



Johnston A 13M  
API #3003926086

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Durango, CO 81303  
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[www.greenanalytical.com](http://www.greenanalytical.com)

12 February 2016

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

OIL CONS. DIV DIST. 3  
FEB 16 2016

Enclosed are the results of analyses for samples received by the laboratory on 02/04/16 16:20.  
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 9  
Project Manager: Darrell Savage

Reported:  
02/12/16 11:58

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Johnston A #13M	1602035-01	Water	02/04/16 10:00	02/04/16 16:20
Johnston A #13M	1602035-02	Water	02/04/16 10:00	02/04/16 16:20

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Debbie Zufelt, Reports Manager

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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: 02/12/16 11:58
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**Johnston A #13M**

**1602035-01 (Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
<b>General Chemistry</b>									
Alkalinity, Bicarbonate*	8800	10.0		mg/L	100	02/10/16	2320 B		KDG
Alkalinity, Carbonate*	<10.0	10.0		mg/L	100	02/10/16	2320 B		KDG
Chloride	4540	500	26.0	mg/L	500	02/08/16	EPA300.0		JDA
TDS*	51700	10.0		mg/L	1	02/10/16	EPA160.1		JDA
Sulfate	470	500	30.7	mg/L	500	02/08/16	EPA300.0		JDA
<b>Potentially Dissolved Metals by ICP</b>									
Calcium*	207	1.00	0.138	mg/L	50	02/10/16	EPA200.7		JGS
Iron*	1750	2.50	0.175	mg/L	50	02/10/16	EPA200.7		JGS
Magnesium*	35.9	5.00	1.62	mg/L	50	02/10/16	EPA200.7		JGS
Sodium*	3130	50.0	15.3	mg/L	50	02/10/16	EPA200.7		JGS

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**Johnston A #13M**

**1602035-02 (Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**General Chemistry**

Chloride	4700	500	26.0	mg/L	500	02/08/16	EPA300.0		JDA
pH*	7.14			pH Units	1	02/05/16	EPA150.1		KDG
TDS*	46700	10.0		mg/L	1	02/10/16	EPA160.1		JDA
Sulfate	505	500	30.7	mg/L	500	02/08/16	EPA300.0		JDA

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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*

Debbie Zufelt, Reports Manager

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Project: Formation Comparison  
Project Name / Number: Area 9  
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Reported:  
02/12/16 11:58

### 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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Debbie Zufelt, Reports Manager

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Please put these samples at the top of the list for analysis - call Darrell for questions **RUSH**

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



CHAIN OF CUSTODY RECORD	
GAL Work Order #	1602-035
PO#	
Project Name:	Area 9

16.5°C  
NO: 000  
30°C  
on ice, Dgo

Sample Location:	(1) Bumper Spring, (2) Compressor Discharge, (3) Flowline, (4) Meter, (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

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	Formaldehyde Comparison
1. JOHNSTON A # 13m	2-4-16	10:00	DJ	20	4	1	N	Y						X
2. " " "	"	"	DJ	20	4	1	N	Y						
3.														
4.														
5.														
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16.														
17.														
18.														
19.														
20.														

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
<i>[Signature]</i>	2-4-16	16:20	<i>[Signature]</i>	2/4/16	16:20
<i>[Signature]</i>	2/4/16	16:55	Kangaroo Express	2/4/16	16:58

Kangaroo 2-5-16 → Michael Valentin 430 Page 7 of 8

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		
JOHNSTON A 13M	DS	2-4-16 10:00	25.6	164	yellow	7.0		Intermediate Sample For Formational comparison		
"Solid" sample collected for (solvency testing)										
Well Name	Sampler Initials	Collection date & time	Type Paraffin/Scale/Other	Norm test Y/N	Acid Soluble Y/N	Other tests conducted		Comments		

For  
Intermediate Sample Formational comparison  
for  
Bradley Head Testing