

Rock Island #1

30-045-11876

OIL CONS. DIV DIST. 3

JUL 26 2016



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Durango, CO 81303
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22 July 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 07/12/16 13:05.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Debbie Zufelt".

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 6 Project Manager: Darrell Savage	Reported: 07/22/16 15:43
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Rock Island #1 (produced water sample)	1607111-01	Water	07/11/16 12:21	07/12/16 13:05

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



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Rock Island #1 (produced water sample)

1607111-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	62.0	10.0		mg/L	1	07/21/16	2320 B		JDA
Alkalinity, Carbonate*	<10.0	10.0		mg/L	1	07/21/16	2320 B		JDA
Chloride	326	50.0	2.60	mg/L	50	07/19/16	EPA300.0		JDA
Total Dissolved Solids	665	10.0		mg/L	1	07/13/16	EPA160.1		KDG
Sulfate	30.2	50.0	3.07	mg/L	50	07/19/16	EPA300.0		JDA
Potentially Dissolved Metals by ICP									
Calcium*	16.6	1.00	0.055	mg/L	20	07/20/16	EPA200.7		LLG
Iron*	59.4	1.00	0.070	mg/L	20	07/20/16	EPA200.7		LLG
Magnesium*	<2.00	2.00	0.648	mg/L	20	07/20/16	EPA200.7		LLG
Sodium*	244	20.0	6.11	mg/L	20	07/20/16	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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Debbie Zufelt, Reports Manager

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Notes and Definitions

- 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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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 # 1607-111
 PO#
 Project Name: Area 6

30.8°C
 No. 1 u w
 4.5°C
 mic

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	Formalinal Conductivity
Rock Island #1 (produced water sample)	7/11/2016	12:21	DS	20	4	1	n	y						X
2.														
3. Send analysis results to: Kaylie.B.Branstetter@conocophillips.com														
4.														
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19.														
20.														

Relinquished by: *Darrell Savage* Date: 7-12-16 Time: 7:20 am
 Received By: *Christina Clark* Date: 7-12-16 Time: 7:20 am

Christina Clark 7-12-16 1:05 pm
 Christina Clark 7/12/16 1655 Kangaroo Express 7/12/16 1055

CIC water sampling form "Full sample" (requires 120 ML water for lab) (100 ML water needed for titrations)										
Well Name	Sampler Initials	Collection date & time	Temp. (F)	Sample PSI	Water color / clarity	PH	Dissolved CO2 (Titration) turns X 4 = PPM	Total Alkalinity (Titration) turns X 10 = PPM	CO2 Partial pressure	Comments
"Residual" water sample only (requires 60 ML water)										
Well Name	Sampler Initials	Collection date & time	Temp. (F)	Sample PSI	Water color / clarity	PH	CO2 Partial pressure if requested			Comments
Rock Island 1	DS	7/11/2015 1221	92.4	86	clr	6.73				produced water sample from tubing
"Solid" sample collected for (solveny testing)										
Well Name	Sampler Initials	Collection date & time	Type Paraffin/Scale/Other	Norm test Y/N	Acid Soluble Y/N	Other tests conducted				Comments