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**Report On**  
**Analysis of Drill Core Rejects**  
**Hyman Township**  
**For**  
**Skead Holdings Ltd.**  
**By**  
**R.A. MacGregor, P. Eng.**  
**October 03, 2020**

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## **Summary**

Rejects from previous drilling were recovered where possible from drill holes which had been drilled in 2007-2008 and transported to Sault Ste. Marie. Rejects which had not been contaminated by broken bags were recovered, processed and analysed by ICP-MS for 45 elements. The remaining rejects were placed in new marked plastic bags and archived for future reference. Additional sampling was also carried out on a number of samples for Rare Earth elements and gold.

## **Location and Access**

The Hyman township property consists of the former Agnew Lake mine in the north central part of the township. Hyman Township is located approximately 80 km west of Sudbury and 20km north-east of Espanola, Ontario. It can be accessed from Hwy 17 by paved and gravel roads. A good paved road goes right to the former Agnew Lake mine.

## **Previous Exploration**

The property was first discovered in the 1950's uranium boom and considerable drilling done. It was further explored by Kerr-Addison Mines in the 1970's and operated as a producing uranium mine from 1978-1983. Extraction was by a process of leaching broken rock in place as well as hoisting some rock to surface which was heap leached. There is reported to be a six compartment shaft to a depth of 950 metres as well as a decline to the 580 metre level. There are reported uranium resources remaining in the mine, which at this point are not 43-101 compliant. There are also significant thorium and rare earth resources which do not appear to have been fully evaluated.

## Work Program

Rejects from previous drilling in Hyman Township during 2007-2008 were located stored on private property at a site near Nairn Centre, Ontario. The rejects had been piled on wooden pallets and covered with plastic tarpaulins. Both the tarpaulins and plastic bags containing the rejects had deteriorated and broken in the outside layers over time. Rejects in plastic bags which appeared to have not been broken were recovered and transported to Sault Ste. Marie. Bags which had been broken open and old plastic was transported to a local dump.

Reject bags which were uncontaminated were cleaned, removed from their existing plastic bags and placed in aluminium pans along with identification tags. After drying and breaking up coarse lumps a 300-400 gram portion of the reject was placed in marked heavy paper envelopes and sent for sample preparation (pulverization to -200 mesh) to Swastika Labs. The remaining reject material was placed in new plastic bags with new sample tags and retained for future reference.

Pulps were recovered from Swastika Labs and a 20-30 gram portion placed in marked envelopes. These were sent to Bureau Veritas Labs in Vancouver for analysis of 45 elements by ICP-MS after a 4-acid dissolution. Additional samples were also sent for rare earth analysis and gold.

Prefix of samples analysis gives the assay method as follows:

IMA 4-acid dissolution-analysis of 45 elements by ICP-MS

REE lithium borate fusion-analysis of 31 refractory and rare earth elements by ICP-MS

IAX aqua regia digestion of a 15 gram sample with analysis of 36 elements by ICP-ES

WR lithium borate fusion-whole rock analysis by ICP-MS

A aqua regia dissolution of 15 gram sample for gold by ICP-MS

Au fire assay of 30 gram sample for gold

Pulps not sent for analysis have been archived in 40 dram plastic vials and stored in wooden boxes holding 91 vials each.

Subsequent sorting and racking of core has allowed for identification of drill hole numbers and correlation of most sample intervals using the original sample numbers. Sampling of drill core to fill in sections where reject samples are missing is in progress.

## **Results and Conclusions**

Analysis shows significant values for some samples in both uranium and the only two rare earths, Ce and La included in the analytical package. A number of samples showed >2000 ppm for Ce and also La, the upper limit for analysis. The sampling was essentially blind with sample locations only becoming available after sorting and racking of reclaimed core. It has given a good indication of where to concentrate further sampling both for fill in and rare earth sampling which is now in progress. Compared to Elliot Lake, thorium values appear much higher and sulphide (pyrite) is much lower. Rare earth values also appear higher for similar grades of uranium and are probably more related to thorium. Further work may show a clearer correlation.

**Respectfully submitted**

**October 03,2020**

**R.A. MacGregor, P. Eng.**

**Table 1**

**Sample Intervals**

**NA07-05**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
49.1 – 49.7	175381	IMA 2463	A 332 WR 421 WR 423 Au
49.7 – 50.7	34329	IMA 2858	A331 WR 422
83.0 – 83.8	34330	IMA 2859	IAX 475
146.47 – 147.47	175384	IMA 2467	Au
147.47 – 148.47	175385	IMA 2468	Au
148.47 – 149.47	175386	IMA 2821	
149.47 – 150.53	175387	IMA 1926	
157.8 – 158.5	175389	IMA 2741	
158.5 – 159.0	175391	IMA2683	
159.0 – 160.0	175392	IMA 2736	
160.0 – 161.0	175393	IMA 2465	Au
161.0 – 162.0	175394	IMA 2628	Au
162.0 – 162.67	175395	IMA 2740	
162.67 – 163.67	175396	IMA 2872	Au
189.37 – 190.37	0522	IMA 2830	
190.37 – 191.0	0523	IMA 2829	
191.0 – 192.0	0524	IMA 2828	
194.0 – 195.0	0525	IMA 2827	REE 317
195.0 – 196.0	0526	IMA 2826	REE 318
196.0 – 197.0	0527	IMA 2825	REE 320
197.0 – 197.5	0528	IMA 2824	
197.5 – 198.0	0529	IMA 2823	
198.0 – 199.0	0530	IMA 2822	REE 321
199.0 – 200.0	175409	IMA 1927	IMA2873 REE 186



**NA07 – 05**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
200.0 – 201.0	0531	IMA 2831	REE 322
201.0 – 202.0	175411	IMA 2862	Au
202.0 – 203.0	175412	IMA 2812	REE 328
203.0 – 204.0	175413	IMA 2813	REE 329
204.0 – 205.0	175414	IMA 2867	REE 335 Au
205.0 – 206.0	175415	IMA 2868	REE 334 Au
206.0 – 207.0	175416	IMA 2814	REE 178
207.0 – 208.0	175417	IMA 2866	REE 160 Au
208.0 – 209.0	175418	IMA 2863	REE 164 Au
209.0 – 210.0	175419	IMA 2869	REE 161 Au
210.0 – 211.0	175421	IMA 2815	REE 177
211.0 – 212.0	175422	IMA 2860	IAX 478
212.0 – 213.0	175423	IMA 2816	REE 176
213.0 – 214.0	175424	IMA 2817	REE 175
214.0 – 215.0	0532	IMA 2832	
215.0 – 216.0	175426	IMA 2865	REE 162 Au
216.0 – 217.0	0465		
217.0 – 218.0	17528	IMA 2818	REE 174
218.0 – 219.0	0466		
219.0 – 220.0	0467		
220.0 – 221.0	175431	IMA 2743	
221.0 – 222.0	175432	IMA 2819	REE 173 IMA 2861
222.0 – 223.0	175433	IMA 2870	REE 167 Au
223.0 – 224.0	175434	IMA 2820	REE 172

**NA07 – 05**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
224.0 – 225.0	0468		
225.0 – 226.0	0469		
226.0 – 227.0	175437	IMA 2864	REE 166 IMA 2871 Au
227.0 – 228.0	0535	IMA 2835	REE 171
228.0 – 229.0	0534	IMA 2834	REE 326
229.0 – 230.0	0536	IMA 2836	REE 323
230.0 – 231.0	0537		
231.0 – 232.0	175444	IMA 2742	
232.0 – 233.0	175445	IMA 2744	
233.0 – 234.0	0533	IMA 2833	

**NA07 – 08**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
216.0 – 217.0	176761		REE 315
419.0 – 419.5	176807	IMA 2649	

NA08 - 17

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
	158316	IMA 2754	
	158318	IMA 2713	
	158320	IMA 2714	
359.0 - 360.0	158324	IMA 2746	
361.0 - 362.0	158326	IMA 2712	
362.0 - 363.0	158328	IMA 2802	
Blank	158332	IMA 2751	
<del>364.0 - 365.0</del>	<del>158334</del>		
366.0 - 367.0	158336	IMA 2811	REE 470 REE 471
371.0 - 372.0	158341		REE368
372.0 - 373.0	158342	IMA 2775	IMA 2958
373.0 - 374.0	158343	IMA 2753	
Blank	158350	IMA 2750	REE 401

**NA08 – 18**

Sample Interval	Sample No.	Analysis No.	Additional Analysis No's.
252.0 – 253.0	158372	IMA 2804	
253.0 – 254.0	158373	IMA 2805	REE 473
254.0 – 255.0	158374	IMA 2806	REE 472
273.0 – 274.0	158393	IMA 2810	
274.0 – 275.0	158394	IMA 2809	
275.0 – 276.0	158395	IMA2808	
276.0 – 277.0	158396	IMA 2807	
278.0 – 279.0	158398	IMA 2803	
280.0 – 281.0	158401	IMA 2969	REE 390
281.0 – 282.0	158402	IMA 2970	REE 391
282.0 – 283.0	158403	IMA 2971	REE 392
284.0 – 285.0	158405	IMA 2972	REE393
285.0 – 286.0	158406	IMA 2973	REE 394
286.0 – 287.0	158407	IMA 2974	
287.0 – 288.0	158408	IMA 2975	

NA08 – 19

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's
293.0 – 294.0	158420	IMA 2976	REE 397
294.0 – 295.0	158421	IMA 2977	REE 398
295.0 – 296.0	158422	IMA 2978	REE 395
297.0 – 298.0	158424	IMA 2979	
298.0 – 299.0	158425	IMA 2980	REE 396
Blank	158433	IMA 2981	<i>REE 476</i>
306.0 – 307.0	158434	IMA 1848	
307.0 – 308.0	158435	IMA 2982	REE 399
308.0 – 309.0	158436	IMA 2983	<i>REE 477</i>
309.0 – 310.0	158437	IMA 2984	
310.0 – 311.0	158438	IMA 2985	
311.0 – 312.0	158439	IMA 2986	
312.0 – 313.0	158440	IMA 2987	
313.0 – 314.0	158441	IMA2988	REE 400
314.0 – 315.0	158442	IMA 2989	<i>REE 475</i>
315.0 – 316.0	158443	IMA 2990	<i>REE 474</i>
318.0 – 319.0	158446	IMA 2992	
319.0 – 320.0	158447	IMA 2991	
320.0 – 321.0	158448	IMA 2993	
321.0 – 322.0	158449	IMA 2994	
322.0 – 323.0	242001	IMA 1947	REE 371
323.0 – 324.0	242002	IMA 2964	
328.0 – 329.0	242006	IMA 2961	
329.0 – 330.0	242007	IMA 2960	

**NA08 - 19**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's
331.0 – 332.0	242009	IMA 2959	
332.0 – 333.0	242010	IMA 1948	
336.0 – 337.0	242014	IMA2963	
341.0 – 342.0	242018	IMA 2965	

**NA08 – 21**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
41.0 – 42.0	176711	IMA 2774	
47.0 – 48.0	176717	IMA 2755	
108.0 – 109.0	176732		REE 378
109.0 – 110.0	176733	IMA 2734	
116.0 – 117.0	176740	IMA 2749	REE 379
121.0 – 122.0	176745		REE 380
125.0 – 126.0	242451	IMA 2940	
129.0 – 130.0	242455		REE 388
130.0 – 131.0	242456	IMA 2967	REE 386
131.0 – 132.0	242457		REE 455
132.0 – 133.0	242458		REE 456
133.0 – 134.0	242459		REE 457
134.0 – 135.0	242460		REE 458
135.0 – 136.0	242461		REE 349
136.0 – 137.0	242462		REE 350
137.0 – 138.0	242463		REE 451
139.0 – 140.0	242465		REE 452
Blank	242469	IMA 2698	
305.0 – 306.0	242472		REE 453
306.0 – 307.0	242473		REE 454
307.0 – 308.0	242474	IMA2694	
	242476		REE 284



**NA08 – 25**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
61.0 – 62.0	242084	IMA 2766	
62.0 – 63.0	242085	IMA2695	
63.0 – 64.0			REE 347
64.0 – 65.0	242087	IMA 2715	REE 383
67.0 – 68.0	242090	IMA 2717	
72.0 – 73.0	242095	IMA 2718	
74.0 – 75.0	242097		REE 348
78.0 – 79.0	242151	IMA 2716	A 388
Blank	242153	IMA 2703	
195.0 – 196.0	242162	IMA 2767	REE 377
196.0 – 197.0	242163	IMA 2651	REE 282
198.0 – 199.0	242165	IMA 2771	REE 381
199.0 – 200.0	242166	IMA 2655	REE 285
200.0 – 201.0	242167	IMA 2653	REE 283
203.0 – 204.0	242170	IMA 2701	
207.0 – 208.0	242174	IMA 2702	
282.0 – 283.0	242184	IMA 2730	
283.0 – 284.0	242185	IMA 2697	
286.0 – 287.0	242188	IMA 2724	REE 384
288.0 – 289.0	242190	IMA 2706	REE 369
289.0 – 289.9	242191	IMA 248	REE 488 <i>IMA 2968</i>
328.0 – 329.0	242192	IMA 2765	
330.0 – 331.0	242194	IMA 2757	
331.0 – 332.0	242195	IMA 2705	

**NA08 – 25**

<b>Sample Interval (m)</b>	<b>Sample No.</b>	<b>Analysis No.</b>	<b>Additional Analysis No's.</b>
333.0 – 334.0	242197	IMA 2704	REE 370
334.0 – 335.0	242198	IMA 2747	REE 387
335.0 – 336.0	242199	IMA 2699	
337.0 – 338.0	242201	IMA 2758	

**NA08 – 26**

Sample Interval (m)	Sample No.	Analysis No.	Additional Analysis No's.
106.0 – 107.0	242224	IMA 2711	
108.0 – 109.0	242226	IMA 2966	

## **Appendix I**

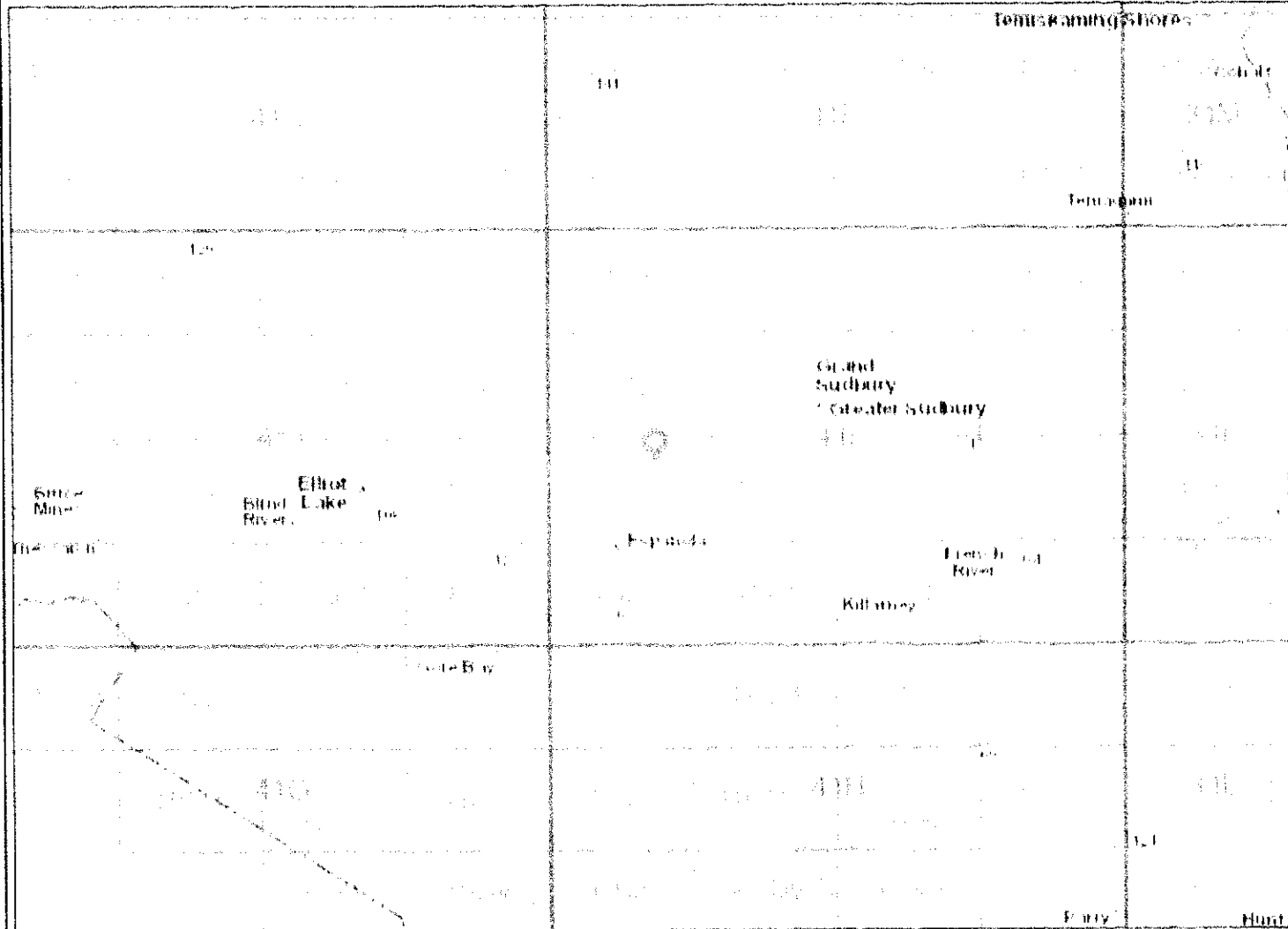
### **Maps**



MLAS Map Viewer

# MLAS Map

Notes:



### Legend

- Provincial Grid Cell**
  - Available
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  - Unavailable
- Mining Claim**
  - Mining Claim
  - Revised Claim
- Attention**
  - Provision
  - Notice
- ENDM Administrative Boundaries**
  - ENDM Townships and Areas
  - Geographic Regions
  - OTM Counties
  - OTM Districts
  - OTM Divisions
  - Mineral Subdivision and Development Region
  - OTM Districts and Areas
  - Research Geological District
  - Regional and Other
  - Nature Reserves
  - AMR Areas
  - AMR Features
  - Landfile
  - Local Occurrences
- MLAS Mining History**
  - Industrial History
  - Mining History
  - Mining Claims History
  - Mining and Technical History
  - Legacy Claims
- Provincial Grid**
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  - Provincial Grid 2010
  - Provincial Grid 2015
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  - Mining and Surface Rights
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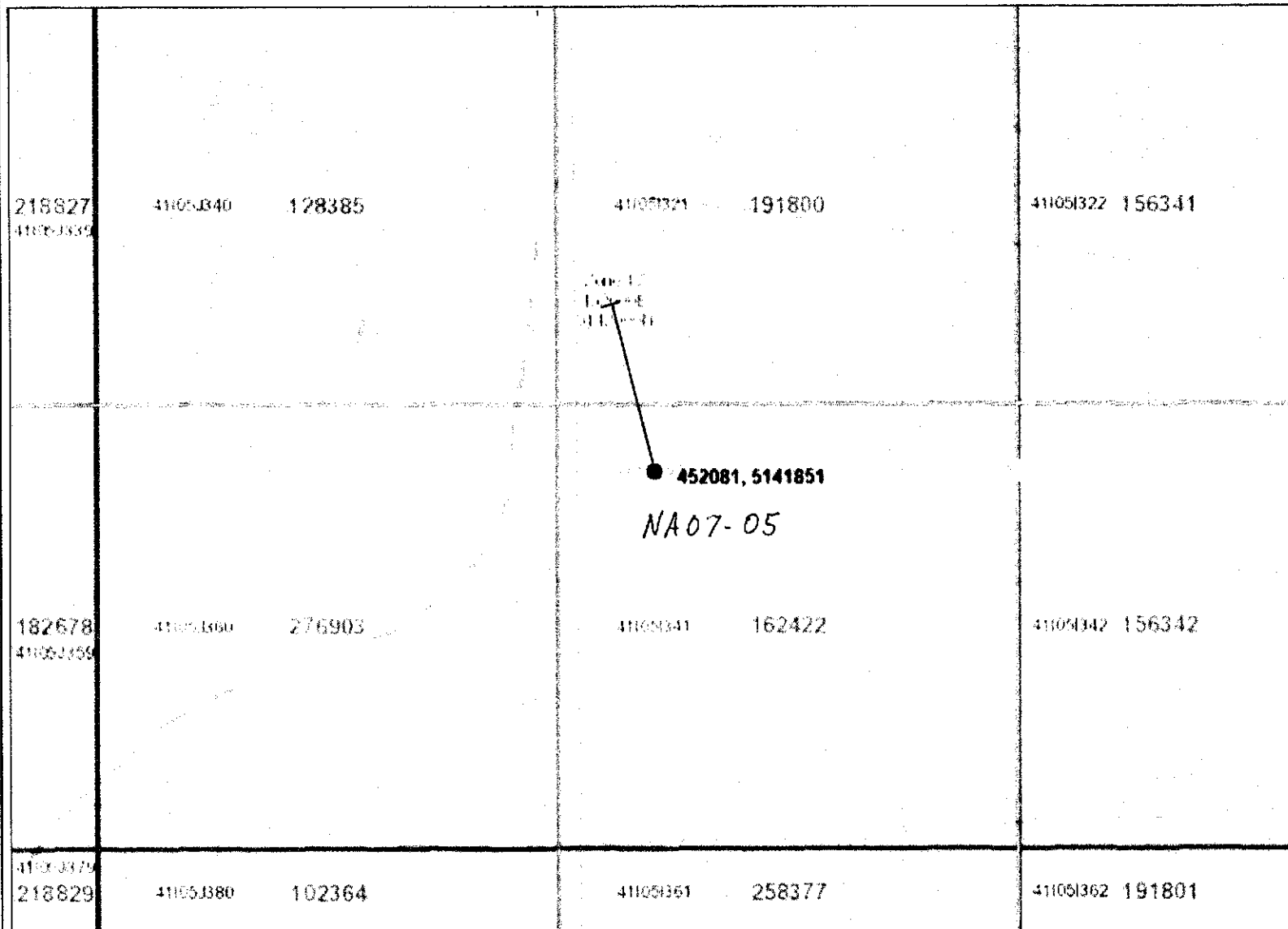


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### Legend

- Provincial Grid Cell
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  - Mining Claim
  - Boundary Claim
- Alienation
  - Withdrawal
  - Notice
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  - ENDM Townships and Areas
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  - UTM Grid 10K
  - Mining Division
  - Mineral Exploration and Development Region
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  - Resident Geological District
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  - Mining Rights
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  - Order-in-Council

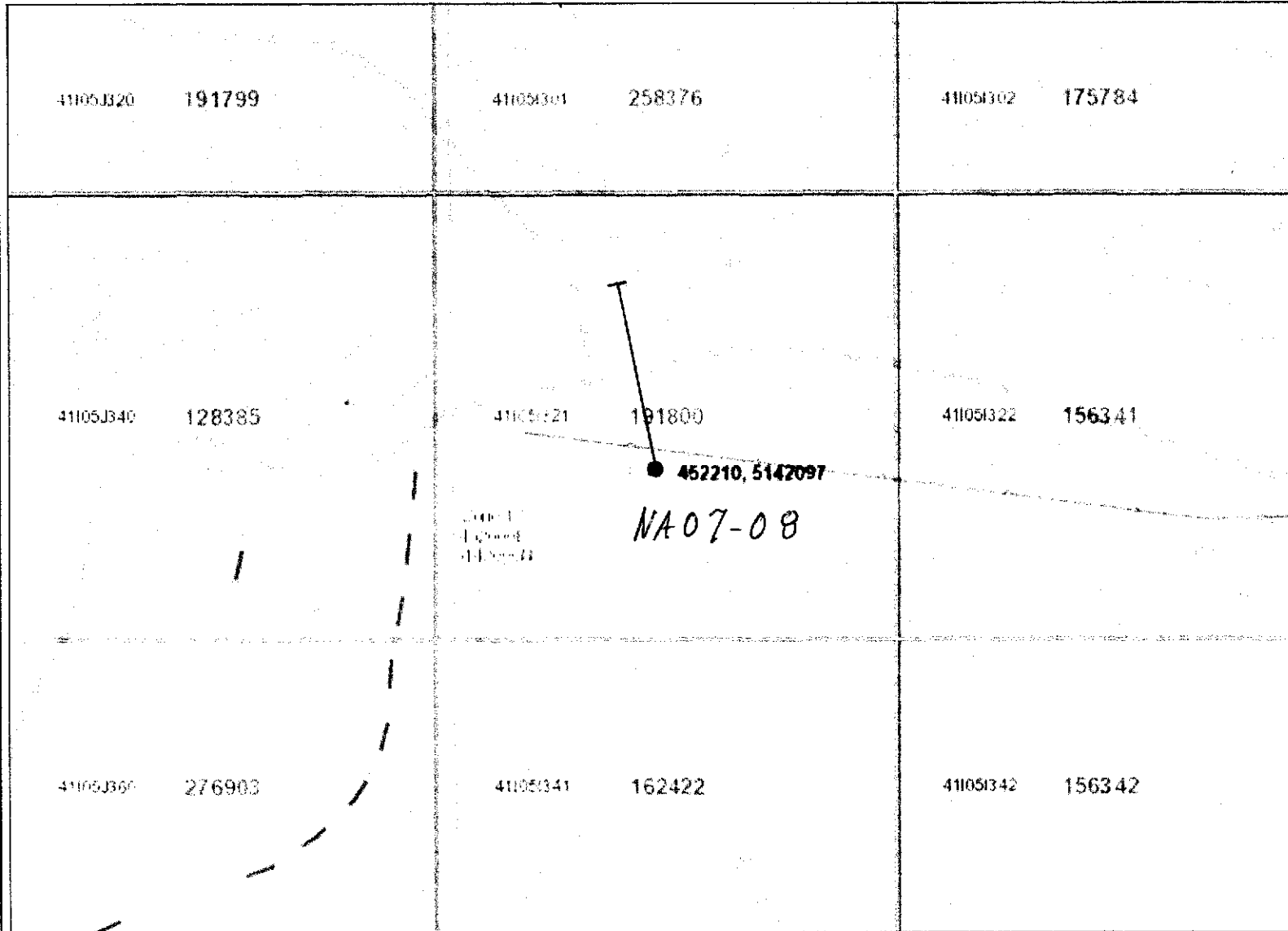


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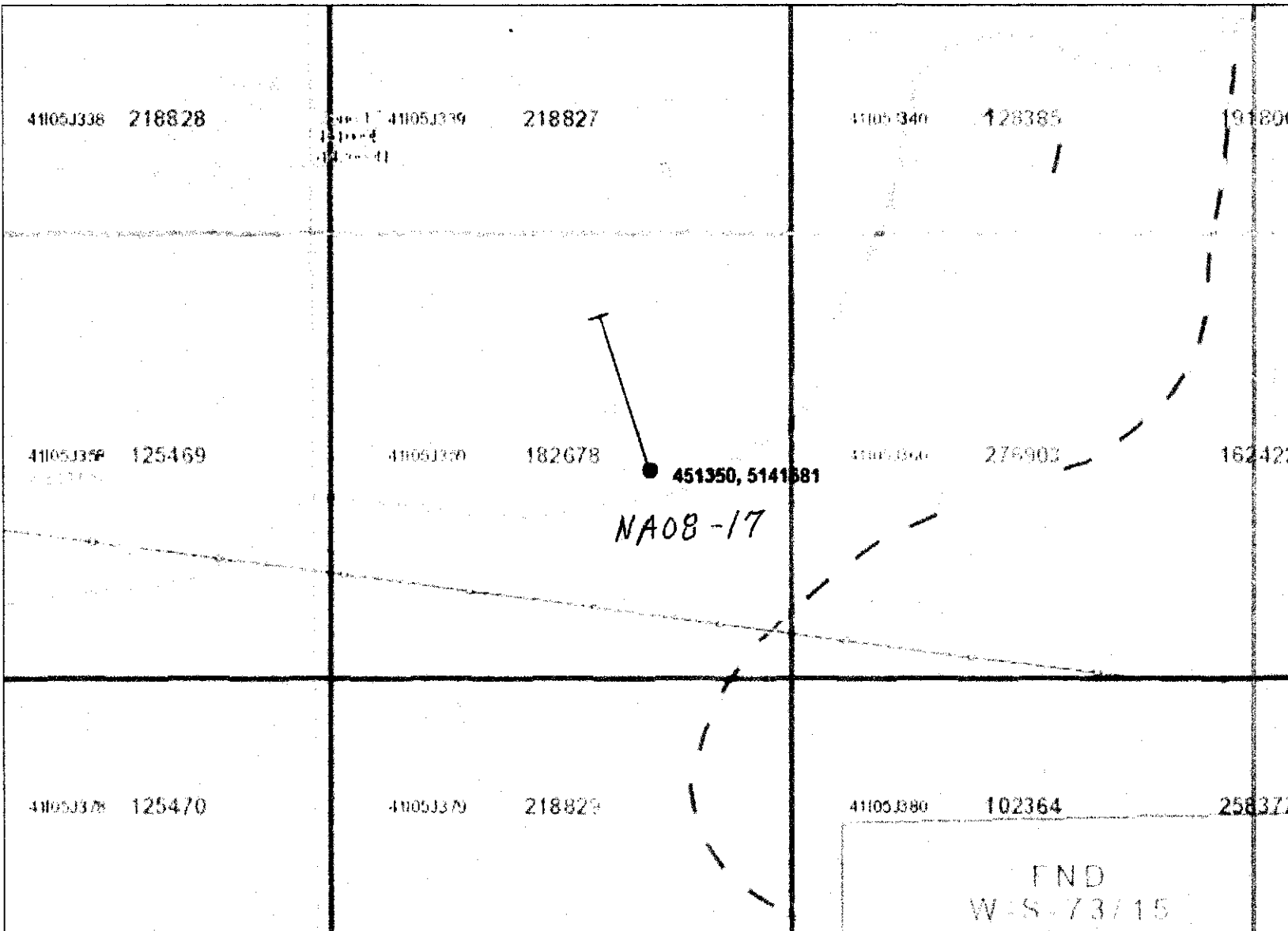
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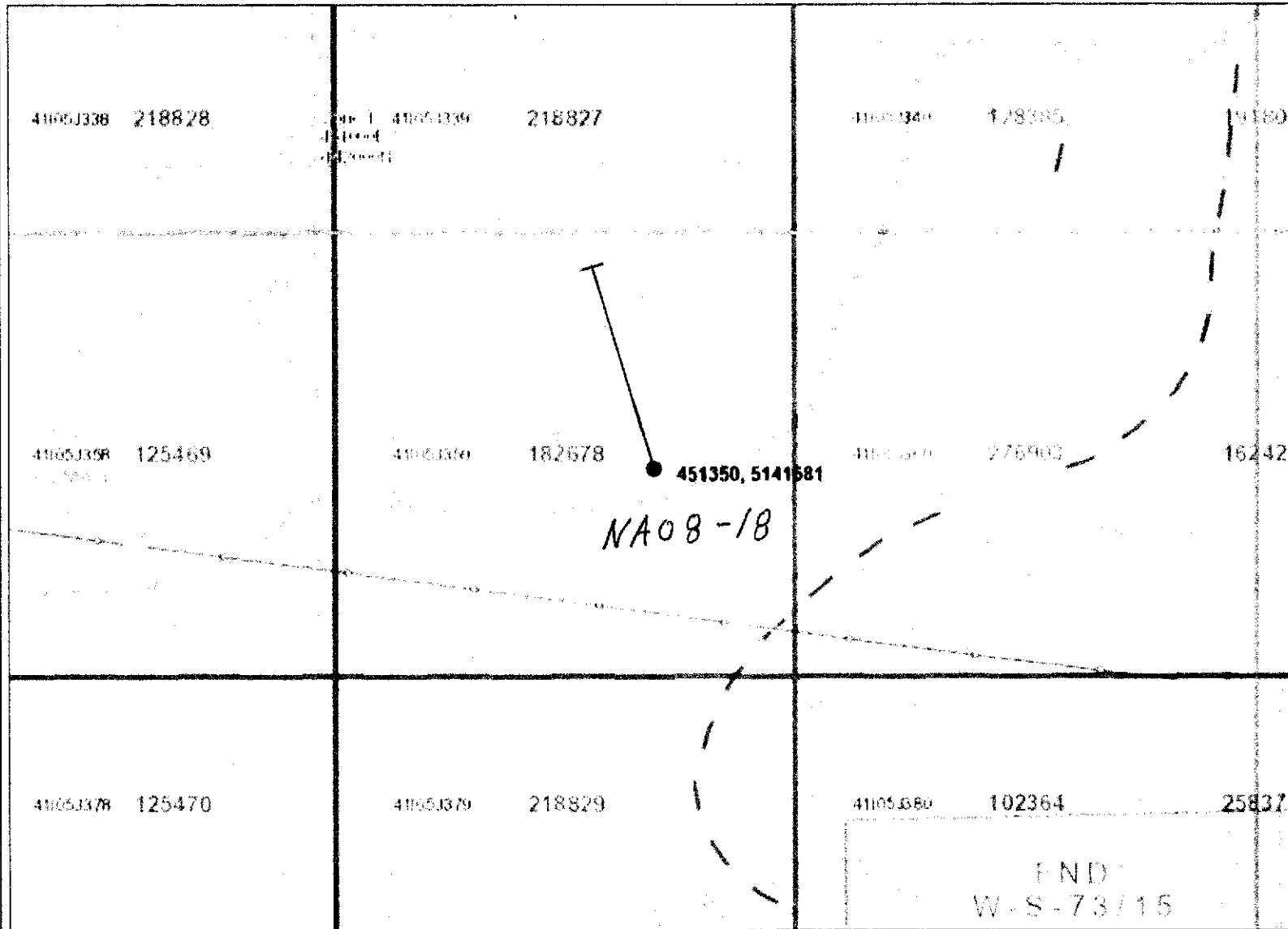
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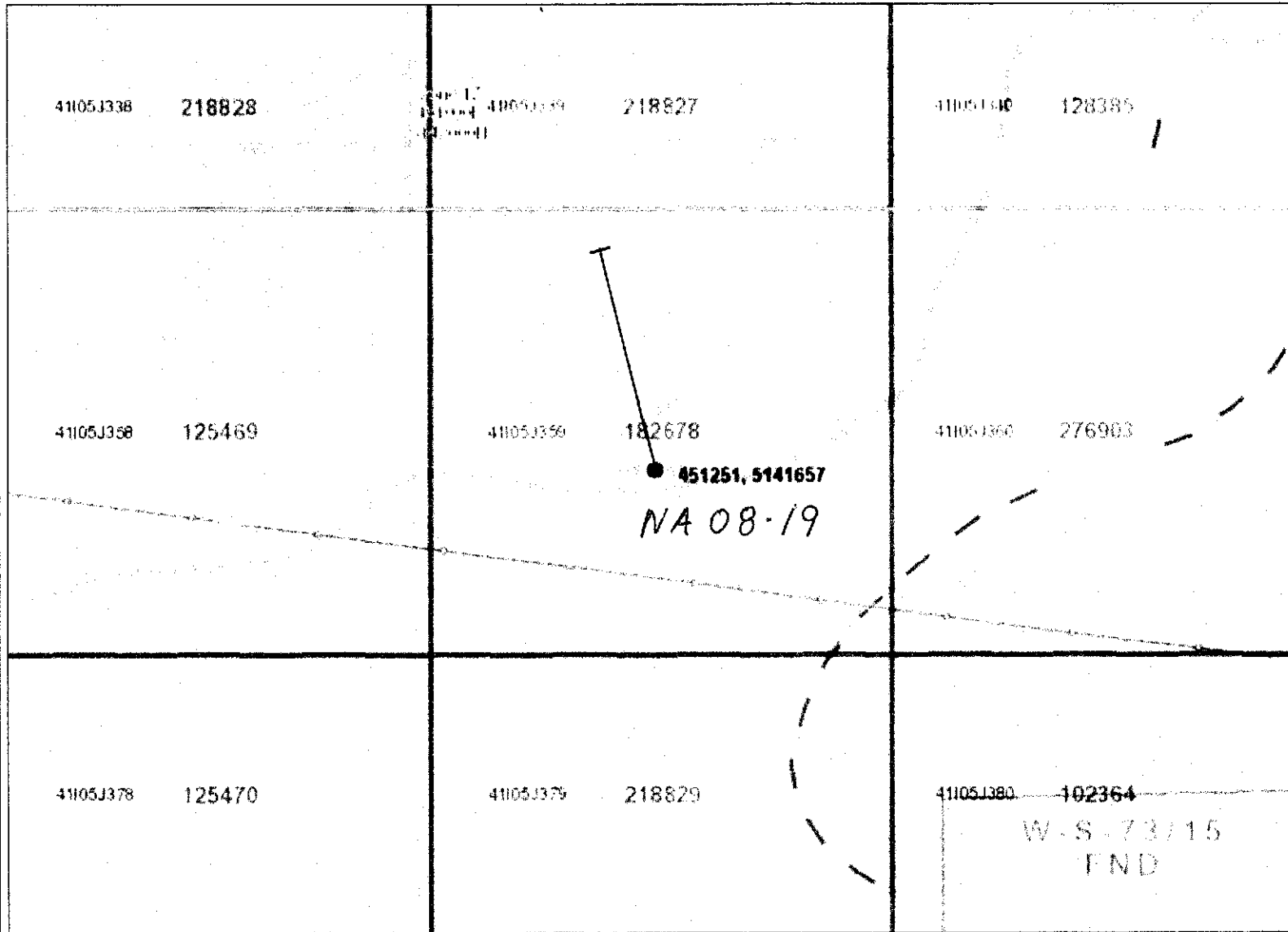


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
































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- Mining Claim**
  -  Mining Claim
  -  Boundary Claim
- Alienation**
  -  Withdrawal
  -  Notice
- ENDM Administrative Boundaries**
  -  ENDM Townships and Areas
  -  Geographic Lot Fabric
  -  UTM Grid 1K
  -  UTM Grid 10K
  -  Mining Division
  -  Mineral Exploration and Development Region
  -  CLUPA Protected Area - Far North
  -  Resident Geologist District
  -  Federal Land Other
  -  Native Reserves
  -  AMIS Sites
  -  AMIS Features
  -  Drill Hole
  -  Mineral Occurrences
- MLAS Mining History**
  -  Withdrawal - History
  -  Notice - History
  -  Mining Claim - History
  -  Mining Land Tenure - History
  -  Legacy Claim
- Provincial Grid**
  -  Provincial Grid 250K
  -  Provincial Grid 50K
  -  Provincial Grid Group
- Land Tenure**
  -  Surface Rights
  -  Mining Rights
  -  Mining and Surface Rights
  -  Order-in-Council

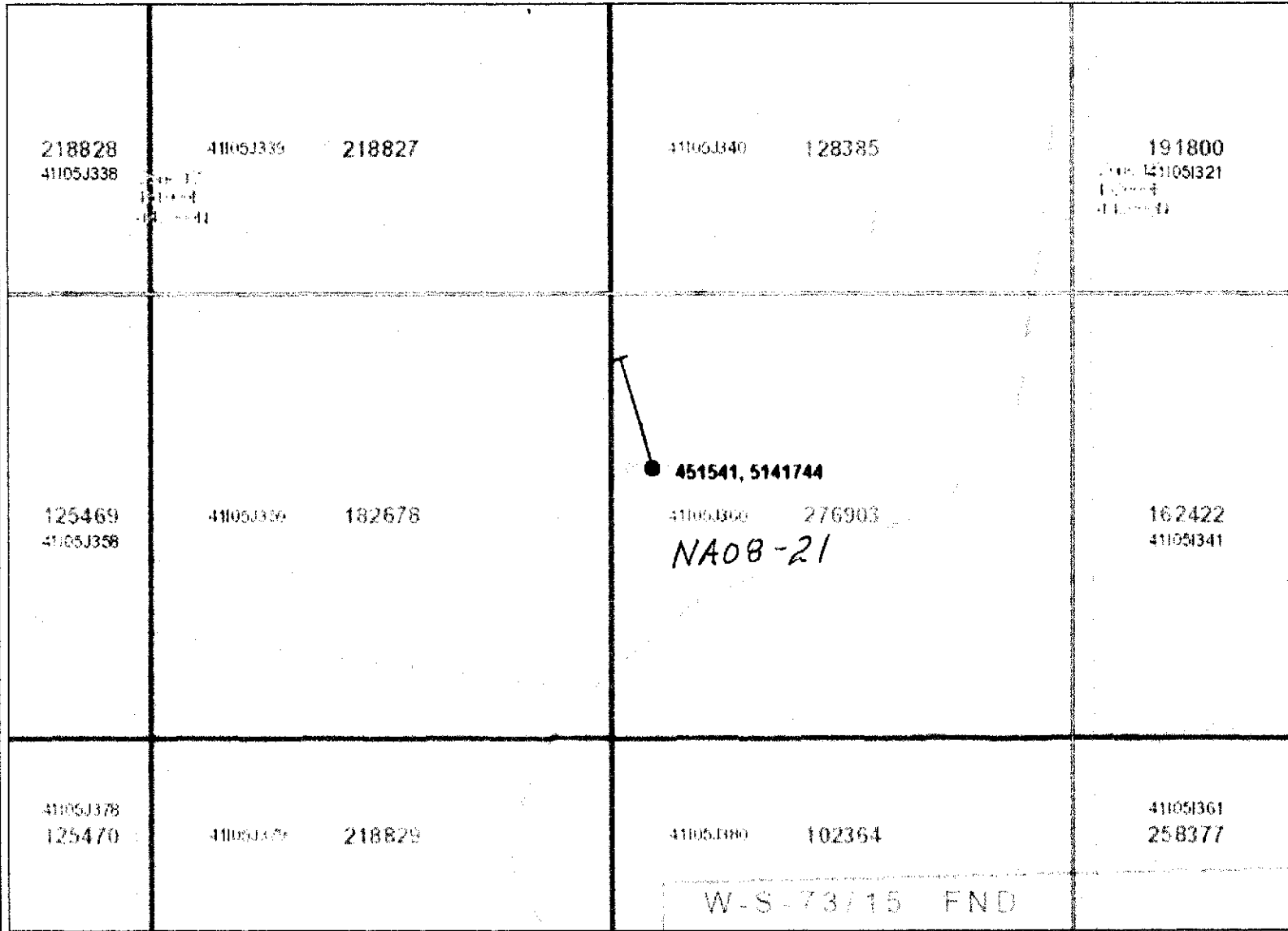


Projection: Web Mercator



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### Legend

- Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
- Mining Claim**
  - Mining Claim
  - Boundary Claim
- Alienation**
  - Withdrawal
  - Notice
- ENDM Administrative Boundaries**
  - ENDM Township and Area
  - Geographic Lot Fabric
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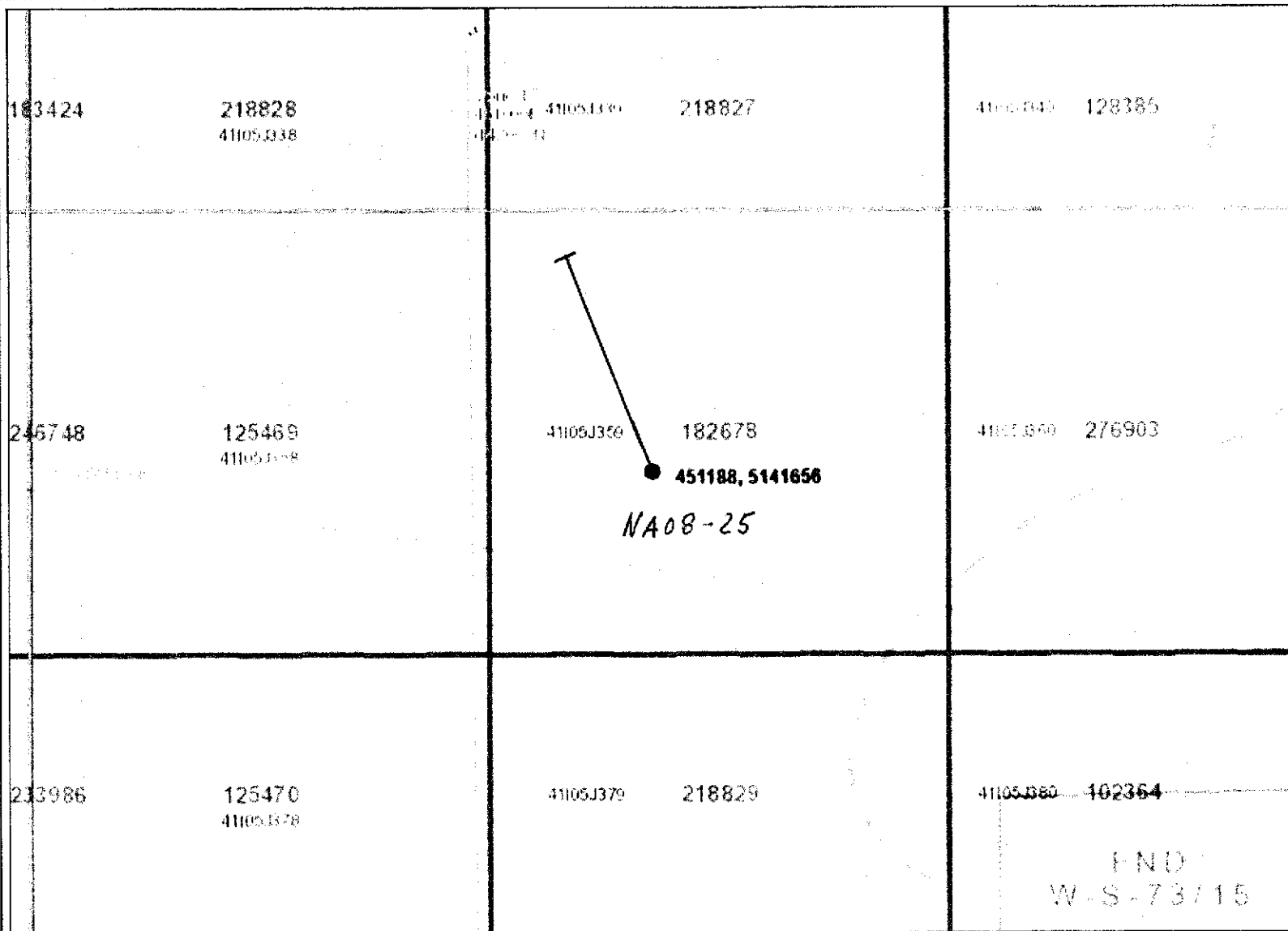


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**Legend**

- Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
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  - Notice
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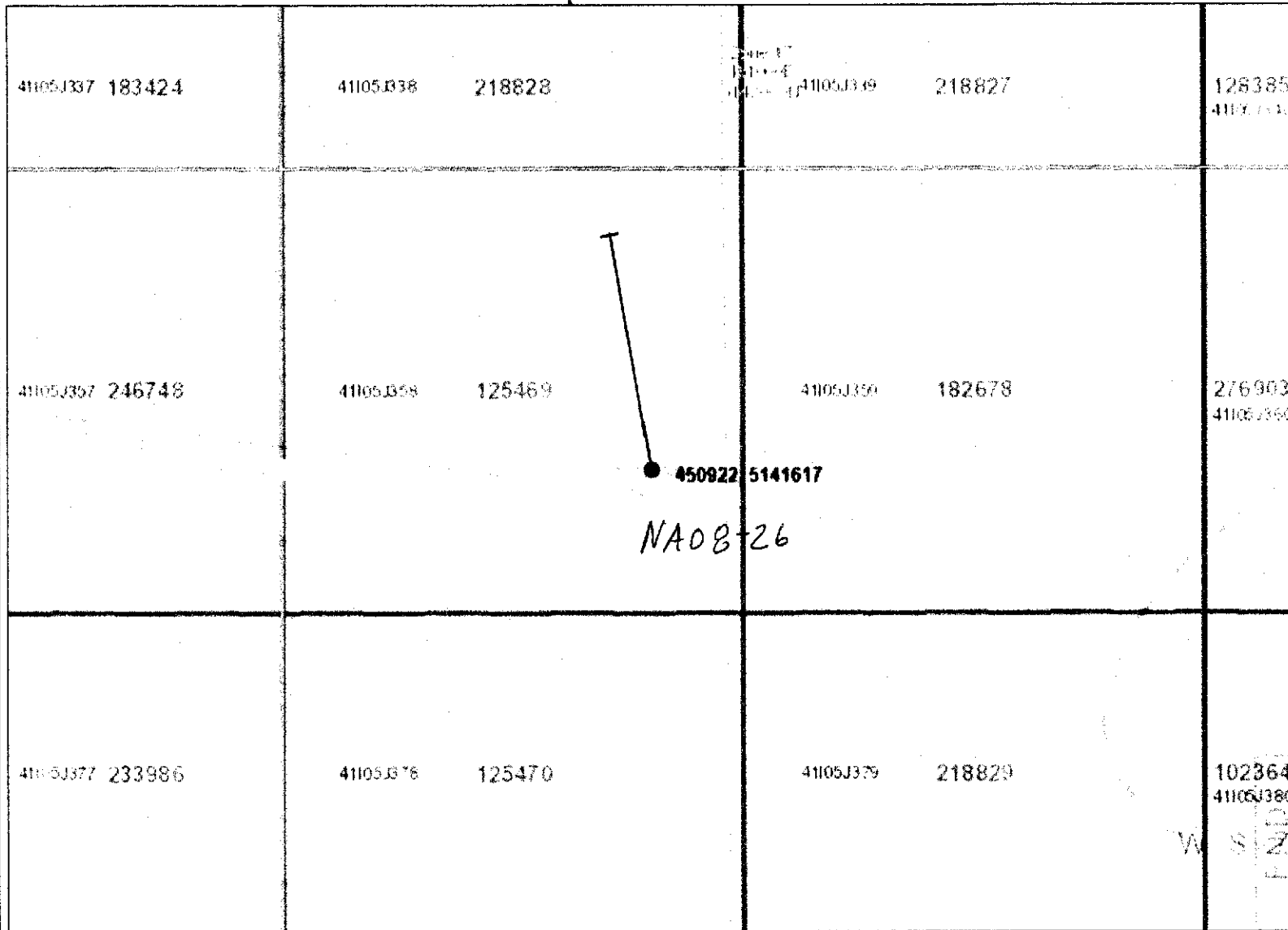


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### Legend

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**Appendix II**

**Certificate of Analysis**



**BUREAU VERITAS** MINERAL LABORATORIES  
 1928

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

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

**Client:** MacGregor, R.A.  
 28 Ford St  
 Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
 Receiving Lab: Canada-Vancouver  
 Received: February 08, 2020  
 Analysis Start: February 10, 2020  
 Report Date: February 13, 2020  
 Page: 1 of 4

# CERTIFICATE OF ANALYSIS

VAN20000236.1

## CLIENT JOB INFORMATION

Project: None Given  
 Shipment ID:  
 P.O. Number  
 Number of Samples: 80

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	80	Sorting, labeling and boxing samples received as pulps			VAN
LF100	80	Refractory and REEs by fusion and ICP-MS analysis	0.2	Completed	VAN

## SAMPLE DISPOSAL

RTRN-PLP Return After 90 days

## 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: MacGregor, R.A.  
 28 Ford St.  
 Sault Ste. Marie Ontario P6A 4N4  
 Canada

CC:

JEFFREY CANNON  
 Quality Assurance Department Supervisor

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.



**BUREAU** MINERAL LABORATORIES  
**VERITAS**

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: February 13, 2020

Page: 2 of 4

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN20000236 1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.02
REE 368	Pulp	638	<1	21.5	0.5	7.4	5.6	75.9	133.6	2	21.2	7.9	752.1	119.1	38	8.2	219.6	67.8	341.9	598.0	68.04
REE 369	Pulp	921	2	13.4	1.2	11.6	6.5	68.4	199.6	3	27.7	7.9	981.9	183.0	27	2.2	225.9	94.6	1040.1	1881.7	199.54
REE 370	Pulp	696	2	5.7	0.7	6.0	4.2	48.9	130.4	1	30.5	6.1	998.2	216.9	22	1.4	152.9	99.0	1059.2	1853.5	196.44
REE 371	Pulp	793	<1	7.5	0.8	8.9	6.4	68.2	171.9	2	29.7	7.8	742.2	128.5	28	2.1	221.4	66.7	813.5	1425.2	155.54
REE 372	Pulp	516	3	19.5	0.5	5.5	4.4	48.4	91.6	1	34.7	5.2	1088.3	264.2	20	1.0	171.1	102.6	1117.5	1894.7	209.68
REE 373	Pulp	356	2	12.8	1.3	10.4	7.6	68.5	158.9	3	13.2	8.0	1297.9	326.7	19	0.9	256.0	155.2	1217.9	2179.7	233.70
REE 374	Pulp	589	3	13.5	2.8	12.0	7.7	103.0	189.9	4	19.0	13.0	1612.3	371.5	25	1.9	272.7	157.9	1479.0	2670.5	286.88
REE 375	Pulp	736	2	10.5	0.8	10.0	6.1	48.7	156.0	4	19.1	5.4	526.2	155.5	20	1.2	185.8	69.7	488.8	819.3	93.87
REE 376	Pulp	520	2	95.2	0.4	4.8	6.8	155.0	128.0	3	33.0	21.9	2560.7	645.4	18	4.1	241.0	270.3	2733.5	4771.8	497.99
REE 377	Pulp	399	1	25.5	0.3	2.9	2.9	50.8	79.3	1	17.0	7.0	1144.3	497.9	19	3.1	101.8	125.2	1020.6	1786.5	195.93
REE 378	Pulp	1096	<1	13.6	0.9	12.3	4.1	23.0	210.2	2	27.5	2.7	504.4	91.6	10	3.0	136.8	47.9	509.1	871.9	97.53
REE 379	Pulp	1193	7	9.6	1.7	25.4	7.9	63.6	301.9	7	31.5	8.0	1433.6	379.6	26	1.7	263.6	154.0	1762.7	3067.5	328.22
REE 380	Pulp	662	4	37.9	0.7	7.4	10.5	158.0	146.6	5	35.6	19.7	3745.8	975.5	23	3.1	381.7	351.9	3738.3	6696.7	687.25
REE 381	Pulp	717	2	14.0	0.5	5.6	5.4	98.2	147.8	3	30.8	12.1	1509.8	226.4	23	3.0	183.1	154.3	1560.7	2803.8	296.20
REE 382	Pulp	596	<1	21.1	0.3	5.0	3.2	40.2	117.3	1	21.8	4.9	509.6	92.3	15	0.9	116.8	42.8	452.9	784.4	87.85
REE 383	Pulp	725	2	21.3	0.6	6.0	6.7	67.0	152.4	2	23.3	7.7	653.8	101.5	12	1.9	232.3	62.7	732.6	1301.9	140.07
REE 384	Pulp	723	2	8.2	0.8	6.9	7.8	64.8	162.5	2	20.6	7.9	739.5	136.6	19	2.4	267.2	81.1	772.9	1394.4	146.84
REE 385	Pulp	753	<1	8.8	0.8	4.8	6.0	56.9	150.5	2	30.0	7.1	1195.5	153.7	13	2.4	215.2	114.0	1275.8	2235.4	236.50
REE 386	Pulp	475	3	54.3	0.6	3.9	9.8	129.4	106.0	4	43.2	17.1	5946.9	1452.4	13	3.4	348.0	502.1	5839.2	9865.1	1089.73
REE 387	Pulp	780	<1	5.9	0.6	5.7	5.3	45.8	135.7	1	34.3	5.5	699.7	135.9	11	1.3	186.6	73.1	734.6	1299.9	138.77
REE 388	Pulp	516	2	40.9	0.7	3.4	7.8	113.1	99.7	3	40.3	15.9	4555.2	919.8	11	2.9	272.5	369.8	4240.4	7552.4	778.16
REE 389	Pulp	605	1	30.5	0.5	5.1	6.7	74.9	138.5	2	26.0	9.6	1548.3	229.1	13	2.2	240.7	127.5	1680.2	3007.4	317.78
REE 390	Pulp	843	3	12.3	1.0	13.1	7.1	64.2	193.0	3	24.3	7.4	790.1	123.1	13	1.2	248.5	74.1	850.5	1588.7	167.22
REE 391	Pulp	762	1	8.9	0.8	8.5	7.2	76.0	162.7	2	24.0	8.7	773.9	125.8	9	1.9	267.2	77.2	873.2	1667.6	167.76
REE 392	Pulp	837	1	5.1	0.8	9.6	5.8	41.9	175.9	2	25.7	4.7	372.9	72.7	10	1.3	200.9	58.9	435.1	752.6	82.41
REE 393	Pulp	733	1	10.3	0.8	6.6	5.0	47.4	146.6	2	25.4	5.9	880.2	130.0	<8	1.5	180.4	81.6	765.7	1359.1	146.57
REE 394	Pulp	687	1	13.0	0.6	4.9	5.2	77.7	129.8	2	29.5	9.1	987.7	172.8	13	3.1	178.4	109.1	1120.7	1996.8	209.79
REE 395	Pulp	724	1	13.9	0.7	5.9	3.8	26.3	170.1	1	22.4	3.3	402.4	80.3	12	5.7	131.0	42.9	380.4	667.4	73.06
REE 396	Pulp	770	1	7.3	0.7	5.9	4.4	39.2	171.1	1	24.4	4.4	461.5	93.3	19	2.0	154.9	54.9	488.1	834.6	92.14
REE 397	Pulp	748	<1	5.8	0.6	5.1	4.9	37.0	152.5	1	23.0	4.3	490.3	82.4	15	1.6	170.3	47.8	431.1	769.8	86.42

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**VERITAS**

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: February 13, 2020

Page: 2 of 4

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

**VAN20000236.1**

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 368	Pulp	212.8	32.88	2.23	24.78	3.20	16.05	2.58	6.13	0.74	4.08	0.55
REE 369	Pulp	618.9	88.79	3.73	56.05	5.94	24.97	3.51	8.16	1.04	5.94	0.75
REE 370	Pulp	614.2	88.22	3.39	54.24	6.02	25.73	3.64	8.27	1.02	5.83	0.72
REE 371	Pulp	484.6	70.17	3.68	43.06	4.66	19.49	2.63	5.90	0.74	4.31	0.56
REE 372	Pulp	654.8	94.51	5.49	57.19	6.03	25.57	3.69	8.56	1.07	6.19	0.76
REE 373	Pulp	737.2	108.53	6.31	68.88	7.94	38.39	5.42	13.58	1.67	9.41	1.19
REE 374	Pulp	895.6	127.54	4.97	80.74	9.02	38.79	5.69	13.34	1.68	9.85	1.29
REE 375	Pulp	301.5	47.21	3.32	30.11	3.52	16.79	2.51	6.16	0.82	4.72	0.63
REE 376	Pulp	1578.2	233.07	10.76	155.22	18.12	83.10	11.52	26.55	3.33	19.24	2.37
REE 377	Pulp	616.8	90.96	5.00	57.58	7.04	32.79	4.93	11.67	1.46	8.35	1.04
REE 378	Pulp	305.8	44.86	2.72	26.93	2.96	12.89	1.80	3.98	0.49	2.95	0.39
REE 379	Pulp	1030.4	151.74	6.43	95.62	10.19	43.67	5.85	13.20	1.61	9.36	1.18
REE 380	Pulp	2201.5	324.83	13.85	207.54	22.53	96.74	13.23	28.73	3.57	20.34	2.45
REE 381	Pulp	944.3	138.08	7.07	84.84	9.29	40.48	5.83	13.28	1.66	9.78	1.23
REE 382	Pulp	272.8	39.73	3.38	25.18	2.79	12.67	1.72	3.84	0.47	2.71	0.33
REE 383	Pulp	444.7	63.11	4.29	38.09	4.05	16.71	2.25	5.06	0.65	3.98	0.52
REE 384	Pulp	466.4	66.80	2.78	41.44	4.59	19.96	2.80	6.63	0.86	5.20	0.62
REE 385	Pulp	731.4	107.19	4.59	65.73	7.07	30.04	3.90	8.86	1.09	6.21	0.80
REE 386	Pulp	3283.2	480.71	20.19	301.96	33.28	140.94	19.01	41.85	5.01	28.90	3.44
REE 387	Pulp	433.0	62.63	2.49	36.64	4.18	17.98	2.52	6.13	0.76	4.26	0.56
REE 388	Pulp	2537.3	369.45	15.41	231.83	24.45	103.73	13.71	29.96	3.59	20.42	2.45
REE 389	Pulp	1002.1	143.57	6.99	85.67	9.00	36.37	4.69	10.16	1.26	7.46	0.90
REE 390	Pulp	526.8	76.09	2.99	46.18	4.84	20.54	2.72	6.21	0.78	4.65	0.61
REE 391	Pulp	532.5	74.04	2.93	43.25	4.63	19.41	2.80	6.24	0.77	4.75	0.63
REE 392	Pulp	258.4	36.64	1.57	22.03	2.73	12.70	2.02	4.85	0.67	4.00	0.53
REE 393	Pulp	459.6	67.18	2.62	40.72	4.44	19.66	2.81	6.72	0.82	4.98	0.63
REE 394	Pulp	660.7	93.74	3.77	57.58	6.52	28.48	3.96	8.80	1.09	6.31	0.80
REE 395	Pulp	227.0	33.22	1.82	21.48	2.42	10.94	1.60	3.63	0.45	2.76	0.36
REE 396	Pulp	290.0	41.47	1.76	26.30	2.96	13.28	1.91	4.59	0.57	3.47	0.44
REE 397	Pulp	270.7	37.71	2.21	23.32	2.67	12.01	1.69	4.07	0.49	2.92	0.38

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**BUREAU VERITAS** MINERAL LABORATORIES

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

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: February 13, 2020

Page: 3 of 4

Part 1 of 2

# CERTIFICATE OF ANALYSIS

**VAN20000236 1**

Method	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
Analyte	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	1	0.2	0.1	0.5	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	
REE 398	Pulp	755	2	7.3	0.8	5.4	4.2	37.7	164.1	1	23.9	4.4	548.4	101.8	15	1.0	147.1	58.6	605.2	1069.8	114.07
REE 399	Pulp	805	3	6.6	0.7	4.9	5.3	47.0	173.5	1	25.8	5.4	655.2	119.7	13	1.1	191.6	59.0	585.3	1005.7	111.10
REE 400	Pulp	835	<1	11.0	0.8	8.0	4.5	41.2	174.2	2	22.7	5.2	488.0	101.9	9	1.2	152.9	56.5	546.9	954.5	104.78
REE 401	Pulp	552	1	18.6	0.3	2.6	4.3	81.8	129.7	2	26.5	10.9	1858.5	381.0	19	3.4	181.5	196.7	1704.2	3061.0	320.47
REE 402	Pulp	473	2	19.2	1.8	6.7	7.1	98.4	130.1	3	20.3	11.9	1581.9	448.2	19	1.4	253.3	153.4	1486.8	2709.0	281.26
REE 403	Pulp	799	1	19.8	0.4	4.6	7.2	65.8	148.8	1	20.0	7.3	573.9	83.8	16	1.7	246.7	83.1	806.9	1489.6	155.27
REE 404	Pulp	790	2	7.8	0.6	9.0	4.1	35.8	160.6	1	31.9	4.1	524.3	82.1	25	1.2	149.5	45.6	629.1	1068.3	118.18
REE 405	Pulp	479	1	12.6	0.2	6.7	7.5	98.0	103.1	2	23.6	11.3	929.8	169.7	19	3.6	275.3	86.2	957.5	1895.6	181.08
REE 406	Pulp	589	<1	35.7	0.9	11.1	7.1	66.1	180.7	4	23.2	8.0	1134.3	481.3	15	1.2	251.6	150.2	1203.7	2130.7	227.38
REE 451	Pulp	646	3	51.9	0.5	10.7	6.9	83.8	149.0	4	24.9	10.2	1977.1	954.9	17	2.7	252.7	232.4	1950.1	3483.1	366.04
REE 452	Pulp	923	<1	29.4	0.8	13.8	5.0	35.0	192.8	2	24.8	4.2	460.1	86.7	<8	1.9	172.9	44.5	517.0	873.4	94.51
REE 453	Pulp	634	<1	5.2	0.5	8.1	5.1	48.4	156.0	2	18.4	5.5	582.1	82.7	19	5.4	182.1	69.6	689.2	1167.1	123.46
REE 454	Pulp	538	2	16.5	0.6	6.5	10.2	121.8	158.4	4	30.2	14.9	2301.8	360.0	26	2.8	377.0	247.1	2565.0	4535.2	474.60
REE 455	Pulp	626	2	16.3	0.7	10.6	4.0	46.8	136.7	3	20.4	5.8	1193.9	308.1	9	1.4	147.2	119.1	1298.1	2323.7	244.48
REE 456	Pulp	644	<1	23.2	0.4	8.6	4.3	71.2	119.9	2	23.8	9.9	1689.0	342.9	<8	2.6	168.0	141.0	1863.4	3299.5	347.02
REE 457	Pulp	801	<1	7.3	0.4	7.1	4.0	49.3	136.0	2	21.7	5.8	454.6	68.4	<8	1.5	142.5	54.4	567.8	969.9	104.54
REE 458	Pulp	799	2	14.4	0.5	8.9	4.3	49.8	161.8	2	24.3	8.0	709.9	109.1	<8	1.3	153.5	69.2	819.3	1444.6	152.07
REE 459	Pulp	509	1	26.2	0.4	5.2	4.4	46.2	130.3	1	16.5	5.5	457.7	64.8	<8	6.5	158.2	58.6	779.5	1354.7	144.32
REE 460	Pulp	612	<1	13.5	0.4	5.1	3.8	45.7	138.8	1	19.6	5.4	575.2	83.5	8	3.9	140.9	61.0	721.5	1221.7	132.04
REE 461	Pulp	661	<1	10.1	0.4	5.5	4.9	37.5	149.5	<1	22.3	4.4	508.6	85.1	<8	3.8	175.0	53.4	577.4	984.5	106.89
REE 462	Pulp	501	<1	16.7	0.5	7.9	4.0	50.2	162.1	2	18.3	6.6	838.5	133.0	<8	2.3	145.4	86.4	904.5	1610.5	172.02
REE 463	Pulp	542	4	12.1	0.8	11.9	3.9	43.8	195.5	3	13.8	5.2	641.6	128.2	9	2.0	138.7	77.5	690.5	1202.0	130.32
REE 464	Pulp	543	1	25.4	0.7	10.6	3.6	49.8	181.1	3	17.5	7.0	937.1	191.1	<8	3.2	124.7	93.4	1038.0	1823.2	195.34
REE 465	Pulp	659	2	22.7	0.5	6.5	5.7	65.0	165.9	2	23.9	7.9	738.5	114.6	12	3.2	196.2	71.4	775.1	1343.6	141.96
REE 466	Pulp	706	1	32.7	0.5	7.7	2.8	32.7	178.0	2	22.2	5.2	686.8	488.6	<8	2.1	99.2	106.5	675.8	1199.3	125.71
REE 467	Pulp	744	<1	10.6	0.5	7.1	5.2	45.6	172.3	1	25.1	5.0	217.3	32.7	8	3.0	178.5	29.9	336.5	578.2	61.28
REE 468	Pulp	712	1	55.3	0.4	5.3	3.5	45.6	164.0	1	24.3	6.3	1159.9	349.8	<8	3.5	124.6	129.0	1328.3	2358.3	248.71
REE 469	Pulp	623	1	21.1	0.6	6.3	6.3	77.9	162.3	2	25.7	9.2	716.2	107.1	10	2.4	219.9	67.1	765.0	1353.2	143.42
REE 470	Pulp	826	2	7.5	0.6	5.2	9.7	103.6	175.2	2	32.1	12.9	823.9	138.1	13	3.0	337.3	81.2	876.0	1521.9	162.49
REE 471	Pulp	709	<1	17.9	0.3	3.0	4.0	63.3	144.6	2	34.0	7.9	1304.1	356.1	15	2.0	134.4	115.6	1193.9	2222.4	235.74

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.



**BUREAU VERITAS** MINERAL LABORATORIES  
 VERITAS

www.bureauveritas.com/um

Client: **MacGregor, R.A.**  
 28 Ford St.  
 Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
 Report Date: February 13, 2020

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

Page: 3 of 4 Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

**VAN20000236 1**

Method Analyte Unit MDL		LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 398	Pulp	356.9	50.78	2.27	31.98	3.52	15.47	2.13	4.95	0.60	3.64	0.43
REE 399	Pulp	351.1	49.41	2.55	30.25	3.28	14.64	2.14	4.96	0.61	3.60	0.49
REE 400	Pulp	329.2	46.80	2.03	28.83	3.23	14.12	2.01	4.76	0.61	3.49	0.46
REE 401	Pulp	1027.3	146.86	7.40	94.82	11.12	49.74	7.31	16.36	2.02	11.71	1.46
REE 402	Pulp	892.5	129.99	5.79	78.99	9.02	40.41	5.83	13.41	1.66	9.79	1.25
REE 403	Pulp	494.6	69.18	5.05	39.54	4.25	18.80	2.22	4.95	0.63	3.86	0.47
REE 404	Pulp	371.9	51.05	2.57	28.12	2.86	11.82	1.61	3.31	0.46	2.76	0.36
REE 405	Pulp	589.8	81.23	5.85	45.94	5.40	23.45	3.36	7.26	0.96	5.25	0.67
REE 406	Pulp	725.3	106.43	5.91	64.20	7.73	35.70	5.61	13.00	1.84	9.50	1.19
REE 451	Pulp	1169.6	172.13	8.58	99.53	13.03	62.72	9.69	21.81	2.81	16.36	1.94
REE 452	Pulp	297.9	40.09	2.46	21.41	2.46	10.52	1.55	3.28	0.47	2.78	0.35
REE 453	Pulp	389.1	55.30	2.43	31.04	3.65	15.74	2.37	5.04	0.65	3.79	0.53
REE 454	Pulp	1526.0	215.22	8.88	120.00	14.01	69.51	8.58	17.80	2.29	12.96	1.62
REE 455	Pulp	770.8	111.75	4.84	60.41	7.31	32.13	4.53	9.33	1.23	6.93	0.86
REE 456	Pulp	1103.4	165.80	7.08	84.40	9.21	38.48	5.22	10.47	1.32	7.60	0.91
REE 457	Pulp	331.3	45.62	2.68	24.25	2.90	12.52	1.87	4.17	0.54	3.14	0.41
REE 458	Pulp	482.4	87.17	3.32	35.55	3.98	16.32	2.37	4.76	0.64	3.54	0.49
REE 459	Pulp	454.8	62.97	3.34	33.21	3.66	15.21	2.07	4.28	0.59	3.56	0.46
REE 480	Pulp	421.0	58.34	3.19	31.20	3.44	14.80	2.13	4.71	0.59	3.45	0.46
REE 461	Pulp	333.9	47.05	2.51	24.36	2.83	12.14	1.86	4.21	0.55	3.44	0.42
REE 462	Pulp	554.1	77.98	3.73	43.08	4.92	20.71	3.10	6.82	0.85	5.16	0.65
REE 463	Pulp	414.1	59.14	2.59	32.62	4.07	18.55	2.85	5.95	0.77	4.53	0.60
REE 464	Pulp	620.3	88.43	4.09	48.38	5.59	24.06	3.38	7.31	0.92	5.34	0.66
REE 465	Pulp	450.0	62.68	3.32	39.80	4.15	18.09	2.53	5.85	0.68	4.20	0.55
REE 466	Pulp	396.2	59.43	3.21	37.28	5.35	27.32	4.37	10.69	1.38	8.09	0.96
REE 467	Pulp	193.9	27.03	1.37	14.67	1.69	7.19	1.04	2.35	0.31	1.77	0.27
REE 468	Pulp	792.3	112.28	5.82	64.78	7.33	32.80	4.74	11.06	1.38	7.88	0.99
REE 469	Pulp	453.4	63.60	3.31	35.95	4.13	17.95	2.53	5.49	0.71	4.27	0.53
REE 470	Pulp	524.7	75.37	6.22	43.24	5.03	22.20	3.35	7.44	0.95	5.63	0.71
REE 471	Pulp	751.8	104.71	6.68	56.90	6.74	29.71	4.30	9.48	1.26	7.07	0.87

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**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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PHONE (604) 253-3158

**Client: MacGregor, R.A.**  
 28 Ford St.  
 Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
 Report Date: February 13, 2020

Page: 4 of 4

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** **VAN20000236 1**

Method	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	
Analyte	Ba	Be	Co	Ca	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	1	0.2	0.1	0.5	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	
REE 472	Pulp	878	<1	16.1	0.8	6.9	5.5	60.3	164.9	2	20.3	8.0	575.0	101.5	<8	1.6	187.1	55.8	556.4	971.5	104.14
REE 473	Pulp	681	<1	8.2	1.0	9.9	8.4	59.6	213.1	3	23.2	7.1	484.4	93.1	9	1.0	230.6	58.8	505.2	853.7	93.31
REE 474	Pulp	751	<1	6.8	0.5	5.2	3.0	24.9	145.7	<1	24.9	3.0	608.0	134.1	11	0.8	105.3	60.1	823.4	1073.0	114.14
REE 475	Pulp	884	1	11.8	0.6	6.7	3.1	22.2	158.3	<1	25.4	3.0	338.8	101.1	14	1.5	107.1	35.6	435.5	765.9	82.54
REE 476	Pulp	665	2	9.4	0.4	3.0	5.7	70.7	142.8	2	28.3	8.8	927.2	181.8	17	2.3	202.3	97.3	1120.1	2012.6	216.08
REE 477	Pulp	831	2	4.2	0.2	3.8	5.3	47.9	152.4	<1	28.2	5.5	479.5	79.6	<8	2.2	190.7	40.0	534.8	926.3	101.71
REE 478	Pulp	646	2	8.5	0.5	4.7	3.8	33.5	153.9	1	30.8	4.1	450.3	65.8	13	1.5	129.8	48.5	621.4	1095.3	115.24
REE 479	Pulp	697	<1	10.1	0.6	5.2	3.7	41.0	166.3	1	29.1	4.9	655.5	154.1	12	1.2	134.3	69.1	692.6	1248.8	131.17
REE 480	Pulp	727	<1	12.5	0.5	3.8	3.5	42.4	155.9	<1	28.8	5.3	744.7	142.6	9	1.2	120.4	78.2	874.8	1579.8	167.40
REE 481	Pulp	819	1	2.9	0.8	11.0	7.6	60.7	184.6	3	20.0	7.4	475.0	66.6	13	1.1	273.0	55.0	519.7	905.7	94.97
REE 482	Pulp	639	<1	10.9	0.5	5.8	3.2	37.1	161.8	1	21.4	4.7	545.9	177.9	9	1.5	108.2	64.2	608.9	1080.3	114.50
REE 483	Pulp	799	<1	5.7	0.7	9.4	5.7	65.1	211.6	3	24.5	8.2	712.1	101.3	12	2.3	203.4	70.7	772.4	1368.3	145.44
REE 484	Pulp	609	<1	14.5	1.0	15.9	4.0	40.7	206.8	4	15.9	5.3	477.8	271.8	26	2.1	152.9	83.2	482.8	845.2	92.17
REE 485	Pulp	665	<1	11.9	0.8	10.0	3.8	35.2	182.8	2	16.8	4.2	330.8	147.7	15	1.0	132.0	45.6	326.4	567.4	61.40
REE 486	Pulp	663	<1	19.0	0.7	6.7	10.9	109.5	188.8	3	31.9	13.1	1789.9	302.3	12	1.9	395.3	144.3	1701.9	3060.2	317.85
REE 487	Pulp	353	1	43.8	0.4	2.2	5.6	109.9	94.4	2	24.6	13.7	2107.3	429.7	12	2.5	193.3	190.7	2012.1	3655.4	378.56
REE 488	Pulp	711	1	10.8	1.3	8.0	10.7	35.5	134.3	1	34.2	4.3	489.5	92.3	22	1.8	378.9	67.2	526.6	939.0	102.12
REE 489	Pulp	634	2	15.7	0.5	4.7	4.6	75.9	131.2	2	28.7	10.0	1103.9	246.9	10	2.6	181.5	114.9	1096.9	1987.3	215.38
REE 490	Pulp	612	3	14.7	0.7	4.8	8.1	73.7	142.8	2	23.9	8.8	993.1	187.1	12	1.5	218.9	114.9	1154.1	2004.7	213.32
REE 491	Pulp	829	1	8.5	0.5	4.5	4.5	44.9	139.5	<1	24.4	5.4	659.7	112.1	<8	1.4	159.8	68.9	706.9	1272.1	135.24

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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** MacGregor, R.A.  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

**Project:** None Given  
**Report Date:** February 13, 2020

**Page:** 4 of 4

**Part:** 2 of 2

# CERTIFICATE OF ANALYSIS

VAN20000236.1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 472	Pulp	330.2	46.69	2.24	26.44	3.05	13.59	2.06	4.39	0.63	3.53	0.48
REE 473	Pulp	296.2	41.86	1.77	24.37	2.95	13.70	2.13	4.80	0.67	4.08	0.55
REE 474	Pulp	363.8	50.29	2.24	29.48	3.28	14.02	2.11	4.68	0.68	3.34	0.42
REE 475	Pulp	265.0	37.68	2.19	20.08	2.19	9.34	1.26	2.78	0.38	2.29	0.29
REE 476	Pulp	692.7	94.85	5.78	53.84	5.71	23.77	3.37	7.50	0.97	6.81	0.75
REE 477	Pulp	326.9	44.32	3.29	24.13	2.58	10.56	1.55	3.39	0.46	2.74	0.38
REE 478	Pulp	352.9	49.46	2.27	26.62	2.78	11.36	1.48	3.04	0.42	2.64	0.34
REE 479	Pulp	420.3	58.88	3.00	35.35	4.02	17.85	2.55	5.67	0.73	4.23	0.55
REE 480	Pulp	529.2	75.57	3.77	45.38	5.14	21.79	3.19	6.72	0.85	4.90	0.61
REE 481	Pulp	298.4	42.17	1.53	24.42	2.83	12.68	1.83	4.30	0.58	3.44	0.49
REE 482	Pulp	360.4	52.42	2.51	32.44	3.84	17.71	2.59	5.80	0.76	4.52	0.67
REE 483	Pulp	461.5	64.93	2.89	37.77	4.02	17.23	2.52	5.46	0.71	4.34	0.58
REE 484	Pulp	298.5	42.70	2.04	28.40	3.60	18.37	2.96	7.48	1.00	5.85	0.79
REE 485	Pulp	190.3	27.27	1.45	17.51	2.26	10.91	1.73	4.02	0.52	3.12	0.42
REE 486	Pulp	995.4	140.33	8.34	85.82	9.05	39.35	5.33	12.14	1.51	9.01	1.14
REE 487	Pulp	1178.8	171.66	7.81	108.36	11.90	51.56	7.18	16.52	2.04	11.84	1.47
REE 488	Pulp	319.6	46.57	2.51	27.47	3.34	15.59	2.47	5.63	0.74	4.24	0.60
REE 489	Pulp	674.1	98.41	4.89	58.53	6.68	29.80	4.25	9.52	1.22	7.10	0.92
REE 490	Pulp	660.3	96.99	4.03	60.03	6.72	28.55	4.09	8.64	1.12	6.71	0.87
REE 491	Pulp	421.7	59.86	2.58	35.73	4.09	17.31	2.45	5.36	0.71	4.01	0.53



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

**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: January 24, 2020  
Analysis Start: January 29, 2020  
Report Date: February 04, 2020  
Page: 1 of 4

## CERTIFICATE OF ANALYSIS

VAN20000148.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 78

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	78	Sorting, labeling and boxing samples received as pulps			VAN
AQ115-IGN	78	Ignite samples, acid digest. Au by ICP-MS	15	Completed	VAN

### SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

MAY LAI  
Data Validation Specialist

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.



**BUREAU VERITAS** MINERAL LABORATORIES

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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: February 04, 2020

Page: 2 of 4

Part: 1 of 1

**CERTIFICATE OF ANALYSIS**

**VAN200000148.1**

	Method	AQ115
	Analyte	Au
	Unit	ppb
	MDL	0.5
A 384	Pulp	5.2
A 385	Pulp	3.8
A 386	Pulp	2.7
A 387	Pulp	1.4
A 388	Pulp	25.5
A 389	Pulp	0.6
A 390	Pulp	2.8
A 391	Pulp	2.0
A 392	Pulp	2.0
A 393	Pulp	4.1
A 394	Pulp	1.2
A 395	Pulp	0.6
A 396	Pulp	0.5
A 397	Pulp	2.0
A 398	Pulp	2.6
A 399	Pulp	1.9
A 400	Pulp	1.8
A 401	Pulp	2.8
A 402	Pulp	2.8
A 403	Pulp	2.5
A 404	Pulp	<0.5
A 405	Pulp	0.9
A 406	Pulp	0.6
A 407	Pulp	<0.5
A 408	Pulp	0.7
A 409	Pulp	0.8
A 410	Pulp	2.4
A 411	Pulp	1.6
A 412	Pulp	8.4
A 413	Pulp	3.2

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

**Client: MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: June 18, 2019  
Report Date: June 21, 2019  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

VAN19001480 1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 107

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	107	Sorting, labeling and boxing samples received as pulps			VAN
MA200	107	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN
EN001-MA	107	Environmental disposal fee - Multi-acid neutralization			VAN

### SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

  
**GEORGE ARCALA**  
Instrumentation Tech Supervisor

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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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 21, 2019

Page: 3 of 5

Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN19001480.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2934	Pulp	6.8	53.5	305.2	55	0.5	16.1	13.8	41	0.97	9	182.4	1011.3	26	0.6	0.2	1.7	13	0.10	0.088	1002.1
IMA2935	Pulp	1.3	7.5	20.6	9	0.1	6.7	3.8	35	0.53	2	9.1	47.9	23	<0.1	0.1	0.1	7	0.03	0.007	66.7
IMA2936	Pulp	2.6	25.5	29.7	28	0.1	7.4	12.8	50	0.91	9	44.9	236.6	22	0.2	<0.1	0.3	19	0.08	0.037	420.1
IMA2937	Pulp	2.3	17.9	82.8	93	0.2	9.8	9.8	44	0.63	12	48.4	285.0	19	0.6	<0.1	0.8	10	0.08	0.030	267.2
IMA2938	Pulp	1.9	23.0	227.5	58	0.2	9.4	11.0	55	0.68	9	36.2	183.2	21	0.8	0.1	0.3	10	0.14	0.022	239.9
IMA2939	Pulp	1.9	13.4	41.6	220	0.2	9.7	8.8	55	0.74	9	21.3	129.9	18	1.4	<0.1	0.4	14	0.08	0.018	169.1
IMA2940	Pulp	1.5	7.5	124.0	126	0.1	5.3	5.9	19	0.34	4	35.2	192.2	22	0.7	<0.1	0.1	6	0.04	0.022	292.9
IMA2941	Pulp	3.4	11.7	114.7	115	0.1	7.0	8.1	59	0.85	2	41.2	266.3	26	0.9	0.1	0.2	14	0.10	0.030	322.7
IMA2942	Pulp	3.8	6.5	121.3	191	0.1	5.3	4.8	42	0.55	2	38.2	181.5	23	0.9	<0.1	<0.1	11	0.08	0.024	217.5
IMA2943	Pulp	1.6	10.2	102.3	145	<0.1	5.5	5.8	42	0.66	3	25.2	178.0	25	0.8	<0.1	0.3	11	0.05	0.021	239.8
IMA2944	Pulp	3.3	11.1	152.1	126	<0.1	6.9	4.9	52	0.58	2	64.6	360.8	26	0.6	0.1	0.2	11	0.12	0.044	449.4
IMA2945	Pulp	3.1	20.2	75.2	9	0.1	9.7	9.3	80	0.88	3	67.0	432.5	32	<0.1	<0.1	0.3	15	0.19	0.058	655.7
IMA2946	Pulp	4.6	34.4	133.7	5	0.1	12.7	11.3	72	1.08	5	180.5	836.0	30	0.1	0.3	0.3	14	0.15	0.070	740.7
IMA2947	Pulp	6.4	39.2	93.1	7	0.2	14.6	14.6	69	1.15	<1	156.2	767.7	33	0.2	0.3	0.4	12	0.14	0.078	995.6
IMA2948	Pulp	3.6	5.6	40.3	8	0.1	6.7	3.2	33	0.51	3	69.5	473.8	23	<0.1	0.2	0.3	15	0.05	0.058	529.2
IMA2949	Pulp	8.7	21.1	277.8	185	0.3	7.1	12.1	37	0.71	6	177.4	527.6	23	1.1	0.1	0.8	10	0.08	0.058	648.5
IMA2950	Pulp	5.4	8.2	31.4	9	0.1	4.8	4.4	57	0.57	3	53.1	380.0	27	<0.1	0.1	0.2	18	0.14	0.048	388.4
IMA2951	Pulp	2.5	7.2	20.4	7	0.1	3.5	3.4	35	0.42	2	15.1	87.2	20	<0.1	<0.1	0.1	11	0.07	0.014	172.6
IMA2952	Pulp	5.6	12.0	119.8	48	0.2	6.9	6.0	47	0.61	2	97.9	693.3	26	0.4	0.1	0.3	15	0.11	0.082	802.1
IMA2953	Pulp	5.5	394.9	221.5	35	0.3	21.9	15.8	83	1.42	4	283.8	494.2	18	0.5	0.2	1.2	13	0.19	0.055	499.1
IMA2954	Pulp	2.1	3.8	13.9	8	<0.1	4.8	3.7	17	0.39	3	23.2	176.8	12	<0.1	<0.1	0.1	10	0.01	0.026	240.4
IMA2955	Pulp	1.7	4.5	19.6	5	0.1	5.3	2.9	22	0.46	3	25.2	147.9	19	<0.1	<0.1	0.1	10	0.03	0.018	164.7
IMA2956	Pulp	3.7	16.1	24.6	5	0.1	5.3	7.2	30	0.45	3	28.9	215.0	20	0.1	<0.1	0.2	11	0.04	0.028	213.6
IMA2957	Pulp	5.5	23.4	72.9	17	0.2	6.7	15.6	33	0.62	10	173.5	363.9	19	0.2	0.1	0.6	15	0.04	0.038	385.3
IMA2958	Pulp	4.2	20.9	109.7	19	0.2	6.7	3.6	84	0.66	1	109.5	611.1	25	0.2	<0.1	0.3	17	0.16	0.063	564.7
IMA2959	Pulp	4.7	8.7	59.1	8	0.2	6.2	4.4	50	0.57	3	85.0	487.4	26	0.1	0.1	0.6	17	0.10	0.053	536.1
IMA2960	Pulp	3.7	15.1	245.9	27	0.1	5.9	5.4	31	0.55	1	30.0	171.6	20	0.3	<0.1	0.2	12	0.05	0.021	182.9
IMA2961	Pulp	3.4	21.8	436.8	197	0.2	5.3	7.6	24	0.55	2	22.1	90.7	19	1.0	<0.1	0.4	9	0.04	0.012	105.3
IMA2962	Pulp	3.3	22.9	101.9	7	<0.1	8.3	6.9	106	0.91	3	117.9	721.1	25	<0.1	0.1	0.4	16	0.14	0.076	691.3
IMA2963	Pulp	6.3	31.6	508.8	7	0.3	13.4	16.2	24	0.52	13	716.0	2498.3	33	0.2	0.4	1.6	15	0.02	0.230	>2000

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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P8A 4N4 Canada

Project: None Given  
Report Date: June 21, 2019

Page: 3 of 5

Part: 2 of 3

**CERTIFICATE OF ANALYSIS**

**VAN19001480.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2934	Pulp	123	0.15	520	0.299	2.49	0.038	2.88	1.6	226.5	1832	1.0	80.6	33.2	3.7	<1	3	3.5	0.4	111.7	6.4
IMA2935	Pulp	80	0.11	843	0.050	3.51	0.057	4.42	0.2	76.6	125	0.6	5.8	5.1	0.5	<1	1	1.7	<0.1	181.5	2.1
IMA2936	Pulp	103	0.20	912	0.122	4.50	0.055	4.80	0.6	117.2	720	3.0	29.0	13.5	1.4	2	3	7.2	0.1	244.5	3.4
IMA2937	Pulp	91	0.14	610	0.113	2.86	0.042	3.51	1.0	117.3	468	0.7	23.9	10.7	1.1	<1	2	2.1	0.1	123.2	3.4
IMA2938	Pulp	89	0.16	700	0.109	3.17	0.047	3.92	1.2	101.6	416	0.7	17.8	10.8	1.1	<1	2	2.6	0.1	143.5	2.9
IMA2939	Pulp	119	0.17	690	0.090	3.28	0.054	3.85	0.9	128.8	301	0.7	12.8	6.1	0.8	<1	2	2.7	0.1	143.3	3.7
IMA2940	Pulp	62	0.06	700	0.081	3.19	0.061	3.51	0.3	76.1	533	1.0	18.3	6.0	0.9	<1	1	2.7	<0.1	121.7	2.3
IMA2941	Pulp	87	0.13	745	0.213	3.39	0.057	3.23	0.5	127.0	616	1.1	28.0	20.2	2.2	1	2	4.6	0.1	138.5	3.5
IMA2942	Pulp	74	0.10	712	0.111	3.22	0.055	3.60	0.3	98.5	404	0.9	17.6	11.0	1.1	1	1	4.2	<0.1	150.3	2.7
IMA2943	Pulp	129	0.10	773	0.163	3.48	0.060	3.43	0.5	104.4	428	0.9	19.0	16.0	1.6	<1	1	4.1	<0.1	146.8	3.0
IMA2944	Pulp	95	0.08	685	0.175	3.00	0.083	3.19	0.4	109.9	846	0.9	34.0	17.2	1.8	1	2	2.6	0.1	131.3	3.3
IMA2945	Pulp	117	0.12	710	0.177	3.34	0.126	3.91	0.6	107.6	1231	1.2	36.9	17.8	2.0	2	2	3.9	0.2	160.2	3.4
IMA2946	Pulp	97	0.12	784	0.198	3.38	0.061	3.95	0.8	121.1	1391	1.1	60.8	24.8	3.2	2	2	6.1	0.4	167.4	3.4
IMA2947	Pulp	115	0.11	825	0.213	3.47	0.077	3.76	0.8	121.8	1780	1.0	72.9	29.6	3.3	1	2	5.3	0.5	152.1	3.6
IMA2948	Pulp	91	0.15	688	0.247	4.94	0.198	3.30	0.6	259.8	1028	2.8	47.7	21.9	2.6	2	3	4.9	<0.1	182.6	7.6
IMA2949	Pulp	95	0.09	693	0.146	3.42	0.056	3.53	0.9	98.9	1223	1.2	54.9	20.5	2.1	<1	3	5.3	0.2	162.2	2.9
IMA2950	Pulp	83	0.18	1117	0.227	5.03	0.074	5.05	0.9	181.5	732	2.8	35.7	24.3	2.5	2	4	6.3	<0.1	254.2	5.4
IMA2951	Pulp	59	0.09	955	0.104	4.29	0.064	3.85	0.6	109.1	299	1.4	9.3	9.7	1.0	1	2	3.3	<0.1	188.6	3.1
IMA2952	Pulp	77	0.14	956	0.268	4.23	0.127	4.24	1.2	196.3	1470	2.5	57.7	31.0	3.4	2	3	6.3	0.1	208.5	6.0
IMA2953	Pulp	102	0.23	585	0.177	4.46	0.048	4.29	1.7	141.9	899	4.0	62.5	21.7	2.9	2	3	10.0	0.9	227.9	4.3
IMA2954	Pulp	89	0.09	534	0.218	3.47	0.037	3.38	1.6	126.9	440	1.7	19.1	19.0	1.8	1	1	3.7	<0.1	164.3	3.5
IMA2955	Pulp	66	0.13	932	0.113	4.94	0.066	4.39	0.6	113.4	308	2.1	14.6	10.4	1.1	2	2	4.4	<0.1	212.8	3.2
IMA2956	Pulp	82	0.08	910	0.108	4.22	0.061	3.85	0.4	112.0	388	1.4	18.4	10.7	1.2	<1	2	3.5	<0.1	176.7	3.0
IMA2957	Pulp	89	0.11	855	0.157	4.10	0.053	3.77	0.7	142.4	702	1.8	35.2	17.5	2.1	2	3	5.0	0.2	198.7	3.9
IMA2958	Pulp	143	0.10	920	0.235	3.71	0.069	4.21	1.4	177.4	1045	1.7	45.2	28.4	2.9	2	3	4.1	<0.1	178.2	5.1
IMA2959	Pulp	84	0.17	1013	0.280	5.38	0.100	4.30	0.9	307.9	975	3.2	46.3	25.7	2.8	3	3	5.5	<0.1	220.5	9.0
IMA2960	Pulp	79	0.14	874	0.163	4.81	0.085	4.36	0.6	193.4	320	2.8	16.7	12.6	1.4	2	2	5.6	<0.1	215.1	5.8
IMA2961	Pulp	94	0.11	837	0.087	4.05	0.052	4.08	0.5	117.5	195	2.1	9.1	6.9	0.7	2	2	3.5	0.1	189.5	3.4
IMA2962	Pulp	104	0.13	842	0.249	3.66	0.055	4.36	0.5	169.4	1293	1.4	52.8	25.0	2.8	2	3	4.4	0.2	196.5	5.0
IMA2963	Pulp	91	0.09	653	0.358	4.20	0.129	1.73	1.0	367.2	>2000	2.5	223.5	37.8	3.3	3	3	9.9	0.1	76.4	10.1

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Client:

**MacGregor, R.A.**

28 Ford St.

Sault Ste. Marie Ontario P6A 4N4 Canada

Project:

None Given

Report Date:

June 21, 2019

Page:

3 of 5

Part:

3 of 3

# CERTIFICATE OF ANALYSIS

VAN19001480.1

Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200	
	In ppm	Re ppm	Se ppm	Te ppm	Ti ppm	
	0.05	0.005	1	0.5	0.5	
IMA2934	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2935	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2936	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2937	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2938	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2939	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2940	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2941	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2942	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2943	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2944	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2945	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2946	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2947	Pulp	<0.05	<0.005	2	<0.5	1.1
IMA2948	Pulp	0.05	<0.005	<1	<0.5	0.8
IMA2949	Pulp	<0.05	<0.005	2	<0.5	0.9
IMA2950	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2951	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2952	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2953	Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2954	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2955	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2956	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2957	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2958	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2959	Pulp	0.05	<0.005	<1	<0.5	1.1
IMA2960	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2961	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2962	Pulp	<0.05	<0.005	2	<0.5	1.0
IMA2963	Pulp	<0.05	<0.005	3	<0.5	0.9



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Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 21, 2019

Page: 4 of 5

Part: 1 of 3

**CERTIFICATE OF ANALYSIS**

**VAN19001480.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2964	Pulp	3.1	28.5	111.0	6	0.2	33.4	7.4	43	0.61	2	148.7	681.3	27	0.2	0.1	0.3	15	0.10	0.081	756.0
IMA2965	Pulp	1.3	4.8	17.3	2	<0.1	9.3	1.4	18	0.25	<1	21.8	100.5	32	0.1	<0.1	<0.1	6	0.02	0.011	108.3
IMA2966	Pulp	2.8	63.2	179.1	25	0.2	6.0	16.1	158	1.28	10	128.6	814.2	26	0.3	0.2	0.4	17	0.08	0.088	992.7
IMA2967	Pulp	7.3	46.9	1148.2	65	0.6	20.7	60.7	75	1.13	39	1313.1	>4000	50	0.4	0.1	2.3	6	0.31	0.570	>2000
IMA2968	Pulp	3.3	40.4	88.4	39	0.2	19.4	12.1	204	1.80	1	107.1	497.5	39	0.5	<0.1	0.5	35	0.21	0.069	608.2
IMA2969	Pulp	8.0	30.3	85.9	9	0.1	8.5	13.5	40	0.68	3	137.2	818.3	28	0.2	<0.1	0.4	15	0.08	0.100	994.9
IMA2970	Pulp	8.7	43.4	180.9	49	0.1	9.4	11.4	51	0.78	1	140.1	818.3	27	0.3	<0.1	0.3	14	0.11	0.106	980.7
IMA2971	Pulp	4.9	20.5	95.2	21	<0.1	5.9	6.9	49	0.81	1	80.2	381.7	27	0.3	<0.1	0.6	15	0.13	0.046	467.9
IMA2972	Pulp	6.9	27.8	188.6	38	0.1	8.8	12.2	36	0.61	4	141.4	783.3	29	0.5	0.1	0.4	12	0.09	0.087	883.8
IMA2973	Pulp	3.4	73.0	179.8	10	0.2	10.1	15.1	52	0.88	3	199.2	1071.1	33	0.2	0.1	0.4	14	0.08	0.126	1289.1
IMA2974	Pulp	2.4	127.9	115.7	123	0.2	12.3	5.8	172	0.74	2	48.2	284.9	56	0.8	0.1	0.4	15	0.58	0.032	323.9
IMA2975	Pulp	1.2	4.6	9.1	3	<0.1	5.8	0.9	18	0.25	<1	6.6	27.5	24	<0.1	<0.1	<0.1	5	0.02	0.005	37.1
IMA2976	Pulp	2.3	18.7	187.7	8	<0.1	12.7	6.1	104	0.75	4	82.8	521.1	27	<0.1	<0.1	0.2	11	0.16	0.082	432.9
IMA2977	Pulp	2.6	12.7	69.4	8	<0.1	8.7	8.4	117	0.87	6	94.1	536.3	26	0.2	0.1	0.1	14	0.14	0.055	609.7
IMA2978	Pulp	2.7	19.1	444.4	142	0.1	9.4	13.4	110	0.87	8	83.8	418.2	27	0.8	0.2	0.2	13	0.21	0.049	410.4
IMA2979	Pulp	2.6	18.7	26.8	4	0.1	8.1	9.0	91	0.71	7	41.7	267.2	25	<0.1	0.2	0.1	12	0.15	0.032	323.7
IMA2980	Pulp	8.3	19.0	36.8	3	<0.1	7.7	8.1	93	0.60	6	90.1	445.2	26	<0.1	<0.1	0.2	15	0.12	0.047	522.1
IMA2981	Pulp	5.2	17.5	173.0	3	<0.1	8.4	10.8	110	0.96	2	170.3	969.6	31	<0.1	0.1	0.5	19	0.24	0.100	1167.3
IMA2982	Pulp	4.6	8.1	109.7	4	<0.1	7.1	7.9	95	0.88	4	112.2	645.9	29	<0.1	<0.1	0.2	13	0.19	0.068	558.7
IMA2983	Pulp	5.9	9.6	106.7	13	<0.1	5.9	4.5	72	0.65	1	76.5	476.1	30	<0.1	<0.1	0.2	10	0.15	0.055	560.2
IMA2984	Pulp	2.1	12.0	127.5	20	<0.1	12.3	5.3	59	0.52	2	71.3	252.0	22	0.1	<0.1	0.2	10	0.11	0.028	268.6
IMA2985	Pulp	5.4	6.8	34.1	6	<0.1	6.7	4.2	30	0.52	2	82.8	451.8	21	<0.1	0.2	<0.1	13	0.06	0.043	394.5
IMA2986	Pulp	5.0	6.9	31.1	2	<0.1	7.1	5.1	35	0.44	5	65.8	407.5	20	<0.1	0.2	0.2	10	0.08	0.045	447.4
IMA2987	Pulp	3.4	5.9	27.3	10	<0.1	5.3	3.0	64	0.61	<1	37.9	255.6	25	<0.1	<0.1	<0.1	10	0.15	0.033	289.6
IMA2988	Pulp	4.8	32.6	190.5	58	0.1	13.6	11.6	60	0.64	3	100.5	520.3	26	0.2	0.1	0.1	11	0.13	0.054	580.2
IMA2989	Pulp	4.2	32.0	288.2	107	0.4	35.1	12.8	73	0.89	2	102.8	346.3	27	0.7	0.1	1.0	13	0.16	0.037	435.7
IMA2990	Pulp	4.3	30.7	175.3	55	<0.1	17.2	7.5	61	0.70	<1	128.1	664.4	26	0.2	<0.1	<0.1	13	0.14	0.063	661.9
IMA2991	Pulp	2.1	12.9	45.8	27	<0.1	15.0	4.3	43	0.43	1	16.9	74.8	24	<0.1	<0.1	<0.1	8	0.09	0.011	126.7
IMA2992	Pulp	4.0	4.5	26.3	12	<0.1	6.1	5.3	36	0.66	4	49.9	290.1	20	<0.1	<0.1	<0.1	15	0.05	0.031	292.6
IMA2993	Pulp	4.2	22.4	84.9	43	<0.1	22.4	9.2	67	0.56	2	44.0	214.3	25	<0.1	<0.1	<0.1	8	0.15	0.024	288.8

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Project: Nons Given  
Report Date: June 21, 2019

Page: 4 of 5

Part: 2 of 3

**CERTIFICATE OF ANALYSIS** **VAN19001480.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2964	Pulp	84	0.11	948	0.205	3.79	0.109	4.25	1.0	223.1	1445	2.0	53.9	22.0	2.5	<1	3	5.3	0.2	176.1	6.0
IMA2965	Pulp	92	0.02	116	0.031	1.94	0.261	0.83	0.2	51.6	192	0.4	8.2	3.3	0.3	<1	<1	0.9	<0.1	32.1	1.5
IMA2966	Pulp	118	0.12	679	0.354	3.03	0.042	3.44	1.8	224.5	1796	1.7	73.8	43.9	5.0	<1	3	3.2	0.2	149.7	6.3
IMA2967	Pulp	106	0.18	587	0.273	3.45	0.044	2.79	1.4	215.9	>2000	1.3	498.2	27.2	2.8	4	5	11.8	0.4	130.8	5.8
IMA2968	Pulp	189	0.34	864	0.348	4.18	0.743	3.52	1.1	369.3	1152	1.5	48.3	27.8	3.1	1	4	9.9	<0.1	156.9	10.9
IMA2969	Pulp	77	0.15	956	0.232	4.98	0.176	4.47	0.9	236.2	1811	2.9	65.4	24.9	2.9	2	4	6.3	0.2	216.3	7.0
IMA2970	Pulp	104	0.12	930	0.290	4.26	0.087	4.31	1.3	258.8	1812	2.4	61.3	32.2	3.8	1	3	5.2	0.2	194.8	7.2
IMA2971	Pulp	88	0.13	991	0.210	4.49	0.082	4.85	0.9	191.6	858	2.0	36.9	21.8	2.3	1	3	5.2	<0.1	213.0	5.7
IMA2972	Pulp	98	0.09	884	0.188	3.60	0.085	3.66	0.9	168.8	1639	1.4	58.2	24.6	2.4	<1	3	4.4	0.1	151.7	4.7
IMA2973	Pulp	117	0.09	778	0.383	3.38	0.139	3.24	1.6	217.9	>2000	1.6	80.8	43.6	4.9	<1	2	3.8	0.2	135.4	5.8
IMA2974	Pulp	105	0.20	954	0.143	3.76	0.372	3.32	0.4	105.7	578	0.9	23.6	16.7	1.6	<1	3	3.5	<0.1	132.8	3.0
IMA2975	Pulp	98	0.01	103	0.019	1.61	0.222	0.68	<0.1	35.9	71	0.2	3.2	1.9	0.2	<1	<1	1.0	<0.1	26.9	1.1
IMA2976	Pulp	106	0.12	789	0.197	3.41	0.069	2.48	1.0	146.8	868	1.1	38.5	22.0	2.6	<1	2	3.9	<0.1	116.6	4.4
IMA2977	Pulp	100	0.12	770	0.162	3.58	0.063	2.73	0.7	115.8	1128	1.1	44.9	21.2	2.5	<1	2	4.2	0.1	128.6	3.7
IMA2978	Pulp	121	0.17	824	0.130	3.87	0.060	2.66	2.4	104.2	809	1.2	37.8	15.2	1.7	<1	2	5.4	0.2	136.2	3.2
IMA2979	Pulp	107	0.13	816	0.158	3.64	0.072	2.57	0.5	120.9	621	1.0	26.3	15.8	1.9	<1	2	4.1	0.1	124.0	3.6
IMA2980	Pulp	95	0.11	812	0.170	3.69	0.070	2.77	0.6	116.3	954	1.0	43.1	20.5	2.3	1	2	4.5	0.2	132.4	3.3
IMA2981	Pulp	117	0.11	718	0.388	3.01	0.058	2.53	1.4	166.9	>2000	1.3	84.5	40.9	4.7	3	5	4.4	0.2	122.7	5.1
IMA2982	Pulp	110	0.11	845	0.313	3.37	0.066	2.45	0.5	154.2	1070	1.5	52.0	30.5	3.5	1	2	4.4	<0.1	129.4	4.8
IMA2983	Pulp	103	0.07	939	0.370	3.52	0.094	2.38	1.3	154.7	1077	0.6	35.9	35.7	4.2	<1	2	2.5	<0.1	104.5	4.9
IMA2984	Pulp	92	0.07	852	0.123	3.58	0.067	3.08	0.4	86.1	481	1.0	24.3	13.3	1.5	<1	1	2.7	0.1	147.3	2.7
IMA2985	Pulp	87	0.14	751	0.329	5.06	0.100	2.61	0.9	235.7	740	2.6	41.1	29.8	3.4	2	2	8.6	<0.1	143.5	6.8
IMA2986	Pulp	92	0.10	833	0.301	3.98	0.089	2.58	1.0	209.8	841	2.1	37.0	26.8	3.0	1	2	3.4	<0.1	129.7	5.9
IMA2987	Pulp	85	0.15	722	0.216	4.72	0.260	2.46	1.0	174.8	547	2.8	19.3	17.0	1.8	2	2	4.9	<0.1	133.7	5.1
IMA2988	Pulp	92	0.11	923	0.209	4.12	0.093	2.54	0.9	139.4	1071	1.7	43.8	23.2	2.7	1	2	4.6	0.1	127.0	4.4
IMA2989	Pulp	112	0.10	952	0.133	3.93	0.129	3.59	1.0	99.4	859	0.9	32.0	14.9	1.9	<1	2	4.5	0.3	142.2	3.0
IMA2990	Pulp	89	0.10	830	0.168	3.56	0.121	2.93	0.8	89.7	1219	1.2	51.0	20.7	2.6	1	1	5.0	0.1	119.8	2.5
IMA2991	Pulp	74	0.09	926	0.089	3.90	0.144	2.81	0.5	89.3	241	0.8	8.9	8.2	0.8	<1	1	2.7	<0.1	120.6	2.4
IMA2992	Pulp	102	0.20	751	0.237	5.94	0.067	1.93	0.9	220.6	569	3.5	33.2	18.4	1.9	3	3	5.4	<0.1	130.6	7.2
IMA2993	Pulp	82	0.09	895	0.159	3.63	0.149	2.89	0.7	109.9	530	0.5	21.8	18.1	2.1	<1	1	2.5	0.1	105.3	2.9

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Project: None Given  
Report Date: June 21, 2019

Page: 4 of 5

Part: 3 of 3

**CERTIFICATE OF ANALYSIS**

VAN19001480.1

Method	Analyte	Unit	MA200	MA200	MA200	MA200	MA200
			In	Re	Se	Te	Tl
MDL			ppm	ppm	ppm	ppm	ppm
			0.05	0.005	1	0.5	0.5
IMA2964	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2965	Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA2966	Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2967	Pulp		<0.05	0.007	9	0.6	0.6
IMA2968	Pulp		0.05	<0.005	<1	<0.5	0.8
IMA2969	Pulp		<0.05	<0.005	2	<0.5	1.0
IMA2970	Pulp		<0.05	<0.005	1	<0.5	1.0
IMA2971	Pulp		<0.05	<0.005	1	<0.5	1.1
IMA2972	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2973	Pulp		<0.05	<0.005	2	<0.5	0.8
IMA2974	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2975	Pulp		<0.05	<0.005	2	<0.5	<0.5
IMA2976	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2977	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2978	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2979	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2980	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2981	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2982	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2983	Pulp		<0.05	<0.005	1	<0.5	1.0
IMA2984	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2985	Pulp		0.07	<0.005	<1	<0.5	0.9
IMA2986	Pulp		<0.05	<0.005	<1	<0.5	0.7
IMA2987	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2988	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2989	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2990	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2991	Pulp		<0.05	<0.005	2	<0.5	0.9
IMA2992	Pulp		<0.05	<0.005	<1	<0.5	1.1
IMA2993	Pulp		<0.05	<0.005	1	<0.5	0.7

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Project: None Given  
 Report Date: June 21, 2019

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN19001480 1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1
IMA2994	Pulp	1.7	18.5	56.4	13	<0.1	11.7	4.9	49	0.56	3	24.5	138.0	24	<0.1	<0.1	<0.1	12	0.09	0.020	204.3
IMA2995	Pulp	5.7	4.6	136.5	245	<0.1	6.3	6.9	59	1.17	6	56.7	342.0	32	1.3	0.1	<0.1	13	0.06	0.037	336.0
IMA2996	Pulp	9.4	6.4	160.5	338	0.1	3.8	2.2	34	0.94	<1	17.4	87.0	17	1.8	0.2	<0.1	11	0.02	0.014	108.1
IMA2997	Pulp	6.2	4.4	188.2	339	0.1	4.1	2.3	38	0.87	2	21.1	126.5	16	1.8	<0.1	<0.1	12	0.03	0.017	129.1
IMA2998	Pulp	2.8	3.9	119.3	242	0.1	4.5	2.2	40	0.98	1	21.9	118.8	13	1.4	0.1	<0.1	13	0.02	0.016	143.9
IMA2999	Pulp	3.4	2.5	118.2	190	<0.1	5.6	2.6	65	1.37	9	29.0	134.9	12	0.9	<0.1	<0.1	14	0.02	0.018	124.7
IMA3000	Pulp	9.0	3.6	108.7	207	<0.1	5.3	4.0	96	1.80	21	17.3	96.9	7	1.6	0.1	<0.1	10	0.04	0.012	113.0
IMA3001	Pulp	12.1	5.3	177.7	299	<0.1	9.5	7.7	129	2.27	14	101.9	396.0	6	1.4	0.1	<0.1	11	0.04	0.038	412.8
IMA3002	Pulp	3.3	1.5	17.0	30	<0.1	4.1	2.1	33	0.58	2	27.9	133.6	91	<0.1	<0.1	<0.1	12	0.06	0.014	125.7
IMA3003	Pulp	4.6	44.1	232.9	85	0.1	40.2	9.8	61	1.07	<1	186.6	1007.3	27	0.2	<0.1	0.2	14	0.22	0.092	970.1
IMA3004	Pulp	2.4	11.7	66.7	13	<0.1	11.6	3.6	72	0.61	<1	77.4	390.7	25	<0.1	<0.1	<0.1	16	0.16	0.041	429.6
IMA3005	Pulp	1.6	126.5	7.9	29	<0.1	133.5	36.7	196	4.72	11	5.6	10.9	15	<0.1	0.6	0.6	156	0.08	0.041	28.8
IMA3006	Pulp	1.4	52.4	68.3	136	0.1	85.7	14.2	136	2.81	<1	2.2	6.0	61	0.5	0.1	<0.1	41	0.11	0.020	14.2
IMA3007	Pulp	1.4	594.2	64.4	179	0.3	6.6	4.8	48	0.68	3	1.2	2.7	8	1.2	<0.1	<0.1	4	0.05	0.002	6.1
IMA3008	Pulp	2.4	3.3	33.4	13	<0.1	6.9	4.1	50	0.64	5	25.2	77.7	22	<0.1	<0.1	<0.1	7	0.04	0.008	75.9
IMA3009	Pulp	0.6	679.7	82.7	294	0.3	4.2	20.9	355	5.65	3	3.2	13.5	35	1.1	<0.1	<0.1	26	0.44	0.149	41.9
IMA3010	Pulp	0.2	1.1	14.8	426	<0.1	3.7	8.4	3859	14.31	<1	16.8	132.8	126	<0.1	0.2	<0.1	125	8.40	0.004	60.7



**BUREAU VERITAS** MINERAL LABORATORIES

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Bureau Veritas Commodities Canada Ltd.

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

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 21, 2019

Page: 5 of 5

Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN19001480.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2994	Pulp	88	0.11	851	0.118	3.83	0.099	2.76	0.5	97.6	381	1.4	15.5	10.5	1.1	2	2	4.2	<0.1	127.7	3.0
IMA2995	Pulp	95	0.89	350	0.231	4.58	1.041	1.89	0.4	152.9	636	1.9	31.8	17.3	2.0	1	3	13.2	<0.1	117.9	4.4
IMA2996	Pulp	44	0.43	633	0.160	5.14	0.190	2.84	0.2	128.8	198	1.7	10.2	11.0	1.1	2	2	11.1	0.1	156.5	3.8
IMA2997	Pulp	80	0.37	621	0.168	5.30	0.058	2.88	0.2	140.2	247	2.0	13.8	12.9	1.4	2	2	11.4	<0.1	166.9	4.0
IMA2998	Pulp	36	0.44	573	0.174	5.29	0.047	2.54	0.3	143.1	275	1.9	13.8	12.3	1.2	1	3	12.8	<0.1	144.1	3.8
IMA2999	Pulp	86	0.58	559	0.205	5.28	0.084	2.52	0.3	141.1	238	1.9	13.8	15.8	1.7	1	2	16.7	<0.1	150.1	4.1
IMA3000	Pulp	46	0.77	389	0.178	3.99	0.045	2.10	0.3	102.7	216	1.2	11.1	13.7	1.4	1	2	15.2	<0.1	135.9	2.8
IMA3001	Pulp	179	0.89	235	0.191	3.32	0.026	1.49	0.2	84.0	806	1.4	37.6	20.6	3.0	1	2	15.5	0.1	102.2	2.3
IMA3002	Pulp	45	0.51	170	0.167	5.17	2.662	1.31	0.2	139.3	241	1.3	14.0	12.7	1.4	2	3	8.9	<0.1	81.2	4.4
IMA3003	Pulp	64	0.10	625	0.240	2.96	0.071	2.28	1.3	114.3	1846	1.1	81.2	29.4	2.7	3	2	4.5	0.3	97.4	3.0
IMA3004	Pulp	68	0.14	804	0.215	3.75	0.091	3.00	0.6	133.5	830	1.2	33.9	20.2	2.2	<1	2	6.4	<0.1	137.3	4.0
IMA3005	Pulp	147	0.98	590	0.438	9.93	0.064	4.22	3.1	151.0	66	3.0	11.3	13.1	1.1	4	18	27.7	0.7	232.1	5.1
IMA3006	Pulp	248	0.71	168	0.177	4.38	2.121	0.83	0.6	94.6	29	0.5	4.8	5.5	0.4	1	5	10.7	0.3	52.3	2.6
IMA3007	Pulp	196	0.13	59	0.008	1.10	0.354	0.57	<0.1	9.7	12	<0.1	1.3	1.9	0.1	<1	<1	1.6	0.1	19.9	0.2
IMA3008	Pulp	149	0.54	66	0.058	1.97	0.769	0.58	0.1	44.7	147	0.4	8.5	4.4	0.3	<1	1	7.4	<0.1	30.6	1.1
IMA3009	Pulp	36	1.93	80	0.473	5.20	1.864	0.52	0.8	178.4	90	1.3	15.6	8.3	0.8	1	10	18.1	0.2	35.9	5.0
IMA3010	Pulp	79	3.02	21	0.083	0.57	3.467	0.03	0.4	137.5	162	24.8	51.9	5.1	0.1	24	19	160.0	<0.1	4.1	6.9

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 21, 2019

Page: 5 of 5

Part: 3 of 3

**CERTIFICATE OF ANALYSIS**

**YAN19001480.1**

Method	Analyte	Unit	MA200	MA200	MA200	MA200	MA200
			In	Re	Se	Te	Ti
MDL			ppm	ppm	ppm	ppm	ppm
			0.05	0.005	1	0.5	0.5
IMA2994	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2995	Pulp		<0.05	<0.005	<1	<0.5	0.7
IMA2996	Pulp		<0.05	<0.005	<1	<0.5	1.1
IMA2997	Pulp		0.08	<0.005	<1	<0.5	1.2
IMA2998	Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2999	Pulp		<0.05	<0.005	<1	<0.5	1.1
IMA3000	Pulp		0.06	<0.005	<1	<0.5	0.9
IMA3001	Pulp		<0.05	<0.005	<1	<0.5	0.5
IMA3002	Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA3003	Pulp		<0.05	<0.005	<1	<0.5	0.7
IMA3004	Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA3005	Pulp		0.09	0.008	2	<0.5	1.7
IMA3006	Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA3007	Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA3008	Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA3009	Pulp		0.07	<0.005	<1	<0.5	<0.5
IMA3010	Pulp		0.31	<0.005	<1	0.9	<0.5



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Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (804) 253-3158

**Client:** Skead Holdings Ltd.  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: Robert MacGregor  
Receiving Lab: Canada-Vancouver  
Received: May 13, 2019  
Report Date: June 28, 2019  
Page: 1 of 5

**CERTIFICATE OF ANALYSIS** VAN19001087-1

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 114

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	113	Sorting, labeling and boxing samples received as pulps			VAN
LF100	113	Refractory and REEs by fusion and ICP-MS analysis	0.2	Completed	VAN

**SAMPLE DISPOSAL**

IMM-PLP Return immediately after analysis

**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: Skead Holdings Ltd.  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

**JEFFREY CANNON**  
Geochemistry Department 4546-1100

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.



**BUREAU VERITAS** MINERAL LABORATORIES

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 2 of 5

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN19001087-1

Method	Analyte	Unit	MDL	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100		
				Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
				1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1		
REE 254	Rock Pulp			490	<1	16.2	0.4	8.0	8.0	44.9	103.8	1	23.0	4.9	409.2	70.7	35	4.1	212.0	38.3	515.5	943.7	94.80
REE 255	Rock Pulp			826	<1	19.6	0.6	8.7	3.8	30.4	172.1	1	22.3	3.3	243.8	45.3	24	3.5	134.0	30.3	326.1	564.7	57.41
REE 256	Rock Pulp			794	<1	19.8	0.5	8.5	5.3	41.1	172.5	2	24.9	4.8	415.2	72.8	21	3.2	198.1	62.2	480.1	874.1	87.41
REE 257	Rock Pulp			806	<1	35.8	0.6	10.4	6.6	75.7	192.2	2	29.2	9.1	875.7	156.1	22	3.4	230.3	88.3	1029.0	1782.5	187.32
REE 258	Rock Pulp			926	1	25.2	0.5	11.4	6.7	57.6	228.1	2	29.6	6.7	725.7	130.4	24	2.7	244.1	71.8	893.9	1583.4	160.67
REE 259	Rock Pulp			906	3	6.4	0.9	15.1	7.1	48.2	256.4	4	24.2	5.8	401.7	87.7	23	2.4	243.9	49.3	458.1	825.4	82.12
REE 260	Rock Pulp			828	1	4.8	0.6	9.2	4.8	28.3	193.8	1	22.2	3.0	304.4	52.1	19	1.8	165.4	32.4	367.5	675.3	67.33
REE 261	Rock Pulp			892	<1	4.8	0.6	9.3	4.3	31.0	205.8	2	28.1	3.6	320.5	59.7	16	1.8	150.0	31.9	344.3	622.7	61.59
REE 262	Rock Pulp			928	<1	4.0	1.0	14.0	4.7	31.9	252.7	3	23.3	4.0	338.3	66.5	16	1.8	166.3	45.3	348.8	633.8	63.59
REE 263	Rock Pulp			857	<1	14.2	0.5	8.5	4.3	46.7	199.7	1	29.1	6.2	944.6	203.9	10	2.8	183.0	93.1	1131.9	2007.8	207.98
REE 264	Rock Pulp			683	<1	21.0	0.5	7.9	5.8	79.6	188.9	2	26.8	10.9	1234.3	300.7	14	2.8	206.0	124.3	1363.0	2436.4	249.89
REE 265	Rock Pulp			773	<1	11.5	0.9	14.1	8.3	69.1	238.9	4	23.2	7.9	609.6	120.4	19	2.7	228.6	74.8	739.0	1329.8	133.58
REE 266	Rock Pulp			808	<1	7.3	0.7	10.7	5.4	63.1	218.3	3	23.2	7.4	532.7	92.1	15	2.4	205.0	65.7	841.9	1122.0	114.79
REE 267	Rock Pulp			853	1	4.4	0.6	8.3	3.6	29.2	210.3	5	28.3	3.3	401.6	86.4	10	1.6	132.7	47.2	396.4	711.2	71.79
REE 268	Rock Pulp			870	<1	12.1	0.4	7.7	3.9	44.4	175.0	2	22.8	5.9	712.9	367.1	10	1.7	132.8	103.1	775.0	1355.7	138.34
REE 269	Rock Pulp			436	3	31.8	0.7	10.5	5.3	90.2	178.8	4	28.4	13.4	2053.2	1208.5	18	3.1	194.4	252.1	2110.4	3920.9	398.78
REE 270	Rock Pulp			483	<1	6.2	0.7	11.8	6.1	67.1	201.6	4	15.3	7.8	589.0	122.3	14	2.9	209.4	73.5	681.0	1185.4	119.05
REE 271	Rock Pulp			598	1	3.9	0.9	9.4	5.7	50.8	181.8	2	22.1	5.6	358.5	73.7	14	1.7	216.3	45.5	408.7	731.7	71.88
REE 272	Rock Pulp			609	2	7.3	0.8	9.8	5.4	61.1	189.5	2	21.2	6.2	597.6	114.0	20	1.4	197.9	58.6	633.4	1148.5	115.74
REE 273	Rock Pulp			1015	2	7.5	1.2	14.9	8.9	64.8	271.1	3	30.9	7.8	927.7	171.6	18	3.3	309.0	68.5	961.4	1721.4	175.94
REE 274	Rock Pulp			749	<1	10.1	0.8	11.5	7.7	57.6	208.6	2	26.0	6.9	1078.8	252.8	14	2.0	281.3	98.3	1039.4	1845.0	188.95
REE 275	Rock Pulp			645	1	17.8	0.5	6.4	5.0	65.9	163.9	2	27.3	8.4	1330.4	368.3	12	2.9	185.2	131.9	1321.5	2381.4	243.87
REE 276	Rock Pulp			864	3	12.9	1.0	16.9	9.6	81.8	263.6	5	28.2	10.9	1324.8	218.1	17	2.6	342.5	151.3	1809.3	2881.1	296.83
REE 277	Rock Pulp			804	1	4.8	0.6	9.0	4.8	25.9	197.0	1	21.6	3.1	252.4	41.7	<8	1.4	189.6	26.3	323.2	568.6	56.64
REE 278	Rock Pulp			735	<1	10.3	0.7	10.0	7.3	68.8	200.0	3	25.0	8.2	998.8	194.1	12	3.4	250.3	108.9	1146.9	2022.5	208.50
REE 279	Rock Pulp			747	<1	8.4	0.5	8.1	5.2	50.6	187.3	2	21.5	5.8	675.0	94.0	10	2.6	189.8	71.6	780.1	1387.6	139.00
REE 280	Rock Pulp			870	<1	4.0	0.6	8.7	4.2	34.2	205.6	1	20.8	4.2	232.6	42.9	10	1.9	162.7	32.1	310.8	553.8	54.56
REE 281	Rock Pulp			578	<1	38.9	0.8	6.6	5.9	53.3	151.2	1	28.9	7.5	614.8	75.8	30	3.7	220.3	66.4	832.6	1473.3	152.19
REE 282	Rock Pulp			286	<1	8.3	<0.1	2.5	1.8	37.5	62.2	<1	11.3	4.3	449.3	222.1	11	2.0	61.4	58.9	414.7	761.4	77.26
REE 283	Rock Pulp			735	<1	9.7	0.7	8.3	4.3	58.1	164.9	2	29.3	7.0	398.7	59.0	33	11.9	158.1	50.0	557.5	962.0	95.61

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Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 2 of 5

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

VAN19001087.1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.06	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 254	Rock Pulp	298.9	42.23	2.38	28.50	2.69	10.88	1.50	3.80	0.46	2.74	0.41
REE 255	Rock Pulp	185.5	26.17	1.48	16.16	1.75	7.35	1.15	2.72	0.33	2.10	0.27
REE 256	Rock Pulp	277.3	39.18	2.02	24.40	2.74	12.43	1.93	4.41	0.57	3.39	0.44
REE 257	Rock Pulp	597.4	83.93	4.48	52.17	5.85	23.62	3.38	8.09	0.99	5.76	0.71
REE 258	Rock Pulp	507.0	72.97	3.66	45.50	4.75	19.98	2.66	6.15	0.80	4.64	0.60
REE 259	Rock Pulp	269.2	37.60	1.94	24.21	2.68	12.19	1.79	4.28	0.58	3.28	0.46
REE 260	Rock Pulp	214.3	29.42	1.50	18.18	1.92	8.34	1.17	2.83	0.35	2.07	0.28
REE 261	Rock Pulp	194.8	27.45	1.39	16.34	1.80	7.88	1.11	2.72	0.35	2.17	0.30
REE 262	Rock Pulp	202.8	28.42	1.30	18.20	2.12	9.64	1.47	3.83	0.50	2.84	0.44
REE 263	Rock Pulp	658.4	91.95	3.82	56.78	5.84	23.72	3.34	7.84	0.97	5.79	0.73
REE 264	Rock Pulp	788.1	114.52	4.92	73.24	8.18	34.29	4.82	10.94	1.39	8.38	1.02
REE 265	Rock Pulp	426.2	60.98	2.80	38.23	4.27	18.28	2.71	6.27	0.84	4.89	0.64
REE 266	Rock Pulp	363.9	52.99	2.25	33.88	3.67	15.92	2.36	5.84	0.71	4.24	0.55
REE 267	Rock Pulp	225.4	31.90	1.58	21.40	2.47	10.65	1.69	3.97	0.49	2.87	0.40
REE 268	Rock Pulp	432.8	83.87	3.07	43.49	5.33	25.43	4.02	9.95	1.27	7.29	0.90
REE 269	Rock Pulp	1278.5	190.29	8.22	121.99	14.65	66.68	10.41	24.90	3.15	18.81	2.21
REE 270	Rock Pulp	380.0	55.58	2.23	34.81	3.94	18.30	2.54	5.89	0.74	4.41	0.59
REE 271	Rock Pulp	223.3	31.19	1.40	19.89	2.41	10.59	1.66	3.98	0.53	3.27	0.44
REE 272	Rock Pulp	372.0	52.81	2.02	32.62	3.51	14.53	2.11	5.06	0.59	3.61	0.47
REE 273	Rock Pulp	560.2	79.78	3.63	49.82	5.26	21.81	3.11	8.87	0.87	5.24	0.67
REE 274	Rock Pulp	597.3	84.49	3.57	52.47	5.75	24.12	3.49	8.15	1.00	6.09	0.75
REE 275	Rock Pulp	789.4	110.31	4.81	70.85	8.00	34.32	5.02	11.79	1.41	8.68	1.04
REE 276	Rock Pulp	953.6	135.61	6.55	86.24	9.29	38.15	5.27	11.64	1.44	8.60	1.05
REE 277	Rock Pulp	176.6	24.85	1.16	14.72	1.59	6.69	0.88	2.06	0.27	1.74	0.23
REE 278	Rock Pulp	668.8	94.92	4.83	61.22	6.59	28.21	4.08	9.33	1.10	6.98	0.86
REE 279	Rock Pulp	437.5	63.80	3.44	39.63	4.51	18.84	2.79	6.06	0.74	4.51	0.56
REE 280	Rock Pulp	170.7	24.17	1.17	15.06	1.76	7.58	1.10	2.74	0.34	2.21	0.30
REE 281	Rock Pulp	487.3	89.64	4.56	43.74	4.70	18.92	2.81	5.92	0.76	4.52	0.57
REE 282	Rock Pulp	249.6	37.23	2.78	24.49	3.24	15.80	2.54	6.16	0.79	4.81	0.57
REE 283	Rock Pulp	296.8	42.75	2.19	27.03	3.01	12.10	1.79	4.53	0.57	3.45	0.46

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**BUREAU VERITAS** MINERAL LABORATORIES

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 3 of 5

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN19001087-1

Method	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
Analyte	Ba	Be	Co	Ca	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	1	1	0.2	0.1	0.5	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	
REE 284	Rock Pulp	700	<1	3.2	0.8	4.8	4.7	24.1	172.5	1	21.4	3.0	262.5	48.8	11	9.5	169.4	31.5	302.7	545.0	53.78
REE 285	Rock Pulp	439	<1	4.4	0.4	4.1	3.6	51.9	101.2	1	25.5	6.2	553.8	81.2	21	2.6	124.8	60.7	661.4	1201.7	119.46
REE 286	Rock Pulp	627	2	4.2	0.7	10.6	5.8	42.7	197.0	2	21.8	4.8	344.5	87.3	18	0.7	206.4	45.2	410.7	713.5	68.72
REE 287	Rock Pulp	554	3	31.4	0.9	9.0	6.9	60.1	159.2	3	24.2	7.8	1027.7	446.5	20	1.1	249.8	136.2	1119.9	1991.1	200.08
REE 288	Rock Pulp	250	2	65.5	0.8	8.1	5.0	46.1	129.6	3	15.5	6.1	1092.7	638.0	12	1.2	176.5	138.4	1179.0	2092.1	211.33
REE 289	Rock Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
REE 290	Rock Pulp	271	3	52.0	1.3	7.5	6.6	142.9	148.5	4	18.9	18.1	1892.5	478.0	20	2.3	222.5	191.9	2082.6	3717.5	378.28
REE 291	Rock Pulp	305	<1	25.7	1.5	18.8	8.1	130.0	172.2	5	25.2	14.5	1648.7	408.2	28	2.0	283.2	160.9	1759.9	3235.2	328.80
REE 292	Rock Pulp	650	2	3.0	0.6	11.0	5.4	58.6	183.6	2	21.9	6.8	464.2	101.4	21	3.8	198.2	54.0	546.7	960.6	96.73
REE 293	Rock Pulp	698	<1	6.9	0.8	9.1	4.4	36.6	170.8	2	21.9	4.5	342.9	87.8	10	1.2	180.5	40.8	402.5	726.7	72.95
REE 294	Rock Pulp	629	<1	6.7	0.6	8.0	4.4	59.0	155.8	2	21.6	7.1	694.1	116.2	13	1.3	180.4	76.6	834.5	1494.2	149.77
REE 295	Rock Pulp	325	<1	38.3	1.4	13.6	4.4	59.6	172.0	3	16.9	7.3	921.9	346.7	11	1.3	187.6	101.7	982.8	1757.6	179.70
REE 296	Rock Pulp	597	<1	8.2	0.6	9.0	4.9	61.3	152.3	2	19.6	7.6	676.2	115.5	16	1.5	182.3	75.8	804.5	1426.7	143.93
REE 297	Rock Pulp	552	2	4.9	0.4	5.3	5.3	51.6	140.8	2	19.7	6.3	734.7	128.6	18	7.5	177.2	79.7	910.8	1577.0	157.42
REE 298	Rock Pulp	443	3	15.2	1.1	13.1	5.6	37.0	172.8	3	19.1	4.2	390.4	83.9	<8	0.6	197.1	41.3	441.4	812.4	79.15
REE 299	Rock Pulp	831	1	4.7	1.0	13.7	6.8	36.2	238.0	4	22.0	4.4	358.3	65.9	<8	1.2	228.2	33.6	316.7	578.7	58.24
REE 300	Rock Pulp	897	<1	2.1	1.1	13.5	7.5	38.2	256.3	4	23.8	4.4	296.0	54.7	<8	1.4	257.8	29.8	284.9	530.9	53.59
REE 301	Rock Pulp	644	2	12.6	0.6	7.7	4.2	51.4	153.4	2	23.1	7.4	823.2	139.9	<8	1.8	144.2	94.1	956.9	1705.2	174.88
REE 302	Rock Pulp	490	4	29.1	0.7	10.4	4.1	66.5	166.2	4	26.0	9.7	1312.7	2167.6	<8	2.0	140.5	250.2	1179.6	2110.1	221.19
REE 303	Rock Pulp	805	<1	5.1	0.6	10.5	5.1	46.0	204.1	2	23.4	5.3	357.0	55.0	19	1.1	178.4	40.7	432.0	774.0	77.40
REE 304	Rock Pulp	683	<1	14.3	1.0	7.8	7.9	55.8	137.6	3	23.5	7.1	860.5	352.8	<8	2.0	281.5	114.3	892.2	1624.1	167.73
REE 305	Rock Pulp	469	<1	22.5	1.6	12.4	5.4	72.1	169.0	3	23.6	9.1	1441.6	526.2	<8	1.1	193.4	166.8	1468.7	2698.5	273.95
REE 306	Rock Pulp	888	1	5.6	0.8	6.4	3.3	37.6	172.8	1	26.3	4.8	323.4	80.4	<8	1.0	118.9	40.8	383.6	678.7	68.58
REE 307	Rock Pulp	641	2	8.3	1.2	9.4	4.6	31.5	134.3	1	25.6	3.9	431.0	81.8	<8	0.9	162.1	51.9	486.8	859.7	86.31
REE 308	Rock Pulp	406	2	6.7	1.5	13.9	6.3	51.2	184.0	3	16.9	6.3	746.1	203.2	<8	1.1	213.1	79.9	732.9	1314.7	134.46
REE 309	Rock Pulp	188	3	8.5	0.2	3.5	3.4	32.0	38.7	<1	18.9	3.6	645.7	153.8	<8	0.9	130.0	80.1	360.7	666.0	67.60
REE 310	Rock Pulp	518	1	12.6	0.7	7.4	6.4	86.9	122.3	3	45.3	9.4	1395.2	498.9	<8	1.9	224.6	160.5	1833.7	3310.1	337.94
REE 311	Rock Pulp	707	<1	12.6	2.0	8.1	2.9	65.4	103.3	1	30.0	4.9	353.1	62.0	<8	0.6	94.1	32.7	392.3	679.6	66.59
REE 312	Rock Pulp	308	<1	21.3	1.3	10.7	5.2	59.1	146.3	3	15.9	7.6	1004.7	297.1	<8	1.2	193.1	93.7	995.4	1768.0	182.23
REE 313	Rock Pulp	382	<1	7.1	1.6	12.0	6.2	48.8	173.4	3	14.0	5.4	403.3	101.1	<8	2.2	222.4	42.5	403.2	727.6	73.01

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

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Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

VAN19001087.1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 284	Rock Pulp	172.6	23.81	1.30	14.79	1.65	7.36	1.15	2.60	0.32	2.04	0.28
REE 285	Rock Pulp	375.4	53.01	2.95	31.40	3.47	14.67	2.12	4.72	0.61	3.77	0.51
REE 286	Rock Pulp	216.2	30.54	1.30	19.35	2.27	10.10	1.58	3.79	0.51	3.09	0.44
REE 287	Rock Pulp	640.4	94.14	5.24	63.26	7.43	34.00	5.28	12.39	1.52	8.80	1.10
REE 288	Rock Pulp	686.1	101.13	6.12	65.70	7.99	37.86	5.92	13.74	1.85	11.10	1.32
REE 289	Rock Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
REE 290	Rock Pulp	1230.6	174.68	8.59	111.09	12.18	51.92	7.51	17.82	2.14	12.68	1.53
REE 291	Rock Pulp	1031.4	150.09	7.03	95.27	10.51	44.59	6.34	14.28	1.75	10.14	1.28
REE 292	Rock Pulp	310.3	42.83	1.87	26.63	2.97	12.61	1.91	4.87	0.60	3.73	0.48
REE 293	Rock Pulp	223.8	31.83	1.47	20.71	2.33	9.84	1.49	3.51	0.45	2.62	0.36
REE 294	Rock Pulp	460.0	66.41	2.87	41.44	4.73	19.75	2.87	6.58	0.81	4.60	0.59
REE 295	Rock Pulp	577.3	83.79	3.75	53.52	6.34	27.24	4.19	9.46	1.17	6.60	0.83
REE 296	Rock Pulp	448.7	65.74	2.80	42.07	4.68	19.38	2.77	6.64	0.83	4.77	0.62
REE 297	Rock Pulp	494.3	70.26	2.93	43.75	5.01	20.62	2.93	6.72	0.83	4.78	0.63
REE 298	Rock Pulp	252.5	36.27	1.87	21.59	2.52	10.05	1.51	3.57	0.43	2.81	0.36
REE 299	Rock Pulp	181.8	26.29	1.53	16.64	1.95	8.28	1.31	3.19	0.43	2.43	0.35
REE 300	Rock Pulp	169.5	24.19	1.63	15.26	1.72	7.62	1.15	2.73	0.37	2.02	0.27
REE 301	Rock Pulp	547.8	80.04	3.58	50.50	5.73	23.47	3.48	7.92	0.95	5.59	0.73
REE 302	Rock Pulp	708.7	115.90	5.54	83.71	12.13	62.07	10.80	28.38	3.62	20.82	2.44
REE 303	Rock Pulp	244.3	34.49	1.42	21.28	2.29	9.69	1.34	3.47	0.43	2.84	0.32
REE 304	Rock Pulp	525.5	80.27	5.10	50.88	6.10	27.85	4.30	10.30	1.26	7.33	0.93
REE 305	Rock Pulp	673.9	126.28	5.97	79.84	9.25	40.80	6.13	14.41	1.74	10.11	1.24
REE 306	Rock Pulp	216.2	30.55	1.34	18.68	2.27	9.66	1.50	3.69	0.48	2.88	0.39
REE 307	Rock Pulp	269.1	39.12	2.10	25.46	2.97	12.77	1.84	4.33	0.54	3.09	0.39
REE 308	Rock Pulp	419.0	60.58	2.88	38.50	4.58	19.55	3.04	7.01	0.86	5.16	0.69
REE 309	Rock Pulp	212.8	34.55	2.76	24.43	3.37	16.50	2.94	7.38	0.85	4.71	0.55
REE 310	Rock Pulp	1054.0	159.82	9.75	95.42	10.47	42.04	5.77	13.80	1.74	10.65	1.26
REE 311	Rock Pulp	215.7	51.53	6.87	26.90	2.38	8.68	1.08	2.64	0.36	2.20	0.29
REE 312	Rock Pulp	577.0	82.86	3.86	50.47	5.74	24.33	3.66	8.60	1.04	6.18	0.73
REE 313	Rock Pulp	233.6	32.97	1.63	20.79	2.37	10.03	1.59	3.65	0.48	3.05	0.39

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 4 of 5

Part: 1 of 2

**CERTIFICATE OF ANALYSIS**

VAN19001087-1

Method	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	
Analyte	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	1	0.2	0.1	0.5	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	
REE 314	Rock Pulp	348	2	12.2	1.9	11.8	7.1	66.6	164.7	3	14.9	7.9	1161.5	337.5	<8	0.9	253.7	145.3	1179.7	2123.6	218.42
REE 315	Rock Pulp	403	<1	16.8	1.0	11.0	5.5	44.2	163.1	3	18.9	5.7	845.1	178.6	<8	0.9	192.6	73.6	878.7	1554.2	159.07
REE 316	Rock Pulp	333	3	28.2	1.7	12.3	6.6	73.1	169.9	4	16.1	9.4	1575.6	574.8	<8	1.4	252.5	209.6	1650.8	3055.1	310.77
REE 317	Rock Pulp	749	<1	9.8	0.5	8.4	4.9	39.5	157.9	2	23.4	4.8	495.4	84.5	<8	4.3	175.4	61.1	559.9	1017.1	102.13
REE 318	Rock Pulp	826	<1	15.1	0.6	11.0	4.5	34.8	178.2	1	24.4	4.3	426.0	83.2	<8	1.9	154.3	51.1	502.1	880.4	89.14
REE 319	Rock Pulp	473	2	17.2	1.6	10.4	6.5	92.1	163.8	3	26.0	11.4	1401.4	358.3	<8	1.8	234.8	150.3	1555.5	2743.4	284.59
REE 320	Rock Pulp	782	<1	17.1	0.7	11.2	6.3	51.9	178.9	2	24.2	6.2	547.4	100.4	<8	2.0	229.9	60.6	654.2	1175.0	117.58
REE 321	Rock Pulp	850	2	5.9	0.8	10.5	4.9	30.4	164.2	1	23.3	3.7	263.1	48.4	<8	1.6	170.7	32.6	369.0	663.1	67.06
REE 322	Rock Pulp	821	<1	12.6	0.6	9.7	4.6	43.0	177.3	2	26.7	5.0	477.9	96.0	<8	1.6	166.3	53.9	601.0	1060.5	107.27
REE 323	Rock Pulp	414	<1	6.4	0.7	12.7	3.3	25.7	165.3	1	15.4	3.0	359.4	107.2	<8	0.6	117.6	36.1	360.8	690.8	68.49
REE 324	Rock Pulp	659	<1	20.6	0.4	4.9	4.2	59.2	140.0	1	24.1	7.6	878.2	114.6	<8	4.1	147.7	86.0	1135.0	2008.2	205.21
REE 325	Rock Pulp	973	<1	14.5	0.9	13.5	6.4	43.0	226.8	3	33.1	4.7	262.7	52.3	31	2.6	236.1	43.8	336.2	596.2	57.19
REE 326	Rock Pulp	465	5	9.3	0.6	13.0	3.9	41.3	173.9	2	19.0	5.5	630.6	143.2	<8	1.0	135.6	61.4	635.9	1168.2	116.86
REE 327	Rock Pulp	320	<1	22.2	0.5	11.6	4.3	75.2	138.8	2	19.7	9.7	1158.6	318.4	38	1.9	156.1	110.1	1286.0	2293.2	235.85
REE 328	Rock Pulp	357	<1	42.5	1.2	7.3	6.6	81.4	137.3	3	26.5	9.6	746.4	204.4	15	0.8	240.6	78.3	889.8	1644.4	155.04
REE 329	Rock Pulp	287	1	13.2	0.9	7.6	5.8	64.6	121.1	2	20.9	7.8	651.4	150.2	26	1.9	205.9	64.9	754.3	1327.6	134.41
REE 330	Rock Pulp	355	2	10.2	1.0	11.0	11.8	89.5	165.1	3	20.1	11.2	600.8	116.9	28	2.5	429.2	72.9	691.4	1239.3	124.66
REE 331	Rock Pulp	342	4	5.5	1.4	10.0	11.6	67.0	169.6	3	17.8	7.9	443.8	83.3	26	1.1	413.7	55.9	500.4	997.0	89.13
REE 332	Rock Pulp	326	3	10.6	1.1	10.4	9.5	97.8	161.0	4	20.5	12.1	963.7	226.4	27	2.6	351.2	111.5	1064.2	1922.4	195.92
REE 333	Rock Pulp	262	2	23.5	1.0	8.6	10.3	169.6	136.0	5	24.2	20.9	2437.2	674.7	29	2.2	366.1	258.2	2627.1	4781.8	482.06
REE 334	Rock Pulp	294	4	10.1	0.8	10.5	6.2	40.1	147.8	3	16.5	4.8	401.1	116.6	22	2.8	209.6	45.9	429.2	747.6	74.47
REE 335	Rock Pulp	315	<1	7.5	0.7	9.9	7.6	55.3	154.5	3	16.8	6.7	470.3	112.2	20	1.5	271.8	54.4	533.5	945.2	94.77
REE 336	Rock Pulp	325	<1	9.9	0.8	8.8	4.7	43.0	147.7	2	17.0	5.2	366.1	79.6	17	1.1	161.9	41.5	409.6	740.6	72.83
REE 337	Rock Pulp	266	2	16.9	0.8	9.2	7.2	73.3	140.9	3	14.1	8.6	539.6	123.8	22	1.4	254.6	68.0	653.7	1152.5	115.87
REE 338	Rock Pulp	291	5	8.9	0.8	12.6	5.5	42.8	163.0	3	14.7	5.3	312.3	78.1	20	1.0	189.1	40.6	355.2	636.1	63.28
REE 339	Rock Pulp	284	2	40.7	0.8	7.6	4.9	67.7	119.5	2	17.9	8.2	577.7	122.3	28	1.9	178.1	64.8	748.0	1309.9	131.71
REE 340	Rock Pulp	354	1	20.0	1.3	10.1	5.0	65.6	156.7	3	16.6	7.8	936.8	224.1	19	1.8	175.9	93.6	995.0	1720.2	176.10
REE 341	Rock Pulp	832	2	10.9	0.5	9.5	3.9	23.3	193.1	1	21.9	2.8	140.3	21.8	17	2.0	137.9	35.8	177.8	304.8	30.27
REE 342	Rock Pulp	535	<1	22.2	0.4	5.4	8.8	53.6	123.6	<1	24.0	5.9	404.7	71.5	22	4.4	318.0	41.7	447.4	782.2	79.68
REE 343	Rock Pulp	764	5	16.9	0.9	15.7	7.9	24.6	237.4	3	26.1	2.6	152.8	31.3	27	1.9	284.6	24.6	166.4	269.3	28.70

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**BUREAU VERITAS** MINERAL LABORATORIES

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 4 of 5

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

VAN19001087.1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.06	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 314	Rock Pulp	698.0	103.15	5.96	66.56	7.64	34.37	5.31	12.78	1.80	9.35	1.11
REE 315	Rock Pulp	500.6	72.11	3.98	43.13	4.73	20.02	2.89	6.39	0.80	4.67	0.61
REE 316	Rock Pulp	879.5	148.44	7.81	96.12	11.29	51.03	8.19	19.11	2.31	13.15	1.82
REE 317	Rock Pulp	315.5	45.06	2.72	29.54	3.47	15.40	2.34	6.72	0.70	4.03	0.51
REE 318	Rock Pulp	280.1	41.70	2.31	26.10	2.98	12.97	1.91	4.48	0.55	3.43	0.40
REE 319	Rock Pulp	907.3	129.85	6.32	80.97	9.05	38.80	5.87	12.94	1.57	8.84	1.09
REE 320	Rock Pulp	373.0	52.75	3.02	33.58	3.89	15.41	2.29	5.39	0.65	3.99	0.52
REE 321	Rock Pulp	205.3	29.58	1.79	17.35	2.01	8.39	1.28	2.75	0.35	2.13	0.26
REE 322	Rock Pulp	341.4	48.47	2.65	30.61	3.33	14.35	2.13	4.78	0.63	3.62	0.43
REE 323	Rock Pulp	215.4	31.30	1.36	19.07	2.22	9.57	1.43	3.35	0.44	2.60	0.33
REE 324	Rock Pulp	647.9	93.01	4.75	55.34	6.16	25.39	3.58	7.83	0.93	5.68	0.65
REE 325	Rock Pulp	181.0	26.72	1.81	17.61	2.12	9.42	1.51	4.00	0.51	3.10	0.41
REE 326	Rock Pulp	372.3	54.37	2.28	35.06	3.80	15.88	2.45	5.68	0.66	4.05	0.49
REE 327	Rock Pulp	744.9	107.82	4.59	72.41	7.28	30.66	4.47	10.17	1.27	7.18	0.90
REE 328	Rock Pulp	498.2	69.37	4.14	42.77	4.82	20.53	3.03	7.12	0.96	5.83	0.74
REE 329	Rock Pulp	433.5	60.69	3.54	38.20	4.06	17.01	2.48	5.80	0.71	4.43	0.55
REE 330	Rock Pulp	398.8	55.70	2.77	36.78	4.03	17.61	2.65	6.69	0.81	5.27	0.68
REE 331	Rock Pulp	283.6	38.46	1.91	26.27	2.92	13.07	2.00	5.11	0.65	3.98	0.55
REE 332	Rock Pulp	832.9	89.76	4.58	57.40	6.21	26.80	3.98	9.97	1.25	7.25	0.95
REE 333	Rock Pulp	1539.1	222.08	12.61	143.59	15.42	67.39	9.68	23.72	2.87	17.11	2.13
REE 334	Rock Pulp	239.4	33.74	1.95	21.87	2.46	11.51	1.72	4.63	0.59	3.59	0.47
REE 335	Rock Pulp	299.8	41.86	2.32	28.42	2.98	12.79	2.05	4.96	0.63	3.81	0.51
REE 336	Rock Pulp	232.4	32.37	1.84	20.62	2.32	10.35	1.59	3.87	0.49	3.08	0.43
REE 337	Rock Pulp	369.1	51.59	2.78	34.39	3.69	16.28	2.42	6.03	0.81	4.82	0.65
REE 338	Rock Pulp	201.3	29.40	1.47	19.28	2.14	9.45	1.50	3.74	0.46	3.15	0.41
REE 339	Rock Pulp	423.9	59.94	3.46	37.99	4.05	16.88	2.39	5.68	0.71	4.28	0.57
REE 340	Rock Pulp	567.6	80.78	4.41	53.30	5.83	24.32	3.54	8.59	1.03	6.18	0.80
REE 341	Rock Pulp	94.8	14.02	0.88	9.63	1.29	6.57	1.21	3.05	0.40	2.26	0.32
REE 342	Rock Pulp	254.0	36.59	2.29	23.66	2.53	10.91	1.57	3.92	0.45	2.87	0.39
REE 343	Rock Pulp	92.2	13.40	0.94	6.76	1.09	5.05	0.88	2.36	0.29	2.00	0.31

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**BUREAU VERITAS** MINERAL LABORATORIES

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 5 of 5

Part: 1 of 2

**CERTIFICATE OF ANALYSIS**

**VAN19001057.1**

Method	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	
Analyte	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.6	0.1	0.1	0.1	0.1	0.02	
REE 344	Rock Pulp	350	1	48.9	1.4	12.5	6.0	53.9	165.8	5	15.5	6.9	906.8	273.1	27	1.5	216.6	97.2	955.1	1697.6	174.28
REE 345	Rock Pulp	623	2	33.2	0.5	4.6	5.5	82.0	137.1	2	44.2	11.0	1735.1	413.2	25	3.6	199.2	154.9	1886.4	3172.2	324.91
REE 346	Rock Pulp	1151	<1	5.6	0.7	5.1	3.5	43.0	209.9	2	26.6	5.6	422.9	86.7	16	1.3	133.8	48.6	463.3	833.8	83.87
REE 347	Rock Pulp	650	<1	44.0	0.8	8.5	9.7	112.2	155.4	2	35.8	14.5	1635.6	263.9	22	2.0	343.9	144.9	1782.6	3209.3	326.70
REE 348	Rock Pulp	702	<1	11.7	0.7	8.1	6.9	68.1	169.0	2	26.0	8.6	778.5	129.1	29	2.0	255.9	77.3	924.2	1623.8	165.85
REE 349	Rock Pulp	784	1	39.2	0.7	9.2	5.5	81.4	163.7	3	25.9	9.2	832.2	262.0	14	1.5	197.1	101.2	1000.1	1774.1	180.49
REE 350	Rock Pulp	307	7	77.1	0.3	1.3	6.3	102.2	79.4	5	39.5	15.2	4869.3	3030.3	20	3.8	237.1	520.0	4941.6	9552.5	691.26
REE 351	Rock Pulp	815	1	16.0	0.5	7.5	5.1	31.3	190.0	<1	23.7	4.1	369.8	60.4	10	3.4	183.6	40.4	351.2	596.8	59.57
REE 352	Rock Pulp	241	<1	10.9	1.5	11.3	6.9	79.8	172.6	4	10.5	9.3	829.0	193.5	21	1.5	230.5	86.6	890.3	1581.8	160.88
REE 353	Rock Pulp	509	<1	7.4	1.8	11.8	11.5	76.7	188.9	4	17.7	8.7	599.5	130.8	20	1.1	416.4	66.3	617.9	1098.2	110.50
REE 354	Rock Pulp	484	<1	6.9	1.7	12.2	8.1	52.6	199.4	3	15.5	8.2	499.2	131.6	16	0.8	281.6	54.5	486.3	876.1	88.57
REE 355	Rock Pulp	388	<1	9.7	1.1	8.3	3.0	28.0	136.6	2	23.5	3.4	381.0	93.1	14	1.3	105.5	38.7	404.4	720.6	72.93
REE 356	Rock Pulp	521	2	10.4	1.5	18.6	4.3	12.5	201.0	2	21.6	1.3	78.6	17.6	24	<0.5	162.3	13.7	98.3	169.9	16.84
REE 357	Rock Pulp	415	4	10.5	2.6	20.6	6.8	81.4	285.2	5	12.8	10.5	793.5	258.4	33	2.4	241.5	87.5	697.7	1265.4	130.53
REE 358	Rock Pulp	644	<1	6.5	0.7	4.5	4.8	58.2	152.2	2	28.1	7.2	1167.3	267.5	11	1.4	167.4	110.6	1402.0	2453.1	245.53
REE 359	Rock Pulp	770	<1	9.6	0.8	5.2	6.8	48.3	137.1	<1	32.9	5.4	816.8	143.2	18	2.3	234.8	87.8	941.7	1651.4	170.15
REE 360	Rock Pulp	69	6	1.8	0.9	29.0	22.5	33.7	119.8	2	88.2	0.7	680.1	807.2	10	0.8	740.0	125.8	319.8	661.9	70.21
REE 361	Rock Pulp	834	8	24.2	4.3	22.3	3.0	29.9	200.3	4	433.4	2.3	38.7	14.3	67	0.9	97.1	187.7	747.1	956.8	79.09
REE 362	Rock Pulp	645	<1	14.5	0.6	5.2	6.8	90.0	150.0	2	23.0	11.0	875.3	144.4	19	2.0	242.8	78.9	1026.0	1810.1	185.23
REE 363	Rock Pulp	684	<1	23.2	0.6	8.8	6.3	54.5	170.5	2	20.2	5.8	464.8	75.1	22	5.3	211.8	47.4	383.8	709.2	69.38
REE 364	Rock Pulp	838	<1	4.3	0.3	3.4	4.6	49.4	162.9	<1	30.4	5.4	343.4	57.3	15	1.6	167.0	39.6	580.2	1081.6	112.37
REE 365	Rock Pulp	858	1	5.0	0.4	4.1	10.0	94.2	167.0	<1	35.8	11.1	826.1	143.6	9	3.2	344.5	67.7	779.0	1421.0	149.69
REE 366	Rock Pulp	346	<1	7.0	5.7	3.3	<0.1	11.8	117.6	<1	3708.3	<0.1	1.1	0.7	10	<0.5	2.0	243.9	354.5	744.7	82.62
REE 367	Rock Pulp	223	<1	<0.2	<0.1	<0.5	<0.1	<0.1	0.7	<1	4449.5	<0.1	1.4	2.0	<8	0.8	0.6	269.6	401.6	820.1	92.26

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**BUREAU VERITAS** MINERAL LABORATORIES

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Skead Holdings Ltd.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 28, 2019

Page: 5 of 5

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

**VAN 19001087.1**

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 344	Rock Pulp	555.6	80.07	4.41	51.43	5.97	24.59	3.71	8.65	1.06	5.95	0.76
REE 345	Rock Pulp	1033.9	147.52	6.69	94.22	10.25	42.55	6.12	14.08	1.72	10.04	1.23
REE 346	Rock Pulp	264.7	39.17	1.76	25.38	2.90	12.23	1.84	4.51	0.51	3.27	0.41
REE 347	Rock Pulp	1034.3	149.99	9.79	98.65	10.41	41.95	5.80	12.58	1.49	8.66	1.05
REE 348	Rock Pulp	527.1	76.56	4.96	48.45	5.28	22.09	2.86	6.80	0.79	5.05	0.62
REE 349	Rock Pulp	570.0	84.80	4.00	54.86	8.20	26.75	3.96	9.38	1.13	6.72	0.81
REE 350	Rock Pulp	2883.9	432.42	20.78	289.75	35.24	157.06	23.44	54.63	7.15	40.67	4.64
REE 351	Rock Pulp	190.1	27.79	1.72	17.96	2.14	9.50	1.46	3.78	0.49	2.83	0.36
REE 352	Rock Pulp	511.5	73.95	3.52	50.72	5.51	22.91	3.47	8.45	1.02	6.10	0.80
REE 353	Rock Pulp	344.9	49.83	2.22	33.42	3.82	16.53	2.50	6.49	0.83	4.96	0.68
REE 354	Rock Pulp	262.3	42.15	2.11	27.53	3.11	13.90	2.12	5.11	0.65	4.20	0.57
REE 355	Rock Pulp	228.7	32.85	1.83	21.20	2.47	10.45	1.47	3.56	0.45	2.59	0.35
REE 356	Rock Pulp	53.0	7.73	0.53	5.15	0.60	2.83	0.51	1.27	0.17	1.12	0.17
REE 357	Rock Pulp	407.8	60.25	3.24	41.35	5.15	23.00	3.77	9.34	1.18	6.96	0.89
REE 358	Rock Pulp	782.8	111.27	4.07	69.21	7.50	30.75	4.31	9.54	1.17	7.06	0.86
REE 359	Rock Pulp	529.5	77.39	3.06	50.62	5.70	23.34	3.45	8.08	0.92	5.41	0.70
REE 360	Rock Pulp	224.0	36.74	1.20	29.99	4.48	24.87	5.21	15.33	2.09	11.71	1.51
REE 361	Rock Pulp	222.5	26.01	3.46	22.48	3.53	22.54	5.17	16.59	2.64	17.15	2.38
REE 362	Rock Pulp	584.1	83.62	4.68	52.27	5.52	20.80	2.96	6.80	0.81	4.86	0.64
REE 363	Rock Pulp	219.6	32.24	1.91	21.83	2.67	12.15	1.94	4.48	0.57	3.14	0.41
REE 364	Rock Pulp	359.8	50.27	4.10	26.19	2.94	11.49	1.51	3.36	0.47	2.70	0.35
REE 365	Rock Pulp	477.1	67.32	5.30	40.81	4.36	18.20	2.61	5.85	0.78	4.81	0.63
REE 366	Rock Pulp	292.4	47.53	9.22	41.65	6.58	40.38	9.30	30.34	4.53	30.50	4.21
REE 367	Rock Pulp	326.0	52.64	10.36	47.59	7.40	46.42	10.51	34.69	5.18	34.29	4.73

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**BUREAU VERITAS** MINERAL LABORATORIES

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

**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: April 30, 2019  
Report Date: May 13, 2019  
Page: 1 of 2

**CERTIFICATE OF ANALYSIS**

**VAN19000956-1**

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 15

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
SLBHP	15	Sorting, labeling and boxing samples received as pulps			VAN
LF302	15	LiBO2/Li2B4O7 fusion ICP-ES analysis	0.2	Completed	VAN

**SAMPLE DISPOSAL**

IMM-PLP Return immediately after analysis

**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

**JEFFREY CANNON**  
Geotechnical Director

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.



**BUREAU VERITAS** MINERAL LABORATORIES

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: May 13, 2019

Page: 2 of 2

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN19000956.1

Method	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300	LF300
Analyte	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O6	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	LOI	Sum	
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	5	20	2	5	3	5	1	-5.1	0.01	
WR411	Rock Pulp	69.23	13.92	3.88	0.99	1.73	3.23	5.32	0.34	0.20	0.07	0.055	1226	<20	369	406	91	40	4	0.7	99.94
WR412	Rock Pulp	66.32	13.86	7.32	0.94	1.49	3.78	4.09	0.61	0.08	0.08	0.041	500	<20	168	1045	79	41	3	1.0	99.87
WR413	Rock Pulp	53.71	7.27	20.68	0.50	10.80	5.42	0.38	0.21	0.01	0.72	0.009	114	<20	230	1974	270	1078	<1	-0.4	99.82
WR414	Rock Pulp	53.98	24.05	6.25	2.05	0.13	0.09	7.95	0.91	0.09	0.03	0.034	860	81	19	162	30	14	25	4.2	99.91
WR415	Rock Pulp	61.78	19.08	4.78	1.66	0.10	1.58	7.07	0.72	0.03	0.01	0.022	1162	32	56	571	21	19	13	2.9	99.93
WR416	Rock Pulp	62.17	18.57	5.46	1.80	0.19	2.62	5.26	0.73	0.09	0.02	0.026	933	35	71	476	21	14	14	2.7	99.92
WR417	Rock Pulp	66.28	17.64	6.20	1.58	0.13	0.08	6.13	0.81	0.10	0.03	0.046	656	78	19	160	23	20	16	2.9	99.90
WR418	Rock Pulp	54.95	23.41	6.78	1.92	0.16	0.09	7.25	0.99	0.13	0.03	0.034	648	106	19	167	33	13	28	4.0	99.88
WR419	Rock Pulp	62.20	6.22	1.46	0.11	0.04	0.07	5.25	0.92	0.20	<0.01	0.029	842	<20	25	262	79	61	3	0.9	99.60
WR420	Rock Pulp	62.18	11.71	10.78	3.86	1.65	2.66	0.28	1.39	0.18	0.06	0.026	42	41	84	176	22	13	22	5.0	99.88
WR421	Rock Pulp	54.34	22.56	7.84	2.09	0.17	0.07	7.27	0.98	0.14	0.04	0.033	702	118	20	163	36	11	29	4.2	99.90
WR422	Rock Pulp	52.98	21.68	10.38	2.69	0.21	0.07	6.00	1.15	0.16	0.06	0.032	624	94	19	177	36	13	31	4.4	99.88
WR423	Rock Pulp	54.24	22.85	7.82	2.11	0.16	0.06	7.04	0.97	0.13	0.04	0.033	704	119	20	165	37	16	29	4.3	99.88
WR424	Rock Pulp	56.97	22.34	6.02	2.39	0.19	0.46	6.31	0.90	0.10	0.03	0.035	634	81	33	162	28	15	25	4.0	99.87
WR425	Rock Pulp	38.34	13.04	11.22	9.02	7.28	5.34	0.22	0.80	0.37	0.11	0.066	115	157	482	134	21	<5	24	14.0	99.90

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: May 13, 2019

Page: 2 of 2

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

VAN19080956.1

Method	Analyte	TC000	TC000
		TOT/C	TOT/S
Unit		%	%
MDL		0.02	0.02
WR411	Rock Pulp	0.08	<0.02
WR412	Rock Pulp	0.11	0.07
WR413	Rock Pulp	0.05	<0.02
WR414	Rock Pulp	0.08	0.17
WR415	Rock Pulp	0.04	0.11
WR416	Rock Pulp	0.06	0.13
WR417	Rock Pulp	0.06	0.27
WR418	Rock Pulp	0.05	0.57
WR419	Rock Pulp	<0.02	0.68
WR420	Rock Pulp	0.60	1.69
WR421	Rock Pulp	0.06	0.73
WR422	Rock Pulp	0.03	0.74
WR423	Rock Pulp	0.05	0.73
WR424	Rock Pulp	0.11	0.25
WR425	Rock Pulp	3.42	4.32



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**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: October 09, 2018  
Report Date: October 22, 2018  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

**VAN18002811.1**

## CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 23

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	18	Sorting, labeling and boxing samples received as pulps			VAN
AQ115-IGN	18	Ignite samples, acid digest, Au by ICP-MS	15	Completed	VAN

## SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

## 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

**KERRY JAY**  
Geoscientist

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PHONE (604) 253-3158

**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

**Project:** None Given  
**Report Date:** October 22, 2018

**Page:** 2 of 2

**Part:** 1 of 1

**CERTIFICATE OF ANALYSIS**

**VAN18002811.1**

	Method	AQ115
	Analyte	Au
	Unit	ppb
	MDL	0.5
A331	Pulp	15.6
A332	Pulp	11.7
A333	Pulp	11.6
A334	Pulp	8.3
A335	Pulp	1.3
A336	Pulp	1.4
A337	Pulp	2.4
A338	Pulp	1.3
A339	Pulp	2.3
A340	Pulp	18.8
A341	Pulp	<0.5
A342	Pulp	<0.5
A343	Pulp	9.9
A344	Pulp	3.1
A345	Pulp	L.N.R.
A346	Pulp	L.N.R.
A347	Pulp	L.N.R.
A348	Pulp	L.N.R.
A349	Pulp	L.N.R.
A350	Pulp	9.1
A351	Pulp	4.8
A352	Pulp	17.5
A353	Pulp	12.5



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**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: October 15, 2018  
Report Date: October 27, 2018  
Page: 1 of 8

**CERTIFICATE OF ANALYSIS**

**VAN18002871-1**

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 191

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	191	Sorting, labeling and boxing samples received as pulps			VAN
MA200	191	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

**SAMPLE DISPOSAL**

IMM-PLP Return immediately after analysis

**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

KERRY JAY  
Geochem Project Specialist

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CERTIFICATE OF ANALYSIS VAN18002871-1

Table with columns: Method, Analyte, Unit, MDL, and 20 elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La) with corresponding values for each sample ID (IMA2689 to IMA2718).

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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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: October 27, 2018

Page: 2 of 8

Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2689	Rock Pulp	105	4.14	78	0.737	7.96	0.165	0.63	0.6	163.3	60	0.7	14.2	6.1	0.5	1	30	51.2	<0.1	41.7	4.3
IMA2690	Rock Pulp	74	0.27	1295	0.113	5.90	0.071	3.64	0.4	115.6	76	1.7	5.5	8.2	0.7	2	2	13.3	<0.1	121.8	3.1
IMA2691	Rock Pulp	77	0.06	683	0.101	2.82	0.045	3.09	0.4	87.8	676	1.3	28.7	11.1	1.2	1	2	3.2	0.1	112.1	2.5
IMA2692	Rock Pulp	103	0.21	679	0.057	4.42	1.499	2.53	0.3	55.2	26	0.6	2.3	2.7	0.3	<1	2	5.9	<0.1	61.1	1.5
IMA2693	Rock Pulp	95	0.14	1077	0.303	3.77	0.069	3.06	0.8	155.4	434	1.7	20.2	26.5	2.9	<1	2	4.5	<0.1	158.4	4.6
IMA2694	Rock Pulp	59	0.10	615	0.100	2.87	0.040	2.90	0.4	102.8	209	1.1	10.2	8.9	0.8	<1	1	2.5	<0.1	122.4	2.8
IMA2695	Rock Pulp	125	0.07	841	0.142	3.89	0.048	2.86	1.1	147.6	437	1.3	16.7	13.5	1.4	<1	2	2.4	<0.1	113.8	4.0
IMA2696	Rock Pulp	102	1.49	280	0.143	4.58	0.608	1.98	0.8	127.1	158	2.1	11.6	3.9	0.3	2	13	17.3	0.2	130.4	3.6
IMA2697	Rock Pulp	135	0.13	644	0.259	3.28	0.048	3.21	0.5	135.9	956	1.4	37.6	23.1	2.6	<1	2	4.3	0.1	139.7	4.1
IMA2698	Rock Pulp	81	0.13	705	0.095	3.37	0.043	3.32	0.2	106.3	531	1.0	24.7	11.2	1.2	<1	1	2.7	<0.1	133.6	2.7
IMA2699	Rock Pulp	93	0.11	705	0.218	3.59	0.098	3.19	0.9	122.8	916	1.3	37.9	23.9	2.6	<1	2	4.6	<0.1	117.3	3.2
IMA2700	Rock Pulp	48	0.14	623	0.028	2.96	0.039	3.15	0.4	51.3	74	0.4	2.6	2.0	0.2	<1	1	1.4	<0.1	114.2	1.4
IMA2701	Rock Pulp	128	0.09	664	0.153	3.12	0.044	3.66	1.7	118.6	481	1.0	15.8	14.7	1.6	1	2	2.1	0.2	128.4	3.3
IMA2702	Rock Pulp	60	0.15	829	0.194	3.43	0.066	3.44	0.9	137.7	507	1.2	19.3	21.6	2.3	<1	2	3.8	<0.1	138.7	3.9
IMA2703	Rock Pulp	111	<0.01	25	0.008	1.51	0.198	0.33	0.1	25.7	15	0.2	0.9	0.5	<0.1	<1	<1	0.4	<0.1	10.6	0.7
IMA2704	Rock Pulp	88	0.09	677	0.319	3.23	0.106	2.77	1.1	127.6	1839	1.3	69.7	33.2	4.2	2	2	4.9	<0.1	101.0	3.6
IMA2705	Rock Pulp	85	0.07	450	0.136	3.48	1.332	2.58	0.5	117.2	349	0.9	16.6	12.2	1.4	<1	1	2.5	<0.1	91.2	3.2
IMA2706	Rock Pulp	56	0.11	856	0.234	4.21	0.096	3.67	1.3	171.6	1696	2.5	66.9	26.0	3.0	2	3	5.2	0.2	161.3	5.0
IMA2707	Rock Pulp	114	0.12	924	0.142	3.43	0.052	3.02	0.8	109.9	641	1.2	27.0	15.1	1.6	2	1	4.1	<0.1	119.3	2.8
IMA2708	Rock Pulp	45	0.15	1017	0.125	4.87	0.068	3.48	1.1	123.3	400	2.1	17.0	10.6	1.1	1	2	5.9	<0.1	137.6	3.4
IMA2709	Rock Pulp	144	0.15	615	0.115	2.65	0.038	2.64	1.3	112.9	365	0.8	18.6	10.5	1.1	<1	2	1.9	0.1	98.1	3.1
IMA2710	Rock Pulp	103	0.12	632	0.073	2.81	0.037	2.66	0.6	77.6	171	0.6	5.6	6.3	0.6	<1	1	1.7	<0.1	99.6	2.1
IMA2711	Rock Pulp	142	0.15	611	0.073	2.67	0.037	3.08	0.4	74.1	126	1.1	6.0	7.2	0.7	<1	2	2.2	<0.1	120.2	1.9
IMA2712	Rock Pulp	50	0.14	870	0.176	4.43	0.072	3.05	0.7	197.5	485	3.5	22.5	13.8	1.6	1	3	5.9	<0.1	152.5	5.1
IMA2713	Rock Pulp	66	0.10	542	0.234	2.99	0.057	3.21	0.6	103.7	318	2.2	14.1	19.5	2.2	1	2	3.5	<0.1	151.7	3.0
IMA2714	Rock Pulp	85	0.10	601	0.083	3.52	0.051	3.18	0.3	82.4	89	1.9	4.5	5.4	0.6	1	2	3.5	<0.1	161.0	2.3
IMA2715	Rock Pulp	70	0.07	766	0.200	3.40	0.046	2.83	0.8	184.1	1356	1.2	47.3	21.3	2.4	1	2	3.8	0.1	111.2	5.3
IMA2716	Rock Pulp	242	0.05	112	0.084	2.91	0.063	3.52	0.9	100.4	397	0.9	16.1	7.9	0.9	1	2	2.1	3.1	139.8	2.9
IMA2717	Rock Pulp	48	0.04	807	0.101	3.20	0.046	3.03	0.7	106.3	415	0.5	14.6	9.3	1.0	<1	1	1.2	0.2	116.5	3.0
IMA2718	Rock Pulp	119	0.25	787	0.112	3.60	0.046	2.93	0.6	96.2	281	1.1	14.2	10.0	1.0	1	2	3.5	<0.1	126.3	3.1

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

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: October 27, 2016

Page: 2 of 8

Part: 3 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	Analyte	Unit	MA200	MA200	MA200	MA200	MA200
			In	Re	Se	Te	Tl
MDL			ppm	ppm	ppm	ppm	ppm
			0.05	0.005	1	0.5	0.5
IMA2689	Rock Pulp		0.07	<0.005	<1	<0.5	<0.5
IMA2690	Rock Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2691	Rock Pulp		<0.05	<0.005	1	<0.5	0.8
IMA2692	Rock Pulp		<0.05	<0.005	<1	<0.5	0.5
IMA2693	Rock Pulp		<0.05	<0.005	<1	<0.5	1.2
IMA2694	Rock Pulp		<0.05	<0.005	<1	<0.5	0.7
IMA2695	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2696	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2697	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2698	Rock Pulp		<0.05	<0.005	<1	<0.5	0.9
IMA2699	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2700	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2701	Rock Pulp		<0.05	<0.005	<1	<0.5	0.7
IMA2702	Rock Pulp		<0.05	<0.005	1	<0.5	0.8
IMA2703	Rock Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA2704	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2705	Rock Pulp		<0.05	<0.005	<1	<0.5	<0.5
IMA2706	Rock Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2707	Rock Pulp		<0.05	<0.005	1	<0.5	0.8
IMA2708	Rock Pulp		<0.05	<0.005	<1	<0.5	1.0
IMA2709	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2710	Rock Pulp		<0.05	<0.005	1	<0.5	0.8
IMA2711	Rock Pulp		<0.05	0.007	<1	<0.5	0.7
IMA2712	Rock Pulp		0.06	0.005	1	<0.5	1.1
IMA2713	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2714	Rock Pulp		<0.05	0.005	<1	<0.5	0.9
IMA2715	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2716	Rock Pulp		<0.05	<0.005	2	<0.5	0.7
IMA2717	Rock Pulp		<0.05	<0.005	<1	<0.5	0.8
IMA2718	Rock Pulp		<0.05	<0.005	1	<0.5	0.9

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Client: MacGregor, R.A.
28 Ford St.
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given
Report Date: October 27, 2018

Page: 3 of 8 Part: 1 of 3

CERTIFICATE OF ANALYSIS YAN18002871.1

Table with columns: Method, Analyte, Unit, MDL, and 20 elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La). Rows include sample IDs like IMA2719 through IMA2748 and their corresponding analytical results.

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Client: **MacGregor, R.A.**  
 28 Ford St.  
 Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
 Report Date: October 27, 2018

Page: 3 of 8 Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2719	Rock Pulp	119	0.10	803	0.085	3.46	0.062	2.46	1.9	101.0	193	1.0	7.5	8.0	0.8	<1	2	2.2	<0.1	101.6	3.5
IMA2720	Rock Pulp	126	0.20	594	0.182	2.68	0.037	2.58	0.3	100.6	773	0.9	38.5	17.6	1.8	<1	3	4.5	0.2	100.5	3.0
IMA2721	Rock Pulp	100	0.14	781	0.238	3.12	0.044	3.36	1.4	149.8	>2000	1.7	86.9	29.3	3.5	2	3	6.5	0.3	140.4	4.1
IMA2722	Rock Pulp	165	0.14	810	0.145	3.68	0.076	4.19	0.3	134.9	278	1.1	15.8	14.4	1.5	<1	1	3.2	0.1	165.7	4.0
IMA2723	Rock Pulp	88	0.09	221	0.070	3.41	0.053	4.23	0.5	83.8	425	1.1	12.1	6.2	0.7	<1	2	3.4	0.7	188.3	2.3
IMA2724	Rock Pulp	148	0.16	731	0.398	3.51	0.080	3.33	1.6	243.3	1487	2.1	75.7	40.2	4.6	1	2	5.5	0.1	156.4	6.9
IMA2725	Rock Pulp	95	0.16	698	0.216	3.04	0.045	3.38	0.6	150.2	781	1.0	37.0	19.1	1.5	<1	2	3.8	0.1	143.7	4.2
IMA2726	Rock Pulp	108	0.05	718	0.376	3.15	0.047	3.18	1.7	248.5	822	1.3	37.4	38.1	4.4	<1	1	3.0	<0.1	142.7	7.1
IMA2727	Rock Pulp	76	0.07	774	0.181	3.03	0.043	2.82	0.5	102.2	267	1.1	12.6	15.5	1.7	<1	1	2.1	<0.1	183.1	2.8
IMA2728	Rock Pulp	174	0.16	755	0.237	3.34	0.051	2.80	1.1	183.8	1143	0.9	43.3	23.8	2.7	<1	2	2.2	<0.1	111.9	4.5
IMA2729	Rock Pulp	72	0.11	808	0.135	3.44	0.069	3.07	2.0	93.1	553	1.4	26.0	13.6	1.6	<1	2	3.8	<0.1	122.7	2.9
IMA2730	Rock Pulp	139	0.09	888	0.319	3.04	0.066	2.58	0.6	146.6	529	1.0	26.4	27.5	3.4	<1	1	3.8	0.1	132.0	3.9
IMA2731	Rock Pulp	125	0.51	675	0.146	4.45	0.339	2.82	0.9	175.9	115	2.3	10.5	6.5	0.5	1	6	15.6	0.3	188.3	5.0
IMA2732	Rock Pulp	83	0.07	608	0.153	3.88	0.165	3.13	0.6	102.2	350	1.6	17.8	12.7	1.4	1	2	3.3	<0.1	154.7	2.7
IMA2733	Rock Pulp	53	0.01	602	0.050	2.61	0.051	3.42	0.4	56.4	84	0.5	3.7	3.9	0.4	<1	<1	0.7	0.1	132.9	1.5
IMA2734	Rock Pulp	117	0.16	964	0.121	4.36	0.063	4.34	0.6	103.7	191	2.2	11.1	10.3	1.1	1	2	6.1	<0.1	173.9	2.7
IMA2735	Rock Pulp	73	0.03	414	0.018	1.68	0.030	2.33	0.4	42.7	15	0.3	1.9	1.4	0.1	<1	<1	0.6	<0.1	74.4	1.2
IMA2736	Rock Pulp	59	0.02	647	0.092	2.88	0.050	3.43	0.6	104.3	179	0.7	9.0	7.0	0.8	<1	<1	1.1	<0.1	152.4	2.9
IMA2737	Rock Pulp	67	0.30	1037	0.155	5.80	1.388	3.10	0.4	89.6	135	1.5	9.1	12.3	1.3	<1	2	9.3	<0.1	125.1	2.8
IMA2738	Rock Pulp	200	0.07	466	0.137	3.87	0.041	3.25	0.4	107.8	217	1.6	12.2	10.4	1.1	<1	1	3.1	<0.1	148.5	3.1
IMA2739	Rock Pulp	106	0.84	245	0.074	4.73	2.349	1.46	0.7	60.9	26	1.0	2.9	1.5	0.1	<1	4	10.8	<0.1	74.1	1.5
IMA2740	Rock Pulp	155	0.16	408	0.038	2.05	0.028	2.26	0.3	73.8	34	0.5	2.4	1.8	0.2	<1	2	3.9	<0.1	82.0	2.1
IMA2741	Rock Pulp	105	0.05	418	0.017	1.70	0.032	2.34	0.3	39.1	18	0.4	1.5	1.2	0.1	<1	<1	1.0	0.3	76.1	1.1
IMA2742	Rock Pulp	117	0.06	450	0.191	4.53	0.075	2.86	0.2	184.3	472	1.6	26.5	13.8	1.6	1	2	7.0	<0.1	144.0	5.2
IMA2743	Rock Pulp	131	0.06	552	0.394	4.33	0.056	3.03	0.4	227.0	1229	2.2	53.9	36.8	4.9	1	2	3.3	<0.1	152.2	6.4
IMA2744	Rock Pulp	213	0.09	367	0.115	3.98	0.525	2.45	0.3	130.1	143	1.3	7.5	7.1	0.8	<1	2	2.1	<0.1	127.8	3.5
IMA2745	Rock Pulp	98	<0.01	8	0.004	0.22	0.067	0.08	<0.1	15.2	9	<0.1	0.7	0.1	<0.1	<1	<1	0.2	<0.1	2.1	0.4
IMA2746	Rock Pulp	234	0.14	800	0.186	4.18	0.085	3.73	1.0	181.4	437	3.5	24.3	14.7	1.6	2	2	6.1	0.3	192.4	5.1
IMA2747	Rock Pulp	93	0.10	812	0.352	3.73	0.396	2.99	0.9	173.1	1240	1.2	45.4	31.2	3.8	<1	2	4.4	0.1	96.6	4.9
IMA2748	Rock Pulp	166	0.34	773	0.389	4.31	0.698	2.33	1.0	324.2	975	1.4	51.2	27.3	3.2	1	4	8.4	0.1	120.9	8.7

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Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: October 27, 2018

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Part: 3 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871 1

Method Analyte	Unit	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Ti
MDL		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2719	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2720	Rock Pulp	<0.05	<0.005	1	<0.5	0.6
IMA2721	Rock Pulp	<0.05	<0.005	3	<0.5	0.8
IMA2722	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2723	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2724	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2725	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2726	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2727	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2728	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2729	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2730	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2731	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2732	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2733	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2734	Rock Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2735	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2736	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2737	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2738	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2739	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2740	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2741	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2742	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2743	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2744	Rock Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2745	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2746	Rock Pulp	0.15	<0.005	1	<0.5	1.3
IMA2747	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2748	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7

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Project: None Given  
Report Date: October 27, 2018

Page: 4 of 8

Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1
IMA2749	Rock Pulp	5.1	11.0	407.6	100	<0.1	8.5	10.6	71	1.14	4	341.5	1114.6	34	0.6	0.2	0.8	31	0.16	0.133	1518.9
IMA2750	Rock Pulp	6.6	71.5	389.7	12	0.1	15.4	21.0	171	1.51	9	351.2	1642.5	27	<0.1	0.2	0.8	21	0.19	0.153	1525.9
IMA2751	Rock Pulp	0.9	2.7	2.7	2	<0.1	5.9	1.1	30	0.33	<1	1.4	6.4	26	<0.1	<0.1	<0.1	5	0.01	0.001	17.7
IMA2752	Rock Pulp	1.7	2.5	11.6	3	<0.1	3.9	1.7	34	0.44	1	4.3	30.4	24	<0.1	<0.1	<0.1	12	0.04	0.007	101.3
IMA2753	Rock Pulp	4.9	18.8	94.1	51	<0.1	5.6	5.7	99	0.69	2	38.6	206.2	24	0.1	0.2	<0.1	10	0.09	0.024	242.9
IMA2754	Rock Pulp	1.4	9.2	15.9	10	<0.1	3.3	3.3	63	0.52	3	11.0	57.6	15	<0.1	<0.1	0.1	11	0.12	0.010	68.5
IMA2755	Rock Pulp	2.5	2.6	74.2	48	<0.1	3.4	1.7	51	0.78	1	64.0	353.4	11	<0.1	0.2	0.1	19	0.02	0.042	334.6
IMA2756	Rock Pulp	1.1	41.3	18.9	367	<0.1	11.5	10.3	66	0.41	10	66.0	480.7	26	2.5	0.2	0.6	10	0.18	0.069	681.6
IMA2757	Rock Pulp	0.6	2.4	1.7	<1	<0.1	5.1	0.6	20	0.24	<1	1.8	4.8	30	<0.1	<0.1	<0.1	4	<0.01	0.002	10.4
IMA2758	Rock Pulp	2.0	32.4	30.4	9	<0.1	13.6	8.5	184	1.42	2	15.8	80.2	34	<0.1	<0.1	0.2	24	0.17	0.017	116.2
IMA2759	Rock Pulp	5.7	46.2	953.5	231	0.4	17.0	45.8	88	1.10	27	1120.0	>4000	48	1.2	0.1	1.9	8	0.23	0.372	>2000
IMA2760	Rock Pulp	4.4	15.6	43.0	65	0.1	7.8	7.0	41	0.65	7	43.0	291.8	25	0.2	0.1	0.3	9	0.07	0.037	354.5
IMA2761	Rock Pulp	8.0	20.1	935.3	190	0.8	12.9	44.0	32	0.93	30	1200.6	3802.5	42	1.2	0.2	2.9	12	0.14	0.310	>2000
IMA2762	Rock Pulp	3.2	16.9	84.1	166	0.1	5.5	14.2	58	0.76	13	89.7	481.2	31	0.7	0.1	0.2	11	0.13	0.057	502.6
IMA2763	Rock Pulp	2.5	6.6	77.0	80	<0.1	6.8	2.5	38	0.44	1	20.7	154.4	24	0.3	<0.1	<0.1	8	0.05	0.023	236.3
IMA2764	Rock Pulp	2.9	26.8	266.6	443	0.1	5.0	7.9	75	0.81	3	29.7	167.7	26	2.4	<0.1	0.4	11	0.16	0.029	232.0
IMA2765	Rock Pulp	2.2	14.6	44.9	3	<0.1	6.7	4.2	99	0.81	<1	64.6	413.9	26	<0.1	<0.1	0.1	12	0.13	0.050	437.1
IMA2766	Rock Pulp	1.0	7.6	7.3	12	<0.1	4.0	4.6	31	0.31	5	8.0	44.6	15	<0.1	<0.1	<0.1	6	0.05	0.012	97.7
IMA2767	Rock Pulp	8.8	94.9	412.0	249	0.6	18.2	27.0	55	1.13	13	576.0	1145.2	20	0.9	0.1	1.9	16	0.11	0.111	1026.2
IMA2768	Rock Pulp	3.0	9.2	34.3	5	<0.1	8.2	10.8	100	0.83	9	16.2	97.4	28	<0.1	0.1	0.6	10	0.07	0.018	182.2
IMA2769	Rock Pulp	1.2	5.8	364.7	276	<0.1	3.6	8.0	18	0.34	6	53.9	300.8	23	1.4	<0.1	0.2	6	0.05	0.035	360.3
IMA2770	Rock Pulp	4.8	16.1	78.1	5	<0.1	7.5	13.8	118	0.87	11	64.6	330.4	26	<0.1	0.1	2.5	10	0.10	0.043	420.1
IMA2771	Rock Pulp	4.6	62.5	135.9	10	0.3	8.5	14.7	141	1.27	18	257.8	1416.6	32	<0.1	<0.1	3.5	19	0.29	0.160	1475.0
IMA2772	Rock Pulp	6.5	13.4	68.5	5	<0.1	6.7	12.8	115	0.86	7	49.6	318.8	31	<0.1	<0.1	1.0	10	0.11	0.049	448.7
IMA2773	Rock Pulp	2.6	3.1	14.6	3	<0.1	3.6	3.4	22	0.63	3	32.8	205.1	19	<0.1	<0.1	0.1	15	0.03	0.030	216.8
IMA2774	Rock Pulp	13.9	13.5	501.0	13	0.2	8.0	26.0	40	2.01	12	172.4	1492.6	23	<0.1	0.6	1.6	15	0.05	0.358	>2000
IMA2775	Rock Pulp	3.9	18.5	100.7	16	<0.1	6.1	3.1	99	0.66	2	98.3	607.7	26	<0.1	0.1	0.3	16	0.16	0.062	572.8
IMA2776	Rock Pulp	2.5	5.7	18.1	4	<0.1	7.0	5.6	44	0.64	3	50.7	311.5	20	<0.1	<0.1	0.2	18	0.06	0.040	277.7
IMA2777	Rock Pulp	2.5	6.3	28.1	12	<0.1	4.2	3.8	50	0.52	2	18.7	93.4	24	<0.1	<0.1	<0.1	10	0.07	0.012	119.8
IMA2778	Rock Pulp	2.3	13.4	74.4	44	<0.1	8.7	11.2	63	0.71	8	10.7	67.9	25	0.3	<0.1	0.4	9	0.11	0.014	157.3

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CERTIFICATE OF ANALYSIS VAN18002871.1

Table with columns: Method, Analyte, Unit, MDL, and 20 elements (Cr, Mg, Ba, Ti, Al, Na, K, W, Zr, Ce, Sn, Y, Nb, Ta, Be, Sc, Li, S, Rb, Hf) with corresponding values for 20 samples (IMA2749 to IMA2778).





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**Project:** None Given  
**Report Date:** October 27, 2018

**Page:** 4 of 8

**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

VAN18002871-1

Method Analyte	Unit	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
MDL		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2749	Rock Pulp	0.07	<0.005	2	<0.5	1.3
IMA2750	Rock Pulp	<0.05	<0.005	2	<0.5	0.7
IMA2751	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2752	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2753	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2754	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2755	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2756	Rock Pulp	0.08	<0.005	<1	<0.5	0.8
IMA2757	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2758	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2759	Rock Pulp	<0.05	<0.005	6	<0.5	0.7
IMA2760	Rock Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2761	Rock Pulp	<0.05	<0.005	7	<0.5	0.8
IMA2762	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2763	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2764	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2765	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2766	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2767	Rock Pulp	<0.05	<0.005	2	<0.5	0.7
IMA2768	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2769	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2770	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2771	Rock Pulp	0.07	<0.005	3	<0.5	0.7
IMA2772	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2773	Rock Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2774	Rock Pulp	<0.05	<0.005	4	<0.5	1.1
IMA2775	Rock Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2776	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2777	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2778	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0



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Project: None Given  
Report Date: October 27, 2018

Page: 5 of 8 Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871-1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2779	Rock Pulp	1.3	13.6	16.4	20	<0.1	4.5	6.9	33	0.40	5	21.8	94.2	14	<0.1	<0.1	0.3	9	0.04	0.012	113.4
IMA2780	Rock Pulp	19.4	132.1	798.9	219	2.1	28.9	104.2	91	2.56	62	789.4	2922.3	41	1.5	0.3	9.4	11	0.29	0.303	>2000
IMA2781	Rock Pulp	2.2	28.9	35.0	56	<0.1	6.8	9.8	56	0.63	2	79.7	533.9	21	0.2	0.1	0.7	14	0.15	0.062	569.4
IMA2782	Rock Pulp	3.3	13.1	63.2	44	<0.1	7.3	7.3	62	0.69	3	64.6	322.0	18	0.2	0.2	0.2	12	0.11	0.037	347.0
IMA2783	Rock Pulp	5.2	23.3	235.2	7	0.1	12.2	32.7	103	0.85	29	296.3	1489.5	29	<0.1	0.2	1.6	10	0.23	0.176	1682.1
IMA2784	Rock Pulp	4.5	13.2	60.2	13	<0.1	7.7	10.8	93	0.70	8	43.1	254.8	31	<0.1	0.1	0.6	9	0.13	0.034	333.5
IMA2785	Rock Pulp	9.8	23.9	141.4	43	<0.1	12.1	24.4	78	0.86	20	111.5	812.2	30	0.2	0.1	1.0	12	0.22	0.095	812.8
IMA2786	Rock Pulp	4.1	15.9	100.7	85	<0.1	7.2	11.7	61	0.83	8	35.2	227.1	27	0.4	0.1	0.3	12	0.16	0.035	325.1
IMA2787	Rock Pulp	5.6	11.5	87.3	73	<0.1	7.9	10.4	58	0.61	8	56.0	249.1	23	0.4	0.1	0.6	12	0.14	0.031	247.2
IMA2788	Rock Pulp	13.5	57.0	2394.1	1581	1.0	18.9	24.7	100	0.89	17	119.5	822.1	27	10.2	0.5	1.5	11	0.25	0.084	820.5
IMA2789	Rock Pulp	7.5	51.8	175.8	56	0.2	10.9	28.9	69	1.05	16	242.4	1098.2	21	0.2	0.1	1.0	11	0.16	0.118	1078.0
IMA2790	Rock Pulp	10.4	40.5	218.9	41	0.2	8.9	33.2	49	0.86	25	581.9	724.2	23	<0.1	<0.1	1.4	11	0.09	0.072	683.4
IMA2791	Rock Pulp	8.1	89.0	1193.9	1349	0.5	12.1	56.0	87	0.83	45	407.9	1305.4	25	8.1	0.1	0.9	8	0.21	0.134	1332.6
IMA2792	Rock Pulp	2.3	20.9	27.6	8	<0.1	8.6	17.9	91	0.95	16	33.4	275.0	23	<0.1	0.2	0.4	10	0.20	0.037	383.8
IMA2793	Rock Pulp	3.5	7.7	54.7	10	<0.1	8.1	17.1	72	0.60	21	141.7	934.0	21	<0.1	<0.1	0.3	10	0.14	0.102	942.2
IMA2794	Rock Pulp	4.8	7.2	106.1	6	0.1	6.2	13.4	52	0.63	17	140.5	656.4	15	0.1	0.1	0.5	10	0.10	0.069	714.6
IMA2795	Rock Pulp	2.2	10.4	42.7	9	<0.1	7.1	7.3	76	0.60	5	50.7	230.5	29	<0.1	<0.1	0.1	11	0.18	0.029	284.5
IMA2796	Rock Pulp	3.3	10.2	57.3	13	<0.1	6.0	11.0	74	0.51	14	93.4	519.4	27	<0.1	<0.1	0.3	8	0.17	0.063	610.8
IMA2797	Rock Pulp	2.6	23.0	157.6	26	0.1	6.3	12.7	75	0.50	12	60.1	532.9	20	0.1	0.1	1.3	9	0.19	0.067	701.1
IMA2798	Rock Pulp	2.2	39.4	182.1	111	<0.1	8.4	26.6	44	0.66	23	74.8	460.8	19	0.7	0.1	0.2	8	0.09	0.086	644.3
IMA2799	Rock Pulp	4.8	9.5	24.5	7	<0.1	7.7	10.4	44	0.81	10	35.6	242.8	19	<0.1	0.1	0.1	10	0.08	0.032	338.6
IMA2800	Rock Pulp	2.2	11.0	25.3	8	<0.1	6.4	8.9	52	0.49	7	28.8	155.3	22	<0.1	<0.1	0.4	7	0.14	0.029	238.2
IMA2801	Rock Pulp	1.8	24.2	105.6	81	<0.1	7.0	4.6	212	0.90	2	19.0	108.2	30	0.7	0.2	0.1	13	0.47	0.016	158.7
IMA2802	Rock Pulp	4.2	17.4	64.1	17	<0.1	8.6	3.5	55	0.60	2	41.7	236.8	31	<0.1	0.2	0.1	13	0.17	0.033	173.1
IMA2803	Rock Pulp	4.0	6.0	35.1	7	<0.1	6.6	4.1	36	0.56	3	83.9	474.3	22	<0.1	<0.1	0.2	16	0.07	0.062	578.0
IMA2804	Rock Pulp	5.7	8.7	41.9	9	<0.1	6.7	9.0	31	0.60	7	68.1	389.8	22	<0.1	<0.1	0.4	11	0.07	0.054	467.7
IMA2805	Rock Pulp	14.2	11.1	35.7	6	<0.1	9.1	9.4	40	0.80	6	93.1	468.0	27	<0.1	0.3	0.5	13	0.10	0.065	536.3
IMA2806	Rock Pulp	6.9	25.1	414.9	238	<0.1	15.1	16.2	48	0.74	13	110.2	582.0	24	1.4	0.2	0.5	11	0.13	0.071	582.8
IMA2807	Rock Pulp	3.0	12.9	156.2	154	<0.1	7.6	6.5	64	0.70	4	66.7	451.0	28	1.0	<0.1	0.1	15	0.18	0.058	538.7
IMA2808	Rock Pulp	4.0	5.5	71.3	20	<0.1	7.0	3.1	41	0.52	3	71.7	460.7	22	<0.1	<0.1	0.2	12	0.09	0.058	527.2

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**BUREAU VERITAS** MINERAL LABORATORIES

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Project: None Given  
Report Date: October 27, 2018

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Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2779	Rock Pulp	68	0.06	579	0.074	3.00	0.041	3.92	1.1	64.1	205	0.7	9.8	6.3	0.6	<1	1	1.8	0.1	157.4	1.7
IMA2780	Rock Pulp	165	0.16	83	0.487	3.04	0.047	3.29	2.5	234.1	>2000	1.9	259.0	64.2	10.1	<1	4	11.1	1.7	165.1	7.0
IMA2781	Rock Pulp	103	0.10	708	0.271	3.56	0.052	4.30	0.9	185.1	1058	1.8	40.5	25.6	2.9	1	3	5.3	0.1	196.7	5.1
IMA2782	Rock Pulp	191	0.09	625	0.193	2.92	0.055	3.94	0.9	103.1	655	1.3	31.1	20.0	1.9	<1	2	3.6	0.2	167.1	2.8
IMA2783	Rock Pulp	107	0.12	623	0.347	3.17	0.055	3.60	1.7	206.0	>2000	1.6	101.6	41.1	4.7	<1	2	6.3	0.2	168.7	5.8
IMA2784	Rock Pulp	108	0.10	830	0.137	3.72	0.114	4.79	1.0	134.9	616	1.0	20.2	13.5	1.5	<1	2	4.0	0.1	198.3	3.7
IMA2785	Rock Pulp	100	0.13	703	0.366	3.75	0.082	4.01	1.7	208.6	1493	2.5	59.9	36.8	4.3	<1	3	6.7	0.3	167.3	5.8
IMA2786	Rock Pulp	117	0.10	765	0.263	3.83	0.099	4.49	1.9	167.0	612	1.6	20.2	22.6	2.4	<1	2	4.2	0.2	181.9	4.6
IMA2787	Rock Pulp	110	0.12	778	0.273	3.47	0.058	4.28	1.3	179.6	449	1.7	23.0	24.9	2.3	1	2	6.0	0.1	200.9	5.1
IMA2788	Rock Pulp	141	0.14	727	0.317	3.60	0.067	3.73	1.9	196.3	1499	1.7	59.9	34.1	3.9	2	3	5.6	0.5	170.4	5.5
IMA2789	Rock Pulp	111	0.20	602	0.257	4.17	0.119	3.93	1.9	139.6	1978	3.6	77.7	30.4	4.1	3	3	11.3	0.4	227.3	3.8
IMA2790	Rock Pulp	126	0.10	762	0.170	3.57	0.056	3.92	1.5	105.4	1262	1.8	68.1	21.2	3.6	<1	3	7.0	0.3	196.4	3.0
IMA2791	Rock Pulp	113	0.12	419	0.163	3.59	0.056	4.54	1.9	110.9	>2000	1.4	96.8	22.6	3.0	1	2	3.8	0.5	190.9	3.0
IMA2792	Rock Pulp	111	0.14	366	0.178	3.16	0.060	3.79	8.2	120.0	713	1.1	23.6	20.0	2.6	<1	1	4.1	0.5	167.3	3.3
IMA2793	Rock Pulp	109	0.15	560	0.219	3.63	0.049	3.41	1.9	128.2	1756	2.3	66.2	25.5	3.0	2	2	7.2	<0.1	185.0	3.5
IMA2794	Rock Pulp	105	0.19	588	0.284	4.18	0.040	2.37	1.7	141.3	1332	3.4	58.4	29.3	2.4	3	2	6.7	<0.1	204.7	3.8
IMA2795	Rock Pulp	97	0.14	787	0.116	3.77	0.057	3.58	1.8	144.1	519	1.5	21.9	10.8	1.1	<1	2	5.3	<0.1	209.0	4.0
IMA2796	Rock Pulp	98	0.11	704	0.159	3.35	0.059	3.10	1.5	146.5	1125	1.1	41.2	16.2	1.6	<1	2	4.2	<0.1	174.3	3.9
IMA2797	Rock Pulp	96	0.09	634	0.149	3.07	0.043	3.01	1.4	115.4	1295	0.8	42.5	17.6	1.7	<1	2	3.4	0.1	154.0	3.0
IMA2798	Rock Pulp	117	0.08	571	0.177	2.92	0.096	2.82	2.3	142.3	1548	1.2	43.2	17.4	1.6	<1	2	4.2	0.3	168.1	3.9
IMA2799	Rock Pulp	114	0.15	661	0.133	3.73	0.058	2.94	1.6	117.9	629	1.9	22.4	11.3	1.1	<1	2	6.5	<0.1	218.3	3.2
IMA2800	Rock Pulp	87	0.10	795	0.096	3.82	0.059	3.11	1.3	114.6	433	1.2	15.3	8.5	0.9	<1	2	2.9	<0.1	187.3	3.2
IMA2801	Rock Pulp	146	0.16	358	0.053	1.94	0.027	1.90	0.4	62.4	278	0.7	12.8	4.3	0.2	<1	2	2.4	0.1	87.2	1.7
IMA2802	Rock Pulp	133	0.15	755	0.195	3.95	0.147	3.80	0.6	169.8	315	2.5	19.4	16.7	1.8	<1	3	4.7	<0.1	232.0	4.6
IMA2803	Rock Pulp	98	0.16	691	0.282	5.21	0.059	2.87	0.8	267.9	1040	3.2	50.1	21.3	2.4	2	3	6.7	<0.1	217.7	7.0
IMA2804	Rock Pulp	109	0.14	741	0.226	4.26	0.059	3.04	0.3	191.9	843	2.5	36.6	18.0	2.0	2	2	5.7	0.1	241.4	5.3
IMA2805	Rock Pulp	118	0.16	756	0.286	4.28	0.094	3.17	0.7	214.5	994	3.0	49.0	26.7	2.8	2	3	6.9	0.2	267.7	6.1
IMA2806	Rock Pulp	106	0.14	739	0.270	3.58	0.074	2.93	0.7	176.1	1064	2.1	48.7	26.9	3.2	<1	2	4.8	0.3	209.0	5.0
IMA2807	Rock Pulp	105	0.13	670	0.258	3.57	0.070	2.85	0.5	138.3	999	1.2	40.5	22.3	2.3	1	2	4.5	0.1	185.5	3.7
IMA2808	Rock Pulp	97	0.15	684	0.279	4.58	0.057	3.27	0.7	235.6	1002	2.6	46.4	22.4	2.4	2	3	4.6	<0.1	209.2	7.1

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**BUREAU** MINERAL LABORATORIES  
**VERITAS**

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Project: None Given  
Report Date: October 27, 2018

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Part: 3 of 3

# CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In ppm	Re ppm	Se ppm	Te ppm	Tl ppm
		0.05	0.005	1	0.5	0.5
IMA2779	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2780	Rock Pulp	0.07	<0.005	5	<0.5	1.9
IMA2781	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2782	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2783	Rock Pulp	<0.05	0.008	3	<0.5	0.7
IMA2784	Rock Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2785	Rock Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2786	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2787	Rock Pulp	<0.05	0.008	<1	<0.5	0.8
IMA2788	Rock Pulp	0.12	<0.005	<1	<0.5	1.0
IMA2789	Rock Pulp	0.05	<0.005	1	<0.5	1.1
IMA2790	Rock Pulp	<0.05	<0.005	2	<0.5	0.9
IMA2791	Rock Pulp	0.14	<0.005	1	<0.5	0.8
IMA2792	Rock Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2793	Rock Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2794	Rock Pulp	0.08	<0.005	<1	<0.5	0.9
IMA2795	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2796	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2797	Rock Pulp	<0.05	0.005	<1	<0.5	0.7
IMA2798	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2799	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2800	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2801	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2802	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2803	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2804	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2805	Rock Pulp	<0.05	<0.005	2	<0.5	1.1
IMA2806	Rock Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2807	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2808	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9



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Project: None Given  
Report Date: October 27, 2018

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** **VAN18002871.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2809	Rock Pulp	4.2	17.8	133.2	135	<0.1	9.0	19.4	47	0.68	17	83.8	365.8	25	0.8	0.1	0.6	11	0.13	0.050	580.7
IMA2810	Rock Pulp	3.9	5.2	33.1	10	<0.1	6.7	2.8	46	0.64	3	57.9	330.5	21	<0.1	0.2	0.2	14	0.09	0.050	418.9
IMA2811	Rock Pulp	5.4	33.7	280.1	12	<0.1	16.4	19.4	114	1.00	12	451.9	1332.7	38	<0.1	0.2	0.6	14	0.42	0.138	1250.4
IMA2812	Rock Pulp	2.0	15.4	42.7	7	0.2	8.4	12.1	64	0.60	16	34.7	165.3	33	<0.1	0.2	0.6	12	0.23	0.027	243.7
IMA2813	Rock Pulp	3.0	13.7	41.6	5	0.1	8.4	12.0	51	0.61	39	88.5	484.9	28	<0.1	0.1	2.3	12	0.17	0.061	548.1
IMA2814	Rock Pulp	5.1	8.3	44.5	3	<0.1	9.2	8.7	32	0.44	20	84.8	490.5	28	<0.1	0.1	0.7	10	0.11	0.053	587.1
IMA2815	Rock Pulp	6.4	8.3	153.4	3	<0.1	8.2	7.7	18	0.65	5	149.0	707.8	15	<0.1	0.2	0.5	13	0.03	0.091	788.0
IMA2816	Rock Pulp	1.6	3.5	46.2	3	<0.1	6.9	1.5	18	0.33	1	23.5	124.2	15	<0.1	<0.1	<0.1	7	0.03	0.019	182.8
IMA2817	Rock Pulp	3.3	3.3	43.6	3	<0.1	5.7	2.0	19	0.42	1	53.9	276.8	19	<0.1	<0.1	0.1	12	0.03	0.039	293.1
IMA2818	Rock Pulp	4.1	5.4	101.4	2	<0.1	7.7	3.9	17	0.39	2	108.4	407.0	21	<0.1	<0.1	0.7	10	0.03	0.054	454.9
IMA2819	Rock Pulp	5.1	13.7	189.2	3	0.1	12.4	11.3	21	0.52	7	199.5	853.1	23	<0.1	0.2	0.9	10	0.07	0.102	936.4
IMA2820	Rock Pulp	4.1	19.5	109.1	25	<0.1	16.6	10.4	87	0.74	4	84.3	387.0	25	<0.1	0.1	0.2	12	0.16	0.042	370.9
IMA2821	Rock Pulp	1.7	64.0	79.2	130	0.2	18.1	12.2	137	2.96	2	48.9	110.9	44	0.4	0.1	0.7	42	0.07	0.036	126.7
IMA2822	Rock Pulp	4.0	9.4	34.9	4	<0.1	6.3	6.4	43	0.42	7	50.2	292.2	26	<0.1	0.1	0.2	8	0.11	0.044	375.1
IMA2823	Rock Pulp	3.7	5.5	20.1	7	<0.1	6.6	7.6	42	0.56	10	41.5	209.6	23	<0.1	<0.1	0.2	12	0.10	0.028	225.9
IMA2824	Rock Pulp	5.9	10.9	56.5	6	<0.1	11.6	31.2	102	0.76	38	387.5	1861.7	41	<0.1	0.1	0.3	14	0.44	0.185	1789.0
IMA2825	Rock Pulp	3.5	14.9	29.3	6	<0.1	7.7	17.9	53	0.54	21	99.1	570.7	24	<0.1	0.2	0.4	9	0.15	0.067	647.1
IMA2826	Rock Pulp	4.2	24.0	28.9	7	<0.1	7.2	11.6	50	0.52	13	83.2	430.4	24	<0.1	0.1	0.6	9	0.12	0.052	477.9
IMA2827	Rock Pulp	8.2	36.8	31.0	7	<0.1	7.2	9.4	35	0.56	6	91.4	482.4	24	<0.1	0.2	0.6	8	0.09	0.065	554.5
IMA2828	Rock Pulp	1.4	43.8	34.0	8	0.1	10.8	13.6	70	0.81	13	28.2	155.1	18	<0.1	<0.1	0.6	10	0.13	0.021	170.5
IMA2829	Rock Pulp	2.1	113.8	71.5	18	0.2	19.1	37.9	141	1.33	40	50.1	391.2	28	<0.1	0.2	0.8	23	0.27	0.059	529.3
IMA2830	Rock Pulp	2.7	180.8	125.6	117	0.2	26.1	24.0	257	1.96	20	44.2	143.2	41	0.3	0.2	0.4	49	0.24	0.039	173.2
IMA2831	Rock Pulp	4.8	19.7	110.0	9	<0.1	8.0	13.7	48	0.50	16	109.8	497.7	31	<0.1	0.1	0.4	9	0.18	0.068	646.9
IMA2832	Rock Pulp	3.4	5.7	51.1	4	<0.1	6.5	3.6	28	0.44	4	45.6	219.6	20	<0.1	<0.1	0.2	12	0.05	0.035	283.7
IMA2833	Rock Pulp	2.0	30.3	37.1	42	<0.1	39.8	14.1	245	2.31	16	12.1	52.5	44	0.2	0.2	0.2	60	0.54	0.026	70.9
IMA2834	Rock Pulp	8.4	31.1	228.2	7	0.2	14.3	25.5	39	1.20	19	392.6	1220.8	20	<0.1	0.3	1.5	14	0.05	0.152	1298.7
IMA2835	Rock Pulp	4.9	11.5	107.5	6	0.1	8.4	9.7	26	0.70	8	131.5	807.6	20	<0.1	0.2	0.6	11	0.04	0.072	618.2
IMA2836	Rock Pulp	3.9	7.5	106.7	5	<0.1	7.6	8.0	24	0.56	5	113.1	390.0	19	<0.1	<0.1	0.4	10	0.04	0.050	415.8
IMA2837	Rock Pulp	5.5	4.3	50.3	10	<0.1	7.8	9.6	57	0.70	21	81.3	324.0	16	<0.1	0.1	0.4	14	0.06	0.050	393.3
IMA2838	Rock Pulp	11.4	5.9	143.5	14	0.1	9.4	20.0	36	0.73	27	130.8	583.0	16	<0.1	0.2	0.8	16	0.04	0.086	704.6

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Project: None Given
Report Date: October 27, 2018

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CERTIFICATE OF ANALYSIS VAN18002871.1

Table with columns: Method, Analyte, Unit, MDL, and 20 MA200 columns (Cr, Mg, Ba, Ti, Al, Na, K, W, Zr, Ce, Sn, Y, Nb, Ta, Ba, Sc, Li, S, Rb, Hf). Rows include IMA2809 through IMA2838.

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**Project:** None Given  
**Report Date:** October 27, 2018

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**Part:** 3 of 3

**CERTIFICATE OF ANALYSIS**

VAN18002871.1

	Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2809	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2810	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2811	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2812	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2813	Rock Pulp	<0.05	0.008	<1	<0.5	0.9
IMA2814	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2815	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2816	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2817	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2818	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2819	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2820	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2821	Rock Pulp	<0.05	<0.005	2	<0.5	0.8
IMA2822	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2823	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2824	Rock Pulp	0.08	<0.005	1	<0.5	0.9
IMA2825	Rock Pulp	0.08	<0.005	<1	<0.5	0.8
IMA2826	Rock Pulp	<0.05	0.005	<1	<0.5	0.8
IMA2827	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2828	Rock Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2829	Rock Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2830	Rock Pulp	0.08	<0.005	<1	<0.5	0.9
IMA2831	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2832	Rock Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2833	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2834	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2835	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2836	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2837	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2838	Rock Pulp	<0.05	<0.005	1	<0.5	0.9

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Project: None Given  
Report Date: October 27, 2018

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2839	Rock Pulp	4.3	5.3	88.2	10	<0.1	7.2	11.7	33	0.82	14	78.4	379.4	18	<0.1	<0.1	0.8	12	0.04	0.052	415.4
IMA2840	Rock Pulp	6.7	8.1	100.8	11	<0.1	6.4	8.2	41	0.61	12	108.8	457.6	16	<0.1	<0.1	0.8	14	0.04	0.064	647.5
IMA2841	Rock Pulp	4.3	21.5	98.1	35	<0.1	8.8	10.7	52	0.72	14	103.6	375.0	15	0.2	0.1	0.4	13	0.07	0.049	401.2
IMA2842	Rock Pulp	15.9	80.1	458.5	217	0.9	14.1	24.8	60	1.58	18	787.5	2519.8	24	1.2	0.3	1.7	17	0.08	0.280	>2000
IMA2843	Rock Pulp	9.7	36.9	359.0	520	0.3	9.8	11.9	58	1.02	21	257.6	1029.1	21	3.2	0.3	0.6	17	0.08	0.123	1054.8
IMA2844	Rock Pulp	8.8	26.9	110.2	83	<0.1	6.6	5.2	44	0.70	8	83.1	440.9	17	0.4	<0.1	0.2	14	0.06	0.060	486.3
IMA2845	Rock Pulp	8.0	41.8	243.1	214	0.1	9.2	9.9	50	0.81	11	114.8	562.1	19	1.1	<0.1	0.3	16	0.08	0.075	653.3
IMA2846	Rock Pulp	12.1	171.8	280.4	197	0.2	9.0	13.5	70	0.91	16	158.1	694.8	20	0.7	0.2	0.5	13	0.07	0.081	811.8
IMA2847	Rock Pulp	14.9	73.2	176.0	27	0.2	15.2	44.7	123	1.35	64	198.0	765.7	30	<0.1	0.3	1.3	17	0.15	0.101	850.8
IMA2848	Rock Pulp	2.6	9.4	28.5	9	<0.1	4.8	2.7	78	0.67	7	16.2	83.1	22	<0.1	<0.1	0.1	7	0.07	0.016	157.5
IMA2849	Rock Pulp	3.6	41.7	91.7	4	<0.1	7.3	9.3	116	0.85	3	137.9	850.5	32	<0.1	<0.1	0.4	9	0.19	0.100	1029.8
IMA2850	Rock Pulp	3.6	29.0	193.0	8	<0.1	8.2	8.9	181	1.21	3	313.2	1181.5	30	<0.1	0.2	0.3	9	0.18	0.138	1508.3
IMA2851	Rock Pulp	11.1	49.4	168.2	91	0.1	13.6	42.9	69	0.91	62	132.6	608.8	19	0.2	0.2	1.2	13	0.07	0.073	792.4
IMA2852	Rock Pulp	7.2	140.8	481.6	424	0.4	12.6	22.0	87	1.10	11	272.5	929.7	18	2.2	0.1	0.9	13	0.12	0.114	999.7
IMA2853	Rock Pulp	6.1	87.1	307.0	337	0.2	8.9	10.9	46	0.72	9	88.3	359.6	18	1.7	<0.1	0.7	10	0.07	0.046	393.6
IMA2854	Rock Pulp	7.1	27.3	54.2	57	<0.1	6.3	9.8	42	0.68	14	17.1	74.1	20	0.2	<0.1	0.2	12	0.04	0.015	89.6
IMA2855	Rock Pulp	4.3	18.8	50.6	15	<0.1	6.8	4.1	108	0.80	4	40.2	235.2	24	<0.1	0.2	0.1	9	0.08	0.031	304.2
IMA2856	Rock Pulp	1.4	11.1	46.7	10	<0.1	5.2	2.8	72	0.79	2	36.1	162.9	25	<0.1	<0.1	<0.1	9	0.08	0.024	225.1
IMA2857	Rock Pulp	3.5	18.8	113.6	4	<0.1	7.0	8.6	85	0.80	6	42.5	244.2	24	<0.1	<0.1	<0.1	8	0.11	0.031	308.2
IMA2858	Rock Pulp	0.5	5.7	5.6	5	<0.1	8.9	2.5	17	1.06	5	8.4	40.2	23	<0.1	<0.1	<0.1	22	0.03	0.005	42.2
IMA2859	Rock Pulp	6.4	582.8	11.6	29	0.3	20.9	27.2	138	1.94	30	5.5	17.0	23	0.1	0.2	1.0	44	0.21	0.013	30.0
IMA2860	Rock Pulp	1.4	2.2	15.4	3	<0.1	4.7	1.2	22	0.37	2	6.9	30.1	13	<0.1	<0.1	<0.1	7	0.04	0.010	31.4
IMA2861	Rock Pulp	5.7	14.8	181.2	3	0.2	12.1	9.8	21	0.51	8	241.3	943.2	24	<0.1	0.2	0.8	10	0.06	0.096	970.9
IMA2862	Rock Pulp	2.4	44.1	56.5	10	0.2	17.0	15.0	157	1.54	16	109.6	457.6	24	<0.1	0.1	0.5	32	0.15	0.066	528.8
IMA2863	Rock Pulp	5.6	65.0	181.8	24	0.2	8.1	15.5	28	1.00	12	327.3	741.7	19	<0.1	0.2	1.5	11	0.08	0.086	863.7
IMA2864	Rock Pulp	4.7	260.2	103.6	53	0.4	5.8	8.2	53	0.69	10	42.7	210.2	18	0.1	0.1	0.9	9	0.12	0.029	267.4
IMA2865	Rock Pulp	5.5	4.2	127.3	2	<0.1	5.7	5.5	19	0.57	4	147.9	637.0	22	<0.1	0.2	0.5	12	0.03	0.080	718.7
IMA2866	Rock Pulp	7.7	43.1	324.9	135	0.5	12.1	31.2	36	1.38	21	1081.3	1322.1	27	0.8	0.5	3.3	11	0.12	0.114	1194.2
IMA2867	Rock Pulp	12.4	42.3	145.7	33	0.3	10.8	24.8	33	0.88	10	262.1	1183.2	24	<0.1	0.2	1.8	14	0.07	0.128	1376.4
IMA2868	Rock Pulp	3.6	8.0	39.5	2	<0.1	5.7	6.8	24	0.46	11	52.9	301.5	24	<0.1	0.1	0.7	12	0.05	0.042	368.2

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Project: None Given  
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**CERTIFICATE OF ANALYSIS** VAN18002871-1

Method	Analyte	Unit	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
			Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
MDL			ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
IMA2839	Rock Pulp		108	0.12	341	0.294	4.26	0.052	2.64	0.6	161.8	736	2.8	32.4	24.5	3.0	1	2	5.0	0.2	177.6	5.0
IMA2840	Rock Pulp		129	0.12	339	0.343	4.12	0.050	2.38	0.6	242.5	976	2.8	43.8	26.5	3.0	1	3	5.3	<0.1	168.6	6.9
IMA2841	Rock Pulp		123	0.15	301	0.208	3.65	0.054	2.52	0.5	169.5	737	2.6	35.6	17.1	2.0	2	3	5.6	0.1	155.2	4.8
IMA2842	Rock Pulp		189	0.17	288	0.509	3.46	0.049	2.38	1.3	290.9	>2000	4.1	215.0	65.5	6.9	2	5	9.1	0.9	152.0	8.7
IMA2843	Rock Pulp		144	0.19	356	0.421	3.83	0.055	2.57	0.6	300.9	1935	3.5	93.6	36.2	4.7	2	4	7.6	0.4	178.6	8.8
IMA2844	Rock Pulp		137	0.17	357	0.339	3.80	0.045	2.47	0.4	311.2	913	3.2	44.1	25.4	2.9	2	3	6.6	<0.1	161.7	9.0
IMA2845	Rock Pulp		136	0.18	366	0.420	3.78	0.046	2.63	0.5	298.8	1164	3.1	56.0	33.3	3.9	1	4	7.7	0.1	171.8	8.4
IMA2846	Rock Pulp		190	0.15	319	0.296	2.78	0.057	2.16	0.5	177.2	1426	2.4	59.3	27.6	3.4	1	3	6.1	0.2	130.7	5.0
IMA2847	Rock Pulp		199	0.22	378	0.335	3.42	0.110	2.40	0.6	208.6	1586	2.4	67.2	30.4	3.7	2	4	7.8	0.4	180.4	5.6
IMA2848	Rock Pulp		104	0.10	662	0.091	3.22	0.055	2.82	0.3	92.0	274	0.9	9.6	6.6	1.0	<1	1	3.9	<0.1	176.8	2.5
IMA2849	Rock Pulp		129	0.10	797	0.343	3.48	0.172	2.51	1.1	209.2	1861	1.2	61.3	32.6	3.8	<1	2	3.9	0.2	128.1	5.8
IMA2850	Rock Pulp		137	0.16	683	0.292	3.29	0.055	2.91	0.6	141.8	>2000	1.4	89.1	32.4	3.9	<1	2	5.7	0.2	184.3	3.9
IMA2851	Rock Pulp		155	0.16	308	0.328	3.02	0.042	2.25	0.5	173.1	1418	2.4	57.8	32.4	3.8	2	4	6.9	0.2	144.8	4.7
IMA2852	Rock Pulp		139	0.24	365	0.297	3.73	0.037	2.29	1.1	161.7	1870	3.3	66.8	30.7	3.6	3	3	9.8	0.3	182.3	4.6
IMA2853	Rock Pulp		140	0.17	365	0.148	3.29	0.043	2.57	0.5	101.1	728	2.3	34.9	15.3	1.7	2	2	5.6	0.1	166.9	2.7
IMA2854	Rock Pulp		103	0.19	491	0.108	4.65	0.048	3.07	0.3	131.7	160	2.8	6.6	7.2	0.7	2	3	7.1	<0.1	220.6	3.5
IMA2855	Rock Pulp		124	0.13	685	0.220	3.31	0.057	2.63	0.5	123.8	545	1.3	26.0	19.6	2.4	<1	2	5.0	<0.1	168.3	3.4
IMA2856	Rock Pulp		107	0.15	750	0.117	3.45	0.055	3.11	0.3	109.5	403	1.1	16.0	10.3	1.2	<1	2	4.4	<0.1	206.7	3.0
IMA2857	Rock Pulp		128	0.11	670	0.242	3.31	0.055	2.61	0.4	120.2	563	1.1	27.6	21.1	2.4	<1	2	3.8	0.2	192.1	3.2
IMA2858	Rock Pulp		83	0.18	639	0.072	4.06	0.052	3.04	0.8	133.2	60	1.1	6.0	5.8	0.5	<1	3	5.6	<0.1	159.2	3.4
IMA2859	Rock Pulp		125	0.53	349	0.117	4.23	0.494	2.06	0.6	109.8	56	1.3	4.8	4.5	0.4	2	5	20.6	0.2	139.6	3.0
IMA2860	Rock Pulp		77	0.08	422	0.087	4.72	0.056	2.60	0.2	66.3	50	2.0	3.9	5.1	0.5	2	1	2.4	<0.1	199.7	2.6
IMA2861	Rock Pulp		82	0.07	574	0.277	4.16	0.069	3.16	0.5	214.4	1762	1.8	68.6	27.3	3.6	2	3	4.0	0.2	202.8	6.1
IMA2862	Rock Pulp		124	0.35	638	0.218	4.63	0.056	3.34	1.0	198.4	1014	1.9	42.2	14.3	1.7	1	6	11.4	0.1	241.4	5.7
IMA2863	Rock Pulp		111	0.10	453	0.224	4.25	0.046	3.09	0.8	147.5	1554	2.4	72.9	30.9	3.9	2	3	6.3	0.6	200.7	4.2
IMA2864	Rock Pulp		124	0.13	363	0.138	4.33	0.056	2.86	0.4	105.4	489	2.0	20.0	12.4	1.4	1	2	4.4	0.2	171.8	2.9
IMA2865	Rock Pulp		100	0.07	578	0.321	4.34	0.055	2.70	0.5	218.0	1316	2.2	51.4	30.1	3.4	<1	3	5.2	0.2	207.4	6.2
IMA2866	Rock Pulp		146	0.07	217	0.296	3.48	0.062	3.71	1.1	154.8	>2000	3.4	146.5	44.5	6.7	1	2	7.1	1.0	178.8	4.8
IMA2867	Rock Pulp		125	0.10	663	0.336	3.38	0.054	3.13	1.1	184.2	>2000	3.2	102.3	45.8	6.6	1	3	4.9	0.5	172.9	5.5
IMA2868	Rock Pulp		92	0.09	791	0.275	4.47	0.067	3.28	0.6	180.5	658	2.5	29.8	22.5	2.5	1	3	3.9	0.1	168.8	5.7

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**BUREAU** MINERAL LABORATORIES  
**VERITAS**

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: October 27, 2018

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Part: 3 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871 1

Method Analyte Unit	MA200 In ppm	MA200 Re ppm	MA200 Se ppm	MA200 Te ppm	MA200 Tl ppm	
						MDL
IMA2839	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2840	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2841	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2842	Rock Pulp	<0.05	<0.005	3	<0.5	1.1
IMA2843	Rock Pulp	0.08	<0.005	<1	<0.5	1.0
IMA2844	Rock Pulp	0.06	<0.005	<1	<0.5	0.9
IMA2845	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2846	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2847	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2848	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2849	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2850	Rock Pulp	<0.05	<0.005	2	<0.5	0.8
IMA2851	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2852	Rock Pulp	0.06	<0.005	2	<0.5	1.0
IMA2853	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2854	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2855	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2856	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2857	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2858	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2859	Rock Pulp	0.06	<0.005	<1	<0.5	0.7
IMA2860	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2861	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2862	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2863	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2864	Rock Pulp	0.10	<0.005	<1	<0.5	0.8
IMA2865	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2866	Rock Pulp	0.06	<0.005	1	<0.5	1.2
IMA2867	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2868	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1

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Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: October 27, 2018

Page: 8 of 8 Part: 1 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18002871 1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2869	Rock Pulp	5.3	9.7	231.8	4	<0.1	10.1	19.7	24	0.99	10	323.7	1359.2	19	<0.1	0.3	1.4	12	0.03	0.144	1504.5
IMA2870	Rock Pulp	2.9	11.2	112.5	3	<0.1	8.1	9.6	19	0.44	8	180.5	790.4	21	<0.1	0.1	1.0	10	0.03	0.079	859.8
IMA2871	Rock Pulp	3.4	21.2	101.8	25	<0.1	15.6	12.7	91	0.73	5	76.7	351.5	24	<0.1	0.1	0.3	12	0.16	0.044	348.8
IMA2872	Rock Pulp	3.2	111.6	12.7	23	0.2	51.0	21.1	523	4.92	15	10.0	39.8	20	<0.1	0.3	0.2	114	0.13	0.047	70.5
IMA2873	Rock Pulp	7.4	33.1	41.5	5	<0.1	7.5	16.2	30	0.79	18	88.8	383.8	24	<0.1	0.2	0.5	8	0.09	0.042	314.7
IMA2874	Rock Pulp	0.9	3.9	0.8	3	<0.1	6.0	1.1	49	0.36	2	0.3	0.4	5	<0.1	<0.1	<0.1	3	0.07	0.002	1.7
IMA2875	Rock Pulp	<0.1	2.3	3.0	84	0.7	1417.0	108.8	1907	8.04	744	<0.1	0.2	424	<0.1	1.4	0.1	207	5.96	<0.001	1.0
IMA2876	Rock Pulp	9.3	11.3	11.5	45	1.4	179.7	47.7	670	5.44	203	1.0	5.9	336	<0.1	0.6	0.2	102	3.80	0.051	51.6
IMA2877	Rock Pulp	12.0	85.7	4.7	51	0.7	170.9	39.9	1042	4.97	122	0.9	6.9	629	<0.1	0.4	0.1	98	5.96	0.119	82.7
IMA2878	Rock Pulp	3.0	38.5	8.0	52	0.6	139.2	38.7	802	4.72	124	0.9	6.1	596	0.1	0.6	<0.1	110	5.09	0.225	72.4
IMA2879	Rock Pulp	23.8	40.5	5.5	67	0.4	183.2	49.2	947	5.54	83	0.7	4.2	488	<0.1	0.4	0.1	119	5.20	0.119	44.6



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Client: **MacGregor, R.A.**  
28 Ford St.  
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Project: None Given  
Report Date: October 27, 2018

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Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN18002871.1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2869	Rock Pulp	129	0.09	422	0.270	4.08	0.043	2.37	0.6	146.2	>2000	3.2	120.2	33.4	4.1	2	3	7.7	0.6	176.8	4.1
IMA2870	Rock Pulp	82	0.05	545	0.207	3.70	0.054	2.76	0.4	143.9	1486	1.7	61.4	23.1	2.7	1	2	3.2	0.1	155.4	4.3
IMA2871	Rock Pulp	91	0.11	777	0.246	3.35	0.062	3.14	0.5	137.4	592	1.8	34.4	19.7	2.2	<1	2	4.7	0.1	184.4	3.8
IMA2872	Rock Pulp	137	1.05	933	0.429	6.70	0.047	3.80	1.0	356.0	135	3.0	11.4	11.5	0.9	4	17	32.0	0.2	273.6	10.4
IMA2873	Rock Pulp	102	0.06	517	0.187	3.58	0.075	4.00	1.0	145.0	537	1.5	32.4	17.9	2.0	<1	2	2.7	0.5	176.1	4.5
IMA2874	Rock Pulp	167	0.02	7	0.010	0.11	0.021	0.03	<0.1	30.2	3	0.2	2.5	0.4	<0.1	<1	<1	2.2	<0.1	0.7	0.9
IMA2875	Rock Pulp	1767	12.52	35	0.009	1.74	0.194	0.11	1.1	13.2	2	0.2	3.9	<0.1	<0.1	<1	16	25.9	<0.1	2.6	0.4
IMA2876	Rock Pulp	339	4.60	111	0.049	6.73	4.286	0.51	4.0	100.1	98	0.2	7.6	0.4	<0.1	<1	16	13.8	2.6	4.6	2.6
IMA2877	Rock Pulp	279	5.57	173	0.041	6.04	3.892	0.29	2.6	80.8	152	0.2	8.1	0.4	<0.1	<1	21	12.3	1.0	4.3	2.2
IMA2878	Rock Pulp	335	4.66	220	0.058	5.11	3.375	0.40	2.7	70.7	137	0.7	8.0	0.4	<0.1	<1	18	4.4	0.4	8.1	1.7
IMA2879	Rock Pulp	392	5.74	117	0.082	5.97	3.953	0.24	2.5	74.0	84	0.3	7.7	0.4	<0.1	<1	22	11.8	0.2	3.1	2.0



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Project: None Given  
Report Date: October 27, 2018

Page: 8 of 8

Part: 3 of 3

# CERTIFICATE OF ANALYSIS

VAN18002871.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Ti
Unit		ppm	ppm	ppm	ppm	ppm
MDL		0.05	0.005	1	0.5	0.5
IMA2869	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2870	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2871	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2872	Rock Pulp	0.08	<0.005	<1	<0.5	1.5
IMA2873	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2874	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2875	Rock Pulp	0.07	<0.005	<1	6.7	<0.5
IMA2876	Rock Pulp	0.06	<0.005	<1	2.0	<0.5
IMA2877	Rock Pulp	<0.05	<0.005	<1	2.8	<0.5
IMA2878	Rock Pulp	0.08	<0.005	<1	1.7	<0.5
IMA2879	Rock Pulp	<0.05	<0.005	<1	1.8	<0.5



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PHONE (604) 253-3158

**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: July 11, 2018  
Report Date: July 30, 2018  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

VAN18001676.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 120

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	120	Sorting, labeling and boxing samples received as pulps			VAN
MA200	120	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

### SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

  
KERRY JAY  
Geoscientist Project Specialist

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\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: **MacGregor, R.A.**  
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Project: None Given  
Report Date: July 30, 2018

Page: 3 of 5

Part: 1 of 3

**CERTIFICATE OF ANALYSIS** **VAN18001676 1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fa	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unk	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2599	Rock Pulp	5.7	1863.9	403.9	81	0.9	12.4	24.5	49	1.70	7	303.6	1078.5	17	0.6	0.2	2.3	15	0.05	0.097	1021.3
IMA2600	Rock Pulp	2.6	7.1	22.5	4	<0.1	6.6	2.0	27	0.36	2	17.0	92.3	22	<0.1	<0.1	<0.1	8	0.02	0.012	127.7
IMA2601	Rock Pulp	4.9	11.1	67.8	4	<0.1	11.1	8.8	35	0.73	3	87.8	447.3	14	<0.1	0.2	0.5	10	0.02	0.040	425.7
IMA2602	Rock Pulp	2.5	11.9	78.7	8	<0.1	7.3	7.0	21	0.54	3	88.2	349.7	15	<0.1	0.1	0.4	10	0.02	0.035	362.1
IMA2603	Rock Pulp	3.1	811.4	287.8	485	0.6	8.3	9.0	86	0.97	4	94.3	286.8	12	3.2	0.2	1.2	7	0.37	0.034	326.2
IMA2604	Rock Pulp	4.3	731.9	267.1	448	1.0	10.5	20.7	95	1.94	24	254.6	1046.3	40	4.2	0.5	1.2	11	0.04	0.098	1149.0
IMA2605	Rock Pulp	4.1	9.8	95.4	7	<0.1	5.8	3.3	19	0.41	2	50.1	284.6	14	<0.1	<0.1	0.2	9	0.03	0.030	285.4
IMA2606	Rock Pulp	0.7	50.4	3.9	6	<0.1	16.6	5.0	84	0.82	<1	2.1	6.7	25	<0.1	<0.1	<0.1	9	0.20	0.007	12.5
IMA2607	Rock Pulp	6.5	13.3	90.1	3	0.2	10.2	9.3	21	0.71	5	231.2	1386.7	26	<0.1	0.2	0.8	15	0.04	0.154	1576.3
IMA2608	Rock Pulp	3.2	21.0	92.8	5	0.1	6.0	4.1	46	0.50	3	107.2	579.8	23	<0.1	0.2	1.2	11	0.10	0.062	678.4
IMA2609	Rock Pulp	2.7	6.3	31.3	4	<0.1	7.3	2.3	30	0.49	<1	15.9	64.5	14	<0.1	<0.1	0.2	8	0.02	0.011	78.5
IMA2610	Rock Pulp	3.4	10.3	39.9	4	<0.1	8.1	3.8	23	0.45	2	76.4	382.6	19	<0.1	0.2	0.2	13	0.04	0.049	439.5
IMA2611	Rock Pulp	1.0	26.7	5.5	6	<0.1	14.6	4.5	127	0.88	2	3.1	9.6	43	<0.1	<0.1	<0.1	12	0.39	0.007	18.3
IMA2612	Rock Pulp	2.2	120.0	14.8	12	0.1	20.4	23.5	405	2.14	28	40.4	122.2	39	<0.1	0.2	0.6	80	0.76	0.038	136.0
IMA2613	Rock Pulp	1.7	29.1	8.0	25	<0.1	30.0	12.2	108	2.27	<1	5.9	17.4	84	<0.1	<0.1	<0.1	61	0.16	0.019	29.1
IMA2614	Rock Pulp	2.4	33.7	8.4	4	<0.1	15.8	10.4	53	0.82	9	2.0	6.0	19	<0.1	<0.1	0.3	18	0.04	0.002	9.1
IMA2615	Rock Pulp	1.3	5.1	2.2	2	<0.1	11.4	1.1	25	0.31	<1	2.1	5.6	39	<0.1	<0.1	<0.1	2	<0.01	0.004	12.1
IMA2616	Rock Pulp	2.4	5.3	11.3	5	<0.1	12.6	6.7	55	0.94	10	11.0	53.5	39	<0.1	0.1	0.1	16	0.16	0.008	76.9
IMA2617	Rock Pulp	5.6	54.4	86.0	101	2.2	12.9	17.3	19	0.48	11	297.1	1330.6	29	0.4	0.2	1.0	14	0.06	0.133	1427.7
IMA2618	Rock Pulp	1.9	18.7	23.6	20	0.4	13.8	9.9	118	1.90	13	25.0	80.6	27	<0.1	<0.1	0.3	22	0.11	0.016	110.5
IMA2619	Rock Pulp	4.6	2.7	23.5	5	0.3	8.1	16.4	22	0.82	18	67.7	370.7	19	<0.1	0.1	0.3	10	0.02	0.042	412.1
IMA2620	Rock Pulp	9.3	64.5	1056.0	1364	0.6	13.8	38.9	38	1.03	29	323.4	980.5	19	7.2	0.3	0.8	15	0.06	0.108	1056.8
IMA2621	Rock Pulp	1.1	455.4	25.4	45	0.1	11.9	5.7	95	1.54	6	2.1	6.7	10	0.2	0.2	0.1	22	0.04	0.005	20.8
IMA2622	Rock Pulp	0.7	42.5	75.6	186	0.1	50.0	32.8	773	6.66	2	15.8	116.2	216	0.4	<0.1	<0.1	158	2.74	0.168	33.0
IMA2623	Rock Pulp	2.7	4.0	21.3	12	0.2	9.6	21.5	30	0.46	28	85.7	260.0	19	<0.1	0.2	0.4	9	0.04	0.038	312.9
IMA2624	Rock Pulp	2.9	99.7	30.1	5	0.2	9.2	9.2	81	0.68	15	86.1	840.0	25	<0.1	0.2	0.2	15	0.14	0.069	757.0
IMA2625	Rock Pulp	2.7	5.5	9.5	2	0.2	6.7	8.9	27	0.39	12	11.9	65.4	15	<0.1	<0.1	0.1	8	0.02	0.009	72.1
IMA2626	Rock Pulp	1.2	5.1	2.1	2	<0.1	11.9	1.5	33	0.47	2	0.8	4.0	41	<0.1	<0.1	<0.1	9	<0.01	0.005	11.5
IMA2627	Rock Pulp	2.4	17.2	47.2	27	0.1	7.1	3.3	73	1.32	<1	6.5	35.4	51	<0.1	<0.1	<0.1	15	0.06	0.004	44.2
IMA2628	Rock Pulp	1.2	14.8	4.5	2	<0.1	6.3	1.6	49	0.39	1	2.8	9.2	19	<0.1	<0.1	<0.1	5	0.08	0.007	12.6

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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: July 30, 2018

Page: 3 of 5

Part: 2 of 3

**CERTIFICATE OF ANALYSIS**

VAN18001676 1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2599	Rock Pulp	295	0.19	342	0.245	3.99	0.037	2.65	0.8	171.0	1864	2.8	94.9	27.2	3.3	2	4	7.7	0.7	158.1	4.8
IMA2600	Rock Pulp	113	0.04	657	0.083	4.18	0.154	4.87	0.3	98.1	230	0.9	7.4	8.1	0.6	<1	1	1.5	<0.1	174.1	2.7
IMA2601	Rock Pulp	193	0.06	381	0.150	4.17	0.065	3.38	0.4	98.2	758	1.5	36.1	16.9	2.1	2	2	2.3	0.2	149.5	2.6
IMA2602	Rock Pulp	79	0.07	431	0.139	4.72	0.082	3.73	0.3	100.8	653	1.5	31.0	14.6	1.8	2	2	2.9	0.2	166.7	3.0
IMA2603	Rock Pulp	214	0.17	156	0.097	1.33	0.143	0.87	0.2	61.7	570	0.8	32.2	13.9	0.4	1	1	5.5	0.3	51.2	1.7
IMA2604	Rock Pulp	185	0.79	523	0.153	2.68	0.033	2.58	0.6	115.3	>2000	1.3	86.9	16.3	0.8	<1	2	17.9	0.3	105.1	2.6
IMA2605	Rock Pulp	72	0.06	403	0.133	4.43	0.060	3.63	0.3	102.4	511	1.4	22.4	12.3	1.4	2	2	2.6	<0.1	148.6	2.9
IMA2606	Rock Pulp	106	0.23	11	0.016	1.73	1.160	0.10	0.1	52.3	23	0.2	1.9	0.6	<0.1	<1	1	2.9	0.1	5.1	1.4
IMA2607	Rock Pulp	160	0.06	527	0.446	4.33	0.047	4.02	0.9	309.4	>2000	2.3	104.3	48.2	5.5	2	3	6.6	0.3	184.4	8.4
IMA2608	Rock Pulp	113	0.11	790	0.190	4.37	0.059	4.86	0.9	180.4	1193	1.8	46.4	20.1	2.3	1	3	2.8	<0.1	202.7	5.1
IMA2609	Rock Pulp	159	0.06	461	0.088	4.53	0.120	3.63	0.2	91.2	139	1.5	7.2	8.1	0.7	2	2	2.0	<0.1	150.7	2.5
IMA2610	Rock Pulp	78	0.08	578	0.264	5.24	0.054	4.56	0.6	227.0	783	2.0	36.5	21.1	2.4	2	3	3.3	<0.1	204.3	6.4
IMA2611	Rock Pulp	118	0.32	12	0.021	2.64	1.918	0.11	0.3	56.3	33	0.1	2.8	0.8	<0.1	<1	2	3.4	<0.1	4.5	1.5
IMA2612	Rock Pulp	155	0.87	676	0.185	7.26	0.993	3.93	0.9	164.7	253	2.5	22.2	11.9	1.2	3	10	21.9	<0.1	222.2	4.7
IMA2613	Rock Pulp	118	0.86	122	0.072	6.14	2.904	1.18	0.8	153.4	59	1.1	5.3	1.7	0.2	1	7	13.7	0.1	59.2	4.2
IMA2614	Rock Pulp	352	0.05	677	0.011	2.30	0.048	2.99	0.2	32.4	17	0.3	1.5	1.2	0.1	<1	<1	1.5	0.2	107.0	0.9
IMA2615	Rock Pulp	181	<0.01	20	0.008	1.09	0.158	0.24	<0.1	34.4	24	0.2	1.8	0.5	<0.1	<1	<1	1.8	<0.1	7.2	1.0
IMA2616	Rock Pulp	115	0.16	1460	0.067	5.89	0.138	6.53	1.2	107.8	137	0.9	6.6	5.2	0.5	<1	2	4.8	0.2	229.3	3.0
IMA2617	Rock Pulp	90	0.06	568	0.313	3.61	0.048	3.91	1.0	182.6	>2000	1.9	122.6	39.4	4.5	2	3	7.1	0.1	168.7	4.9
IMA2618	Rock Pulp	260	0.40	410	0.144	2.87	0.612	2.02	0.2	123.1	202	0.8	11.9	11.5	1.4	<1	2	7.1	0.1	73.3	3.2
IMA2619	Rock Pulp	133	0.08	716	0.134	4.84	0.065	5.00	1.0	113.0	739	2.1	27.1	13.6	1.7	<1	2	5.0	0.4	212.2	3.0
IMA2620	Rock Pulp	178	0.22	344	0.270	3.84	0.036	2.85	0.7	141.7	1878	3.0	106.3	28.6	3.7	2	4	9.0	0.3	184.2	3.9
IMA2621	Rock Pulp	129	0.49	121	0.057	1.83	0.379	0.67	0.2	56.4	40	0.8	2.6	2.5	0.1	<1	3	6.9	<0.1	33.3	1.6
IMA2622	Rock Pulp	90	4.42	346	1.060	6.10	1.340	0.72	0.5	194.8	64	1.1	24.4	10.4	0.7	1	16	45.9	<0.1	28.9	4.6
IMA2623	Rock Pulp	128	0.04	697	0.107	3.61	0.057	4.50	0.7	90.4	562	1.0	23.5	10.5	1.1	<1	2	1.8	0.1	170.6	2.4
IMA2624	Rock Pulp	117	0.09	629	0.170	2.88	0.051	3.53	1.3	115.0	1345	1.0	54.2	19.0	2.1	<1	2	4.9	0.2	150.4	3.1
IMA2625	Rock Pulp	123	0.02	567	0.082	2.45	0.045	3.12	0.5	62.4	130	0.7	6.8	6.5	0.6	<1	1	0.8	<0.1	121.7	2.2
IMA2626	Rock Pulp	187	0.05	91	0.022	2.08	0.247	0.73	0.1	41.0	23	0.5	1.6	0.9	<0.1	<1	<1	3.0	<0.1	28.4	1.1
IMA2627	Rock Pulp	95	0.24	1443	0.134	5.87	0.439	6.38	0.4	89.0	82	1.1	4.8	9.9	1.0	<1	2	6.6	<0.1	176.9	2.4
IMA2628	Rock Pulp	142	0.04	395	0.018	1.67	0.035	2.17	0.2	41.9	23	0.2	1.6	1.3	0.1	<1	<1	0.3	<0.1	72.1	1.1

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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**Project:** None Given  
**Report Date:** July 30, 2018

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**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

VAN18001676 1

Method Analyte	Unit	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Ti
MDL		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2599	Rock Pulp	0.18	<0.005	2	<0.5	0.7
IMA2600	Rock Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2601	Rock Pulp	<0.05	<0.005	2	<0.5	<0.5
IMA2602	Rock Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2603	Rock Pulp	0.16	<0.005	<1	<0.5	<0.5
IMA2604	Rock Pulp	0.27	<0.005	2	<0.5	0.7
IMA2605	Rock Pulp	<0.05	<0.005	2	<0.5	0.5
IMA2606	Rock Pulp	<0.05	<0.005	2	<0.5	<0.5
IMA2607	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2608	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2609	Rock Pulp	<0.05	<0.005	<1	<0.5	0.5
IMA2610	Rock Pulp	<0.05	<0.005	1	<0.5	0.6
IMA2611	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2612	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2613	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2614	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2615	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2616	Rock Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2617	Rock Pulp	<0.05	<0.005	2	<0.5	0.7
IMA2618	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2619	Rock Pulp	<0.05	<0.005	2	<0.5	0.8
IMA2620	Rock Pulp	0.09	<0.005	2	<0.5	0.9
IMA2621	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2622	Rock Pulp	0.05	<0.005	<1	0.8	<0.5
IMA2623	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2624	Rock Pulp	<0.05	<0.005	1	<0.5	0.6
IMA2625	Rock Pulp	<0.05	<0.005	<1	<0.5	0.5
IMA2626	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2627	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2628	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5



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Project: None Given  
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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** **VAN18001676.1**

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2629	Rock Pulp	2.1	13.3	29.3	4	0.2	5.6	6.7	25	0.52	8	111.8	378.3	28	<0.1	0.2	0.5	11	0.02	0.044	487.0
IMA2630	Rock Pulp	3.5	3.0	13.0	<1	0.1	6.8	10.1	22	0.43	13	23.3	109.6	20	<0.1	0.2	0.2	11	0.02	0.012	112.1
IMA2631	Rock Pulp	1.1	7.0	23.9	3	0.1	6.4	7.5	26	0.61	4	58.7	327.0	21	<0.1	0.1	0.3	13	0.06	0.039	434.2
IMA2632	Rock Pulp	2.0	71.4	5.4	37	<0.1	88.9	25.4	247	4.36	50	4.1	9.8	16	<0.1	0.4	0.3	182	0.08	0.044	26.3
IMA2633	Rock Pulp	0.5	2.4	2.8	2	<0.1	3.5	0.4	13	0.15	<1	2.2	6.4	44	<0.1	<0.1	<0.1	6	<0.01	0.004	16.7
IMA2634	Rock Pulp	8.7	126.7	161.0	94	0.2	9.0	12.9	209	1.63	8	62.8	368.3	31	0.2	0.1	1.2	15	0.24	0.044	392.6
IMA2635	Rock Pulp	0.9	33.8	120.8	281	0.1	22.4	9.5	86	1.56	5	3.1	9.0	42	1.4	<0.1	0.1	24	0.13	0.010	16.4
IMA2636	Rock Pulp	9.3	165.5	1227.7	1514	0.6	10.7	13.8	68	1.08	5	507.2	1433.8	48	9.5	0.2	0.5	17	0.38	0.198	>2000
IMA2637	Rock Pulp	0.8	149.6	8.2	6	<0.1	2.8	1.1	43	0.44	<1	2.4	9.4	10	<0.1	<0.1	<0.1	4	0.04	0.001	7.3
IMA2638	Rock Pulp	3.5	5621.6	18.8	103	2.4	23.1	9.8	105	3.23	<1	13.4	41.0	10	1.2	<0.1	0.9	65	0.09	0.020	62.1
IMA2639	Rock Pulp	1.1	36.6	213.5	338	0.2	26.0	8.6	146	1.59	3	3.1	8.0	40	1.5	<0.1	0.3	22	0.15	0.010	20.3
IMA2640	Rock Pulp	1.0	56.8	22.4	89	<0.1	50.0	33.2	951	6.82	28	7.9	10.7	71	<0.1	0.2	<0.1	222	3.03	0.070	26.1
IMA2641	Rock Pulp	4.2	674.6	158.8	318	0.4	10.7	6.9	129	0.86	3	147.1	648.3	18	2.3	0.2	0.6	6	0.87	0.059	387.9
IMA2642	Rock Pulp	2.2	47.7	405.9	682	0.2	60.6	23.2	231	3.86	26	8.4	19.5	33	2.9	0.1	0.2	116	0.13	0.045	41.2
IMA2643	Rock Pulp	1.0	60.5	53.0	89	<0.1	3.7	2.9	43	0.60	3	28.1	149.8	17	0.3	<0.1	0.2	7	0.05	0.016	200.4
IMA2644	Rock Pulp	4.9	18.8	367.2	260	0.3	5.2	7.9	30	0.79	2	195.9	785.0	19	1.7	0.1	0.8	15	0.04	0.075	804.8
IMA2645	Rock Pulp	5.8	59.9	247.8	621	0.2	7.7	9.4	58	1.16	3	86.7	473.5	30	4.2	0.2	0.2	11	0.13	0.049	516.7
IMA2646	Rock Pulp	2.6	22.7	11.7	5	<0.1	3.9	3.1	39	0.29	5	12.2	70.2	13	<0.1	<0.1	0.7	7	0.07	0.008	108.8
IMA2647	Rock Pulp	2.9	6.3	87.9	20	<0.1	5.8	6.8	99	0.83	3	84.6	338.1	30	<0.1	0.2	0.4	12	0.23	0.043	403.9
IMA2648	Rock Pulp	10.7	76.8	1101.7	1083	0.8	9.7	22.9	149	1.63	10	568.4	1599.3	24	7.0	0.4	1.7	18	0.23	0.150	1547.2
IMA2649	Rock Pulp	4.7	58.8	23.4	90	<0.1	23.9	29.6	205	5.01	16	25.4	102.8	88	0.2	<0.1	<0.1	151	0.30	0.062	125.0
IMA2650	Rock Pulp	11.8	107.1	377.5	1213	0.4	7.4	16.6	65	0.93	9	369.7	878.1	24	9.4	0.3	0.8	13	0.30	0.102	968.9
IMA2651	Rock Pulp	2.0	43.2	198.0	166	0.2	6.6	9.5	78	0.54	3	238.8	510.8	13	0.8	<0.1	0.7	10	0.15	0.039	445.9
IMA2652	Rock Pulp	1.7	126.1	82.8	147	0.3	108.9	32.3	410	8.17	15	4.5	10.7	14	0.4	0.3	0.2	192	0.10	0.052	18.1
IMA2653	Rock Pulp	4.4	23.0	50.0	11	<0.1	7.2	9.0	182	0.93	7	53.0	368.3	28	<0.1	<0.1	0.4	20	0.32	0.053	506.9
IMA2654	Rock Pulp	1.1	13.9	37.8	3	0.1	7.9	6.2	23	0.48	4	140.3	866.0	27	<0.1	<0.1	0.4	15	0.05	0.078	816.0
IMA2655	Rock Pulp	7.0	76.3	172.9	29	0.6	8.7	5.2	330	1.01	3	82.3	605.6	28	<0.1	<0.1	2.3	15	0.56	0.067	682.3
IMA2656	Rock Pulp	1.7	10.4	22.4	1	<0.1	7.0	4.5	28	0.51	2	66.3	368.6	23	<0.1	<0.1	0.4	14	0.04	0.044	441.6
IMA2657	Rock Pulp	2.0	88.5	8.3	36	<0.1	113.6	32.6	293	4.52	27	5.4	13.0	18	<0.1	0.3	0.5	179	0.09	0.048	29.9
IMA2658	Rock Pulp	3.1	9.5	12.1	8	<0.1	12.6	6.0	46	1.24	1	11.9	63.8	45	<0.1	0.3	0.1	18	0.02	0.008	70.0

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**CERTIFICATE OF ANALYSIS** VAN18001676-1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2629	Rock Pulp	79	0.10	861	0.139	4.79	0.068	5.19	0.7	120.6	843	2.3	39.1	13.6	2.0	1	2	5.9	0.2	227.7	3.7
IMA2630	Rock Pulp	121	0.02	646	0.103	3.01	0.057	3.91	0.4	132.9	192	0.8	10.2	7.7	0.9	<1	1	1.0	0.1	154.2	3.9
IMA2631	Rock Pulp	74	0.18	780	0.178	4.82	0.056	4.76	0.7	147.1	762	2.8	35.6	14.0	1.5	2	3	8.3	<0.1	210.9	4.4
IMA2632	Rock Pulp	168	1.07	552	0.447	10.85	0.056	6.35	3.0	137.6	58	2.7	8.1	10.3	0.9	3	21	27.3	0.2	314.7	4.1
IMA2633	Rock Pulp	56	<0.01	32	0.010	1.40	0.161	0.39	0.1	42.5	29	0.2	1.6	0.4	<0.1	<1	<1	0.8	<0.1	11.4	1.4
IMA2634	Rock Pulp	167	0.59	732	0.189	2.71	0.415	2.24	0.4	82.9	686	1.3	30.7	29.7	2.0	<1	2	10.7	0.3	103.7	2.4
IMA2635	Rock Pulp	119	0.51	8	0.041	3.65	2.579	0.07	0.2	58.7	31	0.2	2.3	1.3	<0.1	<1	3	8.3	0.2	2.9	1.8
IMA2636	Rock Pulp	153	0.28	539	0.342	3.39	0.419	2.80	1.0	197.2	>2000	2.8	137.4	40.8	4.3	1	4	12.7	0.2	127.4	5.8
IMA2637	Rock Pulp	66	0.10	203	0.011	1.22	0.158	1.07	0.1	29.6	13	0.3	1.2	1.1	<0.1	<1	<1	2.7	<0.1	41.8	0.9
IMA2638	Rock Pulp	225	0.83	358	0.207	4.18	0.260	2.29	0.7	79.7	108	4.8	8.6	16.2	0.6	1	8	21.5	0.6	166.8	2.2
IMA2639	Rock Pulp	108	0.68	26	0.031	3.23	1.802	0.30	0.2	60.8	39	0.3	3.2	0.8	<0.1	<1	3	8.5	0.1	13.8	1.7
IMA2640	Rock Pulp	100	2.45	147	0.179	7.34	1.634	1.49	0.4	156.4	59	1.2	8.6	2.2	0.2	1	23	36.0	0.2	80.7	4.3
IMA2641	Rock Pulp	174	0.19	198	0.140	1.22	0.148	1.08	0.3	24.0	650	0.7	70.3	6.1	0.1	<1	1	5.3	0.2	42.0	0.2
IMA2642	Rock Pulp	142	1.58	342	0.144	8.43	1.014	3.83	1.0	166.5	81	2.2	8.3	4.4	0.2	2	15	21.1	0.2	174.3	5.0
IMA2643	Rock Pulp	84	0.17	336	0.059	1.87	0.222	1.97	0.2	71.7	356	0.5	16.3	4.9	0.5	<1	<1	3.1	<0.1	61.9	2.1
IMA2644	Rock Pulp	82	0.26	434	0.257	4.87	0.042	3.68	0.6	201.0	1431	3.3	80.4	22.1	2.7	2	4	8.6	0.2	190.9	5.9
IMA2645	Rock Pulp	132	0.38	696	0.168	3.78	0.515	3.48	0.3	136.0	914	1.7	44.1	14.8	1.6	1	2	10.1	0.2	142.4	4.0
IMA2646	Rock Pulp	83	0.04	338	0.042	1.58	0.029	1.98	0.3	41.5	173	0.3	6.8	4.3	0.4	<1	<1	0.8	<0.1	69.8	1.2
IMA2647	Rock Pulp	108	0.21	921	0.240	3.34	0.052	4.04	0.8	110.9	739	1.4	36.9	24.6	3.0	1	2	5.2	0.1	191.0	3.1
IMA2648	Rock Pulp	66	0.56	480	0.226	3.88	0.082	3.10	0.6	134.0	>2000	3.0	163.9	26.9	3.7	3	3	16.2	0.7	168.8	3.9
IMA2649	Rock Pulp	124	1.65	357	0.609	7.29	3.862	2.88	0.4	175.6	227	2.0	16.5	25.4	1.6	2	14	18.5	<0.1	285.1	4.7
IMA2650	Rock Pulp	88	0.33	685	0.267	3.41	0.169	2.97	0.7	223.4	1728	2.8	104.8	25.6	2.9	2	3	12.7	0.2	146.1	6.3
IMA2651	Rock Pulp	91	0.07	311	0.064	1.68	0.120	1.78	1.2	55.9	815	0.7	51.5	25.6	0.9	<1	2	2.1	0.2	66.4	1.5
IMA2652	Rock Pulp	229	1.54	539	0.473	9.75	0.051	5.26	3.1	152.6	42	5.0	9.8	11.4	0.9	3	24	33.8	0.5	254.0	4.2
IMA2653	Rock Pulp	118	0.15	701	0.218	3.54	0.061	4.04	3.5	141.5	908	1.9	32.4	23.1	2.5	<1	3	4.0	0.2	153.0	4.0
IMA2654	Rock Pulp	80	0.12	757	0.269	5.25	0.055	4.51	0.7	255.8	1449	2.8	77.9	24.1	2.9	2	3	6.6	<0.1	216.2	6.9
IMA2655	Rock Pulp	208	0.24	457	0.263	2.45	0.044	2.67	1.2	110.6	1226	1.5	48.5	22.7	0.8	<1	2	3.7	0.1	104.9	3.2
IMA2656	Rock Pulp	139	0.09	689	0.237	4.73	0.051	4.44	0.4	178.8	731	2.3	36.4	19.1	2.1	1	3	3.8	<0.1	196.4	4.9
IMA2657	Rock Pulp	167	1.02	687	0.508	11.17	0.063	6.44	3.4	145.6	65	3.4	10.4	12.2	1.1	4	24	30.4	0.4	328.1	4.1
IMA2658	Rock Pulp	180	0.29	1123	0.179	5.64	0.064	5.72	0.5	132.2	125	1.6	9.4	11.6	1.1	1	3	12.0	0.1	184.1	3.3

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**BUREAU VERITAS** MINERAL LABORATORIES  
 1875

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Bureau Veritas Commodities Canada Ltd.

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

**Client:** MacGregor, R.A.  
 26 Ford St.  
 Sault Ste. Marie Ontario P6A 4N4 Canada

**Project:** None Given  
**Report Date:** July 30, 2018

**Page:** 4 of 5

**Part:** 3 of 3

**CERTIFICATE OF ANALYSIS** VAN18001676 1

Method	MA200	MA200	MA200	MA200	MA200	
Analyte	In	Re	Se	Te	Tl	
Unit	ppm	ppm	ppm	ppm	ppm	
MDL	0.05	0.005	1	0.5	0.5	
IMA2629	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2630	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2631	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2632	Rock Pulp	0.11	<0.005	<1	<0.5	1.7
IMA2633	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2634	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2635	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2636	Rock Pulp	0.18	<0.005	1	<0.5	0.8
IMA2637	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2638	Rock Pulp	0.31	<0.005	2	<0.5	1.2
IMA2639	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2640	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2641	Rock Pulp	0.29	<0.005	2	<0.5	<0.5
IMA2642	Rock Pulp	0.08	<0.005	<1	<0.5	1.1
IMA2643	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2644	Rock Pulp	<0.05	<0.005	<1	<0.5	1.2
IMA2645	Rock Pulp	0.17	<0.005	<1	<0.5	0.9
IMA2646	Rock Pulp	<0.05	<0.005	1	<0.5	<0.5
IMA2647	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2648	Rock Pulp	0.07	<0.005	2	<0.5	1.2
IMA2649	Rock Pulp	<0.05	<0.005	<1	<0.5	2.8
IMA2650	Rock Pulp	0.25	<0.005	1	<0.5	0.8
IMA2651	Rock Pulp	<0.05	<0.005	1	<0.5	<0.5
IMA2652	Rock Pulp	0.12	0.009	2	<0.5	1.8
IMA2653	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2654	Rock Pulp	<0.05	<0.005	1	<0.5	1.0
IMA2655	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2656	Rock Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2657	Rock Pulp	0.09	0.008	1	<0.5	1.7
IMA2658	Rock Pulp	<0.05	<0.005	<1	<0.5	0.9

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Client: MacGregor, R.A.
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Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given
Report Date: July 30, 2018

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Part: 1 of 3

CERTIFICATE OF ANALYSIS VAN18001676 1

Table with 21 columns for analytes (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La) and 21 rows of data (IMA2859 to IMA2888). Includes Method, Analyte, Unit, and MDL headers.

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CERTIFICATE OF ANALYSIS

VAN18001676.1

Table with 20 columns (analytes) and multiple rows (samples). Headers include Method, Analyte, Unit, MDL, and various element symbols like Cr, Mg, Ba, Ti, Al, Na, K, W, Zr, Ce, Sn, Y, Nb, Ta, Be, Sc, Li, S, Rb, Hf. Values are in ppm or %.



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**Project:** None Given

**Report Date:** July 30, 2018

**Page:** 5 of 5

**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

VAN18001676 1

Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2859	Rock Pulp	0.07	<0.005	<1	<0.5	<0.5
IMA2860	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2861	Rock Pulp	0.07	<0.005	2	<0.5	1.2
IMA2862	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2863	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2864	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2865	Rock Pulp	0.05	<0.005	<1	<0.5	0.8
IMA2866	Rock Pulp	0.07	<0.005	3	<0.5	0.9
IMA2867	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2868	Rock Pulp	<0.05	<0.005	2	<0.5	0.9
IMA2869	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2870	Rock Pulp	<0.05	<0.005	1	<0.5	<0.5
IMA2871	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2872	Rock Pulp	<0.05	<0.005	1	<0.5	0.7
IMA2873	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2874	Rock Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2875	Rock Pulp	<0.05	<0.005	<1	<0.5	0.5
IMA2876	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2877	Rock Pulp	0.09	<0.005	<1	0.8	<0.5
IMA2878	Rock Pulp	<0.05	<0.005	<1	<0.5	0.5
IMA2879	Rock Pulp	<0.05	<0.005	4	<0.5	0.8
IMA2880	Rock Pulp	<0.05	<0.005	2	<0.5	0.7
IMA2881	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2882	Rock Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2883	Rock Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2884	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2885	Rock Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2886	Rock Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2887	Rock Pulp	<0.05	<0.005	1	<0.5	1.0
IMA2888	Rock Pulp	<0.05	<0.005	<1	<0.5	1.5



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Bureau Veritas Commodities Canada Ltd.  
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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: March 05, 2018  
Report Date: March 12, 2018  
Page: 1 of 5

**CERTIFICATE OF ANALYSIS**

VAN18000488 1

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 109

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	109	Sorting, labeling and boxing samples received as pulps			VAN
MA200	109	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

**SAMPLE DISPOSAL**

IMM-PLP Return Immediately after analysis

**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
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Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 12, 2018

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN18000488 1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	1	0.01	0.001	0.1	
IMA2460	Pulp	3.2	23.3	53.3	51	<0.1	30.8	10.4	100	1.66	10	30.9	124.6	26	<0.1	<0.1	0.3	57	0.13	0.031	151.9
IMA2461	Pulp	1.6	46.3	32.3	34	<0.1	42.3	17.1	127	2.24	14	19.0	93.3	21	0.1	0.1	0.4	73	0.10	0.028	121.7
IMA2462	Pulp	2.4	76.5	54.4	54	0.1	70.1	26.1	230	3.91	24	14.9	50.9	22	<0.1	0.3	0.4	141	0.10	0.045	73.9
IMA2463	Pulp	0.3	15.0	6.8	2	<0.1	7.2	3.2	40	0.74	3	2.9	16.2	32	<0.1	0.2	<0.1	8	0.16	0.003	22.2
IMA2464	Pulp	4.7	23.5	35.0	5	0.2	6.9	11.5	49	0.72	6	106.5	501.9	25	<0.1	0.2	0.3	12	0.16	0.058	574.4
IMA2465	Pulp	1.5	33.8	4.6	3	<0.1	6.4	1.8	40	0.40	2	3.5	10.6	18	<0.1	<0.1	0.7	8	0.06	0.013	14.5
IMA2466	Pulp	1.9	59.8	91.6	166	0.3	52.3	24.2	214	3.04	20	4.7	11.6	82	1.0	0.1	0.4	61	0.21	0.034	23.9
IMA2467	Pulp	2.1	139.1	12.1	39	0.2	120.1	44.8	292	5.42	31	5.1	12.1	16	<0.1	0.5	0.7	201	0.09	0.058	28.0
IMA2468	Pulp	2.3	106.8	10.5	69	0.1	107.4	56.6	487	7.12	41	4.7	11.0	15	<0.1	0.4	0.5	223	0.13	0.070	25.0
IMA2469	Pulp	9.3	56.2	344.1	2	0.2	24.4	39.4	149	2.23	16	451.3	2123.1	50	<0.1	0.4	1.6	18	0.29	0.209	>2000
IMA2470	Pulp	4.8	84.8	269.5	266	0.2	8.1	6.5	69	0.74	4	90.7	449.1	27	1.5	0.2	0.4	10	0.12	0.052	478.2
IMA2471	Pulp	8.2	64.2	78.1	1334	0.5	26.8	47.0	85	1.39	51	262.7	1843.0	37	8.6	0.4	2.1	17	0.24	0.183	1913.0
IMA2472	Pulp	4.8	25.0	8.8	5	0.1	8.9	4.4	62	0.59	4	6.4	32.8	20	<0.1	0.2	0.2	4	0.13	0.006	40.5
IMA2473	Pulp	8.0	19.0	35.1	36	0.1	10.7	12.7	70	0.87	13	135.4	891.2	27	0.2	0.3	0.7	12	0.13	0.096	1014.8
IMA2474	Pulp	6.7	22.6	477.0	67	0.2	12.6	18.7	72	1.08	11	338.2	1331.4	24	0.3	0.2	1.5	13	0.11	0.143	1487.1
IMA2475	Pulp	5.9	32.3	326.5	70	0.3	12.1	27.2	31	0.90	15	402.4	1690.2	27	0.2	0.2	1.3	10	0.07	0.196	>2000
IMA2476	Pulp	3.0	7.5	157.1	49	<0.1	5.5	7.7	32	0.49	6	77.4	507.5	26	<0.1	<0.1	0.6	8	0.11	0.057	611.8
IMA2477	Pulp	5.2	18.0	205.9	235	<0.1	10.6	14.9	75	0.89	6	119.7	795.1	28	1.3	0.1	0.4	10	0.09	0.083	876.1
IMA2478	Pulp	6.4	26.2	267.9	311	0.2	11.1	42.2	27	0.73	16	266.5	910.3	27	1.8	0.2	1.1	11	0.08	0.107	1047.9
IMA2479	Pulp	23.6	90.6	3720.4	373	2.7	17.8	95.3	43	1.86	97	3085.5	>4000	47	2.1	0.8	13.4	16	0.10	0.528	>2000
IMA2480	Pulp	20.8	68.7	335.8	161	0.8	18.1	59.8	80	1.46	82	1141.7	2291.2	30	0.9	0.2	4.3	16	0.15	0.207	>2000
IMA2481	Pulp	7.0	30.5	235.0	241	0.4	9.9	36.5	52	0.74	35	95.0	516.0	29	1.3	<0.1	0.6	10	0.10	0.081	612.6
IMA2482	Pulp	3.3	15.8	188.5	446	0.2	7.3	7.6	75	0.68	6	99.4	698.2	23	2.9	<0.1	0.1	19	0.15	0.076	908.8
IMA2483	Pulp	6.5	24.5	540.1	572	0.5	16.5	21.7	133	1.46	16	529.4	2781.6	39	3.9	0.1	0.4	23	0.34	0.234	>2000
IMA2484	Pulp	1.8	9.0	17.2	17	0.1	6.5	3.9	127	0.73	3	8.7	41.9	22	<0.1	<0.1	<0.1	7	0.18	0.008	51.4
IMA2485	Pulp	2.4	8.2	23.8	63	<0.1	7.0	5.2	69	0.76	3	59.9	339.8	26	0.3	<0.1	0.2	10	0.11	0.038	431.7
IMA2486	Pulp	3.6	10.3	45.3	256	0.1	11.6	5.7	66	0.92	3	16.4	84.0	22	1.9	<0.1	<0.1	8	0.03	0.014	107.2
IMA2487	Pulp	2.1	101.7	148.1	367	0.3	96.5	36.3	215	4.57	27	4.5	11.0	31	1.9	0.5	0.2	177	0.13	0.041	31.1
IMA2488	Pulp	1.6	56.3	86.6	322	0.3	81.6	27.3	233	4.43	20	3.6	8.7	37	0.9	0.3	0.5	146	0.12	0.040	26.0
IMA2489	Pulp	2.3	57.6	98.9	177	0.4	77.5	23.9	301	4.47	17	3.8	9.9	61	0.6	0.2	0.4	126	0.22	0.042	29.0

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Project: None Given  
Report Date: March 12, 2018

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# CERTIFICATE OF ANALYSIS

VAN18000488 1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
Unit	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2460	Pulp	103	0.51	532	0.136	7.16	0.281	5.01	0.9	123.1	275	1.9	13.7	6.2	0.6	2	8	8.7	0.1	234.2	3.9
IMA2461	Pulp	120	0.52	637	0.217	6.17	0.129	4.84	1.7	116.5	229	2.2	13.5	7.9	0.8	2	9	14.3	0.3	246.1	3.6
IMA2462	Pulp	192	0.94	598	0.390	9.35	0.155	5.60	2.4	145.0	150	3.1	13.1	8.8	0.9	4	18	24.8	0.4	304.5	4.3
IMA2463	Pulp	65	0.13	1054	0.036	4.18	0.084	5.31	0.4	52.9	42	0.5	2.7	2.8	0.2	<1	1	1.9	<0.1	193.4	1.7
IMA2464	Pulp	69	0.23	914	0.184	4.75	0.067	5.15	1.1	152.4	1081	2.4	43.6	17.6	2.0	2	3	7.0	0.1	263.7	4.2
IMA2465	Pulp	111	0.04	347	0.018	1.60	0.031	1.94	0.4	51.0	29	0.2	1.9	1.7	0.1	<1	<1	0.5	<0.1	72.9	1.4
IMA2466	Pulp	183	0.94	140	0.231	5.29	3.301	0.58	0.8	190.6	49	0.8	6.3	4.6	0.4	<1	8	15.2	0.2	31.3	5.3
IMA2467	Pulp	177	1.15	616	0.522	10.20	0.063	5.92	2.8	152.8	63	3.2	9.1	12.1	1.1	8	24	33.9	0.7	336.1	4.6
IMA2468	Pulp	177	1.48	539	0.646	9.72	0.054	5.41	2.8	174.0	60	3.9	10.0	11.3	0.9	6	25	35.0	0.7	289.9	4.6
IMA2469	Pulp	279	0.16	425	0.308	3.16	0.072	4.08	1.4	181.6	>2000	1.5	144.3	52.0	6.4	2	4	5.5	0.8	187.5	5.2
IMA2470	Pulp	141	0.13	1294	0.273	3.49	0.058	5.15	0.7	117.5	885	1.6	40.4	29.1	3.9	1	2	4.4	0.2	243.4	3.5
IMA2471	Pulp	309	0.18	687	0.462	3.72	0.047	4.00	1.4	304.8	>2000	2.2	142.3	50.6	6.2	<1	4	7.9	0.4	178.8	8.9
IMA2472	Pulp	264	0.02	741	0.043	3.16	0.056	4.43	0.4	99.3	84	0.5	4.4	4.2	0.4	<1	<1	0.6	<0.1	163.9	2.9
IMA2473	Pulp	225	0.15	770	0.371	3.45	0.050	4.23	1.2	249.1	1818	1.8	89.7	37.2	4.4	<1	3	5.0	0.1	192.8	7.3
IMA2474	Pulp	357	0.17	688	0.243	3.87	0.047	3.96	1.2	142.5	>2000	3.2	115.2	32.9	3.8	2	3	8.0	0.2	168.8	4.0
IMA2475	Pulp	142	0.08	706	0.294	3.11	0.049	3.82	1.2	161.2	>2000	2.0	139.9	41.0	4.7	1	2	6.3	0.4	148.8	4.6
IMA2476	Pulp	102	0.09	902	0.251	3.81	0.061	4.39	0.8	137.7	1151	1.9	42.4	24.7	2.6	1	2	3.8	<0.1	176.2	4.0
IMA2477	Pulp	282	0.11	872	0.258	3.75	0.066	4.97	0.6	144.5	1612	2.0	57.8	28.0	3.0	2	2	4.2	0.2	196.8	4.5
IMA2478	Pulp	112	0.11	786	0.415	3.67	0.058	4.64	1.0	178.0	1888	2.4	87.3	44.2	5.2	<1	2	5.1	0.3	189.6	4.5
IMA2479	Pulp	349	0.07	349	0.445	2.11	0.026	1.97	3.3	63.4	>2000	5.4	531.3	57.2	1.6	2	4	10.9	1.1	100.3	<0.1
IMA2480	Pulp	302	0.17	720	0.404	3.81	0.050	3.90	1.9	256.4	>2000	3.8	222.9	51.5	6.1	2	4	10.1	0.6	194.2	7.2
IMA2481	Pulp	140	0.17	1119	0.200	4.74	0.079	3.44	1.4	177.0	1132	3.3	41.2	20.8	2.6	2	3	10.3	0.1	181.9	6.4
IMA2482	Pulp	189	0.15	739	0.289	3.44	0.043	3.35	3.0	183.3	1548	2.0	60.2	28.2	3.7	1	2	4.0	0.1	180.8	5.4
IMA2483	Pulp	477	0.26	736	0.536	3.68	0.040	3.00	1.9	295.6	>2000	3.3	248.2	32.4	0.7	3	5	11.1	0.1	199.4	8.5
IMA2484	Pulp	210	0.13	854	0.084	3.54	0.049	3.20	0.6	100.2	95	1.1	5.8	7.0	0.7	<1	1	2.3	0.1	170.8	3.2
IMA2485	Pulp	246	0.13	879	0.235	3.69	0.051	3.33	0.6	183.5	758	1.4	30.4	22.0	2.5	<1	2	3.1	<0.1	183.5	5.3
IMA2486	Pulp	465	0.07	845	0.187	3.45	0.046	3.09	0.6	153.5	180	1.1	9.6	15.0	1.6	<1	<1	1.9	<0.1	183.8	4.3
IMA2487	Pulp	227	1.40	582	0.350	9.28	0.526	3.18	2.8	156.9	68	2.8	8.9	8.9	0.7	3	23	34.6	0.3	198.7	4.4
IMA2488	Pulp	194	1.42	447	0.315	8.06	1.072	3.43	1.8	134.8	53	2.4	7.9	6.9	0.6	2	17	34.8	0.2	206.5	3.6
IMA2489	Pulp	332	1.54	432	0.283	7.85	1.936	2.76	1.5	145.2	58	2.1	7.8	6.0	0.5	2	16	31.1	0.1	172.5	4.3

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28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 12, 2018

Page: 2 of 5

Part: 3 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18000488 1**

Method	Analyte	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
Unit		ppm	ppm	ppm	ppm	ppm
MDL		0.05	0.005	1	0.5	0.5
IMA2460	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2461	Pulp	0.12	0.013	<1	<0.5	1.2
IMA2462	Pulp	0.09	0.011	<1	0.8	1.6
IMA2463	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2464	Pulp	<0.05	0.005	<1	<0.5	1.1
IMA2465	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2466	Pulp	0.08	<0.005	<1	<0.5	<0.5
IMA2467	Pulp	0.12	0.011	2	0.5	1.8
IMA2468	Pulp	0.18	0.009	2	<0.5	1.7
IMA2469	Pulp	<0.05	0.006	<1	<0.5	0.9
IMA2470	Pulp	0.06	<0.005	<1	<0.5	1.4
IMA2471	Pulp	0.06	<0.005	<1	<0.5	0.9
IMA2472	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2473	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2474	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2475	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2476	Pulp	<0.05	<0.005	1	<0.5	0.9
IMA2477	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2478	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2479	Pulp	0.05	<0.005	<1	<0.5	0.9
IMA2480	Pulp	0.08	<0.005	<1	<0.5	1.1
IMA2481	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2482	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2483	Pulp	<0.05	<0.005	<1	0.9	1.2
IMA2484	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2485	Pulp	<0.05	<0.005	<1	<0.5	1.2
IMA2486	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2487	Pulp	0.08	<0.005	<1	<0.5	1.7
IMA2488	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2489	Pulp	0.05	<0.005	<1	<0.5	0.9

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Project: None Given  
Report Date: March 12, 2018

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN 18000488 1

Method Analyte Unit MDL	MA200																				
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2490	Pulp	2.5	56.2	118.6	186	0.3	82.2	27.6	293	4.70	21	3.8	9.9	57	0.6	0.3	0.2	145	0.14	0.041	30.8
IMA2491	Pulp	1.9	47.9	148.3	381	0.3	47.8	17.6	309	3.92	8	3.2	8.5	74	1.4	0.1	0.4	82	0.23	0.035	24.3
IMA2492	Pulp	2.4	84.0	485.2	757	0.5	58.1	21.2	297	4.21	12	4.0	9.6	75	3.6	0.2	0.4	95	0.18	0.040	24.4
IMA2493	Pulp	2.1	39.4	150.2	113	0.3	41.7	16.8	251	3.09	10	3.4	8.7	84	<0.1	<0.1	0.6	62	0.31	0.034	14.2
IMA2494	Pulp	2.1	49.7	145.6	321	0.3	87.8	31.5	828	4.84	22	3.6	8.9	61	1.3	0.2	0.5	133	0.16	0.046	28.0
IMA2495	Pulp	3.4	43.2	118.9	810	0.3	72.4	21.6	393	5.34	4	3.0	8.4	73	6.0	0.2	0.3	135	0.15	0.044	27.6
IMA2496	Pulp	2.2	50.3	416.1	864	0.5	58.0	18.5	277	3.52	9	3.6	8.9	70	4.5	0.1	0.3	85	0.28	0.037	25.6
IMA2497	Pulp	1.9	61.3	283.2	434	0.4	60.3	20.5	229	3.33	10	5.3	12.2	75	2.1	0.2	0.6	84	0.29	0.034	31.2
IMA2498	Pulp	2.2	58.8	240.1	450	0.4	65.3	19.8	232	4.01	18	3.9	8.5	67	2.2	0.1	0.3	93	0.14	0.040	23.3
IMA2499	Pulp	2.2	68.3	490.1	676	0.6	74.2	23.2	240	4.50	24	3.9	9.6	46	3.6	<0.1	0.6	108	0.11	0.039	24.1
IMA2500	Pulp	2.1	92.6	11.4	52	0.1	101.8	36.1	254	4.58	30	4.7	9.6	14	<0.1	0.4	0.5	200	0.08	0.050	21.6
IMA2501	Pulp	1.5	137.3	181.6	251	0.9	34.9	23.3	622	7.05	7	31.1	76.9	47	0.4	0.1	1.1	181	0.47	0.054	98.8
IMA2502	Pulp	0.3	194.9	139.5	276	1.1	71.8	46.0	1069	13.78	15	4.9	10.5	28	0.6	<0.1	1.5	336	0.27	0.102	22.8
IMA2503	Pulp	1.8	123.4	223.9	489	0.4	64.2	37.5	576	8.26	13	15.3	35.0	18	2.1	0.1	0.5	209	0.16	0.071	41.7
IMA2504	Pulp	2.2	111.7	58.4	198	0.2	54.4	31.2	415	7.27	5	23.1	54.3	20	0.6	<0.1	0.3	168	0.11	0.056	66.3
IMA2505	Pulp	2.5	117.0	107.8	96	0.5	34.4	22.4	480	6.26	6	36.1	93.1	49	<0.1	0.1	0.4	133	0.44	0.062	116.3
IMA2506	Pulp	0.5	157.3	116.8	209	0.9	76.2	47.7	1127	14.27	16	5.2	9.7	25	0.1	0.3	0.8	358	0.39	0.103	15.3
IMA2507	Pulp	2.4	466.8	331.2	279	1.3	19.6	16.7	185	2.68	7	42.2	98.7	43	1.8	0.3	0.8	49	0.14	0.044	125.9
IMA2508	Pulp	3.9	140.2	17.4	13	0.2	28.5	29.7	412	2.44	35	44.9	124.3	44	<0.1	0.2	0.7	85	0.77	0.046	161.4
IMA2509	Pulp	4.3	200.3	19.6	9	0.1	22.2	15.9	180	1.75	12	3.5	9.5	18	<0.1	0.1	1.8	21	0.23	0.005	14.5
IMA2510	Pulp	3.6	37.2	9.1	3	<0.1	19.2	10.4	62	0.92	11	2.0	5.7	20	<0.1	<0.1	0.3	16	0.04	0.002	9.3
IMA2511	Pulp	3.3	28.0	24.4	8	<0.1	18.1	7.0	113	1.35	7	11.9	67.1	39	<0.1	0.1	0.7	17	0.34	0.012	77.7
IMA2512	Pulp	3.3	33.7	14.4	12	<0.1	18.8	7.2	102	1.16	7	4.6	22.0	36	<0.1	<0.1	0.1	18	0.20	0.008	79.2
IMA2513	Pulp	4.3	6.3	13.7	3	<0.1	15.2	7.7	67	1.10	13	12.8	55.7	40	<0.1	<0.1	0.1	16	0.16	0.009	98.6
IMA2514	Pulp	2.4	16.9	19.9	5	0.2	9.2	4.4	53	0.67	3	41.3	241.0	21	<0.1	<0.1	0.5	10	0.09	0.033	430.1
IMA2515	Pulp	3.5	51.7	128.4	158	0.2	34.5	13.0	160	2.26	4	4.5	11.0	41	0.5	0.1	0.3	16	0.10	0.009	21.9
IMA2516	Pulp	8.1	31.0	37.9	4	0.2	13.9	13.9	77	1.12	8	106.0	592.1	25	<0.1	<0.1	0.4	12	0.13	0.074	699.2
IMA2517	Pulp	7.0	24.1	418.3	237	0.4	15.0	57.6	58	1.01	74	268.5	1001.0	15	1.4	0.3	1.9	13	0.03	0.108	1156.1
IMA2518	Pulp	6.9	239.8	217.9	8	0.8	11.7	13.2	143	1.92	25	116.8	534.6	34	<0.1	0.4	2.0	10	0.22	0.075	684.1
IMA2519	Pulp	5.0	6.4	52.0	12	0.1	4.3	2.5	36	0.68	<1	74.2	359.0	14	<0.1	<0.1	0.4	11	0.03	0.045	375.5

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Project: None Given  
Report Date: March 12, 2018

Page: 3 of 5

Part: 2 of 3

# CERTIFICATE OF ANALYSIS

VAN 18000488 1

Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
	Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA2490	Pulp	220	1.78	612	0.280	7.64	1.858	2.42	1.8	158.8	62	2.5	7.1	5.9	0.5	3	17	39.5	0.1	184.6	4.9
IMA2491	Pulp	207	1.37	177	0.184	6.38	2.840	1.20	0.8	140.8	51	1.4	5.7	3.4	0.3	1	11	24.7	0.1	67.2	4.3
IMA2492	Pulp	294	1.42	247	0.205	6.63	2.758	1.71	1.0	168.3	52	1.8	7.3	4.1	0.4	2	12	28.8	0.1	97.3	4.8
IMA2493	Pulp	255	0.92	88	0.151	5.56	3.345	0.59	0.5	152.3	31	0.8	4.9	3.2	0.3	<1	7	19.5	0.1	32.1	4.4
IMA2494	Pulp	277	1.74	351	0.217	7.16	2.138	2.46	1.3	149.6	59	2.2	6.9	4.1	0.4	3	15	36.8	0.1	142.1	4.5
IMA2495	Pulp	304	1.86	249	0.199	7.44	2.956	1.88	0.8	139.5	60	2.1	8.3	3.9	0.3	2	17	36.9	0.2	83.1	4.2
IMA2496	Pulp	248	1.28	258	0.222	5.90	2.700	1.41	1.0	151.5	50	1.5	7.2	4.6	0.4	1	10	22.3	0.2	84.6	4.2
IMA2497	Pulp	321	1.11	256	0.253	6.99	2.974	1.34	1.0	174.9	58	1.5	7.2	5.2	0.5	<1	12	20.5	0.2	77.9	5.3
IMA2498	Pulp	327	1.29	331	0.290	6.47	2.513	1.91	1.0	150.6	49	1.7	6.5	6.6	0.6	1	11	25.0	0.1	111.0	4.3
IMA2499	Pulp	256	1.33	358	0.319	6.55	1.682	2.80	1.6	145.0	49	1.7	7.4	7.9	0.7	2	12	30.8	<0.1	169.9	4.2
IMA2500	Pulp	205	0.98	621	0.544	10.05	0.055	4.09	3.2	158.9	51	3.6	7.4	13.0	1.2	5	23	33.7	0.5	235.3	4.6
IMA2501	Pulp	194	2.08	110	0.469	6.31	2.061	0.92	0.5	161.9	177	1.0	16.3	11.2	1.2	1	18	29.9	<0.1	66.0	4.8
IMA2502	Pulp	118	3.82	73	0.902	8.66	1.234	0.66	0.7	174.4	46	0.7	11.5	7.5	0.6	<1	39	52.6	<0.1	33.8	5.1
IMA2503	Pulp	210	1.93	295	0.590	7.43	0.563	2.71	1.8	156.0	88	2.0	13.0	11.2	1.1	3	22	31.3	0.4	131.5	4.6
IMA2504	Pulp	282	1.62	371	0.509	7.54	0.529	2.85	1.9	171.9	130	2.3	15.9	12.7	1.3	2	19	30.2	0.4	161.2	5.1
IMA2505	Pulp	330	1.38	215	0.451	6.19	1.866	1.41	0.9	163.3	230	1.1	19.8	12.8	1.4	1	14	20.8	0.2	90.0	4.6
IMA2506	Pulp	150	3.40	184	1.081	8.44	0.980	1.43	1.0	195.1	34	1.2	11.8	8.8	0.7	2	39	53.1	0.1	41.3	5.4
IMA2507	Pulp	182	0.80	372	0.266	5.05	1.632	2.02	1.1	194.4	223	1.5	19.3	13.8	1.6	1	6	15.9	0.3	134.0	5.4
IMA2508	Pulp	322	0.73	866	0.223	7.50	1.035	2.95	1.3	199.4	316	3.6	23.9	15.5	1.5	4	12	25.4	0.1	211.3	6.1
IMA2509	Pulp	597	0.29	652	0.038	3.57	0.042	3.08	0.7	47.4	26	1.1	2.9	2.6	0.2	<1	2	10.8	0.2	153.1	1.3
IMA2510	Pulp	444	0.06	633	0.013	2.42	0.043	3.08	1.3	36.6	17	0.6	1.3	1.3	0.1	<1	<1	1.5	0.1	121.7	1.1
IMA2511	Pulp	332	0.29	1333	0.135	5.06	0.058	3.33	0.7	129.9	132	1.9	9.2	13.2	1.4	1	3	11.6	<0.1	167.7	3.8
IMA2512	Pulp	358	0.22	1277	0.072	4.84	0.067	3.54	1.0	81.3	139	1.5	4.8	5.8	0.5	2	2	7.1	<0.1	191.3	2.3
IMA2513	Pulp	324	0.18	1599	0.091	5.40	0.158	3.92	1.1	131.6	163	1.2	6.9	7.6	0.7	<1	2	6.0	0.2	203.7	3.8
IMA2514	Pulp	344	0.09	1014	0.174	4.12	0.058	3.68	1.0	156.2	746	1.6	23.9	17.0	2.0	1	2	3.5	<0.1	182.8	4.6
IMA2515	Pulp	673	0.62	17	0.039	2.97	1.879	0.18	0.3	68.2	42	0.5	2.9	1.7	0.2	<1	2	10.5	0.2	7.2	2.1
IMA2516	Pulp	505	0.20	993	0.250	4.51	0.062	2.85	1.4	186.4	1312	3.3	50.3	27.0	3.4	2	2	8.8	0.1	183.4	5.4
IMA2517	Pulp	355	0.18	383	0.294	3.82	0.080	3.01	0.9	205.7	1932	5.7	94.2	31.4	3.8	3	3	10.2	0.1	189.6	5.9
IMA2518	Pulp	494	0.71	603	0.236	2.59	0.036	2.85	1.0	122.3	1207	1.4	49.2	24.3	1.8	<1	2	14.2	0.2	110.5	3.4
IMA2519	Pulp	129	0.21	415	0.283	4.19	0.038	3.35	0.5	213.6	663	3.1	36.0	21.3	2.1	3	2	6.2	<0.1	181.6	6.2

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Project: None Given  
Report Date: March 12, 2018

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Part: 3 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18000488 1**

Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2490	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2491	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2492	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2493	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2494	Pulp	0.06	<0.005	<1	<0.5	0.9
IMA2495	Pulp	0.14	<0.005	<1	<0.5	<0.5
IMA2496	Pulp	<0.05	<0.005	1	<0.5	<0.5
IMA2497	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2498	Pulp	<0.05	<0.005	1	<0.5	0.6
IMA2499	Pulp	0.07	<0.005	<1	<0.5	0.9
IMA2500	Pulp	0.06	0.011	1	<0.5	2.2
IMA2501	Pulp	0.06	<0.005	1	0.6	0.5
IMA2502	Pulp	<0.05	0.007	2	0.8	<0.5
IMA2503	Pulp	0.06	0.008	2	<0.5	1.0
IMA2504	Pulp	0.07	<0.005	2	<0.5	1.1
IMA2505	Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA2506	Pulp	0.07	<0.005	1	<0.5	0.8
IMA2507	Pulp	0.09	<0.005	1	<0.5	0.9
IMA2508	Pulp	<0.05	<0.005	<1	<0.5	1.5
IMA2509	Pulp	<0.05	<0.005	1	<0.5	0.8
IMA2510	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2511	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2512	Pulp	<0.05	<0.005	<1	<0.5	1.5
IMA2513	Pulp	<0.05	<0.005	<1	<0.5	1.7
IMA2514	Pulp	<0.05	<0.005	<1	<0.5	1.2
IMA2515	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2516	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2517	Pulp	0.07	<0.005	1	<0.5	0.9
IMA2518	Pulp	<0.05	<0.005	4	<0.5	0.9
IMA2519	Pulp	<0.05	<0.005	<1	<0.5	1.0

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Project: None Given  
Report Date: March 12, 2018

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Part: 1 of 3

**CERTIFICATE OF ANALYSIS** VAN18000488 1

Method	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1	
IMA2520	Pulp	8.4	138.3	135.3	471	0.4	8.6	11.7	82	1.05	5	159.8	520.1	22	3.9	0.2	0.8	18	0.38	0.081	509.2
IMA2521	Pulp	9.8	22.4	541.4	391	0.2	11.9	14.5	90	1.92	6	343.2	1437.0	20	2.6	0.3	0.7	18	0.14	0.174	1454.4
IMA2522	Pulp	3.2	5.6	4.3	3	<0.1	11.8	1.6	82	0.74	<1	2.0	7.9	36	<0.1	<0.1	<0.1	6	<0.01	0.004	11.6
IMA2523	Pulp	13.8	37.1	349.0	89	0.3	10.2	20.8	124	2.08	12	438.9	1587.9	24	0.6	0.3	1.8	17	0.12	0.167	1571.5
IMA2524	Pulp	4.4	34.5	9.7	10	0.1	8.7	9.0	36	0.51	8	23.5	140.5	18	<0.1	0.1	0.4	6	0.04	0.023	219.6
IMA2525	Pulp	4.7	37.8	24.6	49	<0.1	12.3	21.6	45	0.72	25	85.8	583.0	23	0.1	0.2	0.8	8	0.05	0.100	889.4
IMA2526	Pulp	2.5	19.8	103.3	243	0.1	7.2	4.7	115	0.61	3	13.0	82.2	15	1.3	<0.1	0.3	4	0.19	0.011	111.2
IMA2527	Pulp	3.7	1065.6	18.6	14	0.2	25.4	10.7	394	2.61	8	16.0	59.6	41	<0.1	0.1	0.7	64	0.83	0.037	90.4
IMA2528	Pulp	5.1	17.4	90.3	6	<0.1	11.6	7.9	197	1.24	4	84.9	517.2	37	<0.1	0.1	0.1	12	0.23	0.081	642.9
IMA2529	Pulp	5.1	27.1	16.6	7	<0.1	11.8	6.4	41	1.52	16	47.0	247.5	42	<0.1	0.2	0.2	21	0.10	0.029	217.3
IMA2530	Pulp	4.5	20.5	16.1	4	<0.1	13.3	9.0	32	1.06	22	31.8	239.3	39	<0.1	0.2	0.2	15	0.13	0.032	315.2
IMA2531	Pulp	2.1	158.5	8.1	25	0.2	48.2	24.5	203	4.51	25	11.9	39.8	55	<0.1	0.2	0.4	106	0.21	0.036	60.2
IMA2532	Pulp	3.5	319.4	144.5	73	0.4	40.3	25.1	590	4.97	68	17.9	61.3	63	<0.1	0.3	1.0	72	0.22	0.039	124.0
IMA2533	Pulp	3.4	320.5	38.2	11	0.3	23.0	12.0	291	2.65	18	37.9	91.0	40	<0.1	0.3	0.9	47	0.13	0.031	86.8
IMA2534	Pulp	3.3	470.4	215.9	88	0.3	16.0	9.7	170	1.63	17	20.2	67.0	41	0.5	0.2	0.6	31	0.08	0.020	68.1
IMA2535	Pulp	2.1	18.6	18.7	21	<0.1	25.6	10.0	184	2.66	11	13.9	63.7	57	<0.1	0.1	0.3	65	0.19	0.023	86.2
IMA2536	Pulp	2.0	187.5	11.5	10	<0.1	17.7	11.9	239	2.00	18	18.7	29.2	41	<0.1	0.2	0.4	53	0.22	0.024	54.1
IMA2537	Pulp	2.8	106.3	34.1	6	0.2	26.6	46.1	146	1.69	79	79.1	643.1	30	<0.1	0.4	1.2	30	0.38	0.099	817.7
IMA2538	Pulp	2.4	39.6	22.2	3	0.1	18.0	23.4	112	0.79	47	75.7	428.3	26	<0.1	0.2	0.4	15	0.23	0.047	494.0
IMA2539	Pulp	2.3	27.6	16.4	6	0.1	14.3	18.7	149	1.05	36	31.3	158.8	29	<0.1	0.2	0.3	20	0.30	0.019	189.2
IMA2540	Pulp	1.9	15.0	51.1	3	<0.1	4.2	4.3	32	0.41	6	45.5	240.9	23	<0.1	0.1	0.3	9	0.07	0.031	321.6
IMA2541	Pulp	3.0	9.4	19.5	3	<0.1	8.3	11.9	31	0.72	19	21.7	137.3	21	<0.1	0.1	0.3	12	0.03	0.020	166.9
IMA2542	Pulp	6.2	9.7	47.4	3	0.1	6.2	8.9	20	1.04	34	95.2	706.5	24	<0.1	0.2	0.3	9	0.03	0.080	735.7
IMA2543	Pulp	5.4	11.0	50.7	2	<0.1	7.0	11.0	36	0.69	21	188.3	1028.4	25	<0.1	0.2	0.2	12	0.06	0.125	1187.3
IMA2544	Pulp	4.1	31.6	54.6	7	0.3	9.7	15.0	44	0.85	27	237.6	1425.2	31	<0.1	0.3	0.8	15	0.09	0.188	1670.4
IMA2545	Pulp	2.4	14.4	56.4	4	<0.1	5.6	5.7	35	0.49	7	44.1	265.9	22	<0.1	0.1	0.3	8	0.07	0.038	314.6
IMA2546	Pulp	1.5	118.3	162.4	162	0.3	11.9	7.5	236	1.20	8	4.0	19.0	59	0.6	0.2	0.3	13	0.26	0.006	23.4
IMA2547	Pulp	3.2	31.9	12.4	7	<0.1	12.6	6.5	88	1.43	9	13.1	65.1	38	<0.1	0.2	0.1	31	0.14	0.009	65.5
IMA2548	Pulp	1.9	15.5	42.2	32	<0.1	7.0	2.9	88	0.84	4	5.0	29.2	46	<0.1	0.1	0.1	10	0.20	0.007	53.0
IMA2549	Pulp	4.0	16.2	24.7	12	<0.1	13.3	9.4	184	1.96	13	37.4	163.3	39	<0.1	0.2	0.6	25	0.25	0.022	189.6

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Project: None Given  
Report Date: March 12, 2018

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Part: 2 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18000488 1**

Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	
IMA2520	Pulp	163	0.33	800	0.286	3.76	0.148	3.40	0.6	176.6	894	4.1	62.7	26.1	2.7	2	3	18.1	0.2	179.2	4.8
IMA2521	Pulp	304	0.55	578	0.395	4.26	0.058	3.12	0.8	213.5	>2000	4.1	128.6	41.5	4.9	3	4	24.0	0.4	185.6	5.9
IMA2522	Pulp	476	<0.01	25	0.013	0.99	0.134	0.28	0.2	49.1	29	0.4	1.9	0.9	<0.1	<1	<1	0.7	<0.1	9.2	1.3
IMA2523	Pulp	189	0.80	527	0.421	3.43	0.077	2.27	0.9	223.9	>2000	3.3	148.6	45.8	5.1	3	4	21.4	0.5	158.5	6.0
IMA2524	Pulp	144	0.06	741	0.125	3.13	0.050	4.28	0.6	121.6	393	0.8	14.8	11.8	1.1	<1	1	1.8	<0.1	160.2	3.4
IMA2525	Pulp	246	0.07	653	0.292	3.28	0.057	3.91	1.0	224.9	1539	1.2	49.1	27.9	3.1	<1	2	2.6	0.1	152.4	6.2
IMA2526	Pulp	235	0.08	437	0.068	1.66	0.029	2.50	0.3	52.8	188	0.6	8.7	7.0	0.5	<1	<1	1.3	<0.1	98.2	1.4
IMA2527	Pulp	209	0.82	666	0.223	5.03	0.594	2.96	0.7	416.4	180	2.1	14.9	7.1	0.5	3	8	21.1	0.2	193.2	11.4
IMA2528	Pulp	441	0.11	637	0.257	3.54	0.100	3.65	0.6	136.8	1095	1.3	36.2	24.0	2.5	<1	2	3.1	<0.1	143.4	3.7
IMA2529	Pulp	185	0.26	1263	0.221	5.75	0.104	4.10	2.1	170.5	390	2.0	25.6	21.5	2.1	1	3	6.6	0.2	182.2	4.6
IMA2530	Pulp	118	0.11	1231	0.182	4.96	0.101	3.77	1.2	146.0	527	1.6	23.9	16.6	1.7	<1	2	3.9	0.2	147.1	3.9
IMA2531	Pulp	163	1.06	678	0.421	7.09	1.942	3.13	0.7	429.4	116	2.0	11.5	10.8	0.9	2	12	28.2	0.2	181.5	11.3
IMA2532	Pulp	206	0.82	785	0.304	6.45	1.845	3.01	0.5	459.4	219	3.4	11.2	8.9	0.7	1	11	16.9	0.4	127.6	12.1
IMA2533	Pulp	226	0.43	716	0.187	4.52	1.129	3.05	0.4	328.2	155	1.8	12.0	7.9	0.8	<1	6	10.0	0.2	108.0	8.9
IMA2534	Pulp	122	0.26	794	0.145	4.26	1.230	3.24	0.2	247.8	121	1.0	7.9	6.2	0.6	<1	4	5.5	0.1	96.3	6.4
IMA2535	Pulp	153	0.82	691	0.239	7.16	3.556	3.00	0.4	113.8	159	2.2	9.6	6.9	0.6	1	8	14.7	<0.1	116.8	2.9
IMA2536	Pulp	107	0.41	682	0.129	6.10	2.352	3.00	0.4	190.1	100	1.6	6.4	5.1	0.4	<1	7	7.8	<0.1	133.8	5.4
IMA2537	Pulp	181	0.22	289	0.210	3.22	0.178	3.39	1.6	208.2	1480	1.5	56.3	21.4	3.1	<1	4	7.8	1.1	160.2	5.7
IMA2538	Pulp	195	0.11	616	0.278	2.88	0.043	2.51	1.8	294.7	873	1.2	38.0	26.1	2.6	<1	3	3.0	0.3	120.1	8.0
IMA2539	Pulp	175	0.29	843	0.195	4.57	0.053	3.68	1.2	283.4	296	4.0	18.6	17.3	1.8	2	5	11.3	0.2	213.2	7.7
IMA2540	Pulp	92	0.08	938	0.178	4.41	0.075	3.39	0.9	138.0	568	1.7	23.1	16.2	1.8	<1	2	2.9	<0.1	150.6	3.7
IMA2541	Pulp	180	0.05	819	0.111	3.98	0.068	4.08	0.8	130.6	303	1.5	14.2	9.3	0.9	<1	2	2.1	0.3	169.1	3.6
IMA2542	Pulp	110	0.06	799	0.189	3.69	0.058	4.10	1.3	169.1	1332	1.8	58.4	19.2	2.2	<1	2	4.8	0.7	180.8	4.8
IMA2543	Pulp	172	0.11	777	0.302	3.75	0.059	3.47	2.2	221.4	>2000	2.6	84.9	31.1	3.7	1	3	6.9	0.2	165.9	6.2
IMA2544	Pulp	146	0.18	935	0.347	5.31	0.099	4.02	1.6	295.1	>2000	5.4	129.2	35.8	4.2	2	3	9.6	0.2	210.8	8.4
IMA2545	Pulp	137	0.09	849	0.148	4.12	0.061	4.02	0.9	144.3	577	1.8	23.0	12.3	1.4	<1	2	2.8	<0.1	174.6	4.2
IMA2546	Pulp	178	0.25	650	0.079	4.52	1.402	3.38	0.3	79.7	46	0.6	4.0	3.6	0.4	<1	2	7.1	<0.1	107.4	2.2
IMA2547	Pulp	209	0.31	1248	0.150	6.34	0.094	3.82	0.7	141.5	117	2.3	8.2	11.5	1.0	2	5	11.3	<0.1	178.3	3.9
IMA2548	Pulp	110	0.18	1149	0.085	5.02	0.432	4.15	0.8	65.5	96	1.0	4.3	6.4	0.6	<1	2	5.7	<0.1	150.4	1.8
IMA2549	Pulp	105	0.42	1163	0.165	5.90	0.082	3.45	0.9	216.6	350	2.4	19.2	13.9	1.4	2	4	16.4	0.2	140.1	6.2

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**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 12, 2018

Page: 4 of 5

Part: 3 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18000488 1**

Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2520	Pulp	0.14	<0.005	<1	<0.5	0.9
IMA2521	Pulp	0.07	<0.005	<1	<0.5	1.1
IMA2522	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2523	Pulp	<0.05	<0.005	2	<0.5	1.0
IMA2524	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2525	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2526	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA2527	Pulp	0.09	<0.005	<1	<0.5	0.9
IMA2528	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2529	Pulp	<0.05	<0.005	<1	<0.5	1.3
IMA2530	Pulp	<0.05	<0.005	<1	<0.5	1.2
IMA2531	Pulp	0.06	<0.005	<1	<0.5	1.3
IMA2532	Pulp	0.08	<0.005	<1	<0.5	0.8
IMA2533	Pulp	0.06	<0.005	<1	<0.5	0.7
IMA2534	Pulp	<0.05	<0.005	<1	<0.5	0.5
IMA2535	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2536	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2537	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2538	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2539	Pulp	0.05	<0.005	<1	<0.5	1.1
IMA2540	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2541	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2542	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2543	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2544	Pulp	0.05	<0.005	<1	<0.5	1.3
IMA2545	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA2546	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2547	Pulp	<0.05	<0.005	<1	<0.5	1.4
IMA2548	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2549	Pulp	<0.05	<0.005	<1	<0.5	1.0

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Project: None Given  
Report Date: March 12, 2018

Page: 5 of 5

Part: 1 of 3

**CERTIFICATE OF ANALYSIS**

**VAN18000488 1**

Method	Analyte	MA200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1
IMA2550	Pulp	2.6	64.5	273.0	355	0.3	29.5	22.9	264	4.11	11	58.3	131.6	62	1.6	0.2	0.3	66	0.15	0.055	140.3
IMA2551	Pulp	2.9	35.9	178.9	200	0.2	19.7	12.5	210	3.00	5	58.8	136.8	69	0.7	0.2	0.4	57	0.14	0.044	149.0
IMA2552	Pulp	3.0	37.7	112.5	78	0.2	17.2	12.3	220	2.88	4	56.2	134.3	62	0.1	0.2	0.5	46	0.16	0.040	142.9
IMA2553	Pulp	3.6	25.7	208.6	187	0.3	25.2	11.8	248	2.97	3	61.2	143.7	59	0.7	0.2	0.8	54	0.19	0.036	150.3
IMA2554	Pulp	1.4	12.4	40.3	92	<0.1	50.3	17.7	366	5.17	7	6.0	14.6	45	0.1	0.2	<0.1	120	0.09	0.013	21.5
IMA2555	Pulp	2.3	16.0	229.4	372	0.1	47.7	15.0	361	4.66	4	6.2	22.1	71	1.5	0.2	0.1	99	0.10	0.012	33.1
IMA2556	Pulp	2.3	17.9	50.7	107	0.1	46.7	19.3	330	4.35	15	4.2	15.0	78	0.5	0.2	0.2	88	0.13	0.024	31.3
IMA2557	Pulp	2.5	14.7	15.6	11	0.2	12.0	6.4	59	2.20	1	15.9	77.9	66	<0.1	0.1	0.2	29	0.02	0.010	86.4
IMA2558	Pulp	2.8	38.9	11.3	18	0.2	40.3	20.4	124	3.42	13	21.8	70.6	54	<0.1	0.2	0.1	97	0.08	0.011	79.1
IMA2559	Pulp	2.2	37.6	6.7	18	0.2	40.5	20.0	145	3.89	15	10.1	37.6	66	<0.1	0.2	0.2	106	0.12	0.031	69.0
IMA2560	Pulp	2.2	23.6	59.7	138	<0.1	49.4	27.8	343	4.79	24	6.6	24.7	66	0.2	0.2	0.1	101	0.12	0.040	53.4
IMA2561	Pulp	3.1	69.6	309.4	504	0.3	38.3	23.6	283	4.48	15	21.6	77.5	58	2.4	<0.1	0.5	74	0.12	0.038	104.1
IMA2562	Pulp	1.8	49.6	24.9	165	0.2	51.3	18.3	281	4.94	10	7.2	22.7	57	0.7	0.2	0.2	124	0.10	0.027	36.9
IMA2563	Pulp	1.8	3.5	1.5	1	<0.1	7.8	1.0	36	0.41	<1	0.9	3.4	23	<0.1	<0.1	<0.1	4	<0.01	0.002	9.4
IMA2564	Pulp	6.3	43.0	149.4	9	0.3	13.2	24.1	23	0.69	34	121.6	927.1	27	<0.1	0.2	1.4	<1	0.04	0.115	1142.6
IMA2565	Pulp	3.3	16.2	20.3	3	0.1	9.9	14.6	79	0.66	21	51.7	270.5	29	<0.1	0.1	0.5	13	0.18	0.034	302.3
IMA2566	Pulp	1.8	20.4	12.8	4	<0.1	10.4	2.1	57	1.21	4	10.1	42.5	43	<0.1	<0.1	<0.1	10	0.14	0.009	74.0
IMA2567	Pulp	2.6	37.7	11.8	4	<0.1	5.4	2.6	82	0.74	4	14.8	86.3	32	<0.1	0.2	0.3	12	0.18	0.014	120.7
IMA2568	Pulp	6.8	28.6	13.6	3	<0.1	9.5	4.0	41	1.09	5	23.6	154.4	37	<0.1	0.2	0.2	10	0.07	0.022	215.0

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Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 12, 2018

Page: 5 of 5

Part: 2 of 3

**CERTIFICATE OF ANALYSIS** VAN13000488 1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	
		Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
Unit		ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
MDL		1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1
IMA2550	Pulp	280	0.82	632	0.371	5.73	1.837	3.18	0.7	194.6	263	3.3	23.6	17.1	1.8	1	7	17.6	0.2	190.9	5.6
IMA2551	Pulp	194	0.83	694	0.314	6.16	1.820	3.25	0.7	197.3	264	6.2	23.8	18.5	2.3	1	6	16.6	0.1	162.6	5.4
IMA2552	Pulp	186	0.59	625	0.287	5.32	1.621	3.13	0.7	181.7	257	3.2	22.3	15.0	1.8	1	5	17.3	0.1	135.9	5.2
IMA2553	Pulp	345	0.86	735	0.302	5.88	1.103	3.88	0.7	198.4	289	2.2	26.1	17.8	2.1	2	6	21.2	<0.1	184.1	5.5
IMA2554	Pulp	157	1.36	871	0.412	8.66	1.108	4.19	1.2	116.0	43	3.9	8.6	11.7	1.0	4	12	40.6	<0.1	283.2	3.3
IMA2555	Pulp	172	1.18	737	0.384	7.98	1.982	4.35	0.9	172.4	64	2.8	6.5	10.4	0.9	3	11	32.4	<0.1	263.5	4.9
IMA2556	Pulp	247	1.03	883	0.331	7.20	2.119	3.90	0.7	169.1	62	2.1	6.2	7.9	0.7	2	10	27.8	<0.1	238.0	4.9
IMA2557	Pulp	128	0.57	1426	0.283	6.96	0.386	6.37	0.7	172.5	155	2.2	10.8	17.6	1.7	2	4	21.0	<0.1	216.0	4.7
IMA2558	Pulp	134	0.96	1151	0.432	8.83	1.159	5.02	0.9	462.6	148	3.9	15.2	15.6	1.3	4	12	37.0	0.2	272.2	13.4
IMA2559	Pulp	137	1.10	885	0.423	8.38	2.028	4.56	1.0	391.4	131	3.2	12.0	13.1	1.0	4	13	34.8	0.1	248.5	11.1
IMA2560	Pulp	147	1.14	668	0.425	6.58	1.762	3.91	0.7	238.4	103	1.7	8.1	9.7	0.8	2	12	28.8	<0.1	258.1	7.0
IMA2561	Pulp	179	0.88	728	0.425	6.95	2.015	3.13	0.7	621.7	188	2.0	15.7	12.6	1.0	<1	11	19.6	0.2	122.2	15.7
IMA2562	Pulp	162	1.24	758	0.406	7.65	2.017	4.21	0.9	281.7	78	2.9	8.9	9.8	0.9	3	13	32.5	<0.1	217.1	7.6
IMA2563	Pulp	212	<0.01	16	0.007	0.75	0.098	0.21	<0.1	67.1	18	0.2	1.4	0.5	<0.1	<1	<1	1.0	<0.1	6.9	1.5
IMA2564	Pulp	138	0.02	696	0.235	2.98	0.051	4.01	2.1	135.3	>2000	1.2	72.7	29.1	3.6	<1	2	2.6	0.4	153.9	3.8
IMA2565	Pulp	188	0.15	924	0.218	4.56	0.070	5.24	1.4	200.1	546	2.6	29.7	17.8	2.0	1	3	7.6	0.3	230.0	5.6
IMA2566	Pulp	150	0.20	1402	0.073	5.69	0.207	6.34	0.3	103.8	126	0.7	5.9	8.2	0.5	<1	1	7.4	<0.1	208.9	2.9
IMA2567	Pulp	120	0.13	1051	0.087	4.29	0.281	4.55	0.7	101.7	207	0.8	9.7	6.9	0.6	<1	2	2.5	<0.1	169.9	2.8
IMA2568	Pulp	242	0.07	1121	0.152	4.43	0.082	5.42	1.3	109.5	379	0.9	16.5	13.7	1.5	<1	1	3.0	<0.1	190.7	3.0

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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 12, 2018

Page: 5 of 5

Part: 3 of 3

# CERTIFICATE OF ANALYSIS

VAN18000488 1

	Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA2550	Pulp	<0.05	<0.005	<1	<0.5	1.6
IMA2551	Pulp	<0.05	<0.005	<1	<0.5	1.2
IMA2552	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2553	Pulp	0.05	<0.005	<1	<0.5	0.9
IMA2554	Pulp	0.06	<0.005	<1	<0.5	1.8
IMA2555	Pulp	<0.06	<0.005	<1	<0.5	1.5
IMA2556	Pulp	0.07	<0.005	<1	<0.5	1.4
IMA2557	Pulp	<0.06	<0.005	<1	<0.5	1.1
IMA2558	Pulp	0.07	<0.005	<1	<0.5	1.6
IMA2559	Pulp	0.06	<0.005	<1	<0.5	1.2
IMA2560	Pulp	<0.06	<0.005	<1	<0.5	1.6
IMA2561	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA2562	Pulp	0.06	<0.005	<1	<0.5	1.1
IMA2563	Pulp	<0.06	<0.005	<1	<0.5	<0.5
IMA2564	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA2565	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2566	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA2567	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA2568	Pulp	<0.05	<0.005	<1	<0.5	1.0



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**Client:** **MacGregor, R.A.**  
28 Ford St.  
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Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: March 07, 2017  
Report Date: March 15, 2017  
Page: 1 of 7

## CERTIFICATE OF ANALYSIS

**VAN17000385.1**

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 158

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	157	Sorting, labeling and boxing samples received as pulps			VAN
MA200	157	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN
DRPLP	157	Warehouse handling / disposition of pulps			VAN

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

  
**JEFFREY CANNON**  
Geochemistry Department Supervisor

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\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: None Given  
Report Date: March 15, 2017

Page: 2 of 7

Part: 1 of 3

# CERTIFICATE OF ANALYSIS

## VAN17000385.1

Method	Analyte	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	1	0.01	0.001	0.1
IMA1839	Pulp	0.4	38.1	3.7	72	<0.1	104.5	27.7	894	4.44	3	1.2	5.1	575	0.2	3.1	<0.1	118	4.24	0.082	31.0
IMA1840	Pulp	1.2	32.0	13.4	76	<0.1	176.5	24.3	735	4.00	76	0.6	1.9	645	0.2	7.3	0.2	101	2.45	0.050	15.6
IMA1841	Pulp	2.3	41.0	5.7	65	<0.1	242.3	29.2	920	4.91	23	0.5	1.9	592	<0.1	3.3	0.2	116	2.45	0.048	14.6
IMA1842	Pulp	15.6	104.3	5.0	99	0.1	99.7	43.5	1381	7.65	2	0.6	1.6	359	0.1	0.2	0.4	249	6.18	0.086	12.1
IMA1843	Pulp	2.3	56.8	41.2	49	0.2	23.7	11.2	464	2.64	2	0.4	1.0	365	0.1	<0.1	0.5	68	1.99	0.042	8.7
IMA1844	Pulp	1.5	132.8	8.0	24	0.3	96.4	24.3	656	3.83	48	0.7	2.1	409	0.1	0.4	0.5	132	2.94	0.071	19.5
IMA1845	Pulp	8.1	85.4	7.4	60	0.2	133.3	35.8	788	5.11	7	3.0	8.0	344	0.2	0.8	0.3	211	5.28	0.180	44.9
IMA1846	Pulp	1.0	56.2	14.0	76	0.1	77.5	33.2	1041	5.03	1	1.7	6.1	870	0.2	1.0	0.3	136	5.59	0.173	40.2
IMA1847	Pulp	2.4	19.3	3.8	23	0.1	47.9	11.2	557	2.87	29	0.3	0.9	352	<0.1	0.8	0.1	69	3.06	0.030	8.1
IMA1848	Pulp	2.6	5.7	26.2	4	<0.1	7.5	4.2	25	0.33	5	17.3	75.5	21	<0.1	0.2	0.5	8	0.03	0.011	92.7
IMA1849	Pulp	6.9	24.9	53.5	13	0.2	11.2	25.0	123	1.81	36	128.0	705.0	25	<0.1	0.6	0.6	15	0.26	0.078	329.0
IMA1850	Pulp	3.3	22.1	11.3	74	<0.1	27.5	18.2	1187	4.92	3	3.7	4.9	511	0.1	0.4	0.2	119	8.02	0.106	40.9
IMA1851	Pulp	29.0	209.6	18.6	115	0.3	80.1	31.8	589	7.96	2	4.2	9.7	93	0.3	<0.1	0.7	281	1.08	0.105	37.1
IMA1852	Pulp	22.8	182.3	22.5	101	0.3	71.3	29.0	589	7.71	2	6.9	16.8	133	0.4	<0.1	0.8	178	1.04	0.082	61.9
IMA1853	Pulp	13.3	159.2	18.8	55	0.2	78.5	33.6	451	8.73	2	5.4	9.6	113	0.3	<0.1	0.9	153	0.24	0.056	36.6
IMA1854	Pulp	8.0	109.2	21.2	48	0.2	51.2	21.3	353	5.49	4	4.1	8.1	132	0.2	<0.1	0.6	130	0.22	0.044	30.8
IMA1855	Pulp	28.0	215.5	16.4	118	0.4	84.9	35.3	699	9.21	1	8.8	23.7	94	0.7	<0.1	0.7	173	0.71	0.064	86.7
IMA1856	Pulp	29.0	221.3	10.9	81	0.4	91.4	38.8	567	9.98	1	6.7	17.2	89	0.4	<0.1	1.1	191	0.73	0.074	61.9
IMA1857	Pulp	23.7	192.6	19.0	47	0.4	89.8	35.9	385	8.23	3	5.8	11.4	137	0.2	<0.1	1.2	125	0.60	0.094	48.4
IMA1858	Pulp	40.4	174.3	55.8	250	0.2	85.8	32.1	1827	9.29	1	25.6	11.0	63	0.3	<0.1	0.5	186	0.59	0.095	45.8
IMA1859	Pulp	31.3	199.4	28.2	150	0.3	66.4	22.2	968	7.15	3	18.3	12.2	289	0.4	<0.1	0.4	119	1.53	0.130	77.0
IMA1860	Pulp	15.3	122.0	14.6	174	0.3	34.9	13.0	2162	7.33	1	10.1	10.6	128	0.5	<0.1	0.2	79	1.92	0.118	55.3
IMA1861	Pulp	19.3	181.7	9.0	239	0.2	37.8	29.1	4985	13.75	<1	5.8	5.7	193	0.8	<0.1	0.2	184	4.13	0.724	52.1
IMA1862	Pulp	3.7	38.9	5.8	157	<0.1	52.0	48.9	1980	9.25	<1	1.2	0.7	300	0.1	<0.1	0.2	298	7.38	0.061	13.6
IMA1863	Pulp	14.2	249.8	10.6	111	0.1	79.0	52.3	1308	9.04	<1	6.2	4.0	254	0.1	0.1	0.4	271	5.09	0.071	25.2
IMA1864	Pulp	23.2	180.8	35.8	158	0.3	47.3	19.7	2000	7.72	<1	17.3	14.8	149	0.7	<0.1	0.3	109	1.51	0.161	78.7
IMA1865	Pulp	21.0	175.8	36.9	48	0.7	83.9	28.0	598	6.10	1	7.0	14.3	192	0.3	<0.1	0.6	124	1.98	0.083	53.2
IMA1866	Pulp	18.2	222.5	25.7	47	0.3	94.0	38.3	397	9.73	<1	10.1	13.5	139	<0.1	<0.1	0.7	154	1.04	0.060	44.9
IMA1867	Pulp	5.6	180.7	115.8	16	0.5	31.2	10.9	67	3.00	1	482.7	586.5	124	0.1	0.1	0.3	22	0.63	0.024	38.5
IMA1868	Pulp	15.4	280.9	38.6	21	0.3	89.3	36.0	196	8.41	<1	13.1	17.3	189	0.1	<0.1	0.9	68	0.85	0.048	40.6

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Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 15, 2017

Page: 2 of 7

Part: 2 of 3

# CERTIFICATE OF ANALYSIS

## VAN17000385.1

Method	Analyte	Unit	MDL	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200		
				Cr	Mg	Ba	Tl	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	
				ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
				1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1
IMA1839	Pulp	328	4.05	909	0.117	6.17	2.814	0.88	1.4	108.0	65	0.7	11.1	1.0	<0.1	<1	17	25.1	<0.1	31.7	3.0			
IMA1840	Pulp	279	2.23	729	0.109	7.11	3.449	1.75	6.8	62.6	35	0.5	5.5	1.0	<0.1	1	12	7.6	0.3	45.3	1.9			
IMA1841	Pulp	428	2.35	740	0.086	6.60	2.476	1.89	4.9	61.1	33	0.4	5.3	0.6	<0.1	<1	13	6.5	0.6	56.7	1.7			
IMA1842	Pulp	136	3.78	559	0.595	5.90	1.547	3.00	1.3	72.3	28	1.3	21.4	3.6	0.2	1	31	12.2	0.9	100.4	2.0			
IMA1843	Pulp	62	1.05	574	0.212	6.89	5.226	1.00	0.4	64.6	21	0.7	6.4	2.2	0.1	1	7	10.2	0.3	28.2	2.1			
IMA1844	Pulp	587	2.25	37	0.149	5.84	4.425	0.06	13.3	88.5	43	0.6	9.0	1.7	0.1	<1	16	9.9	0.8	1.0	2.4			
IMA1845	Pulp	301	3.39	435	0.199	6.88	4.095	0.08	1.6	245.2	96	1.2	22.1	2.2	0.1	2	21	18.0	0.6	1.3	6.1			
IMA1846	Pulp	209	4.02	258	0.370	6.28	2.904	2.82	0.3	144.0	86	1.1	14.1	3.2	0.2	2	18	13.9	0.8	142.9	3.7			
IMA1847	Pulp	26	1.77	545	0.120	7.56	4.962	1.25	7.3	71.9	18	1.6	6.5	1.1	<0.1	1	5	7.3	0.8	28.5	2.2			
IMA1848	Pulp	84	0.06	611	0.091	3.98	0.070	4.39	0.2	85.0	161	1.4	9.3	7.1	0.8	<1	1	2.0	<0.1	180.0	2.4			
IMA1849	Pulp	155	0.16	262	0.253	2.47	0.070	3.89	3.2	184.8	600	1.5	55.3	32.4	3.5	<1	2	4.6	1.4	151.6	5.2			
IMA1850	Pulp	74	3.48	997	0.617	6.60	1.917	3.76	1.0	80.2	83	5.0	46.9	7.7	0.5	2	15	36.7	0.3	155.4	2.6			
IMA1851	Pulp	194	1.32	84	0.297	6.14	0.993	3.35	0.8	277.6	82	1.4	16.3	2.6	0.2	5	13	65.0	3.7	134.2	7.7			
IMA1852	Pulp	160	1.53	128	0.249	7.17	1.135	3.98	0.5	523.7	131	1.4	20.9	17.5	1.2	4	9	75.0	3.0	152.7	11.2			
IMA1853	Pulp	153	1.08	44	0.240	7.53	0.537	4.44	0.6	259.7	84	1.2	15.0	1.9	0.1	4	19	75.0	3.8	147.0	7.3			
IMA1854	Pulp	173	0.89	95	0.199	6.94	0.514	4.69	0.6	202.6	71	1.2	12.4	1.5	<0.1	2	17	71.3	2.4	153.6	5.8			
IMA1855	Pulp	175	2.03	112	0.275	7.35	0.715	3.51	0.4	874.1	187	1.7	27.6	29.3	1.4	5	9	98.5	3.3	135.9	16.9			
IMA1856	Pulp	188	1.48	50	0.229	6.49	0.632	2.85	0.6	620.8	132	1.3	21.3	13.5	0.8	5	12	78.5	4.2	119.9	12.8			
IMA1857	Pulp	206	0.90	54	0.189	6.87	0.627	3.82	1.1	271.7	108	1.1	18.6	1.7	0.1	3	15	63.4	3.6	140.3	6.8			
IMA1858	Pulp	118	0.81	255	0.615	7.99	2.886	4.50	2.7	543.8	102	3.8	37.9	24.3	1.3	6	17	52.3	2.8	175.4	12.0			
IMA1859	Pulp	106	0.95	111	0.627	8.06	2.929	4.26	0.8	955.8	170	1.7	75.7	35.7	2.1	7	10	47.6	2.6	203.8	24.0			
IMA1860	Pulp	138	0.90	253	0.581	7.37	1.813	2.94	2.8	758.0	130	5.0	106.1	30.1	1.8	8	9	43.8	1.3	131.1	17.9			
IMA1861	Pulp	121	1.77	262	1.871	8.18	0.889	2.20	9.9	521.2	106	6.1	89.9	16.7	1.0	6	21	51.4	1.4	155.9	9.9			
IMA1862	Pulp	110	4.70	254	0.931	7.79	1.542	0.94	1.0	36.9	26	2.7	36.2	2.4	0.2	<1	35	21.5	0.2	38.7	1.8			
IMA1863	Pulp	165	3.52	268	0.784	8.06	1.360	1.68	1.9	124.4	51	1.9	29.7	3.1	0.2	2	29	49.0	1.7	72.2	3.8			
IMA1864	Pulp	185	0.90	285	0.654	7.78	1.693	4.85	2.7	1006.0	177	4.5	119.6	43.5	2.5	8	9	46.2	2.4	154.6	26.3			
IMA1865	Pulp	282	1.56	71	0.233	6.62	1.948	2.41	2.1	490.0	115	1.0	31.6	17.2	1.2	5	9	44.6	3.6	99.0	11.2			
IMA1866	Pulp	206	1.10	65	0.208	6.90	2.068	3.34	1.4	274.6	96	0.8	15.3	4.0	0.3	6	14	63.6	3.9	178.3	8.7			
IMA1867	Pulp	322	0.13	84	0.029	3.34	1.465	0.70	1.4	1433.0	74	0.3	48.6	1.2	0.1	6	2	12.2	1.5	22.9	86.2			
IMA1868	Pulp	242	0.48	48	0.109	6.30	1.865	3.88	1.5	214.3	85	0.7	14.6	1.7	0.1	3	8	26.8	4.1	176.0	6.7			

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**Project:** None Given  
**Report Date:** March 15, 2017

**Page:** 2 of 7

**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

**VAN17000385.1**

Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA1839	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1840	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1841	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1842	Pulp	0.07	0.006	<1	0.8	0.7
IMA1843	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1844	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1845	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1846	Pulp	<0.05	<0.005	<1	<0.5	1.7
IMA1847	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1848	Pulp	<0.05	<0.005	2	<0.5	0.9
IMA1849	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA1850	Pulp	0.07	0.005	1	0.9	1.2
IMA1851	Pulp	0.08	0.018	3	<0.5	4.7
IMA1852	Pulp	<0.05	0.012	2	<0.5	5.3
IMA1853	Pulp	0.08	0.008	<1	<0.5	4.9
IMA1854	Pulp	0.08	0.006	<1	<0.5	4.9
IMA1855	Pulp	0.14	0.015	2	<0.5	6.0
IMA1856	Pulp	0.08	0.017	3	<0.5	4.1
IMA1857	Pulp	0.09	0.011	<1	<0.5	4.2
IMA1858	Pulp	0.19	0.017	3	<0.5	3.9
IMA1859	Pulp	0.12	0.018	3	<0.5	2.9
IMA1860	Pulp	0.18	0.006	<1	<0.5	1.7
IMA1861	Pulp	0.31	0.012	1	<0.5	2.2
IMA1862	Pulp	0.15	<0.005	<1	0.9	0.8
IMA1863	Pulp	0.09	0.010	2	0.5	1.3
IMA1864	Pulp	0.18	0.012	2	<0.5	2.5
IMA1865	Pulp	0.08	0.007	2	<0.5	4.4
IMA1866	Pulp	0.07	0.017	<1	<0.5	4.9
IMA1867	Pulp	<0.05	0.011	<1	<0.5	<0.5
IMA1868	Pulp	<0.05	0.010	3	<0.5	3.2

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**CERTIFICATE OF ANALYSIS** **VAN17000385.1**

Method	Analyte	Unit	MDL	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200		
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
				ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm		
IMA1898	Pulp			2.0	4.1	23.6	70	<0.1	6.3	9.6	713	8.16	1	3.0	6.2	172	0.2	<0.1	<0.1	33	1.56	0.213	25.0
IMA1899	Pulp			2.9	387.2	12.0	8	0.1	36.4	16.0	104	2.71	19	18.3	32.0	31	<0.1	0.1	0.6	55	0.28	0.023	53.3
IMA1900	Pulp			2.4	351.6	28.6	15	0.3	24.3	32.6	264	1.96	45	36.7	84.3	49	0.4	0.1	0.8	46	0.26	0.024	92.4
IMA1901	Pulp			2.2	90.7	39.0	8	0.2	7.0	5.8	31	0.45	9	99.0	460.6	25	<0.1	<0.1	0.7	10	0.05	0.048	478.9
IMA1902	Pulp			3.7	5.3	35.9	12	0.2	8.4	5.6	37	0.72	5	78.5	422.4	17	0.2	0.2	0.4	13	0.04	0.070	672.1
IMA1903	Pulp			5.4	8.9	103.6	5	0.2	5.9	7.5	17	0.59	5	147.6	1220.9	26	0.1	0.2	0.8	12	0.04	0.148	1408.4
IMA1904	Pulp			4.0	2.9	60.8	5	0.1	8.4	22.3	18	0.95	30	44.8	308.9	18	<0.1	0.1	0.8	7	0.02	0.051	526.7
IMA1905	Pulp			0.9	2.7	0.5	<1	<0.1	4.7	0.8	23	0.26	<1	1.2	2.7	3	<0.1	<0.1	<0.1	2	<0.01	0.002	5.4
IMA1906	Pulp			1.9	128.0	15.4	54	0.1	108.3	35.9	338	6.34	21	5.0	13.8	15	0.2	0.2	0.8	192	0.13	0.064	34.6
IMA1907	Pulp			1.0	9.2	1.8	2	<0.1	10.5	1.0	31	0.35	1	0.4	1.7	23	<0.1	<0.1	<0.1	5	<0.01	0.003	7.5
IMA1908	Pulp			2.2	214.0	13.7	48	0.2	112.7	38.2	346	6.70	9	4.8	12.5	15	<0.1	0.2	0.9	190	0.13	0.064	31.3
IMA1909	Pulp			1.5	67.7	69.1	128	0.2	52.7	23.8	370	6.75	6	9.1	21.8	16	0.5	<0.1	0.2	112	0.11	0.050	29.1
IMA1910	Pulp			1.7	88.6	112.4	194	0.5	51.7	32.1	335	6.49	29	19.9	49.7	20	1.1	0.1	0.5	140	0.10	0.049	53.7
IMA1911	Pulp			0.9	59.6	94.4	83	0.1	10.7	5.6	135	0.86	6	2.3	10.8	58	0.5	0.1	0.1	12	0.16	0.004	13.1
IMA1912	Pulp			2.1	17.1	19.8	10	<0.1	13.9	5.4	143	1.70	9	13.1	71.9	38	0.1	0.2	0.4	24	0.22	0.011	81.7
IMA1913	Pulp			5.5	8.9	25.2	3	<0.1	7.5	3.6	25	0.49	2	38.8	196.2	19	0.2	0.1	0.1	13	0.03	0.030	241.8
IMA1914	Pulp			3.5	7.2	67.9	3	<0.1	7.5	3.6	30	0.46	2	93.4	415.4	23	0.1	0.1	<0.1	12	0.02	0.052	485.4
IMA1915	Pulp			1.6	7.5	70.1	3	<0.1	5.6	3.8	19	0.34	1	70.2	174.5	16	<0.1	<0.1	0.2	7	0.03	0.022	177.6
IMA1916	Pulp			1.7	31.8	21.2	52	<0.1	37.3	12.8	187	3.13	1	7.6	19.9	86	0.2	<0.1	0.1	64	0.36	0.030	26.4
IMA1917	Pulp			1.2	122.0	21.8	66	0.2	44.0	56.8	466	7.19	4	2.9	9.2	90	<0.1	0.1	0.6	197	1.05	0.069	21.3
IMA1918	Pulp			2.3	33.9	7.7	25	<0.1	27.9	8.8	113	1.92	2	5.8	15.7	87	<0.1	<0.1	<0.1	30	0.20	0.015	23.3
IMA1919	Pulp			1.1	2.8	1.1	1	<0.1	5.4	1.0	26	0.30	<1	0.6	1.4	2	<0.1	<0.1	<0.1	2	<0.01	0.002	4.0
IMA1920	Pulp			0.6	1.2	7.0	44	<0.1	16.8	13.9	939	3.80	3	1.6	6.2	179	0.1	0.3	<0.1	81	6.56	0.067	28.7
IMA1921	Pulp			0.8	6.5	9.6	41	<0.1	14.1	12.1	820	3.52	2	2.9	4.8	246	0.1	0.4	0.1	86	6.41	0.069	26.5
IMA1922	Pulp			2.1	4.4	8.3	219	0.3	1.2	3.6	2889	8.02	1	6.2	10.6	115	0.7	<0.1	<0.1	<1	3.36	0.041	30.1
IMA1923	Pulp			1.2	2.2	10.7	78	<0.1	39.0	27.6	1113	5.50	4	2.5	3.2	282	0.1	0.9	0.3	171	7.82	0.065	39.0
IMA1924	Pulp			2.3	3.0	17.4	79	<0.1	38.7	21.0	1080	4.91	2	6.6	7.8	408	0.1	0.2	0.2	123	7.23	0.036	40.1
IMA1925	Pulp			14.7	19.8	14.2	151	0.2	5.6	3.4	1321	4.32	15	6.2	11.9	147	0.6	<0.1	0.1	24	2.84	0.068	27.7
IMA1926	Pulp			2.3	80.2	83.2	73	0.3	23.6	15.7	159	3.61	3	49.3	113.4	28	0.3	0.3	0.2	58	0.11	0.045	137.7
IMA1927	Pulp			7.1	31.3	39.8	4	0.1	7.1	15.1	25	0.79	20	64.4	353.0	22	<0.1	0.2	0.6	8	0.09	0.043	332.3

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**Client:** MacGregor, R.A.  
28 Ford St.  
Sault Ste. Marie Ontario P8A 4N4 Canada

**Project:** None Given  
**Report Date:** March 15, 2017

**Page:** 4 of 7

**Part:** 2 of 3

# CERTIFICATE OF ANALYSIS

**VAN17000385.1**

Method	Analyte	Unit	MDL	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200	MA200
				Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S
		ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
IMA1898	Pulp	72	0.44	662	0.800	8.84	3.513	4.82	0.8	322.4	59	5.0	47.8	10.8	0.6	4	6	61.1	<0.1	268.6	7.1
IMA1899	Pulp	192	0.58	751	0.121	6.01	1.188	4.82	0.6	222.2	106	1.7	6.9	4.7	0.4	<1	6	26.9	<0.1	207.0	6.7
IMA1900	Pulp	152	0.37	942	0.109	4.99	1.310	4.73	0.5	381.2	172	1.1	11.8	5.9	0.5	<1	6	6.0	0.1	158.9	11.5
IMA1901	Pulp	108	0.08	857	0.136	4.36	0.069	5.17	0.7	148.9	849	1.8	34.3	13.2	1.5	1	2	2.8	<0.1	216.2	4.4
IMA1902	Pulp	205	0.11	493	0.251	4.27	0.051	3.74	0.8	151.2	1207	2.7	37.3	25.5	3.4	3	2	4.0	0.1	184.2	4.5
IMA1903	Pulp	89	0.07	587	0.299	4.05	0.052	4.12	0.6	217.3	>2000	2.3	82.5	31.5	3.5	1	3	4.6	0.3	195.9	6.5
IMA1904	Pulp	123	0.04	422	0.106	2.92	0.066	3.74	0.8	71.4	938	1.1	21.9	13.4	1.8	<1	1	2.9	0.7	146.0	2.0
IMA1905	Pulp	173	<0.01	8	0.004	0.25	0.068	0.09	<0.1	21.1	11	0.2	0.8	0.3	<0.1	<1	<1	0.2	<0.1	2.5	0.6
IMA1906	Pulp	186	1.27	602	0.547	9.99	0.053	5.87	3.0	158.1	73	3.3	13.4	11.5	1.0	4	27	32.0	0.8	316.7	4.5
IMA1907	Pulp	158	0.01	22	0.009	1.01	0.099	0.34	<0.1	28.8	15	0.3	1.2	0.4	<0.1	<1	<1	0.9	<0.1	11.0	0.8
IMA1908	Pulp	179	1.30	615	0.498	10.29	0.053	5.99	3.0	151.3	67	3.2	13.2	10.8	0.9	5	28	31.0	1.1	330.8	4.4
IMA1909	Pulp	178	1.36	382	0.364	7.14	0.170	3.53	1.8	96.0	62	1.9	10.1	8.2	0.7	3	15	27.6	0.5	197.6	2.9
IMA1910	Pulp	140	1.32	393	0.381	6.97	0.669	3.35	1.8	135.9	108	2.2	13.8	10.2	1.0	2	18	33.0	0.4	189.9	3.8
IMA1911	Pulp	87	0.21	678	0.061	4.61	1.497	3.31	0.2	66.2	26	0.5	2.7	3.3	0.3	<1	2	5.8	<0.1	105.3	1.8
IMA1912	Pulp	136	0.40	1232	0.155	6.01	0.077	6.12	0.7	177.7	152	1.9	10.8	13.6	1.2	2	4	14.8	<0.1	223.2	4.9
IMA1913	Pulp	128	0.08	635	0.271	4.73	0.061	4.57	0.8	193.2	435	2.5	24.0	25.9	2.9	1	3	2.4	<0.1	216.9	5.4
IMA1914	Pulp	125	0.06	639	0.161	4.58	0.191	4.52	1.0	124.9	911	1.8	35.7	16.8	1.8	1	2	2.9	<0.1	188.5	3.5
IMA1915	Pulp	80	0.06	488	0.105	3.93	0.050	3.60	0.3	87.2	336	1.4	18.6	9.8	1.0	1	1	2.0	<0.1	149.0	2.4
IMA1916	Pulp	151	1.27	159	0.104	6.65	3.142	1.39	0.5	200.1	59	1.7	6.2	2.8	0.2	1	8	19.7	<0.1	74.6	5.4
IMA1917	Pulp	165	2.43	45	0.187	6.26	2.115	0.46	0.6	131.1	45	0.7	6.5	2.5	0.1	<1	22	34.9	1.1	25.2	3.4
IMA1918	Pulp	165	0.72	61	0.064	4.76	3.055	0.48	0.4	127.6	46	0.7	4.7	2.1	0.2	<1	4	11.6	<0.1	25.3	3.5
IMA1919	Pulp	145	<0.01	6	0.004	0.27	0.076	0.09	<0.1	18.8	8	0.2	0.6	0.3	<0.1	<1	<1	0.1	<0.1	2.9	0.5
IMA1920	Pulp	61	4.01	480	0.423	5.94	1.078	4.03	0.5	146.3	60	1.7	30.4	8.4	0.5	2	13	55.2	<0.1	138.6	4.0
IMA1921	Pulp	59	3.61	539	0.402	6.27	1.937	3.96	0.5	104.9	57	2.3	31.0	9.3	0.5	2	13	51.3	<0.1	131.5	3.0
IMA1922	Pulp	34	0.17	289	0.554	7.35	4.318	3.53	0.3	1060.1	129	10.5	204.1	48.9	2.6	7	1	19.9	<0.1	108.0	24.6
IMA1923	Pulp	97	3.59	767	0.570	6.44	2.404	2.80	0.4	62.8	78	1.9	57.3	4.7	0.2	2	24	61.4	<0.1	97.8	2.2
IMA1924	Pulp	56	2.76	750	0.548	8.40	2.319	3.12	1.4	95.7	82	3.6	54.7	18.4	1.1	8	20	70.4	0.1	99.3	3.3
IMA1925	Pulp	87	0.88	516	0.403	7.12	1.731	2.09	4.2	711.6	63	5.5	93.4	36.0	1.9	6	3	39.9	0.4	94.0	16.5
IMA1926	Pulp	216	0.65	403	0.284	5.39	0.804	2.64	1.1	185.8	265	1.7	22.0	15.0	1.5	2	6	26.0	0.3	168.1	5.0
IMA1927	Pulp	93	0.07	556	0.206	3.60	0.083	4.50	1.1	163.7	609	1.5	34.0	22.5	2.3	<1	2	2.9	0.5	175.5	4.6

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Project: None Given  
Report Date: March 15, 2017

Page: 4 of 7

Part: 3 of 3

# CERTIFICATE OF ANALYSIS

**VAN17000385.1**

	Method Analyte Unit MDL	MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA1898	Pulp	0.05	<0.005	2	<0.5	2.4
IMA1899	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA1900	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA1901	Pulp	<0.05	<0.005	1	<0.5	1.1
IMA1902	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA1903	Pulp	<0.05	<0.005	2	<0.5	0.8
IMA1904	Pulp	<0.05	<0.005	1	<0.5	0.7
IMA1905	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1906	Pulp	0.12	0.011	2	0.5	1.6
IMA1907	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1908	Pulp	0.13	0.014	3	0.6	1.5
IMA1909	Pulp	0.06	<0.005	2	<0.5	1.0
IMA1910	Pulp	0.13	<0.005	1	<0.5	0.9
IMA1911	Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA1912	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA1913	Pulp	<0.05	<0.005	1	<0.5	0.9
IMA1914	Pulp	<0.05	<0.005	<1	<0.5	0.8
IMA1915	Pulp	<0.05	<0.005	<1	<0.5	0.7
IMA1916	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1917	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1918	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1919	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1920	Pulp	0.06	<0.005	<1	1.0	1.5
IMA1921	Pulp	0.07	<0.005	<1	1.5	1.5
IMA1922	Pulp	0.40	<0.005	2	<0.5	0.6
IMA1923	Pulp	0.11	<0.005	<1	1.2	1.2
IMA1924	Pulp	0.08	<0.005	<1	1.1	0.9
IMA1925	Pulp	0.13	<0.005	1	<0.5	0.9
IMA1926	Pulp	0.06	<0.005	1	<0.5	1.0
IMA1927	Pulp	<0.05	<0.005	1	<0.5	0.8

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Project: None Given  
Report Date: March 15, 2017

Page: 5 of 7

Part: 1 of 3

# CERTIFICATE OF ANALYSIS

**VAN17000385.1**

Method	Analyte	MA200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001	0.1
IMA1928	Pulp	0.8	17.1	2.6	2	<0.1	12.8	3.7	24	0.48	2	1.7	5.0	14	<0.1	<0.1	0.1	14	0.02	0.007	12.9
IMA1929	Pulp	1.4	32.7	10.1	32	<0.1	21.3	13.8	36	0.65	11	12.1	6.3	14	0.2	<0.1	0.4	10	0.04	0.005	9.8
IMA1930	Pulp	4.8	28.4	161.1	209	0.2	5.7	9.7	28	0.85	11	38.4	91.6	9	1.0	<0.1	0.6	16	0.01	0.015	123.6
IMA1931	Pulp	10.3	41.3	150.3	147	0.2	7.0	12.6	20	0.85	11	91.0	135.1	4	0.6	<0.1	0.5	14	0.02	0.026	219.1
IMA1932	Pulp	1.6	97.2	55.2	113	0.2	6.6	3.7	74	0.88	2	18.3	85.5	13	0.8	0.1	0.5	12	0.08	0.010	91.6
IMA1933	Pulp	1.7	583.3	44.4	177	0.2	7.5	4.6	89	0.99	2	37.9	191.8	10	0.9	0.2	0.3	10	0.14	0.022	226.0
IMA1934	Pulp	18.7	50.6	523.2	57	0.6	9.6	18.8	51	1.20	<1	489.7	1503.8	19	0.4	0.2	3.1	16	0.07	0.136	1490.0
IMA1935	Pulp	13.0	70.0	341.3	41	0.2	9.8	18.5	51	1.45	1	427.8	1501.0	19	0.3	0.1	1.3	16	0.07	0.148	1610.8
IMA1936	Pulp	22.4	81.2	807.9	59	0.4	18.3	41.6	81	2.07	2	1395.3	3306.0	29	0.3	0.3	2.5	28	0.15	0.280	>2000
IMA1937	Pulp	5.5	32.0	304.7	248	0.3	7.2	12.2	61	1.17	5	279.1	723.8	11	1.8	0.1	0.3	26	0.14	0.089	681.2
IMA1938	Pulp	8.7	24.5	474.7	537	0.2	9.2	12.0	64	0.91	8	178.4	812.3	8	3.5	<0.1	0.2	18	0.16	0.098	901.8
IMA1939	Pulp	7.1	10.3	299.8	187	0.2	6.8	8.8	34	0.81	5	128.8	626.7	17	1.4	<0.1	0.8	15	0.05	0.073	663.5
IMA1940	Pulp	5.8	8.8	190.0	169	0.2	5.8	6.4	34	0.79	3	119.6	476.4	15	0.9	<0.1	0.8	15	0.06	0.058	476.2
IMA1941	Pulp	25.1	30.6	883.2	861	0.6	12.3	35.5	84	1.29	24	609.1	1962.4	24	5.8	0.2	2.5	18	0.17	0.187	1944.8
IMA1942	Pulp	15.6	39.4	654.3	195	0.4	13.0	36.2	54	1.45	23	658.9	2451.3	23	1.4	0.2	2.6	22	0.12	0.245	>2000
IMA1943	Pulp	3.1	>10000	134.3	234	4.4	49.8	34.6	251	3.07	<1	9.3	30.3	23	2.2	0.1	1.2	71	0.52	0.021	58.2
IMA1944	Pulp	7.5	>10000	44.5	91	4.1	41.7	28.0	259	4.05	<1	23.9	104.2	21	1.1	0.1	0.9	93	0.48	0.038	137.8
IMA1945	Pulp	3.7	148.7	160.7	1146	0.4	7.2	6.0	44	0.65	1	149.2	682.8	19	9.0	0.1	0.4	8	0.17	0.068	713.9
IMA1946	Pulp	11.8	27.1	181.6	3	0.1	5.8	8.5	70	0.84	2	140.3	868.6	34	0.2	0.2	0.2	15	0.27	0.097	963.7
IMA1947	Pulp	6.0	53.4	228.9	200	0.1	64.9	9.3	131	1.15	<1	138.2	779.6	32	1.5	<0.1	0.2	18	0.27	0.084	877.8
IMA1948	Pulp	3.1	10.8	42.9	4	<0.1	9.2	5.0	50	0.63	1	67.9	360.1	25	0.1	<0.1	0.3	12	0.11	0.044	468.4
IMA1949	Pulp	1.9	99.2	39.9	71	0.1	96.8	35.3	204	3.94	37	4.2	9.0	23	0.2	0.2	1.0	158	0.08	0.045	26.5
IMA1950	Pulp	1.1	8.9	15.1	40	<0.1	9.8	6.0	618	1.82	<1	3.0	10.8	537	0.1	<0.1	<0.1	39	2.23	0.039	22.5
IMA1951	Pulp	2.4	33.7	13.8	118	<0.1	28.5	36.6	1437	8.19	2	0.5	1.0	410	0.1	0.2	0.2	288	6.28	0.031	9.8
IMA1952	Pulp	2.9	25.5	33.0	94	<0.1	65.4	25.5	898	4.05	1	32.4	35.7	558	0.2	0.2	0.1	97	4.97	0.085	15.1
IMA1953	Pulp	5.7	42.3	30.9	120	<0.1	21.8	22.8	1433	6.70	2	6.3	7.4	536	0.4	0.2	0.2	259	5.99	0.081	32.7
IMA1954	Pulp	14.4	99.5	35.6	179	0.1	18.4	45.7	1663	9.79	3	3.3	2.8	561	0.3	0.5	0.5	304	7.37	0.262	32.4
IMA1955	Pulp	2.4	38.9	24.4	158	<0.1	35.6	45.5	1838	8.73	2	0.6	0.9	319	0.3	0.4	0.3	278	8.33	0.117	10.6
IMA1956	Pulp	4.5	31.4	37.0	140	0.3	9.8	8.0	1733	8.18	4	4.6	9.6	283	0.4	0.2	0.5	64	4.37	0.100	35.1
IMA1957	Pulp	2.3	2.7	20.4	124	<0.1	19.0	15.5	1477	3.70	2	14.9	30.2	321	0.3	0.2	0.2	79	9.13	0.088	34.1

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Project: None Given  
Report Date: March 15, 2017

Page: 5 of 7 Part: 2 of 3

**CERTIFICATE OF ANALYSIS** **VAN17000385.1**

Method	Analyte	MA200		MA200		MA200		MA200		MA200		MA200		MA200		MA200		MA200		MA200	
		Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
Unit	MDL	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	
		1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	1	1	0.1	0.1	0.1	0.1	
IMA1928	Pulp	138	0.12	411	0.048	2.64	0.032	2.54	0.3	46.7	25	0.7	3.3	1.3	0.1	<1	2	3.2	<0.1	95.8	1.3
IMA1929	Pulp	124	0.17	322	0.037	1.71	0.105	1.94	0.4	47.4	18	0.6	3.8	2.5	0.1	<1	1	4.3	0.2	63.7	1.4
IMA1930	Pulp	121	0.14	276	0.191	4.53	0.043	3.01	1.0	151.0	243	2.4	13.2	15.0	1.8	2	2	5.4	0.2	161.7	4.7
IMA1931	Pulp	105	0.11	149	0.227	4.04	0.035	2.41	1.1	136.1	427	2.1	20.3	19.0	2.2	2	3	5.5	0.2	127.0	4.1
IMA1932	Pulp	247	0.25	362	0.091	2.00	0.106	1.91	0.4	72.9	159	0.8	10.3	9.0	0.5	<1	<1	5.8	<0.1	77.3	2.1
IMA1933	Pulp	226	0.32	164	0.086	1.19	0.030	0.78	0.2	63.2	398	0.8	23.1	7.0	0.3	<1	<1	5.0	0.1	42.9	1.9
IMA1934	Pulp	149	0.24	348	0.357	3.64	0.034	2.78	0.9	209.0	>2000	3.5	137.8	36.5	4.4	2	4	8.7	0.4	164.9	6.5
IMA1935	Pulp	168	0.24	350	0.397	3.49	0.033	2.80	0.8	218.3	>2000	3.5	136.5	41.2	4.9	2	4	9.1	0.6	162.5	6.6
IMA1936	Pulp	209	0.30	327	0.434	3.92	0.032	2.65	1.2	232.8	>2000	4.8	327.5	55.8	6.9	2	5	13.6	0.8	174.4	7.1
IMA1937	Pulp	106	0.41	430	0.417	6.86	0.048	4.76	1.1	192.8	1246	5.9	78.4	42.2	5.1	5	5	15.2	0.2	281.5	5.9
IMA1938	Pulp	218	0.30	268	0.365	4.03	0.031	2.66	0.8	193.9	1639	3.8	78.5	38.8	4.3	2	4	9.2	0.1	163.8	5.9
IMA1939	Pulp	136	0.29	544	0.379	4.23	0.038	3.59	0.5	343.9	1194	3.7	64.0	31.8	3.6	2	4	9.0	0.1	202.2	10.6
IMA1940	Pulp	131	0.29	483	0.268	4.00	0.073	3.34	0.5	226.4	867	3.4	49.4	22.8	2.4	2	3	9.5	<0.1	190.5	6.7
IMA1941	Pulp	172	0.31	413	0.388	3.44	0.031	2.80	0.9	249.6	>2000	4.1	188.0	46.9	5.9	2	4	10.0	0.6	167.5	7.4
IMA1942	Pulp	160	0.31	442	0.541	3.73	0.030	2.72	1.1	381.5	>2000	4.6	234.6	60.7	7.4	3	6	10.8	0.5	181.7	11.5
IMA1943	Pulp	211	0.69	173	0.220	5.08	0.350	3.07	1.0	63.2	101	3.9	6.6	10.6	0.5	3	10	24.2	1.3	209.5	2.4
IMA1944	Pulp	293	1.06	336	0.342	5.49	0.375	3.44	1.2	122.8	250	3.9	18.0	22.5	1.0	2	12	28.4	1.1	251.4	3.4
IMA1945	Pulp	139	0.20	403	0.133	2.11	0.105	1.83	0.3	94.0	1257	1.3	75.0	13.8	1.2	1	1	7.5	0.1	92.7	2.9
IMA1946	Pulp	113	0.13	939	0.506	3.64	0.112	4.67	2.0	296.8	1676	2.1	76.5	52.8	6.1	2	4	6.3	0.2	190.5	9.2
IMA1947	Pulp	150	0.21	858	0.416	3.80	0.083	4.87	1.3	199.3	1585	2.5	63.0	41.0	4.7	1	3	6.8	0.3	187.7	6.1
IMA1948	Pulp	119	0.14	859	0.265	4.41	0.108	5.02	0.6	203.2	828	3.1	35.4	20.9	2.3	2	2	4.3	<0.1	206.4	6.1
IMA1949	Pulp	165	1.33	429	0.197	9.43	0.321	5.89	1.3	112.9	59	2.9	7.5	2.5	0.2	3	19	21.0	0.7	203.4	3.3
IMA1950	Pulp	142	0.70	932	0.248	6.25	2.740	2.43	0.2	97.0	47	1.5	22.4	9.1	0.6	2	6	9.9	<0.1	51.7	2.8
IMA1951	Pulp	84	2.84	281	1.110	9.61	3.311	0.61	1.9	25.2	26	2.1	36.6	4.4	0.3	1	29	41.7	<0.1	16.5	1.3
IMA1952	Pulp	143	1.78	748	0.633	7.39	2.675	1.58	5.8	168.7	31	1.5	20.3	12.7	0.8	8	10	35.2	<0.1	107.3	6.1
IMA1953	Pulp	83	3.12	738	0.898	8.09	2.858	1.33	3.4	163.4	58	0.9	50.0	11.7	0.6	2	24	41.6	0.2	123.6	4.4
IMA1954	Pulp	17	2.52	579	1.604	7.77	2.473	1.26	15.4	57.1	61	2.4	56.6	9.6	0.5	1	24	74.1	0.4	64.3	2.5
IMA1955	Pulp	55	2.95	329	0.956	9.04	2.425	0.71	7.3	24.7	26	1.4	36.5	3.9	0.2	<1	26	40.7	<0.1	31.6	1.3
IMA1956	Pulp	124	1.74	800	0.822	7.90	2.265	4.76	4.2	185.5	70	7.1	54.8	21.6	1.0	5	14	13.5	0.6	143.6	4.2
IMA1957	Pulp	46	3.63	1023	0.367	6.20	1.692	3.99	1.0	155.6	85	3.3	70.1	44.3	2.6	4	10	57.0	<0.1	243.3	6.5

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**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.  
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PHONE (604) 253-3158

**Client:** MacGregor, R.A.  
28 Ford St.  
Sault Ste. Marie Ontario P8A 4N4 Canada

**Project:** None Given  
**Report Date:** March 15, 2017

**Page:** 5 of 7

**Part:** 3 of 3

# CERTIFICATE OF ANALYSIS

**VAN17000385.1**

Method Analyte Unit MDL		MA200	MA200	MA200	MA200	MA200
		In	Re	Se	Te	Tl
		ppm	ppm	ppm	ppm	ppm
		0.05	0.005	1	0.5	0.5
IMA1928	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1929	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1930	Pulp	<0.05	<0.005	<1	<0.5	0.9
IMA1931	Pulp	<0.05	<0.005	<1	<0.5	0.6
IMA1932	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1933	Pulp	0.08	<0.005	<1	<0.5	<0.5
IMA1934	Pulp	<0.05	<0.005	2	<0.5	0.9
IMA1935	Pulp	<0.05	<0.005	1	<0.5	0.9
IMA1936	Pulp	<0.05	<0.005	3	<0.5	1.0
IMA1937	Pulp	0.08	<0.005	2	<0.5	1.6
IMA1938	Pulp	0.05	<0.005	<1	<0.5	1.0
IMA1939	Pulp	0.05	<0.005	<1	<0.5	1.2
IMA1940	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA1941	Pulp	0.06	<0.005	3	<0.5	1.2
IMA1942	Pulp	0.05	<0.005	2	<0.5	1.1
IMA1943	Pulp	0.53	<0.005	6	<0.5	2.0
IMA1944	Pulp	0.48	<0.005	4	<0.5	1.7
IMA1945	Pulp	0.36	<0.005	1	<0.5	0.5
IMA1946	Pulp	<0.05	<0.005	1	<0.5	1.0
IMA1947	Pulp	<0.05	<0.005	<1	<0.5	1.1
IMA1948	Pulp	<0.05	<0.005	<1	<0.5	1.0
IMA1949	Pulp	0.07	<0.005	1	<0.5	1.4
IMA1950	Pulp	<0.05	<0.005	<1	<0.5	<0.5
IMA1951	Pulp	0.11	<0.005	<1	<0.5	<0.5
IMA1952	Pulp	<0.05	<0.005	<1	0.7	1.3
IMA1953	Pulp	0.05	<0.005	<1	0.8	2.2
IMA1954	Pulp	0.11	<0.005	<1	0.7	1.1
IMA1955	Pulp	0.10	<0.005	<1	0.8	0.5
IMA1956	Pulp	0.08	<0.005	<1	<0.5	1.7
IMA1957	Pulp	<0.05	<0.005	<1	1.7	2.3

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**Client: MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: March 06, 2017  
Report Date: March 21, 2017  
Page: 1 of 3

**CERTIFICATE OF ANALYSIS** **VAN17000375.1**

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 48

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	48	Sorting, labeling and boxing samples received as pulps			VAN
AQ251	48	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN
DRPLP	48	Warehouse handling / disposition of pulps			VAN

**SAMPLE DISPOSAL**

DISP-PLP Dispose of Pulp After 90 days

**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:

*Jeffrey Cannon*  
**JEFFREY CANNON**  
Geochemistry Department Supervisor

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.



Bureau Veritas Commodities Canada Ltd.  
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Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: March 21, 2017

Page: 2 of 3 Part: 1 of 2

**CERTIFICATE OF ANALYSIS** **VAN17000375.1**

Method	Analyte	Unit	MDL	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251	AQ251				
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
				ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%		
				0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
1AX 468	Pulp			0.33	9.84	9.15	98.0	372	16.0	4.4	75	1.47	2.1	0.4	2.9	3.5	7.8	0.15	0.04	0.10	21	0.10	0.019	
1AX 469	Pulp			0.92	143.27	9.33	59.0	1417	97.4	27.3	767	4.19	42.2	0.9	5972.7	4.3	242.1	0.06	0.09	0.14	89	3.57	0.165	
1AX 470	Pulp			0.73	101.27	7.09	48.8	170	59.1	25.6	614	3.39	39.4	0.7	121.1	3.6	194.6	0.08	0.09	0.09	80	3.10	0.138	
1AX 471	Pulp			0.58	54.97	13.91	65.8	159	37.0	13.2	478	2.23	17.5	0.9	202.5	6.5	171.1	0.26	0.09	0.12	46	2.91	0.118	
1AX 472	Pulp			0.90	39.51	37.90	28.3	198	37.1	13.3	445	2.06	17.7	0.8	289.4	5.0	172.2	0.05	0.12	0.24	40	2.67	0.102	
1AX 473	Pulp			0.84	44.07	4.86	39.5	40	98.8	22.3	849	3.19	28.9	0.8	37.3	4.4	221.9	0.07	0.07	0.05	65	3.89	0.090	
1AX 474	Pulp			0.95	18.88	4.02	4.2	80	15.8	8.8	25	0.54	3.5	2.6	0.7	7.0	2.7	0.02	0.08	0.22	2	0.03	0.010	
1AX 475	Pulp			2.17	77.31	87.50	125.9	228	19.4	13.2	105	2.44	1.8	48.7	1.8	121.0	4.5	0.57	0.05	1.01	6	0.06	0.028	
1AX 476	Pulp			1.11	55.82	10.23	19.7	37	21.1	7.0	185	1.64	3.2	3.4	5.2	9.7	3.1	0.09	0.03	0.22	3	0.07	0.010	
1AX 477	Pulp			2.03	53.96	3.11	14.2	41	56.3	24.4	333	3.60	11.5	4.3	0.9	14.5	4.7	0.02	0.03	0.27	8	0.09	0.033	
1AX 478	Pulp			1.78	2.75	15.54	1.0	21	5.9	1.2	18	0.16	1.7	8.8	0.6	38.8	2.2	<0.01	<0.02	0.10	<2	0.03	0.011	
1AX 479	Pulp			0.73	15.75	2.67	78.8	847	1044.1	89.1	1429	5.88	794.2	<0.1	122.0	0.2	366.7	0.08	1.84	0.08	137	6.04	0.007	
1AX 480	Pulp			1.83	38.27	114.85	186.8	223	70.7	17.9	227	3.88	41.9	2.9	2.8	9.5	8.3	0.96	0.09	0.60	19	0.14	0.040	
1AX 481	Pulp			1.96	70.86	11.36	30.0	99	70.8	20.1	152	3.17	36.5	3.4	3.5	11.5	5.8	0.03	0.07	0.65	14	0.09	0.040	
1AX 482	Pulp			1.84	65.12	45.34	32.1	90	27.8	7.5	130	2.78	36.2	2.9	2.0	10.5	5.3	0.07	0.05	0.79	14	0.09	0.040	
1AX 483	Pulp			0.82	14.59	2.65	1.4	13	7.5	2.2	53	0.41	3.2	1.9	1.3	7.1	2.1	<0.01	0.03	0.18	3	0.10	0.003	
1AX 484	Pulp			1.49	8.87	3.24	1.5	20	7.0	2.2	71	0.65	2.0	6.4	1.4	30.5	3.3	0.02	0.03	0.14	2	0.29	0.004	
1AX 485	Pulp			2.47	9.83	4.63	1.1	48	5.8	2.2	40	0.45	2.3	21.9	4.5	136.4	3.9	0.01	0.04	0.14	<2	0.12	0.010	
1AX 486	Pulp			2.28	23.42	1.74	24.9	21	18.0	8.6	281	1.74	1.3	2.2	0.6	2.4	173.2	0.04	0.12	0.12	40	1.92	0.097	
1AX 487	Pulp			1.60	141.94	435.81	430.1	430	101.2	32.8	188	2.97	40.3	3.3	11.2	10.8	7.2	2.60	0.06	1.14	11	0.25	0.041	
1AX 488	Pulp			2.02	120.10	674.19	811.7	246	96.5	39.6	229	3.82	30.1	4.6	4.3	12.9	7.8	4.79	0.09	0.41	21	0.17	0.042	
1AX 489	Pulp			2.41	217.42	12.19	35.6	215	108.3	42.7	243	5.07	10.7	2.8	11.9	7.3	4.9	0.03	0.05	1.01	21	0.12	0.059	
1AX 490	Pulp			27.75	105.51	10.27	97.6	262	143.4	57.3	1719	7.17	160.6	1.3	18.2	0.8	102.8	0.19	0.46	0.32	50	4.92	0.029	
1AX 491	Pulp			103.22	8.64	12.52	46.7	92	14.6	12.2	1281	2.23	1.9	4.9	10.5	7.1	172.4	0.36	0.29	0.46	8	2.74	0.087	
1AX 492	Pulp			0.44	2.84	2.01	28.1	16	23.3	7.9	87	1.83	3.9	1.2	5.8	5.8	27.8	0.02	0.21	0.04	27	0.26	0.076	
1AX 493	Pulp			11.16	4.00	5.30	35.5	10	16.1	8.5	487	1.94	3.2	1.2	0.6	5.5	158.7	0.05	0.28	0.03	13	2.65	0.073	
1AX 494	Pulp			4.00	3.44	6.45	53.0	8	21.8	12.5	589	2.33	1.2	0.9	0.5	5.2	181.6	0.06	0.24	0.05	15	3.23	0.077	
1AX 495	Pulp			0.28	5.40	5.98	40.7	133	15.1	5.4	76	1.23	0.9	0.4	1.3	3.1	8.9	0.06	0.03	0.08	22	0.11	0.015	
1AX 496	Pulp			0.65	3.06	1.79	27.4	14	22.1	8.5	92	1.80	2.1	1.2	1.4	5.5	23.9	0.01	0.20	0.03	28	0.20	0.071	
1AX 497	Pulp			6.80	12.50	4.12	12.2	17	17.8	13.4	161	1.07	8.1	1.5	6.4	6.7	53.2	0.05	0.52	0.15	9	1.13	0.104	

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**BUREAU VERITAS** MINERAL LABORATORIES  
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Project: None Given  
Report Date: March 21, 2017

Page: 2 of 3

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

**VAN17000375.1**

Method	Analyte	AQ251		AQ251		AQ251		AQ251		AQ251		AQ251		AQ251		AQ251		AQ251	
		La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	
MDL		0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	
1AX 468	Pulp	10.3	27.1	0.16	25.3	0.072	2	1.49	0.006	0.02	<0.1	1.8	0.05	<0.02	49	<0.1	0.03	3.7	
1AX 469	Pulp	25.8	331.1	3.59	91.5	0.005	5	2.21	0.082	0.19	0.2	14.6	<0.02	0.24	122	<0.1	0.05	9.0	
1AX 470	Pulp	24.6	312.7	2.38	85.7	0.004	4	1.37	0.086	0.27	0.2	12.7	<0.02	0.12	59	<0.1	0.02	6.9	
1AX 471	Pulp	42.5	131.5	1.50	68.8	0.003	4	0.84	0.097	0.19	0.3	7.7	<0.02	0.08	110	<0.1	0.03	3.9	
1AX 472	Pulp	32.5	127.4	1.31	62.6	0.002	3	0.69	0.079	0.17	0.3	6.5	<0.02	0.15	72	<0.1	0.03	3.5	
1AX 473	Pulp	28.2	291.1	2.34	111.1	0.002	4	1.17	0.089	0.33	0.7	11.1	<0.02	0.06	73	<0.1	0.03	4.7	
1AX 474	Pulp	10.7	115.5	0.09	27.2	0.002	1	0.33	0.006	0.22	<0.1	0.4	0.13	0.18	<5	<0.1	<0.02	0.9	
1AX 475	Pulp	70.7	107.5	0.37	37.6	0.021	2	1.09	0.030	0.29	<0.1	1.2	0.16	0.29	<5	0.7	0.31	3.3	
1AX 476	Pulp	12.5	129.0	0.47	7.0	<0.001	<1	0.21	0.046	0.07	<0.1	1.0	0.03	0.08	<5	<0.1	0.04	0.6	
1AX 477	Pulp	21.0	42.6	1.24	22.0	0.001	2	0.83	0.021	0.24	<0.1	2.0	0.07	0.18	<5	<0.1	0.07	2.3	
1AX 478	Pulp	37.8	136.7	0.02	23.8	0.002	3	0.30	0.004	0.23	<0.1	0.3	0.06	<0.02	<5	<0.1	<0.02	1.0	
1AX 479	Pulp	1.9	1831.8	11.46	3.4	0.003	<1	2.37	0.008	<0.01	0.1	21.4	<0.02	<0.02	7	<0.1	0.50	8.4	
1AX 480	Pulp	18.3	98.2	1.02	30.0	0.005	2	1.95	0.006	0.29	<0.1	2.2	0.16	0.08	<5	<0.1	0.21	4.9	
1AX 481	Pulp	18.8	56.3	0.61	37.6	0.010	1	1.58	0.004	0.38	<0.1	2.1	0.20	0.34	<5	0.9	0.21	3.9	
1AX 482	Pulp	21.3	47.9	0.50	37.8	0.009	2	1.41	0.004	0.40	<0.1	2.0	0.19	0.22	<5	0.6	0.20	3.3	
1AX 483	Pulp	11.5	279.7	0.05	24.4	0.002	<1	0.16	0.003	0.14	<0.1	0.3	0.04	<0.02	<5	<0.1	<0.02	0.6	
1AX 484	Pulp	36.4	178.9	0.13	31.7	0.002	<1	0.26	0.003	0.19	0.1	0.4	0.05	<0.02	<5	<0.1	<0.02	0.8	
1AX 485	Pulp	108.2	144.4	0.05	45.6	0.004	<1	0.26	0.004	0.25	<0.1	0.6	0.06	0.03	<5	<0.1	<0.02	1.0	
1AX 486	Pulp	22.8	58.2	1.02	41.0	0.263	13	0.98	0.249	0.32	0.4	4.4	0.18	0.28	<5	<0.1	0.02	3.9	
1AX 487	Pulp	13.8	45.5	0.91	20.4	0.002	2	1.51	0.004	0.21	<0.1	1.6	0.23	0.64	<5	1.7	0.27	3.3	
1AX 488	Pulp	15.0	119.9	1.23	25.7	0.003	3	2.15	0.017	0.32	<0.1	2.4	0.18	0.80	<5	1.0	0.07	5.5	
1AX 489	Pulp	10.1	58.7	0.84	34.9	0.011	2	2.06	0.003	0.36	<0.1	2.6	0.14	1.18	<5	2.9	0.59	4.8	
1AX 490	Pulp	2.0	63.1	1.82	62.6	0.003	4	1.76	0.020	0.47	<0.1	7.8	0.12	1.30	110	0.3	0.05	3.6	
1AX 491	Pulp	32.4	41.0	0.95	186.6	0.002	4	0.55	0.042	0.34	<0.1	3.8	0.09	0.76	61	<0.1	0.12	1.9	
1AX 492	Pulp	36.9	97.3	1.09	141.5	0.006	2	1.27	0.108	0.15	<0.1	2.9	0.04	0.10	36	<0.1	0.05	6.0	
1AX 493	Pulp	31.7	50.5	1.03	452.6	0.003	3	0.63	0.090	0.21	<0.1	3.9	0.05	0.03	11	<0.1	<0.02	2.5	
1AX 494	Pulp	31.9	42.2	1.36	498.1	0.002	1	0.66	0.068	0.17	<0.1	4.1	0.04	0.02	8	<0.1	<0.02	2.8	
1AX 495	Pulp	11.1	26.4	0.15	32.2	0.081	1	1.53	0.006	0.03	<0.1	2.0	0.05	<0.02	30	<0.1	<0.02	4.4	
1AX 496	Pulp	34.9	82.8	1.15	121.4	0.003	3	1.37	0.119	0.17	<0.1	3.3	0.03	0.11	68	<0.1	0.04	6.8	
1AX 497	Pulp	29.7	56.1	0.37	187.4	0.001	6	1.12	0.036	0.42	<0.1	1.8	0.08	0.34	106	<0.1	0.12	3.1	

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**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

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

**Client:** **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: June 06, 2017  
Report Date: June 12, 2017  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

**VAN17001075.1**

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 19

### SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

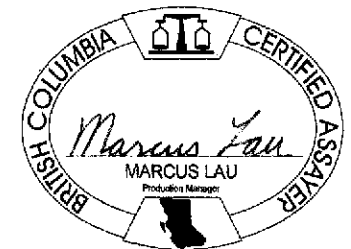
Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
SLBHP	19	Sorting, labeling and boxing samples received as pulps			VAN
LF100	19	Refractory and REEs by fusion and ICP-MS analysis	0.2	Completed	VAN

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:



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\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



**BUREAU VERITAS**  
MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 12, 2017

Page: 2 of 2

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** **VAN17001075.1**

Method	Analyte	LF100																			
		Ba	Ba	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	1	0.2	0.1	0.5	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
REE 182	Pulp	874	<1	6.5	0.7	17.8	4.5	33.9	207.8	2	23.2	3.7	446.1	97.9	31	0.9	158.7	56.6	463.0	792.6	81.52
REE 183	Pulp	485	2	6.1	0.8	16.8	5.6	55.7	174.4	3	16.8	7.5	437.3	79.1	29	1.3	187.5	44.9	641.5	1129.1	116.61
REE 184	Pulp	581	<1	7.8	0.5	13.6	6.4	77.5	187.1	3	26.5	9.4	1315.7	169.1	26	1.3	234.6	107.5	1325.4	2376.3	252.95
REE 185	Pulp	615	<1	23.0	0.3	7.9	2.6	36.0	142.4	1	17.5	5.5	343.2	50.0	16	1.5	85.1	37.5	551.5	974.0	101.29
REE 186	Pulp	840	<1	15.7	0.4	9.8	5.6	52.6	181.0	2	24.0	6.5	420.1	78.7	15	1.9	191.8	49.8	348.7	632.8	64.09
REE 187	Pulp	151	2	11.5	0.5	12.2	5.2	39.3	127.9	2	4.1	4.8	153.1	105.8	21	1.8	167.2	33.8	231.2	451.4	48.42
REE 188	Pulp	647	<1	3.1	0.5	11.2	3.9	34.0	181.6	2	22.1	4.2	450.9	105.9	16	2.1	136.2	44.9	489.3	860.9	91.31
REE 189	Pulp	395	2	30.9	1.5	11.1	8.5	118.8	172.8	4	24.1	14.9	1872.3	527.4	21	1.9	307.6	193.6	1853.9	3357.2	343.17
REE 190	Pulp	384	2	32.1	1.2	9.5	13.2	180.4	170.2	5	22.0	22.1	2230.3	536.3	25	2.1	451.2	228.7	2284.1	4122.3	426.69
REE 191	Pulp	334	1	16.6	1.2	10.5	8.4	96.6	159.9	4	18.1	12.0	1496.7	460.5	19	2.3	292.0	145.2	1420.3	2559.1	268.80
REE 192	Pulp	344	3	16.5	1.2	9.7	7.9	101.9	160.9	4	19.6	12.8	1570.9	377.3	18	1.7	273.1	143.9	1549.3	2798.0	285.27
REE 193	Pulp	302	4	36.2	1.3	12.8	9.0	133.7	163.7	5	26.0	17.6	3059.9	1183.0	21	1.9	308.8	316.3	2825.7	5067.7	523.25
REE 194	Pulp	886	<1	7.2	0.5	9.2	4.9	33.7	189.7	2	20.8	4.0	333.5	46.7	11	1.4	169.4	39.2	470.6	805.4	85.44
REE 195	Pulp	58	11	1.7	0.3	33.2	27.6	49.2	25.5	12	168.7	3.0	18.3	8.1	<8	<0.5	1149.1	192.7	57.8	193.0	20.05
REE 196	Pulp	870	5	4.5	4.6	26.7	11.0	25.1	96.0	12	564.8	1.0	12.0	48.9	88	1.9	418.1	364.0	68.7	166.3	21.99
REE 197	Pulp	248	5	2.7	0.8	34.3	24.8	42.2	92.8	8	106.0	2.4	10.3	6.5	<8	<0.5	1010.6	189.5	28.8	117.3	16.17
REE 198	Pulp	847	2	15.0	0.8	10.6	6.0	45.8	191.5	2	23.3	5.4	501.1	92.1	12	2.0	208.4	52.6	533.4	940.2	98.57
REE 199	Pulp	848	1	15.2	0.4	9.3	4.5	38.0	183.0	2	21.5	4.7	569.6	102.2	9	1.5	155.0	54.6	630.7	1113.6	116.91
REE 200	Pulp	864	4	18.3	4.5	25.2	18.3	15.6	314.6	3	17.8	1.5	51.4	9.9	121	3.5	628.0	21.5	113.4	212.3	22.48

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**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: June 12, 2017

Page: 2 of 2

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

VAN17001075.1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 182	Pulp	258.4	36.31	1.51	23.27	2.62	11.65	1.76	4.50	0.57	3.39	0.46
REE 183	Pulp	374.4	52.86	1.92	30.29	3.08	12.42	1.60	3.85	0.52	2.99	0.39
REE 184	Pulp	818.9	114.57	4.09	68.88	7.11	28.67	3.80	8.81	1.13	6.55	0.84
REE 185	Pulp	325.2	45.51	2.73	27.01	2.87	11.15	1.44	3.27	0.44	2.63	0.33
REE 186	Pulp	206.7	29.50	1.72	19.47	2.53	11.88	1.87	4.73	0.57	3.37	0.45
REE 187	Pulp	162.9	24.05	2.09	14.22	1.72	8.16	1.35	3.47	0.50	3.13	0.40
REE 188	Pulp	294.6	41.58	2.08	25.43	2.84	12.23	1.72	4.01	0.52	2.99	0.41
REE 189	Pulp	1110.6	159.53	6.86	97.99	11.45	50.02	7.39	16.95	2.23	12.76	1.59
REE 190	Pulp	1395.8	196.09	7.98	123.31	14.12	61.03	8.71	20.43	2.61	14.88	1.90
REE 191	Pulp	856.2	123.14	5.72	74.38	9.10	39.06	5.85	13.34	1.68	9.52	1.18
REE 192	Pulp	918.7	130.96	6.24	77.98	9.03	38.00	5.52	12.48	1.55	8.82	1.08
REE 193	Pulp	1707.6	245.99	11.89	153.50	18.30	83.46	12.52	29.83	3.79	21.67	2.84
REE 194	Pulp	264.2	38.15	1.78	22.30	2.61	11.11	1.54	3.53	0.46	2.72	0.35
REE 195	Pulp	88.7	21.88	2.49	25.04	4.73	31.44	7.36	23.48	3.53	23.13	3.38
REE 196	Pulp	94.3	26.52	6.31	32.57	6.20	42.67	10.75	36.48	5.91	39.03	5.34
REE 197	Pulp	77.1	20.87	3.00	24.35	4.71	31.80	7.32	22.98	3.57	24.27	3.70
REE 198	Pulp	311.3	43.71	2.10	26.85	3.02	13.26	2.03	4.62	0.61	3.48	0.47
REE 199	Pulp	370.7	52.18	2.47	31.14	3.47	14.78	2.05	4.64	0.60	3.40	0.44
REE 200	Pulp	74.9	11.52	1.86	6.92	0.86	4.52	0.77	2.48	0.38	2.67	0.45



**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Submitted By: R.A. MacGregor  
Receiving Lab: Canada-Vancouver  
Received: January 17, 2017  
Report Date: January 24, 2017  
Page: 1 of 3

## CERTIFICATE OF ANALYSIS

VAN17000087-1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 39

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	39	Sorting, labeling and boxing samples received as pulps			VAN
LF100	39	Refractory and REEs by fusion and ICP-MS analysis	0.2	Completed	VAN
DRPLP	39	Warehouse handling / disposition of pulps			VAN

### SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

### 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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4  
Canada

CC:



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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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: January 24, 2017

Page: 2 of 3

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN17000087 1

Method	Analyte	Unit	MDL	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100		
				Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
REE 143	Rock Pulp			458	10	53.9	2.6	22.2	12.8	12.5	84.8	5	376.2	0.3	10.6	1.6	410	1.2	638.9	98.3	136.3	299.6	41.96
REE 144	Rock Pulp			253	7	12.4	4.8	26.0	7.2	218.5	588.9	13	21.2	32.5	28.4	10.2	28	14.9	177.8	29.5	32.8	63.9	6.19
REE 145	Rock Pulp			634	2	3.9	1.0	13.8	5.2	34.5	178.3	2	18.7	4.0	442.8	75.9	14	0.6	194.1	51.7	428.2	759.1	84.56
REE 146	Rock Pulp			557	2	4.8	0.8	11.8	6.4	87.1	159.0	3	18.4	9.1	686.0	137.3	16	0.9	223.5	71.0	709.6	1323.1	138.54
REE 147	Rock Pulp			529	3	5.9	1.0	13.2	8.2	73.4	160.4	4	18.8	8.1	750.1	168.5	19	1.0	303.0	86.4	711.7	1343.5	140.17
REE 148	Rock Pulp			886	2	9.4	0.8	13.4	4.5	41.0	229.4	3	23.2	4.7	456.0	90.8	17	1.7	162.9	56.1	518.2	976.6	101.44
REE 149	Rock Pulp			369	2	6.5	0.8	12.4	5.1	39.7	112.7	2	54.0	4.8	644.0	112.6	26	0.9	192.1	80.7	629.0	1198.6	127.20
REE 150	Rock Pulp			935	1	4.0	0.9	14.8	4.8	39.1	217.5	2	21.7	4.4	384.1	42.2	15	2.0	170.9	46.5	442.8	768.2	84.19
REE 151	Rock Pulp			864	1	3.9	0.5	11.0	3.6	27.5	192.2	1	21.4	3.2	338.0	50.3	11	1.1	130.4	37.3	351.9	613.3	70.19
REE 152	Rock Pulp			779	2	12.1	0.7	12.9	5.3	69.3	187.3	2	25.0	8.8	1151.8	231.7	19	2.3	194.4	115.9	1245.1	2234.3	234.44
REE 153	Rock Pulp			801	2	6.3	0.8	15.8	7.6	82.5	210.8	3	18.8	7.4	380.5	58.6	18	2.4	274.4	80.7	447.7	749.1	84.18
REE 154	Rock Pulp			828	1	7.5	0.7	11.7	7.3	89.2	196.8	3	20.4	7.4	327.4	51.9	18	2.0	263.0	39.3	377.9	645.6	71.82
REE 155	Rock Pulp			639	1	15.3	0.7	14.1	5.4	50.4	191.7	3	18.5	6.1	654.7	323.3	20	1.9	185.6	93.2	613.3	1134.4	121.33
REE 156	Rock Pulp			392	3	16.3	0.8	11.2	5.2	67.1	148.0	3	16.2	8.5	1305.7	377.3	14	1.5	185.7	137.2	1374.6	2438.2	258.13
REE 157	Rock Pulp			491	2	11.5	0.5	10.3	9.1	111.4	148.5	3	22.4	13.5	1725.2	374.8	20	1.6	326.4	153.2	1789.3	3123.9	327.50
REE 158	Rock Pulp			852	2	12.4	0.7	11.9	6.2	58.2	191.5	2	22.7	7.3	985.5	144.1	13	2.8	209.1	91.4	1029.8	1847.9	192.18
REE 159	Rock Pulp			945	1	5.0	0.9	15.9	8.2	59.2	226.5	4	22.4	7.0	754.4	104.8	16	2.3	294.4	74.9	761.3	1434.3	151.68
REE 160	Rock Pulp			666	2	24.9	0.7	10.2	5.5	73.2	189.8	3	25.6	10.4	1314.2	1052.7	15	2.0	197.8	169.0	1228.9	2165.6	229.62
REE 161	Rock Pulp			438	3	16.0	0.8	12.4	5.1	70.8	179.8	3	19.7	9.1	1448.4	316.0	15	1.2	182.9	136.6	1537.2	2715.1	284.33
REE 162	Rock Pulp			595	1	5.5	0.8	11.8	7.1	87.5	188.3	3	21.4	7.9	749.0	148.9	16	0.6	256.4	71.0	724.2	1376.6	146.26
REE 163	Rock Pulp			826	1	5.3	0.8	11.7	6.5	80.1	206.2	3	22.5	6.5	287.1	47.1	14	1.2	238.5	49.8	347.8	605.7	66.34
REE 164	Rock Pulp			458	2	15.5	0.7	12.6	5.9	60.6	174.8	3	17.4	7.6	834.5	276.3	14	1.1	202.4	87.7	799.3	1517.9	160.70
REE 165	Rock Pulp			911	2	15.8	1.3	15.1	6.6	40.6	227.8	2	24.5	5.2	511.6	114.1	36	1.8	245.7	60.7	556.7	1028.6	109.42
REE 166	Rock Pulp			399	1	8.3	0.8	12.1	3.9	29.2	160.5	2	16.4	3.4	258.6	46.2	13	1.0	129.5	28.4	277.3	501.3	54.13
REE 167	Rock Pulp			603	2	10.1	0.6	10.5	5.1	48.9	179.6	2	22.6	6.1	928.0	199.5	13	0.9	178.2	77.7	878.4	1579.9	167.85
REE 168	Rock Pulp			704	2	23.8	0.6	11.3	6.7	111.7	177.7	5	23.5	15.7	1239.6	243.1	18	1.9	233.5	124.8	1490.7	2646.0	271.88
REE 169	Rock Pulp			389	<1	14.7	0.5	5.3	2.6	25.6	87.7	1	19.9	3.0	283.5	41.0	<8	<0.5	95.1	22.9	355.7	819.4	68.54
REE 170	Rock Pulp			563	4	16.6	4.1	17.8	7.8	26.1	182.4	3	24.3	3.1	304.6	106.0	53	1.1	265.3	39.8	327.8	588.3	66.20
REE 171	Rock Pulp			631	<1	4.6	0.7	10.1	3.6	21.7	182.6	1	21.1	2.5	203.8	53.6	10	<0.5	122.4	21.8	219.0	380.5	40.39
REE 172	Rock Pulp			823	<1	11.3	0.6	5.2	4.8	36.7	184.1	1	24.0	4.2	382.7	78.3	13	1.1	171.8	38.2	373.1	659.3	71.18

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**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: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: January 24, 2017

Page: 2 of 3

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

VAN17000087 1

REE	Method	LF100										
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
	Analyte	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 143	Rock Pulp	174.3	34.78	8.75	29.84	3.88	18.83	3.14	8.33	1.15	8.95	0.94
REE 144	Rock Pulp	19.4	3.30	0.45	3.34	0.65	4.21	0.95	3.24	0.58	4.35	0.71
REE 145	Rock Pulp	286.0	37.38	1.58	24.72	2.79	12.15	1.83	4.44	0.58	3.30	0.44
REE 148	Rock Pulp	437.8	61.17	2.34	40.32	4.48	18.50	2.69	8.28	0.82	4.58	0.61
REE 147	Rock Pulp	446.8	63.22	2.63	42.81	4.85	21.16	3.14	7.52	1.01	5.75	0.76
REE 148	Rock Pulp	327.1	46.74	2.12	31.07	3.43	14.63	2.10	4.87	0.88	3.69	0.47
REE 149	Rock Pulp	413.7	57.02	2.51	37.94	3.80	18.43	2.29	5.38	0.67	3.87	0.50
REE 150	Rock Pulp	269.7	37.34	1.57	24.13	2.62	11.00	1.82	3.72	0.50	2.85	0.38
REE 151	Rock Pulp	222.2	31.11	1.32	20.20	2.21	9.50	1.40	3.44	0.41	2.42	0.31
REE 152	Rock Pulp	749.4	106.83	4.25	70.27	7.57	31.80	4.46	10.25	1.29	7.24	0.92
REE 153	Rock Pulp	268.1	38.27	1.56	25.40	2.93	12.89	2.06	5.28	0.89	4.02	0.58
REE 154	Rock Pulp	228.2	31.53	1.37	20.29	2.30	9.58	1.43	3.41	0.44	2.78	0.41
REE 155	Rock Pulp	389.9	57.63	2.44	39.95	4.83	22.75	3.56	8.89	1.11	6.22	0.81
REE 156	Rock Pulp	833.4	120.18	4.52	80.85	8.78	38.88	5.33	12.42	1.51	8.51	1.08
REE 157	Rock Pulp	1050.6	149.47	5.45	96.73	10.61	43.00	5.94	13.50	1.72	9.77	1.24
REE 158	Rock Pulp	608.8	85.17	3.77	54.72	5.74	23.64	3.33	7.79	1.00	5.57	0.72
REE 159	Rock Pulp	471.1	68.43	2.89	43.75	4.76	19.91	2.87	6.50	0.84	4.77	0.65
REE 160	Rock Pulp	748.4	110.29	5.59	76.17	9.88	47.28	7.27	18.09	2.40	13.48	1.68
REE 161	Rock Pulp	908.3	130.75	6.08	88.21	9.26	38.14	5.17	11.86	1.42	7.97	0.98
REE 162	Rock Pulp	468.5	64.99	2.48	41.07	4.50	19.20	2.78	6.41	0.84	5.01	0.67
REE 163	Rock Pulp	211.3	28.82	1.38	19.42	2.21	10.11	1.65	4.27	0.59	3.62	0.55
REE 164	Rock Pulp	518.7	74.51	3.31	48.95	5.42	22.63	3.43	8.23	1.06	6.01	0.79
REE 165	Rock Pulp	348.2	48.37	2.82	31.56	3.46	14.78	2.17	5.27	0.89	4.04	0.56
REE 166	Rock Pulp	173.6	24.86	1.39	16.21	1.77	7.51	1.11	2.65	0.34	2.05	0.27
REE 167	Rock Pulp	537.3	78.78	3.11	50.07	5.34	21.82	2.94	6.57	0.82	4.71	0.61
REE 168	Rock Pulp	864.8	123.83	5.80	80.08	8.34	34.83	4.74	10.84	1.40	8.22	1.06
REE 169	Rock Pulp	218.0	30.60	2.08	18.35	1.83	6.98	0.89	1.97	0.24	1.37	0.19
REE 170	Rock Pulp	212.2	30.08	2.12	19.69	2.22	9.91	1.45	3.81	0.62	3.07	0.42
REE 171	Rock Pulp	125.6	17.30	0.83	11.25	1.22	5.23	0.82	2.02	0.28	1.54	0.22
REE 172	Rock Pulp	228.3	31.97	1.83	20.82	2.24	9.62	1.41	3.30	0.44	2.51	0.35

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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: January 24, 2017

Page: 3 of 3

Part: 1 of 2

**CERTIFICATE OF ANALYSIS** VAN170000087 1

Method	Analyte	LF100																			
		Ba	Be	Co	Ca	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		1	1	0.2	0.1	0.5	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
REE 173	Rock Pulp	587	2	9.2	0.5	9.3	6.8	63.0	168.9	2	23.0	7.8	1011.6	196.1	14	1.1	233.9	91.9	986.7	1760.6	184.63
REE 174	Rock Pulp	572	2	3.9	0.7	9.1	5.1	43.1	170.5	2	19.2	5.3	423.0	106.2	21	0.7	177.6	52.8	460.4	824.4	91.61
REE 175	Rock Pulp	626	2	2.4	0.8	13.1	8.1	55.7	207.4	3	19.0	6.6	324.6	62.3	16	0.5	283.7	37.5	334.9	589.5	63.82
REE 176	Rock Pulp	517	<1	1.5	0.7	8.7	3.9	26.5	161.8	2	15.3	3.0	131.8	22.7	11	0.5	137.7	15.7	173.8	301.2	31.28
REE 177	Rock Pulp	381	2	7.2	0.8	10.5	7.5	96.6	155.7	3	13.5	11.4	727.4	144.7	29	1.1	259.7	75.5	741.9	1419.9	148.40
REE 178	Rock Pulp	886	<1	7.8	0.8	11.4	5.9	51.9	210.4	2	25.9	5.7	466.3	73.7	17	1.3	210.3	56.7	520.9	947.0	102.22
REE 179	Rock Pulp	885	2	13.9	0.8	18.3	8.0	58.9	206.8	3	27.3	6.4	435.6	84.5	22	1.9	222.9	62.8	558.5	1015.8	109.90
REE 180	Rock Pulp	910	2	12.3	0.7	11.8	4.2	26.5	198.2	2	29.9	3.1	171.9	34.0	13	1.5	139.8	34.9	260.9	475.5	51.25
REE 181	Rock Pulp	638	1	2.8	0.9	13.1	7.4	50.5	186.9	2	17.6	5.8	235.3	37.5	14	0.8	248.2	37.8	286.0	491.8	54.05

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PHONE (604) 253-3158

Client: **MacGregor, R.A.**  
28 Ford St.  
Sault Ste. Marie Ontario P6A 4N4 Canada

Project: None Given  
Report Date: January 24, 2017

Page: 3 of 3

Part: 2 of 2

**CERTIFICATE OF ANALYSIS**

VAN17000087 1

Method	Analyte	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100	LF100
		Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.3	0.06	0.02	0.06	0.01	0.05	0.02	0.03	0.01	0.05	0.01
REE 173	Rock Pulp	588.0	82.93	3.28	52.51	5.74	24.21	3.46	8.26	1.03	5.88	0.77
REE 174	Rock Pulp	286.8	40.47	1.55	25.49	2.93	12.97	1.94	4.81	0.61	3.62	0.48
REE 175	Rock Pulp	198.3	27.44	1.14	18.31	1.98	8.80	1.39	3.38	0.46	2.97	0.43
REE 176	Rock Pulp	97.8	12.58	0.58	7.96	0.86	3.67	0.54	1.38	0.19	1.17	0.18
REE 177	Rock Pulp	473.4	67.79	2.58	42.89	4.81	20.06	2.92	6.99	0.90	5.25	0.71
REE 178	Rock Pulp	315.4	45.91	2.12	29.41	3.04	12.88	1.96	4.58	0.58	3.23	0.46
REE 179	Rock Pulp	338.3	48.85	2.50	28.56	3.22	13.46	2.08	4.99	0.85	3.93	0.52
REE 180	Rock Pulp	157.7	22.10	1.21	11.71	1.46	6.55	1.11	2.66	0.38	2.31	0.30
REE 181	Rock Pulp	186.2	23.58	1.08	12.77	1.71	7.75	1.38	3.28	0.44	2.76	0.42



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# Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 1 of 1

## *Assay Certificate*

**Certificate Number: 16-1363**

Company: **Robert MacGregor**

Project:

Report Date: 12-Oct-16

Attn: **Robert MacGregor**

*We hereby certify* the following Assay of 2 rejects samples  
submitted 29-Sep-16 by Robert MacGregor

Sample Number	Au FA-MP Ppb
175437	10
175418	10

Certified by   
Denis Chartre

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 Fax (705) 642-3300



Established 1928

# Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 2 of 3

## Assay Certificate

Certificate Number: 16-1361

Company: **Robert MacGregor**

Project:

Report Date:

12-Oct-16

Attn: **Robert MacGregor**

We hereby certify the following Assay of 49 rejects samples submitted 29-Sep-16 by Robert MacGregor

Sample Number	Au	Au Chk
	FA-MP ppb	FA-MP ppb
175208	10	
175209	10	
175219	10	
175222	10	
Blank Value	< 2	
OxH97	1290	
175223	10	
175228	10	10
175283 -	< 2	
175303 -	10	
175331 -	10	
175337 - 1		
175339 -	10	
175381 -	10	
175384 -	20	
175385 -	10	
175393 -	10	
175394 -	< 2	< 2
175396 -	10	
175411	10	
175414 -	10	
175415 -	< 2	
175417 -	10	
175419 -	< 2	
175426 -	< 2	

1. listed not received

Certified by   
Denis Chartre

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 Fax (705) 642-3300



Established 1928

# Swastika Laboratories Ltd

Assaying - Consulting - Representation

Page 3 of 3

## Assay Certificate

Certificate Number: 16-1361

Company: **Robert MacGregor**

Project:

Report Date:

12-Oct-16

Attn: **Robert MacGregor**

*We hereby certify* the following Assay of 49 rejects samples submitted 29-Sep-16 by Robert MacGregor

Sample Number	Au	Au Chk
	FA-MP ppb	FA-MP ppb
175433 -	< 2	
Blank Value	< 2	
OxH97	1250	
176602 -	20	
176645 -	10	20

1. listed not received

Certified by   
Denis Chartre

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 Fax (705) 642-3300

**Withheld for client confidentiality.**

**Appendix III**

**Cost Receipts**

## Costs

Reject sample recovery	98 samples @ \$50/sample	4900	
	Over 2 years	2450	
	36 samples @ \$50/sample	1800	4250
Sample prep	98 samples @ \$8/sample	784	
	Over 2 years	392	
	36 samples @ \$8/sample	288	680
Shipping	Oct. 09/18 4 hs @ \$50/hr	200	
	Purolater	58.20	
	June 12/19 2 hr @ \$50/hr	100	
	Purolater	55.01	
	Jan. 13/20 Ont. Northland	23.85	
	Jan. 16/20 2 hr @ \$50/hr	100	
	Purolater	62.53	600
Anaysis	Au	14 samples @ 22.50/sample	315
		Over 2 years	157.50
	REE	15 samples @ 30.10/sample	451.50
		Over 2 years	225.75
	IAX	2 samples @ 24.30/sample	48.60
		Over 2 year	24.30
	IMA	10 samples @ 20.30/sample	203
		Over 2 years	101.50

## Costs

Analysis	IMA	73 samples @ 20.30/sample	1,481.90	
	A	2 samples @ 13.15/sample	26.30	
	WR	3 samples @ 39.57/sample	118.70	
	REE	20 samples @ 32.30/sample	646.00	
	IMA	36 samples @ 21.55/sample	775.80	
	A	1 sample @ 15.00/sample	15.00	
	REE	43 samples @ 34.30/sample	1,479.90	5,311
	Report			500
		<b>Total</b>	<b>11,321</b>	