

Photos, Annotation and Issue Report

10/17/2023

Operator: PETROLEUM RESOURCE
MANAGEMENT CORP #10421

Location ID: 485573

Inspection Doc: 696205712

Moffat County, CO

Aaron Trujillo
NW Reclamation Specialist
CECMC



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PRM Duncan Pad Unpermitted Pad Annotation Report



Created on March 29, 2024

Captured on October 17, 2023



Point

NAD83(2011) / Colorado North (ftUS) (US survey foot)

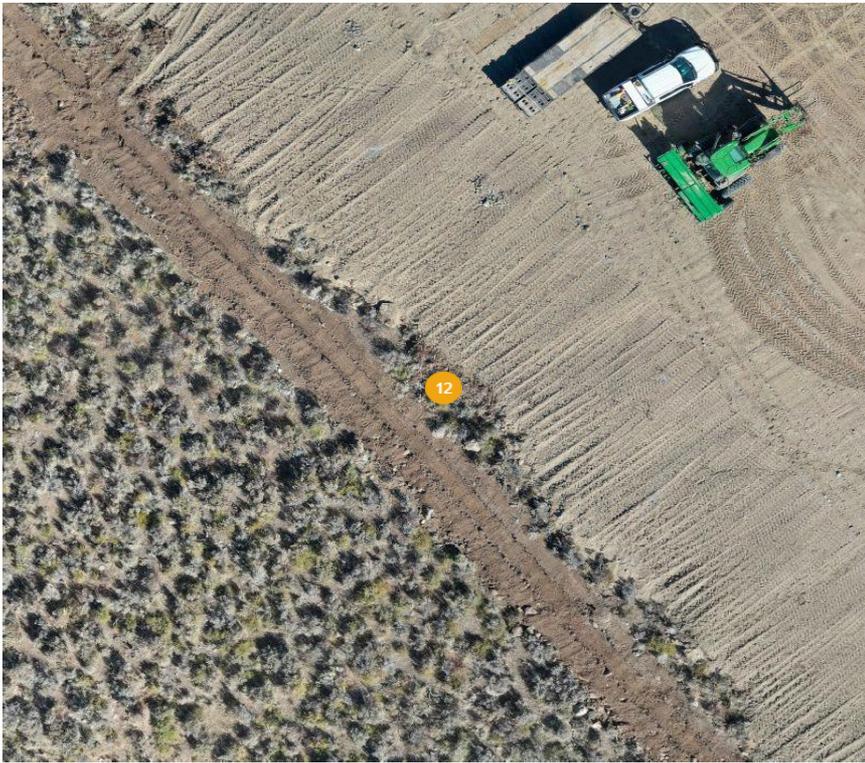
Label	Title	Elevation	Lat, Long	Northing, Easting
1	Fill Slopes- Surface Roughening	7215.02 US ft	40.9118059, -107.3513505	1580364.3 US ft, 2488309.8 US ft
2	Sediment Trap w/ Rip-rap outlet	7192.31 US ft	40.9116863, -107.3512018	1580319.9 US ft, 2488350.0 US ft
3	Sediment trap w/ Rip-rap outlet	7189.90 US ft	40.9124271, -107.3530772	1580600.6 US ft, 2487837.4 US ft
4	Combination ditch and berm- Northwestern, western and southern perimeter.	7201.56 US ft	40.9123025, -107.3529430	1580554.4 US ft, 2487873.6 US ft
5	Tank Battery #1	7222.94 US ft	40.9124261, -107.3518328	1580593.0 US ft, 2488181.3 US ft
6	Tank Battery #2	7223.53 US ft	40.9122802, -107.3519267	1580540.4 US ft, 2488154.2 US ft
7	Steel Tanks placed on Location	7223.28 US ft	40.9125498, -107.3520152	1580639.1 US ft, 2488131.8 US ft
8	Cut Slopes- Northeastern Location Perimeter	7248.12 US ft	40.9126268, -107.3514306	1580663.8 US ft, 2488293.9 US ft
9	Flowline System Disturbance	7258.24 US ft	40.9124342, -107.3511163	1580591.9 US ft, 2488379.4 US ft
10	Access Road	7212.94 US ft	40.9115616, -107.3502971	1580269.3 US ft, 2488599.1 US ft
11	Culvert	7189.06 US ft	40.9112355, -107.3494671	1580145.7 US ft, 2488826.0 US ft
12	Vegetation	7207.36 US ft	40.9120432, -107.3525733	1580457.8 US ft, 2487973.7 US ft

Area

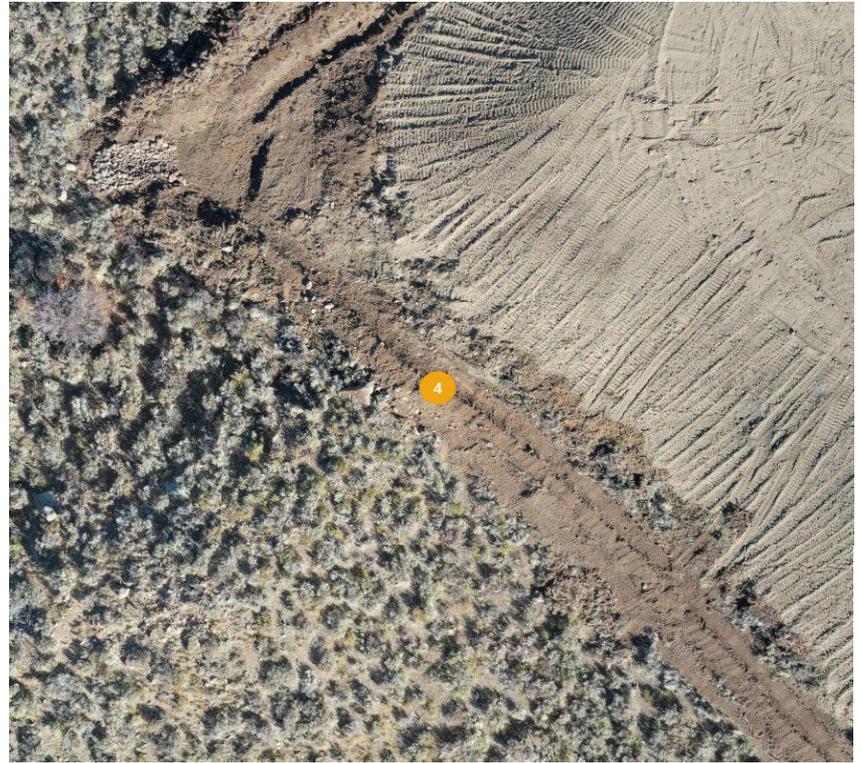
Label	Title	Horizontal Length	Horizontal Width	Area	Surface Area
13	Total Disturbance	--	--	5.70 acres	6.29 acres
14	Location disturbance area subject to soil salvage requirements	--	--	4.80 acres	5.34 acres

Volume

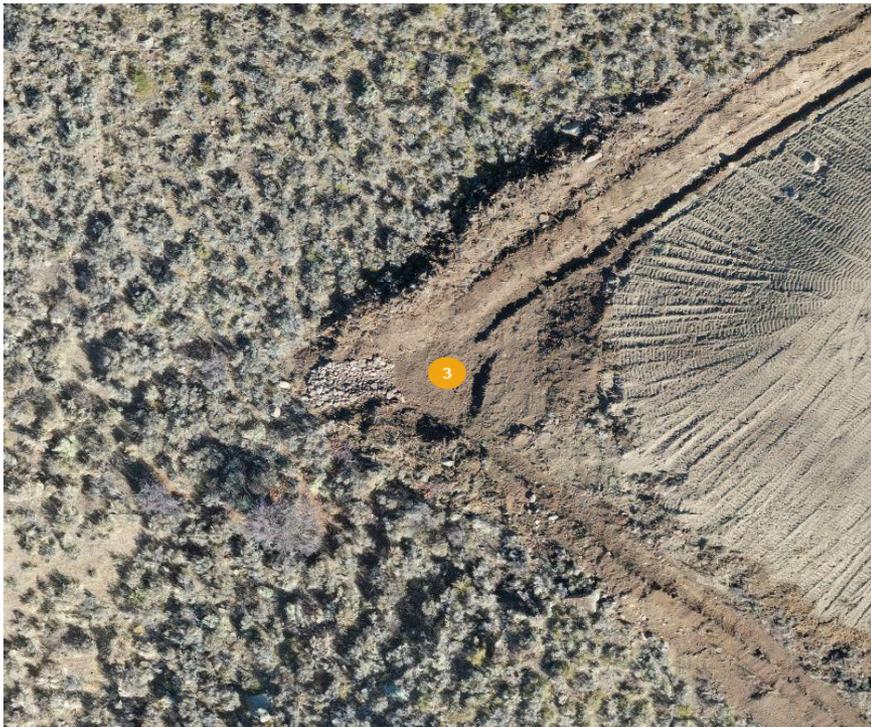
Label	Title	Area	Cut	Fill	Net	Tolerance
15 stockpile	Topsoil	0.39 acres	1825.37 y ³	16.33 y ³	-1809.04 y ³	0 ft



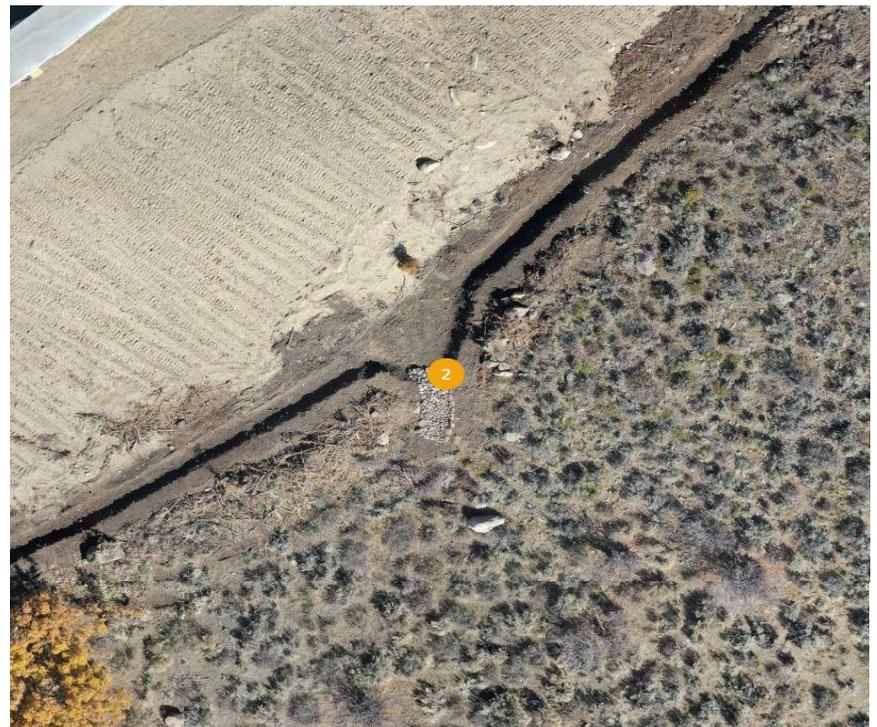
Details Intact vegetation evident at the toe of the slopes, partially covered with fill material, indicates that not all of the topsoil had been salvaged and segregated.



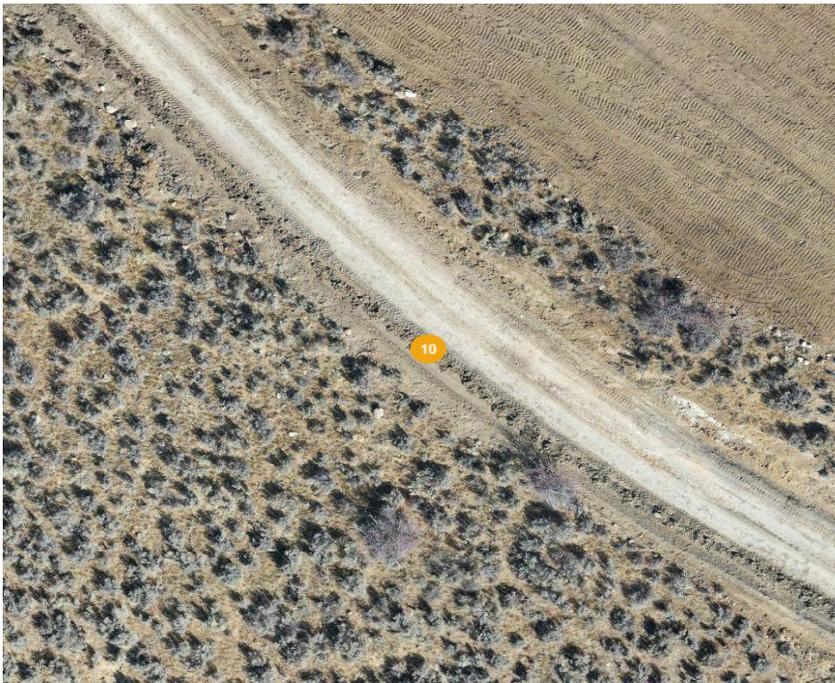
Details Operator has utilized topsoil material at the base of the fill slopes/subsoils of the Location as a ditch/berm.



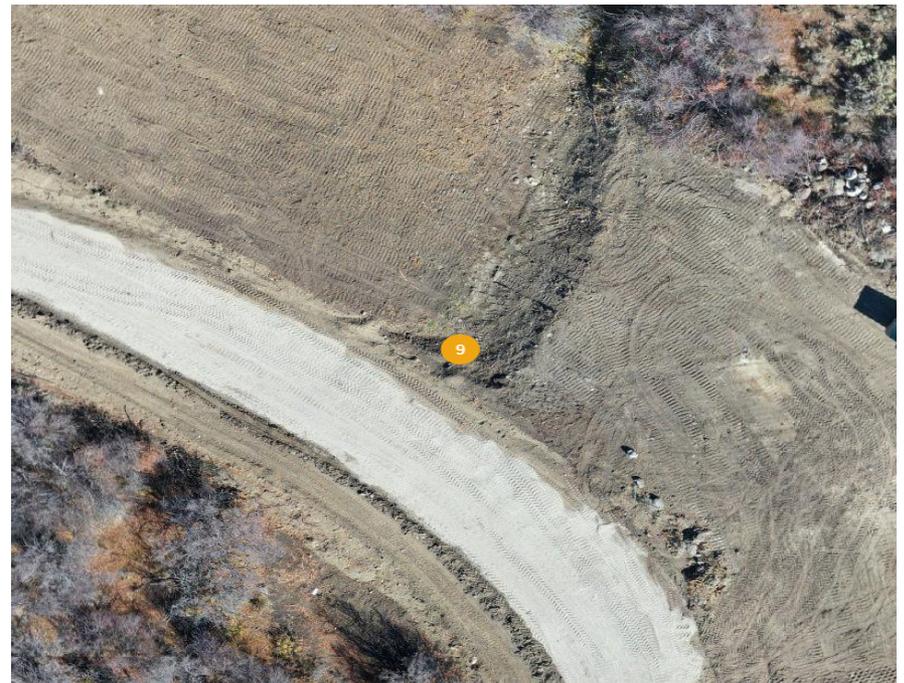
Details Operator has utilized topsoil material in the construction of the sediment trap BMP. This does not comport with Rule 1002.b. and 1002.c.



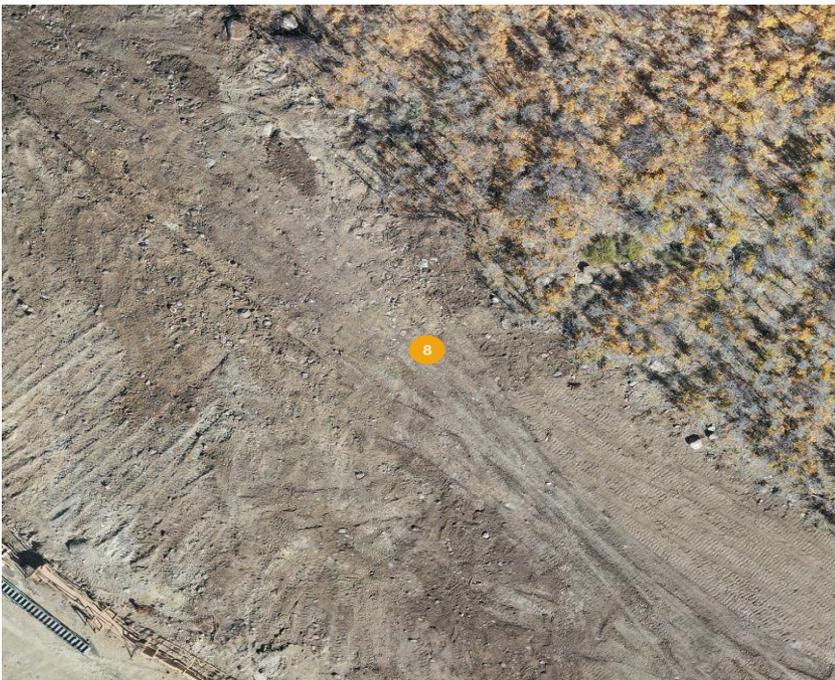
Details Operator has utilized topsoil material in the construction of the sediment trap BMP. This does not comport with Rule 1002.b. and 1002.c.



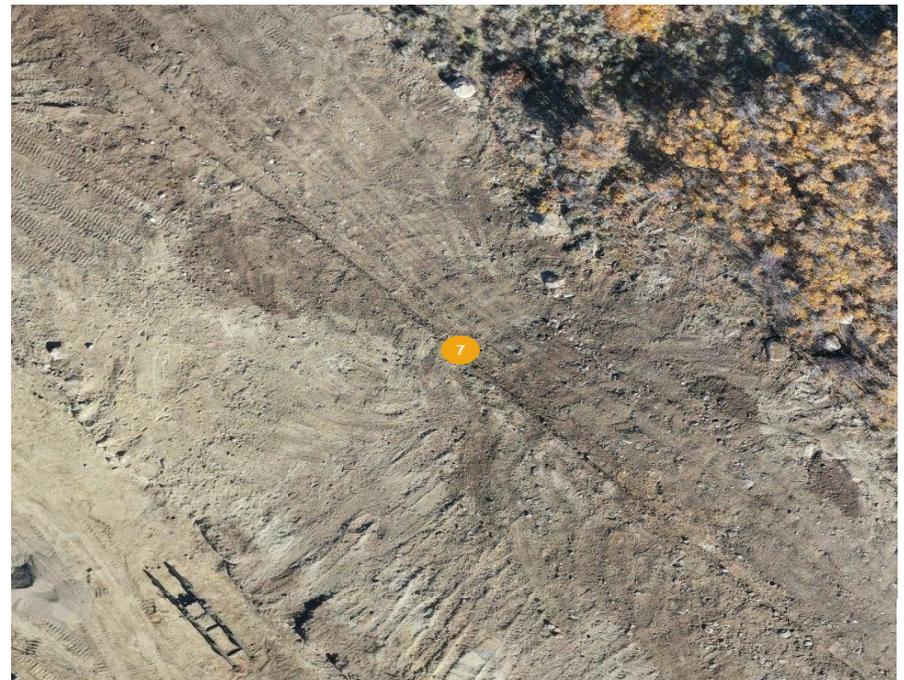
Details Perimeter stormwater and erosion control BMPs missing or insufficient along the access road, including the fill slopes; slopes lack stabilization and BMPs to minimize sediment transport.



Details Inlet/Outlet protections and armoring not observed.



Details Stormwater erosion control measures to manage runoff in a manner that minimizes erosion, degradation and sediment transport were missing or insufficient throughout the Flowline System disturbance



Details Stormwater and erosion control measures to stabilize, as well as to manage runoff in a manner that minimizes erosion and degradation at the (cut) slopes on the northeast end of the Location are missing or insufficient; slopes bare and at risk to erosion degradation. Perimeter stormwater and erosion controls not installed along the northeastern perimeter of the Location. These areas also include disturbances related to the Flowline System construction.

6 - Observation

Oct 17, 2023 at 10:42am

Open



Details

Summary: Wildlife Protections- Tanks open at manhole, or other areas of the tanks. Tanks have not been properly closed, covered, or lack other BMPs to prevent unauthorized access by people or wildlife.

Created: Mar 29, 2024, 12:52pm by Aaron Trujillo

Cost of Repair: —

Lat/Long: 40.9125498, -107.3520152

Northing: 1580639.1 US ft

Easting: 2488131.8 US ft

Elevation: 7223.28 US ft

NAD83(2011) / Colorado North (NUS) (US survey foot)

5 - Observation

Oct 17, 2023 at 10:42am

Open



Details

Summary: Stormwater and erosion control measures to stabilize, as well as to minimize erosion, degradation and sediment transport missing or insufficient at the topsoil stockpile.

Created: Mar 29, 2024, 12:50pm by Aaron Trujillo

Cost of Repair: —

Lat/Long: 40.91299, -107.35221

Area: 0.39 acres

Cut: 1825.37 y³

Fill: -16.33 y³

Material volume: 1809.04 y³



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Inspection Photos

Operator Name: PETROLEUM RESOURCE MANAGEMENT CORP #10421

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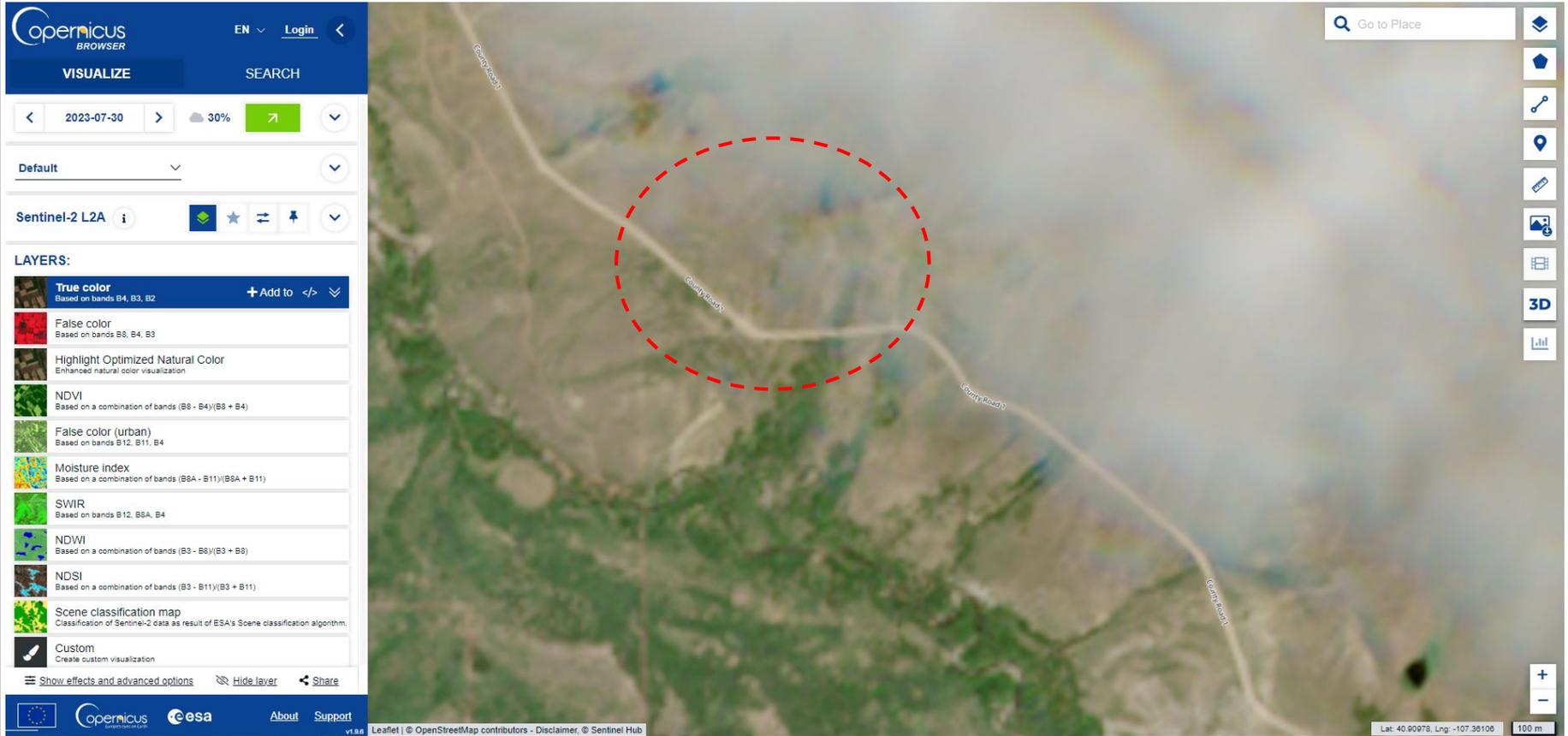


Photo 1: 7/30/2020 Satellite aerial imagery. Photo shows Location (circle) of the “Duncan Unpermitted Pad” Location prior to construction activities.



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Photo 2: 8/9/2020 Satellite aerial imagery. Photo shows Location (circle) of the Duncan Unpermitted Pad Location. Disturbances apparent indicating construction activities for the Location and Flowline System commenced between 7/30/2023 and 8/9/2023.



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Photo 3: Photo taken from the east of the Location, facing northwest. Photo provides an overview of the Location.



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Photo 4: Photo taken from the east of the Location, facing west. Photo provides an overview of the Location. Photo also shows intact vegetation (arrow, trees and shrubs) along the perimeter of the Location, partially covered with fill material, indicating that not all topsoil had been salvaged and segregated during construction.



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Photo 5: Photo taken from the east of the Location, facing southwest. ECMC had directed Operator to stop construction related activities; photo example showing utility installation activities ongoing at time of the inspection, but after Operator was directed to stop work.



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Photo 6: Photo taken from the south of the Location, facing south. ECMC had directed Operator to stop construction related activities; photo example showing utility installation activities ongoing at time of the inspection, but after Operator was directed to stop work.



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Photo 7: Photo taken from the east end of the Location, facing west. Photo shows areas of the eastern perimeter of the Location's disturbance, including the Flowline System disturbance. Photo example showing perimeter stormwater and erosion control BMPs are missing or insufficient along the perimeter of the Location and slopes of the disturbance.



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Photo 8: Photo taken from the north end of the Location, facing northeast. Photo shows cut slopes of the Location lack stabilization. BMPs to minimize erosion, degradation and sediment transport are missing or insufficient; BMPs to manage runoff/runoff along eastern perimeter missing or insufficient. Photo also shows the mixing of soil horizons, such as the topsoil; Operator failed to salvage all topsoil on the Location; Operator failed to separate and store soil horizons separately based on changes in physical characteristics (such as organic content, color, texture, density or consistency).



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Photo 9: Photo taken from the southwest end of the Location, facing southeast. Photo example showing surface roughening (tracking) implemented on fill slopes. Photo also example showing ditch/berm constructed along the perimeter of the Location; BMPs had been constructed with use of topsoil material. Photo also shows intact vegetation (arrow, shrubs) along the perimeter of the Location, partially covered with fill material, indicating that not all topsoil had been salvaged and segregated during construction.



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Photo 10: Photo taken from the southeast end of the Location, facing southeast. Photo shows 1 of the 2 sediment traps on the Location, as well as the ditch/berm along the perimeter; BMPs had been constructed with use of topsoil material. Photo also shows intact vegetation (arrow, tree) along the perimeter of the Location, partially covered with fill material, indicating that not all topsoil had been salvaged and segregated during construction.



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Photo 11: Photo taken from the north end of the Location, facing northwest. Photo shows the topsoil stockpile. Stockpile bare, unstabilized and at risk from wind and water erosion; BMPs to minimize erosion and degradation missing from the stockpile; control measures to manage stormwater runoff and minimize sediment transport are also missing along the perimeter of the stockpile. Photo also shows the mixing of different soil horizons, such as the topsoil; Operator failed to salvage all topsoil on the Location; Operator failed to separate and store soil horizons separately based on changes in physical characteristics (such as organic content, color, texture, density or consistency).



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Photo 12: Photo taken from the northwest end of the Location, facing southeast. Photo shows production equipment placed and/or installed on the Location.



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Photo 13: Photo taken from the center of the Location, facing north northwest. Photo shows tank battery/production equipment placed and/or installed on the Location. Photo also example showing hatches open at tanks.



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Photo 14: Photo taken from the northwest end of the Location, facing northwest. Photo shows production equipment placed and/or installed on the Location.



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Photo 15: Photo taken from the northwest end of the Location, facing west. Photo shows production equipment placed and/or installed on the Location.



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Photo 16: Photo taken from the north end of the Location, facing northeast. Photo shows production equipment placed and/or installed on the Location. See comments under photo 8 regarding stormwater, soil salvage, segregation and protections.



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Photo 17: Photo taken from ~40.889363, -107.333643. Photo shows a newly constructed access road and stream crossing associated with the Flowline System construction. This stream crossing may require an Army Corps of Engineers permit.



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Photo 18: Continued from photo 17. Operator has placed erosion logs (straw wattles) along sections of the access road. BMP has not been installed in accordance with good engineering practices, and alone is inadequate to manage runoff in a manner that minimizes erosion, degradation and sediment transport at the access road.



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Photo 19: Continued from Photo 17. Photo shows the intersection of the new access road, and Slater Creek; access road has not been constructed with an engineered stream crossing; degradation and tracking evident; crossing lacks stabilization and has resulted in impacts to Waters of the State.



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October 18, 2023

Photo 20: Continued from Photo 17. Photo shows the intersection of the new access road, and Slater Creek; access road has not been constructed with an engineered stream crossing; degradation and tracking evident; crossing lacks stabilization and has resulted in impacts to Waters of the State. Operator has placed erosion logs (straw wattles) along sections of the access road. BMP has not been installed in accordance with good engineering practices, and alone is inadequate to manage runoff in a manner that minimizes erosion, degradation and sediment transport at the access road.



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40.88909505N 107.33531011W
October 18, 2023

Photo 21: Photos taken from the Flowline System disturbance. Stormwater and erosion control BMPs along ~4 mile disturbance leading south of the Unpermitted Duncan Facility are inadequate. Photo example showing silt fence; Operator had installed silt fence along the toe of the slopes adjacent to the pipeline stream crossings; ~30-40 foot sections of silt fence were the only control measure observed installed on the disturbance area; BMPs to stabilize the soils, as well as to manage runoff/runoff missing or insufficient.



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Photo 22: Photo taken from the Flowline System disturbance. Photo example showing soils along the ~4 miles disturbance leading south of the Unpermitted Duncan Facility are bare, unstabilized and at risk to wind and water erosion. BMPs to stabilize the soils, as well as to manage runoff/runoff are missing or insufficient along the Flowline System disturbance.



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Photo 23: See comments under photo 21. Silt fence installed along areas of the Flowline System disturbance have not been installed per good engineering practice; BMP has been installed backwards, and not properly trenched.



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Photo 24: Continue from photo 21. BMP has been installed backwards, and not properly trenched. This is resulted in sediment transport and deposition.



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Photo 25: Continue from photo 21. BMP has been installed backwards, and not properly trenched. This is resulted in sediment transport and deposition.



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Photo 26: Continue from photo 21. Photo shows a spring (red arrow) that feeds into Slater Creek (yellow arrow). Spring has been impacted during the Flowline System construction; combination of construction activities, runoff from the Flowline System disturbance, and inadequate Stormwater BMPs has resulted in sediment deposition and degradation of the spring.



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