

Fawn 2734-2833
Weld County, Colorado
2/28/2022

304.c.(2): Noise Mitigation Plan



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Article I. Introduction

Facility Information

This document provides site-specific information for the Fawn 2734-2833 Pad. The information in this document relates specifically to the time during the construction, drilling, and completion of the fourteen (14) proposed horizontal wells on this location.

The proposed location is Agricultural Crop located North of WCR 45 with an existing access West onto a gravel road. The pad will be in the S2 of Section 22, Township 1 North, Range 65 West zoned AG. A 1041 WOGLA pre hearing meeting has been held and pre application notifications were sent on 08/30/2021.

The proposed Pad will be approximately 10 acres, reduced to 4.35 acres after interim reclamation. The Pad is on Parcel 147322000040 owned by BNSF Development Co, LLC. The location is currently used as crop land.

The proposed production facility equipment for the Fawn 2734-2833 Pad will be located within the Working Pad Surface adjacent to the wells and will consist of 2 oil tanks, 8 water tanks, 4 separators, 1 Instrument Air System, 2 Heater Treaters, 1 VOC, 6 Vapor Recovery Units, 2 Surge Vessels, and 3 LACT Units.

Phase	Duration (Days)
Construction	10
Drilling	74
Completion	102
Flowback	10
Production	20 Years

Article II. Noise Standards and Regulations

Weld County Code 21-5-435 A.-Noise

The Weld County Code list noise limits for oil and gas operations. All oil and gas operations will comply with the following maximum permissible noise levels in Table 435 A.1 unless otherwise required by Rule 435. The Fawn location is located in Ag-rural planning areas and must comply with NL-4 for construction phase operations and NL-1 for the production phase. The noise limits are provided in table II-1.

Table II-1-Noise Level Standards Weld County 435 A.1

Land Use Designation	7:00 am to next 7:00 pm	7:00 am to next 7:00 pm
NL-1	55 db(A)	50 db(A)
NL-2	60 db(A)	55 db(A)
NL-3	65 db(A)	60 db(A)
NL-4	70 db(A)	65 db(A)
All Zones (C-scale)	65 db(C)	65 db(C)

Colorado Oil and Gas Conservation Commission (COGCC)

Noise associated with oil and gas development is regulated by the Colorado Oil and Gas Conservation Commission (COGCC) Rule 423. Operators will submit a noise mitigation plan that demonstrates one or more proposed methods

of meeting the maximum permissible noise levels described by this Rule 423 as an attachment to their Form 2As, as required by Rule 304.c.(2). The COGCC rules list noise limits for oil and gas operations. "All oil and gas operations will comply with the following maximum permissible noise levels in Table 423-1 unless otherwise required by Rule 423". The noise limits are provided in table II-1.

Table II-1- Maximum Permissible Noise Levels

Land Use Designation	7:00 am to next 7:00 pm	7:00 am to next 7:00 pm
Residential/ Rural/State Parks & State Wildlife Area	55 db(A)	50 db(A)
Commercial/ Agricultural	60 db(A)	55 db(A)
Light Industrial	70 db(A)	65 db(A)
Industrial	80 db(A)	75 db(A)
All Zones	60 db(C)	60 db(C)

Exceptions to the noise limits above are given in Rule 423.b(2)

(2) Unless otherwise required by Rule 423, drilling or completion operations, including Flowback

A. In Residential/Rural or Commercial/Agricultural, maximum permissible noise levels will be 60 db(A) in the 7:00 p.m. to 7:00 a.m. nighttime hours and 65 db(A) in the daylight 7:00 a.m. to 7:00 p.m.; and

B. In all zones maximum permissible noise levels will be 65 db(C) in the house between 7:00 p.m. to 7:00 a.m. and 65 db(C) in the hours between 7:00 a.m. and 7:00 p.m.

Table II-2 displays estimated noise levels as defined by Rule 423.a.(2)

Table II.2- Estimated Noise Levels at 2000 ft.

Phase	Duration (Days)	Estimated Noise Levels at Compliance Points
Construction	10	<50 db(A), <60 db(C)
Drilling	74	<60 db(A), <65 db(C)
Completion	102	<60 db(A), <65 db(C)
Flowback	10	<60 db(A), <65 db(C)
Production	20 Years	<50 db(A), <60 db(C)

Article III. Ambient Sound Survey

For proposed Oil and Gas Locations with a Working Pad Surface within 2,000 feet of one or more Residential Building Units, an ambient noise survey will be run. The proposed Fawn 2734-2833 location does not meet the COGCC requirements for an ambient sound survey as defined in COGCC 423.a.(5).

If requested, a background ambient survey will be conducted prior to commencement in accordance with Weld County code 21-5-435.

21-5-435. Noise.

b. When required, the 1041 WOGLA Permit will include a condition of approval requiring the Operator to conduct the background ambient noise survey not more than ninety (90) days, nor less than thirty (30) days, prior to the Construction Phase. Such survey results shall be submitted to the OGED Director for review and possible action. If necessary, the noise mitigation plan shall be updated accordingly based on the survey results and submitted to the OGED Director for approval via the 1041 WOGLA Sundry Form.

c. When an Operator conducts a background ambient survey the Operator will follow the same approach as outlined in Section 21-5-435.B and over a 72-hour period, including at least 24 hours between 10:00 p.m. on a Friday and 4:00 a.m. on a Monday. A single cumulative daytime ambient noise level and a single cumulative nighttime ambient noise level will be established by taking the logarithmic average of all daytime or nighttime one (1)-hour Leq values measured and in accordance with the sound level data collection requirements pursuant to the maximum permissible noise levels found in Table 435 A.1.

d. Sound levels shall be measured at a distance of 350 feet from the Oil and Gas Location, at minimum in four (4) directions.

Article IV. Points of Compliance

For proposed Oil and Gas Locations with a Working Pad Surface within 2,000 feet of one or more Residential Building Units, at least one, and no more than six noise points of compliance where monitors will be located. Rules defined in COGCC 423.a.(5) series noise regulations are not applicable for the Fawn 2734-2833 location.

Per the COGCC there will be no noise points required for the Fawn 2734-2833 location as the nearest Residential Building Unit is located further than 2000' from the Working pad surface.

Weld County Code states if a location is AG Rural and there is a Building Unit Owner within 1000' of the Disturbance Area a sounds survey must be provided.

The Fawn 2734-2833 location nearest Building Unit Owner is located further than 1000' from the disturbance area.

Article V. Mitigation Measures and Best Management Practices

Best Management Practices and best engineering practices for measuring and mitigating noise levels shall include but not be limited to:

1. Operator will comply with the maximum permissible noise levels specified in Rule 423.b.(1).
2. Operator will install temporary sounds walls to comply with COGCC and Relevant Local Government requirements. Sound walls will be installed for the duration of drilling and completion activities and will be placed a on the North, East and West sides of the perimeter on the pad as indicated below to reduce impacts to nearby receptors.
3. The utilization and placement of these sound walls is driven by a forecasted Noise Impact Assessment that incorporates the applicable drilling rig and frac fleet noise signatures which are placed on to the topography of the site location. The sound model and assessment will provide mitigation methods that can be applied to bring an operation into compliance if needed. Verdad plans to utilize a "quiet" frac fleet.
4. The direction of prevailing winds is considered when planning the location in order to mitigate odor and noise from being a nuisance to the surrounding residents and occupied structures. In order to minimize sound levels during drilling operations at nearby residences, rig generators will be located as far as possible from the residence by rig orientation.
5. A topsoil pile will be located on the Northeast side of the proposed location. This soil pile will further help to reduce impacts of noise to the nearest Building Unit Owner located to the North East of the location.

Complaints

Operator shall provide and post 24-hour, 7 days per week contact information to deal with all noise complaints arising due to Operator's oil and gas facilities. If a noise complaint is made to either Operator directly, or to the COGCC or the Local Government Designee and Operator is notified of the complaint, noise levels will be measured within forty-eight (48) hours of Operator's receipt of the complaint. Operator will contact the concerned party (if contact information is available) to discuss the complaint and the results of the noise measurements.

Contacts

Should a noise complaint be filed with the COGCC or the Local Government Designee, the complaint should be forwarded to the following address or emailed to the below:

Verdad Resources LLC

1125 17th St Suite 550

Denver CO 80202

Attention: Mike Cugnetti

Mike Cugnetti 720-845-6901

Regulatory@verdadresources.com

Article VI. Exhibits/References/Appendices

A background ambient noise survey will be provided if requested by Weld County.