

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 30, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Merritt 6-66-9-0560CH Wellhead

Work Order #2406100

Enclosed are the results of analyses for samples received by Summit Scientific on 06/07/24 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue 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 - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

ANALYTICAL REPORT FOR SAMPLES


Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WC01@7'	2406100-01	Soil	06/07/24 12:35	06/07/24 16:50
SS01@9'	2406100-02	Soil	06/07/24 13:00	06/07/24 16:50
SS02@7'	2406100-03	Soil	06/07/24 13:16	06/07/24 16:50
SS03@7'	2406100-04	Soil	06/07/24 13:20	06/07/24 16:50
SS04@7'	2406100-05	Soil	06/07/24 13:24	06/07/24 16:50
SS05@7'	2406100-06	Soil	06/07/24 13:28	06/07/24 16:50
SS06@2.5'	2406100-07	Soil	06/07/24 13:30	06/07/24 16:50

Case Narrative

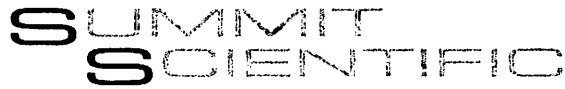
Hunter Merlo requested full PAH analyte list be reported for samples SS01-SS05 on 9/18/2024.
Bryce Goldade requested Selenium be added to SS01 - SS05 on 9/30/2024.
This report includes those results.

This is a revision of the report originally sent on 6/26/2024 at 14:44 MT.

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.



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

Lab ID	Page 1 of 1
2406100	

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:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: Merritt 6-66-9-0560Ch Wellhead		PO/Billing Codes:	
Sampler Name: Elizabeth Brauer		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 - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR		PAHs **	Full 915-suite
1	WC01 @ 7'	6/7/24	1235	2			X			X							X			* 48 hour turnaround
2	SS01 @ 9'		1300							X	X	X				X	X	X		
3	SS02 @ 7'		1316																	
4	SS03 @ 7'		1320																	
5	SS04 @ 7'		1324																	
6	SS05 @ 7'		1328																	
7	SS06 @ 2.5'		1330											X	X				** Standard turn	
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>EB</i>	Date/Time: 6/7/24 1600	Received by: Summit North	Date/Time: 6/7/24 1600	TAT Business Days	Field DO	Notes: *fluorene, 1-M, 2-M
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <i>SL</i>	Date/Time: 6/24 1650	Received by: <i>[Signature]</i>	Date/Time: 6/24 1650	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 84	Corrected Temperature: <i>[Symbol]</i>	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2406100

Wellhead

Client: Pactasman Client Project ID: Merritt 6669-056004

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<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"/>	
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"/>	
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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<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.

AS
Custodian Printed Name

6/7/24
Date/Time



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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

WC01@7'
2406100-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.0059	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.012	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.85	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.3	82.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

WC01@7'
2406100-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00895	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0106	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0229	68.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0244	73.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0225	06/10/24	06/12/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

WC01@7'
2406100-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.94	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B
Barium	290	0.400	"	"	"	"	"	"
Cadmium	0.232	0.200	"	"	"	"	"	"
Copper	9.18	0.400	"	"	"	"	"	"
Lead	6.70	0.200	"	"	"	"	"	"
Nickel	8.86	0.400	"	"	"	"	"	"
Silver	0.0353	0.0200	"	"	"	"	"	"
Zinc	66.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0226	06/10/24	06/10/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	906	0.0500	mg/L dry	1	BHF0268	06/10/24	06/14/24	EPA 6020B	
Magnesium	63.0	0.0500	"	"	"	"	"	"	
Sodium	236	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.04	0.00100	units	1	BHF0429	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
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Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

WC01@7'
2406100-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.4	%	1	BHF0257	06/10/24	06/10/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.740	0.0100	mmhos/cm	1	BHF0269	06/10/24	06/11/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	10.6		pH Units	1	BHF0270	06/10/24	06/11/24	EPA 9045D	

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS01@9'
2406100-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.9	87.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Reported:
09/30/24 16:40

SS01@9'
2406100-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0190	57.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0189	56.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.60	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	138	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS01@9'
2406100-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.8		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.98		pH Units	1	BHF0216	06/10/24	06/10/24	EPA 9045D	

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS02@7'
2406100-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.8	94.2 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS02@7'
2406100-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0292	87.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0296	88.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.09	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	226	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS02@7'
2406100-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:16**


Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	77.7			%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.39			pH Units	1	BHF0216	06/10/24	06/10/24	EPA 9045D	

Summit Scientific



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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS03@7'
2406100-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0400	99.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.7 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.31	74.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS03@7'
2406100-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0289	86.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0290	87.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.92	0.200	mg/kg dry	1	BHF0286	06/11/24	06/12/24	EPA 6020B	
Barium	262	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS03@7'
2406100-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:20**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.73		pH Units	1	BHF0216	06/10/24	06/10/24	EPA 9045D	

Summit Scientific



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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS04@7'
2406100-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0384	96.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.32	74.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS04@7'
2406100-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0301	90.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0285	85.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.60	0.200	mg/kg dry	1	BHF0287	06/11/24	06/13/24	EPA 6020B	
Barium	115	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS04@7'
2406100-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:24**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.4		%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHF0216	06/10/24	06/10/24	EPA 9045D	

Summit Scientific



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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS05@7'
2406100-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0201	06/07/24	06/08/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0400	100 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	97.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHF0203	06/07/24	06/08/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.0	95.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS05@7'
2406100-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BHF0222	06/10/24	06/11/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0217	65.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.35	0.200	mg/kg dry	1	BHF0287	06/11/24	06/13/24	EPA 6020B	
Barium	75.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS05@7'
2406100-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:28**


Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.0			%	1	BHF0257	06/10/24	06/10/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.11			pH Units	1	BHF0216	06/10/24	06/10/24	EPA 9045D	

Summit Scientific



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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

SS06@2.5'
2406100-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0281	06/11/24	06/13/24	EPA 6020B	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	43.2	0.0500	mg/L dry	1	BHF0305	06/11/24	06/13/24	EPA 6020B	
Magnesium	3.33	0.0500	"	"	"	"	"	"	
Sodium	8.99	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.355	0.00100	units	1	BHF0430	06/14/24	06/14/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	1	BHF0291	06/11/24	06/11/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BHF0306	06/11/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 09/30/24 16:40

SS06@2.5'
2406100-07 (Soil)

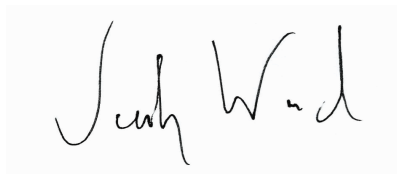
Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/07/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.70		pH Units	1	BHF0307	06/11/24	06/12/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

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 BHF0201 - EPA 5030 Soil MS

Blank (BHF0201-BLK1)

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0400		95.9	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	50-150			

LCS (BHF0201-BS1)

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130			
Toluene	0.109	0.0050	"	0.100		109	70-130			
Ethylbenzene	0.103	0.0050	"	0.100		103	70-130			
m,p-Xylene	0.199	0.010	"	0.200		99.7	70-130			
o-Xylene	0.108	0.0050	"	0.100		108	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.0998	0.0050	"	0.100		99.8	70-130			
Naphthalene	0.104	0.0038	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.6	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

Matrix Spike (BHF0201-MS1)

Source: 2406098-01

Prepared: 06/07/24 Analyzed: 06/08/24

Benzene	0.0860	0.0020	mg/kg	0.100	ND	86.0	70-130			
Toluene	0.0814	0.0050	"	0.100	ND	81.4	70-130			
Ethylbenzene	0.0703	0.0050	"	0.100	ND	70.3	70-130			
m,p-Xylene	0.155	0.010	"	0.200	ND	77.5	70-130			
o-Xylene	0.0876	0.0050	"	0.100	ND	87.6	70-130			
1,2,4-Trimethylbenzene	0.0768	0.0050	"	0.100	ND	76.8	70-130			
1,3,5-Trimethylbenzene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
Naphthalene	0.0770	0.0038	"	0.100	ND	77.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.6	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	50-150			

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

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 BHF0201 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0201-MSD1)	Source: 2406098-01			Prepared: 06/07/24 Analyzed: 06/08/24						
Benzene	0.0883	0.0020	mg/kg	0.100	ND	88.3	70-130	2.55	30	
Toluene	0.0897	0.0050	"	0.100	ND	89.7	70-130	9.67	30	
Ethylbenzene	0.0820	0.0050	"	0.100	ND	82.0	70-130	15.4	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	85.2	70-130	9.51	30	
o-Xylene	0.0916	0.0050	"	0.100	ND	91.6	70-130	4.48	30	
1,2,4-Trimethylbenzene	0.0854	0.0050	"	0.100	ND	85.4	70-130	10.7	30	
1,3,5-Trimethylbenzene	0.0857	0.0050	"	0.100	ND	85.7	70-130	6.61	30	
Naphthalene	0.0744	0.0038	"	0.100	ND	74.4	70-130	3.37	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.5</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>50-150</i>			

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHF0203 - EPA 3550A

Blank (BHF0203-BLK1)

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.1		"	12.5		88.8	30-150				

LCS (BHF0203-BS1)

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	522	50	mg/kg	500		104	70-130				
Surrogate: <i>o</i> -Terphenyl	14.7		"	12.5		118	30-150				

Matrix Spike (BHF0203-MS1)

Source: 2406098-01

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	530	50	mg/kg	500	32.7	99.5	70-130				
Surrogate: <i>o</i> -Terphenyl	14.2		"	12.5		114	30-150				

Matrix Spike Dup (BHF0203-MSD1)

Source: 2406098-01

Prepared: 06/07/24 Analyzed: 06/08/24

C10-C28 (DRO)	479	50	mg/kg	500	32.7	89.2	70-130	10.2	20		
Surrogate: <i>o</i> -Terphenyl	15.2		"	12.5		121	30-150				

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHF0222 - EPA 5030 Soil MS

Blank (BHF0222-BLK1)

Prepared & Analyzed: 06/10/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0241</i>		"	<i>0.0333</i>		<i>72.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0348</i>		"	<i>0.0333</i>		<i>104</i>	<i>40-150</i>			

LCS (BHF0222-BS1)

Prepared & Analyzed: 06/10/24

Acenaphthene	0.0265	0.00500	mg/kg	0.0333		79.5	31-137			
Anthracene	0.0261	0.00500	"	0.0333		78.2	30-120			
Benzo (a) anthracene	0.0281	0.00500	"	0.0333		84.4	30-120			
Benzo (a) pyrene	0.0245	0.00500	"	0.0333		73.4	30-120			
Benzo (b) fluoranthene	0.0257	0.00500	"	0.0333		77.0	30-120			
Benzo (k) fluoranthene	0.0260	0.00500	"	0.0333		78.1	30-120			
Chrysene	0.0276	0.00500	"	0.0333		82.8	30-120			
Dibenz (a,h) anthracene	0.0234	0.00500	"	0.0333		70.3	30-120			
Fluoranthene	0.0265	0.00500	"	0.0333		79.6	30-120			
Fluorene	0.0267	0.00500	"	0.0333		80.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0242	0.00500	"	0.0333		72.6	30-120			
Pyrene	0.0310	0.00500	"	0.0333		93.1	35-142			
1-Methylnaphthalene	0.0230	0.00500	"	0.0333		69.0	35-142			
2-Methylnaphthalene	0.0231	0.00500	"	0.0333		69.2	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0237</i>		"	<i>0.0333</i>		<i>71.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0283</i>		"	<i>0.0333</i>		<i>84.9</i>	<i>40-150</i>			

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHF0222 - EPA 5030 Soil MS

Matrix Spike (BHF0222-MS1)	Source: 2405470-24			Prepared & Analyzed: 06/10/24							
Acenaphthene	0.0230	0.00500	mg/kg	0.0333	ND	69.0	31-137				
Anthracene	0.0228	0.00500	"	0.0333	ND	68.5	30-120				
Benzo (a) anthracene	0.0231	0.00500	"	0.0333	ND	69.4	30-120				
Benzo (a) pyrene	0.0194	0.00500	"	0.0333	ND	58.3	30-120				
Benzo (b) fluoranthene	0.0198	0.00500	"	0.0333	ND	59.5	30-120				
Benzo (k) fluoranthene	0.0203	0.00500	"	0.0333	ND	60.8	30-120				
Chrysene	0.0229	0.00500	"	0.0333	ND	68.6	30-120				
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333	ND	57.7	30-120				
Fluoranthene	0.0222	0.00500	"	0.0333	ND	66.5	30-120				
Fluorene	0.0234	0.00500	"	0.0333	ND	70.1	30-120				
Indeno (1,2,3-cd) pyrene	0.0110	0.00500	"	0.0333	ND	33.0	30-120				
Pyrene	0.0254	0.00500	"	0.0333	ND	76.2	35-142				
1-Methylnaphthalene	0.0219	0.00500	"	0.0333	ND	65.6	15-130				
2-Methylnaphthalene	0.0218	0.00500	"	0.0333	ND	65.3	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0216</i>		<i>"</i>	<i>0.0333</i>		<i>64.8</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0236</i>		<i>"</i>	<i>0.0333</i>		<i>70.8</i>	<i>40-150</i>				

Matrix Spike Dup (BHF0222-MSD1)	Source: 2405470-24			Prepared & Analyzed: 06/10/24							
Acenaphthene	0.0236	0.00500	mg/kg	0.0333	ND	70.9	31-137	2.81	30		
Anthracene	0.0240	0.00500	"	0.0333	ND	72.1	30-120	5.15	30		
Benzo (a) anthracene	0.0247	0.00500	"	0.0333	ND	74.1	30-120	6.59	30		
Benzo (a) pyrene	0.0208	0.00500	"	0.0333	ND	62.5	30-120	7.10	30		
Benzo (b) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.2	30-120	6.01	30		
Benzo (k) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.3	30-120	4.00	30		
Chrysene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	4.48	30		
Dibenz (a,h) anthracene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	7.31	30		
Fluoranthene	0.0238	0.00500	"	0.0333	ND	71.5	30-120	7.26	30		
Fluorene	0.0239	0.00500	"	0.0333	ND	71.6	30-120	2.13	30		
Indeno (1,2,3-cd) pyrene	0.0131	0.00500	"	0.0333	ND	39.3	30-120	17.6	30		
Pyrene	0.0265	0.00500	"	0.0333	ND	79.5	35-142	4.25	30		
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	ND	63.7	15-130	2.92	50		
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.5	15-130	1.31	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0218</i>		<i>"</i>	<i>0.0333</i>		<i>65.5</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0251</i>		<i>"</i>	<i>0.0333</i>		<i>75.2</i>	<i>40-150</i>				

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BHF0225 - EPA 3050B

LCS (BHF0225-BS1)

Prepared: 06/10/24 Analyzed: 06/12/24

Boron	5.19	2.00	mg/L	5.00		104	80-120			
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Duplicate (BHF0225-DUP1)

Source: 2405442-26

Prepared: 06/10/24 Analyzed: 06/12/24

Boron	0.422	2.00	mg/L		0.427			1.24	20	
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Matrix Spike (BHF0225-MS1)

Source: 2405442-26

Prepared: 06/10/24 Analyzed: 06/12/24

Boron	5.99	2.00	mg/L	5.00	0.427	111	75-125			
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Matrix Spike Dup (BHF0225-MSD1)

Source: 2405442-26

Prepared: 06/10/24 Analyzed: 06/12/24

Boron	6.23	2.00	mg/L	5.00	0.427	116	75-125	3.94	25	
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Batch BHF0281 - EPA 3050B

Blank (BHF0281-BLK1)

Prepared: 06/11/24 Analyzed: 06/13/24

Boron	ND	2.00	mg/L							
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LCS (BHF0281-BS1)

Prepared: 06/11/24 Analyzed: 06/13/24

Boron	5.35	2.00	mg/L	5.00		107	80-120			
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Duplicate (BHF0281-DUP1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron	0.703	2.00	mg/L		0.744			5.70	20	
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Matrix Spike (BHF0281-MS1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron	6.14	2.00	mg/L	5.01	0.744	108	75-125			
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Matrix Spike Dup (BHF0281-MSD1)

Source: 2405075-10

Prepared: 06/11/24 Analyzed: 06/13/24

Boron	5.73	2.00	mg/L	5.01	0.744	99.5	75-125	6.94	25	
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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0286 - EPA 3050B

Blank (BHF0286-BLK1)

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BHF0286-BS1)

Prepared: 06/11/24 Analyzed: 06/14/24

Arsenic	36.0	0.200	mg/kg wet	40.0	90.0	80-120
Barium	38.4	0.400	"	40.0	95.9	80-120
Cadmium	1.93	0.200	"	2.00	96.3	80-120
Copper	35.9	0.400	"	40.0	89.9	80-120
Lead	19.7	0.200	"	20.0	98.5	80-120
Nickel	35.7	0.400	"	40.0	89.2	80-120
Silver	1.91	0.0200	"	2.00	95.6	80-120
Zinc	35.6	0.400	"	40.0	89.1	80-120
Selenium	3.69	0.260	"	4.00	92.3	80-120

Duplicate (BHF0286-DUP1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	5.93	0.181	mg/kg dry	4.94	18.3	20	
Barium	201	0.362	"	290	36.2	20	QR-04
Cadmium	0.287	0.181	"	0.232	20.9	20	QR-04
Copper	10.2	0.362	"	9.18	10.2	20	
Lead	7.64	0.181	"	6.70	13.1	20	
Nickel	10.7	0.362	"	8.86	18.6	20	
Silver	0.0423	0.0181	"	0.0353	18.0	20	
Zinc	167	0.362	"	66.5	86.0	20	QR-04
Selenium	0.163	0.236	"	0.165	200	20	QR-01

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHF0286 - EPA 3050B

Matrix Spike (BHF0286-MS1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	47.8	0.200	mg/kg dry	44.8	4.94	95.5	75-125			
Barium	337	0.400	"	44.8	290	103	75-125			
Cadmium	2.43	0.200	"	2.24	0.232	98.0	75-125			
Copper	53.0	0.400	"	44.8	9.18	97.7	75-125			
Lead	25.7	0.200	"	22.4	6.70	84.8	75-125			
Nickel	53.7	0.400	"	44.8	8.86	99.9	75-125			
Silver	2.19	0.0200	"	2.24	0.0353	96.3	75-125			
Zinc	101	0.400	"	44.8	66.5	77.7	75-125			
Selenium	3.73	0.260	"	4.48	ND	83.2	75-125			

Matrix Spike Dup (BHF0286-MSD1)

Source: 2406100-01

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	49.8	0.200	mg/kg dry	47.6	4.94	94.2	75-125	4.17	25	
Barium	222	0.400	"	47.6	290	NR	75-125	41.1	25	QM-07
Cadmium	2.56	0.200	"	2.38	0.232	97.9	75-125	5.39	25	
Copper	54.9	0.400	"	47.6	9.18	96.0	75-125	3.54	25	
Lead	27.5	0.200	"	23.8	6.70	87.2	75-125	6.58	25	
Nickel	55.6	0.400	"	47.6	8.86	98.1	75-125	3.50	25	
Silver	2.31	0.0200	"	2.38	0.0353	95.7	75-125	5.32	25	
Zinc	95.5	0.400	"	47.6	66.5	60.9	75-125	5.94	25	QM-07
Selenium	3.87	0.260	"	4.76	ND	81.3	75-125	3.67	25	

Batch BHF0287 - EPA 3050B

Blank (BHF0287-BLK1)

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

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6855 W. 119th Ave.
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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BHF0287 - EPA 3050B

LCS (BHF0287-BS1)

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	38.8	0.200	mg/kg wet	40.0		97.1	80-120			
Barium	39.1	0.400	"	40.0		97.8	80-120			
Cadmium	1.92	0.200	"	2.00		95.8	80-120			
Copper	39.8	0.400	"	40.0		99.6	80-120			
Lead	18.9	0.200	"	20.0		94.7	80-120			
Nickel	38.7	0.400	"	40.0		96.9	80-120			
Silver	1.92	0.0200	"	2.00		96.2	80-120			
Zinc	38.3	0.400	"	40.0		95.7	80-120			
Selenium	3.78	0.260	"	4.00		94.6	80-120			

Duplicate (BHF0287-DUP1)

Source: 2406075-03

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	5.97	0.200	mg/kg dry		5.69			4.89	20	
Barium	114	0.400	"		123			7.39	20	
Cadmium	4.14	0.200	"		0.513			156	20	QR-04
Copper	9.83	0.400	"		10.0			1.93	20	
Lead	8.66	0.200	"		7.74			11.3	20	
Nickel	13.0	0.400	"		13.4			3.14	20	
Silver	0.0449	0.0200	"		0.0488			8.42	20	
Zinc	409	0.400	"		41.1			163	20	QR-04
Selenium	1.19	0.260	"		0.331			113	20	QR-01

Matrix Spike (BHF0287-MS1)

Source: 2406075-03

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	51.7	0.200	mg/kg dry	47.1	5.69	97.8	75-125			
Barium	159	0.400	"	47.1	123	77.4	75-125			
Cadmium	2.81	0.200	"	2.35	0.513	97.5	75-125			
Copper	54.1	0.400	"	47.1	10.0	93.7	75-125			
Lead	28.0	0.200	"	23.5	7.74	85.9	75-125			
Nickel	58.1	0.400	"	47.1	13.4	94.9	75-125			
Silver	2.23	0.0200	"	2.35	0.0488	92.6	75-125			
Zinc	86.6	0.400	"	47.1	41.1	96.7	75-125			
Selenium	5.01	0.260	"	4.71	0.331	99.5	75-125			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BHF0287 - EPA 3050B

Matrix Spike Dup (BHF0287-MSD1)

Source: 2406075-03

Prepared: 06/11/24 Analyzed: 06/12/24

Arsenic	52.3	0.200	mg/kg dry	47.8	5.69	97.4	75-125	1.06	25
Barium	164	0.400	"	47.8	123	86.1	75-125	2.92	25
Cadmium	2.95	0.200	"	2.39	0.513	102	75-125	4.82	25
Copper	54.5	0.400	"	47.8	10.0	93.1	75-125	0.719	25
Lead	28.6	0.200	"	23.9	7.74	87.4	75-125	2.32	25
Nickel	58.7	0.400	"	47.8	13.4	94.6	75-125	0.949	25
Silver	2.26	0.0200	"	2.39	0.0488	92.3	75-125	1.12	25
Zinc	99.6	0.400	"	47.8	41.1	123	75-125	14.0	25
Selenium	5.09	0.260	"	4.78	0.331	99.6	75-125	1.53	25

Summit Scientific

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Tasman Geosciences
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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHF0226 - 3060A Mod

Blank (BHF0226-BLK1)

Prepared & Analyzed: 06/10/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHF0226-BS1)

Prepared & Analyzed: 06/10/24

Chromium, Hexavalent 25.8 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BHF0226-DUP1)

Source: 2405442-01

Prepared & Analyzed: 06/10/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHF0226-MS1)

Source: 2405442-01

Prepared & Analyzed: 06/10/24

Chromium, Hexavalent 25.8 0.30 mg/kg dry 26.8 ND 96.2 75-125


Matrix Spike Dup (BHF0226-MSD1)

Source: 2405442-01

Prepared & Analyzed: 06/10/24

Chromium, Hexavalent 28.6 0.30 mg/kg dry 27.0 ND 106 75-125 10.5 20

Summit Scientific



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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BHF0268 - General Preparation

Blank (BHF0268-BLK1)

Prepared: 06/10/24 Analyzed: 06/14/24

Calcium	ND	0.0500	mg/L wet						
Magnesium	ND	0.0500	"						
Sodium	ND	0.0500	"						

LCS (BHF0268-BS1)

Prepared: 06/10/24 Analyzed: 06/14/24

Calcium	5.56	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.45	0.0500	"	5.00	109	70-130
Sodium	5.28	0.0500	"	5.00	106	70-130

Batch BHF0305 - General Preparation

Blank (BHF0305-BLK1)

Prepared: 06/11/24 Analyzed: 06/13/24

Calcium	ND	0.0500	mg/L wet			
Magnesium	ND	0.0500	"			
Sodium	ND	0.0500	"			

LCS (BHF0305-BS1)

Prepared: 06/11/24 Analyzed: 06/13/24

Calcium	5.62	0.0500	mg/L wet	5.00	112	70-130
Magnesium	5.53	0.0500	"	5.00	111	70-130
Sodium	5.43	0.0500	"	5.00	109	70-130

Summit Scientific

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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

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

Summit Scientific

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

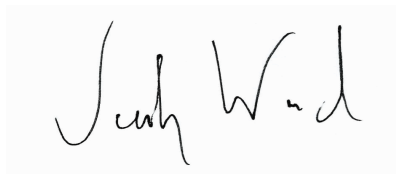
Batch BHF0257 - General Preparation

Duplicate (BHF0257-DUP1)		Source: 2405470-31			Prepared & Analyzed: 06/10/24			
% Solids	96.4		%		96.0		0.343	20

Batch BHF0291 - General Preparation

Duplicate (BHF0291-DUP2)		Source: 2406095-01			Prepared & Analyzed: 06/11/24			
% Solids	94.4		%		94.3		0.0424	20

Summit Scientific



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Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BHF0269 - General Preparation

Blank (BHF0269-BLK1)

Prepared: 06/10/24 Analyzed: 06/11/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0269-BS1)

Prepared: 06/10/24 Analyzed: 06/11/24

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHF0269-DUP1)

Source: 2406081-01

Prepared: 06/10/24 Analyzed: 06/11/24

Specific Conductance (EC) 0.0702 0.0100 mmhos/cm 0.0708 0.780 20

Batch BHF0306 - General Preparation

Blank (BHF0306-BLK1)

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0306-BS1)

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHF0306-DUP1)

Source: 2406082-01

Prepared: 06/11/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.0767 0.0100 mmhos/cm 0.0767 0.0130 20

Summit Scientific

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BHF0216 - General Preparation

LCS (BHF0216-BS1)		Prepared & Analyzed: 06/10/24								
pH	9.21		pH Units	9.18		100	95-105			
Duplicate (BHF0216-DUP1)		Source: 2404180-01		Prepared & Analyzed: 06/10/24						
pH	8.02		pH Units		8.08			0.745	20	

Batch BHF0270 - General Preparation

LCS (BHF0270-BS1)		Prepared: 06/10/24 Analyzed: 06/11/24								
pH	9.19		pH Units	9.18		100	95-105			
Duplicate (BHF0270-DUP1)		Source: 2406081-01		Prepared: 06/10/24 Analyzed: 06/11/24						
pH	8.12		pH Units		8.18			0.736	20	

Batch BHF0307 - General Preparation

LCS (BHF0307-BS1)		Prepared: 06/11/24 Analyzed: 06/12/24								
pH	9.17		pH Units	9.18		99.9	95-105			
Duplicate (BHF0307-DUP1)		Source: 2406082-01		Prepared: 06/11/24 Analyzed: 06/12/24						
pH	8.02		pH Units		8.12			1.24	20	

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

Project: PDC - Merritt 6-66-9-0560CH Wellhead

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/30/24 16:40

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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