



LEGEND

- SOIL SAMPLE
- X RELEASE
- ▲ BACKGROUND SOIL SAMPLE
- RELEASE PATH

IMAGE COURTESY OF ESRI

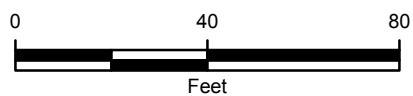


FIGURE 1
SITE MAP
HIGH MESA ROAD RELEASE
NWNE SEC 35-T7S-R96W
GARFIELD COUNTY, COLORADO
CAERUS OIL AND GAS, LLC



TABLE 1
HIGH MESA ROAD RELEASE
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	SS-POR (6")	SS-01 (6")	Spillpath Terminus (6")	POC (6")	BG-01 (6")	BG-02 (6")
Sample Date			3/11/2016	3/11/2016	3/11/2016	3/11/2016	3/11/2016	3/11/2016
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Background	Background
Arsenic	0.39	mg/kg	10	6.4	6.6	NA	8.3	8.4
Barium	15,000	mg/kg	200	310	150	NA	NA	NA
Cadmium	70	mg/kg	ND	ND	ND	NA	NA	NA
Chromium (III)	120,000	mg/kg	13	9.5	11	NA	NA	NA
Chromium (VI)	23	mg/kg	ND	ND	ND	NA	NA	NA
Copper	3,100	mg/kg	12	9.2	8.4	NA	NA	NA
Lead	400	mg/kg	6.5	7.4	6.4	NA	NA	NA
Mercury	23	mg/kg	ND	ND	ND	NA	NA	NA
Nickel	1,600	mg/kg	13	9.3	11	NA	NA	NA
Selenium	390	mg/kg	ND	ND	ND	NA	NA	NA
Silver	390	mg/kg	ND	ND	ND	NA	NA	NA
Zinc	23,000	mg/kg	62	56	42	NA	NA	NA
EC	4 or 2x background	mmhos/cm	1.3	1.5	0.81	NA	NA	NA
pH	6-9	SU	8.4	8.3	8.4	NA	NA	NA
SAR	12	unitless	7.4	7.3	0.87	NA	NA	NA
TPH-GRO			ND	25	ND	NA	NA	NA
TPH-DRO			180	380	61	NA	NA	NA
TPH	500	mg/kg	180	405	61	NA	NA	NA
Benzene	0.17	mg/kg	ND	ND	ND	NA	NA	NA
Toluene	85	mg/kg	ND	0.190	ND	NA	NA	NA
Ethylbenzene	100	mg/kg	ND	ND	ND	NA	NA	NA
Total Xylenes	175	mg/kg	0.120	0.560	ND	NA	NA	NA
Acenaphthene	1,000	mg/kg	ND	ND	ND	NA	NA	NA
Anthracene	1,000	mg/kg	ND	ND	ND	NA	NA	NA
Benz(a)anthracene	0.22	mg/kg	ND	ND	ND	NA	NA	NA
Benzo(b)fluoranthene	0.22	mg/kg	ND	ND	ND	NA	NA	NA
Benzo(k)fluoranthene	2.2	mg/kg	ND	ND	ND	NA	NA	NA
Benzo(a)pyrene	0.022	mg/kg	ND	ND	ND	NA	NA	NA
Chrysene	22	mg/kg	ND	ND	ND	NA	NA	NA
Dibenzo(a,h)anthracene	0.022	mg/kg	ND	ND	ND	NA	NA	NA
Fluoranthene	1,000	mg/kg	ND	ND	ND	NA	NA	NA
Fluorene	1,000	mg/kg	ND	ND	ND	NA	NA	NA
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	ND	ND	ND	NA	NA	NA
Naphthalene	23	mg/kg	0.036	0.017	ND	NA	NA	NA
Pyrene	1,000	mg/kg	ND	ND	ND	NA	NA	NA

Notes:

< - less than the stated reporting limit

Highlight - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

EC - electrical conductivity

mg/kg - milligrams per kilogram

mmhos/cm - millimhos per centimeter

NA - not analyzed

ND - non-detect

SAR - sodium adsorption ratio

SU - standard unit

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

TPH - combination of TPH-GRO and TPH-DRO



21-Mar-2016

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

Re: **High Mesa Road Release**

Work Order: **1603709**

Dear Jake,

ALS Environmental received 6 samples on 12-Mar-2016 02:20 PM 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 NELAP standard requirements and QC 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 29.

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

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

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Environmental

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Work Order: 1603709

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>
1603709-01	SS-POR (6")	Soil	6"	3/11/2016 11:15	3/12/2016 14:20	<input type="checkbox"/>
1603709-02	SS-01 (6")	Soil	6"	3/11/2016 11:25	3/12/2016 14:20	<input type="checkbox"/>
1603709-03	Spillpath Terminus (6")	Soil	6"	3/11/2016 11:30	3/12/2016 14:20	<input type="checkbox"/>
1603709-04	POC (6")	Soil	6"	3/11/2016 11:40	3/12/2016 14:20	<input type="checkbox"/>
1603709-05	BG-01 (6")	Soil	6"	3/11/2016 11:45	3/12/2016 14:20	<input type="checkbox"/>
1603709-06	BG-02 (6")	Soil	6"	3/11/2016 11:55	3/12/2016 14:20	<input type="checkbox"/>

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Work Order: 1603709

Case Narrative

Batch 83552, Method ICP_6010_S, Sample 1603709-05A MS/MSD: The MS and MSD recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

Batch 83552, Method ICP_6010_S, Sample 1603709-05A MS/MSD: The MS and MSD recovery was below the lower control limit for Nickel. The corresponding result in the parent sample may be biased low.

Batch 83552, Method ICP_6010_S, Sample 1603709-05A MS: The MS recovery was outside of the control limit for Lead. However, the MSD recovery and the RPD between the MS and MSD were in control. No qualification is required.

Batch 83614, Method CR6_7196_S, Sample 1603709-03B MS and MSD: The MS and MSD recovery was below the lower control limit for Hexavalent Chromium. The corresponding result in the parent sample may be biased low.

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not 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
n	Not offered for accreditation
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 PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: SS-POR (6")
Collection Date: 3/11/2016 11:15 AM

Work Order: 1603709
Lab ID: 1603709-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 3/15/16	Analyst: IT
DRO (C10-C28)	180		4.8	mg/Kg-dry	1	3/16/2016 09:01 PM
Surr: 4-Terphenyl-d14	101		39-133	%REC	1	3/16/2016 09:01 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 3/14/16	Analyst: IT
GRO (C6-C10)	ND		3,300	µg/Kg-dry	1	3/16/2016 06:51 PM
Surr: Toluene-d8	91.7		50-150	%REC	1	3/16/2016 06:51 PM
MERCURY BY CVAA						
			SW7471B		Prep: SW7471 / 3/17/16	Analyst: LR
Mercury	ND		0.017	mg/Kg-dry	1	3/17/2016 03:51 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 3/15/16	Analyst: BL
Arsenic	10		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Barium	200		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Cadmium	ND		0.88	mg/Kg-dry	1	3/15/2016 09:29 PM
Chromium	13		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Copper	12		0.88	mg/Kg-dry	1	3/15/2016 09:29 PM
Lead	6.5		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Nickel	13		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Selenium	ND		0.88	mg/Kg-dry	1	3/15/2016 09:29 PM
Silver	ND		0.44	mg/Kg-dry	1	3/15/2016 09:29 PM
Zinc	62		0.88	mg/Kg-dry	1	3/15/2016 09:29 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Calcium	36		20	mg/L	40	3/17/2016 06:08 PM
Magnesium	24		8.0	mg/L	40	3/17/2016 06:08 PM
Sodium	230		8.0	mg/L	40	3/17/2016 06:08 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Sodium Adsorption Ratio	7.4		0.010	none	1	3/17/2016
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 3/16/16	Analyst: RS
Acenaphthene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Anthracene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Benzo(a)anthracene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Benzo(a)pyrene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Benzo(b)fluoranthene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Benzo(k)fluoranthene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Chrysene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Dibenzo(a,h)anthracene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Fluoranthene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: SS-POR (6")
Collection Date: 3/11/2016 11:15 AM

Work Order: 1603709
Lab ID: 1603709-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Indeno(1,2,3-cd)pyrene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Naphthalene	0.036		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Pyrene	ND		0.0077	mg/Kg-dry	1	3/17/2016 12:29 AM
Surr: 2-Fluorobiphenyl	78.1		12-100	%REC	1	3/17/2016 12:29 AM
Surr: 4-Terphenyl-d14	80.7		25-137	%REC	1	3/17/2016 12:29 AM
Surr: Nitrobenzene-d5	80.2		37-107	%REC	1	3/17/2016 12:29 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 3/14/16	Analyst: LSY	
Benzene	ND		40	µg/Kg-dry	1	3/16/2016 01:51 AM
Ethylbenzene	ND		40	µg/Kg-dry	1	3/16/2016 01:51 AM
m,p-Xylene	100		80	µg/Kg-dry	1	3/16/2016 01:51 AM
o-Xylene	ND		40	µg/Kg-dry	1	3/16/2016 01:51 AM
Toluene	ND		40	µg/Kg-dry	1	3/16/2016 01:51 AM
Xylenes, Total	120		120	µg/Kg-dry	1	3/16/2016 01:51 AM
Surr: 1,2-Dichloroethane-d4	110		70-130	%REC	1	3/16/2016 01:51 AM
Surr: 4-Bromofluorobenzene	110		70-130	%REC	1	3/16/2016 01:51 AM
Surr: Dibromofluoromethane	94.6		70-130	%REC	1	3/16/2016 01:51 AM
Surr: Toluene-d8	97.0		70-130	%REC	1	3/16/2016 01:51 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 3/17/16	Analyst: JB	
Electrical Conductivity @ Saturation	1.3		0.050	mmhos/cm @2	10	3/18/2016 08:40 AM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	13		0.58	mg/Kg-dry	1	3/17/2016 07:59 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 3/15/16	Analyst: TVD	
Chromium, Hexavalent	ND		1.2	mg/Kg-dry	1	3/16/2016 03:04 PM
MOISTURE			SW3550C	Analyst: ED		
Moisture	14		0.050	% of sample	1	3/14/2016 03:20 PM
PH			SW9045D	Prep: EXTRACT / 3/14/16	Analyst: STP	
pH	8.4			s.u.	1	3/14/2016 03:45 PM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: SS-01 (6")
Collection Date: 3/11/2016 11:25 AM

Work Order: 1603709
Lab ID: 1603709-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015M		Prep: SW3541 / 3/15/16	Analyst: IT
DRO (C10-C28)	380		4.7	mg/Kg-dry	1	3/16/2016 09:31 PM
Surr: 4-Terphenyl-d14	120		39-133	%REC	1	3/16/2016 09:31 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D		Prep: SW5035 / 3/14/16	Analyst: IT
GRO (C6-C10)	25,000		3,300	µg/Kg-dry	1	3/16/2016 11:24 PM
Surr: Toluene-d8	90.5		50-150	%REC	1	3/16/2016 11:24 PM
MERCURY BY CVAA						
			SW7471B		Prep: SW7471 / 3/17/16	Analyst: LR
Mercury	ND		0.015	mg/Kg-dry	1	3/17/2016 03:54 PM
METALS ANALYSIS BY ICP						
			SW846 6010C		Prep: SW3050B / 3/15/16	Analyst: BL
Arsenic	6.4		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Barium	310		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Cadmium	ND		0.90	mg/Kg-dry	1	3/15/2016 09:35 PM
Chromium	9.5		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Copper	9.2		0.90	mg/Kg-dry	1	3/15/2016 09:35 PM
Lead	7.4		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Nickel	9.3		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Selenium	ND		0.90	mg/Kg-dry	1	3/15/2016 09:35 PM
Silver	ND		0.45	mg/Kg-dry	1	3/15/2016 09:35 PM
Zinc	56		0.90	mg/Kg-dry	1	3/15/2016 09:35 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Calcium	36		20	mg/L	40	3/17/2016 06:14 PM
Magnesium	14		8.0	mg/L	40	3/17/2016 06:14 PM
Sodium	200		8.0	mg/L	40	3/17/2016 06:14 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Sodium Adsorption Ratio	7.3		0.010	none	1	3/17/2016
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 3/16/16	Analyst: RS
Acenaphthene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Anthracene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Benzo(a)anthracene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Benzo(a)pyrene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Benzo(b)fluoranthene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Benzo(k)fluoranthene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Chrysene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Dibenzo(a,h)anthracene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Fluoranthene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: SS-01 (6")
Collection Date: 3/11/2016 11:25 AM

Work Order: 1603709
Lab ID: 1603709-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Indeno(1,2,3-cd)pyrene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Naphthalene	0.017		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Pyrene	ND		0.0075	mg/Kg-dry	1	3/17/2016 12:50 AM
Surr: 2-Fluorobiphenyl	70.9		12-100	%REC	1	3/17/2016 12:50 AM
Surr: 4-Terphenyl-d14	68.6		25-137	%REC	1	3/17/2016 12:50 AM
Surr: Nitrobenzene-d5	80.7		37-107	%REC	1	3/17/2016 12:50 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 3/14/16	Analyst: LSY	
Benzene	ND		40	µg/Kg-dry	1	3/15/2016 05:38 AM
Ethylbenzene	ND		40	µg/Kg-dry	1	3/15/2016 05:38 AM
m,p-Xylene	450		80	µg/Kg-dry	1	3/15/2016 05:38 AM
o-Xylene	110		40	µg/Kg-dry	1	3/15/2016 05:38 AM
Toluene	190		40	µg/Kg-dry	1	3/15/2016 05:38 AM
Xylenes, Total	560		120	µg/Kg-dry	1	3/15/2016 05:38 AM
Surr: 1,2-Dichloroethane-d4	102		70-130	%REC	1	3/15/2016 05:38 AM
Surr: 4-Bromofluorobenzene	104		70-130	%REC	1	3/15/2016 05:38 AM
Surr: Dibromofluoromethane	99.8		70-130	%REC	1	3/15/2016 05:38 AM
Surr: Toluene-d8	97.1		70-130	%REC	1	3/15/2016 05:38 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 3/17/16	Analyst: JB	
Electrical Conductivity @ Saturation	1.5		0.050	mmhos/cm @2	10	3/18/2016 08:40 AM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	9.5		0.58	mg/Kg-dry	1	3/17/2016 07:59 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 3/15/16	Analyst: TVD	
Chromium, Hexavalent	ND		1.2	mg/Kg-dry	1	3/16/2016 03:04 PM
MOISTURE			SW3550C	Analyst: ED		
Moisture	14		0.050	% of sample	1	3/14/2016 03:20 PM
PH			SW9045D	Prep: EXTRACT / 3/14/16	Analyst: STP	
pH	8.3			s.u.	1	3/14/2016 03:45 PM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: Spillpath Terminus (6")
Collection Date: 3/11/2016 11:30 AM

Work Order: 1603709
Lab ID: 1603709-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
DRO (C10-C28)	61		SW8015M		Prep: SW3541 / 3/15/16	Analyst: IT
<i>Surr: 4-Terphenyl-d14</i>	92.9		4.5	mg/Kg-dry	1	3/16/2016 10:32 PM
			39-133	%REC	1	3/16/2016 10:32 PM
GASOLINE RANGE ORGANICS BY GC-FID						
GRO (C6-C10)	ND		SW8015D		Prep: SW5035 / 3/14/16	Analyst: IT
<i>Surr: Toluene-d8</i>	94.1		3,000	µg/Kg-dry	1	3/16/2016 11:49 PM
			50-150	%REC	1	3/16/2016 11:49 PM
MERCURY BY CVAA						
Mercury	ND		SW7471B		Prep: SW7471 / 3/17/16	Analyst: LR
			0.015	mg/Kg-dry	1	3/17/2016 03:56 PM
METALS ANALYSIS BY ICP						
Arsenic	6.6		SW846 6010C		Prep: SW3050B / 3/15/16	Analyst: BL
Barium	150		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Cadmium	ND		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Chromium	11		0.80	mg/Kg-dry	1	3/15/2016 09:40 PM
Copper	8.4		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Lead	6.4		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Nickel	11		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Selenium	ND		0.80	mg/Kg-dry	1	3/15/2016 09:40 PM
Silver	ND		0.40	mg/Kg-dry	1	3/15/2016 09:40 PM
Zinc	42		0.80	mg/Kg-dry	1	3/15/2016 09:40 PM
SOLUBLE CATIONS FOR SAR						
			SW846 6010C		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Calcium	50		20	mg/L	40	3/17/2016 06:48 PM
Magnesium	57		8.0	mg/L	40	3/17/2016 06:48 PM
Sodium	38		8.0	mg/L	40	3/17/2016 06:48 PM
SODIUM ADSORPTION RATIO						
			USDA H60 METHO		Prep: USDA Method 20B / 3/17/16	Analyst: BL
Sodium Adsorption Ratio	0.87		0.010	none	1	3/17/2016
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep: SW3541 / 3/16/16	Analyst: RS
Acenaphthene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Anthracene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Benzo(a)anthracene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Benzo(a)pyrene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Benzo(b)fluoranthene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Benzo(k)fluoranthene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Chrysene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Dibenzo(a,h)anthracene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Fluoranthene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: Spillpath Terminus (6")
Collection Date: 3/11/2016 11:30 AM

Work Order: 1603709
Lab ID: 1603709-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Indeno(1,2,3-cd)pyrene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Naphthalene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Pyrene	ND		0.0073	mg/Kg-dry	1	3/17/2016 01:11 AM
Surr: 2-Fluorobiphenyl	65.9		12-100	%REC	1	3/17/2016 01:11 AM
Surr: 4-Terphenyl-d14	74.5		25-137	%REC	1	3/17/2016 01:11 AM
Surr: Nitrobenzene-d5	72.2		37-107	%REC	1	3/17/2016 01:11 AM
VOLATILE ORGANIC COMPOUNDS			SW8260B	Prep: SW5035 / 3/14/16	Analyst: LSY	
Benzene	ND		36	µg/Kg-dry	1	3/15/2016 06:04 AM
Ethylbenzene	ND		36	µg/Kg-dry	1	3/15/2016 06:04 AM
m,p-Xylene	ND		71	µg/Kg-dry	1	3/15/2016 06:04 AM
o-Xylene	ND		36	µg/Kg-dry	1	3/15/2016 06:04 AM
Toluene	ND		36	µg/Kg-dry	1	3/15/2016 06:04 AM
Xylenes, Total	ND		110	µg/Kg-dry	1	3/15/2016 06:04 AM
Surr: 1,2-Dichloroethane-d4	107		70-130	%REC	1	3/15/2016 06:04 AM
Surr: 4-Bromofluorobenzene	97.2		70-130	%REC	1	3/15/2016 06:04 AM
Surr: Dibromofluoromethane	93.2		70-130	%REC	1	3/15/2016 06:04 AM
Surr: Toluene-d8	98.4		70-130	%REC	1	3/15/2016 06:04 AM
ELECTRICAL CONDUCTIVITY (SAR)			USDA H60 METHO	Prep: USDA Method 20B / 3/17/16	Analyst: JB	
Electrical Conductivity @ Saturation	0.81		0.050	mmhos/cm @2	10	3/18/2016 08:40 AM
CHROMIUM, TRIVALENT			CALCULATION	Analyst: JJG		
Chromium, Trivalent	11		0.55	mg/Kg-dry	1	3/17/2016 07:59 AM
CHROMIUM, HEXAVALENT			SW7196A	Prep: SW3060A / 3/15/16	Analyst: TVD	
Chromium, Hexavalent	ND		1.0	mg/Kg-dry	1	3/16/2016 03:04 PM
MOISTURE			SW3550C	Analyst: ED		
Moisture	8.6		0.050	% of sample	1	3/14/2016 03:20 PM
PH			SW9045D	Prep: EXTRACT / 3/14/16	Analyst: STP	
pH	8.4			s.u.	1	3/14/2016 03:45 PM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: BG-01 (6")
Collection Date: 3/11/2016 11:45 AM

Work Order: 1603709
Lab ID: 1603709-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	8.3		SW846 6010C 0.48	mg/Kg-dry	Prep: SW3050B / 3/15/16 1	Analyst: BL 3/15/2016 10:02 PM
MOISTURE						
Moisture	17		SW3550C 0.050	% of sample	1	Analyst: ED 3/14/2016 03:20 PM

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

ALS Group USA, Corp**Date:** 21-Mar-16

Client: Caerus Oil and Gas LLC
Project: High Mesa Road Release
Sample ID: BG-02 (6")
Collection Date: 3/11/2016 11:55 AM

Work Order: 1603709
Lab ID: 1603709-06
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS ANALYSIS BY ICP						
Arsenic	8.4		SW846 6010C 0.47	mg/Kg-dry	Prep: SW3050B / 3/15/16 1	Analyst: BL 3/15/2016 10:30 PM
MOISTURE						
Moisture	14		SW3550C 0.050	% of sample	1	Analyst: ED 3/14/2016 05:02 PM

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

ALS Group USA, Corp

Date: 21-Mar-16

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83531** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-83531-83531				Units: mg/Kg		Analysis Date: 3/16/2016 02:59 PM		
Client ID:		Run ID: GC8_160316A				SeqNo: 3736502		Prep Date: 3/15/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	ND	5.0								
<i>Surr: 4-Terphenyl-d14</i>	1.94	0	2	0	97	39-133	0			

LCS		Sample ID: DLCSS1-83531-83531				Units: mg/Kg		Analysis Date: 3/16/2016 03:29 PM		
Client ID:		Run ID: GC8_160316A				SeqNo: 3736503		Prep Date: 3/15/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	213.4	5.0	200	0	107	61-109	0			
<i>Surr: 4-Terphenyl-d14</i>	1.745	0	2	0	87.2	39-133	0			

MS		Sample ID: 1603706-06B MS				Units: mg/Kg		Analysis Date: 3/16/2016 04:00 PM		
Client ID:		Run ID: GC8_160316A				SeqNo: 3737175		Prep Date: 3/15/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	405.3	4.1	162	205.8	123	48-110	0			S
<i>Surr: 4-Terphenyl-d14</i>	1.503	0	1.62	0	92.8	39-133	0			

MSD		Sample ID: 1603706-06B MSD				Units: mg/Kg		Analysis Date: 3/16/2016 05:00 PM		
Client ID:		Run ID: GC8_160316A				SeqNo: 3737176		Prep Date: 3/15/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	347.5	4.0	161.8	205.8	87.6	48-110	405.3	15.4	30	
<i>Surr: 4-Terphenyl-d14</i>	1.468	0	1.618	0	90.7	39-133	1.503	2.34	30	

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83497** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-83497-83497				Units: µg/Kg-dry		Analysis Date: 3/16/2016 06:27 PM		
Client ID:		Run ID: GC9_160316B				SeqNo: 3737348		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	4564	0	5000	0	91.3	50-150	0			

LCS		Sample ID: LCS-83497-83497				Units: µg/Kg-dry		Analysis Date: 3/16/2016 06:02 PM		
Client ID:		Run ID: GC9_160316B				SeqNo: 3737347		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	476700	2,500	500000	0	95.3	70-130	0			
Surr: Toluene-d8	4682	0	5000	0	93.6	50-150	0			

MS		Sample ID: 1603709-01A MS				Units: µg/Kg-dry		Analysis Date: 3/16/2016 09:21 PM		
Client ID: SS-POR (6")		Run ID: GC9_160316B				SeqNo: 3737355		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	818000	3,300	662800	0	123	70-130	0			
Surr: Toluene-d8	5548	0	6628	0	83.7	50-150	0			

MSD		Sample ID: 1603709-01A MSD				Units: µg/Kg-dry		Analysis Date: 3/16/2016 09:46 PM		
Client ID: SS-POR (6")		Run ID: GC9_160316B				SeqNo: 3737356		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

GRO (C6-C10)	816200	3,300	662800	0	123	70-130	818000	0.225	30	
Surr: Toluene-d8	5664	0	6628	0	85.5	50-150	5548	2.07	30	

The following samples were analyzed in this batch:

1603709-01A	1603709-02A	1603709-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83625** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-83625-83625				Units: mg/Kg		Analysis Date: 3/17/2016 03:15 PM		
Client ID:		Run ID: HG1_160317A				SeqNo: 3738035		Prep Date: 3/17/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.020

LCS		Sample ID: LCS-83625-83625				Units: mg/Kg		Analysis Date: 3/17/2016 03:17 PM		
Client ID:		Run ID: HG1_160317A				SeqNo: 3738037		Prep Date: 3/17/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1792 0.020 0.1665 0 108 80-120 0

MS		Sample ID: 1603877-03BMS				Units: mg/Kg		Analysis Date: 3/17/2016 03:21 PM		
Client ID:		Run ID: HG1_160317A				SeqNo: 3738040		Prep Date: 3/17/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1244 0.014 0.114 0.002706 107 75-125 0

MSD		Sample ID: 1603877-03BMSD				Units: mg/Kg		Analysis Date: 3/17/2016 03:24 PM		
Client ID:		Run ID: HG1_160317A				SeqNo: 3738042		Prep Date: 3/17/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1251 0.014 0.1126 0.002706 109 75-125 0.1244 0.57 35

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83552** Instrument ID **ICP2** Method: **SW846 6010C**

Sample ID: MBLK-83552-83552				Units: mg/Kg			Analysis Date: 3/15/2016 07:57 PM				
Client ID:			Run ID: ICP2_160315A			SeqNo: 3734989		Prep Date: 3/15/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.25									
Barium	ND	0.25									
Cadmium	ND	0.50									
Chromium	0.01743	0.25								J	
Copper	ND	0.50									
Lead	ND	0.25									
Nickel	ND	0.25									
Selenium	ND	0.50									
Silver	ND	0.25									
Zinc	0.188	0.50								J	

LCS				Sample ID: LCS-83552-83552				Units: mg/Kg			Analysis Date: 3/15/2016 08:03 PM		
Client ID:			Run ID: ICP2_160315A				SeqNo: 3734990			Prep Date: 3/15/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic	5.032	0.25	5	0	101	80-120	0						
Barium	4.813	0.25	5	0	96.3	80-120	0						
Cadmium	4.814	0.50	5	0	96.3	80-120	0						
Chromium	5.189	0.25	5	0	104	80-120	0						
Copper	5.191	0.50	5	0	104	80-120	0						
Lead	5.093	0.25	5	0	102	80-120	0						
Nickel	4.958	0.25	5	0	99.2	80-120	0						
Selenium	5.112	0.50	5	0	102	80-120	0						
Silver	5.134	0.25	5	0	103	80-120	0						
Zinc	5.223	0.50	5	0	104	80-120	0						

MS				Sample ID: 1603709-05AMS			Units: mg/Kg		Analysis Date: 3/15/2016 10:08 PM		
Client ID: BG-01 (6")			Run ID: ICP2_160315A			SeqNo: 3735012		Prep Date: 3/15/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	15.4	0.40	7.924	6.907	107	75-125	0				
Barium	154.1	0.40	7.924	164.9	-136	75-125	0			SO	
Cadmium	7.376	0.79	7.924	-0.09673	94.3	75-125	0				
Chromium	24.08	0.40	7.924	14.41	122	75-125	0				
Copper	22.75	0.79	7.924	14.19	108	75-125	0				
Lead	17.05	0.40	7.924	11.52	69.9	75-125	0			S	
Nickel	25.57	0.40	7.924	21.84	47	75-125	0			S	
Selenium	9.582	0.79	7.924	0.9956	108	75-125	0				
Silver	8.195	0.40	7.924	-0.05649	104	75-125	0				
Zinc	58.86	0.79	7.924	46.18	160	75-125	0			SO	

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83552** Instrument ID **ICP2** Method: **SW846 6010C**

MSD				Sample ID: 1603709-05AMSD			Units: mg/Kg		Analysis Date: 3/15/2016 10:13 PM		
Client ID: BG-01 (6")				Run ID: ICP2_160315A			SeqNo: 3735013		Prep Date: 3/15/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	16.31	0.40	7.949	6.907	118	75-125	15.4	5.73	20		
Barium	152.6	0.40	7.949	164.9	-155	75-125	154.1	0.982	20	SO	
Cadmium	7.576	0.79	7.949	-0.09673	96.5	75-125	7.376	2.68	20		
Chromium	23.55	0.40	7.949	14.41	115	75-125	24.08	2.19	20		
Copper	23.35	0.79	7.949	14.19	115	75-125	22.75	2.58	20		
Lead	18.15	0.40	7.949	11.52	83.5	75-125	17.05	6.24	20		
Nickel	26.99	0.40	7.949	21.84	64.7	75-125	25.57	5.4	20	S	
Selenium	9.655	0.79	7.949	0.9956	109	75-125	9.582	0.759	20		
Silver	8.373	0.40	7.949	-0.05649	106	75-125	8.195	2.15	20		
Zinc	58.03	0.79	7.949	46.18	149	75-125	58.86	1.42	20	SO	

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
1603709-05A	1603709-06A	

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83651** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP				Sample ID: 1603706-03BDUP				Units: none			Analysis Date: 3/17/2016			
Client ID:				Run ID: SAR_160317A				SeqNo: 3738375			Prep Date: 3/17/2016		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Sodium Adsorption Ratio		27.66	0.010	0	0	0		28.76	3.9	50				

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83578** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK				Sample ID: SBLKS1-83578-83578				Units: µg/Kg			Analysis Date: 3/17/2016 04:02 PM		
Client ID:			Run ID: SVMS5_160316A				SeqNo: 3738252			Prep Date: 3/16/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	ND	6.7											
Anthracene	ND	6.7											
Benzo(a)anthracene	ND	6.7											
Benzo(a)pyrene	ND	6.7											
Benzo(b)fluoranthene	ND	6.7											
Benzo(k)fluoranthene	ND	6.7											
Chrysene	ND	6.7											
Dibenzo(a,h)anthracene	ND	6.7											
Fluoranthene	ND	6.7											
Fluorene	ND	6.7											
Indeno(1,2,3-cd)pyrene	ND	6.7											
Naphthalene	ND	6.7											
Pyrene	ND	6.7											
Surr: 2-Fluorobiphenyl	1306	0	1667	0	78.3	12-100		0					
Surr: 4-Terphenyl-d14	2005	0	1667	0	120	25-137		0					
Surr: Nitrobenzene-d5	1336	0	1667	0	80.2	37-107		0					

LCS				Sample ID: SLCSS1-83578-83578				Units: µg/Kg		Analysis Date: 3/17/2016 04:25 PM	
Client ID:			Run ID: SVMS5_160316A			SeqNo: 3738253		Prep Date: 3/16/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	536.7	6.7	666.7	0	80.5	45-110	0				
Anthracene	664.7	6.7	666.7	0	99.7	55-105	0				
Benzo(a)anthracene	669.7	6.7	666.7	0	100	50-110	0				
Benzo(a)pyrene	641	6.7	666.7	0	96.1	50-110	0				
Benzo(b)fluoranthene	724.7	6.7	666.7	0	109	45-115	0				
Benzo(k)fluoranthene	701.3	6.7	666.7	0	105	45-115	0				
Chrysene	666.3	6.7	666.7	0	99.9	55-110	0				
Dibenzo(a,h)anthracene	684.7	6.7	666.7	0	103	40-125	0				
Fluoranthene	665	6.7	666.7	0	99.7	55-115	0				
Fluorene	540.3	6.7	666.7	0	81	50-110	0				
Indeno(1,2,3-cd)pyrene	627	6.7	666.7	0	94	40-120	0				
Naphthalene	566.7	6.7	666.7	0	85	40-105	0				
Pyrene	736	6.7	666.7	0	110	45-125	0				
Surr: 2-Fluorobiphenyl	1402	0	1667	0	84.1	12-100	0				
Surr: 4-Terphenyl-d14	1827	0	1667	0	110	25-137	0				
Surr: Nitrobenzene-d5	1450	0	1667	0	87	37-107	0				

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

Client: Caerus Oil and Gas LLC
 Work Order: 1603709
 Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: 83578 Instrument ID SVMS5 Method: SW846 8270D

MS				Sample ID: 1603738-06B MS			Units: µg/Kg		Analysis Date: 3/16/2016 06:26 PM		
Client ID:			Run ID: SVMS5_160316A			SeqNo: 3737877		Prep Date: 3/16/2016		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	592.8	33	660.5	112.6	72.7	45-110	0				
Anthracene	1219	33	660.5	466.8	114	55-105	0			S	
Benzo(a)anthracene	2246	33	660.5	1275	147	50-110	0			S	
Benzo(a)pyrene	1972	33	660.5	1157	123	50-110	0			S	
Benzo(b)fluoranthene	2708	33	660.5	1653	160	45-115	0			S	
Benzo(k)fluoranthene	1304	33	660.5	597.4	107	45-115	0				
Chrysene	2105	33	660.5	1177	141	55-110	0			S	
Dibenzo(a,h)anthracene	731.5	33	660.5	195.9	81.1	40-125	0				
Fluoranthene	4467	33	660.5	2967	227	55-115	0			SO	
Fluorene	820.7	33	660.5	275.8	82.5	50-110	0				
Indeno(1,2,3-cd)pyrene	1428	33	660.5	856.9	86.5	40-120	0				
Naphthalene	421.1	33	660.5	0	63.7	40-105	0				
Pyrene	3615	33	660.5	2189	216	45-125	0			S	
Surr: 2-Fluorobiphenyl	1171	0	1651	0	70.9	12-100	0				
Surr: 4-Terphenyl-d14	1364	0	1651	0	82.6	25-137	0				
Surr: Nitrobenzene-d5	1177	0	1651	0	71.3	37-107	0				

MSD				Sample ID: 1603738-06B MSD				Units: µg/Kg		Analysis Date: 3/16/2016 06:50 PM	
Client ID:			Run ID: SVMS5_160316A			SeqNo: 3737878		Prep Date: 3/16/2016		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	557.5	33	665.7	112.6	66.8	45-110	592.8	6.14	30		
Anthracene	858.7	33	665.7	466.8	58.9	55-105	1219	34.7	30	R	
Benzo(a)anthracene	1419	33	665.7	1275	21.7	50-110	2246	45.1	30	SR	
Benzo(a)pyrene	1306	33	665.7	1157	22.4	50-110	1972	40.6	30	SR	
Benzo(b)fluoranthene	1649	33	665.7	1653	-0.639	45-115	2708	48.6	30	SR	
Benzo(k)fluoranthene	975.1	33	665.7	597.4	56.8	45-115	1304	28.9	30		
Chrysene	1306	33	665.7	1177	19.5	55-110	2105	46.8	30	SR	
Dibenzo(a,h)anthracene	637.3	33	665.7	195.9	66.3	40-125	731.5	13.8	30		
Fluoranthene	2318	33	665.7	2967	-97.5	55-115	4467	63.3	30	SRO	
Fluorene	655.6	33	665.7	275.8	57.1	50-110	820.7	22.4	30		
Indeno(1,2,3-cd)pyrene	993.4	33	665.7	856.9	20.5	40-120	1428	35.9	30	SR	
Naphthalene	527.5	33	665.7	0	79.2	40-105	421.1	22.4	30		
Pyrene	1907	33	665.7	2189	-42.3	45-125	3615	61.9	30	SR	
Surr: 2-Fluorobiphenyl	1221	0	1664	0	73.4	12-100	1171	4.24	40		
Surr: 4-Terphenyl-d14	1308	0	1664	0	78.6	25-137	1364	4.19	40		
Surr: Nitrobenzene-d5	1168	0	1664	0	70.2	37-107	1177	0.782	40		

The following samples were analyzed in this batch:

1603709-01B 1603709-02B 1603709-03B

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83496** Instrument ID **VMS9** Method: **SW8260B**

MBLK		Sample ID: MBLK-83496-83496				Units: µg/Kg-dry		Analysis Date: 3/14/2016 02:07 PM		
Client ID:		Run ID: VMS9_160314A				SeqNo: 3733593		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	11.5	30								J
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	1052	0	1000	0	105	70-130	0			
Surr: 4-Bromofluorobenzene	988	0	1000	0	98.8	70-130	0			
Surr: Dibromofluoromethane	969	0	1000	0	96.9	70-130	0			
Surr: Toluene-d8	970.5	0	1000	0	97	70-130	0			

LCS		Sample ID: LCS-83496-83496				Units: µg/Kg-dry		Analysis Date: 3/14/2016 12:24 PM		
Client ID:		Run ID: VMS9_160314A				SeqNo: 3733592		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1025	30	1000	0	102	75-125	0			
Ethylbenzene	1058	30	1000	0	106	75-125	0			
m,p-Xylene	2151	60	2000	0	108	80-125	0			
o-Xylene	1025	30	1000	0	102	75-125	0			
Toluene	1030	30	1000	0	103	70-125	0			
Xylenes, Total	3176	90	3000	0	106	75-125	0			
Surr: 1,2-Dichloroethane-d4	958.5	0	1000	0	95.8	70-130	0			
Surr: 4-Bromofluorobenzene	1002	0	1000	0	100	70-130	0			
Surr: Dibromofluoromethane	988.5	0	1000	0	98.8	70-130	0			
Surr: Toluene-d8	991.5	0	1000	0	99.2	70-130	0			

MS		Sample ID: 1603709-01A MS				Units: µg/Kg-dry		Analysis Date: 3/16/2016 08:42 AM		
Client ID: SS-POR (6")		Run ID: VMS10_160315B				SeqNo: 3735699		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1320	40	1326	0	99.6	75-125	0			
Ethylbenzene	1396	40	1326	0	105	75-125	0			
m,p-Xylene	3023	80	2651	100.1	110	80-125	0			
o-Xylene	1418	40	1326	23.2	105	75-125	0			
Toluene	1369	40	1326	33.14	101	70-125	0			
Xylenes, Total	4441	120	3977	123	109	75-125	0			
Surr: 1,2-Dichloroethane-d4	1408	0	1326	0	106	70-130	0			
Surr: 4-Bromofluorobenzene	1442	0	1326	0	109	70-130	0			
Surr: Dibromofluoromethane	1376	0	1326	0	104	70-130	0			
Surr: Toluene-d8	1293	0	1326	0	97.6	70-130	0			

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83496** Instrument ID **VMS9** Method: **SW8260B**

MSD				Sample ID: 1603709-01A MSD			Units: µg/Kg-dry		Analysis Date: 3/16/2016 09:06 AM		
Client ID: SS-POR (6")				Run ID: VMS10_160315B			SeqNo: 3735700		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1381	40	1326	0	104	75-125	1320	4.52	30		
Ethylbenzene	1474	40	1326	0	111	75-125	1396	5.45	30		
m,p-Xylene	3189	80	2651	100.1	116	80-125	3023	5.34	30		
o-Xylene	1493	40	1326	23.2	111	75-125	1418	5.1	30		
Toluene	1408	40	1326	33.14	104	70-125	1369	2.77	30		
Xylenes, Total	4681	120	3977	123	115	75-125	4441	5.26	30		
Surr: 1,2-Dichloroethane-d4	1422	0	1326	0	107	70-130	1408	0.937	30		
Surr: 4-Bromofluorobenzene	1436	0	1326	0	108	70-130	1442	0.414	30		
Surr: Dibromofluoromethane	1359	0	1326	0	102	70-130	1376	1.26	30		
Surr: Toluene-d8	1289	0	1326	0	97.2	70-130	1293	0.308	30		

The following samples were analyzed in this batch:

1603709-01A 1603709-02A 1603709-03A

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83495** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-83495-83495				Units: s.u.		Analysis Date: 3/14/2016 03:45 PM		
Client ID:		Run ID: WETCHEM_160314I				SeqNo: 3732544		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	4.02	0	4	0	100	90-110	0			
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DUP		Sample ID: 1603551-01A DUP				Units: s.u.		Analysis Date: 3/14/2016 03:45 PM		
Client ID:		Run ID: WETCHEM_160314I				SeqNo: 3732546		Prep Date: 3/14/2016		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	11.59	0	0	0	0	0-0	11.54	0.432	20	
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DUP		Sample ID: 1603706-04B DUP					Units: s.u.		Analysis Date: 3/14/2016 03:45 PM		
Client ID:			Run ID: WETCHEM_160314I			SeqNo: 3732553		Prep Date: 3/14/2016		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	8.36	0	0	0	0	0-0	8.42	0.715	20	
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The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83614** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-83614-83614				Units: mg/Kg		Analysis Date: 3/16/2016 03:04 PM		
Client ID:		Run ID: WETCHEM_160316Q		SeqNo: 3736438		Prep Date: 3/15/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent ND 1.0

LCS		Sample ID: LCS-83614-83614				Units: mg/Kg		Analysis Date: 3/16/2016 03:04 PM		
Client ID:		Run ID: WETCHEM_160316Q		SeqNo: 3736439		Prep Date: 3/15/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.76 1.0 5 0 95.2 80-120 0

MS		Sample ID: 1603709-03BMS				Units: mg/Kg		Analysis Date: 3/16/2016 03:04 PM		
Client ID: Spillpath Terminus (6")		Run ID: WETCHEM_160316Q		SeqNo: 3736451		Prep Date: 3/15/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.128 0.92 4.587 0.1226 43.7 75-125 0 S

MS		Sample ID: 1603709-03BMSI				Units: mg/Kg		Analysis Date: 3/16/2016 03:04 PM		
Client ID: Spillpath Terminus (6")		Run ID: WETCHEM_160316Q		SeqNo: 3736453		Prep Date: 3/15/2016		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2531 94 2945 0.1226 85.9 75-125 0

MSD		Sample ID: 1603709-03BMSD				Units: mg/Kg		Analysis Date: 3/16/2016 03:04 PM		
Client ID: Spillpath Terminus (6")		Run ID: WETCHEM_160316Q		SeqNo: 3736452		Prep Date: 3/15/2016		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.311 0.94 4.717 0.1226 46.4 75-125 2.128 8.24 20 S

The following samples were analyzed in this batch:

1603709-01B 1603709-02B 1603709-03B

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **83651** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1603706-03B DUP				Units: mmhos/cm @25°		Analysis Date: 3/18/2016 08:40 AM		
Client ID:		Run ID: WETCHEM_160318A				SeqNo: 3738657		Prep Date: 3/17/2016		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	8.38	0.050	0	0	0		7.79	7.3	50	

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Caerus Oil and Gas LLC
 Work Order: 1603709
 Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **R183474** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R183474				Units: % of sample		Analysis Date: 3/14/2016 03:20 PM		
Client ID:		Run ID: MOIST_160314B				SeqNo: 3734183		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

LCS		Sample ID: LCS-R183474				Units: % of sample		Analysis Date: 3/14/2016 03:20 PM		
Client ID:		Run ID: MOIST_160314B				SeqNo: 3734182		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1603693-02B DUP				Units: % of sample		Analysis Date: 3/14/2016 03:20 PM		
Client ID:		Run ID: MOIST_160314B				SeqNo: 3734162		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 12.13 0.050 0 0 0 11.62 4.29 20

DUP		Sample ID: 1603693-08A DUP				Units: % of sample		Analysis Date: 3/14/2016 03:20 PM		
Client ID:		Run ID: MOIST_160314B				SeqNo: 3734169		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 20.98 0.050 0 0 0 21.23 1.18 20

The following samples were analyzed in this batch:

1603709-01B	1603709-02B	1603709-03B
1603709-05A		

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

Client: Caerus Oil and Gas LLC
Work Order: 1603709
Project: High Mesa Road Release

QC BATCH REPORT

Batch ID: **R183475** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R183475				Units: % of sample		Analysis Date: 3/14/2016 05:02 PM		
Client ID:		Run ID: MOIST_160314C				SeqNo: 3734208		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture ND 0.050

LCS		Sample ID: LCS-R183475				Units: % of sample		Analysis Date: 3/14/2016 05:02 PM		
Client ID:		Run ID: MOIST_160314C				SeqNo: 3734207		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1603686-02B DUP				Units: % of sample		Analysis Date: 3/14/2016 05:02 PM		
Client ID:		Run ID: MOIST_160314C				SeqNo: 3734198		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 17.59 0.050 0 0 0 18.91 7.23 20

DUP		Sample ID: 1603709-06A DUP				Units: % of sample		Analysis Date: 3/14/2016 05:02 PM		
Client ID: BG-02 (6")		Run ID: MOIST_160314C				SeqNo: 3734206		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 14.47 0.050 0 0 0 14.37 0.693 20

The following samples were analyzed in this batch:

1603709-06A

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



CHAIN OF CUSTODY

Failure to complete all section of this form may delay analysis.

COC number (for client tracking)

1603707

Page 1 of 1

Hold

Note: (a) DW (Drinking water), SW (Surface water), GW (Ground water), WW (Waste water), S (Soil), SL (Sludge), SE (Sediment), OS (Other solid material)

ALS Technichem (HK) Pty Ltd Address: 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong Tel: +852 2810 1044 Fax: +852 2810 2021 Email: HongKong@alsglobal.com

* Hold POC pending analysis of other samples *

 2.0°C

Sample Receipt Checklist

Client Name: **CAERUS**

Date/Time Received: **12-Mar-16 14:20**

Work Order: **1603709**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

14-Mar-16
Date

Reviewed by: Chad Whelton
eSignature

14-Mar-16
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>2.0/2.0 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>3/14/2016 11:38:46 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: