



10-Nov-2017

Jake Janicek
Caerus Oil and Gas LLC
120 N. Railroad Ave. Suite D
Parachute, CO 81635

Re: **H2-797**

Work Order: **1711731**

Dear Jake,

ALS Environmental received 1 sample on 10-Nov-2017 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 7.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Caerus Oil and Gas LLC
Project: H2-797
Work Order: 1711731

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1711731-01	20171109-H2-797-SWALL(4.5')	Soil		11/9/2017 13:00	11/10/2017 09:00	<input type="checkbox"/>

Client: Caerus Oil and Gas LLC
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QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group, USA**Date:** 10-Nov-17**Client:** Caerus Oil and Gas LLC**Project:** H2-797**Sample ID:** 20171109-H2-797-SWALL(4.5')**Collection Date:** 11/9/2017 01:00 PM**Work Order:** 1711731**Lab ID:** 1711731-01**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>							
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B		Prep: SW5035 / 11/10/17		Analyst: WH
Benzene	0.059		0.0077	0.045	mg/Kg-dry	1	11/10/2017 14:25
Surr: 1,2-Dichloroethane-d4	103			70-130	%REC	1	11/10/2017 14:25
Surr: 4-Bromofluorobenzene	106			70-130	%REC	1	11/10/2017 14:25
Surr: Dibromofluoromethane	96.7			70-130	%REC	1	11/10/2017 14:25
Surr: Toluene-d8	104			70-130	%REC	1	11/10/2017 14:25
MOISTURE			Method: SW3550C				Analyst: MT
Moisture	20		0.025	0.050	% of sample	1	11/10/2017 11:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 10-Nov-17

Client: Caerus Oil and Gas LLC
Work Order: 1711731
Project: H2-797

QC BATCH REPORT

Batch ID: **R224319** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R224319				Units: % of sample		Analysis Date: 11/10/2017 11:33 A		
Client ID:		Run ID: MOIST_171110B		SeqNo: 4753637		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture U 0.050

LCS		Sample ID: LCS-R224319				Units: % of sample		Analysis Date: 11/10/2017 11:33 A		
Client ID:		Run ID: MOIST_171110B		SeqNo: 4753636		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.98 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1711731-01A DUP				Units: % of sample		Analysis Date: 11/10/2017 11:33 A		
Client ID: 20171109-H2-797-SWALL(4.5')		Run ID: MOIST_171110B		SeqNo: 4753635		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.87 0.050 0 0 0 0-0 20.03 4.11 5

The following samples were analyzed in this batch:

1711731-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



PROJECT NAME	H2-797	SAMPLER	Blair Rollins					DATE	11/9/17					PAGE	1 of 1				
PROJECT No.		SITE ID	H2-797					TURNAROUND	SAME DAY					DISPOSAL	By Lab or Return to Client				
COMPANY NAME	Caerus Piceance, LLC	EDD FORMAT						TPH/GRO/DRO											
SEND REPORT TO	Jake Janicek	PURCHASE ORDER						BTEX											
ADDRESS	143 Diamond Ave	BILL TO COMPANY	Caerus Piceance, LLC					Table 910 PAH's											
CITY / STATE / ZIP	Parachute Co 81835	INVOICE ATTN TO	Jake Janicek					EC											
PHONE	970-285-9808	ADDRESS	143 Diamond Ave					PH											
FAX		CITY / STATE / ZIP	Parachute CO 81835					SAR											
E-MAIL	jjanicek@caerusoilandgas.com	PHONE	970-285-9808					Benzene											
		FAX						Table 910 Metals											
		E-MAIL	jjanicek@caerusoilandgas.com					BENZENE											

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	TPH/GRO/DRO	BTEX	Table 910 PAH's	EC	PH	SAR	Benzene	Table 910 Metals	BENZENE
1	2071109-H2-797-SWAW(45')	soil	11/9/17	1300	3			W	W						X	

*Time Zone (Circle): EST CST MST PST Matrix: O=oil S=soil NS=non-soil solid W=water L=liquid E=extract F=filter

For metals or anions, please detail analytes below.

Comments: SR2 3.6°C 	QC PACKAGE (check below)	
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Blair Rollins	11/9/17	1440
RECEIVED BY		W. L.	11-9-17	1440
RELINQUISHED BY		Diane F. Shaw	11-5-17	1820
RECEIVED BY		J. Z. L.	11/10/17	0906
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **CAERUS**

Date/Time Received: **10-Nov-17 09:00**

Work Order: **1711731**

Received by: **DS**

Checklist completed by Diane Shaw 10-Nov-17
eSignature Date

Reviewed by: Chad Whelton 10-Nov-17
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.6/3.6 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>11/10/2017 10:37:10 AM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: