



## **Facility Closure Investigation and Environmental Summary**

Shable Federal LB33-78HN Wellhead

ECMC Remediation Project #27519

Weld County, Colorado

### **Attachments:**

**Figure 1 – General Location Map**

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

**Table 1 – Soil Sample and Field Screening Location Information**

**Table 2 – Soil Analytical Results Summary Table – Volatile Organics**

**Table 3 – Soil Analytical Results Summary Table – PAHs**

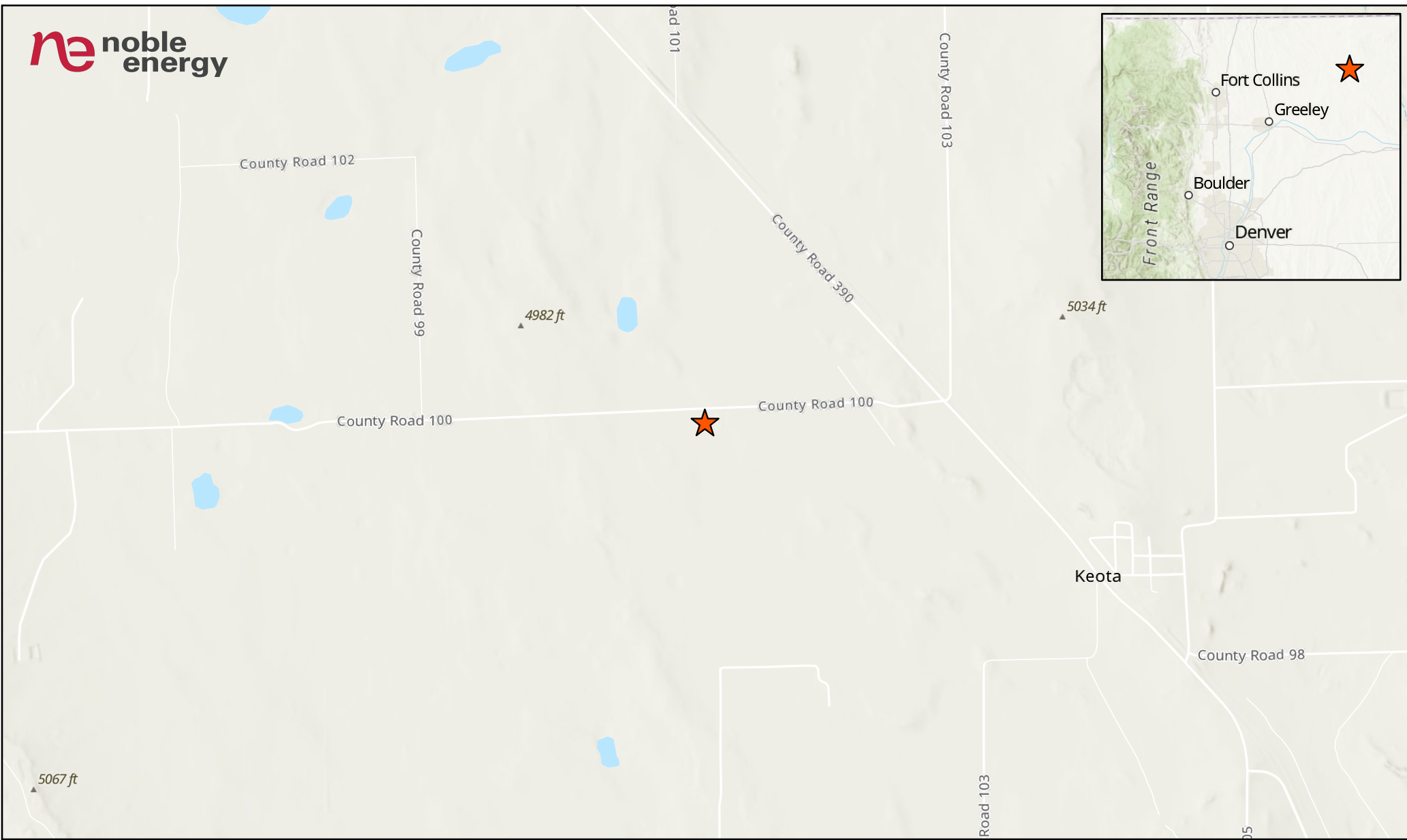
**Table 4 – Soil Analytical Results Summary Table – Soil Suitability**

**Table 5 – Soil Analytical Results Summary Table – Metals**

**Attachment A: Photographic Log**

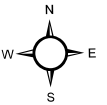
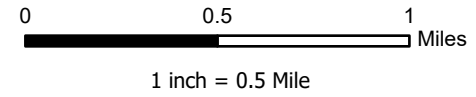
**Attachment B: Facility Closure Checklists**

## **FIGURES**



**LEGEND**

Site Location



Project No: 025-450

Map By: JW

Date: 10/15/2025

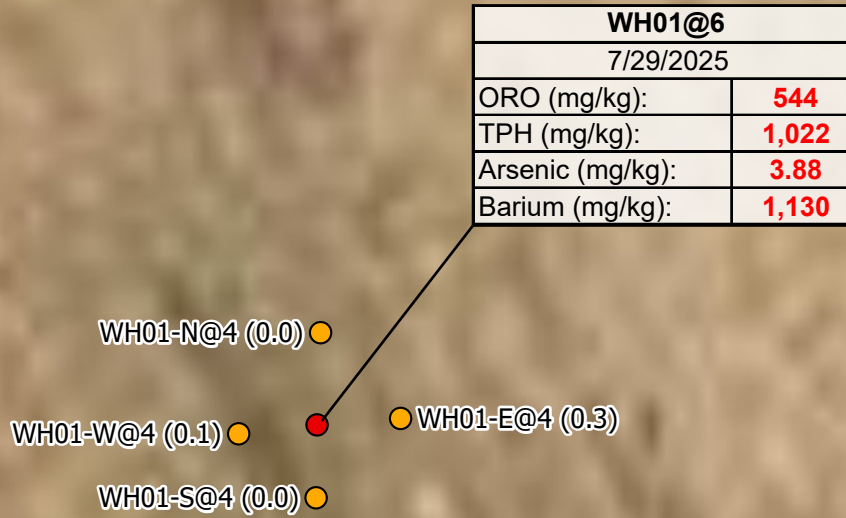
**SHABLE FEDERAL LB33-78HN WELLHEAD  
GENERAL LOCATION MAP**  
NOBLE ENERGY  
NW 1/4 NW 1/4 SECTION 33  
T9N R60W, 6TH PM  
WELD COUNTY, COLORADO



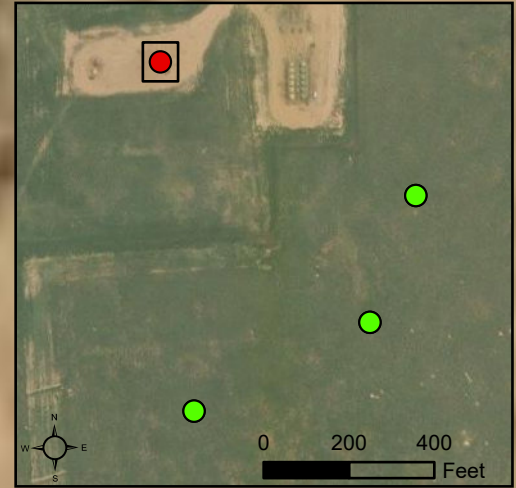
610 Garrison St., Unit T  
Lakewood, CO 80215  
303.378.4036

Figure

1



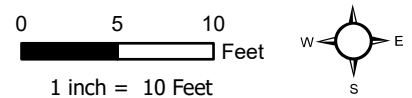
**LABEL LEGEND**  
 XXXX@X: SAMPLE NAME @ DEPTH IN FEET  
 WH: WELLHEAD SAMPLE  
 ORO: OIL RANGE ORGANICS  
 TPH: TOTAL PETROLEUM HYDROCARBONS  
**BOLD**: ABOVE ECMC TABLE 915-1 GWSSL



**Legend**

- Soil Sample
- Screening Location
- Proposed Background Sample

**NOTES:**  
 - Sample Label (PID Result in ppm)  
 - ppm = parts per million  
 - PID = photoionization detector



Project No: 025-450	<b>SHABLE FEDERAL LB33-78HN WELLHEAD          SOIL SAMPLE AND FIELD SCREENING LOCATIONS</b> NOBLE ENERGY NW 1/4 NW 1/4 SECTION 33 T9N R60W, 6TH PM WELD COUNTY, COLORADO		610 Garrison St., Unit T Lakewood, CO 80215 303.378.4036	Figure
Map By: JW				2
Date: 10/15/2025				

Cherwon, Figure 2 - Template Noble Wellhead - Soil Sample and Field Screening Locations

## **TABLES**

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**SHABLE FEDERAL LB33-78HN WELLHEAD, WELD COUNTY, COLORADO**  
**REM # 27519**

Sample ID	Sample Date	Depth (ft-bgs)	GPS Data Latitude/Longitude		VOC Concentration (ppm)
WH01@6	7/29/2025	6	40.712412	-104.105877	0.1
WH01-N@4	7/29/2025	4	40.712425	-104.105876	0.0
WH01-E@4	7/29/2025	4	40.712412	-104.105861	0.3
WH01-W@4	7/29/2025	4	40.712411	-104.105891	0.1
WH01-S@4	7/29/2025	4	40.712401	-104.105877	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).

ppm - Parts per million

ft-bgs - feet below ground surface

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
SHABLE FEDERAL LB33-78HN WELLHEAD, WELD COUNTY, COLORADO  
REM # 27519

Sample ID	Sample Date	Depth (ft-bgs)	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**		
WH01@6	7/29/2025	6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002	1,022	<0.200	478	544

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s)
  2. Red highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
  3. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit
  4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg
- TPH-GRO = Total petroleum hydrocarbons - gasoline range organics  
TPH-DRO = Total petroleum hydrocarbons - diesel range organics  
TPH-ORO = Total petroleum hydrocarbons - oil range organics  
ft-bgs - feet below ground surface  
mg/kg - milligrams per kilogram

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
SHABLE FEDERAL LB33-78HN WELLHEAD, WELD COUNTY, COLORADO  
REM # 27519

Sample ID	Sample Date	Depth (ft-bgs)	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
WH01@6	7/29/2025	6	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit  
ft-bgs - feet below ground surface  
mg/kg - milligrams per kilogram

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE 100322**  
**SHABLE FEDERAL LB33-78HN WELLHEAD, WELD COUNTY, COLORADO**  
**REM # 27519**

Sample ID	Sample Date	Depth (ft-bgs)	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
WH01@6	7/29/2025	6	8.05	0.497	0.755	0.141

ft-bgs - feet below ground surface

EC - Electrical Conductivity

SAR - Sodium adsorption ratio

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
SHABLE FEDERAL LB33-78HN WELLHEAD, WELD COUNTY, COLORADO  
REM # 27519

Sample ID	Sample Date	Depth (ft-bgs)	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
WH01@6	7/29/2025	6	<b>3.88</b>	<b>1130</b>	<0.337	<0.5*	<40.8	<12.4	<23.1	0.240	<0.710	<328

1. **Bold** faced 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. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit
- \* Indicates laboratory reporting or minimum detection limit in excess of SSL
- ft-bgs - feet below ground surface  
mg/kg - milligrams per kilogram

**ATTACHMENT A  
PHOTOGRAPHIC LOG**

Shable Federal LB33-78HN Historical Release Wellhead Photographic Log



Shable Federal LB33-78HN Historical Release Wellhead Photographic Log



Shable Federal LB33-78HN Historical Release Wellhead Photographic Log



**ATTACHMENT B  
FACILITY CLOSURE CHECKLISTS**

# Chevron Rockies Business Unit

## Field Qualitative Criteria for ECMC Reporting Associated with the Discovery of Potentially Impacted Material

If answered **Yes** to any of the questions listed below, this may suggest the presence of potentially impacted materials as outlined in ECMC Rule 912. Out of an abundance of caution, a "Yes" response will be reported to the ECMC within 24 hours after discovery, regardless of laboratory results. **Immediately notify the RBU Remediation Team.** Include a copy of this Field Qualitative Spill Criteria Checklist in the field Report.

Please answer the following questions when on-site:

1. Is there visible petroleum hydrocarbon staining in the soil?  
 (Yes) /  (No)
2. Does the soil sample from the stained area have a petroleum odor?  
 (Yes) /  (No)
3. Is there a petroleum hydrocarbon sheen on the nearby surface water?  
 (Yes) /  (No)
4. Does there appear to be a sheen of the surface of accumulated groundwater or seeps within the excavation indicative of petroleum?  
 (Yes) /  (No)
5. Is stained soil in contact with groundwater?  
 (Yes) /  (No)

Please Include relevant photos of the site conditions for items 1-5.

See attached photolog

Shable Federal LB33-78HN

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Location name

Please Circle Facility Type: Well / Flowline / Production Facility / Other

## Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Shable Federal LB33-78HN, 431816		Date: 7/29/2025						Remediation Project #: 27519	
Associated Wells: NA		Age of Site: 3/29/2013-spud date						Number of Photos Attached: 3	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.712413 / -104.105882							Estimated Facility Size (acres): ~0.01		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  Overall good									
USCS Soil Type: ML				Estimated Depth to Groundwater: Unknown as none encountered					
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) Yes, size and extent unknown; remedial excavation will occur as soon as possible									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None encountered or observed									
Wellhead(s)									
Well API	05-123-36799								
Age	3/29/2013-spud date								
Condition of surface around wellhead	Good								
PID Readings	0.0 to 0.3 ppm								
Condition of subsurface (staining present)	Good								
PID Readings	0.1 ppm								
Sample taken? Location/Sample ID#	WH01@6								
Photo Number(s)	1-3								
Other observations regarding wellheads: Hydrocarbon impacted soils were not suspected/observed at the time of wellhead decommissioning activities; analytical report confirmed presence of spill									
Summary									
Was impacted soil identified? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards									
Total number of samples field screened: 5				Total number of samples collected: 5					
Highest PID Reading: 0.3 ppm				Total number of samples submitted to lab for analysis: 1					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No				Volume of groundwater removed prior to sampling:					
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> No				Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									