

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 10, 2025

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

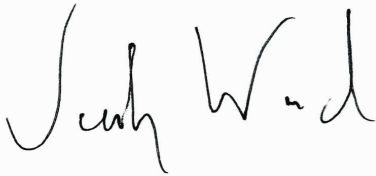
Broomfield, CO 80020

RE: Civitas - State Bierstadt 4-65 35-34 2AH

Work Order #2501160

Enclosed are the results of analyses for samples received by Summit Scientific on 01/13/25 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury

President



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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP-W01@5'R	2501160-01	Soil	01/13/25 09:36	01/13/25 17:55
SEP-N01@5'R	2501160-02	Soil	01/13/25 09:40	01/13/25 17:55
SEP-N02@5'R	2501160-03	Soil	01/13/25 09:48	01/13/25 17:55
SEP-N03@5'R	2501160-04	Soil	01/13/25 10:00	01/13/25 17:55
SEP-B03@6'R	2501160-05	Soil	01/13/25 10:10	01/13/25 17:55
SEP-E01@5'R	2501160-06	Soil	01/13/25 10:20	01/13/25 17:55
SEP-S01@5'R	2501160-07	Soil	01/13/25 10:31	01/13/25 17:55
SEP-S02@5'R	2501160-08	Soil	01/13/25 10:37	01/13/25 17:55
SEP-S03@5'R	2501160-09	Soil	01/13/25 10:39	01/13/25 17:55
SEP3-B02@3"R	2501160-10	Soil	01/13/25 11:00	01/13/25 17:55
SEP4-B01@3"R	2501160-11	Soil	01/13/25 11:10	01/13/25 17:55
SEP3-B01@3"R	2501160-12	Soil	01/13/25 11:15	01/13/25 17:55
SEP2-B01@3"R	2501160-13	Soil	01/13/25 11:25	01/13/25 17:55
SEP1-B01@3"R	2501160-14	Soil	01/13/25 11:50	01/13/25 17:55
B-SEP-B01@3"R	2501160-15	Soil	01/13/25 11:32	01/13/25 17:55
SGS-SEP-B01@3"R	2501160-16	Soil	01/13/25 11:45	01/13/25 17:55
SEP4-B02@3"R	2501160-17	Soil	01/13/25 11:05	01/13/25 17:55

Summit Scientific

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# SUMMIT SCIENTIFIC

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

Lab ID: 2501180.1 Page 1 of 2

<b>Send Data To:</b>		<b>Send Invoice To:</b>	
Client: Civitas / Tasman	Project Manager: Sam Vogt / <del>Jacob Evans</del> / <del>Justin Mr. Queen</del>	Company: Civitas	
Address: 6855 W. 119th Ave.	E-Mail: Svogt@tasman-geo.com	Project Name/Location:	
City/State/Zip: Broomfield, CO 80020	<del>levans@civitasresources.com</del> / <del>cmqueenecivitasresources.com</del>	AFE#: P1672CD	
Phone: PM Phone # - (610)-405-9078	Project Name: State Bierstadt 4-65 35-34 2AH	PO/Billing Codes: 8311.542	
Sampler Name: Daniel Hensel	Project Number:	Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested							Special Instructions				
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 + 1,3,5 TMB's	TPH(GRO,DRO,ORO)	Hex Chrome	PHENOL EC		Boron Boron	Metals SAR	PH	
1	SEP-W01E5'R	1/13/25	9:36	1			X			X										X		
2	SEP-N01E5'R		9:40	1										X								
3	SEP-N02E5'R		9:48	1										X								
4	SEP-N03E5'R		10:00	1										X							X	
5	SEP-B03E6'R		10:10	1										X								
6	SEP-E01E5'R		10:20	1																	X	
7	SEP-S01E5'R		10:31	1																	X	
8	SEP-S02E5'R		10:37	1																	X	Just PH - Daniel Hensel
9	SEP-S03E5'R		10:39	1										X							X	
10	<del>SEP3-B04E3'R</del>		11:00	1																	X	
11	<del>SEP3-B04E3'R</del>		<del>11:00</del>	<del>1</del>																	X	<del>Just PH - Daniel Hensel</del>
12	SEP4-B01E3'R		11:10	1										X							X	
13	SEP3-B01E3'R		11:15	1																	X	
14	SEP2-B01E3'R		11:25	1																	X	
15	SEP1-B01E3'R		11:50	1																	X	

Relinquished by:	Date/Time: 1/13/25 1351	Received by:	Date/Time: 1/13/25 1351	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 5.1	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

Daniel Hensel

**Send Data To:**

**Send Invoice To:**

Client: Civitas / Tasman	Project Manager: Sam Vogt / <del>Jacob Evans</del> <i>Costin M. Queen</i>	Company: Civitas
Address: 6855 W. 119th Ave.	E-Mail: Svogt@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020	<del>levans@civitasresources.com</del> <i>cm.queen@civitasresources.com</i>	AFE#: <i>P1672CD</i>
Phone: PM Phone # - (610)-405-9078	Project Name: <i>State Biefstadt 4-65 35-34 2AH</i>	PO/Billing Codes: <i>8311.542</i>
Sampler Name: <i>Daniel Hense</i>	Project Number:	Contact:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN	1,2,4 + 1,3,5 TMB's	TPH(GRO,DRO,ORO)	PAH	EC,SAR	Boron		Metals	PH
1	B-SEP-B01e3"R	1/13/25	1132	1			X			X										X	
2	S65-SEP-B01e3"R	1/13/25	1145	1			X			X										X	
3	SEP4-B02e3"R	1/13/25	1105	1			X			X							X	X			
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>[Signature]</i>	Date/Time: 1/13/25 1351	Received by: <i>Tasman Lockbox</i>	Date/Time: 1/13/25 1351	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: 1/13/25 1755	Received by: <i>[Signature]</i>	Date/Time: 1/13/25 1755	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: <i>5.1</i>	Corrected Temperature: <i>5</i>	IR gun #:	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	

S<sub>2</sub>

2/2

Sample Receipt Checklist

S2 Work Order# 2301160

Client: CuAast [unclear] Client Project ID: State Bierstadt 3534AH

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

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

Temp (°C) 5.1

Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> 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"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	limited amount for multiple samples
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):				

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

AS  
Custodian Printed Name

1/13/25  
Date/Time



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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-W01@5'R**  
**2501160-01 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 09:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.27</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

Summit Scientific



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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-N01@5'R**  
**2501160-02 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 09:40**


Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1479	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 09:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>% Solids</b>	<b>78.4</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-N02@5'R**  
**2501160-03 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 09:48**


Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1479	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 09:48**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>86.0</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-N03@5'R**  
**2501160-04 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1479	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>84.1</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Date Sampled: **01/13/25 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.52</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-B03@6'R**  
**2501160-05 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 10:10**


Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1479	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 10:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>80.7</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SEP-E01@5'R**  
**2501160-06 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.79</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-S01@5'R**  
**2501160-07 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 10:31**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.51</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SEP-S02@5'R**  
**2501160-08 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 10:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.58</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP-S03@5'R**  
**2501160-09 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 10:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1479	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 10:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>82.3</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Date Sampled: **01/13/25 10:39**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.75</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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 6855 W. 119th Ave.  
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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SEP3-B02@3''R**  
**2501160-10 (Soil)**


**Summit Scientific**

**Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013**

Date Sampled: **01/13/25 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	<b>0.197</b>	0.0100	mmhos/cm	1	BIA0558	01/14/25	01/15/25	EPA 120.1	

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP4-B01@3''R**  
**2501160-11 (Soil)**

**Summit Scientific**

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/13/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1481	01/31/25	02/03/25	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 11:10**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.1</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Date Sampled: **01/13/25 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>8.87</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SEP3-B01@3''R**  
**2501160-12 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>9.12</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

Summit Scientific



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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP2-B01@3''R**  
**2501160-13 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/13/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>15.8</b>	0.0500	mg/L dry	1	BIA1360	01/29/25	02/01/25	EPA 6020B	
<b>Magnesium</b>	<b>3.60</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>5.42</b>	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/13/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Sodium Adsorption Ratio</b>	<b>0.320</b>	0.00100	units	1	BIB0027	02/03/25	02/03/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>% Solids</b>	<b>94.2</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

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

Date Sampled: **01/13/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.40</b>		pH Units	1	BIA1336	01/29/25	01/30/25	EPA 9045D	

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

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SEP1-B01@3''R**  
**2501160-14 (Soil)**

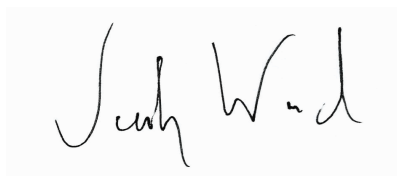
**Summit Scientific**

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

Date Sampled: **01/13/25 11:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.75</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**B-SEP-B01@3"R**  
**2501160-15 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>9.06</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**SGS-SEP-B01@3''R**  
**2501160-16 (Soil)**


**Summit Scientific**

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

Date Sampled: **01/13/25 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>8.85</b>		pH Units	1	BIA0559	01/14/25	01/15/25	EPA 9045D	

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Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**SEP4-B02@3''R**  
**2501160-17 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/13/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1170	02/20/25	03/04/25	EPA 6020B	

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

Date Sampled: **01/13/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	<b>16.4</b>	0.0500	mg/L dry	1	BIB0226	02/05/25	02/06/25	EPA 6020B	
Magnesium	<b>4.11</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>11.7</b>	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/13/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.669</b>	0.00100	units	1	BIB0607	02/12/25	02/12/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/13/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>93.6</b>		%	1	BIA1436	01/30/25	01/30/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/13/25 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.153</b>	0.0100	mmhos/cm	1	BIB0227	02/05/25	02/06/25	EPA 120.1	

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

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

**Summit Scientific**

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

**Batch BIB1170 - EPA 3050B**

**Blank (BIB1170-BLK1)**

Prepared: 02/20/25 Analyzed: 03/04/25

Boron ND 2.00 mg/L

**LCS (BIB1170-BS1)**

Prepared: 02/20/25 Analyzed: 03/04/25

Boron 4.82 2.00 mg/L 5.00 96.3 80-120

**Duplicate (BIB1170-DUP1)**

**Source: 2501155-01**

Prepared: 02/20/25 Analyzed: 03/04/25

Boron 0.0368 2.00 mg/L 0.0551 39.8 20 QR-01

**Matrix Spike (BIB1170-MS1)**

**Source: 2501155-01**

Prepared: 02/20/25 Analyzed: 03/04/25

Boron 5.09 2.00 mg/L 5.02 0.0551 100 75-125

**Matrix Spike Dup (BIB1170-MSD1)**

**Source: 2501155-01**

Prepared: 02/20/25 Analyzed: 03/04/25

Boron 5.06 2.00 mg/L 5.02 0.0551 99.8 75-125 0.554 25

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**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 BIA1479 - 3060A Mod**

<b>Blank (BIA1479-BLK1)</b>											
Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BIA1479-BS1)</b>											
Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	25.1	0.30	mg/kg wet	24.0		105	80-120				
<b>Duplicate (BIA1479-DUP1)</b>											
Source: 2501152-21 Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BIA1479-MS1)</b>											
Source: 2501152-21 Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	29.7	0.30	mg/kg dry	26.4	ND	112	75-125				
<b>Matrix Spike Dup (BIA1479-MSD1)</b>											
Source: 2501152-21 Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	31.1	0.30	mg/kg dry	27.8	ND	112	75-125	4.62		20	

**Batch BIA1481 - 3060A Mod**

<b>Blank (BIA1481-BLK1)</b>											
Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BIA1481-BS1)</b>											
Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	26.8	0.30	mg/kg wet	26.0		103	80-120				
<b>Duplicate (BIA1481-DUP1)</b>											
Source: 2501160-11 Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BIA1481-MS1)</b>											
Source: 2501160-11 Prepared: 01/31/25 Analyzed: 02/03/25											
Chromium, Hexavalent	27.1	0.30	mg/kg dry	29.7	ND	91.2	75-125				

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 Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

**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 BIA1481 - 3060A Mod**


**Matrix Spike Dup (BIA1481-MSD1)**

Source: 2501160-11

Prepared: 01/31/25 Analyzed: 02/03/25

Chromium, Hexavalent	24.8	0.30	mg/kg dry	28.9	ND	85.8	75-125	9.05	20	
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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**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 BIA1360 - General Preparation**

**Blank (BIA1360-BLK1)**

Prepared: 01/29/25 Analyzed: 02/01/25

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

**LCS (BIA1360-BS1)**

Prepared: 01/29/25 Analyzed: 02/01/25

Calcium	5.02	0.0500	mg/L wet	5.00	100	70-130
Magnesium	4.87	0.0500	"	5.00	97.5	70-130
Sodium	4.72	0.0500	"	5.00	94.4	70-130

**Batch BIB0226 - General Preparation**

**Blank (BIB0226-BLK1)**

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

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

**LCS (BIB0226-BS1)**

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

Calcium	4.91	0.0500	mg/L wet	5.00	98.2	70-130
Magnesium	4.54	0.0500	"	5.00	90.8	70-130
Sodium	4.73	0.0500	"	5.00	94.6	70-130

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Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
 Project Manager: Sam Vogt

**Reported:**  
 03/10/25 12:36

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

**Summit Scientific**

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

**Batch BIA1436 - General Preparation**

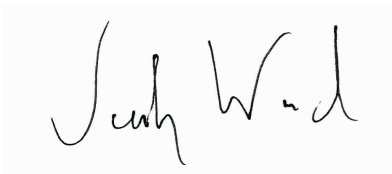
**Duplicate (BIA1436-DUP1)**

**Source: 2501160-02**

**Prepared & Analyzed: 01/30/25**

% Solids	79.1		%		78.4			0.985		20	
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Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**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 BIB0227 - General Preparation**

**Blank (BIB0227-BLK1)**

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

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIB0227-BS1)**

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

Specific Conductance (EC) 1.42 0.0100 mmhos/cm 1.41 100 95-105

**Duplicate (BIB0227-DUP1)**

Source: 2501160-17

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

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.153 0.455 20

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Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

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

**Summit Scientific**

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


**Batch BIA0559 - General Preparation**

<b>LCS (BIA0559-BS1)</b>										
					Prepared: 01/14/25 Analyzed: 01/15/25					
pH	9.21		pH Units	9.18	100	95-105				
<b>Duplicate (BIA0559-DUP1)</b>										
					Source: 2501160-01 Prepared: 01/14/25 Analyzed: 01/15/25					
pH	8.25		pH Units	8.27				0.242	20	

**Batch BIA1336 - General Preparation**

<b>LCS (BIA1336-BS1)</b>										
					Prepared: 01/29/25 Analyzed: 01/30/25					
pH	9.11		pH Units	9.18	99.2	95-105				
<b>Duplicate (BIA1336-DUP1)</b>										
					Source: 2501086-01 Prepared: 01/29/25 Analyzed: 01/30/25					
pH	8.61		pH Units	8.64				0.341	20	

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Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

**Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013 - Quality Control**  
**Summit Scientific**

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

**Batch BIA0558 - General Preparation**

**Blank (BIA0558-BLK1)**

Prepared: 01/14/25 Analyzed: 01/15/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIA0558-BS1)**

Prepared: 01/14/25 Analyzed: 01/15/25

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

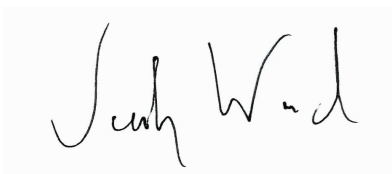
**Duplicate (BIA0558-DUP1)**

**Source: 2501160-10**

Prepared: 01/14/25 Analyzed: 01/15/25

Specific Conductance (EC) 0.195 0.0100 mmhos/cm 0.197 0.815 20

Summit Scientific



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Broomfield CO, 80020

Project: Civitas - State Bierstadt 4-65 35-34 2AH

Project Number: P1672CD  
Project Manager: Sam Vogt

**Reported:**  
03/10/25 12:36

### Notes and Definitions

- 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.
- 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