

# Construction and Stormwater Inspection

September 19, 2017

Operator: GREAT WESTERN OPERATING COMPANY LLC- #10110

Location ID: 451100

Weld County, CO

NESE Section 30 T6N R67W

Chris Binschus  
Reclamation Specialist, COGCC



**COLORADO**  
Oil & Gas Conservation  
Commission

Department of Natural Resources

**Inspection Photos**  
**Location Name: Raindance FD Off-Site Tank Pad**  
**Location ID: 451100**

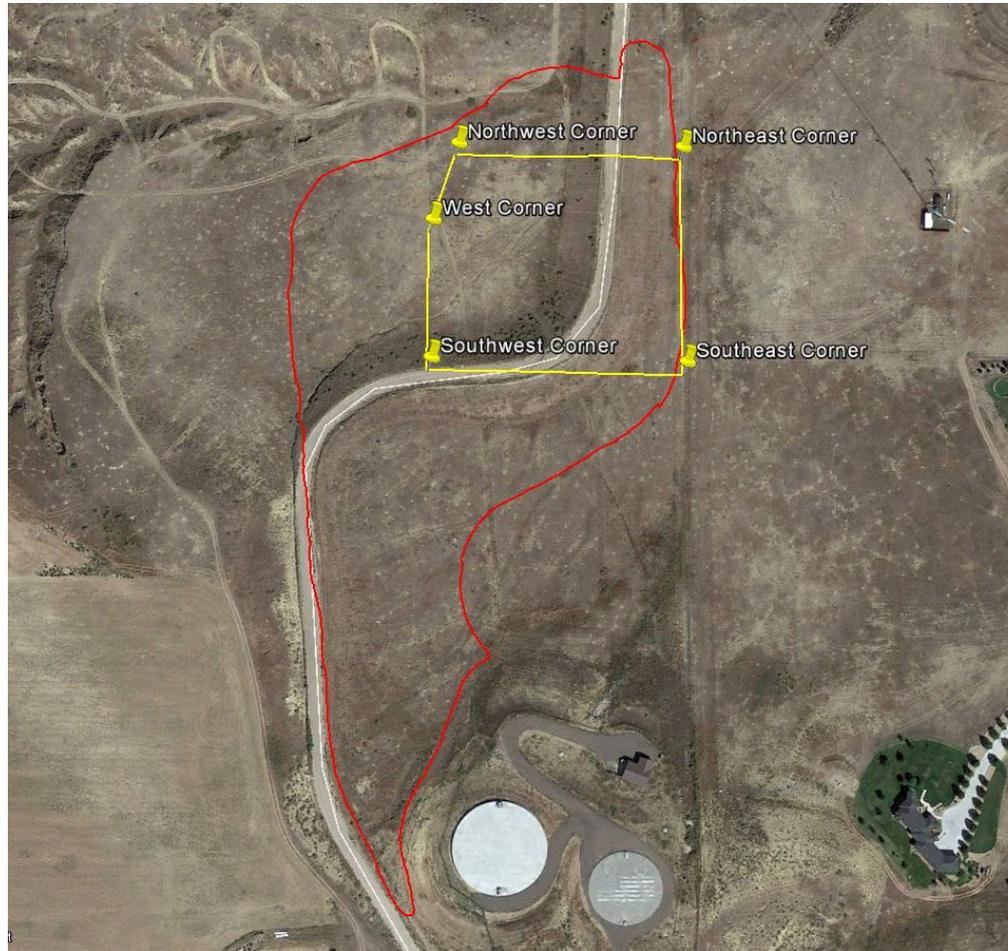


COGCC GISOnline aerial imagery illustrating the Raindance FD Off-site tank battery location (Location ID 451100 highlighted in the red circle) and the Raindance Drilling pad to the north (Location ID 427917).

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Google Earth aerial imagery taken September 7, 2016 overlaid with field collected data from September 19, 2017 using a Trimble Juno 3B handheld device (red line). Total disturbance of 12.48 acres was mapped on September 19, 2017 (84% over permitted construction disturbance). Form 2A Document #401154132 was permitted for 6.77 acres of construction disturbance. Based on the Facility Layout Drawing (Document #401159161), the proposed pad corners have been overlaid with the field collected data to illustrate where the Operator exceeded the construction disturbance.

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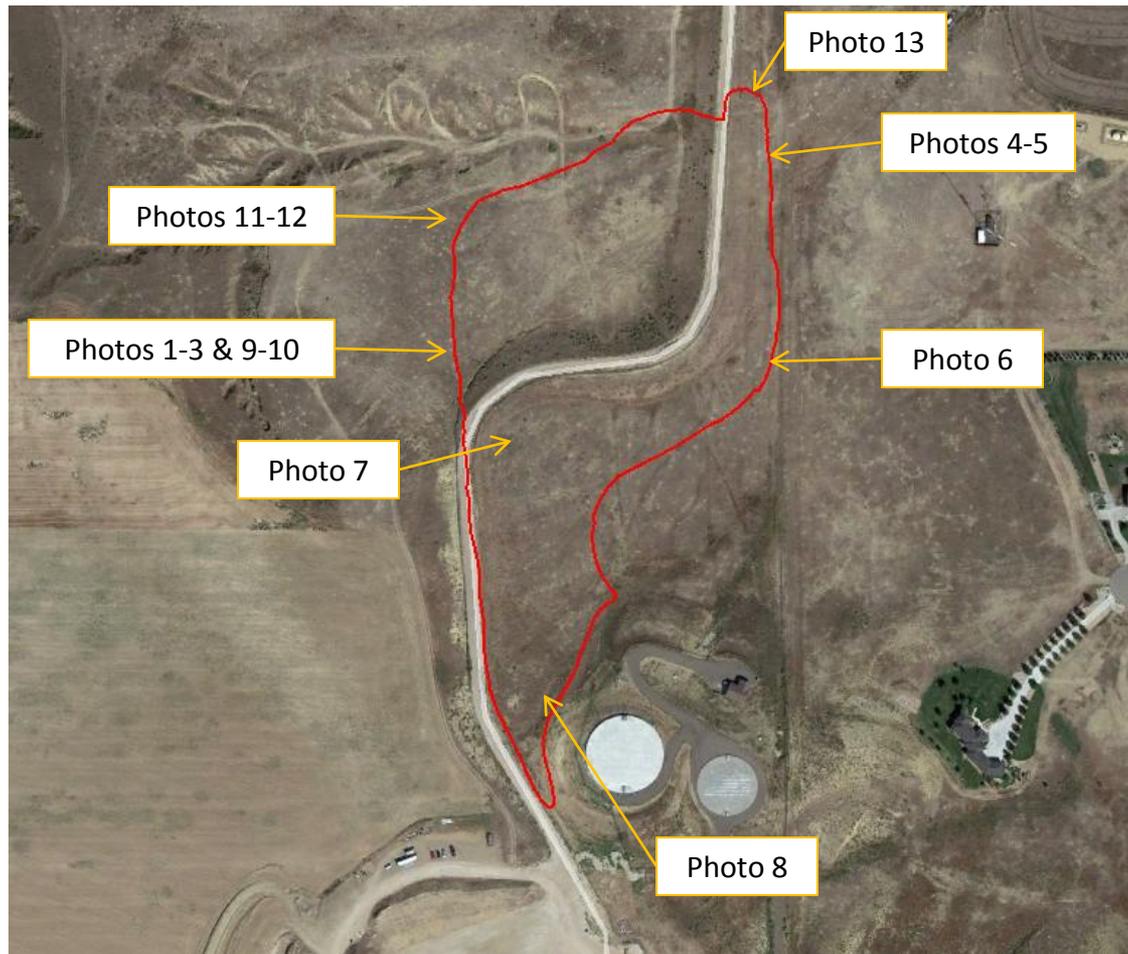


Photo reference points taken on September 19, 2017 to help illustrate approximate locations of the subject photo.

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**Photo 1.** Photo taken from the western location, facing East. The above image is a combination of three photos put together to illustrate the Off-site Tank Pad.

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**Photo 2.** Photo taken from the western location, facing South. The topsoil stockpile has been stored along a portion of the western location. Both the topsoil stockpile and other areas constructed to be a berm have been seeded and mulched. Operator indicated that a “TOPSOIL” sign would be placed to indicate the location of the topsoil.



**Photo 3.** Photo taken from the western location, facing North. A portion of the southern well pad (Location ID 427917) can be seen in the above photo.

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**Photo 4.** Photo taken from the northeastern pad location, facing North. A perimeter ditch has been installed around the toe of the cut slope in conjunction with filter wattle which is directed to a sediment basin along the northeastern location. Russian thistle and Kochia were observed along the perimeter of the location which needs to be controlled and managed per Rule 603.f.



**Photo 5.** Photo taken from the northeastern pad location, facing South. A perimeter ditch has been installed around the toe of the cut slope in conjunction with filter wattle which is directed to a sediment basin along the northeastern location. Russian thistle and Kochia were observed along the perimeter of the location which needs to be controlled and managed per Rule 603.f.

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**Photo 6.** Photo taken from the eastern location, facing West. A perimeter ditch has been installed around the top of the cut slope in conjunction with filtrex wattles to control stormwater run-on. Cut slopes have been temporarily tracked with equipment. Rill erosion was observed along portions of the cut slope- see Photo 7.



**Photo 7.** Photo taken from the southwestern pad location, facing South. Rill erosion observed along the western, southwestern and southern cut slope areas. Operator needs to stabilize cut slopes per Rule 1002.f.(2)C.

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**Photo 8.** Photo taken from the southern location, facing North. The well pad (Location ID 427917) can be seen in the above photo. Areas constructed to be a berm, as mentioned in Photo 2, do not have uniform germination but appear to be temporarily stabilized with mulch. May need additional reclamation activities for long-term self-sustaining stabilization.

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**Photo 9.** Photo taken from the western location, facing South. Stormwater appears to be travel along the western fill slope and lease road which then runs onto the northwestern location- see Photos 11 & 12.



**Photo 10.** Photo taken from the western location, facing North. Stormwater appears to be travel along the western fill slope and lease road which then runs onto the northwestern location- see Photos 11 & 12.

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**Photo 11.** Photo taken from the northwestern location, facing East. Photo illustrates stormwater erosion traveling from the lease road onto location.

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**Photo 12.** Photo taken from the northwestern location, facing Southwest. Photo illustrates gully and rill erosion occurring along the northwestern location.

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**Photo 13.** Photo taken from the northeastern location, facing South. Sediment basin has been installed with a stabilized outlet in conjunction with other stormwater BMPs. The sediment basin is downgradient from run-on erosion illustrated in Photos 11 & 12.