

**Site/Project Location:** Denbury 12" Cedar Hills CO2 Pipeline

**Date of Inspection:** 30 August 2021

Keitu staff visited the Denbury 12" Cedar Hills CO2 Pipeline project for a construction inspection. Inspection of construction sites focused on (1) confirming surface disturbance/work occurring within ND PSC-approved work corridor and/or route; (2) topsoil segregation occurring; (3) vegetation removal consistent with tree & scrub mitigation plan; and (4) storm water runoff and sediment control.

### **Observed Work / Weather Conditions**

Visit occurred between 12:00 p.m. to 3:00 p.m. The weather was mostly sunny, temperature at 80°F, winds at 10 mph out of the west and no precipitation.

The 12" pipeline project has been underway since July of 2021. At the time of the inspection, pipe was being lowered into the ground on the western end of the project in Section 1 T132N R101W in Bowman County, North Dakota. Backfilling activities were underway where pipe had already been lowered into the ground in Sections 31, 32, and 33 T133N R106W in Slope County, North Dakota. It was also noted during the inspection that the ROW had been cleared and pipe was laid out above ground for the remaining Project area located in Sections 7, 8, 9, 16, 21, 28, and 33 T132N R106W in Bowman County, North Dakota.

At the time of the inspection, the entire Project corridor in North Dakota had been cleared of vegetation, stripped of topsoil, and all of the pipe had been laid out along the Project ROW. Trenching and lowering of the pipe began on the west end of the Project with construction activities working along the ROW to the east and eventually south to the termination point of the line. Heavy equipment operators were following behind the trenching crew and backfilled the trenched areas with subsoil. Upon completion of trenching and backfilling activities, a separate crew will follow the entire Project Corridor to replace topsoil, and fertilize and reseed the disturbed area according to the Natural Resources Conservation Service recommendations. Construction activities are expected to be completed in November 2021.

The depth of the lowered pipe was measured in several locations prior to being backfilled with subsoil and the depth of the pipe from the surface ranged from 56" to 68" and noted to be in compliance with Commission's Order. Sandbags were stacked for trench breaks in several locations along the open trenched areas observed during the inspection.

### **Top Soil Management / Condition / Erosion Control / Stormwater Management**

During the inspection, it was noted that the topsoil removed along the Project corridor was properly segregated from subsoil. All topsoil was placed on one side of the line and subsoil on the opposite side. Erosion control and stormwater management BMPs were being placed in areas of concern by a crew following behind the heavy equipment that was backfilling trenched areas with subsoil. Stormwater crews will be monitoring the effectiveness of the BMPs during rain events and will adjust BMPs as needed. The Project area had not received any recent precipitation at the time of the inspection.

### **Vegetation Condition**

Removal of trees and shrubs were noted in one location where construction activities crossed through a narrow ravine. Denbury's Environmental consultant confirmed that tree and shrub counts were taken and the tree/shrub species removed were predominately green ash and American elm.

## **Deficiencies**

A deficiency regarding construction activities in two proposed route adjustments was identified in the course of the inspection and post-inspection review of Project records filed with the PSC. A summary of the identified issue and pertinent information based on the review of the Project file are described below.

On July 15th, 2021, Denbury notified the Commission of two route adjustments under North Dakota Century Code Chapter 49-22.1-15(3) would be required to avoid recently identified buried utilities within the designated corridor. Denbury provided details regarding the need for each of the two route adjustments along with summaries of field studies conducted within the designated corridor, desktop reviews of official files, PDF maps showing the two route adjustments, and a Class III survey for previously identified cultural resources for areas falling outside the previous surveys of the designated corridor. Denbury's environmental consultant concluded that previous surveys did not cover portions of the proposed realignments and based on the desktop review and records search, further field and pedestrian surveys were not warranted for the two route adjustments.

On July 21, 2021, the Commission filed a request for more information regarding the two proposed route adjustments that were not included in the notification submitted by Denbury on July 15th, 2021. The Commission requested that prior to the route adjustment, Denbury needed to file with the Commission a Certification relating to a route adjustment, supporting documents (including a map meeting the requirements of North Dakota Administrative Code section 69-06-04-01(2) (n)), a description of whether the route adjustment was to be located inside or outside the designated corridor, and all supporting documents relating to Route Adjustments Before or During Construction per the Certification Relating to Order Provisions- Transmission Facility Siting that is attached to the Commission's April 1, 2020 Findings of Fact, Conclusions of Law and Order.

The information requested by the Commission has not been filed as of September 13, 2021. At the time of the inspection on August 30, 2021, construction activities were noted at both of the proposed route adjustments. The information requested by the Commission needed to be filed and approved prior to construction in the two route adjustments outside of the designated corridor.

## **Actions Taken/To Be Taken**

Burying of the remaining pipe was ongoing at the time of the inspection and was expected to be completed in September 2021. Reclamation and revegetation seeding is expected to be completed by November 2021. Topsoil piles along ROW will be replaced on top of disturbed areas prior to fertilizing and reseeding.

**Photo #1 "Pipeline Running South along Camp Crook Road with Reroute 2 Area at Far End of Photo"**



**Photo #2 "Pipe Lowered and being Backfilled with Subsoil"**



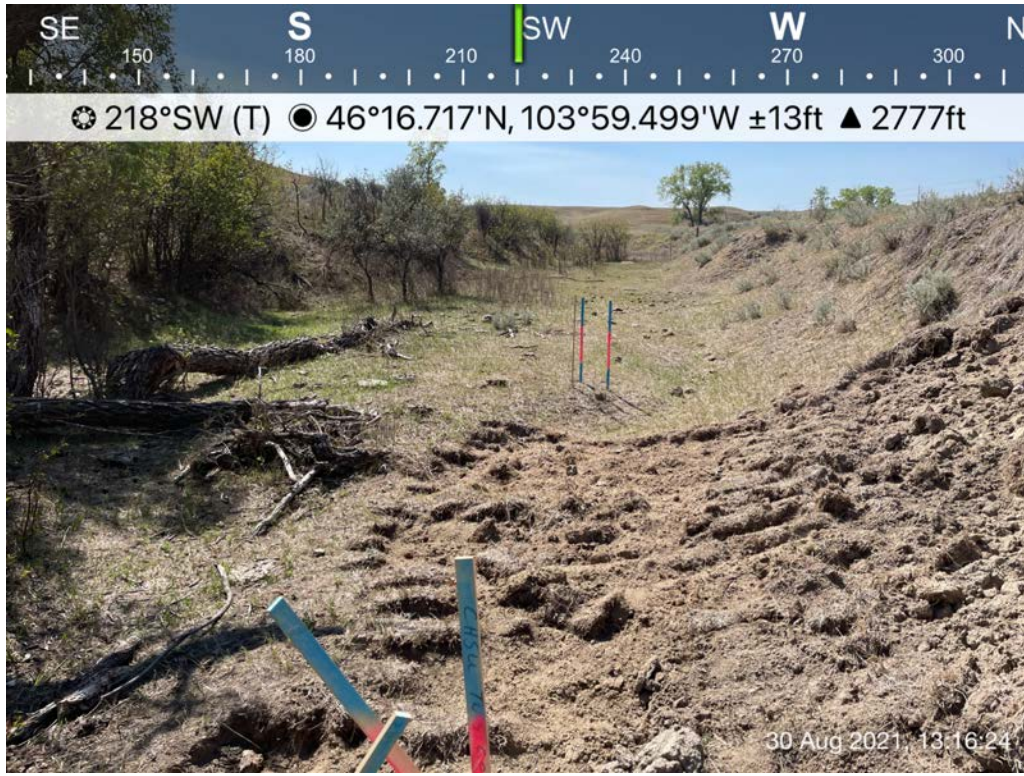
**Report Photo #3 "Trench Break"**



**Report Photo #4 "Pipe Lowered and Ready for Backfill"**



**Report Photo #5 "Backfilling with Subsoil"**



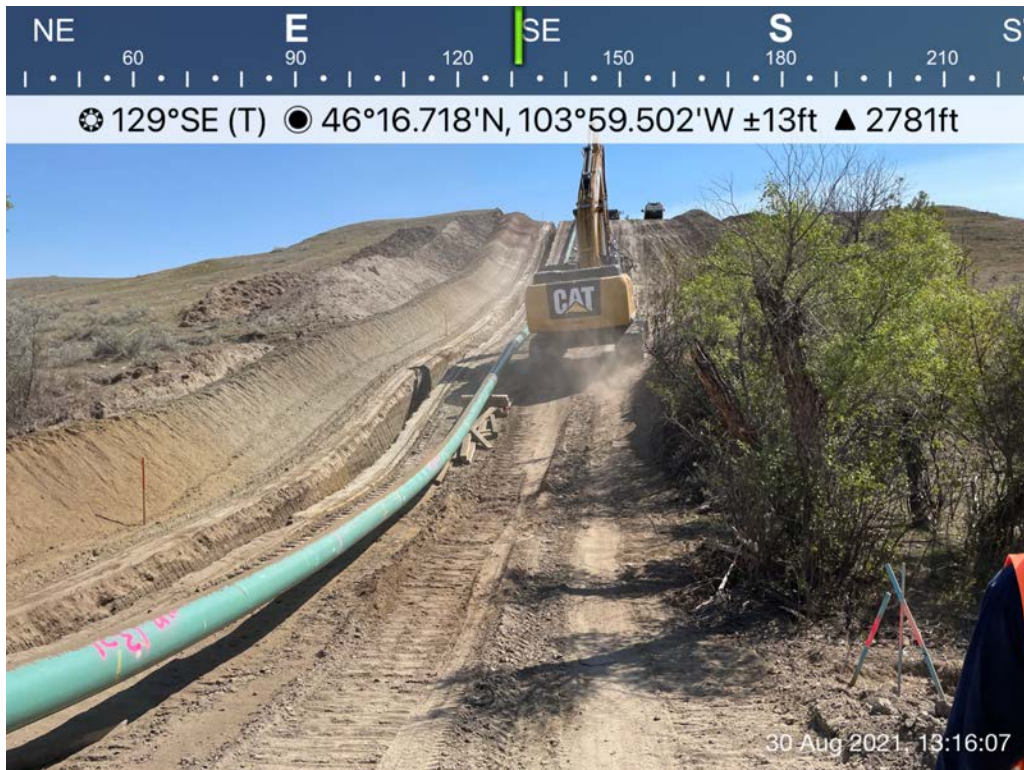
**Report Photo #6 "ROW Re-Routed away from Existing Pipeline at Reroute Area 1"**



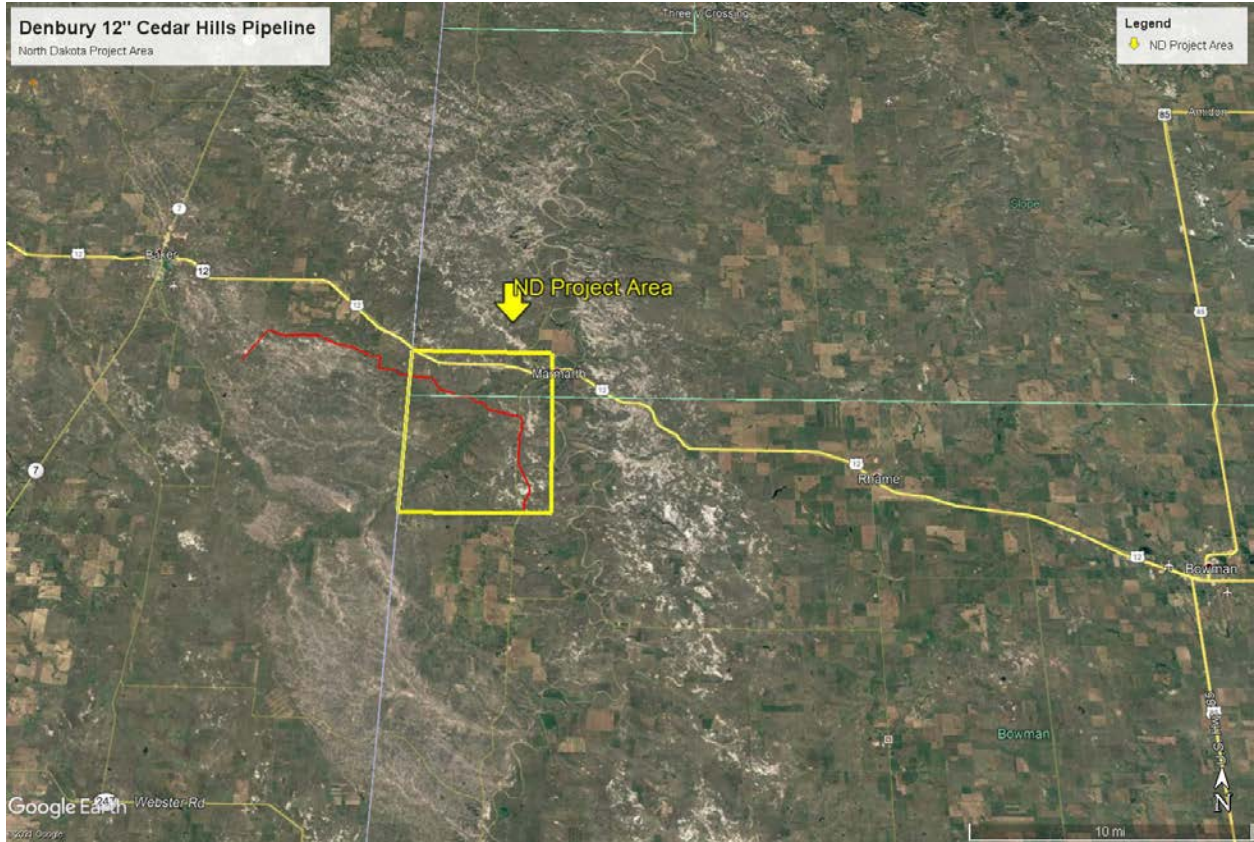
**Report Photo #7 "Topsoil Pile"**



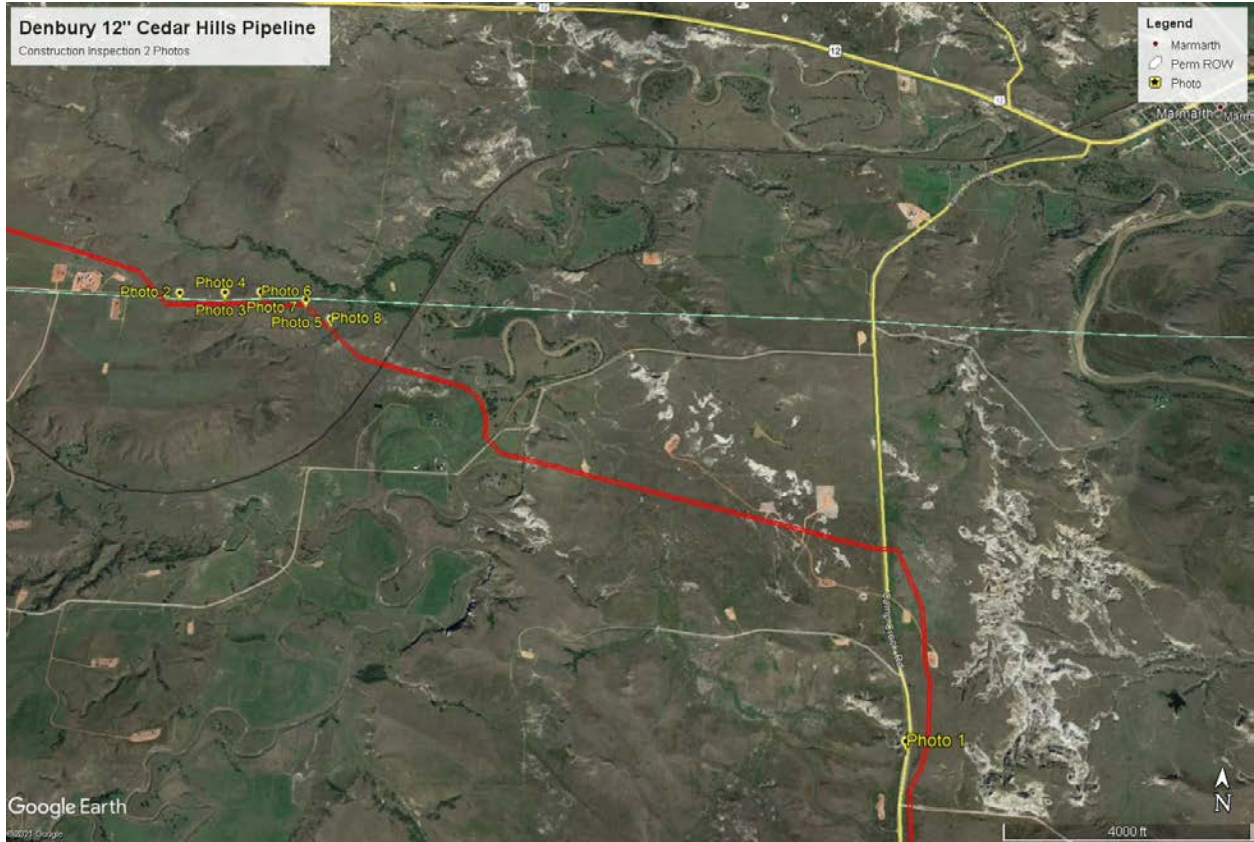
**Report Photo #8 "Ravine where Trees and Shrubs Removed along ROW"**



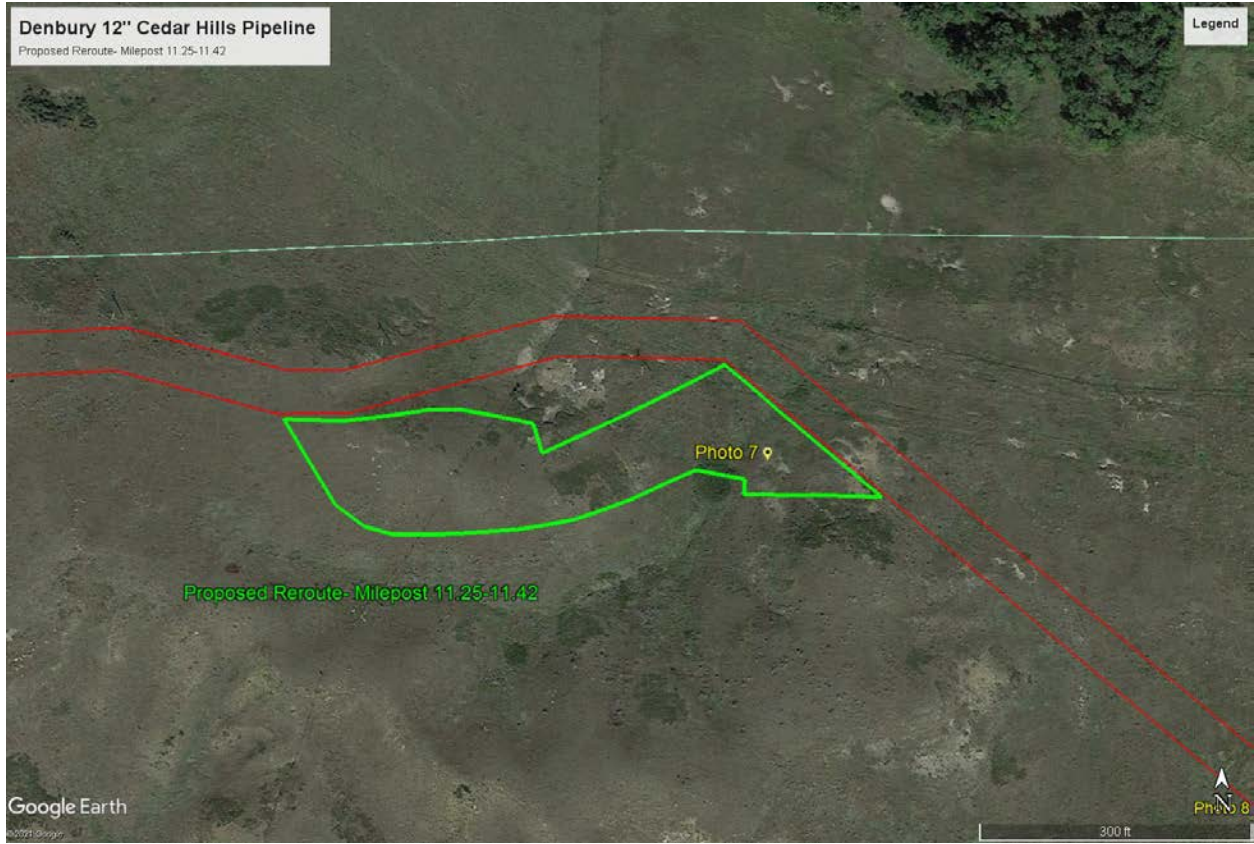
**Site Location Map**



### Inspection Photos Map



**Map of Reroute 1- Milepost 11.25-11.42**



**Map of Reroute 2- Milepost 14.5-15.1**

