63	4.04	3.43
REP 3202192	QC																				
3202193	Rock	25.9	6.4	1.71	338	0.003	0.50	<0.01	0.32	<0.5	<0.05	3.2	<0.5	0.73	<5	5	56.89	12.32	4.77	4.70	3.77
REP 3202193	QC																				
Core Reject Duplicates																					
3202085	Rock	22.6	8.5	0.13	201	0.002	0.39	<0.01	0.22	0.5	0.14	4.9	<0.5	0.46	<5	3	69.58	11.28	8.28	0.46	0.50
DUP 3202085	QC	21.3	8.0	0.13	200	0.002	0.37	<0.01	0.21	0.6	0.11	5.1	<0.5	0.46	<5	3	69.30	11.27	8.38	0.45	0.51
3202130	Rock	44.0	24.7	1.11	48	0.002	2.87	0.01	0.19	2.1	<0.05	3.8	<0.5	0.08	8	<2	69.73	13.22	7.32	0.20	1.94
DUP 3202130	QC	41.0	22.7	1.10	39	0.001	2.77	<0.01	0.14	2.6	<0.05	3.2	<0.5	0.08	8	<2	70.28	13.34	7.33	0.20	1.99
3202171	Rock	14.7	15.7	1.74	240	0.008	0.69	<0.01	0.36	<0.5	0.09	3.0	<0.5	1.44	<5	10	57.22	9.41	3.37	7.79	3.57
DUP 3202171	QC	15.3	15.9	1.75	242	0.009	0.72	<0.01	0.37	<0.5	0.07	2.6	<0.5	1.40	<5	10	56.81	9.40	3.32	7.78	3.58



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

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**Project:**

MacMillan Pass

**Report Date:**

August 03, 2019

**Page:**

2 of 6

**Part:**

3 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		LF725 K2O %	LF725 MnO %	LF725 TiO2 %	LF725 P2O5 %	LF725 Cr2O3 %	LF725 Ba %	LF725 Cu %	LF725 Pb %	LF725 Zn %	LF725 LOI %	LF725 SUM_T %	LF725 V2O5 %	TC000 TOT/C %	TC000 TOT/S %	TC005 C/ORG %	TC005 C/GRA %	TC006 CO2 %	TC008 S/S- %	TC008 SO4 %
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
3202141	Rock	4.63	0.08	0.84	0.13	0.01	0.10	<0.01	<0.01	0.01	4.78	99.26	0.02	0.37	0.51	0.29	0.08	<0.08	0.41	0.29
REP 3202141	QC																0.08			
3202146	Rock	4.70	0.07	0.82	0.18	<0.01	0.10	<0.01	<0.01	0.02	4.54	100.17	0.02	0.38	0.08	0.29	0.08	<0.08	<0.05	0.16
REP 3202146	QC	4.66	0.07	0.81	0.19	0.01	0.09	<0.01	<0.01	0.02	4.54	99.32	0.03							
3202159	Rock	3.69	0.05	0.44	1.06	<0.01	0.29	0.01	<0.01	0.03	10.90	99.19	0.06	3.39	0.53	1.51	0.08	6.59	0.33	0.59
REP 3202159	QC													3.41	0.55			6.61		
3202168	Rock	2.57	0.05	0.45	0.83	<0.01	0.22	<0.01	<0.01	0.03	8.08	99.27	0.05	3.00	0.51	1.74	0.21	3.85	0.27	0.73
REP 3202168	QC																			
3202169	Rock	2.82	0.05	0.40	2.27	0.01	0.16	<0.01	<0.01	0.03	12.07	97.69	0.05	4.72	0.86	2.50	0.14	7.60	0.63	0.69
REP 3202169	QC																			0.71
3202170	Rock	2.78	0.05	0.40	2.10	0.01	0.15	0.01	<0.01	0.01	14.45	99.53	0.04	5.53	0.98	2.92	0.19	8.85	0.75	0.69
REP 3202170	QC	2.79	0.06	0.41	2.11	0.01	0.16	0.02	<0.01	0.01	14.45	99.53	0.04							
3202178	Rock	0.82	0.03	0.10	1.71	<0.01	0.06	<0.01	<0.01	0.05	6.21	98.16	0.08	3.10	0.64	2.13	0.07	3.26	0.49	0.45
REP 3202178	QC																	3.53		
3202185	Rock	2.90	0.05	0.46	0.79	0.01	0.30	0.02	<0.01	0.03	8.67	98.55	0.07	2.86	0.46	1.48	0.06	4.85	0.23	0.68
REP 3202185	QC																0.06			
3202187	Rock	3.26	0.05	0.44	0.83	<0.01	0.27	<0.01	<0.01	0.07	12.87	98.32	0.12	4.26	0.84	1.81	0.08	8.67	0.58	0.77
REP 3202187	QC	3.30	0.05	0.45	0.83	<0.01	0.27	<0.01	<0.01	0.07	12.87	98.44	0.12							
3202192	Rock	3.91	0.04	0.50	0.47	<0.01	0.34	<0.01	<0.01	0.03	9.67	98.80	0.06	2.86	0.79	1.24	0.07	5.71	0.58	0.63
REP 3202192	QC																			0.65
3202193	Rock	3.74	0.05	0.54	0.54	<0.01	0.32	<0.01	<0.01	0.02	10.37	98.11	0.06	2.91	0.69	1.15	0.03	6.31	0.50	0.57
REP 3202193	QC																0.09	6.10		
Core Reject Duplicates																				
3202085	Rock	3.03	0.27	0.61	0.18	0.02	0.21	0.02	<0.01	<0.01	5.36	99.86	0.06	1.38	0.44	1.01	0.10	0.99	0.15	0.85
DUP 3202085	QC	2.98	0.26	0.62	0.18	0.02	0.19	<0.01	<0.01	<0.01	5.31	99.56	0.05	1.40	0.45	1.05	0.08	0.97	0.12	0.97
3202130	Rock	2.11	0.08	0.60	0.11	<0.01	0.04	<0.01	<0.01	<0.01	2.90	98.46	<0.01	0.18	0.07	0.14	<0.02	<0.08	<0.05	0.13
DUP 3202130	QC	2.11	0.08	0.64	0.12	<0.01	0.05	0.01	<0.01	<0.01	3.02	99.37	<0.01	0.18	0.08	0.13	0.02	<0.08	<0.05	0.17
3202171	Rock	2.93	0.04	0.40	2.01	0.01	0.16	0.02	<0.01	0.04	12.06	99.07	0.05	4.56	1.59	2.29	0.36	7.04	1.28	0.95
DUP 3202171	QC	2.91	0.04	0.39	1.97	<0.01	0.15	0.03	<0.01	0.04	12.16	98.67	0.05	4.74	1.56	2.49	0.32	7.05	1.26	0.92



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

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MacMillan Pass

Report Date:

August 03, 2019

Page:

3 of 6

Part:

1 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01
Reference Materials																				
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD COO1	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GGC-10	Standard																			
STD GS311-1	Standard																			
STD GS311-1	Standard																			
STD GS311-1	Standard																			
STD GS311-1	Standard																			
STD GS910-4	Standard																			
STD GS910-4	Standard																			
STD GS910-4	Standard																			
STD GS910-4	Standard																			
STD OREAS133B(D)	Standard																			
STD OREAS133B(D)	Standard																			



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Fireweed Zinc Ltd.**  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6 Canada

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**Report Date:** August 03, 2019

**Page:** 3 of 6

**Part:** 2 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725	
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
Reference Materials																					
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD COO1	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GGC-10	Standard																				
STD GS311-1	Standard																				
STD GS311-1	Standard																				
STD GS311-1	Standard																				
STD GS311-1	Standard																				
STD GS910-4	Standard																				
STD GS910-4	Standard																				
STD GS910-4	Standard																				
STD GS910-4	Standard																				
STD OREAS133B(D)	Standard																34.87	7.10	11.53	5.32	3.91
STD OREAS133B(D)	Standard																34.39	7.09	11.52	5.29	3.85



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**Project:**

MacMillan Pass

**Report Date:**

August 03, 2019

**Page:**

3 of 6

**Part:**

3 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008	
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-	SO4
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
Reference Materials																				
STD COO1	Standard																		2.40	
STD COO1	Standard																		2.36	
STD COO1	Standard																		2.22	
STD COO1	Standard																		2.35	
STD COO1	Standard																		2.44	
STD COO1	Standard																		2.48	
STD COO1	Standard																		2.45	
STD COO1	Standard																		2.44	
STD COO1	Standard																		2.28	
STD COO1	Standard																		2.37	
STD GGC-10	Standard																	4.80		
STD GGC-10	Standard																	4.91		
STD GGC-10	Standard																	4.65		
STD GGC-10	Standard																	4.37		
STD GGC-10	Standard																	4.84		
STD GGC-10	Standard																	4.29		
STD GGC-10	Standard																	4.50		
STD GGC-10	Standard																	4.32		
STD GS311-1	Standard													0.99	2.33					
STD GS311-1	Standard													1.00	2.39					
STD GS311-1	Standard													0.99	2.24					
STD GS311-1	Standard													0.98	2.33					
STD GS910-4	Standard													2.67	8.50					
STD GS910-4	Standard													2.74	8.36					
STD GS910-4	Standard													2.64	8.53					
STD GS910-4	Standard													2.65	8.32					
STD OREAS133B(D)	Standard	3.47	0.16	0.21	0.12	0.01	0.07	0.04	5.08	11.38	13.03	99.65	<0.01							
STD OREAS133B(D)	Standard	3.46	0.17	0.22	0.11	<0.01	0.07	0.06	5.06	11.38	13.03	99.04	0.01							





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

## QUALITY CONTROL REPORT

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		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01	0.001
STD OREAS133B(D)	Standard																				
STD OREAS133B(D)	Standard																				
STD OREAS135	Standard		8.3	296.2	17716.6	28510	58.7	36.2	30.7	4052	9.04	969	9.2	11.1	25	65.5	38.2	5.1	35	1.89	0.089
STD OREAS135	Standard		8.1	308.3	16931.6	27570	55.8	35.8	29.4	3870	8.69	976	9.3	10.2	24	63.1	38.0	5.2	38	1.77	0.082
STD OREAS605	Standard		5.0	49960.4	926.3	2221	973.4	1597.9	101.1	90	3.76	1694	0.9	2.6	50	14.7	306.1	20.4	<10	0.19	0.009
STD OREAS605	Standard		4.7	47035.9	857.4	2165	>1000	1539.0	101.4	90	3.60	1681	0.9	2.4	49	14.3	303.4	16.6	<10	0.18	0.013
STD OREAS605	Standard		4.4	46461.0	826.6	2107	967.1	1494.8	94.1	82	3.46	1636	0.8	2.1	43	12.1	267.7	18.6	<10	0.17	0.007
STD OREAS605	Standard		4.9	48756.0	871.1	2131	997.6	1580.0	98.4	94	3.62	1676	0.9	2.6	52	13.7	306.1	19.3	<10	0.18	0.009
STD OREAS72B	Standard																				
STD OREAS72B	Standard																				
STD OREAS72B	Standard																				
STD OREAS72B	Standard																				
STD OREAS927-AR	Standard		1.1	10725.5	220.6	710	5.4	31.0	29.6	1069	7.98	12	1.7	12.9	12	1.1	1.2	62.0	38	0.29	0.058
STD OREAS927-AR	Standard		1.1	10797.4	208.6	704	6.0	30.3	29.8	1159	8.05	12	1.8	12.5	13	0.9	1.3	70.5	33	0.31	0.051
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD SY-4(D)	Standard																				
STD SY-4(D)	Standard																				
STD SY-4(D)	Standard																				
STD SY-4(D)	Standard																				
STD GS311-1 Expected																					
STD GS910-4 Expected																					
STD SY-4(D) Expected																					
STD OREAS72B Expected																					



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

**Project:**

MacMillan Pass

**Report Date:**

August 03, 2019

**Page:**

4 of 6

**Part:**

2 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01	0.01
STD OREAS133B(D)	Standard																34.96	7.15	11.59	5.34	3.84
STD OREAS133B(D)	Standard																34.61	7.07	11.57	5.27	3.83
STD OREAS135	Standard	39.6	25.0	0.82	338	0.028	1.10	0.02	0.49	3.0	1.23	3.9	6.3	7.27	<5	<2					
STD OREAS135	Standard	37.9	22.8	0.82	353	0.027	1.06	0.02	0.44	3.1	1.13	2.0	6.1	7.16	5	<2					
STD OREAS605	Standard	7.8	30.1	0.03	185	0.010	0.76	0.03	0.15	7.3	1.81	1.7	17.3	7.96	7	81					
STD OREAS605	Standard	7.6	27.7	0.03	265	0.011	0.72	0.03	0.14	6.5	1.52	1.0	15.8	7.96	6	79					
STD OREAS605	Standard	7.0	30.3	0.02	148	0.010	0.71	0.03	0.12	6.4	1.62	1.2	15.1	7.54	6	74					
STD OREAS605	Standard	7.7	29.9	0.03	217	0.011	0.80	0.03	0.17	7.4	1.61	1.5	15.9	7.75	7	73					
STD OREAS72B	Standard																51.09	8.81	9.84	3.96	16.08
STD OREAS72B	Standard																51.12	8.95	9.92	3.97	16.11
STD OREAS72B	Standard																51.20	8.94	9.91	3.97	16.00
STD OREAS72B	Standard																51.09	8.92	9.92	3.96	16.05
STD OREAS927-AR	Standard	27.3	38.7	1.87	43	0.082	3.17	<0.01	0.26	4.9	0.10	4.7	<0.5	1.72	9	13					
STD OREAS927-AR	Standard	29.4	43.1	1.88	51	0.099	3.26	<0.01	0.30	4.1	0.09	4.7	<0.5	1.68	9	14					
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD RTS-3A	Standard																				
STD SY-4(D)	Standard																50.11	20.69	6.19	8.04	0.53
STD SY-4(D)	Standard																49.95	20.76	6.21	7.97	0.52
STD SY-4(D)	Standard																50.09	20.70	6.19	8.00	0.53
STD SY-4(D)	Standard																49.91	20.67	6.17	7.92	0.54
STD GS311-1 Expected																					
STD GS910-4 Expected																					
STD SY-4(D) Expected																	49.9	20.69	6.21	8.05	0.54
STD OREAS72B Expected																	51.16	8.97	9.724	3.96	15.933



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

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Vancouver British Columbia V5C 2V6 Canada

**Project:** MacMillan Pass

**Report Date:** August 03, 2019

**Page:** 4 of 6

**Part:** 3 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		LF725 K2O %	LF725 MnO %	LF725 TiO2 %	LF725 P2O5 %	LF725 Cr2O3 %	LF725 Ba %	LF725 Cu %	LF725 Pb %	LF725 Zn %	LF725 LOI %	LF725 SUM_T %	LF725 V2O5 %	TC000 TOT/C %	TC000 TOT/S %	TC005 C/ORG %	TC005 C/GRA %	TC006 CO2 %	TC008 S/S- %	TC008 SO4 %
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
STD OREAS133B(D)	Standard	3.47	0.16	0.21	0.12	<0.01	0.06	0.06	5.06	11.37	13.03	99.82	0.01							
STD OREAS133B(D)	Standard	3.46	0.16	0.21	0.12	<0.01	0.05	0.06	5.07	11.35	13.03	99.26	<0.01							
STD OREAS135	Standard																			
STD OREAS135	Standard																			
STD OREAS605	Standard																			
STD OREAS605	Standard																			
STD OREAS605	Standard																			
STD OREAS605	Standard																			
STD OREAS72B	Standard	1.31	0.15	0.34	0.05	0.15	0.03	0.02	<0.01	<0.01	5.12	98.24	0.01							
STD OREAS72B	Standard	1.33	0.15	0.36	0.04	0.14	0.03	0.02	<0.01	<0.01	5.12	98.62	0.01							
STD OREAS72B	Standard	1.32	0.15	0.36	0.05	0.14	0.03	0.02	<0.01	0.01	5.12	98.55	0.01							
STD OREAS72B	Standard	1.30	0.15	0.35	0.05	0.17	0.04	0.02	<0.01	<0.01	5.12	98.46	0.01							
STD OREAS927-AR	Standard																			
STD OREAS927-AR	Standard																			
STD RTS-3A	Standard																			3.43
STD RTS-3A	Standard																			3.15
STD RTS-3A	Standard																			3.27
STD RTS-3A	Standard																			3.32
STD RTS-3A	Standard																			3.20
STD RTS-3A	Standard																			3.15
STD RTS-3A	Standard																			2.98
STD SY-4(D)	Standard	1.67	0.11	0.29	0.14	<0.01	0.04	<0.01	<0.01	<0.01	4.56	99.54	<0.01							
STD SY-4(D)	Standard	1.66	0.11	0.29	0.14	<0.01	0.04	<0.01	<0.01	0.01	4.56	99.36	<0.01							
STD SY-4(D)	Standard	1.69	0.11	0.28	0.14	<0.01	0.04	<0.01	<0.01	0.01	4.56	99.52	<0.01							
STD SY-4(D)	Standard	1.66	0.11	0.29	0.14	<0.01	0.04	<0.01	<0.01	0.01	4.56	99.18	<0.01							
STD GS311-1 Expected														1.02	2.35					
STD GS910-4 Expected														2.65	8.27					
STD SY-4(D) Expected		1.66	0.108	0.287	0.131		0.0345				4.56									
STD OREAS72B Expected		1.313	0.13	0.355	0.061	0.142	0.0335	0.0193			5.12									



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Report Date: August 03, 2019

Part: 1 of 3

## WHI19000186.1

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Report Date: August 03, 2019

Part: 2 of 3

## WHI19000186.1

		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01
STD OREAS133B(D) Expected		33.83 6.91 11.67 5.4 3.73																			
STD RTS-3A Expected																					
STD GGC-10 Expected																					
STD OREAS135 Expected		39.8	22	0.833	366	0.026	1.09	0.017	0.487	2.93	1.21	3.51	6.27	7.08	4.8						
STD OREAS605 Expected		7.5	27.5	0.0289	160	0.01	0.73	0.0328	0.134	7.1	1.7	1.05	15.9	7.86	6.7	79					
STD OREAS927-AR Expected		26.9	41.7	1.94	51.4	0.085	3.25	0.011	0.27	4.9	0.12	4.74		1.77	9.09	15.5					
STD COO1 Expected																					
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
SI BLK	Blank															99.05	0.31	<0.01	0.02	0.02	
SI BLK	Blank															99.21	0.32	0.02	0.03	0.02	
BLK	Blank																				
BLK	Blank																				
SI BLK	Blank															98.47	0.32	0.02	0.03	0.02	
SI BLK	Blank															98.86	0.33	0.03	0.02	0.02	
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.5	<0.5	<0.01	<5	<0.001	<0.01	<0.01	<0.01	<0.5	<0.05	<0.5	<0.5	<0.05	<5	<2					
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.5	<0.5	<0.01	<5	<0.001	<0.01	<0.01	<0.01	<0.5	<0.05	<0.5	<0.5	<0.05	<5	<2					
BLK	Blank	<0.5	<0.5	<0.01	<5	<0.001	<0.01	<0.01	<0.01	<0.5	<0.05	<0.5	<0.5	<0.05	<5	<2					
BLK	Blank	<0.5	<0.5	<0.01	<5	<0.001	<0.01	<0.01	<0.01	<0.5	<0.05	<0.5	<0.5	<0.05	<5	<2					



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:**

**Fireweed Zinc Ltd.**

Suite 1020, 800 Pender Street

Vancouver British Columbia V5C 2V6 Canada

**Project:**

MacMillan Pass

**Report Date:**

August 03, 2019

**Page:**

5 of 6

**Part:**

3 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	LF725	TC000	TC000	TC005	TC005	TC006	TC008	TC008	
		K2O	MnO	TiO2	P2O5	Cr2O3	Ba	Cu	Pb	Zn	LOI	SUM_T	V2O5	TOT/C	TOT/S	C/ORG	C/GRA	CO2	S/S-	SO4
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
STD OREAS133B(D) Expected		0.08 0.032 5.06 11.35																		
STD RTS-3A Expected		3.3																		
STD GGC-10 Expected		4.79																		
STD OREAS135 Expected																				
STD OREAS605 Expected																				
STD OREAS927-AR Expected																				
STD COO1 Expected		2.37																		
BLK	Blank	<0.02 <0.02																		
BLK	Blank	<0.02 <0.02																		
BLK	Blank	<0.02 <0.02																		
BLK	Blank	<0.02 <0.02																		
BLK	Blank	<0.08																		
SI BLK	Blank	<0.01	0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	99.42	<0.01							
SI BLK	Blank	<0.01	0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	99.62	<0.01							
BLK	Blank	<0.05																		
BLK	Blank	<0.05																		
SI BLK	Blank	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00	98.89	<0.01							
SI BLK	Blank	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.00	99.25	<0.01							
BLK	Blank	<0.08																		
BLK	Blank	<0.05																		
BLK	Blank	<0.02																		
BLK	Blank	<0.02																		
BLK	Blank	<0.05																		
BLK	Blank	<0.02																		
BLK	Blank	<0.02																		
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Fireweed Zinc Ltd.**  
Suite 1020, 800 Pender Street  
Vancouver British Columbia V5C 2V6 Canada

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**Page:** 6 of 6

**Part:** 1 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		WGHT	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.5	0.5	0.5	5	0.5	0.5	0.5	5	0.01	5	0.5	0.5	5	0.5	0.5	0.5	10	0.01
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			
Prep Wash																				
ROCK-WHI	Prep Blank		0.9	2.6	2.1	36	<0.5	0.8	3.6	511	1.82	<5	<0.5	3.1	20	<0.5	<0.5	<0.5	26	0.60
ROCK-WHI	Prep Blank		0.9	3.9	1.4	28	<0.5	1.4	3.9	509	1.92	<5	<0.5	2.3	24	<0.5	<0.5	<0.5	29	0.64





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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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MacMillan Pass

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August 03, 2019

**Page:**

6 of 6

**Part:**

2 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	AQ270	LF725	LF725	LF725	LF725	LF725	
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	SiO2	Al2O3	Fe2O3	CaO	MgO
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	%	%	%
		0.5	0.5	0.01	5	0.001	0.01	0.01	0.01	0.01	0.5	0.05	0.5	0.5	0.05	5	2	0.01	0.01	0.01	0.01
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
ROCK-WHI	Prep Blank	6.4	2.5	0.44	61	0.098	0.88	0.08	0.09	<0.5	<0.05	3.3	<0.5	<0.05	<5	<2	71.29	14.09	3.42	2.34	0.94
ROCK-WHI	Prep Blank	6.3	3.0	0.47	65	0.103	0.92	0.08	0.09	<0.5	<0.05	3.1	<0.5	<0.05	<5	<2	70.09	13.94	3.41	2.48	0.94



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**Report Date:** August 03, 2019

**Page:** 6 of 6

**Part:** 3 of 3

## QUALITY CONTROL REPORT

WHI19000186.1

		LF725 K2O %	LF725 MnO %	LF725 TiO2 %	LF725 P2O5 %	LF725 Cr2O3 %	LF725 Ba %	LF725 Cu %	LF725 Pb %	LF725 Zn %	LF725 LOI %	LF725 SUM_T %	LF725 V2O5 %	TC000 TOT/C %	TC000 TOT/S %	TC005 C/ORG %	TC005 C/GRA %	TC006 CO2 %	TC008 S/S- %	TC008 SO4 %
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-5.11	0.01	0.01	0.02	0.02	0.02	0.02	0.08	0.05	0.05
BLK	Blank																			
BLK	Blank																			
BLK	Blank																			
Prep Wash																				
ROCK-WHI	Prep Blank	1.99	0.11	0.38	0.09	<0.01	0.09	<0.01	<0.01	<0.01	0.90	100.26	<0.01	0.07	<0.02	0.05	<0.02	<0.08	<0.05	0.11
ROCK-WHI	Prep Blank	2.03	0.11	0.36	0.09	<0.01	0.09	<0.01	<0.01	<0.01	0.80	98.79	<0.01	0.08	<0.02	0.02	<0.02	0.18	<0.05	0.11