

API #3004524340

Salmon 1E



Beckenhead

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

29 December 2016

Darrell Savage
Conoco Phillips-Farmington
3401 30th Street
Farmington, NM 87401
RE: API +

OIL CONS. DIV DIST. 3
JUN 22 2017

Enclosed are the results of analyses for samples received by the laboratory on 12/20/16 15:30.
If you need any further assistance, please feel free to contact me.

Sincerely,

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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www.GreenAnalytical.com

Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/29/16 11:44
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Salmon 1E	1612207-01	Water	12/20/16 10:02	12/20/16 15:30

OIL CONS. DIV DIST. 3
JUN 22 2017

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Debbie Zufelt, Reports Manager

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/29/16 11:44
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Salmon 1E

1612207-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	<10.0	10.0		mgCaCO3/L	100	12/28/16	2320 B		JDA
Alkalinity, Carbonate*	1800	10.0		mgCaCO3/L	100	12/28/16	2320 B		JDA
Alkalinity, Hydroxide*	4000	10.0		mgCaCO3/L	100	12/28/16	2320 B		JDA
Alkalinity, Total*	5800	10.0		mgCaCO3/L	100	12/28/16	2320 B		JDA
Chloride	11200	1000	219	mg/L	1000	12/27/16	EPA300.0		JDA
Conductivity*	51200	10.0		uS/cm	1	12/22/16	2510 B		BDV
pH*	12.9			pH Units	1	12/22/16	EPA150.1	H2	BDV
Resistivity	19.5			ohm/cm	1	12/22/16	2510 B		BDV
Total Dissolved Solids	24600	10.0		mg/L	1	12/22/16	EPA160.1		JDA
Specific Gravity	1.020	0.9300		N/A	1	12/22/16	Hydrometer		BDV
Sulfate	391	1000	199	mg/L	1000	12/27/16	EPA300.0	J	JDA
Potentially Dissolved Metals by ICP									
Hardness	157	53.7	14.0	mg/L	100	12/28/16	2340 B		LLG
Silica Potentially Dissolved	<53.4	107	53.4	mg/L	100	12/28/16	2340 B		LLG
Barium*	<1.00	1.00	0.263	mg/L	100	12/28/16	EPA200.7		LLG
Calcium*	62.8	5.00	0.275	mg/L	100	12/28/16	EPA200.7		LLG
Iron*	<5.00	5.00	0.349	mg/L	100	12/28/16	EPA200.7		LLG
Lead*	<10.0	10.0	2.46	mg/L	100	12/28/16	EPA200.7		LLG
Magnesium*	<3.24	10.0	3.24	mg/L	100	12/28/16	EPA200.7		LLG
Manganese*	<0.500	0.500	0.073	mg/L	100	12/28/16	EPA200.7		LLG
Potassium*	1130	100	33.5	mg/L	100	12/28/16	EPA200.7		LLG
Silicon	<50.0	50.0	25.0	mg/L	100	12/28/16	EPA200.7		LLG
Sodium*	8790	100	30.5	mg/L	100	12/28/16	EPA200.7		LLG
Strontium*	<10.0	10.0	0.036	mg/L	100	12/28/16	EPA200.7		LLG
Zinc*	<5.00	5.00	0.218	mg/L	100	12/28/16	EPA200.7		LLG
Cation/Anion Balance	6.97								

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/29/16 11:44
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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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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/29/16 11:44
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Notes and Definitions

- J Estimated concentration. Analyte concentration between MDL and RL.
- H2 Sample analysis performed past hold time specified by the method.
- 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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5 Day 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 #	1612-207
PO#	
Project Name:	Area 1

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 Braden head valve

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

17.9c
NOISE

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
1. Salmon 1E	12-20-16	10:02	DS	21	4	1	N	Y					✓
2.													
3.													
4. Rush 5 day													
5.													
6. Send Results To:													
7. Victoria To Ramirez @conocophillips.com													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
<i>Darrell Savage</i>	12-20-16	15:30	<i>Christina Claus</i>	12/20/16	15:30
		C.E.	<i>Kangaroo</i>		

Kangaroo 12-21-16 10:15 → Michael Valentine

API #3004524340

Salmon 1E



Cathodic

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14 December 2016

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

RE: API +

OIL CONS. DIV DIST. 3
JUN 22 2017

Enclosed are the results of analyses for samples received by the laboratory on 12/07/16 15:30.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

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www.GreenAnalytical.com

Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/14/16 12:05
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Salmon #1E	1612088-01	Water	12/07/16 08:20	12/07/16 15:30

OIL CONS. DIV DIST. 3
JUN 22 2017

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Debbie Zufelt, Reports Manager

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/14/16 12:05
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Salmon #1E

1612088-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	385	10.0		mgCaCO3/L	5	12/13/16	2320 B		JDA
Alkalinity, Carbonate*	<10.0	10.0		mgCaCO3/L	5	12/13/16	2320 B		JDA
Alkalinity, Hydroxide*	<10.0	10.0		mgCaCO3/L	5	12/13/16	2320 B		JDA
Alkalinity, Total*	385	10.0		mgCaCO3/L	5	12/13/16	2320 B		JDA
Chloride	24.2	25.0	5.47	mg/L	25	12/12/16	EPA300.0	J	JDA
Conductivity*	825	10.0		uS/cm	1	12/09/16	2510 B		BDV
pH*	7.79			pH Units	1	12/09/16	EPA150.1	H2	BDV
Resistivity	1210			ohm/cm	1	12/12/16	2510 B		BDV
Total Dissolved Solids	1140	10.0		mg/L	1	12/09/16	EPA160.1		JDA
Specific Gravity	0.9990	0.9300		N/A	1	12/12/16	Hydrometer		BDV
Sulfate	63.6	25.0	4.97	mg/L	25	12/12/16	EPA300.0		JDA
Potentially Dissolved Metals by ICP									
Hardness	20.9	5.37	1.40	mg/L	10	12/13/16	2340 B		LLG
Silica Potentially Dissolved	130	10.7	5.34	mg/L	10	12/13/16	2340 B		LLG
Barium*	<0.100	0.100	0.026	mg/L	10	12/13/16	EPA200.7		LLG
Calcium*	5.73	0.500	0.028	mg/L	10	12/13/16	EPA200.7		LLG
Iron*	17.4	0.500	0.035	mg/L	10	12/13/16	EPA200.7		LLG
Lead*	<1.00	1.00	0.246	mg/L	10	12/13/16	EPA200.7		LLG
Magnesium*	1.60	1.00	0.324	mg/L	10	12/13/16	EPA200.7		LLG
Manganese*	1.06	0.050	0.007	mg/L	10	12/13/16	EPA200.7		LLG
Potassium*	<10.0	10.0	3.35	mg/L	10	12/13/16	EPA200.7		LLG
Silicon	60.7	5.00	2.50	mg/L	10	12/13/16	EPA200.7		LLG
Sodium*	222	10.0	3.05	mg/L	10	12/13/16	EPA200.7		LLG
Strontium*	<1.00	1.00	0.004	mg/L	10	12/13/16	EPA200.7		LLG
Zinc*	0.550	0.500	0.022	mg/L	10	12/13/16	EPA200.7		LLG
Cation/Anion Balance	5.28								

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Debbie Zufelt, Reports Manager

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/14/16 12:05
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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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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: Area 1 Project Manager: Darrell Savage	Reported: 12/14/16 12:05
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Notes and Definitions

- J Estimated concentration. Analyte concentration between MDL and RL.
- H2 Sample analysis performed past hold time specified by the method.
- 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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5 Day 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 # 1612-088
 PO#
 Project Name: Area 1

206c
 NO: u u

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 cathodic protection well

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
1. Salmon #1E	12-7-16	8:20	DS	21	4	1	N	Y					✓
2.													
3.													
4. Please Forward Results													
5. To: victoria.t.ramirez@conocophillips.com													
6.													
7. Rush 5 day turnaround													
8.													
9.													
10.													
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													

Relinquished by: _____ Date: 12-7-16 Time: 15:30 Received By: _____ Date: 12/7/16 Time: 15:30
 _____ Date: 12/7/16 Time: 16:55 Received By: Kangaroo Express Date: 12/7/16 Time: 16:55
 Kangaroo 12-8-16 11:00 Michael Valentine

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
Salmon #1E	DS	12-7-16 8:20	54.2	Ø	BLK	7.40	200	920	NA	Cathodic Protection well
"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		
"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		

API #3004524340

Salmon 1E



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
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01 December 2016

Kevin Fredrickson
Conoco Phillips-Farmington
3401 30th Street
Farmington, NM 87401
RE: API +

OIL CONS. DIV DIST. 3

JUN 22 2017

Enclosed are the results of analyses for samples received by the laboratory on 11/22/16 15:40.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink that reads "Debbie Zufelt". The signature is written in a cursive, flowing style.

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/>

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: [none] Project Manager: Kevin Fredrickson	Reported: 12/01/16 08:02
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Salmon 1 E Area 1	1611186-01	Water	11/22/16 10:00	11/22/16 15:40
Blanco 30-12 100S Area 1	1611186-02	Water	11/22/16 13:30	11/22/16 15:40

OIL CONS. DIV DIST. 3
JUN 22 2017

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Debbie Zufelt, Reports Manager

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: [none] Project Manager: Kevin Fredrickson	Reported: 12/01/16 08:02
--	---	-----------------------------

Salmon 1 E Area 1

1611186-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate*	340	10.0		mgCaCO3/L	5	11/28/16	2320 B		JDA
Alkalinity, Carbonate*	<10.0	10.0		mgCaCO3/L	5	11/28/16	2320 B		JDA
Alkalinity, Hydroxide*	<10.0	10.0		mgCaCO3/L	5	11/28/16	2320 B		JDA
Alkalinity, Total*	340	10.0		mgCaCO3/L	5	11/28/16	2320 B		JDA
Chloride	10300	1000	219	mg/L	1000	11/30/16	EPA300.0	Q1	JDA
Conductivity*	29200	10.0		uS/cm	1	11/23/16	2510 B		BDV
pH*	7.37			pH Units	1	11/23/16	EPA150.1		BDV
Phosphate (PO4)	46.4	1.54	0.553	mg/L	10	11/30/16	EPA365.3/Calc		JDA
Phosphorus, Total	15.1	0.500	0.180	mg/L	10	11/30/16	EPA365.3		JDA
Resistivity	61.9			ohm/cm	1	11/23/16	2510 B		BDV
Total Dissolved Solids	17200	10.0		mg/L	1	11/23/16	EPA160.1		JDA
Specific Gravity	1.013	0.9300		N/A	1	11/23/16	Hydrometer		BDV
Sulfate	<199	1000	199	mg/L	1000	11/30/16	EPA300.0	Q1	JDA
Potentially Dissolved Metals by ICP									
Hardness	469	26.8	7.01	mg/L	50	11/29/16	2340 B		LLG
Silica Potentially Dissolved	<26.7	53.5	26.7	mg/L	50	11/29/16	2340 B		LLG
Barium*	9.28	0.500	0.132	mg/L	50	11/29/16	EPA200.7		LLG
Calcium*	135	2.50	0.138	mg/L	50	11/29/16	EPA200.7		LLG
Iron*	35.9	2.50	0.175	mg/L	50	11/29/16	EPA200.7		LLG
Lead*	<5.00	5.00	1.23	mg/L	50	11/29/16	EPA200.7		LLG
Magnesium*	32.0	5.00	1.62	mg/L	50	11/29/16	EPA200.7		LLG
Manganese*	<0.250	0.250	0.037	mg/L	50	11/29/16	EPA200.7		LLG
Potassium*	132	50.0	16.7	mg/L	50	11/29/16	EPA200.7		LLG
Silicon	<25.0	25.0	12.5	mg/L	50	11/29/16	EPA200.7		LLG
Sodium*	6260	50.0	15.3	mg/L	50	11/29/16	EPA200.7		LLG
Strontium*	21.9	5.00	0.018	mg/L	50	11/29/16	EPA200.7		LLG
Zinc*	<2.50	2.50	0.109	mg/L	50	11/29/16	EPA200.7		LLG
Cation/Anion Balance	-2.57								

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Debbie Zufelt, Reports Manager

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: [none] Project Manager: Kevin Fredrickson	Reported: 12/01/16 08:02
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Blanco 30-12 100S Area 1

1611186-02 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Potentially Dissolved Metals by ICP									
Iron*	6.85	1.00	0.070	mg/L	20	11/29/16	EPA200.7		LLG
Manganese*	<0.100	0.100	0.015	mg/L	20	11/29/16	EPA200.7		LLG
Cation/Anion Balance	100.								

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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: [none] Project Manager: Kevin Fredrickson	Reported: 12/01/16 08:02
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Conoco Phillips-Farmington 3401 30th Street Farmington NM, 87401	Project: API + Project Name / Number: [none] Project Manager: Kevin Fredrickson	Reported: 12/01/16 08:02
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Notes and Definitions

- Q3 Sample received without proper chemical preservation as requested by the method of analysis.
- Q1 Sample received outside of acceptable temperature range for analyses requiring cold storage.
- 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 Salmon 1E

Client: COP	Phone# 505-320-4738	Contact: Kevin Fredrickson
Address:	E-Mail Address: Kevin.G.Fredrickson@conocophillips.com	



75 Suttle Street
Durango, CO 81303
Phone: 970-247-4220
FAX: 970-247-4227

CHAIN OF CUSTODY RECORD	
GAL Work Order #	1611-186
PO#	
Project Name:	

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

15.3c
NO pill c

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
Rush on Salmon 1E 01. Salmon 1E area 1	11/22/16	10:00	DR	20	4	1	N	✓			✓	✓	✓
02. Blanco 30-12 100S area 1	11/22/16	13:30	DR	20	4	1	N	✓			✓	✓	✓
3.													
4.													
5.													
6.													
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16.													
17.													
18.													
19.													
20.													

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
<i>[Signature]</i>	11-22-16	15:40	<i>[Signature]</i>	11/22/16	1540
<i>[Signature]</i>	11/22/16	16:55	Rangaroo Express	11/22/16	1655
Kangaroo	11-23-16	10:00	Dulinda Zupett	11-23-16	10:00 3.1c

