

Laramie Energy - Grand Junction, CO

Sample Delivery Group: L1687568

Samples Received: 12/13/2023

Project Number: M9D

Description: Cow Camp

Report To: Matt Kasten
760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

COW CAMP DS L1687568-01 GW

Collected by
Matt K

Collected date/time
12/12/23 08:15

Received date/time
12/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2189707	1	12/14/23 18:35	12/15/23 13:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2193737	1	12/24/23 14:56	12/24/23 14:56	ASM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2190781	1	12/16/23 14:18	12/16/23 14:18	JAH	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

ACCOUNT:

Laramie Energy - Grand Junction, CO

PROJECT:

M9D

SDG:

L1687568

DATE/TIME:

12/28/23 10:33

PAGE:

3 of 13

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm 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 by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	375		10.0	1	12/15/2023 13:33	WG2189707

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	19.4		1.00	1	12/24/2023 14:56	WG2193737
Sulfate	57.1		5.00	1	12/24/2023 14:56	WG2193737

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	12/16/2023 14:18	WG2190781
Toluene	ND		0.00100	1	12/16/2023 14:18	WG2190781
Ethylbenzene	ND		0.00100	1	12/16/2023 14:18	WG2190781
Xylenes, Total	ND		0.00300	1	12/16/2023 14:18	WG2190781
Naphthalene	ND		0.00500	1	12/16/2023 14:18	WG2190781
1,2,4-Trimethylbenzene	ND		0.00100	1	12/16/2023 14:18	WG2190781
1,3,5-Trimethylbenzene	ND		0.00100	1	12/16/2023 14:18	WG2190781
(S) Toluene-d8	105		80.0-120		12/16/2023 14:18	WG2190781
(S) 4-Bromofluorobenzene	95.6		77.0-126		12/16/2023 14:18	WG2190781
(S) 1,2-Dichloroethane-d4	78.2		70.0-130		12/16/2023 14:18	WG2190781

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Method Blank (MB)

(MB) R4013551-1 12/15/23 13:33

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U	⬇	10.0	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1687655-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1687655-01 12/15/23 13:33 • (DUP) R4013551-3 12/15/23 13:33

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	635	644	1	1.46		5

L1687655-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1687655-02 12/15/23 13:33 • (DUP) R4013551-4 12/15/23 13:33

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	633	631	1	0.421		5

Laboratory Control Sample (LCS)

(LCS) R4013551-2 12/15/23 13:33

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8680	98.6	85.0-115	

Method Blank (MB)

(MB) R4017295-1 12/24/23 10:38

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1687655-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1687655-03 12/24/23 17:04 • (DUP) R4017295-6 12/24/23 17:17

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	8.67	8.59	1	0.832		15
Sulfate	166	165	1	0.465		15

Laboratory Control Sample (LCS)

(LCS) R4017295-2 12/24/23 10:51

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	42.3	106	80.0-120	
Sulfate	40.0	40.5	101	80.0-120	

L1687655-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1687655-03 12/24/23 17:04 • (MS) R4017295-7 12/24/23 17:30

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	40.0	8.67	49.8	103	1	80.0-120	
Sulfate	40.0	166	177	25.9	1	80.0-120	V

Sample Narrative:

MS: [SO4 spike failed due to high parent hit]



Method Blank (MB)

(MB) R4014875-3 12/16/23 11:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	97.4			77.0-126
(S) 1,2-Dichloroethane-d4	81.4			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4014875-1 12/16/23 09:58 • (LCSD) R4014875-2 12/16/23 10:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00450	0.00467	90.0	93.4	70.0-123			3.71	20
Toluene	0.00500	0.00514	0.00516	103	103	79.0-120			0.388	20
Ethylbenzene	0.00500	0.00509	0.00510	102	102	79.0-123			0.196	20
Xylenes, Total	0.0150	0.0130	0.0153	86.7	102	79.0-123			16.3	20
Naphthalene	0.00500	0.00343	0.00398	68.6	79.6	54.0-135			14.8	20
1,2,4-Trimethylbenzene	0.00500	0.00432	0.00461	86.4	92.2	76.0-121			6.49	20
1,3,5-Trimethylbenzene	0.00500	0.00445	0.00451	89.0	90.2	76.0-122			1.34	20
(S) Toluene-d8				106	104	80.0-120				
(S) 4-Bromofluorobenzene				99.3	99.1	77.0-126				
(S) 1,2-Dichloroethane-d4				80.3	77.7	70.0-130				

L1687609-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687609-01 12/16/23 17:09 • (MS) R4014875-4 12/16/23 18:46 • (MSD) R4014875-5 12/16/23 19:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	ND	0.00386	0.00479	77.2	95.8	1	17.0-158			21.5	27
Toluene	0.00500	ND	0.00497	0.00530	99.4	106	1	26.0-154			6.43	28
Ethylbenzene	0.00500	ND	0.00431	0.00530	86.2	106	1	30.0-155			20.6	27
Xylenes, Total	0.0150	ND	0.0138	0.0161	92.0	107	1	29.0-154			15.4	28
Naphthalene	0.00500	ND	ND	ND	78.8	81.6	1	12.0-156			3.49	35
1,2,4-Trimethylbenzene	0.00500	ND	0.00400	0.00458	80.0	91.6	1	26.0-154			13.5	27
1,3,5-Trimethylbenzene	0.00500	ND	0.00361	0.00448	72.2	89.6	1	28.0-153			21.5	27

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1687609-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687609-01 12/16/23 17:09 • (MS) R4014875-4 12/16/23 18:46 • (MSD) R4014875-5 12/16/23 19:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Toluene-d8					105	104		80.0-120				
(S) 4-Bromofluorobenzene					97.8	100		77.0-126				
(S) 1,2-Dichloroethane-d4					92.3	92.4		70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

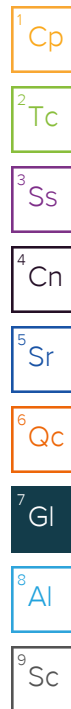
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:

Laramie Energy - Grand Junction, CO

760 Horizon Dr., Ste. 101
Grand Junction, CO 81506

Billing Information:

Accounts Payable
1401 Seventeenth St, Ste 1400
Denver, CO 80202Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG #

Table #

Acctnum: OXYGJCO

Template: T222240

Prelogin: P973161

PM: 824 - Chris Ward

PB:

Shipped Via: FedEX Ground

Remarks

Sample # (lab only)

Report to:

Matt Kasten

Email To: mkasten@laramie-energy.com

Project Description:

Cow Camp

City/State
Collected:

Please Circle:

PT MT CT ET

Phone: 970-263-3601

Client Project #

M9D

Lab Project #

OXYGJCO-915

Collected by (print):

Matt Kasten

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Quote #

Date Results Needed

Immediately

Packed on Ice N ☒No.
of
Cntrs

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

Cow Camp DS

Gnd

GW

—

12/12/23

8:15

5

X

X

X

CHLORIDE, SULFATE 125mlHDPE-NoPres

TDS 250mlHDPE-NoPres

V8260 40mlAmb-HCl

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

Relinquished by: (Signature)

Date:

12/12/23

Time:

1:40

Received by: (Signature)

Trip Blank Received: Yes / No

HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

12/12/23

Time:

1:50

Received by: (Signature)

Temp: °C

Bottles Received:

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

12/13/23

Time:

0:40

Hold:

Condition:
NCF / OK

Sample Receipt Checklist

COC Seal Present/Intact: ☐ NP ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

20568917

MSA

[illegible]

Name

Date _____