



Request for Comments

Case Name: Great Western Operating Company B-Farm LD Pad
Project Number: USR2017-00004

July 20, 2017

Adams County Community and Economic Development Department is requesting comments on the following request:

Request for a Use by Special Review Permit to allow thirty-six (36) horizontal well on one (1) well pad for the production of oil and gas.

This request is located at approximately southeast of Colorado Blvd. and Highway 7.

The Assessor's Parcel Number is 0157107000016.

Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 by August 10, 2017 so that your comments may be taken into consideration in the review of this case. Please send your response by way of e-mail to clamere@adcogov.org.

The complete Use by Special Review Permit application can be found at www.adcogov.org/planning/currentcases.

Additional Oil and Gas information can be found at www.adcogov.org/oil-and-gas-information.

Thank you for your review of this case.

Christopher LaMere
Case Manager

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WRITTEN EXPLANATION

The proposed project consists of the construction of one (1) well pad with up to thirty-six (36) wells and one (1) access road for an oil and gas location to be operated by Great Western Oil and Gas. Great Western Oil and Gas does not intend to drill all (36) wells consecutively. The drilling schedule is subject to change due to economic conditions, business development priorities and equipment availability.

COMPATIBILITY/LAND USE IMPACTS

The location of this pad is consistent with the surface owner's preference and was agreed upon per the Surface Use Agreement. The surface owner has an irrigated crop circle in the NE quarter of this section therefore placement in the NW quarter of this section is optimal to reduce the impacts to their farming operations. There is an irrigated ditch that runs along the North and East boundaries of the proposed pad location, along with an existing wetlands and FEMA 100 year floodplain to the NE, these factors act as restrictions to shifting this location to the North. The future location of Colorado Blvd is planned to be along the west side of Lot 1, just to the west of the surface owners irrigated crop circle and east of this proposed pad location. The nearest building unit is located 567' to the NW of the production facilities and 702' to the west of the nearest well. A berm has been planned along the west side of the pad to mitigate nuisances such as light, dust, noise and odor for the building unit owners to the west.

SITE PREPARATION (30 Days)

The proposed drill site will be 11.769 acres in size which will be reclaimed to 5.926 acres once all wells are done drilling and completed. Construction of this site includes upgrading the existing access road and leveling the site. A closed loop fluids system will be used while drilling; so, no drilling pits will be used. The tank battery and wellhead access road will be constructed of a 6" layer of gravel compacted to minimum density of 95% and will be graded to provide drainage from the roadway surface. Any grading will have all topsoil horizons segregated per Colorado Oil & Gas Conservation Commission (COGCC) regulations to facilitate proper backfilling and reclamation/revegetation.

EROSION AND DRAINAGE CONTROL

Culverts for cross-drainage will be installed as necessary and in conjunction with consultations with surface owner. Proper storm-water controls will be installed around the tank battery and drilling pad during construction. The wellhead access road will be crowned, ditched and graveled, and culverts for cross drainage will be installed as noted above. The operator will take steps to insure that access to the wellheads is maintained in all seasons. Storm-water controls will also be installed around the spoil piles to prevent sediment migration.

DRILLING PHASE (Approximately 6 days per well)

After site preparation, drilling rig equipment is transported to location and rigged up. Drilling operations are conducted 24 hours a day until completed. The surface hole is drilled to at least 1700 ft using fresh water and surface casing is run and cemented back to ground level to protect all fresh water zones. Surface casing setting depth and construction is approved by the Colorado Oil & Gas Conservation Commission and complies with COGCC rules and regulations. Well control equipment is installed and tested and drilling of the main hole is then commenced. The rig

uses a closed-loop pit-less drilling system. The average total measured depth for the proposed wells is 18,200 ft, (vertical depth is approx. 7,900 ft.) depending on the directional reach and the formation being targeted. Upon reaching total depth production casing is run to total depth and cemented to isolate the oil and gas productive intervals from communication with shallower formations.

Water used in drilling and completion of the wells will be obtained from a commercial water hauling contractor from a source approved by both COGCC and the State Engineer's office.

COMPLETION PHASE

The completion phase begins after the drilling equipment is transported off the location. Completion operations are conducted intermittently over a period of several weeks. Completion Operations will be run 24 hours and last approximately 12 days per well. Prior to beginning Completion activities, the site is bladed and leveled to accommodate the completion rig, anchors are set for the completion rig, and drilling mud is removed from the pits. Additional operations including cementing, drilling and logging may occur as circumstances require. The Niobrara or Codell formations are perforated through the casing and are hydraulically fractured. During this form of stimulation water is pumped at high rates and pressures which hydraulically fractures the formation. Sand is then pumped into the formation to allow oil and gas to flow freely from the formation into the well bore. The equipment will consist of multiple tanks for water storage, pressure pumps, blending and bulk material trucks with other necessary equipment. Hydraulic fracturing will take about 7 days per well and preparing for the procedure requires up to three weeks to move in necessary equipment and schedule services. After fracturing is completed the mobile equipment is removed, excluding tanks that are used to retain the water that is produced during flowback and testing operations. All water is hauled to approved disposal sites. The flowback tanks will remain on location until the well is rerouted through standard production equipment.

RESTORATION / RECLAMATION

Interim reclamation will be conducted under company supervision per COGCC regulations after all planned wells are drilled. During drilling operations, all excess drilling mud and cuttings will be removed from the location and will be trucked offsite to an approved land farming site or to an approved commercial disposal facility, per COGCC regulations. The pad will be backfilled with soils in the reverse order removed and capped with the separated topsoil. Sub soils will be mechanically compacted while backfilling if necessary.

PRODUCTION PHASE

Production facilities will comply with Adams County and COGCC regulations. The standard production equipment to be installed on the wellhead pad is a Plunger Lift Lubricator on each well and an Automation box. The separators and tanks must be located 75' from each other and the wellhead, per COGCC regulations.

The production facility pad will be located to the South of the proposed well pad. Thirty Six (36) low profile 533 bbls (16' tall) steel oil tanks, six (6) low profile 533 bbls (16' tall) fiberglass water tanks, thirty-six (36) 3-phase separators, six (6) horizontal heater treaters (12' tall), two (2) Horizontal Free Water Knockout (12' tall), three (3) Vapor Recovery Towers (32' tall), twelve

(12) ECDs (25' tall), three (3) vertical gas line scrubbers (12' tall), two (2) vapor recovery units, two (2) gas sales wellhead compressors, two (2) custody transfer gas meter per the attached facility detail site plan. A berm will be constructed around the oil and water tanks to hold a minimum 110% of the capacity of the largest tank located within the berm.

Within thirty days after completion of operations, Great Western shall provide to the Town "as built" drawings showing all facilities, pipelines, flow lines and gathering lines installed to service the proposed wells. Building permits will be obtained for permanent above-ground structures. A "pumper/lease operator" (Great Western employee or contractor), will monitor the well every day. The pumper/lease operator reports the tank measurements of the oil, gas sales and pressure readings and performs normal maintenance duties. This production information is compiled and submitted to the Colorado Oil & Gas Commission on a monthly basis. Pumper traffic will be light after the initial 120 days of production after each drilling rig visit. During the initial 120 days there will be a continuous operator on site. Water trucks will be on site to haul produced water. The frequency will be based on production rates. Trucks haul 130 bbls at a time. Initially there will be trucks through the site continuously. Oil trucks will be on site to haul oil off the site. The frequency will be based on production rates. The trucks haul between 180-250 bbls at a time. Initially they will be on site continuously.

If an oil line is installed oil will be pipelined out and only trucked if the pipeline is down.

VISUAL & NOISE MITIGATION

Pursuant to COGCC Rule 804, the tank battery shall be painted in uniform, non-reflective, earth tones selected after consultation with the surface owner. This site was chosen in cooperation with the surface owner in accordance with future plans, an earthen berm is being placed on the west side of the pad to reduce the visual and noise impacts to the adjacent homeowners located to the west of the pad. In addition to the berm installation sound walls will be utilized on the north, west and east sides of the pad on an as needed basis based on a baseline noise survey.

An Ambient Sound Study will be conducted no sooner than (3) weeks prior to the construction of the location to account for any new sounds not associated with this oil and gas location in order to get the most accurate baseline noise survey and recommendations for noise mitigation.

LIGHT MITIGATION

Light sources will be directed downwards, and away from occupied structures where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.

LANDSCAPING

The berm to the west of the berm will be farmed by the Surface Owner initially. Upon additional planned improvement of the surrounding lands landscaping will be installed. A plan has been provided with plants and landscaping materials.

FENCING

Great Western will comply with Colorado Oil and Gas Conservation Commission (COGCC) rule 604.c(2)M At a minimum GWOC will install appropriate fencing to restrict access by any unauthorized persons. This fencing may vary depending on site-specific situations. Chain-link

fencing with slat covering will be installed on the North side of the pad to break the light of sight from HWY 7.

WEED CONTROL

The site will be maintained to prevent accumulation of trash and noxious weeds. Great Western will comply with the Colorado Oil and Gas Conservation Commission (COGCC) rules 603g, 1003e1, 1003f, 1004c2 regarding weed control. All weeds, noxious or otherwise, will be prevented from growing or will be removed from the tank battery site, access road and wellhead pad. Weed spraying by a licensed applicator will be conducted annually, and any fugitive weeds will be removed manually.

ROAD MAINTENANCE

Access roads will be bladed or “dragged” to minimize ruts following wet weather. Fugitive dust is not expected to be a problem as disturbed areas will be either reseeded or graveled. GWOC will work with the county/Town road department to ensure any damage caused by GWOC activities is properly repaired.

SIGNS

Signs required by COGCC will be maintained in good, readable condition.

AIR POLLUTION MITIGATION

All drilling, well completion and production activities will be in compliance with the permit and control provisions of the Colorado Air Quality Control Program, Title 25, Article 7, C.R.S.

ENDANGERED SPECIES

The site has been continuously maintained as cropland and as such is not a habitat for Preble’s meadow jumping mouse or other endangered species, and the operator will take all reasonable precautions to protect same if encountered.

ABANDONMENT

At the time that the well becomes permanently sub-economic to operate Great Western will engage the services of a plugging rig to remove production equipment from the wellbore and plug the productive zones with a combination of bridge plugs and cement plugs in accordance with Section 319 of the rules and regulations promulgated by the Colorado Oil & Gas Conservation Commission. After the well has been plugged, the surface separator and tanks will be removed. Flow lines will be filled with water and capped in accordance with Section 1103 of the COGCC regulations. Surface restoration will involve removal of any above-ground casing and installation of required markers that will not interfere with subsequent surface use.

After all production equipment is removed, the surface will be restored to the original grade in a matter compatible with the then-existing surface usage.

Location Map:

