

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 25, 2019

Susana Lara-Mesa

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Dwinell

Work Order # 1909234

Enclosed are the results of analyses for samples received by Summit Scientific on 09/19/19 08:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", on a light blue background.

Muri Premier For Ben Shrewsbury

Laboratory Manager



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Dwinell	1909234-01	Soil	09/18/19 17:40	09/19/19 08:37
Dwinell	1909234-02	Soil	09/18/19 17:42	09/19/19 08:37
Dwinell	1909234-03	Soil	09/18/19 17:45	09/19/19 08:37
Cody	1909234-04	Soil	09/18/19 17:50	09/19/19 08:37
Cody	1909234-05	Soil	09/18/19 17:55	09/19/19 08:37
Cody	1909234-06	Soil	09/18/19 18:00	09/19/19 08:37

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.

Summit Scientific

1909234

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: KP Kauffman
Address: 1675 Broadway
City/State/Zip: Denver, CO 80202
Phone: 303-825-4822 Fax: 303-825-4825
Sampler Name: Susana Lara-Mesa

Project Manager: Susana Lara-Mesa
E-Mail: slaramesa@kpk.com
Project Name: DWINELL
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:								Special Instructions				
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	TPH-GRO	TPH-DRO	TPH-ORO									
Dwinell	9/18/2019	5:40p	1						x				x	x	x	x								
Dwinell	9/18/2019	5:42p	2						x				x	x	x	x								
Dwinell	9/18/2019	5:45p	3						x				x	x	x	x								
Cody	9/18/2019	5:50p	1						x				x	x	x	x								
Cody	9/18/2019	5:55p	2						x				x	x	x	x								
Cody	9/18/2019	6:00p	3						x				x	x	x	x								
Relinquished by: <u>N. Libby</u>				Date/Time: <u>9/19/19 8:37AM</u>				Received by: <u>[Signature]</u>				Date/Time: <u>9-19-19 8:37</u>				Turn Around Time (Check)								Notes:
																Same Day <input type="checkbox"/>				72 Hours <input type="checkbox"/>				
																24 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>				
Relinquished by:				Date/Time:				Received by:				Date/Time:				48 Hours <input type="checkbox"/>								
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity:				Temperature Upon Receipt: <u>3.7</u>				
																Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

Sample Receipt Checklist

S2 Work Order **1909234**

Client: KP Kauffman Client Project ID: Dwinell

Shipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☒ Airbill #: _____

Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)

Temp (°C)	3.7
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

MP

Custodian Printed Name or Initials

Muri Premier

Signature of Custodian

9/19/19

Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

Cody
1909234-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/18/19 17:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1909277	09/20/19	09/21/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/18/19 17:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/18/19 17:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	730	50	mg/kg	1	1909276	09/20/19	09/21/19	EPA 8015M	
C28-C36 (ORO)	320	50	"	"	"	"	"	"	

Date Sampled: **09/18/19 17:55**

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



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

Cody
1909234-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/18/19 18:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1909277	09/20/19	09/21/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **09/18/19 18:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/18/19 18:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	430	50	mg/kg	1	1909276	09/20/19	09/21/19	EPA 8015M	
C28-C36 (ORO)	290	50	"	"	"	"	"	"	

Date Sampled: **09/18/19 18:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		102 %	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.



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

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 1909277 - EPA 5030 Soil MS

Blank (1909277-BLK1)

Prepared: 09/20/19 Analyzed: 09/21/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

LCS (1909277-BS1)

Prepared: 09/20/19 Analyzed: 09/21/19

Benzene	0.135	0.0020	mg/kg	0.150		89.8	70-130			
Toluene	0.125	0.0050	"	0.150		83.4	70-130			
Ethylbenzene	0.148	0.0050	"	0.150		99.0	70-130			
m,p-Xylene	0.255	0.010	"	0.300		84.9	70-130			
o-Xylene	0.145	0.0050	"	0.150		96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0400		87.3	23-173			
Surrogate: Toluene-d8	0.0448		"	0.0400		112	20-170			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	21-167			

Matrix Spike (1909277-MS1)

Source: 1909231-01

Prepared: 09/20/19 Analyzed: 09/21/19

Benzene	0.138	0.0020	mg/kg	0.150	ND	91.9	70-130			
Toluene	0.136	0.0050	"	0.150	ND	90.7	70-130			
Ethylbenzene	0.121	0.0050	"	0.150	ND	80.5	70-130			
m,p-Xylene	0.264	0.010	"	0.300	ND	87.9	70-130			
o-Xylene	0.149	0.0050	"	0.150	ND	99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0400		87.2	23-173			
Surrogate: Toluene-d8	0.0469		"	0.0400		117	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	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.



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

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 1909277 - EPA 5030 Soil MS

Matrix Spike Dup (1909277-MSD1)		Source: 1909231-01			Prepared: 09/20/19 Analyzed: 09/21/19					
Benzene	0.137	0.0020	mg/kg	0.150	ND	91.5	70-130	0.458	30	
Toluene	0.126	0.0050	"	0.150	ND	84.2	70-130	7.48	30	
Ethylbenzene	0.121	0.0050	"	0.150	ND	80.4	70-130	0.0995	30	
m,p-Xylene	0.259	0.010	"	0.300	ND	86.4	70-130	1.68	30	
o-Xylene	0.146	0.0050	"	0.150	ND	97.4	70-130	2.07	30	
Surrogate: 1,2-Dichloroethane-d4	0.0362		"	0.0400		90.4	23-173			
Surrogate: Toluene-d8	0.0434		"	0.0400		108	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	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.



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1909276 - EPA 3550A

Blank (1909276-BLK1)

Prepared: 09/20/19 Analyzed: 09/21/19

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (1909276-BS1)

Prepared: 09/20/19 Analyzed: 09/21/19

C10-C28 (DRO)	507	50	mg/kg	500	101	81.4-129
---------------	-----	----	-------	-----	-----	----------

Matrix Spike (1909276-MS1)

Source: 1909229-01

Prepared: 09/20/19 Analyzed: 09/21/19

C10-C28 (DRO)	496	50	mg/kg	500	23.8	94.4	77.8-133
---------------	-----	----	-------	-----	------	------	----------

Matrix Spike Dup (1909276-MSD1)

Source: 1909229-01

Prepared: 09/20/19 Analyzed: 09/21/19

C10-C28 (DRO)	514	50	mg/kg	500	23.8	98.1	77.8-133	3.59	8.48
---------------	-----	----	-------	-----	------	------	----------	------	------

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.



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Dwinell

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
09/25/19 17:09

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