

**CLIENT NAME: AURORA GEOSCIENCES  
34A LABERGE RD  
WHITEHORSE, YT Y1A5Y9  
(867) 668-7672**

**ATTENTION TO: DAVE WHITE**

**PROJECT NO:**

**AGAT WORK ORDER: 13Y739606**

**SOLID ANALYSIS REVIEWED BY: Yufei Chen, Analyst**

**DATE REPORTED: Sep 04, 2013**

**PAGES (INCLUDING COVER): 9**

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

**\*NOTES**

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 13Y739606

PROJECT NO:

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: AURORA GEOSCIENCES

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### Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 23, 2013

DATE RECEIVED: Jul 19, 2013

DATE REPORTED: Sep 04, 2013

SAMPLE TYPE: Rock

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
Sample ID (AGAT ID)														
5636560 (4580616)	0.65	0.10	0.95	3.8	<0.01	9	251	0.41	0.03	19.7	0.09	23.0	4.0	12.3
5636561 (4580617)	0.22	0.45	2.93	1.5	<0.01	130	151	1.16	0.02	4.60	0.07	81.6	32.7	45.3
5636562 (4580618)	0.31	0.22	0.08	3.2	<0.01	6	59	0.35	<0.01	21.1	0.17	2.34	1.2	2.2
5636563 (4580619)	0.38	0.05	0.51	2.6	<0.01	<5	91	0.36	0.02	12.4	0.08	20.4	2.2	4.9
5636564 (4580620)	0.93	0.15	1.31	51.8	<0.01	<5	30	0.33	0.49	1.25	0.13	8.20	58.6	40.1
5636565 (4580621)	1.51	0.06	1.95	4.9	<0.01	6	77	0.71	0.29	1.10	0.11	53.0	17.5	34.1
5636566 (4580622)	0.61	0.04	2.22	4.3	<0.01	<5	24	0.50	0.23	1.29	0.06	19.6	28.1	63.4
5636567 (4580623)	0.26	0.04	1.20	3.4	<0.01	<5	34	0.28	0.10	1.69	0.22	28.9	10.3	54.3
5632010 (4580624)	1.26	0.23	0.43	7.7	<0.01	7	35	0.19	0.02	13.5	0.12	17.2	31.8	6.0
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
Sample ID (AGAT ID)														
5636560 (4580616)	0.94	17.1	1.53	3.53	<0.05	0.13	0.06	0.011	0.16	12.0	25.3	2.84	226	0.79
5636561 (4580617)	2.97	94.2	5.94	20.3	0.27	0.63	<0.01	0.047	0.08	37.4	25.5	1.88	1040	4.55
5636562 (4580618)	0.06	7.9	2.97	0.40	<0.05	0.06	0.02	<0.005	0.01	1.8	1.0	0.25	414	1.88
5636563 (4580619)	0.69	8.4	0.59	3.05	<0.05	0.14	0.03	0.007	0.03	12.6	29.5	1.37	148	0.70
5636564 (4580620)	0.73	76.3	12.8	5.35	0.16	0.26	0.07	0.031	0.16	3.5	21.6	1.05	293	2.46
5636565 (4580621)	1.01	49.6	4.37	7.69	0.12	0.11	0.02	0.029	0.22	25.8	36.4	1.17	588	0.30
5636566 (4580622)	1.15	86.7	5.43	8.29	0.10	0.07	0.01	0.032	0.13	9.3	63.9	1.79	600	0.55
5636567 (4580623)	0.43	36.0	2.80	4.22	0.09	0.05	0.02	0.018	0.15	13.7	22.9	0.77	529	0.56
5632010 (4580624)	0.31	34.2	10.1	1.60	<0.05	0.12	0.05	0.014	0.18	9.8	7.2	2.32	171	1.00

Certified By:

*Y. Chen.*



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CLIENT NAME: AURORA GEOSCIENCES

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### Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 23, 2013

DATE RECEIVED: Jul 19, 2013

DATE REPORTED: Sep 04, 2013

SAMPLE TYPE: Rock

	Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Sample ID (AGAT ID)	RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
5636560 (4580616)		0.01	<0.05	8.1	314	4.1	11.4	<0.001	1.16	0.36	4.2	1.5	0.3	605	<0.01
5636561 (4580617)		0.43	44.4	29.1	2340	4.3	8.0	0.002	0.306	0.07	7.0	1.0	1.8	209	0.41
5636562 (4580618)		0.01	1.00	1.9	192	0.8	1.0	0.001	2.55	2.08	0.8	1.7	<0.2	578	<0.01
5636563 (4580619)		<0.01	0.11	2.8	169	1.9	4.4	<0.001	0.535	0.26	2.4	1.3	<0.2	604	<0.01
5636564 (4580620)		<0.01	<0.05	43.4	283	79.8	8.7	<0.001	>10	1.18	5.0	5.2	0.2	42.0	<0.01
5636565 (4580621)		<0.01	<0.05	30.9	535	28.7	13.0	<0.001	0.112	0.09	7.8	0.3	0.3	66.6	<0.01
5636566 (4580622)		<0.01	<0.05	37.6	332	8.5	7.3	<0.001	0.244	0.10	9.8	0.2	0.2	37.4	<0.01
5636567 (4580623)		<0.01	<0.05	20.8	233	16.5	7.7	<0.001	0.051	0.07	4.7	<0.2	<0.2	112	<0.01
5632010 (4580624)		0.01	0.21	45.8	215	26.6	8.5	<0.001	8.90	1.24	3.5	9.7	<0.2	1040	<0.01
	Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr				
	Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm				
Sample ID (AGAT ID)	RDL:	0.01	0.1	0.005	0.01	0.05	0.5	0.05	0.05	0.5	0.5				
5636560 (4580616)		0.03	4.1	<0.005	0.06	0.55	20.3	0.09	11.1	18.3	3.4				
5636561 (4580617)		<0.01	12.9	1.01	0.12	1.81	177	0.86	21.9	67.5	45.5				
5636562 (4580618)		0.03	0.8	0.012	0.09	0.95	21.7	0.06	3.16	4.8	3.4				
5636563 (4580619)		0.02	2.4	<0.005	0.04	0.52	13.9	<0.05	11.8	9.8	4.4				
5636564 (4580620)		0.07	5.4	<0.005	0.40	0.35	37.4	<0.05	6.06	46.6	9.2				
5636565 (4580621)		0.02	11.9	<0.005	0.10	0.43	38.9	<0.05	10.7	66.8	3.6				
5636566 (4580622)		0.02	5.1	<0.005	0.09	0.47	60.5	<0.05	7.96	63.5	2.1				
5636567 (4580623)		<0.01	5.8	<0.005	0.05	0.28	29.1	<0.05	5.18	45.9	1.5				
5632010 (4580624)		0.02	3.1	0.009	0.07	0.72	17.0	<0.05	4.79	1.8	4.3				

Comments: RDL - Reported Detection Limit

Certified By:

*Y. Chen*



**AGAT** Laboratories

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CLIENT NAME: AURORA GEOSCIENCES

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### Fire Assay - Trace Au, ICP-OES finish (202552) (50g charge)

DATE SAMPLED: Jul 23, 2013

DATE RECEIVED: Jul 19, 2013

DATE REPORTED: Sep 04, 2013

SAMPLE TYPE: Rock

	Analyte:	Au
	Unit:	ppm
Sample ID (AGAT ID)	RDL:	0.001
5636560 (4580616)		0.004
5636561 (4580617)		0.001
5636562 (4580618)		<0.001
5636563 (4580619)		0.009
5636564 (4580620)		0.003
5636565 (4580621)		<0.001
5636566 (4580622)		0.001
5636567 (4580623)		<0.001
5632010 (4580624)		0.001

Comments: RDL - Reported Detection Limit

Certified By:

*Y. Chen*



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### Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

Parameter	REPLICATE #1															
	Sample ID	Original	Replicate	RPD												
Ag	4580616	0.10	0.10	0.0%												
Al	4580616	0.950	0.931	2.0%												
As	4580616	3.76	3.21	15.8%												
Au	4580616	< 0.01	< 0.01	0.0%												
B	4580616	9	8	11.8%												
Ba	4580616	251	245	2.4%												
Be	4580616	0.41	0.39	5.0%												
Bi	4580616	0.03	0.03	0.0%												
Ca	4580616	19.7	19.3	2.1%												
Cd	4580616	0.09	0.09	0.0%												
Ce	4580616	23.0	23.2	0.9%												
Co	4580616	3.95	3.92	0.8%												
Cr	4580616	12.3	12.9	4.8%												
Cs	4580616	0.938	0.925	1.4%												
Cu	4580616	17.1	17.8	4.0%												
Fe	4580616	1.53	1.48	3.3%												
Ga	4580616	3.53	3.54	0.3%												
Ge	4580616	< 0.05	< 0.05	0.0%												
Hf	4580616	0.13	0.11	16.7%												
Hg	4580616	0.06	0.06	0.0%												
In	4580616	0.011	0.011	0.0%												
K	4580616	0.156	0.150	3.9%												
La	4580616	12.0	12.2	1.7%												
Li	4580616	25.3	24.9	1.6%												
Mg	4580616	2.84	2.76	2.9%												
Mn	4580616	226	234	3.5%												
Mo	4580616	0.786	0.612	24.9%												
Na	4580616	0.01	0.01	0.0%												
Nb	4580616	< 0.05	< 0.05	0.0%												
Ni	4580616	8.1	8.2	1.2%												
P	4580616	314	301	4.2%												



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Pb	4580616	4.1	4.1	0.0%												
Rb	4580616	11.4	11.0	3.6%												
Re	4580616	< 0.001	< 0.001	0.0%												
S	4580616	1.16	1.13	2.6%												
Sb	4580616	0.36	0.31	14.9%												
Sc	4580616	4.25	4.60	7.9%												
Se	4580616	1.5	1.5	0.0%												
Sn	4580616	0.25	0.24	4.1%												
Sr	4580616	605	605	0.0%												
Ta	4580616	< 0.01	< 0.01	0.0%												
Te	4580616	0.026	0.020	26.1%												
Th	4580616	4.1	4.7	13.6%												
Ti	4580616	< 0.005	< 0.005	0.0%												
Tl	4580616	0.057	0.055	3.6%												
U	4580616	0.552	0.542	1.8%												
V	4580616	20.3	19.5	4.0%												
W	4580616	0.09	< 0.05													
Y	4580616	11.1	11.1	0.0%												
Zn	4580616	18.3	18.8	2.7%												
Zr	4580616	3.4	3.2	6.1%												

### Fire Assay - Trace Au, ICP-OES finish (202552) (50g charge)

Parameter	REPLICATE #1															
	Sample ID	Original	Replicate	RPD												
Au	4580616	0.004	0.004	0.0%												



**AGAT** Laboratories

**Quality Assurance - Certified Reference materials**

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**Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)**

CRM #1 (CU186)																
Parameter	Expect	Actual	Recovery	Limits												
Ag	14	12	86%	80% - 120%												
Cu	6000	5989	100%	80% - 120%												
Mo	360	377	105%	80% - 120%												

**Fire Assay - Trace Au, ICP-OES finish (202552) (50g charge)**

CRM #1 (1P5F)																
Parameter	Expect	Actual	Recovery	Limits												
Au	1.40	1.31	94%	90% - 110%												

## Method Summary

CLIENT NAME: AURORA GEOSCIENCES

AGAT WORK ORDER: 13Y739606

PROJECT NO:

ATTENTION TO: DAVE WHITE

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Solid Analysis</b>			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS



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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES