TABLE 1
NOLTE 14-43D
SOIL ANALYTICAL RESULTS (LANDFARM)
CAERUS OIL AND GAS
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	Nolte Landfarm East	Nolte East	Nolte Landfarm West	Nolte West	BKGD 03*
Sample Date			10/5/2015	2/22/2016	10/5/2015	2/22/2016	12/9/2014
Sample Type			Confirmation	Confirmation	Confirmation	Confirmation	Background
Arsenic	0.39	mg/kg	6.7	NA	6.6	NA	9.1
Barium	15,000	mg/kg	360	NA	490	NA	NA
Cadmium	70	mg/kg	ND	NA	ND	NA	NA
Chromium (III)	120,000	mg/kg	14	NA	13	NA	NA
Chromium (VI)	23	mg/kg	ND	NA	ND	NA	NA
Copper	3,100	mg/kg	14	NA	14	NA	NA
Lead	400	mg/kg	13	NA	14	NA	NA
Mercury	23	mg/kg	0.025	NA	0.025	NA	NA
Nickel	1,600	mg/kg	26	NA	25	NA	NA
Selenium	390	mg/kg	1.1	NA	ND	NA	NA
Silver	390	mg/kg	ND	NA	ND	NA	NA
Zinc	23,000	mg/kg	62	NA	65	NA	NA
EC	4 or 2x background	mmhos/cm	13	11	12	11	NA
pH	6-9	SU	8.0	NA	8.0	NA	NA
SAR	12	unitless	21	15	20	16	NA
TPH-GRO			5,900	95	470	75	NA
TPH-DRO			160	450	170	91	NA
TPH	500	mg/kg	6,060	545	640	166	NA
Benzene	0.17	mg/kg	ND	NA	ND	NA	NA
Toluene	85	mg/kg	0.85	NA	0.070	NA	NA
Ethylbenzene	100	mg/kg	3.3	NA	ND	NA	NA
Total Xylenes	175	mg/kg	83	NA	0.49	NA	NA
Acenaphthene	1,000	mg/kg	ND	NA	ND	NA	NA
Anthracene	1,000	mg/kg	ND	NA	ND	NA	NA
Benz(a)anthracene	0.22	mg/kg	0.0090	NA	0.0082	NA	NA
Benzo(b)fluoranthene	0.22	mg/kg	0.013	NA	0.0089	NA	NA
Benzo(k)fluoranthene	2.2	mg/kg	ND	NA	ND	NA	NA
Benzo(a)pyrene	0.022	mg/kg	0.012	NA	0.0078	NA	NA
Chrysene	22	mg/kg	ND	NA	ND	NA	NA
Dibenzo(a,h)anthracene	0.022	mg/kg	ND	NA	ND	NA	NA
Fluoranthene	1,000	mg/kg	0.015	NA	0.011	NA	NA
Fluorene	1,000	mg/kg	0.015	NA	0.021	NA	NA
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	0.0094	NA	ND	NA	NA
Naphthalene	23	mg/kg	0.068	NA	0.049	NA	NA
Pyrene	1,000	mg/kg	0.012	NA	0.011	NA	NA

Notes:
* This background sample was collected near another pad location, Island Ranch 13-796 (COGCC Location ID 436810)
< - 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
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

13-Oct-2015

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

Re: **Project Nolte 14-43d Landfarm** Work Order: **1510326**

Dear Jake,

ALS Environmental received 2 samples on 06-Oct-2015 02:30 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 26.

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

Sincerely,

Electronically approved by: Chad Whelton

Les Arnold
Senior Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 13-Oct-15

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: **1510326**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1510326-01	Nolte Landfarm East	Soil		10/5/2015 15:03	10/6/2015 14:30	☐
1510326-02	Nolte Landfarm West	Soil		10/5/2015 15:18	10/6/2015 14:30	☐

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: 1510326

Case Narrative

Batch 77052, Method VOC_8260_S, Sample 1510326-01A: VOC surrogate recovery high due to matrix interference.

Batch 77106, Method CR6_7196_S, Sample 1510326-02A MS/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.

Batch 77156, Method ICP_6010_S, Sample 1510326-02A MS/MSD: The MS and MSD recovery was above the upper control limit for Chromium. The corresponding result in the parent sample may be biased high.

Batch 77156, Method ICP_6010_S, Sample 1510326-02A 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.

ALS Group USA, Corp

Date: 13-Oct-15

Qualifier	Description
*	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.

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
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: *13-Oct-15*

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: 1510326
Sample ID: Nolte Landfarm East
Lab ID: 1510326-01
Collection Date: 10/5/2015 03:03 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**			Analyst: **IT**
DRO (C10-C28)	**160**		**4.5**	**mg/Kg-dry**	1	10/9/2015 04:24 AM
Surr: 4-Terphenyl-d14	*104*		*39-133*	*%REC*	1	10/9/2015 04:24 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**			Analyst: **IT**
GRO (C6-C10)	**5,900**		**14**	**mg/Kg-dry**	5	10/6/2015 09:24 PM
Surr: Toluene-d8	*102*		*50-150*	*%REC*	5	10/6/2015 09:24 PM
MERCURY BY CVAA			**SW7471B**		Prep: SW7471 / 10/7/15	Analyst: **LR**
Mercury	**0.025**		**0.015**	**mg/Kg-dry**	1	10/7/2015 05:48 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 10/8/15	Analyst: **JEC**
Arsenic	**6.7**		**0.42**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Barium	**360**		**0.42**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Cadmium	ND		0.85	mg/Kg-dry	1	10/12/2015 10:21 AM
Chromium	**14**		**0.42**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Copper	**14**		**0.85**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Lead	**13**		**0.42**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Nickel	**26**		**0.42**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Selenium	**1.1**		**0.85**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
Silver	ND		0.42	mg/Kg-dry	1	10/12/2015 10:21 AM
Zinc	**62**		**0.85**	**mg/Kg-dry**	1	10/12/2015 10:21 AM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 10/8/15	Analyst: **JEC**
Calcium	**460**		**5.0**	**mg/L**	10	10/8/2015 12:13 PM
Magnesium	**110**		**2.0**	**mg/L**	10	10/8/2015 12:13 PM
Sodium	**2,000**		**2.0**	**mg/L**	10	10/8/2015 12:13 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 10/8/15	Analyst: **JEC**
Sodium Adsorption Ratio	**21**		**0.010**	**none**	1	10/8/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 10/8/15	Analyst: **RS**
Acenaphthene	ND		0.0072	mg/Kg-dry	1	10/10/2015 01:18 AM
Anthracene	ND		0.0072	mg/Kg-dry	1	10/10/2015 01:18 AM
Benzo(a)anthracene	**0.0090**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Benzo(a)pyrene	**0.012**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Benzo(b)fluoranthene	**0.013**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Benzo(k)fluoranthene	ND		0.0072	mg/Kg-dry	1	10/10/2015 01:18 AM
Chrysene	ND		0.0072	mg/Kg-dry	1	10/10/2015 01:18 AM
Dibenzo(a,h)anthracene	ND		0.0072	mg/Kg-dry	1	10/10/2015 01:18 AM
Fluoranthene	**0.015**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM

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

ALS Group USA, Corp

Date: *13-Oct-15*

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: 1510326
Sample ID: Nolte Landfarm East
Lab ID: 1510326-01
Collection Date: 10/5/2015 03:03 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	**0.015**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Indeno(1,2,3-cd)pyrene	**0.0094**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Naphthalene	**0.068**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Pyrene	**0.012**		**0.0072**	**mg/Kg-dry**	1	10/10/2015 01:18 AM
Surr: 2-Fluorobiphenyl	*70.5*		*12-100*	*%REC*	1	10/10/2015 01:18 AM
Surr: 4-Terphenyl-d14	*77.7*		*25-137*	*%REC*	1	10/10/2015 01:18 AM
Surr: Nitrobenzene-d5	*73.5*		*37-107*	*%REC*	1	10/10/2015 01:18 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 10/6/15	Analyst: **AK**
Benzene	ND		0.033	mg/Kg-dry	1	10/11/2015 02:13 PM
Ethylbenzene	**3.3**		**0.033**	**mg/Kg-dry**	1	10/11/2015 02:13 PM
m,p-Xylene	**76**		**2.6**	**mg/Kg-dry**	40	10/13/2015 07:53 AM
o-Xylene	**6.6**		**1.3**	**mg/Kg-dry**	40	10/13/2015 07:53 AM
Toluene	**0.85**		**0.033**	**mg/Kg-dry**	1	10/11/2015 02:13 PM
Xylenes, Total	**83**		**4.0**	**mg/Kg-dry**	40	10/13/2015 07:53 AM
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-130*	*%REC*	40	10/13/2015 07:53 AM
Surr: 1,2-Dichloroethane-d4	*98.4*		*70-130*	*%REC*	1	10/11/2015 02:13 PM
Surr: 4-Bromofluorobenzene	*115*		*70-130*	*%REC*	1	10/11/2015 02:13 PM
Surr: 4-Bromofluorobenzene	*99.6*		*70-130*	*%REC*	40	10/13/2015 07:53 AM
Surr: Dibromofluoromethane	*91.7*		*70-130*	*%REC*	40	10/13/2015 07:53 AM
Surr: Dibromofluoromethane	*103*		*70-130*	*%REC*	1	10/11/2015 02:13 PM
Surr: Toluene-d8	*377*	S	*70-130*	*%REC*	1	10/11/2015 02:13 PM
Surr: Toluene-d8	*103*		*70-130*	*%REC*	40	10/13/2015 07:53 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 10/8/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**13**		**0.050**	**mmhos/cm @2**	10	10/8/2015 02:45 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JB**
Chromium, Trivalent	**14**		**0.55**	**mg/Kg-dry**	1	10/12/2015 02:00 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 10/6/15	Analyst: **MB**
Chromium, Hexavalent	ND		1.0	mg/Kg-dry	1	10/7/2015 03:30 PM
MOISTURE			**E160.3M**			Analyst: **TM**
Moisture	**9.0**		**0.050**	**% of sample**	1	10/9/2015 01:54 PM
PH			**SW9045D**		Prep: EXTRACT / 10/6/15	Analyst: **JB**
pH	**8.0**			**s.u.**	1	10/6/2015 03:45 PM

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

ALS Group USA, Corp

Date: *13-Oct-15*

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: 1510326
Sample ID: Nolte Landfarm West
Lab ID: 1510326-02
Collection Date: 10/5/2015 03:18 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**			Analyst: **IT**
DRO (C10-C28)	**170**		**4.4**	**mg/Kg-dry**	1	10/9/2015 04:54 AM
Surr: 4-Terphenyl-d14	*96.4*		*39-133*	*%REC*	1	10/9/2015 04:54 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**			Analyst: **IT**
GRO (C6-C10)	**470**		**14**	**mg/Kg-dry**	5	10/6/2015 09:52 PM
Surr: Toluene-d8	*102*		*50-150*	*%REC*	5	10/6/2015 09:52 PM
MERCURY BY CVAA			**SW7471B**		Prep: SW7471 / 10/7/15	Analyst: **LR**
Mercury	**0.025**		**0.016**	**mg/Kg-dry**	1	10/7/2015 05:51 PM
METALS ANALYSIS BY ICP			**SW846 6010C**		Prep: SW3050B / 10/8/15	Analyst: **JEC**
Arsenic	**6.6**		**0.41**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Barium	**490**		**0.41**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Cadmium	ND		0.82	mg/Kg-dry	1	10/8/2015 06:43 PM
Chromium	**13**		**0.41**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Copper	**14**		**0.82**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Lead	**14**		**0.41**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Nickel	**25**		**0.41**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
Selenium	ND		0.82	mg/Kg-dry	1	10/8/2015 06:43 PM
Silver	ND		0.41	mg/Kg-dry	1	10/8/2015 06:43 PM
Zinc	**65**		**0.82**	**mg/Kg-dry**	1	10/8/2015 06:43 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 10/8/15	Analyst: **JEC**
Calcium	**450**		**5.0**	**mg/L**	10	10/8/2015 12:18 PM
Magnesium	**100**		**2.0**	**mg/L**	10	10/8/2015 12:18 PM
Sodium	**1,800**		**2.0**	**mg/L**	10	10/8/2015 12:18 PM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 10/8/15	Analyst: **JEC**
Sodium Adsorption Ratio	**20**		**0.010**	**none**	1	10/8/2015
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 10/8/15	Analyst: **RS**
Acenaphthene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Anthracene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Benzo(a)anthracene	**0.0082**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Benzo(a)pyrene	**0.0078**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Benzo(b)fluoranthene	**0.0089**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Benzo(k)fluoranthene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Chrysene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Dibenzo(a,h)anthracene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Fluoranthene	**0.011**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM

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

ALS Group USA, Corp

Date: *13-Oct-15*

Client: Caerus Oil and Gas LLC
Project: Project Nolte 14-43d Landfarm
Work Order: 1510326
Sample ID: Nolte Landfarm West
Lab ID: 1510326-02
Collection Date: 10/5/2015 03:18 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	**0.021**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Indeno(1,2,3-cd)pyrene	ND		0.0071	mg/Kg-dry	1	10/10/2015 01:37 AM
Naphthalene	**0.049**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Pyrene	**0.011**		**0.0071**	**mg/Kg-dry**	1	10/10/2015 01:37 AM
Surr: 2-Fluorobiphenyl	*73.2*		*12-100*	*%REC*	1	10/10/2015 01:37 AM
Surr: 4-Terphenyl-d14	*74.2*		*25-137*	*%REC*	1	10/10/2015 01:37 AM
Surr: Nitrobenzene-d5	*79.1*		*37-107*	*%REC*	1	10/10/2015 01:37 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 10/6/15	Analyst: **BG**
Benzene	ND		0.033	mg/Kg-dry	1	10/13/2015 03:05 AM
Ethylbenzene	ND		0.033	mg/Kg-dry	1	10/13/2015 03:05 AM
m,p-Xylene	**0.46**		**0.065**	**mg/Kg-dry**	1	10/13/2015 03:05 AM
o-Xylene	**0.035**		**0.033**	**mg/Kg-dry**	1	10/13/2015 03:05 AM
Toluene	**0.070**		**0.033**	**mg/Kg-dry**	1	10/13/2015 03:05 AM
Xylenes, Total	**0.49**		**0.098**	**mg/Kg-dry**	1	10/13/2015 03:05 AM
Surr: 1,2-Dichloroethane-d4	*97.4*		*70-130*	*%REC*	1	10/13/2015 03:05 AM
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	1	10/13/2015 03:05 AM
Surr: Dibromofluoromethane	*92.8*		*70-130*	*%REC*	1	10/13/2015 03:05 AM
Surr: Toluene-d8	*105*		*70-130*	*%REC*	1	10/13/2015 03:05 AM
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 10/8/15	Analyst: **JB**
Electrical Conductivity @ Saturation	**12**		**0.050**	**mmhos/cm @2**	10	10/8/2015 02:45 PM
CHROMIUM, TRIVALENT			**CALCULATION**			Analyst: **JB**
Chromium, Trivalent	**13**		**0.54**	**mg/Kg-dry**	1	10/12/2015 02:00 PM
CHROMIUM, HEXAVALENT			**SW7196A**		Prep: SW3060A / 10/6/15	Analyst: **MB**
Chromium, Hexavalent	ND		1.0	mg/Kg-dry	1	10/7/2015 03:30 PM
MOISTURE			**E160.3M**			Analyst: **TM**
Moisture	**8.1**		**0.050**	**% of sample**	1	10/9/2015 01:54 PM
PH			**SW9045D**		Prep: EXTRACT / 10/6/15	Analyst: **JB**
pH	**8.0**			**s.u.**	1	10/6/2015 03:45 PM

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77136b** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-77136-77136b** Units: **mg/Kg** Analysis Date: **10/8/2015 05:26 PM**
Client ID: Run ID: **GC8_151008A** SeqNo: **3499247** Prep Date: **10/8/2015** 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								
Surr: 4-Terphenyl-d14	*1.724*	0	*2*	0	*86.2*	*39-133*	0			

LCS Sample ID: **DLCSS1-77136-77136b** Units: **mg/Kg** Analysis Date: **10/8/2015 05:56 PM**
Client ID: Run ID: **GC8_151008A** SeqNo: **3499248** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	194.9	5.0	200	0	97.4	61-109	0			
Surr: 4-Terphenyl-d14	*1.392*	0	*2*	0	*69.6*	*39-133*	0			

MS Sample ID: **1510242-01B MS** Units: **mg/Kg** Analysis Date: **10/8/2015 06:26 PM**
Client ID: Run ID: **GC8_151008A** SeqNo: **3499251** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	174.8	4.1	162.2	17.46	97	48-110	0			
Surr: 4-Terphenyl-d14	*1.177*	0	*1.622*	0	*72.5*	*39-133*	0			

MSD Sample ID: **1510242-01B MSD** Units: **mg/Kg** Analysis Date: **10/8/2015 06:56 PM**
Client ID: Run ID: **GC8_151008A** SeqNo: **3499254** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	173.2	4.1	162.1	17.46	96.1	48-110	174.8	0.919	30	
Surr: 4-Terphenyl-d14	*1.154*	0	*1.621*	0	*71.2*	*39-133*	1.177	*1.91*	*30*	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77029A** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-77029-77029A** Units: **µg/Kg** Analysis Date: **10/6/2015 07:17 PM**
Client ID: Run ID: **GC9_151006A** SeqNo: **3494676** Prep Date: **10/6/2015** 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	*4609*	0	*5000*	0	*92.2*	*50-150*	0			

LCS Sample ID: **LCS-77029-77029A** Units: **µg/Kg** Analysis Date: **10/6/2015 06:52 PM**
Client ID: Run ID: **GC9_151006A** SeqNo: **3494671** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	522900	2,500	500000	0	105	70-130	0			
Surr: Toluene-d8	*5100*	0	*5000*	0	*102*	*50-150*	0			

MS Sample ID: **1510320-01A MS** Units: **µg/Kg** Analysis Date: **10/6/2015 10:17 PM**
Client ID: Run ID: **GC9_151006A** SeqNo: **3494690** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	740000	2,500	500000	63570	135	70-130	0			S
Surr: Toluene-d8	*5460*	0	*5000*	0	*109*	*50-150*	0			

MSD Sample ID: **1510320-01A MSD** Units: **µg/Kg** Analysis Date: **10/6/2015 10:41 PM**
Client ID: Run ID: **GC9_151006A** SeqNo: **3494692** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	744000	2,500	500000	63570	136	70-130	740000	0.539	30	S
Surr: Toluene-d8	*5558*	0	*5000*	0	*111*	*50-150*	5460	*1.77*	*30*	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77083** Instrument ID **HG1** Method: **SW7471B**

MBLK Sample ID: **MBLK-77083-77083** Units: **mg/Kg** Analysis Date: **10/7/2015 04:33 PM**
Client ID: Run ID: **HG1_151007A** SeqNo: **3496119** Prep Date: **10/7/2015** 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-77083-77083** Units: **mg/Kg** Analysis Date: **10/7/2015 04:36 PM**
Client ID: Run ID: **HG1_151007A** SeqNo: **3496120** Prep Date: **10/7/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1767	0.020	0.1665	0	106	80-120	0			

MS Sample ID: **1510170-06BMS** Units: **mg/Kg** Analysis Date: **10/7/2015 04:43 PM**
Client ID: Run ID: **HG1_151007A** SeqNo: **3496123** Prep Date: **10/7/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1146	0.013	0.105	0.002268	107	75-125	0			

MSD Sample ID: **1510170-06BMSD** Units: **mg/Kg** Analysis Date: **10/7/2015 04:45 PM**
Client ID: Run ID: **HG1_151007A** SeqNo: **3496124** Prep Date: **10/7/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1149	0.013	0.1048	0.002268	107	75-125	0.1146	0.248	35	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77102** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1510326-02ADUP** Units: **mg/L** Analysis Date: **10/8/2015 12:24 PM**
Client ID: **Nolte Landfarm West** Run ID: **ICP2_151008A** SeqNo: **3497560** Prep Date: **10/8/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	452.4	5.0	0	0	0	0-0	453	0.116		
Magnesium	103.1	2.0	0	0	0	0-0	103.7	0.569		
Sodium	1780	2.0	0	0	0	0-0	1775	0.283		

DUP Sample ID: **1510326-02ADUP** Units: **none** Analysis Date: **10/8/2015**
Client ID: **Nolte Landfarm West** Run ID: **SAR_151008B** SeqNo: **3497692** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	19.65	0.010	0	0	0		19.57	0.403	50	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77156** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-77156-77156** Units: **mg/Kg** Analysis Date: **10/8/2015 06:32 PM**
Client ID: Run ID: **ICP2_151008A** SeqNo: **3499670** Prep Date: **10/8/2015** 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	0.009063	0.25								J
Copper	0.06804	0.50								J
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	0.09719	0.50								J

LCS Sample ID: **LCS-77156-77156** Units: **mg/Kg** Analysis Date: **10/8/2015 06:38 PM**
Client ID: Run ID: **ICP2_151008A** SeqNo: **3499671** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.09	0.25	5	0	102	80-120	0			
Barium	5.125	0.25	5	0	103	80-120	0			
Cadmium	4.927	0.50	5	0	98.5	80-120	0			
Chromium	5.582	0.25	5	0	112	80-120	0			
Copper	5.377	0.50	5	0	108	80-120	0			
Lead	5.303	0.25	5	0	106	80-120	0			
Nickel	5.374	0.25	5	0	107	80-120	0			
Selenium	5.351	0.50	5	0	107	80-120	0			
Silver	5.274	0.25	5	0	105	80-120	0			
Zinc	5.275	0.50	5	0	105	80-120	0			

MS Sample ID: **1510326-02AMS** Units: **mg/Kg** Analysis Date: **10/8/2015 06:48 PM**
Client ID: **Nolte Landfarm West** Run ID: **ICP2_151008A** SeqNo: **3499673** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.9	0.38	7.519	6.04	105	75-125	0			
Barium	365.9	0.38	7.519	453.8	-1170	75-125	0			SO
Cadmium	7.396	0.75	7.519	0.4765	92	75-125	0			
Chromium	22.83	0.38	7.519	12.12	142	75-125	0			S
Copper	20.11	0.75	7.519	12.97	94.9	75-125	0			
Lead	19.09	0.38	7.519	12.89	82.5	75-125	0			
Nickel	31.46	0.38	7.519	22.84	115	75-125	0			
Selenium	8.711	0.75	7.519	0.5799	108	75-125	0			
Silver	7.684	0.38	7.519	0.01004	102	75-125	0			
Zinc	70.98	0.75	7.519	59.59	152	75-125	0			SO

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77156** Instrument ID **ICP2** Method: **SW846 6010C**

MSD Sample ID: **1510326-02AMSD** Units: **mg/Kg** Analysis Date: **10/8/2015 06:54 PM**
Client ID: **Nolte Landfarm West** Run ID: **ICP2_151008A** SeqNo: **3499674** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	13.68	0.38	7.519	6.04	102	75-125	13.9	1.56	20	
Barium	436.6	0.38	7.519	453.8	-229	75-125	365.9	17.6	20	SO
Cadmium	7.662	0.75	7.519	0.4765	95.6	75-125	7.396	3.52	20	
Chromium	22.73	0.38	7.519	12.12	141	75-125	22.83	0.429	20	S
Copper	20.09	0.75	7.519	12.97	94.7	75-125	20.11	0.0934	20	
Lead	19.33	0.38	7.519	12.89	85.7	75-125	19.09	1.22	20	
Nickel	31.16	0.38	7.519	22.84	111	75-125	31.46	0.967	20	
Selenium	8.747	0.75	7.519	0.5799	109	75-125	8.711	0.408	20	
Silver	7.815	0.38	7.519	0.01004	104	75-125	7.684	1.7	20	
Zinc	71.23	0.75	7.519	59.59	155	75-125	70.98	0.352	20	SO

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77137** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-77137-77137** Units: **µg/Kg** Analysis Date: **10/8/2015 08:50 PM**
Client ID: Run ID: **SVMS5_151008A** SeqNo: **3499754** Prep Date: **10/8/2015** 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	*1325*	0	*1667*	0	*79.5*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1560*	0	*1667*	0	*93.6*	*25-137*	0			
Surr: Nitrobenzene-d5	*1352*	0	*1667*	0	*81.1*	*37-107*	0			

LCS Sample ID: **SLCSS1-77137-77137** Units: **µg/Kg** Analysis Date: **10/8/2015 09:13 PM**
Client ID: Run ID: **SVMS5_151008A** SeqNo: **3499755** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	590.7	6.7	666.7	0	88.6	45-110	0			
Anthracene	649.3	6.7	666.7	0	97.4	55-105	0			
Benzo(a)anthracene	665	6.7	666.7	0	99.7	50-110	0			
Benzo(a)pyrene	673.7	6.7	666.7	0	101	50-110	0			
Benzo(b)fluoranthene	672	6.7	666.7	0	101	45-115	0			
Benzo(k)fluoranthene	672.7	6.7	666.7	0	101	45-115	0			
Chrysene	654.3	6.7	666.7	0	98.1	55-110	0			
Dibenzo(a,h)anthracene	635	6.7	666.7	0	95.2	40-125	0			
Fluoranthene	646.7	6.7	666.7	0	97	55-115	0			
Fluorene	602.3	6.7	666.7	0	90.3	50-110	0			
Indeno(1,2,3-cd)pyrene	640.7	6.7	666.7	0	96.1	40-120	0			
Naphthalene	556.3	6.7	666.7	0	83.4	40-105	0			
Pyrene	662	6.7	666.7	0	99.3	45-125	0			
Surr: 2-Fluorobiphenyl	*1395*	0	*1667*	0	*83.7*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1581*	0	*1667*	0	*94.9*	*25-137*	0			
Surr: Nitrobenzene-d5	*1386*	0	*1667*	0	*83.1*	*37-107*	0			

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77137** Instrument ID **SVMS5** Method: **SW846 8270D**

MS Sample ID: **1510423-01B MS** Units: **µg/Kg** Analysis Date: **10/9/2015 02:24 AM**
Client ID: Run ID: **SVMS5_151008A** SeqNo: **3499761** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	552.3	6.6	655.9	0	84.2	45-110	0			
Anthracene	612.9	6.6	655.9	0	93.4	55-105	0			
Benzo(a)anthracene	616.6	6.6	655.9	8.12	92.8	50-110	0			
Benzo(a)pyrene	614.3	6.6	655.9	7.795	92.5	50-110	0			
Benzo(b)fluoranthene	623.4	6.6	655.9	10.07	93.5	45-115	0			
Benzo(k)fluoranthene	592.3	6.6	655.9	4.547	89.6	45-115	0			
Chrysene	607.7	6.6	655.9	8.769	91.3	55-110	0			
Dibenzo(a,h)anthracene	642.5	6.6	655.9	0	97.9	40-125	0			
Fluoranthene	600.8	6.6	655.9	6.171	90.7	55-115	0			
Fluorene	566.1	6.6	655.9	0	86.3	50-110	0			
Indeno(1,2,3-cd)pyrene	639.8	6.6	655.9	8.12	96.3	40-120	0			
Naphthalene	446	6.6	655.9	0	68	40-105	0			
Pyrene	619.8	6.6	655.9	11.69	92.7	45-125	0			
Surr: 2-Fluorobiphenyl	*1270*	0	*1640*	0	*77.4*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1447*	0	*1640*	0	*88.2*	*25-137*	0			
Surr: Nitrobenzene-d5	*1142*	0	*1640*	0	*69.6*	*37-107*	0			

MSD Sample ID: **1510423-01B MSD** Units: **µg/Kg** Analysis Date: **10/9/2015 02:47 AM**
Client ID: Run ID: **SVMS5_151008A** SeqNo: **3499762** Prep Date: **10/8/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	509	6.6	660.2	0	77.1	45-110	552.3	8.15	30	
Anthracene	539.7	6.6	660.2	0	81.7	55-105	612.9	12.7	30	
Benzo(a)anthracene	546.6	6.6	660.2	8.12	81.6	50-110	616.6	12	30	
Benzo(a)pyrene	540	6.6	660.2	7.795	80.6	50-110	614.3	12.9	30	
Benzo(b)fluoranthene	549	6.6	660.2	10.07	81.6	45-115	623.4	12.7	30	
Benzo(k)fluoranthene	516.3	6.6	660.2	4.547	77.5	45-115	592.3	13.7	30	
Chrysene	539.1	6.6	660.2	8.769	80.3	55-110	607.7	12	30	
Dibenzo(a,h)anthracene	529.8	6.6	660.2	0	80.2	40-125	642.5	19.2	30	
Fluoranthene	524.2	6.6	660.2	6.171	78.5	55-115	600.8	13.6	30	
Fluorene	522.5	6.6	660.2	0	79.1	50-110	566.1	7.99	30	
Indeno(1,2,3-cd)pyrene	562.5	6.6	660.2	8.12	84	40-120	639.8	12.9	30	
Naphthalene	356.8	6.6	660.2	0	54	40-105	446	22.2	30	
Pyrene	544.7	6.6	660.2	11.69	80.7	45-125	619.8	12.9	30	
Surr: 2-Fluorobiphenyl	*1127*	0	*1651*	0	*68.3*	*12-100*	1270	*11.9*	*40*	
Surr: 4-Terphenyl-d14	*1311*	0	*1651*	0	*79.4*	*25-137*	1447	*9.85*	*40*	
Surr: Nitrobenzene-d5	*851.3*	0	*1651*	0	*51.6*	*37-107*	1142	*29.2*	*40*	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77052** Instrument ID **VMS7** Method: **SW8260B**

MBLK Sample ID: **MBLK-77052-77052** Units: **µg/Kg** Analysis Date: **10/6/2015 05:06 PM**
Client ID: Run ID: **VMS7_151006A** SeqNo: **3494883** Prep Date: **10/6/2015** 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	24.5	60								J
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	24	90								J
Surr: 1,2-Dichloroethane-d4	*1014*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*993.5*	0	*1000*	0	*99.4*	*70-130*	0			
Surr: Dibromofluoromethane	*995*	0	*1000*	0	*99.5*	*70-130*	0			
Surr: Toluene-d8	*945.5*	0	*1000*	0	*94.6*	*70-130*	0			

LCS Sample ID: **LCS-77052-77052** Units: **µg/Kg** Analysis Date: **10/6/2015 03:26 PM**
Client ID: Run ID: **VMS7_151006A** SeqNo: **3494882** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	980.5	30	1000	0	98	75-125	0			
Ethylbenzene	968.5	30	1000	0	96.8	75-125	0			
m,p-Xylene	1970	60	2000	0	98.5	80-125	0			
o-Xylene	941	30	1000	0	94.1	75-125	0			
Toluene	925.5	30	1000	0	92.6	70-125	0			
Xylenes, Total	2912	90	3000	0	97	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1008*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1044*	0	*1000*	0	*104*	*70-130*	0			
Surr: Dibromofluoromethane	*1000*	0	*1000*	0	*100*	*70-130*	0			
Surr: Toluene-d8	*971.5*	0	*1000*	0	*97.2*	*70-130*	0			

MS Sample ID: **1510326-02A MS** Units: **µg/Kg** Analysis Date: **10/13/2015 10:30 A**
Client ID: **Nolte Landfarm West** Run ID: **VMS6_151012A** SeqNo: **3505952** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	999	30	1000	0	99.9	75-125	0			
Ethylbenzene	1023	30	1000	15.5	101	75-125	0			
m,p-Xylene	2372	60	2000	422.5	97.5	80-125	0			
o-Xylene	1056	30	1000	32.5	102	75-125	0			
Toluene	1002	30	1000	64.5	93.8	70-125	0			
Xylenes, Total	3428	90	3000	452	99.2	75-125	0			
Surr: 1,2-Dichloroethane-d4	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1016*	0	*1000*	0	*102*	*70-130*	0			
Surr: Dibromofluoromethane	*1010*	0	*1000*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1030*	0	*1000*	0	*103*	*70-130*	0			

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77052** Instrument ID **VMS7** Method: **SW8260B**

MSD Sample ID: **1510326-02A MSD** Units: **µg/Kg** Analysis Date: **10/13/2015 10:56 A**
Client ID: **Nolte Landfarm West** Run ID: **VMS6_151012A** SeqNo: **3505953** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1068	30	1000	0	107	75-125	999	6.63	30	
Ethylbenzene	1096	30	1000	15.5	108	75-125	1023	6.94	30	
m,p-Xylene	2528	60	2000	422.5	105	80-125	2372	6.39	30	
o-Xylene	1146	30	1000	32.5	111	75-125	1056	8.13	30	
Toluene	1072	30	1000	64.5	101	70-125	1002	6.7	30	
Xylenes, Total	3674	90	3000	452	107	75-125	3428	6.93	30	
Surr: 1,2-Dichloroethane-d4	*1008*	0	*1000*	0	*101*	*70-130*	1006	*0.248*	*30*	
Surr: 4-Bromofluorobenzene	*1048*	0	*1000*	0	*105*	*70-130*	1016	*3.1*	*30*	
Surr: Dibromofluoromethane	*1014*	0	*1000*	0	*101*	*70-130*	1010	*0.445*	*30*	
Surr: Toluene-d8	*1008*	0	*1000*	0	*101*	*70-130*	1030	*2.21*	*30*	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77055** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-77055-77055** Units: **s.u.** Analysis Date: **10/6/2015 03:45 PM**
Client ID: Run ID: **WETCHEM_151006R** SeqNo: **3493617** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.96	0	4	0	99	90-110	0			

DUP Sample ID: **1510304-01A DUP** Units: **s.u.** Analysis Date: **10/6/2015 03:45 PM**
Client ID: Run ID: **WETCHEM_151006R** SeqNo: **3493624** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.08	0	0	0	0	0-0	8.13	0.617	20	

DUP Sample ID: **1510322-01A DUP** Units: **s.u.** Analysis Date: **10/6/2015 03:45 PM**
Client ID: Run ID: **WETCHEM_151006R** SeqNo: **3493626** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.04	0	0	0	0	0-0	8.17	1.6	20	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77102** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **1510326-02A DUP** Units: **mmhos/cm @25°** Analysis Date: **10/8/2015 02:45 PM**
Client ID: **Nolte Landfarm West** Run ID: **WETCHEM_151008L** SeqNo: **3497925** Prep Date: **10/8/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	12.63	0.050	0	0	0		12.37	2.08	50	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77106** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-77106-77106** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: Run ID: **WETCHEM_151007U** SeqNo: **3495868** Prep Date: **10/6/2015** 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-77106-77106** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: Run ID: **WETCHEM_151007U** SeqNo: **3495867** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.67	1.0	5	0	93.4	80-120	0			

MS Sample ID: **1510326-02A MS** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: **Nolte Landfarm West** Run ID: **WETCHEM_151007U** SeqNo: **3495863** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.3529	0.98	4.902	0	7.2	75-125	0			JS

MS Sample ID: **1510326-02A MSI** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: **Nolte Landfarm West** Run ID: **WETCHEM_151007U** SeqNo: **3495865** Prep Date: **10/6/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2685	100	2719	0	98.7	75-125	0			

MS Sample ID: **1508386-02A MS** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: Run ID: **WETCHEM_151007U** SeqNo: **3495870** Prep Date: **10/6/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	142.5	9.8	4.902	132.7	198	75-125	0			SOH

MS Sample ID: **1508386-02A MSI** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: Run ID: **WETCHEM_151007U** SeqNo: **3495872** Prep Date: **10/6/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	3256	99	3059	132.7	102	75-125	0			H

MSD Sample ID: **1510326-02A MSD** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**
Client ID: **Nolte Landfarm West** Run ID: **WETCHEM_151007U** SeqNo: **3495864** Prep Date: **10/6/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	0.99	4.95	0	0	75-125	2685	0	20	S

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **77106** Instrument ID **WETCHEM** Method: **SW7196A**

MSD Sample ID: **1508386-02A MSD** Units: **mg/Kg** Analysis Date: **10/7/2015 03:30 PM**

Client ID: Run ID: **WETCHEM_151007U** SeqNo: **3495871** Prep Date: **10/6/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	142.6	9.9	4.95	132.7	200	75-125	142.5	0.136	20	SOH

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 1510326
Project: Project Nolte 14-43d Landfarm

QC BATCH REPORT

Batch ID: **R173531** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R173531** Units: **% of sample** Analysis Date: **10/9/2015 01:54 PM**
Client ID: Run ID: **MOIST_151009C** SeqNo: **3502199** 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-R173531** Units: **% of sample** Analysis Date: **10/9/2015 01:54 PM**
Client ID: Run ID: **MOIST_151009C** SeqNo: **3502198** 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: **1510325-02A DUP** Units: **% of sample** Analysis Date: **10/9/2015 01:54 PM**
Client ID: Run ID: **MOIST_151009C** SeqNo: **3502156** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.61	0.050	0	0	0		10.73	1.12	20	

DUP Sample ID: **1510334-07A DUP** Units: **% of sample** Analysis Date: **10/9/2015 01:54 PM**
Client ID: Run ID: **MOIST_151009C** SeqNo: **3502191** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	97.48	0.050	0	0	0		97.47	0.0103	20	

The following samples were analyzed in this batch: 1510326-01A 1510326-02A

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

ALS Environmental

3352 128th Avenue
Holland Michigan 49424 (616) 399-6070

Chain-of-Custody

Form 202r8

WORKORDER # 1S10326

PAGE 1 of 1

DISPOSAL By Lab or Return

PROJECT NAME	Nolte Landfarm	SAMPLER	Tyler Bost
PROJECT No.		SITE ID	
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	Caerus Piceance, LLC	BILL TO COMPANY	Caerus Piceance, LLC
SEND REPORT TO	Jake Janicek	INVOICE ATTN TO	Jake Janicek
ADDRESS	120 N. Railroad, suite D	ADDRESS	120 N. Railroad, suite D
CITY / STATE / ZIP	Parachute Co. 81635	CITY / STATE / ZIP	Parachute Co. 81635
PHONE	970-285-9606	PHONE	970-285-9606
FAX		FAX	
E-MAIL	jjanicek@caerusoilandgas.com	E-MAIL	invoices@caerusoilandgas.com

DATE 10/5/15

TURNAROUND STD 5 Day

	Sample Description	Sample Date	Sample Time	Matrix	# Bottles	Pres.		TPH GRO/DRO	BTEX	Table 910 PAHs	Table 910 Metals	EC	PH	SAR
1	Nolte Landfarm East	10/5/15	1503	Soil	2	—		X	X	X	X	X	X	X
2	Nolte Landfarm West	10/5/15	1518	Soil	2	—		X	X	X	X	X	X	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: 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	Tyler Bost	Tyler Bost	10/5/15	1600
RECEIVED BY			10-5-15	1600
RELINQUISHED BY			10-5-15	1615
RECEIVED BY		Diane F. Shea	10/6/15	1430
RELINQUISHED BY				
RECEIVED BY				

ORIGIN ID:RILA (616) 298-1033
NICK MARTINEZ
ALS ENVIRONMENTAL PARACHUTE
PARACHUTE SERVICE CENTER
127 EAST 1ST. ST
PARACHUTE, CO 81635
UNITED STATES US

SHIP DATE: 05OCT15
ACTWGT: 55.00 LB
CAD: 2284840/NET3670
DIMS: 14x26x15 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE

HOLLAND MI 49424
(616) 399-6070 REF: 100515-1
INV:
PO: PARACHUTE DEPT:

539J3401A3100

FedEx Express

REL# 3785346

TUE - 06 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7746 6949 7482**

XX HLMA

49424
MI-US **GRR**

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

ALS Parachute Custody Seal

Time 1540 Date 10/5/15

Name

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **CAERUS** Date/Time Received: **06-Oct-15 14:30**

Work Order: **1510326** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 06-Oct-15 (Date) Reviewed by: Lee Arnold (eSignature) 06-Oct-15 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.6/3.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/6/2015 2:57:38 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

29-Feb-2016

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

Re: **Nolte 14-43 Landfarm** Work Order: **16021151**

Dear Jake,

ALS Environmental received 2 samples on 24-Feb-2016 09:30 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 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 12.

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

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 29-Feb-16

Client: Caerus Oil and Gas LLC
Project: Nolte 14-43 Landfarm
Work Order: **16021151**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
16021151-01	Nolte East	Soil		2/22/2016 09:07	2/24/2016 09:30	☐
16021151-02	Nolte West	Soil		2/22/2016 09:25	2/24/2016 09:30	☐

ALS Group USA, Corp

Date: 29-Feb-16

Qualifier	Description
*	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.

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
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	

ALS Group USA, Corp

Date: *29-Feb-16*

Client: Caerus Oil and Gas LLC
Project: Nolte 14-43 Landfarm
Work Order: 16021151
Sample ID: Nolte East
Lab ID: 16021151-01
Collection Date: 2/22/2016 09:07 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/25/16	Analyst: **IT**
DRO (C10-C28)	**95**		**7.3**	**mg/Kg-dry**	1	2/26/2016 04:17 AM
Surr: 4-Terphenyl-d14	*82.7*		*39-133*	*%REC*	1	2/26/2016 04:17 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**		Prep: SW5035 / 2/25/16	Analyst: **IT**
GRO (C6-C10)	**450,000**		**3,500**	**µg/Kg-dry**	1	2/26/2016 01:16 PM
Surr: Toluene-d8	*100*		*50-150*	*%REC*	1	2/26/2016 01:16 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 2/26/16	Analyst: **BL**
Calcium	**630**		**50**	**mg/L**	100	2/29/2016 09:37 AM
Magnesium	**110**		**20**	**mg/L**	100	2/29/2016 09:37 AM
Sodium	**1,500**		**20**	**mg/L**	100	2/29/2016 09:37 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/26/16	Analyst: **BL**
Sodium Adsorption Ratio	**15**		**0.010**	**none**	1	2/29/2016
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 2/26/16	Analyst: **JB**
Electrical Conductivity @ Saturation	**11**		**0.050**	**mmhos/cm @2**	10	2/26/2016 11:30 AM
MOISTURE			**SW3550C**			Analyst: **ED**
Moisture	**16**		**0.050**	**% of sample**	1	2/25/2016 06:31 PM

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

ALS Group USA, Corp

Date: *29-Feb-16*

Client: Caerus Oil and Gas LLC
Project: Nolte 14-43 Landfarm
Work Order: 16021151
Sample ID: Nolte West
Lab ID: 16021151-02
Collection Date: 2/22/2016 09:25 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID			**SW8015M**		Prep: SW3541 / 2/25/16	Analyst: **IT**
DRO (C10-C28)	**91**		**7.4**	**mg/Kg-dry**	1	2/26/2016 04:47 AM
Surr: 4-Terphenyl-d14	*90.3*		*39-133*	*%REC*	1	2/26/2016 04:47 AM
GASOLINE RANGE ORGANICS BY GC-FID			**SW8015D**		Prep: SW5035 / 2/25/16	Analyst: **IT**
GRO (C6-C10)	**75,000**		**3,700**	**µg/Kg-dry**	1	2/26/2016 01:41 PM
Surr: Toluene-d8	*100*		*50-150*	*%REC*	1	2/26/2016 01:41 PM
SOLUBLE CATIONS FOR SAR			**SW846 6010C**		Prep: USDA Method 20B / 2/26/16	Analyst: **BL**
Calcium	**610**		**50**	**mg/L**	100	2/29/2016 09:48 AM
Magnesium	**110**		**20**	**mg/L**	100	2/29/2016 09:48 AM
Sodium	**1,600**		**20**	**mg/L**	100	2/29/2016 09:48 AM
SODIUM ADSORPTION RATIO			**USDA H60 METHO**		Prep: USDA Method 20B / 2/26/16	Analyst: **BL**
Sodium Adsorption Ratio	**16**		**0.010**	**none**	1	2/29/2016
ELECTRICAL CONDUCTIVITY (SAR)			**USDA H60 METHO**		Prep: USDA Method 20B / 2/26/16	Analyst: **JB**
Electrical Conductivity @ Saturation	**11**		**0.050**	**mmhos/cm @2**	10	2/26/2016 11:30 AM
MOISTURE			**SW3550C**			Analyst: **ED**
Moisture	**19**		**0.050**	**% of sample**	1	2/25/2016 06:31 PM

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

Client: Caerus Oil and Gas LLC
Work Order: 16021151
Project: Nolte 14-43 Landfarm

QC BATCH REPORT

Batch ID: **82859** Instrument ID **GC8** Method: **SW8015M**

MBLK	Sample ID: **DBLKS1-82859-82859**			Units: **mg/Kg**			Analysis Date: **2/26/2016 12:17 PM**			
Client ID:	Run ID: **GC8_160225B**			SeqNo: **3712926**		Prep Date: **2/25/2016**		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								
Surr: 4-Terphenyl-d14	*1.742*	0	*2*	0	*87.1*	*39-133*	0			

LCS	Sample ID: **DLCSS1-82859-82859**			Units: **mg/Kg**			Analysis Date: **2/26/2016 12:47 PM**			
Client ID:	Run ID: **GC8_160225B**			SeqNo: **3712927**		Prep Date: **2/25/2016**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	173.3	5.0	200	0	86.7	61-109	0			
Surr: 4-Terphenyl-d14	*1.473*	0	*2*	0	*73.7*	*39-133*	0			

MS	Sample ID: **16021145-02B MS**			Units: **mg/Kg**			Analysis Date: **2/26/2016 01:17 AM**			
Client ID:	Run ID: **GC8_160225B**			SeqNo: **3712918**		Prep Date: **2/25/2016**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	2206	4.1	164.9	1975	140	48-110	0			SEO
Surr: 4-Terphenyl-d14	*1.41*	0	*1.649*	0	*85.5*	*39-133*	0			

MSD	Sample ID: **16021145-02B MSD**			Units: **mg/Kg**			Analysis Date: **2/26/2016 01:47 AM**			
Client ID:	Run ID: **GC8_160225B**			SeqNo: **3712919**		Prep Date: **2/25/2016**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	2223	4.1	165.2	1975	150	48-110	2206	0.779	30	SEO
Surr: 4-Terphenyl-d14	*1.468*	0	*1.652*	0	*88.9*	*39-133*	1.41	*3.99*	*30*	

The following samples were analyzed in this batch: 16021151-01B 16021151-02B

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

Client: Caerus Oil and Gas LLC
Work Order: 16021151
Project: Nolte 14-43 Landfarm

QC BATCH REPORT

Batch ID: **82858** Instrument ID **GC10** Method: **SW8015D**

MBLK Sample ID: **MBLK-82858-82858** Units: **µg/Kg-dry** Analysis Date: **2/25/2016 05:17 PM**
Client ID: Run ID: **GC10_160225A** SeqNo: **3713183** Prep Date: **2/25/2016** 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	*4938*	0	*5000*	0	*98.8*	*50-150*	0			

LCS Sample ID: **LCS-82858-82858** Units: **µg/Kg-dry** Analysis Date: **2/25/2016 04:52 PM**
Client ID: Run ID: **GC10_160225A** SeqNo: **3713182** Prep Date: **2/25/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	540300	2,500	500000	0	108	70-130	0			
Surr: Toluene-d8	*4798*	0	*5000*	0	*96*	*50-150*	0			

MS Sample ID: **16021148-01A MS** Units: **µg/Kg-dry** Analysis Date: **2/25/2016 08:22 PM**
Client ID: Run ID: **GC10_160225A** SeqNo: **3713190** Prep Date: **2/25/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1056000	4,300	851400	132700	108	70-130	0			
Surr: Toluene-d8	*8264*	0	*8514*	0	*97.1*	*50-150*	0			

MSD Sample ID: **16021148-01A MSD** Units: **µg/Kg-dry** Analysis Date: **2/25/2016 08:47 PM**
Client ID: Run ID: **GC10_160225A** SeqNo: **3713192** Prep Date: **2/25/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1014000	4,300	851400	132700	104	70-130	1056000	4.03	30	
Surr: Toluene-d8	*8108*	0	*8514*	0	*95.2*	*50-150*	8264	*1.9*	*30*	

The following samples were analyzed in this batch: 16021151-01A, 16021151-02A

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

Client: Caerus Oil and Gas LLC
Work Order: 16021151
Project: Nolte 14-43 Landfarm

QC BATCH REPORT

Batch ID: **82847** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP Sample ID: **16021151-01BDUP** Units: **none** Analysis Date: **2/29/2016**
Client ID: **Nolte East** Run ID: **SAR_160229A** SeqNo: **3715380** Prep Date: **2/26/2016** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	13.95	0.010	0	0	0		15.02	7.4	50	

The following samples were analyzed in this batch: 16021151-01B 16021151-02B

Batch ID: **82847** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP Sample ID: **16021151-01B DUP** Units: **mmhos/cm @25°** Analysis Date: **2/26/2016 11:30 AM**
Client ID: **Nolte East** Run ID: **WETCHEM_160226B** SeqNo: **3713251** Prep Date: **2/26/2016** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	10.81	0.050	0	0	0		10.78	0.278	50	

The following samples were analyzed in this batch: 16021151-01B 16021151-02B

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

Client: Caerus Oil and Gas LLC
Work Order: 16021151
Project: Nolte 14-43 Landfarm

QC BATCH REPORT

Batch ID: **R182495** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R182495** Units: **% of sample** Analysis Date: **2/25/2016 06:31 PM**
Client ID: Run ID: **MOIST_160225C** SeqNo: **3713169** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.03	0.050								J

LCS Sample ID: **LCS-R182495** Units: **% of sample** Analysis Date: **2/25/2016 06:31 PM**
Client ID: Run ID: **MOIST_160225C** SeqNo: **3713166** 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: **16021148-01B DUP** Units: **% of sample** Analysis Date: **2/25/2016 06:31 PM**
Client ID: Run ID: **MOIST_160225C** SeqNo: **3713144** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	26.82	0.050	0	0	0		26.03	2.99	20	

DUP Sample ID: **16021151-02B DUP** Units: **% of sample** Analysis Date: **2/25/2016 06:31 PM**
Client ID: **Nolte West** Run ID: **MOIST_160225C** SeqNo: **3713147** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	18.5	0.050	0	0	0		18.76	1.4	20	

The following samples were analyzed in this batch:

16021151-01B	16021151-02B

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

ALS Laboratory Group

ALS Holland 3352 128th Ave, Holland MI
855-572-1944 616-399-6070

Chain-of-Custody

Form 202r6

WORKORDER # 1602115 1

PAGE 1 of 1

DISPOSAL (By Lab) or Return to Client

PROJECT NAME	Nolte 14-43 Landfarm	SAMPLER	Tyler Rust
PROJECT No.		SITE ID	
		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	Caerus Piceance, LLC	BILL TO COMPANY	Caerus Piceance, LLC
SEND REPORT TO	Jake Janicek	INVOICE ATTN TO	Jake Janicek
ADDRESS	120 N. Railroad, suite D	ADDRESS	120 N. Railroad, suite D
CITY / STATE / ZIP	Parachute Co, 81635	CITY / STATE / ZIP	Parachute Co, 81635
PHONE	970-285-9608	PHONE	970-285-9608
FAX		FAX	
E-MAIL	jjanicek@caerusoilandgas.com	E-MAIL	invoices@caerusoilandgas.com

DATE 2/22/16

TURNAROUND STD 5 Day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	TPH/GRO/DRO	BTEX	Table 910 PAH;s	EC	PH	SAR	Benzene
1	Nolte East	Soil	2/22/16	9:09	2	—	—	X			X		X	
2	Nolte West	Soil	2/22/16	9:25	2	—	—	X			X		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: 3.4°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	Tyler Rust	Tyler Rust	2/22/16	3:55
RECEIVED BY			2-22-16	3:55
RELINQUISHED BY		KEITH WIFRENCE	2/24/16	0930
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ORIGIN ID:RLA (616) 399-1033
NICK MARTINEZ
ALS ENVIRONMENTAL PARACHUTE
PARACHUTE SERVICE CENTER
127 EAST 1ST ST
PARACHUTE, CO 81635
UNITED STATES US

SHIP DATE: 23FEB16
ACTWGT: 31.00 LB
CAD: 2284040/NET3730
DIMS: 11x18x17 IN
BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL HOLLAND LAB
3352 128TH AVE
HOLLAND MI 49424
(616) 399-6070
INV
PO: PARACHUTE
REF: 022316-2
DEPT:

540J1/97D7/727F

FedEx Express

REF: 3785346

WED - 24 FEB 10:30A
PRIORITY OVERNIGHT
TRK# 0201 7757 1728 0792

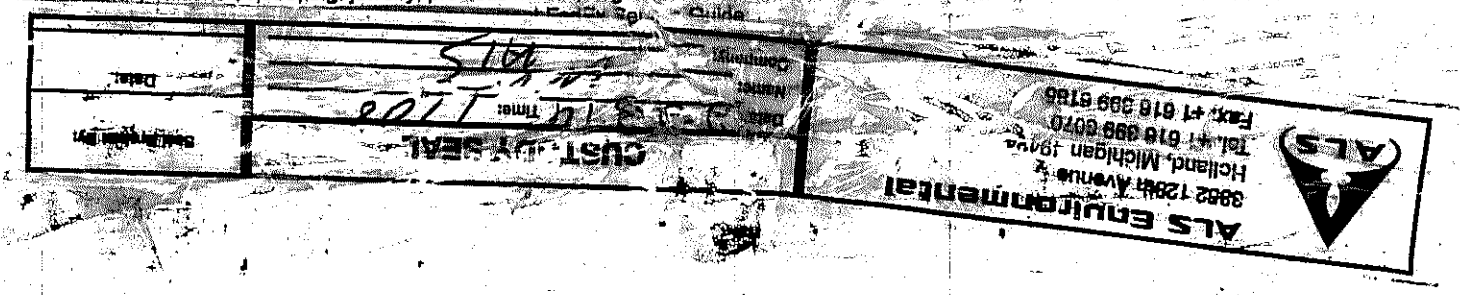
XX HLMA

49424
GRR
MI-US

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable documents and other items listed in our ServiceGuide. Written



ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **CAERUS** Date/Time Received: **24-Feb-16 09:30**

Work Order: **16021151** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 24-Feb-16 (Date) Reviewed by: Chad Whelton (eSignature) 24-Feb-16 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.4/3.4 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	2/24/2016 3:10:34 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: