September 26, 2024
Kleinfelder Project No. 24005494.001A

Mr. Blair Rollins
Caerus Piceance, LLC
1001 17th Street #1600
Denver, Colorado 80202

SUBJECT: **Site Investigation Report**
Caerus Piceance, LLC
Spill / Release Point ID: 487580
K22 596 Pad, 05D Flowline
Garfield County, Colorado

Dear Mr. Rollins:

Kleinfelder Inc. (Kleinfelder) performed soil sampling activities at the K22 596 Pad in Garfield County, Colorado under contract by Caerus Piceance, LLC (Caerus). QB Energy Operating, LLC acquired the Caerus Piceance, LLC assets within the Piceance Basin on August 16, 2024. Enclosed is the report of work completed for this effort.

Please do not hesitate to contact me at (970) 309-6553 or by email at JVeith@kleinfelder.com should you have questions or concerns.

Respectfully submitted,
KLEINFELDER, INC.

Jordan Veith

Jordan Veith
Project Manager I

KLEINFELDER 707 17th Street, Suite 3000, Denver, CO 80202 p | 303.237.6601 f | 303.237.6602

SITE INVESTIGATION REPORT
CAERUS PICEANCE, LLC
SPILL / RELEASE POINT ID: 487580
K22 596 PAD, 05D FLOWLINE
GARFIELD COUNTY, COLORADO

KLEINFELDER PROJECT NO. 24005494.001A

September 26, 2024

A Report Prepared for:

Caerus Piceance, LLC
1001 17th Street #1600
Denver, CO 80202

SITE INVESTIGATION REPORT
CAERUS PICEANCE, LLC
SPILL / RELEASE POINT ID: 487580
K22 596 PAD, 05D FLOWLINE
GARFIELD COUNTY, COLORADO

Prepared by:

Alex Fenske
Geologist/Professional

Reviewed by:

Jordan Veith
Project Manager I

KLEINFELDER
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September 26, 2024
Kleinfelder Project No. 24005494.001A

Contents

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SITE INVESTIGATION REPORT

CAERUS PICEANCE, LLC

SPILL / RELEASE POINT ID: 487580

K22 596 PAD, 05D FLOWLINE

GARFIELD COUNTY, COLORADO

1 INTRODUCTION

This document was prepared by Kleinfelder Inc. (Kleinfelder) on behalf of Caerus Piceance, LLC (Caerus) to provide documentation of recent sampling support services conducted at the K22 596 Pad located in Garfield County, Colorado (**Figure 1**). QB Energy Operating, LLC acquired Caerus Piceance, LLC assets within the Piceance Basin on August 16, 2024.

Kleinfelder has been contracted by Caerus to perform soil sampling support services to provide necessary information to complete the Colorado Energy and Carbon Management Commission (ECMC) Form 27 for their upstream oil and gas production facilities located in the Piceance Basin. According to the ECMC Form 19 Spill / Release Report Approved (document # 403888424) provided to Kleinfelder by Caerus, a flowline failure was identified upon a failed pressure test at the K22 596 Pad. Caerus proposed soil sampling to characterize the approximate release area from the reported spill/release under ECMC 913.c.(3): Remediation of Spill and Release pursuant to Rule 912. Kleinfelder collected the soil samples on August 19, 2024. Samples were analyzed by Elevation Diagnostic laboratory and results are reported herein.

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2 SITE LOCATION AND GEOLOGIC SETTING

The K22 596 Pad is located within the Piceance Basin in Garfield County, Colorado (NESW, Section 22, Township 5 South, Range 96 West) (**Figure 1**). The Piceance Basin is a geologic structural basin consisting of sandstones and siltstones, containing reserves of coal, natural gas, and oil shale.

Based on field assessment and desktop review of the area, it is believed there is no reasonable pathway to groundwater within the investigation area. The K22 596 Pad resides on a rocky canyon hillside. Bear Run Creek, the nearest surface water, is located approximately 245 feet south and resides approximately 50 feet lower than the K22 596 Pad. Additionally, the nearest water well (permit # 295164-) to the K22 596 Pad is approximately 0.99 miles east and has a total depth of 34 feet. According to the permit notes, no groundwater was encountered in the well.

No surface water or groundwater were encountered during Kleinfelder's soil sampling activities. The general soil type within the release area was classified based on Kleinfelder's field observations using the Unified Soil Classification System (USCS) and were observed as clayey gravels, gravel-sand-clay mixtures. Topographical information is provided in **Figure 1**.

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3 FIELD ACTIVITIES

As prescribed within the approved ECMC Form 19 Spill/Release Reports (documents #403888424 and 403894421), Kleinfelder performed the following field activities at the K22 596 Pad on August 19, 2024.

August 19, 2024

- Collected one (1) soil sample from the base of the excavation adjacent to the 05D flowline [20240819-K22 596-(05D-BASE01)@5] on the K22 596 Pad at 5 feet below ground surface (bgs),
- Collected four (4) soil samples from the north [20240819-K22 596-(05D-NW01)@5], east [20240819-K22 596-(05D-EW01)@5], south [20240819-K22 596-(05D-SW01)@5], and west [20240819-K22 596-(05D-WW01)@5] walls of the excavation adjacent to 05D flowline of the K22 596 pad at 5 feet bgs,
- Collected one (1) 5-point composite soil sample [20240819-K22 596-(05D-STOCK01)] from the soil stockpile associated with the 05D flowline release excavation,
- Screened soil with a photoionization detector (PID) and olfactory senses at all soil sample locations, and
- Shipped soil samples to Elevation Diagnostic to analyze for the contaminants of concern listed within ECMC Table 915-1.

Prior to Kleinfelder's soil sampling activities, Caerus identified the soil sampling locations. On August 19, 2024, Kleinfelder collected the soil samples from the open excavation and resulting soil stockpile associated with the 05D flowline release as described above. Kleinfelder used an EOS Arrow 100 sub-meter GNSS receiver to record latitude and longitude at each sample location. The sample locations are shown on **Figure 2.**

Soil samples were collected from a stainless-steel hand trowel and placed into laboratory-supplied, 3-ounce jars with Teflon lids per sample. Each sample was collected directly from the hand trowel from the appropriate depth and placed into the glass jars. The samples were immediately placed on ice in a cooler. Standard chain-of-custody (COC) procedures were used during sampling and transportation to Elevation Diagnostic in Aurora, Colorado (via FEDEX). All soil samples were analyzed for contaminants of concern listed in Full ECMC Table 915-1.

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Sampling equipment (i.e., hand auger cutter head, soil sampler, etc.) was washed with a solution of Liquinox® detergent, rinsed with tap water, and then distilled water between samples. During soil sampling activities, Kleinfelder documented staining and/or odor observations, if any, and screened the soil with a PID. Kleinfelder placed the soil into a Ziploc® plastic bag directly from the hand auger for screening with the PID. The PID is a MiniRAE 3000®, which is owned and maintained by Caerus. Prior to use, Kleinfelder calibrated the PID, which passed calibration. Soil sample conditions and locations are provided in **Table 1**.

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4 RESULTS

Kleinfelder observed soil conditions within the release area during the soil sampling activities. Hydrocarbon odors and no soil staining were not observed at any sample location. **Table 1** summarizes the samples and associated field observations, including PID readings.

Excluding arsenic and pH, the sample analytical results did not exceed the ECMC Table 915-1 Residential Soil Screening Levels (RSSLs) (see **Table 2** and **Table 3**). Both arsenic and pH were detected at concentrations above the ECMC Table 915-1 RSSLs at all six site assessment soil sample locations.

Analytical results are summarized in **Table 2** and **Table 3** and were compared to ECMC Table 915-1 RSSLs as requested by Caerus. Site assessment soil and background soil laboratory reports are provided in **Appendix A**. Soil sample locations are provided in **Figure 2** and **Figure 3.**

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5 CONCLUSIONS AND RECOMMENDATIONS

Excluding arsenic and pH, the site assessment soil sample analytical results did not exceed the ECMC Table 915-1 RSSLs (see **Table 2** and **Table 3**).

Results from within the release area exhibited ECMC Table 915-1 RSSL exceedances for arsenic in all site assessment soil samples. To address the arsenic exceedances, Kleinfelder recommends Caerus request an alternative allowable limit of 34.25 mg/kg for arsenic per ECMC Table 916-1 Footnote 11. Analytical results of background samples collected from nearby offsite and undisturbed locations at the F23 596 Pad (**Figure 3**) indicate a range of background arsenic concentrations from 6.28 – 27.4 mg/kg (**Table 2**). Arsenic concentrations exhibited in all site assessment soil samples are within the background range for arsenic concentrations.

Results from within the release area exhibited ECMC Table 915-1 exceedances for pH in all site assessment soil samples. Analytical results of background samples collected from nearby offsite and undisturbed locations at the F23 596 Pad (**Figure 3**) indicate a range of background pH concentrations from 8.12 to 10.1 (**Table 2**). All site assessment soil samples are within the background adjusted range for pH. Kleinfelder recommends Caerus request and alternative allowable range of 8.12 to 10.1 for pH per ECMC Table 915-1 Footnote 1.

Based on the Pathway to Groundwater Assessment described in Section 2, Kleinfelder recommends Caerus request formal approval to compare site assessment soil sample results to ECMC Table 915-1 RSSLs. Based on all investigative results, all constituents of concern are compliant with ECMC Table 915-1 RSSLs or background concentration levels. Kleinfelder recommends Caerus request No Further Action (NFA) associated with the site investigation under ECMC Spill / Release Point ID 487580.

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6 LIMITATIONS

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that QB Energy has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage, or treatment of hazardous materials within the meaning of any governmental statute, regulation, or order. QB Energy is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. QB Energy is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder’s services.

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FIGURES

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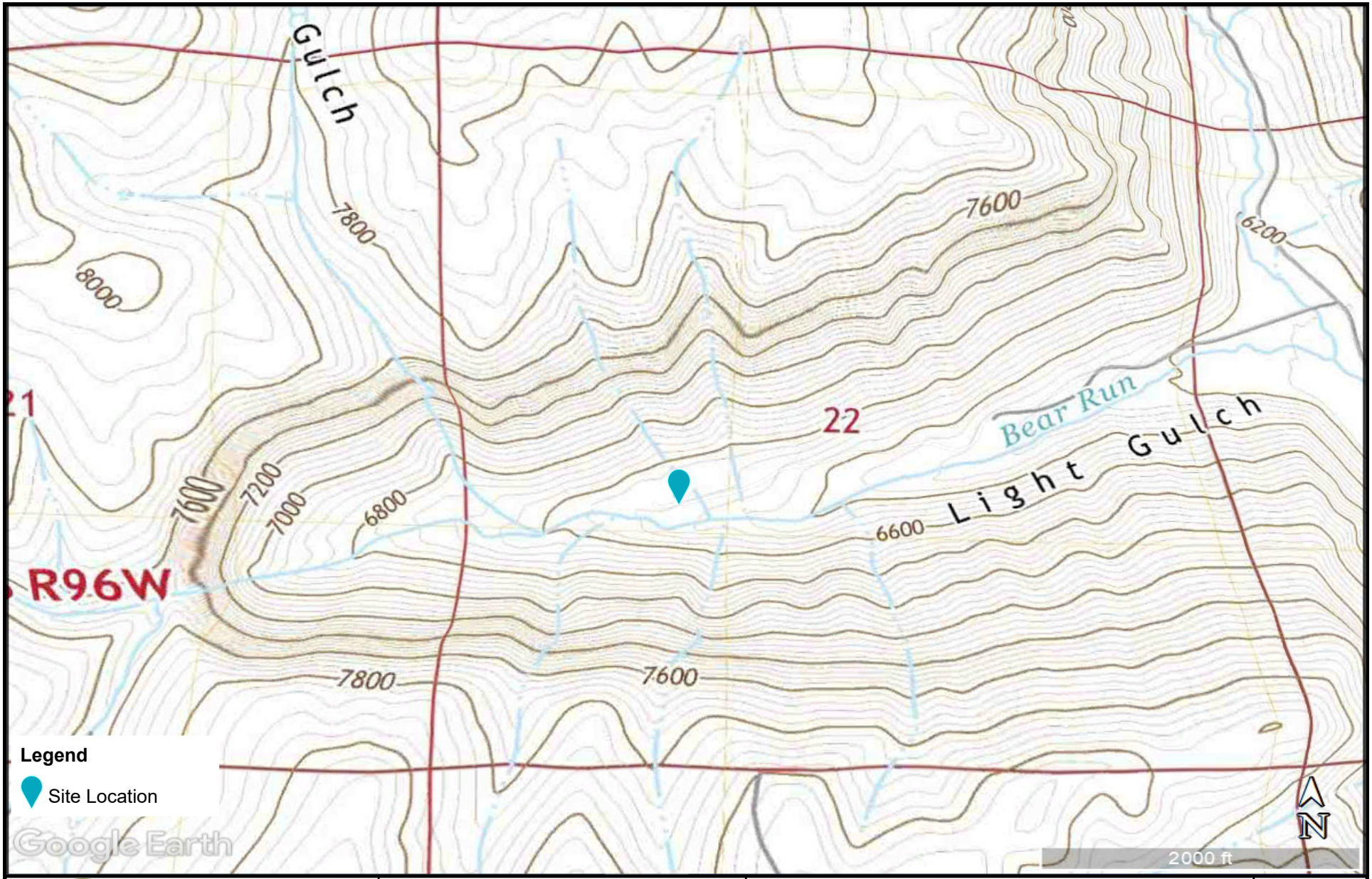

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Bright People. Right Solutions.
www.kleinfelder.com

PROJECT NO.	24005494.001A
DRAWN:	9/26/2024
DRAWN BY:	A. Fenske
CHECKED BY:	J. Veith
FILE NAME:	K22 596 (05D) Figure 1.pub

Topographical Map

Caerus Piceance, LLC
Spill / Release Point ID: 487580
K22 596 Pad, 05D Flowline
NESW Sec. 22 T5S R96W
Garfield County, Colorado

FIGURE

1

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PROJECT NO.	24005494.001A
DRAWN:	9/26/2024
DRAWN BY:	A. Fenske
CHECKED BY:	J. Veith
FILE NAME:	K22 596 (05D) Figure 2.pub

Sample Location Map

Caerus Piceance, LLC
Spill / Release Point ID: 487580
K22 596 Pad, 05D Flowline
NESW Sec. 22 T5S R96W
Garfield County, Colorado

FIGURE

2

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PROJECT NO.	24005494.001A
DRAWN:	9/26/2024
DRAWN BY:	A. Fenske
CHECKED BY:	J. Veith
FILE NAME:	K22 596 (05D) Figure 2.pub

Background Sample Location Map

Caerus Piceance, LLC
Spill / Release Point ID: 487580
K22 596 Pad, 05D Flowline
NESW Sec. 22 T5S R96W
Garfield County, Colorado

FIGURE

3

TABLES

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TABLE 1 - SAMPLE SUMMARY
CAERUS PICEANCE, LLC
SPILL / RELEASE POINT ID: 487580
K22 596 PAD, 05D FLOWLINE
NESW SEC. 22 T5S R96W
GARFIELD COUNTY, COLORADO

Sample ID	Sample Type	Sample Date	Latitude	Longitude	PID Reading (PPM)	Hydrocarbon Odor Detected (Y/N)	Soil Staining Observed (Y/N)	Submitted for Laboratory Analysis (Y/N)	Comments
20240819-K22 596-(05D-BASE01)@5	Soil	8/19/2024	39.59890881	-108.15955190	6.0	N	N	Y	None
20240819-K22 596-(05D-NW01)@5	Soil	8/19/2024	39.59892981	-108.15954662	< 1	N	N	Y	None
20240819-K22 596-(05D-EW01)@5	Soil	8/19/2024	39.59890347	-108.15954751	1.2	N	N	Y	None
20240819-K22 596-(05D-SW01)@5	Soil	8/19/2024	39.59890742	-108.15958077	< 1	N	N	Y	None
20240819-K22 596-(05D-WW01)@5	Soil	8/19/2024	39.59893008	-108.15956985	< 1	N	N	Y	None
20240819-K22 596-(05D-STOCK01)	Soil	8/19/2024	39.59895063	-108.15969553	2.4	N	N	Y	None

Notes:
PID = Photo-ionization Detector
PPM = Parts per million

TABLE 2 - SOIL ANALYTICAL RESULTS - INORGANIC ANALYTES
CAERUS PICEANCE, LLC
SPILL / RELEASE POINT ID: 487580
K22 596 PAD, 05D FLOWLINE
NESW SEC. 22 T5S R96W
GARFIELD COUNTY, COLORADO

Analyte			EC	SAR	pH	HWS Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
915-1 RESIDENTIAL SOIL			4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Units			mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	**Sample Type**	**Sample Date**														
20220908-F23 BG(0950)@0.5'	Background	09/08/2022	0.22	0.196	8.12	0.793	**18.5**	309	0.488	**< 1.00**	22.4	13.5	17.2	< 2.00	< 1.00	48.2
20220908-F23 BG(1020)@0.5'	Background	09/08/2022	2.29	3.67	**8.59**	1.08	**22.6**	515	6.43	**< 1.00**	35.9	15.8	20.1	< 2.00	< 1.00	40.5
20220908-F23 BG(1050)@1'	Background	09/08/2022	0.393	0.326	8.05	0.868	**15.3**	296	0.497	**< 1.00**	19.3	14.8	18	< 2.00	< 1.00	50.5
20220908-F23 BG(1120)@1'	Background	09/08/2022	0.225	0.484	**8.65**	0.655	**27.4**	329	0.617	**< 1.00**	29.7	17.6	23.8	< 2.00	< 1.00	62.3
20220908-F23 BG(1140)@1'	Background	09/08/2022	0.236	0.501	8.13	0.516	**17.3**	339	0.514	**< 1.00**	22.3	16.8	19.2	1.07	< 1.00	52.6
20220908-F23 BG(1215)@0.5'	Background	09/08/2022	3.8	**123**	**10.1**	**7.57**	**6.28**	421	0.589	**< 1.00**	10.6	9.07	13.8	< 2.00	< 1.00	46.6
20220908-F23 BG(1240)@1'	Background	09/08/2022	0.156	0.241	**8.49**	0.325	**14.2**	243	0.643	**< 1.00**	25.6	12.7	19.1	< 2.00	< 1.00	54.9
20240819-K22-596-(05D-BASE01)@5	Assessment	08/19/2024	1.779	3.09	**8.42**	0.51	**17.16**	1343.39	0.493	< 0.08	27.9	17.17	18.84	2.78	< 0.25	69.12
20240819-K22-596-(05D-EW01)@5	Assessment	08/19/2024	1.571	2.14	**8.53**	0.47	**13.37**	1257.72	0.463	< 0.08	23.04	13.46	14.54	2.00	< 0.25	57.53
20240819-K22-596-(05D-NW01)@5	Assessment	08/19/2024	1.058	1.1	**8.41**	0.33	**23.8**	1276.88	0.55	< 0.08	31.97	20.59	21.91	3.01	< 0.25	98.42
20240819-K22-596-(05D-STOCK01)	Assessment	08/19/2024	1.254	1.47	**8.48**	0.44	**13.72**	2270.50	0.5	< 0.08	24.33	15.61	16.18	2.38	< 0.25	51.3
20240819-K22-596-(05D-SW01)@5	Assessment	08/19/2024	1.135	1.14	**8.49**	0.38	**26.82**	2238.42	0.41	< 0.08	25.35	22.67	15.39	2.3	< 0.25	54.72
20240819-K22-596-(05D-WW01)@5	Assessment	08/19/2024	1.287	1.39	**8.48**	0.37	**23.71**	2503.18	0.473	< 0.08	27.92	17.36	18.44	2.43	< 0.25	66.41

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)

TABLE 3 - SOIL ANALYTICAL RESULTS - ORGANIC ANALYTES
CAERUS PICEANCE, LLC
SPILL / RELEASE POINT ID: 487580
K22 596 PAD, 05D FLOWLINE
NESW SEC. 22 T5S R96W
GARFIELD COUNTY, COLORADO

Analyte			GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	Dibenz(a,h)anthracen	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyre	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene
915-1 RESIDENTIAL SOIL			500			1.2	490	5.8	58	30	27	360	1800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	2	180
Units			mg/kg			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	**Sample Type**	**Sample Date**																								
20240819-K22-596-(05D-BASE01)@5	Assessment	08/19/2024	0.32873	< 100	< 100	< 0.00242	< 0.00263	< 0.005	0.01	0.0025	0.047	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.13	0.12	< 0.01
20240819-K22-596-(05D-EW01)@5	Assessment	08/19/2024	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.01	< 0.01
20240819-K22-596-(05D-NW01)@5	Assessment	08/19/2024	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20240819-K22-596-(05D-STOCK01)	Assessment	08/19/2024	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20240819-K22-596-(05D-SW01)@5	Assessment	08/19/2024	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20240819-K22-596-(05D-WW01)@5	Assessment	08/19/2024	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)

APPENDIX A

LABORATORY ANALYTICAL REPORTS

KLEINFELDER 707 17th Street, Suite 3000, Denver, CO 80202 p | 303.237.6601 f | 303.237.6602

Division of Environmental Testing
2115 N Scranton St Suite 3040A
Aurora, CO 80045
800-440-5184

August 28, 2024

143 Diamond Ave
Parachute, CO 81635
970-285-2600

Project Manager :	Blair Rollins
Project Name :	K22 (05D) Investigation
Project Number :	N/A

Attached are the analytical results for K22 (05D) Investigation N/A received by Elevation Diagnostics, Division of Environmental Testing on August 20, 2024. This is associated with Elevation's number AA11333 .

The results were analyzed under the guidelines of various methods. These methods are identified in the report as follows: "SW" is referring to the EPA's SW-846 Compendium; "EPA" is referring to 40 CFR part 136; "HACH" is referring to a method which was validated by HACH®; "SM" is referring to a revision of the Standard Methods For the Examination of Water and Wastewater; and "ASTM" is referring to the standard test method set forth by ASTM International.

The analytical results in this report apply specifically to the samples listed in the attached Chain of Custody. This report may only be duplicated in full.

Any deviations to sample integrity, method specifications, or Elevation Diagnostics's standard operating procedures are documented in the report below.

Please contact us for any questions or comments concerning the content of this report.

Thank you,

Elevation Diagnostics, Division of Environmental Testing

Chain of Custody Form

Elevation Diagnostics

2115 North Scranton Street Suite 3040A Aurora, CO 80045
800.440.5184

Client: Caerus Oil and Gas
Address: 143 Diamond Avenue
City/State/ZIP: Parachute, CO, 81635
Phone: (970) 640-6919
Project Contact: Blair Rollins

Project Name/Number: K22 (05D) Investigation
Project Location:
Collector Name:

Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Other	Matrix: Water	Matrix: Soil	Matrix: Other	Analysis Requested: ECMC Table 915-1	Interim report requested: Notes
1	20240819-K22 596-(05D-BASE01)@5	8/19/24	9:19	3			X			X		X	Grab
2	20240819-K22 596-(05D-NW01)@5		9:46	3			X			X		X	
3	20240819-K22 596-(05D-EW01)@5		10:12	3			X			X		X	
4	20240819-K22 596-(05D-SW01)@5		10:34	3			X			X		X	
5	20240819-K22 596-(05D-NW01)@5		10:57	3			X			X		X	
6	20240819-K22 596-(05D-STOCK01)		11:14	3			X			X		X	composite
7													
8													
9													
10													

Alex Larsha 8/19/24

AA11333-1 AA11334-1 AA11335-1 AA11336-1 AA11337-1 AA11338-1

Interim report requested: ☐ Yes ☐ No

Relinquished By: Alex Larsha
Date/Time: 8/19/24 15:15

Relinquished By:
Date/Time:

Relinquished By:
Date/Time:

Scan to Deliver Samples

Lab Use Only

Observed Temperature Upon Receipt: 8.0°C
Corrected Temperature Upon Receipt: 9.3°C
Thermometer #: EDXEQ248
Correction Factor: +1.3°C

Samples Intact: (Yes) No
pH Checked: Yes (No)
pH Adjusted: Yes (No)
PFAS rec'd on ice: Yes No N/A

2024-08-20-001
Lot/EQM Number:

Name/Lot Number of Adjustment:

EFOR-008.005

Division of Environmental Testing
2115 N Scranton St Suite 3040A
Aurora, CO 80045
800-440-5184

FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start	Dilution	Result	Units	MDL	Method Ref. / Recovery
AA11333-1	20240819-K22-596-(05D-BASE01)@5	**Collected :** 08/19/2024	09:19				
SAR - Calcium		08/22/2024	13:34 10.00	7.55	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34 10.00	4.36	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34 10.00	7.55	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34 10.00	3.09		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41	1.779	mmhos/cm		USDA 60
AA11333-2	20240819-K22-596-(05D-BASE01)@5	**Collected :** 08/19/2024	09:19				
Chromium VI, Soil		08/21/2024	14:27	<0.08 - MS	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59	0.51	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58	21.2	°C		
pH, Soils		08/20/2024	16:58	8.42	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:03 10.00	17.16	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:03 100.00	1343.39	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:03 10.00	0.493	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:03 10.00	27.90	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:03 10.00	17.17	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:03 10.00	18.84	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:03 10.00	2.78	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:03 10.00	<0.250 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		08/26/2024	11:03 10.00	69.12	mg/kg	0.025	EPA 6020B
AA11333-3	20240819-K22-596-(05D-BASE01)@5	**Collected :** 08/19/2024	09:19				
DRO & ORO, Soil - DRO		08/27/2024	10:03	<100.00	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03	<100.00	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55	0.32873 - MS	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		08/26/2024	11:21 10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	11:21 10.00	0.13	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	11:21 10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	11:21 10.00	0.12	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	11:21 10.00	Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34	0.0025 - MS	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34	0.047 - MS	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34	<0.0024 - MS	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34	<0.005 - MS	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34	0.0062 - MS	mg/kg	0.00427	EPA 8260d

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
VOC, Soils - o-xylene		08/27/2024	15:34		0.0038 - MS	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		<0.0026 - MS	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		0.010 - MS	mg/kg	0.00654	EPA 8260d
AA11334-1	20240819-K22-596-(05D-NW01)@5	**Collected :** 08/19/2024	09:46					
SAR - Calcium		08/22/2024	13:34	10.00	6.84	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34	10.00	2.92	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34	10.00	2.43	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34	10.00	1.10		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41		1.058	mmhos/cm		USDA 60
AA11334-2	20240819-K22-596-(05D-NW01)@5	**Collected :** 08/19/2024	09:46					
Chromium VI, Soil		08/21/2024	14:27		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59		0.33	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58		21.1	°C		
pH, Soils		08/20/2024	16:58		8.41	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:03	10.00	23.80	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:03	100.00	1276.88	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:03	10.00	0.55	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:03	10.00	31.97	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:03	10.00	20.59	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:03	10.00	21.91	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:03	10.00	3.01	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:03	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		08/26/2024	11:03	10.00	98.42	mg/kg	0.025	EPA 6020B
AA11334-3	20240819-K22-596-(05D-NW01)@5	**Collected :** 08/19/2024	09:46					
DRO & ORO, Soil - DRO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55		<0.26827	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		08/26/2024	11:21	10.00	<0.01 - MS	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	11:21	10.00	<0.10 - RL1, MS	mg/kg	0.10	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34		<0.0025	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34		<0.0024	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34		Not Detected	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34		<0.00427	mg/kg	0.00427	EPA 8260d
VOC, Soils - o-xylene		08/27/2024	15:34		<0.00227	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		<0.0026	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		<0.00654	mg/kg	0.00654	EPA 8260d
AA11335-1	20240819-K22-596-(05D-EW01)@5	**Collected :**	08/19/2024	10:12				
SAR - Calcium		08/22/2024	13:34	10.00	6.94	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34	10.00	3.87	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34	10.00	4.98	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34	10.00	2.14		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41		1.571	mmhos/cm		USDA 60
AA11335-2	20240819-K22-596-(05D-EW01)@5	**Collected :**	08/19/2024	10:12				
Chromium VI, Soil		08/21/2024	14:27		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59		0.47	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58		21.3	°C		
pH, Soils		08/20/2024	16:58		8.53	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:03	10.00	13.37	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:03	100.00	1257.72	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:03	10.00	0.463	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:03	10.00	23.04	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:03	10.00	13.46	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:03	10.00	14.54	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:03	10.00	2.00	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:03	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		08/26/2024	11:03	10.00	57.53	mg/kg	0.025	EPA 6020B
AA11335-3	20240819-K22-596-(05D-EW01)@5	**Collected :**	08/19/2024	10:12				
DRO & ORO, Soil - DRO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55		<0.26827	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		08/26/2024	00:00	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Benzo(a)pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270

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FINAL RESULTS REPORT

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Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
SVOC, Soils - Fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34		<0.0025	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34		0.0091	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34		<0.0024	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34		<0.0043	mg/kg	0.00427	EPA 8260d
VOC, Soils - o-xylene		08/27/2024	15:34		<0.0023	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		<0.0026	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		<0.0065	mg/kg	0.00654	EPA 8260d
AA11336-1	20240819-K22-596-(05D-SW01)@5	**Collected :** 08/19/2024	10:34					
SAR - Calcium		08/22/2024	13:34	10.00	6.76	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34	10.00	2.96	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34	10.00	2.51	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34	10.00	1.14		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41		1.135	mmhos/cm		USDA 60
AA11336-2	20240819-K22-596-(05D-SW01)@5	**Collected :** 08/19/2024	10:34					
Chromium VI, Soil		08/21/2024	14:27		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59		0.38	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58		21	°C		
pH, Soils		08/20/2024	16:58		8.49	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:03	10.00	26.82	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:03	100.00	2238.42	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:03	10.00	0.41	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:03	10.00	25.35	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:03	10.00	22.67	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:03	10.00	15.39	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:03	10.00	2.30	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:03	10.00	<0.250 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		08/26/2024	11:03	10.00	54.72	mg/kg	0.025	EPA 6020B
AA11336-3	20240819-K22-596-(05D-SW01)@5	**Collected :** 08/19/2024	10:34					
DRO & ORO, Soil - DRO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55		<0.26827	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		08/26/2024	11:21	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	11:21	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	11:21	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270

Division of Environmental Testing
2115 N Scranton St Suite 3040A
Aurora, CO 80045
800-440-5184

FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
SVOC, Soils - Benzo(a)pyrene		08/26/2024	11:21	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	11:21	10.00	0.12	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	11:21	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		08/26/2024	11:21	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	11:21	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	11:21	10.00	Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34		<0.0025	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34		0.0054	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34		<0.0024	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34		<0.0043	mg/kg	0.00427	EPA 8260d
VOC, Soils - o-xylene		08/27/2024	15:34		<0.0023	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		Not Detected	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		<0.0065	mg/kg	0.00654	EPA 8260d
AA11337-1	20240819-K22-596-(05D-WW01)@5	**Collected :** 08/19/2024	10:57					
SAR - Calcium		08/22/2024	13:34	10.00	6.50	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34	10.00	4.04	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34	10.00	3.18	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34	10.00	1.39		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41		1.287	mmhos/cm		USDA 60
AA11337-2	20240819-K22-596-(05D-WW01)@5	**Collected :** 08/19/2024	10:57					
Chromium VI, Soil		08/21/2024	14:27		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59		0.37	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58		21.3	°C		
pH, Soils		08/20/2024	16:58		8.48	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:12	10.00	23.71	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:12	100.00	2503.18	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:12	10.00	0.473	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:12	10.00	27.92	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:12	10.00	17.36	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:12	10.00	18.44	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:12	10.00	2.43	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:12	10.00	<0.250 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		08/26/2024	11:12	10.00	66.41	mg/kg	0.025	EPA 6020B
AA11337-3	20240819-K22-596-(05D-WW01)@5	**Collected :** 08/19/2024	10:57					
DRO & ORO, Soil - DRO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55		<0.26827	mg/kg	0.26827	EPA 8260

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
SVOC, Soils - 1-methylnaphthalene		08/26/2024	00:00	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Benzo(a)pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		08/26/2024	00:00	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34		<0.0025	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34		<0.0024	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34		0.0045	mg/kg	0.00427	EPA 8260d
VOC, Soils - o-xylene		08/27/2024	15:34		<0.0023	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		<0.0026	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		0.0045	mg/kg	0.00654	EPA 8260d
AA11338-1	20240819-K22-596-(05D-STOCK01)	**Collected :** 08/19/2024	11:14					
SAR - Calcium		08/22/2024	13:34	10.00	6.83	mEq/L	0.000	EPA 6020B
SAR - Magnesium		08/22/2024	13:34	10.00	2.92	mEq/L	0.000	EPA 6020B
SAR - Sodium		08/22/2024	13:34	10.00	3.25	mEq/L	0.000	EPA 6020B
SAR - Sodium Adsorption Ratio		08/22/2024	13:34	10.00	1.47		0.000	EPA 6020B
Soil Conductivity		08/21/2024	14:41		1.254	mmhos/cm		USDA 60
AA11338-2	20240819-K22-596-(05D-STOCK01)	**Collected :** 08/19/2024	11:14					
Chromium VI, Soil		08/21/2024	14:27		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		08/23/2024	08:59		0.44	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		08/20/2024	16:58		21	°C		
pH, Soils		08/20/2024	16:58		8.48	S.U.	0.01	EPA 9045D
Total Metals, Soils - Arsenic		08/26/2024	11:12	10.00	13.72	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		08/26/2024	11:12	100.00	2270.50 - MS	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		08/26/2024	11:12	10.00	0.50	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		08/26/2024	11:12	10.00	24.33	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		08/26/2024	11:12	10.00	15.61	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		08/26/2024	11:12	10.00	16.18	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		08/26/2024	11:12	10.00	2.38	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		08/26/2024	11:12	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

Sample ID / Analyte Name	Customer ID	Collected / Analysis Start		Dilution	Result	Units	MDL	Method Ref. / Recovery
Total Metals, Soils - Zinc		08/26/2024	11:12	10.00	51.30	mg/kg	0.025	EPA 6020B
AA11338-3	20240819-K22-596-(05D-STOCK01)	**Collected :**	08/19/2024	11:14				
DRO & ORO, Soil - DRO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		08/27/2024	10:03		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		08/27/2024	11:55		Not Detected	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Acenaphthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Benzo(a)pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		08/26/2024	00:00	10.00	<0.01	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		08/26/2024	00:00	10.00	Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
SVOC, Soils - Pyrene		08/26/2024	00:00	10.00	<0.10 - RL1	mg/kg	0.10	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		08/27/2024	15:34		<0.0025	mg/kg	0.00245	EPA 8260d
VOC, Soils - 1,3,5-trimethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - Benzene		08/27/2024	15:34		Not Detected	mg/kg	0.00242	EPA 8260d
VOC, Soils - Ethylbenzene		08/27/2024	15:34		<0.005	mg/kg	0.005	EPA 8260d
VOC, Soils - m&p- xylene		08/27/2024	15:34		Not Detected	mg/kg	0.00427	EPA 8260d
VOC, Soils - o-xylene		08/27/2024	15:34		<0.00227	mg/kg	0.00227	EPA 8260d
VOC, Soils - Toluene		08/27/2024	15:34		Not Detected	mg/kg	0.00263	EPA 8260d
VOC, Soils - Xylenes, total		08/27/2024	15:34		<0.00654	mg/kg	0.00654	EPA 8260d

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
BORON-4439										
DUP	AA11267	0.78	0.050	mg/kg					<%MDL%	-15 - 15
MB	AA11346	0.01		mg/kg						
LCS	AA11347	1.00		mg/kg	1.00		100	80 - 120		
LCS	AA11348	1.09		mg/kg	1.00		109	80 - 120		
CHROM_VI_SOIL-4431										
MB	AA11323	0.02		mg/kg						
LCS	AA11325	0.04		mg/kg	0.04		100			
LCS	AA11326	0.04		mg/kg	0.04		100			
DUP	AA11333	<0.08	0.080	mg/kg						
ECSOIL_MMHOS-4433										
DUP	AA11267	6.87		mmhos/cm					4.2735	
LCS	AA11328	10.32		mmhos/cm	10.00		103			
LCS	AA11329	10.34		mmhos/cm	10.00		103			
GRO_SOIL-4513										
DUP	AA11333	0.98582	0.26827	mg/kg					12.205	
Matrix Spike	AA11333	0.87242		mg/kg	2.150		25.3			
MB	AA11517	Not Detected		mg/kg						
LCS	AA11518	1.77489		mg/kg	2.150		82.6			
LCS	AA11519	1.83267		mg/kg	2.150		85.2			
PH_S-4435										
DUP	AA11267	7.98	0.01	S.U.					0.3752345215	-5 - 5
LCS	AA11331	6.90	0.01	S.U.	6.86		101	95 - 105		
LCS	AA11332	6.87	0.01	S.U.	6.86		100	95 - 105		

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Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DRO_ORO_SOIL-4474										
AA11333										
Dup	DRO	291.73				<100.00			25.4	
Dup	ORO	278.42				<100.00			4.26	
Matrix Spike	DRO	376.61		mg/kg	350	<100.00	108			
Matrix Spike	ORO	266.80		mg/kg	350	<100.00	76.2			
AA11445										
MB	DRO	Not Detected		mg/kg						
MB	ORO	Not Detected		mg/kg						
AA11446										
LCS	DRO	431.42		mg/kg			123			
LCS	ORO	327.79		mg/kg			93.7			
AA11447										
LCS	DRO	434.40		mg/kg			124			
LCS	ORO	301.47		mg/kg			86.1			
METALS_S-4440										
AA11338										
Dup	Arsenic	15.39	0.025	mg/kg		13.72			11.5	0 - 15
Dup	Barium	2356.54	0.025	mg/kg		2270.50			3.72	0 - 15
Dup	Cadmium	0.49	0.001	mg/kg		0.50			2.02	0 - 15
Dup	Copper	23.19	0.025	mg/kg		24.33			4.80	0 - 15
Dup	Lead	17.764	0.025	mg/kg		15.61			12.9	0 - 15
Dup	Nickel	18.32	0.025	mg/kg		16.18			12.4	0 - 15
Dup	Selenium	2.71	0.025	mg/kg		2.38			13.0	0 - 15
Dup	Silver	<0.25	0.250	mg/kg		<0.25				
Dup	Zinc	58.71	0.025	mg/kg		51.30			13.5	0 - 15
Matrix Spike	Arsenic	33.48		mg/kg	20	13.72	98.8			
Matrix Spike	Barium	2296.70		mg/kg	20	2270.50	131			
Matrix Spike	Cadmium	20.53		mg/kg	20	0.50	100			
Matrix Spike	Copper	42.37		mg/kg	20	24.33	90.2			
Matrix Spike	Lead	35.73		mg/kg	20	15.61	101			
Matrix Spike	Nickel	36.07		mg/kg	20	16.18	99.4			
Matrix Spike	Selenium	19.29		mg/kg	20	2.38	84.6			
Matrix Spike	Silver	17.30		mg/kg	20	<0.25	86.5			
Matrix Spike	Zinc	69.65		mg/kg	20	51.30	91.8			
AA11349										
MB	Arsenic	0.00		mg/kg						
MB	Barium	0.00		mg/kg						
MB	Cadmium	0.00		mg/kg						
MB	Copper	0.00		mg/kg						
MB	Lead	0.00		mg/kg						
MB	Nickel	0.00		mg/kg						
MB	Selenium	0.00		mg/kg						
MB	Silver	0.00		mg/kg						
MB	Zinc	0.01		mg/kg						
AA11351										

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Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
LCS	Arsenic	0.09		mg/kg			100	80 - 120		
LCS	Barium	0.09		mg/kg			100	80 - 120		
LCS	Cadmium	0.09		mg/kg			100	80 - 120		
LCS	Copper	0.09		mg/kg			100	80 - 120		
LCS	Lead	0.09		mg/kg			100	80 - 120		
LCS	Nickel	0.09		mg/kg			100	80 - 120		
LCS	Selenium	0.09		mg/kg			100	80 - 120		
LCS	Silver	0.09		mg/kg			100	80 - 120		
LCS	Zinc	0.09		mg/kg			100	80 - 120		
AA11352										
LCS	Arsenic	0.09		mg/kg			100	80 - 120		
LCS	Barium	0.09		mg/kg			100	80 - 120		
LCS	Cadmium	0.09		mg/kg			100	80 - 120		
LCS	Copper	0.09		mg/kg			100	80 - 120		
LCS	Lead	0.09		mg/kg			100	80 - 120		
LCS	Nickel	0.09		mg/kg			100	80 - 120		
LCS	Selenium	0.09		mg/kg			100	80 - 120		
LCS	Silver	0.09		mg/kg			100	80 - 120		
LCS	Zinc	0.09		mg/kg			100	80 - 120		
SAR-4466										
AA11267										
Dup	Calcium	27.96		mEq/L	27.96	25.21			10.3	
Dup	Magnesium	38.24		mEq/L	38.24	37.18			2.81	
Dup	Sodium	26.53		mEq/L	26.53	26.79			0.975	
AA11421										
MB	Calcium	0.00		mEq/L						
MB	Magnesium	0.01		mEq/L						
MB	Sodium	0.02		mEq/L						
AA11422										
LCS	Calcium	9.01		ppm			90.1			
LCS	Magnesium	10.30		ppm			103			
LCS	Sodium	10.12		ppm			101			
AA11423										
LCS	Calcium	489.14		ppm			97.8			
LCS	Magnesium	488.52		ppm			97.7			
LCS	Sodium	488.42		ppm			97.7			
SVOC_SOIL-4475										
AA11334										
Dup	1-methylnaphthalene	0.26		mg/kg		<0.01			7.41	
Dup	2-methylnaphthalene	0.29		mg/kg		<0.10			6.67	
Dup	Acenaphthene	0.30		mg/kg		Not Detected			3.28	
Dup	Anthracene	0.50		mg/kg		Not Detected			<%MDL%	
Dup	Benz(a)anthracene	0.35		mg/kg		Not Detected			5.56	
Dup	Benzo(a)pyrene	0.45		mg/kg		Not Detected			6.45	
Dup	Benzo(b)fluoranthene	0.37		mg/kg		Not Detected			7.79	
Dup	Benzo(k)fluoranthene	0.35		mg/kg		Not Detected			8.22	

Division of Environmental Testing
2115 N Scranton St Suite 3040A
Aurora, CO 80045
800-440-5184

FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
Dup	Chrysene	0.33		mg/kg		Not Detected			5.88	
Dup	Dibenzo(a,h)anthracene	0.42		mg/kg		Not Detected			2.41	
Dup	Fluoranthene	0.33		mg/kg		Not Detected			5.88	
Dup	Fluorene	0.34		mg/kg		Not Detected			2.90	
Dup	Indeno(1,2,3-cd)pyrene	0.29		mg/kg		Not Detected			3.39	
Dup	Naphthalene	0.39		mg/kg		Not Detected			9.76	
Dup	Pyrene	0.39		mg/kg		Not Detected			2.53	
Matrix Spike	1-methylnaphthalene	0.28		mg/kg	0.30	<0.01	93.3			
Matrix Spike	2-methylnaphthalene	0.31		mg/kg	0.30	<0.10	103			
Matrix Spike	Acenaphthene	0.31		mg/kg	0.30	Not Detected	103			
Matrix Spike	Anthracene	0.50		mg/kg	0.30	Not Detected	167			
Matrix Spike	Benz(a)anthracene	0.37		mg/kg	0.30	Not Detected	123			
Matrix Spike	Benzo(a)pyrene	0.48		mg/kg	0.30	Not Detected	160			
Matrix Spike	Benzo(b)fluoranthene	0.40		mg/kg	0.30	Not Detected	133			
Matrix Spike	Benzo(k)fluoranthene	0.38		mg/kg	0.30	Not Detected	127			
Matrix Spike	Chrysene	0.35		mg/kg	0.30	Not Detected	117			
Matrix Spike	Dibenzo(a,h)anthracene	0.41		mg/kg	0.30	Not Detected	137			
Matrix Spike	Fluoranthene	0.35		mg/kg	0.30	Not Detected	117			
Matrix Spike	Fluorene	0.35		mg/kg	0.30	Not Detected	117			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.30		mg/kg	0.30	Not Detected	100			
Matrix Spike	Naphthalene	0.43		mg/kg	0.30	Not Detected	143			
Matrix Spike	Pyrene	0.40		mg/kg	0.30	Not Detected	133			
AA11449										
MB	1-methylnaphthalene	<0.01		mg/kg						
MB	2-methylnaphthalene	<0.01		mg/kg						
MB	Acenaphthene	Not Detected		mg/kg						
MB	Anthracene	Not Detected		mg/kg						
MB	Benz(a)anthracene	Not Detected		mg/kg						
MB	Benzo(a)pyrene	Not Detected		mg/kg						
MB	Benzo(b)fluoranthene	Not Detected		mg/kg						
MB	Benzo(k)fluoranthene	Not Detected		mg/kg						
MB	Chrysene	Not Detected		mg/kg						
MB	Dibenzo(a,h)anthracene	Not Detected		mg/kg						
MB	Fluoranthene	Not Detected		mg/kg						
MB	Fluorene	Not Detected		mg/kg						
MB	Indeno(1,2,3-cd)pyrene	Not Detected		mg/kg						
MB	Naphthalene	Not Detected		mg/kg						
MB	Pyrene	Not Detected		mg/kg						
AA11450										
LCS	1-methylnaphthalene	0.29		mg/kg			96.7			
LCS	2-methylnaphthalene	0.28		mg/kg			93.3			
LCS	Acenaphthene	0.29		mg/kg			96.7			
LCS	Anthracene	0.35		mg/kg			117			
LCS	Benz(a)anthracene	0.30		mg/kg			100			
LCS	Benzo(a)pyrene	0.35		mg/kg			117			
LCS	Benzo(b)fluoranthene	0.36		mg/kg			120			
LCS	Benzo(k)fluoranthene	0.36		mg/kg			120			

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
LCS	Chrysene	0.31		mg/kg			103			
LCS	Dibenzo(a,h)anthracene	0.30		mg/kg			100			
LCS	Fluoranthene	0.34		mg/kg			113			
LCS	Fluorene	0.35		mg/kg			117			
LCS	Indeno(1,2,3-cd)pyrene	0.25		mg/kg			83.3			
LCS	Naphthalene	0.33		mg/kg			110			
LCS	Pyrene	0.31		mg/kg			103			
AA11451										
LCS	1-methylnaphthalene	0.26		mg/kg			86.7			
LCS	2-methylnaphthalene	0.29		mg/kg			96.7			
LCS	Acenaphthene	0.30		mg/kg			100			
LCS	Anthracene	0.35		mg/kg			117			
LCS	Benz(a)anthracene	0.30		mg/kg			100			
LCS	Benzo(a)pyrene	0.36		mg/kg			120			
LCS	Benzo(b)fluoranthene	0.32		mg/kg			107			
LCS	Benzo(k)fluoranthene	0.35		mg/kg			117			
LCS	Chrysene	0.36		mg/kg			120			
LCS	Dibenzo(a,h)anthracene	0.34		mg/kg			113			
LCS	Fluoranthene	0.31		mg/kg			103			
LCS	Fluorene	0.36		mg/kg			120			
LCS	Indeno(1,2,3-cd)pyrene	0.27		mg/kg			90.0			
LCS	Naphthalene	0.34		mg/kg			113			
LCS	Pyrene	0.29		mg/kg			96.7			
VOC_S-4481										
AA11333										
Dup	1,2,4-trimethylbenzene	0.0074		mg/kg		0.0025			16.1	
Dup	1,3,5-trimethylbenzene	0.072		mg/kg		0.047			11.8	
Dup	Benzene	0.024		mg/kg		<0.0024			15.4	
Dup	Ethylbenzene	0.018		mg/kg		<0.005			20.0	
Dup	m&p- xylene	0.032		mg/kg		0.0062			8.96	
Dup	o-xylene	0.024		mg/kg		0.0038			8.00	
Dup	Toluene	0.032		mg/kg		<0.0026			6.06	
Dup	Xylenes, total	0.056		mg/kg		0.010			8.55	
Matrix Spike	1,2,4-trimethylbenzene	0.0087		mg/kg	0.05	0.0025	12.4			
Matrix Spike	1,3,5-trimethylbenzene	0.081		mg/kg	0.05	0.047	68.0			
Matrix Spike	Benzene	0.028		mg/kg	0.05	<0.0024	56.0			
Matrix Spike	Ethylbenzene	0.022		mg/kg	0.05	<0.005	44.0			
Matrix Spike	m&p- xylene	0.035		mg/kg	0.100	0.0062	28.8			
Matrix Spike	o-xylene	0.026		mg/kg	0.05	0.0038	44.4			
Matrix Spike	Toluene	0.034		mg/kg	0.05	<0.0026	68.0			
Matrix Spike	Xylenes, total	0.061		mg/kg	0.150	0.010	34.0			
AA11463										
MB	1,2,4-trimethylbenzene	<0.0025		mg/kg						
MB	1,3,5-trimethylbenzene	<0.005		mg/kg						
MB	Benzene	Not Detected		mg/kg						
MB	Ethylbenzene	<0.005		mg/kg						

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FINAL RESULTS REPORT

Report Date : 8/28/2024
Report Time : 9:29

Project Manager: Blair Rollins **Project Name:** K22 (05D) Investigation **Project Number:** N/A

QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
MB	m&p- xylene	<0.0043		mg/kg						
MB	o-xylene	<0.0023		mg/kg						
MB	Toluene	Not Detected		mg/kg						
MB	Xylenes, total	<0.0065		mg/kg						
AA11464										
LCS	1,2,4-trimethylbenzene	0.065		mg/kg			130			
LCS	1,3,5-trimethylbenzene	0.064		mg/kg			128			
LCS	Benzene	0.065		mg/kg			130			
LCS	Ethylbenzene	0.061		mg/kg			122			
LCS	m&p- xylene	0.120		mg/kg			120			
LCS	o-xylene	0.064		mg/kg			128			
LCS	Toluene	0.062		mg/kg			124			
LCS	Xylenes, total	0.184		mg/kg			123			
AA11465										
LCS	1,2,4-trimethylbenzene	0.061		mg/kg			122			
LCS	1,3,5-trimethylbenzene	0.060		mg/kg			120			
LCS	Benzene	0.059		mg/kg			118			
LCS	Ethylbenzene	0.057		mg/kg			114			
LCS	m&p- xylene	0.111		mg/kg			111			
LCS	o-xylene	0.061		mg/kg			122			
LCS	Toluene	0.060		mg/kg			120			
LCS	Xylenes, total	0.172		mg/kg			115			

Qualifier	Explanation
H1	Sample received outside of regulatory holding time.
H2	Sample analyzed outside of regulatory holding time due to a laboratory error.
P1	Sample received outside temperature requirements, 0-6°C.
P2	Sample received unpreserved.
P3	Broken or leaking sample container.
P4	Sample improperly collected
P5	Sample incorrectly preserved
B1	Blank failed high, indicating possible high bias in sample results.
B2	Blank failed low, indicating possible low bias in sample results.
MS	Matrix Spike / Matrix Spike Duplicate recovery and/or RPD limit exceeded, indicating potential matrix interference.
D1	Duplicate RPD limit exceeded due to low sample concentration.
D2	Duplicate RPD limit exceeded due to matrix interference.
S	Surrogate recovery failed, indicating potential matrix interference.
RL1	Reporting limits raised due to matrix interference.
RL2	Reporting limits raised due to limited sample.
U	Sample result less than method detection limit.
J	Sample result less than reporting limit but higher than method detection limit.
E	Electronic loss or corruption of data.
I	Subcontracted sample

ANALYTICAL REPORT

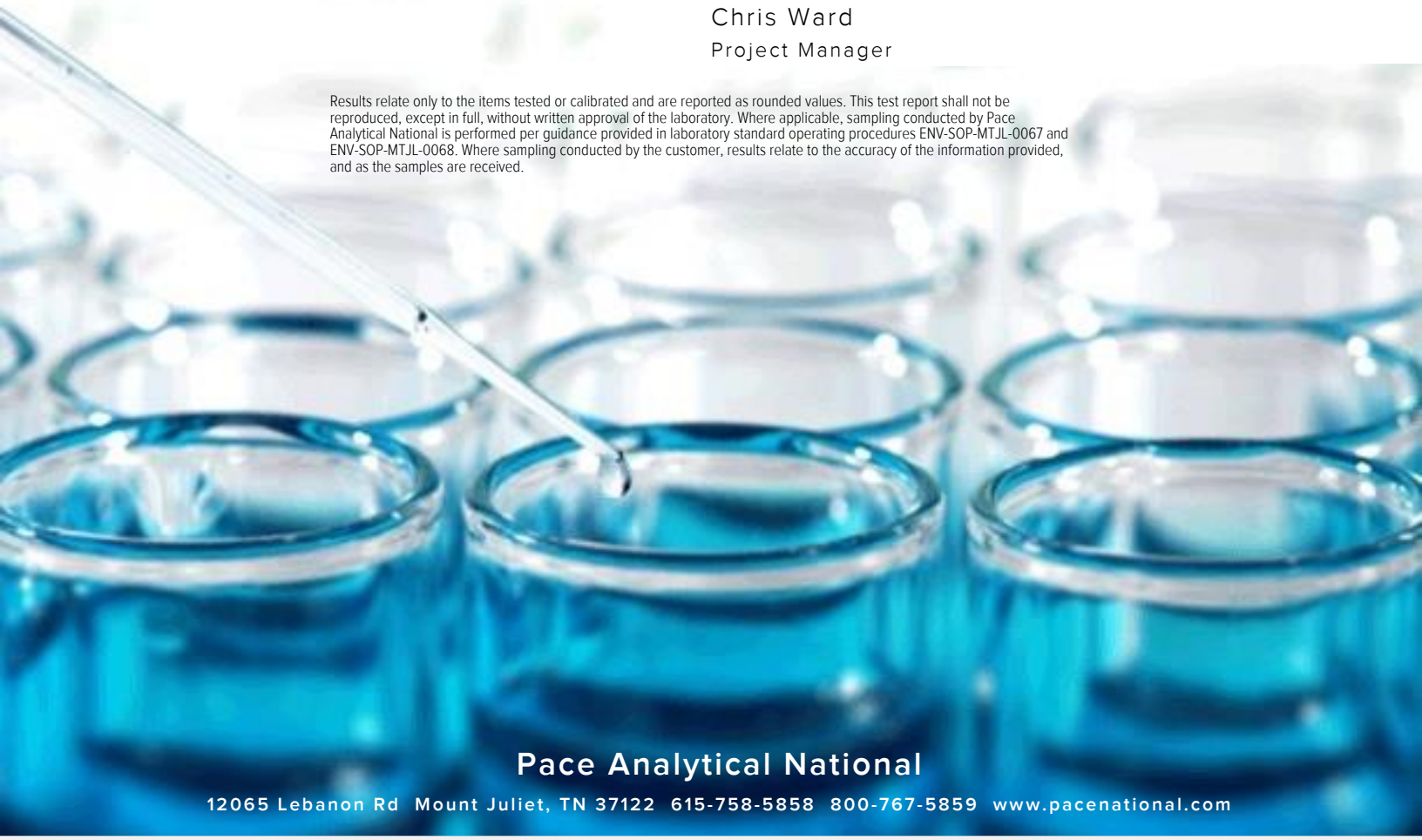
September 26, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1534559
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

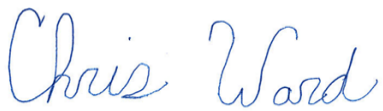
20220908-F23-BG(1140)@1' L1534559-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 11:40
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/21/22 00:04	09/21/22 00:04	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 08:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929125	1	09/21/22 10:00	09/21/22 12:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:24	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 22:56	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:31	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.501		1	09/21/2022 00:04	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 08:04	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.13	T8	1	09/21/2022 12:00	WG1929125

Sample Narrative:

L1534559-01 WG1929125: 8.13 at 22C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	236		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534559-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	339		0.0852	0.500	1	09/15/2022 18:24	WG1926442
Cadmium	0.514		0.0471	0.500	1	09/15/2022 18:24	WG1926442
Copper	22.3		0.400	2.00	1	09/15/2022 18:24	WG1926442
Lead	16.8		0.208	0.500	1	09/15/2022 18:24	WG1926442
Nickel	19.2		0.132	2.00	1	09/15/2022 18:24	WG1926442
Selenium	1.07	J	0.764	2.00	1	09/15/2022 18:24	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:24	WG1926442
Zinc	52.6		0.832	5.00	1	09/15/2022 18:24	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.516		0.0167	0.200	1	09/15/2022 22:56	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	17.3		0.100	1.00	5	09/15/2022 19:31	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534044-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534044-02 09/21/22 12:00 • (DUP) R3839634-2 09/21/22 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.75	7.75	1	0.000		1

Sample Narrative:

OS: 7.75 at 21.6C

DUP: 7.75 at 21.8C

L1534307-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534307-01 09/21/22 12:00 • (DUP) R3839634-3 09/21/22 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.43	8.42	1	0.119		1

Sample Narrative:

OS: 8.43 at 22.1C

DUP: 8.42 at 22.2C

Laboratory Control Sample (LCS)

(LCS) R3839634-1 09/21/22 12:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.91	99.1	99.0-101	

Sample Narrative:

LCS: 9.91 at 21C

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

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

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC

Billing Information: Info on file

Address: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins

Email To: Info on file

Copy To: Chris McKisson, remediation@confluence-cc.com

Site Collection Info/Address:

Customer Project Name/Number: F23 Background

State: CO / Garfield

County/City:

Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone:

Email:

Site/Facility ID #: F23

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Alex Slorby

Purchase Order # :

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature): Alex Slorby

Turnaround Date Required: Standard Turnaround

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments: L1534559-01

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC
20220908-F23-BG(1140)@1'	SL	G	9/8/2022	1140				1	P	X	X	X	X

cont. - 1

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 5433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NSM1
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/9/22 1100	Received by/Company: (Signature)	Date/Time: 1146
Relinquished by/Company: (Signature)	Date/Time: 9/9/22 1300	Received by/Company: (Signature)	Date/Time: 09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

September 26, 2022

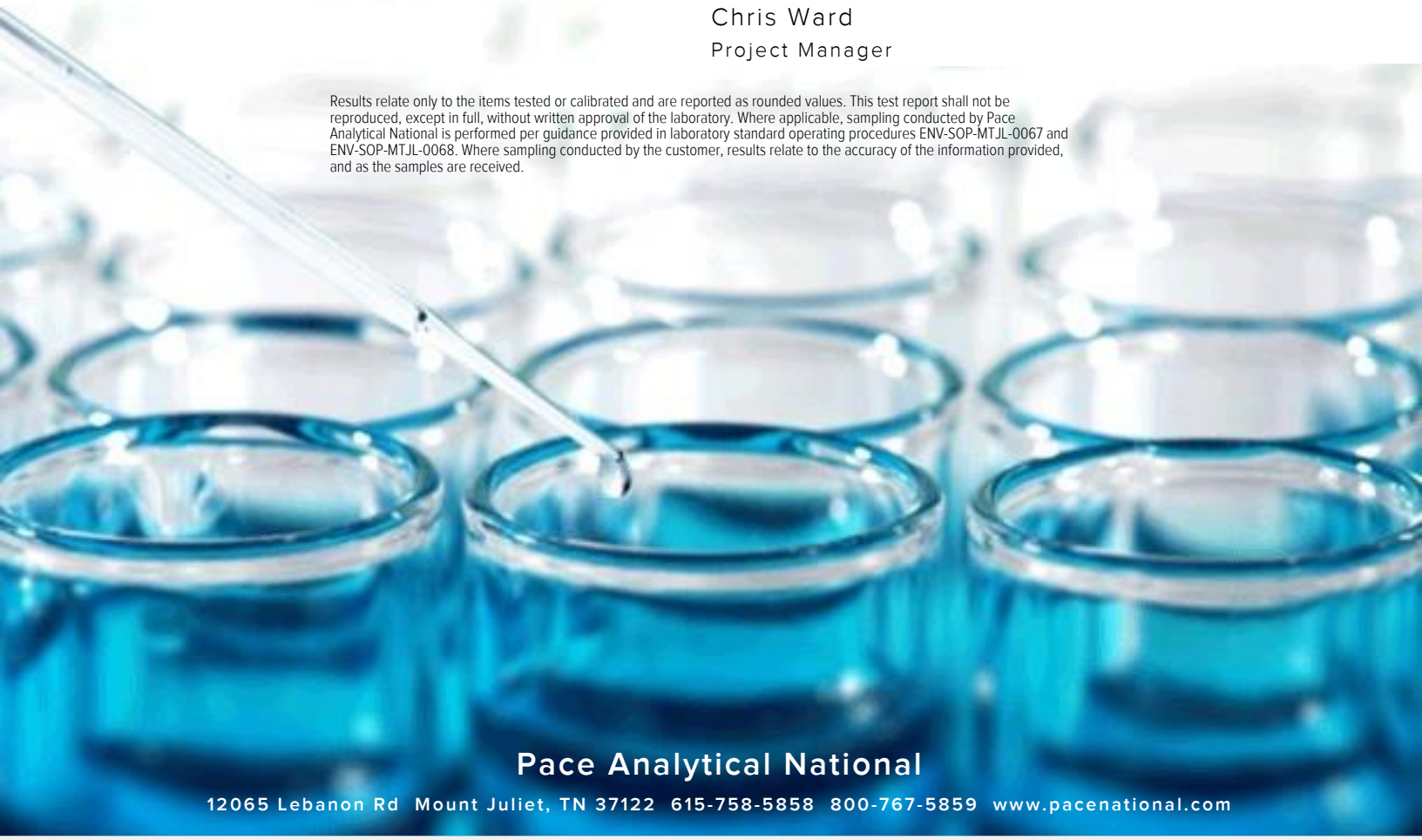
Caerus Oil and Gas

Sample Delivery Group:	L1534552
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

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 National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

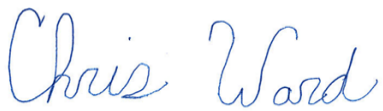
20220908-F23-BG(0950)@0.5' L1534552-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 09:50
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/20/22 23:56	09/20/22 23:56	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 07:13	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929264	1	09/20/22 15:00	09/20/22 17:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1925721	1	09/23/22 14:00	09/24/22 09:00	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:15	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 22:48	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:22	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.196		1	09/20/2022 23:56	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 07:13	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.12	T8	1	09/20/2022 17:00	WG1929264

Sample Narrative:

L1534552-01 WG1929264: 8.12 at 23.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	220		10.0	1	09/24/2022 09:00	WG1925721

Sample Narrative:

L1534552-01 WG1925721: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	309		0.0852	0.500	1	09/15/2022 18:15	WG1926442
Cadmium	0.488	J	0.0471	0.500	1	09/15/2022 18:15	WG1926442
Copper	22.4		0.400	2.00	1	09/15/2022 18:15	WG1926442
Lead	13.5		0.208	0.500	1	09/15/2022 18:15	WG1926442
Nickel	17.2		0.132	2.00	1	09/15/2022 18:15	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:15	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:15	WG1926442
Zinc	48.2		0.832	5.00	1	09/15/2022 18:15	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.793		0.0167	0.200	1	09/15/2022 22:48	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	18.5		0.100	1.00	5	09/15/2022 19:22	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534552-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534552-01 09/20/22 17:00 • (DUP) R3839370-2 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.12	8.11	1	0.123		1

Sample Narrative:

OS: 8.12 at 23.2C

DUP: 8.11 at 23.2C

L1534970-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1534970-05 09/20/22 17:00 • (DUP) R3839370-3 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.80	8.80	1	0.000		1

Sample Narrative:

OS: 8.8 at 22.9C

DUP: 8.8 at 23C

Laboratory Control Sample (LCS)

(LCS) R3839370-1 09/20/22 17:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 22.7C

Method Blank (MB)

(MB) R3840903-1 09/24/22 09:00

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

Sample Narrative:
BLANK: at 25C

L1534976-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1534976-03 09/24/22 09:00 • (DUP) R3840903-3 09/24/22 09:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	350	353	1	0.853		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1537862-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1537862-06 09/24/22 09:00 • (DUP) R3840903-4 09/24/22 09:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3930	3920	1	0.255		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840903-2 09/24/22 09:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1100	98.3	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: F23 Background	State: CO / Garfield; County/City: ; Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: Email:	Site/Facility ID #: F23; Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : Quote #: ; DW PWS ID #: DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround; Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day; Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC
20220908-F23-BG(0950)@0.5'	SL	G	9/8/2022	0950				1	P	X	X	X	X

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
L1534552
-01

cont.-1

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 0221 5433 8386 1233
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: NS47
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/8/22 1100	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 9/9/22 1320	Received by/Company: (Signature)	Date/Time: 09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

1149

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

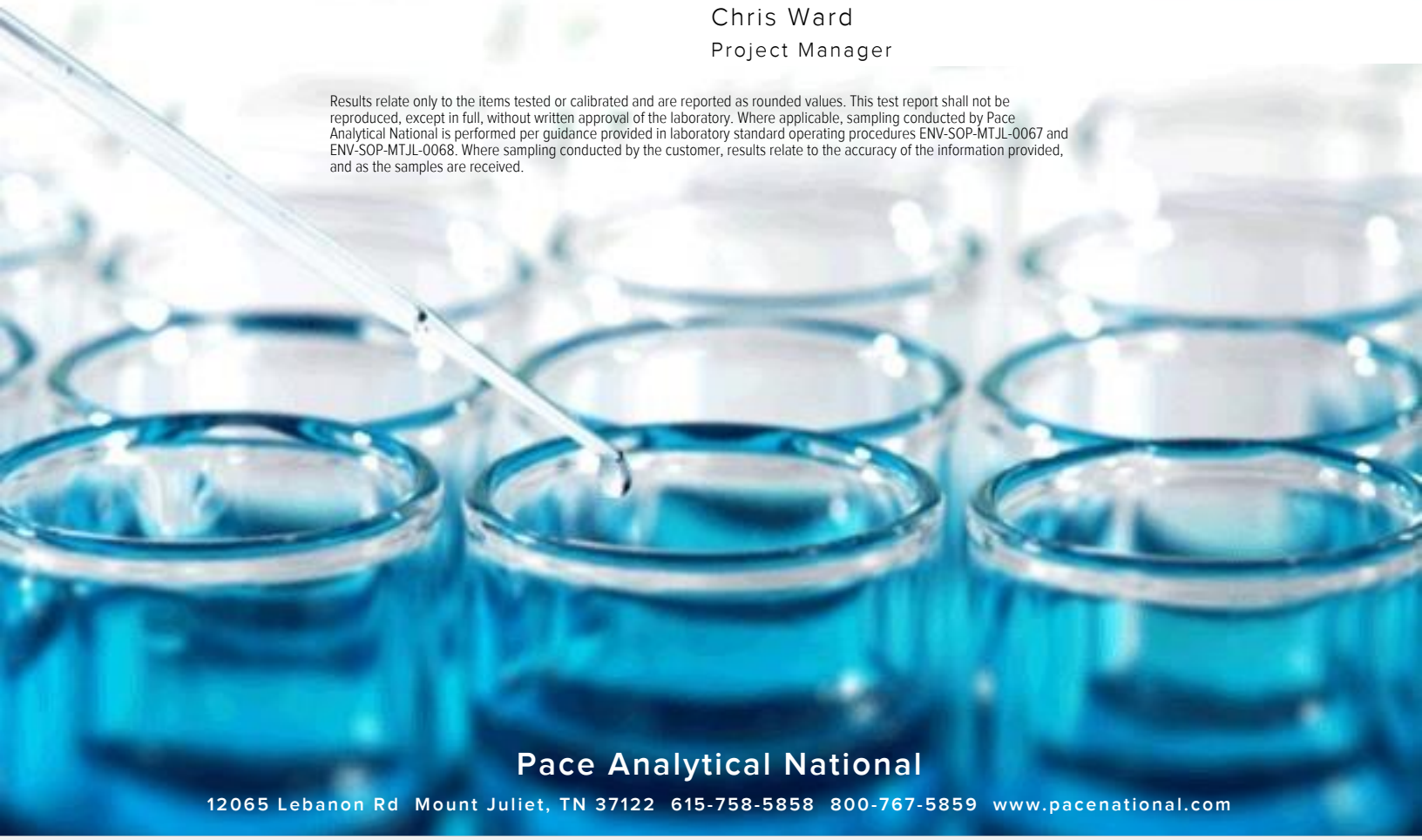
September 26, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1534561
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

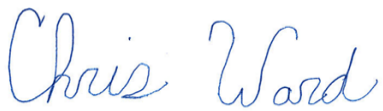
20220908-F23-BG(1050)@1' L1534561-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 10:50
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/21/22 00:07	09/21/22 00:07	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 08:10	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929667	1	09/21/22 09:00	09/21/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:27	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 23:05	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:35	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.326		1	09/21/2022 00:07	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 08:10	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.05	T8	1	09/21/2022 11:00	WG1929667

Sample Narrative:

L1534561-01 WG1929667: 8.05 at 22.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	393		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534561-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	296		0.0852	0.500	1	09/15/2022 18:27	WG1926442
Cadmium	0.497	J	0.0471	0.500	1	09/15/2022 18:27	WG1926442
Copper	19.3		0.400	2.00	1	09/15/2022 18:27	WG1926442
Lead	14.8		0.208	0.500	1	09/15/2022 18:27	WG1926442
Nickel	18.0		0.132	2.00	1	09/15/2022 18:27	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:27	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:27	WG1926442
Zinc	50.5		0.832	5.00	1	09/15/2022 18:27	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.868		0.0167	0.200	1	09/15/2022 23:05	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.3		0.100	1.00	5	09/15/2022 19:35	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534564-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534564-01 09/21/22 11:00 • (DUP) R3839587-2 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.65	8.67	1	0.231		1

Sample Narrative:

OS: 8.65 at 21.9C

DUP: 8.67 at 22C

L1534581-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-02 09/21/22 11:00 • (DUP) R3839587-3 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.71	7.70	1	0.130		1

Sample Narrative:

OS: 7.71 at 22.1C

DUP: 7.7 at 22.3C

Laboratory Control Sample (LCS)

(LCS) R3839587-1 09/21/22 11:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 21.8C

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

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC

Billing Information: Info on file

Address: Info on file

Report To: Jake Janicek, Brett Middleton, Blair Rollins

Email To: Info on file

Copy To: Chris McKisson, remediation@confluence-cc.com

Site Collection Info/Address:

Customer Project Name/Number: F23 Background

State: CO / County/City: Garfield Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Phone:
Email:

Site/Facility ID #: F23

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Alex Slorby

Purchase Order # :
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature): Alex Slorby

Turnaround Date Required: Standard Turnaround

Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush: (Expedite Charges Apply)
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
L1534561
-01

Cont. - 1

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC
20220908-F23-BG(1050)@1'	SL	G	9/8/2022	1050				1	P	X	X	X	X

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 5433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NSK1
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Alex Slorby	9/8/22 1100		1145
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	9/9/22 1300		09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Accnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

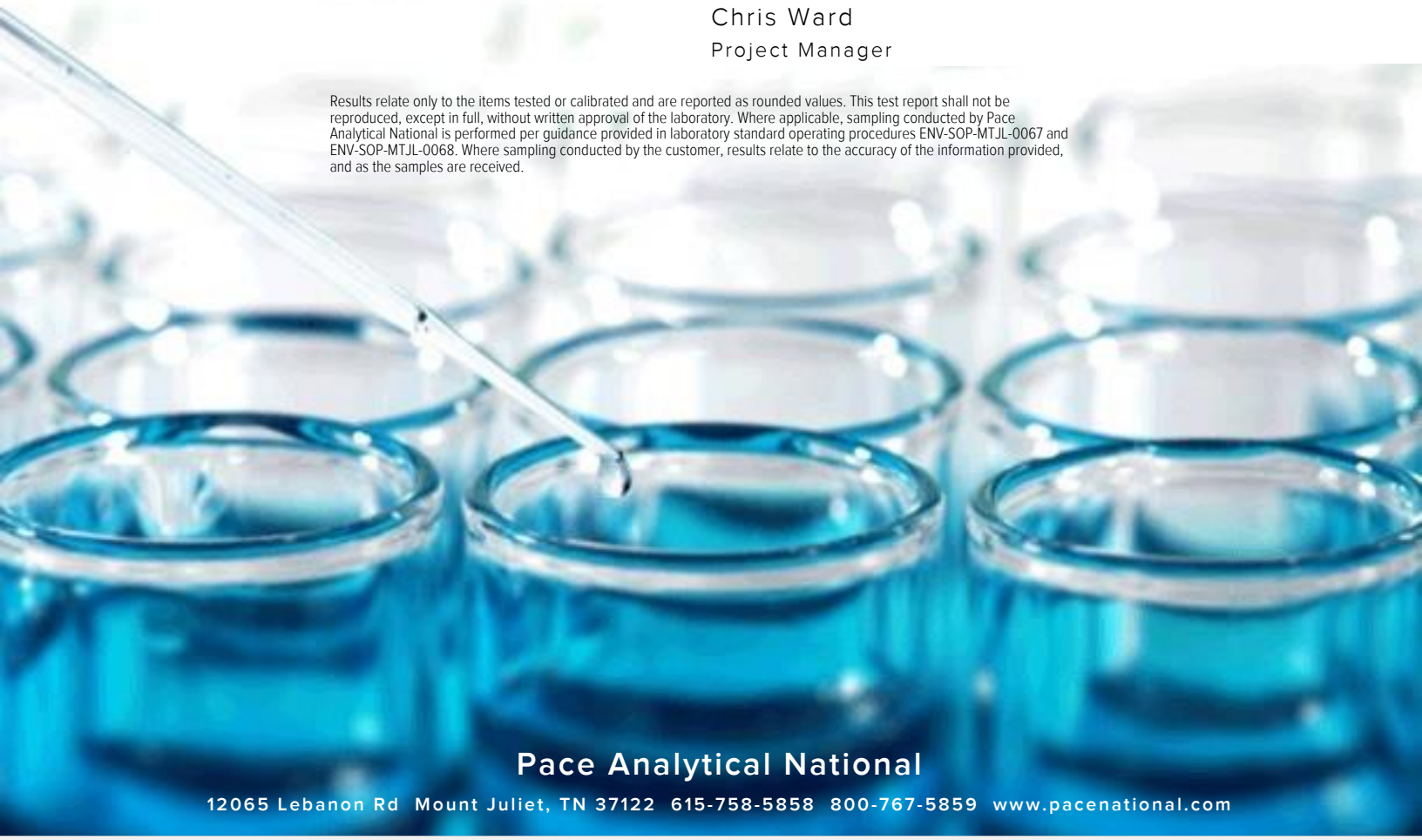
September 26, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1534567
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

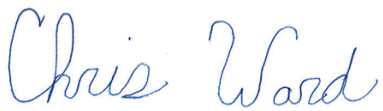
20220908-F23-BG(1020)@0.5' L1534567-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 10:20
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/21/22 00:18	09/21/22 00:18	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 08:20	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929667	1	09/21/22 09:00	09/21/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:39	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 23:10	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:52	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.67		1	09/21/2022 00:18	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 08:20	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.59	T8	1	09/21/2022 11:00	WG1929667

Sample Narrative:

L1534567-01 WG1929667: 8.59 at 21.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2290		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534567-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	515		0.0852	0.500	1	09/15/2022 18:39	WG1926442
Cadmium	0.643		0.0471	0.500	1	09/15/2022 18:39	WG1926442
Copper	35.9		0.400	2.00	1	09/15/2022 18:39	WG1926442
Lead	15.8		0.208	0.500	1	09/15/2022 18:39	WG1926442
Nickel	20.1		0.132	2.00	1	09/15/2022 18:39	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:39	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:39	WG1926442
Zinc	40.5		0.832	5.00	1	09/15/2022 18:39	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.08		0.0167	0.200	1	09/15/2022 23:10	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	22.6		0.100	1.00	5	09/15/2022 19:52	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534564-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534564-01 09/21/22 11:00 • (DUP) R3839587-2 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.65	8.67	1	0.231		1

Sample Narrative:

OS: 8.65 at 21.9C

DUP: 8.67 at 22C

L1534581-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-02 09/21/22 11:00 • (DUP) R3839587-3 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.71	7.70	1	0.130		1

Sample Narrative:

OS: 7.71 at 22.1C

DUP: 7.7 at 22.3C

Laboratory Control Sample (LCS)

(LCS) R3839587-1 09/21/22 11:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 21.8C

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

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: F23 Background	State: CO / Garfield — County/City: — Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: F23 — Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #: — DW PWS ID #: / DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround — Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day — Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC
20220908-F23-BG(1020)@0.5'	SL	G	9/8/2022	1020				1	P	X	X	X	X

Lab Profile/Line:

Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments: L1334567 -01

cont. 1

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 9433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: NSN7
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/9/22 1100	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 9/9/22 1300	Received by/Company: (Signature)	Date/Time: 09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

1143

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

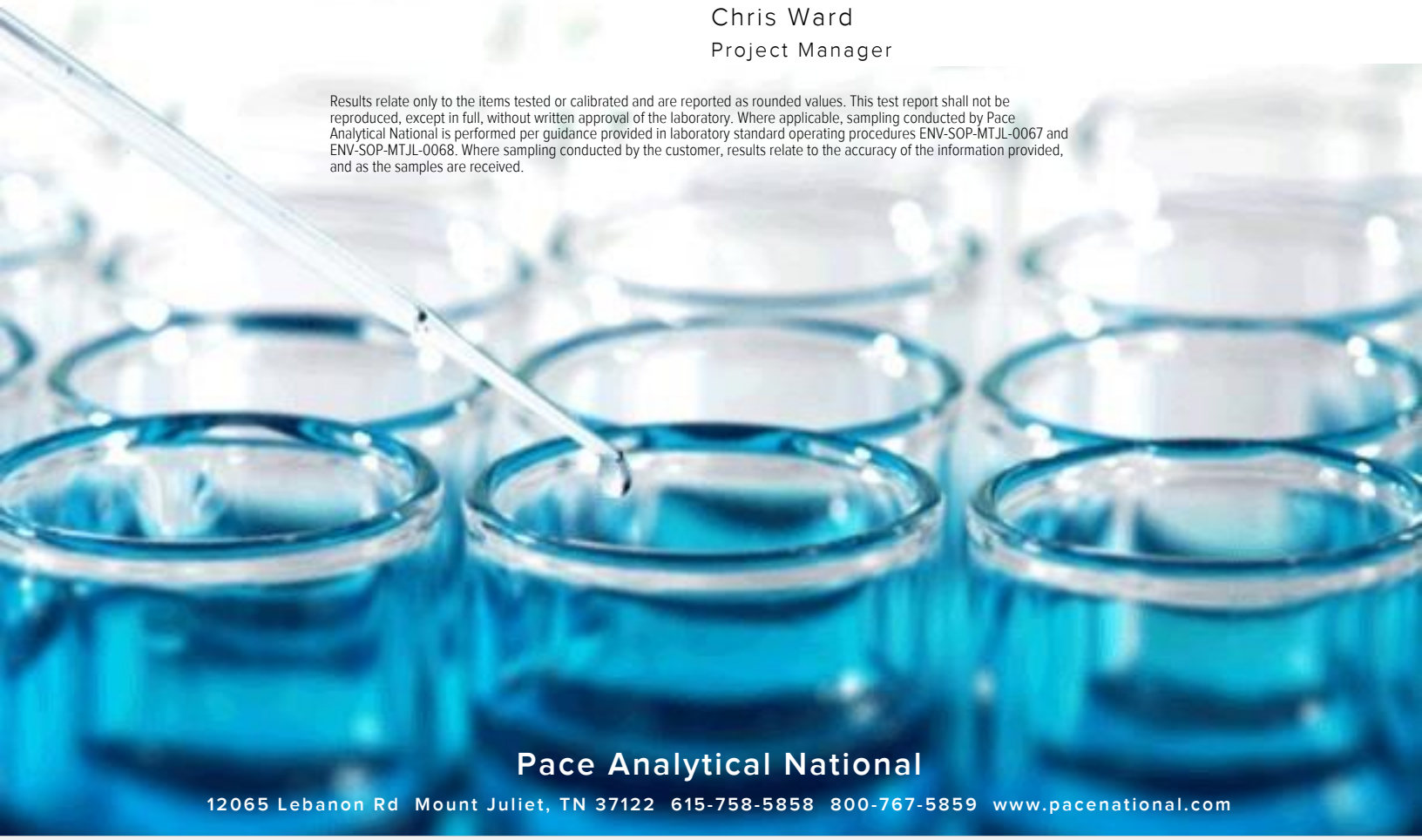
September 26, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1534564
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

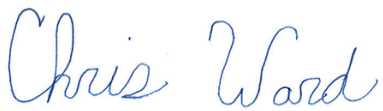
20220908-F23-BG(1120)@1' L1534564-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 11:20
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/21/22 00:10	09/21/22 00:10	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 08:15	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929667	1	09/21/22 09:00	09/21/22 11:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:30	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 23:07	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:38	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.484		1	09/21/2022 00:10	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 08:15	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.65	T8	1	09/21/2022 11:00	WG1929667

Sample Narrative:

L1534564-01 WG1929667: 8.65 at 21.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	225		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534564-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	329		0.0852	0.500	1	09/15/2022 18:30	WG1926442
Cadmium	0.617		0.0471	0.500	1	09/15/2022 18:30	WG1926442
Copper	29.7		0.400	2.00	1	09/15/2022 18:30	WG1926442
Lead	17.6		0.208	0.500	1	09/15/2022 18:30	WG1926442
Nickel	23.8		0.132	2.00	1	09/15/2022 18:30	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:30	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:30	WG1926442
Zinc	62.3		0.832	5.00	1	09/15/2022 18:30	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.655		0.0167	0.200	1	09/15/2022 23:07	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	27.4		0.100	1.00	5	09/15/2022 19:38	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534564-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534564-01 09/21/22 11:00 • (DUP) R3839587-2 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.65	8.67	1	0.231		1

Sample Narrative:

OS: 8.65 at 21.9C

DUP: 8.67 at 22C

L1534581-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-02 09/21/22 11:00 • (DUP) R3839587-3 09/21/22 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.71	7.70	1	0.130		1

Sample Narrative:

OS: 7.71 at 22.1C

DUP: 7.7 at 22.3C

Laboratory Control Sample (LCS)

(LCS) R3839587-1 09/21/22 11:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 21.8C

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: F23 Background	State: CO / Garfield County/City: Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: Email:	Site/Facility ID #: F23
Collected By (print): Alex Slorby	Purchase Order # : Quote #:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [X] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC	Analyses
20220908-F23-BG(1120)@1'	SL	G	9/8/2022	1120				1	P	X	X	X	X	

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
L1534564
-01

cont - 1

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 5433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: NSM1
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/8/22 1100	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 9/22 1341	Received by/Company: (Signature)	Date/Time: 09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

1144

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

September 26, 2022

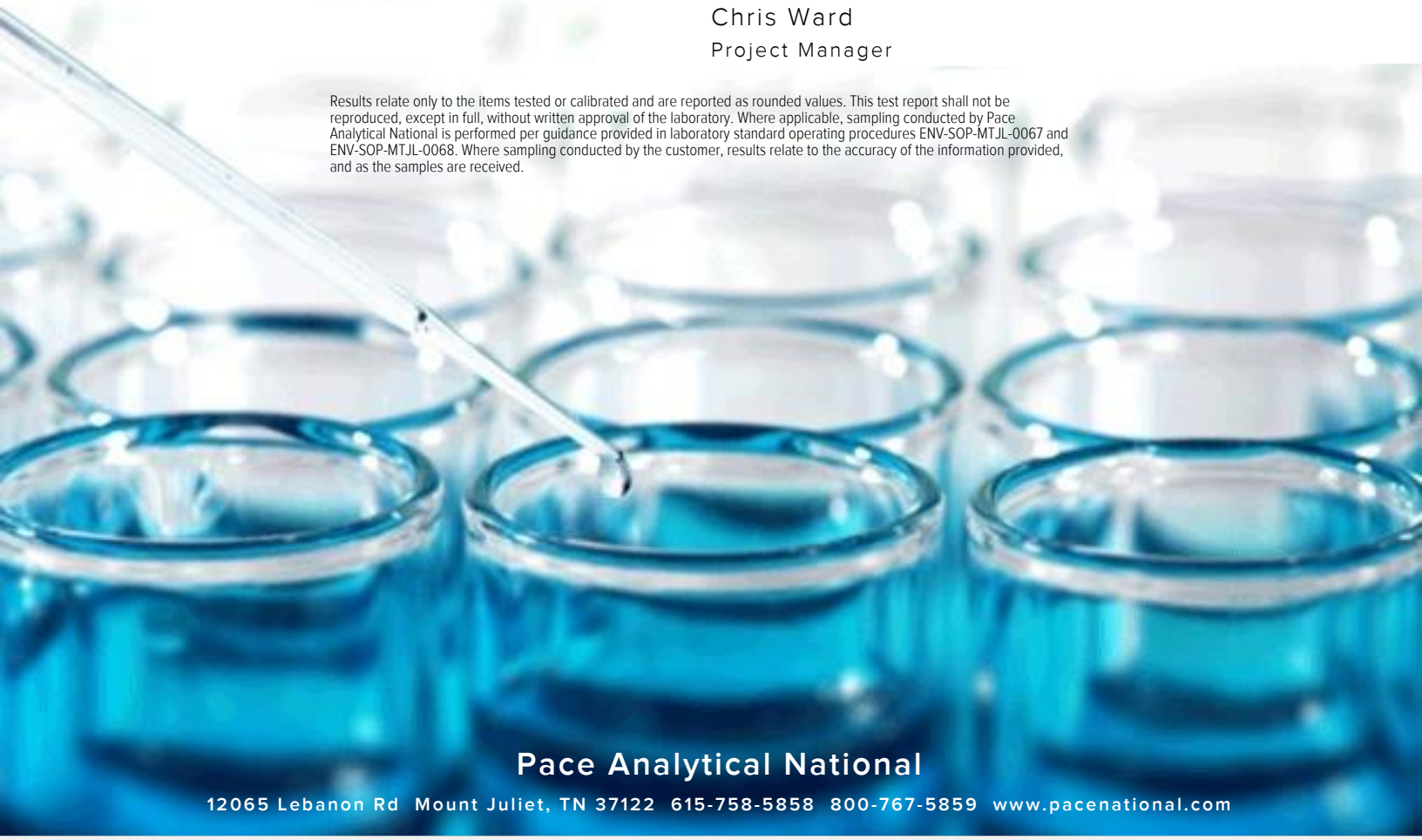
Caerus Oil and Gas

Sample Delivery Group:	L1534555
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

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 National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

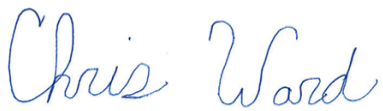
20220908-F23-BG(1215)@0.5' L1534555-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 12:15
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/20/22 23:59	09/20/22 23:59	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 07:18	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929264	1	09/20/22 15:00	09/20/22 17:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:18	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 22:51	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:25	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	123		1	09/20/2022 23:59	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U	J3 J6	0.255	1.00	1	09/26/2022 07:18	WG1930634

Sample Narrative:

L1534555-01 WG1930634: Sample is a reducer.

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	10.1	T8	1	09/20/2022 17:00	WG1929264

Sample Narrative:

L1534555-01 WG1929264: 10.12 at 22.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3800		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534555-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	421		0.0852	0.500	1	09/15/2022 18:18	WG1926442
Cadmium	0.589		0.0471	0.500	1	09/15/2022 18:18	WG1926442
Copper	10.6		0.400	2.00	1	09/15/2022 18:18	WG1926442
Lead	9.07		0.208	0.500	1	09/15/2022 18:18	WG1926442
Nickel	13.8		0.132	2.00	1	09/15/2022 18:18	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:18	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:18	WG1926442
Zinc	46.6		0.832	5.00	1	09/15/2022 18:18	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	7.57		0.0167	0.200	1	09/15/2022 22:51	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.28		0.100	1.00	5	09/15/2022 19:25	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534552-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534552-01 09/20/22 17:00 • (DUP) R3839370-2 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.12	8.11	1	0.123		1

Sample Narrative:

OS: 8.12 at 23.2C

DUP: 8.11 at 23.2C

L1534970-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1534970-05 09/20/22 17:00 • (DUP) R3839370-3 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.80	8.80	1	0.000		1

Sample Narrative:

OS: 8.8 at 22.9C

DUP: 8.8 at 23C

Laboratory Control Sample (LCS)

(LCS) R3839370-1 09/20/22 17:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 22.7C

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

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: F23 Background	State: CO / Garfield County/City: Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: Email:	Site/Facility ID #: F23
Collected By (print): Alex Slorby	Purchase Order # : Quote #:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
	Compliance Monitoring? [ ] Yes [X] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC	Analyses	Analyses	Analyses	Analyses	Analyses	Analyses	Analyses	Analyses
20220908-F23-BG(1215)@0.5'	SL	G	9/8/2022	1215				1	P	X	X	X	X								

Lab Profile/Line:

Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:
L1534555
-01

Cont. - 7.

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 5433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: NSM
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/8/22 1100	Received by/Company: (Signature)	Date/Time:	1148
Relinquished by/Company: (Signature)	Date/Time: 9/9 22 1300	Received by/Company: (Signature)	Date/Time: 09/09/22 1300	Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

ANALYTICAL REPORT

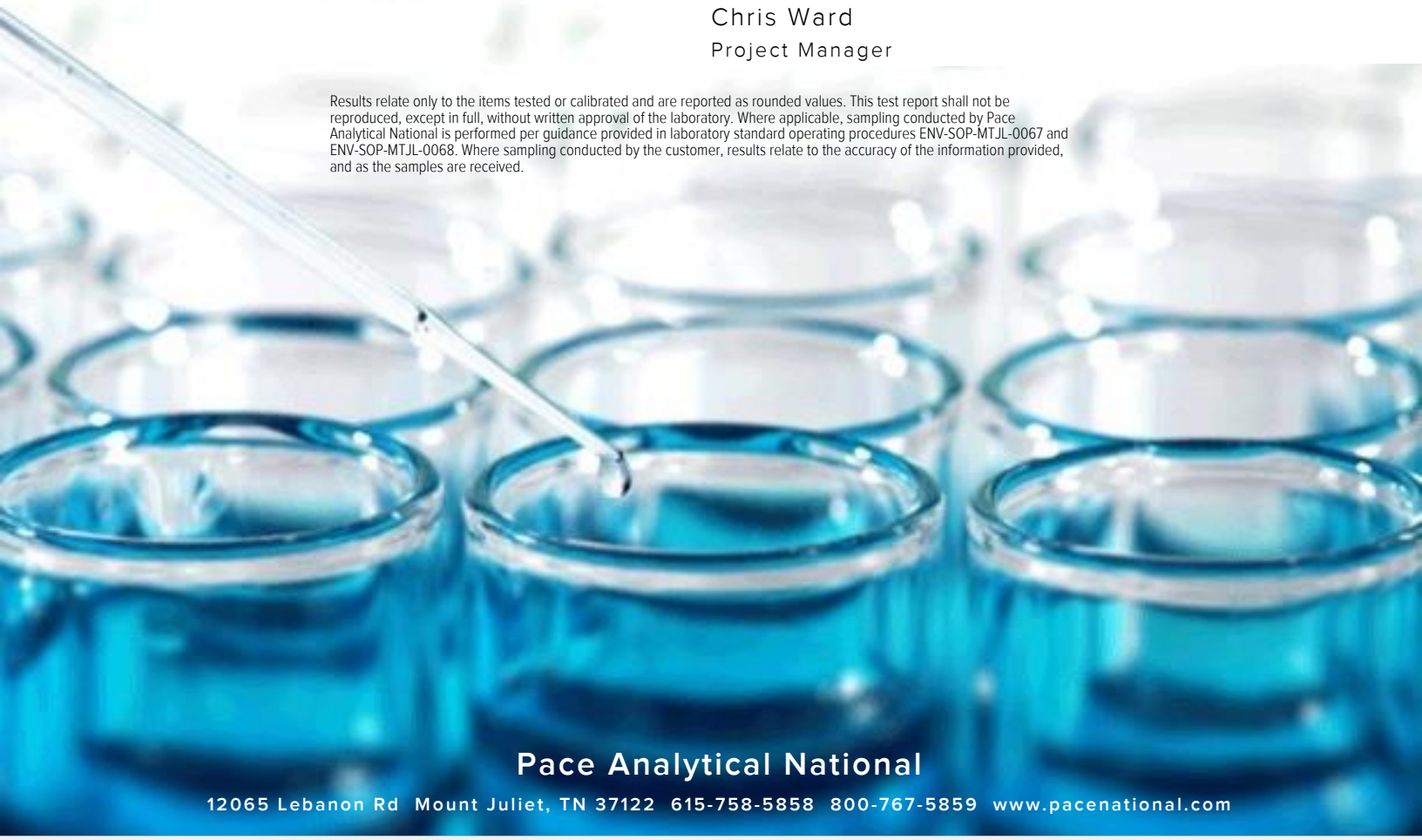
September 26, 2022

Caerus Oil and Gas

Sample Delivery Group:	L1534557
Samples Received:	09/10/2022
Project Number:	
Description:	F23 Background
Site:	F23
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

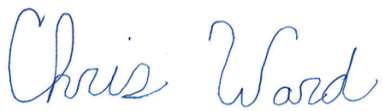
20220908-F23-BG(1240)@1' L1534557-01 Solid

Collected by: Alex Slorby
Collected date/time: 09/08/22 12:40
Received date/time: 09/10/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1926589	1	09/21/22 00:02	09/21/22 00:02	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1930634	1	09/25/22 05:04	09/26/22 07:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1929264	1	09/20/22 15:00	09/20/22 17:00	SGB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1927576	1	09/17/22 13:19	09/23/22 11:10	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1926442	1	09/15/22 08:57	09/15/22 18:21	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1925597	1	09/14/22 08:31	09/15/22 22:54	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1926444	5	09/15/22 08:59	09/15/22 19:28	LD	Mt. Juliet, TN

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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.241		1	09/21/2022 00:02	WG1926589

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/26/2022 07:44	WG1930634

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.49	T8	1	09/20/2022 17:00	WG1929264

Sample Narrative:

L1534557-01 WG1929264: 8.49 at 23.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	156		10.0	1	09/23/2022 11:10	WG1927576

Sample Narrative:

L1534557-01 WG1927576: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	243		0.0852	0.500	1	09/15/2022 18:21	WG1926442
Cadmium	0.643		0.0471	0.500	1	09/15/2022 18:21	WG1926442
Copper	25.6		0.400	2.00	1	09/15/2022 18:21	WG1926442
Lead	12.7		0.208	0.500	1	09/15/2022 18:21	WG1926442
Nickel	19.1		0.132	2.00	1	09/15/2022 18:21	WG1926442
Selenium	U		0.764	2.00	1	09/15/2022 18:21	WG1926442
Silver	U		0.127	1.00	1	09/15/2022 18:21	WG1926442
Zinc	54.9		0.832	5.00	1	09/15/2022 18:21	WG1926442

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.325		0.0167	0.200	1	09/15/2022 22:54	WG1925597

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.2		0.100	1.00	5	09/15/2022 19:28	WG1926444

Method Blank (MB)

(MB) R3841339-1 09/26/22 06:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1534557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534557-01 09/26/22 07:44 • (DUP) R3841339-10 09/26/22 07:59

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1538296-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1538296-08 09/26/22 09:33 • (DUP) R3841339-11 09/26/22 09:38

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3841339-2 09/26/22 06:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.08	90.8	80.0-120	

L1534555-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-7 09/26/22 07:23 • (MSD) R3841339-8 09/26/22 07:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	2.89	U	14.4	0.000	1	75.0-125	J6	J3 J6	200	20

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-12 09/26/22 07:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	U	0.000	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534555-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534555-01 09/26/22 07:18 • (MS) R3841339-13 09/26/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	636	U	384	60.4	50	75.0-125	J6

Sample Narrative:

OS: Sample is a reducer.

L1534552-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534552-01 09/20/22 17:00 • (DUP) R3839370-2 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.12	8.11	1	0.123		1

Sample Narrative:

OS: 8.12 at 23.2C

DUP: 8.11 at 23.2C

L1534970-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1534970-05 09/20/22 17:00 • (DUP) R3839370-3 09/20/22 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.80	8.80	1	0.000		1

Sample Narrative:

OS: 8.8 at 22.9C

DUP: 8.8 at 23C

Laboratory Control Sample (LCS)

(LCS) R3839370-1 09/20/22 17:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 22.7C

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

Method Blank (MB)

(MB) R3840590-1 09/23/22 11:10

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

Sample Narrative:
BLANK: at 25C

L1534450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1534450-12 09/23/22 11:10 • (DUP) R3840590-3 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	211	210	1	0.712		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1534581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534581-01 09/23/22 11:10 • (DUP) R3840590-4 09/23/22 11:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	191	193	1	0.729		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3840590-2 09/23/22 11:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.7	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3837808-1 09/15/22 17:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3837808-2 09/15/22 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	101	101	80.0-120	
Cadmium	100	97.2	97.2	80.0-120	
Copper	100	96.7	96.7	80.0-120	
Lead	100	97.3	97.3	80.0-120	
Nickel	100	96.7	96.7	80.0-120	
Selenium	100	98.8	98.8	80.0-120	
Silver	20.0	19.1	95.6	80.0-120	
Zinc	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 17:37 • (MS) R3837808-5 09/15/22 17:45 • (MSD) R3837808-6 09/15/22 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	243	408	329	165	85.8	1	75.0-125	J5	J3	21.5	20
Cadmium	100	0.489	84.8	87.6	84.3	87.1	1	75.0-125			3.24	20
Copper	100	53.6	148	154	94.3	100	1	75.0-125			3.80	20
Lead	100	48.7	128	120	79.6	71.0	1	75.0-125		J6	6.94	20
Nickel	100	46.2	137	133	90.6	86.9	1	75.0-125			2.75	20
Selenium	100	U	82.7	86.7	82.7	86.7	1	75.0-125			4.76	20
Silver	20.0	U	16.6	17.1	83.1	85.5	1	75.0-125			2.86	20
Zinc	100	87.9	173	169	85.2	81.5	1	75.0-125			2.14	20

QUALITY CONTROL SUMMARY

L1534557-01

Method Blank (MB)

(MB) R3837837-1 09/15/22 22:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3837837-2 09/15/22 22:34 • (LCSD) R3837837-3 09/15/22 22:37

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 %
Hot Water Sol. Boron	1.00	1.01	1.00	101	100	80.0-120			1.22	20

Method Blank (MB)

(MB) R3837803-1 09/15/22 18:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3837803-2 09/15/22 18:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.5	94.5	80.0-120	

L1534450-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534450-11 09/15/22 18:35 • (MS) R3837803-5 09/15/22 18:45 • (MSD) R3837803-6 09/15/22 18:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.4	107	89.4	77.4	60.0	5	75.0-125		J6	17.8	20

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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	LAO000356
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.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Caerus Oil and Gas LLC	Billing Information: Info on file
Address: Info on file	
Report To: Jake Janicek, Brett Middleton, Blair Rollins	Email To: Info on file
Copy To: Chris McKisson, remediation@confluence-cc.com	Site Collection Info/Address:
Customer Project Name/Number: F23 Background	State: CO / Garfield — County/City: — Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: F23 — Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Alex Slorby	Purchase Order # : / Quote #: — DW PWS ID #: / DW Location Code:
Collected By (signature): Alex Slorby	Turnaround Date Required: Standard Turnaround — Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day — Field Filtered (if applicable): [ ] Yes [ ] No — Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: EC, SAR, pH	Table 915-1 Metals	Boron - Hot Water Soluble	CR6IC
20220908-F23-BG(1240)@1'	SL	G	9/8/2022	1240				1	P	X	X	X	X

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments: L1534557 -01

cont. - 1

Customer Remarks / Special Conditions / Possible Hazards:
Please store all extra material for additional analysis.

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 0221 5433 8386 1233

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: NSH7
Cooler 1 Temp Upon Receipt: 1.5 oC
Cooler 1 Therm Corr. Factor: ___ oC
Cooler 1 Corrected Temp: 1.5 oC
Comments:

Relinquished by/Company: (Signature) Alex Slorby	Date/Time: 9/8/22 1100	Received by/Company: (Signature)	Date/Time: 1147
Relinquished by/Company: (Signature)	Date/Time: 9922 1300	Received by/Company: (Signature)	Date/Time: 09/09/22 1300
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____