



RUH STATE SOUTH PAD TOPSOIL PROTECTION PLAN

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Article I. Introduction

Location Information

This document provides site-specific information for the Ruh State South Pad within the Ruh State OGD. The information in this document relates specifically to the time during the construction, drilling, completion, and production of the eight (8) proposed horizontal wells on this location.

The proposed location is dryland crop on the west side of WCR 83 approximately 7392' south of the intersection with WCR 74. The Pad will be in the SENE of Section 11, Township 6 North, Range 62 West, Zoned Agricultural within Weld County Ag-Rural Planning Area. A 1041WOGLA Local Gov Permit was approved as 1041WOGLA22-0022.

The proposed Pad will be 10.90 acres, reduced to 8.54 after interim reclamation. The working pad surface will be 6.22 acres. The Pad is on Parcel 079711100004 owned by Marjorie L and William G Ruh. The location is currently used for farming.

The proposed production facility equipment for the Ruh State South Pad will be located within the Working Pad Surface adjacent to the wells and will consist of oil tanks, water tanks, meter buildings, separators, vapor recovery towers, compressors, vapor recovery units, LACT units, scrubbers, skids, pumps, and proposed electrical and/or solar equipment.

Phase	Duration (days)	Estimated Start Date
Construction	24	2 nd Quarter (May), 2024
Drilling	56	2 nd Quarter (June), 2024
Completion	56	3 rd Quarter (August), 2024
Flowback	90	3 rd Quarter (September), 2024
Production	9,150	4 th Quarter (December), 2024
Interim Reclamation	15	4 th Quarter (December), 2024*

**or the first favorable growing season.*

Article II. General Reclamation Regulations

Per Rule, 1001.a, HERV will ensure the protection of segregated topsoil and will return the land surface as nearly as practical to its condition at the commencement of drilling operations. Within three months following drilling and/or subsequent operations, the total footprint of Ruh State South Pad disturbed area and access will be reduced from approximately 10.90 acres to 8.54 acres.

Article III. Rule 1002. Site Preparation and Stabilization

Soil removal and segregation

Soil horizons will be removed and stored separately for use during future interim and final reclamation. Soil horizons will be segregated based on physical characteristics observed during topsoil removal. All stockpiled soils shall be protected from degradation due to contamination, compaction and, to the extent practicable, from wind and water erosion during drilling and production operations. Topsoil stockpiles will be located along the

West side of the proposed Oil and Gas Location as shown on the Facility Layout Drawings. The maximum height of topsoil stockpiles will be 8 feet.

Article IV. General Recommendation Compliance

Experienced Persons

The topsoil 'dirt work' will be performed by a competent and experienced local contactor, such as Roberts Excavation Corp., JAMM Power Services, LLC, or 2DOT Consulting. The attached Topsoil Investigation was prepared by Terracon.

Soil Horizon Identification

Soil horizons will be identified based on physical characteristics to allow for proper stockpile segregation and storage. In the event there is a plow layer, the entire plow layer will be considered topsoil and will be salvaged. A plow layer is not planned for this location.

Standard Terminology

The attached Topsoil Investigation labels do not use the standard terminology, but the actual stockpile labels will use this nomenclature.

Test Pit Locations

Test bore locations are identified and mapped as the Exploration Plan of the attached Topsoil Investigation.

NRCS Soil Types

Please see NRCS Soil Type aerial map attached to Form 2A.

Soil Horizon Thicknesses and Evaluation

Soil Horizon Thickness and Evaluation data is included as the investigation results of the attached Topsoil Investigation.

Narrative Description of Available Topsoil to be Salvaged

Per the Grading Plan stie quantities, total available topsoil to be salvaged will be 9,662 cubic yards.

Method and Timeline for Seeding and Stabilizing Stockpiles

Operator will stabilize the topsoil stockpiles utilizing vehicle tracking perpendicular to slope angle for short term stabilization and drill seed/crimped straw mulch application for longer term stabilization will be utilized to prevent erosion.

Site-Specific BMP

- Per Rule, 1002.a, the drill site will be delineated by a perimeter stormwater ditch and berm BMP structure. The ditch and berm will be installed to specifications detailed in HERV's Stormwater Management Plan and in conjunction topsoil removal and segregation.
- Typical erosion control practices include, but are not limited to, revegetation of disturbed areas, mulching, berms, diversion dikes, surface roughening, slope drains, check dams, and other comparable measures.
- An integrated weed management plan which includes mowing, spraying, and routine inspections will be utilized to prevent weed establishment in compliance with the Colorado Noxious Weed Act and Weld County Weed Division options.
- Establishment of diverse population of native plant species through seeding, as well as application of site-specific soil amendments (if necessary) will be utilized to maintain soil microbial activity.
- After the location is constructed, topsoil depth inventories will be conducted in accordance with CDOT Topsoil Testing Procedures at areas determined by the person conducting the inventory. Inventories will be taken after issuance of the 2A and prior to construction and as part of the pad work. A topsoil depth inventory at 2-3 locations within the Disturbed Area will be conducted to confirm the depth of topsoil. Such depths will be determined on site via either a heavy equipment dozer or grader by via approximate 50' long slot cuts. If there is a variance in the depths exposed via the slot cuts additional slot cuts will be made to ensure that all topsoil is removed and stockpiled.
- The Grading Plan prepared in conjunction with the Weld County 1041WOGLA22-0022 is attached to the Form 2A as Layout Drawings and estimates six inches of topsoil in its calculations. If the slot cuts described above indicate greater depths of topsoil, then those additional cubic yards will be calculated and stockpiled in the areas shown on the Grading Plan.
- **Fencing of drill sites and access roads on crop lands.** During drilling operations on crop lands, when requested by the surface owner, the operator shall delineate each drill site and access road on crop lands constructed after such date by berms, single strand fence, or other equivalent method in order to discourage unnecessary surface disturbances. Pronghorn-friendly fencing may be installed and maintained around the pad perimeter following drilling and completion activities and in coordination with surface landowner preferences and any relevant local government requirements. Any wire fencing will be three- or four-strand with the top strand maximum height of approximately 42 inches, with the lower smooth strand without barbs at a height of approximately 18 inches.
- Per Rule, 1002.b and 1002.c, soil horizons will be removed and stored separately for use during future interim and final reclamation. Soil horizons will be segregated based on physical characteristics observed during topsoil removal. All stockpiled soils shall be protected from degradation due to contamination, compaction and, to the extent practicable, from wind and water erosion during drilling and production operations.
- The assumed stockpile slopes will be 3:1 with a maximum slope of 3:1.

Article V. Exhibits/References/Appendices

Topsoil Investigation



January 28, 2022

Petroleum Field Services, LLC
dba Ascent Geomatics Solutions
8620 Wolff Court
Westminister, Colorado 80031

Attn: Mr. Ramsey Hanson, CFO
P: (303) 928-7128
E: rhanson@ascentgeomatics.com

Re: Topsoil Investigation Results
Topsoil Investigations at HERV 6 and HERV 8 Pads
Multiple Locations Near the Intersection of CR 74 and CR 83
Weld County, Colorado
Terracon Project No. 21225003

Dear Mr. Hanson:

Terracon Consultants, Inc. (Terracon) was requested to perform a topsoil thickness investigation at the HERV 6 and HERV 8 pad sites located near the intersection of CR 74 and CR 83 in Weld County, Colorado.

We determined topsoil thickness at each location by obtaining a soil sample using the split-barrel sampling procedure at the existing ground surface at the approximate locations shown on the attached exploration plans. We used soil color, native grass roots, soil structure and texture, and land use as indicators to identify topsoil thickness. The topsoil thickness investigation has been completed and photos of the samples and site are attached to this letter, with the topsoil thickness measured by Terracon as follows:

HERV 6 Pad	
Boring Location	Topsoil Depth (inches)
B-1	5½
B-2	8
B-3	7½

HERV 8 Pad	
Boring Location	Topsoil Depth (inches)
B-1	6½
B-2	11
B-3	7½

Terracon Consultants, Inc. 1510 44th Street, Unit 1 Evans, Colorado 80620
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Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads • Weld County, Colorado
January 28, 2022 • Terracon Project No. 21225003

Terracon

We appreciate the opportunity to continue to be of service to you on this project. If you have any questions or concerns regarding the content of this report, please feel free to contact us.

Sincerely,

Terracon Consultants, Inc.



Jacob DeYoung
Assistant Geologist



Eric D. Bernhardt
Eric D. Bernhardt, P.E.
Geotechnical Department Manager

cc: Raejanna Church – Ascent Geomatics Solutions (via email)

Attachments: Site Location
Exploration Plan (2 Pages)
Topsoil Photos (2 pages)
Site Photos (4 pages)

Responsive • Resourceful • Reliable

SITE LOCATION

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003

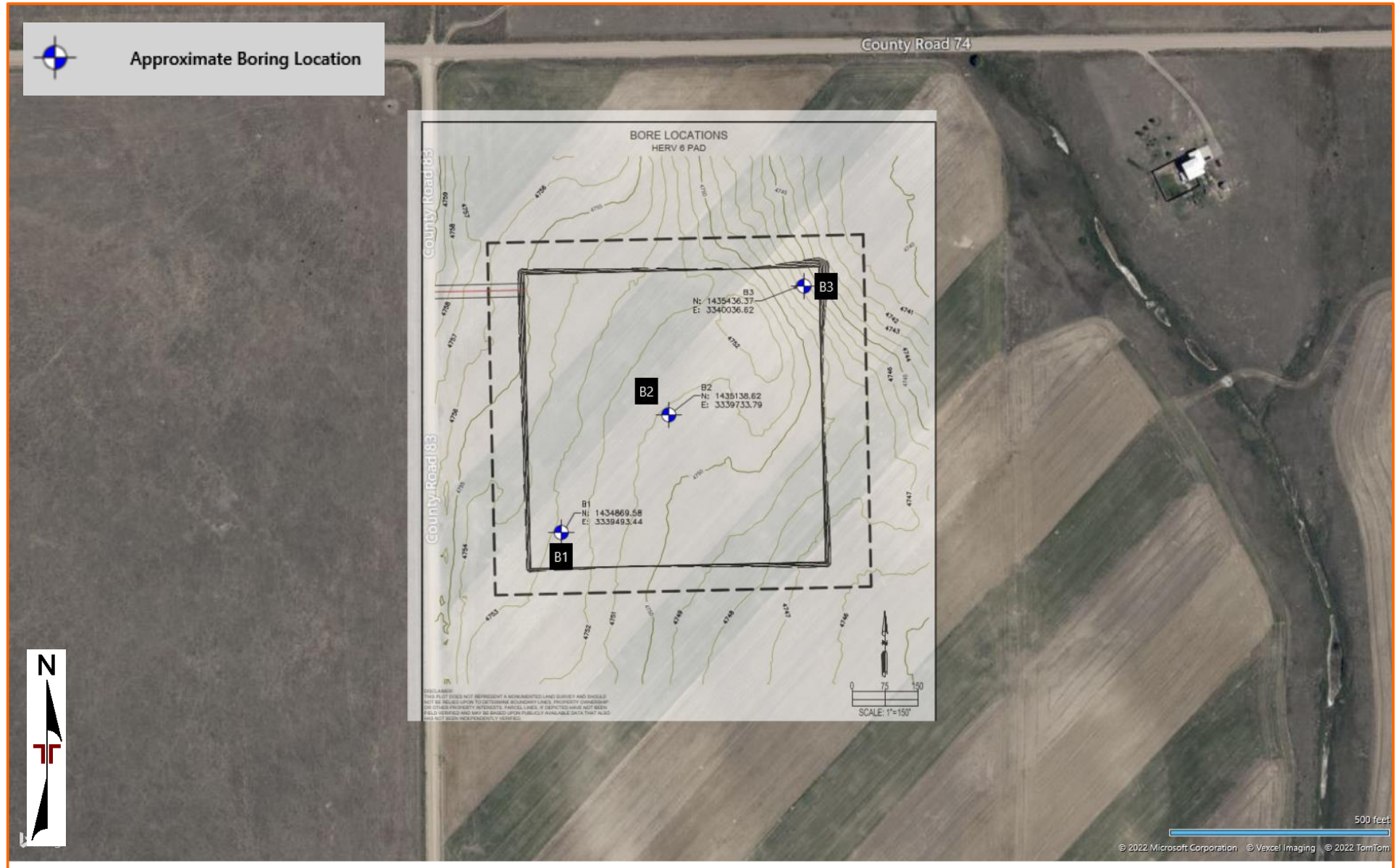


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT
INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: GALETON, CO (1997) and CORNISH, CO (1997).

EXPLORATION PLAN

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21215097



EXPLORATION PLAN

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
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Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003



TOSOIL PHOTOS

HERV 6 Pad:



B-1 at 0 feet. Topsoil thickness of about 5½ inches



B-2 at 0 feet. Topsoil thickness of about 8 inches



B-3 at 0 feet. Topsoil thickness of about 7½ inches

Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003



HERV 8 Pad:



B-1 at 0 feet. Topsoil thickness of about 6½ inches



B-2 at 0 feet. Topsoil thickness of about 11 inches



B-3 at 0 feet. Topsoil thickness of about 7½ inches

Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003



SITE PHOTOS

HERV 6 Pad:



Looking North from Boring No. B-2



Looking East from Boring No. B-2

Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003



Looking South from Boring No. B-2



Looking West from Boring No. B-2

Topsoil Investigation Results

Topsoil Investigations at HERV 6 and HERV 8 Pads ■ Weld County, Colorado
January 28, 2022 ■ Terracon Project No. 21225003



HERV 8 Pad:



Looking North from Boring No. B-2



Looking East from Boring No. B-2



Looking South from Boring No. B-2



Looking West from Boring No. B-2