

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,



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 Downs		Project Number:	Contact: Mike Montoya

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	SEP01-FL04'	10-22-24	11:00	3			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	SEP01-DL04'		11:03																	
3	SEP02-FL04'		11:05																	
4	SEP02-DL04'		11:08																	
5	SEP03-FL04'		11:12																	
6	SEP03-DL04'		11:16																	
7	SEP04-FL04'		11:19																	
8	SEP04-DL04'		11:22																	
9	SEP05-FL04'		11:24																	
10	SEP05-DL04'		11:28																	
11	Bk601C0-6"		12:00	2									X					X	X	
12	Bk601C2'		12:03																	
13	.Bk60104'		12:05																	
14																				
15																				

Relinquished by: P. Downs	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. <input checked="" type="checkbox"/>	
Temperature Upon Receipt: 8.5	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2410397

Client: Tusman Client Project ID: Poach Bass TSN-R67W-S14 L01

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

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

Temp (°C) 8.5 Thermometer # 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>none</u>
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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

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

Reported:
11/01/24 07:48

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

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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Project Number: UWRWE-A4196-AES
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Reported:
11/01/24 07:48

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

Summit Scientific

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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PAH by EPA Method 8270D SIM

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

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 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SEP01-DL@4'
2410397-02 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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	

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

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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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

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
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)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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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)

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

Summit Scientific

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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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-DL@4'
2410397-04 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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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

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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:12**

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

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-FL@4'
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	

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

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

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.40		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

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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:16**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: 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 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	0.0125	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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:16**

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

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

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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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

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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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

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

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

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

Summit Scientific

PAH by EPA Method 8270D SIM

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

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	0.00872	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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:19**

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

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

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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
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

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	

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

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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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

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)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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
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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-DL@4'
2410397-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

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

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

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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

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

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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

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)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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 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 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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 11:28**

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

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

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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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	

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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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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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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

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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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

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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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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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

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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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

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 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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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

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 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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			

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

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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -Terphenyl	11.5		"	12.5		92.0	30-150				

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

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 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			

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

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 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		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0205</i>		<i>"</i>	<i>0.0333</i>		<i>61.4</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0194</i>		<i>"</i>	<i>0.0333</i>		<i>58.2</i>	<i>40-150</i>		

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
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0186</i>		<i>"</i>	<i>0.0333</i>		<i>55.8</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0166</i>		<i>"</i>	<i>0.0333</i>		<i>49.7</i>	<i>40-150</i>		

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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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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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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

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 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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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

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

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	
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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

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 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				

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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	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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

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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

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			%REC	Limits	RPD	Limit	

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	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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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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

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