

LEGEND



Site Location

N



Figure 1
Location Site Map
October 8, 2015 BDD

**Pierre B Tank Release
NESW Sec 2, T9N, R79W, 6th PM
Jackson County, Colorado**

Figure 2: Pierre B Tank Release - Soil Sample Locations
NESW, Sec. 2, T9N R79W
Jackson County, Colorado



Spill Path Sample



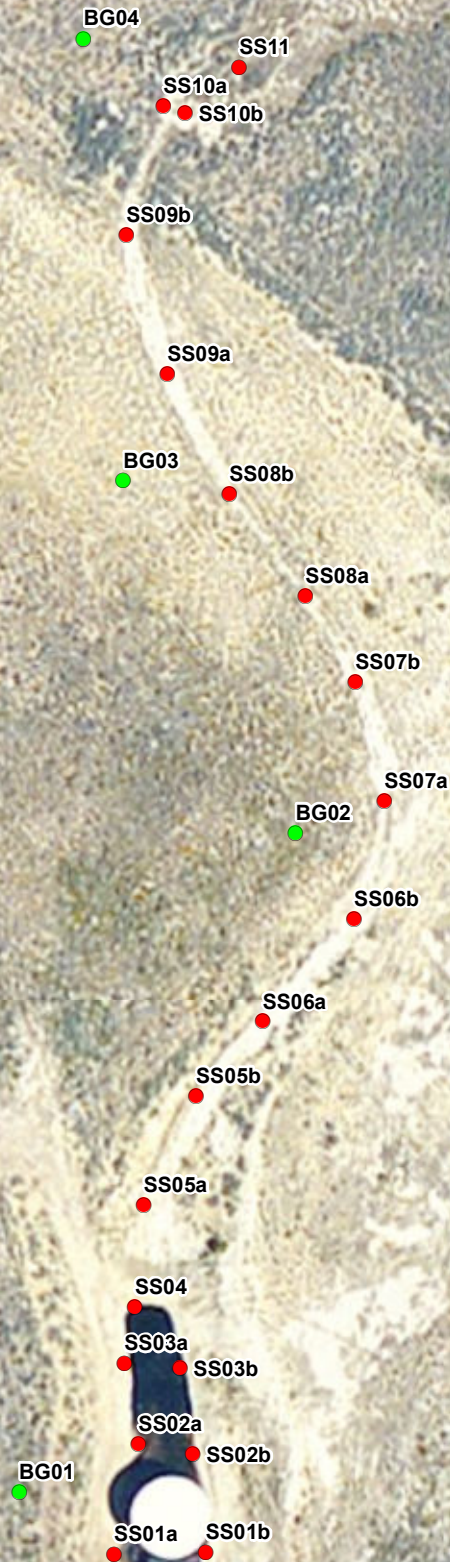
Background Sample

D. Castro
11/13/15

Background: NAIP 9/25/13 True Color Imagery



0 20 40 80 120
Feet
1:1,000



| SampleName | Lat83 | Long83 |
|------------|-----------|-------------|
| SS01a | 40.782016 | -106.233200 |
| SS01b | 40.782019 | -106.233056 |
| SS02a | 40.782147 | -106.233165 |
| SS02b | 40.782137 | -106.233079 |
| SS03a | 40.782243 | -106.233188 |
| SS03b | 40.782239 | -106.233100 |
| SS04 | 40.782310 | -106.233173 |
| BG01 | 40.782088 | -106.233350 |
| SS05a | 40.782433 | -106.233162 |
| SS05b | 40.782563 | -106.233082 |
| SS06a | 40.782653 | -106.232979 |
| SS06b | 40.782777 | -106.232838 |
| SS07a | 40.782918 | -106.232794 |
| SS07b | 40.783059 | -106.232841 |
| SS08a | 40.783160 | -106.232921 |
| SS08b | 40.783281 | -106.233043 |
| SS09a | 40.783423 | -106.233142 |
| SS09b | 40.783588 | -106.233210 |
| SS10a | 40.783742 | -106.233154 |
| SS10b | 40.783734 | -106.233121 |
| SS11 | 40.783789 | -106.233037 |
| BG02 | 40.782878 | -106.232932 |
| BG03 | 40.783295 | -106.233209 |
| BG04 | 40.783821 | -106.233281 |

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PIERRE B TANK RELEASE
BONANZA CREEK ENERGY OPERATING COMPANY LLC

| SAMPLE ID | SAMPLE DATE | DEPTH (inches bgs) | BENZENE (mg/kg) | TOLUENE (mg/kg) | ETHYL- BENZENE (mg/kg) | XYLENES (Total) (mg/kg) | TPH | | |
|---------------------------|-------------|--------------------------|--------------------|--------------------|------------------------------|-------------------------------|----------------|----------------|----------------------|
| | | | | | | | GRO (mg/kg) | DRO (mg/kg) | Total TPH (mg/kg) |
| SS01 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS02 | 11/3/2015 | 0 - 4 | <0.050 | <0.050 | <0.050 | <0.050 | 12.3 | 183 | 195.3 |
| SS03 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | 0.002 | 0.002 | 0.708 | <50 | 0.708 |
| SS04 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS05 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS06 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS07 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS08 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS09 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| SS10 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | 239 | 239 |
| SS11 | 11/3/2015 | 0 - 4 | <0.002 | <0.002 | <0.002 | <0.002 | <0.200 | <50 | <50 |
| COGCC Concentration Level | | | 0.17 | 85 | 100 | 175 | -- | -- | 500 ¹ |

Notes:

bgs - below ground surface

mg/kg - milligrams per kilogram

TPH - Total Petroleum Hydrocarbons

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

<0.01 - less than laboratory reporting limit.

COGCC - Colorado Oil and Gas Conservation Commission

¹ - The COGCC concentration level for TPH is applied to the sum of the GRO and DRO concentrations.





November 10, 2015

Bonanza Creek Energy, Inc.

Brian Dodek

410 17th St, Suite 1400

Denver

CO 80211

Project Name - McCallum Pierre B

Project Number - [none]

Attached are your analytical results for McCallum Pierre B received by Origins Laboratory, Inc. November 04, 2015. This project is associated with Origins project number X511055-01.

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: McCallum Pierre B

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|------------------------|------------------|
| SS01 | X511055-01 | Soil | November 3, 2015 10:52 | 11/04/2015 13:55 |
| SS02 | X511055-02 | Soil | November 3, 2015 11:17 | 11/04/2015 13:55 |
| SS03 | X511055-03 | Soil | November 3, 2015 11:52 | 11/04/2015 13:55 |
| SS04 | X511055-04 | Soil | November 3, 2015 12:02 | 11/04/2015 13:55 |
| SS05 | X511055-05 | Soil | November 3, 2015 12:32 | 11/04/2015 13:55 |
| SS06 | X511055-06 | Soil | November 3, 2015 12:44 | 11/04/2015 13:55 |
| SS07 | X511055-07 | Soil | November 3, 2015 12:59 | 11/04/2015 13:55 |
| SS08 | X511055-08 | Soil | November 3, 2015 13:25 | 11/04/2015 13:55 |
| SS09 | X511055-09 | Soil | November 3, 2015 13:30 | 11/04/2015 13:55 |
| SS10 | X511055-10 | Soil | November 3, 2015 13:48 | 11/04/2015 13:55 |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

CROSS REFERENCE REPORT

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|------------------------|------------------|
| SS11 | X511055-11 | Soil | November 3, 2015 13:53 | 11/04/2015 13:55 |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

ORIGINS
LABORATORY, INC

XSI1055

www.originslaboratory.com

page 1 of 2

Client: Bonanza Creek Energy, Inc.
Address: 410 17th Street, Suite 1400
Telephone Number: 720-225-6653
Email Address: bdodek@bonanzaark.com

Project Manager: Brian Dodek
Project Name: McCallum Pierre B
Project Number: NA
Samples Collected By: Sam Robles

| Sample ID Description | Date Sampled | Time Sampled | # of Containers | Preservative | | | | | Matrix | | | | Analysis | Sample Instructions |
|-----------------------------|---------------|--------------|-----------------|-------------------------------------|-----|------------------|-------|-------------|--------|---------------|-------|---------------|------------------------|---|
| | | | | Unpreserved | HCl | HNO ₃ | Other | Groundwater | Soil | Air Summation | Other | | | |
| SS01 | 11-3-15 | 10:52 | 2 | <input checked="" type="checkbox"/> | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 1 |
| SS02 | | 11:17 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 2 |
| SS03 | | 11:52 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 3 |
| SS04 | | 12:02 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 4 |
| SS05 | | 12:32 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 5 |
| SS06 | | 12:44 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 6 |
| SS07 | | 12:59 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 7 |
| SS08 | | 13:25 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 8 |
| SS09 | | 13:36 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 9 |
| SS10 | 11-3-15 | 13:48 | 2 | | | | | | | X | | | BTEX, TPH-GRO, TPH-DRO | 10 |
| Relinquished By: Sam Robles | Date: 11-4-15 | | | Received By: Jim Ward | | | | | | | | Date: 11-4-15 | Time: 17:35 | Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard |
| Relinquished By: Jim Ward | Date: 11-4-15 | 12:55 | | Received By: Jim Ward | | | | | | | | Date: 11-4-15 | Time: 17:35 | |

Date Results Needed

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

ORIGINS

LABORATORY, INC

X51055

www.originslaboratory.com

page 2 of 2

Client: Bonanza Creek Energy, Inc.
Address: 410 17th Street, Suite 1400

Project Manager: Brian Dodek
Project Name: McCallum Pierre B
Project Number: NA
Samples Collected By: Sam Robles

Telephone Number: 720-225-6653
Email Address: bdodek@bonanzacrk.com

| Sample ID Description | Date Sampled | Time Sampled | # of Containers | Preservative | Matrix | Analysis | Sample Instructions |
|-----------------------------|-----------------|--------------|-----------------|--------------------------|---------------|------------------------|---|
| SS11 | 11-3-15 | 13:53 | 2 | Unpreserved | Soil | BTEX, TPH-GRO, TPH-DRO | 1 |
| BG01 | 11-3-15 | 12:15 | 2 | Unpreserved | Soil | BTEX, TPH-GRO, TPH-DRO | 2 |
| BG02 | 11-3-15 | 14:18 | 2 | Unpreserved | Soil | EC, PH, SAR | 3 |
| BG03 | 11-3-15 | 14:23 | 2 | Unpreserved | Soil | EC, PH, SAR | 4 |
| BG04 | 11-3-15 | 14:30 | 2 | Unpreserved | Soil | EC, PH, SAR | 5 |
| | | | | | | EC, PH, SAR | 6 |
| | | | | | | | 7 |
| | | | | | | | 8 |
| | | | | | | | 9 |
| | | | | | | | 10 |
| Relinquished By: Sam Robles | Date: 11-4-2015 | Time: 11:55 | | Received By: Jim Weider | Date: 11-4-15 | Time: 12:15 | Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> Standard <input type="checkbox"/> |
| Relinquished By: Jim Weider | Date: 11-4-15 | Time: 11:55 | | Received By: [Signature] | Date: 11/4/15 | Time: 13:55 | |

Date Results Needed

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS11055

Client: Bonanza Creek

Client Project ID: McCallum Pierre B

Checklist Completed by: Jef Smith

Shipped Via: HAD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11/4/15

Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 1 10.7 °C 1 °C 1 °C (Describe) °C

Thermometer ID: 7003

| Requirement Description | Yes | No | N/A | Comments (if any) |
|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ? | <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 ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Was adequate sample volume provided ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | <input checked="" type="checkbox"/> | | | |
| Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ? | <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 ⁽¹⁾ ? (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 ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH) | | | <input checked="" type="checkbox"/> | |
| Additional Comments (if any): <u>Brian D. requested by phone conversation that B601- B604 be placed on Hold Pending results from S501-S511.</u> | | | | |
| <u>11/4/15</u> <u>Jef Smith</u> | | | | |

⁽¹⁾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.

Reviewed by (Project Manager) [Signature]

11/5/15
Date/Time Reviewed

Origins Laboratory, Inc.

Jef Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS01

11/3/2015 10:52:00AM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-01 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 88.2 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 112 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 98.2 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 104 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS02

11/3/2015 11:17:00AM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-02 (Soil)

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

| | | | | | | | |
|------------------|-----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | 183 | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|-----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|-------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 102 % | 59-131 | | | " | " | " |
|------------------------|-------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|------|------|-------|----|---------|------------|------------|
| Gasoline Range Hydrocarbons | 12.3 | 5.00 | mg/kg | 25 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|------|------|-------|----|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.050 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.050 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.050 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.050 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 104 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 98.9 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 102 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS03

11/3/2015 11:52:00AM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.
X511055-03 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 97.9 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|-------|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | 0.708 | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
| Benzene | ND | 0.002 | " | " | " | " | " |
| Toluene | ND | 0.002 | " | " | " | " | " |
| Ethylbenzene | 0.002 | 0.002 | " | " | " | " | " |
| Xylenes, total | 0.002 | 0.002 | " | " | " | " | " |

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 116 % | 70-130 | | | " | " | " |
| Surrogate: Toluene-d8 | 101 % | 70-130 | | | " | " | " |
| Surrogate: 4-Bromofluorobenzene | 120 % | 70-130 | | | " | " | " |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS04

11/3/2015 12:02:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-04 (Soil)

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

| | | | | | | | |
|------------------|------|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | 76.6 | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|------|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 95.7 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 119 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|-------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 104 % | 70-130 | | | " | " | " |
|-----------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|--------|
| Surrogate: 4-Bromofluorobenzene | 140 % | 70-130 | | | " | " | " S-07 |
|---------------------------------|-------|--------|--|--|---|---|--------|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS05

11/3/2015 12:32:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-05 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 94.4 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 121 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 96.1 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 102 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS06

11/3/2015 12:44:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-06 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|-------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 103 % | 59-131 | | | " | " | " |
|------------------------|-------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 112 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 98.7 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 112 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS07

11/3/2015 12:59:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-07 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 97.2 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 120 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|-------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 100 % | 70-130 | | | " | " | " |
|-----------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 123 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS08

11/3/2015 1:25:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-08 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 81.5 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 120 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 98.6 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 117 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS09

11/3/2015 1:30:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-09 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 93.5 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 117 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|--------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 99.4 % | 70-130 | | | " | " | " |
|-----------------------|--------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 116 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS10

11/3/2015 1:48:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|--------------------|-------|----------|-------|----------|----------|-------|
|---------|--------|--------------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-10 (Soil)

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

| | | | | | | | |
|------------------|-----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | 239 | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|-----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 78.5 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 114 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|-------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 101 % | 70-130 | | | " | " | " |
|-----------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 121 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

SS11

11/3/2015 1:53:00PM

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Notes |
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|
|---------|--------|-----------------|-------|----------|-------|----------|----------|-------|

Origins Laboratory, Inc.

X511055-11 (Soil)

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

| | | | | | | | |
|------------------|----|------|-------|---|---------|------------|------------|
| Diesel (C10-C28) | ND | 50.0 | mg/kg | 1 | B5K0502 | 11/05/2015 | 11/05/2015 |
|------------------|----|------|-------|---|---------|------------|------------|

| | | | | | | | |
|------------------------|--------|--------|--|--|---|---|---|
| Surrogate: o-Terphenyl | 94.8 % | 59-131 | | | " | " | " |
|------------------------|--------|--------|--|--|---|---|---|

GBTEX by EPA 8260C

| | | | | | | | |
|-----------------------------|----|-------|-------|---|---------|------------|------------|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | 1 | B5K0501 | 11/05/2015 | 11/06/2015 |
|-----------------------------|----|-------|-------|---|---------|------------|------------|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Benzene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|---------|----|-------|---|---|---|---|---|
| Toluene | ND | 0.002 | " | " | " | " | " |
|---------|----|-------|---|---|---|---|---|

| | | | | | | | |
|--------------|----|-------|---|---|---|---|---|
| Ethylbenzene | ND | 0.002 | " | " | " | " | " |
|--------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------|----|-------|---|---|---|---|---|
| Xylenes, total | ND | 0.002 | " | " | " | " | " |
|----------------|----|-------|---|---|---|---|---|

| | | | | | | | |
|----------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 1,2-Dichloroethane-d4 | 113 % | 70-130 | | | " | " | " |
|----------------------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|-----------------------|-------|--------|--|--|---|---|---|
| Surrogate: Toluene-d8 | 100 % | 70-130 | | | " | " | " |
|-----------------------|-------|--------|--|--|---|---|---|

| | | | | | | | |
|---------------------------------|-------|--------|--|--|---|---|---|
| Surrogate: 4-Bromofluorobenzene | 115 % | 70-130 | | | " | " | " |
|---------------------------------|-------|--------|--|--|---|---|---|

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B5K0501 - EPA 5030 (soil)

Blank (B5K0501-BLK1)

Prepared: 11/05/2015 Analyzed: 11/06/2015

| | | | | | | | | | | |
|----------------------------------|------|-------|-------|------|--|------|--------|--|--|--|
| Gasoline Range Hydrocarbons | ND | 0.200 | mg/kg | | | | | | | |
| Benzene | ND | 0.002 | " | | | | | | | |
| Toluene | ND | 0.002 | " | | | | | | | |
| Ethylbenzene | ND | 0.002 | " | | | | | | | |
| Xylenes, total | ND | 0.002 | " | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 68.7 | | ug/kg | 62.5 | | 110 | 70-130 | | | |
| Surrogate: Toluene-d8 | 61.8 | | " | 62.5 | | 98.9 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 62.7 | | " | 62.5 | | 100 | 70-130 | | | |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B5K0501 - EPA 5030 (soil)

LCS (B5K0501-BS1)

Prepared: 11/05/2015 Analyzed: 11/06/2015

| | | | | | | | | | | |
|----------------------------------|-------|-------|-------|-------|--|------|----------|--|--|--|
| Benzene | 0.095 | 0.002 | mg/kg | 0.100 | | 94.7 | 77.1-124 | | | |
| Toluene | 0.094 | 0.002 | " | 0.100 | | 93.7 | 74.5-128 | | | |
| Ethylbenzene | 0.089 | 0.002 | " | 0.100 | | 89.4 | 66.4-127 | | | |
| m,p-Xylene | 0.180 | 0.004 | " | 0.200 | | 89.9 | 76.6-124 | | | |
| o-Xylene | 0.089 | 0.002 | " | 0.100 | | 89.1 | 76.6-124 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 64.2 | | ug/kg | 62.5 | | 103 | 70-130 | | | |
| Surrogate: Toluene-d8 | 61.7 | | " | 62.5 | | 98.7 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 62.5 | | " | 62.5 | | 100 | 70-130 | | | |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B5K0501 - EPA 5030 (soil)

| Matrix Spike (B5K0501-MS1) | | Source: X511055-01 | | | Prepared: 11/05/2015 Analyzed: 11/06/2015 | | | | | |
|----------------------------------|-------|--------------------|-------|-------|---|------|----------|--|--|--|
| Benzene | 0.096 | 0.002 | mg/kg | 0.100 | ND | 95.9 | 71.8-126 | | | |
| Toluene | 0.093 | 0.002 | " | 0.100 | ND | 93.2 | 65.1-130 | | | |
| Ethylbenzene | 0.092 | 0.002 | " | 0.100 | ND | 92.5 | 62.2-130 | | | |
| m,p-Xylene | 0.184 | 0.004 | " | 0.200 | ND | 92.2 | 46.5-137 | | | |
| o-Xylene | 0.092 | 0.002 | " | 0.100 | ND | 91.5 | 54.2-134 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 64.7 | | ug/kg | 62.5 | | 103 | 70-130 | | | |
| Surrogate: Toluene-d8 | 62.0 | | " | 62.5 | | 99.2 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 64.0 | | " | 62.5 | | 102 | 70-130 | | | |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B5K0501 - EPA 5030 (soil)

| Matrix Spike Dup (B5K0501-MSD1) | | Source: X511055-01 | | | Prepared: 11/05/2015 Analyzed: 11/06/2015 | | | | | |
|----------------------------------|-------|--------------------|-------|-------|---|------|----------|------|------|--|
| Benzene | 0.094 | 0.002 | mg/kg | 0.100 | ND | 93.6 | 71.8-126 | 2.43 | 11.3 | |
| Toluene | 0.092 | 0.002 | " | 0.100 | ND | 92.2 | 65.1-130 | 1.08 | 15.4 | |
| Ethylbenzene | 0.089 | 0.002 | " | 0.100 | ND | 89.4 | 62.2-130 | 3.39 | 19.6 | |
| m,p-Xylene | 0.179 | 0.004 | " | 0.200 | ND | 89.6 | 46.5-137 | 2.84 | 19.2 | |
| o-Xylene | 0.089 | 0.002 | " | 0.100 | ND | 88.9 | 54.2-134 | 2.95 | 17.9 | |
| Surrogate: 1,2-Dichloroethane-d4 | 65.6 | | ug/kg | 62.5 | | 105 | 70-130 | | | |
| Surrogate: Toluene-d8 | 62.0 | | " | 62.5 | | 99.2 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 63.1 | | " | 62.5 | | 101 | 70-130 | | | |

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

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 |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B5K0502 - EPA 3580

Blank (B5K0502-BLK1)

Prepared: 11/05/2015 Analyzed: 11/05/2015

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 45 " 50.0 89.4 59-131

LCS (B5K0502-BS1)

Prepared: 11/05/2015 Analyzed: 11/05/2015

Diesel (C10-C28) 956 50.0 mg/kg 1000 95.6 64-121

Surrogate: o-Terphenyl 51 " 50.0 102 59-131

Matrix Spike (B5K0502-MS1)

Source: X511055-01

Prepared: 11/05/2015 Analyzed: 11/05/2015

Diesel (C10-C28) 866 50.0 mg/kg 1000 21.3 84.5 53-125

Surrogate: o-Terphenyl 43 " 50.0 85.7 59-131

Matrix Spike Dup (B5K0502-MSD1)

Source: X511055-01

Prepared: 11/05/2015 Analyzed: 11/05/2015

Diesel (C10-C28) 1040 50.0 mg/kg 1000 21.3 102 53-125 18.2 20

Surrogate: o-Terphenyl 53 " 50.0 106 59-131

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bonanza Creek Energy, Inc.

410 17th St, Suite 1400

Denver CO 80211

Brian Dodek

Project Number: [none]

Project: McCallum Pierre B

Notes and Definitions

S-07 High surrogate in sample, however sample is non-detect. High surrogate indicates result values are biased high.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President