

received 10/27/2015
Project 9317
Document 200437837
Spill 437366

FIGURES



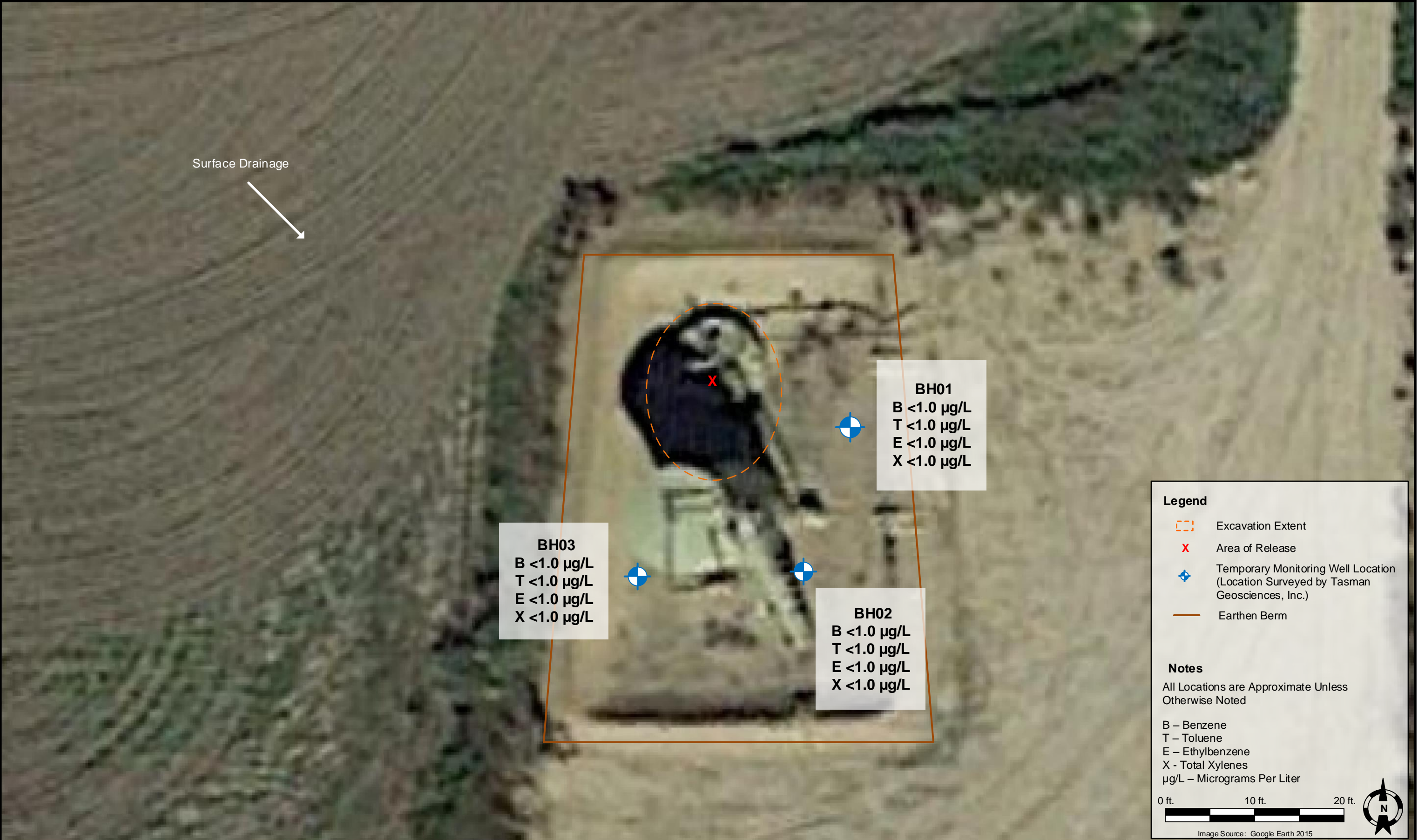
DATE:	October 1, 2015
DESIGNED BY:	R. Bruner
DRAWN BY:	R. Bruner



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



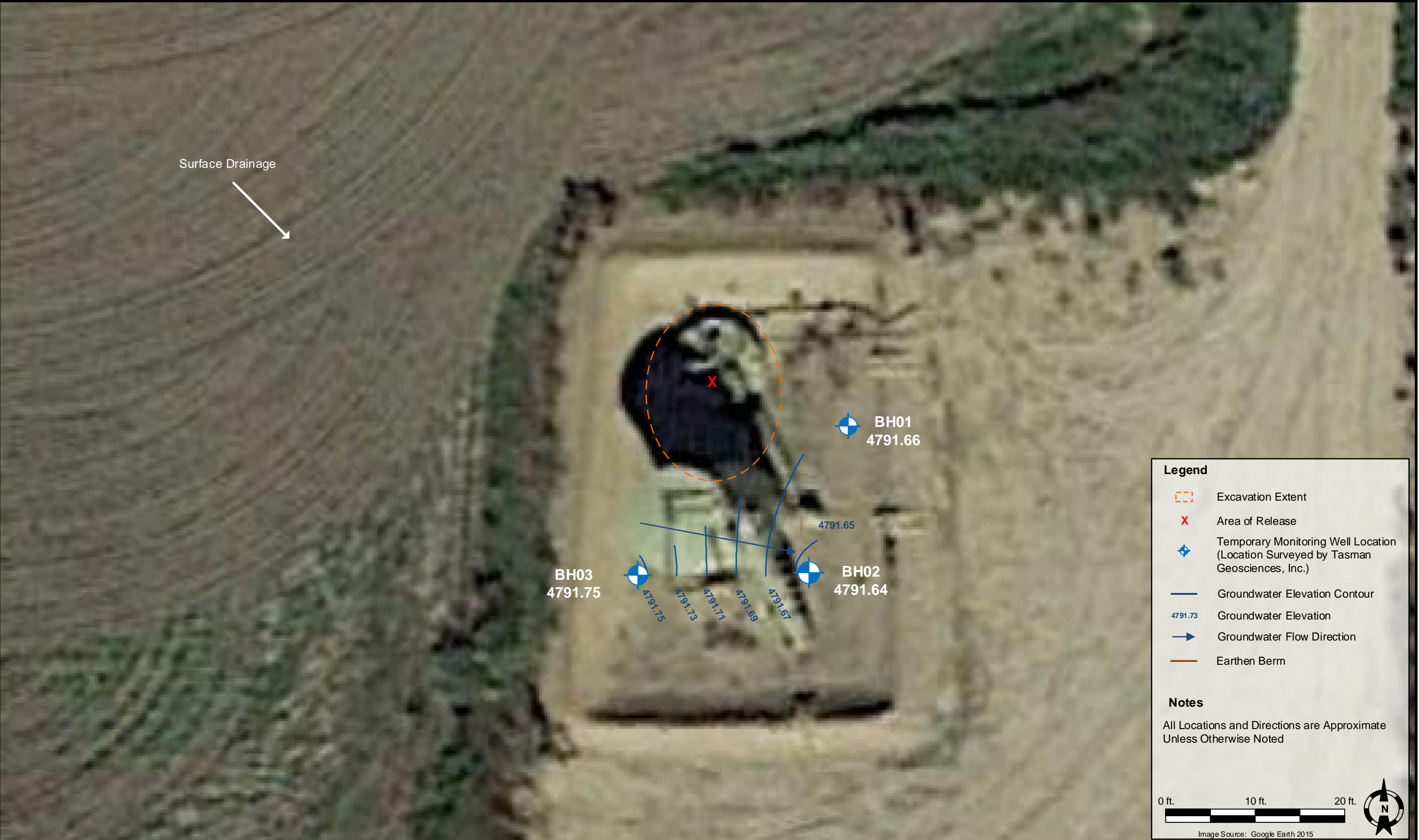
DATE:	October 2, 2015
DESIGNED BY:	R. Bruner
DRAWN BY:	R. Bruner



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



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



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,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

Chain of Custody Form

[illegible]

WO # 1436

eANALYTICS: Environmental testing made Easy

Page 1 of 1

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

The results contained within this report relate only to the items analyzed

eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko Lab ID: 1436

Project: Berry #1

Analysis: Volatile Organics Method: EPA8260
TPH 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

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 Sampled	Date Analyzed	Lab ID	
	ug/L	ug/L	ug/L	ug/L				
GW01	17.6	83.8	13.7	157	05/22/14	05/22/14	1436	5

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

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

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

eANALYTICS

LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1436

Project: Berry #1

Analysis: Volatile Organics
TPHMethod: 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				

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

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			

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report



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,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

[illegible]

eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko Lab ID: 1436

Project: Berry #1

Analysis: Volatile Organics Method: EPA8260
TPH 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

eAnalytics Laboratory

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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

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

eANALYTICS

LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1436

Project: Berry #1

Analysis: Volatile Organics
TPHMethod: 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				

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report



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,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

Chain of Custody Form

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)

Other Analysis

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)

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

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.

possible please inform eANALYTICS in advance for rush analysis.

If

For eANALYTICS Use

Samples Received Intact

Received Within Temperature Range (2-6°C)

Sample Preservative

Yes / No

Yes / No

Ice / None

Acid / Other

Record of Custody

Relinquished by:

Company:

Received by:

Company:

Date: 5/23/14

Time: 1234

Date:

Time:

Relinquished by:

Company:

Received by:

Company:

Date:

Time:

Date: 5/23/14

Time: 1234

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

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

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

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



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.



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.

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

ORIGINS

LABORATORY, INC

www.originslaboratory.com

XS00215

page 1 of 1

Client: APC - Tustin
Address: 6899 Rejossum, T.C. Denver, CO 80221
Telephone Number: 720 409 8791
Email Address: cwasike@tustin-aeco.com

Project Manager: C Wasike
Project Name: Barry #1, Barry 8-8
Project Number:
Samples Collected By: Elliot Dillen - Herzog

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other			
BH01	06/17/15	12:45	3										1	
BH02	12:50												2	
BH03	12:55												3	
													4	
													5	
													6	
													7	
													8	
													9	
													10	
Relinquished By:	Date: 6/17/15	Time: 15:30	Received By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:	Same Day	24 Hr	48 Hr	72 Hr	Standard
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:	Same Day	24 Hr	48 Hr	72 Hr	Standard

Date Results Needed

Origins Laboratory, Inc.

Jeff Pellipini

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

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSO6215

Client: Tasman

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

Checklist Completed by: Jen Pellegrini

Shipped Via: HD

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

Date/time completed: 6/18/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 3.6 °C / _____ °C / _____ °C (Describe)

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⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>			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.

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
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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.



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

BH02

6/17/2015 12:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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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.



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

BH03

6/17/2015 12:55:00PM

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

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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
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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			

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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
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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			

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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
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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			

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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
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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			

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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
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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			

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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
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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			

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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
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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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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
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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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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
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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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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
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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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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
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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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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
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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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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Christine Wasko

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**

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 -			Hydro-excavation - no recovery Groundwater interface approximately 3.46 ft bgs			Hydrated Granular Bentonite Seal	
1 -							
2 -						1" Diameter Schedule 40 Blank PVC Riser	1" Diameter Schedule 40 PVC 0.010" Slot Screen
3 -							
4 -							
5 -							
6 -							
7 -		Borehole geology not logged	10-20 Silica Sand				
8 -							
9 -							
10 -							
11 -			Borehole TD= 12.6' ft bgs				
12 -							
13 -							
14 -							
15 -						Threaded PVC End Cap	
16 -							
17 -							
18 -							
19 -							
20 -							

Notes:

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

NOTES:

Flush mount installed for temporary monitoring well.

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 -			Hydro-excavation - no recovery Groundwater interface approximately 2.82 ft bgs			Hydrated Granular Bentonite Seal	
1 -							
2 -						1" Diameter Schedule 40 Blank PVC Riser	
3 -						10-20 Silica Sand	1" Diameter Schedule 40 PVC 0.010" Slot Screen
4 -							
5 -							
6 -							
7 -			Borehole geology not logged				
8 -							
9 -							
10 -							
11 -							
12 -			Borehole TD= 12.7' ft bgs				
13 -							Threaded PVC End Cap
14 -							
15 -							
16 -							
17 -							
18 -							
19 -							
20 -							

Notes:

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

NOTES:

Flush mount installed for temporary monitoring well.

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 -			Hydro-excavation - no recovery Groundwater interface approximately 3.30 ft bgs			Hydrated Granular Bentonite Seal							
1 -													
2 -						10-20 Silica Sand			1" Diameter Schedule 40 Blank PVC Riser	1" Diameter Schedule 40 PVC 0.010" Slot Screen			
3 -													
4 -													
5 -													
6 -			Borehole geology not logged										
7 -													
8 -													
9 -													
10 -			Borehole TD= 12.5' ft bgs										
11 -													
12 -													
13 -					Threaded PVC End Cap								
14 -													
15 -													
16 -													
17 -													
18 -													
19 -													
20 -													

Notes:

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

NOTES:

Flush mount installed for temporary monitoring well.