November 23, 2021

Blair Rollins
Environmental Specialist
Caerus Oil & Gas LLC (Operator #: 10456)
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Report of Work Completed

COGCC Location Name (ID)	OU Murphy Federal J14OU (334151)
Client Location Name	J14OU
COGCC Remediation Project #	19242
Legal Description	NESW Sec. 14 T8S-R96W
Coordinates (Lat/Long)	39.348580 / -108.072830
County	Mesa County, Colorado

Mr. Rollins,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document recent site investigation activities associated with the abandonment of the KNOX 14-9 (J14OU) (API# 05-077-09239) well and associated infrastructure at the J14OU well pad (Location). The Location is 7.5 miles east of De Beque, Colorado in Mesa County, as illustrated in the attached Topographic Location Map. Additional information on the Location and the associated remediation project is provided in the title block above, the attached Site Diagrams, and the attached Laboratory Results Summary Table. This ROWC provides background on the Location, methods used to complete the investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

As required by COGCC Rule 911.a, Caerus also submitted an Initial eForm 27 (Document #402742697) presenting planned site investigation activities associated with the flowline abandonment. There was no on-location piping at to be abandoned at the Location.

Methodology

On August 31, 2021, Confluence was onsite to investigate and document flowline abandonment activities as per COGCC Form 27 Document #402742697. Confluence inspected the footprints of all previous equipment and infrastructure including the pipeline riser, tank battery, and separator. Soil from each location was characterized using visual and olfactory observations and field-screened for volatile organic compounds using a photoionization detector (PID). Field-screening did not indicate impacts to soil with PID measurements ranging from 0.1 to 0.6 parts per million (ppm). Soil samples were collected from the center of each footprint for laboratory analysis.

On November 1, 2021, Confluence returned to the Location to document the “cut and cap” operations completed at the wellhead. Confluence characterized and field-screened soil samples from wellhead excavation. Field screening did not indicate impacts to soil with a PID measurement of 0.7 ppm. One soil sample was collected from the base of the excavation and submitted for

laboratory analysis. All characterization soil samples were collected in laboratory provided jars, immediately placed on ice, and shipped for laboratory analysis of constituents listed in COGCC Table 915-1. Sample locations are illustrated in the attached Site Diagrams.

Additionally, background soil samples were collected August 20 and November 1, 2021, from comparable, nearby, non-impacted soil to establish native soil conditions for pH, electrical conductivity (EC), and sodium adsorption ratio (SAR) per Rule 915.e.(2).D.

Results

These results summarize observations from onsite investigation efforts and associated field screening results. For organizational and presentation purposes the results summary is divided between general observations of lithology and hydrogeology for the entire Location and excavation activities.

Lithology and Hydrogeology

Lithology at the Location is characterized by sandy loam. Groundwater is expected to flow northwest toward Wallace Creek and ultimately the Colorado River, located 3.6 miles northwest of the Location.

Investigation Results

Laboratory results of final excavation soil samples indicate compliance with COGCC Table 915-1 except for chromium (VI), arsenic, and pH. One chromium (VI) exceedance was detected at the base of the wellhead excavation with a concentration of 0.587 milligrams per kilogram (mg/kg). Arsenic exceedances range from 4.86 mg/kg at the base of the wellhead excavation to 6.25 mg/kg in the separator footprint. Values of pH exceeding COGCC Table 915-1 range from 8.38 in the pipeline riser footprint to 8.78 in the tank battery footprint. All other samples and analytes are compliant with COGCC Table 915-1.

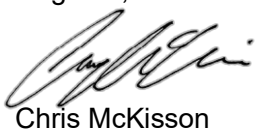
Analysis and Recommendations

Although arsenic and pH values above COGCC Table 915-1 standards remain within the wellhead excavation, separator footprint, and pipeline riser footprint, background data suggests the exceedances are within naturally occurring levels at the Location. Background samples collected from the Location indicate an arsenic concentration of 25.3 mg/kg and a pH value of 10.1.

The chromium (VI) exceedance in the wellhead excavation was labeled with a “J” qualifier; stating that the identification of the analyte was made, however, the concentration is only an estimate due to the minimal amount of the analyte being exhibited in the sample material. Confluence recommends that Caerus request the consideration of the “J” qualifier from the COGCC based on Footnote 9 to COGCC Table 915-1. Based on these results, Confluence recommends that Caerus request closure of COGCC Remediation Project # 19242 and a no further action (NFA) determination.

Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results, or recommendations presented here, please do not hesitate to contact me.

Regards,



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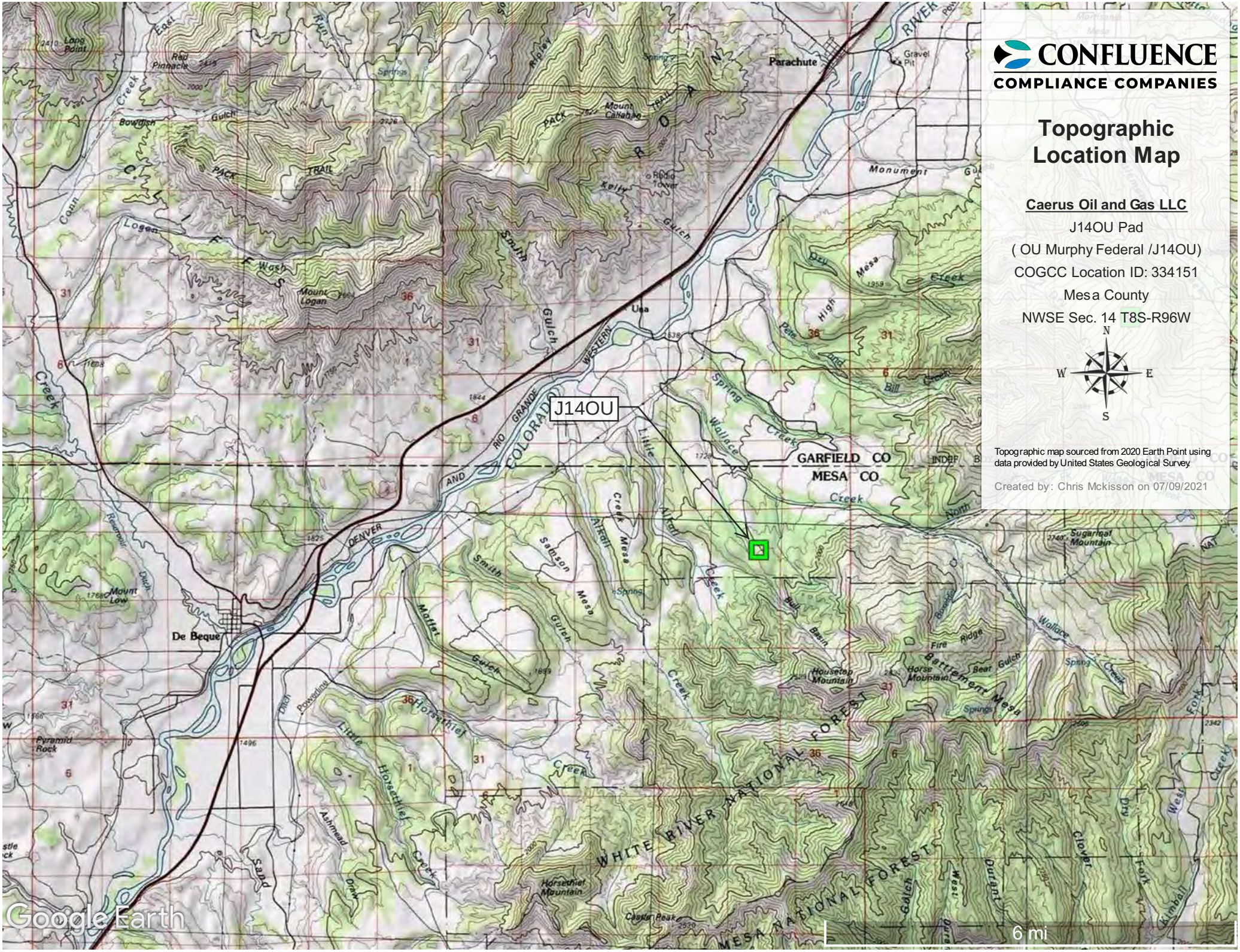
Attachments

- Topographic Location Map
- Site Diagram – Background Samples
- Site Diagram – On-Location P&A Samples
- Laboratory Results Summary Table
- Laboratory Reports



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Topographic Location Map

Caerus Oil and Gas LLC

J14OU Pad

(OU Murphy Federal /J14OU)

COGCC Location ID: 334151

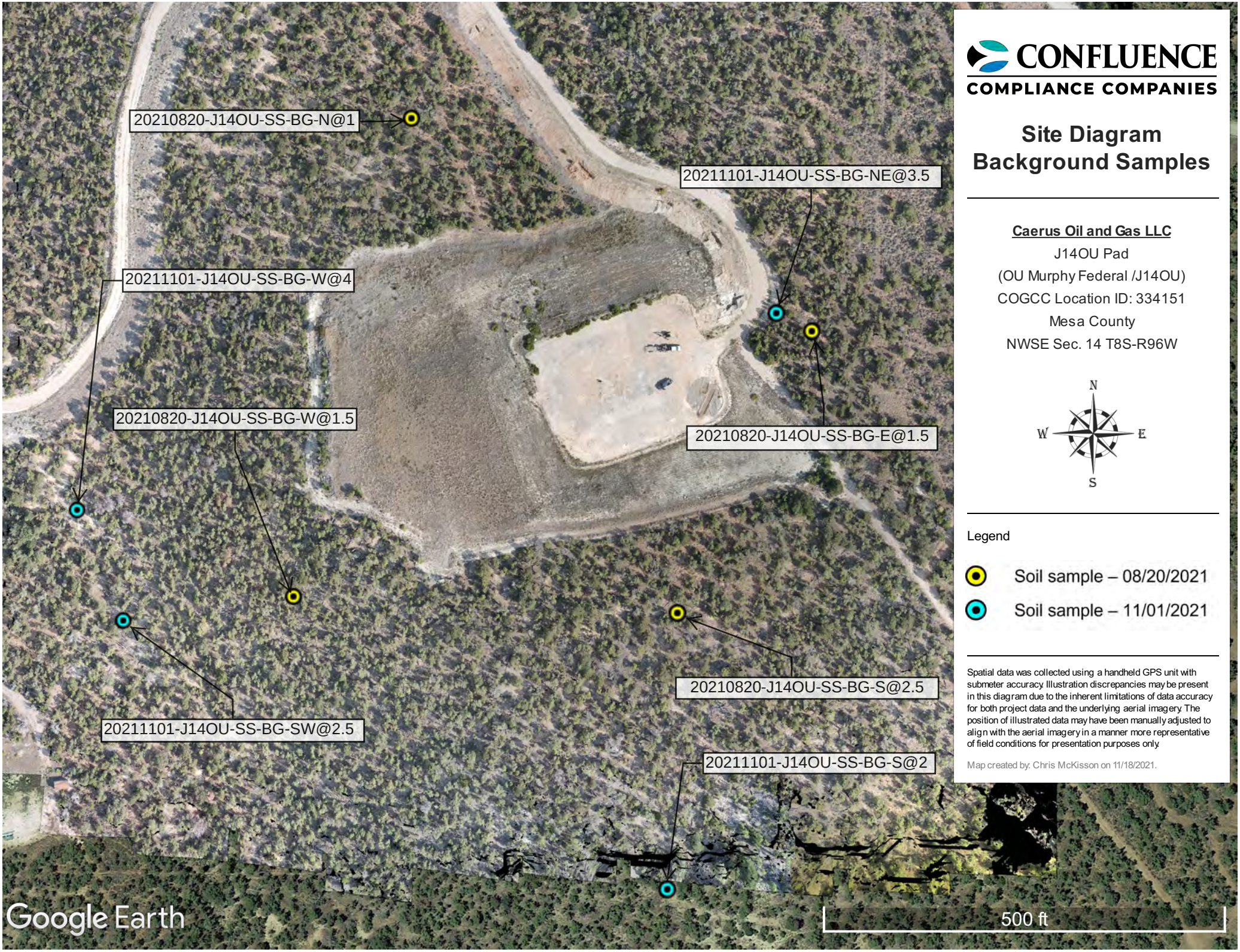
Mesa County

NWSE Sec. 14 T8S-R96W

N
W E
S

Topographic map sourced from 2020 Earth Point using data provided by United States Geological Survey.

Created by: Chris Mckisson on 07/09/2021



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
Background Samples

Caerus Oil and Gas LLC
J14OU Pad
(OU Murphy Federal /J14OU)
COGCC Location ID: 334151
Mesa County
NWSE Sec. 14 T8S-R96W

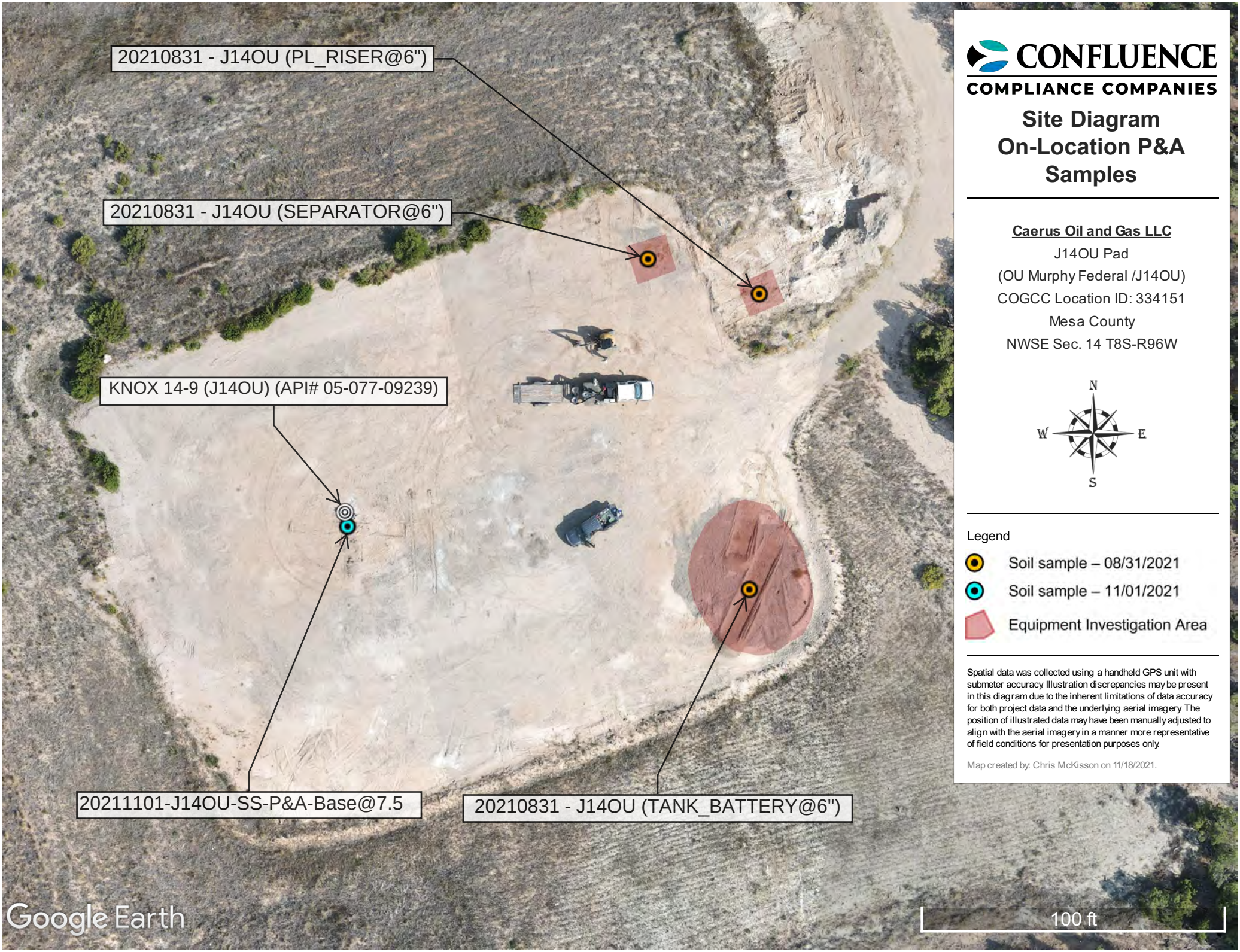
N
W E
S

Legend

- Soil sample – 08/20/2021
- Soil sample – 11/01/2021

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Chris McKisson on 11/18/2021.



CONFLUENCE
COMPLIANCE COMPANIES

Site Diagram
On-Location P&A Samples

Caerus Oil and Gas LLC
J14OU Pad
(OU Murphy Federal /J14OU)
COGCC Location ID: 334151
Mesa County
NWSE Sec. 14 T8S-R96W

N
W E
S

Legend

- Soil sample – 08/31/2021
- Soil sample – 11/01/2021
- Equipment Investigation Area

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Chris McKisson on 11/18/2021.

Laboratory Results Summary Table - Soil
J14OU On-Location P&A

Soil Screening and Remediation Limits			Organic Compounds (mg/kg [ppm])																	
		COGCC Table 915-1 Residential -->	500	NA	NA	NA	1.2	490	5.8	58	30	27	360	1800	1.1	0.11	1.1	11	110	0.11	240
Sample Date	Solid/Soil Source (Equipment) [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (GRO+DRO+ORO)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	TPH-ORO (C28-C36) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total (sum of o-, m-, p- isomers)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(A)pyrene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene
8/31/2021	Tank Battery	**20210831 - J14OU (TANK_BATTERY@6")**	**11.62**	**0.0426**	**3.79**	**7.79**	*<0.00100*	**0.00193**	*<0.00250*	**0.00624**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*
8/31/2021	Separator	**20210831 - J14OU (SEPARATOR@6")**	**50.6**	**0.0482**	**12.5**	**38.1**	*<0.00100*	*<0.00500*	*<0.00250*	**0.00163**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*
8/31/2021	Pipeline	**20210831 - J14OU (PL_RISER@6")**	**48.4**	**0.0499**	**13.3**	**35.1**	*<0.00100*	*<0.00500*	*<0.00250*	**0.00125**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*
11/1/2021	P&A Well	**20211101-J14OU-SS-P&A-Base@7.5**	**138.0**	**0.234**	**61.1**	**76.7**	*<0.00100*	**0.00178**	*<0.00250*	**0.00343**	*<0.00500*	*<0.00500*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*	*<0.00600*
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-N@1**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-E@1.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-S@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-W@1.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

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Orange Fill = Exceedance
Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

CONFLUENCE

Laboratory Results Summary Table - Soil
J14OU On-Location P&A

11/22/2021

Soil Screening and Remediation Limits									Soil Suitability for Reclamation				Metals (mg/kg [ppm])								
COGCC Table 915-1 Residential -->			240	1.1	18	24	2	180	4	6	6-8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Sample Date	Solid/Soil Source (Equipment) [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Sample ID	Fluorene	Indeno(1,2,3,C,D)pyrene	1- Methylnaphthalene	2- Methylnaphthalene	Naphthalene	Pyrene	EC (Specific Conductance) (millimhos/centimeter) (by saturated paste method)	SAR (Sodium Adsorption Ratio) (calculation) (by saturated paste method)	pH (pH Units) (by saturated paste method)	Boron - Hot Water Soluble (mg/L)	Arsenic	Barium	Cadmium (mg/kg)	Chromium (VI)	Copper	Lead	Nickel	Selenium	Silver	Zinc
8/31/2021	Tank Battery	**20210831 - J14OU (TANK_BATTERY@6")**	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*	**0.221**	**1.63**	**8.78**	**0.246**	**4.91**	**488**	**0.352**	*<1.00*	**11.8**	**9.58**	**15.0**	**1.22**	*<1.00*	**36.9**
8/31/2021	Separator	**20210831 - J14OU (SEPARATOR@6")**	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*	**0.169**	**0.341**	**8.69**	**0.208**	**6.25**	**517**	**0.291**	*<1.00*	**12.7**	**10.6**	**15.5**	**1.16**	*<1.00*	**38.8**
8/31/2021	Pipeline	**20210831 - J14OU (PL_RISER@6")**	*<0.00600*	*<0.00600*	*<0.0200*	**0.00798**	*<0.0200*	*<0.00600*	**0.340**	**0.792**	**8.38**	**0.293**	**5.83**	**487**	**0.310**	*<1.00*	**12.3**	**11.2**	**15.6**	**1.18**	*<1.00*	**39.7**
11/1/2021	P&A Well	**20211101-J14OU-SS-P&A-Base@7.5**	*<0.00600*	*<0.00600*	*<0.0200*	*<0.0200*	*<0.0200*	*<0.00600*	**0.169**	**0.737**	**8.57**	**0.594**	**4.86**	**522**	**0.622**	**0.587**	**14.6**	**14.7**	**16.5**	*<2.00*	*<1.00*	**46.9**
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.181**	**0.222**	**8.44**	*NA*	**10.2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.164**	**0.181**	**8.53**	*NA*	**22.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-S@2**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.166**	**0.209**	**8.58**	*NA*	**10.9**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.907**	**8.99**	**10.1**	*NA*	**16.0**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.958**	**12.9**	**10.0**	*NA*	**15.0**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-W@4**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.941**	**13.6**	**10.1**	*NA*	**14.8**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.183**	**0.299**	**8.82**	*NA*	**14.9**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.175**	**0.352**	**8.73**	*NA*	**11.6**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-SW@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.166**	**0.364**	**8.85**	*NA*	**15.8**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.268**	**2.71**	**9.04**	*NA*	**24.7**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.248**	**2.00**	**9.17**	*NA*	**20.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11/1/2021	Background	**20211101-J14OU-SS-BG-NE@3.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.250**	**2.58**	**9.23**	*NA*	**25.3**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-N@1**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.223**	**0.0920**	**8.08**	*NA*	**6.90**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-E@1.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.224**	**0.0416**	**8.47**	*NA*	**9.70**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-S@2.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.193**	**0.210**	**8.36**	*NA*	**6.03**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8/20/2021	Background	**20210820-J14OU-SS-BG-W@1.5**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	**0.177**	**0.263**	**8.40**	*NA*	**14.3**	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

Confluence Compliance Companies, LLC
info@confluence-cc.com

Orange Fill = Exceedance
Dark Gray Italics = Below Reporting Detection Limit (RDL)
"NA" = Not Analyzed
mg/kg = milligrams per kilogram / parts per million

ANALYTICAL REPORT

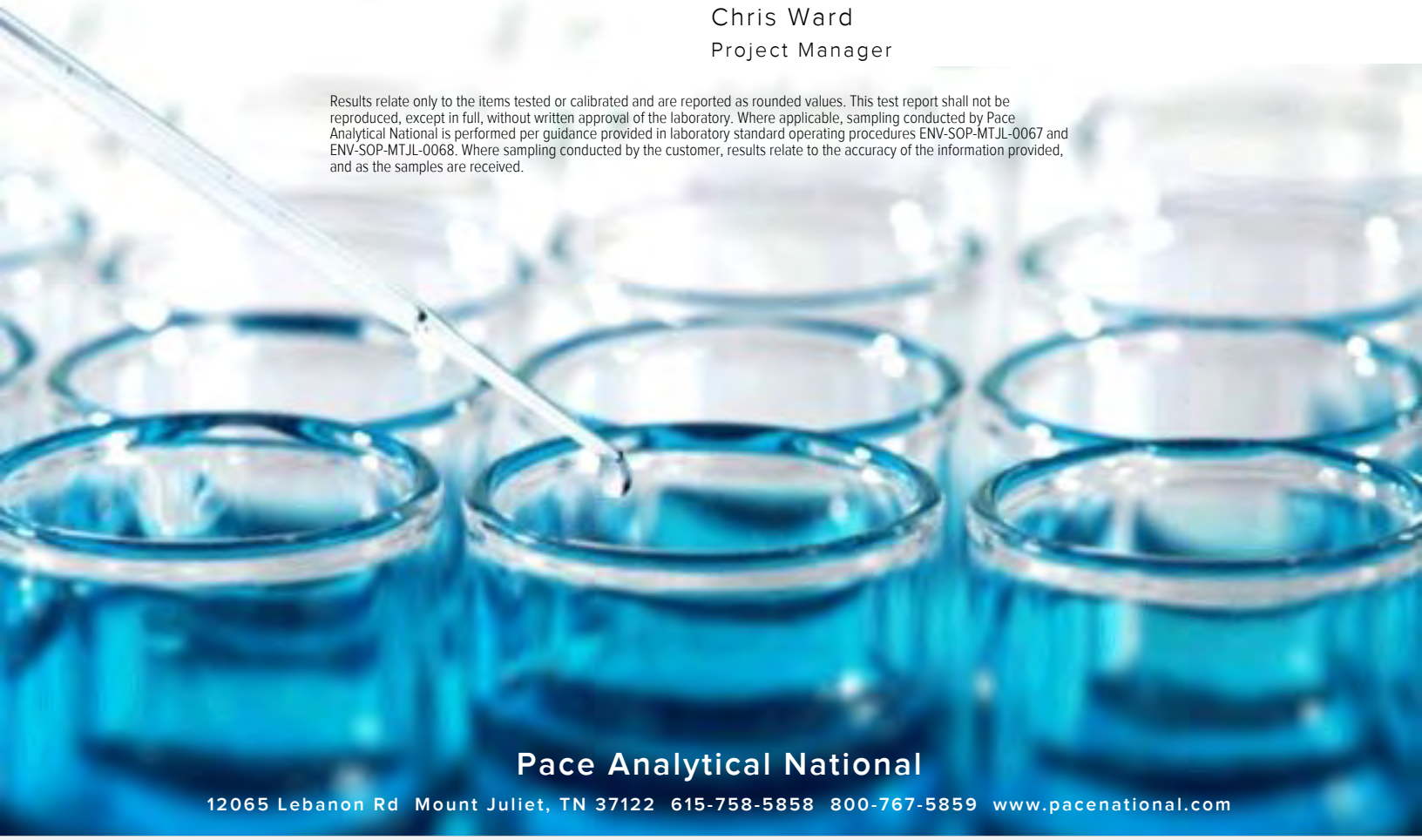
September 10, 2021

Caerus Oil and Gas

Sample Delivery Group:	L1398390
Samples Received:	09/02/2021
Project Number:	
Description:	J14OU Equipment P&A
Site:	J14OU
Report To:	Brett Middleton 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National
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20210831-J14OU (TANK_BATTERY @6) L1398390-01 Solid

Collected by: Andrew Smith | Collected date/time: 08/31/21 09:40 | Received date/time: 09/02/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1734454	1	09/08/21 21:21	09/08/21 21:21	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1735560	1	09/06/21 09:51	09/08/21 19:30	GB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1735544	1	09/05/21 16:00	09/05/21 23:34	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1736710	1	09/08/21 15:59	09/09/21 13:20	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1734439	1	09/03/21 09:41	09/08/21 09:51	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1734444	1	09/03/21 12:06	09/08/21 22:09	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1734436	5	09/03/21 09:45	09/06/21 01:05	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1735942	1	09/03/21 16:36	09/10/21 08:29	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1735263	1	09/03/21 16:36	09/07/21 08:56	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1735753	1	09/07/21 14:02	09/09/21 06:31	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1736264	1	09/08/21 15:30	09/08/21 23:39	AAT	Mt. Juliet, TN

20210831-J14OU (SEPARATOR @6) L1398390-02 Solid

Collected by: Andrew Smith | Collected date/time: 08/31/21 09:55 | Received date/time: 09/02/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1734454	1	09/08/21 21:24	09/08/21 21:24	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1735560	1	09/06/21 09:51	09/08/21 19:35	GB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1735544	1	09/05/21 16:00	09/05/21 23:34	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1736710	1	09/08/21 15:59	09/09/21 13:20	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1734439	1	09/03/21 09:41	09/08/21 09:54	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1734444	1	09/03/21 12:06	09/08/21 22:17	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1734436	5	09/03/21 09:45	09/06/21 01:08	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1735942	1	09/03/21 16:36	09/10/21 08:51	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1735263	1	09/03/21 16:36	09/07/21 09:15	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1735753	1	09/07/21 14:02	09/09/21 07:11	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1736264	1	09/08/21 15:30	09/08/21 23:59	AAT	Mt. Juliet, TN

20210831-J14OU (PL_RISER @6) L1398390-03 Solid

Collected by: Andrew Smith | Collected date/time: 08/31/21 10:05 | Received date/time: 09/02/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1734454	1	09/08/21 21:26	09/08/21 21:26	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1735560	1	09/06/21 09:51	09/08/21 19:40	GB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1735544	1	09/05/21 16:00	09/05/21 23:34	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1736710	1	09/08/21 15:59	09/09/21 13:20	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1734439	1	09/03/21 09:41	09/08/21 09:57	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1734444	1	09/03/21 12:06	09/08/21 22:20	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1734436	5	09/03/21 09:45	09/06/21 01:12	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1735942	1	09/03/21 16:36	09/10/21 09:13	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1735263	1	09/03/21 16:36	09/07/21 09:34	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1735753	1	09/07/21 14:02	09/09/21 06:58	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1736264	1	09/08/21 15:30	09/09/21 00:19	AAT	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	1.63		1	09/08/2021 21:21	WG1734454

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	09/08/2021 19:30	WG1735560

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.78	T8	1	09/05/2021 23:34	WG1735544

Sample Narrative:

L1398390-01 WG1735544: 8.78 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	221		10.0	1	09/09/2021 13:20	WG1736710

Sample Narrative:

L1398390-01 WG1736710: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	488		0.0852	0.500	1	09/08/2021 09:51	WG1734439
Cadmium	0.352	J	0.0471	0.500	1	09/08/2021 09:51	WG1734439
Copper	11.8		0.400	2.00	1	09/08/2021 09:51	WG1734439
Lead	9.58		0.208	0.500	1	09/08/2021 09:51	WG1734439
Nickel	15.0		0.132	2.00	1	09/08/2021 09:51	WG1734439
Selenium	1.22	J	0.764	2.00	1	09/08/2021 09:51	WG1734439
Silver	U		0.127	1.00	1	09/08/2021 09:51	WG1734439
Zinc	36.9		0.832	5.00	1	09/08/2021 09:51	WG1734439

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	0.246		0.0167	0.200	1	09/08/2021 22:09	WG1734444

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.91		0.100	1.00	5	09/06/2021 01:05	WG1734436

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0426	J	0.0217	0.100	1	09/10/2021 08:29	WG1735942
(S) a,a,a-Trifluorotoluene(FID)	*94.5*			*77.0-120*		*09/10/2021 08:29*	WG1735942

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/07/2021 08:56	WG1735263
Toluene	0.00193	J	0.00130	0.00500	1	09/07/2021 08:56	WG1735263
Ethylbenzene	U		0.000737	0.00250	1	09/07/2021 08:56	WG1735263
Xylenes, Total	0.00624	J	0.000880	0.00650	1	09/07/2021 08:56	WG1735263
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/07/2021 08:56	WG1735263
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/07/2021 08:56	WG1735263
(S) Toluene-d8	*106*			*75.0-131*		*09/07/2021 08:56*	WG1735263
(S) 4-Bromofluorobenzene	*98.7*			*67.0-138*		*09/07/2021 08:56*	WG1735263
(S) 1,2-Dichloroethane-d4	*80.0*			*70.0-130*		*09/07/2021 08:56*	WG1735263

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.79	J	1.61	4.00	1	09/09/2021 06:31	WG1735753
C28-C36 Motor Oil Range	7.79		0.274	4.00	1	09/09/2021 06:31	WG1735753
(S) o-Terphenyl	*40.0*			*18.0-148*		*09/09/2021 06:31*	WG1735753

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	09/08/2021 23:39	WG1736264
Acenaphthene	U		0.00209	0.00600	1	09/08/2021 23:39	WG1736264
Acenaphthylene	U		0.00216	0.00600	1	09/08/2021 23:39	WG1736264
Benzo(a)anthracene	U		0.00173	0.00600	1	09/08/2021 23:39	WG1736264
Benzo(a)pyrene	U		0.00179	0.00600	1	09/08/2021 23:39	WG1736264
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/08/2021 23:39	WG1736264
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	09/08/2021 23:39	WG1736264
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/08/2021 23:39	WG1736264
Chrysene	U		0.00232	0.00600	1	09/08/2021 23:39	WG1736264
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/08/2021 23:39	WG1736264
Fluoranthene	U		0.00227	0.00600	1	09/08/2021 23:39	WG1736264
Fluorene	U		0.00205	0.00600	1	09/08/2021 23:39	WG1736264
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/08/2021 23:39	WG1736264
Naphthalene	U		0.00408	0.0200	1	09/08/2021 23:39	WG1736264
Phenanthrene	U		0.00231	0.00600	1	09/08/2021 23:39	WG1736264
Pyrene	U		0.00200	0.00600	1	09/08/2021 23:39	WG1736264
1-Methylnaphthalene	U		0.00449	0.0200	1	09/08/2021 23:39	WG1736264
2-Methylnaphthalene	U		0.00427	0.0200	1	09/08/2021 23:39	WG1736264
2-Chloronaphthalene	U		0.00466	0.0200	1	09/08/2021 23:39	WG1736264
(S) p-Terphenyl-d14	*112*			*23.0-120*		*09/08/2021 23:39*	WG1736264
(S) Nitrobenzene-d5	*81.6*			*14.0-149*		*09/08/2021 23:39*	WG1736264
(S) 2-Fluorobiphenyl	*89.6*			*34.0-125*		*09/08/2021 23:39*	WG1736264

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.341		1	09/08/2021 21:24	WG1734454

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	09/08/2021 19:35	WG1735560

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.69	T8	1	09/05/2021 23:34	WG1735544

Sample Narrative:

L1398390-02 WG1735544: 8.69 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	169		10.0	1	09/09/2021 13:20	WG1736710

Sample Narrative:

L1398390-02 WG1736710: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	517		0.0852	0.500	1	09/08/2021 09:54	WG1734439
Cadmium	0.291	J	0.0471	0.500	1	09/08/2021 09:54	WG1734439
Copper	12.7		0.400	2.00	1	09/08/2021 09:54	WG1734439
Lead	10.6		0.208	0.500	1	09/08/2021 09:54	WG1734439
Nickel	15.5		0.132	2.00	1	09/08/2021 09:54	WG1734439
Selenium	1.16	J	0.764	2.00	1	09/08/2021 09:54	WG1734439
Silver	U		0.127	1.00	1	09/08/2021 09:54	WG1734439
Zinc	38.8		0.832	5.00	1	09/08/2021 09:54	WG1734439

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	0.208		0.0167	0.200	1	09/08/2021 22:17	WG1734444

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.25		0.100	1.00	5	09/06/2021 01:08	WG1734436

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0482	J	0.0217	0.100	1	09/10/2021 08:51	WG1735942
(S) a,a,a-Trifluorotoluene(FID)	*94.8*			*77.0-120*		*09/10/2021 08:51*	WG1735942

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/07/2021 09:15	WG1735263
Toluene	U		0.00130	0.00500	1	09/07/2021 09:15	WG1735263
Ethylbenzene	U		0.000737	0.00250	1	09/07/2021 09:15	WG1735263
Xylenes, Total	0.00163	J	0.000880	0.00650	1	09/07/2021 09:15	WG1735263
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/07/2021 09:15	WG1735263
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/07/2021 09:15	WG1735263
(S) Toluene-d8	*103*			*75.0-131*		*09/07/2021 09:15*	WG1735263
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*09/07/2021 09:15*	WG1735263
(S) 1,2-Dichloroethane-d4	*80.3*			*70.0-130*		*09/07/2021 09:15*	WG1735263

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	12.5		1.61	4.00	1	09/09/2021 07:11	WG1735753
C28-C36 Motor Oil Range	38.1		0.274	4.00	1	09/09/2021 07:11	WG1735753
(S) o-Terphenyl	*61.0*			*18.0-148*		*09/09/2021 07:11*	WG1735753

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	09/08/2021 23:59	WG1736264
Acenaphthene	U		0.00209	0.00600	1	09/08/2021 23:59	WG1736264
Acenaphthylene	U		0.00216	0.00600	1	09/08/2021 23:59	WG1736264
Benzo(a)anthracene	U		0.00173	0.00600	1	09/08/2021 23:59	WG1736264
Benzo(a)pyrene	U		0.00179	0.00600	1	09/08/2021 23:59	WG1736264
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/08/2021 23:59	WG1736264
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	09/08/2021 23:59	WG1736264
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/08/2021 23:59	WG1736264
Chrysene	U		0.00232	0.00600	1	09/08/2021 23:59	WG1736264
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/08/2021 23:59	WG1736264
Fluoranthene	U		0.00227	0.00600	1	09/08/2021 23:59	WG1736264
Fluorene	U		0.00205	0.00600	1	09/08/2021 23:59	WG1736264
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/08/2021 23:59	WG1736264
Naphthalene	U		0.00408	0.0200	1	09/08/2021 23:59	WG1736264
Phenanthrene	U		0.00231	0.00600	1	09/08/2021 23:59	WG1736264
Pyrene	U		0.00200	0.00600	1	09/08/2021 23:59	WG1736264
1-Methylnaphthalene	U		0.00449	0.0200	1	09/08/2021 23:59	WG1736264
2-Methylnaphthalene	U		0.00427	0.0200	1	09/08/2021 23:59	WG1736264
2-Chloronaphthalene	U		0.00466	0.0200	1	09/08/2021 23:59	WG1736264
(S) p-Terphenyl-d14	*93.4*			*23.0-120*		*09/08/2021 23:59*	WG1736264
(S) Nitrobenzene-d5	*70.1*			*14.0-149*		*09/08/2021 23:59*	WG1736264
(S) 2-Fluorobiphenyl	*75.8*			*34.0-125*		*09/08/2021 23:59*	WG1736264

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.792		1	09/08/2021 21:26	WG1734454

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	09/08/2021 19:40	WG1735560

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.38	T8	1	09/05/2021 23:34	WG1735544

Sample Narrative:

L1398390-03 WG1735544: 8.38 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	340		10.0	1	09/09/2021 13:20	WG1736710

Sample Narrative:

L1398390-03 WG1736710: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	487		0.0852	0.500	1	09/08/2021 09:57	WG1734439
Cadmium	0.310	J	0.0471	0.500	1	09/08/2021 09:57	WG1734439
Copper	12.3		0.400	2.00	1	09/08/2021 09:57	WG1734439
Lead	11.2		0.208	0.500	1	09/08/2021 09:57	WG1734439
Nickel	15.6		0.132	2.00	1	09/08/2021 09:57	WG1734439
Selenium	1.18	J	0.764	2.00	1	09/08/2021 09:57	WG1734439
Silver	U		0.127	1.00	1	09/08/2021 09:57	WG1734439
Zinc	39.7		0.832	5.00	1	09/08/2021 09:57	WG1734439

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	0.293		0.0167	0.200	1	09/08/2021 22:20	WG1734444

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.83		0.100	1.00	5	09/06/2021 01:12	WG1734436

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0499	J	0.0217	0.100	1	09/10/2021 09:13	WG1735942
(S) a,a,a-Trifluorotoluene(FID)	*95.1*			*77.0-120*		*09/10/2021 09:13*	WG1735942

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/07/2021 09:34	WG1735263
Toluene	U		0.00130	0.00500	1	09/07/2021 09:34	WG1735263
Ethylbenzene	U		0.000737	0.00250	1	09/07/2021 09:34	WG1735263
Xylenes, Total	0.00125	J	0.000880	0.00650	1	09/07/2021 09:34	WG1735263
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/07/2021 09:34	WG1735263
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/07/2021 09:34	WG1735263
(S) Toluene-d8	*102*			*75.0-131*		*09/07/2021 09:34*	WG1735263
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*		*09/07/2021 09:34*	WG1735263
(S) 1,2-Dichloroethane-d4	*79.6*			*70.0-130*		*09/07/2021 09:34*	WG1735263

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13.3		1.61	4.00	1	09/09/2021 06:58	WG1735753
C28-C36 Motor Oil Range	35.1		0.274	4.00	1	09/09/2021 06:58	WG1735753
(S) o-Terphenyl	*55.7*			*18.0-148*		*09/09/2021 06:58*	WG1735753

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	09/09/2021 00:19	WG1736264
Acenaphthene	U		0.00209	0.00600	1	09/09/2021 00:19	WG1736264
Acenaphthylene	U		0.00216	0.00600	1	09/09/2021 00:19	WG1736264
Benzo(a)anthracene	U		0.00173	0.00600	1	09/09/2021 00:19	WG1736264
Benzo(a)pyrene	U		0.00179	0.00600	1	09/09/2021 00:19	WG1736264
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/09/2021 00:19	WG1736264
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	09/09/2021 00:19	WG1736264
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/09/2021 00:19	WG1736264
Chrysene	U		0.00232	0.00600	1	09/09/2021 00:19	WG1736264
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/09/2021 00:19	WG1736264
Fluoranthene	U		0.00227	0.00600	1	09/09/2021 00:19	WG1736264
Fluorene	U		0.00205	0.00600	1	09/09/2021 00:19	WG1736264
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/09/2021 00:19	WG1736264
Naphthalene	U		0.00408	0.0200	1	09/09/2021 00:19	WG1736264
Phenanthrene	U		0.00231	0.00600	1	09/09/2021 00:19	WG1736264
Pyrene	U		0.00200	0.00600	1	09/09/2021 00:19	WG1736264
1-Methylnaphthalene	U		0.00449	0.0200	1	09/09/2021 00:19	WG1736264
2-Methylnaphthalene	0.00798	J	0.00427	0.0200	1	09/09/2021 00:19	WG1736264
2-Chloronaphthalene	U		0.00466	0.0200	1	09/09/2021 00:19	WG1736264
(S) p-Terphenyl-d14	*97.4*			*23.0-120*		*09/09/2021 00:19*	WG1736264
(S) Nitrobenzene-d5	*72.3*			*14.0-149*		*09/09/2021 00:19*	WG1736264
(S) 2-Fluorobiphenyl	*79.0*			*34.0-125*		*09/09/2021 00:19*	WG1736264

Method Blank (MB)

(MB) R3702330-1 09/08/21 18:58

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

L1398441-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1398441-01 09/08/21 20:22 • (DUP) R3702330-7 09/08/21 20:27

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	1.24	1.25	1	1.29		20

L1398562-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1398562-04 09/08/21 21:19 • (DUP) R3702330-8 09/08/21 21:24

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) R3702330-2 09/08/21 19:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.62	96.2	80.0-120	

L1398402-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1398402-01 09/08/21 19:45 • (MS) R3702330-3 09/08/21 19:50 • (MSD) R3702330-4 09/08/21 19:56

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	16.7	16.2	83.7	80.9	1	75.0-125			3.50	20

L1398402-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1398402-01 09/08/21 19:45 • (MS) R3702330-5 09/08/21 20:11

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	648	U	586	90.5	50	75.0-125	

L1396531-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1396531-04 09/05/21 23:34 • (DUP) R3700642-2 09/05/21 23:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.50	7.48	1	0.267		1

Sample Narrative:

OS: 7.5 at 22C

DUP: 7.48 at 22.6C

L1398562-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1398562-03 09/05/21 23:34 • (DUP) R3700642-3 09/05/21 23:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.85	8.87	1	0.226		1

Sample Narrative:

OS: 8.85 at 22.1C

DUP: 8.87 at 21.8C

Laboratory Control Sample (LCS)

(LCS) R3700642-1 09/05/21 23:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.05 at 21.3C

Method Blank (MB)

(MB) R3702251-1 09/09/21 13:20

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

L1397942-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1397942-20 09/09/21 13:20 • (DUP) R3702251-3 09/09/21 13:20

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2190	2150	1	1.66		20

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

L1398389-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1398389-03 09/09/21 13:20 • (DUP) R3702251-4 09/09/21 13:20

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1380	1380	1	0.000		20

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

Laboratory Control Sample (LCS)

(LCS) R3702251-2 09/09/21 13:20

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	912	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3701947-1 09/08/21 09:13

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) R3701947-2 09/08/21 09:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	104	104	80.0-120	
Cadmium	100	97.9	97.9	80.0-120	
Copper	100	99.9	99.9	80.0-120	
Lead	100	99.0	99.0	80.0-120	
Nickel	100	101	101	80.0-120	
Selenium	100	100	100	80.0-120	
Silver	20.0	18.5	92.5	80.0-120	
Zinc	100	97.4	97.4	80.0-120	

Method Blank (MB)

(MB) R3702008-1 09/08/21 21:45

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) R3702008-2 09/08/21 21:48 • (LCSD) R3702008-3 09/08/21 21:50

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	0.974	0.973	97.4	97.3	80.0-120			0.144	20

Method Blank (MB)

(MB) R3700730-1 09/06/21 00:15

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) R3700730-2 09/06/21 00:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.3	93.3	80.0-120	

L1397415-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397415-01 09/06/21 00:22 • (MS) R3700730-5 09/06/21 00:32 • (MSD) R3700730-6 09/06/21 00:35

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	0.850	73.4	70.3	72.5	69.5	5	75.0-125	J6	J6	4.24	20

Method Blank (MB)

(MB) R3702708-2 09/10/21 04:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.2*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3702708-1 09/10/21 03:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.02	109	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R3702745-3 09/07/21 03:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.2*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*

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

(LCS) R3702745-1 09/07/21 02:35 • (LCSD) R3702745-2 09/07/21 02:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.129	0.125	103	100	70.0-123			3.15	20
Ethylbenzene	0.125	0.117	0.120	93.6	96.0	74.0-126			2.53	20
Toluene	0.125	0.118	0.118	94.4	94.4	75.0-121			0.000	20
1,2,4-Trimethylbenzene	0.125	0.115	0.114	92.0	91.2	70.0-126			0.873	20
1,3,5-Trimethylbenzene	0.125	0.121	0.118	96.8	94.4	73.0-127			2.51	20
Xylenes, Total	0.375	0.358	0.362	95.5	96.5	72.0-127			1.11	20
(S) Toluene-d8				*102*	*99.8*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*93.4*	*97.2*	*70.0-130*				

Method Blank (MB)

(MB) R3702138-1 09/09/21 02:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*60.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3702138-2 09/09/21 02:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.1	72.2	50.0-150	
(S) o-Terphenyl			*66.1*	*18.0-148*	

Method Blank (MB)

(MB) R3702110-2 09/08/21 20:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*79.5*			*14.0-149*
(S) 2-Fluorobiphenyl	*83.3*			*34.0-125*
(S) p-Terphenyl-d14	*102*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3702110-1 09/08/21 20:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0701	87.6	50.0-126	
Acenaphthene	0.0800	0.0651	81.4	50.0-120	
Acenaphthylene	0.0800	0.0712	89.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0720	90.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0572	71.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0629	78.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0587	73.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0647	80.9	49.0-125	
Chrysene	0.0800	0.0689	86.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0607	75.9	47.0-125	
Fluoranthene	0.0800	0.0696	87.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3702110-1 09/08/21 20:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0668	83.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0625	78.1	46.0-125	
Naphthalene	0.0800	0.0643	80.4	50.0-120	
Phenanthrene	0.0800	0.0665	83.1	47.0-120	
Pyrene	0.0800	0.0685	85.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0659	82.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0624	78.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0651	81.4	50.0-120	
(S) Nitrobenzene-d5			*85.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*90.2*	*34.0-125*	
(S) p-Terphenyl-d14			*110*	*23.0-120*	

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.

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: J140U Equipment P&A	State: CO / County/City: Garfield / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: / Email:	Site/Facility ID #: J140U / Compliance Monitoring? [ ] Yes [X] No
Collected By (print): Andrew Smith	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard 5-Day / 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)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	EC, SAR, Arsenic	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments
20210831 - J14OU (TANK_BATTERY@6')	SL	G	8/31/2021	0940				2	G	X	X	X	X	X	X	U398390-01
20210831 - J14OU (SEPARATOR@6")	SL	G	~~8/31/2021~~	0955				2	G	X	X	X	X	X	X	-02
20210831 - J14OU (PL_RISER@6")	SL	G	8/31/2021	1005				2	G	X	X	X	X	X	X	-03

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:

Customer Remarks / Special Conditions / Possible Hazards:

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 #: 50161232 0916

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: A601
Cooler 1 Temp Upon Receipt: 1.1 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 1.1 oC
Comments:

B064

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	9-1-21/1200		9/1
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
	9/1/1500		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
			9/2/21 9:15

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

ANALYTICAL REPORT

November 10, 2021

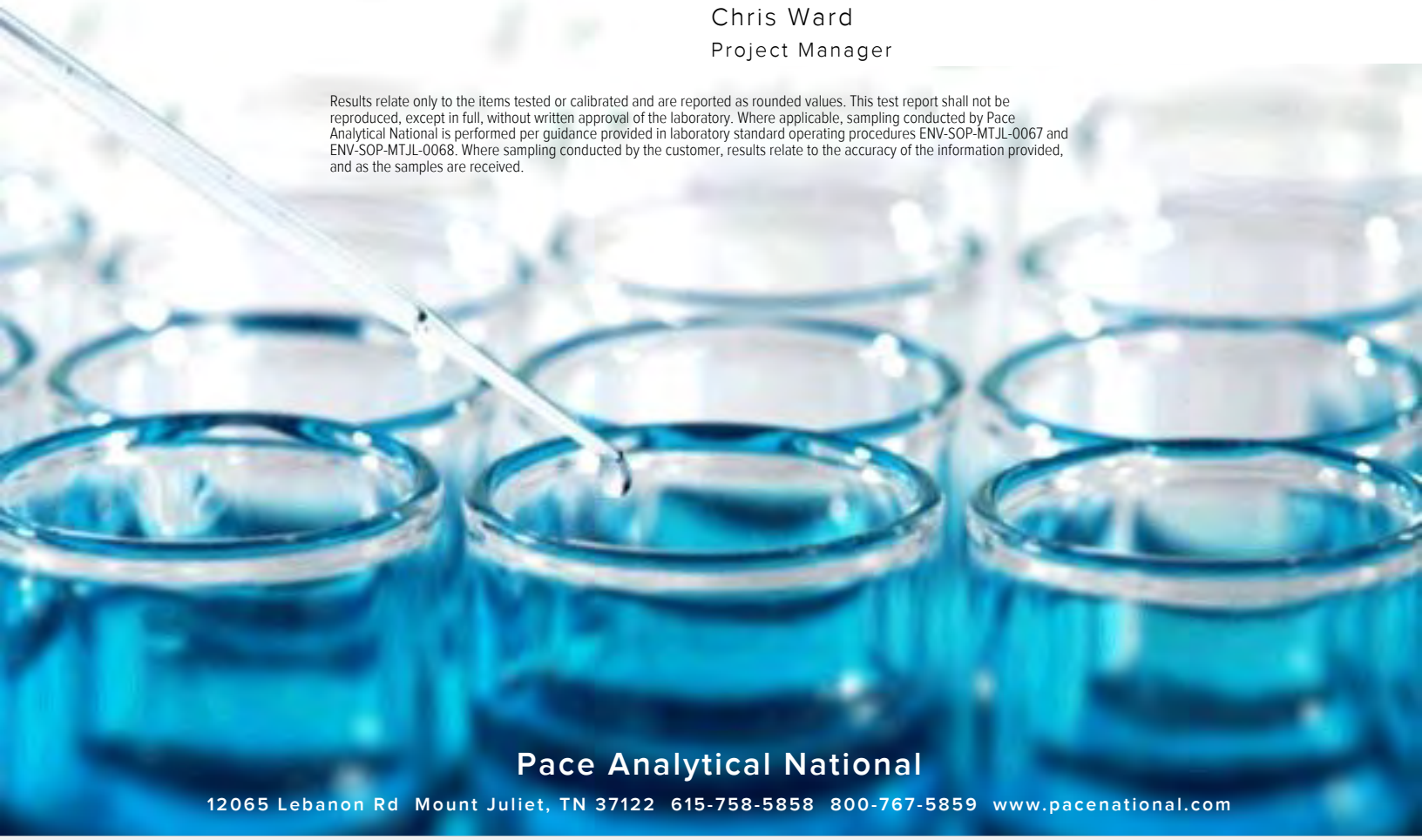
Caerus Oil and Gas

Sample Delivery Group:	L1425498
Samples Received:	11/02/2021
Project Number:	
Description:	J14OU

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

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SAMPLE SUMMARY

20211101-J14OU-SS-P&A-BASE @7.5 L1425498-01 Solid

Collected by: Adam Roll
Collected date/time: 11/01/21 11:18
Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1768844	1	11/09/21 11:43	11/09/21 11:43	EL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1769259	1	11/04/21 18:00	11/09/21 18:27	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768145	1	11/02/21 12:06	11/03/21 12:07	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1770289	1	11/07/21 11:37	11/08/21 19:05	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1768838	1	11/08/21 08:11	11/09/21 13:02	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770287	5	11/07/21 11:36	11/08/21 15:41	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1771229	1	11/03/21 08:22	11/09/21 12:14	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1771214	1	11/03/21 08:22	11/09/21 12:08	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1770811	1	11/08/21 16:07	11/09/21 08:45	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1769028	1	11/04/21 23:13	11/05/21 13:04	AMG	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	0.737		1	11/09/2021 11:43	WG1768844

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.587	J	0.255	1.00	1	11/09/2021 18:27	WG1769259

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.57	T8	1	11/03/2021 12:07	WG1768145

Sample Narrative:
L1425498-01 WG1768145: 8.57 at 18.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	169		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:
L1425498-01 WG1768589: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	522		0.0852	0.500	1	11/08/2021 19:05	WG1770289
Cadmium	0.622		0.0471	0.500	1	11/08/2021 19:05	WG1770289
Copper	14.6		0.400	2.00	1	11/08/2021 19:05	WG1770289
Lead	14.7		0.208	0.500	1	11/08/2021 19:05	WG1770289
Nickel	16.5		0.132	2.00	1	11/08/2021 19:05	WG1770289
Selenium	U		0.764	2.00	1	11/08/2021 19:05	WG1770289
Silver	U		0.127	1.00	1	11/08/2021 19:05	WG1770289
Zinc	46.9		0.832	5.00	1	11/08/2021 19:05	WG1770289

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	0.594		0.0167	0.200	1	11/09/2021 13:02	WG1768838

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.86		0.100	1.00	5	11/08/2021 15:41	WG1770287

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.234	B	0.0217	0.100	1	11/09/2021 12:14	WG1771229
(S) a,a,a-Trifluorotoluene(FID)	*91.9*			*77.0-120*		*11/09/2021 12:14*	WG1771229

Sample Narrative:

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch

L1425498-01 WG1771229: IS failure due to matrix interference. Confirmed by re-analysis.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	11/09/2021 12:08	WG1771214
Toluene	0.00178	J	0.00130	0.00500	1	11/09/2021 12:08	WG1771214
Ethylbenzene	U		0.000737	0.00250	1	11/09/2021 12:08	WG1771214
Xylenes, Total	0.00343	J	0.000880	0.00650	1	11/09/2021 12:08	WG1771214
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	11/09/2021 12:08	WG1771214
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	11/09/2021 12:08	WG1771214
(S) Toluene-d8	*103*			*75.0-131*		*11/09/2021 12:08*	WG1771214
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*11/09/2021 12:08*	WG1771214
(S) 1,2-Dichloroethane-d4	*99.4*			*70.0-130*		*11/09/2021 12:08*	WG1771214

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	61.1		1.61	4.00	1	11/09/2021 08:45	WG1770811
C28-C36 Motor Oil Range	76.7		0.274	4.00	1	11/09/2021 08:45	WG1770811
(S) o-Terphenyl	*42.6*			*18.0-148*		*11/09/2021 08:45*	WG1770811

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	11/05/2021 13:04	WG1769028
Acenaphthene	U		0.00209	0.00600	1	11/05/2021 13:04	WG1769028
Acenaphthylene	U		0.00216	0.00600	1	11/05/2021 13:04	WG1769028
Benzo(a)anthracene	U		0.00173	0.00600	1	11/05/2021 13:04	WG1769028
Benzo(a)pyrene	U		0.00179	0.00600	1	11/05/2021 13:04	WG1769028
Benzo(b)fluoranthene	U		0.00153	0.00600	1	11/05/2021 13:04	WG1769028
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	11/05/2021 13:04	WG1769028
Benzo(k)fluoranthene	U		0.00215	0.00600	1	11/05/2021 13:04	WG1769028
Chrysene	U		0.00232	0.00600	1	11/05/2021 13:04	WG1769028
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	11/05/2021 13:04	WG1769028
Fluoranthene	U		0.00227	0.00600	1	11/05/2021 13:04	WG1769028
Fluorene	U		0.00205	0.00600	1	11/05/2021 13:04	WG1769028
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	11/05/2021 13:04	WG1769028
Naphthalene	U		0.00408	0.0200	1	11/05/2021 13:04	WG1769028
Phenanthrene	U		0.00231	0.00600	1	11/05/2021 13:04	WG1769028
Pyrene	U		0.00200	0.00600	1	11/05/2021 13:04	WG1769028
1-Methylnaphthalene	U		0.00449	0.0200	1	11/05/2021 13:04	WG1769028
2-Methylnaphthalene	U		0.00427	0.0200	1	11/05/2021 13:04	WG1769028
2-Chloronaphthalene	U		0.00466	0.0200	1	11/05/2021 13:04	WG1769028
(S) p-Terphenyl-d14	*72.3*			*23.0-120*		*11/05/2021 13:04*	WG1769028
(S) Nitrobenzene-d5	*54.3*			*14.0-149*		*11/05/2021 13:04*	WG1769028
(S) 2-Fluorobiphenyl	*61.7*			*34.0-125*		*11/05/2021 13:04*	WG1769028

Method Blank (MB)

(MB) R3727885-1 11/09/21 17:25

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

L1425489-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1425489-10 11/09/21 17:41 • (DUP) R3727885-3 11/09/21 17:46

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.664	0.592	1	11.5	J	20

L1425503-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1425503-05 11/09/21 19:30 • (DUP) R3727885-8 11/09/21 19:35

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.936	1.05	1	11.2		20

Laboratory Control Sample (LCS)

(LCS) R3727885-2 11/09/21 17:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	11.3	113	80.0-120	

L1425499-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425499-01 11/09/21 18:32 • (MS) R3727885-4 11/09/21 18:38 • (MSD) R3727885-5 11/09/21 18:43

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	19.6	18.8	98.2	94.0	1	75.0-125			4.37	20

Laboratory Control Sample (LCS)

(LCS) R3725167-1 11/03/21 12:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 20.2C

Method Blank (MB)

(MB) R3726679-1 11/08/21 09:32

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

L1425498-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1425498-01 11/08/21 09:32 • (DUP) R3726679-3 11/08/21 09:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	169	170	1	0.414		20

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

L1426506-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1426506-02 11/08/21 09:32 • (DUP) R3726679-4 11/08/21 09:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	422	411	1	2.64		20

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

Laboratory Control Sample (LCS)

(LCS) R3726679-2 11/08/21 09:32

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	270	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3727085-1 11/08/21 18:45

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) R3727085-2 11/08/21 18:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	103	103	80.0-120	
Cadmium	100	97.5	97.5	80.0-120	
Copper	100	101	101	80.0-120	
Lead	100	97.1	97.1	80.0-120	
Nickel	100	99.3	99.3	80.0-120	
Selenium	100	98.3	98.3	80.0-120	
Silver	20.0	17.8	88.9	80.0-120	
Zinc	100	96.8	96.8	80.0-120	

L1425497-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425497-01 11/08/21 18:51 • (MS) R3727085-5 11/08/21 18:59 • (MSD) R3727085-6 11/08/21 19:02

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	207	302	312	95.3	105	1	75.0-125			3.22	20
Cadmium	100	0.401	88.4	89.3	88.0	88.9	1	75.0-125			1.04	20
Copper	100	18.8	116	114	97.5	95.1	1	75.0-125			2.10	20
Lead	100	7.97	99.5	99.9	91.6	91.9	1	75.0-125			0.324	20
Nickel	100	48.3	144	156	96.0	108	1	75.0-125			8.10	20
Selenium	100	U	86.1	85.8	86.1	85.8	1	75.0-125			0.305	20
Silver	20.0	U	16.4	16.3	82.1	81.7	1	75.0-125			0.579	20
Zinc	100	45.2	126	127	81.1	81.3	1	75.0-125			0.223	20

Method Blank (MB)

(MB) R3727399-1 11/09/21 12:04

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) R3727399-2 11/09/21 12:06 • (LCSD) R3727399-3 11/09/21 12:09

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	1.16	1.11	116	111	80.0-120			4.65	20

Method Blank (MB)

(MB) R3726970-1 11/08/21 15:16

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) R3726970-2 11/08/21 15:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	85.7	85.7	80.0-120	

L1425497-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425497-01 11/08/21 15:24 • (MS) R3726970-5 11/08/21 15:34 • (MSD) R3726970-6 11/08/21 15:38

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	6.16	83.2	83.7	77.1	77.6	5	75.0-125			0.596	20

Method Blank (MB)

(MB) R3727316-1 11/09/21 03:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0267	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*94.7*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3727316-2 11/09/21 03:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.49	99.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

Method Blank (MB)

(MB) R3727414-2 11/09/21 10:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3727414-1 11/09/21 09:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.136	109	70.0-123	
Ethylbenzene	0.125	0.130	104	74.0-126	
Toluene	0.125	0.126	101	75.0-121	
1,2,4-Trimethylbenzene	0.125	0.108	86.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.103	82.4	73.0-127	
Xylenes, Total	0.375	0.384	102	72.0-127	
(S) Toluene-d8			*100*	*75.0-131*	
(S) 4-Bromofluorobenzene			*97.8*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

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

Method Blank (MB)

(MB) R3727381-1 11/09/21 07:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*67.0*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3727381-2 11/09/21 07:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.4	78.8	50.0-150	
(S) o-Terphenyl			*94.1*	*18.0-148*	

Method Blank (MB)

(MB) R3726116-2 11/05/21 07:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*72.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*83.9*			*34.0-125*
(S) p-Terphenyl-d14	*99.5*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3726116-1 11/05/21 06:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0604	75.5	50.0-126	
Acenaphthene	0.0800	0.0610	76.3	50.0-120	
Acenaphthylene	0.0800	0.0625	78.1	50.0-120	
Benzo(a)anthracene	0.0800	0.0589	73.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0520	65.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0661	82.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0602	75.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0632	79.0	49.0-125	
Chrysene	0.0800	0.0607	75.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0623	77.9	47.0-125	
Fluoranthene	0.0800	0.0626	78.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3726116-1 11/05/21 06:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0610	76.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0604	75.5	46.0-125	
Naphthalene	0.0800	0.0551	68.9	50.0-120	
Phenanthrene	0.0800	0.0595	74.4	47.0-120	
Pyrene	0.0800	0.0579	72.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0611	76.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0592	74.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0612	76.5	50.0-120	
(S) Nitrobenzene-d5			*76.4*	*14.0-149*	
(S) 2-Fluorobiphenyl			*83.3*	*34.0-125*	
(S) p-Terphenyl-d14			*96.4*	*23.0-120*	

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

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

Address: Info on file

Billing Information: Info on file (Caerus)

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: 51404

Customer Project Name/Number: 51404

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

Phone: 970 589 6111

Email: adam.roll@confluence-cc

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Adam Roll

Purchase Order #:

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature): [signature]

Turnaround Date Required: Standard 5-day

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

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

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

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

Analysis:

Container Preservative Type **: NA

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 Date	Collected Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Table 915-1 VOCs	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	EC, SAR, Arsenic	Boron (Hot Water Soluble Soil)	Lab Sample # / Comments
*Prefix=20211101-51404-																4425498
*SS-P&A-Base@7.5	SL	G	11/1/21	1118				2	G	X	X	X	X	X	X	-01
~~(blank)~~	~~SL~~	~~G~~						~~2~~	~~G~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~SL~~	~~G~~						~~2~~	~~G~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~SL~~	~~G~~						~~2~~	~~G~~	~~X~~	~~X~~	~~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:

Customer Remarks / Special Conditions / Possible Hazards:
Please use the prefix: 20211101-51404-

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 #: 5016123 2194

Samples received via: FEDEX UPS Client Courier Pace Courier

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

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] / Confluence	11/1/21 / 1655	[signature]	11/1 1700
[signature]	11/1/21 1730		
		B. Barras	11/2/21 0900

MTJL LAB USE ONLY
Table #: B231
Acct:
Temp:
Prelogin:
PM:
PB:

Isabella Arba

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

ANALYTICAL REPORT

September 02, 2021

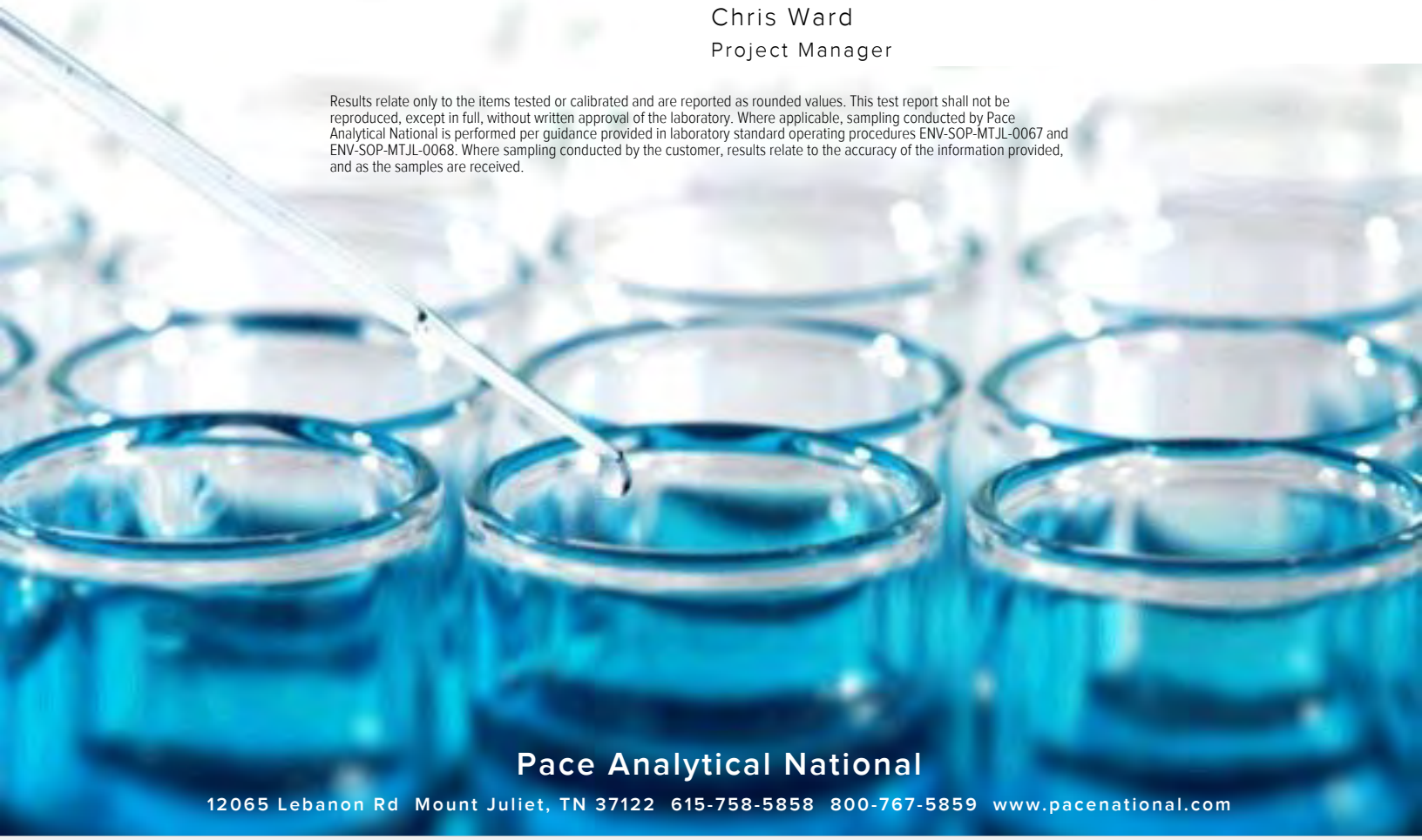
Caerus Oil and Gas

Sample Delivery Group:	L1397218
Samples Received:	08/26/2021
Project Number:	J14OU
Description:	J14OU

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

20210820-J14OU-SS-BG-N@1 L1397218-01 Solid

Collected by: Adam Roll | Collected date/time: 08/20/21 13:57 | Received date/time: 08/26/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1732880	1	09/02/21 08:37	09/02/21 08:37	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1734079	1	09/02/21 13:00	09/02/21 17:00	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1733527	1	09/02/21 10:19	09/02/21 15:41	AMH	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1732883	5	09/01/21 10:54	09/02/21 02:26	LAT	Mt. Juliet, TN

20210820-J14OU-SS-BG-E@1.5 L1397218-02 Solid

Collected by: Adam Roll | Collected date/time: 08/20/21 14:16 | Received date/time: 08/26/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1732880	1	09/02/21 08:40	09/02/21 08:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1734079	1	09/02/21 13:00	09/02/21 17:00	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1733527	1	09/02/21 10:19	09/02/21 15:41	AMH	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1732883	5	09/01/21 10:54	09/02/21 02:29	LAT	Mt. Juliet, TN

20210820-J14OU-SS-BG-S@2.5 L1397218-03 Solid

Collected by: Adam Roll | Collected date/time: 08/20/21 14:38 | Received date/time: 08/26/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1732880	1	09/02/21 08:43	09/02/21 08:43	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1734079	1	09/02/21 13:00	09/02/21 17:00	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1733527	1	09/02/21 10:19	09/02/21 15:41	AMH	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1732883	5	09/01/21 10:54	09/02/21 02:33	LAT	Mt. Juliet, TN

20210820-J14OU-SS-BG-W@1.5 L1397218-04 Solid

Collected by: Adam Roll | Collected date/time: 08/20/21 14:55 | Received date/time: 08/26/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1732880	1	09/02/21 08:46	09/02/21 08:46	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1734079	1	09/02/21 13:00	09/02/21 17:00	MRM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1733527	1	09/02/21 10:19	09/02/21 15:41	AMH	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1732883	5	09/01/21 10:54	09/02/21 02:42	LAT	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	0.0920		1	09/02/2021 08:37	WG1732880

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.08	T8	1	09/02/2021 17:00	WG1734079

Sample Narrative:
L1397218-01 WG1734079: 8.08 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	223		10.0	1	09/02/2021 15:41	WG1733527

Sample Narrative:
L1397218-01 WG1733527: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.90		0.100	1.00	5	09/02/2021 02:26	WG1732883

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0416		1	09/02/2021 08:40	WG1732880

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.47	T8	1	09/02/2021 17:00	WG1734079

Sample Narrative:
L1397218-02 WG1734079: 8.47 at 20.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	224		10.0	1	09/02/2021 15:41	WG1733527

Sample Narrative:
L1397218-02 WG1733527: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.70		0.100	1.00	5	09/02/2021 02:29	WG1732883

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.210		1	09/02/2021 08:43	WG1732880

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.36	T8	1	09/02/2021 17:00	WG1734079

Sample Narrative:
L1397218-03 WG1734079: 8.36 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	193		10.0	1	09/02/2021 15:41	WG1733527

Sample Narrative:
L1397218-03 WG1733527: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.03		0.100	1.00	5	09/02/2021 02:33	WG1732883

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.263		1	09/02/2021 08:46	WG1732880

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	09/02/2021 17:00	WG1734079

Sample Narrative:
L1397218-04 WG1734079: 8.4 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	177		10.0	1	09/02/2021 15:41	WG1733527

Sample Narrative:
L1397218-04 WG1733527: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.3		0.100	1.00	5	09/02/2021 02:42	WG1732883

L1396313-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1396313-10 09/02/21 17:00 • (DUP) R3699751-2 09/02/21 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.80	7.85	1	0.639		1

Sample Narrative:

OS: 7.8 at 21C

DUP: 7.85 at 21.2C

L1397218-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1397218-02 09/02/21 17:00 • (DUP) R3699751-3 09/02/21 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.47	8.47	1	0.000		1

Sample Narrative:

OS: 8.47 at 20.9C

DUP: 8.47 at 21.1C

Laboratory Control Sample (LCS)

(LCS) R3699751-1 09/02/21 17:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.04 at 21.8C

Method Blank (MB)

(MB) R3699681-1 09/02/21 15:41

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

L1397218-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1397218-02 09/02/21 15:41 • (DUP) R3699681-3 09/02/21 15:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	224	225	1	0.178		20

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

L1397737-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1397737-10 09/02/21 15:41 • (DUP) R3699681-4 09/02/21 15:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	11200	11200	1	0.268		20

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

Laboratory Control Sample (LCS)

(LCS) R3699681-2 09/02/21 15:41

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	911	101	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) R3699336-1 09/02/21 01:24

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) R3699336-2 09/02/21 01:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	101	101	80.0-120	

L1396263-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1396263-13 09/02/21 01:31 • (MS) R3699336-5 09/02/21 01:40 • (MSD) R3699336-6 09/02/21 01:44

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	2.07	102	88.2	100	86.2	5	75.0-125			14.8	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
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

E095

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

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: J14OU

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

Phone:

Email:

Site/Facility ID #: J14OU

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Adam Roll

Purchase Order #:

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature): Adam Roll

Turnaround Date Required:

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

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

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

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)	BTEX	naphthalene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	TDS	chloride, sulfate	SAR	pH	EC	AS	Lab Profile/Line: LAB USE ONLY Lab Sample # / Comments:
20210820-J14OU-SS-BG-N@1	SL	G	8/20/21	1357					G							X	X	X	X	L1397218 -01
20210820-J14OU-SS-BG-E@1.5	↓	↓	8/20/21	1416					↓							↓	↓	↓	↓	-02
202108201-J14OU-SS-BG-S@2.5			8/20/21	1438																-03
202108201-J14OU-SS-BG-W@1.5	↓	↓	8/20/21	1455					↓							↓	↓	↓	↓	-04

Lab Profile/Line:

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

Customer Remarks / Special Conditions / Possible Hazards:

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 #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Inf

Temp Blank Received: NA

Therm ID#:

Cooler 1 Temp Upon Rec

Cooler 1 Therm Corr. F

Cooler 1 Corrected Tem

Comments: 0.1

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Adam Roll/Confluence	8/20/21 1545		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)		Received by/Company: (Signature)	Date/Time: 8/26/21 0730

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

ANALYTICAL REPORT

November 09, 2021

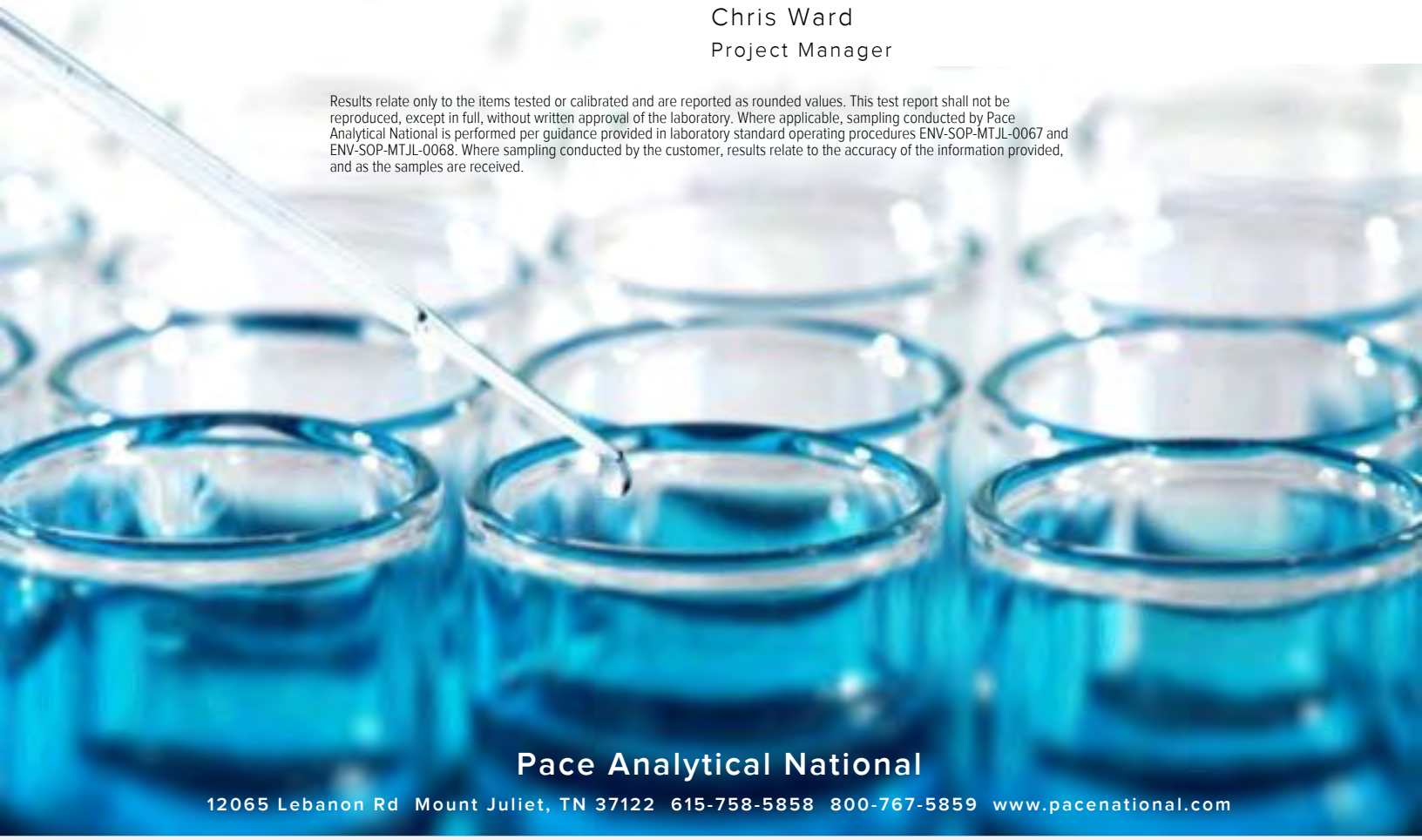
Caerus Oil and Gas

Sample Delivery Group:	L1425491
Samples Received:	11/02/2021
Project Number:	
Description:	J14OU

Report To: Blair Rollins
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

20211101-J14OU-SS-BG-S@2 L1425491-01 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:19 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:07	11/08/21 22:07	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768588	1	11/04/21 03:08	11/04/21 09:15	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:03	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-S@2 L1425491-02 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:19 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:10	11/08/21 22:10	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768588	1	11/04/21 03:08	11/04/21 09:15	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:07	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-S@2 L1425491-03 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:19 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:13	11/08/21 22:13	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768588	1	11/04/21 03:08	11/04/21 09:15	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:10	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-W@4 L1425491-04 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:48 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:16	11/08/21 22:16	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768588	1	11/04/21 03:08	11/04/21 09:15	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:21	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-W@4 L1425491-05 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:48 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:23	11/08/21 22:23	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1767804	1	11/03/21 17:20	11/04/21 07:30	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:25	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-W@4 L1425491-06 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 12:48 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:26	11/08/21 22:26	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1767804	1	11/03/21 17:20	11/04/21 07:30	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:29	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-SW@2.5 L1425491-07 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:00 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:29	11/08/21 22:29	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1767804	1	11/03/21 17:20	11/04/21 07:30	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:32	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-SW@2.5 L1425491-08 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:00 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:31	11/08/21 22:31	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:36	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-SW@2.5 L1425491-09 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:00 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:34	11/08/21 22:34	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768183	1	11/02/21 13:15	11/03/21 13:16	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:39	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-NE@3.5 L1425491-10 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:22 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:37	11/08/21 22:37	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768145	1	11/02/21 12:06	11/03/21 12:07	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:43	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-NE@3.5 L1425491-11 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:22 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:40	11/08/21 22:40	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:47	JPD	Mt. Juliet, TN

20211101-J14OU-SS-BG-NE@3.5 L1425491-12 Solid

Collected by: Adam Roll | Collected date/time: 11/01/21 13:22 | Received date/time: 11/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1770407	1	11/08/21 22:42	11/08/21 22:42	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1768746	1	11/04/21 11:00	11/04/21 11:18	PSN	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1768589	1	11/08/21 06:02	11/08/21 09:32	ARD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1770286	5	11/07/21 12:19	11/08/21 15:50	JPD	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	0.222		1	11/08/2021 22:07	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.44	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:

L1425491-01 WG1768746: 8.44 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	181		10.0	1	11/04/2021 09:15	WG1768588

Sample Narrative:

L1425491-01 WG1768588: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.2		0.100	1.00	5	11/08/2021 15:03	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.181		1	11/08/2021 22:10	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.53	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:

L1425491-02 WG1768746: 8.53 at 19.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	164		10.0	1	11/04/2021 09:15	WG1768588

Sample Narrative:

L1425491-02 WG1768588: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	22.5		0.100	1.00	5	11/08/2021 15:07	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.209		1	11/08/2021 22:13	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.58	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-03 WG1768746: 8.58 at 19.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	166		10.0	1	11/04/2021 09:15	WG1768588

Sample Narrative:
L1425491-03 WG1768588: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.9		0.100	1.00	5	11/08/2021 15:10	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.99		1	11/08/2021 22:16	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.1	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:

L1425491-04 WG1768746: 10.14 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	907		10.0	1	11/04/2021 09:15	WG1768588

Sample Narrative:

L1425491-04 WG1768588: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	16.0		0.100	1.00	5	11/08/2021 15:21	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	12.9		1	11/08/2021 22:23	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.0	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-05 WG1768746: 10 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	958		10.0	1	11/04/2021 07:30	WG1767804

Sample Narrative:
L1425491-05 WG1767804: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.0		0.100	1.00	5	11/08/2021 15:25	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.6		1	11/08/2021 22:26	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.1	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-06 WG1768746: 10.06 at 19.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	941		10.0	1	11/04/2021 07:30	WG1767804

Sample Narrative:
L1425491-06 WG1767804: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.8		0.100	1.00	5	11/08/2021 15:29	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.299		1	11/08/2021 22:29	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.82	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-07 WG1768746: 8.82 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	183		10.0	1	11/04/2021 07:30	WG1767804

Sample Narrative:
L1425491-07 WG1767804: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.9		0.100	1.00	5	11/08/2021 15:32	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.352		1	11/08/2021 22:31	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.73	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-08 WG1768746: 8.73 at 19.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	175		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:
L1425491-08 WG1768589: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	11.6		0.100	1.00	5	11/08/2021 15:36	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.364		1	11/08/2021 22:34	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.85	T8	1	11/03/2021 13:16	WG1768183

Sample Narrative:

L1425491-09 WG1768183: 8.85 at 19.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	166		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:

L1425491-09 WG1768589: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.8		0.100	1.00	5	11/08/2021 15:39	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.71		1	11/08/2021 22:37	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.04	T8	1	11/03/2021 12:07	WG1768145

Sample Narrative:

L1425491-10 WG1768145: 9.04 at 18.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	268		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:

L1425491-10 WG1768589: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	24.7		0.100	1.00	5	11/08/2021 15:43	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.00		1	11/08/2021 22:40	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.17	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:
L1425491-11 WG1768746: 9.17 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	248		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:
L1425491-11 WG1768589: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	20.5		0.100	1.00	5	11/08/2021 15:47	WG1770286

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.58		1	11/08/2021 22:42	WG1770407

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.23	T8	1	11/04/2021 11:18	WG1768746

Sample Narrative:

L1425491-12 WG1768746: 9.23 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	250		10.0	1	11/08/2021 09:32	WG1768589

Sample Narrative:

L1425491-12 WG1768589: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	25.3		0.100	1.00	5	11/08/2021 15:50	WG1770286

Laboratory Control Sample (LCS)

(LCS) R3725167-1 11/03/21 12:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 20.2C

L1425007-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1425007-01 11/03/21 13:16 • (DUP) R3725078-2 11/03/21 13:16

Analyte	Original Result su	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	8.35	8.34	1	0.120		1

Sample Narrative:

OS: 8.35 at 20.2C

DUP: 8.34 at 20.1C

L1425491-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1425491-09 11/03/21 13:16 • (DUP) R3725078-3 11/03/21 13:16

Analyte	Original Result su	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	8.85	8.86	1	0.113		1

Sample Narrative:

OS: 8.85 at 19.2C

DUP: 8.86 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R3725078-1 11/03/21 13:16

Analyte	Spike Amount su	LCS Result su	LCS Rec. %	Rec. Limits %	LCS Qualifier
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 19.8C

L1424346-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1424346-02 11/04/21 11:18 • (DUP) R3725486-2 11/04/21 11:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.30	8.29	1	0.121		1

Sample Narrative:

OS: 8.3 at 20.6C

DUP: 8.29 at 20.7C

L1425489-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1425489-10 11/04/21 11:18 • (DUP) R3725486-3 11/04/21 11:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.94	7.96	1	0.252		1

Sample Narrative:

OS: 7.94 at 20.1C

DUP: 7.96 at 20C

Laboratory Control Sample (LCS)

(LCS) R3725486-1 11/04/21 11:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.95	99.5	99.0-101	

Sample Narrative:

LCS: 9.95 at 18.9C

Method Blank (MB)

(MB) R3725293-1 11/04/21 07:30

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

L1424726-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1424726-21 11/04/21 07:30 • (DUP) R3725293-3 11/04/21 07:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	809	776	1	4.16		20

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

L1424726-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1424726-26 11/04/21 07:30 • (DUP) R3725293-4 11/04/21 07:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1590	1490	1	6.30		20

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

Laboratory Control Sample (LCS)

(LCS) R3725293-2 11/04/21 07:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	272	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3725382-1 11/04/21 09:15

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

L1425489-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1425489-01 11/04/21 09:15 • (DUP) R3725382-3 11/04/21 09:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	201	201	1	0.299		20

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

L1425489-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1425489-06 11/04/21 09:15 • (DUP) R3725382-4 11/04/21 09:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	267	287	1	7.04		20

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

Laboratory Control Sample (LCS)

(LCS) R3725382-2 11/04/21 09:15

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	270	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3726679-1 11/08/21 09:32

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

L1425498-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1425498-01 11/08/21 09:32 • (DUP) R3726679-3 11/08/21 09:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	169	170	1	0.414		20

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

L1426506-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1426506-02 11/08/21 09:32 • (DUP) R3726679-4 11/08/21 09:32

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	422	411	1	2.64		20

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

Laboratory Control Sample (LCS)

(LCS) R3726679-2 11/08/21 09:32

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	270	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3726933-1 11/08/21 14:39

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) R3726933-2 11/08/21 14:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	106	106	80.0-120	

L1425545-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425545-03 11/08/21 14:46 • (MS) R3726933-5 11/08/21 14:56 • (MSD) R3726933-6 11/08/21 15:00

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	2.98	94.2	100	91.2	97.0	5	75.0-125			5.91	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
T8	Sample(s) received past/too close to holding time expiration.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

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 (Caerus)

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: J140U | State: CO | County/City: Garfield | Time Zone Collected: [ ] PT [X] MT [ ] CT [ ] ET

Phone: 970 589 6111

Email: adamroll@confluence-cc

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [X] No

Collected By (print): Adam Roll

Purchase Order # :

Quote #:

DW PWS ID #:

DW Location Code:

Collected By (signature): [signature]

Turnaround Date Required: Standard 5 day

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

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____

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

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

Analysis: ____

Container Preservative Type **: N/A

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 Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	EC, SAR, pH (x3)*	Arsenic (x3)*	Lab Sample # / Comments
** BG-S@2	SL	G	11/1/21	1219				2	G	X	X	L1425491 -01,02,03
** BG-W@4	↓	↓	↓	1248				↓	↓	X	X	-04,05,06
** BG-SW@2.5				1300						X	X	-07,08,09
** BG-NE@3.5				1322						X	X	-10,11,12

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:

Customer Remarks / Special Conditions / Possible Hazards:
* Analyze each sample 3 times for pH, SAR, EC, & As
** Please us ID prefix 20211101-J140U-SS-

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 #: 5016 1232 2194

Samples received via: FEDEX UPS Client Courier Pace Courier

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

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] / Confluence	11/1/21 / 1655	[signature]	11/1 1700
[signature]	11/1/21 1730		
		B. Barras	11/2/21 0900

MTJL LAB USE ONLY
Table: B229
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

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