



Analytical Report

Report Summary

Client: Epic Energy

Samples Received: 7/15/2019

Job Number: 18012-0006

Work Order: P907042

Project Name/Location: Bradenhead Tests

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a horizontal line.

Date: 7/22/19

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.



Epic Energy
7420 Main Street
Farmington NM, 87402

Project Name: Bradenhead Tests
Project Number: 18012-0006
Project Manager: Vern Andrews

Reported:
07/22/19 16:33

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Canado #23 Sample #100	P907042-01A	Aqueous	07/15/19	07/15/19	Poly 500mL

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Epic Energy 7420 Main Street Farmington NM, 87402	Project Name: Bradenhead Tests Project Number: 18012-0006 Project Manager: Vern Andrews	Reported: 07/22/19 16:33
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**Canado #23 Sample #100
P907042-01 (Water)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Wet Chem/Gravimetric

Total Dissolved Solids	1370	25.0	mg/L	1	1929024	07/17/19	07/22/19	SM2540C	
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Dissolved Metals by 6010

Calcium	4.76	1.00	mg/L	1	1929020	07/17/19	07/22/19	EPA 6010C	
Iron	ND	2.00	mg/L	1	1929020	07/17/19	07/22/19	EPA 6010C	
Magnesium	ND	1.00	mg/L	1	1929020	07/17/19	07/22/19	EPA 6010C	
Potassium	152	10.0	mg/L	10	1929020	07/17/19	07/18/19	EPA 6010C	
Sodium	490	20.0	mg/L	10	1929020	07/17/19	07/18/19	EPA 6010C	
Sodium Absorption Ratio	61.9		N/A	1	1930010	07/22/19	07/22/19	[CALC]	

Anions by 300.0/9056A

Chloride	3.26	2.00	mg/L	1	1929009	07/16/19	07/16/19	EPA 300.0/9056A	
Fluoride	1.50	0.250	mg/L	1	1929009	07/16/19	07/16/19	EPA 300.0/9056A	
Nitrate-N	ND	0.250	mg/L	1	1929009	07/16/19 11:29	07/16/19 17:58	EPA 300.0/9056A	
Nitrite-N	ND	0.250	mg/L	1	1929009	07/16/19 11:29	07/16/19 17:58	EPA 300.0/9056A	
o-Phosphate-P	ND	0.250	mg/L	1	1929009	07/16/19 11:29	07/16/19 17:58	EPA 300.0/9056A	
Sulfate	119	2.00	mg/L	1	1929009	07/16/19	07/16/19	EPA 300.0/9056A	

Wet Chemistry

Total Alkalinity (as CaCO ₃ at pH 4.5)	1100	10.0	mg/L	1	1929014	07/16/19	07/18/19	SM2320B	
Specific Conductance (@ 25 C)	4630	10.0	uS/cm	1	1929021	07/17/19	07/17/19	9050A/2510 B	
pH @25°C	12.0		pH Units	1	1929013	07/16/19 13:54	07/17/19 09:54	9040C/4500 H+B	

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Wet Chem/Gravimetric - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929024 - Wet Chemistry Preparation

Blank (1929024-BLK1)

Prepared: 07/17/19 | Analyzed: 07/22/19 |

Total Dissolved Solids	ND	10.0	mg/L
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LCS (1929024-BS1)

Prepared: 07/17/19 | Analyzed: 07/22/19 |

Total Dissolved Solids	96.0	10.0	mg/L	100	96.0	50-150
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Duplicate (1929024-DUP1)

Source: P907045-01

Prepared: 07/17/19 | Analyzed: 07/22/19 |

Total Dissolved Solids	6370	50.0	mg/L	6320	0.788	5
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7420 Main Street	Project Number:	18012-0006	
Farmington NM, 87402	Project Manager:	Vern Andrews	

Dissolved Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929020 - Metals Water Hotblock Digestion EPA 3010A/200.2

Blank (1929020-BLK1)

Prepared: 07/17/19 | Analyzed: 07/18/19 |

Calcium	ND	1.00	mg/L
Iron	ND	2.00	"
Magnesium	ND	1.00	"
Potassium	ND	1.00	"
Sodium	ND	2.00	"

LCS (1929020-BS1)

Prepared: 07/17/19 | Analyzed: 07/18/19 |

Calcium	49.6	1.00	mg/L	50.0	99.2	80-120
Iron	98.4	2.00	"	100	98.4	80-120
Magnesium	52.0	1.00	"	50.0	104	80-120
Potassium	5.19	1.00	"	5.00	104	80-120
Sodium	19.5	2.00	"	20.0	97.7	80-120

Matrix Spike (1929020-MS1)

Source: P907046-01

Prepared: 07/17/19 | Analyzed: 07/18/19 |

Calcium	108	1.00	mg/L	50.0	55.5	105	75-125
Iron	140	2.00	"	100	34.2	105	75-125
Magnesium	60.8	1.00	"	50.0	6.93	108	75-125
Potassium	20.6	1.00	"	5.00	15.0	112	75-125
Sodium	155	2.00	"	20.0	135	99.5	75-125

Matrix Spike Dup (1929020-MSD1)

Source: P907046-01

Prepared: 07/17/19 | Analyzed: 07/18/19 |

Calcium	111	1.00	mg/L	50.0	55.5	111	75-125	2.37	20	
Iron	143	2.00	"	100	34.2	109	75-125	2.48	20	
Magnesium	63.7	1.00	"	50.0	6.93	114	75-125	4.72	20	
Potassium	21.6	1.00	"	5.00	15.0	131	75-125	4.56	20	SPK1
Sodium	162	2.00	"	20.0	135	131	75-125	3.91	20	SPK2

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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929009 - Anion Extraction EPA 300.0/9056A

Blank (1929009-BLK1)

Prepared & Analyzed: 07/16/19 1

Fluoride	ND	0.250	mg/L							
Chloride	ND	2.00	"							
Nitrite-N	ND	0.250	"							
Nitrate-N	ND	0.250	"							
o-Phosphate-P	ND	0.250	"							
Sulfate	ND	2.00	"							

LCS (1929009-BS1)

Prepared & Analyzed: 07/16/19 1

Fluoride	2.50	0.250	mg/L	2.50		100	90-110			
Chloride	25.2	2.00	"	25.0		101	90-110			
Nitrite-N	2.36	0.250	"	2.50		94.6	90-110			
Nitrate-N	2.48	0.250	"	2.50		99.4	90-110			
o-Phosphate-P	12.3	0.250	"	12.5		98.4	90-110			
Sulfate	24.2	2.00	"	25.0		96.9	90-110			

LCS Dup (1929009-BSD1)

Prepared & Analyzed: 07/16/19 1

Fluoride	2.52	0.250	mg/L	2.50		101	90-110	0.638	20	
Chloride	25.3	2.00	"	25.0		101	90-110	0.595	20	
Nitrite-N	2.39	0.250	"	2.50		95.4	90-110	0.884	20	
Nitrate-N	2.50	0.250	"	2.50		100	90-110	0.642	20	
o-Phosphate-P	12.4	0.250	"	12.5		99.2	90-110	0.850	20	
Sulfate	24.4	2.00	"	25.0		97.7	90-110	0.842	20	

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Wet Chemistry - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929013 - Wet Chemistry Preparation

LCS (1929013-BS1)

Prepared: 07/16/19 | Analyzed: 07/17/19 0

pH	7.98		pH Units	8.00		99.9	98.75-101.25			
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Duplicate (1929013-DUP1)

Source: P907042-01

Prepared: 07/16/19 | Analyzed: 07/17/19 0

pH	12.0		pH Units	12.0				0.00	20	
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Wet Chemistry - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929014 - Wet Chemistry Preparation

LCS (1929014-BS1)

Prepared: 07/16/19 | Analyzed: 07/18/19 |

Total Alkalinity (as CaCO ₃ at pH 4.5)	248	10.0	mg/L	250	99.1	70-130
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LCS Dup (1929014-BSD1)

Prepared: 07/16/19 | Analyzed: 07/18/19 |

Total Alkalinity (as CaCO ₃ at pH 4.5)	265	10.0	mg/L	250	106	70-130	6.75	20
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Farmington NM, 87402	Project Manager:	Vern Andrews	

Wet Chemistry - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1929021 - Wet Chemistry Preparation

Blank (1929021-BLK1)		Prepared & Analyzed: 07/17/19 1								
Specific Conductance (@ 25 C)	ND	10.0	uS/cm							
LCS (1929021-BS1)		Prepared & Analyzed: 07/17/19 1								
Specific Conductance (@ 25 C)	1430	10.0	uS/cm	1410		101	98-102			
Duplicate (1929021-DUP1)		Source: P907042-01		Prepared & Analyzed: 07/17/19 1						
Specific Conductance (@ 25 C)	4610	10.0	uS/cm		4630			0.433	20	

QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Notes and Definitions

- SPK2 The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to native analyte concentration at 4 times or greater than the spike concentration.
- SPK1 The spike recovery is outside of quality control limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

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