



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bureauveritas.com/um

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

Client: Geological Survey of Canada (Van)
625 Robson Street
1st Floor, Rm 100
Vancouver BC V6B 5J3 CANADA

Submitted By: Jim Ryan
Receiving Lab: Canada-Vancouver
Received: March 17, 2015
Report Date: March 28, 2015
Page: 1 of 3

CERTIFICATE OF ANALYSIS

VAN15000606.1

CLIENT JOB INFORMATION

Project: GEM Cordillera
Shipment ID:
P.O. Number: 3000 574121
Number of Samples: 50

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PUL85	1	Pulverize to 85% passing 200 mesh			VAN
LF202	50	Total Whole Rock Characterization with AQ200	0.2	Completed	VAN

SAMPLE DISPOSAL

RTRN-PLP Return

ADDITIONAL COMMENTS

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

Invoice To: Geological Survey of Canada (Van)
625 Robson Street
1st Floor, Rm 100
Vancouver BC V6B 5J3
CANADA

CC: Wendy Chiu
JoAnne Nelson



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 3

Part: 1 of 4

CERTIFICATE OF ANALYSIS

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Method	Analyte	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200
		SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga
Unit		%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5	
32020	Rock Pulp	53.48	17.95	8.56	2.95	5.71	3.50	2.58	0.95	0.27	0.20	<0.002	<20	23	3.3	99.46	2947	<1	29.0	0.6	19.5
32215	Rock Pulp	50.35	14.94	10.98	5.22	8.37	4.77	0.15	1.58	0.16	0.16	0.014	34	35	3.1	99.78	76	2	37.0	0.2	15.8
32216	Rock Pulp	68.22	14.41	2.63	1.40	3.20	2.82	3.68	0.39	0.09	0.03	0.007	<20	7	2.8	99.71	1245	3	50.2	1.0	19.0
32217	Rock Pulp	58.10	15.55	6.40	4.33	6.24	2.86	1.95	0.84	0.14	0.13	0.015	23	22	3.1	99.70	1067	4	38.0	0.9	15.9
32218	Rock Pulp	52.00	15.89	10.29	5.89	4.41	3.91	2.86	0.71	0.14	0.10	0.020	39	27	3.5	99.70	958	2	25.6	0.6	15.7
32219	Rock Pulp	47.25	16.07	10.16	8.02	12.12	1.21	0.72	0.79	0.08	0.16	0.033	63	42	3.1	99.69	250	2	46.8	0.8	16.2
32497	Rock Pulp	49.12	14.57	11.33	6.38	8.53	4.01	0.07	1.69	0.15	0.17	0.023	54	39	3.7	99.76	196	3	39.4	1.3	15.5
32499	Rock Pulp	51.72	19.15	7.86	2.12	7.85	3.94	2.73	0.90	0.23	0.24	0.003	<20	20	2.9	99.67	1152	3	18.9	0.7	20.8
32500	Rock Pulp	53.22	18.16	7.00	2.36	7.27	5.25	1.31	0.80	0.12	0.29	0.002	<20	23	3.9	99.71	790	<1	22.9	0.7	16.9
32501	Rock Pulp	47.22	14.35	12.17	7.08	9.86	3.12	0.22	1.70	0.15	0.19	0.027	70	40	3.6	99.66	946	<1	43.0	1.4	16.5
32502	Rock Pulp	46.62	15.90	10.76	7.89	7.20	4.24	0.43	1.43	0.11	0.21	0.055	136	37	4.9	99.77	63	<1	46.9	0.8	16.6
33194	Rock Chip	50.98	16.38	7.88	7.21	10.74	3.39	0.09	0.53	0.02	0.14	0.010	72	34	2.4	99.82	29	<1	27.8	0.6	15.3
33404	Rock Pulp	49.75	14.32	10.65	6.87	6.76	4.60	0.23	1.39	0.12	0.39	0.032	80	35	4.6	99.77	153	<1	40.5	0.5	15.8
33405	Rock Pulp	49.52	16.87	10.44	5.96	4.82	5.27	0.30	1.74	0.15	0.32	<0.002	<20	27	3.8	99.18	5348	<1	31.3	2.4	16.8
33633	Rock Pulp	49.46	19.71	9.40	3.99	5.26	5.60	0.82	0.83	0.25	0.16	<0.002	<20	23	4.3	99.75	433	2	28.4	1.1	17.7
33634	Rock Pulp	55.72	18.76	8.43	2.85	7.22	3.14	2.06	1.02	0.41	0.15	<0.002	<20	23	-0.3	99.42	3626	<1	26.7	1.8	17.7
33635	Rock Pulp	60.47	16.74	6.21	2.61	5.78	4.68	0.45	0.58	0.13	0.13	0.002	<20	16	2.0	99.83	248	<1	22.7	1.1	14.9
33636	Rock Pulp	56.31	17.85	6.86	3.08	7.46	4.32	0.12	0.60	0.18	0.14	<0.002	<20	19	2.9	99.82	143	<1	29.3	1.2	16.7
33637	Rock Pulp	51.89	14.72	12.79	3.65	5.81	5.51	0.13	2.01	0.23	0.20	<0.002	<20	24	2.9	99.83	84	<1	30.0	2.6	19.9
33653	Rock Pulp	49.62	14.93	10.99	7.41	8.03	3.66	0.36	1.28	0.12	0.21	0.020	62	34	3.0	99.67	877	<1	38.1	0.6	14.1
33654	Rock Pulp	48.94	15.01	8.09	5.48	10.05	5.36	0.08	1.09	0.09	0.15	0.028	99	33	5.4	99.80	44	<1	49.0	<0.1	12.3
33655	Rock Pulp	49.69	14.92	9.90	6.14	9.99	3.88	0.02	1.35	0.15	0.16	0.022	72	33	3.6	99.79	32	2	43.1	<0.1	16.3
33656	Rock Pulp	49.23	15.41	9.84	6.83	9.00	3.94	0.62	1.19	0.09	0.17	0.029	72	39	3.4	99.76	86	2	42.4	0.2	15.2
34568	Rock Pulp	54.29	18.43	7.38	3.22	6.98	4.73	0.15	0.79	0.18	0.14	<0.002	<20	22	3.5	99.76	256	<1	23.7	0.5	18.8
34569	Rock Pulp	64.01	16.87	3.62	2.16	4.24	5.54	0.75	0.34	0.14	0.08	0.006	47	7	2.0	99.75	826	<1	19.0	1.0	14.5
34570	Rock Pulp	51.62	15.69	7.78	7.94	9.07	2.09	0.04	0.78	0.10	0.13	0.029	68	45	4.4	99.68	216	1	32.0	0.2	14.0
34741	Rock Pulp	50.94	14.32	10.99	6.68	7.24	4.05	0.84	1.54	0.13	0.16	0.035	85	40	2.7	99.69	858	1	45.3	0.6	13.9
34742	Rock Pulp	48.13	15.21	10.50	8.94	8.86	2.50	0.91	0.96	0.05	0.19	0.051	125	38	3.3	99.64	1190	<1	45.4	1.3	13.8
34743	Rock Pulp	51.43	13.44	10.74	5.39	8.07	4.92	0.23	1.99	0.15	0.17	0.007	30	41	3.2	99.72	555	1	45.1	0.6	15.6
34744	Rock Pulp	48.40	13.15	14.13	5.28	11.11	2.39	0.15	2.24	0.17	0.17	0.005	31	42	2.5	99.74	42	<1	50.9	9.5	18.0



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Page: 2 of 3

Part: 2 of 4

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Method	Analyte	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL
32020	Rock Pulp	3.0	5.9	77.3	1	349.3	0.4	6.1	2.3	227	103.7	117.2	20.7	21.9	47.1	5.48	23.2	4.85	1.29	4.43	0.67	
32215	Rock Pulp	2.9	2.3	2.5	<1	170.9	0.2	0.3	0.2	363	25.6	107.3	30.6	5.7	15.0	2.35	12.2	3.74	1.37	4.76	0.87	
32216	Rock Pulp	4.0	8.7	135.7	2	217.8	1.2	15.8	3.9	40	434.8	151.7	10.7	37.2	68.3	6.97	24.7	3.96	0.85	3.05	0.42	
32217	Rock Pulp	2.2	8.5	76.2	2	262.7	0.9	7.6	1.7	145	169.8	78.0	13.7	20.5	40.6	4.62	17.4	3.50	0.91	3.23	0.48	
32218	Rock Pulp	2.3	4.3	98.4	2	174.6	0.3	4.9	1.5	196	42.9	86.8	16.3	18.0	36.2	4.30	16.5	3.40	0.98	3.24	0.51	
32219	Rock Pulp	1.0	2.0	28.6	<1	367.6	0.4	1.8	0.5	401	95.0	37.6	8.9	7.5	15.0	1.92	8.5	1.98	0.59	2.00	0.31	
32497	Rock Pulp	2.9	2.4	1.1	<1	143.0	0.3	<0.2	<0.1	346	43.1	113.2	35.1	4.4	12.9	2.11	12.3	4.05	1.36	5.07	0.94	
32499	Rock Pulp	3.3	6.1	75.6	1	629.6	0.6	6.6	3.0	220	58.4	130.2	18.9	20.7	43.3	4.98	20.9	4.18	1.26	4.22	0.63	
32500	Rock Pulp	2.4	5.0	29.9	<1	451.5	4.1	6.1	1.8	177	75.7	88.8	14.8	16.6	33.6	3.79	14.9	3.10	0.88	2.98	0.49	
32501	Rock Pulp	2.9	2.5	5.2	<1	182.1	0.4	<0.2	<0.1	361	32.6	111.1	34.4	5.2	13.4	2.16	12.0	4.12	1.25	5.06	0.95	
32502	Rock Pulp	2.2	2.5	7.3	<1	87.4	0.9	<0.2	<0.1	278	18.6	70.3	30.4	2.5	7.7	1.39	9.0	3.02	1.18	4.37	0.84	
33194	Rock Chip	0.9	1.1	1.6	2	126.9	0.8	<0.2	<0.1	191	0.5	29.3	16.9	2.4	4.7	0.67	3.8	1.40	0.77	2.17	0.43	
33404	Rock Pulp	2.5	1.9	3.2	<1	163.0	0.2	0.3	<0.1	292	31.8	91.6	24.5	5.2	11.9	1.76	9.6	3.03	1.19	4.03	0.75	
33405	Rock Pulp	2.8	2.4	7.0	<1	267.7	1.9	<0.2	<0.1	352	24.4	104.4	31.2	5.0	13.1	1.98	10.8	3.51	1.28	4.76	0.82	
33633	Rock Pulp	2.4	5.1	23.6	<1	392.8	0.2	2.9	1.1	259	26.5	101.6	17.5	13.7	26.6	3.77	16.8	3.73	1.09	3.72	0.55	
33634	Rock Pulp	3.3	6.7	36.7	1	342.1	0.7	3.2	1.0	189	64.5	130.2	25.7	17.6	37.9	4.84	22.7	4.98	1.30	5.04	0.79	
33635	Rock Pulp	2.6	3.6	11.5	<1	368.6	0.4	4.0	1.9	140	78.5	99.6	13.9	14.2	26.2	2.98	13.1	2.59	0.76	2.42	0.39	
33636	Rock Pulp	2.0	3.2	3.9	<1	375.7	1.1	2.5	1.1	170	97.2	78.4	15.3	13.3	26.6	3.17	13.7	2.89	0.92	2.92	0.45	
33637	Rock Pulp	4.0	3.6	2.2	<1	107.2	0.4	0.4	<0.1	246	29.6	162.4	41.5	7.3	19.2	3.09	16.8	5.16	1.85	6.96	1.25	
33653	Rock Pulp	2.3	1.5	5.9	<1	284.2	0.2	0.2	<0.1	287	23.7	79.6	24.3	4.3	10.3	1.63	9.2	2.89	1.02	3.85	0.70	
33654	Rock Pulp	2.0	1.3	1.2	<1	258.9	0.1	<0.2	0.1	230	33.8	65.3	22.3	2.9	8.7	1.31	7.1	2.89	0.95	3.26	0.62	
33655	Rock Pulp	2.5	1.6	0.7	<1	66.1	0.3	0.3	0.1	298	44.7	94.7	28.3	4.4	13.3	1.99	10.6	3.44	1.19	4.41	0.79	
33656	Rock Pulp	2.4	1.3	12.9	<1	199.5	<0.1	<0.2	<0.1	286	32.6	78.4	24.5	3.1	8.8	1.42	7.6	2.47	0.90	3.70	0.68	
34568	Rock Pulp	2.0	3.8	3.0	<1	816.7	0.5	2.7	1.0	191	74.0	75.5	17.2	10.7	22.3	2.78	12.2	2.96	1.01	3.13	0.52	
34569	Rock Pulp	1.4	2.3	17.1	<1	759.5	0.2	1.2	0.3	67	98.7	54.5	3.8	8.2	15.2	1.72	7.2	1.23	0.43	1.11	0.15	
34570	Rock Pulp	1.5	3.1	0.8	<1	525.1	0.4	1.8	0.6	301	38.3	54.9	12.9	7.9	17.2	2.13	9.3	2.25	0.68	2.63	0.41	
34741	Rock Pulp	2.5	2.4	19.5	<1	159.6	0.3	0.2	<0.1	312	29.7	90.6	28.0	3.7	10.2	1.67	9.8	3.26	1.07	4.32	0.82	
34742	Rock Pulp	1.6	1.3	28.2	<1	38.4	0.3	<0.2	<0.1	261	17.8	51.5	21.2	2.4	5.1	0.97	5.0	1.98	0.78	3.03	0.58	
34743	Rock Pulp	3.5	2.5	3.3	<1	130.7	0.4	0.4	<0.1	406	31.6	119.6	34.8	4.6	12.1	2.07	12.4	3.96	1.42	5.48	1.05	
34744	Rock Pulp	3.5	2.9	6.0	1	396.9	0.3	0.4	<0.1	443	45.4	126.7	45.2	4.4	13.6	2.30	13.8	4.38	1.57	6.42	1.23	



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Page: 2 of 3

Part: 3 of 4

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32020	Rock Pulp	Method	LF200	LF200	LF200	LF200	LF200	LF200	TC000	TC000	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
		Analyte	Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au	Hg
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm
		MDL	0.05	0.02	0.03	0.01	0.05	0.01	0.02	0.02	0.02	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1	0.1	0.1	0.5
32215	Rock Pulp		5.41	1.21	3.39	0.49	3.09	0.47	0.05	0.05	0.3	79.1	1.3	80	21.7	<0.5	0.1	<0.1	<0.1	<0.1	2.5	<0.01
32216	Rock Pulp		2.08	0.40	1.02	0.16	1.08	0.14	0.08	<0.02	0.1	5.6	17.8	23	11.0	0.9	<0.1	0.2	<0.1	<0.1	2.0	<0.01
32217	Rock Pulp		2.83	0.51	1.54	0.23	1.42	0.21	0.08	<0.02	0.2	18.7	8.6	41	15.6	1.2	<0.1	<0.1	<0.1	<0.1	2.2	<0.01
32218	Rock Pulp		3.01	0.57	1.76	0.24	1.52	0.25	0.16	<0.02	<0.1	156.5	2.7	25	29.2	2.3	<0.1	0.1	<0.1	<0.1	4.1	<0.01
32219	Rock Pulp		1.74	0.39	1.03	0.16	1.00	0.14	0.05	0.05	0.1	90.0	2.9	36	29.9	2.0	<0.1	0.1	<0.1	<0.1	2.0	<0.01
32497	Rock Pulp		5.86	1.30	3.81	0.55	3.74	0.54	0.10	0.13	0.2	57.9	0.4	66	37.9	<0.5	0.1	<0.1	<0.1	<0.1	1.8	0.01
32499	Rock Pulp		3.54	0.73	2.14	0.31	2.02	0.31	0.11	<0.02	0.1	97.6	12.4	72	14.1	4.6	<0.1	0.4	0.2	<0.1	1.7	<0.01
32500	Rock Pulp		3.01	0.57	1.72	0.24	1.61	0.24	0.51	<0.02	0.2	27.1	6.1	350	10.4	2.7	0.8	0.2	0.3	<0.1	4.2	0.02
32501	Rock Pulp		5.93	1.32	3.73	0.56	3.54	0.53	0.05	0.14	0.3	66.5	0.4	69	49.4	0.7	<0.1	<0.1	<0.1	<0.1	1.8	<0.01
32502	Rock Pulp		5.19	1.11	3.35	0.46	2.92	0.45	0.29	<0.02	0.1	124.7	<0.1	81	126.4	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01
33194	Rock Chip		2.90	0.65	1.93	0.29	1.82	0.25	0.03	<0.02	<0.1	11.3	3.7	18	26.5	<0.5	<0.1	0.5	<0.1	<0.1	<0.5	<0.01
33404	Rock Pulp		4.46	0.96	2.96	0.45	2.95	0.44	0.03	<0.02	0.1	60.6	0.6	72	62.7	<0.5	<0.1	<0.1	<0.1	<0.1	1.7	<0.01
33405	Rock Pulp		5.41	1.13	3.45	0.49	3.19	0.52	<0.02	<0.02	0.1	69.6	0.3	72	12.6	1.4	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01
33633	Rock Pulp		3.32	0.75	2.08	0.31	1.89	0.32	0.25	<0.02	0.2	30.2	1.9	92	5.6	3.1	<0.1	<0.1	<0.1	<0.1	3.5	<0.01
33634	Rock Pulp		4.50	0.94	2.63	0.39	2.59	0.37	0.09	0.03	0.8	78.0	3.7	68	4.8	0.9	<0.1	<0.1	<0.1	<0.1	2.2	<0.01
33635	Rock Pulp		2.46	0.50	1.38	0.22	1.37	0.23	0.19	0.05	0.5	22.4	4.1	69	5.4	2.0	<0.1	0.1	<0.1	<0.1	1.3	<0.01
33636	Rock Pulp		2.76	0.54	1.57	0.24	1.59	0.26	0.03	<0.02	0.4	74.3	2.8	66	9.6	3.0	<0.1	0.1	<0.1	<0.1	1.6	<0.01
33637	Rock Pulp		8.38	1.64	4.81	0.75	4.80	0.73	0.03	<0.02	0.2	5.5	0.3	89	0.9	<0.5	<0.1	<0.1	<0.1	<0.1	0.9	<0.01
33653	Rock Pulp		4.49	0.99	2.82	0.42	2.80	0.41	0.03	0.04	0.3	82.0	3.1	69	42.4	1.6	<0.1	<0.1	<0.1	<0.1	1.9	<0.01
33654	Rock Pulp		4.05	0.85	2.45	0.36	2.39	0.40	0.81	<0.02	0.3	72.1	1.8	66	89.0	1.4	0.4	<0.1	<0.1	<0.1	1.0	0.02
33655	Rock Pulp		5.22	1.20	3.48	0.48	2.99	0.47	0.06	0.03	0.5	76.3	1.0	66	53.4	0.6	0.2	<0.1	<0.1	<0.1	<0.5	<0.01
33656	Rock Pulp		4.52	0.93	2.88	0.42	2.64	0.38	0.03	<0.02	0.4	78.4	0.7	64	55.0	<0.5	<0.1	<0.1	<0.1	<0.1	0.8	<0.01
34568	Rock Pulp		3.23	0.64	2.02	0.30	1.73	0.30	0.13	<0.02	0.1	22.9	1.3	64	7.9	8.3	<0.1	0.2	<0.1	<0.1	<0.5	<0.01
34569	Rock Pulp		0.79	0.16	0.42	0.05	0.41	0.06	0.17	0.10	0.1	4.9	1.4	52	48.2	7.9	<0.1	0.5	<0.1	<0.1	0.7	<0.01
34570	Rock Pulp		2.52	0.50	1.46	0.22	1.48	0.23	0.20	0.73	0.5	247.7	0.7	32	54.7	3.1	<0.1	0.1	<0.1	<0.1	2.1	<0.01
34741	Rock Pulp		5.38	1.15	3.47	0.50	2.90	0.46	0.16	<0.02	<0.1	66.5	0.1	50	52.7	<0.5	0.1	<0.1	<0.1	<0.1	<0.5	<0.01
34742	Rock Pulp		3.93	0.81	2.52	0.36	2.43	0.36	0.06	<0.02	<0.1	78.1	<0.1	44	76.0	<0.5	0.1	<0.1	<0.1	<0.1	<0.5	<0.01
34743	Rock Pulp		6.43	1.37	4.27	0.61	3.99	0.60	0.35	<0.02	<0.1	74.1	<0.1	50	20.4	1.1	<0.1	<0.1	<0.1	<0.1	0.7	<0.01
34744	Rock Pulp		7.81	1.66	5.21	0.76	4.77	0.76	0.08	0.13	2.0	61.4	0.2	72	22.8	2.3	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01



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Project: GEM Cordillera

Report Date: March 28, 2015

Page: 2 of 3

Part: 4 of 4

CERTIFICATE OF ANALYSIS

VAN15000606.1

Method Analyte	AQ200 TI	AQ200 Se
32020	Rock Pulp	<0.1 <0.5
32215	Rock Pulp	<0.1 <0.5
32216	Rock Pulp	<0.1 <0.5
32217	Rock Pulp	0.1 <0.5
32218	Rock Pulp	<0.1 <0.5
32219	Rock Pulp	<0.1 <0.5
32497	Rock Pulp	<0.1 <0.5
32499	Rock Pulp	<0.1 <0.5
32500	Rock Pulp	<0.1 <0.5
32501	Rock Pulp	<0.1 <0.5
32502	Rock Pulp	<0.1 <0.5
33194	Rock Chip	<0.1 <0.5
33404	Rock Pulp	<0.1 <0.5
33405	Rock Pulp	<0.1 <0.5
33633	Rock Pulp	<0.1 <0.5
33634	Rock Pulp	<0.1 <0.5
33635	Rock Pulp	<0.1 <0.5
33636	Rock Pulp	<0.1 <0.5
33637	Rock Pulp	<0.1 <0.5
33653	Rock Pulp	<0.1 <0.5
33654	Rock Pulp	<0.1 <0.5
33655	Rock Pulp	<0.1 <0.5
33656	Rock Pulp	<0.1 <0.5
34568	Rock Pulp	<0.1 <0.5
34569	Rock Pulp	<0.1 <0.5
34570	Rock Pulp	<0.1 0.8
34741	Rock Pulp	<0.1 <0.5
34742	Rock Pulp	<0.1 <0.5
34743	Rock Pulp	<0.1 <0.5
34744	Rock Pulp	<0.1 <0.5



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Project: GEM Cordillera
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Page: 3 of 3

Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN15000606.1

Method	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200
Analyte	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga	
Unit	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5	
34746	Rock Pulp	48.75	14.88	9.88	6.37	10.16	4.00	0.17	1.33	0.10	0.15	0.030	78	36	4.0	99.79	68	<1	37.8	1.2	15.0
34747	Rock Pulp	44.54	14.35	12.11	8.82	8.30	1.66	0.02	1.78	0.15	0.14	0.029	64	43	7.8	99.74	121	2	37.7	0.8	16.3
34749	Rock Pulp	50.64	19.74	8.12	3.54	7.74	4.42	0.55	0.68	0.14	0.27	<0.002	<20	26	3.9	99.73	588	3	24.5	0.7	15.3
34751	Rock Pulp	49.52	17.09	9.37	8.42	8.08	3.01	0.18	0.77	0.15	0.16	0.025	66	33	2.9	99.71	309	<1	31.8	1.3	16.1
34752	Rock Pulp	49.38	18.35	8.43	5.21	6.08	4.92	0.48	0.68	0.12	0.21	0.006	25	28	5.9	99.74	560	<1	24.3	0.4	14.6
34753	Rock Pulp	48.00	15.16	10.24	6.73	10.20	3.28	0.17	1.33	0.11	0.17	0.032	66	36	4.4	99.79	51	2	42.6	1.1	17.0
37625	Rock Pulp	48.38	13.00	9.90	6.89	7.79	3.14	0.13	1.36	0.26	0.16	0.037	56	31	8.7	99.75	81	<1	36.5	0.8	14.9
37627	Rock Pulp	44.88	18.53	8.27	7.58	11.66	2.79	0.51	0.87	0.07	0.13	0.008	93	33	4.4	99.69	774	1	42.1	0.4	15.5
37628	Rock Pulp	69.03	14.38	3.85	0.58	4.55	5.12	0.03	0.27	0.04	0.05	<0.002	<20	4	2.0	99.92	47	<1	27.4	<0.1	18.5
37630	Rock Pulp	55.58	16.70	7.24	4.92	3.71	3.31	2.63	0.92	0.29	0.09	0.005	<20	16	4.3	99.70	798	2	20.2	2.4	18.8
37631	Rock Pulp	49.10	15.30	10.72	5.59	8.34	2.99	1.93	1.54	0.37	0.20	0.025	73	32	3.5	99.62	1169	3	36.5	7.7	17.9
37632	Rock Pulp	55.05	15.92	8.96	3.74	5.71	4.09	0.34	0.95	0.18	0.18	0.003	<20	26	4.6	99.71	769	<1	25.1	0.9	16.4
37635	Rock Pulp	47.57	16.88	10.12	5.95	4.13	4.12	1.65	1.85	0.53	0.39	0.029	112	23	6.4	99.69	611	4	47.6	1.5	16.2
37639	Rock Pulp	67.62	13.19	4.45	3.38	1.93	3.70	1.59	0.67	0.10	0.07	0.018	39	12	3.1	99.78	809	2	22.4	1.3	13.6
37640	Rock Pulp	47.82	14.89	11.67	8.83	5.68	2.61	2.36	1.54	0.15	0.18	0.015	68	44	3.9	99.68	518	2	51.3	3.5	17.5
37645	Rock Pulp	48.99	16.18	9.59	6.83	8.75	3.30	0.51	0.94	0.13	0.17	0.023	46	38	4.4	99.77	205	<1	35.6	0.5	15.0
37646	Rock Pulp	59.86	12.52	9.33	4.54	5.22	3.32	0.28	1.33	0.15	0.18	0.010	40	25	3.0	99.79	387	2	31.7	0.9	15.3
37647	Rock Pulp	50.14	15.60	13.29	4.79	5.19	4.23	0.45	1.79	0.18	0.34	0.003	<20	33	3.6	99.56	2209	<1	38.5	2.3	20.4
37648	Rock Pulp	48.13	14.87	10.31	8.30	8.33	2.66	1.89	1.48	0.13	0.17	0.043	74	44	3.3	99.63	1272	<1	42.3	2.5	15.7
37649	Rock Pulp	48.00	14.10	10.59	7.84	10.83	3.06	0.48	1.35	0.11	0.19	0.044	81	43	3.1	99.75	175	2	46.7	0.7	16.1



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Project: GEM Cordillera

Report Date: March 28, 2015

Page: 3 of 3

Part: 2 of 4

CERTIFICATE OF ANALYSIS

VAN15000606.1

	Method Analyte Unit MDL	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1	0.1	0.02	0.3	0.05	0.02	0.05	0.01
34746	Rock Pulp	2.2	1.2	5.5	<1	258.2	<0.1	<0.2	<0.1	288	26.3	75.9	24.7	3.0	8.4	1.42	8.0	2.80	1.00	3.60	0.69	
34747	Rock Pulp	3.1	2.9	1.7	1	78.9	0.3	<0.2	<0.1	357	5.1	107.4	30.3	4.5	12.0	1.99	10.2	3.52	1.28	4.78	0.87	
34749	Rock Pulp	1.3	1.7	15.3	<1	455.8	0.7	1.6	0.6	259	48.2	48.5	15.2	7.6	15.8	2.06	9.9	2.36	0.77	2.54	0.43	
34751	Rock Pulp	1.1	3.1	5.3	<1	353.1	0.2	1.5	0.6	284	20.6	45.7	12.0	8.4	17.2	2.18	9.8	2.32	0.76	2.46	0.39	
34752	Rock Pulp	1.1	1.3	16.4	<1	423.3	0.2	0.5	0.1	236	13.4	40.4	14.8	5.8	12.1	1.65	8.3	2.13	0.85	2.60	0.42	
34753	Rock Pulp	2.1	1.5	9.9	<1	140.2	0.2	<0.2	<0.1	294	41.1	80.3	26.9	3.5	9.3	1.54	8.6	2.89	1.09	4.17	0.76	
37625	Rock Pulp	2.7	9.5	5.8	<1	386.5	0.6	4.7	2.6	256	14.9	100.8	24.2	19.0	38.4	4.74	21.8	4.47	1.50	5.15	0.81	
37627	Rock Pulp	1.3	1.3	8.1	<1	441.1	0.2	<0.2	<0.1	220	38.9	52.7	16.6	2.5	6.0	1.05	5.7	2.07	0.74	2.64	0.50	
37628	Rock Pulp	<0.1	1.1	<0.1	<1	191.7	0.4	<0.2	<0.1	62	212.0	2.7	3.9	5.2	8.6	1.07	4.3	1.09	0.94	0.90	0.11	
37630	Rock Pulp	3.6	8.3	82.7	1	436.4	0.5	8.4	3.0	182	16.6	133.5	18.0	28.3	56.7	6.54	26.5	5.09	1.46	4.65	0.70	
37631	Rock Pulp	4.2	17.9	44.6	1	270.1	1.0	3.6	1.2	339	29.3	169.7	24.8	22.0	46.1	5.55	23.4	4.85	1.48	4.90	0.76	
37632	Rock Pulp	2.7	3.5	5.4	<1	571.3	0.4	1.6	0.6	228	27.1	94.1	19.1	9.6	21.7	2.93	13.2	3.24	1.06	3.81	0.62	
37635	Rock Pulp	3.0	72.8	39.0	1	367.1	4.3	5.5	1.2	199	8.6	126.0	27.8	44.0	75.9	8.82	34.4	6.39	2.29	6.42	0.89	
37639	Rock Pulp	2.6	8.4	54.6	<1	192.8	0.7	5.4	2.5	89	110.7	111.2	12.9	20.5	35.5	3.80	13.9	2.69	0.88	2.57	0.38	
37640	Rock Pulp	2.3	7.8	50.9	<1	83.1	0.4	1.3	2.5	401	5.2	83.6	32.8	8.9	17.8	2.45	11.0	3.48	1.10	4.87	0.88	
37645	Rock Pulp	1.9	5.6	10.2	<1	164.2	0.4	0.7	0.3	274	35.3	63.0	16.3	6.7	15.2	1.94	9.3	2.23	0.82	2.72	0.49	
37646	Rock Pulp	3.1	3.8	8.9	<1	108.8	0.4	2.1	0.6	267	41.5	121.3	26.9	10.4	26.3	3.14	14.6	4.03	1.40	4.63	0.83	
37647	Rock Pulp	2.8	2.5	12.4	1	123.9	0.2	0.5	0.3	412	21.1	106.8	32.1	7.5	17.4	2.60	13.6	3.78	1.42	5.20	0.90	
37648	Rock Pulp	2.3	3.3	46.0	<1	74.5	0.3	<0.2	<0.1	307	19.7	91.0	24.5	4.2	11.8	1.78	9.5	3.29	1.16	4.15	0.72	
37649	Rock Pulp	1.9	1.6	10.8	<1	162.0	0.2	<0.2	0.2	313	34.1	71.1	24.5	2.8	8.2	1.46	8.6	2.91	1.10	4.01	0.74	



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Page: 3 of 3

Part: 3 of 4

CERTIFICATE OF ANALYSIS

VAN15000606.1

Method	LF200	LF200	LF200	LF200	LF200	LF200	TC000	TC000	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au	Hg	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	
MDL	0.05	0.02	0.03	0.01	0.05	0.01	0.02	0.02	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.01	
34746	Rock Pulp	4.48	0.94	2.66	0.41	2.64	0.42	0.10	<0.02	<0.1	23.1	0.2	45	58.7	<0.5	<0.1	<0.1	<0.1	<0.5	<0.01	
34747	Rock Pulp	5.90	1.19	3.62	0.52	3.35	0.52	0.95	<0.02	1.0	66.8	0.8	94	61.6	2.6	0.1	<0.1	<0.1	<0.1	0.6	<0.01
34749	Rock Pulp	2.87	0.56	1.59	0.28	1.62	0.26	<0.02	<0.02	0.2	82.2	3.3	160	4.4	2.6	<0.1	0.2	<0.1	0.2	0.6	0.02
34751	Rock Pulp	2.28	0.48	1.45	0.18	1.24	0.19	0.02	0.04	0.1	59.8	1.2	64	43.4	2.9	<0.1	0.2	<0.1	<0.1	2.6	<0.01
34752	Rock Pulp	2.57	0.58	1.66	0.25	1.66	0.25	0.73	<0.02	<0.1	6.9	1.8	108	26.3	5.3	<0.1	0.3	<0.1	<0.1	2.0	<0.01
34753	Rock Pulp	5.01	0.93	2.93	0.44	2.89	0.45	0.05	<0.02	0.1	26.1	0.2	62	53.0	<0.5	<0.1	<0.1	<0.1	<0.1	2.2	<0.01
37625	Rock Pulp	4.61	0.95	2.66	0.38	2.34	0.40	1.37	0.12	0.3	60.3	8.5	79	62.9	1.3	<0.1	<0.1	<0.1	<0.1	1.6	0.01
37627	Rock Pulp	2.87	0.64	1.88	0.28	1.73	0.26	0.03	<0.02	<0.1	9.8	5.8	40	70.1	2.7	0.2	0.2	0.3	0.2	1.8	0.06
37628	Rock Pulp	0.58	0.09	0.29	0.04	0.19	0.04	0.10	0.05	0.1	22.7	0.5	11	1.7	<0.5	<0.1	<0.1	<0.1	<0.1	2.0	<0.01
37630	Rock Pulp	3.42	0.68	2.02	0.27	1.70	0.28	0.07	0.05	0.3	58.2	7.5	62	16.1	6.6	<0.1	0.2	0.1	<0.1	3.4	0.02
37631	Rock Pulp	4.63	0.87	2.42	0.38	2.39	0.38	0.11	0.02	0.7	189.2	1.8	73	58.8	1.2	<0.1	0.3	<0.1	<0.1	2.2	0.02
37632	Rock Pulp	3.80	0.76	2.34	0.34	2.25	0.35	0.26	<0.02	1.2	130.6	2.6	82	13.3	1.3	<0.1	0.1	<0.1	<0.1	1.6	0.02
37635	Rock Pulp	5.39	0.97	2.64	0.36	2.23	0.34	0.66	<0.02	<0.1	21.0	1.1	130	115.5	0.5	0.1	<0.1	<0.1	<0.1	1.3	0.01
37639	Rock Pulp	2.16	0.47	1.40	0.23	1.36	0.22	0.10	<0.02	0.1	12.0	10.4	52	40.8	7.0	<0.1	0.3	0.1	<0.1	1.9	0.01
37640	Rock Pulp	5.83	1.29	3.79	0.55	3.41	0.54	0.12	<0.02	0.1	93.9	0.8	71	53.8	<0.5	<0.1	<0.1	<0.1	<0.1	1.3	0.01
37645	Rock Pulp	2.85	0.62	1.87	0.27	1.90	0.29	0.04	0.06	0.1	54.1	0.5	59	35.9	<0.5	<0.1	<0.1	<0.1	<0.1	2.1	<0.01
37646	Rock Pulp	4.80	1.06	3.14	0.48	2.90	0.49	0.14	0.02	0.4	49.5	4.6	62	29.3	1.3	<0.1	<0.1	<0.1	<0.1	1.2	<0.01
37647	Rock Pulp	5.74	1.29	3.58	0.52	3.62	0.55	0.12	0.26	10.1	122.7	1.1	72	14.5	<0.5	<0.1	0.1	<0.1	<0.1	1.2	0.01
37648	Rock Pulp	4.40	0.98	2.96	0.43	2.66	0.42	0.10	0.10	0.2	78.7	0.3	47	50.9	1.1	0.1	0.2	<0.1	<0.1	1.0	0.01
37649	Rock Pulp	4.63	1.02	3.01	0.43	2.89	0.46	0.09	0.11	3.8	83.2	0.6	45	52.3	4.7	<0.1	<0.1	<0.1	<0.1	1.3	<0.01



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Project: GEM Cordillera

Report Date: March 28, 2015

Page: 3 of 3

Part: 4 of 4

CERTIFICATE OF ANALYSIS

VAN15000606.1

Method	Analyte	AQ200	AQ200
		Tl	Se
Unit		ppm	ppm
MDL		0.1	0.5
34746	Rock Pulp	<0.1	<0.5
34747	Rock Pulp	<0.1	<0.5
34749	Rock Pulp	<0.1	<0.5
34751	Rock Pulp	<0.1	<0.5
34752	Rock Pulp	<0.1	<0.5
34753	Rock Pulp	<0.1	<0.5
37625	Rock Pulp	<0.1	<0.5
37627	Rock Pulp	<0.1	<0.5
37628	Rock Pulp	<0.1	<0.5
37630	Rock Pulp	<0.1	<0.5
37631	Rock Pulp	<0.1	<0.5
37632	Rock Pulp	<0.1	<0.5
37635	Rock Pulp	<0.1	<0.5
37639	Rock Pulp	<0.1	<0.5
37640	Rock Pulp	<0.1	<0.5
37645	Rock Pulp	<0.1	<0.5
37646	Rock Pulp	<0.1	<0.5
37647	Rock Pulp	<0.1	0.6
37648	Rock Pulp	<0.1	<0.5
37649	Rock Pulp	<0.1	<0.5



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Page: 1 of 2

Part: 1 of 4

QUALITY CONTROL REPORT

VAN15000606.1

Method	Analyte	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200
		SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga
Unit		%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	
MDL		0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5
32217	Rock Pulp	58.10	15.55	6.40	4.33	6.24	2.86	1.95	0.84	0.14	0.13	0.015	23	22	3.1	99.70	1067	4	38.0	0.9	15.9
33633	Rock Pulp	49.46	19.71	9.40	3.99	5.26	5.60	0.82	0.83	0.25	0.16	<0.002	<20	23	4.3	99.75	433	2	28.4	1.1	17.7
37630	Rock Pulp	55.58	16.70	7.24	4.92	3.71	3.31	2.63	0.92	0.29	0.09	0.005	<20	16	4.3	99.70	798	2	20.2	2.4	18.8
Pulp Duplicates																					
33634	Rock Pulp	55.72	18.76	8.43	2.85	7.22	3.14	2.06	1.02	0.41	0.15	<0.002	<20	23	-0.3	99.42	3626	<1	26.7	1.8	17.7
REP 33634	QC																				
33655	Rock Pulp	49.69	14.92	9.90	6.14	9.99	3.88	0.02	1.35	0.15	0.16	0.022	72	33	3.6	99.79	32	2	43.1	<0.1	16.3
REP 33655	QC																				
33656	Rock Pulp	49.23	15.41	9.84	6.83	9.00	3.94	0.62	1.19	0.09	0.17	0.029	72	39	3.4	99.76	86	2	42.4	0.2	15.2
REP 33656	QC	49.52	15.29	9.75	6.83	9.00	3.88	0.61	1.18	0.09	0.17	0.027	73	38	3.4	99.76	75	<1	41.7	0.1	13.3
37628	Rock Pulp	69.03	14.38	3.85	0.58	4.55	5.12	0.03	0.27	0.04	0.05	<0.002	<20	4	2.0	99.92	47	<1	27.4	<0.1	18.5
REP 37628	QC	68.88	14.50	3.79	0.58	4.60	5.15	0.03	0.27	0.05	0.04	<0.002	<20	4	2.0	99.92	42	10	29.5	<0.1	16.5
37649	Rock Pulp	48.00	14.10	10.59	7.84	10.83	3.06	0.48	1.35	0.11	0.19	0.044	81	43	3.1	99.75	175	2	46.7	0.7	16.1
REP 37649	QC	48.07	14.07	10.51	7.83	10.93	3.04	0.48	1.35	0.10	0.19	0.043	88	43	3.1	99.75	165	<1	44.1	0.8	14.2
Reference Materials																					
STD DS10	Standard																				
STD DS10	Standard																				
STD GS311-1	Standard																				
STD GS311-1	Standard																				
STD GS910-4	Standard																				
STD GS910-4	Standard																				
STD OREAS45EA	Standard																				
STD OREAS45EA	Standard																				
STD SO-18	Standard	57.94	14.25	7.59	3.41	6.39	3.66	2.15	0.69	0.79	0.40	0.557	42	24	1.9	99.74	497	1	26.1	6.8	17.5
STD SO-18	Standard	58.11	14.20	7.64	3.38	6.35	3.64	2.07	0.69	0.80	0.39	0.550	47	24	1.9	99.73	500	1	24.0	6.8	16.4
STD SO-18	Standard	57.94	14.20	7.62	3.41	6.36	3.68	2.18	0.68	0.79	0.40	0.559	44	24	1.9	99.74	482	2	24.4	7.0	16.9
STD SO-18	Standard	57.90	14.23	7.63	3.42	6.33	3.71	2.17	0.69	0.80	0.40	0.556	41	24	1.9	99.74	468	2	25.3	6.1	15.6
STD SO-18	Standard	58.36	14.07	7.56	3.32	6.39	3.61	2.08	0.70	0.79	0.39	0.542	48	23	1.9	99.72	480	4	25.2	6.4	16.9
STD SO-18	Standard	58.14	14.07	7.66	3.39	6.39	3.61	2.12	0.69	0.80	0.39	0.549	51	24	1.9	99.73	479	4	23.1	6.2	15.9



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Project: GEM Cordillera
Report Date: March 28, 2015

Page: 1 of 2

Part: 2 of 4

QUALITY CONTROL REPORT

VAN15000606.1

Method	Analyte	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL
32217	Rock Pulp	2.2	8.5	76.2	2	262.7	0.9	7.6	1.7	145	169.8	78.0	13.7	20.5	40.6	4.62	17.4	3.50	0.91	3.23	0.48	
33633	Rock Pulp	2.4	5.1	23.6	<1	392.8	0.2	2.9	1.1	259	26.5	101.6	17.5	13.7	26.6	3.77	16.8	3.73	1.09	3.72	0.55	
37630	Rock Pulp	3.6	8.3	82.7	1	436.4	0.5	8.4	3.0	182	16.6	133.5	18.0	28.3	56.7	6.54	26.5	5.09	1.46	4.65	0.70	
Pulp Duplicates																						
33634	Rock Pulp	3.3	6.7	36.7	1	342.1	0.7	3.2	1.0	189	64.5	130.2	25.7	17.6	37.9	4.84	22.7	4.98	1.30	5.04	0.79	
REP 33634	QC																					
33655	Rock Pulp	2.5	1.6	0.7	<1	66.1	0.3	0.3	0.1	298	44.7	94.7	28.3	4.4	13.3	1.99	10.6	3.44	1.19	4.41	0.79	
REP 33655	QC																					
33656	Rock Pulp	2.4	1.3	12.9	<1	199.5	<0.1	<0.2	<0.1	286	32.6	78.4	24.5	3.1	8.8	1.42	7.6	2.47	0.90	3.70	0.68	
REP 33656	QC	2.2	1.3	13.0	<1	196.0	<0.1	<0.2	<0.1	288	34.0	74.1	22.2	3.2	9.3	1.30	6.6	2.66	0.91	3.72	0.69	
37628	Rock Pulp	<0.1	1.1	<0.1	<1	191.7	0.4	<0.2	<0.1	62	212.0	2.7	3.9	5.2	8.6	1.07	4.3	1.09	0.94	0.90	0.11	
REP 37628	QC	0.1	1.1	0.1	<1	195.4	0.4	<0.2	<0.1	51	210.0	2.7	4.1	4.8	9.8	1.04	5.0	0.95	1.04	0.92	0.10	
37649	Rock Pulp	1.9	1.6	10.8	<1	162.0	0.2	<0.2	0.2	313	34.1	71.1	24.5	2.8	8.2	1.46	8.6	2.91	1.10	4.01	0.74	
REP 37649	QC	2.0	1.7	10.2	4	157.6	0.2	<0.2	0.1	313	33.2	69.9	25.9	3.3	8.8	1.44	7.7	2.73	1.02	3.85	0.70	
Reference Materials																						
STD DS10	Standard																					
STD DS10	Standard																					
STD GS311-1	Standard																					
STD GS311-1	Standard																					
STD GS910-4	Standard																					
STD GS910-4	Standard																					
STD OREAS45EA	Standard																					
STD OREAS45EA	Standard																					
STD SO-18	Standard	8.8	19.4	28.2	14	396.9	7.7	9.6	16.0	202	14.3	289.2	27.5	14.1	26.9	3.14	13.9	2.78	0.82	2.87	0.46	
STD SO-18	Standard	9.2	19.6	27.1	14	400.1	6.8	9.0	15.8	199	14.4	290.6	29.5	13.8	28.5	3.25	13.6	2.76	0.83	2.88	0.48	
STD SO-18	Standard	9.0	20.1	28.2	14	407.3	6.3	9.2	15.6	196	14.1	278.5	28.4	13.1	27.5	3.25	12.8	2.62	0.82	3.02	0.49	
STD SO-18	Standard	9.0	19.1	27.4	13	403.7	6.4	9.3	15.7	198	13.4	273.4	28.8	12.7	27.6	3.15	12.9	2.65	0.80	2.84	0.47	
STD SO-18	Standard	9.3	18.0	27.6	14	392.6	6.3	9.0	15.5	196	14.1	283.1	29.1	12.5	25.0	3.30	13.0	2.59	0.88	2.79	0.48	
STD SO-18	Standard	8.9	19.4	27.6	14	395.1	6.6	8.7	15.1	211	13.5	278.2	29.2	12.2	25.2	3.22	12.4	2.69	0.76	2.60	0.47	



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Project: GEM Cordillera
Report Date: March 28, 2015

Page: 1 of 2

Part: 3 of 4

QUALITY CONTROL REPORT

VAN15000606.1

Method	Analyte	LF200	LF200	LF200	LF200	LF200	TC000	TC000	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au	Hg
Unit	MDL	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm
		0.05	0.02	0.03	0.01	0.05	0.02	0.02	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.5	0.01
32217	Rock Pulp	2.83	0.51	1.54	0.23	1.42	0.21	0.08	<0.02	0.2	18.7	8.6	41	15.6	1.2	<0.1	<0.1	<0.1	<0.1	2.2	<0.01
33633	Rock Pulp	3.32	0.75	2.08	0.31	1.89	0.32	0.25	<0.02	0.2	30.2	1.9	92	5.6	3.1	<0.1	<0.1	<0.1	<0.1	3.5	<0.01
37630	Rock Pulp	3.42	0.68	2.02	0.27	1.70	0.28	0.07	0.05	0.3	58.2	7.5	62	16.1	6.6	<0.1	0.2	0.1	<0.1	3.4	0.02
Pulp Duplicates																					
33634	Rock Pulp	4.50	0.94	2.63	0.39	2.59	0.37	0.09	0.03	0.8	78.0	3.7	68	4.8	0.9	<0.1	<0.1	<0.1	<0.1	2.2	<0.01
REP 33634	QC									0.8	80.5	3.5	63	4.8	0.7	<0.1	<0.1	<0.1	<0.1	2.0	<0.01
33655	Rock Pulp	5.22	1.20	3.48	0.48	2.99	0.47	0.06	0.03	0.5	76.3	1.0	66	53.4	0.6	0.2	<0.1	<0.1	<0.1	<0.5	<0.01
REP 33655	QC							0.06	0.02												
33656	Rock Pulp	4.52	0.93	2.88	0.42	2.64	0.38	0.03	<0.02	0.4	78.4	0.7	64	55.0	<0.5	<0.1	<0.1	<0.1	<0.1	0.8	<0.01
REP 33656	QC	4.40	0.94	2.82	0.39	2.59	0.40														
37628	Rock Pulp	0.58	0.09	0.29	0.04	0.19	0.04	0.10	0.05	0.1	22.7	0.5	11	1.7	<0.5	<0.1	<0.1	<0.1	<0.1	2.0	<0.01
REP 37628	QC	0.52	0.10	0.30	0.04	0.21	0.04														
37649	Rock Pulp	4.63	1.02	3.01	0.43	2.89	0.46	0.09	0.11	3.8	83.2	0.6	45	52.3	4.7	<0.1	<0.1	<0.1	<0.1	1.3	<0.01
REP 37649	QC	4.55	1.03	2.94	0.44	2.89	0.44	0.09	0.10	3.7	81.7	0.5	47	52.2	4.6	0.1	<0.1	<0.1	<0.1	0.5	0.01
Reference Materials																					
STD DS10	Standard									14.6	162.4	146.7	374	75.1	46.6	2.9	7.8	12.4	1.9	59.7	0.31
STD DS10	Standard									14.3	163.5	153.7	389	78.8	46.6	2.9	7.9	13.0	1.9	106.4	0.27
STD GS311-1	Standard						1.02	2.24													
STD GS311-1	Standard						1.03	2.30													
STD GS910-4	Standard						2.67	8.44													
STD GS910-4	Standard						2.72	8.32													
STD OREAS45EA	Standard									1.5	741.3	15.9	33	397.8	10.5	<0.1	0.3	0.3	0.3	51.5	0.01
STD OREAS45EA	Standard									1.5	720.0	14.8	32	385.0	10.5	<0.1	0.3	0.3	0.2	52.0	0.01
STD SO-18	Standard	2.96	0.59	1.66	0.25	1.72	0.25														
STD SO-18	Standard	2.80	0.60	1.75	0.24	1.66	0.27														
STD SO-18	Standard	2.82	0.64	1.83	0.25	1.80	0.27														
STD SO-18	Standard	2.80	0.59	1.81	0.26	1.63	0.26														
STD SO-18	Standard	2.69	0.57	1.72	0.25	1.89	0.25														
STD SO-18	Standard	2.72	0.57	1.65	0.25	1.58	0.24														



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Page: 1 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN15000606.1

Method	Analyte	AQ200	AQ200
		Tl	Se
Unit		ppm	ppm
MDL		0.1	0.5
32217	Rock Pulp	0.1	<0.5
33633	Rock Pulp	<0.1	<0.5
37630	Rock Pulp	<0.1	<0.5
Pulp Duplicates			
33634	Rock Pulp	<0.1	<0.5
REP 33634	QC	<0.1	<0.5
33655	Rock Pulp	<0.1	<0.5
REP 33655	QC		
33656	Rock Pulp	<0.1	<0.5
REP 33656	QC		
37628	Rock Pulp	<0.1	<0.5
REP 37628	QC		
37649	Rock Pulp	<0.1	<0.5
REP 37649	QC	<0.1	<0.5
Reference Materials			
STD DS10	Standard	5.1	2.3
STD DS10	Standard	5.5	2.5
STD GS311-1	Standard		
STD GS311-1	Standard		
STD GS910-4	Standard		
STD GS910-4	Standard		
STD OREAS45EA	Standard	<0.1	0.8
STD OREAS45EA	Standard	<0.1	0.6
STD SO-18	Standard		
STD SO-18	Standard		
STD SO-18	Standard		
STD SO-18	Standard		
STD SO-18	Standard		
STD SO-18	Standard		



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Page: 2 of 2

Part: 1 of 4

QUALITY CONTROL REPORT

VAN15000606.1

		LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200
		SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga
		%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm
		0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5
STD SO-18	Standard	58.10	14.15	7.59	3.37	6.43	3.64	2.09	0.70	0.80	0.40	0.543	50	24	1.9	99.72	507	4	25.0	6.5	17.4
STD SO-18	Standard	57.94	14.21	7.65	3.38	6.45	3.66	2.12	0.70	0.78	0.40	0.546	40	23	1.9	99.73	503	5	25.8	6.3	17.1
STD GS311-1 Expected																					
STD GS910-4 Expected																					
STD DS10 Expected																					
STD OREAS45EA Expected																					
STD SO-18 Expected		58.47	14.23	7.67	3.35	6.42	3.71	2.17	0.69	0.83	0.39	0.55	44	25			514		26.2	7.1	17.6
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<20	<1	0.0	0.03	<1	<1	<0.2	0.1	<0.5
BLK	Blank	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.002	<20	<1	0.0	<0.01	<1	<1	<0.2	<0.1	<0.5
BLK	Blank	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<20	<1	0.0	<0.01	<1	<1	<0.2	<0.1	<0.5
Prep Wash																					
ROCK-VAN	Prep Blank	69.92	14.32	3.43	1.07	2.82	4.35	2.03	0.37	0.10	0.09	<0.002	<20	8	1.3	99.83	862	2	4.6	0.3	13.9



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Project: GEM Cordillera
Report Date: March 28, 2015

Page: 2 of 2

Part: 2 of 4

QUALITY CONTROL REPORT

VAN15000606.1

		LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	LF200	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
STD SO-18	Standard	8.9	19.1	27.6	15	397.3	5.7	9.6	15.5	198	13.9	288.7	28.9	12.4	26.9	3.15	12.7	2.57	0.83	2.92	0.48
STD SO-18	Standard	9.1	18.7	27.5	13	402.8	6.3	9.7	15.1	197	13.9	277.6	29.5	12.4	26.3	3.21	12.9	2.80	0.84	2.82	0.47
STD GS311-1	Expected																				
STD GS910-4	Expected																				
STD DS10	Expected																				
STD OREAS45EA	Expected																				
STD SO-18	Expected	9.8	19.3	28.7	15	407.4	7.4	9.9	16.4	200	14.8	290	29	12.3	27.1	3.45	14	3	0.89	2.93	0.53
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<0.1	0.2	1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	0.2	<0.1	<0.1	<0.1	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	<0.1	<0.1	<0.1	<0.1	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	<0.1	<0.1	<0.1	<0.1	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01
Prep Wash																					
ROCK-VAN	Prep Blank	3.4	6.0	39.4	<1	258.4	0.4	3.2	1.2	44	<0.5	130.7	17.9	13.8	26.1	3.00	12.5	2.55	0.74	2.57	0.43



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Report Date: March 28, 2015

Page: 2 of 2

Part: 3 of 4

QUALITY CONTROL REPORT

VAN15000606.1

		LF200	LF200	LF200	LF200	LF200	LF200	TC000	TC000	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
		Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au	Hg	
		ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	
STD SO-18	Standard	2.80	0.63	1.68	0.28	1.71	0.28															
STD SO-18	Standard	2.68	0.58	1.74	0.25	1.69	0.27															
STD GS311-1 Expected								1.02	2.35													
STD GS910-4 Expected								2.65	8.27													
STD DS10 Expected										14.69	154.61	150.55	370	74.6	43.7	2.49	8.23	11.65	2.02	91.9	0.3	
STD OREAS45EA Expected										1.39	709	14.3	28.9	381	9.1	0.02	0.2	0.26	0.26	53		
STD SO-18 Expected		3	0.62	1.84	0.27	1.79	0.27															
BLK	Blank							<0.02	<0.02													
BLK	Blank							<0.02	<0.02													
BLK	Blank									<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01	
BLK	Blank									<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01	
BLK	Blank	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01															
BLK	Blank	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01															
BLK	Blank	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01															
Prep Wash																						
ROCK-VAN	Prep Blank	2.72	0.57	1.83	0.29	2.12	0.34	0.06	<0.02	0.6	7.3	1.4	33	3.4	0.6	<0.1	<0.1	<0.1	<0.1	2.5	<0.01	



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Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN15000606.1

		AQ200	AQ200
		Tl	Se
		ppm	ppm
		0.1	0.5
STD SO-18	Standard		
STD SO-18	Standard		
STD GS311-1	Expected		
STD GS910-4	Expected		
STD DS10	Expected	5.1	2.3
STD OREAS45EA	Expected	0.072	0.6
STD SO-18	Expected		
BLK	Blank		
BLK	Blank		
BLK	Blank	<0.1	<0.5
BLK	Blank	<0.1	<0.5
BLK	Blank		
BLK	Blank		
BLK	Blank		
Prep Wash			
ROCK-VAN	Prep Blank	<0.1	<0.5