

SITE NAME / REM: HANSCOME C 21-79 HN FL / REM #39803								DATE: 5/2/2025 & 5/14/2025	WEATHER: Cloudy and 60	
TYPE OF WORK: Flowline Decommissioning								CLIENT: Chevron		
LAT/LONG: 40.292320 / -140.562840								PERSONNEL: SHG		
ESTIMATED DEPTH TO GROUNDWATER: Groundwater not encountered								OTHER OBSERVATIONS: None		
<b>SOIL SAMPLING</b>								<b>FACILITY INFRASTRUCTURE</b>		
Date	Soil Sample ID	Soil Type	PID (ppm)	Staining (Y/N)	Odor (Y/N)	Time	Sent to lab on Ice? (Y/N)	EQUIPMENT	Quantity	
								Above Ground Storage Tank (AST)	-	
5/2/2025	FL01-R-S@3'	SW	0.8	N	N	8:40	Y	Buried or Partially Buried Vessel	-	
5/2/2025	FL01-R-W@3'	SW	1.5	N	N	11:30	Y	Separator	-	
5/2/2025	PH01@3'	SW	0.5	N	N	-	N	Emission Control Device (ECD)	-	
5/2/2025	PH02@3'	SW	0.5	N	N	-	N	Dump Line	-	
5/14/2025	BKG01@3'	SC	0.0	N	N	11:37	Y	Wellhead	-	
5/14/2025	BKG02@3'	SC	0.0	N	N	11:29	Y	Flowline	1	
5/14/2025	BKG03@3'	SC	0.0	N	N	11:41	Y	Third Party Equipment:	-	
								Other:	-	
								<b>Soil Loads Removed</b>		
								IMPACTED SOIL IDENTIFIED? None		
								ESTIMATED VOLUME OF IMPACTS:		
								Date	Number	CY
								Total Removed		
								Disposal Facility:		
								<b>Groundwater Recovery</b>		
								DATE GW ENCOUNTERED: NA		DEPTH:
								GROUNDWATER IN CONTACT WITH IMPACTED SOIL?		
								LNAPL OR SHEEN OBSERVED ON GW?		
<b>GROUNDWATER SAMPLING</b>								Date	BBLs	
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?	Sent to lab on Ice? (Y/N)			
								Total Removed		
								Disposal Facility:		





CDH Consulting, LLC  
Thornton, Colorado  
720.431.7468  
[www.CDHConsult.com](http://www.CDHConsult.com)

## **Flowline Closure Investigation and Environmental Summary**

HANSCOME C 21-79HN Flowline  
ECMC Remediation Project #39803  
Weld County, Colorado

### **Attachments:**

**Figure 1 – Site Location Map**

**Figure 2 – Soil Sample and Field Screening Locations Map**

**Figure 3 – Supplemental Site Investigation Map**

**Table 1 – Field Data Summary Table**

**Table 2 – Summary of Volatile Organic Soil Chemistry Data**

**Table 3 – Summary of Polycyclic Aromatic Hydrocarbon Soil Chemistry Data**

**Table 4 – Summary of Soil Suitability for Reclamation**

**Table 5 – Summary of Metals in Soil Chemistry Data**

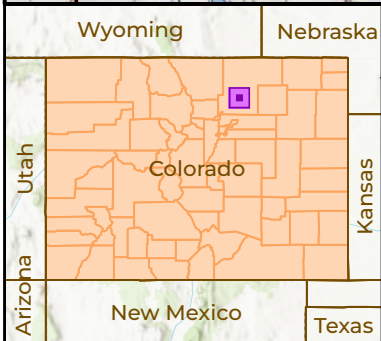
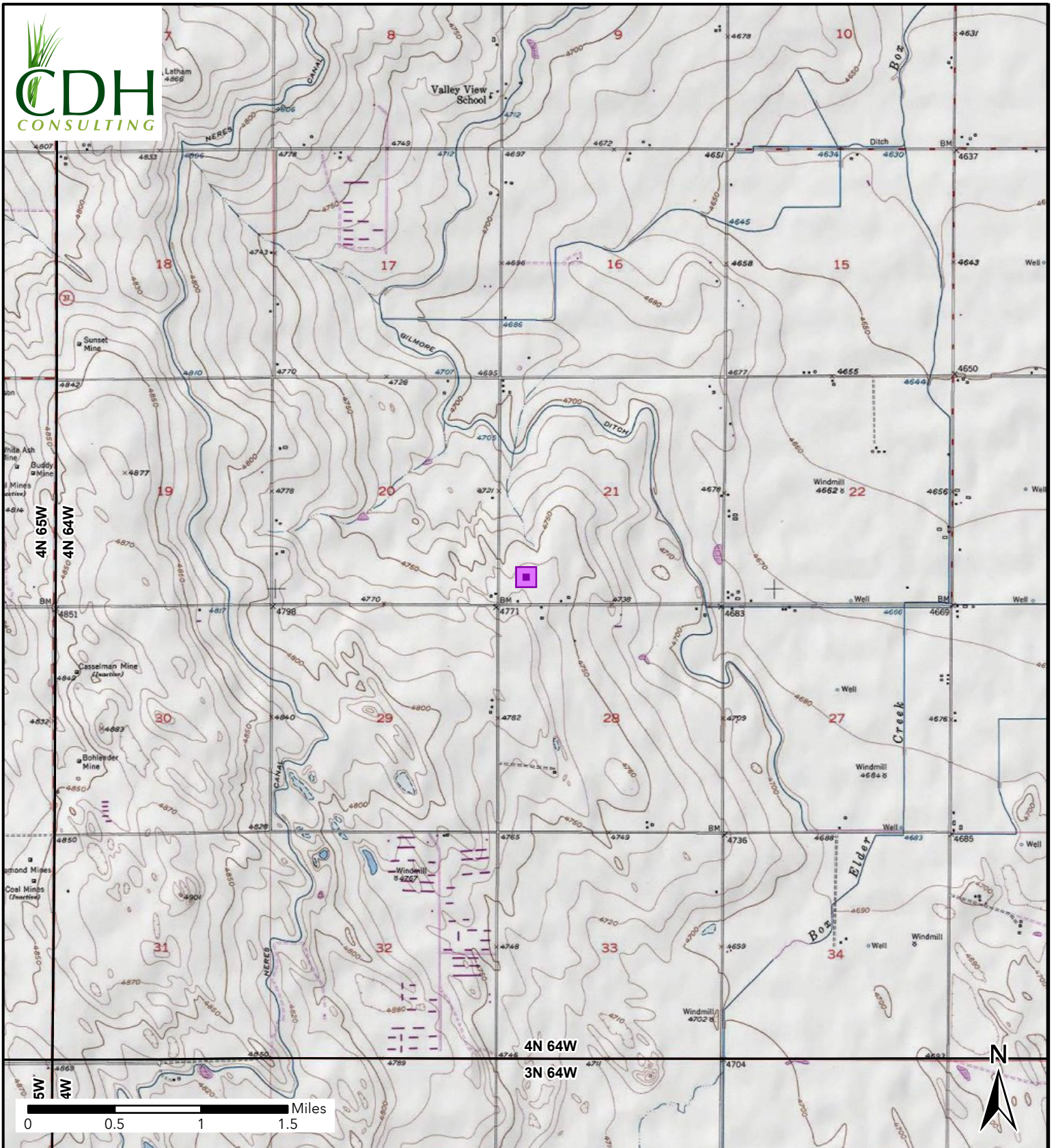
**Attachment A: Photographic Log**

**Attachment B: Flowline Closure Checklist**



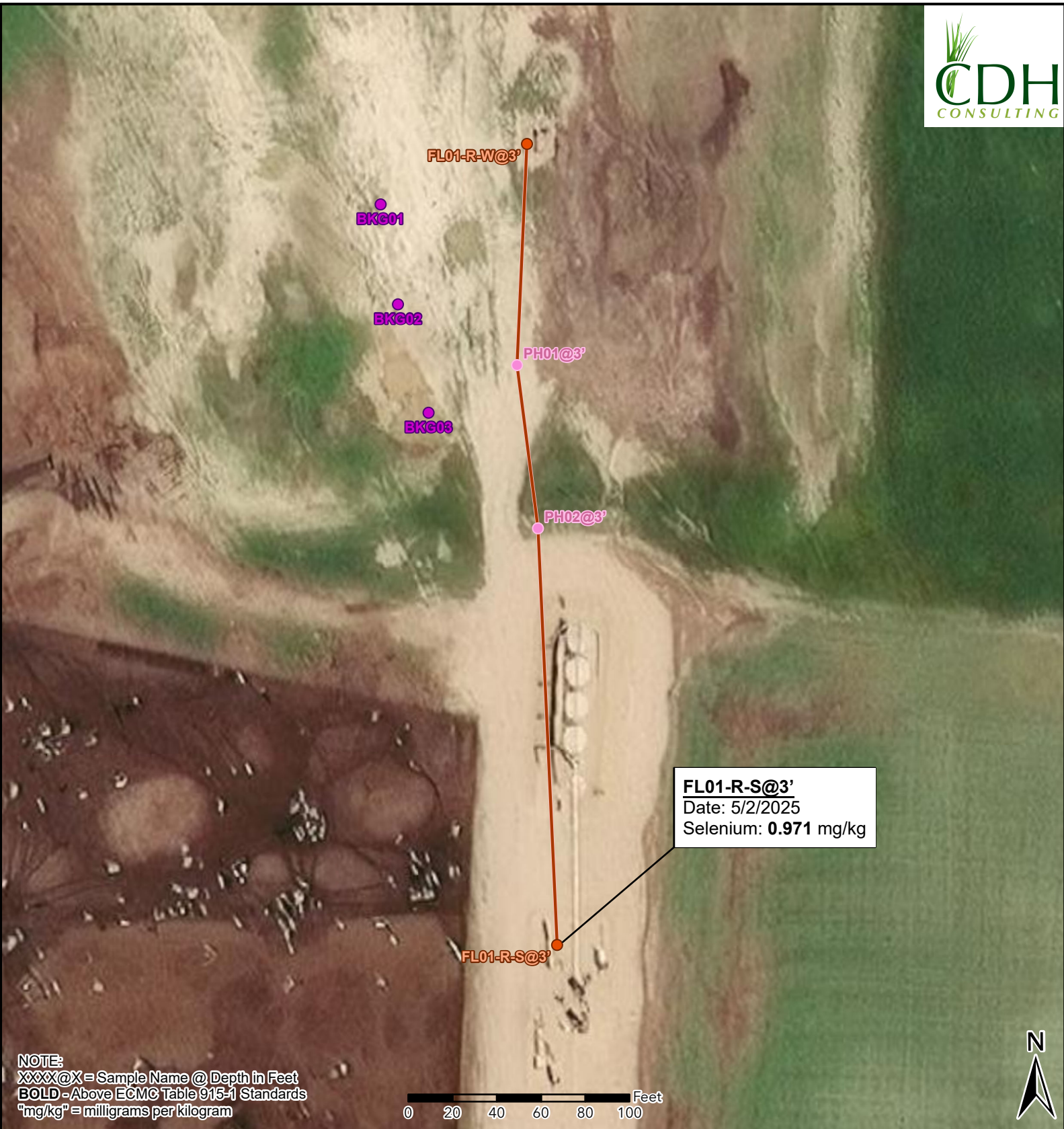
CDH Consulting, LLC  
Thornton, Colorado  
720.431.7468  
[www.CDHConsult.com](http://www.CDHConsult.com)

## FIGURES



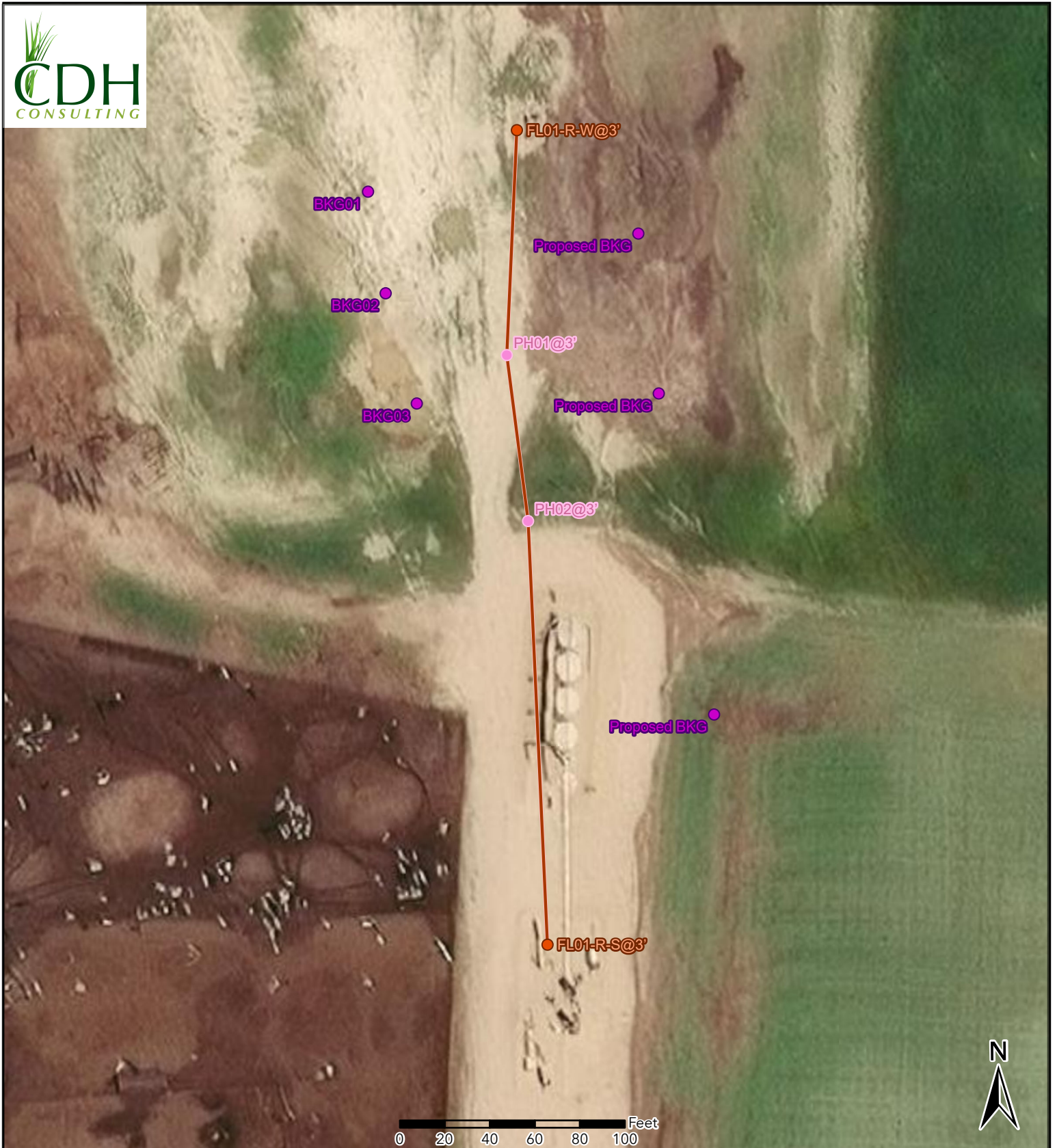
**Figure 1**  
**Site Location**  
**HANSCOME C 21-79HN**  
SWSW-SEC 21-T4N-R64W  
Weld County, Colorado  
Chevron

 Site Location








**Figure 2**  
**Soil Sample and**  
**Field Screening Locations**  
HANSCOME C 21-79HN  
SWSW-SEC 21-T4N-R64W  
Weld County, Colorado  
Noble Energy Inc.

- Site Location
- Soil Sample
- Background Sample
- Screening Point
- Flowline Removed



**Figure 3**  
**Supplemental Site Investigation Map**  
**HANSCOME C 21-79HN**  
 SWSW-SEC 21-T4N-R64W  
 Weld County, Colorado  
 Noble Energy Inc.

-  Site Location
-  Soil Sample
-  Background Sample
-  Screening Point
-  Flowline Removed



CDH Consulting, LLC  
Thornton, Colorado  
720.431.7468  
[www.CDHConsult.com](http://www.CDHConsult.com)

## **TABLES**

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**HANSCOME C 21-79HN, WELD COUNTY, COLORADO**  
**REM # 39803**

Sample ID	Sample Date	Depth (ft)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
FL01-R-S@3'	5/2/2025	3	40.291230	-104.562877	1.200000	0.8
FL01-R-W@3'	5/2/2025	3	40.292318	-104.562865	0.900000	1.5
PH01@3'	5/2/2025	3	40.292044	-104.562885	1.200000	0.5
PH02@3'	5/2/2025	3	40.291841	-104.562854	1.000000	0.5
BKG01@3'	5/14/2025	3	40.2922450	-104.563103	1.006578	0.0
BKG02@3'	5/14/2025	3	40.2921210	-104.563077	1.062716	0.0
BKG03@3'	5/14/2025	3	40.2919860	-104.563029	0.930131	0.0

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft = Feet

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSCOME C 21-79HN, WLED COUNTY, COLORADO  
REM # 39803

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
FL01-R-S@3'	5/2/2025	3	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.0200	5.85	<0.100	<4.00	5.85
FL01-R-W@3'	5/2/2025	3	<0.00100	<0.00500	<0.00250	<0.00650	<0.00500	<0.00500	<0.0200	25.84	<0.100	8.74	17.1

1. Bold values exceed the ECMC Table 915-1 limit(s)
  2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
  3. \* Indicates laboratory minimum detection limit in excess of SSL
  4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg
- (<) = Analytical result is less than the indicated laboratory reporting limit.  
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics  
TPH-DRO = Total petroleum hydrocarbons - diesel range organics  
TPH-ORO = Total petroleum hydrocarbons - oil range organics  
mg/kg = Milligrams per kilogram  
ft = Feet  
AP = Analysis pending  
NA = Not analyzed

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSCOME C 21-79HN, WELD COUNTY, COLORADO  
REM # 39803

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01-R-S@3'	5/2/2025	3	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.0200	<0.0200
FL01-R-W@3'	5/2/2025	3	<0.00600	<0.00600	0.00309	0.00437	0.00596	0.00223	0.00277	<0.00600	0.00595	<0.00600	0.00388	0.00749	<0.0200	<0.0200

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. \* Indicates laboratory minimum detection limit in excess of SSL

4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

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

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft = Feet

AP = Analysis pending

NA = Not analyzed

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE 100322**  
**HANSCOME C 21-79HN, WELD COUNTY, COLORADO**  
**REM # 39803**

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
FL01-R-S@3'	5/2/2025	3	8.06	0.54	0.489	0.393
FL01-R-W@3'	5/2/2025	3	7.79	2.71	1.34	0.438
BKG01@3'	5/14/2025	3	<b>8.73</b>	3.25	<b>10.6</b>	0.525
BKG02@3'	5/14/2025	3	<b>8.47</b>	<b>6.16</b>	<b>11.3</b>	0.517
BKG03@3'	5/14/2025	3	<b>8.4</b>	2.1	<b>6.72</b>	<1.00
Maximum Background Concentration			8.73	6.16	11.3	0.525

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. Brown highlighted soil analytical values indicate a regulatory exceedance.

AP = Analysis pending

NA = Not analyzed

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
HANSCOME C 21-79HN, WELD COUNTY, COLORADO  
REM # 39803

Sample ID	Sample Date	Depth (ft)	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 Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01-R-S@3'	5/2/2025	3	<b>2.61</b>	63.7	0.106	<1.00*	5.83	4.82	5.53	<b>0.971</b>	<0.500	22.8
FL01-R-W@3'	5/2/2025	3	<b>3.55</b>	<b>409</b>	0.238	<1.00*	10.6	7.66	9.15	<b>0.823</b>	<0.500	41.4
BKG01@3'	5/14/2025	3	<b>4.57</b>	<b>194</b>	0.359	<0.300*	23.5	<b>14.4</b>	18.2	<b>0.72</b>	<0.500	68.8
BKG02@3'	5/14/2025	3	<b>3.12</b>	<b>428</b>	<b>1.00</b>	<0.300*	14	10.6	18	<b>0.488</b>	<0.500	52.6
BKG03@3'	5/14/2025	3	<b>3.33</b>	<b>138</b>	0.183	<0.300*	15.2	<10.0	12.2	<b>0.386</b>	<0.500	<50.0
1.25x Maximum Background Concentration			5.71	535	1.250	NA	29.4	18.00	22.75	0.900	NA	86.0

- Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
- Red** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
- Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
- Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

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

mg/kg = Milligrams per kilogram

ft = Feet

\* Indicates laboratory minimum detection limit in excess of SSL

AP = Analysis pending

NA = Not analyzed



CDH Consulting, LLC  
Thornton, Colorado  
720.431.7468  
[www.CDHConsult.com](http://www.CDHConsult.com)

**ATTACHMENT A**  
**PHOTOGRAPHIC LOG**

**Attachment A - Photographic Log**

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025



Photo 1: View of FL01-R-S, facing northwest

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025



Photo 2: View of FL01-R-W, facing east

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025

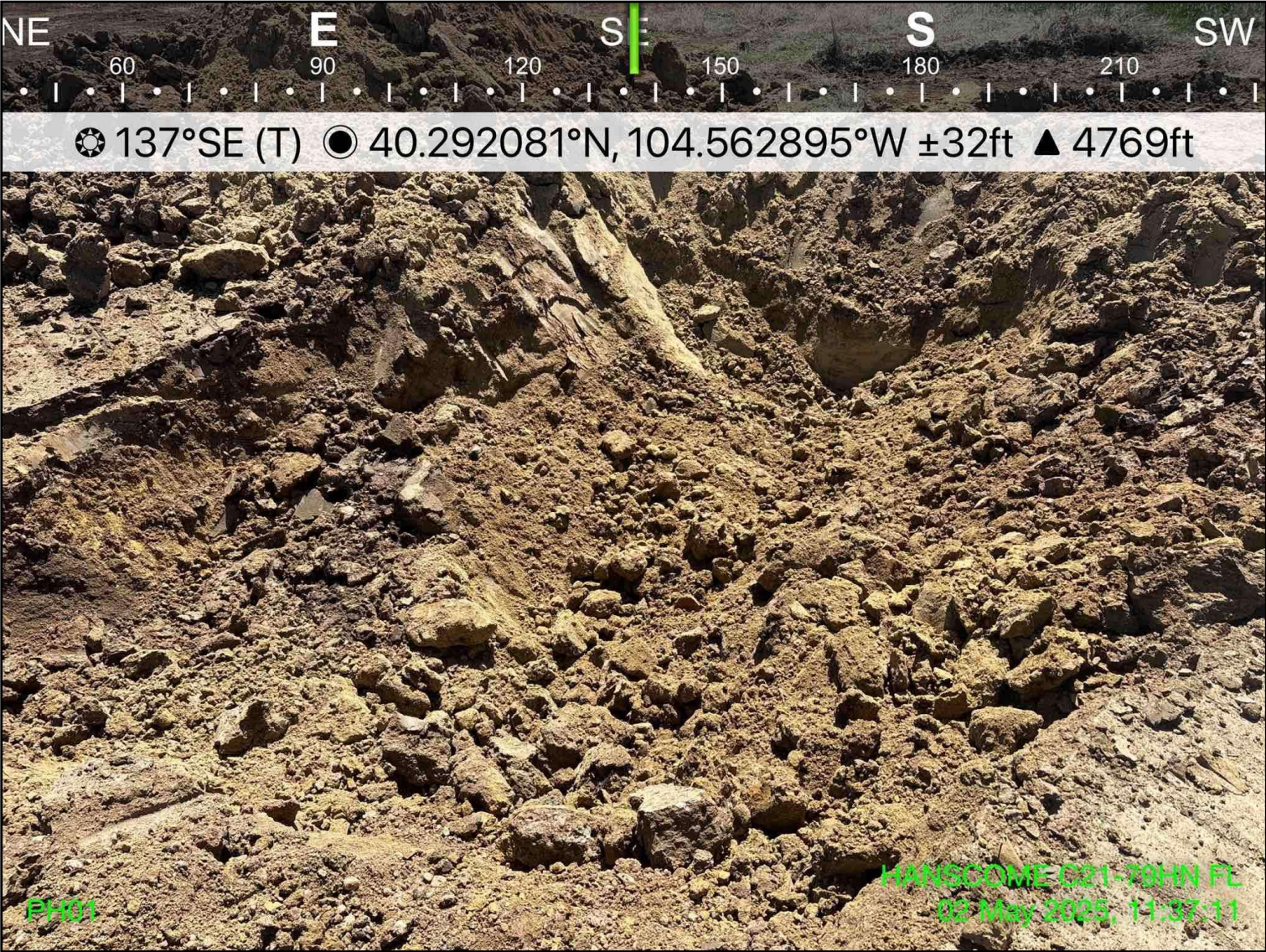


Photo 3: View of PH01 screening location, facing southeast

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025



Photo 4: View of PH02 screening location, facing south

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025

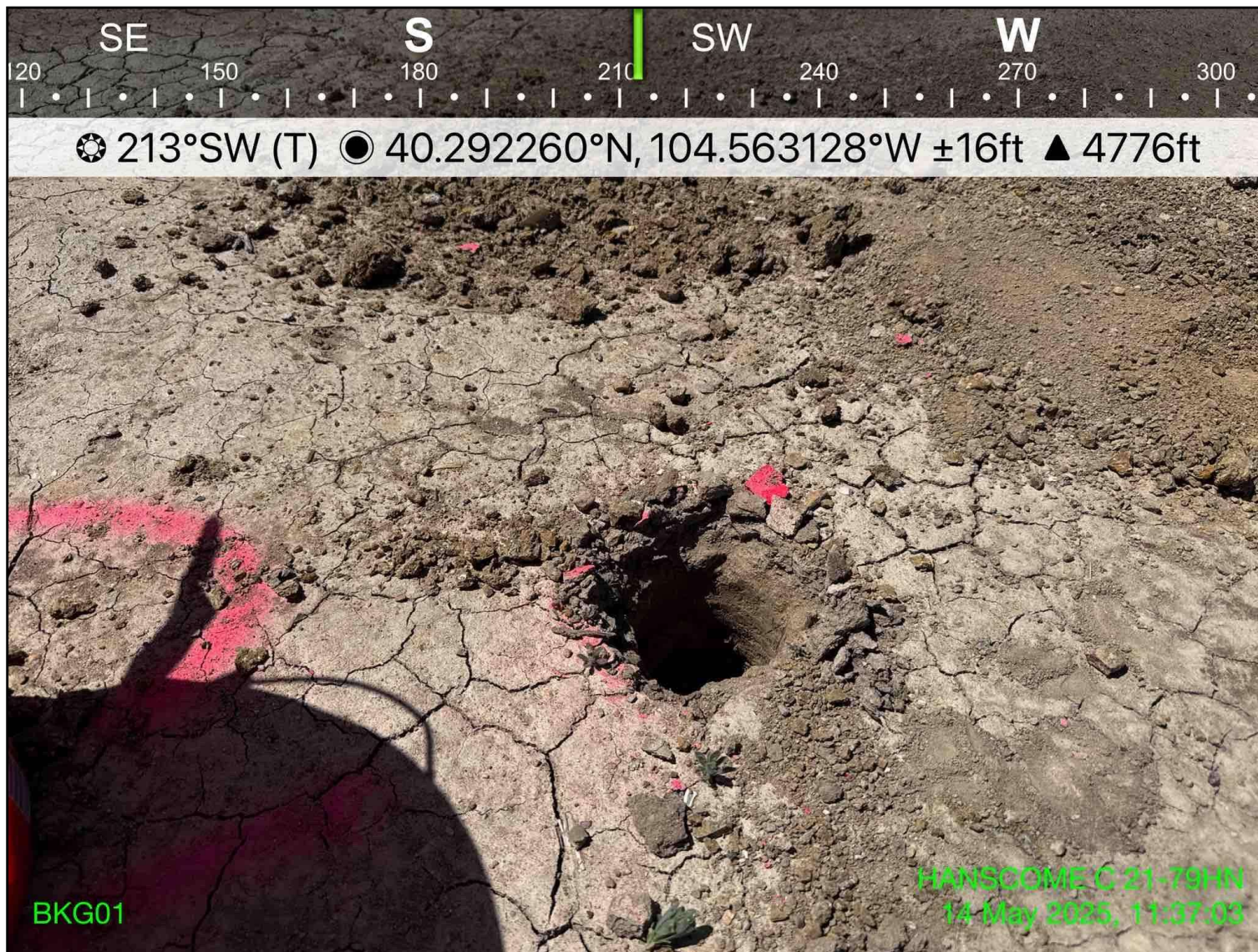


Photo 5: View of BKG01 sample location, facing southwest

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025



Photo 6: View of BKG02 sample location, facing south

Attachment A - Photographic Log

HANSCOME C 21-79HN FL

Chevron REM # 39803

5/2/2025 & 5/14/2025



Photo 7: View of BKG03 sample location, facing southeast



CDH Consulting, LLC  
Thornton, Colorado  
720.431.7468  
[www.CDHConsult.com](http://www.CDHConsult.com)

**ATTACHMENT B**  
**FLOWLINE CLOSURE CHECKLISTS**

## Flowline Closure Checklist

### COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

<i>Additional Attachments:</i>		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
<i>Site Name &amp; COGCC Facility Number:</i> HANSCOME C 21-79HN FL & 123-34334		<i>Date:</i> 6/2/2025			<i>Remediation Project #:</i> 39803			
<i>Associated Wells:</i> HANSCOME C 21-79HN		<i>Age of Site:</i> 10/8/2011 - 6/30/2024			<i>Number of Photos Attached:</i> 7			
<i>Starting point: (GPS coordinates and descriptions)</i> Point A: 40.291230, -140.562877								
<i>End point: (GPS coordinates and descriptions)</i> Point B: 40.292318, -140.562865								
<i>USCS Soil Type: Well-graded and clayey sands</i>					<i>Estimated Depth to Groundwater: Groundwater not encountered</i>			
<i>Hydrocarbon Impacted Soils / Spills:</i> None observed								
<i>Salt Crusted Soils or Impacted Vegetation:</i> None observed								
Flowlines								
<i>Flowline type</i>	Multiphase							
<i>Depth</i>	3'							
<i>Age</i>	10/8/2011							
<i>Length</i>	425'							
<i>Construction Material</i>	Steel							
<i>Were flowlines pulled?</i>	Yes							
<i>Visual Integrity of lines</i>	Good							
<i>Visual impacts if trenched</i>	None							
<i>PID Readings if trenched</i>	0.0 - 1.8 ppm							
<i>Sample taken? Location/Sample ID#</i>	Yes, see attached							
<i>Photo Number(s)</i>	See attached							
<i>Other observations regarding on location flowlines:</i> None								
Summary								
<i>Was impacted soil identified?</i> <b>No</b> Yes - less than 10 cubic yards      Yes - more than 10 cubic yards								
<i>Total number of samples field screened:</i> 4					<i>Total number of samples collected:</i> 2			
<i>Highest PID Reading:</i> 1.5 ppm					<i>Total number of samples submitted to lab for analysis:</i> 2			
<i>If more than 10 cubic yards of impacted soil were observed:</i>								
<i>Vertical extent:</i>					<i>Estimated spill volume:</i>			
<i>Lateral extent:</i>					<i>Volume of soil removed:</i>			
<i>Is additional investigation required?</i>								
<i>Was groundwater encountered during the investigation?</i> <b>No</b> Yes - not impacted or in contact with impacted soils      Yes - groundwater impacted and/or in contact with impacted soils								
<i>Measured depth to groundwater:</i>					<i>Was remedial groundwater removal conducted?</i> Yes      No			
<i>Date Groundwater was encountered:</i>					<i>Commencement date of removal:</i>			
<i>Sheen on groundwater?</i> Yes      No					<i>Volume of groundwater removed prior to sampling:</i>			
<i>Free product observed?</i> Yes      No					<i>Volume of groundwater removed post sampling:</i>			
<i>Total number of samples collected:</i>					<i>Total Volume of groundwater removed:</i>			
<i>Total number of samples submitted to lab for analysis:</i>								