

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 07, 2025

Will Blust

Quandary Consultants

4480 Garfield St

Denver, CO 80237

RE: Bison IV - Fabrizio 33-14

Work Order #2511003

Enclosed are the results of analyses for samples received by Summit Scientific on 11/05/25 14:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Amanda Stilwell For Gavin Stonehouse
Lab Manager



Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG01@0.5'	2511003-01	Soil	11/05/25 10:30	11/05/25 14:18
BG02@0.5'	2511003-02	Soil	11/05/25 10:41	11/05/25 14:18
BG03@0.5'	2511003-03	Soil	11/05/25 10:55	11/05/25 14:18
BG04@0.5'	2511003-04	Soil	11/05/25 11:04	11/05/25 14:18
BG05@0.5'	2511003-05	Soil	11/05/25 11:15	11/05/25 14:18

Case Narrative

Will Blust requested SB01@0.25' and SB02@0.25' be placed on hold on 11/06/2025.

Summit Scientific

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

Lab ID	Page 1 of 1
2511003	

Client: <u>Quandary Consultants</u>	Project Manager: <u>Will Blust</u>	Company: <u>Bison IV</u>
Address: <u>4480 Grandfield St</u>	E-Mail: <u>Wblust@quandaryconsultants.com</u>	Project Name/Location: <u>Fabrizius 33-14</u>
City/State/Zip: <u>Denver CO 80216</u>	<u>Samples.com</u>	AFE#:
Phone: <u>585-645-3517</u>	Project Name: <u>Bison IV-Fabrizius 33-14</u>	PO/Billing Codes:
Sampler Name: <u>Emily Brezovich</u>	Project Number: <u>Bison IV</u>	Contact: <u>ecastro@quandaryconsultants.com</u>

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Analysis Requested				Special Instructions
					HCl	HNO3	None	Other	Water	Soil		Other	Table 915-1	Table 915-1 metals	Table 915-1 soil/water turbidity	
1	B101 @ 0.5'	11-5-25	10:30	3									X	X	X	
2	B102 @ 0.5'	↓	10:41	↓									X	X	X	
3	B103 @ 0.5'	↓	10:55	↓									X	X	X	
4	B104 @ 0.5'	↓	11:04	↓									X	X	X	
5	B105 @ 0.5'	↓	11:15	↓									X	X	X	
6	SB01 @ 0.25'	↓	11:27	↓									X	X	X	
7	SB02 @ 0.25'	↓	11:35	↓									X	X	X	
8																
9																
10																
11																
12																
13																
14																
15																

Relinquished by: <u>EB</u>	Date/Time: <u>11/5/25 14:18</u>	Received by: <u>W. Blust</u>	Date/Time: <u>11/5/25 14:18</u>	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: <u>3.6</u>	Corrected Temperature: <u>3.7</u>	IR gun #:	<u>2</u>	Standard	<input checked="" type="checkbox"/> Field Turb.	
				HNO3 lot #:		



Sample Receipt Checklist

Client: Quandary Client Project ID: Bison IV - Fabrizius 33-14Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____Matrix (Circle all that apply) Air/Soil/Water/Other Temp (°C) 3.6 Corrected (°C) 3.7Thermometer ID: 2 Bottle 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
If custody seals are present, are they intact? (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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, Total Residual Chlorine (TRC)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Were samples provided in appropriate bottleware?	<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 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.	<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"/>	
Will any samples be performed outside of Summit Scientific? Note analysis in comments column	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

Josh Sanford
Custodian Printed Name

11/05/25 14:18
Date/Time



Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BC01@0.5'
2511003-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIK0015	11/05/25	11/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.53	0.200	mg/kg dry	1	BIK0014	11/05/25	11/06/25	EPA 6020B	
Barium	281	0.400	"	"	"	"	"	"	
Cadmium	0.482	0.200	"	"	"	"	"	"	
Copper	9.08	0.400	"	"	"	"	"	"	
Lead	21.8	0.200	"	"	"	"	"	"	
Nickel	6.97	0.400	"	"	"	"	"	"	
Silver	0.0296	0.0200	"	"	"	"	"	"	
Zinc	35.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIK0016	11/05/25	11/06/25	HACH M10218	

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

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	282	0.0500	mg/L dry	1	BIK0011	11/05/25	11/06/25	EPA 6020B	
Magnesium	14.3	0.0500	"	"	"	"	"	"	
Sodium	11.6	0.0500	"	"	"	"	"	"	

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Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG01@0.5'
2511003-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.183	0.00100		units	1	BIK0032	11/06/25	11/06/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	91.2			%	1	BIK0010	11/05/25	11/06/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.330	0.0100		mmhos/cm	1	BIK0013	11/05/25	11/06/25	EPA 120.1	

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

Date Sampled: **11/05/25 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.57			pH Units	1	BIK0012	11/05/25	11/06/25	EPA 9045D	

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Project: Bison IV - Fabrzius 33-14
Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG02@0.5'
2511003-02 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIK0015	11/05/25	11/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.22	0.200	mg/kg dry	1	BIK0014	11/05/25	11/06/25	EPA 6020B	
Barium	357	0.400	"	"	"	"	"	"	
Cadmium	0.532	0.200	"	"	"	"	"	"	
Copper	11.0	0.400	"	"	"	"	"	"	
Lead	21.1	0.200	"	"	"	"	"	"	
Nickel	8.49	0.400	"	"	"	"	"	"	
Silver	0.0315	0.0200	"	"	"	"	"	"	
Zinc	40.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIK0016	11/05/25	11/06/25	HACH M10218	

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

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	551	0.0500	mg/L dry	1	BIK0011	11/05/25	11/06/25	EPA 6020B	
Magnesium	9.41	0.0500	"	"	"	"	"	"	
Sodium	8.75	0.0500	"	"	"	"	"	"	

Calculated Analysis

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Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG02@0.5'
2511003-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.101	0.00100		units	1	BIK0032	11/06/25	11/06/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	83.8			%	1	BIK0010	11/05/25	11/06/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.183	0.0100		mmhos/cm	1	BIK0013	11/05/25	11/06/25	EPA 120.1	

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

Date Sampled: **11/05/25 10:41**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.22			pH Units	1	BIK0012	11/05/25	11/06/25	EPA 9045D	

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Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG03@0.5'
2511003-03 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIK0015	11/05/25	11/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.70	0.200	mg/kg dry	1	BIK0014	11/05/25	11/06/25	EPA 6020B	
Barium	318	0.400	"	"	"	"	"	"	
Cadmium	0.691	0.200	"	"	"	"	"	"	
Copper	10.8	0.400	"	"	"	"	"	"	
Lead	21.0	0.200	"	"	"	"	"	"	
Nickel	8.27	0.400	"	"	"	"	"	"	
Silver	0.0439	0.0200	"	"	"	"	"	"	
Zinc	45.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIK0016	11/05/25	11/06/25	HACH M10218	

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

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	249	0.0500	mg/L dry	1	BIK0011	11/05/25	11/06/25	EPA 6020B	
Magnesium	13.9	0.0500	"	"	"	"	"	"	
Sodium	13.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

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4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG03@0.5'
2511003-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.224	0.00100		units	1	BIK0032	11/06/25	11/06/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	88.4			%	1	BIK0010	11/05/25	11/06/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.323	0.0100		mmhos/cm	1	BIK0013	11/05/25	11/06/25	EPA 120.1	

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

Date Sampled: **11/05/25 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.19			pH Units	1	BIK0012	11/05/25	11/06/25	EPA 9045D	

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Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG04@0.5'
2511003-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIK0015	11/05/25	11/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.57	0.200	mg/kg dry	1	BIK0014	11/05/25	11/06/25	EPA 6020B	
Barium	277	0.400	"	"	"	"	"	"	
Cadmium	0.455	0.200	"	"	"	"	"	"	
Copper	10.4	0.400	"	"	"	"	"	"	
Lead	17.2	0.200	"	"	"	"	"	"	
Nickel	8.54	0.400	"	"	"	"	"	"	
Silver	0.0361	0.0200	"	"	"	"	"	"	
Zinc	39.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIK0016	11/05/25	11/06/25	HACH M10218	

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

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	172	0.0500	mg/L dry	1	BIK0011	11/05/25	11/06/25	EPA 6020B	
Magnesium	12.8	0.0500	"	"	"	"	"	"	
Sodium	11.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

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Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG04@0.5'
2511003-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.224	0.00100		units	1	BIK0032	11/06/25	11/06/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.8			%	1	BIK0010	11/05/25	11/06/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.190	0.0100		mmhos/cm	1	BIK0013	11/05/25	11/06/25	EPA 120.1	

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

Date Sampled: **11/05/25 11:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.86			pH Units	1	BIK0012	11/05/25	11/06/25	EPA 9045D	

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Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG05@0.5'
2511003-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	1.00	mg/L dry	1	BIK0015	11/05/25	11/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.09	0.200	mg/kg dry	1	BIK0014	11/05/25	11/06/25	EPA 6020B	
Barium	322	0.400	"	"	"	"	"	"	
Cadmium	0.489	0.200	"	"	"	"	"	"	
Copper	11.8	0.400	"	"	"	"	"	"	
Lead	15.4	0.200	"	"	"	"	"	"	
Nickel	9.31	0.400	"	"	"	"	"	"	
Silver	0.0306	0.0200	"	"	"	"	"	"	
Zinc	37.3	0.400	"	"	"	"	"	"	
Selenium	0.339	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIK0016	11/05/25	11/06/25	HACH M10218	

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

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	511	0.0500	mg/L dry	1	BIK0011	11/05/25	11/06/25	EPA 6020B	
Magnesium	17.0	0.0500	"	"	"	"	"	"	
Sodium	13.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

BG05@0.5'
2511003-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.154	0.00100		units	1	BIK0032	11/06/25	11/06/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.8			%	1	BIK0010	11/05/25	11/06/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.244	0.0100		mmhos/cm	1	BIK0013	11/05/25	11/06/25	EPA 120.1	

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

Date Sampled: **11/05/25 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.21			pH Units	1	BIK0012	11/05/25	11/06/25	EPA 9045D	

Summit Scientific

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BIK0015 - EPA 3050B

Blank (BIK0015-BLK1)				Prepared: 11/05/25 Analyzed: 11/06/25						
Boron	ND	1.00	mg/L wet							
LCS (BIK0015-BS1)				Prepared: 11/05/25 Analyzed: 11/06/25						
Boron	5.32	1.00	mg/L wet	5.01		106	80-120			
Duplicate (BIK0015-DUP1)				Source: 2511002-01 Prepared: 11/05/25 Analyzed: 11/06/25						
Boron	0.150	1.00	mg/L dry		0.136			9.81	20	
Matrix Spike (BIK0015-MS1)				Source: 2511002-01 Prepared: 11/05/25 Analyzed: 11/06/25						
Boron	4.64	1.00	mg/L dry	5.21	0.136	86.4	75-125			
Matrix Spike Dup (BIK0015-MSD1)				Source: 2511002-01 Prepared: 11/05/25 Analyzed: 11/06/25						
Boron	4.39	1.00	mg/L dry	5.21	0.136	81.6	75-125	5.57	25	

Summit Scientific

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Quandary Consultants
4480 Garfield St
Denver CO, 80237

Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

Total Metals by EPA 6020B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Notes
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Batch BIK0014 - EPA 3050B

Blank (BIK0014-BLK1)

Prepared: 11/05/25 Analyzed: 11/06/25

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 (BIK0014-BS1)

Prepared: 11/05/25 Analyzed: 11/06/25

Arsenic	42.3	0.200	mg/kg wet	38.5	110	80-120
Barium	40.3	0.400	"	38.5	105	80-120
Cadmium	2.00	0.200	"	1.92	104	80-120
Copper	42.4	0.400	"	38.5	110	80-120
Lead	19.5	0.200	"	19.2	102	80-120
Nickel	42.2	0.400	"	38.5	110	80-120
Silver	2.00	0.0200	"	1.92	104	80-120
Zinc	42.6	0.400	"	38.5	111	80-120
Selenium	4.11	0.260	"	3.85	107	80-120

Duplicate (BIK0014-DUP1)

Source: 2511002-01

Prepared: 11/05/25 Analyzed: 11/06/25

Arsenic	1.06	0.200	mg/kg dry	1.05	0.406	20
Barium	29.0	0.400	"	30.0	3.50	20
Cadmium	0.0917	0.200	"	0.0907	1.14	20
Copper	2.65	0.400	"	2.69	1.52	20
Lead	1.86	0.200	"	1.92	2.99	20
Nickel	2.45	0.400	"	2.46	0.336	20
Silver	0.00913	0.0200	"	0.00885	3.04	20
Zinc	7.46	0.400	"	7.54	1.07	20
Selenium	ND	0.260	"	ND		20

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Project: Bison IV - Fabrzius 33-14

Project Number: [none]
 Project Manager: Will Blust

Reported:
 11/07/25 16:14

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BIK0014 - EPA 3050B

Matrix Spike (BIK0014-MSI)		Source: 2511002-01			Prepared: 11/05/25 Analyzed: 11/06/25							
Arsenic	46.4	0.200	mg/kg dry	41.2	1.05	110	75-125					
Barium	69.8	0.400	"	41.2	30.0	96.5	75-125					
Cadmium	2.23	0.200	"	2.06	0.0907	104	75-125					
Copper	46.9	0.400	"	41.2	2.69	107	75-125					
Lead	22.4	0.200	"	20.6	1.92	99.3	75-125					
Nickel	47.4	0.400	"	41.2	2.46	109	75-125					
Silver	2.12	0.0200	"	2.06	0.00885	102	75-125					
Zinc	52.6	0.400	"	41.2	7.54	110	75-125					
Selenium	4.03	0.260	"	4.12	ND	97.8	75-125					

Matrix Spike Dup (BIK0014-MSD1)		Source: 2511002-01			Prepared: 11/05/25 Analyzed: 11/06/25							
Arsenic	48.1	0.200	mg/kg dry	42.5	1.05	111	75-125	3.71	25			
Barium	82.1	0.400	"	42.5	30.0	122	75-125	16.2	25			
Cadmium	2.35	0.200	"	2.13	0.0907	106	75-125	5.10	25			
Copper	49.3	0.400	"	42.5	2.69	110	75-125	5.01	25			
Lead	23.8	0.200	"	21.3	1.92	103	75-125	6.34	25			
Nickel	49.9	0.400	"	42.5	2.46	112	75-125	5.25	25			
Silver	2.20	0.0200	"	2.13	0.00885	103	75-125	3.83	25			
Zinc	56.9	0.400	"	42.5	7.54	116	75-125	7.75	25			
Selenium	4.08	0.260	"	4.25	ND	95.9	75-125	1.21	25			

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Project: Bison IV - Fabrizius 33-14

Project Number: [none]
 Project Manager: Will Blust

Reported:
 11/07/25 16:14

Hexavalent Chromium by HACH M8023 - Quality Control
Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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Batch BIK0016 - 3060A_Mod

Blank (BIK0016-BLK1)		Prepared: 11/05/25 Analyzed: 11/06/25								
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BIK0016-BS1)		Prepared: 11/05/25 Analyzed: 11/06/25								
Chromium, Hexavalent	24.2	0.30	mg/kg wet	24.8		97.6	80-120			
Duplicate (BIK0016-DUP1)		Source: 2511002-01		Prepared: 11/05/25 Analyzed: 11/06/25						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BIK0016-MS1)		Source: 2511002-01		Prepared: 11/05/25 Analyzed: 11/06/25						
Chromium, Hexavalent	25.5	0.30	mg/kg dry	24.7	ND	103	75-125			
Matrix Spike Dup (BIK0016-MSD1)		Source: 2511002-01		Prepared: 11/05/25 Analyzed: 11/06/25						
Chromium, Hexavalent	26.7	0.30	mg/kg dry	26.2	ND	102	75-125	4.52	20	

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
 Project Manager: Will Blust

Reported:
 11/07/25 16:14

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Notes
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Batch BIK0011 - General Preparation

Blank (BIK0011-BLK1)

Prepared: 11/05/25 Analyzed: 11/06/25

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

LCS (BIK0011-BS1)

Prepared: 11/05/25 Analyzed: 11/06/25

Calcium	4.97	0.0500	mg/L wet				70-130			
Magnesium	4.95	0.0500	"				70-130			
Sodium	4.68	0.0500	"				70-130			

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BIK0010 - General Preparation

Duplicate (BIK0010-DUP1)	Source: 2511002-01	Prepared: 11/05/25	Analyzed: 11/06/25		
% Solids	94.8	%	96.4	1.73	20

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
 Project Manager: Will Blust

Reported:
 11/07/25 16:14

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BIK0013 - General Preparation

Blank (BIK0013-BLK1)		Prepared: 11/05/25 Analyzed: 11/06/25								
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (BIK0013-BS1)		Prepared: 11/05/25 Analyzed: 11/06/25								
Specific Conductance (EC)	1.39	0.0100	mmhos/cm	1.41		98.6	95-105			
Duplicate (BIK0013-DUP1)		Source: 2511002-01		Prepared: 11/05/25 Analyzed: 11/06/25						
Specific Conductance (EC)	1.30	0.0100	mmhos/cm		1.27			2.00	20	

Summit Scientific

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Project: Bison IV - Fabrizzius 33-14

Project Number: [none]
 Project Manager: Will Blust

Reported:
 11/07/25 16:14

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

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch BIK0012 - General Preparation

LCS (BIK0012-BS1)

Prepared: 11/05/25 Analyzed: 11/06/25

pH	9.30		pH Units	9.18		101	95-105			
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Duplicate (BIK0012-DUP1)

Source: 2511002-01

Prepared: 11/05/25 Analyzed: 11/06/25

pH	7.72		pH Units		7.75			0.449	20	
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Project: Bison IV - Fabrizius 33-14

Project Number: [none]
Project Manager: Will Blust

Reported:
11/07/25 16:14

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference