

November 2, 2018

Stan Spencer
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

**RE: Canfield #1 Orphan Well
Water Sampling Results
De Beque, Colorado**

Dear Mr. Spencer,

Cottonwood Consulting LLC (Cottonwood) is pleased to provide you with results of the water sampling conducted in the vicinity of the Canfield #1 Orphan well on October 9, 2018 (Figure 1). The methodology and associated results are summarized below.

Background

The Colorado Oil and Gas Conservation Commission (COGCC) has been identifying, prioritizing, and addressing orphaned oil and gas wells through its Orphaned Well Program. Several wells have been identified within the vicinity of De Beque, Colorado in the Piceance Basin. The Canfield #1 Orphan well (API #05-077-10548) is currently discharging to the ground surface and was identified in July 2018 as a candidate for the COGCC Orphaned Well list for plugging and abandonment. The Canfield #1 Orphan well is located in the southeast quarter of the northwest quarter of Section 17, Township 8 South, Range 97 West, in Mesa County, Colorado. No information is known about the completion formation or well depth.

Cottonwood was retained by the COGCC to collect a sample of the water discharging from the well in order to document the water quality conditions prior to plugging and abandonment. Results of the water sampling are found in Table 1 and the attached lab report.

Methodology

Cottonwood was on site on October 9, 2018, to collect the water sample. Cottonwood made field observations and collected field water quality measurements, including pH, temperature, dissolved oxygen, total dissolved solids (TDS), and specific conductance using a YSI® 556 water quality meter. Cottonwood collected the water sample by using a decontaminated beaker to transfer water discharging from the wellhead into laboratory provided bottles. The water sample was placed in a cooler on ice and transported with Chain of Custody to a Pace Analytical representative in Grand Junction, Colorado. The representative shipped the sample to Pace Analytical in Mt. Juliet,

Tennessee for laboratory analysis of hydrocarbons and agricultural parameters. Photographs were taken of the sample site and a photographic log is provided as Attachment 1.

Results

The lab and field TDS concentrations in the water sample were 7,500 and 7,988 milligrams per Liter (mg/L), respectively. Lab and field pH values were 8.31 and 8.38, respectively. Lab and field conductivity concentrations were 13,200 microsiemens per centimeter (uS/cm) and 12,280 uS/cm, respectively. Benzene, ethylbenzene, and total xylenes were detected above the laboratory detection limit. Laboratory analytical results are included as Attachment 2 and summarized in Table 1.

Conclusions

The water sampling results serve as documentation of water quality conditions prior to plugging and abandonment of the Canfield #1 Orphan well. Should you have any questions, please do not hesitate to contact me at 970-764-7356 or ksiesser@cottonwoodconsulting.com. We appreciate the opportunity to provide services to the COGCC.

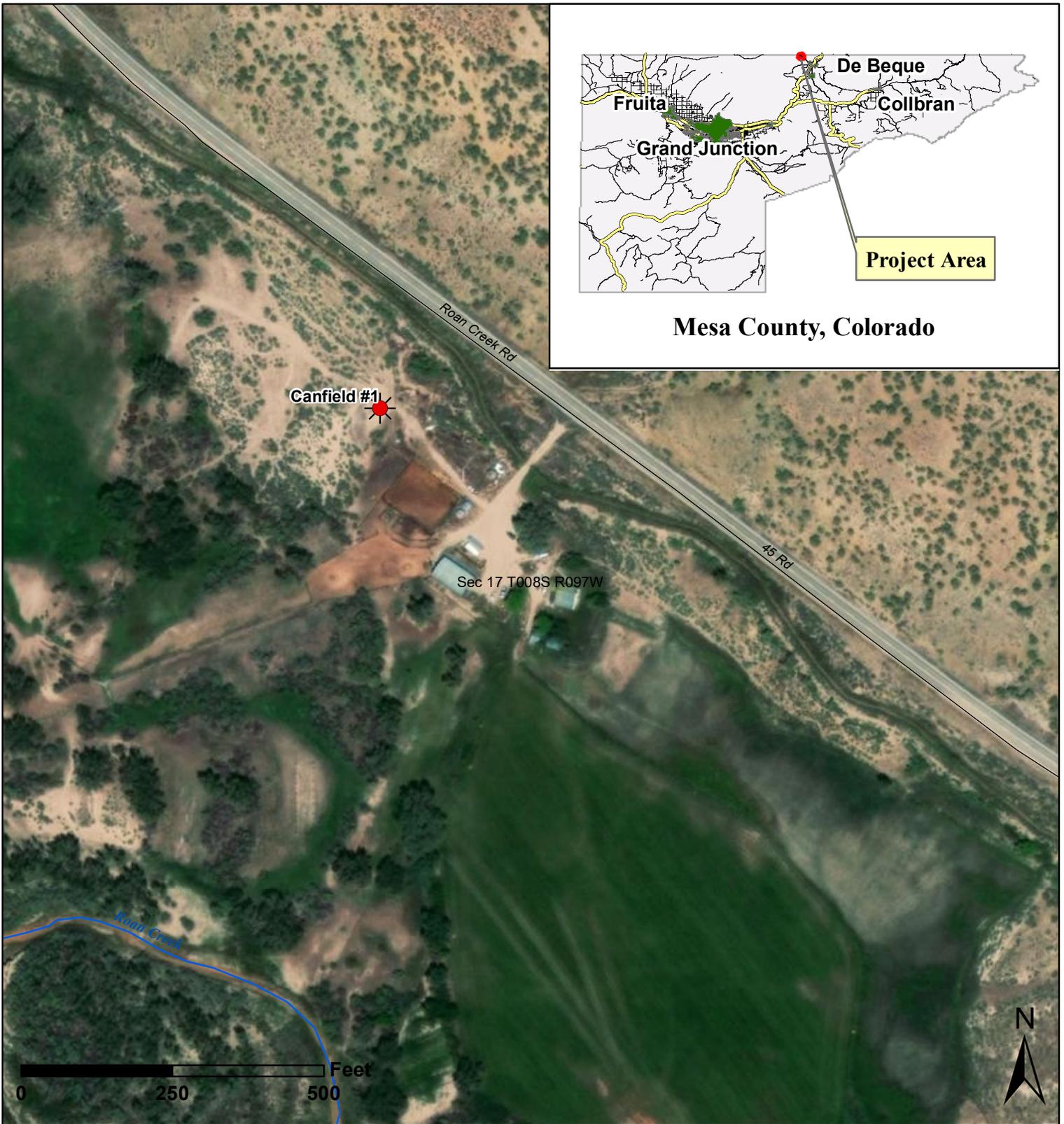
Sincerely,



Kyle Siesser, P.G.
Cottonwood Consulting, LLC

Attachments: Figure 1- Water Sampling Map
Table 1- Water Sampling Results
Attachment 1 - Photographic Log
Attachment 2 – Laboratory Analytical Results

Figure 1
Water Sampling Map



Notes: Sample collected directly from water discharging from Canfield #1 wellhead.

Legend

 Oil & Gas Well

Location: SENW Sec 17 T8S R97W



Mapping by: E. Millar, 11/2/18
 Coordinate System:
 NAD 1983 UTM Zone 13 N

Figure 1
Canfield #1 Orphan Well
Water Sampling Map
COGCC

Table 1
Water Sampling Results

Table 1
Water Sampling Results
Canfield #1 Orphan Well
Colorado Oil & Gas Conservation Commission

Parameter	Result	Units
General Chemistry		
Sodium Adsorption Ratio	61.0	no units
Total Dissolved Solids	7,500	mg/L
pH	8.31	pH Units
Conductivity	13,200	uS/cm
Chloride	3,960	mg/L
Sulfate	<5.00	mg/L
Metals Analysis		
Calcium	126	mg/L
Magnesium	36.1	mg/L
Sodium	3,020	mg/L
Volatile Organic Compounds Analysis		
Benzene	0.0422	mg/L
Toluene	<0.00100	mg/L
Ethylbenzene	0.00923	mg/L
Total Xylenes	0.129	mg/L
Field Parameters		
pH	8.38	pH Units
Conductivity	12,280	uS/cm
Temperature	17.47	°C
Total Dissolved Solids	7,988	mg/L
Dissolved Oxygen (%)	0.9	%
Dissolved Oxygen	0.08	mg/L

Notes:

Sample collected 10/10/18 from water discharging from Canfield #1 wellhead.

mg/L- milligrams per Liter; °C- degrees Centigrade;
uS/cm- microsiemens per centimeter

Attachment 1
Photographic Log

PHOTOGRAPHIC LOG



Photo 1: Water discharging from Canfield #1 Orphan wellhead.



Photo 2: Canfield #1 Orphan well water sample location.

Attachment 2

Laboratory Analytical Results

October 30, 2018

Colorado Oil & Gas Conservation

Sample Delivery Group: L1033582
Samples Received: 10/10/2018
Project Number: 453364
Description: Canfield #1 Orphan Well
Site: 453364
Report To: Stan Spencer
484 Turner Drive Bldg B, Suite 1
Durango, CO 81303

Entire Report Reviewed By:



Olivia Studebaker
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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



CANFIELD #1 L1033582-01 GW

Collected by: Jacob H
 Collected date/time: 10/09/18 14:15
 Received date/time: 10/10/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG1183371	1	10/19/18 09:30	10/19/18 12:38	TRB
Gravimetric Analysis by Method 2540 C-2011	WG1180115	1	10/16/18 18:30	10/16/18 19:07	AJS
Wet Chemistry by Method 9040C	WG1179576	1	10/11/18 16:28	10/11/18 16:28	EEM
Wet Chemistry by Method 9050A	WG1187943	1	10/29/18 12:00	10/29/18 12:00	BAM
Wet Chemistry by Method 9056A	WG1180314	1	10/16/18 03:16	10/16/18 03:16	ELN
Wet Chemistry by Method 9056A	WG1180314	100	10/16/18 03:30	10/16/18 03:30	ELN
Metals (ICP) by Method 6010B	WG1183371	5	10/19/18 09:30	10/19/18 12:38	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1180310	1	10/13/18 07:01	10/13/18 07:01	JCP

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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.

Olivia Studebaker
Project Manager

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



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	61.0		1	10/19/2018 12:38	WG1183371

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	7500		200	1	10/16/2018 19:07	WG1180115

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.31	T8	1	10/11/2018 16:28	WG1179576

Sample Narrative:

L1033582-01 WG1179576: 8.31 at 7.8C

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	13200		10.0	1	10/29/2018 12:00	WG1187943

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	3960		100	100	10/16/2018 03:30	WG1180314
Sulfate	ND		5.00	1	10/16/2018 03:16	WG1180314

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Calcium	126		5.00	5	10/19/2018 12:38	WG1183371
Magnesium	36.1		5.00	5	10/19/2018 12:38	WG1183371
Sodium	3020		5.00	5	10/19/2018 12:38	WG1183371

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	0.0422		0.00100	1	10/13/2018 07:01	WG1180310
Toluene	ND		0.00100	1	10/13/2018 07:01	WG1180310
Ethylbenzene	0.00923		0.00100	1	10/13/2018 07:01	WG1180310
Total Xylenes	0.129		0.00300	1	10/13/2018 07:01	WG1180310
(S) Toluene-d8	99.5		80.0-120		10/13/2018 07:01	WG1180310
(S) Dibromofluoromethane	101		75.0-120		10/13/2018 07:01	WG1180310
(S) a,a,a-Trifluorotoluene	101		80.0-120		10/13/2018 07:01	WG1180310
(S) 4-Bromofluorobenzene	96.9		77.0-126		10/13/2018 07:01	WG1180310

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



Method Blank (MB)

(MB) R3351624-1 10/16/18 19:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		2.82	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1033582-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1033582-01 10/16/18 19:07 • (DUP) R3351624-4 10/16/18 19:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	7500	7640	1	1.85		5

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

(LCS) R3351624-2 10/16/18 19:07 • (LCSD) R3351624-3 10/16/18 19:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Dissolved Solids	8800	8530	8590	96.9	97.6	85.0-115			0.701	5

⁷ Gl

⁸ Al

⁹ Sc



L1033571-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1033571-04 10/11/18 16:28 • (DUP) R3349872-3 10/11/18 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.88	6.90	1	0.290		1

Sample Narrative:

OS: 6.88 at 7.1C
DUP: 6.9 at 7.5C

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

L1033740-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1033740-01 10/11/18 16:28 • (DUP) R3349872-4 10/11/18 16:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.05	8.07	1	0.248		1

Sample Narrative:

OS: 8.05 at 17.3C
DUP: 8.07 at 17.4C

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3349872-1 10/11/18 16:28 • (LCSD) R3349872-2 10/11/18 16:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	10.0	9.96	9.97	99.6	99.7	99.0-101			0.100	1

Sample Narrative:

LCS: 9.96 at 17.8C
LCSD: 9.97 at 17.8C



Method Blank (MB)

(MB) R3354729-1 10/29/18 12:00

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1038257-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1038257-01 10/29/18 12:00 • (DUP) R3354729-3 10/29/18 12:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	156	156	1	0.000		20

L1038379-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1038379-02 10/29/18 12:00 • (DUP) R3354729-4 10/29/18 12:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	213	212	1	0.471		20

Laboratory Control Sample (LCS)

(LCS) R3354729-2 10/29/18 12:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1160	1160	100	85.0-115	



Method Blank (MB)

(MB) R3350931-1 10/15/18 20:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chloride	U		0.0519	1.00
Sulfate	U		0.0774	5.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1033540-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1033540-09 10/16/18 02:18 • (DUP) R3350931-4 10/16/18 02:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	ND	0.0564	1	0.000		15
Sulfate	ND	0.000	1	0.000		15

L1033624-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1033624-02 10/16/18 06:38 • (DUP) R3350931-7 10/16/18 06:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	2.27	2.24	1	1.52		15
Sulfate	27.2	27.2	1	0.168		15

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

(LCS) R3350931-2 10/15/18 21:03 • (LCSD) R3350931-3 10/15/18 21:17

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Chloride	40.0	39.7	39.5	99.3	98.9	80.0-120			0.432	15
Sulfate	40.0	39.0	39.2	97.6	98.1	80.0-120			0.551	15

L1033540-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1033540-09 10/16/18 02:18 • (MS) R3350931-5 10/16/18 02:47 • (MSD) R3350931-6 10/16/18 03:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	ND	49.2	50.4	98.2	101	1	80.0-120			2.34	15
Sulfate	50.0	ND	49.1	49.5	98.2	98.9	1	80.0-120			0.734	15



L1033624-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1033624-02 10/16/18 06:38 • (MS) R3350931-8 10/16/18 07:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Chloride	50.0	2.27	51.7	98.8	1	80.0-120	
Sulfate	50.0	27.2	74.8	95.1	1	80.0-120	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3352193-1 10/19/18 11:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Calcium	U		0.0463	1.00
Magnesium	U		0.0111	1.00
Sodium	0.132	↓	0.0985	1.00

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

(LCS) R3352193-2 10/19/18 11:34 • (LCSD) R3352193-3 10/19/18 11:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Calcium	10.0	10.4	10.6	104	106	80.0-120			1.80	20
Magnesium	10.0	10.4	10.6	104	106	80.0-120			2.25	20
Sodium	10.0	10.5	10.7	105	107	80.0-120			2.02	20

L1035624-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1035624-01 10/19/18 11:39 • (MS) R3352193-5 10/19/18 11:45 • (MSD) R3352193-6 10/19/18 11:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Calcium	10.0	78.8	87.6	87.9	88.1	90.4	1	75.0-125			0.269	20
Magnesium	10.0	33.3	42.8	42.9	94.8	96.1	1	75.0-125			0.283	20
Sodium	10.0	96.3	105	105	82.7	83.5	1	75.0-125			0.0752	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3350859-3 10/13/18 04:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
<i>(S) Toluene-d8</i>	97.2			80.0-120
<i>(S) Dibromofluoromethane</i>	104			75.0-120
<i>(S) a,a,a-Trifluorotoluene</i>	101			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	97.9			77.0-126

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3350859-1 10/13/18 03:01 • (LCSD) R3350859-2 10/13/18 03:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Benzene	0.0250	0.0238	0.0232	95.4	93.0	70.0-123			2.55	20
Ethylbenzene	0.0250	0.0233	0.0232	93.1	93.0	79.0-123			0.0872	20
Toluene	0.0250	0.0230	0.0226	92.1	90.3	79.0-120			1.92	20
Xylenes, Total	0.0750	0.0691	0.0688	92.1	91.7	79.0-123			0.435	20
<i>(S) Toluene-d8</i>				97.6	98.8	80.0-120				
<i>(S) Dibromofluoromethane</i>				102	102	75.0-120				
<i>(S) a,a,a-Trifluorotoluene</i>				99.5	99.5	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				101	102	77.0-126				

7 Gl

8 Al

9 Sc



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.

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.
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.

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
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}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

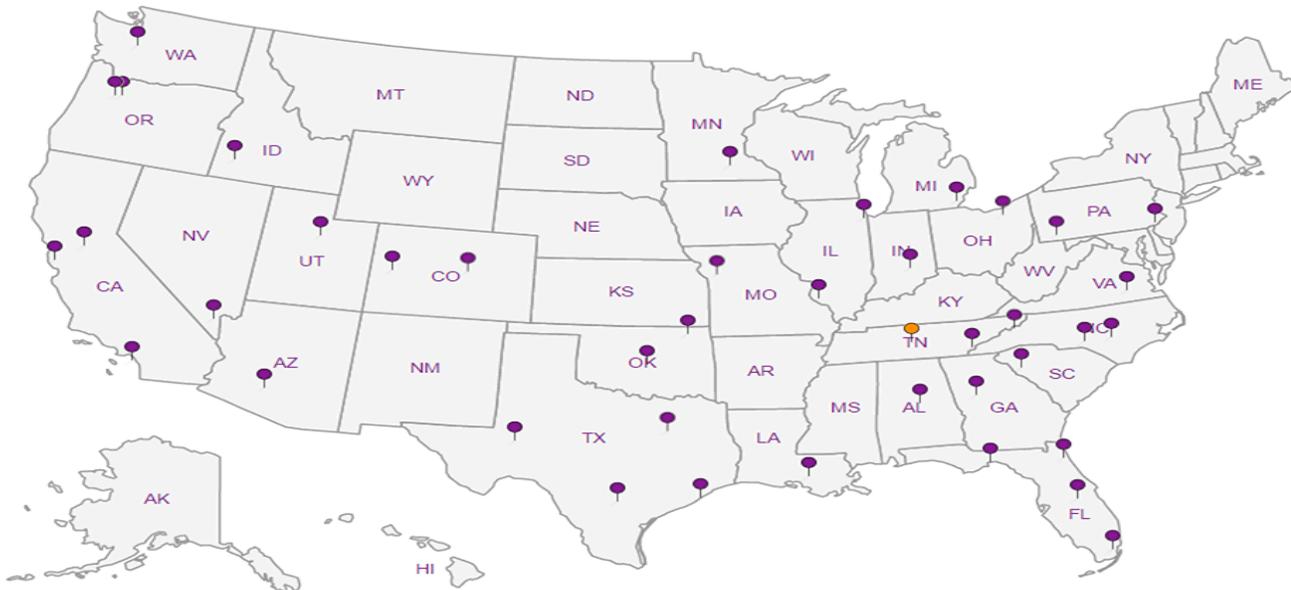
Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Colorado Oil & Gas Conservation

701 Wapiti Court, Ste 204
Rifle, CO 81650

Billing Information:
Attn: Accounts Payable
1120 Lincoln St., Suite 801
Denver, CO 80203

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 10 33582
A080

Accnum: COILGASRCO
Template: T111889
Prelgin: P673143
TSR: 288 - Daphne Richards
PB:

Shipped Via:

Remarks Sample # (lab only)

Report to:
Stan Spencer

Email To: stan.spencer@state.co.us;
ksiesser@cottonwoodconsulting.com

Project Description: *Carfield #1 Orphan Well*

City/State Collected: *De Beque*

Phone: 970-764-7356
Fax: 970-625-5682

Client Project #

Lab Project #
COILGASRCO-TABLE910

Collected by (print):
Jacob Hacker

Site/Facility ID #

P.O. #

Collected by (signature):
Carol Hacker

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 Y X

No. of
Cntrs

CI, S04 125mlHDPE-NoPres
TDS 250mlHDPE-NoPres
V82608TEX 40mlAmb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, S04 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	V82608TEX 40mlAmb-HCl
<i>Carfield #1 Orphan Well</i>	<i>Grab</i>	<i>GW</i>	<i>-</i>	<i>10/9/18</i>	<i>1415</i>	<i>4</i>	<i>X</i>	<i>X</i>	<i>X</i>
		<i>GW</i>				<i>4</i>	<i>X</i>	<i>X</i>	<i>X</i>
		<i>GW</i>				<i>4</i>	<i>X</i>	<i>X</i>	<i>X</i>

01

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

Remarks:

Samples returned via:
 UPS FedEx Courier

RAD

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: N Y N
 COC Signed/Accurate: N Y N
 Bottles arrive intact: N Y N
 Correct bottles used: N Y N
 Sufficient volume sent: N Y N
 If Applicable
 VOA Zero Headspace: N Y N
 Preservation Correct/Checked: N Y N

Relinquished by: (Signature)

Carol Hacker

Date: *10/9/18* Time: *1527*

Tracking #

Received by: (Signature)

Trip Blank Received: Yes No
HCL/MeOH
TBR

Relinquished by: (Signature)

Date: *10/7/18* Time: *1700*

Received by: (Signature)

Temp: *21.2* *22.3* Bottles Received: *4*

Relinquished by: (Signature)

Date: _____ Time: _____

Received for lab by: (Signature)

Date: *10/10/18* Time: *8:45*

If preservation required by Login: Date/Time

Hold: _____ Condition: NCF / OK