

**TABLE 1**  
**SOIL ANALYTICAL RESULTS**  
**DELBERT SHABLE UNIT 1 PRODUCED WATER PIT CLOSURE**  
**WELD COUNTY, COLORADO**  
**BONANZA CREEK ENERGY OPERATING COMPANY LLC.**

Parameters		COGCC Table 910-1 Concentration Level	SS01
Sample Date		<del>XXXXXXXXXX</del>	4/11/2017
Sample Depth (feet)		<del>XXXXXXXXXX</del>	3.0-4.0
<b>BTEX</b>	<b>Benzene</b>	<b>0.17</b>	<0.002
	<b>Toluene</b>	<b>85</b>	<0.002
	<b>Ethylbenzene</b>	<b>100</b>	<0.002
	<b>Total Xylenes</b>	<b>175</b>	<0.002
<b>TPH</b>	<b>DRO</b>	--	<50
	<b>GRO</b>	--	<0.2
	<b>Total</b>	<b>500</b>	<50
<b>Inorganics</b>	<b>EC (mmhos/cm)</b>	<b>&lt;4</b>	0.146
	<b>SAR</b>	<b>&lt;12</b>	3.48
	<b>pH (unitless)</b>	<b>6-9</b>	8.60

Notes:

- - no concentration level is available
- BTEX - benzene, toluene, ethylbenzene, xylenes (total)
- COGCC - Colorado Oil and Gas Conservation Commission
- TPH - total petroleum hydrocarbons
- DRO - diesel range organics
- GRO - gasoline range organics
- EC - electrical conductivity
- mmhos/cm - millimhos per centimeter
- SAR - sodium adsorption ratio
- All results are in mg/kg unless stated otherwise.

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS**  
**DELBERT SHABLE UNIT 1 PRODUCED WATER PIT CLOSURE**  
**WELD COUNTY, COLORADO**  
**BONANZA CREEK ENERGY OPERATING COMPANY LLC.**

Parameters		COGCC Table 910-1 Concentration Level	GW01
Sample Date			4/11/2017
Sample Depth (feet)			4.0
<b>BTEX</b>	<b>Benzene</b>	<b>0.005</b>	<0.001
	<b>Toluene</b>	<b>0.56</b>	<0.001
	<b>Ethylbenzene</b>	<b>0.7</b>	<0.001
	<b>Total Xylenes</b>	<b>1.4</b>	<0.001

Notes:

COGCC - Colorado Oil and Gas Conservation Commission  
 BTEX - benzene, toluene, ethylbenzene, xylenes (total)  
 All results are in mg/kg unless stated otherwise.



April 18, 2017

**Bonanza Creek Energy, Inc.**

**Brian Dodek**

**410 17th St, Suite 1400**

**Denver CO 80211**

**Project Name - Delbert Shable Unit 1**

**Project Number - [none]**

Attached are your analytical results for Delbert Shable Unit 1 received by Origins Laboratory, Inc. April 11, 2017. This project is associated with Origins project number Y704120-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01	Y704120-01	Soil	April 11, 2017 9:15	04/11/2017 16:10
WS01	Y704120-02	Water	April 11, 2017 9:20	04/11/2017 16:10

Origins Laboratory, Inc.



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Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

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1704120



Client: Bonanza Creek Energy  
 Address: 410 17th Street Suite 1700 Denver, CO 80202  
 Telephone Number: 720-225-6653  
 Email Address: \_\_\_\_\_

Project Manager: Brian Dodek/Luke Kelly  
 Project Name: Delbert Shable Unit 1  
 Project Number: \_\_\_\_\_  
 Samples Collected By: Luke Kelly

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air/Surface	Other	TPH (400-1000)	ISTEX	Ec pH		SAZ	Sample Instructions
5501	4/11/17	0915	2	X				X					X				
6501	4/11/17	0920	3	X				X						X			
Relinquished By: <i>L. Kelly</i>	Date: 4/11/2017	Time: 16:10	Received By: <i>[Signature]</i>	Date: 4-11-17	Time: 1610	Standard											

Date Results Needed

1,5 L

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: 1704170

Client: Bonanza Creek Energy

Client Project ID: Delbert Shable Unit 1

Checklist Completed by: Dodek

Shipped Via: W/D  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 4-11-17 1629

Airbill #: N/A

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_ (Describe)

Cooler Number/Temperature: 1 / 13 °C \_\_\_\_\_ °C \_\_\_\_\_ °C \_\_\_\_\_ °C

Thermometer ID: 1005

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)?</sup>	<input checked="" type="checkbox"/>			<u>pH, SAE</u>
Is a chain-of-custody (COC) present and filled out completely <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)?</sup>	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)?</sup> (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCl, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

[Signature]  
Reviewed by (Project Manager)

4/12/17  
Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

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Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**SS01**

**4/11/2017 9:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
Y704120-01 (Soil)**

**Diesel Range Organics (DRO/TEPH) by EPA 8015C**

Diesel (C10-C28)	ND	50.0	mg/kg	1	B7D1302	04/13/2017	04/13/2017	U
<i>Surrogate: o-Terphenyl</i>	80.0 %	59-131			"	"	"	

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B7D1301	04/13/2017	04/13/2017	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

<i>Surrogate: 1,2-Dichloroethane-d4</i>	107 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	106 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.6 %	70-130			"	"	"	

**Metals (Saturated Paste Prep)**

Calcium	7.65		me/L	1	'[none]'	04/12/2017	04/13/2017	
Magnesium	3.58		"	"	"	"	"	
Sodium	8.24		"	"	"	"	"	

**pH in Soil by EPA 9045D**

pH	8.60		pH Units	1	B7D1303	04/13/2017	04/14/2017	
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Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**SS01**

**4/11/2017 9:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y704120-01 (Soil)

**SAR by 20B Saturated Paste**

SAR	3.48			1	'[none]'	04/12/2017	04/13/2017	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.146		mmhos/cm	1	B7D1304	04/13/2017	04/14/2017	
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410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

WS01

4/11/2017 9:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y704120-02 (Water)

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B7D1701	04/17/2017	04/17/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	98.8 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.5 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	

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410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1301 - EPA 5030 (soil)**

**Blank (B7D1301-BLK1)**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

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Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1301 - EPA 5030 (soil)

**LCS (B7D1301-BS1)**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Benzene	0.080	0.002	mg/kg	0.100		80.1	77.1-124			
Toluene	0.088	0.002	"	0.100		87.5	74.5-128			
Ethylbenzene	0.091	0.002	"	0.100		91.5	66.4-127			
m,p-Xylene	0.185	0.004	"	0.200		92.7	76.6-124			
o-Xylene	0.093	0.002	"	0.100		93.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	54		ug/kg	62.5		86.9	70-130			
Surrogate: Toluene-d8	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1301 - EPA 5030 (soil)

Matrix Spike (B7D1301-MS1)	Source: Y704117-01			Prepared: 04/13/2017 Analyzed: 04/13/2017						
Benzene	0.081	0.002	mg/kg	0.100	ND	80.7	71.8-126			
Toluene	0.086	0.002	"	0.100	ND	86.5	65.1-130			
Ethylbenzene	0.087	0.002	"	0.100	ND	86.9	62.2-130			
m,p-Xylene	0.177	0.004	"	0.200	ND	88.6	46.5-137			
o-Xylene	0.089	0.002	"	0.100	ND	89.0	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		100	70-130			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1301 - EPA 5030 (soil)

Matrix Spike Dup (B7D1301-MSD1)	Source: Y704117-01			Prepared: 04/13/2017 Analyzed: 04/13/2017						
Benzene	0.081	0.002	mg/kg	0.100	ND	80.7	71.8-126	0.0248	11.3	
Toluene	0.086	0.002	"	0.100	ND	85.7	65.1-130	0.859	15.4	
Ethylbenzene	0.088	0.002	"	0.100	ND	88.1	62.2-130	1.28	19.6	
m,p-Xylene	0.179	0.004	"	0.200	ND	89.7	46.5-137	1.16	19.2	
o-Xylene	0.091	0.002	"	0.100	ND	90.9	54.2-134	2.13	17.9	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	70-130			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1701 - EPA 5030B (Water)**

**Blank (B7D1701-BLK1)**

Prepared: 04/17/2017 Analyzed: 04/17/2017

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	59		"	62.5	94.6		84-121			
<i>Surrogate: Toluene-d8</i>	62		"	62.5	98.4		85-115			
<i>Surrogate: 4-Bromofluorobenzene</i>	57		"	62.5	91.0		84-114			

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410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1701 - EPA 5030B (Water)**

**Blank (B7D1701-BLK2)**

Prepared: 04/17/2017 Analyzed: 04/17/2017

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	56		"	62.5		89.2	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.7	85-115			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		89.8	84-114			

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410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1701 - EPA 5030B (Water)

**LCS (B7D1701-BS1)**

Prepared: 04/17/2017 Analyzed: 04/17/2017

Benzene	49.0	1.00	ug/L	50.0		98.0	73.3-129			
Toluene	50.5	1.00	"	50.0		101	76.2-123			
Ethylbenzene	52.3	1.00	"	50.0		105	73.6-130			
m,p-Xylene	105	2.00	"	100		105	76.1-126			
o-Xylene	51.0	1.00	"	50.0		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	55		"	62.5		87.7	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.3	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.0	84-114			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1701 - EPA 5030B (Water)

**LCS (B7D1701-BS2)**

Prepared: 04/17/2017 Analyzed: 04/17/2017

Benzene	49.9	1.00	ug/L	50.0		99.8	73.3-129			
Toluene	51.2	1.00	"	50.0		102	76.2-123			
Ethylbenzene	52.0	1.00	"	50.0		104	73.6-130			
m,p-Xylene	106	2.00	"	100		106	76.1-126			
o-Xylene	52.0	1.00	"	50.0		104	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	55		"	62.5		88.6	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.4	85-115			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.8	84-114			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1701 - EPA 5030B (Water)

Matrix Spike (B7D1701-MS1)	Source: Y704161-08			Prepared: 04/17/2017 Analyzed: 04/17/2017						
Benzene	55.3	1.00	ug/L	50.0	3.84	103	74-130			
Toluene	53.7	1.00	"	50.0	ND	107	73-131			
Ethylbenzene	61.0	1.00	"	50.0	5.11	112	76-132			
m,p-Xylene	112	2.00	"	100	ND	112	69-139			
o-Xylene	53.6	1.00	"	50.0	ND	107	74-131			
Surrogate: 1,2-Dichloroethane-d4	56		"	62.5		90.3	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.8	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.3	84-114			

Origins Laboratory, Inc.



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Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7D1701 - EPA 5030B (Water)

Matrix Spike (B7D1701-MS2)	Source: Y704161-09			Prepared: 04/17/2017 Analyzed: 04/17/2017						
Benzene	56.7	1.00	ug/L	50.0	9.37	94.7	74-130			
Toluene	50.5	1.00	"	50.0	0.120	101	73-131			
Ethylbenzene	60.0	1.00	"	50.0	5.71	108	76-132			
m,p-Xylene	107	2.00	"	100	ND	107	69-139			
o-Xylene	51.6	1.00	"	50.0	ND	103	74-131			
Surrogate: 1,2-Dichloroethane-d4	52		"	62.5		83.5	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.1	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.4	84-114			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1701 - EPA 5030B (Water)**

Matrix Spike Dup (B7D1701-MSD1)	Source: Y704161-08			Prepared: 04/17/2017 Analyzed: 04/17/2017						
Benzene	54.2	1.00	ug/L	50.0	3.84	101	74-130	2.08	20	
Toluene	53.7	1.00	"	50.0	ND	107	73-131	0.00	20	
Ethylbenzene	60.4	1.00	"	50.0	5.11	111	76-132	0.906	20	
m,p-Xylene	110	2.00	"	100	ND	110	69-139	1.88	20	
o-Xylene	53.5	1.00	"	50.0	ND	107	74-131	0.224	20	
Surrogate: 1,2-Dichloroethane-d4	55		"	62.5		88.7	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.8	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.3	84-114			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1701 - EPA 5030B (Water)**

Matrix Spike Dup (B7D1701-MSD2)	Source: Y704161-09			Prepared: 04/17/2017 Analyzed: 04/17/2017						
Benzene	57.1	1.00	ug/L	50.0	9.37	95.5	74-130	0.668	20	
Toluene	51.6	1.00	"	50.0	0.120	103	73-131	2.20	20	
Ethylbenzene	58.6	1.00	"	50.0	5.71	106	76-132	2.33	20	
m,p-Xylene	105	2.00	"	100	ND	105	69-139	2.01	20	
o-Xylene	51.6	1.00	"	50.0	ND	103	74-131	0.0581	20	
Surrogate: 1,2-Dichloroethane-d4	51		"	62.5		81.6	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.3	85-115			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.3	84-114			

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Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Extractable Petroleum Hydrocarbons by 8015C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B7D1302 - EPA 3550B**

**Blank (B7D1302-BLK1)**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	40		"	50.0		80.9	59-131			

**LCS (B7D1302-BS1)**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Diesel (C10-C28)	908	50.0	mg/kg	1000		90.8	64-121			
Surrogate: o-Terphenyl	44		"	50.0		87.3	59-131			

**Matrix Spike (B7D1302-MS1)**

**Source: Y704149-01**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Diesel (C10-C28)	1030	50.0	mg/kg	1000	93.7	93.9	53-125			
Surrogate: o-Terphenyl	46		"	50.0		92.2	59-131			

**Matrix Spike Dup (B7D1302-MSD1)**

**Source: Y704149-01**

Prepared: 04/13/2017 Analyzed: 04/13/2017

Diesel (C10-C28)	1100	50.0	mg/kg	1000	93.7	101	53-125	6.67	20	
Surrogate: o-Terphenyl	48		"	50.0		96.8	59-131			

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Denver CO 80211

Brian Dodek

Project Number: [none]

Project: Delbert Shable Unit 1

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B7D1303 - NO PREP</b>										
<b>Duplicate (B7D1303-DUP1)</b>		<b>Source: Y704117-01</b>			Prepared: 04/13/2017 Analyzed: 04/14/2017					
pH	8.77		pH Units		8.70			0.801	25	
<b>Batch B7D1304 - NO PREP</b>										
<b>Blank (B7D1304-BLK1)</b>		Prepared: 04/13/2017 Analyzed: 04/14/2017								
Specific Conductance (EC)	0.00330		mmhos/cm							
<b>Duplicate (B7D1304-DUP1)</b>		<b>Source: Y704117-01</b>			Prepared: 04/13/2017 Analyzed: 04/14/2017					
Specific Conductance (EC)	0.130		mmhos/cm		0.115			11.9	25	

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410 17th St, Suite 1400  
Denver CO 80211

Brian Dodek  
Project Number: [none]  
Project: Delbert Shable Unit 1

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**Notes and Definitions**

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President