

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 02, 2025

AJ Engelhardt

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: Chevron - Ivey LC 02-033HC

Work Order #2504321

Enclosed are the results of analyses for samples received by Summit Scientific on 04/17/25 18:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01R-S@3'	2504321-01	Soil	04/17/25 13:22	04/17/25 18:22
FL01R-W@3'	2504321-02	Soil	04/17/25 11:24	04/17/25 18:22
BKG01@1'	2504321-03	Soil	04/17/25 13:59	04/17/25 18:22
BKG01@3'	2504321-04	Soil	04/17/25 14:00	04/17/25 18:22
BKG02@1'	2504321-05	Soil	04/17/25 14:02	04/17/25 18:22
BKG02@3'	2504321-06	Soil	04/17/25 14:03	04/17/25 18:22



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

Lab ID	Page \ of 1
2504321	

Client: Chevron/Tasman	Project Manager: AJ Engelhardt	Company: PDC
Address: 4725 W. Independence Street	E-Mail: tas-chevron-3@tasman-geo.com	Project Name/Location: Ivey LC 02-033HC
City/State/Zip: Wheat Ridge, CO 80033	E-Mail: rbueuf27@chevron.com	AFE#: UWRAD-A50000-AES
Phone: 408 512 4063	Project Name: Ivey LC 02-033 HC	PO/Billing Codes:
Sampler Name: Connor Kenigsberg	Project Number:	Contact: Wade Firestien

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915-VOC	915-PAH	915-TPH	pH, EC, SAR	Boron		915-Metals
1	FLOIR-S@3'	4/17/25	1322	2			X			X			X	X	X	X	X	X	
2	FLOIR-W@3'		1124	2									X	X	X	X	X	X	
3	BK601@1'		1359	1															
4	BK601@3'		1400	1															
5	BK602@1'		1402	1															
6	BK602@3'		1403	1															
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>Con Kenigsberg</i>	Date/Time: 4/17/25 1519	Received by: Tasman Lockbox	Date/Time: 4/17/25 1514	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 4/17/25 1822	Received by: <i>[Signature]</i>	Date/Time: 4/17/25 1822	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 0.3	Corrected Temperature: e	IR gun #:		HNO3 lot #:		

S₂

S2 Work Order# 2504321

Sample Receipt Checklist

Client: Chevron/Asman Client Project ID: Ivey UC 02-033 HCReceived Via: H.D./F.U./FedEx/UPS/USPS/Other Airbill #: _____Matrix (Circle all that apply) Air/Soil/Water/Other Temp (°C) 0.3 Thermometer # 1Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other

	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.	-			On > CE
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours?		-		
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, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any):				

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

Control Form #: SRC-001

AS
Custodian Printed Name

4/17/25
Date/Time



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

FL01R-S@3'
2504321-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BID1335	04/24/25	05/16/25	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: **04/17/25 13:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0395	98.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BID1331	04/24/25	05/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.03	64.3 %		50-140		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

FL01R-S@3'
2504321-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID1300	04/24/25	05/20/25	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: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0150	45.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0123	36.9 %	40-140		"	"	"	"	S-09

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID1100	04/21/25	04/22/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

FL01R-S@3'
2504321-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.92	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B
Barium	190	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	17.7	0.400	"	"	"	"	"	"
Lead	12.0	0.200	"	"	"	"	"	"
Nickel	17.1	0.400	"	"	"	"	"	"
Silver	0.0475	0.0200	"	"	"	"	"	"
Zinc	58.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.8	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	16.4	0.0500	"	"	"	"	"	"	
Sodium	69.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.30	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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FL01R-S@3'
2504321-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.2		%	1	BID1121	04/21/25	04/22/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

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Project Number: UWRAD-A5000-AES
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Reported:
06/02/25 10:32

FL01R-W@3'
2504321-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BID1335	04/24/25	05/16/25	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: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0430	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BID1331	04/24/25	05/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.70	61.6 %	50-140		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Chevron - Ivey LC 02-033HC
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06/02/25 10:32

FL01R-W@3'
2504321-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BID1300	04/24/25	05/20/25	EPA 8270D SIM	
Anthracene	0.0154	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0116	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0121	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0272	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0167	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0534	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0167	50.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.00950	28.5 %	40-140		"	"	"	"	S-09

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BID1100	04/21/25	04/22/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

FL01R-W@3'
2504321-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.65	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B	
Barium	138	0.400	"	"	"	"	"	"	
Cadmium	0.203	0.200	"	"	"	"	"	"	
Copper	11.6	0.400	"	"	"	"	"	"	
Lead	7.17	0.200	"	"	"	"	"	"	
Nickel	10.6	0.400	"	"	"	"	"	"	
Silver	0.0355	0.0200	"	"	"	"	"	"	
Zinc	43.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.4	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	5.81	0.0500	"	"	"	"	"	"	
Sodium	87.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.91	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Chevron - Ivey LC 02-033HC
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Reported:
 06/02/25 10:32

FL01R-W@3'
2504321-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	91.4	%	1	BID1121	04/21/25	04/22/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.268	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

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Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG01@1'
2504321-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID1100	04/21/25	04/22/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.33	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B	
Barium	246	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	11.4	0.400	"	"	"	"	"	"	
Lead	5.77	0.200	"	"	"	"	"	"	
Nickel	6.47	0.400	"	"	"	"	"	"	
Silver	0.0250	0.0200	"	"	"	"	"	"	
Zinc	32.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	266	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	87.2	0.0500	"	"	"	"	"	"	
Sodium	365	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG01@1'
2504321-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.97	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3		%	1	BID1121	04/21/25	04/22/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.343	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 13:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.63		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG01@3'
2504321-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID1100	04/21/25	04/22/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.34	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B	
Barium	294	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	15.4	0.400	"	"	"	"	"	"	
Lead	9.97	0.200	"	"	"	"	"	"	
Nickel	8.32	0.400	"	"	"	"	"	"	
Silver	0.0341	0.0200	"	"	"	"	"	"	
Zinc	37.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	153	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	37.5	0.0500	"	"	"	"	"	"	
Sodium	273	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG01@3'
2504321-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.13	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.2		%	1	BID1121	04/21/25	04/22/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.719	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.65		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG02@1'
2504321-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID1100	04/21/25	04/22/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.59	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B	
Barium	298	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	10.1	0.400	"	"	"	"	"	"	
Lead	7.03	0.200	"	"	"	"	"	"	
Nickel	8.21	0.400	"	"	"	"	"	"	
Silver	0.0350	0.0200	"	"	"	"	"	"	
Zinc	33.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	99.8	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	25.8	0.0500	"	"	"	"	"	"	
Sodium	195	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG02@1'
2504321-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.50	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.5		%	1	BID1121	04/21/25	04/22/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.278	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG02@3'
2504321-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BID1102	04/21/25	04/25/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.45	0.200	mg/kg dry	1	BID1118	04/21/25	05/29/25	EPA 6020B	
Barium	308	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	52.0	0.400	"	"	"	"	"	"	
Lead	10.5	0.200	"	"	"	"	"	"	
Nickel	7.21	0.400	"	"	"	"	"	"	
Silver	0.454	0.0200	"	"	"	"	"	"	
Zinc	30.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BID1119	04/21/25	04/21/25	Hach 8000	

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

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	116	0.0500	mg/L dry	1	BIE0140	05/02/25	05/26/25	EPA 6020B	
Magnesium	32.3	0.0500	"	"	"	"	"	"	
Sodium	246	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

BKG02@3'
2504321-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.21	0.00100	units	1	BIE0711	05/28/25	05/28/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BID1121	04/21/25	04/22/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.205	0.0100	mmhos/cm	1	BIE0142	05/02/25	05/06/25	EPA 120.1	

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

Date Sampled: **04/17/25 14:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.97		pH Units	1	BIE0141	05/02/25	05/06/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

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 BID1335 - EPA 5030 Soil MS

Blank (BID1335-BLK1)

Prepared: 04/24/25 Analyzed: 05/15/25

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	0.0421		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

LCS (BID1335-BS1)

Prepared: 04/24/25 Analyzed: 05/15/25

Benzene	0.113	0.0020	mg/kg	0.100		113	70-130			
Toluene	0.112	0.0050	"	0.100		112	70-130			
Ethylbenzene	0.116	0.0050	"	0.100		116	70-130			
m,p-Xylene	0.230	0.010	"	0.200		115	70-130			
o-Xylene	0.107	0.0050	"	0.100		107	70-130			
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100		115	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100		115	70-130			
Naphthalene	0.0986	0.0038	"	0.100		98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		105	50-150			

Matrix Spike (BID1335-MS1)

Source: 2504315-01

Prepared: 04/24/25 Analyzed: 05/15/25

Benzene	0.115	0.0020	mg/kg	0.100	ND	115	70-130			
Toluene	0.115	0.0050	"	0.100	ND	115	70-130			
Ethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
m,p-Xylene	0.232	0.010	"	0.200	ND	116	70-130			
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130			
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130			
Naphthalene	0.0979	0.0038	"	0.100	ND	97.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BID1335 - EPA 5030 Soil MS

Matrix Spike Dup (BID1335-MSD1)	Source: 2504315-01			Prepared: 04/24/25 Analyzed: 05/16/25					
Benzene	0.116	0.0020	mg/kg	0.100	ND	116	70-130	0.984	30
Toluene	0.116	0.0050	"	0.100	ND	116	70-130	0.624	30
Ethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	2.47	30
m,p-Xylene	0.226	0.010	"	0.200	ND	113	70-130	2.74	30
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130	1.39	30
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130	3.33	30
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130	3.53	30
Naphthalene	0.0939	0.0038	"	0.100	ND	93.9	70-130	4.10	30
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	50-150		
Surrogate: Toluene-d8	0.0415		"	0.0400		104	50-150		
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	50-150		

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

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 BID1331 - EPA 3550A

Blank (BID1331-BLK1)

Prepared: 04/24/25 Analyzed: 05/21/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		92.5	50-140				

LCS (BID1331-BS1)

Prepared: 04/24/25 Analyzed: 05/22/25

C10-C28 (DRO)	435	50	mg/kg	500		87.1	50-140				
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110	50-140				

Matrix Spike (BID1331-MS1)

Source: 2504315-01

Prepared: 04/24/25 Analyzed: 05/22/25

C10-C28 (DRO)	413	50	mg/kg	500	ND	82.7	50-140				
Surrogate: <i>o</i> -Terphenyl	12.1		"	12.5		97.0	50-140				

Matrix Spike Dup (BID1331-MSD1)

Source: 2504315-01

Prepared: 04/24/25 Analyzed: 05/22/25

C10-C28 (DRO)	420	50	mg/kg	500	ND	84.0	50-140	1.52	20		
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101	50-140				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

PAH by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch BID1300 - EPA 5030 Soil MS

Blank (BID1300-BLK1)

Prepared: 04/24/25 Analyzed: 05/19/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0292		"	0.0333		87.7	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0319		"	0.0333		95.6	40-140			

LCS (BID1300-BS1)

Prepared: 04/24/25 Analyzed: 05/19/25

Acenaphthene	0.0249	0.00500	mg/kg	0.0333		74.8	40-140			
Anthracene	0.0239	0.00500	"	0.0333		71.7	40-140			
Benzo (a) anthracene	0.0239	0.00500	"	0.0333		71.7	40-140			
Benzo (a) pyrene	0.0241	0.00500	"	0.0333		72.2	40-140			
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333		74.7	40-140			
Benzo (k) fluoranthene	0.0260	0.00500	"	0.0333		78.0	40-140			
Chrysene	0.0256	0.00500	"	0.0333		76.7	40-140			
Dibenz (a,h) anthracene	0.0252	0.00500	"	0.0333		75.6	40-140			
Fluoranthene	0.0248	0.00500	"	0.0333		74.5	40-140			
Fluorene	0.0254	0.00500	"	0.0333		76.1	40-140			
Indeno (1,2,3-cd) pyrene	0.0256	0.00500	"	0.0333		76.8	40-140			
Pyrene	0.0271	0.00500	"	0.0333		81.4	40-140			
1-Methylnaphthalene	0.0214	0.00500	"	0.0333		64.3	40-140			
2-Methylnaphthalene	0.0217	0.00500	"	0.0333		65.0	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0244		"	0.0333		73.2	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0273		"	0.0333		81.8	40-140			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

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 BID1300 - EPA 5030 Soil MS

Matrix Spike (BID1300-MS1)	Source: 2504313-01			Prepared: 04/24/25 Analyzed: 05/19/25						
Acenaphthene	0.0262	0.00500	mg/kg	0.0333	ND	78.7	40-140			
Anthracene	0.0244	0.00500	"	0.0333	ND	73.1	40-140			
Benzo (a) anthracene	0.0241	0.00500	"	0.0333	ND	72.3	40-140			
Benzo (a) pyrene	0.0253	0.00500	"	0.0333	ND	75.9	40-140			
Benzo (b) fluoranthene	0.0274	0.00500	"	0.0333	ND	82.3	40-140			
Benzo (k) fluoranthene	0.0307	0.00500	"	0.0333	ND	92.2	40-140			
Chrysene	0.0265	0.00500	"	0.0333	ND	79.6	40-140			
Dibenz (a,h) anthracene	0.0267	0.00500	"	0.0333	ND	80.0	40-140			
Fluoranthene	0.0255	0.00500	"	0.0333	ND	76.4	40-140			
Fluorene	0.0256	0.00500	"	0.0333	ND	76.9	40-140			
Indeno (1,2,3-cd) pyrene	0.0239	0.00500	"	0.0333	ND	71.7	40-140			
Pyrene	0.0290	0.00500	"	0.0333	ND	87.0	40-140			
1-Methylnaphthalene	0.0255	0.00500	"	0.0333	ND	76.6	40-140			
2-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.6	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0289</i>		<i>"</i>	<i>0.0333</i>		<i>86.8</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0278</i>		<i>"</i>	<i>0.0333</i>		<i>83.4</i>	<i>40-140</i>			

Matrix Spike Dup (BID1300-MSD1)	Source: 2504313-01			Prepared: 04/24/25 Analyzed: 05/19/25						
Acenaphthene	0.0241	0.00500	mg/kg	0.0333	ND	72.4	40-140	8.35	30	
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	40-140	6.66	30	
Benzo (a) anthracene	0.0227	0.00500	"	0.0333	ND	68.1	40-140	6.03	30	
Benzo (a) pyrene	0.0233	0.00500	"	0.0333	ND	70.0	40-140	7.99	30	
Benzo (b) fluoranthene	0.0243	0.00500	"	0.0333	ND	73.0	40-140	11.9	30	
Benzo (k) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	40-140	14.4	30	
Chrysene	0.0241	0.00500	"	0.0333	ND	72.3	40-140	9.72	30	
Dibenz (a,h) anthracene	0.0241	0.00500	"	0.0333	ND	72.4	40-140	10.0	30	
Fluoranthene	0.0246	0.00500	"	0.0333	ND	73.9	40-140	3.32	30	
Fluorene	0.0243	0.00500	"	0.0333	ND	72.9	40-140	5.33	30	
Indeno (1,2,3-cd) pyrene	0.0220	0.00500	"	0.0333	ND	66.1	40-140	8.10	30	
Pyrene	0.0275	0.00500	"	0.0333	ND	82.6	40-140	5.25	30	
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	66.0	40-140	14.8	30	
2-Methylnaphthalene	0.0218	0.00500	"	0.0333	ND	65.3	40-140	17.1	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0244</i>		<i>"</i>	<i>0.0333</i>		<i>73.3</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0266</i>		<i>"</i>	<i>0.0333</i>		<i>79.8</i>	<i>40-140</i>			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

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 BID1100 - EPA 3050B

Blank (BID1100-BLK1)											
						Prepared: 04/21/25 Analyzed: 04/22/25					
Boron	ND	2.00	mg/L wet								
LCS (BID1100-BS1)											
						Prepared: 04/21/25 Analyzed: 04/22/25					
Boron	5.20	2.00	mg/L wet	5.00		104	80-120				
Duplicate (BID1100-DUP1)											
						Source: 2504316-64 Prepared: 04/21/25 Analyzed: 04/22/25					
Boron	0.283	2.00	mg/L dry		0.384			30.2	20		QR-01
Matrix Spike (BID1100-MS1)											
						Source: 2504316-64 Prepared: 04/21/25 Analyzed: 04/22/25					
Boron	6.02	2.00	mg/L dry	5.44	0.384	104	75-125				
Matrix Spike Dup (BID1100-MSD1)											
						Source: 2504316-64 Prepared: 04/21/25 Analyzed: 04/22/25					
Boron	6.08	2.00	mg/L dry	5.44	0.384	105	75-125	0.904	25		

Batch BID1102 - EPA 3050B

Blank (BID1102-BLK1)											
						Prepared: 04/21/25 Analyzed: 04/25/25					
Boron	ND	2.00	mg/L wet								
LCS (BID1102-BS1)											
						Prepared: 04/21/25 Analyzed: 04/25/25					
Boron	5.08	2.00	mg/L wet	5.00		102	80-120				
Duplicate (BID1102-DUP1)											
						Source: 2504321-06 Prepared: 04/21/25 Analyzed: 04/25/25					
Boron	0.944	2.00	mg/L dry		1.18			22.0	20		QR-01
Matrix Spike (BID1102-MS1)											
						Source: 2504321-06 Prepared: 04/21/25 Analyzed: 04/25/25					
Boron	6.56	2.00	mg/L dry	5.31	1.18	101	75-125				

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
 Project Number: UWRAD-A5000-AES
 Project Manager: AJ Engelhardt

Reported:
 06/02/25 10:32

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

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

Batch BID1102 - EPA 3050B

Matrix Spike Dup (BID1102-MSD1)

Source: 2504321-06

Prepared: 04/21/25 Analyzed: 04/25/25

Boron	6.24	2.00	mg/L dry	5.31	1.18	95.4	75-125	5.03	25	
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BID1118 - EPA 3050B

Blank (BID1118-BLK1)

Prepared: 04/21/25 Analyzed: 05/29/25

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 (BID1118-BS1)

Prepared: 04/21/25 Analyzed: 05/29/25

Arsenic	41.3	0.200	mg/kg wet	41.3	100	80-120
Barium	39.2	0.400	"	41.3	94.9	80-120
Cadmium	1.91	0.200	"	2.07	92.3	80-120
Copper	42.2	0.400	"	41.3	102	80-120
Lead	19.3	0.200	"	20.7	93.5	80-120
Nickel	41.6	0.400	"	41.3	101	80-120
Silver	1.88	0.0200	"	2.07	90.9	80-120
Zinc	44.3	0.400	"	41.3	107	80-120
Selenium	4.07	0.260	"	4.13	98.4	80-120

Duplicate (BID1118-DUP1)

Source: 2504318-01

Prepared: 04/21/25 Analyzed: 05/29/25

Arsenic	0.983	0.200	mg/kg dry	0.878	11.3	20	
Barium	45.0	0.400	"	50.0	10.4	20	
Cadmium	0.0566	0.200	"	0.0643	12.7	20	
Copper	3.93	0.400	"	4.03	2.32	20	
Lead	4.41	0.200	"	3.52	22.4	20	QR-04
Nickel	4.37	0.400	"	4.11	6.20	20	
Silver	0.0244	0.0200	"	0.0163	39.8	20	QR-04
Zinc	20.2	0.400	"	20.9	3.61	20	
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

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 BID1118 - EPA 3050B

Matrix Spike (BID1118-MS1)	Source: 2504318-01			Prepared: 04/21/25 Analyzed: 05/29/25								
Arsenic	21.7	0.200	mg/kg dry	43.6	0.878	47.8	75-125					QM-05
Barium	82.1	0.400	"	43.6	50.0	73.7	75-125					QM-05
Cadmium	2.07	0.200	"	2.18	0.0643	92.3	75-125					
Copper	48.6	0.400	"	43.6	4.03	102	75-125					
Lead	22.7	0.200	"	21.8	3.52	88.2	75-125					
Nickel	47.2	0.400	"	43.6	4.11	98.9	75-125					
Silver	1.95	0.0200	"	2.18	0.0163	89.0	75-125					
Zinc	63.1	0.400	"	43.6	20.9	96.9	75-125					
Selenium	3.93	0.260	"	4.36	ND	90.2	75-125					

Matrix Spike Dup (BID1118-MSD1)	Source: 2504318-01			Prepared: 04/21/25 Analyzed: 05/29/25								
Arsenic	21.3	0.200	mg/kg dry	42.9	0.878	47.7	75-125	1.83	25			QM-05
Barium	88.4	0.400	"	42.9	50.0	89.6	75-125	7.41	25			
Cadmium	2.13	0.200	"	2.14	0.0643	96.5	75-125	2.80	25			
Copper	46.2	0.400	"	42.9	4.03	98.3	75-125	5.25	25			
Lead	23.3	0.200	"	21.4	3.52	92.3	75-125	2.49	25			
Nickel	46.6	0.400	"	42.9	4.11	99.2	75-125	1.17	25			
Silver	2.02	0.0200	"	2.14	0.0163	93.4	75-125	3.14	25			
Zinc	60.3	0.400	"	42.9	20.9	92.0	75-125	4.55	25			
Selenium	3.93	0.260	"	4.29	ND	91.7	75-125	0.0273	25			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

Hexavalent Chromium by HACH M8023 - Quality Control
Summit Scientific

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

Batch BID1119 - 3060A Mod

Blank (BID1119-BLK1)

Prepared & Analyzed: 04/21/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BID1119-BS1)

Prepared & Analyzed: 04/21/25

Chromium, Hexavalent 24.8 0.30 mg/kg wet 25.5 97.4 80-120

Duplicate (BID1119-DUP1)

Source: 2504318-01

Prepared & Analyzed: 04/21/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BID1119-MS1)

Source: 2504318-01

Prepared & Analyzed: 04/21/25

Chromium, Hexavalent 26.2 0.30 mg/kg dry 27.6 ND 95.2 75-125

Matrix Spike Dup (BID1119-MSD1)

Source: 2504318-01

Prepared & Analyzed: 04/21/25

Chromium, Hexavalent 27.4 0.30 mg/kg dry 28.4 ND 96.4 75-125 4.36 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
 Project Number: UWRAD-A5000-AES
 Project Manager: AJ Engelhardt

Reported:
 06/02/25 10:32

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

Summit Scientific

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

Batch BIE0140 - General Preparation

Blank (BIE0140-BLK1)

Prepared: 05/02/25 Analyzed: 05/27/25

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

LCS (BIE0140-BS1)

Prepared: 05/02/25 Analyzed: 05/26/25

Calcium	4.30	0.0500	mg/L wet	5.00	86.1	70-130			
Magnesium	4.74	0.0500	"	5.00	94.9	70-130			
Sodium	4.63	0.0500	"	5.00	92.6	70-130			

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
 Project Number: UWRAD-A5000-AES
 Project Manager: AJ Engelhardt

Reported:
 06/02/25 10:32

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 BID1121 - General Preparation

Duplicate (BID1121-DUP1)	Source: 2504318-01			Prepared: 04/21/25 Analyzed: 04/22/25	
% Solids	92.2		%	92.6	0.406 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
 Project Number: UWRAD-A5000-AES
 Project Manager: AJ Engelhardt

Reported:
 06/02/25 10:32

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

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

Batch BIE0142 - General Preparation

Blank (BIE0142-BLK1)

Prepared: 05/02/25 Analyzed: 05/06/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIE0142-BS1)

Prepared: 05/02/25 Analyzed: 05/06/25

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.150 97.1 95-105

Duplicate (BIE0142-DUP1)

Source: 2504291-01

Prepared: 05/02/25 Analyzed: 05/06/25

Specific Conductance (EC) 1.70 0.0100 mmhos/cm 1.74 2.33 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
 Project Number: UWRAD-A5000-AES
 Project Manager: AJ Engelhardt

Reported:
 06/02/25 10:32

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 BIE0141 - General Preparation

LCS (BIE0141-BS1)

Prepared: 05/02/25 Analyzed: 05/06/25

pH	9.11	pH Units	9.18	99.2	95-105
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Duplicate (BIE0141-DUP1)

Source: 2504291-01

Prepared: 05/02/25 Analyzed: 05/06/25

pH	8.28	pH Units	8.36	0.962	20
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Chevron - Ivey LC 02-033HC
Project Number: UWRAD-A5000-AES
Project Manager: AJ Engelhardt

Reported:
06/02/25 10:32

Notes and Definitions

- S-09 Surrogate recoveries for this sample are below established control limits. The sample matrix exhibits complex characteristics that can affect extraction efficiency, leading to reduced surrogate recoveries despite adherence to standard procedures.
- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
- 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