FORM 19 Rev 8/13

State of Colorado
Oil and Gas Conservation Commission

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

Document Number: 400925289
Date Received:

Spill report taken by: CANFIELD, CHRIS
Spill/Release Point ID: 437366

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Any spill or release which may impact waters of the State must be reported as soon as practicable; any spill over 20 bbls must be reported within 24 hours and all spills over five bbls must be reported within ten days. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATON

Name of Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator No: 47120
Address: P O BOX 173779
City: DENVER State: CO Zip: 80217-3779
Contact Person: Phil Hamlin

Phone Numbers
Phone: (970) 336-3500
Mobile: (970) 336-3656
Email: phil.hamlin@anadarko.com

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 400614160

Initial Report Date: 05/23/2014 Date of Discovery: 05/23/2014 Spill Type: Historical Release

Spill/Release Point Location:

Locationof Spill/Release: QTRQTR SENE SEC 8 TWP 3N RNG 67W MERIDIAN 6
Latitude: 40.241235 Longitude: -104.905181
`Municipality (if within municipal boundaries): County: WELD

Reference Location:

Facility Type: TANK BATTERY ☒ Facility/Location ID No 318973
☐ No Existing Facility or Location ID No.
☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): Unknown
Estimated Condensate Spill Volume(bbl): 0
Estimated Flow Back Fluid Spill Volume(bbl): 0
Estimated Produced Water Spill Volume(bbl): Unknown
Estimated Other E&P Waste Spill Volume(bbl): 0
Estimated Drilling Fluid Spill Volume(bbl): 0
Specify:

Land Use:

Current Land Use: CROP LAND Other(Specify):
Weather Condition: Partly cloudy
Surface Owner: FEE Other(Specify):

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☒ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

During the rebuilding of the tank battery, historical impacts were encountered. There was no indication that the dump lines, tanks, or fittings were leaking. The produced water tank was cleaned and removed, and the associated lines were flushed and removed. Impacted soil was excavated and will be transported off-site to a licensed facility for disposal. Groundwater analytical results received May 23, 2013, indicated benzene concentrations above COGCC Table 910-1 standards, making the release reportable. Groundwater will be removed using a vacuum truck and resampled.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

Date	Agency/Party	Contact	Phone	Response
5/23/2014	Weld County	Roy Rudisill	-email	
5/23/2014	Weld County	Tom Parko	-email	

SPILL/RELEASE DETAIL REPORTS

#1 Supplemental Report Date: 10/27/2015

FLUIDS	BBL's SPILLED	BBL's RECOVERED	Unknown
OIL			☒
CONDENSATE	0	0	☐
PRODUCED WATER			☒
DRILLING FLUID	0	0	☐
FLOW BACK FLUID	0	0	☐
OTHER E&P WASTE	0	0	☐

specify:

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☒ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 20 Width of Impact (feet): 15

Depth of Impact (feet BGS): 5 Depth of Impact (inches BGS):

How was extent determined?

Reference Supplemental Form 19 (Document No. 400616494). See Attached Form 27.

Soil/Geology Description:

Silty Sand

Depth to Groundwater (feet BGS) 5 Number Water Wells within 1/2 mile radius: 1

If less than 1 mile, distance in feet to nearest Water Well 2300 None ☐ Surface Water 700 None ☐

Wetlands None ☒ Springs None ☒

Livestock None ☒ Occupied Building 530 None ☐

Additional Spill Details Not Provided Above:

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☒ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

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

Signed: _____ Print Name: Phil Hamlin

Title: Senior HSE Representative Date: _____ Email: phil.hamlin@anadarko.com

Attachment Check List

Att Doc Num	Name
400925298	OTHER

Total Attach: 1 Files

General Comments

User Group	Comment	Comment Date

Total: 0 comment(s)

FORM 27 Rev 6/99

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

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

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):

GENERAL INFORMATION

OGCC Operator Number: 47120
Name of Operator: Kerr-McGee Oil and Gas Onshore, LP
Address: 1099 18th Street, Suite 1800
City: Denver State: CO Zip: 80202

Contact Name and Telephone
Name: Phillip Hamlin
No: 970-336-3500
Fax: 970-336-3656

API/Facility No: 318973
Facility Name: Berry
Well Name: Berry
Location (QtrQtr, Sec, Twp, Rng, Meridian): SENE S8 T3N R67W

County: Weld
Facility Number: 63N67W8SENE
Well Number: 1
Latitude: 40.243690 Longitude: -104.90860

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.): Crop Land

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Silty Sand

Potential receptors (water wells within 1/4 mi, surface waters, etc.): The nearest surface water is located approximately 700' southwest of the site.

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

Impacted Media (check):	Extent of Impact:	How Determined:
☒ Soils	15' (E-W) x 20' (N-S) x 5' bgs	Excavation, soil sampling, and laboratory analysis
☐ Vegetation		
☒ Groundwater	See attached data	Groundwater sampling and laboratory analysis
☐ Surface water		

REMEDIATION WORKPLAN

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

On May 22, 2014, historical hydrocarbon impacts were discovered during removal of the produced water sump at the Berry 63N67W8SENE production facility. The volume of released material is unknown. The well was shut in, associated underground infrastructure removed, and excavation activities commenced. Groundwater was encountered in the excavation at approximately 5 feet below ground surface (bgs). An Initial Form 19 was submitted to the COGCC on May 23, 2014, and a Supplemental Form 19 was submitted on May 29, 2014. The COGCC has issued Spill Tracking number 437366 for this release.

Describe how source is to be removed:

On May 22, 2014, excavation activities commenced and approximately 20 cubic yards of impacted material were excavated and transported to the Front Range Regional Landfill in Erie, Colorado for disposal. Excavation activities were guided in the field using a photoionization detector (PID) to measure volatile organic compound (VOC) concentrations in soil. Soil samples were collected from the sidewalls of the final extent of the excavation area at approximately 4 feet bgs. Soil samples were submitted to eAnalytics Laboratory in Loveland, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) by USEPA Method 8260, TPH – diesel range organics and oil range organics (DRO and ORO) by USEPA Method 8015. Laboratory results indicated that constituent concentrations in the soil samples collected from the final lateral extent of the excavation area were below the applicable COGCC Table 910-1 standards. Soil was excavated into the phreatic zone to address potential hydrocarbon impacts that may have been present below the current groundwater table due to seasonal fluctuations. Groundwater was encountered in the excavation at approximately 5 feet bgs. A groundwater sample (GW01) was collected and submitted for laboratory analysis of BTEX. Analytical results received on May 22, 2014, indicated that the benzene concentration in sample GW01 was above the applicable COGCC Table 910-1 groundwater standard. Approximately 40 barrels of impacted groundwater were removed via vacuum truck and transported to a licensed injection facility for disposal. A second groundwater sample (GW02) was subsequently collected from the excavation area and submitted for laboratory analysis of BTEX. Analytical results received on May 23, 2014, indicated that the BTEX concentration in sample GW02 was below the applicable COGCC Table 910-1 groundwater standard. Soil analytical results are summarized in Table 1 and groundwater analytical results are summarized in Table 2. Soil and excavation groundwater sample locations are illustrated on Figure 1 and laboratory analytical reports are included as Attachment A.

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 soil was excavated and transported to the Front Range Regional Landfill in Erie, Colorado. Impacted groundwater was removed via a vacuum truck and transported to a licensed injection facility for disposal. 100 pounds of activated carbon were added to the groundwater in the excavation prior to backfilling. Additional groundwater monitoring measures are described on the following page. The produced water sump was replaced during assessment and remediation activities.

Submit Page 2 with Page 1.

FORM 27 Rev 6/99

Page 2

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: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No.: _____

REMEDIATION WORKPLAN (CONT.)

OGCC Emplyeee:

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

On June 3, 2015, three temporary groundwater monitoring/remediation wells were installed at the site to further assess the extent of groundwater impacts. Groundwater samples were collected from the temporary monitoring wells on June 17, 2015. Samples were submitted to Origins Laboratory in Denver, Colorado for analysis of BTEX by USEPA Method 8260C. Temporary monitoring/remediation well locations and groundwater analytical results are illustrated on Figure 2, and a groundwater contour map is presented on Figure 3. Groundwater analytical results are summarized in Table 2 and the groundwater laboratory analytical reports and well completion diagrams are included as Attachments A and B, respectively. As presented in Table 2, BTEX concentrations were below the applicable COGCC groundwater standards. Based on these data, Kerr-McGee is requesting a no further action (NFA) determination from the COGCC for this release.

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 excavation has been backfilled with clean soil and graded to match the adjacent topography. Kerr-McGee's tank battery remains at the site. Reclamation activities at the site will be compliant with COGCC regulations.

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 [X] N If yes, describe:

Data indicate that impacted soil has been delineated and removed from the site. Temporary monitoring/remediation wells have been installed to further assess groundwater impacts; groundwater points of compliance have been achieved in all directions. Soil and groundwater analytical results are summarized in Tables 1 and 2, respectively. The analytical laboratory reports are included as Attachment A. Based on the soil and groundwater analytical results, Kerr-McGee is requesting an NFA determination for this release.

Final disposition of E&P waste (land treated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Impacted soil was transported to the Front Range Regional Landfill in Erie, Colorado for disposal. Impacted groundwater was transported to a licensed injection facility for disposal.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began:	5/22/2014	Date Site Investigation Completed:	6/3/2015	Remediation Plan Submitted:	
Remediation Start Date:	5/22/2014	Anticipated Completion Date:		Actual Completion Date:	6/17/15

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

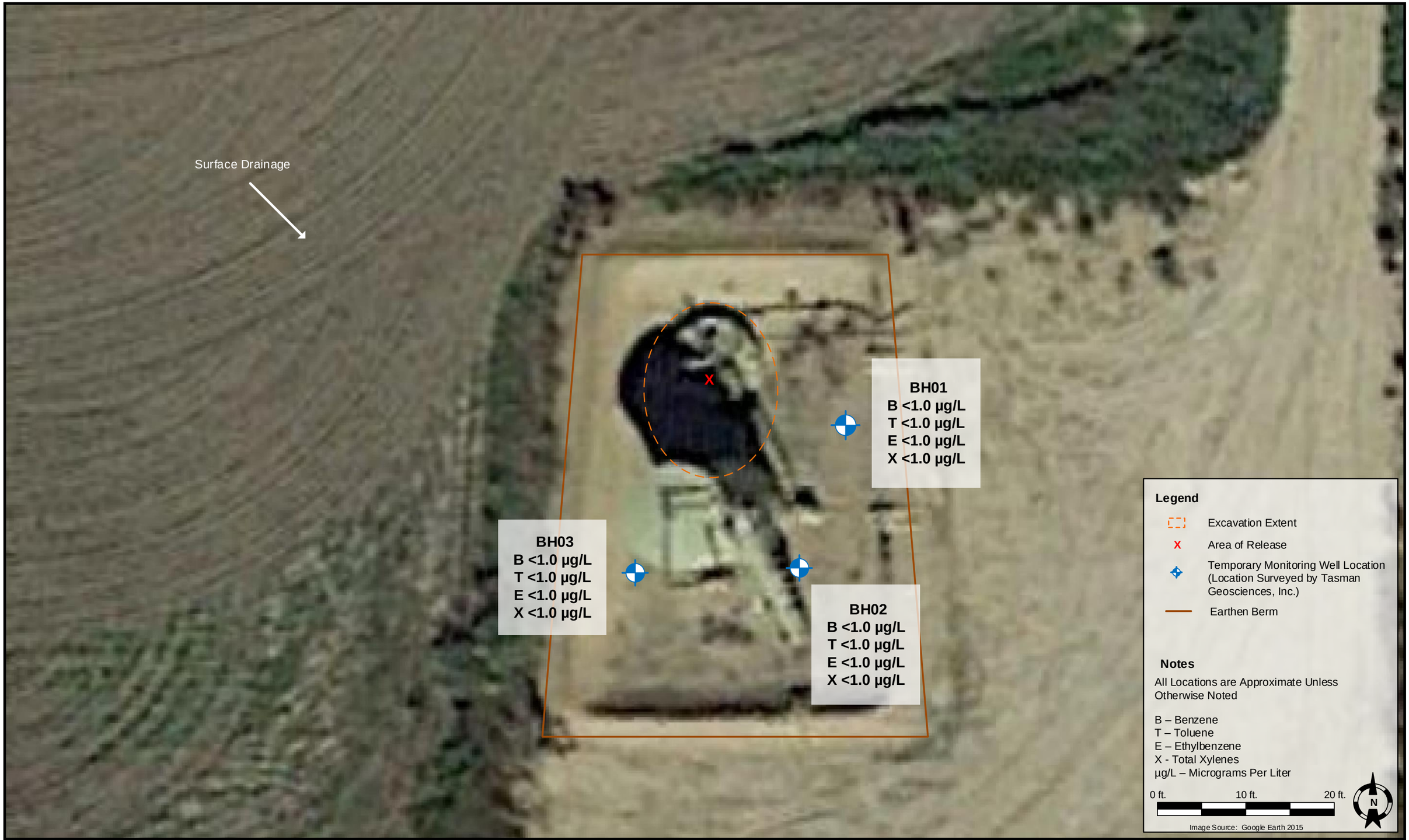
Print Name: Phillip Hamlin

Signed: _____ Title: Senior HSE Representative Date: 10/23/15

OGCC Approved: _____ Title: _____ Date: _____

FIGURES

DATE: October 1, 2015 DESIGNED BY: R. Bruner DRAWN BY: R. Bruner	TASMAN GEOSCIENCES	**Kerr-McGee Oil and Gas Onshore, LP** **Berry 63N67W8SENE** SENE, Section 8, Township 3 North, Range 67 West Weld County, Colorado	Sample Location Map	FIGURE 1



DATE: October 2, 2015 DESIGNED BY: R. Bruner DRAWN BY: R. Bruner	TASMAN GEOSCIENCES	**Kerr-McGee Oil and Gas Onshore, LP** **Berry 63N67W8SENE** SENE, Section 8, Township 3 North, Range 67 West Weld County, Colorado	Groundwater Sample Results Map (06/17/2015)	FIGURE 2

DATE: October 5, 2015 DESIGNED BY: R. Bruner DRAWN BY: R. Bruner	TASMAN GEOSCIENCES	**Kerr-McGee Oil and Gas Onshore, LP** **Berry 63N67W8SENE** SENE, Section 8, Township 3 North, Range 67 West Weld County, Colorado	Groundwater Elevation Contour Map (06/17/2015)	FIGURE 3

ANALYTICAL TABLES

TABLE 1
BERRY 63N67W8SENE
SOIL SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH - GRO (mg/kg)	TEPH - DRO (mg/kg)	TEPH - ORO (mg/kg)
COGCC standards for soil (mg/kg) [(1)]			**0.17**	**85**	**100**	**175**	**500**		
S01 @ 4ft	5/22/2014	4	<0.01	<0.01	<0.01	<0.01	<50	<50	<50
W01 @ 4ft	5/22/2014	4	<0.01	<0.01	<0.01	<0.01	<50	<50	<50
N01 @ 4ft	5/22/2014	4	<0.01	<0.01	<0.01	<0.01	<50	<50	<50
E01 @ 4ft	5/22/2014	4	<0.01	<0.01	<0.01	<0.01	<50	<50	<50

Notes:
1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
COGCC = Colorado Oil and Gas Conservation Commission
(<) = Analytical result is less than the indicated laboratory reporting limit
TVPH - GRO = Total volatile petroleum hydrocarbons - gasoline range organics
TEPH - DRO = Total extractable petroleum hydrocarbons - diesel range organics
TEPH - ORO = Total extractable petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
bgs = Below ground surface
BOLD= Analytical result is in exceedance of COGCC Table 910-1 soil standards

TABLE 2
BERRY 63N67W8SENE
GROUNDWATER SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft bgs)
COGCC Table 910-1 Groundwater Standard (µg/L) (1)		**5**	**560**	**700**	**1,400**	
GW01	5/22/2014	**17.6**	83.8	13.7	157	~5
GW02	5/23/2014	<1.0	<1.0	<1.0	<1.0	~5
BH01	6/17/2015	<1.0	<1.0	<1.0	<1.0	3.28
BH02	6/17/2015	<1.0	<1.0	<1.0	<1.0	2.81
BH03	6/17/2015	<1.0	<1.0	<1.0	<1.0	2.95

Notes:
1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
COGCC = Colorado Oil and Gas Conservation Commission
µg/L = Micrograms per liter
(<) = Analytical result is less than the indicated laboratory reporting limit
ft bgs = Feet below ground surface
BOLD= Analytical result is in exceedance of COGCC groundwater standards

ATTACHMENT A
LABORATORY
ANALYTICAL REPORTS

Test Report

eANALYTICS
LABORATORY

May 22, 2014

Client:	Tasman Geosciences / Anadarko
Project:	Berry #1
Lab ID:	1436
Date Samples Received:	5/22/2014
Number of Samples:	5
Sample Condition:	Samples arrived intact and in appropriate sample containers
Sample Temperature:	Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

Christopher Dieken
Quality Assurance Manager

Todd Rhea
Laboratory Manager

Chain of Custody

eANALYTICS LABORATORY

Chain of Custody Fo

eANALYTICS LABORATORY

1767 Rocky Mountain Avenue Loveland CO 80538 | Phone: (970) 667-6975 | Fax: (970) 669-0941 | www.eAnalyticsLab.com

CLIENT INFORMATION

(*New Clients please fill out completely)

Company:	Tasman Geosciences / Anadarko
Project:	Berry #1
Project Manager:	Paul Schneider / Phil Hamlin
Sampler:	Christine Wasko
Phone/Email:	720-409-8791 / cwasko@tasman-geo.com
Address:	6899 Pecos Street, Unit C Denver, CO 80221

ANALYSIS INFORMATION

(Select analysis by checking box on corresponding sample line)

Lab ID	Sample Name	Sampling Date/Time	Number of Containers	Matrix:(S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX/GRO (EPA 8260)	DRO/ORO (EPA 8015)	TPH-GRO/DRO/ORO (EPA 8260/8015)	SAR (US Dept of Ag Method 20B)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis
1	S01@4ft	5/22/14 1504 AM / PM	1	S		X	X	X				
2	W01@4ft	5/22/14 1506 AM / PM	1	S		Hold						
3	N01@4ft	5/22/14 1508 AM / PM	1	S		Hold						
4	E01@4ft	5/22/14 1510 AM / PM	1	S		Hold						
5	GW01	5/22/14 1520 AM / PM	3	W	X							
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										
		AM / PM										

Comments:

Turnaround Time (Business Days)

TAT begins when sample is received by eANALYTICS

- ○ Normal (5-10 Days)
- ○ 3 Day (1.25x)
- ○ 1 Day (2x)
- ○ Same Day (3x)
- X Next Bus. Morning (APC Pricing)

Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.

For eANALYTICS Use

Samples Received Intact	(Yes)	No
Received Within Temperature Range (2-6°C)	(Yes)	No
Sample Preservative	(Ice) None	Acid Other

Record of Custody

Relinquished by:		Date 5/22/1
Company: Tasman Geosciences		Time 1521 1724 AM / PM
Received by:		Date
Company:		Time AM / PM
Relinquished by:		Date
Company:		Time AM / PM
Received by:		Date 5/22/1
Company: eANALYTICS		Time 1705 AM / PM

WO # 1436

eANALYTICS: Environmental testing made Easy

Page 1 of 1

Soil
Sample Analysis

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
S01 @ 4ft	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/22/14	05/22/14	1436	1

Water
Sample Analysis

eANALYTICS
LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics	Method:	EPA8260

Sample Name	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Total Xylenes ug/L	Date Sampled	Date Analyzed	Lab ID	
GW01	**17.6**	**83.8**	**13.7**	**157**	05/22/14	05/22/14	1436	5

Soil
Quality Control - Surrogate Recoveries

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1	Method:	EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID	
S01 @ 4ft	100	101	94	107	05/22/14	05/22/14	1436	1

Water
Quality Control - Surrogate Recoveries

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1	Method:	EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID	
GW01	99	98	102	89	05/22/14	05/22/14	1436	5

Soil
Quality Control - Analyses

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Analyzed		Lab ID
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec			
Laboratory Control Sample	99	103	104	102	100	102	102	05/22/14	LCS	1436 1
(70-130%)										
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/22/14	MB	1436 1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			

Water
Quality Control - Analyses

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics	Method:	EPA8260

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Date Analyzed		Lab ID	
	% Rec	% Rec	% Rec	% Rec				
Laboratory Control Sample	91	99	93	89	05/22/14	LCS	1436	1
(70-130%)								
Method Blank	< 1.0	< 1.0	< 1.0	< 1.0	05/22/14	MB	1436	1
	ug/L	ug/L	ug/L	ug/L				

Test Report

eANALYTICS
LABORATORY

May 23, 2014

Client:	Tasman Geosciences / Anadarko
Project:	Berry #1
Lab ID:	1436
Date Samples Received:	5/22/2014
Number of Samples:	5
Sample Condition:	Samples arrived intact and in appropriate sample containers
Sample Temperature:	Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

Christopher Dieken
Quality Assurance Manager

Todd Rhea
Laboratory Manager

Chain of Custody

eANALYTICS LABORATORY

eANALYTICS LABORATORY

1767 Rocky Mountain Avenue Loveland CO 80538 | Phone: (970) 667-6975 | Fax: (970) 669-0941 | www.eAnalyticsLab.com

CLIENT INFORMATION

(*New Clients please fill out completely)

Company:	Tasman Geosciences / Anadarko
Project:	Berry #1
Project Manager:	Paul Schneider / Phil Hamlin
Sampler:	Christine Wasko
Phone/Email:	720-409-8791 / cwasko@tasman-geo.com
Address:	6899 Pecos Street, Unit C Denver, CO 80221

ANALYSIS INFORMATION

(Select analysis by checking box on corresponding sample line)

Lab ID	Sample Name	Sampling Date/Time	Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX/GRO (EPA 8260)	DRO/ORO (EPA 8015)	TPH-GRO/DRO/ORO (EPA 8260/8015)	SAR (US Dept of Ag Method 208)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis
1	S01@4ft	5/22/14 1509	1	S		X	X	X				Run hold samples per Christine w. Todd R. 5-23-14
2	W01@4ft	5/22/14 1506	1	S		Hold						X
3	N01@4ft	5/22/14 1508	1	S		Hold						X
4	E01@4ft	5/22/14 1510	1	S		Hold						X
5	GW01	5/22/14 1520	3	W	X							

Comments:

Turnaround Time (Business Days)

TAT begins when sample is received by eANALYTICS

- ○ Normal (5-10 Days)
- ○ 3 Day (1.25x)
- ○ 1 Day (2x)
- ○ Same Day (3x)
- ☒ Next Bus. Morning (APC Pricing)

Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.

For eANALYTICS Use

Samples Received Intact	Yes	No
Received Within Temperature Range (2-6°C)	Yes	No
Sample Preservative	Ice / None	Acid / Other

Record of Custody

Relinquished by:	Company: Tasman Geosciences	Date: 5/2 Time: 1724
Received by:	Company:	Date: Time:
Relinquished by:	Company:	Date: Time:
Received by:	Company: eANALYTICS	Date: 5/2 Time:

WO # 1436

eANALYTICS: Environmental testing made Easy

Page 1 of

Soil
Sample Analysis

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
W01 @ 4 ft	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/22/14	05/23/14	1436	2
N01 @ 4 ft	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/22/14	05/23/14	1436	3
E01 @ 4 ft	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/22/14	05/23/14	1436	4

Soil
Quality Control - Surrogate Recoveries

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1	Method:	EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID	
W01 @ 4 ft	92	93	104	103	05/22/14	05/23/14	1436	2
N01 @ 4 ft	88	100	107	110	05/22/14	05/23/14	1436	3
E01 @ 4 ft	107	104	94	87	05/22/14	05/23/14	1436	4

Soil
Quality Control - Analyses

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1436
Project:	Berry #1		
Analysis:	Volatile Organics TPH	Method:	EPA8260 EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Analyzed		Lab ID
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec			
Laboratory Control Sample	94	97	102	92	101	94	92	05/23/14	LCS	1436 1
(70-130%)										
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/23/14	MB	1436 1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			

Test Report

eANALYTICS
LABORATORY

May 23, 2014

Client:	Tasman Geosciences / Anadarko
Project:	Berry #1
Lab ID:	1443
Date Samples Received:	5/23/2014
Number of Samples:	1
Sample Condition:	Samples arrived intact and in appropriate sample containers
Sample Temperature:	Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

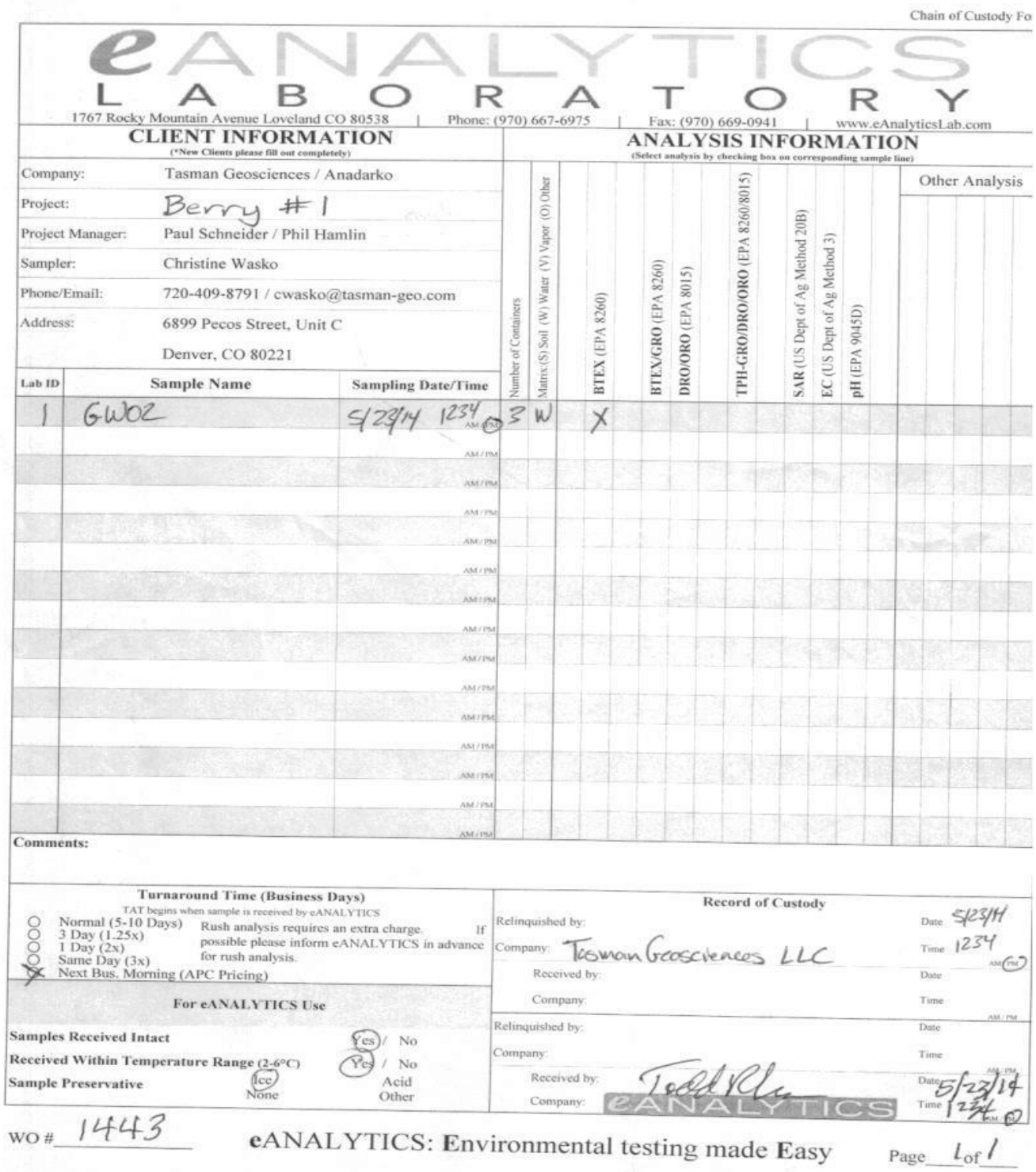
Sincerely,

Christopher Dieken
Quality Assurance Manager

Todd Rhea
Laboratory Manager

Chain of Custody

eANALYTICS LABORATORY



Chain of Custody Fo

eANALYTICS LABORATORY

1767 Rocky Mountain Avenue Loveland CO 80538 | Phone: (970) 667-6975 | Fax: (970) 669-0941 | www.eAnalyticsLab.com

CLIENT INFORMATION
(*New Clients please fill out completely)

Company:	Tasman Geosciences / Anadarko
Project:	Berry #1
Project Manager:	Paul Schneider / Phil Hamlin
Sampler:	Christine Wasko
Phone/Email:	720-409-8791 / cwasko@tasman-geo.com
Address:	6899 Pecos Street, Unit C
	Denver, CO 80221

ANALYSIS INFORMATION
(Select analysis by checking box on corresponding sample line)

Lab ID	Sample Name	Sampling Date/Time	Number of Containers	Matrix: (S) Soil (W) Water (V) Vapor (O) Other	BTEX (EPA 8260)	BTEX/GRO (EPA 8260)	DRO/ORO (EPA 8015)	TPH-GRO/DRO/ORO (EPA 8260/8015)	SAR (US Dept of Ag Method 20B)	EC (US Dept of Ag Method 3)	pH (EPA 9045D)	Other Analysis
1	GW02	5/23/14 1234 AM (PM)	3	W	X							

Comments:

Turnaround Time (Business Days)
TAT begins when sample is received by eANALYTICS

- ○ Normal (5-10 Days)
- ○ 3 Day (1.25x)
- ○ 1 Day (2x)
- ○ Same Day (3x)
- X Next Bus. Morning (APC Pricing)

Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.

For eANALYTICS Use

Samples Received Intact	(Yes) / No	
Received Within Temperature Range (2-6°C)	(Yes) / No	
Sample Preservative	(Ice) None	Acid Other

Record of Custody

Relinquished by:	Date 5/23/14
Company: Tasman Geosciences LLC	Time 1234 AM (PM)
Received by:	Date
Company:	Time AM / PM
Relinquished by:	Date
Company:	Time
Received by: Todd Rhea	Date 5/23/14
Company: eANALYTICS	Time 1234 AM (PM)

WO # 1443

eANALYTICS: Environmental testing made Easy

Page 1 of 1

eANALYTICS
LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1443
Project:	Berry #1		
Analysis:	Volatile Organics	Method:	EPA8260

Sample Name	Benzene ug/L	Toluene ug/L	Ethyl-benzene ug/L	Total Xylenes ug/L	Date Sampled	Date Analyzed	Lab ID	
GW02	< 1.0	< 1.0	< 1.0	< 1.0	05/23/14	05/23/14	1443	1

Water
Quality Control - Surrogate Recoveries

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1443
Project:	Berry #1	Method:	EPA8260

Sample Name	Dibromo-fluoromethane % Recovery	1,2 Dichloro-ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo-fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID	
GW02	102	97	102	97	05/23/14	05/23/14	1443	1

Water
Quality Control - Analyses

eANALYTICS LABORATORY

Client:	Tasman Geosciences / Anadarko	Lab ID:	1443
Project:	Berry #1		
Analysis:	Volatile Organics	Method:	EPA8260

Sample Name	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Date Analyzed		Lab ID	
	% Rec	% Rec	% Rec	% Rec				
Laboratory Control	103	97	104	95	05/23/14	LCS	1443	1
(70-130%)								
Method Blank	< 1.0	< 1.0	< 1.0	< 1.0	05/23/14	MB	1443	1
	ug/L	ug/L	ug/L	ug/L				

eAnalytics Laboratory
1767 Rocky Mountain Avenue Loveland CO 80538

ORIGINS LABORATORY, INC

June 19, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Berry #1, Berry 8-8 **Project Number - [none]**

Attached are your analytical results for KMG - Berry #1, Berry 8-8 received by Origins Laboratory, Inc. June 17, 2015. This project is associated with Origins project number X506215-01.

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

THE NELAC INSTITUTE

ACCREDITED
TESTING CERT # 3494.01

ORIGINS LABORATORY, INC

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	X506215-01	Water	June 17, 2015 12:45	06/17/2015 15:30
BH02	X506215-02	Water	June 17, 2015 12:50	06/17/2015 15:30
BH03	X506215-03	Water	June 17, 2015 12:55	06/17/2015 15:30

Origins Laboratory, Inc.

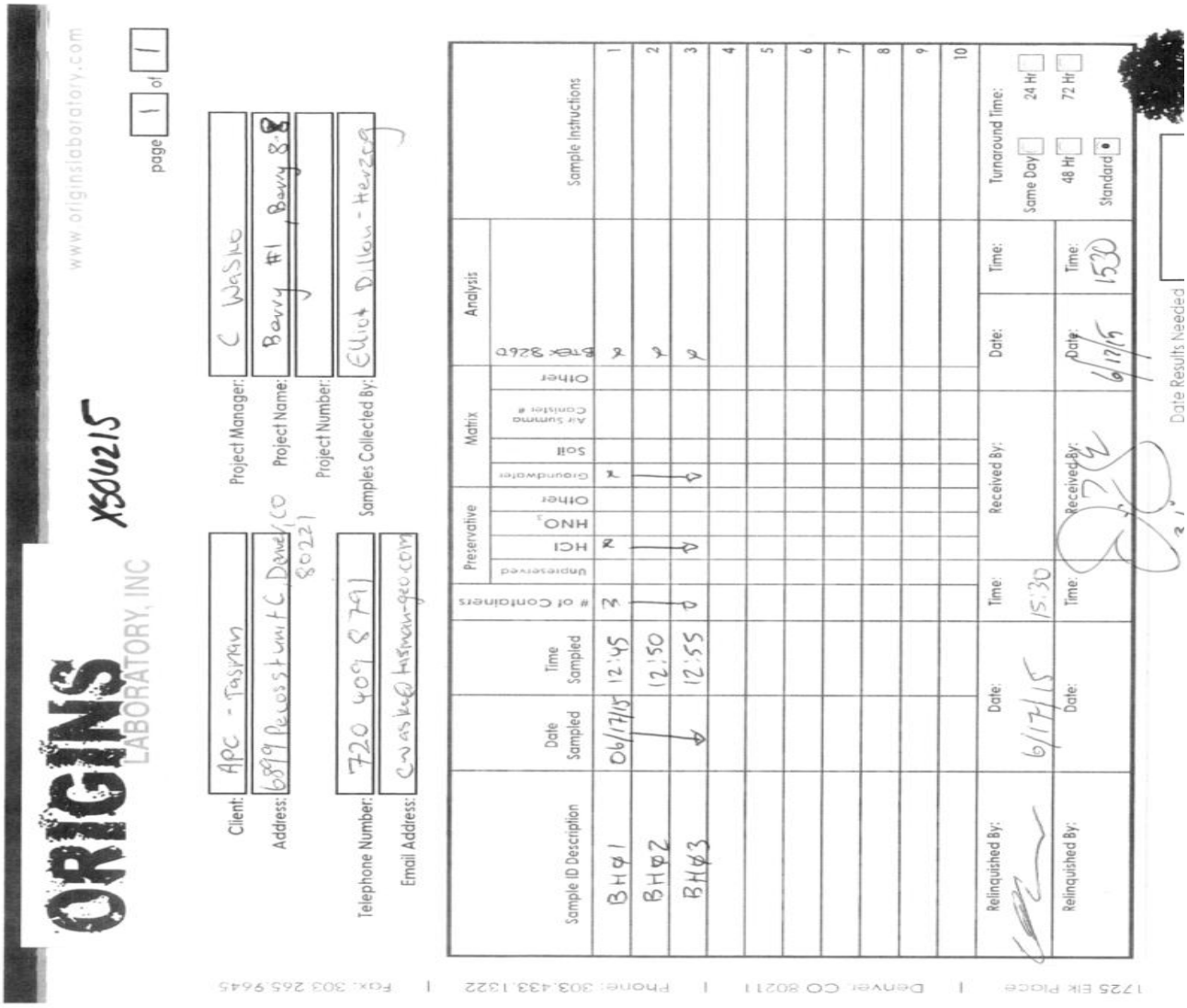
Jen Pellegrini For Noelle Doyle Mathis, President

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.

ORIGINS LABORATORY, INC

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8



Origins Laboratory, Inc.

Jen Pellegrini

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Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSO4215

Client: Tasman
Client Project ID: KMG - Berry #1, Berry 8-8

Checklist Completed by: Jen Pellegrini
Date/time completed: 6/18/15

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

Matrix(s) Received: (Check all that apply): ____Soil/Solid __X__Water ____Other: ____ (Describe)

Cooler Number/Temperature: 1 / 3.6 °C ____/____ °C ____/____ °C ____/____ °C

Thermometer ID: TOU3

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C[1]?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact[1]?	X			
Was adequate sample volume provided[1]?	X			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?		X		
Is a chain-of-custody (COC) present and filled out completely[1]?	X			
Does the COC agree with the number and type of sample bottles received[1]?	X			
Do the sample IDs on the bottle labels match the COC[1]?	X			
Is the COC properly relinquished by the client with date and time recorded[1]?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**		X		
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*	X			HCL
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) 6/18/15 Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

BH01
6/17/2015 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X506215-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	5F18010	06/18/2015	06/19/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*87.3-113*			"	"	"
Surrogate: Toluene-d8	*97.5 %*	*90.9-108*			"	"	"
Surrogate: 4-Bromofluorobenzene	*99.6 %*	*88.6-111*			"	"	"

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

BH02
6/17/2015 12:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X506215-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	5F18010	06/18/2015	06/19/2015
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*87.3-113*			"	"	"
Surrogate: Toluene-d8	*99.6 %*	*90.9-108*			"	"	"
Surrogate: 4-Bromofluorobenzene	*98.6 %*	*88.6-111*			"	"	"

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

BH03
6/17/2015 12:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory, Inc.								
X506215-03 (Water)								
BTEX by EPA 8260C								
Benzene	ND	1.0	ug/L	1	5F18010	06/18/2015	06/19/2015	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*98.3 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*98.5 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Blank (5F18010-BLK1)						Prepared: 06/18/2015 Analyzed: 06/18/2015				
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*65*		"	*62.5*		*104*	*87.3-113*			
Surrogate: Toluene-d8	*60*		"	*62.5*		*96.7*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*60*		"	*62.5*		*96.7*	*88.6-111*			

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Blank (5F18010-BLK2)						Prepared: 06/18/2015 Analyzed: 06/18/2015				
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*64*		*"*	*62.5*		*103*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*99.0*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*62*		*"*	*62.5*		*99.9*	*88.6-111*			

Origins Laboratory, Inc.

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Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Blank (5F18010-BLK3)					Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*65*		*"*	*62.5*		*104*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*98.7*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*62*		*"*	*62.5*		*99.7*	*88.6-111*			

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
LCS (5F18010-BS1)					Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	48.0	1.0	ug/L	50.0		95.9	75-126			
Toluene	45.7	1.0	"	50.0		91.4	78.7-126			
Ethylbenzene	47.9	1.0	"	50.0		95.8	80-130			
m,p-Xylene	95.1	2.0	"	100		95.1	77.2-133			
o-Xylene	48.5	1.0	"	50.0		96.9	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	*61*		"	*62.5*		*96.9*	*87.3-113*			
Surrogate: Toluene-d8	*61*		"	*62.5*		*96.9*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*62*		"	*62.5*		*98.9*	*88.6-111*			

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
LCS (5F18010-BS2)					Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	50.2	1.0	ug/L	50.0		100	75-126			
Toluene	49.2	1.0	"	50.0		98.4	78.7-126			
Ethylbenzene	49.6	1.0	"	50.0		99.2	80-130			
m,p-Xylene	99.4	2.0	"	100		99.4	77.2-133			
o-Xylene	48.7	1.0	"	50.0		97.4	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	*59*		*"*	*62.5*		*95.0*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*99.1*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*63*		*"*	*62.5*		*101*	*88.6-111*			

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
LCS (5F18010-BS3)					Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	46.7	1.0	ug/L	50.0		93.4	75-126			
Toluene	46.1	1.0	"	50.0		92.1	78.7-126			
Ethylbenzene	45.6	1.0	"	50.0		91.1	80-130			
m,p-Xylene	92.4	2.0	"	100		92.4	77.2-133			
o-Xylene	47.2	1.0	"	50.0		94.5	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	*60*		*"*	*62.5*		*96.2*	*87.3-113*			
Surrogate: Toluene-d8	*61*		*"*	*62.5*		*98.1*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*63*		*"*	*62.5*		*101*	*88.6-111*			

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Matrix Spike (5F18010-MS1)		**Source: X506215-01**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	48.0	1.0	ug/L	50.0	ND	96.1	74-130			
Toluene	48.0	1.0	"	50.0	ND	95.9	73-131			
Ethylbenzene	47.5	1.0	"	50.0	ND	95.1	76-132			
m,p-Xylene	96.2	2.0	"	100	ND	96.2	69-139			
o-Xylene	48.0	1.0	"	50.0	ND	96.0	74-131			
Surrogate: 1,2-Dichloroethane-d4	*60*		*"*	*62.5*		*95.3*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*98.8*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*62*		*"*	*62.5*		*99.5*	*88.6-111*			

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Christine Wasko
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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5F18010 - EPA 5030B (Water)										
Matrix Spike (5F18010-MS2)		**Source: X506215-02**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	51.9	1.0	ug/L	50.0	ND	104	74-130			
Toluene	52.7	1.0	"	50.0	ND	105	73-131			
Ethylbenzene	53.5	1.0	"	50.0	ND	107	76-132			
m,p-Xylene	107	2.0	"	100	ND	107	69-139			
o-Xylene	52.7	1.0	"	50.0	ND	105	74-131			
Surrogate: 1,2-Dichloroethane-d4	*59*		*"*	*62.5*		*93.8*	*87.3-113*			
Surrogate: Toluene-d8	*63*		*"*	*62.5*		*101*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*63*		*"*	*62.5*		*100*	*88.6-111*			

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Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Matrix Spike (5F18010-MS3)		**Source: X506215-03**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	52.3	1.0	ug/L	50.0	ND	105	74-130			
Toluene	52.7	1.0	"	50.0	ND	105	73-131			
Ethylbenzene	53.4	1.0	"	50.0	ND	107	76-132			
m,p-Xylene	109	2.0	"	100	ND	109	69-139			
o-Xylene	55.1	1.0	"	50.0	ND	110	74-131			
Surrogate: 1,2-Dichloroethane-d4	*59*		*"*	*62.5*		*94.0*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*99.2*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*63*		*"*	*62.5*		*100*	*88.6-111*			

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Christine Wasko
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Project: KMG - Berry #1, Berry 8-8

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5F18010 - EPA 5030B (Water)										
Matrix Spike Dup (5F18010-MSD1)		**Source: X506215-01**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	52.2	1.0	ug/L	50.0	ND	104	74-130	8.23	20	
Toluene	51.3	1.0	"	50.0	ND	103	73-131	6.71	20	
Ethylbenzene	51.8	1.0	"	50.0	ND	104	76-132	8.60	20	
m,p-Xylene	104	2.0	"	100	ND	104	69-139	8.04	20	
o-Xylene	52.7	1.0	"	50.0	ND	105	74-131	9.37	20	
Surrogate: 1,2-Dichloroethane-d4	*59*		*"*	*62.5*		*94.3*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*98.4*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*64*		*"*	*62.5*		*102*	*88.6-111*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5F18010 - EPA 5030B (Water)										
Matrix Spike Dup (5F18010-MSD2)		**Source: X506215-02**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	53.8	1.0	ug/L	50.0	ND	108	74-130	3.54	20	
Toluene	54.1	1.0	"	50.0	ND	108	73-131	2.53	20	
Ethylbenzene	55.2	1.0	"	50.0	ND	110	76-132	3.09	20	
m,p-Xylene	110	2.0	"	100	ND	110	69-139	2.59	20	
o-Xylene	54.6	1.0	"	50.0	ND	109	74-131	3.58	20	
Surrogate: 1,2-Dichloroethane-d4	*60*		*"*	*62.5*		*96.2*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*99.3*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*62*		*"*	*62.5*		*99.8*	*88.6-111*			

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Christine Wasko
Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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 5F18010 - EPA 5030B (Water)										
Matrix Spike Dup (5F18010-MSD3)		**Source: X506215-03**			Prepared: 06/18/2015 Analyzed: 06/18/2015					
Benzene	51.4	1.0	ug/L	50.0	ND	103	74-130	1.87	20	
Toluene	51.2	1.0	"	50.0	ND	102	73-131	2.85	20	
Ethylbenzene	51.8	1.0	"	50.0	ND	104	76-132	3.06	20	
m,p-Xylene	104	2.0	"	100	ND	104	69-139	4.64	20	
o-Xylene	51.4	1.0	"	50.0	ND	103	74-131	7.02	20	
Surrogate: 1,2-Dichloroethane-d4	*59*		*"*	*62.5*		*93.8*	*87.3-113*			
Surrogate: Toluene-d8	*62*		*"*	*62.5*		*98.6*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*63*		*"*	*62.5*		*101*	*88.6-111*			

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Project Number: [none]
Project: KMG - Berry #1, Berry 8-8

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.

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ATTACHMENT B
WELL COMPLETION
LOGS

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

WELL ID: BH01 **SITE:** **Berry 63N67W8SENE**

DATE: 6/3/2015 **Driller:** Brandon LeVasseur

DRILLING METHOD: AMS Powerprobe 9300-SK

SAMPLING EQUIPMENT: macro-core liners

Depth (ft bgs)	Lithology						Well Completion Detail
	From	To	Material Description[1]	Lab Samples	PID (ppm)	Well Completion Material	
0 - 20			Hydro-excavation - no recovery Groundwater interface approximately 3.46 ft bgs			Hydrated Granular Bentonite Seal	1" Diameter Schedule 40 Blank PVC Riser; 1" Diameter Schedule 40 PVC 0.010" Slot Screen
			Borehole geology not logged			10-20 Silica Sand	
			Borehole TD= 12.6' ft bgs				Threaded PVC End Cap

Notes:

1. Material Description to include: Soil type, color; grain size; texture; moisture content; odor

NOTES:

Flush mount installed for temporary monitoring well.

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

WELL ID: BH02 **SITE:** **Berry 63N67W8SENE**

DATE: 6/3/2015 **Driller:** Brandon LeVasseur

DRILLING METHOD: AMS Powerprobe 9300-SK

SAMPLING EQUIPMENT: macro-core liners

Depth (ft bgs)	Lithology						Well Completion Detail
	From	To	Material Description[1]	Lab Samples	PID (ppm)	Well Completion Material	
0 - 20			Hydro-excavation - no recovery Groundwater interface approximately 2.82 ft bgs			Hydrated Granular Bentonite Seal	1" Diameter Schedule 40 Blank PVC Riser; 1" Diameter Schedule 40 PVC 0.010" Slot Screen
			Borehole geology not logged			10-20 Silica Sand	
			Borehole TD= 12.7' ft bgs				Threaded PVC End Cap

Notes:

1. Material Description to include: Soil type, color; grain size; texture; moisture content; odor

NOTES:

Flush mount installed for temporary monitoring well.

Tasman Geosciences

6899 Pecos St, Unit C

Denver, CO 80221

WELL ID: BH03 **SITE:** **Berry 63N67W8SENE**

DATE: 6/3/2015 **Driller:** Brandon LeVasseur

DRILLING METHOD: AMS Powerprobe 9300-SK

SAMPLING EQUIPMENT: macro-core liners

Depth (ft bgs)	Lithology						Well Completion Detail
	From	To	Material Description[1]	Lab Samples	PID (ppm)	Well Completion Material	
0 - 20			Hydro-excavation - no recovery Groundwater interface approximately 3.30 ft bgs			Hydrated Granular Bentonite Seal	1" Diameter Schedule 40 Blank PVC Riser; 1" Diameter Schedule 40 PVC 0.010" Slot Screen
			Borehole geology not logged			10-20 Silica Sand	
			Borehole TD= 12.5' ft bgs				Threaded PVC End Cap

Notes:

1. Material Description to include: Soil type, color; grain size; texture; moisture content; odor

NOTES:

Flush mount installed for temporary monitoring well.