



EAGLE

ENVIRONMENTAL
CONSULTING, INC.

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

November 26, 2014

Mr. Jacob Evans
Noble Energy, Inc.
1625 Broadway, Suite 2200
Denver, Colorado 80202

**Field Assessment and Excavation Report
Shelton #G25-75HN – Water Vault Removal
40.290016 / -104.608340
NW¼ NE¼ Sec.25 T4N R65W 6PM
API #05-123-35541**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present this Field Assessment and Excavation Report for the Shelton #G25-75HN Site (site).

SITE BACKGROUND

EAGLE was requested by Noble Energy, Inc. (Noble) to perform subsurface assessment activities at the site following removal of the water vaults associated with the Shelton #G25-75HN well. On September 4, 2014, EAGLE collected soil samples SS-01 through SS-05 following removal of the two Shelton #25-75HN water vaults. Groundwater was not observed within the excavated area.

Soils samples, SS-01 through SS-05, collected from the sidewalls and floor of the excavation, were submitted to Origins Laboratory, Inc. (Origins) for laboratory analysis, following standard chain of custody procedures.

Based on laboratory analytical results, soil samples SS-03@2.5' and SS-05@6.5' contained concentrations of total petroleum hydrocarbons (TPH) exceeding the COGCC Table 910-1 Regulatory Limit, requiring remedial action at the site. The following narrative details excavation activities that were completed at the site.

SITE DESCRIPTION

Based on records on file with the Colorado Oil and Gas Conservation Commission (COGCC), the Shelton #G25-75HN well was completed on December 26, 2012 to a total depth of 6,988 feet below ground surface (bgs) and is located at latitude: 40.28969 and longitude: -104.61096 in Weld County, Colorado. The removed water vaults associated the Shelton #G25-75HN well were located at latitude: 40.290016 and longitude: -104.608340. A topographic site location map is presented as Figure 1. An aerial site location map is presented as Figure 2.

SOIL EXCAVATION ACTIVITIES

On September 4, 2014, EAGLE collected soil samples, SS-01 through SS-05, following the removal of the water vaults associated with the Shelton #G25-75HN well. The soil samples were collected to determine if adsorbed petroleum hydrocarbon impacts existed above COGCC Table 910-1 Regulatory Limits beneath the former water vault locations. A portion of each soil sample was placed in a sealable plastic bag for volatile organic compound (VOC) headspace analysis utilizing a field calibrated photoionization detector (PID). Another portion of the soil sample was placed in a 4-ounce glass jar and packed in an iced cooler.

EAGLE submitted soil samples, SS-01 through SS-05, to Origins Laboratory, Inc. (Origins), under standard chain of custody procedures. The soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons – gasoline range organics (TPH-GRO), and total petroleum hydrocarbons – diesel range organics (TPH-DRO) following modified Environmental Protection Agency (EPA) Methods 8260c and 8015. In addition, soil sample SS-04@2.5' was analyzed for Sodium Adsorption Ratio (SAR) following United States Department of Agriculture (USDA) Method 20B, Specific Conductance (EC) following USDA method 3, and pH following EPA method 9045D. The soil samples were received within the required holding time for each laboratory analysis.

Based on laboratory analytical results, soil samples SS-03@2.5' and SS-05@6.5' contained concentrations of TPH (500.5 milligrams per kilogram (mg/kg) and 1,014 mg/kg, respectively) exceeding the COGCC Table 910-1 Regulatory Limit of 500 mg/kg. The laboratory analytical results confirmed additional source removal was required beneath the release area. Soil sample SS-04@2.5' did not contain concentrations of SAR, EC, or pH exceeding their respective COGCC Table 910-1 Regulatory Limits.

On September 5, 2014, EAGLE supervised excavation activities to remove adsorbed petroleum hydrocarbon impacts beneath the water vaults associated with the Shelton #G25-75HN well. BG Services LLC (BG) provided the necessary equipment and personnel to remove and transport petroleum hydrocarbon impacted soil from the site.

The soil lithology observed within the excavation was silty sand to approximately 7.5 feet bgs. Groundwater was not observed within the limits of the excavation.

Waste characterization/confirmation soil samples (SS-01 through SS-12) were collected at various locations to determine the lateral and vertical extent of petroleum hydrocarbon impacts in the soil adjacent to the water vault's former location. A portion of each soil sample was placed in a sealable plastic bag, for VOC headspace analysis utilizing a field calibrated PID. Another portion of the soil sample was placed in a 4-ounce glass jar and packed in an iced cooler for laboratory analysis.

Based on location and PID analysis, selected jarred soil samples were submitted to Origins, located in Denver, Colorado, under standard chain of custody procedures, for analysis of BTEX, naphthalene, TPH-GRO, and TPH-DRO following modified EPA Methods 8260c and 8015. The soil samples were received within the required holding time for each laboratory analysis.

Two (2) additional soil samples (SS-08@7.5' and SS-09@5') collected from the excavation were submitted for laboratory analysis. Spatial location of each soil sample was recorded using a Trimble GeoXT 6000 series instrument. A site map presenting the limits of the excavation, as well as soil sample locations, is included as Figure 3.

The final limits of the Shelton #G25-75HN excavation extended approximately 14 feet north to south, and 30 feet east to west. The excavation was advanced to a depth of approximately 7.5 feet bgs. Approximately 60 cubic yards of soil were removed during excavation activities.

Following collection of confirmatory soil samples, the excavation was backfilled with clean structural fill and compacted to grade.

LABORATORY ANALYTICAL RESULTS

Soil samples SS-03@2.5' and SS-05@6.5' contained concentrations of TPH exceeding the COGCC Table 910-1 regulatory limit. The excavation was extended vertically to a total depth of approximately 7.5' bgs, and to the east approximately four (4) feet. Soil samples SS-08@7.5' and SS-09@5' were collected to confirm soil impacts associated with SS-03@2.5' and SS-05@6.5' had been removed.

Based on soil laboratory analytical results, confirmation soil samples SS-08@7.5' and SS-09@5' collected from the Shelton #G25-75HNL excavation did not contain concentrations of BTEX, naphthalene, TPH-GRO, or TPH-DRO exceeding their respective COGCC Table 910-1 Regulatory Limits.

Soil analytical results are summarized in Table 1 and are presented in Figure 4. The laboratory analytical reports for the soil samples collected during source removal activities at the Shelton #G25-75HN site are included in Attachment A.

CONCLUSIONS

Based on the information presented in this report, EAGLE concludes the following:

- Approximately 60 cubic yards of soil was removed from the Shelton #G25-75HNL site on September 4, 2014 and September 5, 2014.
- Confirmation soil samples (SS-01@2.5', SS-02@2.5', SS-04@2.5', SS-08@7.5' and SS-09@5') collected from the sidewalls and floor of the Shelton #G25-75HN excavation did not contain concentrations of BTEX, naphthalene, TPH-GRO, and TPH-DRO exceeding their respective COGCC Table 910-1 Regulatory Limits.
- Soil sample SS-04@2.5' did not contain concentrations of EC, SAR, or pH exceeding their respective COGCC Table 910-1 Regulatory Limits.

RECOMMENDATIONS

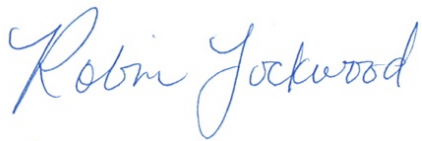
Based on the information presented in this report, EAGLE recommends the following:

- No further assessment or remediation is warranted for the Shelton #G25-75HN water vault removal at this time.

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.



Robin Lockwood
Project Scientist



Martin Eckert III
Senior Project Manager

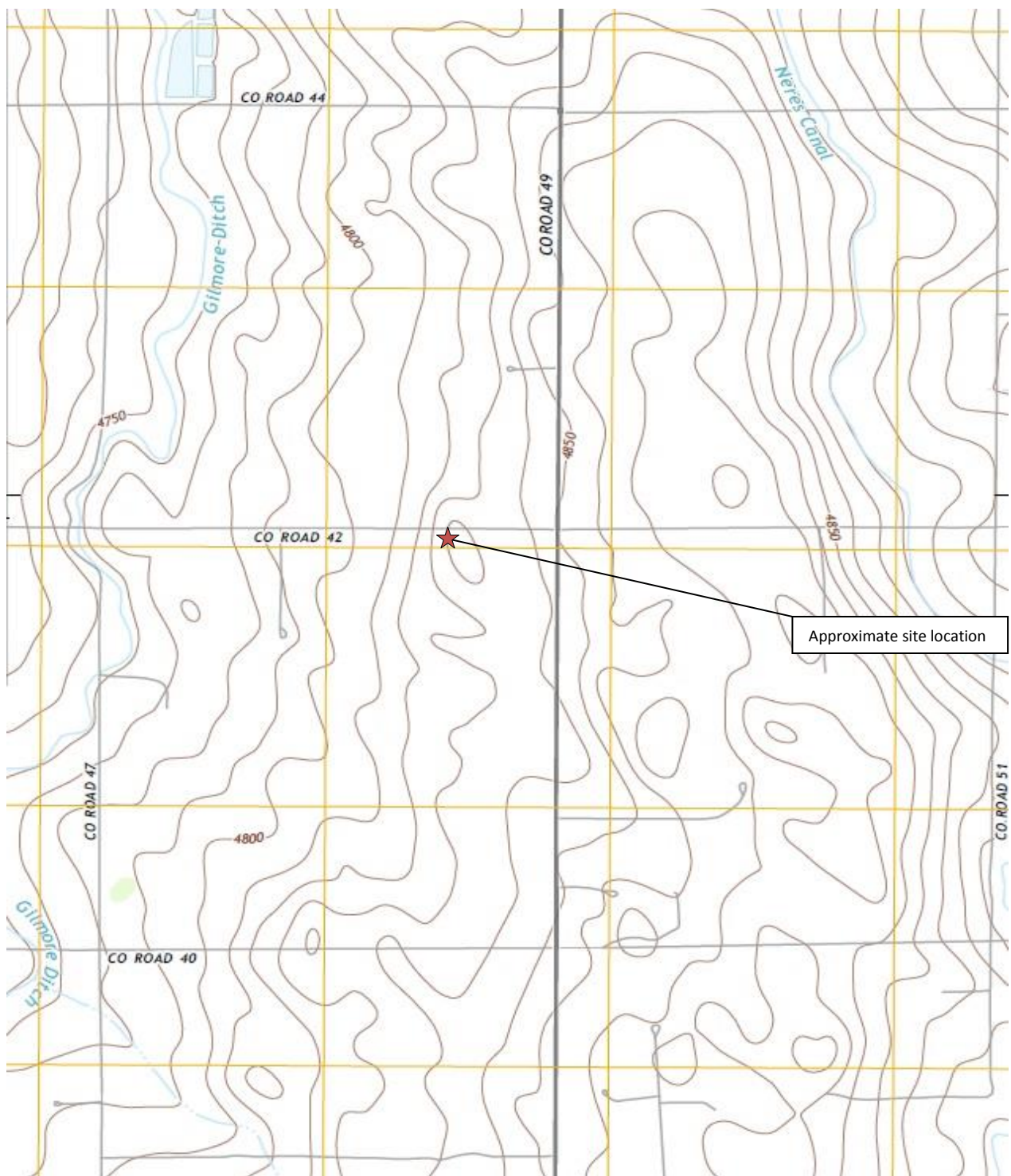
FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Sample Location Map

Figure 4: Soil Sample Analytical Map



Topographic Site Location Map
 Shelton # G25-75HN – Water Vault Removal
 40.290016/-104.608340
 NW¼ NE¼ SEC.25 T4N R65W 6PM
 Weld County, Colorado
 API # 05-123-35541



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Source: USGS 7.5 Minute Topographic
 Map, Valley View School, CO
 Quadrangle 2013

Figure 1



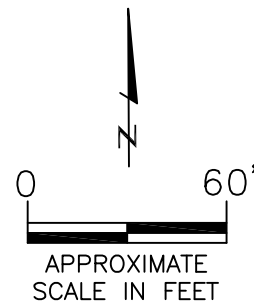
LEGEND

LATITUDE/LONGITUDE OF INFRASTRUCTURE:

WATER VAULT LOCATION (40.290016/-104.608340)



APPROXIMATE LOCATION OF REMOVED WATER VAULTS



AERIAL SITE LOCATION MAP

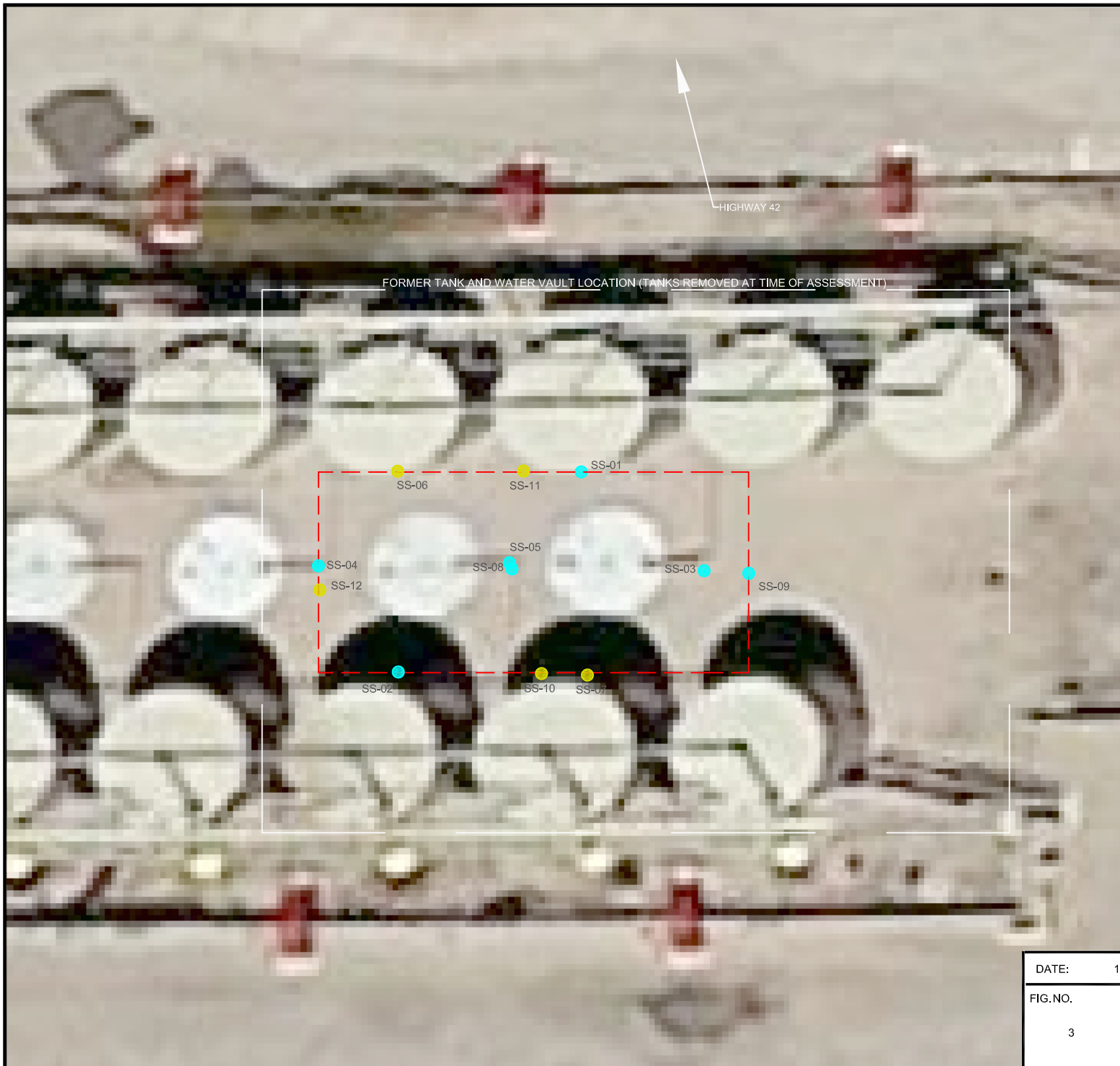
SHELTON #G25-75HN - WATER VAULT REMOVAL
40.290016/-104.608340
NW1/4 NE1/4 SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API# 05-123-35541

DATE:
09/05/14

FIG. NO. 2
DRAWN BY: RAL



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ENVIRONMENTAL
CONSULTING, INC.
4101 INCA STREET, DENVER, CO 80211
Ph: 303-433-0479 • F: 303-325-5449



LEGEND



APPROXIMATE EXCAVATION EXTENTS

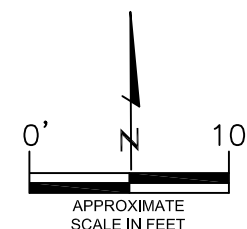


SS-01 SOIL SAMPLES FIELD SCREENED WITH A PID



SS-04 SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PID = PHOTOIONIZATION DETECTOR



SOIL SAMPLE LOCATION MAP
SHELTON # G25-75HN - WATER VAULT REMOVAL
40.290016/-104.608340
NW1/4 NE1/4 SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API# 05-123-35541

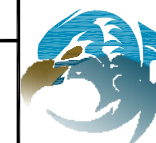
DATE: 11/03/14

FIG.NO.

3

DRAWN BY:

KHP



EAGLE
ENVIRONMENTAL
CONSULTING, INC.
4101 INCA STREET, DENVER, CO 80211
Ph: 303-433-0479 • F: 303-325-5449

LEGEND



APPROXIMATE EXCAVATION EXTENTS



SS-04 SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION
DATE SAMPLE COLLECTED
APPROXIMATE 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)

mg/kg = MILLIGRAMS PER KILOGRAM

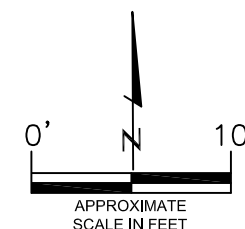
TPH-GRO = TOTAL PETROLEUM
HYDROCARBONS-GASOLINE RANGE ORGANICS

TPH-DRO = TOTAL PETROLEUM HYDROCARBONS-DIESEL
RANGE ORGANICS

NOTE: VALUES PRESENTED IN BOLD TYPEFACE EXCEED
THE COGCC CONCENTRATION LEVELS PRESENTED IN
TABLE 910-1

VALUES PRESENTED WITH A "<" SYMBOL INDICATE
CONCENTRATIONS WERE NOT OBSERVED ABOVE THE
LABORATORY REPORTING LIMIT

COGCC - COLORADO OIL AND GAS CONSERVATION
COMMISSION



SOIL SAMPLE ANALYTICAL MAP
SHELTON # C25-75HN - WATER VAULT REMOVAL
40.290016/-104.608340
NW1/4 NE1/4 SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API# 05-123-35541

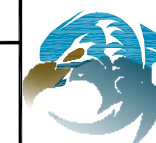
DATE: 11/03/14

FIG.NO.

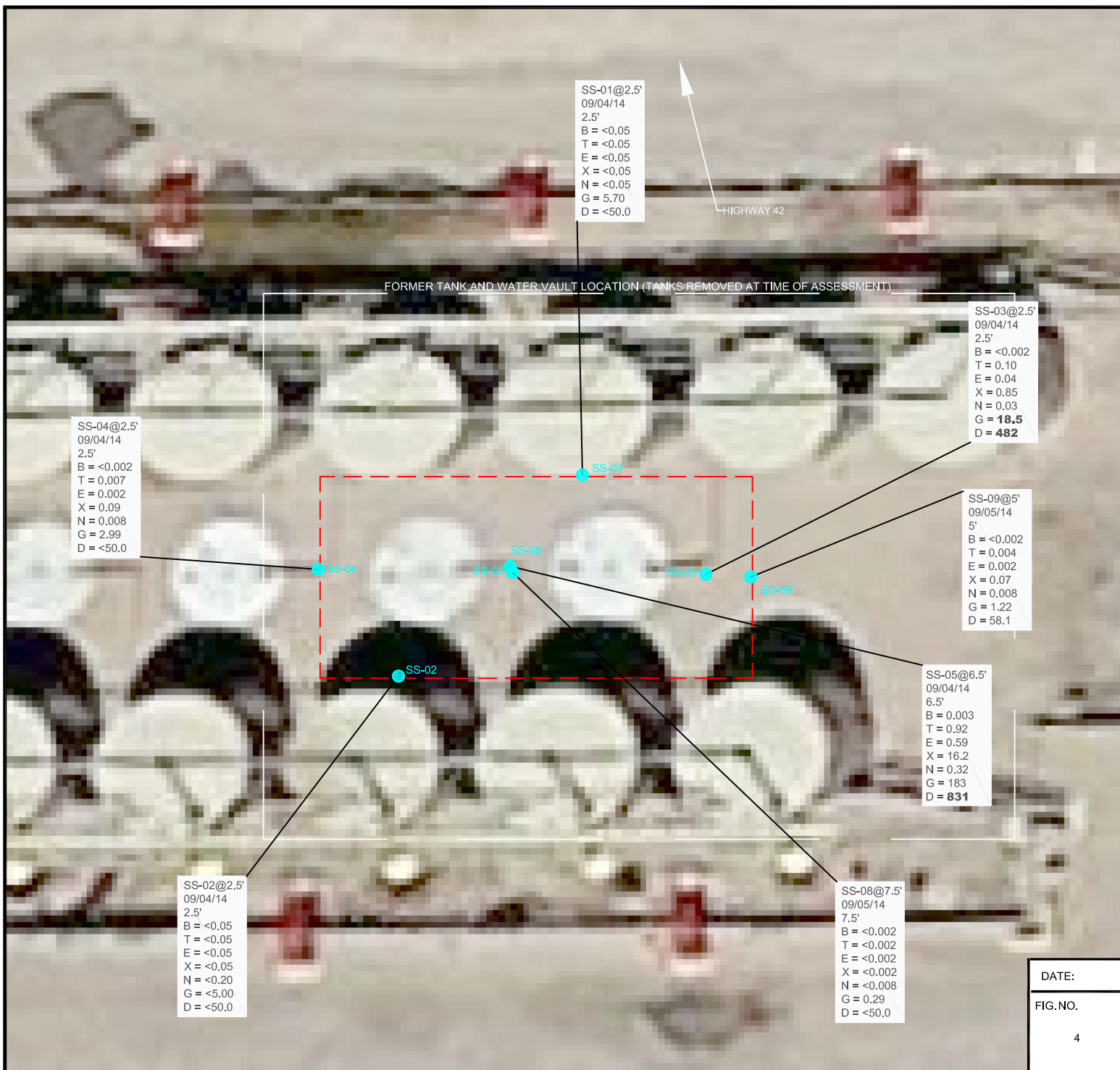
4

DRAWN BY:

KHP



EAGLE
ENVIRONMENTAL
CONSULTING, INC.
4101 INCA STREET, DENVER, CO 80211
Ph: 303-433-0479 • F: 303-325-5449



TABLES

Table 1: Soil Analytical Results Summary

TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
SHELTON #G25-75HN - WATER VAULT REMOVAL
40.290016 / -104.608340
NW¼ NE¼ SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API # 05-123-35541

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
COGCC Table 910-1 Regulatory Limits (mg/kg)			0.17	85	100	175	23	500		<4	6 to 9	<12⁵
SS-01 @ 2.5' (40.290039128 / -104.608338298)	09/04/14	2.5	<0.05	<0.05	<0.05	<0.05	<0.20	5.70	<50.0	NA	NA	NA
SS-02 @ 2.5' (40.289990011 / -104.608374317)	09/04/14	2.5	<0.05	<0.05	<0.05	<0.05	<0.20	<5.00	<50.0	NA	NA	NA
SS-03 @ 2.5' (40.290017206 / -104.608310424)	09/04/14	2.5	<0.002	0.10	0.04	0.85	0.03	18.5	482	NA	NA	NA
SS-04 @ 2.5' (40.290012418 / -104.608397239)	09/04/14	2.5	<0.002	0.007	0.002	0.09	0.008	2.99	<50.0	0.0535	8.58	0.171
SS-05 @ 6.5' (40.290014 / -104.608339)	09/04/14	6.5	0.003	0.92	0.59	16.2	0.32	183	831	NA	NA	NA
SS-08 @ 7.5' (40.290012 / -104.608338)	09/05/14	7.5	<0.002	<0.002	<0.002	<0.002	<0.008	0.29	<50.0	NA	NA	NA
SS-09 @ 5' (40.290011 / -104.608303)	09/05/14	5.0	<0.002	0.004	0.002	0.07	0.008	1.22	58.1	NA	NA	NA

COGCC = Colorado Oil and Gas Conservation Commission

mg/kg = milligrams per kilogram

mmhos/cm = millimhos per centimeter

NA = Not Analyzed

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

SAR = Sodium Adsorption Ratio

Note: Values presented in bold typeface exceeded the COGCC Table 910-1 Regulatory Limit for that compound.

Values presented with a less than symbol (<) did not contain concentrations exceeding the laboratory reporting limit.



ATTACHMENT A

Laboratory Analytical Reports



September 06, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Shelton #G25-75HN

Project Number - [none]

Attached are your analytical results for Noble - Shelton #G25-75HN received by Origins Laboratory, Inc. September 05, 2014. This project is associated with Origins project number X409052-01.

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 - Shelton #G25-75HN

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-08 @ 7.5'	X409052-01	Soil	September 5, 2014 9:20	09/05/2014 10:55
SS-09 @ 5'	X409052-02	Soil	September 5, 2014 9:35	09/05/2014 10:55

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.

Ross S Hutto For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

ORIGINS
LABORATORY, INC

X409052

www.originslaboratory.com

page 1 of 1

Client: Eagle Env. Consulting, Inc.
Address: 4101 Inca Street
Telephone Number: (303) 433-0479
Project Manager/Send Report To: Martin Eckert III
Email Address: Mec.3@eagle-environment.com
Project Name/Number: Shelton #G25-75HN
Samples Collected By: A. Newberry

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions
				HCl	HNO ₃	Other	Groundwater	Soil	200 Summa Container #	Other		
SS-08 @ 75'	9-5-14	0920	2	X				X			G, BTEX - 8260 DRO - 1015 Naphthalene	1
SS-09 @ 5'	9-5-14	0935	2	X				X				2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: <u>[Signature]</u>	Date: <u>9-5-14</u>	Time: <u>1055</u>	Received By: <u>[Signature]</u>	Date: <u>9-5-14</u>	Time: <u>1055</u>	Turnaround Time: <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard						
Relinquished By: <u>[Signature]</u>	Date: <u>9-5-14</u>	Time: <u>1055</u>	Received By: <u>[Signature]</u>	Date: <u>9-5-14</u>	Time: <u>1055</u>	Standard <input type="checkbox"/> 3 hr						

Comments: All results are within the range of the background.

Origins Laboratory, Inc.

[Signature]

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 - Shelton #G25-75HN

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order:

X409052

Client: Eagle

Client Project ID: Shelton #G25-75HN

Checklist Completed by: Scott S. Hutto

Shipped Via: Hot Pick Up

Date/time completed: 9/5/12 11:46

(UPS, FedEx, Hand Delivered, Pick-Up, etc.)

Airbill #: 754

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 1 13.3 °C 1 °C 1 °C (Describe) °C

Thermometer ID: 10017

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"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" 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 checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analyses or samples with LTLs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<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 checked="" 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)

9-5-14 1227
Date/Time Reviewed

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 - Shelton #G25-75HN

SS-08 @ 7.5'
9/5/2014 9:20:00AM

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

Origins Laboratory, Inc.
X409052-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4105008	09/05/2014	09/05/2014
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Surrogate: o-Terphenyl	74.2 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.29	0.20	mg/kg	1	4105007	09/05/2014	09/05/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"
Napthalene	ND	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"
Surrogate: Toluene-d8	94.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	96.6 %	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 - Shelton #G25-75HN

SS-09 @ 5'
9/5/2014 9:35:00AM

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

Origins Laboratory, Inc.
X409052-02 (Soil)

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

Diesel (C10-C28)	58.1	50.0	mg/kg	1	4105008	09/05/2014	09/05/2014
------------------	------	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	60.6 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1.22	0.20	mg/kg	1	4105007	09/05/2014	09/05/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	0.004	0.002	"	"	"	"	"
Ethylbenzene	0.002	0.002	"	"	"	"	"
Xylenes, total	0.07	0.002	"	"	"	"	"
Napthalene	0.008	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"
Surrogate: Toluene-d8	96.6 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	97.9 %	70-130			"	"	"

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 - Shelton #G25-75HN

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 4105007 - EPA 5030 (soil)

Blank (4105007-BLK1)

Prepared: 09/05/2014 Analyzed: 09/05/2014

Gasoline Range Hydrocarbons	ND	0.20	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	59		"	62.5		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.8	70-130			

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.

Ross S Hutto For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Shelton #G25-75HN

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 4105007 - EPA 5030 (soil)										
LCS (4105007-BS1)					Prepared: 09/05/2014 Analyzed: 09/05/2014					
Benzene	0.09	0.002	mg/kg	0.100		94.2	70-130			
Toluene	0.09	0.002	"	0.100		87.9	70-130			
Ethylbenzene	0.09	0.002	"	0.100		89.5	70-130			
m,p-Xylene	0.19	0.004	"	0.200		92.5	70-130			
o-Xylene	0.09	0.002	"	0.100		92.1	70-130			
Naphthalene	0.08	0.008	"	0.100		82.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	59		"	62.5		94.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.2	70-130			

Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

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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Batch 4105007 - EPA 5030 (soil)

Matrix Spike (4105007-MS1)		Source: X409027-01			Prepared: 09/05/2014 Analyzed: 09/05/2014					
Benzene	0.10	0.002	mg/kg	0.100	ND	97.2	70-130			
Toluene	0.09	0.002	"	0.100	0.002	89.5	70-130			
Ethylbenzene	0.09	0.002	"	0.100	ND	91.0	70-130			
m,p-Xylene	0.18	0.004	"	0.200	ND	92.2	70-130			
o-Xylene	0.09	0.002	"	0.100	ND	93.1	70-130			
Naphthalene	0.08	0.008	"	0.100	0.0006	76.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	70-130			

Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

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 4105007 - EPA 5030 (soil)										
Matrix Spike Dup (4105007-MSD1)	Source: X409027-01				Prepared: 09/05/2014 Analyzed: 09/05/2014					
Benzene	0.09	0.002	mg/kg	0.100	ND	89.5	70-130	8.24	20	
Toluene	0.09	0.002	"	0.100	0.002	83.8	70-130	6.43	20	
Ethylbenzene	0.09	0.002	"	0.100	ND	85.5	70-130	6.26	20	
m,p-Xylene	0.17	0.004	"	0.200	ND	85.4	70-130	7.59	20	
o-Xylene	0.09	0.002	"	0.100	ND	89.1	70-130	4.46	20	
Naphthalene	0.07	0.008	"	0.100	0.0006	68.5	70-130	11.0	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	59		"	62.5		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.9	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 - Shelton #G25-75HN

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 8015M - 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 4I05008 - EPA 3580

Blank (4I05008-BLK1)

Prepared: 09/05/2014 Analyzed: 09/05/2014

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	31		g	50.0		62.5	59-131			
LCS (4I05008-BS1)										
Prepared: 09/05/2014 Analyzed: 09/05/2014										
Diesel (C10-C28)	906	50.0	mg/kg	1000		90.6	64-121			
Surrogate: o-Terphenyl	42		g	50.0		84.0	59-131			
Matrix Spike (4I05008-MS1)										
Source: X409027-01										
Prepared: 09/05/2014 Analyzed: 09/05/2014										
Diesel (C10-C28)	944	50.0	mg/kg	1000	36.8	90.7	53-125			
Surrogate: o-Terphenyl	42		g	50.0		84.3	59-131			
Matrix Spike Dup (4I05008-MSD1)										
Source: X409027-01										
Prepared: 09/05/2014 Analyzed: 09/05/2014										
Diesel (C10-C28)	759	50.0	mg/kg	1000	36.8	72.3	53-125	21.6	20	QM-07
Surrogate: o-Terphenyl	32		g	50.0		63.7	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 - Shelton #G25-75HN

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President



November 03, 2014

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Shelton #G25-75HN

Project Number - [none]

Attached are your analytical results for Noble - Shelton #G25-75HN received by Origins Laboratory, Inc. September 04, 2014. This project is associated with Origins project number X409041-01.

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 - Shelton #G25-75HN

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-01 @ 2.5'	X409041-01	Soil	September 4, 2014 8:40	09/04/2014 11:11
SS-02 @ 2.5'	X409041-02	Soil	September 4, 2014 8:46	09/04/2014 11:11
SS-03 @ 2.5'	X409041-03	Soil	September 4, 2014 8:50	09/04/2014 11:11
SS-04 @ 2.5'	X409041-04	Soil	September 4, 2014 8:55	09/04/2014 11:11
SS-05 @ 6.5'	X409041-05	Soil	September 4, 2014 9:11	09/04/2014 11:11

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.

Jen Pellegrini For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X4090041

page 1 of 1

Client: Eagle Environmental Consulting
Address: 4101 Inca Street
Denver, CO
Telephone Number: 303-433-0479

Project Manager/Send Report To: Martin Eckert III
Email Address: m.e@eagle-enviro.com
Project Name/Number: Shelton # G25-75HN
Samples Collected By: H Phillips / M Rianda

Fax: 303.265.9645 | Phone: 303.433.1822 | Denver, CO 80211

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative	Matrix	Analysis/Method	Sample Instructions
SS-01 @ 2.5'	09/04/14	08:46	2	Unpreserved	Soil	EC VH SAP	1
SS-02 @ 2.5'	09/04/14	08:46	2	Unpreserved	Soil	EC VH SAP	2
SS-03 @ 2.5'	09/04/14	08:50	2	Unpreserved	Soil	EC VH SAP	3
SS-04 @ 2.5'	09/04/14	08:55	2	Unpreserved	Soil	EC VH SAP	4
SS-05 @ 6.5'	09/04/14	09:11	2	Unpreserved	Soil	EC VH SAP	5
							6
							7
							8
							9
							10
Relinquished By: <i>[Signature]</i>	Date: 09/04/14	Time: 11:11		Received By: <i>[Signature]</i>	Date: 09/11/14	Time: 11:11	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/> 9.3°C
Relinquished By:	Date:	Time:		Received By:	Date:	Time:	

Comments:

Date Recv'd: 09/11/14

Origins Laboratory, Inc.

Jefe Pellegrini

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 - Shelton #G25-75HN

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X409011

Client: Eagle

Client Project ID: Shelton Pk 25-74-1#10

Checklist Completed by: Jeff Smith

Shipped Via: W/D

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/4/14 1132

Airbill #: N/A

Matrix(s) Received: (Check all that apply) ☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Cooler Number/Temperature: 1 / 9.3 °C 1 °C 1 °C 1 °C

Thermometer ID: T608

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 8°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		<u>Sampled Same Day</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" 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 checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analyses or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<u>Yes</u>		<u>PH</u>
Is a chain of custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments); if preservation is not confirmed for subducted 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 checked="" 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)

9-4-14 1200
Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

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 - Shelton #G25-75HN

SS-01 @ 2.5'
9/4/2014 8:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X409041-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4104008	09/04/2014	09/04/2014
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Surrogate: o-Terphenyl	117 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	5.70	5.00	mg/kg	25	4104007	09/04/2014	09/04/2014
Benzene	ND	0.05	"	"	"	"	"
Toluene	ND	0.05	"	"	"	"	"
Ethylbenzene	ND	0.05	"	"	"	"	"
Xylenes, total	ND	0.05	"	"	"	"	"
Napthalene	ND	0.20	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	99.0 %	70-130			"	"	"
Surrogate: Toluene-d8	99.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	97.5 %	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 - Shelton #G25-75HN

SS-02 @ 2.5'
9/4/2014 8:46:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X409041-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4104008	09/04/2014	09/04/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	91.8 %	59-131			"	"	"
------------------------	--------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	4104007	09/04/2014	09/04/2014
Benzene	ND	0.05	"	"	"	"	"
Toluene	ND	0.05	"	"	"	"	"
Ethylbenzene	ND	0.05	"	"	"	"	"
Xylenes, total	ND	0.05	"	"	"	"	"
Napthalene	ND	0.20	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	97.7 %	70-130			"	"	"
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	99.1 %	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 - Shelton #G25-75HN

SS-03 @ 2.5'
9/4/2014 8:50:00AM

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

Origins Laboratory, Inc.
X409041-03 (Soil)

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

Diesel (C10-C28)	482	50.0	mg/kg	1	4104008	09/04/2014	09/04/2014
------------------	-----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	109 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	18.5	5.00	mg/kg	25	4104007	09/04/2014	09/04/2014
Benzene	ND	0.002	"	1	"	"	09/04/2014
Toluene	0.10	0.002	"	"	"	"	"
Ethylbenzene	0.04	0.002	"	"	"	"	"
Xylenes, total	0.85	0.002	"	"	"	"	"
Napthalene	0.03	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	113 %	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 - Shelton #G25-75HN

SS-04 @ 2.5'
9/4/2014 8:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X409041-04 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	4104008	09/04/2014	09/04/2014
------------------	----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	106 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	2.99	0.20	mg/kg	1	4104007	09/04/2014	09/04/2014
Benzene	ND	0.002	"	"	"	"	"
Toluene	0.007	0.002	"	"	"	"	"
Ethylbenzene	0.002	0.002	"	"	"	"	"
Xylenes, total	0.09	0.002	"	"	"	"	"
Napthalene	0.008	0.008	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	98.6 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.58		pH Units	1	4104013	09/04/2014	09/05/2014
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SAR Metals by SW846 3050B/6010C

Calcium	1350	24.9	mg/kg dry	1	1416853	09/05/2014	09/08/2014
Magnesium	974	29.8	"	"	"	"	"
Sodium	33.8	24.9	"	"	"	"	"

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 - Shelton #G25-75HN

SS-04 @ 2.5'

9/4/2014 8:55:00AM

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit						

GEL Laboratories, LLC

X409041-04 (Soil)

Sodium Adsorption Ratio

Sodium Adsorption Ratio	0.171	none	1	1417575	09/09/2014
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0535	mmhos/cm	1	4104014	09/04/2014	09/05/2014
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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 - Shelton #G25-75HN

SS-05 @ 6.5'
9/4/2014 9:11:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X409041-05 (Soil)

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

Diesel (C10-C28)	831	50.0	mg/kg	1	4104008	09/04/2014	09/04/2014
------------------	-----	------	-------	---	---------	------------	------------

Surrogate: o-Terphenyl	114 %	59-131			"	"	"
------------------------	-------	--------	--	--	---	---	---

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	183	5.00	mg/kg	25	4104007	09/04/2014	09/04/2014
Benzene	0.003	0.002	"	1	"	"	09/04/2014
Toluene	0.92	0.05	"	25	"	"	09/04/2014
Ethylbenzene	0.59	0.05	"	"	"	"	"
Xylenes, total	16.2	0.05	"	"	"	"	"
Naphthalene	0.32	0.20	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	99.7 %	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 - Shelton #G25-75HN

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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Batch 4104007 - EPA 5030 (soil)

Blank (4104007-BLK1)

Prepared: 09/04/2014 Analyzed: 09/04/2014

Gasoline Range Hydrocarbons	ND	0.20	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Naphthalene	ND	0.008	"							
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	70-130			

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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 4104007 - EPA 5030 (soil)										
LCS (4104007-BS1)					Prepared: 09/04/2014 Analyzed: 09/04/2014					
Benzene	0.09	0.002	mg/kg	0.100		87.9	70-130			
Toluene	0.09	0.002	"	0.100		85.6	70-130			
Ethylbenzene	0.09	0.002	"	0.100		88.1	70-130			
m,p-Xylene	0.17	0.004	"	0.200		86.8	70-130			
o-Xylene	0.09	0.002	"	0.100		88.3	70-130			
Naphthalene	0.08	0.008	"	0.100		80.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.6	70-130			

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Project Number: [none]

Project: Noble - Shelton #G25-75HN

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 4104007 - EPA 5030 (soil)										
LCS Dup (4104007-BSD1)					Prepared: 09/04/2014 Analyzed: 09/04/2014					
Benzene	0.09	0.002	mg/kg	0.100		89.4	70-130	1.67	20	
Toluene	0.09	0.002	"	0.100		85.7	70-130	0.210	20	
Ethylbenzene	0.09	0.002	"	0.100		87.2	70-130	1.03	20	
m,p-Xylene	0.18	0.004	"	0.200		88.7	70-130	2.19	20	
o-Xylene	0.09	0.002	"	0.100		89.0	70-130	0.722	20	
Naphthalene	0.09	0.008	"	0.100		86.8	70-130	7.83	20	
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.6	70-130			

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Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

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 8015M - 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 4I04008 - EPA 3580

Blank (4I04008-BLK1)

Prepared: 09/04/2014 Analyzed: 09/04/2014

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	49		g	50.0		97.0	59-131			

LCS (4I04008-BS1)

Prepared: 09/04/2014 Analyzed: 09/04/2014

Diesel (C10-C28)	929	50.0	mg/kg	1000		92.9	64-121			
Surrogate: o-Terphenyl	46		g	50.0		92.2	59-131			

LCS Dup (4I04008-BSD1)

Prepared: 09/04/2014 Analyzed: 09/04/2014

Diesel (C10-C28)	1000	50.0	mg/kg	1000		100	64-121	7.33	20	
Surrogate: o-Terphenyl	47		g	50.0		94.2	59-131			

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Martin C Eckert III
Project Number: [none]
Project: Noble - Shelton #G25-75HN

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 4I04013 - NO PREP										
Duplicate (4I04013-DUP1)		Source: X409041-04			Prepared: 09/04/2014 Analyzed: 09/05/2014					
pH	8.55		pH Units		8.58			0.374	25	
Batch 4I04014 - NO PREP										
Blank (4I04014-BLK1)		Prepared: 09/04/2014 Analyzed: 09/05/2014								
Specific Conductance (EC)	0.00190		mmhos/cm							
Duplicate (4I04014-DUP1)		Source: X409041-04			Prepared: 09/04/2014 Analyzed: 09/05/2014					
Specific Conductance (EC)	0.0509		mmhos/cm		0.0535			4.98	10	

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Martin C Eckert III
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Project: Noble - Shelton #G25-75HN

SAR Metals by SW846 3050B/6010C - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1416853 - SW846 3050B										
BLANK (1203161659-BLK)					Prepared: 09/05/2014 Analyzed: 09/08/2014					
Magnesium	ND	29.7	mg/kg				-			U
Calcium	ND	24.8	"				-			U
Sodium	7.57	24.8	"				-			J
LCS (1203161660-BKS)					Prepared: 09/05/2014 Analyzed: 09/08/2014					
Calcium	484	23.9	mg/kg	479		101	80-120			
Magnesium	512	28.7	"	479		107	80-120			
Sodium	489	23.9	"	479		102	80-120			
DUP (1203161661 D)					Source: 356074001		Prepared: 09/05/2014 Analyzed: 09/08/2014			
Calcium	1250	25.4	mg/kg dry		1350		0-20	7.08	20	
Magnesium	978	30.5	"		974		0-20	0.478	20	
Sodium	32.1	25.4	"		33.8		0-20	5.11	20	
MS (1203161662 S)					Source: 356074001		Prepared: 09/05/2014 Analyzed: 09/08/2014			
Calcium	1770	24.7	mg/kg dry	494	1350	85.6	75-125			
Magnesium	1710	29.7	"	494	974	150	75-125			
Sodium	540	24.7	"	494	33.8	102	75-125			
PS (1203163196 S)					Source: 356074001		Prepared: 09/05/2014 Analyzed: 09/09/2014			
Magnesium	14.8	0.307	mg/kg dry	5000		93.1	80-120			

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Shelton #G25-75HN

Notes and Definitions

U Result not detected above the detection limit

J Greater than the detection limit but less than the reporting limit

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