

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 09, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

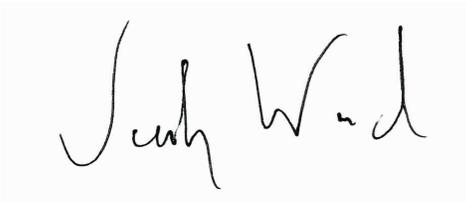
Broomfield, CO 80020

RE: PDC - Churchill 5 Wellhead

Work Order #2409066

Enclosed are the results of analyses for samples received by Summit Scientific on 09/05/24 17:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2409066-01	Water	09/04/24 14:39	09/05/24 17:41
BH02	2409066-02	Water	09/04/24 14:28	09/05/24 17:41
BH03	2409066-03	Water	09/04/24 14:27	09/05/24 17:41
BH04	2409066-04	Water	09/04/24 14:18	09/05/24 17:41
BH05	2409066-05	Water	09/04/24 14:16	09/05/24 17:41

Summit Scientific

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4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2409006	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location: Churchill 5 wellhead	
City/State/Zip: Broomfield / CO / 80220		Project Name: Churchill 5 wellhead		AFE#:	
Phone: 303-487-1228		Project Number:		PO/Billing Codes:	
Sampler Name: S. Bousquet		Project Number:		Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4				
1	BH01	9-4-24	14:39	3	3					X				X	X				
2	BH02	I	14:28	I	I					I				I	I				
3	BH03	I	14:27	I	I					I				I	I				
4	BH04	I	14:18	I	I					I				I	I				
5	BH05	I	14:16	I	I					I				I	I				
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>Aspen 3</i>	Date/Time: 9-4-24 16:20	Received by: <i>Tasman Lockbox</i>	Date/Time: 9-4-24 16:20	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 9/24 1741	Received by: <i>[Signature]</i>	Date/Time: 9/24 1741	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 83	Corrected Temperature: 0	IR gun #:		HNO3 lot #:		



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2409006	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location: Churchill 5 wellhead	
City/State/Zip: Broomfield / CO / 80220		Project Name: Churchill 5 wellhead		AFE#:	
Phone: 303-487-1228		Project Number:		PO/Billing Codes:	
Sampler Name: S. Bousquet		Project Number:		Contact: Karen Olson	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4				
1	BH01	9-4-24	14:39	3	3					X				X	X				
2	BH02	I	14:28	I	I					I				I	I				
3	BH03	I	14:27	I	I					I				I	I				
4	BH04	I	14:18	I	I					I				I	I				
5	BH05	I	14:16	I	I					I				I	I				
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>Aspen 3</i>	Date/Time: 9-4-24 16:20	Received by: <i>Tasman Lockbox</i>	Date/Time: 9-4-24 16:20	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 9-4-24 17:41	Received by: <i>[Signature]</i>	Date/Time: 9-4-24 17:41	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 83	Corrected Temperature: 0	IR gun #:		HNO3 lot #:		



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

BH01
2409066-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/04/24 14:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	9.3	1.0		ug/l	1	BHI0184	09/06/24	09/06/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/04/24 14:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.4	108 %		23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	13.1	98.0 %		20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	13.4	100 %		21-167		"	"	"	"	

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Broomfield CO, 80020

Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

BH02
2409066-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/04/24 14:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHI0184	09/06/24	09/06/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/04/24 14:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.2	106 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.9	96.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %		21-167		"	"	"	"	

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Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

BH03
2409066-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/04/24 14:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHI0184	09/06/24	09/06/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/04/24 14:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.3	108 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.0	97.5 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.2	98.7 %		21-167		"	"	"	"	

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Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

BH04
2409066-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/04/24 14:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHI0184	09/06/24	09/06/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/04/24 14:18**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.3	107 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.0	97.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %		21-167		"	"	"	"	

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Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

BH05
2409066-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/04/24 14:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHI0184	09/06/24	09/06/24	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **09/04/24 14:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.3	107 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.0	97.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.6 %		21-167		"	"	"	"	

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Broomfield CO, 80020

Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BHI0184 - EPA 5030 Water MS

Blank (BHI0184-BLK1)

Prepared & Analyzed: 09/06/24

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Naphthalene	ND	1.0	"								
1,2,4-Trimethylbenzene	ND	1.0	"								
1,3,5-Trimethylbenzene	ND	1.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.6		"	13.3		102		23-173			
<i>Surrogate: Toluene-d8</i>	13.2		"	13.3		98.9		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.0		"	13.3		97.7		21-167			

LCS (BHI0184-BS1)

Prepared & Analyzed: 09/06/24

Benzene	51.2	1.0	ug/l	50.0		102		51-132			
Toluene	51.1	1.0	"	50.0		102		51-138			
Ethylbenzene	50.8	1.0	"	50.0		102		58-146			
m,p-Xylene	101	2.0	"	100		101		57-144			
o-Xylene	53.4	1.0	"	50.0		107		53-146			
Naphthalene	54.2	1.0	"	50.0		108		70-130			
1,2,4-Trimethylbenzene	51.2	1.0	"	50.0		102		70-130			
1,3,5-Trimethylbenzene	51.5	1.0	"	50.0		103		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.9		"	13.3		104		23-173			
<i>Surrogate: Toluene-d8</i>	13.4		"	13.3		101		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.2		"	13.3		99.2		21-167			

LCS Dup (BHI0184-BSD1)

Prepared & Analyzed: 09/06/24

Benzene	50.5	1.0	ug/l	50.0		101		51-132	1.40	20	
Toluene	50.4	1.0	"	50.0		101		51-138	1.30	20	
Ethylbenzene	50.8	1.0	"	50.0		102		58-146	0.00	20	
m,p-Xylene	101	2.0	"	100		101		57-144	0.158	20	
o-Xylene	54.2	1.0	"	50.0		108		53-146	1.51	20	
Naphthalene	56.6	1.0	"	50.0		113		70-130	4.23	20	
1,2,4-Trimethylbenzene	52.4	1.0	"	50.0		105		70-130	2.32	20	
1,3,5-Trimethylbenzene	51.9	1.0	"	50.0		104		70-130	0.851	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.9		"	13.3		104		23-173			
<i>Surrogate: Toluene-d8</i>	13.3		"	13.3		99.6		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.3		"	13.3		100		21-167			

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Project: PDC - Churchill 5 Wellhead

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/09/24 13:57

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