



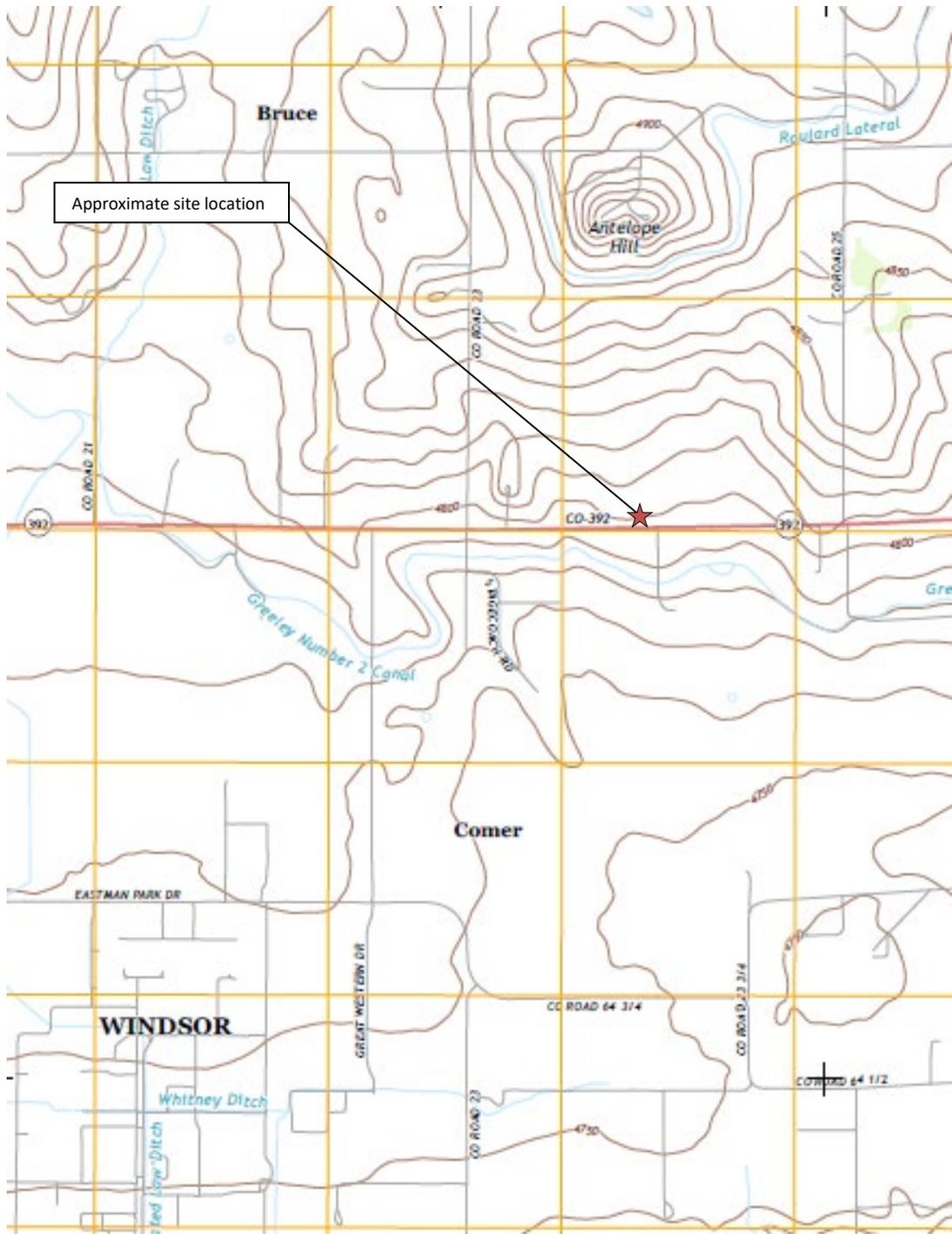
FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Initial Assessment Soil Analytical Map

Figure 4: Soil Boring Analytical Map



Topographic Site Location Map

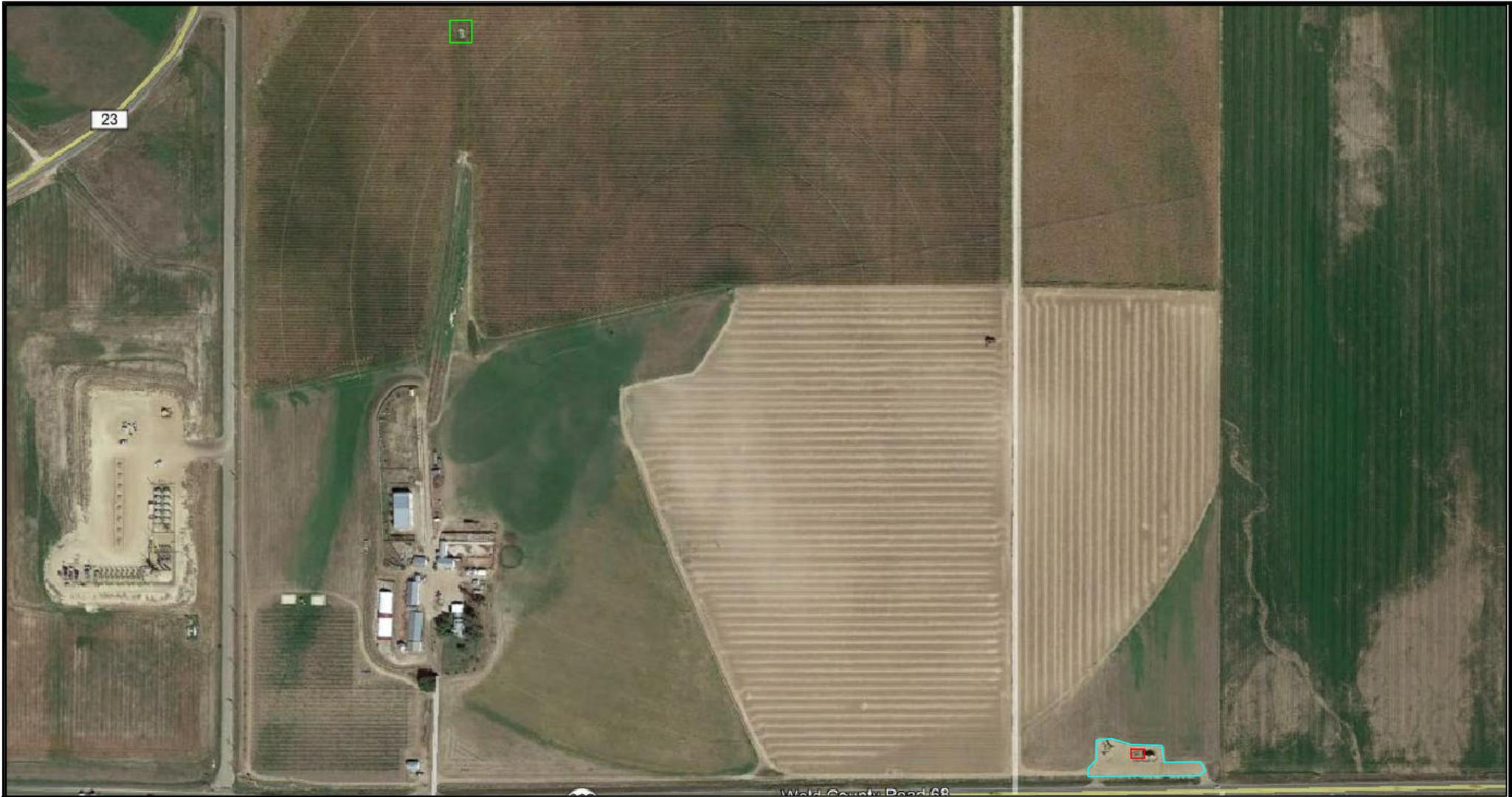
Stromberger #13-32
 Produced Water Release
 40.479950 / -104.842625
 NW¼ SW¼ SEC.13 T6N R67W 6PM
 Weld County, Colorado
 Remediation # 12839



EAGLE
 ENVIRONMENTAL
 CONSULTING, INC.

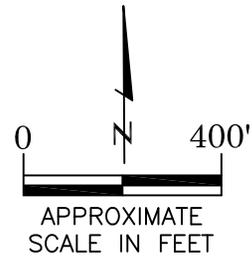
Source: USGS 7.5 Minute Topographic Map, Bracewell, CO Quadrangle 2013

Figure 1



LEGEND

- STROMBERGER #13-32 TANK BATTERY
- STROMBERGER #13-32 WELL HEAD
- APPROXIMATE LOCATION OF WATER VAULT REMOVAL



AERIAL SITE LOCATION MAP
 STROMBERGER #13-32
 PRODUCED WATER RELEASE
 40.479950 / -104.842625
 NW1/4 SW1/4 SEC.13 T6N R67W 6PM
 WELD COUNTY, COLORADO
 REMEDIATION # 12839

DATE:
12/27/19

FIG. NO. DRAWN BY:
2 kf



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 8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449



SS-05@4'
02/06/19
4'
B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.008
G = <0.200
D = <50.0
EC = NA
SAR= NA
pH = NA

SS-02@3'
02/06/19
3'
B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.008
G = <0.200
D = <50.0
EC = 0.248
SAR= **13.97**
pH = 8.63

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

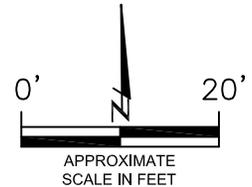
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

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

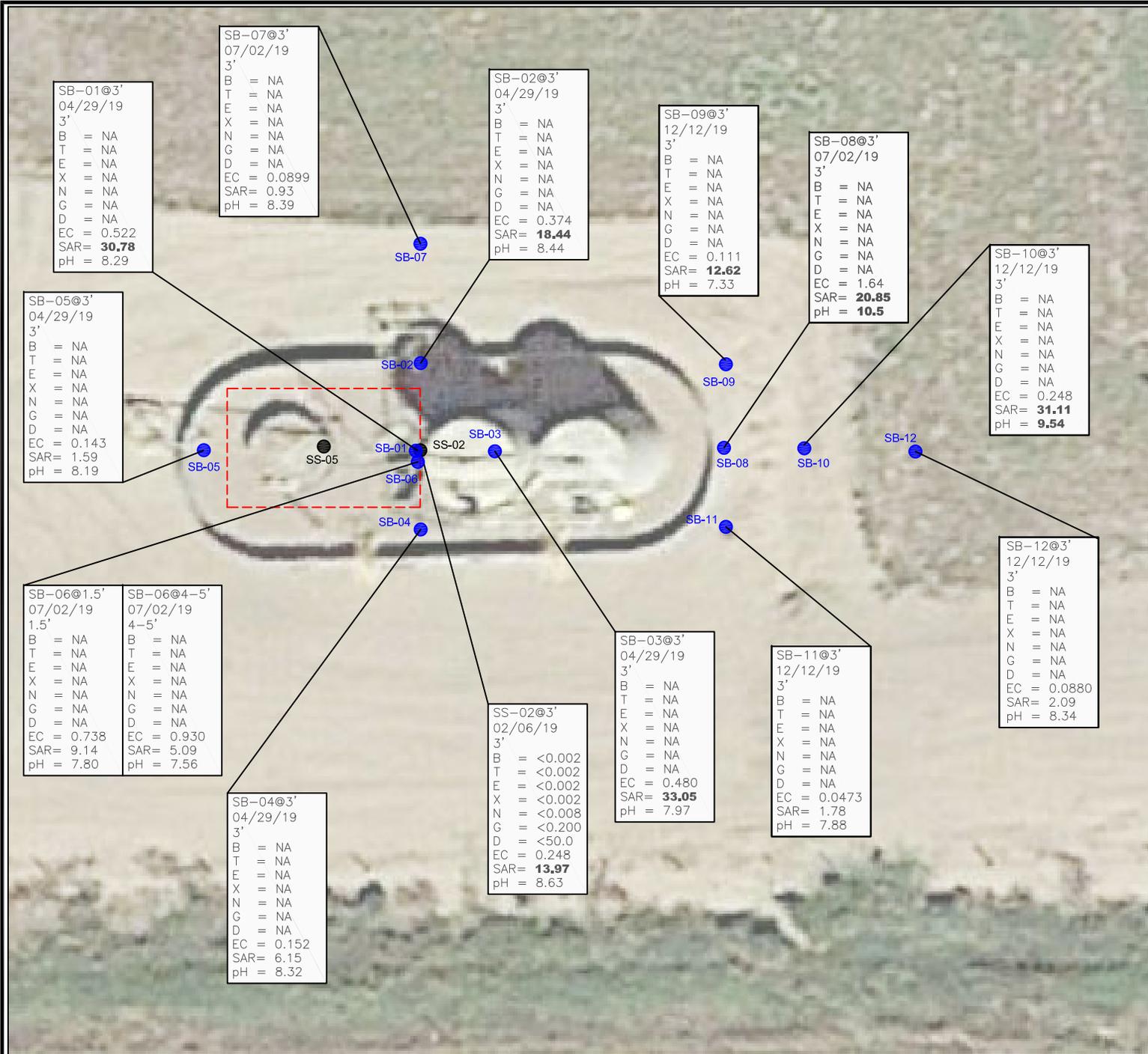


INITIAL ASSESSMENT SOIL ANALYTICAL MAP
STROMBERGER #13-32
PRODUCED WATER RELEASE
40.479950 / -104.842625
NW1/4 SW1/4 SEC.13 T6N R67W 6PM
WELD COUNTY, COLORADO
REMEDATION # 12839

DATE:
12/19/19
DRAWN BY:
kf
FIG.
NO. 3

EAGLE
ENVIRONMENTAL
CONSULTING, INC.
8000 W 44th Ave., Wheat Ridge, CO 80033
Ph: 303-433-0479 • F: 303-325-5449

NOTE: ALL FACILITIES HAVE BEEN REMOVED AS PART OF SITE DECOMMISSIONING ACTIVITIES



LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES

● APPROXIMATE LOCATION OF VAULT REMOVAL SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

● APPROXIMATE SOIL BORING LOCATIONS

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

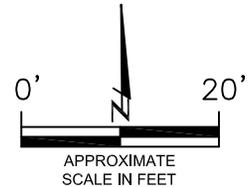
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

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 BORING ANALYTICAL MAP
STROMBERGER #13-32
PRODUCED WATER RELEASE
40.479950 / -104.842625
NW1/4 SW1/4 SEC.13 T6N R67W 6PM
WELD COUNTY, COLORADO
REMEDATION # 12839

DATE:
12/19/19

DRAWN BY:
kf

FIG.
NO. 4

EAGLE
ENVIRONMENTAL
CONSULTING, INC.

8000 W 44th Ave, Wheat Ridge, CO 80033
Ph: 303-433-0479 • F: 303-325-5449

NOTE: ALL FACILITIES HAVE BEEN REMOVED AS PART OF SITE DECOMMISSIONING ACTIVITIES



Tables

Table 1: Soil Analytical Results Summary

TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
STROMBERGER #13-32
PRODUCED WATER RELEASE
40.479950 / -104.842625
NW1/4 SW 1/4 SEC.13 T6N R67W 6PM
WELD COUNTY, COLORADO
REMEDIATION # 12839

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	<12
SS-02 @ 3' (40.479948 / -104.842589)	02/06/19	3	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0	0.248	8.63	13.97
SS-05 @ 4' (40.479952 / -104.842633)	02/06/19	4	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0	NA	NA	NA
SB-01 @ 3' (40.479949 / -104.842587)	04/29/19	3	NA	NA	NA	NA	NA	NA	NA	0.522	8.29	30.78
SB-02 @ 3' (40.479983 / -104.842590)	04/29/19	3	NA	NA	NA	NA	NA	NA	NA	0.374	8.44	18.44
SB-03 @ 3' (40.479948 / -104.842559)	04/29/19	3	NA	NA	NA	NA	NA	NA	NA	0.480	7.97	33.05
SB-04 @ 3' (40.479925 / -104.842589)	04/29/19	3	NA	NA	NA	NA	NA	NA	NA	0.152	8.32	6.15
SB-05 @ 3' (40.479952 / -104.842690)	04/29/19	3	NA	NA	NA	NA	NA	NA	NA	0.143	8.19	1.59
SB-06 @ 1.5' (40.479950 / -104.842588)	07/02/19	3	NA	NA	NA	NA	NA	NA	NA	0.738	7.80	9.14
SB-06 @ 4-5' (40.479950 / -104.842588)	07/02/19	4-5.0	NA	NA	NA	NA	NA	NA	NA	0.930	7.56	5.09
SB-07 @ 3' (40.480030 / -104.842585)	07/02/19	3	NA	NA	NA	NA	NA	NA	NA	0.0899	8.39	0.93
SB-08 @ 3' (40.479953 / -104.842444)	07/02/19	3	NA	NA	NA	NA	NA	NA	NA	1.64	10.5	20.85
SB-09 @ 3' (40.479984 / -104.842446)	12/12/19	3	NA	NA	NA	NA	NA	NA	NA	0.111	7.33	12.62
SB-10 @ 3' (40.479953 / -104.842399)	12/12/19	3	NA	NA	NA	NA	NA	NA	NA	0.248	9.54	31.11
SB-11 @ 3' (40.479926 / -104.842440)	12/12/19	3	NA	NA	NA	NA	NA	NA	NA	0.0473	7.88	1.78
SB-12 @ 3' (40.479958 / -104.842352)	12/12/19	3	NA	NA	NA	NA	NA	NA	NA	0.0880	8.34	2.09

COGCC = Colorado Oil and Gas Conservation Commission

mg/kg = milligrams per kilogram

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

mmhos/cm = millimhos per centimeter

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

NA = Not Analyzed

SAR = Sodium Adsorption Ratio

Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.

Note: Values presented in **BOLD** contained concentrations exceeding COGCC Table 910-1 Regulatory Limits



ATTACHMENT A

Laboratory Analytical Reports



February 13, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Stromberger #13-32

Project Number - [none]

Attached are your analytical results for Noble - Stromberger #13-32 received by Origins Laboratory, Inc. February 06, 2019. This project is associated with Origins project number Y902074-01.

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 - Stromberger #13-32

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-02@3'	Y902074-01	Soil	February 6, 2019 9:31	02/06/2019 11:00
SS-05@4'	Y902074-02	Soil	February 6, 2019 9:37	02/06/2019 11:00

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 - Stromberger #13-32

www.originslaboratory.com

7902674

page 1 of 1

ORIGINS
 LABORATORY, INC

Client: Eagle Environmental Consulting
 Address: 4101 Inca Street
 Telephone Number: 303.433.0479
 Email Address: MCE3@eagle-enviro.com

Project Manager: Martin Eckert
 Project Name: Stromberger #13-32
 Project Number:
 Samples Collected By: K. Fosmark

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 Summa #	Other		
SS-0203	2/6/19	931	2	X				X				Cr17882002	1
SS0504	2/6/19	937	1	X				X				TPH-DIC 2015 Naphthalene X + pH EC SAR	2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By: [Signature] Date: 2/6/19 Time: 1058
 Received By: [Signature] Date: 2/6/19 Time: 1100
 Turnaround Time: Same Day 24 Hr 48 Hr 72 Hr Standard

Date Results Needed: 3.9
 Noble - R-11 to the road EC-815901330

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 - Stromberger #13-32

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y102074

Client: Eagle

Client Project ID: Noble - Stromberger #13-32

Checklist Completed by: JG

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Date/time completed: 2/6/2019

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

Cooler Number/Temperature: 1 13.9 °C 1 °C 1 °C 1 °C (Describe)

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"/>			
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 analytes or samples with HTs 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"/>	<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) JG

Date/Time Reviewed 2/7/19

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 - Stromberger #13-32

SS-02@3'

2/6/2019 9:31:00AM

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

Origins Laboratory, Inc.
Y902074-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9B0702	KDK	02/07/2019	02/07/2019	U
<i>Surrogate: o-Terphenyl</i>	80.1 %	59-131			"	"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9B0701	JTD	02/07/2019	02/07/2019	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
Napthalene	ND	0.008	"	"	"	JTD	"	"	U

<i>Surrogate: 1,2-Dichloroethane-d4</i>	112 %	70-130			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	98.7 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	70-130			"	"	"	"	

Metals (Saturated Paste Prep)

Calcium	1.38		me/L	1	'[none]'		02/08/2019	02/13/2019	
Magnesium	0.60		"	"	"		"	"	
Sodium	13.90		"	"	"		"	"	

pH in Soil by EPA 9045D

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 - Stromberger #13-32

SS-02@3'

2/6/2019 9:31:00AM

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

Origins Laboratory, Inc.
Y902074-01 (Soil)

pH in Soil by EPA 9045D

pH	8.63		pH Units	1	B9B0703	OLAB	02/07/2019	02/08/2019	
----	------	--	----------	---	---------	------	------------	------------	--

SAR by 20B Saturated Paste

SAR	13.97			1	'[none]'		02/08/2019	02/13/2019	
-----	-------	--	--	---	----------	--	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.248	0.00500	mmhos/cm	1	B9B0704	OLAB	02/07/2019	02/08/2019	
---------------------------	-------	---------	----------	---	---------	------	------------	------------	--

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 - Stromberger #13-32

SS-05@4'

2/6/2019 9:37:00AM

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

Origins Laboratory, Inc.
 Y902074-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9B0702	KDK	02/07/2019	02/07/2019	U
Surrogate: o-Terphenyl	76.7 %	59-131			"	"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9B0701	JTD	02/07/2019	02/07/2019	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
Napthalene	ND	0.008	"	"	"	JTD	"	"	U
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	98.6 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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 - Stromberger #13-32

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 B9B0701 - EPA 5030 (soil)

Blank (B9B0701-BLK1)

Prepared: 02/07/2019 Analyzed: 02/07/2019

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	0.13		"	0.125	104		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	99.5		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.4		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 - Stromberger #13-32

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 B9B0701 - EPA 5030 (soil)

LCS (B9B0701-BS1)

Prepared: 02/07/2019 Analyzed: 02/07/2019

Benzene	0.105	0.002	mg/kg	0.100		105	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	0.225	0.004	"	0.200		113	70-130			
o-Xylene	0.111	0.002	"	0.100		111	70-130			
Naphthalene	0.104	0.008	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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 - Stromberger #13-32

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 B9B0701 - EPA 5030 (soil)

Matrix Spike (B9B0701-MS1)	Source: Y902065-01			Prepared: 02/07/2019 Analyzed: 02/07/2019						
Benzene	0.115	0.002	mg/kg	0.100	ND	115	70-130			
Toluene	0.118	0.002	"	0.100	ND	118	70-130			
Ethylbenzene	0.118	0.002	"	0.100	ND	118	70-130			
m,p-Xylene	0.246	0.004	"	0.200	ND	123	70-130			
o-Xylene	0.120	0.002	"	0.100	0.0004	120	70-130			
Naphthalene	0.111	0.008	"	0.100	0.007	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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 - Stromberger #13-32

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 B9B0701 - EPA 5030 (soil)

Matrix Spike Dup (B9B0701-MSD1)	Source: Y902065-01			Prepared: 02/07/2019 Analyzed: 02/07/2019						
Benzene	0.099	0.002	mg/kg	0.100	ND	98.9	70-130	15.5	20	
Toluene	0.104	0.002	"	0.100	ND	104	70-130	12.8	20	
Ethylbenzene	0.108	0.002	"	0.100	ND	108	70-130	8.88	20	
m,p-Xylene	0.221	0.004	"	0.200	ND	111	70-130	10.5	20	
o-Xylene	0.107	0.002	"	0.100	0.0004	106	70-130	11.5	20	
Naphthalene	0.083	0.008	"	0.100	0.007	75.4	70-130	29.0	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 - Stromberger #13-32

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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 B9B0702 - EPA 3550B

Blank (B9B0702-BLK1)

Prepared: 02/07/2019 Analyzed: 02/07/2019

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	44		"	50.0		88.8	59-131			

LCS (B9B0702-BS1)

Prepared: 02/07/2019 Analyzed: 02/07/2019

Diesel (C10-C28)	944	50.0	mg/kg	1000		94.4	64-121			
Surrogate: o-Terphenyl	46		"	50.0		91.6	59-131			

Matrix Spike (B9B0702-MS1)

Source: Y902072-01

Prepared: 02/07/2019 Analyzed: 02/07/2019

Diesel (C10-C28)	974	50.0	mg/kg	1000	ND	97.4	53-125			
Surrogate: o-Terphenyl	43		"	50.0		86.8	59-131			

Matrix Spike Dup (B9B0702-MSD1)

Source: Y902072-01

Prepared: 02/07/2019 Analyzed: 02/07/2019

Diesel (C10-C28)	985	50.0	mg/kg	1000	ND	98.5	53-125	1.07	20	
Surrogate: o-Terphenyl	45		"	50.0		90.7	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 - Stromberger #13-32

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 B9B0703 - NO PREP										
Duplicate (B9B0703-DUP1)		Source: Y902072-01			Prepared: 02/07/2019 Analyzed: 02/08/2019					
pH	6.95		pH Units		7.21			3.67	25	
Batch B9B0704 - NO PREP										
Blank (B9B0704-BLK1)		Prepared: 02/07/2019 Analyzed: 02/08/2019								
Specific Conductance (EC)	0.00170	0.00500	mmhos/cm							
Duplicate (B9B0704-DUP1)		Source: Y902072-01			Prepared: 02/07/2019 Analyzed: 02/08/2019					
Specific Conductance (EC)	0.412	0.00500	mmhos/cm		0.382			7.54	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 - Stromberger #13-32

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.



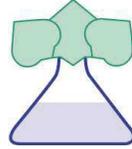
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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: 02/08/2019

DATE REPORTED: 02/13/2019

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			
2595433	Y902074	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		
2595433																			

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		
2595433	1.38	0.60	13.90	13.97	20											

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
2595433	Y902074	01								lbs/A						

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

Subcontracted Laboratory:

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

Work Order: Y902074

Analysis	Due	Expires	Comments
----------	-----	---------	----------

Sample ID: Y902074-01 Soil Sampled: 02/06/2019 09:31

SAR (Saturated Paste Prep) 02/13/2019 02/07/2019 09:31

Containers Supplied:

FEB - 8 2019



Released By

2/7/19

Date



Received By

2/8/19

Date



May 07, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Stromberger #13-32

Project Number - [none]

Attached are your analytical results for Noble - Stromberger #13-32 received by Origins Laboratory, Inc. April 29, 2019. This project is associated with Origins project number Y904494-01.

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 - Stromberger #13-32

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-01@3'	Y904494-01	Soil	April 29, 2019 11:10	04/29/2019 17:20
SB-02@3'	Y904494-02	Soil	April 29, 2019 11:35	04/29/2019 17:20
SB-03@3'	Y904494-03	Soil	April 29, 2019 12:00	04/29/2019 17:20
SB-04@3'	Y904494-04	Soil	April 29, 2019 12:25	04/29/2019 17:20
SB-05@3'	Y904494-05	Soil	April 29, 2019 12:45	04/29/2019 17:20

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 - Stromberger #13-32

www.originslaboratory.com

7904494

page 1 of 1

ORIGINS
 LABORATORY, INC

Client: EAGLE ENV CONSULTING
 Address: 4101 INCA ST
PANORAMA, CO
 Telephone Number: 303 433 0479
 Email Address: MCE@eagle-enviro.com

Project Manager: MARTIN ECKERT
 Project Name: STROMBERGER #13-32
 Project Number: 13
 Samples Collected By: ME

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 Summa #	Other	Date		Time				
SB-01 (S)	4/29/19	1110	2	X				X										
SB-02 (S)		1135	1															
SB-03 (S)		1200	1															
SB-04 (S)		1225	1															
SB-05 (S)		1245	1															
Relinquished By: <u>[Signature]</u>	Date: <u>4/29/19</u>	Time: <u>1710</u>	Time: <u>1710</u>	Received By: <u>[Signature]</u>	Received By: <u>[Signature]</u>	Date: <u>4/29/19</u>	Date: <u>4/29/19</u>	Time: <u>1700</u>	Time: <u>1700</u>	Turnaround Time: <input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input checked="" type="checkbox"/> Standard								

Date Results Needed: N/A

Temp Received: 4.6

Bill to MCE

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 - Stromberger #13-32

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y904494

Client: Eagle

Client Project ID: Stromberger

Checklist Completed by: JG

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

Date/time completed: 4/30/2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.6 °C 1 °C 1 °C 1 °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"/>			
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 analytes or samples with HTs 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) [Signature]

Date/Time Reviewed 5/1/19

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 - Stromberger #13-32

SB-01@3'

4/29/2019 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y904494-01 (Soil)

Metals (Saturated Paste Prep)

Calcium	1.84		me/L	1	'[none]'		05/02/2019	05/06/2019	
Magnesium	0.81		"	"	"		"	"	
Sodium	35.43		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.29		pH Units	1	B9D3005	OLAB	04/30/2019	04/30/2019	
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SAR by 20B Saturated Paste

SAR	30.78			1	'[none]'		05/02/2019	05/06/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.522	0.00507	mmhos/cm	1	B9D3006	OLAB	04/30/2019	04/30/2019	
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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 - Stromberger #13-32

SB-02@3'

4/29/2019 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y904494-02 (Soil)

Metals (Saturated Paste Prep)

Calcium	0.90		me/L	1	'[none]'		05/02/2019	05/06/2019	
Magnesium	0.33		"	"	"		"	"	
Sodium	14.46		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.44		pH Units	1	B9D3005	OLAB	04/30/2019	04/30/2019	
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SAR by 20B Saturated Paste

SAR	18.44			1	'[none]'		05/02/2019	05/06/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.374	0.00500	mmhos/cm	1	B9D3006	OLAB	04/30/2019	04/30/2019	
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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 - Stromberger #13-32

SB-03@3'

4/29/2019 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y904494-03 (Soil)

Metals (Saturated Paste Prep)

Calcium	1.20		me/L	1	'[none]'		05/02/2019	05/06/2019	
Magnesium	0.53		"	"	"		"	"	
Sodium	30.74		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.97		pH Units	1	B9D3005	OLAB	04/30/2019	04/30/2019	
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SAR by 20B Saturated Paste

SAR	33.05			1	'[none]'		05/02/2019	05/06/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.480	0.00500	mmhos/cm	1	B9D3006	OLAB	04/30/2019	04/30/2019	
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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 - Stromberger #13-32

SB-04@3'

4/29/2019 12:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y904494-04 (Soil)

Metals (Saturated Paste Prep)

Calcium	2.40		me/L	1	'[none]'		05/02/2019	05/06/2019	
Magnesium	1.18		"	"	"		"	"	
Sodium	8.23		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.32		pH Units	1	B9D3005	OLAB	04/30/2019	04/30/2019	
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SAR by 20B Saturated Paste

SAR	6.15			1	'[none]'		05/02/2019	05/06/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.152	0.00500	mmhos/cm	1	B9D3006	OLAB	04/30/2019	04/30/2019	
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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 - Stromberger #13-32

SB-05@3'

4/29/2019 12:45:00PM

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

AAL, Inc.
Y904494-05 (Soil)

Metals (Saturated Paste Prep)

Calcium	8.22		me/L	1	'[none]'		05/02/2019	05/06/2019	
Magnesium	3.86		"	"	"		"	"	
Sodium	3.90		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.19		pH Units	1	B9D3005	OLAB	04/30/2019	04/30/2019	
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SAR by 20B Saturated Paste

SAR	1.59			1	'[none]'		05/02/2019	05/06/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.143	0.00500	mmhos/cm	1	B9D3006	OLAB	04/30/2019	04/30/2019	
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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 - Stromberger #13-32

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 B9D3005 - NO PREP										
Duplicate (B9D3005-DUP1)		Source: Y904494-01			Prepared: 04/30/2019 Analyzed: 04/30/2019					
pH	8.19		pH Units		8.29			1.21	25	
Batch B9D3006 - NO PREP										
Blank (B9D3006-BLK1)		Prepared: 04/30/2019 Analyzed: 04/30/2019								
Specific Conductance (EC)	0.00200	0.00500	mmhos/cm							
Duplicate (B9D3006-DUP1)		Source: Y904494-01			Prepared: 04/30/2019 Analyzed: 04/30/2019					
Specific Conductance (EC)	0.624	0.00500	mmhos/cm		0.522			17.8	25	

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 - Stromberger #13-32

Notes and Definitions

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.



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.

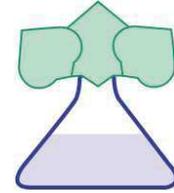
Jen Pellegrini For Noelle Doyle Mathis, President

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

DATE RECEIVED: 05/02/2019

DATE REPORTED: 05/06/2019

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		
2615219	Y904494	01	0-8														
2615220	Y904494	02	0-8														
2615221	Y904494	03	0-8														
2615222	Y904494	04	0-8														
2615223	Y904494	05	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	
2615219																		
2615220																		
2615221																		
2615222																		
2615223																		

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		
2615219	1.84	0.81	35.43	30.78	45											
2615220	0.90	0.33	14.46	18.44	26											
2615221	1.20	0.53	30.74	33.05	48											
2615222	2.40	1.18	8.23	6.15	8											
2615223	8.22	3.86	3.90	1.59	1	0										

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
2615219	Y904494	01														
2615220	Y904494	02														
2615221	Y904494	03														
2615222	Y904494	04														
2615223	Y904494	05														

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

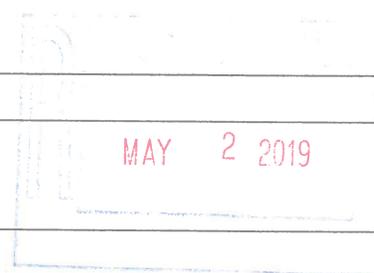
Project Manager: Noelle Doyle Mathis

Subcontracted Laboratory:

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

Work Order: Y904494

Analysis	Due	Expires	Comments
42 Sample ID: Y904494-01 Soil Sampled: 04/29/2019 11:10			
SAR (Saturated Paste Prep)	05/07/2019	04/30/2019 11:10	
<i>Containers Supplied:</i>			
43 Sample ID: Y904494-02 Soil Sampled: 04/29/2019 11:35			
SAR (Saturated Paste Prep)	05/07/2019	04/30/2019 11:35	
<i>Containers Supplied:</i>			
44 Sample ID: Y904494-03 Soil Sampled: 04/29/2019 12:00			
SAR (Saturated Paste Prep)	05/07/2019	04/30/2019 12:00	
<i>Containers Supplied:</i>			
45 Sample ID: Y904494-04 Soil Sampled: 04/29/2019 12:25			
SAR (Saturated Paste Prep)	05/07/2019	04/30/2019 12:25	
<i>Containers Supplied:</i>			
46 Sample ID: Y904494-05 Soil Sampled: 04/29/2019 12:45			
SAR (Saturated Paste Prep)	05/07/2019	04/30/2019 12:45	
<i>Containers Supplied:</i>			



Released By 

Date 4/30/19

Received By 

Date 5/2/19



July 09, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Stromberger #13-32

Project Number - [none]

Attached are your analytical results for Noble - Stromberger #13-32 received by Origins Laboratory, Inc. July 02, 2019. This project is associated with Origins project number Y907064-01.

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 - Stromberger #13-32

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-06@1.5'	Y907064-01	Soil	July 2, 2019 13:30	07/02/2019 16:24
SB-06@4-5'	Y907064-02	Soil	July 2, 2019 13:45	07/02/2019 16:24
SB-07@3'	Y907064-03	Soil	July 2, 2019 14:15	07/02/2019 16:24
SB-08@3'	Y907064-04	Soil	July 2, 2019 14:30	07/02/2019 16:24

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 - Stromberger #13-32

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4907064

Client: Eagle Env.

Client Project ID: Noble - Stromberger

Checklist Completed by: Dan Lee

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

Date/time completed: 7-2-19

Airbill #: NA

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

Cooler Number/Temperature: 1223 / 4.6 °C _____ °C _____ °C _____ °C (Describe)

Thermometer ID: 1223

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 analytes or samples with HTs due within 48 hours present ^{(1)?}	<input checked="" type="checkbox"/>			<u>pl</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) / (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.

MP
 Reviewed by (Project Manager)

7/3/19
 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 - Stromberger #13-32

SB-06@1.5'

7/2/2019 1:30:00PM

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

AAL, Inc.
Y907064-01 (Soil)

Metals (Saturated Paste Prep)

Calcium	17.35		me/L	1	'[none]'		07/08/2019	07/09/2019	
Magnesium	7.52		"	"	"		"	"	
Sodium	32.24		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.80		pH Units	1	B9G0209	OLAB	07/02/2019	07/02/2019	
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SAR by 20B Saturated Paste

SAR	9.14			1	'[none]'		07/08/2019	07/09/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.738	0.00504	mmhos/cm	1	B9G0210	OLAB	07/02/2019	07/02/2019	
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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 - Stromberger #13-32

SB-06@4-5'

7/2/2019 1:45:00PM

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

AAL, Inc.
Y907064-02 (Soil)

Metals (Saturated Paste Prep)

Calcium	46.88		me/L	1	'[none]'		07/08/2019	07/09/2019	
Magnesium	19.25		"	"	"		"	"	
Sodium	29.28		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.56		pH Units	1	B9G0209	OLAB	07/02/2019	07/02/2019	
----	------	--	----------	---	---------	------	------------	------------	--

SAR by 20B Saturated Paste

SAR	5.09			1	'[none]'		07/08/2019	07/09/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.930	0.00503	mmhos/cm	1	B9G0210	OLAB	07/02/2019	07/02/2019	
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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 - Stromberger #13-32

SB-07@3'

7/2/2019 2:15:00PM

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

AAL, Inc.
 Y907064-03 (Soil)

Metals (Saturated Paste Prep)

Calcium	4.10		me/L	1	'[none]'		07/08/2019	07/09/2019	
Magnesium	2.60		"	"	"		"	"	
Sodium	1.70		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.39		pH Units	1	B9G0209	OLAB	07/02/2019	07/02/2019	
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SAR by 20B Saturated Paste

SAR	0.93			1	'[none]'		07/08/2019	07/09/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0899	0.00509	mmhos/cm	1	B9G0210	OLAB	07/02/2019	07/02/2019	
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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 - Stromberger #13-32

SB-08@3'

7/2/2019 2:30:00PM

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

AAL, Inc.
Y907064-04 (Soil)

Metals (Saturated Paste Prep)

Calcium	42.77		me/L	1	'[none]'		07/08/2019	07/09/2019	
Magnesium	0.30		"	"	"		"	"	
Sodium	96.76		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	10.5		pH Units	1	B9G0209	OLAB	07/02/2019	07/02/2019	
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SAR by 20B Saturated Paste

SAR	20.85			1	'[none]'		07/08/2019	07/09/2019	
-----	-------	--	--	---	----------	--	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.64	0.00500	mmhos/cm	1	B9G0210	OLAB	07/02/2019	07/02/2019	
---------------------------	------	---------	----------	---	---------	------	------------	------------	--

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 - Stromberger #13-32

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 B9G0209 - NO PREP										
Duplicate (B9G0209-DUP1)		Source: Y907065-01			Prepared: 07/02/2019 Analyzed: 07/02/2019					
pH	8.56		pH Units		8.69			1.51	25	
Batch B9G0210 - NO PREP										
Blank (B9G0210-BLK1)		Prepared: 07/02/2019 Analyzed: 07/02/2019								
Specific Conductance (EC)	0.00200	0.00500	mmhos/cm							
Duplicate (B9G0210-DUP1)		Source: Y907065-01			Prepared: 07/02/2019 Analyzed: 07/02/2019					
Specific Conductance (EC)	0.505	0.00505	mmhos/cm		0.519			2.87	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 - Stromberger #13-32

Notes and Definitions

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.



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.

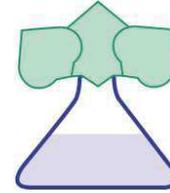
Jen Pellegrini For Noelle Doyle Mathis, President

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

DATE RECEIVED: 07/08/2019

DATE REPORTED: 07/09/2019

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		
2617079	Y907064	01	0-8														
2617080	Y907064	02	0-8														
2617081	Y907064	03	0-8														
2617082	Y907064	04	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	
2617079																		
2617080																		
2617081																		
2617082																		

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		
2617079	17.35	7.52	32.24	9.14	12											
2617080	46.88	19.25	29.28	5.09	6	0										
2617081	4.10	2.60	1.70	0.93	1	0										
2617082	42.77	0.30	96.76	20.85	30											

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
2617079	Y907064	01														
2617080	Y907064	02														
2617081	Y907064	03														
2617082	Y907064	04														

Analysis By: American Agricultural Lab

Recommendations By: American Agricultural Lab



Your Lab's letterhead here... (SAR only)

Address

City, St. Zip

Phone/Fax

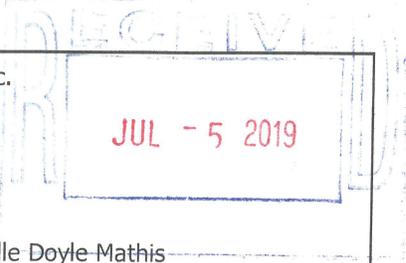
SUBCONTRACT ORDER

070519 Soil Batch

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



Subcontracted Laboratory:

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

Work Order: Y907064

Analysis	Due	Expires	Comments
----------	-----	---------	----------

Sample ID: Y907064-01 Soil Sampled: 07/02/2019 13:30

SAR (Saturated Paste Prep) 07/10/2019 07/03/2019 13:30

Containers Supplied:

1

Sample ID: Y907064-02 Soil Sampled: 07/02/2019 13:45

SAR (Saturated Paste Prep) 07/10/2019 07/03/2019 13:45

Containers Supplied:

2

Sample ID: Y907064-03 Soil Sampled: 07/02/2019 14:15

SAR (Saturated Paste Prep) 07/10/2019 07/03/2019 14:15

Containers Supplied:

3

Sample ID: Y907064-04 Soil Sampled: 07/02/2019 14:30

SAR (Saturated Paste Prep) 07/10/2019 07/03/2019 14:30

Containers Supplied:

4



Released By

7-3-19
Date

Received By

Date



December 23, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Stromberger #13-32

Project Number - [none]

Attached are your analytical results for Noble - Stromberger #13-32 received by Origins Laboratory, Inc. December 12, 2019. This project is associated with Origins project number Y912188-01.

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.
8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Stromberger #13-32

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-09@3'	Y912188-01	Soil	December 12, 2019 10:20	12/12/2019 13:15
SB-10@3'	Y912188-02	Soil	December 12, 2019 10:40	12/12/2019 13:15
SB-11@3'	Y912188-03	Soil	December 12, 2019 11:00	12/12/2019 13:15
SB-12@3'	Y912188-04	Soil	December 12, 2019 11:20	12/12/2019 13:15

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.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4912 138

Client: Eagle Env. Cons
 Client Project ID: Noble Stromberger #13-32

Checklist Completed by: JBE

Shipped Via: (~)
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: _____

Date/time completed: 12-12-19 1344

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

Cooler Number/Temperature: 1 / 56 °C _____ / _____ °C _____ / _____ °C (Describe) _____

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"/>			
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 analytes or samples with HTs due within 48 hours present ^{(1)?}		<input checked="" type="checkbox"/>		PH
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"/>	Spil
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 Na ₂ CO ₃ +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) CVP

Date/Time Reviewed 12/13/19

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.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

SB-09@3'

12/12/2019 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y912188-01 (Soil)

Metals (Saturated Paste Prep)

Calcium	4.88		me/L	1	[none]		12/13/2019	12/17/2019	
Magnesium	2.14		"	"	"		"	"	
Sodium	23.65		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.33		pH Units	1	B9L1203	OLAB	12/12/2019	12/12/2019	
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SAR by 20B Saturated Paste

SAR	12.62			1	[none]		12/13/2019	12/17/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.111	0.00506	mmhos/cm	1	B9L1204	KDK	12/12/2019	12/12/2019	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

SB-10@3'
12/12/2019 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y912188-02 (Soil)

Metals (Saturated Paste Prep)

Calcium	1.55		me/L	1	[none]		12/13/2019	12/17/2019	
Magnesium	0.68		"	"	"		"	"	
Sodium	32.85		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	9.54		pH Units	1	B9L1203	OLAB	12/12/2019	12/12/2019	
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SAR by 20B Saturated Paste

SAR	31.11			1	[none]		12/13/2019	12/17/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.248	0.00500	mmhos/cm	1	B9L1204	KDK	12/12/2019	12/12/2019	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

SB-11@3'
12/12/2019 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y912188-03 (Soil)

Metals (Saturated Paste Prep)

Calcium	2.30		me/L	1	[none]		12/13/2019	12/17/2019	
Magnesium	1.08		"	"	"		"	"	
Sodium	2.32		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.88		pH Units	1	B9L1203	OLAB	12/12/2019	12/12/2019	
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SAR by 20B Saturated Paste

SAR	1.78			1	[none]		12/13/2019	12/17/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0473	0.00507	mmhos/cm	1	B9L1204	KDK	12/12/2019	12/12/2019	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

SB-12@3'

12/12/2019 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y912188-04 (Soil)

Metals (Saturated Paste Prep)

Calcium	1.53		me/L	1	[none]		12/13/2019	12/17/2019	
Magnesium	0.84		"	"	"		"	"	
Sodium	2.28		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	8.34		pH Units	1	B9L1203	OLAB	12/12/2019	12/12/2019	
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SAR by 20B Saturated Paste

SAR	2.09			1	[none]		12/13/2019	12/17/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0880	0.00507	mmhos/cm	1	B9L1204	KDK	12/12/2019	12/12/2019	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Stromberger #13-32

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 B9L1203 - NO PREP										
Duplicate (B9L1203-DUP1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
pH	8.16		pH Units		8.21			0.611	25	
Batch B9L1204 - NO PREP										
Blank (B9L1204-BLK1)		Prepared: 12/12/2019 Analyzed: 12/12/2019								
Specific Conductance (EC)	0.00450	0.00500	mmhos/cm							
Duplicate (B9L1204-DUP1)		Source: Y912176-01			Prepared: 12/12/2019 Analyzed: 12/12/2019					
Specific Conductance (EC)	0.138	0.00500	mmhos/cm		0.117			16.2	25	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Stromberger #13-32

Notes and Definitions

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.



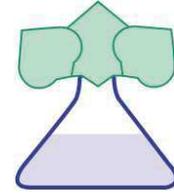
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American Agricultural Laboratory, Inc.

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

DATE RECEIVED: 12/13/2019

DATE REPORTED: 12/17/2019

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		
2677536	Y912188	01	0-8														
2677537	Y912188	02	0-8														
2677538	Y912188	03	0-8														
2677539	Y912188	04	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	
2677536																		
2677537																		
2677538																		
2677539																		

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		
2677536	4.88	2.14	23.65	12.62	18											
2677537	1.55	0.68	32.85	31.11	45											
2677538	2.30	1.08	2.32	1.78	1	0										
2677539	1.53	0.84	2.28	2.09	2	0										

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
2677536	Y912188	01														
2677537	Y912188	02														
2677538	Y912188	03														
2677539	Y912188	04														

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

Subcontracted Laboratory:

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

Work Order: Y912188

Analysis	Due	Expires	Comments
301 331 Sample ID: Y912188-01 Soil Sampled: 12/12/2019 10:20			
SAR (Saturated Paste Prep)	12/19/2019	12/13/2019 10:20	
Containers Supplied:			
302 332 Sample ID: Y912188-02 Soil Sampled: 12/12/2019 10:40			
SAR (Saturated Paste Prep)	12/19/2019	12/13/2019 10:40	
Containers Supplied:			
303 333 Sample ID: Y912188-03 Soil Sampled: 12/12/2019 11:00			
SAR (Saturated Paste Prep)	12/19/2019	12/13/2019 11:00	
Containers Supplied:			
304 334 Sample ID: Y912188-04 Soil Sampled: 12/12/2019 11:20			
SAR (Saturated Paste Prep)	12/19/2019	12/13/2019 11:20	
Containers Supplied:			

DEC 13 2019

Released By Date 12/12/19

Received By Liam Conroy Date 12/13/19