

# Bearden 61N68W 6NESW Multi Well Pad

NESW Sec. 6-T1N-R68W

API #s: 123-23602 (Bearden 13-6), 123-23001 (Bearden 14-6), &  
123-34942 (Bearden 2-4-6)

Remediation Project #: 23110

Location ID: 336188

Wellhead, Flowline, and Facility Decommissioning

October 2022

Prepared by Tasman, Inc.



On behalf of Crestone Peak Resources Operating, LLC



# **FIELD NOTES AND PHOTO LOG**



## TANK BATTERY & WELLHEAD DECOMMISSIONING

<b>SITE NAME:</b> Bearden 61N68W 6NESW							<b>DATE:</b> 10/13/2022	<b>REM. PROJECT #:</b> 23110	<b>WEATHER:</b> Sunny (57)		
<b>SITE DIRECTIONS:</b> CR 52 & NE County Line Rd, S. 0.6 miles, E. 0.4 mi, SW. 0.15 mi on access road, INTO							<b>CLIENT:</b> Creststone Peak Resources Operating LLC				
<b>LEGALS AND LAT/LONG:</b> 40.076820, -105.049890							<b>TASMAN PERSONNEL:</b> Sierra Kirylo & Dylan Miller				
<b>SOIL TYPES:</b> Clayey Sand - SC							<b>SURFACE GRADIENT:</b> Northwest				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT		Quantity		
							Above Ground Storage Tank (AST)		3		
10/13/2022 11:30	PW-B01@4'	0.9	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel		1		
10/13/2022 11:32	PW-N01@3'	0.9	No Staining	No Odor	Yes	N/A	Separator		2		
10/13/2022 11:34	PW-S01@3'	0.4	No Staining	No Odor	Yes	N/A	Emission Control Device (ECD)		3		
10/13/2022 11:36	PW-E01@3'	2.6	No Staining	No Odor	Yes	Lab	Dump Line				
10/13/2022 13:38	PW-W01@3'	0.1	No Staining	No Odor	Yes	N/A	Wellhead		4		
10/13/2022 11:45	AST-B01@3"	8.6	No Staining	No Odor	Yes	Lab	Flowline		6		
10/13/2022 11:50	AST-B02@3"	1.3	No Staining	No Odor	Yes	Lab	Other:				
10/13/2022 11:55	AST-B03@3"	0.0	No Staining	No Odor	Yes	Lab	Soil Loads Removed				
10/13/2022 12:10	SEP-B01@5'	4.3	Organic Content	Organic Odor	Yes	Lab	<b>IMPACTED SOIL IDENTIFIED?</b>				
10/13/2022 12:12	SEP-B02@5'	1.2	No Staining	No Odor	Yes	Lab	<b>ESTIMATED VOLUME OF IMPACTS:</b>				
10/13/2022 12:14	FL-B01@5'	1.5	No Staining	Organic Odor	Yes	Lab	Date	Number	CY		
10/13/2022 12:30	MH-B01@3"	0.8	No Staining	No Odor	Yes	N/A					
10/13/2022 12:35	ECD-B01@3"	7.0	No Staining	No Odor	Yes	N/A					
10/13/2022 12:40	ECD-B02@3"	2.2	No Staining	No Odor	Yes	N/A					
10/13/2022 12:45	ECD-B03@3"	0.0	No Staining	No Odor	Yes	N/A					
10/13/2022 13:00	BG01@3'	0.4	No Staining	No Odor	Yes	Lab	Total Removed		0	0	
10/13/2022 13:02	BG01@5'	0.0	No Staining	No Odor	Yes	Lab	<b>Disposal Facility:</b>				
10/13/2022 13:04	BG01@10'	0.0	No Staining	No Odor	Yes	Lab	Groundwater Recovery				
10/13/2022 13:10	BG02@3"	17.4	Organic Content	No Odor	Yes	Lab	<b>DATE GW ENCOUNTERED:</b>			<b>DEPTH:</b>	
10/13/2022 13:15	SP-CS01	-	Organic Content	Organic Odor	N/A	Lab	<b>GROUNDWATER IN CONTACT WITH IMPACTED SOIL?</b>				
10/13/2022 13:17	SP-CS02	-	Organic Content	No Odor	N/A	Lab					
10/13/2022 13:19	SP-CS03	-	Organic Content	No Odor	N/A	Lab	<b>LNAPL OR SHEEN OBSERVED ON GW?</b>				
GROUNDWATER SAMPLING							Date		BBLs		
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?					
10/13/2022 10:45	13-6-WH-GW01	10	Low Turbidity	None	None	Yes					
10/13/2022 10:55	2-4-6-WH-GW01	10	Low Turbidity	Light Sheen	None	Yes					
10/13/2022 11:00	14-6-WH-GW01	10	Low Turbidity	Light Sheen	None	Yes	Total Removed		0		
10/13/2022 11:10	2-8-6-WH-GW01	10	Medium Turbidity	None	None	Yes	<b>Disposal Facility:</b>				



## TANK BATTERY & WELLHEAD DECOMMISSIONING

<b>SITE NAME:</b> Bearden 61N68W 6NESW							<b>DATE:</b> 10/13/2022	<b>REM. PROJECT #:</b> 23110	<b>WEATHER:</b> Sunny (57)		
<b>SITE DIRECTIONS:</b> CR 52 & NE County Line Rd, S. 0.6 miles, E. 0.4 mi, SW. 0.15 mi on access road, INTO							<b>CLIENT:</b> Creststone Peak Resources Operating LLC				
<b>LEGALS AND LAT/LONG:</b> 40.076820, -105.049890							<b>TASMAN PERSONNEL:</b> Sierra Kirylo & Dylan Miller				
<b>SOIL TYPES:</b> Clayey Sand - SC							<b>SURFACE GRADIENT:</b> Northwest				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT		Quantity		
							Above Ground Storage Tank (AST)		3		
10/13/2022 13:21	SP-CS04	-	No Staining	No Odor	N/A	Lab	Buried or Partially Buried Vessel		1		
10/13/2022 13:23	SP-CS05	-	No Staining	No Odor	N/A	Lab	Separator		2		
10/13/2022 13:25	SP-CS06	-	Organic Content	No Odor	N/A	Lab	Emission Control Device (ECD)		3		
10/13/2022 13:27	SP-CS07	-	Organic Content	Organic Odor	N/A	Lab	Dump Line				
10/13/2022 13:29	SP-CS08	-	No Staining	No Odor	N/A	Lab	Wellhead		4		
10/13/2022 13:31	SP-CS09	-	No Staining	No Odor	N/A	Lab	Flowline		6		
10/13/2022 13:33	SP-CS10	-	No Staining	No Odor	N/A	Lab	Other:				
10/14/2022 09:30	13-16-WH-B01@10'	11.3	HC Staining	HC Odor	Yes	Lab	Soil Loads Removed				
10/14/2022 09:32	13-16-WH-N01@9'	24.9	HC Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?				
10/14/2022 09:34	13-16-WH-S01@9'	0.6	HC Staining	No Odor	Yes	N/A	ESTIMATED VOLUME OF IMPACTS:				
10/14/2022 09:36	13-16-WH-E01@9'	0.6	HC Staining	Slight HC Odor	Yes	N/A	Date	Number	CY		
10/14/2022 09:38	13-16-WH-W01@9'	0.6	HC Staining	No Odor	Yes	N/A					
10/14/2022 09:40	13-16-FL-B02@7'	2.6	No Staining	No Odor	Yes	Lab					
10/14/2022 10:00	2-4-6-WH-B01@10'	225.3	HC Staining	HC Odor	No	Lab					
10/14/2022 10:02	2-4-6-WH-N01@9'	10.9	HC Staining	Slight HC Odor	Yes	N/A					
10/14/2022 10:04	2-4-6-WH-S01@9'	289.8	HC Staining	HC Odor	Yes	Lab	Total Removed		0	0	
10/14/2022 10:06	2-4-6-WH-E01@9'	31.0	HC Staining	No Odor	Yes	N/A	Disposal Facility:				
10/14/2022 10:08	2-4-6-WH-W01@9'	0.7	No Staining	Organic Odor	Yes	N/A	Groundwater Recovery				
10/14/2022 10:10	2-4-6-FL-B02@7'	413.7	HC Staining	HC Odor	Yes	Lab	DATE GW ENCOUNTERED:			DEPTH:	
10/14/2022 10:30	14-6-WH-B01@10'	78.6	HC Staining	Slight HC Odor	Yes	Lab	GROUNDWATER IN CONTACT WITH IMPACTED SOIL?				
10/14/2022 10:32	14-6-WH-N01@9'	12.8	HC Staining	Slight HC Odor	Yes	N/A					
10/14/2022 10:34	14-6-WH-S01@9'	344.9	HC Staining	Strong HC Odor	Yes	Lab	LNAPL OR SHEEN OBSERVED ON GW?				
GROUNDWATER SAMPLING							Date		BBLs		
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?					
							Total Removed		0		
							Disposal Facility:				



## TANK BATTERY & WELLHEAD DECOMMISSIONING

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<b>LEGALS AND LAT/LONG:</b> 40.076820, -105.049890							<b>TASMAN PERSONNEL:</b> Sierra Kirylo		
<b>SOIL TYPES:</b> Clayey Sand - SC							<b>SURFACE GRADIENT:</b> Northwest		
<b>SOIL SAMPLING</b>							<b>FACILITY INFRASTRUCTURE</b>		
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT		Quantity
							Above Ground Storage Tank (AST)		3
10/14/2022 10:36	14-6-WH-E01@9'	50.6	HC Staining	HC Odor	Yes	N/A	Buried or Partially Buried Vessel		1
10/14/2022 10:38	14-6-WH-W01@9'	242.6	HC Staining	Strong HC Odor	Yes	N/A	Separator		2
10/14/2022 10:40	14-6-FL-B02@6'	3.2	HC Staining	No Odor	Yes	Lab	Emission Control Device (ECD)		3
							Dump Line		
							Wellhead		4
							Flowline		6
							Other:		
							<b>Soil Loads Removed</b>		
							<b>IMPACTED SOIL IDENTIFIED?</b>		
							<b>ESTIMATED VOLUME OF IMPACTS:</b>		
							Date	Number	CY
							Total Removed	0	0
							<b>Disposal Facility:</b>		
							<b>Groundwater Recovery</b>		
							<b>DATE GW ENCOUNTERED:</b>		<b>DEPTH:</b>
							<b>GROUNDWATER IN CONTACT WITH IMPACTED SOIL?</b>		
							<b>LNAPL OR SHEEN OBSERVED ON GW?</b>		
<b>GROUNDWATER SAMPLING</b>							<b>Date</b>		<b>BBLs</b>
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?			
							Total Removed	0	
							<b>Disposal Facility:</b>		

**Photographic Log**

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Soil screening and sampling locations, facing northeast 10/13/22			<b>Notes/Conditions:</b> Soil screening and sampling locations, facing southwest 10/13/22		

**Photographic Log**

 <p>AST-B01@3" X</p> <p>AST-B02@3" X</p>			 <p>AST-B03@3" X</p>		
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Soil sampling locations, facing west 10/13/22			<b>Notes/Conditions:</b> Soil sampling location, facing south 10/13/22		

**Photographic Log**

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Soil sampling locations, facing east 10/13/22			<b>Notes/Conditions:</b> Soil screening location, facing south 10/13/22		

**Photographic Log**

					
<b>Material:</b>		<b>Volume:</b>	<b>Material:</b>		<b>Volume:</b>
<b>Contents:</b>			<b>Contents:</b>		
<b>Notes/Conditions:</b> Soil screening location, facing northeast 10/13/22			<b>Notes/Conditions:</b> Background location to the northwest of TB pad 10/13/22		

 <p>BG02@3'</p>			 <p>X 13-6-WH-GW01</p>		
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Background location to the north of TB pad 10/13/22			<b>Notes/Conditions:</b> GW sampling location in WH excavation 10/13/22		



<b>Equipment ID:</b>		<b>Equipment Type:</b>		<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> GW sampling location in WH excavation 10/13/22				<b>Notes/Conditions:</b> GW sampling location in WH excavation 10/13/22			

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> GW sampling location in WH excavation 10/13/22			<b>Notes/Conditions:</b> Soil sampling and screening locations, facing north 10/14/22		

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Soil sampling location, facing south 10/14/22			<b>Notes/Conditions:</b> Soil sampling location, facing east 10/14/22		

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Surface of 13-6 wellhead excavation, facing west			<b>Notes/Conditions:</b> Soil sampling and screening locations, facing north 10/14/22		

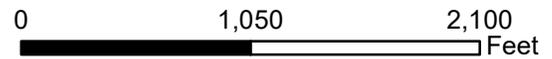
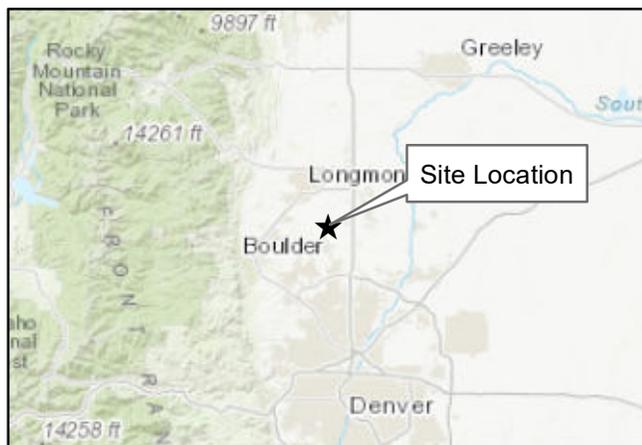
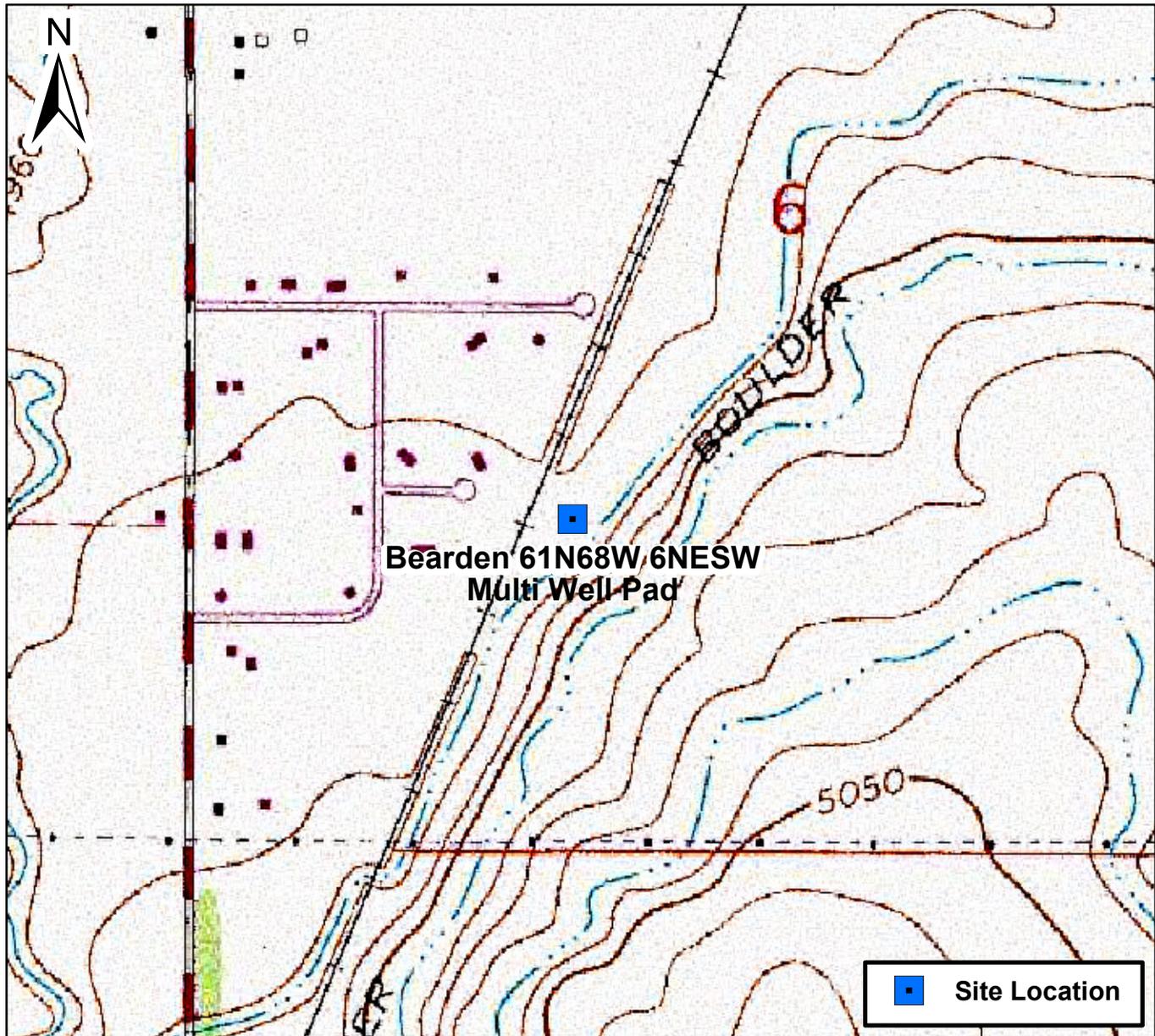
 <p>2-4-6-WH-S01@9' X</p>			 <p>2-4-6-FL-B02@7' X</p>		
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Soil sampling location, facing south 10/14/22			<b>Notes/Conditions:</b> Soil sampling location, facing east 10/14/22		

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Surface of 2-4-6 wellhead excavation, facing west			<b>Notes/Conditions:</b> Soil sampling and screening locations, facing north 10/14/22		

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Soil sampling and screening locations, facing south 10/14/22			Notes/Conditions: Soil sampling location, facing east 10/14/22		

					
<b>Equipment ID:</b>		<b>Equipment Type:</b>	<b>Equipment ID:</b>		<b>Equipment Type:</b>
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b> Surface of 14-6 wellhead excavation, facing west			<b>Notes/Conditions:</b> 2-8-6 wellhead excavation 10/14/22, Not sampled due to excavation conditions		

# FIGURES



**Figure 1**  
 Site Location Map  
 Bearden 61N68W 6NESW NESW  
 Multi Well Pad  
 Sec. 6-T1N-R68W  
 Weld County, Colorado





DATE:	October 2022
DESIGNED BY:	S. Vogt
DRAWN BY:	J. Clonts


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

**Crestone Peak Resources Operating, LLC**  
**Bearden 61N68W 6NESW Multi Well Pad**  
 NESW Sec. 6-T1N-R68W  
 Weld County, Colorado

Sample Location Map

Figure 2

# TABLES

**TABLE 1**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL SAMPLE LOCATIONS**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**



Soil Sample Location	Date	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
AST-B01@3"	10/13/2022	8.6	No Staining	No Odor	40.077085	-105.049252	1.1	Y
AST-B02@3"	10/13/2022	1.3	No Staining	No Odor	40.077035	-105.049196	1.1	Y
AST-B03@3"	10/13/2022	0.0	No Staining	No Odor	40.076988	-105.049257	1.1	Y
BG01@10'	10/13/2022	0.0	No Staining	No Odor	40.077135	-105.049720	1.1	Y
BG01@3'	10/13/2022	0.4	No Staining	No Odor	40.077135	-105.049720	1.1	Y
BG01@5'	10/13/2022	0.0	No Staining	No Odor	40.077135	-105.049720	1.1	Y
BG02@3"	10/13/2022	17.4	Organic Content	No Odor	40.077285	-105.049169	1.1	Y
ECD-B01@3"	10/13/2022	7.0	No Staining	No Odor	40.076878	-105.049539	1.2	N
ECD-B02@3"	10/13/2022	2.2	No Staining	No Odor	40.076849	-105.049511	1.2	N
ECD-B03@3"	10/13/2022	0.0	No Staining	No Odor	40.076820	-105.049488	1.3	N
FL-B01@5'	10/13/2022	1.5	No Staining	Organic Odor	40.076770	-105.049669	1.3	Y
MH-B01@3"	10/13/2022	0.8	No Staining	No Odor	40.076802	-105.049526	1.3	N
PW-B01@4'	10/13/2022	0.9	No Staining	No Odor	40.077048	-105.049326	1.1	Y
PW-E01@3'	10/13/2022	2.6	No Staining	No Odor	40.077033	-105.049287	1.1	Y
PW-N01@3'	10/13/2022	0.9	No Staining	No Odor	40.077074	-105.049298	1.1	N
PW-S01@3'	10/13/2022	0.4	No Staining	No Odor	40.077029	-105.049360	1.1	N
PW-W01@3'	10/13/2022	0.1	No Staining	No Odor	40.077053	-105.049366	1.1	N
SEP-B01@5'	10/13/2022	4.3	OrganicContent	Organic Odor	40.076776	-105.049672	1.3	Y
SEP-B02@5'	10/13/2022	1.2	No Staining	No Odor	40.076771	-105.049683	1.3	Y
SP-CS01	10/13/2022	-	OrganicContent	Organic Odor	NA	NA	NA	Y
SP-CS02	10/13/2022	-	Organic Content	No Odor	NA	NA	NA	Y
SP-CS03	10/13/2022	-	Organic Content	No Odor	NA	NA	NA	Y
SP-CS04	10/13/2022	-	No Staining	No Odor	NA	NA	NA	Y
SP-CS05	10/13/2022	-	No Staining	No Odor	NA	NA	NA	Y
SP-CS06	10/13/2022	-	Organic Content	No Odor	NA	NA	NA	Y

**TABLE 1**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL SAMPLE LOCATIONS**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**

Soil Sample Location	Date	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
SP-CS07	10/13/2022	-	Organic Content	Organic Odor	NA	NA	NA	Y
SP-CS08	10/13/2022	-	No Staining	No Odor	NA	NA	NA	Y
SP-CS09	10/13/2022	-	No Staining	No Odor	NA	NA	NA	Y
SP-CS10	10/13/2022	-	No Staining	No Odor	NA	NA	NA	Y
13-16-FL-B02@7'	10/14/2022	2.6	No Staining	No Odor	40.076898	-105.049767	1	Y
13-16-WH-B01@10'	10/14/2022	11.3	HC Staining	HC Odor	40.076928	-105.049766	1	Y
13-16-WH-E01@9'	10/14/2022	0.6	HC Staining	Slight HC Odor	40.076928	-105.049760	1	N
13-16-WH-N01@9'	10/14/2022	24.9	HC Staining	No Odor	40.076938	-105.049761	1.2	Y
13-16-WH-S01@9'	10/14/2022	0.6	HC Staining	No Odor	40.076919	-105.049779	1.2	N
13-16-WH-W01@9'	10/14/2022	0.6	HC Staining	No Odor	40.076933	-105.049785	1.2	N
14-6-FL-B02@6'	10/14/2022	3.2	HC Staining	No Odor	40.076787	-105.049890	1.2	Y
14-6-WH-B01@10'	10/14/2022	78.6	HC Staining	Slight HC Odor	40.076801	-105.049895	1.4	Y
14-6-WH-E01@9'	10/14/2022	50.6	HC Staining	HC Odor	40.076796	-105.049882	1.2	N
14-6-WH-N01@9'	10/14/2022	12.8	HC Staining	Slight HC Odor	40.076811	-105.049894	1.3	N
14-6-WH-S01@9'	10/14/2022	344.9	HC Staining	Strong HC Odor	40.076786	-105.049902	1.3	Y
14-6-WH-W01@9'	10/14/2022	242.6	HC Staining	Strong HC Odor	40.076817	-105.049924	1.4	N
2-4-6-FL-B02@7'	10/14/2022	413.7	HC Staining	HC Odor	40.076880	-105.049806	1	Y
2-4-6-WH-B01@10'	10/14/2022	225.3	HC Staining	HC Odor	40.076891	-105.049806	1	Y
2-4-6-WH-E01@9'	10/14/2022	31.0	HC Staining	No Odor	40.076895	-105.049791	1	N
2-4-6-WH-N01@9'	10/14/2022	10.9	HC Staining	Slight HC Odor	40.076901	-105.049797	1	N
2-4-6-WH-S01@9'	10/14/2022	289.8	HC Staining	HC Odor	40.076879	-105.049823	1	Y
2-4-6-WH-W01@9'	10/14/2022	0.7	No Staining	Organic Odor	40.076905	-105.049825	1	N

**Notes:**

PID = Photoionization detector

**TABLE 1**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL SAMPLE LOCATIONS**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**

Soil Sample Location	Date	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
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ppm = Parts per million

HC = Hydrocarbon

GPS = Global positioning system

PDOP = Position dilution of precision

NA = Not Applicable

**TABLE 2**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL ANALYTICAL DATA - VOCs**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**

Soil Sample Location	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>COGCC standards for soil (mg/kg)<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>COGCC standards for soil (mg/kg)<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>
13-6-FL-B02@7'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
13-6-WH-B01@10'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
13-6-WH-N01@9'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<b>0.0056</b>	<0.50	<50	<50	<0.0050	<0.0050
14-6-FL-B02@6'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
14-6-WH-B01@10'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	7.7	<50	<b>0.015</b>	<b>0.24</b>
14-6-WH-S01@9'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	3.0	<50	<50	<0.0050	<b>0.082</b>
2-4-6-FL-B02@7'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	<0.50	<50	<50	<0.0050	<0.0050
2-4-6-WH-B01@10'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	1.4	<50	<50	<0.0050	<0.0050
2-4-6-WH-S01@9'	10/14/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0038	10.0	<50	<50	<b>0.026</b>	<0.0050

**Notes:**

VOCs = Volatile Organic Compounds

(1) Standards for soil are taken from COGCC Table 915-1: Protection of Groundwater Soil Screening Level Concentrations, effective January 15, 2021

(2) Standards for soil are taken from COGCC Table 915-1: Residential Soil Screening Level Concentrations, effective January 15, 2021

COGCC = Colorado Oil and Gas Conservation 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 COGCC Table 915-1 soil standards

**TABLE 3**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL ANALYTICAL DATA - PAHs**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**

Soil Sample Location	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)
COGCC standards for soil (mg/kg) <sup>(1)</sup>		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
COGCC standards for soil (mg/kg) <sup>(2)</sup>		360	1,800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	180
13-6-FL-B02@7'	10/14/2022	<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
13-6-WH-B01@10'	10/14/2022	<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
13-6-WH-N01@9'	10/14/2022	<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
14-6-FL-B02@6'	10/14/2022	<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
14-6-WH-B01@10'	10/14/2022	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0161	<0.00500
14-6-WH-S01@9'	10/14/2022	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0187	<0.00500
2-4-6-FL-B02@7'	10/14/2022	<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
2-4-6-WH-B01@10'	10/14/2022	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<b>0.00793</b>	<b>0.0261</b>	<0.00500
2-4-6-WH-S01@9'	10/14/2022	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<b>0.0578</b>	<b>0.140</b>	<0.00500

**Notes:**

PAHs = Polycyclic Aromatic Hydrocarbons

(1) Standards for soil are taken from COGCC Table 915-1: Protection of Groundwater Soil Screening Level Concentrations, effective January 15, 2021

(2) Standards for soil are taken from COGCC Table 915-1: Residential Soil Screening Level Concentrations, effective January 15, 2021

COGCC = Colorado Oil and Gas Conservation 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 COGCC Table 915-1 soil standards

**TABLE 4**  
**BEARDEN 61N68W 6NESW MULTI WELL PAD**  
**SOIL ANALYTICAL DATA - SOIL RECLAMATION**  
**CRESTONE PEAK RESOURCES OPERATING, LLC**

Soil Sample Location	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
<b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b>		<b>6 - 8.3</b>	<b>&lt; 6</b>	<b>&lt; 4</b>	<b>2</b>
13-6-FL-B02@7'	10/14/2022	8.21	4.05	2.21	0.367
13-6-WH-B01@10'	10/14/2022	8.25	<b>6.08</b>	1.40	0.229
13-6-WH-N01@9'	10/14/2022	7.96	<b>10.6</b>	<b>6.51</b>	0.370
14-6-FL-B02@6'	10/14/2022	<b>8.66</b>	1.81	0.690	0.277
14-6-WH-B01@10'	10/14/2022	8.23	<b>9.04</b>	1.44	0.210
14-6-WH-S01@9'	10/14/2022	8.22	3.96	0.883	0.124
2-4-6-FL-B02@7'	10/14/2022	7.50	1.87	<b>4.27</b>	0.569
2-4-6-WH-B01@10'	10/14/2022	8.14	3.99	2.83	0.160
2-4-6-WH-S01@9'	10/14/2022	<b>8.34</b>	2.53	0.661	0.158

**Notes:**

(1) Standards for soil are taken from COGCC Table 915-1, effective January 15, 2021

COGCC = Colorado Oil and Gas Conservation Commission

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

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

**BOLD** = Analytical result is in exceedance of COGCC Table 915-1 soil standards

# **LABORATORY ANALYTICAL DATA**

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 25, 2022

Sam Vogt

Civitas Resources

650 Southgate Drive

Windsor, CO 80550

RE: Bearden 61N68W 6NESW

Work Order #2210245

Enclosed are the results of analyses for samples received by Summit Scientific on 10/14/22 18:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury  
President



Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181

Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
13-6-WH-B01@10'	2210245-01	Soil	10/14/22 09:30	10/14/22 18:20
13-6-WH-N01@9'	2210245-02	Soil	10/14/22 09:32	10/14/22 18:20
13-6-FL-B02@7'	2210245-03	Soil	10/14/22 09:40	10/14/22 18:20
2-4-6-WH-B01@10'	2210245-04	Soil	10/14/22 10:00	10/14/22 18:20
2-4-6-WH-S01@9'	2210245-05	Soil	10/14/22 10:04	10/14/22 18:20
2-4-6-FL-B02@7'	2210245-06	Soil	10/14/22 10:10	10/14/22 18:20
14-6-WH-B01@10'	2210245-07	Soil	10/14/22 10:30	10/14/22 18:20
14-6-WH-S01@9'	2210245-08	Soil	10/14/22 10:34	10/14/22 18:20
14-6-FL-B02@6'	2210245-09	Soil	10/14/22 10:40	10/14/22 18:20

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

2210245

741 Corporate Circle Suite I ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: CIVITAS/Tasman  
Address: 6855 W. 119th St  
City/State/Zip: Broomfield, CO 80020  
Phone: 303-405-9078 Fax:  
Sampler Name: Sierra Kirylo

Project Manager: Sam Vogt, Jacob Evans  
E-Mail: svogt@tasman-geo.com, jevanse@civiresources.com  
Project Name: Bearden 61N68W 6NESW  
Project Number: AFE # 22181

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Air - Canister Serial #	Other (Specify)	Analyze For: <u>915 Table</u>							Special Instructions
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil			<del>Fe</del>	<del>Hg</del>	<del>Pb</del>	<del>Cd</del>	<del>Mn</del>	<del>Zn</del>	PAHs	
13-6-WH-B01e10'	10-14-22	0930	2			X					X	X	X	X	X	X	X	X	
13-6-WH-N01e9'		0932									X	X	X	X	X	X	X	X	
13-6-FL-B02e7'		0940									X	X	X	X	X	X	X	X	
2-4-6-WH-B01e10'		1000									X	X	X	X	X	X	X	X	
2-4-6-WH-S01e9'		1004									X	X	X	X	X	X	X	X	
2-4-6-FL-B02e7'		1010									X	X	X	X	X	X	X	X	
14-6-WH-B01e10'		1030									X	X	X	X	X	X	X	X	
14-6-WH-S01e9'		1034									X	X	X	X	X	X	X	X	
14-6-FL-B02e6'	✓	1040	✓								X	X	X	X	X	X	X	X	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>10-14-22 1220</u>	Received by: <u>Tasman Lockbox</u>	Date/Time: <u>10-14-22 1220</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours Standard <input checked="" type="checkbox"/>	Methods Notes: *PH, EC, SAR = sat. paste **Boron = hot water
Relinquished by: <u>Tasman Lockbox</u>	Date/Time: <u>10/14/22 1820</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10/14/22 1820</u>		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2210245

Client: Civitas/Tasman Client Project ID: Bearden CoIN CSW CONESW

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

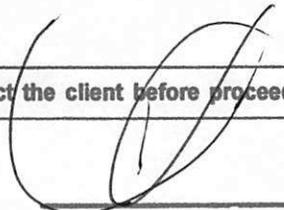
Matrix (Check all that apply) Air  Soil/Solid  Water  Other

Temp (°C)  Thermometer #

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

Additional Comments (if any):

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

  
Custodian Printed Name

10-14-22 22:00  
Date/Time



Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-B01@10'**  
**2210245-01 (Soil)**

Summit Scientific

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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: **10/14/22 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		93.2 %	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.



Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-B01@10'**  
**2210245-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		73.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		45.4 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.229</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-B01@10'**  
**2210245-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	45.8	0.0620	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	44.4	0.0620	"	"	"	"	"	"	
Sodium	241	0.0620	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.08	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.6		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.40	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-N01@9'**  
**2210245-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0056</b>	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		109 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-N01@9'**  
**2210245-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.2 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.370</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-WH-N01@9'**  
**2210245-02 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	421	0.0646	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	350	0.0646	"	"	"	"	"	"	
Sodium	1220	0.0646	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.6	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.4		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.51	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-FL-B02@7'**  
**2210245-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		71.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-FL-B02@7'**  
**2210245-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.2 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.367</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**13-6-FL-B02@7'**  
**2210245-03 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	148	0.0591	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	110	0.0591	"	"	"	"	"	"	
Sodium	267	0.0591	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.05	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.21	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-B01@10'**  
**2210245-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1.4</b>	<b>0.50</b>	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		174 %	50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-B01@10'**  
**2210245-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.00793</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0261</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	62.5 %	40-150			"	"	"	"	
Surrogate: Fluoranthene-d10	59.9 %	40-150			"	"	"	"	

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.160</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-B01@10'**  
**2210245-04 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	176	0.0592	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	180	0.0592	"	"	"	"	"	"	
Sodium	315	0.0592	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.99	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.83	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-S01@9'**  
**2210245-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.026</b>	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>10</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		222 %	50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-S01@9'**  
**2210245-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0578</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.140</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	66.5 %	40-150			"	"	"	"	
Surrogate: Fluoranthene-d10	78.0 %	40-150			"	"	"	"	

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.158</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-WH-S01@9'**  
**2210245-05 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.9	0.0612	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	42.9	0.0612	"	"	"	"	"	"	
Sodium	88.1	0.0612	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.53	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.661	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-FL-B02@7'**  
**2210245-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		145 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		70.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-FL-B02@7'**  
**2210245-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		54.6 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.569</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**2-4-6-FL-B02@7'**  
**2210245-06 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	470	0.0597	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	446	0.0597	"	"	"	"	"	"	
Sodium	236	0.0597	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.87	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.7		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.27	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.50		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-B01@10'**  
**2210245-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.015</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.24</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>7.7</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		84.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		186 %	50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		66.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-B01@10'**  
**2210245-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/20/22	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	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0161</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		80.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.4 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.210</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-B01@10'**  
**2210245-07 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	31.5	0.0608	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	32.9	0.0608	"	"	"	"	"	"	
Sodium	304	0.0608	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.04	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.2		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.44	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-S01@9'**  
**2210245-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.082</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.0</b>	0.50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		121 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		174 %	50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		68.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-S01@9'**  
**2210245-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/21/22	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	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0187</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		71.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		75.1 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.124</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-WH-S01@9'**  
**2210245-08 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	26.9	0.0595	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	42.7	0.0595	"	"	"	"	"	"	
Sodium	142	0.0595	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.96	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.883	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-FL-B02@6'**  
**2210245-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFJ0529	10/20/22	10/22/22	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: **10/14/22 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		116 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFJ0532	10/20/22	10/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		65.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-FL-B02@6'**  
**2210245-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFJ0501	10/20/22	10/21/22	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: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		77.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.8 %	40-150		"	"	"	"	

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.277</b>	0.0100	mg/L	1	BFJ0470	10/18/22	10/19/22	EPA 6020B	

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**14-6-FL-B02@6'**  
**2210245-09 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.8	0.0616	mg/L dry	1	BFJ0600	10/21/22	10/23/22	EPA 6020B	
Magnesium	30.6	0.0616	"	"	"	"	"	"	
Sodium	66.7	0.0616	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.81	0.00100	units	1	BFJ0674	10/25/22	10/25/22	Calculation	

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.1		%	1	BFJ0463	10/18/22	10/24/22	Calculation	

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.690	0.0100	mmhos/cm	1	BFJ0613	10/22/22	10/24/22	EPA 120.1	

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

Date Sampled: **10/14/22 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BFJ0611	10/22/22	10/24/22	EPA 9045D	

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0529 - EPA 5030 Soil MS**

**Blank (BFJ0529-BLK1)**

Prepared: 10/20/22 Analyzed: 10/22/22

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>	0.0408		"	0.0400		102	50-150				
<i>Surrogate: Toluene-d8</i>	0.0438		"	0.0400		110	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0420		"	0.0400		105	50-150				

**LCS (BFJ0529-BS1)**

Prepared: 10/20/22 Analyzed: 10/22/22

Benzene	0.0755	0.0020	mg/kg	0.100		75.5	70-130				
Toluene	0.0758	0.0050	"	0.100		75.8	70-130				
Ethylbenzene	0.0750	0.0050	"	0.100		75.0	70-130				
m,p-Xylene	0.152	0.010	"	0.200		75.8	70-130				
o-Xylene	0.0796	0.0050	"	0.100		79.6	70-130				
1,2,4-Trimethylbenzene	0.0868	0.0050	"	0.100		86.8	70-130				
1,3,5-Trimethylbenzene	0.0860	0.0050	"	0.100		86.0	70-130				
Naphthalene	0.114	0.0038	"	0.100		114	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0406		"	0.0400		101	50-150				
<i>Surrogate: Toluene-d8</i>	0.0436		"	0.0400		109	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0432		"	0.0400		108	50-150				

**Matrix Spike (BFJ0529-MS1)**

Source: 2210245-02

Prepared: 10/20/22 Analyzed: 10/22/22

Benzene	0.0769	0.0020	mg/kg	0.100	ND	76.9	70-130				
Toluene	0.0715	0.0050	"	0.100	ND	71.5	70-130				
Ethylbenzene	0.0791	0.0050	"	0.100	ND	79.1	70-130				
m,p-Xylene	0.153	0.010	"	0.200	ND	76.6	70-130				
o-Xylene	0.0801	0.0050	"	0.100	ND	80.1	70-130				
1,2,4-Trimethylbenzene	0.0847	0.0050	"	0.100	ND	84.7	70-130				
1,3,5-Trimethylbenzene	0.0870	0.0050	"	0.100	ND	87.0	70-130				
Naphthalene	0.109	0.0038	"	0.100	0.00564	103	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0443		"	0.0400		111	50-150				
<i>Surrogate: Toluene-d8</i>	0.0433		"	0.0400		108	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0376		"	0.0400		94.1	50-150				

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0529 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BFJ0529-MSD1)</b>	<b>Source: 2210245-02</b>			<b>Prepared: 10/20/22 Analyzed: 10/22/22</b>						
Benzene	0.0868	0.0020	mg/kg	0.100	ND	86.8	70-130	12.1	30	
Toluene	0.0716	0.0050	"	0.100	ND	71.6	70-130	0.0839	30	
Ethylbenzene	0.0857	0.0050	"	0.100	ND	85.7	70-130	8.01	30	
m,p-Xylene	0.159	0.010	"	0.200	ND	79.7	70-130	4.03	30	
o-Xylene	0.0798	0.0050	"	0.100	ND	79.8	70-130	0.338	30	
1,2,4-Trimethylbenzene	0.0796	0.0050	"	0.100	ND	79.6	70-130	6.17	30	
1,3,5-Trimethylbenzene	0.0857	0.0050	"	0.100	ND	85.7	70-130	1.49	30	
Naphthalene	0.0869	0.0038	"	0.100	0.00564	81.2	70-130	22.4	30	
Surrogate: 1,2-Dichloroethane-d4	0.0493		"	0.0400		123	50-150			
Surrogate: Toluene-d8	0.0430		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0359		"	0.0400		89.8	50-150			

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

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

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

**Batch BFJ0532 - EPA 3550A**

**Blank (BFJ0532-BLK1)**

Prepared: 10/20/22 Analyzed: 10/21/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	7.53		"	12.5	60.3	30-150					

**LCS (BFJ0532-BS1)**

Prepared: 10/20/22 Analyzed: 10/21/22

C10-C28 (DRO)	547	50	mg/kg	500	109	70-130					
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5	87.1	30-150					

**Matrix Spike (BFJ0532-MS1)**

Source: 2210245-02

Prepared: 10/20/22 Analyzed: 10/21/22

C10-C28 (DRO)	514	50	mg/kg	500	9.99	101	70-130				
Surrogate: <i>o</i> -Terphenyl	8.54		"	12.5	68.3	30-150					

**Matrix Spike Dup (BFJ0532-MSD1)**

Source: 2210245-02

Prepared: 10/20/22 Analyzed: 10/21/22

C10-C28 (DRO)	411	50	mg/kg	500	9.99	80.2	70-130	22.3	20		QR-02
Surrogate: <i>o</i> -Terphenyl	8.84		"	12.5	70.7	30-150					

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0501 - EPA 5030 Soil MS**

**Blank (BFJ0501-BLK1)**

Prepared & Analyzed: 10/20/22

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>0.0374</i>		<i>"</i>	<i>0.0333</i>		<i>112</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0362</i>		<i>"</i>	<i>0.0333</i>		<i>108</i>		<i>40-150</i>		

**LCS (BFJ0501-BS1)**

Prepared & Analyzed: 10/20/22

Acenaphthene	0.0396	0.00500	mg/kg	0.0333	119	31-137
Anthracene	0.0352	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0343	0.00500	"	0.0333	103	30-120
Benzo (a) pyrene	0.0377	0.00500	"	0.0333	113	30-120
Benzo (b) fluoranthene	0.0390	0.00500	"	0.0333	117	30-120
Benzo (k) fluoranthene	0.0378	0.00500	"	0.0333	113	30-120
Chrysene	0.0323	0.00500	"	0.0333	97.0	30-120
Dibenz (a,h) anthracene	0.0387	0.00500	"	0.0333	116	30-120
Fluoranthene	0.0335	0.00500	"	0.0333	100	30-120
Fluorene	0.0328	0.00500	"	0.0333	98.3	30-120
Indeno (1,2,3-cd) pyrene	0.0377	0.00500	"	0.0333	113	30-120
Pyrene	0.0326	0.00500	"	0.0333	97.8	35-142
1-Methylnaphthalene	0.0376	0.00500	"	0.0333	113	35-142
2-Methylnaphthalene	0.0377	0.00500	"	0.0333	113	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0389</i>		<i>"</i>	<i>0.0333</i>	<i>117</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0323</i>		<i>"</i>	<i>0.0333</i>	<i>96.9</i>	<i>40-150</i>

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0501 - EPA 5030 Soil MS**

<b>Matrix Spike (BFJ0501-MS1)</b>	<b>Source: 2210245-01</b>			<b>Prepared &amp; Analyzed: 10/20/22</b>							
Acenaphthene	0.0284	0.00500	mg/kg	0.0333	ND	85.1	31-137				
Anthracene	0.0264	0.00500	"	0.0333	ND	79.1	30-120				
Benzo (a) anthracene	0.0215	0.00500	"	0.0333	ND	64.4	30-120				
Benzo (a) pyrene	0.0252	0.00500	"	0.0333	ND	75.5	30-120				
Benzo (b) fluoranthene	0.0282	0.00500	"	0.0333	ND	84.6	30-120				
Benzo (k) fluoranthene	0.0310	0.00500	"	0.0333	ND	93.0	30-120				
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	30-120				
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333	ND	85.0	30-120				
Fluoranthene	0.0257	0.00500	"	0.0333	ND	77.1	30-120				
Fluorene	0.0249	0.00500	"	0.0333	ND	74.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0329	0.00500	"	0.0333	ND	98.7	30-120				
Pyrene	0.0266	0.00500	"	0.0333	ND	79.8	35-142				
1-Methylnaphthalene	0.0250	0.00500	"	0.0333	ND	75.0	15-130				
2-Methylnaphthalene	0.0274	0.00500	"	0.0333	ND	82.2	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0249</i>		<i>"</i>	<i>0.0333</i>		<i>74.7</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0262</i>		<i>"</i>	<i>0.0333</i>		<i>78.6</i>	<i>40-150</i>				

<b>Matrix Spike Dup (BFJ0501-MSD1)</b>	<b>Source: 2210245-01</b>			<b>Prepared &amp; Analyzed: 10/20/22</b>							
Acenaphthene	0.0209	0.00500	mg/kg	0.0333	ND	62.7	31-137	30.4	30		QR-02
Anthracene	0.0201	0.00500	"	0.0333	ND	60.2	30-120	27.2	30		
Benzo (a) anthracene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	18.8	30		
Benzo (a) pyrene	0.0206	0.00500	"	0.0333	ND	61.8	30-120	19.9	30		
Benzo (b) fluoranthene	0.0218	0.00500	"	0.0333	ND	65.4	30-120	25.6	30		
Benzo (k) fluoranthene	0.0232	0.00500	"	0.0333	ND	69.6	30-120	28.8	30		
Chrysene	0.0190	0.00500	"	0.0333	ND	57.1	30-120	24.0	30		
Dibenz (a,h) anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120	23.9	30		
Fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	27.3	30		
Fluorene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	20.9	30		
Indeno (1,2,3-cd) pyrene	0.0263	0.00500	"	0.0333	ND	79.0	30-120	22.2	30		
Pyrene	0.0204	0.00500	"	0.0333	ND	61.1	35-142	26.4	30		
1-Methylnaphthalene	0.0218	0.00500	"	0.0333	ND	65.4	15-130	13.7	50		
2-Methylnaphthalene	0.0233	0.00500	"	0.0333	ND	70.0	15-130	16.1	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0207</i>		<i>"</i>	<i>0.0333</i>		<i>62.1</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0205</i>		<i>"</i>	<i>0.0333</i>		<i>61.5</i>	<i>40-150</i>				

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0470 - EPA 3050B**

**Blank (BFJ0470-BLK1)**

Prepared: 10/18/22 Analyzed: 10/19/22

Boron ND 0.0100 mg/L

**LCS (BFJ0470-BS1)**

Prepared: 10/18/22 Analyzed: 10/19/22

Boron 5.33 0.0100 mg/L 5.00 107 80-120

**Duplicate (BFJ0470-DUP1)**

Source: 2210242-01

Prepared: 10/18/22 Analyzed: 10/19/22

Boron 0.0637 0.0100 mg/L 0.0778 19.9 20

**Matrix Spike (BFJ0470-MS1)**

Source: 2210242-01

Prepared: 10/18/22 Analyzed: 10/19/22

Boron 6.19 0.0100 mg/L 5.00 0.0778 122 75-125

**Matrix Spike Dup (BFJ0470-MSD1)**

Source: 2210242-01

Prepared: 10/18/22 Analyzed: 10/19/22

Boron 6.13 0.0100 mg/L 5.00 0.0778 121 75-125 0.977 25

Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

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

**Summit Scientific**

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

**Batch BFJ0600 - General Preparation**

**Blank (BFJ0600-BLK1)**

Prepared: 10/21/22 Analyzed: 10/22/22

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

**LCS (BFJ0600-BS1)**

Prepared: 10/21/22 Analyzed: 10/22/22

Calcium	4.24	0.0500	mg/L wet	5.00	84.8	70-130				
Magnesium	4.84	0.0500	"	5.00	96.8	70-130				
Sodium	5.05	0.0500	"	5.00	101	70-130				

Summit Scientific

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Civitas Resources  
 650 Southgate Drive  
 Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
 Project Manager: Sam Vogt

**Reported:**  
 10/25/22 16:37

**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 BFJ0463 - General Preparation**

**Duplicate (BFJ0463-DUP1)**

**Source: 2210237-01**

Prepared: 10/18/22 Analyzed: 10/24/22

% Solids	96.4		%		96.7			0.331	20	
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Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

**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 BFJ0613 - General Preparation**

**Blank (BFJ0613-BLK1)**

Prepared: 10/22/22 Analyzed: 10/24/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFJ0613-BS1)**

Prepared: 10/22/22 Analyzed: 10/24/22

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 98.3 95-105

**Duplicate (BFJ0613-DUP1)**

Source: 2210244-01

Prepared: 10/22/22 Analyzed: 10/24/22

Specific Conductance (EC) 2.68 0.0100 mmhos/cm 2.70 0.707 20

Summit Scientific

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Civitas Resources  
 650 Southgate Drive  
 Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
 Project Manager: Sam Vogt

**Reported:**  
 10/25/22 16:37

**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 BFJ0611 - General Preparation**

**LCS (BFJ0611-BS1)**

Prepared: 10/22/22 Analyzed: 10/24/22

pH	8.99	pH Units	9.18	97.9	95-105
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**Duplicate (BFJ0611-DUP1)**

Source: 2210244-01

Prepared: 10/22/22 Analyzed: 10/24/22

pH	8.10	pH Units	8.31	2.56	20
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Summit Scientific

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Civitas Resources  
650 Southgate Drive  
Windsor CO, 80550

Project: Bearden 61N68W 6NESW

Project Number: AFE #22181  
Project Manager: Sam Vogt

**Reported:**  
10/25/22 16:37

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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.
- 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