



EAGLE
ENVIRONMENTAL
CONSULTING, INC.

4101 Inca Street, Denver, CO 80211 • Phone: 303-433-0479 • Fax: 303-325-5449 • www.eagle-enviro.com

December 11, 2018

Mr. Jacob Evans
Noble Energy, Inc.
2115 117th Avenue
Greeley, Colorado 80631

Dillard USX AB #03-07P
Water Vault Removal
40.604603 / -104.535190
SW¼ NE¼ SEC.3 T7N R64W 6PM
Weld County, Colorado
Location ID 415376

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present the results from the water vault removal at the Dillard USX AB #03-07P site (site).

On November 6, 2018, EAGLE collected soil samples following the removal of the water vault at the site. Per Noble Standard Operation Procedures, a soil sample was collected from each sidewall and the floor for field screening. The sidewall soil sample with the highest photoionization detector (PID) reading (SS-02@3') and the floor soil sample (SS-05@5') were submitted for laboratory analysis.

Based on laboratory analytical results:

- Soil samples SS-02@3' and SS-05@5' did not contain concentrations of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, or total petroleum hydrocarbons (TPH) exceeding Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 regulatory limits.
- The sidewall soil sample's (SS-02@3') specific conductance, and sodium adsorption ratio (SAR) values were within COGCC Table 910-1 regulatory limits.
- The sidewall soil sample's (SS-02@3') pH value (9.23 pH units) was outside the COGCC Table 910-1 regulatory limit of 6-9 pH units.

EAGLE sincerely appreciates the opportunity to provide our services. If you have any questions or require further information, please contact us at (303) 433-0479.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Andrew Newberry
Project Geologist

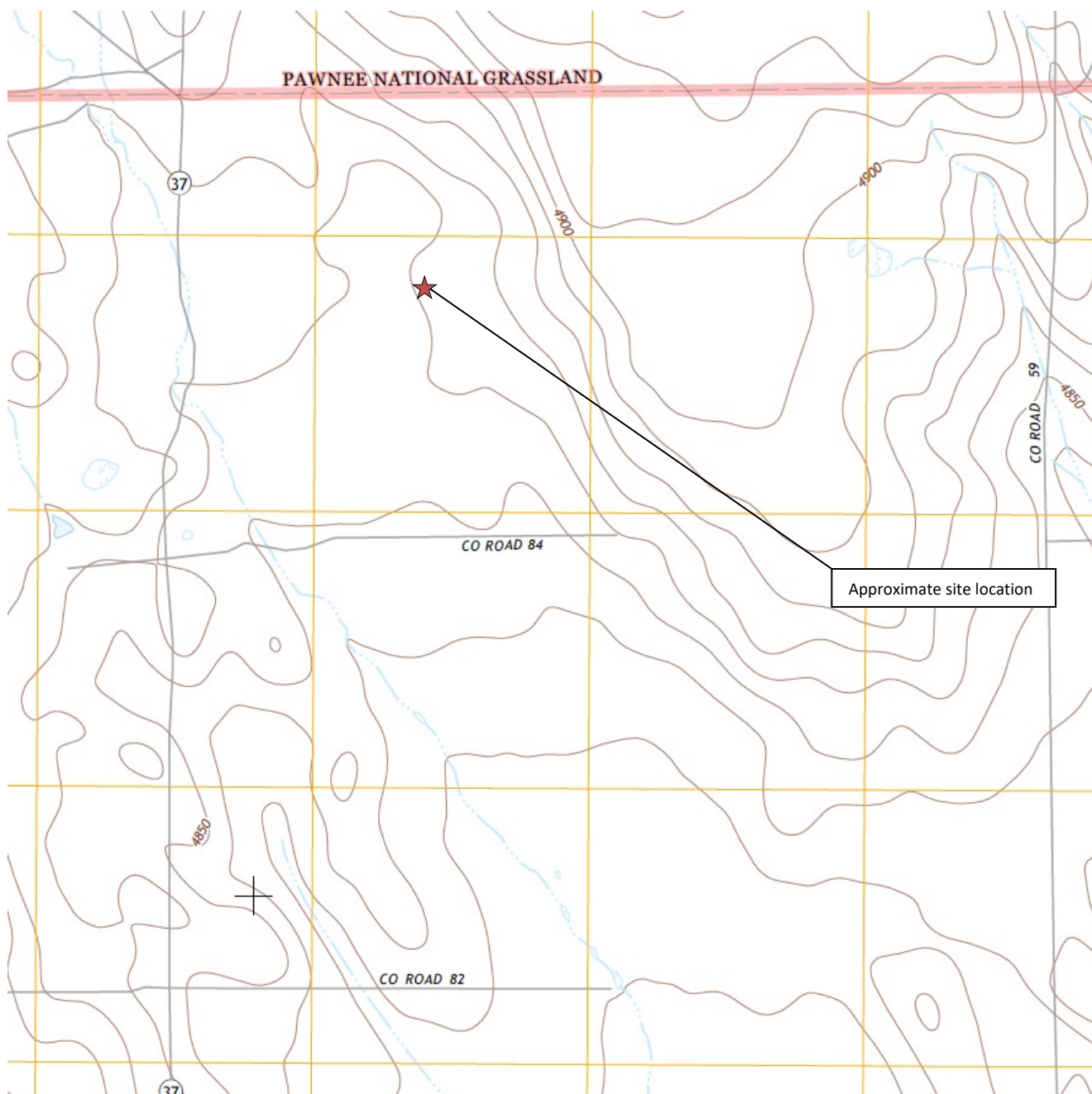


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



Topographic Site Location Map
 Dillard USX AB #03-07P
 Water Vault Removal
 40.604603 / -104.535190
 SW¼ NE¼ SEC.3 T7N R64W 6PM
 Weld County, Colorado
 Location ID 415376



EAGLE
 ENVIRONMENTAL
 CONSULTING, INC.

Source: USGS 7.5 Minute Topographic
 Map: Galeton, CO Quadrangle 2013

Figure 1



LEGEND



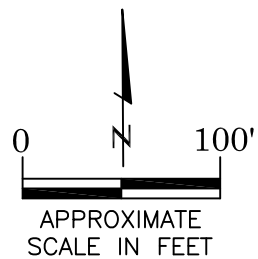
DILLARD USX AB #03-07P TANK BATTERY



DILLARD USX AB #03-07P WELL HEAD



APPROXIMATE LOCATION OF WATER VAULT REMOVAL



AERIAL SITE LOCATION MAP
DILLARD USX AB #03-07P
WATER VAULT REMOVAL
40.604603 / -104.535190
SW1/4 NE1/4 SEC.3 T7N R64W 6PM
WELD COUNTY, COLORADO
LOCATION ID 415376

DATE:
11/13/18

FIG. NO.
2

DRAWN BY:
AMN



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Ph: 303-433-0479 • F: 303-325-5449



LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES

● APPROXIMATE LOCATION OF SOIL SAMPLES
FIELD ANALYZED WITH PHOTOIONIZATION
DETECTOR (PID)

● APPROXIMATE LOCATION OF SOIL SAMPLES
SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SOIL SAMPLE LOCATION
DATE
DEPTH (FEET)
B = BENZENE (mg/kg)
T = TOLUENE (mg/kg)
E = ETHYLBENZENE (mg/kg)
X = TOTAL XYLENES (mg/kg)
N = NAPHTHALENE (mg/kg)
G = TPH-GRO (mg/kg)
D = TPH-DRO (mg/kg)
EC = SPECIFIC CONDUCTANCE (mmhos/cm)
SAR= SODIUM ADSORPTION RATIO
pH = pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM

mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE
RANGE ORGANICS

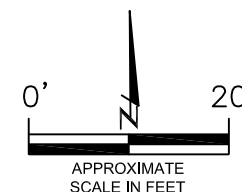
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL
RANGE ORGANICS

NA = NOT ANALYZED

NOTE: VALUES PRESENTED WITH A LESS THAN SYMBOL (<)
DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE
LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** TYPEFACE CONTAIN
CONCENTRATIONS EXCEEDING COGCC TABLE 910-1
REGULATORY LIMITS FOR THAT COMPOUND

COGCC - COLORADO OIL AND GAS CONSERVATION
COMMISSION

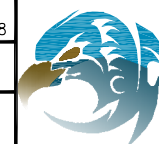


SOIL ANALYTICAL MAP
DILLARD USX AB #03-07P
WATER VAULT REMOVAL
40.604603 / -104.535190
SW1/4 NE1/4 SEC.3 T7N R64W 6PM
WELD COUNTY, COLORADO
LOCATION ID 415376

DATE:
11/13/18

DRAWN BY:
AMN

FIG.
NO. 3



EAGLE
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ATTACHMENT A

Laboratory Analytical Report



November 13, 2018

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Dillard USX AB03-07P

Project Number - [none]

Attached are your analytical results for Noble - Dillard USX AB03-07P received by Origins Laboratory, Inc. November 06, 2018. This project is associated with Origins project number Y811099-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-02@3'	Y811099-01	Soil	November 6, 2018 10:28	11/06/2018 16:40
SS-05@5'	Y811099-02	Soil	November 6, 2018 10:34	11/06/2018 16:40

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

ORIGINS
LABORATORY, INC

www.originslaboratory.com

Y811099

page 1 of 1

Client: ETHEL ENV CONSULTING
Address: 4101 INCA ST.
DENVER, CO
Telephone Number: 303-433-0479
Email Address: WILLIAM.ECKERT@EAGLE-ENV.COM

Project Manager: MARTIN ECKERT III
Project Name: DILLARD USX AB03-07P
Project Number: _____
Samples Collected By: KEP

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summ #	Other	ISTEX	LRD	DRD		ANALYST	LAB
SS-DZ03	11-6-18	1028	2	X					X				X	X	X	X	1
SS-DZ05	11-6-18	1034	2	X					X				X	X	X	X	2
																	3
																	4
																	5
																	6
																	7
																	8
																	9
																	10

Relinquished By: [Signature] Date: 11-6-18 Time: 1640 Received By: [Signature] Date: 11-6-18 Time: 1640

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

REL: B1540412 ABILL TD 1004: 247034 Nov-18-18 Temp Received: 39 Date Results Needed: \$1000

Origins Laboratory, Inc.

Jefe Pellegrini

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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y811099

Client: Eagle

Client Project ID: Noble - Dillard USX AB03-07

Checklist Completed by: JG

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11 / 7 / 2018

Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid Water Other:
(Describe)

Cooler Number/Temperature: 1 / 3.9 °C / °C / °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JG

11/8/18
Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

SS-02@3'

11/6/2018 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811099-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8K0802	JTD	11/08/2018	11/09/2018	U
------------------	----	------	-------	---	---------	-----	------------	------------	---

Surrogate: o-Terphenyl	76.2 %	59-131			"	"	"		
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8K0801	JTD	11/08/2018	11/08/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U
Naphthalene	ND	0.008	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"		
Surrogate: Toluene-d8	97.4 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	96.1 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	1.87	me/L	1	'[none]'		11/08/2018	11/12/2018
Magnesium	1.28	"	"	"		"	"
Sodium	8.47	"	"	"		"	"

pH in Soil by EPA 9045D

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

SS-02@3'

11/6/2018 10:28:00AM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
Y811099-01 (Soil)

pH in Soil by EPA 9045D

pH	9.23	pH Units	1	B8K0803	OLAB	11/08/2018	11/08/2018
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SAR by 20B Saturated Paste

SAR	6.75		1	'[none]'		11/08/2018	11/12/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.192	0.00500	mmhos/cm	1	B8K0804	OLAB	11/08/2018	11/08/2018
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

SS-05@5'

11/6/2018 10:34:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	---------	----------	----------	-------

Origins Laboratory, Inc.
Y811099-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8K0802	JTD	11/08/2018	11/09/2018	U
------------------	----	------	-------	---	---------	-----	------------	------------	---

Surrogate: o-Terphenyl	83.0 %	59-131			"	"	"		
------------------------	--------	--------	--	--	---	---	---	--	--

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8K0801	JTD	11/08/2018	11/08/2018	U
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U
Naphthalene	ND	0.008	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"		
Surrogate: Toluene-d8	95.5 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	94.9 %	70-130			"	"	"		

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
Blank (B8K0801-BLK1)					Prepared: 11/08/2018 Analyzed: 11/08/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.2	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
Blank (B8K0801-BLK2)					Prepared: 11/08/2018 Analyzed: 11/08/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.9	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		93.7	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
LCS (B8K0801-BS1)					Prepared: 11/08/2018 Analyzed: 11/08/2018					
Benzene	0.105	0.002	mg/kg	0.100		105	70-130			
Toluene	0.100	0.002	"	0.100		100	70-130			
Ethylbenzene	0.100	0.002	"	0.100		100	70-130			
m,p-Xylene	0.205	0.004	"	0.200		102	70-130			
o-Xylene	0.097	0.002	"	0.100		97.0	70-130			
Naphthalene	0.104	0.008	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.8	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B8K0801 - EPA 5030 (soil)

LCS (B8K0801-BS2)

Prepared: 11/08/2018 Analyzed: 11/08/2018

Benzene	0.109	0.002	mg/kg	0.100		109	70-130			
Toluene	0.107	0.002	"	0.100		107	70-130			
Ethylbenzene	0.109	0.002	"	0.100		109	70-130			
m,p-Xylene	0.222	0.004	"	0.200		111	70-130			
o-Xylene	0.104	0.002	"	0.100		104	70-130			
Naphthalene	0.100	0.008	"	0.100		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B8K0801 - EPA 5030 (soil)

Matrix Spike (B8K0801-MS1)		Source: Y811103-01			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	70-130			
Toluene	0.098	0.002	"	0.100	ND	98.5	70-130			
Ethylbenzene	0.098	0.002	"	0.100	ND	97.8	70-130			
m,p-Xylene	0.202	0.004	"	0.200	ND	101	70-130			
o-Xylene	0.096	0.002	"	0.100	ND	95.6	70-130			
Naphthalene	0.107	0.008	"	0.100	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
Matrix Spike (B8K0801-MS2)		Source: Y811103-02			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Benzene	0.102	0.002	mg/kg	0.100	ND	102	70-130			
Toluene	0.096	0.002	"	0.100	ND	96.1	70-130			
Ethylbenzene	0.095	0.002	"	0.100	ND	94.9	70-130			
m,p-Xylene	0.195	0.004	"	0.200	ND	97.3	70-130			
o-Xylene	0.092	0.002	"	0.100	ND	92.4	70-130			
Naphthalene	0.107	0.008	"	0.100	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	58		"	62.5		93.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
Matrix Spike Dup (B8K0801-MSD1)			Source: Y811103-01		Prepared: 11/08/2018 Analyzed: 11/08/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	70-130	0.552	20	
Toluene	0.098	0.002	"	0.100	ND	97.6	70-130	0.857	20	
Ethylbenzene	0.097	0.002	"	0.100	ND	97.2	70-130	0.574	20	
m,p-Xylene	0.200	0.004	"	0.200	ND	99.9	70-130	0.897	20	
o-Xylene	0.094	0.002	"	0.100	ND	94.4	70-130	1.24	20	
Naphthalene	0.106	0.008	"	0.100	ND	106	70-130	0.842	20	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	58		"	62.5		93.1	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	70-130			

Origins Laboratory, Inc.



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Martin C Eckert III
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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0801 - EPA 5030 (soil)										
Matrix Spike Dup (B8K0801-MSD2)		Source: Y811103-02			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Benzene	0.109	0.002	mg/kg	0.100	ND	109	70-130	6.68	20	
Toluene	0.104	0.002	"	0.100	ND	104	70-130	7.82	20	
Ethylbenzene	0.101	0.002	"	0.100	ND	101	70-130	6.13	20	
m,p-Xylene	0.207	0.004	"	0.200	ND	103	70-130	5.95	20	
o-Xylene	0.099	0.002	"	0.100	ND	98.7	70-130	6.59	20	
Naphthalene	0.111	0.008	"	0.100	ND	111	70-130	3.86	20	
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	59		"	62.5		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

Origins Laboratory, Inc.



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Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B8K0802 - EPA 3550B

Blank (B8K0802-BLK1)

Prepared: 11/08/2018 Analyzed: 11/08/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
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Surrogate: o-Terphenyl

37

"

50.0

74.0

59-131

Blank (B8K0802-BLK2)

Prepared: 11/08/2018 Analyzed: 11/08/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
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Surrogate: o-Terphenyl

38

"

50.0

75.4

59-131

LCS (B8K0802-BS1)

Prepared: 11/08/2018 Analyzed: 11/08/2018

Diesel (C10-C28)	1010	50.0	mg/kg	1000		101	64-121			
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Surrogate: o-Terphenyl

47

"

50.0

93.7

59-131

LCS (B8K0802-BS2)

Prepared: 11/08/2018 Analyzed: 11/08/2018

Diesel (C10-C28)	1000	50.0	mg/kg	1000		100	64-121			
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Surrogate: o-Terphenyl

45

"

50.0

90.3

59-131

Matrix Spike (B8K0802-MS1)

Source: Y811103-01

Prepared: 11/08/2018 Analyzed: 11/09/2018

Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	53-125			
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Surrogate: o-Terphenyl

50

"

50.0

100

59-131

Matrix Spike (B8K0802-MS2)

Source: Y811103-02

Prepared: 11/08/2018 Analyzed: 11/08/2018

Diesel (C10-C28)	1190	50.0	mg/kg	1000	ND	119	53-125			
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Surrogate: o-Terphenyl

57

"

50.0

115

59-131

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

Extractable Petroleum Hydrocarbons by 8015C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B8K0802 - EPA 3550B

Matrix Spike Dup (B8K0802-MSD1)		Source: Y811103-01			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Diesel (C10-C28)	988	50.0	mg/kg	1000	ND	98.8	53-125	8.06	20	
Surrogate: o-Terphenyl	45		"	50.0		90.6	59-131			
Matrix Spike Dup (B8K0802-MSD2)		Source: Y811103-02			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Diesel (C10-C28)	969	50.0	mg/kg	1000	ND	96.9	53-125	20.8	20	QR-02
Surrogate: o-Terphenyl	46		"	50.0		91.0	59-131			

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Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Dillard USX AB03-07P

Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8K0803 - NO PREP										
Duplicate (B8K0803-DUP1)		Source: Y811097-01			Prepared: 11/08/2018 Analyzed: 11/08/2018					
pH	7.48		pH Units		8.51			12.9	25	
Batch B8K0804 - NO PREP										
Blank (B8K0804-BLK1)		Prepared: 11/08/2018 Analyzed: 11/08/2018								
Specific Conductance (EC)	0.00140	0.00500	mmhos/cm							
Duplicate (B8K0804-DUP1)		Source: Y811097-01			Prepared: 11/08/2018 Analyzed: 11/08/2018					
Specific Conductance (EC)	0.0725	0.00500	mmhos/cm		0.0629			14.2	25	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Dillard USX AB03-07P

Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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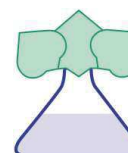
Jen Pellegrini For Noelle Doyle Mathis, President

American Agricultural Laboratory, Inc.

700 West D Street / PO Box 370 / McCook, Nebraska 69001

Office: 308-345-3670 / FAX: 308-345-7880

www.AmAgLab.com



95029

ORIGINS LABORATORY INC

1725 ELK PLACE

DENVER CO 80211

NAME : ORIGINS LAB

DATE RECEIVED: 11/08/2018

DATE REPORTED: 11/12/2018

SOIL TEST RESULTS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	Depth Inches	pH		EL	SOLUBLE SALTS mod. SP mmhos/cm	OM LOI %	NITRATE-N (FIA)		PHOSPHORUS				
				1 : 1 Soil	Buffer Woodruff				ppm	lbs/A	P1 ppm	Bicarb ppm	P2 ppm	M2 ppm	M3 ppm
2568085	Y811099	01	0-8												

LAB NUMBER	SULFATE-S Ca-P ppm	NH4OAc (Exchangeable)				DTPA				BORON Sorbitol ppm	EST. CATION EXCHANGE CAPACITY (CEC) me/100g	% SATURATION					
		K ppm	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm			BASE	H	Ca	Mg	K	Na
2568085																	

LAB NUMBER	SOLUBLE (SAT. EXT.)			SODIUM ADSORPTION RATIO (SAR)	EXCH. SODIUM PERCENT (ESP)	GYPSUM REQ T/A	PARTICLE SIZE ANALYSIS				CHLORIDE		EXCH. NH4-N		ALUMINUM ppm	TOTAL N %
	Ca me/L	Mg me/L	Na me/L				SAND %	SILT %	CLAY %	SOIL TEXTURE	ppm	lbs/A	ppm	lbs/A		
2568085	1.87	1.28	8.47	6.75	9											

SUGGESTED FERTILIZER RECOMMENDATIONS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	CROP TO BE GROWN	YIELD GOAL	N	P2O5	K2O	S	Zn	MgO	Fe	Mn	Cu	B	Cl	LIME REC 60% ECCE T/A
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2568085	Y811099	01														
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Analysis By: American Agricultural Lab

Recommendations By: American Agricultural Lab



Your Lab's letterhead here...

Address

City, St. Zip

Phone/Fax

SUBCONTRACT ORDER

Sending Laboratory:

Origins Laboratory, Inc.
1725 West Elk Place
Denver, CO 80211
Phone: 303.433.1322
Fax: 303.265.9645

Project Manager: Noelle Doyle Mathis

NOV 8 2018

Subcontracted Laboratory:

American Agricultural Laboratory, Inc
210 East 1st Street
McCook, NE 69001
Phone: (308) 345-3670
Fax: (308) 345-7880

Work Order: Y811099

Analysis	Due	Expires	Comments
Sample ID: Y811099-01 Soil Sampled: 11/06/2018 10:28			
SAR (Saturated Paste Prep)	11/13/2018	11/07/2018 10:28	
Containers Supplied:			

425

Released By [Signature] Date 11/7/18 Received By [Signature] Date _____