

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Tuesday, January 16, 2018 5:01 PM
To: Dave Kubeczko - DNR
Subject: FW: Gunnison Energy LLC, Trail Gulch Unit 1090 #30 Pad, SWSE Sec 30 T10S R90W, Gunnison County, Form 2A #401411667 Review
Attachments: Scan No. 400965011_Gunnison Energy LLC, Spadafora 11-90, #21-21 H1 Pad_Approved Form 2A_04042016.pdf; Scan No. 401026007_Gunnison Energy LLC, Henderson 8-14 #8-14 Pad_Approved Form 2A_11102016.pdf
Importance: High
Categories: Operator Correspondence

Scan No. 2108393 CORRESPONDENCE 2A #401411667

From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Friday, January 12, 2018 1:04 PM
To: Robert Downey
Cc: Heather Lang
Subject: Gunnison Energy LLC, Trail Gulch Unit 1090 #30 Pad, SWSE Sec 30 T10S R90W, Gunnison County, Form 2A #401411667 Review
Importance: High

Robert,

Thanks for the additional information and updated attachments. The changes Gunnison Energy LLC has made to this pad are substantial and will require COGCC replacing at least five attachments on the Form 2A. **Have other attachments associated with the Form 2 been revised? These will need to be sent to COGCC and replaced on the Form 2.** Under COGCC's rejection policy, this Form 2A and associated Form 2 can be rejected and Gunnison will have to resubmit all permits. **As a courtesy, I will update the Form 2A attachments and all data fields on the Form 2A as necessary.** However, in the future, any substantial changes to permits for any reason, will require the permits to be rejected, and then resubmitted.

As for Gunnison Energy's non-concurrence of the 48 hour notification for pressure testing of flowlines from wellheads to separators to tanks, this **COA 90** will remain on this Form 2A with the following revisions (**yellow highlight is added text, black highlight is deleted text**):

Planning - Notifications: The following COA will apply:

COA 90 - In addition to the notifications required by COGCC listed in the **Northwest Notification Policy (Notice of Intent to construct a new location, Notice of Intent to spud surface casing, and Notice of Intent to commence hydraulic fracturing operations)** and **Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment; b. Notice of Spud; and c. Notice of Construction or Major Change)**; operator shall notify the COGCC 48 hours prior to pipeline **pressure** testing **of all onsite** (flowlines from wellheads to separators to tanks; **and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations**) using the Form 42 (as described in **Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions**). The appropriate COGCC individuals will automatically be email notified.

I have attached two (2) previously approved Form 2As for Gunnison Energy with the same COA, so this should not be anything new to Gunnison Energy.

As for Gunnison Energy's proposed changes to the Flowback to tanks **COA 25**, this COA will remain on this Form 2A with the following revisions (**yellow highlight is added text, black highlight is deleted text**):

Drilling/Completions: The following COAs will apply:

COA 25 - Initial Flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel; or into tanker trucks for offsite disposal. **Open top tanks cannot be used for initial flowback fluids containment unless they are situated downstream from a two or three phase flowback separator. No open top tanks can be used for initial flowback fluids containment.** The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material.

Again, this COA has been placed on two (2) previously approved Form 2As for Gunnison Energy, so this should not be anything new to Gunnison Energy.

COGCC will attached the Google Earth Snapshot of OGCC Location ID # , the pad located immediately adjacent to the southwest of this proposed new well pad. COGCC has added the following statement to the 'Operator Comments and Submittal' section of the Form 2A:

Gunnison Energy LLC has evaluated whether the existing well pad immediately adjacent to the southwest (Gunnison Energy LLC, Federal-610S90W #30SWSE OGCC Location ID #324464) could be expanded and used to drill the proposed horizontal Mancos wells, but this was not feasible due to the following:

The existing (producing) well pad has been fully reclaimed and is immediately adjacent to pipeline equipment, including a meter and pig receiver (see attachment - 'Google Earth Map of OGCC Location #324464'). This well was drilled in 1981.

The existing producing well is only 25 to 50 feet from the gas metering equipment and the edge of the reclaimed location. There's is only enough room to drive a truck around the wellhead; the existing pad area is about 75 feet by 100 feet, with the well near the middle, with no room for a drilling rig.

The proposed well pad is intended to accommodate up to 8 deep horizontal Mancos shale gas wells, with the potential for more. At least 2.5 acres of pad land is required to enable a drilling rig large enough to drill a 17,500' TMD well, and an equal or larger amount of land is needed to support a fracture stimulation on these wells. For multiple wells on a pad, with simultaneous operations, a larger pad is required.

If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

David A. Kubeczko, PG
Oil and Gas Location Assessment Specialist
Western Colorado



Colorado Oil & Gas Conservation Commission
Northwest Area Office
796 Megan Avenue, Suite 201
Rifle, CO 81650
FAX: (970) 625-5682
Cell: (970) 309-2514
dave.kubeczko@state.co.us | www.colorado.gov/cogcc

 Please consider the environment before printing this e-mail

From: Robert Downey [mailto:Robert.Downey@OXBOW.COM]

Sent: Thursday, January 11, 2018 4:37 PM

To: dave.kubeczko@state.co.us

Cc: Heather Lang

Subject: Gunnison Energy LLC, Trail Gulch Unit 1090 #30 Pad, SWSE Sec 30 T10S R90W, Gunnison County, Form 2A #401411667 Review

Hello Dave,

Thank you for taking my call this afternoon, I certainly appreciated your taking time to talk with me, and I enjoyed the conversation. I've addressed your questions and comments as follows:

First, regarding your question as to why we need to build a new pad immediately adjacent to an existing pad.

The google earth snapshot with dimensions added, below, may help to answer this question:

The existing (producing) well pad has been fully reclaimed and is immediately adjacent to pipeline equipment, including a meter and pig receiver. This well was drilled in 1981. The picture from Google Earth of the location is shown below:



As can be seen from this view, the existing producing well is only 25-50 feet from the gas metering equipment and the edge of the reclaimed location. There's barely enough room to drive a truck around the wellhead; the existing pad area is about 75 feet by 100 feet, with the well near the middle, with no room for a drilling rig.

The proposed well pad is intended to accommodate up to 8 deep horizontal Mancos shale gas wells, with the potential for more. At least 2.5 acres of pad land is required to enable a drilling rig large enough to drill a 17,500' TMD well, and an equal or larger amount of land is needed to support a fracture stimulation on such wells. For multiple wells on a pad, with simultaneous operations, a larger pad is required.

I've attached the final plats we will be filing for the proposed well, that were completed in late October, following multiple adjustments made following numerous meetings and correspondence with the BLM, USFS and our environmental consultants. As shown on the Exhibit 1 plat, the total area of disturbance for this pad will be 6.548 acres, and will eventually be reclaimed back to 1.428 acres. Likewise the footage at the surface for the proposed well will be 4281 feet from the west line, or 1942' from the east line, as shown on the well location plat. These footages changed slightly when we corrected the wellbore alignments.

Regarding the revisions to the Conditions of Approval, we don't concur with the addition of the requirement to provide 48 hour prior notice of pipeline testing from wellhead to separator to tanks, and/or any temporary surface lines used for hydraulic fracture stimulation and/or flowback operations, as written, when this is all within the well pad, and I understand from our conversation that this was not what you were referring to. I would suggest changing your COA to insert the words "off-pad", e.g., *"operator shall notify the COGCC 48 hours prior to off-pad pipeline testing (flowlines from wellheads to off-pad separators to tanks; and/or any off-pad temporary surface lines used for hydraulic stimulation and/or flowback operations"*

I would suggest changing your COA, *"No open top tanks can be used for initial flowback fluids containment"* to: *"Open top tanks cannot be used for initial flowback fluids containment unless they are situated downstream from a two or three phase flowback separator"*. This is because we flow our wells back through a choke to a large flowback separator, with the produced gas directed to a gas pipeline or a flare, and the flowback fluids to open top frac tanks. Open top frac tanks are much easier to remove frac sand from than enclosed tanks, using hydrovac equipment. Our wells produce only dry gas, no hydrocarbon liquids, so the level of hydrocarbon emissions is very low. In addition, we frac with nitrogen foam, and open top flowback tanks facilitate the use of sprayed on defoamer, that we would not be able to easily apply with an enclosed tank.

Thank you for your consideration,

Robert



GUNNISON ENERGY LLC
Robert A. Downey
VP Operations & Production
Gunnison Energy LLC
1801 Broadway Suite 1200
Denver, CO 80202
Main: 303-296-4222
Fax: 303-296-4555
Direct: 303-296-3549

From: Dave Kubiczko - DNR [<mailto:dave.kubiczko@state.co.us>]
Sent: Monday, January 08, 2018 1:45 PM
To: Heather Lang
Cc: Sarah Freeman - DNR
Subject: Gunnison Energy LLC, Trail Gulch Unit 1090 #30 Pad, SWSE Sec 30 T10S R90W, Gunnison County, Form 2A #401411667 Review
Importance: High

Heather,

I have been reviewing the Gunnison Energy LLC, Trail Gulch Unit 1090 #30 Pad **Form 2A #401411667**. Based on COGCC's review, the following revisions have been made to the Form 2A:

COGCC has revised: Footage at surface from 4358 feet FWL to 1865 feet FEL based on COGCC's review of the Well Location Plat attachment to the Form 2 #401416174 (made same revision to the Form 2 #401416174);

COGCC has revised: Size of disturbed area during construction in acres: from 6.00 to 2.71; and revised: Size of location after interim reclamation in acres: from 4.00 to 1.28; based on survey data on the Construction Layout Drawings attachment (Interim Reclamation Plan, Figure #5); and

COGCC has revised the Distance to nearest downgradient surface water feature from 2000' to 1790' based on COGCC's review of our Online GIS Map, Topo layer (intermittent stream to the east-southeast).

COGCC requests an explanation why Gunnison Energy needs to build a new well pad location immediately adjacent to an existing (producing) well pad location (OGCC ID #324464, Gunnison Energy LLC, Federal-610S90w #30SWSE). COGCC will place this comment on the 'Operator Comments and Submittal' section of the Form 2A.

COGCC would like to attach the following conditions of approval (COAs) based on the information and data Gunnison Energy has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

Planning - Notifications: The following COA will apply:

COA 90 - In addition to the notifications required by COGCC listed in the **Northwest Notification Policy (Notice of Intent to construct a new location, Notice of Intent to spud surface casing, and Notice of Intent to commence hydraulic fracturing operations)** and **Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment; b. Notice of Spud; and c. Notice of Construction or Major Change)**; operator shall notify the COGCC 48 hours prior to pipeline testing (flowlines from wellheads to separators to tanks; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in **Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions**). The appropriate COGCC individuals will automatically be email notified.

Construction: The following COAs will apply:

COA 23 - Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals, and maintained in good condition.

COA 76 - Strategically apply fugitive dust control measures to reduce fugitive dust and coating of vegetation and deposition in water sources.

COA 58 - Berms or other containment devices around permanent produced water storage tanks shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner or equivalent protection) to contain any spilled or released material.

Drilling/Completions: The following COAs will apply:

COA 12 - A closed loop system must be implemented during drilling. All cuttings generated during drilling with high chloride (salt based [$>15,000$ ppm Cl]) based mud (SBM) must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The moisture content of any SBM-generated drill cuttings in a cuttings containment area or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. All liners associated with salt based drilling mud and cuttings must be disposed of offsite per CDPHE rules and regulations.

COA 11 - The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

COA 25 - Flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel; or into

tanker trucks for offsite disposal. **No open top tanks can be used for initial flowback fluids containment.** The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material.

Emissions Mitigation: The following COA will apply:

COA 26 - Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.

Material Handling and Spill Prevention: The following COA will apply for any temporary surface or buried permanent flowlines and/or offsite pipelines (poly or steel) are used during operations at this well pad location or nearby pipeline routes:

COA 45 - Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.

COGCC would appreciate your concurrence to attaching these COAs and concurrence with the revisions listed above, to the Form 2A, prior to passing the OGLA review. In addition, could Gunnison Energy provide COGCC with the COAs and wildlife stipulations that the Forest Service / BLM has attached to this location (or when you receive them if the Federal APD has not yet been approved). If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

David A. Kubeczko, PG
Oil and Gas Location Assessment Specialist
Western Colorado



Colorado Oil & Gas Conservation Commission
Northwest Area Office
796 Megan Avenue, Suite 201
Rifle, CO 81650
FAX: (970) 625-5682
Cell: (970) 309-2514
dave.kubeczko@state.co.us | www.colorado.gov/cogcc

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