

Wednesday, November 09, 2016

XTO Energy  
Irwin Trujillo  
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Trinidad, CO 81082  
Tel: (719) 845-2111 Fax: (719) 845-0108  
Irwin\_Trujillo@xtoenergy.com

Re: Project Name: Hill Ranch Existing

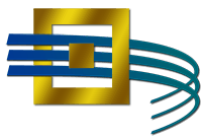
Oxidor received 1 liquid sample(s). The analysis performed were as follows:

<u>Sample</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Analysis</u>
16110041-001	010-A	Liquid	11/1/2016 10:55	Bicarbonate Alkalinity, Calcium, Magnesium, Sodium, Sodium Adsorption Ratio (SAR), Adjusted, Specific Conductance

*To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.*

Respectfully submitted,

Charles Brungardt  
President



XTO Energy  
Irwin Trujillo

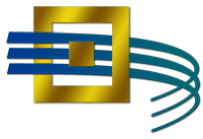
### Analytical Report

Project Name: **Hill Ranch Existing**

Customer Sample ID: **010-A**  
Oxidor Sample ID: 16110041-001  
Sample Received: 11/2/2016

Matrix: **Liquid**  
Sample Collected: **11/1/2016 10:55**

Parameter	MQL	PQL	Result	Units	Date Analyzed	Method	Analyst	Flags
<b>General Chemistry</b>								
Alkalinity, Bicarbonate	10	10.0	<b>1200</b>	mg/L	11/07/16 13:00	SM-2320-B	B.F.	
SAR, Adjusted			<b>74.2</b>			Calculation		
Conductivity	0.1	0.100	<b>3.05</b>	dS/m	11/02/16 16:30	120.1	B.F.	
<b>Metals</b>								
<i>Digested by method 200.8 on 11/04/16 at 09:09</i>								
Calcium	0.5	0.100	<b>12.3</b>	mg/L	11/07/16 11:45	200.8	M.A.	C-1
Magnesium	0.5	0.100	<b>1.77</b>	mg/L	11/07/16 11:45	200.8	M.A.	C-1
Sodium	0.5	5.00	<b>749</b>	mg/L	11/07/16 10:44	200.8	M.A.	D-1

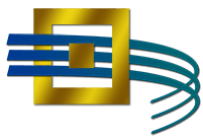


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**Sample Cross Reference**

Project Name: **Hill Ranch Existing**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
010-A	16110041-001	Bicarbonate Alkalinity	SM-2320-B	ALKA_01719_L
		Specific Conductance	120.1	COND_03415_L
		Sodium	200.8	META_04365_L
		Magnesium	200.8	META_04365_L
		Calcium	200.8	META_04365_L

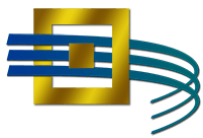


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**QC Summary**

Project Name: **Hill Ranch Existing**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
<b>QCBatchID ALKA_01719_L</b>									
Blank	Alkalinity, Bicarbonate	ND mg/L							
LCS	Alkalinity, Total	100 mg/L		100 mg/L	100%	90-110%			
LCSD	Alkalinity, Total	100 mg/L		100 mg/L	100%	90-110%	0.0%	0-20%	
MS	Alkalinity, Total	2140 mg/L	1160 mg/L	1000 mg/L	98%	80-120%			
MSD	Alkalinity, Total	2160 mg/L	1160 mg/L	1000 mg/L	100%	80-120%	0.9%	0-20%	
<b>QCBatchID COND_03415_L</b>									
Blank	Conductivity	ND µmhos/cm							
LCS	Conductivity	501 µmhos/cm		500 µmhos/cm	100%	90-110%			
LCSD	Conductivity	500 µmhos/cm		500 µmhos/cm	100%	90-110%	0.2%	0-25%	
Replicate	Conductivity	1940 µmhos/cm	1910 µmhos/cm				1.6%	0-25%	
<b>QCBatchID META_04365_L</b>									
Blank	Calcium	ND mg/L							
	Magnesium	ND mg/L							
	Sodium	ND mg/L							
LCS	Calcium	10.1 mg/L		10.1 mg/L	100%	85-115%			
	Magnesium	10.3 mg/L		10.1 mg/L	102%	85-115%			
	Sodium	10.1 mg/L		10.1 mg/L	100%	85-115%			
LCSD	Calcium	9.73 mg/L		10.1 mg/L	96%	85-115%	3.7%	0-20%	
	Magnesium	10.0 mg/L		10.1 mg/L	99%	85-115%	3.0%	0-20%	
	Sodium	9.99 mg/L		10.1 mg/L	99%	85-115%	1.1%	0-20%	
MS	Calcium	98.2 mg/L	51.4 mg/L	50.5 mg/L	93%	80-120%			
	Magnesium	53.2 mg/L	3.2 mg/L	50.5 mg/L	99%	80-120%			
	Sodium	63.5 mg/L	13.5 mg/L	50.5 mg/L	99%	80-120%			
MSD	Calcium	103 mg/L	51.4 mg/L	50.5 mg/L	102%	80-120%	4.8%	0-20%	
	Magnesium	52.9 mg/L	3.2 mg/L	50.5 mg/L	98%	80-120%	0.6%	0-20%	
	Sodium	64.1 mg/L	13.5 mg/L	50.5 mg/L	100%	80-120%	0.9%	0-20%	



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### Case Narrative

Project Name: **Hill Ranch Existing**

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C-1	SDL / SQL lowered by means of initial sample aliquot adjustment.
D-1	Elevated reporting limit(s) due to dilution. Dilution resulted from sample matrix interference, high target analyte(s), high non-target analyte(s) or a combination thereof.
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution)
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

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 Irwin Trujillo

**Sample Preservation Verification**

Project Name: **Hill Ranch Existing**

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Receipt temp: **1.4 °C on Ice**

Receipt method: **Fed Ex**

Custody seal intact: **Yes**

All samples / labels received intact: **Yes**

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Customer Sample ID: **010-A**

Collected By: **Dennis Barton**

Oxidor Sample ID: **16110041-001**

Collector Affiliation: **XTO Energy**

Collected: **11/01/16 10:55**

Matrix: **Liquid**

<u>Bottle Type</u>	<u>Count</u>	<u>Collection Method</u>	<u>Parts / Interval</u>	<u>Indicated Preservation</u>	<u>pH</u>
250 mL Plastic	1	Grab		HNO3	<2
250 mL Plastic	1	Grab		Temp	-

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Sample conditions at time of receipt at laboratory verified in part or in whole by:

H.Y.



Documentation

PROJECT DESCRIPTION: Hill Ranch Existing

Oxidior Laboratories, LLC

1825 E Plano Pkwy, Suite 160

Plano, TX 75074

Phone: 972-424-6422 - Email: hyoungblood@oxidior.com

Company Name: XTO Energy Trinidad

Address: 21603 Hwy 12

Trinidad, CO 81082

Contact: Irwin Trujillo

Phone #: 719 846-0272

Project # / Name: Hill Ranch Existing

Permit #: CO0048054

16110041

SAR ADJUSTED CHAIN-OF-CUSTODY  
PARAMETERS FOR ANALYSIS

Sample Description	Sample Date	Time MST	Matrix Liquid	Clomp/ (O)rab	Preservative	# Containers	Sodium SAR, adjusted	Magnesium	Effluent Flow	Conductivity	Calcium	Alkalinity, Bicarbonate
✓ 010-A	11/1/2016	9:55	L	G	Ice/HNO3	2	X	X	X	X	X	X
✓ 032-A	11/1/2016	10:22	L	G	Ice/HNO3	2	X	X	X	X	X	X
✓ 034-A	11/1/2016	11:44	L	G	Ice/HNO3	2	X	X	X	X	X	X
✓ 035-A	11/1/2016	11:16	L	G	Ice/HNO3	2	X	X	X	X	X	X
✓ 039-A	11/1/2016	10:08	L	G	Ice/HNO3	2	X	X	X	X	X	X
✓ 078-A	11/1/2016	10:57	L	G	Ice/HNO3	2	X	X	X	X	X	X

Collected by: (Signature)	<i>Ramin Banata</i>	Date:	11-01-2016	Time:	4:30 PM
Relinquished by: (Signature)	<i>Ramin Banata</i>	Date:	11/2/16	Time:	9:15
Received by: (Signature)	<i>Kelly Leach</i>	Date:	11/2/16	Time:	9:15
Received by: (Signature)	<i>Kelly Reubenshaw</i>				
Method of Shipment:	<i>Fed Ex</i>				
Additional Comments:					

1.4°  
0x104