

### **ANALYTICAL SUMMARY REPORT**

January 31, 2013

Rare Element Resources Inc 225 Union Blvd Ste 250 Lakewood, CO 80228-1574

Workorder No.: G12120257

Project Name: Upton

Energy Laboratories Inc. Gillette WY received the following 7 samples for Rare Element Resources Inc on 12/11/2012 for analysis.

Sample ID	Client Sample ID	Collect Date Receive Date	Matrix	Test
G12120257-001	UAMS #1 PM10	11/12/12 8:00 12/11/12	Filter	PM-10 Filter Analysis
G12120257-002	UAMS #2 PM10	11/28/12 16:10 12/11/12	Filter	Same As Above
G12120257-003	UAMS #1 PM2.5	11/16/12 14:30 12/11/12	Filter	Same As Above
G12120257-004	UAMS #2 PM2.5	11/21/12 12:00 12/11/12	Filter	Same As Above
G12120257-005	UAMS #3 Cont.	11/28/12 16:50 12/11/12	Filter	Metals on air filter by ICP/ICPMS Digestion, Total Metals Nitric acid-extraction Radium 226 Thorium, Isotopic
G12120257-006	UAMS #2 Cont.	11/16/12 15:00 12/11/12	Filter	Same As Above
G12120257-007	UAMS #3 PM10	12/05/12 16:45 12/11/12	Filter	PM-10 Filter Analysis

The analyses presented in this report were performed by Energy Laboratories, Inc., 400 W. Boxelder Rd., Gillette, WY 82718, unless otherwise noted.

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these tests results, please call.

Report Approved By:

<b>ENERGY</b> LABORATORIES	www.energylab.com Analytical Excellence Since 1952	Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515 Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218
CLIENT:	Rare Element Resources Inc	Revised Date: 01/31/13
Proiect:	Upton	Report Date: 01/17/13
	ry Group: G12120257	CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

RevA:

The Sample ID's on the Gravimetric reports have been revised to UAMS to reflect the Upton project. Tracey L. Archer



#### LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client:Rare Element Resources IncProject:UptonLab ID:G12120257-005Client Sample IDUAMS #3 Cont.

 Revised Date:
 01/31/13

 Report Date:
 01/17/13

 Collection Date:
 11/28/12 16:50

 DateReceived:
 12/11/12

 Matrix:
 Filter

Analyses	Result	Units	Qualifiers	RL	MDL	Method	Analysis Date / By
METALS IN AIR							
Cerium	10	ug/filter		1	0.005	E200.8	12/26/12 12:41 / eli-b
Lanthanum	5	ug/filter		1	0.005	E200.8	12/26/12 12:41 / eli-b
Thorium	4	ug/filter		1	0.004	E200.8	01/10/13 16:03 / eli-b
Uranium	ND	ug/filter		1	0.00005	E200.8	12/14/12 22:39 / eli-b
RADIONUCLIDES - TOTAL							
Radium 226	2.4	pCi/Filter	U			E903.0	12/31/12 14:29 / eli-ca
Radium 226 precision (±)	2.1	pCi/Filter				E903.0	12/31/12 14:29 / eli-ca
Radium 226 MDC	3.0	pCi/Filter				E903.0	12/31/12 14:29 / eli-ca
RADIONUCLIDES							
Thorium 230	1.6	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca
Thorium 230 precision (±)	0.60	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca
Thorium 230 MDC	0.51	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca

Report Definitions: RL - Analyte reporting limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

MDL - Method detection limit

QCL - Quality control limit.

MDC - Minimum detectable concentration



#### LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client:Rare Element Resources IncProject:UptonLab ID:G12120257-006Client Sample IDUAMS #2 Cont.

 Revised Date:
 01/31/13

 Report Date:
 01/17/13

 Collection Date:
 11/16/12 15:00

 DateReceived:
 12/11/12

 Matrix:
 Filter

Analyses	Result	Units	Qualifiers	RL	MDL	Method	Analysis Date / By
METALS IN AIR							
Cerium	20	ug/filter		1	0.005	E200.8	12/26/12 12:46 / eli-b
Lanthanum	10	ug/filter		1	0.005	E200.8	12/26/12 12:46 / eli-b
Thorium	5	ug/filter		1	0.004	E200.8	01/10/13 16:09 / eli-b
Uranium	2	ug/filter		1	0.00005	E200.8	12/14/12 22:54 / eli-b
RADIONUCLIDES - TOTAL							
Radium 226	3.4	pCi/Filter				E903.0	12/31/12 14:29 / eli-ca
Radium 226 precision (±)	2.2	pCi/Filter				E903.0	12/31/12 14:29 / eli-ca
Radium 226 MDC	3.1	pCi/Filter				E903.0	12/31/12 14:29 / eli-ca
RADIONUCLIDES							
Thorium 230	1.2	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca
Thorium 230 precision (±)	0.54	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca
Thorium 230 MDC	0.57	pCi/Filter				E908.0	01/04/13 13:36 / eli-ca

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

### 2012 FILTER DATA UAMS#1, PM10 Site: Rare Element Resources Upton

Lab. No.						Gross Wt, grams			
B12121060-001	11/07/12	58790	12/14/12	06/19/12	1440	4.6991	4.6445	0.0546	



### 2012 FILTER DATA UAMS#2, PM10 Site: Rare Element Resources Upton

Lab. No.						Gross Wt, grams			
B12121060-002	11/21/12	58793	12/14/12	06/19/12	1440	4.6367	4.6290	0.0077	



### 2012 FILTER DATA UAMS#1, PM2.5 Site: Rare Element Resources Upton

Lab.	Sample	Filter	Gross Wt.	Tare Wt.	Sampling	Gross Wt, grams	Tare Wt,	Net Wt,
No.	Date	No.	Date	Date	Time,min		grams	grams
B12121060-003	11/12/12	58791	12/14/12	06/19/12	1440	4.6029	4.5878	0.0151

### 2012 FILTER DATA UAMS#2, PM2.5 Site: Rare Element Resources Upton

Lab. No.						Gross Wt, grams			
B12121060-004	11/16/12	58792	12/14/12	06/19/12	1440	4.5892	4.5782	0.0110	



### 2012 FILTER DATA UAMS#3, PM10 Site: Rare Element Resources Upton

Lab. No.	Sample Date	Filter No.	Gross Wt. Date	Tare Wt. Date	Sampling Time,min	Gross Wt, grams	Tare Wt, grams	Net Wt, grams	
B12121060-007	11/28/12	58772	12/14/12	06/19/12	1265	4.5754	4.5632	0.0122	* 9973
Code	#								
* 9973	***	INVALI	SAMPLE *	**	Sample	time out of l	imits.		



### **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client: Rare Element Resources Inc

Project: Upton

Report Date: 01/11/13 Work Order: G12120257

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	l Run: I	CPMS202-B_	_121213A
Sample ID:	QCS	Initial Calibra	tion Verification	n Standard					12/14	/12 17:52
Uranium		0.0197	mg/L	0.0010	99	90	110			
Method:	E200.8								Bat	ch: 67788
Sample ID:	MB-67788	Method Blank	(			Run: ICPM	S202-B_121213	A	12/14	/12 22:36
Thorium		0.04	ug/filter	0.0002						
Uranium		0.005	ug/filter	4E-06						
Sample ID:	G12120257-006ADUP	Sample Dupli	cate			Run: ICPM	S202-B_121213	A	12/14	/12 22:57
Thorium		12.6	ug/filter	1.0				10	20	
Uranium		2.24	ug/filter	1.0				12	20	
Sample ID:	LFB-67788	Laboratory Fo	ortified Blank			Run: ICPM	S202-B_121213	A	12/14	/12 23:00
Thorium		7.51	ug/filter	1.0	75	80	120			S
Uranium		10.0	ug/filter	1.0	100	80	120			
Sample ID:	LFBD-67788	Laboratory Fo	ortified Blank D	Duplicate		Run: ICPM	S202-B_121213	A	12/14	/12 23:03
Uranium		9.80	ug/filter	1.0	98	80	120			
Sample ID:	G12120257-005AMS	Sample Matri	x Spike			Run: ICPM	S202-B_121213	A	12/14	/12 23:06
Thorium		24.0	ug/filter	1.0	88	70	130			
Uranium		24.3	ug/filter	1.0	94	70	130			
Sample ID:	G12120257-005AMSD	Sample Matri	x Spike Duplic	ate		Run: ICPM	S202-B_121213	A	12/14	/12 23:08
Thorium		24.3	ug/filter	1.0	89	70	130	1.5	20	
Uranium		24.5	ug/filter	1.0	95	70	130	1.0	20	

#### **Qualifiers:**

RL - Analyte reporting limit.

S - Spike recovery outside of advisory limits.



### **QA/QC Summary Report**

Prepared by Billings, MT Branch

Client: Rare Element Resources Inc

Project: Upton

Report Date: 01/11/13 Work Order: G12120257

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8						Analytica	ll Run: I	CPMS203-B	_121226A
Sample ID:	QCS	Initial Calibra	tion Verificatio	n Standard					12/26	6/12 11:38
Cerium		0.0496	mg/L	0.0010	99	90	110			
Lanthanum		0.0498	mg/L	0.0010	100	90	110			
Method:	E200.8								Bat	ch: 67788
Sample ID:	MB-67788	Method Blank	(			Run: ICPM	S203-B_121226	A	12/26	6/12 12:16
Cerium		0.008	ug/filter	0.0004						
Lanthanum		0.007	ug/filter	0.0004						
Thorium		0.07	ug/filter	0.002						
Uranium		0.002	ug/filter	7E-06						
Sample ID:	G12120257-006ADUP	Sample Dupl	cate			Run: ICPM	S203-B_121226	A	12/26	6/12 12:51
Cerium		19.2	ug/filter	1.0				2.8	20	
Lanthanum		9.67	ug/filter	1.0				4.5	20	
Thorium		3.87	ug/filter	1.0				7.2	20	
Uranium		1.77	ug/filter	1.0				7.7	20	
Sample ID:	LFB-67788	Laboratory Fo	ortified Blank			Run: ICPM	S203-B_121226	A	12/26	6/12 12:56
Cerium		9.94	ug/filter	1.0	99	80	120			
Lanthanum		9.87	ug/filter	1.0	99	80	120			
Thorium		7.32	ug/filter	1.0	72	80	120			S
Uranium		9.72	ug/filter	1.0	97	80	120			
Sample ID:	LFBD-67788	Laboratory Fo	ortified Blank D	Duplicate		Run: ICPM	S203-B_121226	A	12/26	6/12 13:16
Cerium		9.77	ug/filter	1.0	98	80	120		20	
Lanthanum		9.80	ug/filter	1.0	98	80	120		20	
Thorium		7.57	ug/filter	1.0	75	80	120	0.8	20	S
Uranium		9.46	ug/filter	1.0	95	80	120	5.7	20	
Sample ID:	G12120257-006AMS	Sample Matri	x Spike			Run: ICPM	S203-B_121226	A	12/26	6/12 13:31
Cerium		0.262	ug/filter	1.0		70	130			А
Lanthanum		0.253	ug/filter	1.0		70	130			А
Thorium		0.247	ug/filter	1.0		70	130			А
Uranium		0.241	ug/filter	1.0		70	130			А
Sample ID:	G12120257-006AMSD	Sample Matri	x Spike Duplic	ate		Run: ICPM	S203-B_121226	A	12/26	6/12 13:36
Cerium		0.266	ug/filter	1.0		70	130		20	А
Lanthanum		0.258	ug/filter	1.0		70	130		20	А
Thorium		0.249	ug/filter	1.0		70	130		20	А
Uranium		0.244	ug/filter	1.0		70	130		20	А

**Qualifiers:** 

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated. S - Spike recovery outside of advisory limits.



### **QA/QC Summary Report**

Prepared by Billings, MT Branch

#### Client: Rare Element Resources Inc

Project: Upton

Report Date: 01/11/13 Work Order: G12120257

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E200.8								Bat	ch: 67788
Sample ID:	G12120257-005AMS	Sample Matri	x Spike			Run: ICPM	S203-B_130107	A	01/10	/13 01:22
Thorium		347	ug/filter	1.0	113	70	130			
Uranium		329	ug/filter	1.0	109	70	130			
Sample ID:	G12120257-005AMSD	Sample Matri	x Spike Duplic	ate		Run: ICPM	S203-B_130107	A	01/10	)/13 01:28
Thorium		340	ug/filter	1.0	111	70	130	2.1	20	
Uranium		327	ug/filter	1.0	109	70	130	0.6	20	
Method:	E200.8						Analytica	l Run: I	CPMS203-B	_130110A
Sample ID:	QCS	Initial Calibra	tion Verificatio	n Standard					01/10	/13 14:28
Thorium		0.0209	mg/L	0.0010	105	90	110			
Method:	E200.8								Bat	ch: 67788
Sample ID:	MB-67788	Method Blank	(			Run: ICPM	S203-B_130110	A	01/10	)/13 15:58
Thorium		0.4	ug/filter	0.0004						
Uranium		0.002	ug/filter	1E-06						
Sample ID:	G12120257-006ADUP	Sample Dupl	cate			Run: ICPM	S203-B_130110	A	01/10	)/13 16:14
Thorium		5.23	ug/filter	1.0				0.9	20	
Uranium		2.18	ug/filter	1.0				9.1	20	
Sample ID:	LFB-67788	Laboratory Fo	ortified Blank			Run: ICPM	S203-B_130110	A	01/10	/13 16:19
Thorium		9.34	ug/filter	1.0	89	80	120			
Uranium		9.92	ug/filter	1.0	99	80	120			
Sample ID:	LFBD-67788	Laboratory Fo	ortified Blank [	Duplicate		Run: ICPM	S203-B_130110	A	01/10	/13 16:25
Thorium		9.59	ug/filter	1.0	92	80	120	2.7	20	
Uranium		9.89	ug/filter	1.0	99	80	120	0.3	20	
Sample ID:	G12120257-006AMS	Sample Matri	x Spike			Run: ICPM	S203-B_130110	A	01/10	)/13 16:30
Thorium		72.7	ug/filter	1.0	112	70	130			
Uranium		65.7	ug/filter	1.0	106	70	130			
Sample ID:	G12120257-006AMSD	Sample Matri	x Spike Duplic	ate		Run: ICPM	S203-B_130110	A	01/10	)/13 16:35
Thorium		73.1	ug/filter	1.0	113	70	130	0.5	20	
Uranium		70.2	ug/filter	1.0	114	70	130	6.7	20	



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### **QA/QC Summary Report**

Prepared by Casper, WY Branch

#### Client: Rare Element Resources Inc

Project: Upton

Report Date: 01/16/13 Work Order: G12120257

Analyte	Result Units	RL %REC Low Limit High Limit	RPD RPDLimit Qual
Method: E903.0			Batch: RA226-6425
Sample ID: MB-36035	Method Blank	Run: G5000W_121221D	12/31/12 14:29
Radium 226	0.09 pCi/Filter		U
Radium 226 precision (±)	0.2 pCi/Filter		
Radium 226 MDC	0.3 pCi/Filter		
Sample ID: LCS-36035	Laboratory Control Sample	Run: G5000W_121221D	12/31/12 14:29
Radium 226	12.5 pCi/Filter	109 80 120	
Sample ID: G12120257-005BMS	Sample Matrix Spike	Run: G5000W_121221D	12/31/12 14:29
Radium 226	285 pCi/Filter	124 70 130	
Sample ID: C12120627-001ADUP	Sample Duplicate	Run: G5000W_121221D	12/31/12 14:29
Radium 226	0.000244 pCi/Filter		26 288.9 U
Radium 226 precision (±)	0.000411 pCi/Filter		
Radium 226 MDC	0.000651 pCi/Filter		

RL - Analyte reporting limit. MDC - Minimum detectable concentration



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### **QA/QC Summary Report**

Prepared by Casper, WY Branch

#### Client: Rare Element Resources Inc

Project: Upton

Report Date: 01/16/13 Work Order: G12120257

Analyte	Result Units	RL %REC Low Limit High Limit RPD RPDLimit Qual
Method: E908.0		Batch: R169231
Sample ID: MB-36035	Method Blank	Run: ALPHANALYST_130102A 01/04/13 13:36
Thorium 230	0.3 pCi/Filter	
Thorium 230 precision (±)	0.1 pCi/Filter	
Thorium 230 MDC	0.2 pCi/Filter	
Sample ID: C12120849-001AMS	Sample Matrix Spike	Run: ALPHANALYST_130102A 01/04/13 13:36
Thorium 230	0.0255 pCi/Filter	89 70 130
Sample ID: C12120849-001AMSD	Sample Matrix Spike Duplicate	Run: ALPHANALYST_130102A 01/04/13 13:36
Thorium 230	0.0272 pCi/Filter	95 70 130 6.5 30.7
Sample ID: LCS-36139	Laboratory Control Sample	Run: ALPHANALYST_130102A 01/04/13 13:36
Thorium 230	14.2 pCi/Filter	87 80 120



## **Standard Reporting Procedures**

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

# **Workorder Receipt Checklist**

### Rare Element Resources Inc

### G12120257

Login completed by:	Amanda Alley	Date Received: 12/11/2012								
Reviewed by:	BL2000\kscottruff	Received by: ala								
Reviewed Date:	12/11/2012			Carrier Hand Del name:						
Shipping container/cooler in	good condition?	Yes 🗹	No 🗌	Not Present						
Custody seals intact on ship	ping container/cooler?	Yes	No 🗌	Not Present 🗹						
Custody seals intact on sam	ple bottles?	Yes	No 🗌	Not Present 🗹						
Chain of custody present?		Yes 🖌	No 🗌							
Chain of custody signed whe	en relinquished and received?	Yes 🗹	No 🗌							
Chain of custody agrees wit	n sample labels?	Yes 🗸	No 🗌							
Samples in proper container	/bottle?	Yes 🗹	No 🗌							
Sample containers intact?		Yes 🗸	No 🗌							
Sufficient sample volume for	r indicated test?	Yes 🖌	No 🗌							
All samples received within I (Exclude analyses that are of such as pH, DO, Res CI, Su	onsidered field parameters	Yes 🗸	No 🗌							
Temp Blank received?		Yes	No 🗌	Not Applicable 🗹						
Container/Temp Blank temp	erature:	°C								
Water - VOA vials have zero	headspace?	Yes	No 🗌	No VOA vials submitted						
Water - pH acceptable upon	receipt?	Yes 🗌	No 🗌	Not Applicable						

Contact and Corrective Action Comments:

None

Signed         Sample Disposal:         Return to Client:         Lab Disposal:           In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other	Correct white the second strength of the second sec	2 1800			BAMS # 3 1m10 /2/2 /645 1	WAMS # 2 CONT 11/16/12 1500	5 CONT 11/28/12 1450	2 0 1 -1 - 1 - 1			2 PMIO lilzaliz	WAMSEL PM10 11/12/12 0800 A	SAMPLE IDENTIFICATION         Collection         Collection           (Name, Location, Interval, etc.)         Date         Time	N Samp <u>V</u> eç		POTWWWTP Format:	]	Special Report/Formats:	ress:	On File Robbie	ddress: Co		Company Name: Project Na	
posal: tal. tal. tal. tal. tal. tal. tal. tal.	Drag KUNUMAM ANALA	Storatuse Storatuse Received by (print):				× ×			R )	<b>X</b>	×	*	\$ 15 9 1		5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L'n'~	<del>تد'7</del>	ANALVSIS REQUESTED		Robbies Grubbs 307-1029-00111	ame: Phone/Fax:	s L		PRINT (Provide as much information as possible.)
ories in order to complete the analysis requested	Date/Time:	Date Time: 12/10/12 /8/10 11/14													<u>^</u>	U Comments:	R scheduling – See Instruction Page	RUSH sample submittal	Purchase Order:		Email:	State:	e Origin	ossible.)
nalysis requested.		Sunture Sunture	1	A/B(C		170	R	70	ISE	6	NI	1250010	Signature Y N Match Y N	On Bottle On Cooler	On ice: Y N			<u>ہ</u> ہ	Quote/Bottle Order:		Sampler: (Please Print)		EPA/State Compliance:	-

This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at <u>www.energylab.com</u> for additional information, downloadable fee schedule, forms, and links.

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