

Inspection Photos

09/20/2019

Operator: BISON OIL & GAS II LLC # 10661

Location ID: 454591

Weld County, CO

Aaron Trujillo

NE Reclamation Specialist

COGCC

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Photo 1: Photo taken from the culvert/sediment trap on the south end of the location. Photo shows sufficient outlet protection has not been installed above culvert outlet. Culvert outlet/sediment trap inlet has filled with sediment



Photo 2: Photo of sediment trap on the south end of the location. It appears BMP is sufficient in size to mitigate runoff on the location. However (though repaired) it appears that areas of the trap had failed resulting in sediment laden stormwater discharge. See photos 4-6.

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Photo 3: See comments under photo 1.



Photo 4: Photo shows area of the sediment trap BMP that appears to have failed resulting in sediment laden stormwater discharge

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Photo 5: See comments under photo 4.



Photo 6: See comments under photo 4.

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Photo 7: Photo taken from the outlet at the sediment trap. Operator appears to have installed the outlet at the same elevation as the adjacent berms, and constructed in such a manner to dam stormwater rather than reducing velocity, trapping excess sediment and allow for sediment laden-free stormwater discharge from the trap. BMP has not been constructed with good engineering practices.



Photo 8: Photo taken from the sediment trap on the southeast end of the location. Photo shows operator appears to have installed rock aggregate as inlet protection.

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Photo 9: Photo of outlet at the sediment trap on the northeast end of the location. See comments under photo 7



Photo 10: Photo of diversion ditch on the southeast end of the location. Erosion degradation on the slopes have resulted in sediment deposition within ditch. Maintenance required.

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Photo 11: See comments under photo 10.



Photo 12: Photo taken from the southeast end of the location, facing west. Photo shows area where stormwater erosion appears to have degraded the slopes. Operator appears to have repaired the erosion. However, photo also shows operator has not installed stabilization controls on slopes in accordance with good engineering practices. Operator has installed tracking along the contour of the slopes rather than up and down. This has resulted in the facilitation of rill erosion on the slopes.

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Photo 13: See comments under photo 12.



Photo 14: Photo taken from the east end of the location. Photo shows area where pad meets the perimeter diversion ditch. Photo shows insufficient BMPs in place to stabilize soils and location.

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Photo 15: Photo taken from the sediment trap on the northeast end of the location. See comments under photo 7.



Photo 16: Continued from photo 15.



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Photo 17: See comments under photo 15. Photo also shows operator has installed rock aggregate along inlet.



Photo 18: Photo taken from the northwest end of the location. Photo shows erosion degradation on slopes due to insufficient stormwater and erosion control BMPs.

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Photo 19: See comments under photo 18.



Photo 20: Photo taken from the northwest end of the location, facing west. Photo shows operator has not installed stabilization controls on slopes in accordance with good engineering practices. Operator has installed tracking along the contour of the slopes rather than up and down. This has resulted in the facilitation of rill erosion on the slopes.

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Photo 21: Continued from photo 20. Photo shows sediment deposition due to stormwater erosion on slopes.



Photo 22: Continued from photo 20. Photo shows sediment deposition due to stormwater erosion on slopes.

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Photo 23: Photo taken from the sediment trap on the southwest end of the location. Photo shows operator has installed inlet protection on a portion of the inlet. BMP does not appear to be sufficient as erosion degradation is evident.



Photo 24: Continued from photo 22.

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Photo 25: Photo taken from the stormwater ditch on the south end of the location. Photo shows erosion degradation within ditch.



Photo 26: Photo taken from the sediment trap on the southwest end of the location. See comments under photo 7.

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Photo 27: Continued from photo 26.



Photo 28: Photo taken from the topsoil stockpile on the southwest end of the location. Photo shows operator has not installed stabilization controls on slopes in accordance with good engineering practices. Operator has installed tracking along the contour of the slopes rather than up and down. This has resulted in the facilitation of rill erosion on the slopes.



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Photo 29: Photo taken from the culvert on the south end of the location. Photo shows sufficient outlet protection has not been installed above culvert outlet. Sediment is also beginning to fill culvert and rip-rap; maintenance advised.



Photo 30: Continued from photo 29



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Photo 31: Continued from photo 29



Photo 32: Photo taken from the access road south of the location, facing north. Photo of cattle guard. Insufficient tracking BMPs on location and/or access road.

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Photo 33: Photo taken from cattle guard along access road. Photo shows insufficient outlet protection at culvert. Erosion degradation evident.



Photo 34: See comments under photo 33.

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Photo 35: See comments under photo 33.



Photo 36: Photo taken from the access road south of the location, facing west. Photo of cattle guard. Insufficient tracking BMPs on location and/or access road.