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Denver, CO 80202
(720) 440-6100 phone
(720) 305-0804 fax

Bonanza Creek.com

October 12, 2012

Eagles Nest Gun Club Inc.
C/O Jack Cox
7713 Poudre River Road
Greeley, Colorado 80634

Facility ID#752139

RE: Water Supply Sampling

Dear Mr. Cox:

Bonanza Creek Energy, Inc. (Bonanza Creek) contracted LT Environmental, Inc. (LTE) to collect a water sample from your water well (Permit # 287415) in Section 18, Township 4N, Range 62W, Weld County, Colorado on September 25, 2012. The sampling activities were conducted per Rule 318A.e.(4) requirements set forth by the Colorado Oil and Gas Conservation Commission (COGCC).

The water sample was collected in laboratory-supplied containers and submitted to ALS Environmental Laboratories (ALS) in Fort Collins, Colorado, for analysis of the required water quality parameters. The laboratory results are summarized in Table 1. The laboratory analytical report is provided as an attachment to this letter.

For comparison purposes, a regulatory limit for each analyte is included where applicable. The regulatory limit listed is the most stringent of the Colorado Primary Drinking Water Standards, Colorado Groundwater Standards, or Colorado Secondary Drinking Water Standards. The regulatory limit presented may not be the applicable standard for your water use.

A copy of this letter and the associated laboratory reports are also provided to Bob Chesson, Environmental Protection Specialist with the COGCC (303-894-2100 X5112). Bonanza Creek appreciates your cooperation in this sampling effort. If you have any questions, please contact me at 720-440-6113.

Sincerely,

Bonanza Creek Energy, Inc.

Tom Peterson
Engineering Technician

Attachments (2)

cc: Bob Chesson, COGCC

TABLE 1
318A Water Well Sampling Results
Bonanza Creek Energy, Inc.

Sample Name: BCE-70Holes-4N62W18-Eagle

Sample Date: September 25, 2012

Analyte	Result	Regulatory Limit	Units
pH	7.55	6.5-8.5	pH Units
Conductivity	1,440	NA	umhos/cm
Alkalinity, Bicarbonate	260	NA	mg/L
Alkalinity, Carbonate	<20	NA	mg/L
Calcium	130	NA	mg/L
Chloride	93	250	mg/L
Fluoride	0.75	4.0	mg/L
Iron	<0.1	0.3	mg/L
Magnesium	48	NA	mg/L
Manganese	<0.002	0.05	mg/L
Methane	<0.001	NA	mg/L
Nitrate as N	6.6	10	mg/L
Nitrite as N	<0.2	1	mg/L
Potassium	5.1	NA	mg/L
Selenium	0.0073	0.02	mg/L
Sodium	120	NA	mg/L
Sulfate	370	250	mg/L
TDS	1,100	500	mg/L

Notes:

mg/L – milligrams per Liter (~ parts per million)

NA – not applicable

N – nitrogen

TDS – total dissolved solids

umhos/cm – micromhos per centimeter

< - less than



1209395

Dissolved Gasses:

The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.

All acceptance criteria were met with the following exception:

The sample had a pH > 2 at the time of analysis.

Metals:

The sample was analyzed following SW-846, 3rd Edition procedures. Analysis by ICPMS followed method 6020A and the current revision of SOP 827.

All acceptance criteria were met.

Inorganics:

The sample was analyzed following EMSL and Standard Method procedures for the current revisions of the following SOPs and methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
pH	SM4500-H ⁺ B	1126
Specific conductance	SM2510B	1128
TDS	SM2540C	1101
Chloride	300.0 Revision 2.1	1113
Fluoride	300.0 Revision 2.1	1113
Nitrate as N	300.0 Revision 2.1	1113
Nitrite as N	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

All acceptance criteria were met.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1209395

Client Name: LT Environmental, Inc.

Client Project Name:

Client Project Number: 034512001.22







Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
BCE-70Holes-4N62W18-Eagle	1209395-1		WATER	25-Sep-12	10:10



1209395

Form 202r8

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		David L. Smith	7/25/12	1:15
RECEIVED BY		David L. Smith	7/25/12	1:15
RELINQUISHED BY		Lauren Schmitz	7/25/12	1:15
RECEIVED BY		Lauren Schmitz	7/25/12	1:15
RELINQUISHED BY		Lauren Schmitz	7/25/12	1:15
RECEIVED BY		Lauren Schmitz	7/25/12	1:15



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: LTE
Project Manager: ARW

Workorder No: 1209395
Initials: LAS Date: 9/25/12

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	<input checked="" type="radio"/> YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	YES	<input checked="" type="radio"/> NO
Cooler #: <u>1</u>			
Temperature (°C): <u>7.0*</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

*clipped off same day as sampled-temp OK

If applicable, was the client contacted? YES / NO / NA Contact: Swef Date/Time: 9/25/12

Project Manager Signature / Date: Swef 9/25/12

ALS Environmental -- FC

SAMPLE SUMMARY REPORT

Client: LT Environmental, Inc.
 Project: 034512001.22
 Sample ID: BCE-70Holes-4N62W18-Eagle
 Legal Location:
 Collection Date: 9/25/2012 10:10

Date: 30-Sep-12
 Work Order: 1209395
 Lab ID: 1209395-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE						
			SM2320B		Prep Date: 9/27/2012	PrepBy: JBM
BICARBONATE AS CaCO3	260		20	MG/L	1	9/27/2012
CARBONATE AS CaCO3	ND		20	MG/L	1	9/27/2012
TOTAL ALKALINITY AS CaCO3	260		20	MG/L	1	9/27/2012
DISSOLVED GASSES						
			RSK175		Prep Date: 9/28/2012	PrepBy: JFN
METHANE	ND		1	UG/L	1	9/28/2012 14:18
ICPMS METALS						
			SW6020		Prep Date: 9/28/2012	PrepBy: BAS
CALCIUM	130		1	MG/L	10	9/29/2012 12:29
IRON	ND		0.1	MG/L	10	9/29/2012 12:29
POTASSIUM	5.1		1	MG/L	10	9/29/2012 12:29
MAGNESIUM	48		0.1	MG/L	10	9/29/2012 12:29
MANGANESE	ND		0.002	MG/L	10	9/29/2012 12:29
SODIUM	120		1	MG/L	10	9/29/2012 12:29
SELENIUM	0.0073		0.001	MG/L	10	9/29/2012 12:29
ION CHROMATOGRAPHY						
			EPA300.0		Prep Date: 9/25/2012	PrepBy: EAL
CHLORIDE	93		4	MG/L	20	9/25/2012 18:05
FLUORIDE	0.75		0.2	MG/L	2	9/25/2012 17:54
NITRATE AS N	6.6		0.4	MG/L	2	9/25/2012 17:54
NITRITE AS N	ND		0.2	MG/L	2	9/25/2012 17:54
SULFATE	370		20	MG/L	20	9/25/2012 18:05
PH						
			SM4500-H		Prep Date: 9/26/2012	PrepBy: JBM
PH	7.55		0.1	pH	1	9/26/2012
SPECIFIC CONDUCTANCE IN WATER						
			SM2510B		Prep Date: 9/26/2012	PrepBy: JBM
SPECIFIC CONDUCTIVITY	1440		1	umhos/cm	1	9/26/2012
TOTAL DISSOLVED SOLIDS						
			SM2540C		Prep Date: 9/25/2012	PrepBy: JBM
TOTAL DISSOLVED SOLIDS	1100		40	MG/L	1	9/26/2012

ALS Environmental -- FC

SAMPLE SUMMARY REPORT

Client: LT Environmental, Inc.
 Project: 034512001.22
 Sample ID: BCE-70Holes-4N62W18-Eagle
 Legal Location:
 Collection Date: 9/25/2012 10:10

Date: 30-Sep-12
 Work Order: 1209395
 Lab ID: 1209395-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

U or ND - Result is less than the sample specific MDC.	M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.	L - LCS Recovery below lower control limit.
Y2 - Chemical Yield outside default limits.	H - LCS Recovery above upper control limit.
W - DER is greater than Warning Limit of 1.42	P - LCS, Matrix Spike Recovery within control limits.
* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.	N - Matrix Spike Recovery outside control limits
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.	NC - Not Calculated for duplicate results less than 5 times MDC
G - Sample density differs by more than 15% of LCS density.	B - Analyte concentration greater than MDC.
D - DER is greater than Control Limit	B3 - Analyte concentration greater than MDC but less than Requested MDC.
M - Requested MDC not met.	

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
 U or ND - Indicates that the compound was analyzed for but not detected.
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 M - Duplicate injection precision was not met.
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 * - Duplicate analysis (relative percent difference) not within control limits.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
 E - Analyte concentration exceeds the upper level of the calibration range.
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
 A - A tentatively identified compound is a suspected aldol-condensation product.
 X - The analyte was diluted below an accurate quantitation level.
 * - The spike recovery is equal to or outside the control criteria used.
 + - The relative percent difference (RPD) equals or exceeds the control criteria.

Diesel Range Organics:

ALS Environmental -- FC

SAMPLE SUMMARY REPORT

Client: LT Environmental, Inc.
Project: 034512001.22
Sample ID: BCE-70Holes-4N62W18-Eagle
Legal Location:
Collection Date: 9/25/2012 10:10

Date: 30-Sep-12
Work Order: 1209395
Lab ID: 1209395-1
Matrix: WATER

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
G - A pattern resembling gasoline was detected in this sample. D - A pattern resembling diesel was detected in this sample. M - A pattern resembling motor oil was detected in this sample. C - A pattern resembling crude oil was detected in this sample. 4 - A pattern resembling JP-4 was detected in this sample. 5 - A pattern resembling JP-5 was detected in this sample. H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest. L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest. Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products: - gasoline - JP-8 - diesel - mineral spirits - motor oil - Stoddard solvent - bunker C						

ALS Environmental -- FC

Date: 9/30/2012 9:17:

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: HC120928-9-2 Instrument ID MEE-1 Method: RSK175

LCS Sample ID: HC120928-9 Units: UG/L Analysis Date: 9/28/2012 14:06

Client ID: Run ID: HC120928-9A Prep Date: 9/28/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	154	1	142		108	80-120			25	

LCSD Sample ID: HC120928-9 Units: UG/L Analysis Date: 9/28/2012 14:22

Client ID: Run ID: HC120928-9A Prep Date: 9/28/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	143	1	142		100	80-120	154	7	25	

MB Sample ID: HC120928-9 Units: UG/L Analysis Date: 9/28/2012 13:59

Client ID: Run ID: HC120928-9A Prep Date: 9/28/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	ND	1								

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
 Work Order: 1209395
 Project: 034512001.22

QC BATCH REPORT

Batch ID: IP120928-4-2 Instrument ID ICPMS2 Method: SW6020

LCS		Sample ID: FM120927-1		Units: MG/L		Analysis Date: 9/29/2012 12:18				
Client ID:		Run ID: IM120929-10A1		Prep Date: 9/28/2012		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	8.95	1	10		90	80-120			20	
IRON	4.61	0.1	5		92	80-120			20	
MAGNESIUM	9.51	0.1	10		95	80-120			20	
MANGANESE	0.179	0.002	0.2		90	80-120			20	
POTASSIUM	4.3	1	5		86	80-120			20	
SELENIUM	0.0927	0.001	0.1		93	80-120			20	
SODIUM	9.22	1	10		92	80-120			20	

LCSD		Sample ID: FM120927-1		Units: MG/L		Analysis Date: 9/29/2012 12:21				
Client ID:		Run ID: IM120929-10A1		Prep Date: 9/28/2012		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	8.86	1	10		89	80-120	8.95	1	20	
IRON	4.58	0.1	5		92	80-120	4.61	1	20	
MAGNESIUM	9.52	0.1	10		95	80-120	9.51	0	20	
MANGANESE	0.178	0.002	0.2		89	80-120	0.179	1	20	
POTASSIUM	4.37	1	5		87	80-120	4.3	2	20	
SELENIUM	0.0934	0.001	0.1		93	80-120	0.0927	1	20	
SODIUM	9.17	1	10		92	80-120	9.22	1	20	

MB		Sample ID: F120927-1		Units: MG/L		Analysis Date: 9/29/2012 12:10				
Client ID:		Run ID: IM120929-10A1		Prep Date: 9/28/2012		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	ND	1								
IRON	ND	0.1								
MAGNESIUM	ND	0.1								
MANGANESE	ND	0.002								
POTASSIUM	ND	1								
SELENIUM	ND	0.001								
SODIUM	ND	1								

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: AK120927-1-1 Instrument ID NONE Method: SM2320B

LCS Sample ID: AK120927-1 Units: MG/L Analysis Date: 9/27/2012

Client ID: Run ID: ak120927-1a Prep Date: 9/27/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	99.5	5	100		99	85-115			15	

MB Sample ID: AK120927-1 Units: MG/L Analysis Date: 9/27/2012

Client ID: Run ID: ak120927-1a Prep Date: 9/27/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	ND	5								
CARBONATE AS CaCO3	ND	5								
TOTAL ALKALINITY AS CaCO3	ND	5								

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: IC120925-1-1 Instrument ID IC Method: EPA300.0

LCS Sample ID: IC120925-1 Units: MG/L Analysis Date: 9/25/2012 12:12

Client ID: Run ID: IC120925-1A1 Prep Date: 9/25/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
FLUORIDE	2.4	0.1	2.5		96	90-110			15	
CHLORIDE	4.89	0.2	5		98	90-110			15	
NITRITE AS N	1.94	0.1	2		97	90-110			15	
NITRATE AS N	4.78	0.2	5		96	90-110			15	
SULFATE	24.7	1	25		99	90-110			15	

MB Sample ID: IC120925-1 Units: MG/L Analysis Date: 9/25/2012 12:23

Client ID: Run ID: IC120925-1A1 Prep Date: 9/25/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
FLUORIDE	ND	0.1								
CHLORIDE	ND	0.2								
NITRITE AS N	ND	0.1								
NITRATE AS N	ND	0.2								
SULFATE	ND	1								

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: PH120926-1-2 Instrument ID pH-1 Method: SM4500-H

DUP Sample ID: 1209395-1 Units: pH Analysis Date: 9/26/2012
Client ID: BCE-70Holes-4N62W18-Eagle Run ID: pH120926-1a Prep Date: 9/26/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
PH	7.55	0.1					7.55		0.2	

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: **SC120926-1-1** Instrument ID **pH-1** Method: **SM2510B**

DUP Sample ID: **1209395-1** Units: **umhos/cm** Analysis Date: **9/26/2012**
Client ID: **BCE-70Holes-4N62W18-Eagle** Run ID: **sc120926-1a** Prep Date: **9/26/2012** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1460	1					1440	1	10	

The following samples were analyzed in this batch:

1209395-1

Client: LT Environmental, Inc.
Work Order: 1209395
Project: 034512001.22

QC BATCH REPORT

Batch ID: TD120925-1-2 Instrument ID Balance Method: SM2540C

LCS Sample ID: TD120925-1 Units: MG/L Analysis Date: 9/26/2012
Client ID: Run ID: td120926-1a Prep Date: 9/25/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	416	20	400		104	85-115			5	

MB Sample ID: TD120925-1 Units: MG/L Analysis Date: 9/26/2012
Client ID: Run ID: td120926-1a Prep Date: 9/25/2012 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	ND	20								

The following samples were analyzed in this batch: 1209395-1