

# **Helming (OWP) 43-19**

NESE Sec. 19-T3S-R62W

API #: 001-09548

Remediation Project #: 32255

Wellhead Decommissioning Package

December 2023

Prepared by Tasman, Inc.



On behalf of Painted Pegasus Petroleum LLC

# **FIELD NOTES AND PHOTO LOG**





Photographic Log

<p>☉ 359°N (T) ● 39°46'21"N, 104°21'37"W ±91ft ▲ 5337ft</p>			<p>☉ 180°S (T) ● 39°46'21"N, 104°21'36"W ±16ft ▲ 5337ft</p>				
<p>06 Dec 2023, 13:05:44</p>			<p>06 Dec 2023, 13:05:58</p>				
Equipment ID:		Equipment Type:		Equipment ID:		Equipment Type:	
Material:		Volume:		Material:		Volume:	
Notes/Conditions: Surrounding land use facing N				Notes/Conditions: Surrounding land use facing S			



# Photographic Log

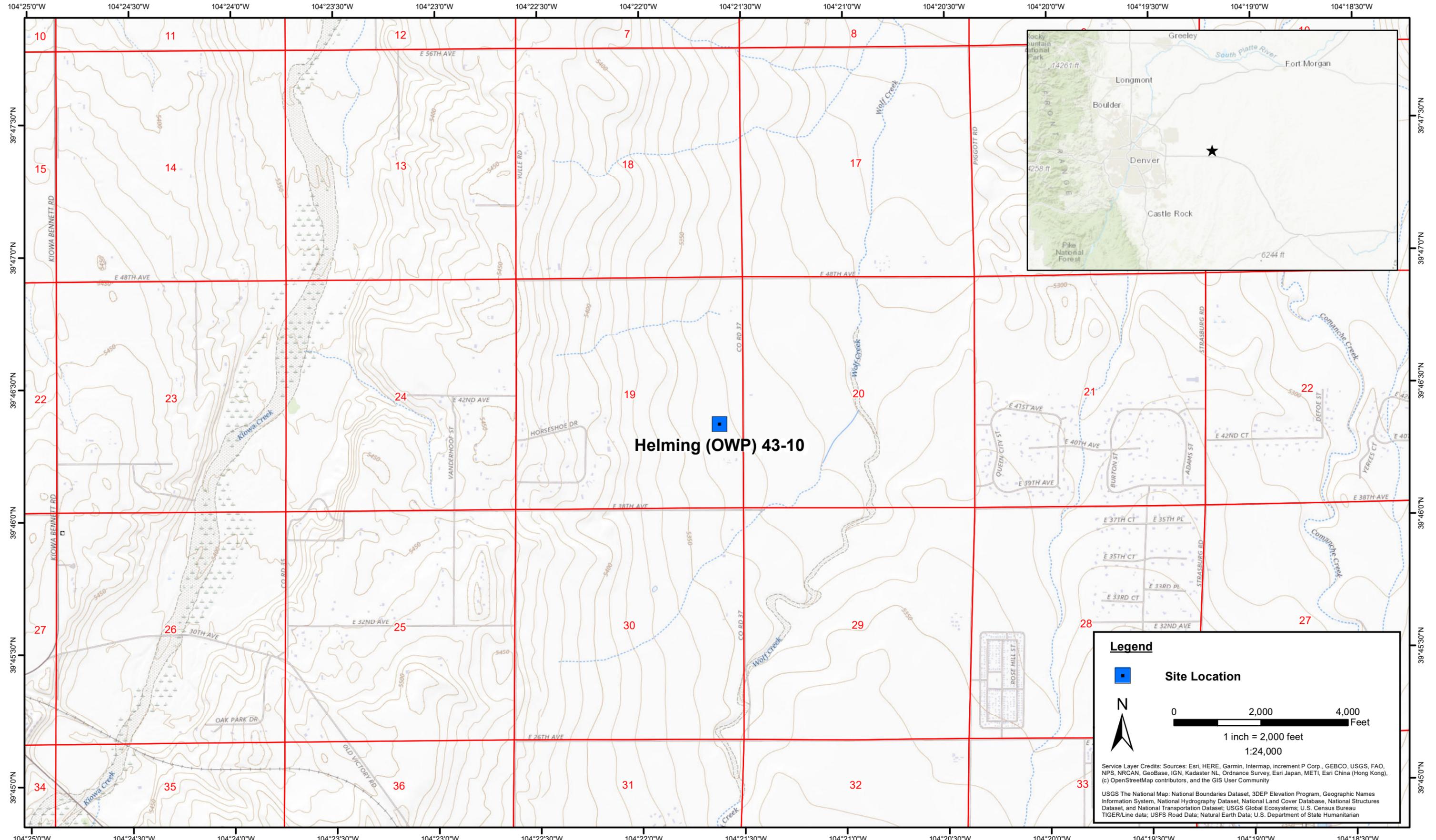
90°E (T) ● 39°46'21"N, 104°21'37"W ±29ft ▲ 5337ft			300°NW (T) ● 39°46'21"N, 104°21'37"W ±16ft ▲ 5336ft				
06 Dec 2023, 13:05:49			06 Dec 2023, 13:06:10				
<b>Equipment ID:</b>		<b>Equipment Type:</b>		<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>		<b>Volume:</b>		<b>Material:</b>		<b>Volume:</b>	
<b>Contents:</b>				<b>Contents:</b>			
<b>Notes/Conditions:</b> Surrounding land use facing E				<b>Notes/Conditions:</b> Surrounding land use facing W			



Photographic Log

<p>SW 210 240 270 W 300 330 NW N 0</p> <p>☉ 283°W (T) ☉ 39°46'21"N, 104°21'37"W ±16ft ▲ 5337ft</p> <p>WH-S01@6'</p> <p>WH-W01@6'</p> <p>WH-B01@7'</p> <p>06 Dec 2023, 13:06:24</p>			<p>N 0 30 NE 60 E 90 SE 120 150</p> <p>☉ 70°E (T) ☉ 39°46'21"N, 104°21'37"W ±16ft ▲ 5337ft</p> <p>WH-E01@6'</p> <p>WH-N01@6'</p> <p>06 Dec 2023, 13:06:45</p>				
Equipment ID:		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: Soil sampling and screening locations				Notes/Conditions: Soil screening locations			

# FIGURES



DATE:	February 2024
DESIGNED BY:	S. Vogt
DRAWN BY:	L. Reed

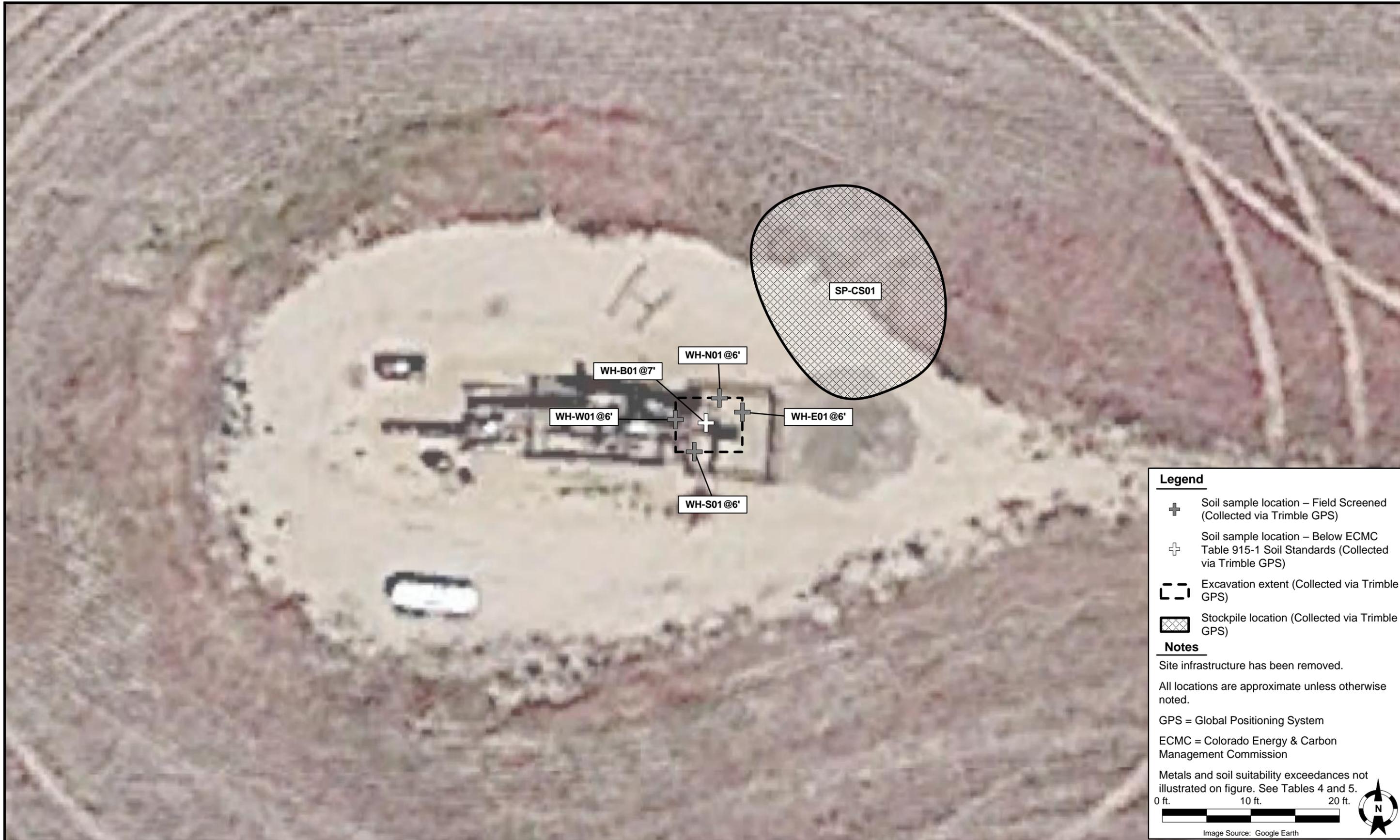


**Tasman, Inc.**  
 6855 W. 119th Ave  
 Broomfield, CO 80020

**Painted Pegasus Petroleum LLC**  
**Helming (OWP) 43-10**  
 NESE Sec. 19-T3S-R62W  
 Adams County, Colorado

Site Location Map

Figure  
1



**Legend**

- Soil sample location – Field Screened (Collected via Trimble GPS)
- Soil sample location – Below ECMC Table 915-1 Soil Standards (Collected via Trimble GPS)
- Excavation extent (Collected via Trimble GPS)
- Stockpile location (Collected via Trimble GPS)

**Notes**

Site infrastructure has been removed.

All locations are approximate unless otherwise noted.

GPS = Global Positioning System

ECMC = Colorado Energy & Carbon Management Commission

Metals and soil suitability exceedances not illustrated on figure. See Tables 4 and 5.

0 ft. 10 ft. 20 ft.

Image Source: Google Earth

DATE:	February 07, 2024
DESIGNED BY:	S. Vogt
DRAWN BY:	B. LeVasseur



**Tasman, Inc.**  
 6855 W119th Ave.  
 Broomfield, CO 80020

**Painted Pegasus Petroleum LLC**  
**Helming (OWP) 43-19**  
 NESE Sec. 19-T3S-R62W  
 Adams County, Colorado

Soil Sample Location Map

Figure 2

# TABLES

**TABLE 1**  
**HELMING (OWP) 43-19**  
**SOIL SAMPLE LOCATIONS**  
**PAINTED PEGASUS PETROLEUM LLC**



Soil Sample Location	Depth	Date	PID Reading (ppm)	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
WH-B01@7'	7'	12/06/2023	5.4	39.772673	-104.360465	1.1	Y
WH-N01@6'	6'	12/06/2023	5.3	39.772680	-104.360460	0.9	N
WH-S01@6'	6'	12/06/2023	14.5	39.772663	-104.360470	1.2	Y
WH-E01@6'	6'	12/06/2023	4.5	39.772676	-104.360450	1	N
WH-W01@6'	6'	12/06/2023	3.7	39.772673	-104.360478	1	N
SP-CS01	-	12/06/2023	3.6	39.772692	-104.360370	1.1	Y

**Notes:**

PID = Photoionization Detector

ppm = parts per million

GPS = Global Positioning System

PDOP = Position Dilution of Precision

- = Not Applicable

**TABLE 2**  
**HELMING (OWP) 43-19**  
**SOIL ANALYTICAL DATA - VOCs**  
**PAINTED PEGASUS PETROLEUM LLC**

Soil Sample Location	Depth	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TVPH-GRO (mg/kg)	TEPH-DRO (mg/kg)	TEPH-ORO (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)
<b>ECMC Organic Compounds in Soils - GSSL <sup>(1)</sup></b>			<b>0.0026</b>	<b>0.69</b>	<b>0.78</b>	<b>9.9</b>	<b>0.0038</b>	<b>500</b>			<b>0.0081</b>	<b>0.0087</b>
<b>ECMC Organic Compounds in Soils - RSL <sup>(2)</sup></b>			<b>1.2</b>	<b>490</b>	<b>5.8</b>	<b>58</b>	<b>2</b>	<b>500</b>			<b>30</b>	<b>27</b>
SP-CS01	-	12/06/2023	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
WH-B01@7'	7'	12/06/2023	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
WH-S01@6'	6'	12/06/2023	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050

**Notes:**

VOCs = Volatile Organic Compounds

(1) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

(<) = Analytical result is less than the indicated laboratory reporting limit

mg/kg = milligram per kilogram

TVPH - GRO = Total Volatile Petroleum Hydrocarbons - Gasoline Range Organics

TEPH - DRO = Total Extractable Petroleum Hydrocarbons - Diesel Range Organics

TEPH - ORO = Total Extractable Petroleum Hydrocarbons - Oil Range Organics

1,2,4 - TMB = 1,2,4 - Trimethylbenzene

1,3,5 - TMB = 1,3,5 - Trimethylbenzene

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

**TABLE 3**  
**HELMING (OWP) 43-19**  
**SOIL ANALYTICAL DATA - PAHs**  
**PAINTED PEGASUS PETROLEUM LLC**

Soil Sample Location	Depth	Date	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)A (mg/kg)	Benzo(b)F (mg/kg)	Benzo(k)F (mg/kg)	Benzo(a)P (mg/kg)	Chrysene (mg/kg)	D (a,h) A (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	1-M (mg/kg)	2-M (mg/kg)	Pyrene (mg/kg)
<b>ECMC Organic Compounds in Soils - GSSL <sup>(1)</sup></b>			<b>0.55</b>	<b>5.8</b>	<b>0.011</b>	<b>0.3</b>	<b>2.9</b>	<b>0.24</b>	<b>9</b>	<b>0.96</b>	<b>8.9</b>	<b>0.54</b>	<b>0.98</b>	<b>0.006</b>	<b>0.019</b>	<b>1.3</b>
<b>ECMC Organic Compounds in Soils - RSL <sup>(2)</sup></b>			<b>360</b>	<b>1,800</b>	<b>1.1</b>	<b>1.1</b>	<b>11</b>	<b>0.11</b>	<b>110</b>	<b>0.11</b>	<b>240</b>	<b>240</b>	<b>1.1</b>	<b>18</b>	<b>24</b>	<b>180</b>
SP-CS01	-	12/06/2023	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
WH-B01@7'	7'	12/06/2023	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
WH-S01@6'	6'	12/06/2023	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

**Notes:**

PAHs = Polycyclic Aromatic Hydrocarbons

(1) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

(<) = Analytical result is less than the indicated laboratory reporting limit

mg/kg = milligrams per kilogram

Benzo(a)A = Benzo(a)Anthracene

Benzo(b)F = Benzo(b)Fluoranthene

Benzo(k)F = Benzo(k)Fluoranthene

Benzo(a)P = Benzo(a)Pyrene

D (a,h) A = Dibenz(a,h)Anthracene

1,2,3-CD = Indeno(1,2,3-cd)Pyrene

1-M = 1-Methylnaphthalene

2-M = 2-Methylnaphthalene

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

**TABLE 4**  
**HELMING (OWP) 43-19**  
**SOIL ANALYTICAL DATA - METALS**  
**PAINTED PEGASUS PETROLEUM LLC**

Soil Sample Location	Depth	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Metals in Soils - GSSL <sup>(1)</sup>			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
ECMC Metals in Soils - RSL <sup>(2)</sup>			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
SP-CS01	-	12/06/2023	<b>0.853</b>	<b>95.0</b>	<0.200	<0.30	2.97	11.7	2.20	<0.260	0.0369	7.84
WH-B01@7'	7'	12/06/2023	<b>0.891</b>	<b>95.7</b>	<0.200	<0.30	2.99	13.4	2.34	<0.260	0.0496	7.45
WH-S01@6'	6'	12/06/2023	<b>0.964</b>	<b>133</b>	<0.200	<0.30	2.72	10.9	2.53	<0.260	0.0469	8.55

**Notes:**

(1) Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations (Effective January 15, 2021)

(2) Standards for soil are taken from ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

(<) = Analytical result is less than the indicated laboratory minimum detection limit

mg/kg = milligrams per kilogram

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations

**Highest background concentration x1.25**

*Italics* = Laboratory minimum detection limit exceeds the ECMC Table 915-1 Standard

\* Result exceeded the ECMC Table 915-1 standard, but was within site-specific 1.25x background multiplier levels

**TABLE 5**  
**HELMING (OWP) 43-19**  
**SOIL ANALYTICAL DATA - SOIL RECLAMATION**  
**PAINTED PEGASUS PETROLEUM LLC**



Soil Sample Location	Depth	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
<b>ECMC Soil Suitability for Reclamation<sup>(1)</sup></b>			<b>6 - 8.3</b>	<b>&lt; 6</b>	<b>&lt; 4</b>	<b>2</b>
SP-CS01	-	12/06/2023	<b>8.89</b>	0.558	0.158	<2.00
WH-B01@7'	7'	12/06/2023	<b>8.98</b>	0.432	0.115	<2.00
WH-S01@6'	6'	12/06/2023	<b>8.86</b>	0.321	0.148	<2.00

**Notes:**

(1) Standards for soil are taken from ECMC Table 915-1: Soil Suitability for Reclamation (Effective January 15, 2021)

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit

mmhos/cm = millimhos per centimeter

mg/L = milligrams per liter

pH = Potential of Hydrogen

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

**BOLD** = Analytical result is in exceedance of ECMC Table 915-1: Soil Suitability for Reclamation Concentrations

**Highest background concentration**

\* Result exceeded the ECMCC Table 915-1 standard, but was within site-specific background concentrations

# **LABORATORY ANALYTICAL DATA**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 03, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

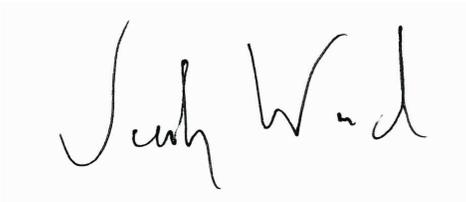
Broomfield, CO 80020

RE: Civitas - Helming (OWP) 43-19

Work Order #2312122

Enclosed are the results of analyses for samples received by Summit Scientific on 12/06/23 17:57. 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 "W".

Jacob Wood For Paul Shrewsbury  
President



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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-B01@7'	2312122-01	Soil	12/06/23 12:39	12/06/23 17:57
WH-S01@6'	2312122-02	Soil	12/06/23 12:46	12/06/23 17:57
SP-CS01	2312122-03	Soil	12/06/23 12:56	12/06/23 17:57

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.*

# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2312122	

Client: Civitas/Tasman	Send Data To: Project Manager: Sam Vogt, Jacod Evans	Send Invoice To: Company:
Address: 6855 W. 119th Ave	E-Mail: svogt@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020	jevans@civiresources.com	AFE#: 23583
Phone: PM 610-405-9078	Project Name: Helming (owp) 43-19	PO/Billing Codes:
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	TPH	TMBs(1,2,4)&(1,3,5)	PAH	pH, EC, SAR	Boron	Metals	
1	WH-501 07'	12/6/23	12:39	2			X			X				X	X	X	X	X	X	
2	WH-501 06'	↓	12:46	↓										X	X	X	X	X	X	
3	SP-LS 01	↓	12:56	↓										X	X	X	X	X	X	
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>[Signature]</i> Date/Time: 12/6/23 16:30	Received by: Tasman Lockbox Date/Time: 12/6/23 16:30	TAT Business Days	Field DO	Notes: Methods: *Sat. paste **Hot water
Relinquished by: Tasman Lockbox Date/Time: 12/6/23 17:57	Received by: <i>[Signature]</i> Date/Time: 12/6/23 17:57	Same Day	Field EC	
		1 Day	Field ORP	
		2 Days	Field pH	
		3 Days	Field Temp.	
Temperature Upon Receipt: 9.1	Corrected Temperature: 0	Standard	X Field Turb.	
		IR gun #: 1	HNO3 lot #:	

S2

Sample Receipt Checklist

S2 Work Order# 2312122

Client: Civilian

Client Project ID: Helming (owp) 43-19

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

Airbill #: \_\_\_\_\_

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

9.1

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>NOTICE</u>
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? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? (1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>no time stamps</u>
For volatiles in water - is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column - HCl, H <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? (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"/>	
<u>Additional Comments (if any):</u>				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS

Custodian Printed Name

12/6/23  
Date/Time

11/10/23



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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-B01@7'**  
**2312122-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0413	12/12/23	12/13/23	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: **12/06/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0438	110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0417	12/12/23	12/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.5	100 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-B01@7'**  
**2312122-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0528	12/14/23	12/15/23	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: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0183	54.9 %	40-150		"	"	"	"	

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

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0531	12/14/23	12/26/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/06/23 12:39**

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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-B01@7'**  
**2312122-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.891	0.200	mg/kg dry	1	BGL0539	12/14/23	12/28/23	EPA 6020B	
Barium	95.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.99	0.400	"	"	"	"	"	"	
Lead	13.4	0.200	"	"	"	"	"	"	
Nickel	2.34	0.400	"	"	"	"	"	"	
Silver	0.0496	0.0200	"	"	"	"	"	"	
Zinc	7.45	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 12/06/23 12:39

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0460	12/12/23	12/13/23	EPA 7196A	

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

Date Sampled: 12/06/23 12:39

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	47.6	0.0500	mg/L dry	1	BGL0933	12/27/23	12/30/23	EPA 6020B	
Magnesium	7.86	0.0500	"	"	"	"	"	"	
Sodium	12.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 12/06/23 12:39

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.432	0.00100	units	1	BHA0051	01/02/24	01/02/24	Calculation	

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

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-B01@7'**  
**2312122-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>88.8</b>		%	1	BGL0602	12/15/23	12/18/23	Calculation	

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

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.115</b>	0.0100	mmhos/cm	1	BGL1027	12/28/23	12/29/23	EPA 120.1	

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

Date Sampled: **12/06/23 12:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.98</b>		pH Units	1	BGL1026	12/28/23	12/29/23	EPA 9045D	

Summit Scientific

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-S01@6'**  
**2312122-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0413	12/12/23	12/13/23	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: **12/06/23 12:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0441	110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0417	12/12/23	12/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.0	95.8 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-S01@6'**  
**2312122-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0528	12/14/23	12/15/23	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: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0157	47.2 %	40-150		"	"	"	"	

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

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0531	12/14/23	12/26/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.  
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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-S01@6'**  
**2312122-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.964	0.200	mg/kg dry	1	BGL0539	12/14/23	12/28/23	EPA 6020B	
Barium	133	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.72	0.400	"	"	"	"	"	"	
Lead	10.9	0.200	"	"	"	"	"	"	
Nickel	2.53	0.400	"	"	"	"	"	"	
Silver	0.0469	0.0200	"	"	"	"	"	"	
Zinc	8.55	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 12/06/23 12:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0460	12/12/23	12/13/23	EPA 7196A	

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

Date Sampled: 12/06/23 12:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	98.6	0.0500	mg/L dry	1	BGL0933	12/27/23	12/30/23	EPA 6020B	
Magnesium	14.3	0.0500	"	"	"	"	"	"	
Sodium	12.9	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 12/06/23 12:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.321	0.00100	units	1	BHA0051	01/02/24	01/02/24	Calculation	

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

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**WH-S01@6'**  
**2312122-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>84.4</b>		%	1	BGL0602	12/15/23	12/18/23	Calculation	

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

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.148</b>	0.0100	mmhos/cm	1	BGL1027	12/28/23	12/29/23	EPA 120.1	

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

Date Sampled: **12/06/23 12:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.86</b>		pH Units	1	BGL1026	12/28/23	12/29/23	EPA 9045D	

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Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**SP-CS01**  
**2312122-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0413	12/12/23	12/13/23	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: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0417	12/12/23	12/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.6	100 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Number: 23583  
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**Reported:**  
01/03/24 09:16

**SP-CS01**  
**2312122-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0528	12/14/23	12/15/23	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: **12/06/23 12:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.4 %	40-150		"	"	"	"	

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

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0531	12/14/23	12/26/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**SP-CS01**  
**2312122-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.853	0.200	mg/kg dry	1	BGL0539	12/14/23	12/28/23	EPA 6020B	
Barium	95.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.97	0.400	"	"	"	"	"	"	
Lead	11.7	0.200	"	"	"	"	"	"	
Nickel	2.20	0.400	"	"	"	"	"	"	
Silver	0.0369	0.0200	"	"	"	"	"	"	
Zinc	7.84	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 12/06/23 12:56

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0460	12/12/23	12/13/23	EPA 7196A	

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

Date Sampled: 12/06/23 12:56

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.7	0.0500	mg/L dry	1	BGL0933	12/27/23	12/30/23	EPA 6020B	
Magnesium	8.72	0.0500	"	"	"	"	"	"	
Sodium	16.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 12/06/23 12:56

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.558	0.00100	units	1	BHA0051	01/02/24	01/02/24	Calculation	

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

Summit Scientific

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Broomfield CO, 80020

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**SP-CS01**  
**2312122-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	<b>88.9</b>			%	1	BGL0602	12/15/23	12/18/23	Calculation	

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

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	<b>0.158</b>	0.0100		mmhos/cm	1	BGL1027	12/28/23	12/29/23	EPA 120.1	

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

Date Sampled: **12/06/23 12:56**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	<b>8.89</b>			pH Units	1	BGL1026	12/28/23	12/29/23	EPA 9045D	

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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

### 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 BGL0413 - EPA 5030 Soil MS

##### Blank (BGL0413-BLK1)

Prepared & Analyzed: 12/12/23

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0419		"	0.0400		105	50-150				
<i>Surrogate: Toluene-d8</i>	0.0402		"	0.0400		101	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0409		"	0.0400		102	50-150				

##### LCS (BGL0413-BS1)

Prepared & Analyzed: 12/12/23

Benzene	0.103	0.0020	mg/kg	0.100		103	70-130				
Toluene	0.0972	0.0050	"	0.100		97.2	70-130				
Ethylbenzene	0.102	0.0050	"	0.100		102	70-130				
m,p-Xylene	0.198	0.010	"	0.200		98.9	70-130				
o-Xylene	0.0937	0.0050	"	0.100		93.7	70-130				
1,2,4-Trimethylbenzene	0.0920	0.0050	"	0.100		92.0	70-130				
1,3,5-Trimethylbenzene	0.0931	0.0050	"	0.100		93.1	70-130				
Naphthalene	0.0788	0.0038	"	0.100		78.8	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0413		"	0.0400		103	50-150				
<i>Surrogate: Toluene-d8</i>	0.0412		"	0.0400		103	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		101	50-150				

##### Matrix Spike (BGL0413-MS1)

Source: 2312119-01

Prepared & Analyzed: 12/12/23

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130				
Toluene	0.0940	0.0050	"	0.100	ND	94.0	70-130				
Ethylbenzene	0.0988	0.0050	"	0.100	ND	98.8	70-130				
m,p-Xylene	0.189	0.010	"	0.200	ND	94.6	70-130				
o-Xylene	0.0920	0.0050	"	0.100	ND	92.0	70-130				
1,2,4-Trimethylbenzene	0.0890	0.0050	"	0.100	ND	89.0	70-130				
1,3,5-Trimethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130				
Naphthalene	0.0819	0.0038	"	0.100	ND	81.9	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0412		"	0.0400		103	50-150				
<i>Surrogate: Toluene-d8</i>	0.0407		"	0.0400		102	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0400		"	0.0400		100	50-150				

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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0413 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGL0413-MSD1)</b>	<b>Source: 2312119-01</b>			<b>Prepared &amp; Analyzed: 12/12/23</b>						
Benzene	0.0850	0.0020	mg/kg	0.100	ND	85.0	70-130	17.2	30	
Toluene	0.0781	0.0050	"	0.100	ND	78.1	70-130	18.5	30	
Ethylbenzene	0.0843	0.0050	"	0.100	ND	84.3	70-130	15.9	30	
m,p-Xylene	0.166	0.010	"	0.200	ND	82.9	70-130	13.2	30	
o-Xylene	0.0789	0.0050	"	0.100	ND	78.9	70-130	15.3	30	
1,2,4-Trimethylbenzene	0.0751	0.0050	"	0.100	ND	75.1	70-130	17.0	30	
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130	17.4	30	
Naphthalene	0.0755	0.0038	"	0.100	ND	75.5	70-130	8.04	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0438</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>	<i>50-150</i>			

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BGL0417 - EPA 3550A**

**Blank (BGL0417-BLK1)**

Prepared: 12/12/23 Analyzed: 12/14/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	8.74		"	12.5		69.9	30-150			

**LCS (BGL0417-BS1)**

Prepared: 12/12/23 Analyzed: 12/14/23

C10-C28 (DRO)	390	50	mg/kg	500		78.1	70-130			
Surrogate: <i>o</i> -Terphenyl	9.71		"	12.5		77.7	30-150			

**Matrix Spike (BGL0417-MS1)**

Source: 2312119-01

Prepared: 12/12/23 Analyzed: 12/14/23

C10-C28 (DRO)	394	50	mg/kg	500	22.0	74.4	70-130			
Surrogate: <i>o</i> -Terphenyl	7.80		"	12.5		62.4	30-150			

**Matrix Spike Dup (BGL0417-MSD1)**

Source: 2312119-01

Prepared: 12/12/23 Analyzed: 12/14/23

C10-C28 (DRO)	420	50	mg/kg	500	22.0	79.7	70-130	6.55	20	
Surrogate: <i>o</i> -Terphenyl	10.6		"	12.5		85.0	30-150			

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6855 W. 119th Ave.  
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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BGL0528 - EPA 5030 Soil MS**

**Blank (BGL0528-BLK1)**

Prepared: 12/14/23 Analyzed: 12/15/23

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>	<i>0.0225</i>		"	<i>0.0333</i>		<i>67.6</i>		<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0408</i>		"	<i>0.0333</i>		<i>122</i>		<i>40-150</i>			

**LCS (BGL0528-BS1)**

Prepared: 12/14/23 Analyzed: 12/15/23

Acenaphthene	0.0358	0.00500	mg/kg	0.0333	107	31-137
Anthracene	0.0376	0.00500	"	0.0333	113	30-120
Benzo (a) anthracene	0.0341	0.00500	"	0.0333	102	30-120
Benzo (a) pyrene	0.0262	0.00500	"	0.0333	78.5	30-120
Benzo (b) fluoranthene	0.0337	0.00500	"	0.0333	101	30-120
Benzo (k) fluoranthene	0.0367	0.00500	"	0.0333	110	30-120
Chrysene	0.0390	0.00500	"	0.0333	117	30-120
Dibenz (a,h) anthracene	0.0348	0.00500	"	0.0333	104	30-120
Fluoranthene	0.0358	0.00500	"	0.0333	108	30-120
Fluorene	0.0323	0.00500	"	0.0333	97.0	30-120
Indeno (1,2,3-cd) pyrene	0.0372	0.00500	"	0.0333	112	30-120
Pyrene	0.0392	0.00500	"	0.0333	117	35-142
1-Methylnaphthalene	0.0299	0.00500	"	0.0333	89.7	35-142
2-Methylnaphthalene	0.0348	0.00500	"	0.0333	104	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0298</i>		"	<i>0.0333</i>	<i>89.5</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0367</i>		"	<i>0.0333</i>	<i>110</i>	<i>40-150</i>

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0528 - EPA 5030 Soil MS**

<b>Matrix Spike (BGL0528-MS1)</b>	<b>Source: 2312115-21</b>			Prepared: 12/14/23 Analyzed: 12/15/23						
Acenaphthene	0.0258	0.00500	mg/kg	0.0333	ND	77.4	31-137			
Anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Benzo (a) anthracene	0.0252	0.00500	"	0.0333	ND	75.6	30-120			
Benzo (a) pyrene	0.0177	0.00500	"	0.0333	ND	53.0	30-120			
Benzo (b) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.1	30-120			
Benzo (k) fluoranthene	0.0252	0.00500	"	0.0333	ND	75.7	30-120			
Chrysene	0.0261	0.00500	"	0.0333	ND	78.3	30-120			
Dibenz (a,h) anthracene	0.0259	0.00500	"	0.0333	ND	77.7	30-120			
Fluoranthene	0.0252	0.00500	"	0.0333	ND	75.5	30-120			
Fluorene	0.0243	0.00500	"	0.0333	ND	72.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0237	0.00500	"	0.0333	ND	71.1	30-120			
Pyrene	0.0328	0.00500	"	0.0333	ND	98.5	35-142			
1-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	15-130			
2-Methylnaphthalene	0.0242	0.00500	"	0.0333	ND	72.7	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0231</i>		"	<i>0.0333</i>		<i>69.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0264</i>		"	<i>0.0333</i>		<i>79.2</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BGL0528-MSD1)</b>	<b>Source: 2312115-21</b>			Prepared: 12/14/23 Analyzed: 12/15/23						
Acenaphthene	0.0163	0.00500	mg/kg	0.0333	ND	49.0	31-137	44.9	30	QR-02
Anthracene	0.0173	0.00500	"	0.0333	ND	51.9	30-120	38.4	30	QR-02
Benzo (a) anthracene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	39.5	30	QR-02
Benzo (a) pyrene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	14.3	30	
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	41.1	30	QR-02
Benzo (k) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	38.9	30	QR-02
Chrysene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	36.8	30	QR-02
Dibenz (a,h) anthracene	0.0198	0.00500	"	0.0333	ND	59.3	30-120	26.9	30	
Fluoranthene	0.0164	0.00500	"	0.0333	ND	49.2	30-120	42.1	30	QR-02
Fluorene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	38.7	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0189	0.00500	"	0.0333	ND	56.8	30-120	22.4	30	
Pyrene	0.0221	0.00500	"	0.0333	ND	66.2	35-142	39.3	30	QR-02
1-Methylnaphthalene	0.0140	0.00500	"	0.0333	ND	42.0	15-130	43.2	50	
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.5	15-130	34.1	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0148</i>		"	<i>0.0333</i>		<i>44.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0175</i>		"	<i>0.0333</i>		<i>52.5</i>	<i>40-150</i>			

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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0531 - EPA 3050B**

**Blank (BGL0531-BLK1)**

Prepared: 12/14/23 Analyzed: 12/26/23

Boron ND 2.00 mg/L

**LCS (BGL0531-BS1)**

Prepared: 12/14/23 Analyzed: 12/26/23

Boron 5.06 2.00 mg/L 5.00 101 80-120

**Duplicate (BGL0531-DUP1)**

**Source: 2311392-02**

Prepared: 12/14/23 Analyzed: 12/26/23

Boron 0.170 2.00 mg/L 0.174 2.82 20

**Matrix Spike (BGL0531-MS1)**

**Source: 2311392-02**

Prepared: 12/14/23 Analyzed: 12/26/23

Boron 6.12 2.00 mg/L 5.00 0.174 119 75-125

**Matrix Spike Dup (BGL0531-MSD1)**

**Source: 2311392-02**

Prepared: 12/14/23 Analyzed: 12/26/23

Boron 6.13 2.00 mg/L 5.00 0.174 119 75-125 0.0336 25

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0539 - EPA 3050B**

**Blank (BGL0539-BLK1)**

Prepared: 12/14/23 Analyzed: 12/27/23

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 (BGL0539-BS1)**

Prepared: 12/14/23 Analyzed: 12/27/23

Arsenic	32.9	0.200	mg/kg wet	40.0	82.2	80-120
Barium	33.5	0.400	"	40.0	83.7	80-120
Cadmium	1.65	0.200	"	2.00	82.4	80-120
Copper	33.4	0.400	"	40.0	83.6	80-120
Lead	16.7	0.200	"	20.0	83.3	80-120
Nickel	32.7	0.400	"	40.0	81.8	80-120
Silver	1.69	0.0200	"	2.00	84.4	80-120
Zinc	33.2	0.400	"	40.0	82.9	80-120
Selenium	3.37	0.260	"	4.00	84.3	80-120

**Duplicate (BGL0539-DUP1)**

Source: 2312117-01

Prepared: 12/14/23 Analyzed: 12/27/23

Arsenic	0.526	0.200	mg/kg dry	0.584	10.4	20
Barium	31.8	0.400	"	32.7	2.81	20
Cadmium	0.127	0.200	"	0.141	10.3	20
Copper	1.45	0.400	"	1.51	3.93	20
Lead	4.25	0.200	"	4.51	5.99	20
Nickel	1.63	0.400	"	1.73	5.74	20
Silver	0.0129	0.0200	"	0.0134	3.51	20
Zinc	5.46	0.400	"	5.67	3.78	20
Selenium	ND	0.260	"	ND		20

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Broomfield CO, 80020

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0539 - EPA 3050B**

**Matrix Spike (BGL0539-MS1)**

Source: 2312117-01

Prepared: 12/14/23 Analyzed: 12/27/23

Arsenic	12.4	0.200	mg/kg dry	46.2	0.584	25.6	75-125				QM-07
Barium	58.8	0.400	"	46.2	32.7	56.6	75-125				QM-07
Cadmium	1.65	0.200	"	2.31	0.141	65.4	75-125				QM-07
Copper	13.3	0.400	"	46.2	1.51	25.6	75-125				QM-07
Lead	18.5	0.200	"	23.1	4.51	60.4	75-125				QM-07
Nickel	13.5	0.400	"	46.2	1.73	25.5	75-125				QM-07
Silver	1.59	0.0200	"	2.31	0.0134	68.1	75-125				QM-07
Zinc	17.6	0.400	"	46.2	5.67	25.9	75-125				QM-07
Selenium	3.02	0.260	"	4.62	ND	65.3	75-125				QM-07

**Matrix Spike Dup (BGL0539-MSD1)**

Source: 2312117-01

Prepared: 12/14/23 Analyzed: 12/27/23

Arsenic	12.5	0.200	mg/kg dry	46.2	0.584	25.9	75-125	1.11	25		QM-07
Barium	56.8	0.400	"	46.2	32.7	52.2	75-125	3.55	25		QM-07
Cadmium	1.60	0.200	"	2.31	0.141	63.4	75-125	2.95	25		QM-07
Copper	13.4	0.400	"	46.2	1.51	25.8	75-125	0.745	25		QM-07
Lead	17.8	0.200	"	23.1	4.51	57.5	75-125	3.64	25		QM-07
Nickel	13.6	0.400	"	46.2	1.73	25.8	75-125	0.871	25		QM-07
Silver	1.53	0.0200	"	2.31	0.0134	65.5	75-125	3.83	25		QM-07
Zinc	17.7	0.400	"	46.2	5.67	26.1	75-125	0.460	25		QM-07
Selenium	2.83	0.260	"	4.62	ND	61.3	75-125	6.45	25		QM-07

Summit Scientific

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

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL0460 - 3060A Mod**

**Blank (BGL0460-BLK1)**

Prepared: 12/12/23 Analyzed: 12/13/23

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BGL0460-BS1)**

Prepared: 12/12/23 Analyzed: 12/13/23

Chromium, Hexavalent 26.8 0.30 mg/kg wet 25.0 107 80-120

**Duplicate (BGL0460-DUP1)**

**Source: 2312122-01**

Prepared: 12/12/23 Analyzed: 12/13/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BGL0460-MS1)**

**Source: 2312122-01**

Prepared: 12/12/23 Analyzed: 12/13/23

Chromium, Hexavalent 28.4 0.30 mg/kg dry 28.2 ND 101 75-125

**Matrix Spike Dup (BGL0460-MSD1)**

**Source: 2312122-01**

Prepared: 12/12/23 Analyzed: 12/13/23

Chromium, Hexavalent 27.1 0.30 mg/kg dry 28.2 ND 96.2 75-125 4.87 20

Summit Scientific

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Project: Civitas - Helming (OWP) 43-19

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**Reported:**  
01/03/24 09:16

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

**Summit Scientific**

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

**Batch BGL0933 - General Preparation**

**Blank (BGL0933-BLK1)**

Prepared: 12/27/23 Analyzed: 12/30/23

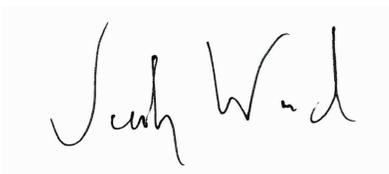
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

**LCS (BGL0933-BS1)**

Prepared: 12/27/23 Analyzed: 12/30/23

Calcium	5.47	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.14	0.0500	"	5.00	103	70-130
Sodium	4.94	0.0500	"	5.00	98.7	70-130

Summit Scientific



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Broomfield CO, 80020

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

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

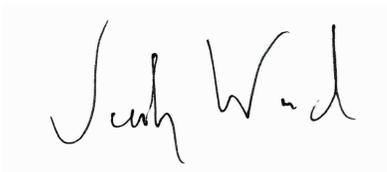
**Summit Scientific**

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

**Batch BGL0602 - General Preparation**

Duplicate (BGL0602-DUP1)	Source: 2312117-01			Prepared: 12/15/23 Analyzed: 12/18/23	
% Solids	87.4		%	86.6	0.852 20

Summit Scientific



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Broomfield CO, 80020

Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL1027 - General Preparation**

**Blank (BGL1027-BLK1)**

Prepared: 12/28/23 Analyzed: 12/29/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGL1027-BS1)**

Prepared: 12/28/23 Analyzed: 12/29/23

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 97.8 95-105

**Duplicate (BGL1027-DUP1)**

**Source: 2311392-02**

Prepared: 12/28/23 Analyzed: 12/29/23

Specific Conductance (EC) 0.0771 0.0100 mmhos/cm 0.0772 0.220 20

Summit Scientific

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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

**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 BGL1026 - General Preparation**

**LCS (BGL1026-BS1)**

Prepared: 12/28/23 Analyzed: 12/29/23

pH 9.07 pH Units 9.18 98.8 95-105

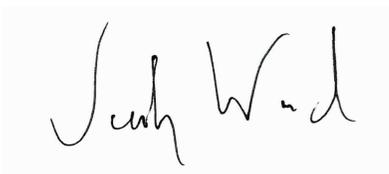
**Duplicate (BGL1026-DUP1)**

Source: 2311392-02

Prepared: 12/28/23 Analyzed: 12/29/23

pH 9.01 pH Units 8.95 0.668 20

Summit Scientific



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Project: Civitas - Helming (OWP) 43-19

Project Number: 23583  
Project Manager: Sam Vogt

**Reported:**  
01/03/24 09:16

### Notes and Definitions

- QR-02     The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07     The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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