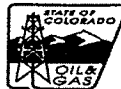


State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109



FOR OGCC USE ONLY

REM 9686
Document 2526326

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): _____

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

GENERAL INFORMATION

OGCC Operator Number: 10112		Contact Name and Telephone	
Name of Operator: Foundation Energy Management		Name: Rachel Grant	
Address: 16000 Dallas Parkway, Suite 875		No: 918-526-5592	
City: Dallas State: TX Zip: 75248		Fax: 918-585-1660	
API/Facility No: 05-057-06124		County: Jackson	
Facility Name: Allard 30-8-5		Facility Number: 05-057-06124	
Well Name: Allard 30-8-5		Well Number: Allard 30-8-5	
Location (Qtr, Sec, Twp, Rng, Meridian): SENE, S30, T10N, R79W, M6		Latitude: 40.812241 Longitude: -106.301789	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Crude oil and produced water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☒ Y ☐ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Fluetsch-Tiagos association

Potential receptors (water wells within 1/4 mi, surface waters, etc.): The nearest surface water is 115' to the east. The nearest water well is 1.761' to the east.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	Refer to Figure 2 and Table 1	Excavation and soil sampling
<input type="checkbox"/> Vegetation		
<input checked="" type="checkbox"/> Groundwater	Refer to Figure 2 and Table 2	Groundwater sampling from open excavation
<input type="checkbox"/> Surface water		

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

On April 3, 2015, a broken valve caused the release of approximately four (4) barrels of oil and produced water within the containment berms. Following Inspection #677900073 a Form 19 was submitted to the COGCC on June 2, 2015 (DOC # 400847550), and Spill/Release Point ID: 441949 was assigned to the location. A topographic map of the site is included as Figure 1.

Describe how source is to be removed:

Excavation and soil sampling was conducted Tuesday 10/13/15 at the Allard 30-8-5 tank battery location. After encountering groundwater at a depth of 3' bgs; one groundwater sample (GW01 - 10/13/2015) and four sidewall confirmation soil samples were collected at a depth of 2' bgs. The four soil samples exhibited concentrations below COGCC Table 910-1 concentration levels for Gasoline Range Organics (GRO), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Diesel Range Organics (DRO), Electrical Conductivity (EC), and Sodium Adsorption Ratio (SAR). One soil sample N01@2' exceed the COGCC Table 910-1 concentration level for pH. Soil sample analytical results are summarized within Table 1. The excavation extent and soil sample locations are included within the attached Figure 2. 80 Cubic Yards (cy) of impacted soil were transported to a licensed facility for disposal.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Impacted soils have been removed and disposed of at a licensed facility. Groundwater sample GW01 collected October 13, 2015 exhibited a Benzene concentration of 10 ug/l above COGCC Table 910-1 concentration levels. On April 21, 2016 the water within the excavation was removed by vacuum truck and transported for disposal at a licensed facility. On April 22, 2016 an additional groundwater sample (GW01 - 04/22/2016) was collected from the excavation which exhibited concentrations below COGCC Table 910-1 concentration levels. Groundwater sample analytical results are included within Table 2 and the laboratory analytical report is included as Exhibit A. Foundation has selected to monitor the natural attenuation (MNA) of possible hydrocarbon impacts to groundwater at the site as the remediation approach. With COGCC approval five monitoring wells (MW01 - MW05) will be installed by hand augering techniques at the locations illustrated within the attached Figure 3. Subsequently groundwater samples will be submitted to Summit Scientific Laboratories in Golden, Colorado for analysis of BTEX using USEPA Method 8260B.

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado
(303) 894-2100 Fax 894-2109



Tracking Number: _____
Name of Operator: Foundation Energy Management
OGCC Operator No: 10112
Received Date: _____
Well Name & No: Allard 30-8-5
Facility Name & No.: Allard 30-8-5

REMEDIAL WORKPLAN (CONT.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
Foundation will perform groundwater sampling at the five monitoring wells illustrated within Figure 3 to assess the dissolved phase petroleum hydrocarbon impacts in groundwater using USEPA Method 8260.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.
The area where the excavation was located within the active tank battery will be backfilled and compacted with clean material.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.
Is further site investigation required? ☒ Y ☐ N If yes, describe:
In order to characterize impacts to groundwater Foundation will install five groundwater monitoring points at the locations illustrated within Figure 3 and collect groundwater samples to assess the dissolved phase petroleum hydrocarbon impacts in groundwater using USEPA Method 8260.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
Impacted material was transported and disposed of at the Waste Management Facility in Ault, Colorado under Foundation waste manifests.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: <u>10/13/2015</u>	Date Site Investigation Completed: <u>NA</u>	Remediation Plan Submitted: _____
Remediation Start Date: <u>10/13/2015</u>	Anticipated Completion Date: <u>NA</u>	Actual Completion Date: <u>TBD</u>

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Rachel Grant

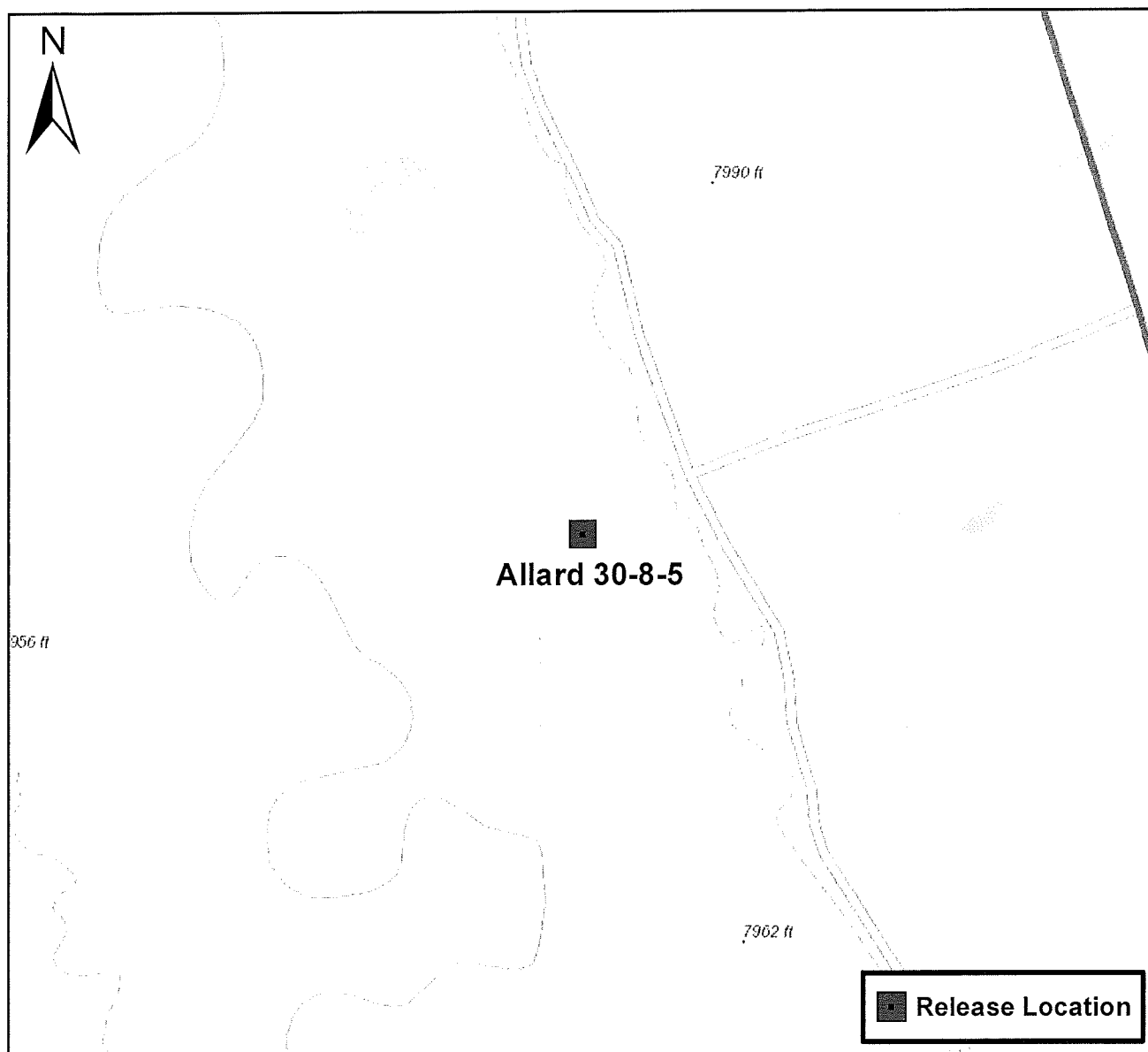
Signed: [Signature] Title: Sr. HSE / Regulatory Tech. Date: 5/27/16

OGCC Approved: [Signature] Title: EPS Date: 5/31/16

See next Page for Conditions of Approval ...

- Lat/Long provided on form is for the wellhead, lat long of pit is 40.811000,-106.299954
- Provide a schedule for conducting field work by June 17, 2016.
- If soil borings are advanced either with a hand auger or by mechanical means, continuous core and screening shall be conducted from the ground surface to the extent of the borings. Screening shall be visual including soil type, color, observed impact (if any) in addition to VOC screening.
- Discrete samples shall be collected from each core exhibiting the most likely impacted interval, as the groundwater interface, or highest VOC detection. Previous observations from the initial soil excavation and groundwater sampling should also be considered as part of the site investigation.
- Monitoring wells shall be installed and registered with the Colorado State Engineer.
- Monitoring wells shall be surveyed to determine in variable of the ground water flow direction and water table fluctuations.
- Monitoring wells shall be installed to adequately define the aerial and vertical extent of impact. The wells shall be installed such that the screen interval intersects the groundwater table taking into account fluctuating groundwater levels.
- Based on the Site Investigation, remedial options will be evaluated by Foundation and presented to the COGCC. The COGCC does NOT approve monitoring by natural attenuation (MNA) at this time.
- Groundwater monitoring wells should be sampled quarterly with at least one sampling event during times of groundwater high and one sampling event during times of groundwater lows. Progress reports and data should be provided to COGCC quarterly beginning July 1, 2016 and quarterly thereafter.
- Groundwater shall be tested for; all major cations and anions, TDS, iron and manganese, nutrients, benzene, toluene, ethylbenzene, xylenes, Total Petroleum Hydrocarbons including DRO and GRO, pH, and specific conductance.
- COGCC rules (910.b.C.)state that EPA method SW-846 or AP RP-45 Analytical methods shall be used.
- Any further discovery of impacted groundwater shall be reported to the COGCC immediately.

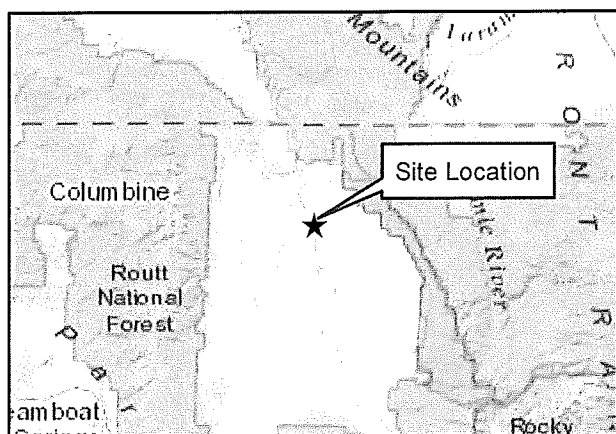
Figures



0 750 1,500 Feet

Figure 1

Site Location Map
 Allard 30-8-5
 SENE S30 T10N R79W
 Jackson County, Colorado



Drawn By: DBA
 Date: 10/14/2015

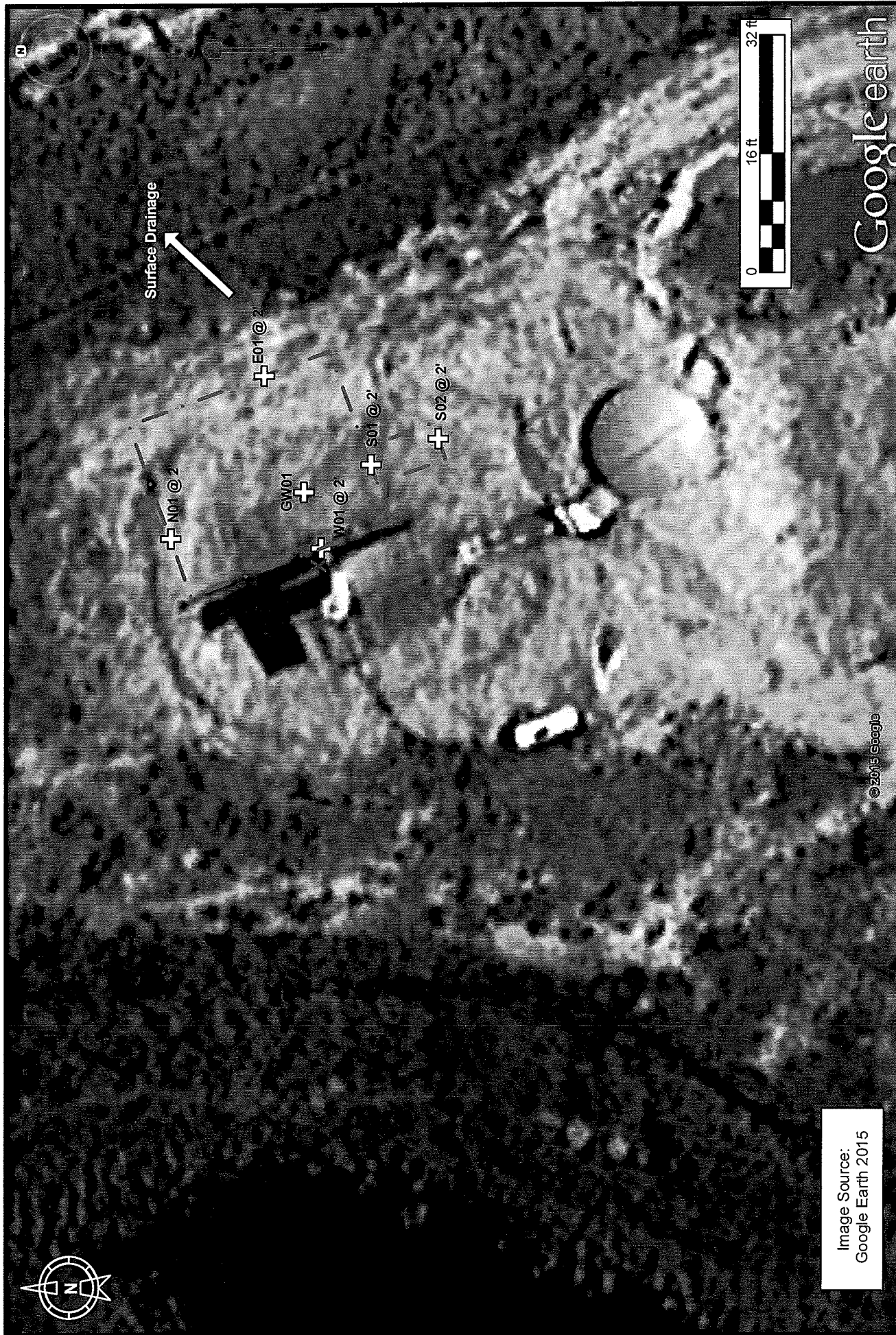




Image Source:
Google Earth 2015

DRAWN BY: MP	Facility Diagram Foundation Energy Management Allard 30-8-5 SENE Section 30, Township 10 North, Range 79 West Jackson County, CO	 TASMAN GEOSCIENCES 6899 Pecos St., Unit C Denver, CO 80221	LEGEND  Approximate Excavation Extent  Approximate Release Location  Approximate Soil Sample Location	FIGURE 2 SITE AND SAMPLE LOCATION MAP
DATE: 10/14/2015				



Image Source:
Google Earth 2015

DRAWN BY: MP	<p>Facility Diagram Foundation Energy Management Allard 30-8-5 SENE Section 30, Township 10 North, Range 79 West Jackson County, CO</p>	<p> TASMAN GEOSCIENCES 6899 Pecos St., Unit C Denver, CO 80221</p>	<p>LEGEND - - - Approximate Excavation Extent X Approximate Release Location + Approximate Soil Sample Location  Approximate Monitoring Well Location</p>	<p>FIGURE 3 Monitoring Well Location Map</p>
DATE: 5/24/2016				

Tables

TABLE 1
FOUNDATION ENERGY
ALLARD 30-8 5
SOIL ANALYTICAL DATA TABLE

Sample ID	Date Sampled	PID Readings (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	DRO (mg/kg)	GRO (mg/kg)	TPH ⁽²⁾ (mg/kg)	pH (s.u.)	EC (mmhos/cm)	SAR	Organics Pass / Fail	Inorganics Pass / Fail
N01 @ 2'	10/13/2013	12.1	<0.10	<10	<10	<10	<50	<50	<50	9.25	0.678	1.31	Pass	Fail
E01 @ 2'	10/13/2013	3.6	<0.10	<10	<10	<10	<50	<50	<50	8.78	0.836	1.5	Pass	Pass
W01 @ 2'	10/13/2013	0.8	<0.10	<10	<10	<10	140	<50	<50	8.67	1.13	2.49	Pass	Pass
S01 @ 2'	10/13/2013	112	<0.10	<10	<10	<10	180	<50	<50	8.67	1.94	2.81	Pass	Pass
COGCC standards for Soil ⁽¹⁾			0.17	85	100	175	500	500	500	6-9	< 4mmhos/cm or 2xBackground	< 12	0 Failed to date	1 Failed to date

Notes:

1). Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective January 30, 2015.

2). TPH - Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.

Bold red values indicate an exceedance of the COGCC soil standards.

< - Analytical result is less than the indicated laboratory reporting limit

GRO - Gasoline range organics

DRO - Diesel range organics

mg/kg - Milligrams per kilogram

ppm - Parts per million

mmhos/cm - Millimhos per centimeter

SAR - Sodium adsorption ratio

NA- Not analyzed

EC - Specific conductance

s.u. - Standard units

TABLE 2
FOUNDATION ENERGY
ALLARD 30-8-5
GROUNDWATER ANALYTICAL DATA TABLE

Sample ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
GW01	10/13/2015	10.0	1.3	21.0	39.0
GW01	4/22/2016	<1.0	<1.0	<1.0	<1.0
COGCC Table 910-1 Groundwater Standard (ug/L) ⁽¹⁾		5	560	700	1,400

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective January 30, 2015.

COGCC = Colorado Oil and Gas Conservation Commission

ug/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

BOLD= Analytical result is in exceedance of COGCC groundwater standards.

Exhibit A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

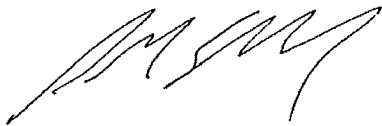
303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 09, 2015

Carter Peace
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Allard 30-8-5

Enclosed are the results of analyses for samples received by Summit Scientific on 10/14/15 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President

S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1510088-01	Water	10/13/15 10:00	10/14/15 17:00
N01@2'	1510088-02	Soil	10/13/15 10:52	10/14/15 17:00
E01@2'	1510088-03	Soil	10/13/15 11:43	10/14/15 17:00
W01@2'	1510088-04	Soil	10/13/15 12:01	10/14/15 17:00
S01@2'	1510088-05	Soil	10/13/15 12:20	10/14/15 17:00

Summit Scientific

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Summit Scientific

741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

Client: Tasman (Foundation) Invoice
Address: (Foundation)
City/State/Zip:
Phone: Fax:
Salesperson Name: Muff P

Project Manager: Carter Peace
E-Mail: C. Peace @ fastia-geo.com
Project Name: Alford 30-8-S
Project Number: _____

[illegible]

www.ck12.org

Summit Scientific

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S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

GW01
1510088-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/13/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	10	1.0	ug/l	1	1510127	10/15/15	10/15/15	EPA 8260B	
Toluene	1.3	1.0	"	"	"	"	"	"	
Ethylbenzene	21	1.0	"	"	"	"	"	"	
Xylenes (total)	39	1.0	"	"	"	"	"	"	

Date Sampled: 10/13/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		104 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	45-146		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

N01@2'
1510088-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510123	10/15/15	10/17/15	8015M	

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1510126	10/15/15	10/16/15	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

N01@2'
1510088-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	2300	11.4 mg/kg dry	1	1510221	10/27/15	11/07/15	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	708	5.68	"	"	"	"	"	"
Sodium	280	5.68	"	"	"	"	"	"

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.31		units	"	1511067	11/08/15	11/08/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.678	0.0100 mmhos/cm		1	1510122	10/15/15	10/15/15	SM 2510B	

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.25	0.100 pH Units		"	1510121	10/15/15	10/15/15	EPA 9045	

Date Sampled: 10/13/15 10:52

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	"	1510190	10/23/15	10/26/15	% calculation	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

E01@2'
1510088-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510123	10/15/15	10/17/15	8015M	

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1510126	10/15/15	10/16/15	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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.

S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

E01@2'
1510088-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	4860	12.4 mg/kg dry	1	1510221	10/27/15	11/07/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	2930	6.21 "	"	"	"	"	"
Sodium	537	6.21 "	"	"	"	"	"

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.50		units	"	1511067	11/08/15	11/08/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.836	0.0100 mmhos/cm		1	1510122	10/15/15	10/15/15	SM 2510B	

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.78	0.100 pH Units		"	1510121	10/15/15	10/15/15	EPA 9045	

Date Sampled: 10/13/15 11:43

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.5		%	"	1510190	10/23/15	10/26/15	% calculation	

Summit Scientific

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.

S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

W01@2'
1510088-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	140	50	mg/kg	1	1510123	10/15/15	10/17/15	8015M	

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1510126	10/15/15	10/16/15	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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.

S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

W01@2'
1510088-04 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	3630	10.2 mg/kg dry	1	1510221	10/27/15	11/07/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	3730	5.11	"	"	"	"	"
Sodium	896	5.11	"	"	"	"	"

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.49		units	"	1511067	11/08/15	11/08/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.13	0.0100 mmhos/cm		1	1510122	10/15/15	10/15/15	SM 2510B	

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67	0.100	pH Units	"	1510121	10/15/15	10/15/15	EPA 9045	

Date Sampled: 10/13/15 12:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.6		%	"	1510190	10/23/15	10/26/15	% calculation	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

S01@2'
1510088-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1510123	10/15/15	10/17/15	8015M	

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		107 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1510126	10/15/15	10/16/15	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		122 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

S01@2'
1510088-05 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	6810	11.8 mg/kg dry	1	1510221	10/27/15	11/07/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	3820	5.92	"	"	"	"	"
Sodium	1170	5.92	"	"	"	"	"

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.81		units	"	1511067	11/08/15	11/08/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.94	0.0100 mmhos/cm		1	1510122	10/15/15	10/15/15	SM 2510B	

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67	0.100 pH Units		"	1510121	10/15/15	10/15/15	EPA 9045	

Date Sampled: 10/13/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	"	1510190	10/23/15	10/26/15	% calculation	

Summit Scientific

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.

S₂

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1510123 - EPA 3550A

Blank (1510123-BLK1)

Prepared & Analyzed: 10/15/15

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	13.3		"	12.2		109	30-150			

LCS (1510123-BS1)

Prepared & Analyzed: 10/15/15

C10-C28 (DRO)	488	50	mg/kg	499		97.7	73-134			
Surrogate: o-Terphenyl	13.7		"	12.2		112	30-150			

Matrix Spike (1510123-MS1)

Source: 1510079-01

Prepared & Analyzed: 10/15/15

C10-C28 (DRO)	497	50	mg/kg	484	ND	103	50-148			
Surrogate: o-Terphenyl	12.8		"	11.8		108	30-150			

Matrix Spike Dup (1510123-MSD1)

Source: 1510079-01

Prepared & Analyzed: 10/15/15

C10-C28 (DRO)	459	50	mg/kg	459	ND	100	50-148	7.92	13	
Surrogate: o-Terphenyl	12.4		"	11.2		110	30-150			

Summit Scientific

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.

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1510126 - EPA 5030 Soil MS

Blank (1510126-BLK1)

Prepared: 10/15/15 Analyzed: 10/16/15

Benzene	ND	0.10	mg/kg							
Toluene	ND	10	"							
Ethylbenzene	ND	10	"							
Xylenes (total)	ND	10	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0447		"	0.0396		113	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	21-167			

LCS (1510126-BS1)

Prepared: 10/15/15 Analyzed: 10/16/15

Benzene	0.115	0.10	mg/kg	0.100		115	58-130			
Toluene	0.105	10	"	0.100		105	61-134			
Ethylbenzene	0.120	10	"	0.0992		121	74-139			
m,p-Xylene	0.231	10	"	0.200		116	73-137			
o-Xylene	0.125	10	"	0.0984		127	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0459		"	0.0396		116	23-173			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	20-170			
Surrogate: 4-Bromofluorobenzene	0.0433		"	0.0400		108	21-167			

Matrix Spike (1510126-MS1)

Source: 1510080-02

Prepared: 10/15/15 Analyzed: 10/16/15

Benzene	0.114	0.10	mg/kg	0.0988	ND	115	30-131			
Toluene	0.104	10	"	0.0988	ND	105	30-134			
Ethylbenzene	0.121	10	"	0.0980	ND	124	22-153			
m,p-Xylene	0.235	10	"	0.197	ND	119	10-159			
o-Xylene	0.125	10	"	0.0972	ND	129	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0460		"	0.0391		118	23-173			
Surrogate: Toluene-d8	0.0412		"	0.0395		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0433		"	0.0395		110	21-167			

Summit Scientific

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.

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1510126 - EPA 5030 Soil MS

Matrix Spike Dup (1510126-MSD1)	Source: 1510080-02			Prepared: 10/15/15 Analyzed: 10/16/15						
Benzene	0.114	0.10	mg/kg	0.0978	ND	116	30-131	0.210	34	
Toluene	0.103	10	"	0.0978	ND	106	30-134	0.185	30	
Ethylbenzene	0.119	10	"	0.0971	ND	123	22-153	1.42	24	
m,p-Xylene	0.232	10	"	0.195	ND	119	10-159	1.31	68	
o-Xylene	0.125	10	"	0.0963	ND	130	31-151	0.0653	38	
Surrogate: 1,2-Dichloroethane-d4	0.0466		"	0.0387		120	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0391		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0425		"	0.0391		109	21-167			

Batch 1510127 - EPA 5030 Water MS

Blank (1510127-BLK1)	Prepared & Analyzed: 10/15/15									
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.3		"	13.2		101	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	45-146			
LCS (1510127-BS1)	Prepared & Analyzed: 10/15/15									
Benzene	31.7	1.0	ug/l	33.3		95.1	51-132			
Toluene	29.9	1.0	"	33.3		89.7	51-138			
Ethylbenzene	37.2	1.0	"	33.1		113	58-146			
m,p-Xylene	69.7	2.0	"	66.5		105	57-144			
o-Xylene	33.1	1.0	"	32.8		101	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.3	45-149			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.7	45-146			

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1510127 - EPA 5030 Water MS

Matrix Spike (1510127-MS1)		Source: 1510088-01			Prepared & Analyzed: 10/15/15					
Benzene	40.8	1.0	ug/l	33.3	10.2	91.8	34-141			
Toluene	31.1	1.0	"	33.3	1.32	89.4	27-151			
Ethylbenzene	58.6	1.0	"	33.1	21.1	114	29-160			
m,p-Xylene	99.4	2.0	"	66.5	30.6	103	20-166			
o-Xylene	41.6	1.0	"	32.8	7.93	103	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	45-146			
Matrix Spike Dup (1510127-MSD1)		Source: 1510088-01			Prepared & Analyzed: 10/15/15					
Benzene	39.7	1.0	ug/l	33.3	10.2	88.6	34-141	2.71	32	
Toluene	31.5	1.0	"	33.3	1.32	90.6	27-151	1.25	25	
Ethylbenzene	54.8	1.0	"	33.1	21.1	102	29-160	6.79	50	
m,p-Xylene	94.3	2.0	"	66.5	30.6	95.7	20-166	5.35	36	
o-Xylene	40.1	1.0	"	32.8	7.93	98.2	33-159	3.69	26	
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.2		112	37-154			
Surrogate: Toluene-d8	13.8		"	13.3		104	45-149			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	45-146			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

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

Batch 1510221 - General Preparation

Blank (1510221-BLK1)

Prepared: 10/27/15 Analyzed: 11/07/15

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1510221-BS1)

Prepared: 10/27/15 Analyzed: 11/07/15

Calcium	540	10.0	mg/kg wet	500	108	82.9-118
Magnesium	518	5.00	"	500	104	77.1-123
Sodium	532	5.00	"	500	106	71-129

Duplicate (1510221-DUP1)

Source: 1510088-02

Prepared: 10/27/15 Analyzed: 11/07/15

Calcium	1530	9.34	mg/kg dry	2300	40.4	200
Magnesium	544	4.67	"	708	26.1	200
Sodium	314	4.67	"	280	11.5	200

Matrix Spike (1510221-MS1)

Source: 1510088-02

Prepared: 10/27/15 Analyzed: 11/07/15

Calcium	2760	11.4	mg/kg dry	535	2300	87.1	75-125
Magnesium	1190	5.68	"	535	708	90.4	75-125
Sodium	841	5.68	"	535	280	105	75-125

Matrix Spike Dup (1510221-MSD1)

Source: 1510088-02

Prepared: 10/27/15 Analyzed: 11/07/15

Calcium	2740	11.4	mg/kg dry	535	2300	81.6	75-125	1.07	25
Magnesium	1200	5.68	"	535	708	91.6	75-125	0.524	25
Sodium	848	5.68	"	535	280	106	75-125	0.804	25

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 1510121 - General Preparation

LCS (1510121-BS1) Prepared & Analyzed: 10/15/15

pH	7.95	0.100	pH Units	8.00	99.4	95-105
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Duplicate (1510121-DUP1) Source: 1510088-02 Prepared & Analyzed: 10/15/15

pH	9.17	0.100	pH Units	9.25	0.869	20
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Batch 1510122 - General Preparation

Blank (1510122-BLK1) Prepared & Analyzed: 10/15/15

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1510122-BS1) Prepared & Analyzed: 10/15/15

Specific Conductance (EC)	0.506	0.0100	mmhos/cm	0.500	101	90-110
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Duplicate (1510122-DUP1) Source: 1510088-02 Prepared & Analyzed: 10/15/15

Specific Conductance (EC)	0.801	0.0100	mmhos/cm	0.678	16.5	20
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Batch 1510190 - General Preparation

Duplicate (1510190-DUP1) Source: 1510088-02 Prepared: 10/23/15 Analyzed: 10/26/15

% Solids	88.2	%	88.0	0.168	20
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Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Carter Peace

Reported:
11/09/15 05:46

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

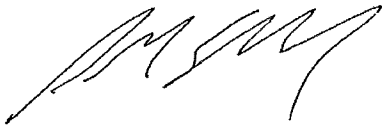
303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 24, 2016

Austin Anderson
Foundation Energy, LLC
15 E 15th St
Tulsa, OK 74103
RE: Allard 30-8-5

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/16 16:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President

S₂

Foundation Energy, LLC
15 E 15th St
Tulsa OK, 74103

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Austin Anderson


Reported:
04/24/16 12:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	1604187-01	Water	04/22/16 12:32	04/22/16 16:35

Summit Scientific

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.



Reported:
04/24/16 12:28

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page | of |

Client: Fandora Energy Management, LLC

Project Manager: Austin Anderson

Address:

E-Mail: ganderson@foundstoneenergy.com

City/State/Zip: _____

Phone: (918) 845-4700 Fax:

Project Name: Allied 30-8-5

Sampler Name: Austin Anderson

Project Number:

Sampler Name: Austin Anderson			Project Number:		Analysis Requested										Special Instructions								
				Preservative				Matrix															
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)											
1	GW 01	4/22/16	12:32 PM	3			5		X				675K 13200										
2	GW 02	4/22/16	12:41 PM	3			3		X				1	Hold 11 test on GW 02									
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
Relinquished by:		Date/Time:	Received by:		Date/Time:		Turn Around Time		(Check)		Notes:												
AK OK		4/22/16 16:35					Same Day <input checked="" type="checkbox"/>		72 hours <input type="checkbox"/>		Monday morning												
Relinquished by:		Date/Time:	Received by:		Date/Time:		24 hours <input type="checkbox"/>		Standard <input type="checkbox"/>														
							48 hours <input type="checkbox"/>																
Relinquished by:		Date/Time:	Received by:		Date/Time:		Sample Integrity:		Temperature Upon Receipt:		45°C												
			[Signature]		4/22/16 16:35		Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No																

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Summit Scientific

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.

S2

Foundation Energy, LLC
15 E 15th St
Tulsa OK, 74103

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Austin Anderson

Reported:
04/24/16 12:28

Sample Receipt Checklist

S2 Work Order: 1604187Client: Foundation Energy Client Project ID: Allard 30-8-5Shipped Via: HD Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)Matrix (check all that apply): Air Soil/Solid ✓ Water Other: _____ (Describe)

Cooler ID					
Temp (°C)	<u>4.5°C</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 8°C ⁽¹⁾ ?	✓			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?	✓			
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		✓		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			✓	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			✓	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Mindy Mach
Custodian Printed Name

AMM
Signature or Initials of Custodian

4/22/16 16:58
Date/Time

S₂

Foundation Energy, LLC
15 E 15th St
Tulsa OK, 74103

Project: Allard 30-8-5

Project Number: [none]
Project Manager: Austin Anderson

Reported:
04/24/16 12:28

GW01
1604187-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/22/16 12:32

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1604250	04/23/16	04/23/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 04/22/16 12:32

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

Summit Scientific

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Foundation Energy, LLC
15 E 15th St
Tulsa OK, 74103

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Austin Anderson

Reported:
04/24/16 12:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1604250 - EPA 5030 Water MS

Blank (1604250-BLK1)

Prepared & Analyzed: 04/23/16

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.4	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.8	45-146			

LCS (1604250-BS1)

Prepared & Analyzed: 04/23/16

Benzene	29.0	1.0	ug/l	33.3		87.2	51-132			
Toluene	28.9	1.0	"	33.3		86.8	51-138			
Ethylbenzene	38.5	1.0	"	33.1		117	58-146			
m,p-Xylene	73.6	2.0	"	66.5		111	57-144			
o-Xylene	35.4	1.0	"	32.7		108	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	37-154			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.8	45-146			

Matrix Spike (1604250-MS1)

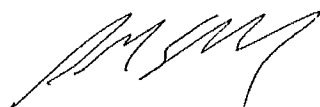
Source: 1604177-01

Prepared & Analyzed: 04/23/16

Benzene	93.2	1.0	ug/l	33.3	80.6	37.7	34-141			
Toluene	29.6	1.0	"	33.3	ND	89.0	27-151			
Ethylbenzene	41.1	1.0	"	33.1	2.66	116	29-160			
m,p-Xylene	79.6	2.0	"	66.5	5.47	111	20-166			
o-Xylene	37.5	1.0	"	32.7	2.30	108	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		110	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.5	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.5	45-146			

Summit Scientific

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Foundation Energy, LLC
15 E 15th St
Tulsa OK, 74103

Project: Allard 30-8-5
Project Number: [none]
Project Manager: Austin Anderson

Reported:
04/24/16 12:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1604250 - EPA 5030 Water MS

Matrix Spike Dup (1604250-MSD1)	Source: 1604177-01			Prepared & Analyzed: 04/23/16						
Benzene	84.8	1.0	ug/l	33.3	80.6	12.7	34-141	9.37	32	QM-07
Toluene	30.8	1.0	"	33.3	ND	92.3	27-151	3.74	25	
Ethylbenzene	41.4	1.0	"	33.1	2.66	117	29-160	0.752	50	
m,p-Xylene	79.3	2.0	"	66.5	5.47	111	20-166	0.340	36	
o-Xylene	37.7	1.0	"	32.7	2.30	108	33-159	0.506	26	
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.3		116	37-154			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

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S₂

Foundation Energy, LLC
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Project: Allard 30-8-5
Project Number: [none]
Project Manager: Austin Anderson

Reported:
04/24/16 12:28

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/LCSD recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Summit Scientific

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