



San Juan 27-5 Unit 107M

API #3003925930

30-039-25930

75 Suttle Street  
Durango, CO 81303  
970.247.4220 Phone  
970.247.4227 Fax  
www.greenanalytical.com

25 May 2016

OIL CONS. DIV DIST. 3

JUN 22 2016

Darrell Savage  
Conoco Phillips-Farmington  
3401 30th Street  
Farmington, NM 87401  
RE: Formation Comparison

Enclosed are the results of analyses for samples received by the laboratory on 05/17/16 16:20.  
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt  
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8.



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Conoco Phillips-Farmington  
3401 30th Street  
Farmington NM, 87401

Project: Formation Comparison  
Project Name / Number: Area 9  
Project Manager: Darrell Savage

Reported:  
05/25/16 12:21

ANALYTICAL REPORT FOR SAMPLES

| Sample ID                                  | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|--|---------------|--------|----------------|----------------|
| San Juan 27-5 Unit 107M Tubing Sample      | 1605191-01    | Water  | 05/16/16 14:08 | 05/17/16 16:20 |
| San Juan 27-5 Unit 107M Braden Head Sample | 1605191-02    | Water  | 05/16/16 14:08 | 05/17/16 16:20 |

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Debbie Zufelt, Reports Manager

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|  |   |                             |
|--|---|-----------------------------|
| Conoco Phillips-Farmington<br>3401 30th Street<br>Farmington NM, 87401 | Project: Formation Comparison<br>Project Name / Number: Area 9<br>Project Manager: Darrell Savage | Reported:<br>05/25/16 12:21 |
|--|---|-----------------------------|

**San Juan 27-5 Unit 107M Tubing Sample**

**1605191-01 (Water)**

| Analyte                                    | Result | RL    | MDL   | Units | Dilution | Analyzed | Method   | Notes | Analyst |
|--|--------|-------|-------|-------|----------|----------|----------|-------|---------|
| <b>General Chemistry</b>                   |        |       |       |       |          |          |          |       |         |
| Alkalinity, Bicarbonate*                   | 160    | 10.0  |       | mg/L  | 10       | 05/24/16 | 2320 B   |       | KDG     |
| Alkalinity, Carbonate*                     | <10.0  | 10.0  |       | mg/L  | 10       | 05/24/16 | 2320 B   |       | KDG     |
| Chloride                                   | 85.2   | 50.0  | 2.60  | mg/L  | 50       | 05/19/16 | EPA300.0 |       | JDA     |
| Total Dissolved Solids                     | 200    | 10.0  |       | mg/L  | 1        | 05/25/16 | EPA160.1 |       | KDG     |
| Sulfate                                    | 26.0   | 50.0  | 3.07  | mg/L  | 50       | 05/19/16 | EPA300.0 | J     | JDA     |
| <b>Potentially Dissolved Metals by ICP</b> |        |       |       |       |          |          |          |       |         |
| Calcium*                                   | 2.66   | 0.400 | 0.055 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Iron*                                      | 14.1   | 1.00  | 0.070 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Magnesium*                                 | <2.00  | 2.00  | 0.648 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Sodium*                                    | 47.8   | 20.0  | 6.11  | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |

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

**San Juan 27-5 Unit 107M Braden Head Sample**

**1605191-02 (Water)**

| Analyte                                    | Result | RL    | MDL   | Units | Dilution | Analyzed | Method   | Notes | Analyst |
|--|--------|-------|-------|-------|----------|----------|----------|-------|---------|
| <b>General Chemistry</b>                   |        |       |       |       |          |          |          |       |         |
| Alkalinity, Bicarbonate*                   | <10.0  | 10.0  |       | mg/L  | 10       | 05/24/16 | 2320 B   |       | KDG     |
| Alkalinity, Carbonate*                     | 520    | 10.0  |       | mg/L  | 10       | 05/24/16 | 2320 B   |       | KDG     |
| Chloride                                   | 25.3   | 50.0  | 2.60  | mg/L  | 50       | 05/19/16 | EPA300.0 | J     | JDA     |
| Total Dissolved Solids                     | 595    | 10.0  |       | mg/L  | 1        | 05/25/16 | EPA160.1 |       | KDG     |
| Sulfate                                    | 57.7   | 50.0  | 3.07  | mg/L  | 50       | 05/19/16 | EPA300.0 |       | JDA     |
| <b>Potentially Dissolved Metals by ICP</b> |        |       |       |       |          |          |          |       |         |
| Calcium*                                   | <0.400 | 0.400 | 0.055 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Iron*                                      | <1.00  | 1.00  | 0.070 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Magnesium*                                 | <2.00  | 2.00  | 0.648 | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |
| Sodium*                                    | 245    | 20.0  | 6.11  | mg/L  | 20       | 05/24/16 | EPA200.7 |       | LLG     |

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

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

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

**Notes and Definitions**

- J Estimated concentration. Analyte concentration between MDL and RL.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis  
\*Results reported on as received basis unless designated as dry.
- RPD Relative Percent Difference
- LCS Laboratory Control Sample (Blank Spike)
- RL Report Limit
- MDL Method Detection Limit

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Debbie Zufelt, Reports Manager

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KUSH!

Client: COP Phone# (505) 320-2634 Contact: Darrell Savage  
 Address: 3401 E. 30th St. Farmington, NM 87402 E-Mail Address: darrell.q.savage@conocophillips.com



**CHAIN OF CUSTODY RECORD**  
 GAL Work Order # 1605-191  
 PO#  
 Project Name: Area 9

28.3°C  
 HDi U  
 3°C  
 on ice Dyo

**Sample Location:** (1)BumperSpring, (2)CompressorDischarge, (3)Flowline, (4)Meter, (5)Oil Tank  
 (6)PigLauncher, (7)PigReceiver, (8)Pipeline, (9)Pit Tank, (10)PostFilter, (11)PreFilter  
 (12)SeparatorInlet, (13)SeparatorOutlet, (14)SeparatorDump, (15)SWDInlet  
 (16)SWDOutlet, (17)TransferPump, (18)ValveCan, (19)WaterTank, (20)Wellhead  
 (21)Other

**Sample Type:** (1)Casing, (2)CO2GasTube, (3)Coupon, (4)Water, (5)H2SGasTube, (6)Metals  
 (7)O2GasTube, (8)PipeSection, (9)Residual, (10)Sludge, (11)Solid, (12)Tubing, (13)Other

| Well Name (Sample Name)                  | Collection |       |                       |                 | Preservative |                   |               |             | Analyses Required |        |                    |           |                |                      |
|--|------------|-------|-----------------------|-----------------|--------------|-------------------|---------------|-------------|-------------------|--------|--------------------|-----------|----------------|----------------------|
|  | Date       | Time  | Collected By: (Init.) | Sample Location | Sample Type  | No. of Containers | Filtered: Y/N | Unpreserved | H2SO4             | Other: | Iron and Manganese | Phosphate | Full Water API | Formation/Compar: SA |
| 1. San Juan 27-S unit 107m               | 5-16-16    | 14:08 | DS                    | 20              | 4            | 1                 | N             | Y           |                   |        |                    |           |                | X                    |
| 2. Tubing sample                         |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 3.                                       |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 4. San Juan 27-S unit 107M               | 5-16-16    | 14:08 | DS                    | 13              | 4            | 1                 | N             | Y           |                   |        |                    |           |                | X                    |
| 5. Braden Head sample                    |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 6.                                       |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 7. API No. 30-039-25930                  |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 8.                                       |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 9. Send results to:                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 10. Nathan.Bloomfield@conocophillips.com |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 11.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 12.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 13.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 14.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 15.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 16.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 17.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 18.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 19.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |
| 20.                                      |            |       |                       |                 |              |                   |               |             |                   |        |                    |           |                |                      |

Relinquished by: *[Signature]* Date: 5-17-16 Time: 16:20  
 Received By: *[Signature]* Date: 5/17/16 Time: 16:20  
*Charito Clark* 5/17/16 16:55 *Kangaroo Express* 5/17/16 16:55

Kangaroo → Michael Valenti Page 7 of 8



**Busse, Dollie L**

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**From:** Bloomfield, Nathan  
**Sent:** Saturday, June 18, 2016 8:06 PM  
**To:** Busse, Dollie L  
**Subject:** SJ 27-5 Unit 107M water sample  
**Attachments:** SJ 27-5 Unit 107 M BH and Prod Csg water samples.pdf

**OIL CONS. DIV DIST. 3**

**JUN 22 2016**

Dollie,

The SJ 27-5 Unit 107M made water during the bradenhead test. Please see the attached water analysis for submittal to NMOCD.

Thanks,

*Nathan Bloomfield*

The logo for ConocoPhillips, featuring the word "ConocoPhillips" in a bold, sans-serif font with a red checkmark above the "o" in "Phillips".

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Email: [nathan.bloomfield@conocophillips.com](mailto:nathan.bloomfield@conocophillips.com)