

Harsch 42-27

NWNE Sec. 27-T2N-R69W

Remediation Project #: 21354

First Quarter 2024 Groundwater Monitoring

February 2024

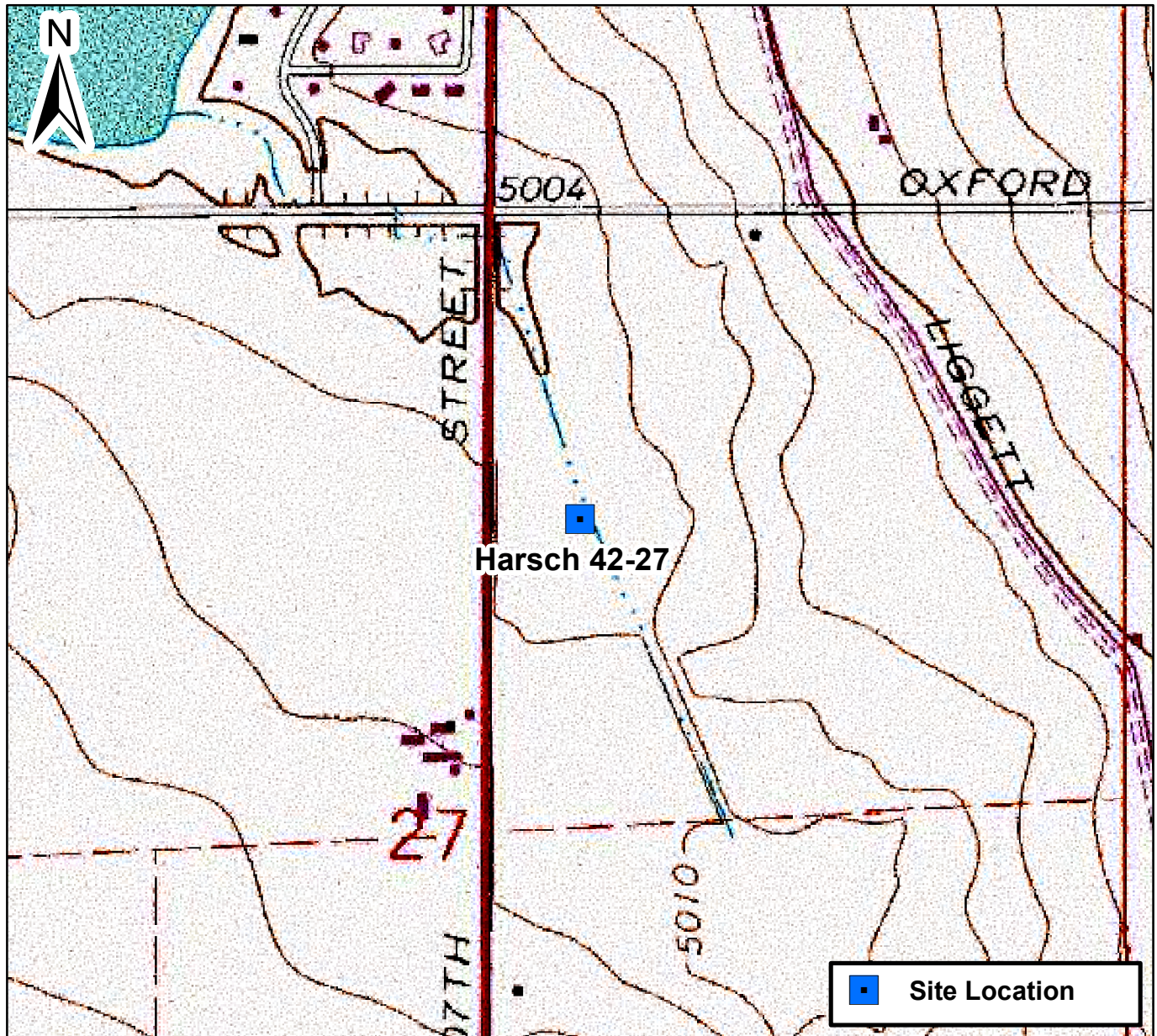
Prepared by Tasman, Inc.



On behalf of Crestone Peak Resources Operating, LLC



FIGURES




0 1,050 2,100 Feet

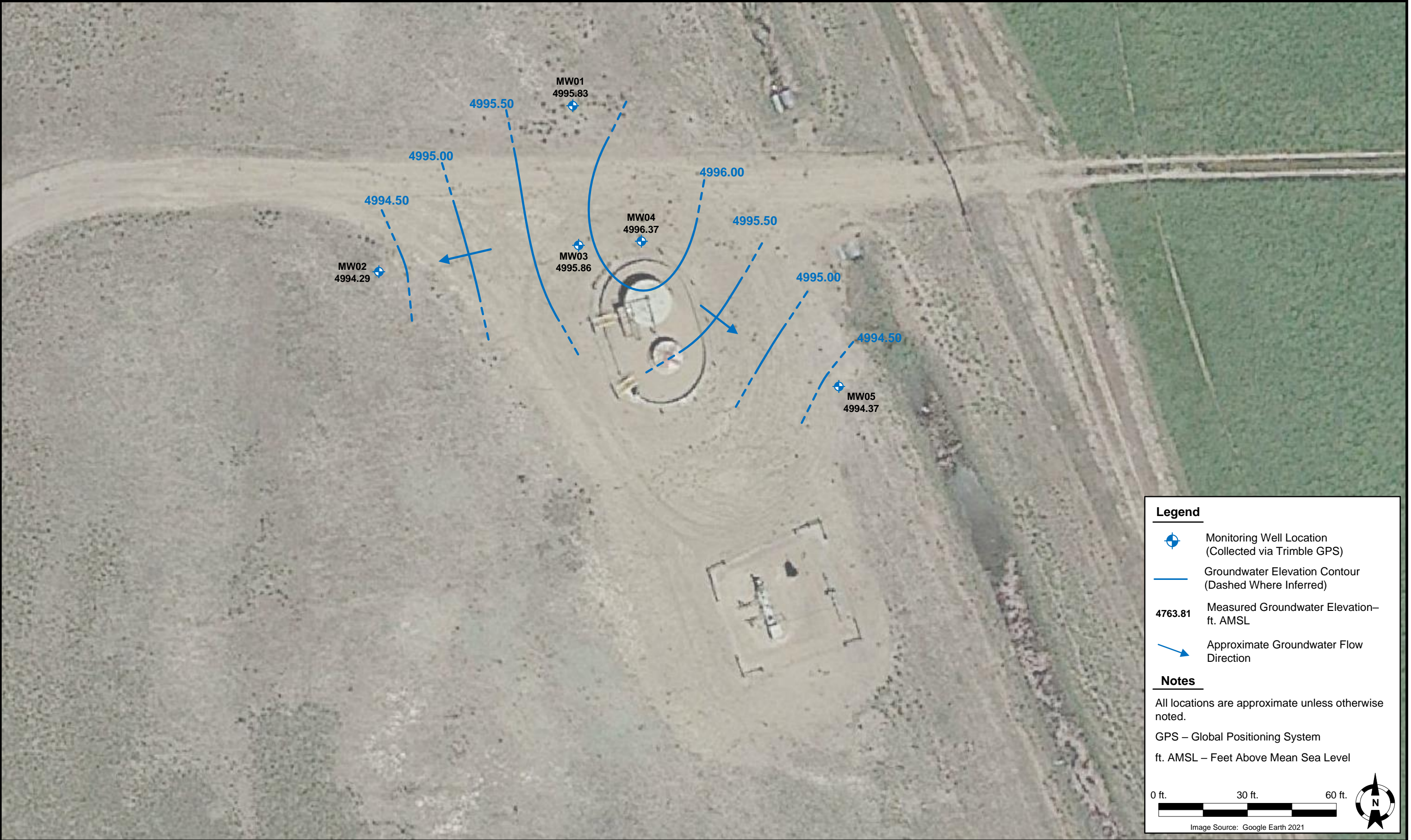
Figure 1


Site Location Map
Harsch 42-27
NWNE Sec. 27-T2N-R69W
Boulder, Colorado

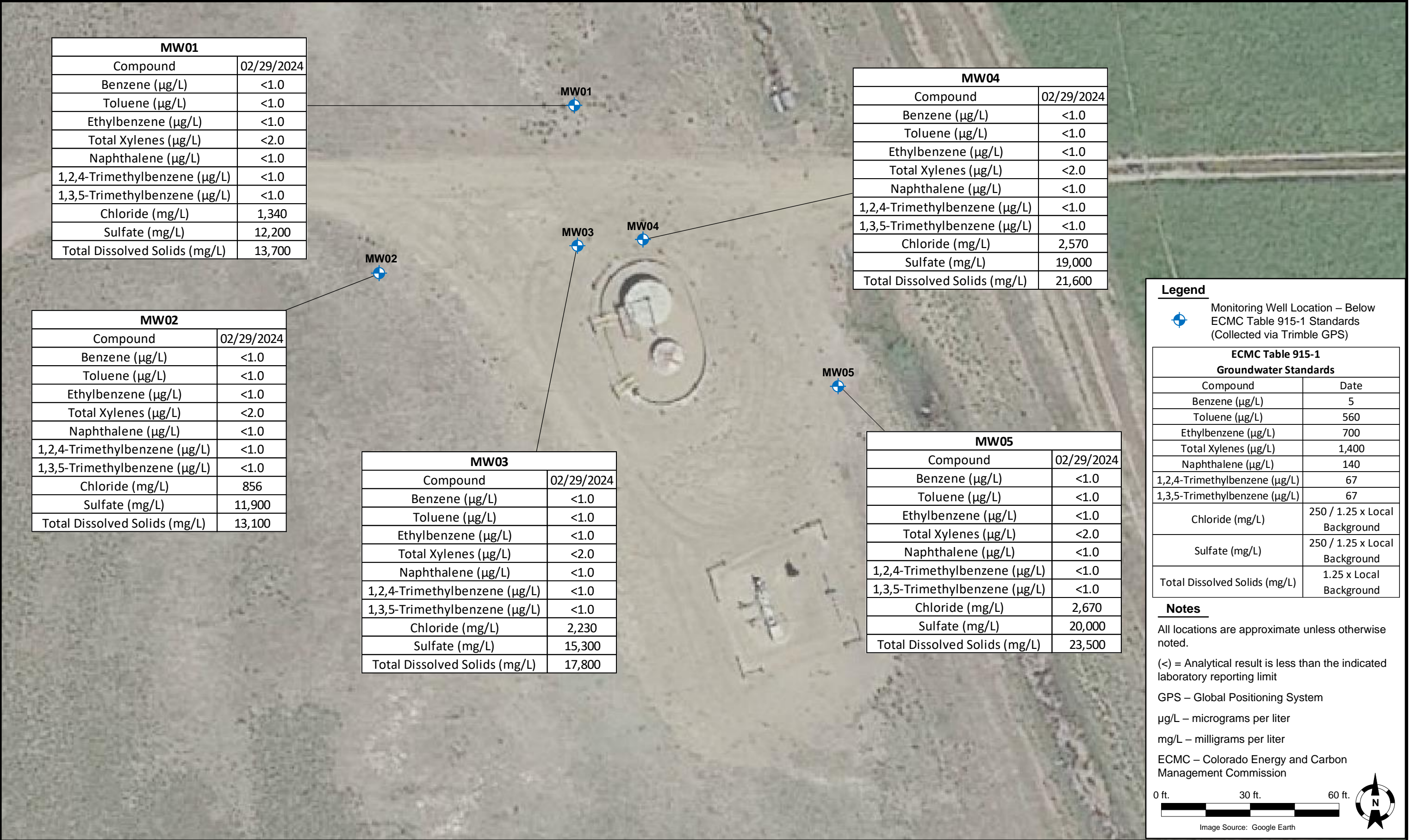





DATE: January 30, 2023	 TASMAN Tasman, Inc. 6855 W. 119th Avenue Broomfield, Colorado 80020	Crestone Peak Resources Operating, LLC Harsch 42-27 NWNE Sec. 27-T2N-R69W Boulder County, Colorado	Site Overview Map	FIGURE 2
DESIGNED BY: S. Vogt				
DRAWN BY: S. Kirylo				



DATE: April 19, 2024	 TASMAN Tasman, Inc. 6855 W. 119th Avenue Broomfield, Colorado 80020	Crestone Peak Resources Operating, LLC Harsch 42-27 NWNE Sec. 27-T2N-R6W Boulder County, Colorado	Groundwater Potentiometric Surface Contour Map (02/29/2024)	FIGURE 3
DESIGNED BY: S. Vogt				
DRAWN BY: J. Woffinden				





DATE: June 5, 2024	 TASMAN Tasman, Inc. 6855 W. 119th Avenue Broomfield, Colorado 80020	Crestone Peak Resources Operating, LLC Harsch 42-27 NWNE Sec. 27-T2N-R69W Boulder County, Colorado	Proposed Background Monitoring Well and Background Soil Sample Location Map	FIGURE 5
DESIGNED BY: S. Vogt				
DRAWN BY: S. Kirylo				

TABLES

TABLE 1
HARSCH 42-27
SOIL SAMPLE LOCATIONS
CRESTONE PEAK RESOURCES OPERATING, LLC



Soil Sample Location	Depth	Date	PID Reading (ppm)	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
SB01@5-6	5'-6'	10/08/2021	7.4	40.112769	-105.101412	-	Y
SB02@4-5	4'-5'	10/08/2021	3.2	40.112755	-105.101507	-	Y
SB03@3-4	3'-4'	10/08/2021	2.6	40.112654	-105.101487	-	Y
SB03@4-5	4'-5'	10/08/2021	2.7	40.112654	-105.101487	-	Y
SB04@4-5	4'-5'	10/08/2021	1.6	40.112556	-105.101382	-	Y
BKG01@4-5	4'-5'	10/08/2021	-	40.112693	-105.101568	-	Y
SB01_GW	-	10/08/2021	-	40.112789	-105.101409	-	Y
BKG01_GW	-	10/08/2021	-	40.112693	-105.101568	-	Y
MW01@12'	12'	10/27/2022	0.0	40.112893	-105.101424	-	Y
MW02@12'	12'	10/27/2022	0.0	40.112739	-105.101657	-	Y
MW03@2'	2'	10/27/2022	2.5	40.112764	-105.101417	-	Y
MW03@12'	12'	10/27/2022	0.0	40.112764	-105.101417	-	Y
MW04@2'	2'	10/27/2022	3.5	40.112768	-105.101340	-	Y
MW04@10'-11'	10'-11'	10/27/2022	0.0	40.112768	-105.101340	-	Y
MW05@12'	12'	10/27/2022	0.0	40.112634	-105.101102	-	Y

Notes:

PID = Photoionization Detector

ppm = parts per million

GPS = Global Positioning System

PDOP = Position Dilution of Precision

- = Not Applicable

10/29/20 [date] = Data collected by 3rd-party consultant(s)

TABLE 2
HARSCH 42-27
SOIL ANALYTICAL DATA - VOCs
CRESTONE PEAK RESOURCES OPERATING, 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)
ECMC Organic Compounds in Soils ⁽¹⁾			0.0026	0.69	0.78	9.9	0.0038	500			0.0081	0.0087
ECMC Organic Compounds in Soils ⁽²⁾			1.2	490	5.8	58	2	500			30	27
SB01@5-6	5'-6'	10/08/2021	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50			<0.0050	<0.0050
SB02@4-5	4'-5'	10/08/2021	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50			<0.0050	<0.0050
SB03@3-4	3'-4'	10/08/2021	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50			<0.0050	<0.0050
SB03@4-5	4'-5'	10/08/2021	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50			<0.0050	<0.0050
SB04@4-5	4'-5'	10/08/2021	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50			<0.0050	<0.0050
MW01@12'	12'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW02@12'	12'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW03@12'	12'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW03@2'	2'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW04@10-11'	10'-11'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW04@2'	2'	10/27/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
MW05@12'	12'	10/27/2022	<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 and Carbon Management Commission

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

mg/kg = milligrams 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

10/29/20 [date] = Data collected by 3rd-party consultant(s)

TABLE 3
HARSCH 42-27
SOIL ANALYTICAL DATA - PAHs
CRESTONE PEAK RESOURCES OPERATING, 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)
ECMC Organic Compounds in Soils ⁽¹⁾			0.55	5.8	0.011	0.3	2.9	0.24	9	0.96	8.9	0.54	0.98	0.006	0.019	1.3
ECMC Organic Compounds in Soils ⁽²⁾			360	1,800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	180
SB01@5-6	5'-6'	10/08/2021	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB02@4-5	4'-5'	10/08/2021	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB03@3-4	3'-4'	10/08/2021	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB03@4-5	4'-5'	10/08/2021	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB04@4-5	4'-5'	10/08/2021	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW01@12'	12'	10/27/2022	<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
MW02@12'	12'	10/27/2022	<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
MW03@12'	12'	10/27/2022	<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
MW03@2'	2'	10/27/2022	<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
MW04@10-11'	10'-11'	10/27/2022	<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
MW04@2'	2'	10/27/2022	<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
MW05@12'	12'	10/27/2022	<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 and Carbon Management Commission

(<) = 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

10/29/20 [date] = Data collected by 3rd-party consultant(s)

TABLE 4
HARSCH 42-27
SOIL ANALYTICAL DATA - METALS
CRESTONE PEAK RESOURCES OPERATING, 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 ⁽¹⁾			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
ECMC Metals in Soils ⁽²⁾			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
SB01@5-6	5'-6'	10/08/2021	3.53*	117*	0.299	<0.30	18.8	14.5*	18.8	1.32	0.109	78.6
SB02@4-5	4'-5'	10/08/2021	5.07*	116*	0.254	<0.30	18.3	16.7*	16.1	1.40	0.101	74.6
SB03@3-4	3'-4'	10/08/2021	5.73*	65.7	0.284	<0.30	16.7	15.8*	18.0	0.988*	0.106	74.6
SB03@4-5	4'-5'	10/08/2021	6.81*	75.6	0.280	<0.30	17.9	14.6*	18.5	1.05*	0.0986	83.0
SB04@4-5	4'-5'	10/08/2021	6.41*	101*	0.288	<0.30	18.9	15.2*	18.9	1.37	0.102	90.6
MW01@12'	12'	10/27/2022	2.06	112	0.309	<0.30	10.6	12.4	10.7	<0.213	0.0677	40.8
MW02@12'	12'	10/27/2022	1.77	63.3	0.282	<0.30	9.90	11.5	10.7	<0.213	0.0708	38.1
MW03@12'	12'	10/27/2022	1.84	77.0	0.307	<0.30	10.5	11.7	10.3	0.274	0.0668	42.6
MW03@2'	2'	10/27/2022	2.04	92.7	0.333	<0.30	9.35	10.4	8.86	0.272	0.0718	32.9
MW04@10-11'	10'-11'	10/27/2022	2.11	112	0.330	<0.30	11.3	12.3	11.3	0.363	0.0686	43.4
MW04@2'	2'	10/27/2022	2.82	80.9	0.262	<0.30	9.87	10.8	8.79	0.336	0.0692	32.2
MW05@12'	12'	10/27/2022	1.95	70.0	0.334	<0.30	11.0	12.2	10.8	0.510	0.0932	42.8
BACKGROUND												
BKG01@4-5	4'-5'	10/08/2021	5.61	94.9	<0.251	<0.30	16.3	13.4	16.9	1.04	0.0725	71.2
Average Background @ 4'-5' x1.25			7.01	119	-	-	20.4	16.8	21.1	1.30	0.0906	89.0

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 and Carbon Management Commission

(<) = 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

Average background concentration x1.25

10/29/20 [date] = Data collected by 3rd-party consultant(s)

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

- = Constituent not analyzed

TABLE 5
HARSCH 42-27



SOIL ANALYTICAL DATA - SOIL RECLAMATION
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
ECMC Soil Suitability for Reclamation ⁽¹⁾			6 - 8.3	< 6	< 4	2
SB01@5-6	5'-6'	10/08/2021	8.34	12.1*	4.21*	0.499
SB02@4-5	4'-5'	10/08/2021	8.16	11.9*	7.96*	0.209
SB03@3-4	3'-4'	10/08/2021	8.27	13.8*	11.5	0.357
SB03@4-5	4'-5'	10/08/2021	8.25	13.8*	10.8	0.335
SB04@4-5	4'-5'	10/08/2021	8.25	13.3*	10.3	0.284
MW01@12'	12'	10/27/2022	8.21	14.8	5.24	0.817
MW02@12'	12'	10/27/2022	8.50	13.8	3.40	1.47
MW03@12'	12'	10/27/2022	8.07	15.7	9.94	1.37
MW03@2'	2'	10/27/2022	7.71	16.4	11.6	0.567
MW04@10-11'	10'-11'	10/27/2022	8.31	19.5	9.11	1.29
MW04@2'	2'	10/27/2022	8.21	16.2	8.89	0.493
MW05@12'	12'	10/27/2022	8.15	18.0	9.43	1.33
BACKGROUND						
BKG01@4-5	4'-5'	10/08/2021	8.29	15.5	8.58	0.325

Notes:

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

ECMC = Colorado Energy and 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

Average background concentration

10/29/20 [date] = Data collected by 3rd-party consultant(s)

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

**TABLE 6
HARSCH 42-27**



**GROUNDWATER ANALYTICAL DATA
CRESTONE PEAK RESOURCES OPERATING, LLC**

Groundwater Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
ECMC Organic Compounds in Groundwater and Groundwater Inorganic Parameters ⁽¹⁾		5	560	700	1,400	140	67	67	250 or <1.25 x Background	250 or <1.25 x Background	<1.25 x Background
SB01_GW	10/08/2021	88	27	2.1	42	<1.0	5.3	4	-	-	-
BKG01_GW	10/08/2021	-	-	-	-	-	-	-	-	-	-
MW01	11/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,350	11,700	13,100
	02/03/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	911	11,300	13,000
	05/10/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,430	9,750	11,500
	08/09/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,330	10,700	12,100
	11/15/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,090	11,800	12,000
	02/29/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,340	12,200	13,700
MW02	11/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-	-
	02/03/2023	NS - Unable to locate									
	05/10/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,100	12,200	13,600
	08/09/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	945	11,600	12,700
	11/15/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	616	11,000	11,700
	02/29/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	856	11,900	13,100
MW03	11/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,580	13,500	16,300
	02/03/2023	NS - Unable to locate									
	05/10/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,610	15,400	18,300
	08/09/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,330	15,200	17,600
	11/15/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,080	19,400	11,600
	02/29/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,230	15,300	17,800
MW04	11/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,740	16,600	18,700
	02/03/2023	NS - Unable to locate									
	05/10/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3,140	19,200	22,500
	08/09/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,790	18,000	21,000
	11/15/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,230	22,900	20,900
	02/29/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,570	19,000	21,600
MW05	11/23/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	-	-	-
	02/03/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,720	19,600	21,700
	05/10/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,820	19,300	22,200
	08/09/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,660	19,300	22,200
	11/15/2023	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	1,820	20,700	21,400
	02/29/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2,670	20,000	23,500

Notes:

(1) Standards for groundwater are taken from ECMC Table 915-1: Organic Compounds in Groundwater and Groundwater Inorganic Parameters (Effective January 15, 2021)

ECMC = Colorado Energy and Carbon Management Commission

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

µg/L = micrograms per liter

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

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

TDS = Total Dissolved Solids

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Groundwater and Groundwater Inorganic Parameters

10/29/20 [date] = Data collected by 3rd-party consultant(s)

- = Constituent not analyzed

NS = Not sampled

**TABLE 7
HARSCH 42-27**



**GROUNDWATER ELEVATION DATA
CRESTONE PEAK RESOURCES OPERATING, LLC**

Groundwater Sample ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft.)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
MW01	11/23/2022	4,998.50	10.45	7.89	ND		4,990.61
	02/03/2023		10.48	4.19	ND		4,994.31
	05/10/2023		10.45	2.70	ND		4,995.80
	08/09/2023		10.43	2.20	ND		4,996.30
	11/15/2023		10.44	3.42	ND		4,995.08
	02/29/2024		10.46	2.67	ND		4,995.83
MW02	11/23/2022	4,998.65	11.10	7.57	ND		4,991.08
	02/03/2023		NS - Unable to locate				
	05/10/2023		11.11	1.35	ND		4,997.30
	08/09/2023		11.12	3.24	ND		4,995.41
	11/15/2023		11.13	4.48	ND		4,994.17
	02/29/2024		11.14	4.36	ND		4,994.29
MW03	11/23/2022	4,999.83	10.15	5.73	ND		4,994.10
	02/03/2023		NS - Unable to locate				
	05/10/2023		10.15	3.74	ND		4,996.09
	08/09/2023		10.16	3.81	ND		4,996.02
	11/15/2023		10.18	4.61	ND		4,995.22
	02/29/2024		10.20	3.97	ND		4,995.86
MW04	11/23/2022	4,999.70	11.34	9.25	ND		4,990.45
	02/03/2023		NS - Unable to locate				
	05/10/2023		11.33	3.83	ND		4,995.87
	08/09/2023		11.32	3.35	ND		4,996.35
	11/15/2023		11.34	4.65	ND		4,995.05
	02/29/2024		11.35	3.33	ND		4,996.37
MW05	11/23/2022	5,000.69	11.14	10.62	ND		4,990.07
	02/03/2023		11.34	8.78	ND		4,991.91

**TABLE 7
HARSCH 42-27**



**GROUNDWATER ELEVATION DATA
CRESTONE PEAK RESOURCES OPERATING, LLC**

Groundwater Sample ID	Date	Top of Casing Elevation (ft. AMSL)	Total Depth (ft.)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	Groundwater Elevation* (ft. AMSL)
MW05	05/10/2023	5,000.69	11.31	7.34		ND	4,993.35
	08/09/2023		11.32	6.43		ND	4,994.26
	11/15/2023		11.32	6.31		ND	4,994.38
	02/29/2024		11.33	6.32		ND	4,994.37

Notes:

* Groundwater elevation was corrected for product thickness (when present) using the following calculation:
Groundwater elevation = (TOC Elevation - Measured Depth to Water)+(LNAPL Thickness in Well x LNAPL Relative Density)
LNAPL relative density was estimated to be approximately 0.75

Definitions:

ft. = feet
AMSL = Above Mean Sea Level
LNAPL = Light Non-Aqueous Phase Liquid
ND = Not detected
NS = Not sampled

LABORATORY ANALYTICAL DATA

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 11, 2024

Sam Vogt

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Civitas - Harsch 42-27

Work Order #2402543

Enclosed are the results of analyses for samples received by Summit Scientific on 02/29/24 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	2402543-01	Water	02/29/24 13:22	02/29/24 17:45
MW02	2402543-02	Water	02/29/24 13:24	02/29/24 17:45
MW03	2402543-03	Water	02/29/24 13:41	02/29/24 17:45
MW04	2402543-04	Water	02/29/24 13:47	02/29/24 17:45
MW05	2402543-05	Water	02/29/24 13:56	02/29/24 17:45

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.

Client: Civitas/Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W. 119th Ave.		Project Manager: Jacob Evans / Sam Vogt		Company:	
City/State/Zip: Broomfield, CO 80020		E-Mail: jevans@civiresources.com, svogt@tasman-geo.com		Project Name/Location:	
Phone: PM Phone # - (610) 405 9078		Project Name: Harsch 42-27		AFE#: C0C40773	
Sampler Name: Lennon Baker, Angela Kinylo		Project Number:		PO/Billing Codes: 8520.162	
				Contact:	

Sample Information					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEXN	1,2,4 + 1,3,5 TMBs	Chloride	Sulfate	TDS				
1	MW01	2/29/24	13:22	4	3		1		X				X	X	X	X	X				
2	MW02	↓	13:24	↓	↓		↓		↓				↓	↓	↓	↓	↓				
3	MW03		13:41	↓	↓								↓	↓	↓	↓	↓				
4	MW04	↓	13:47	↓	↓		↓		↓				↓	↓	↓	↓	↓				
5	MW05	↓	13:50	↓	↓		↓		↓				↓	↓	↓	↓	↓				
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>L. Baker</u>	Date/Time: <u>2/29/24/16:15</u>	Received by: Tasman Lockbox	Date/Time: <u>2/29/24/16:15</u>	TAT Business Days	Field DO	Notes:
Relinquished by: <u>Tasman Lockbox</u>	Date/Time: <u>2/29/24/17:45</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/29/24/17:45</u>	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: <u>6.5</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	Standard <u>X</u>	Field Turb.	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2402543Client Citast Roman Client Project ID: Harsch 42-27Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 6.5Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>06/20/05</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>"</u>
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl</u>
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.AS
Custodian Printed Name2/29/24
Date/Time



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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

MW01
2402543-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BHC0012	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/29/24 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	10.6	79.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.3	92.0 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/29/24 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	1340	24.0	mg/L	400	BHC0003	03/01/24	03/07/24	EPA 300.0	
Sulfate	12200	120	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/29/24 13:22**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	13700	10.0	mg/L	1	BHC0188	03/06/24	03/08/24	SM2540C	

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

MW02
2402543-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 13:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHC0012	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/29/24 13:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	10.8	80.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.2	91.6 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/29/24 13:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	856	24.0	mg/L	400	BHC0003	03/01/24	03/07/24	EPA 300.0	
Sulfate	11900	120	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/29/24 13:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	13100	10.0	mg/L	1	BHC0188	03/06/24	03/08/24	SM2540C	

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

MW03
2402543-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 13:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHC0012	03/01/24	03/02/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/29/24 13:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	11.2	83.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.8	95.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.0	90.2 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/29/24 13:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	2230	24.0	mg/L	400	BHC0003	03/01/24	03/07/24	EPA 300.0	
Sulfate	15300	120	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/29/24 13:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	17800	10.0	mg/L	1	BHC0188	03/06/24	03/08/24	SM2540C	

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

MW04
2402543-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHC0012	03/01/24	03/07/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/29/24 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.7	103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.4	100 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/29/24 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	2570	24.0	mg/L	400	BHC0003	03/01/24	03/07/24	EPA 300.0	
Sulfate	19000	240	"	800	"	"	03/07/24	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/29/24 13:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	21600	10.0	mg/L	1	BHC0188	03/06/24	03/08/24	SM2540C	

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

MW05
2402543-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/24 13:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHC0012	03/01/24	03/07/24	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/29/24 13:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.5	101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.6	102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.5	101 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/29/24 13:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	2670	24.0	mg/L	400	BHC0003	03/01/24	03/07/24	EPA 300.0	
Sulfate	20000	240	"	800	"	"	03/07/24	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/29/24 13:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	23500	10.0	mg/L	1	BHC0188	03/06/24	03/08/24	SM2540C	

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 - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHC0012 - EPA 5030 Water MS

Blank (BHC0012-BLK1)

Prepared: 03/01/24 Analyzed: 03/06/24

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.1		"	13.3		90.8	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.1	21-167			

LCS (BHC0012-BS1)

Prepared: 03/01/24 Analyzed: 03/06/24

Benzene	32.3	1.0	ug/l	33.3		96.9	51-132			
Toluene	31.4	1.0	"	33.3		94.2	51-138			
Ethylbenzene	30.6	1.0	"	33.3		91.8	58-146			
m,p-Xylene	62.6	2.0	"	66.7		93.9	57-144			
o-Xylene	31.1	1.0	"	33.3		93.4	53-146			
Naphthalene	25.3	1.0	"	33.3		75.9	70-130			
1,2,4-Trimethylbenzene	27.6	1.0	"	33.3		82.9	70-130			
1,3,5-Trimethylbenzene	28.3	1.0	"	33.3		85.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.8	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.8	21-167			

LCS Dup (BHC0012-BS1)

Prepared: 03/01/24 Analyzed: 03/06/24

Benzene	32.0	1.0	ug/l	33.3		96.0	51-132	0.933	20	
Toluene	31.2	1.0	"	33.3		93.7	51-138	0.543	20	
Ethylbenzene	30.1	1.0	"	33.3		90.2	58-146	1.75	20	
m,p-Xylene	60.9	2.0	"	66.7		91.4	57-144	2.74	20	
o-Xylene	30.6	1.0	"	33.3		91.9	53-146	1.65	20	
Naphthalene	27.4	1.0	"	33.3		82.2	70-130	8.05	20	
1,2,4-Trimethylbenzene	26.8	1.0	"	33.3		80.5	70-130	2.90	20	
1,3,5-Trimethylbenzene	27.6	1.0	"	33.3		82.7	70-130	2.76	20	
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.3		88.7	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	21-167			

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 - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BHC0003 - General Preparation

Blank (BHC0003-BLK1)

Prepared & Analyzed: 03/01/24

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BHC0003-BS1)

Prepared & Analyzed: 03/01/24

Chloride	3.16	0.0600	mg/L	3.00	105	90-110
Sulfate	15.4	0.300	"	15.0	103	90-110

Duplicate (BHC0003-DUP1)

Source: 2402514-01

Prepared: 03/01/24 Analyzed: 03/07/24

Chloride	11.6	3.00	mg/L	11.8	1.72	20
Sulfate	485	60.0	"	495	2.04	20

Matrix Spike (BHC0003-MS1)

Source: 2402514-01

Prepared & Analyzed: 03/01/24

Chloride	606	12.0	mg/L	600	11.8	99.0	80-120
Sulfate	3470	60.0	"	3000	495	99.2	80-120

Matrix Spike (BHC0003-MS2)

Source: 2402514-11

Prepared & Analyzed: 03/01/24

Chloride	670	12.0	mg/L	600	62.8	101	80-120
Sulfate	3440	60.0	"	3000	429	100	80-120

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BHC0188 - General Preparation

Blank (BHC0188-BLK1)

Prepared: 03/06/24 Analyzed: 03/08/24

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BHC0188-DUP1)

Source: 2402536-01

Prepared: 03/06/24 Analyzed: 03/08/24

Total Dissolved Solids 1890 10.0 mg/L 1800 4.55 20

Summit Scientific

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

Project: Civitas - Harsch 42-27

Project Number: 21354
Project Manager: Sam Vogt

Reported:
03/11/24 12:54

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