

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 01, 2024

Daniel Simpson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Chevron - Roach Bass T5N-R67W-S14 L01

Work Order #2410397

Enclosed are the results of analyses for samples received by Summit Scientific on 10/22/24 17:49. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@4'	2410397-01	Soil	10/22/24 11:00	10/22/24 17:49
SEP01-DL@4'	2410397-02	Soil	10/22/24 11:03	10/22/24 17:49
SEP02-FL@4'	2410397-03	Soil	10/22/24 11:05	10/22/24 17:49
SEP02-DL@4'	2410397-04	Soil	10/22/24 11:08	10/22/24 17:49
SEP03-FL@4'	2410397-05	Soil	10/22/24 11:12	10/22/24 17:49
SEP03-DL@4'	2410397-06	Soil	10/22/24 11:16	10/22/24 17:49
SEP04-FL@4'	2410397-07	Soil	10/22/24 11:19	10/22/24 17:49
SEP04-DL@4'	2410397-08	Soil	10/22/24 11:22	10/22/24 17:49
SEP05-FL@4'	2410397-09	Soil	10/22/24 11:24	10/22/24 17:49
SEP05-DL@4'	2410397-10	Soil	10/22/24 11:28	10/22/24 17:49
BKG01@0-6"	2410397-11	Soil	10/22/24 12:00	10/22/24 17:49
BKG01@2'	2410397-12	Soil	10/22/24 12:03	10/22/24 17:49
BKG01@4'	2410397-13	Soil	10/22/24 12:05	10/22/24 17:49

Summit Scientific

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		Send Data To:	Send Invoice To:
Client: Tasman, Inc.		Project Manager: Daniel Simpson	Company: Chevron
Address: 6855 W. 119th Ave.		E-Mail: Tas-chevron-5@tasman-geo.com	Project Name/Location: Roach Bass TSN-R67W-S14 L01
City/State/Zip: Broomfield / CO/ 80020			AFE#: UWRWE-A4196-AES
Phone: 303-487-1228		Project Name: Roach Bass TSN-R67W-S14 L01	PO/Billing Codes:
Sampler Name: Patrick Douns		Project Number:	Contact: Mike Montoya

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD			SAR, EC, pH by saturated paste
1	SEP01-FL04'	10-22-24	11:00	3			X			X			X	X	X	X	X	X				
2	SEP01-DL04'		11:03	1																		
3	SEP02-FL04'		11:05	1																		
4	SEP02-DL04'		11:08	1																		
5	SEP03-FL04'		11:12	1																		
6	SEP03-DL04'		11:16	1																		
7	SEP04-FL04'		11:19	1																		
8	SEP04-DL04'		11:22	1																		
9	SEP05-FL04'		11:24	1																		
10	SEP05-DL04'		11:29	1																		
11	Bk601C0-6"		12:00	2									X				X	X				
12	Bk601C2'		12:03	1																		
13	.Bk601C4'		12:05	1																		
14																						
15																						

Relinquished by: P. Douns	Date/Time: 10-22-24 / 14:35	Received by: Tasman Lockbox	Date/Time: 10-22-24	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 10-22-24 / 1749	Received by: [Signature]	Date/Time: 10-22-24 / 1749	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: 8.5	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2410397Client: Tusman Client Project ID: Poach Bass TSN-R67W-S14 L01Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

☐	☒	☐	☐	☐
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.5Thermometer # 1

	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.	☒	☐	☐	none
If custody seals are present, are they intact? ⁽¹⁾	☒	☐	☐	
Are samples due within 48 hours present?	☐	☒	☐	
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	☐	☒	☐	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	☒	☐	☐	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	☒	☐	☐	
Were all samples received intact? ⁽¹⁾	☒	☐	☐	
Was adequate sample volume provided? ⁽¹⁾	☒	☐	☐	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	☒	☐	☐	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	☒	☐	☐	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	☐	☐	☒	
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.	☐	☐	☒	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	☐	☐	☒	
If dissolved metals are requested, were samples field filtered?	☐	☐	☒	
Additional Comments (if any):				

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

10/22/24
Date/Time



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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP01-FL@4'
2410397-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/22/24 11:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/24/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.012	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.0058	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 10/22/24 11:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/22/24 11:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 10/22/24 11:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.48	59.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2410397-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0176	52.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0173	51.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SEP01-FL@4'
2410397-01 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.83	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	99.3	0.400	"	"	"	"	"	"
Cadmium	0.250	0.200	"	"	"	"	"	"
Copper	6.12	0.400	"	"	"	"	"	"
Lead	8.02	0.200	"	"	"	"	"	"
Nickel	6.89	0.400	"	"	"	"	"	"
Silver	0.0408	0.0200	"	"	"	"	"	"
Zinc	22.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.7	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	8.43	0.0500	"	"	"	"	"	"	
Sodium	3.83	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.141	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SEP01-FL@4'
2410397-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.8	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.214	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP01-DL@4'
2410397-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/24/24	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: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0429	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.8	86.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2410397-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0156	46.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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SEP01-DL@4'
2410397-02 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.18	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	78.8	0.400	"	"	"	"	"	"
Cadmium	0.215	0.200	"	"	"	"	"	"
Copper	5.98	0.400	"	"	"	"	"	"
Lead	7.08	0.200	"	"	"	"	"	"
Nickel	6.27	0.400	"	"	"	"	"	"
Silver	0.0357	0.0200	"	"	"	"	"	"
Zinc	23.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	74.4	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	9.31	0.0500	"	"	"	"	"	"	
Sodium	5.92	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.172	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP01-DL@4'
2410397-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	93.4	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.261	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-FL@4'
2410397-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/24/24	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: **10/22/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.8	86.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-FL@4'
2410397-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-FL@4'
2410397-03 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.14	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	80.0	0.400	"	"	"	"	"	"
Cadmium	0.230	0.200	"	"	"	"	"	"
Copper	5.97	0.400	"	"	"	"	"	"
Lead	7.54	0.200	"	"	"	"	"	"
Nickel	5.94	0.400	"	"	"	"	"	"
Silver	0.0320	0.0200	"	"	"	"	"	"
Zinc	21.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	105	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	10.9	0.0500	"	"	"	"	"	"	
Sodium	2.55	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0633	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-FL@4'
2410397-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	91.5	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.176	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.62		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-DL@4'
2410397-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/25/24	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: **10/22/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0439	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.55	60.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Reported:
11/01/24 07:48

SEP02-DL@4'
2410397-04 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	41.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0141	42.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP02-DL@4'
2410397-04 (Soil)

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Total Metals by EPA 6020B

Arsenic	3.24	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	81.1	0.400	"	"	"	"	"	"
Cadmium	0.206	0.200	"	"	"	"	"	"
Copper	5.53	0.400	"	"	"	"	"	"
Lead	6.82	0.200	"	"	"	"	"	"
Nickel	5.87	0.400	"	"	"	"	"	"
Silver	0.0332	0.0200	"	"	"	"	"	"
Zinc	21.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	85.6	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	9.78	0.0500	"	"	"	"	"	"	
Sodium	5.66	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.155	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
11/01/24 07:48

SEP02-DL@4'
2410397-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	89.5	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.184	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-FL@4'
2410397-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/25/24	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: **10/22/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0430	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	3.53	28.2 %	30-150		"	"	"	"	S-04

PAH by EPA Method 8270D SIM

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2410397-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.00883	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	EPA 8270D SIM	
Anthracene	0.0151	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0144	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00984	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0132	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0135	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0458	0.00500	"	"	"	"	"	"	
Fluorene	0.0118	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00813	0.00500	"	"	"	"	"	"	
Pyrene	0.0267	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.00936	0.00500	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0126	37.7 %	40-150		"	"	"	"	S-04
Surrogate: Fluoranthene-d10	0.0155	46.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.29	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-FL@4'
2410397-05 (Soil)

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Total Metals by EPA 6020B

Barium	105	0.400	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Cadmium	0.281	0.200	"	"	"	"	"	"
Copper	6.45	0.400	"	"	"	"	"	"
Lead	9.13	0.200	"	"	"	"	"	"
Nickel	7.21	0.400	"	"	"	"	"	"
Silver	0.0442	0.0200	"	"	"	"	"	"
Zinc	23.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	151	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	14.9	0.0500	"	"	"	"	"	"	
Sodium	2.34	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0486	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BHJ1131	10/25/24	10/28/24	Calculation	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-FL@4'
2410397-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.165	0.0100		mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:12**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.40			pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-DL@4'
2410397-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/26/24	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: **10/22/24 11:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.42	75.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-DL@4'
2410397-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHJ0937	10/23/24	10/24/24	EPA 8270D SIM	
Anthracene	0.0125	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	0.00581	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	0.0119	0.00500		"	"	"	"	"	"	

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0166	49.9 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-DL@4'
2410397-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.45	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	91.9	0.400	"	"	"	"	"	"
Cadmium	0.219	0.200	"	"	"	"	"	"
Copper	6.06	0.400	"	"	"	"	"	"
Lead	7.85	0.200	"	"	"	"	"	"
Nickel	6.48	0.400	"	"	"	"	"	"
Silver	0.0370	0.0200	"	"	"	"	"	"
Zinc	21.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.9	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	6.97	0.0500	"	"	"	"	"	"	
Sodium	4.54	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.162	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP03-DL@4'
2410397-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	89.1	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.167	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.61		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-FL@4'
2410397-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/26/24	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: **10/22/24 11:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0426	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.30	74.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
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Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-FL@4'
2410397-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Acenaphthene	ND	0.00500		mg/kg	1	BHJ0937	10/23/24	10/24/24	EPA 8270D SIM	
Anthracene	0.00872	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	0.00683	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	0.0138	0.00500		"	"	"	"	"	"	

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.4 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0177	53.2 %		40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-FL@4'
2410397-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.22	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	115	0.400	"	"	"	"	"	"
Cadmium	0.266	0.200	"	"	"	"	"	"
Copper	6.39	0.400	"	"	"	"	"	"
Lead	8.44	0.200	"	"	"	"	"	"
Nickel	7.38	0.400	"	"	"	"	"	"
Silver	0.0414	0.0200	"	"	"	"	"	"
Zinc	24.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	103	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	10.2	0.0500	"	"	"	"	"	"	
Sodium	6.07	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.153	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-FL@4'
2410397-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.6	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.158	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.59		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Tasman Geosciences
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Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-DL@4'
2410397-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/26/24	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: **10/22/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0408	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0407	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.5	92.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-DL@4'
2410397-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0166	49.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-DL@4'
2410397-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.15	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	50.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.98	0.400	"	"	"	"	"	"
Lead	4.81	0.200	"	"	"	"	"	"
Nickel	4.23	0.400	"	"	"	"	"	"
Silver	0.0232	0.0200	"	"	"	"	"	"
Zinc	16.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.8	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	5.83	0.0500	"	"	"	"	"	"	
Sodium	1.55	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0491	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP04-DL@4'
2410397-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.1		%	1	BHJ1131	10/25/24	10/28/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.150	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.70		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-FL@4'
2410397-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/26/24	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: **10/22/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.1	80.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-FL@4'
2410397-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	EPA 8270D SIM	
Anthracene	0.00600	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: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-FL@4'
2410397-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.26	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	123	0.400	"	"	"	"	"	"
Cadmium	0.277	0.200	"	"	"	"	"	"
Copper	6.31	0.400	"	"	"	"	"	"
Lead	8.35	0.200	"	"	"	"	"	"
Nickel	7.51	0.400	"	"	"	"	"	"
Silver	0.0425	0.0200	"	"	"	"	"	"
Zinc	24.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1197	10/28/24	10/29/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.5	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	11.0	0.0500	"	"	"	"	"	"	
Sodium	9.63	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.343	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-FL@4'
2410397-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.6	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.56		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-DL@4'
2410397-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHJ0975	10/23/24	10/26/24	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: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0979	10/23/24	10/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.1	80.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-DL@4'
2410397-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0937	10/23/24	10/24/24	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: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0152	45.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-DL@4'
2410397-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.50	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B
Barium	119	0.400	"	"	"	"	"	"
Cadmium	0.292	0.200	"	"	"	"	"	"
Copper	6.68	0.400	"	"	"	"	"	"
Lead	9.13	0.200	"	"	"	"	"	"
Nickel	7.70	0.400	"	"	"	"	"	"
Silver	0.0458	0.0200	"	"	"	"	"	"
Zinc	25.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1256	10/29/24	10/31/24	EPA 7196A	

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

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.4	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	8.55	0.0500	"	"	"	"	"	"	
Sodium	1.78	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0601	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

SEP05-DL@4'
2410397-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.8	%	1	BHJ1131	10/25/24	10/28/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.219	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@0-6"
2410397-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.17	0.200		mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B	
Barium	135	0.400		"	"	"	"	"	"	
Cadmium	0.360	0.200		"	"	"	"	"	"	
Copper	7.56	0.400		"	"	"	"	"	"	
Lead	12.9	0.200		"	"	"	"	"	"	
Nickel	9.52	0.400		"	"	"	"	"	"	
Silver	0.0792	0.0200		"	"	"	"	"	"	
Zinc	29.5	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHJ1256	10/29/24	10/31/24	EPA 7196A	

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

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	43.8	0.0500		mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	14.8	0.0500		"	"	"	"	"	"	
Sodium	2.73	0.0500		"	"	"	"	"	"	

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@0-6"
2410397-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0910	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BHJ1131	10/25/24	10/28/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.154	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.25		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@2'
2410397-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	5.26	0.200		mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B	
Barium	128	0.400		"	"	"	"	"	"	
Cadmium	0.333	0.200		"	"	"	"	"	"	
Copper	7.06	0.400		"	"	"	"	"	"	
Lead	11.9	0.200		"	"	"	"	"	"	
Nickel	8.62	0.400		"	"	"	"	"	"	
Silver	0.0830	0.0200		"	"	"	"	"	"	
Zinc	27.9	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHJ1256	10/29/24	10/31/24	EPA 7196A	

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

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	34.1	0.0500		mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	11.2	0.0500		"	"	"	"	"	"	
Sodium	4.25	0.0500		"	"	"	"	"	"	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@2'
2410397-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.161	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BHJ1131	10/25/24	10/28/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.177	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.44		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@4'
2410397-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHJ1192	10/28/24	10/30/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	4.30	0.200	mg/kg dry	1	BHJ1258	10/29/24	10/30/24	EPA 6020B	
Barium	128	0.400	"	"	"	"	"	"	
Cadmium	0.367	0.200	"	"	"	"	"	"	
Copper	6.90	0.400	"	"	"	"	"	"	
Lead	12.2	0.200	"	"	"	"	"	"	
Nickel	8.68	0.400	"	"	"	"	"	"	
Silver	0.0591	0.0200	"	"	"	"	"	"	
Zinc	26.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ1256	10/29/24	10/31/24	EPA 7196A	

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

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	165	0.0500	mg/L dry	1	BHJ1150	10/26/24	10/29/24	EPA 6020B	
Magnesium	39.5	0.0500	"	"	"	"	"	"	
Sodium	2.50	0.0500	"	"	"	"	"	"	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

BKG01@4'
2410397-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0454	0.00100	units	1	BHJ1288	10/29/24	10/29/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BHJ1131	10/25/24	10/28/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.239	0.0100	mmhos/cm	1	BHJ1151	10/26/24	10/29/24	EPA 120.1	

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

Date Sampled: **10/22/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.50		pH Units	1	BHJ1152	10/26/24	10/29/24	EPA 9045D	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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 BHJ0975 - EPA 5030 Soil MS

Blank (BHJ0975-BLK1)

Prepared: 10/23/24 Analyzed: 10/24/24

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	0.0418		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150			

LCS (BHJ0975-BS1)

Prepared: 10/23/24 Analyzed: 10/24/24

Benzene	0.119	0.0020	mg/kg	0.100		119	70-130			
Toluene	0.113	0.0050	"	0.100		113	70-130			
Ethylbenzene	0.108	0.0050	"	0.100		108	70-130			
m,p-Xylene	0.211	0.010	"	0.200		105	70-130			
o-Xylene	0.105	0.0050	"	0.100		105	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.108	0.0038	"	0.100		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	50-150			

Matrix Spike (BHJ0975-MS1)

Source: 2410397-01

Prepared: 10/23/24 Analyzed: 10/24/24

Benzene	0.110	0.0020	mg/kg	0.100	ND	110	70-130			
Toluene	0.107	0.0050	"	0.100	ND	107	70-130			
Ethylbenzene	0.0993	0.0050	"	0.100	ND	99.3	70-130			
m,p-Xylene	0.198	0.010	"	0.200	0.00741	95.1	70-130			
o-Xylene	0.101	0.0050	"	0.100	0.00474	96.4	70-130			
1,2,4-Trimethylbenzene	0.0937	0.0050	"	0.100	0.00585	87.9	70-130			
1,3,5-Trimethylbenzene	0.0964	0.0050	"	0.100	0.00438	92.0	70-130			
Naphthalene	0.0991	0.0038	"	0.100	ND	99.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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 BHJ0975 - EPA 5030 Soil MS

Matrix Spike Dup (BHJ0975-MSD1)		Source: 2410397-01			Prepared: 10/23/24 Analyzed: 10/24/24					
Benzene	0.108	0.0020	mg/kg	0.100	ND	108	70-130	1.99	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	3.12	30	
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	1.53	30	
m,p-Xylene	0.198	0.010	"	0.200	0.00741	95.4	70-130	0.273	30	
o-Xylene	0.0994	0.0050	"	0.100	0.00474	94.6	70-130	1.82	30	
1,2,4-Trimethylbenzene	0.0951	0.0050	"	0.100	0.00585	89.2	70-130	1.46	30	
1,3,5-Trimethylbenzene	0.0952	0.0050	"	0.100	0.00438	90.8	70-130	1.28	30	
Naphthalene	0.0991	0.0038	"	0.100	ND	99.1	70-130	0.0606	30	
Surrogate: 1,2-Dichloroethane-d4		0.0430	"	0.0400		107	50-150			
Surrogate: Toluene-d8		0.0411	"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene		0.0408	"	0.0400		102	50-150			

Summit Scientific

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHJ0979 - EPA 3550A

Blank (BHJ0979-BLK1)

Prepared: 10/23/24 Analyzed: 10/24/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	16.1		"	12.5		129	30-150			

LCS (BHJ0979-BS1)

Prepared: 10/23/24 Analyzed: 10/24/24

C10-C28 (DRO)	457	50	mg/kg	500		91.5	70-130			
Surrogate: o-Terphenyl	13.2		"	12.5		106	30-150			

Matrix Spike (BHJ0979-MS1)

Source: 2410397-01

Prepared: 10/23/24 Analyzed: 10/24/24

C10-C28 (DRO)	404	50	mg/kg	500	ND	80.8	70-130			
Surrogate: o-Terphenyl	12.2		"	12.5		97.9	30-150			

Matrix Spike Dup (BHJ0979-MSD1)

Source: 2410397-01

Prepared: 10/23/24 Analyzed: 10/24/24

C10-C28 (DRO)	405	50	mg/kg	500	ND	81.1	70-130	0.305	20	
Surrogate: o-Terphenyl	11.5		"	12.5		92.0	30-150			

Summit Scientific

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHJ0937 - EPA 5030 Soil MS

Blank (BHJ0937-BLK1)

Prepared: 10/23/24 Analyzed: 10/24/24

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0258		"	0.0333		77.3	40-150			
Surrogate: Fluoranthene-d10	0.0273		"	0.0333		81.8	40-150			

LCS (BHJ0937-BS1)

Prepared: 10/23/24 Analyzed: 10/24/24

Acenaphthene	0.0210	0.00500	mg/kg	0.0333	62.9	31-137				
Anthracene	0.0207	0.00500	"	0.0333	62.1	30-120				
Benzo (a) anthracene	0.0220	0.00500	"	0.0333	65.9	30-120				
Benzo (a) pyrene	0.0206	0.00500	"	0.0333	61.9	30-120				
Benzo (b) fluoranthene	0.0207	0.00500	"	0.0333	62.0	30-120				
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	61.1	30-120				
Chrysene	0.0209	0.00500	"	0.0333	62.8	30-120				
Dibenz (a,h) anthracene	0.0189	0.00500	"	0.0333	56.6	30-120				
Fluoranthene	0.0205	0.00500	"	0.0333	61.4	30-120				
Fluorene	0.0208	0.00500	"	0.0333	62.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0141	0.00500	"	0.0333	42.2	30-120				
Pyrene	0.0208	0.00500	"	0.0333	62.4	35-142				
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	62.9	35-142				
2-Methylnaphthalene	0.0211	0.00500	"	0.0333	63.2	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0212		"	0.0333	63.5	40-150				
Surrogate: Fluoranthene-d10	0.0211		"	0.0333	63.3	40-150				

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Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHJ0937 - EPA 5030 Soil MS

Matrix Spike (BHJ0937-MS1)

Source: 2410397-01

Prepared: 10/23/24 Analyzed: 10/24/24

Acenaphthene	0.0194	0.00500	mg/kg	0.0333	ND	58.2	31-137		
Anthracene	0.0192	0.00500	"	0.0333	ND	57.5	30-120		
Benzo (a) anthracene	0.0203	0.00500	"	0.0333	ND	61.0	30-120		
Benzo (a) pyrene	0.0182	0.00500	"	0.0333	ND	54.7	30-120		
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.3	30-120		
Benzo (k) fluoranthene	0.0176	0.00500	"	0.0333	ND	52.8	30-120		
Chrysene	0.0193	0.00500	"	0.0333	ND	57.8	30-120		
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	ND	51.0	30-120		
Fluoranthene	0.0190	0.00500	"	0.0333	ND	57.1	30-120		
Fluorene	0.0196	0.00500	"	0.0333	ND	58.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0173	0.00500	"	0.0333	ND	51.8	30-120		
Pyrene	0.0195	0.00500	"	0.0333	ND	58.5	35-142		
1-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.8	15-130		
2-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.1	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0205		"	0.0333		61.4	40-150		
Surrogate: Fluoranthene-d10	0.0194		"	0.0333		58.2	40-150		

Matrix Spike Dup (BHJ0937-MSD1)

Source: 2410397-01

Prepared: 10/23/24 Analyzed: 10/24/24

Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.6	31-137	15.9	30
Anthracene	0.0167	0.00500	"	0.0333	ND	50.2	30-120	13.7	30
Benzo (a) anthracene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	11.2	30
Benzo (a) pyrene	0.0175	0.00500	"	0.0333	ND	52.6	30-120	3.98	30
Benzo (b) fluoranthene	0.0177	0.00500	"	0.0333	ND	53.0	30-120	2.44	30
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	3.92	30
Chrysene	0.0167	0.00500	"	0.0333	ND	50.2	30-120	14.2	30
Dibenz (a,h) anthracene	0.0168	0.00500	"	0.0333	ND	50.3	30-120	1.47	30
Fluoranthene	0.0159	0.00500	"	0.0333	ND	47.8	30-120	17.7	30
Fluorene	0.0166	0.00500	"	0.0333	ND	49.9	30-120	16.2	30
Indeno (1,2,3-cd) pyrene	0.0174	0.00500	"	0.0333	ND	52.2	30-120	0.748	30
Pyrene	0.0174	0.00500	"	0.0333	ND	52.2	35-142	11.4	30
1-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130	9.08	50
2-Methylnaphthalene	0.0198	0.00500	"	0.0333	ND	59.4	15-130	7.65	50
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.8	40-150		
Surrogate: Fluoranthene-d10	0.0166		"	0.0333		49.7	40-150		

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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

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

Batch BHJ1192 - EPA 3050B

Blank (BHJ1192-BLK1)

Prepared: 10/28/24 Analyzed: 10/30/24

Boron ND 2.00 mg/L

LCS (BHJ1192-BS1)

Prepared: 10/28/24 Analyzed: 10/30/24

Boron 5.03 2.00 mg/L 5.00 101 80-120

Duplicate (BHJ1192-DUP1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/30/24

Boron 0.487 2.00 mg/L 0.545 11.3 20

Matrix Spike (BHJ1192-MS1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/30/24

Boron 5.09 2.00 mg/L 4.97 0.545 91.4 75-125

Matrix Spike Dup (BHJ1192-MSD1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/30/24

Boron 5.03 2.00 mg/L 4.97 0.545 90.2 75-125 1.16 25

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHJ1258 - EPA 3050B

Blank (BHJ1258-BLK1)

Prepared: 10/29/24 Analyzed: 10/30/24

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 (BHJ1258-BS1)

Prepared: 10/29/24 Analyzed: 10/30/24

Arsenic	39.2	0.200	mg/kg wet	41.0	95.7	80-120
Barium	40.3	0.400	"	41.0	98.3	80-120
Cadmium	1.97	0.200	"	2.05	96.3	80-120
Copper	43.0	0.400	"	41.0	105	80-120
Lead	20.1	0.200	"	20.5	98.2	80-120
Nickel	42.6	0.400	"	41.0	104	80-120
Silver	1.99	0.0200	"	2.05	96.9	80-120
Zinc	42.7	0.400	"	41.0	104	80-120
Selenium	4.29	0.260	"	4.10	105	80-120

Duplicate (BHJ1258-DUP1)

Source: 2410397-01

Prepared: 10/29/24 Analyzed: 10/30/24

Arsenic	4.08	0.200	mg/kg dry	3.83	6.17	20
Barium	106	0.400	"	99.3	6.50	20
Cadmium	0.264	0.200	"	0.250	5.48	20
Copper	6.46	0.400	"	6.12	5.44	20
Lead	8.35	0.200	"	8.02	4.13	20
Nickel	7.25	0.400	"	6.89	5.15	20
Silver	0.0413	0.0200	"	0.0408	1.14	20
Zinc	24.0	0.400	"	22.8	4.88	20
Selenium	0.178	0.260	"	ND	200	20

QR-01

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHJ1258 - EPA 3050B

Matrix Spike (BHJ1258-MS1)		Source: 2410397-01			Prepared: 10/29/24 Analyzed: 10/30/24					
Arsenic	44.8	0.200	mg/kg dry	44.0	3.83	93.0	75-125			
Barium	140	0.400	"	44.0	99.3	92.9	75-125			
Cadmium	2.39	0.200	"	2.20	0.250	97.4	75-125			
Copper	31.9	0.400	"	44.0	6.12	58.7	75-125			QM-05
Lead	29.1	0.200	"	22.0	8.02	95.9	75-125			
Nickel	32.8	0.400	"	44.0	6.89	58.9	75-125			QM-05
Silver	2.10	0.0200	"	2.20	0.0408	93.8	75-125			
Zinc	49.6	0.400	"	44.0	22.8	60.8	75-125			QM-05
Selenium	4.12	0.260	"	4.40	ND	93.6	75-125			

Matrix Spike Dup (BHJ1258-MSD1)		Source: 2410397-01			Prepared: 10/29/24 Analyzed: 10/30/24					
Arsenic	45.7	0.200	mg/kg dry	46.2	3.83	90.6	75-125	1.98	25	
Barium	149	0.400	"	46.2	99.3	107	75-125	5.84	25	
Cadmium	2.44	0.200	"	2.31	0.250	94.9	75-125	1.97	25	
Copper	34.0	0.400	"	46.2	6.12	60.3	75-125	6.09	25	QM-05
Lead	29.8	0.200	"	23.1	8.02	94.4	75-125	2.38	25	
Nickel	34.9	0.400	"	46.2	6.89	60.6	75-125	6.05	25	QM-05
Silver	2.19	0.0200	"	2.31	0.0408	93.1	75-125	3.98	25	
Zinc	51.6	0.400	"	46.2	22.8	62.3	75-125	3.98	25	QM-05
Selenium	4.37	0.260	"	4.62	ND	94.6	75-125	5.84	25	

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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHJ1197 - 3060A Mod

Blank (BHJ1197-BLK1)

Prepared: 10/28/24 Analyzed: 10/29/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHJ1197-BS1)

Prepared: 10/28/24 Analyzed: 10/29/24

Chromium, Hexavalent 25.9 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BHJ1197-DUP1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/29/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHJ1197-MS1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/29/24

Chromium, Hexavalent 31.1 0.30 mg/kg dry 28.8 ND 108 75-125

Matrix Spike Dup (BHJ1197-MSD1)

Source: 2410395-06

Prepared: 10/28/24 Analyzed: 10/29/24

Chromium, Hexavalent 31.1 0.30 mg/kg dry 28.8 ND 108 75-125 0.00 20

Batch BHJ1256 - 3060A Mod

Blank (BHJ1256-BLK1)

Prepared: 10/29/24 Analyzed: 10/31/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHJ1256-BS1)

Prepared: 10/29/24 Analyzed: 10/31/24

Chromium, Hexavalent 25.5 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BHJ1256-DUP1)

Source: 2410397-10

Prepared: 10/29/24 Analyzed: 10/31/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHJ1256-MS1)

Source: 2410397-10

Prepared: 10/29/24 Analyzed: 10/31/24

Chromium, Hexavalent 31.2 0.30 mg/kg dry 28.8 ND 108 75-125

Summit Scientific

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Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01

Project Number: UWRWE-A4196-AES

Project Manager: Daniel Simpson

Reported:

11/01/24 07:48

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

Batch BHJ1256 - 3060A Mod

Matrix Spike Dup (BHJ1256-MSD1)		Source: 2410397-10			Prepared: 10/29/24 Analyzed: 10/31/24					
Chromium, Hexavalent	30.0	0.30	mg/kg dry	28.8	ND	104	75-125	3.96	20	

Summit Scientific

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Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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

Summit Scientific

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

Batch BHJ1150 - General Preparation

Blank (BHJ1150-BLK1)

Prepared: 10/26/24 Analyzed: 10/29/24

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

LCS (BHJ1150-BS1)

Prepared: 10/26/24 Analyzed: 10/29/24

Calcium	5.29	0.0500	mg/L wet	5.00	106	70-130
Magnesium	4.59	0.0500	"	5.00	91.7	70-130
Sodium	5.09	0.0500	"	5.00	102	70-130

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01

Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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

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

Batch BHJ1131 - General Preparation

Duplicate (BHJ1131-DUP1)		Source: 2410371-12		Prepared: 10/25/24 Analyzed: 10/28/24	
% Solids	92.0		%	92.1	0.0779 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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

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

Batch BHJ1151 - General Preparation

Blank (BHJ1151-BLK1)

Prepared: 10/26/24 Analyzed: 10/29/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHJ1151-BS1)

Prepared: 10/26/24 Analyzed: 10/29/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BHJ1151-DUP1)

Source: 2410394-01

Prepared: 10/26/24 Analyzed: 10/29/24

Specific Conductance (EC) 0.0600 0.0100 mmhos/cm 0.0607 1.16 20

Summit Scientific

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

Project: Chevron - Roach Bass T5N-R67W-S14 L01
Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

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

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

Batch BHJ1152 - General Preparation

LCS (BHJ1152-BS1)

Prepared: 10/26/24 Analyzed: 10/29/24

pH	9.13	pH Units	9.18	99.5	95-105
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Duplicate (BHJ1152-DUP1)

Source: 2410394-01

Prepared: 10/26/24 Analyzed: 10/29/24

pH	6.69	pH Units	6.73	0.596	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Chevron - Roach Bass T5N-R67W-S14 L01

Project Number: UWRWE-A4196-AES
Project Manager: Daniel Simpson

Reported:
11/01/24 07:48

Notes and Definitions

S-04	A sample matrix effect prevented complete surrogate recovery.
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-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. 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