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Durango, CO 81303
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www.greenanalytical.com

25 May 2016

OIL CONS. DIV DIST. 3

JUN 22 2016

Kevin Fredrickson
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.

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

Project: Formation Comparison
Project Name / Number: Area 9
Project Manager: Kevin Fredrickson

Reported:
05/25/16 12:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
San Juan 27-4 Unit #14X Tubing Sample	1605192-01	Water	05/16/16 13:04	05/17/16 16:20
San Juan 27-4 Unit #14X Braden Head Sample	1605192-02	Water	05/16/16 13:04	05/17/16 16:20

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Debbie Zufelt, Reports Manager

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Project: Formation Comparison
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Project Manager: Kevin Fredrickson

Reported:
05/25/16 12:25

San Juan 27-4 Unit #14X Tubing Sample

1605192-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	700	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	890	500	26.0	mg/L	500	05/19/16	EPA300.0		JDA
Total Dissolved Solids	2190	10.0		mg/L	1	05/25/16	EPA160.1		KDG
Sulfate	307	500	30.7	mg/L	500	05/19/16	EPA300.0	J	JDA
Potentially Dissolved Metals by ICP									
Calcium*	14.4	0.400	0.055	mg/L	20	05/24/16	EPA200.7		LLG
Iron*	53.0	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*	377	20.0	6.11	mg/L	20	05/24/16	EPA200.7		LLG

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Reported:
05/25/16 12:25

San Juan 27-4 Unit #14X Braden Head Sample

1605192-02 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	200	10.0		mg/L	10	05/24/16	2320 B		KDG
Alkalinity, Carbonate*	300	10.0		mg/L	10	05/24/16	2320 B		KDG
Chloride	24.6	50.0	2.60	mg/L	50	05/19/16	EPA300.0	J	JDA
Total Dissolved Solids	550	10.0		mg/L	1	05/25/16	EPA160.1		KDG
Sulfate	85.1	50.0	3.07	mg/L	50	05/19/16	EPA300.0		JDA
Potentially Dissolved Metals by ICP									
Calcium*	1.50	0.400	0.055	mg/L	20	05/24/16	EPA200.7		LLG
Iron*	4.77	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*	206	20.0	6.11	mg/L	20	05/24/16	EPA200.7		LLG

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Reported:
05/25/16 12:25

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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RUSH!

Client: COP	Phone#	Contact:
Address:	E-Mail Address:	



CHAIN OF CUSTODY RECORD
GAL Work Order # 1605-192
PO#
Project Name: Area 9

28.2 °C
NO₃⁻ 4
300
nice, Dyo

Sample Location:	(1) Bumper Spring, (2) Compressor Discharge, (3) Flowline, (4) Water, (5) Oil Tank, (6) Pig Launcher, (7) Pig Receiver, (8) Pipeline, (9) Pit Tank, (10) Post Filter, (11) Pre Filter, (12) Separator Inlet, (13) Separator Outlet, (14) Separator Dump, (15) SWD Inlet, (16) SWD Outlet, (17) Transfer Pump, (18) Valve Can, (19) Water Tank, (20) Wellhead, (21) Other
Sample Type:	(1) Casing, (2) CO2 Gas Tube, (3) Coupon, (4) Water, (5) H2S Gas Tube, (6) Metals, (7) O2 Gas Tube, (8) Pipe Section, (9) Residual, (10) Sludge, (11) Solid, (12) Tubing, (13) Other

Collection								Preservative		Analyses Required				
Well Name (Sample Name)	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	Formaldehyde
1. Sam Jan 27-4 unit # 14X	5/16/16	13:04	DS	20	4	1	N							X
2. Tubing Sample														
3.														
4. Sam Jan 27-4 unit # 14X	5/16/16	13:04	DS	13	4	1	N							X
5. Braden Head sample														
6.														
7.														
8. Send Results to:														
9. NITHER - Bloomfield @ ConocoPhillips.com														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
David Clark	5-17-16	16:20	Christa Clark	5/17/16	16:20
Christa Clark	5/17/16	16:55	Kangaroo Express	5/17/16	16:55

Kangaroo 5-18-16 10:30 Michael Valencia

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 PS	Water color / clarity	pH	Dissolved CO ₂ (titration) turns x 4 = PPM	Total Alkalinity (titration) turns x 10 = PPM	CO ₂ Partial pressure	Comments
Tubing Sample San Juan 27-5 unit #107M	DS	5-16-16 14:08		SR	WB	NR	630			
Brader Head San Juan 27-5 unit #107M	TS	" 11		64R	2 CLR	11.04				
Residual Water sample only (requires 60 ML Water)										
Well Name	Sampler Initials	Collection date & time	Temp. (F)	Sample PS	Water color / clarity	pH	Dissolved CO ₂ (titration) turns x 4 = PPM	Total Alkalinity (titration) turns x 10 = PPM	CO ₂ Partial pressure	Comments
Tubing Sample San Juan 27-4 unit #14X	DS	5-16-16 13:04		52	147	WB	678	NA		
Brader Head Sample San Juan 27-4 unit #14X	DS	" 11		64	2 CLR	9.54	NR			
Solid sample collected for (solventy testing)										
Well Name	Sampler Initials	Collection date & time	Type Paraffin Scale / Corrosion	Normal test Y/N	Acid Soluble Y/N	Other tests conducted		Comments		

Busse, Dollie L

30-039 07056

From: Bloomfield, Nathan
Sent: Saturday, June 18, 2016 8:01 PM
To: Busse, Dollie L
Subject: SJ 27-4 Unit 14X water sample
Attachments: Production and BH Water Results 052516.pdf

OIL CONS. DIV DIST. 3

JUN 22 2016

Dollie,

The SJ 27-4 Unit 14X made water during the bradenhead test. Please see the attached water analysis for submittal to NMOCD.

Thanks,

Nathan Bloomfield

 **ConocoPhillips**

Area 9 Production Engineer
Office: 505-324-5155
Cell: 505-801-4719
Email: nathan.bloomfield@conocophillips.com