



DUST MITIGATION PLAN CAMERON 2 OGD

**COGCC RULE 304.C.(5)
WELD COUNTY CODE SEC. 21-4-415**

SUBSTANTIALLY EQUIVALENT INFORMATION: One Dust Mitigation Plan for the Cameron 2 OGD is being submitted to satisfy the four locations within. The sources of dust and best management practices remain the same for the individual locations. However, site specific information for each location is included to identify the receptors in which the mitigation measures are in place to protect from any potential impacts.

Site Specific Information:

Bona State 5N67W36 1-24

- Disturbance Areas:
 - Total wellpad disturbance for construction: 8.27 acres
 - Total wellpad disturbance after interim reclamation: 1.18 acres
 - Total access road disturbance: 1.23 acres
 - 0.56 miles of temporary and improvement of existing access road
 - Access road is not paved
 - Access road leads to CR 25
- Estimated acreage of soil type that will be disturbed during construction:

Project Feature	Soil Type	Acreage Disturbed
Well Pad	Kim Loam, 1 to 3 percent slopes	4.99
Well Pad	Kim Loam, 3 to 5 percent slopes	0.03
Well Pad	Otero Sandy Loam, 5 to 9 percent slopes	2.11
Well Pad	Tassel Fine Sandy Loam, 5 to 20 percent slopes	1.14
Access Road	Kim Loam, 1 to 3 percent slopes	0.82
Access Road	Kim Loam, 3 to 5 percent slopes	0.23
Access Road	Otero Sandy Loam, 5 to 9 percent slopes	0.18
	Total Soil Disturbance at Location	10.97

- Estimated acreage of existing land use that will be disturbed during construction:
 - No disturbance is anticipated for a plant community
- Estimated total truck trips by operational phase:
 - Construction: 630
 - Drilling: 12,320
 - Completions: 23,460
 - Interim Reclamation: 630
 - Production: 2,263 annually

Bona State Facility 5N67W36

- Disturbance Areas:
 - Total wellpad disturbance for construction: 7.19 acres
 - Total wellpad disturbance after interim reclamation: 4.64 acres
 - Total access road disturbance: 0.05 acres

- 0.03 miles of existing access road to be improved
- Access road is not paved
- Access road leads to CR 25

- Estimated acreage of soil type that will be disturbed during construction:

Project Feature	Soil Type	Acreage Disturbed
Well Pad	Otero Sandy Loam, 5 to 9 percent slopes	3.76
Well Pad	Tassel Fine Sandy Loam, 5 to 20 percent slopes	3.43
Access Road	Tassel Fine Sandy Loam, 5 to 20 percent slopes	0.05
	Total Soil Disturbance at Location	7.24

- Estimated acreage of existing land use that will be disturbed during construction:
 - No disturbance is anticipated for a plant community
- Estimated total truck trips by operational phase:
 - Construction: 630
 - Production: 2,263 annually

Booth State 5N67W25 1-24

- Disturbance Areas:
 - Total wellpad disturbance for construction: 21.66 acres
 - Total wellpad disturbance after interim reclamation: 7.1 acres
 - Total access road disturbance: 0.17 acres
 - 0.05 miles of temporary access road
 - Access road is not paved
 - Access road leads to CR 25
- Estimated acreage of soil type that will be disturbed during construction:

Project Feature	Soil Type	Acreage Disturbed
Well Pad	Colby Loam, 1 to 3 percent slopes	17.73
Well Pad	Colby Loam, 5 to 9 percent slopes	0.73
Well Pad	Shingle Loam, 3 to 9 percent slopes	3.20
Access Road	Colby Loam, 1 to 3 percent slopes	0.17
	Total Soil Disturbance at Location	21.83

- Estimated acreage of existing land use that will be disturbed during construction:
 - No disturbance is anticipated for a plant community

- Estimated total truck trips by operational phase:
 - Construction: 630
 - Drilling: 12,320
 - Completions: 23,460
 - Interim Reclamation: 630
 - Production: 2,263 annually

Windom 5N67W24 1-46

- Disturbance Areas:
 - Total wellpad disturbance for construction: 21.12 acres
 - Total wellpad disturbance after interim reclamation: 8.55 acres
 - Total access road disturbance: 1.0 acres
 - 0.27 miles of temporary access road
 - Access road is not paved
 - Access road leads to CR 54
- Estimated acreage of soil type that will be disturbed during construction:

Project Feature	Soil Type	Acreage Disturbed
Well Pad	Colby-Adena Loams, 3 to 9 percent slopes	21.12
Access Road	Colby-Adena Loams, 3 to 9 percent slopes	1.0
	Total Soil Disturbance at Location	22.12

- Estimated acreage of existing land use that will be disturbed during construction:
 - No disturbance is anticipated for a plant community
- Estimated total truck trips by operational phase:
 - Construction: 630
 - Drilling: 22,330
 - Completions: 36,924
 - Interim Reclamation: 630
 - Production: 2,263 annually

Best Management Practices:

PDC will employ practices for continuous control of fugitive dust caused by operations. These practices shall include but are not limited to:

- During all phases of operations (from construction to interim reclamation), a 10 mph speed restriction will be implemented (unless dust is not visible, then the speed restriction will increase to 20 mph). During all other operational phases, on location speed is limited to 10 mph.
- Regular lease road maintenance to consist of, grading and recompacting the road surface with the optimum amount of water applied when the road surface becomes deteriorated or monthly when heavy traffic is present.
- Restriction of construction activity during high-wind days; on days when dust becomes fugitive (visibly leaves or threatens to leave the site) construction or activities will be halted until either fresh water can suppress dust or dust is no longer visible.
- During initial pad construction, the topsoil will be stripped from the disturbance area and stored onsite for future use during pad pull-back and interim reclamation. All stockpiled topsoil will be protected from degradation due to contamination, compaction, and, to the extent practicable, from wind and water erosion thereby minimizing potential impacts from fugitive dust. This will be achieved initially by applying cat-tracking to the topsoil pile and employing additional BMPs if and when needed (e.g., the addition of organic matter). PDC also maintains a weed mitigation maintenance schedule to prevent the weed establishment on the topsoil pile.
- BMPs such as coconut blankets, straw mulch, or straw waddles, sediment basins, swales and perimeter ditches will be used to prevent excess erosion of soils from disturbed areas and the potential for fugitive dust.
- Coordinate dust mitigation on Gravel surfaced roads with Weld County Public Works per the terms of the Road Maintenance Agreement in applying Magnesium Chloride or an alternative surfacing material prior to construction and maintaining through completion of Interim reclamation of the drill pad.
- PDC uses a gravity fed box proppant delivery system that meets OSHA standards, rather than the historic pneumatic trailer proppant transfer system that blows sand out of the trailer into frac sand silos on the location; a method that required supplemental dust control to meet OSHA requirements. With a gravity fed proppant delivery system, the delivery container is also a well pad storage container, eliminating the need for frac sand silos on location. Storing frac sand in containers reduces sand dust during fracing operations by dropping sand directly from the container into the blender sand hopper. As a result of the gravity fed box proppant delivery system, PDC does not anticipate any silica dust to migrate off the location during completion operations.
- PDC uses Automation on all new wells and production facilities to minimize truck traffic and to reduce the number of visits to location. PDC monitors locations 24 hours a day by the FMR (field monitoring room) and that has cut down on the need for physical location checks greatly. PDC will also have camera coverage of the site that can be viewed remotely. With the current automation we can check the wells from the FMR, offices and trucks.