

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

Date Received: 02/10/2020

TYPE OF WELL    OIL     GAS     COALBED     OTHER: \_\_\_\_\_      Refilling

ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES       Sidetrack

Well Name: Prairie LE      Well Number: 17-016HC

Name of Operator: GREAT WESTERN OPERATING COMPANY LLC      COGCC Operator Number: 10110

Address: 1001 17TH STREET #2000

City: DENVER      State: CO      Zip: 80202

Contact Name: Linsey Jones      Phone: (720)595-2218      Fax: (    )

Email: ljones@gwogco.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20160041

**WELL LOCATION INFORMATION**

QtrQtr: SESW      Sec: 20      Twp: 1S      Rng: 66W      Meridian: 6

Latitude: 39.944912      Longitude: -104.804129

Footage at Surface:      577      Feet      FSL      1317      Feet      FWL

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 5046      County: ADAMS

GPS Data:      GPS Quality Value: 1.2      Type of GPS Quality Value: PDOP      Date of Measurement: 07/26/2019

Instrument Operator's Name: Jared Christopher

If well is  Directional       Horizontal (highly deviated)      **submit deviated drilling plan.**

Footage at Top of Prod Zone:      FNL/FSL      FEL/FWL      Bottom Hole:      FNL/FSL      FEL/FWL

150      FSL      1120      FWL      150      FNL      1120      FWL

Sec: 20      Twp: 1S      Rng: 66W      Sec: 17      Twp: 1S      Rng: 66W

**LOCAL GOVERNMENT INFORMATION**

County: ADAMS      Municipality: Brighton

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below.       Yes  No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.     

The local government siting permit type is: CUG

The local government siting permit was filed on: 01/27/2020

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

## LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership:  Fee  State  Federal  Indian

The Surface Owner is:  is the mineral owner beneath the location.

(check all that apply)

is committed to an Oil and Gas Lease.

has signed the Oil and Gas Lease.

is the applicant.

The Mineral Owner beneath this Oil and Gas Location is:  Fee  State  Federal  Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: No

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

## LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

Sections 17 1S 66W  
40 acres  
map attached

Total Acres in Described Lease: 40 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # \_\_\_\_\_

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building:	<u>1531</u> Feet
Building Unit:	<u>1531</u> Feet
High Occupancy Building Unit:	<u>5280</u> Feet
Designated Outside Activity Area:	<u>5280</u> Feet
Public Road:	<u>563</u> Feet
Above Ground Utility:	<u>562</u> Feet
Railroad:	<u>5168</u> Feet
Property Line:	<u>577</u> Feet
School Facility:	<u>5280</u> Feet
School Property Line:	<u>5280</u> Feet
Child Care Center:	<u>5280</u> Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.

**DESIGNATED SETBACK LOCATION INFORMATION**

Check all that apply. This location is within a:  Buffer Zone  
 Exception Zone  
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit  
 - Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
 - Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

**SPACING and UNIT INFORMATION**

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 291 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 200 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

**SPACING & FORMATIONS COMMENTS**

Section 17 W 1/2  
 Section 20 W 1/2  
 T1S R66W

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: \_\_\_\_\_

**OBJECTIVE FORMATIONS**

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
CODELL	CODL	407-2901	640	Sec 17, 20 W 1/2

## DRILLING PROGRAM

Proposed Total Measured Depth: 18535 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 19 Feet  No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? Yes

BOP Equipment Type:  Annular Preventor  Double Ram  Rotating Head  None

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? \_\_\_\_\_

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

## CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	13+1/2	9+5/8	36	0	1700	717	1700	0
1ST	8+1/2	5+1/2	17	0	18535	2328	18535	4366

Conductor Casing is NOT planned

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

## RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

## OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number \_\_\_\_\_
- Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

## OPERATOR COMMENTS AND SUBMITTAL

Comments

Distance from completed portion of the wellbore to nearest wellbore permitted or completed in the same formation was measured in 3D to the proposed Prairie LE 17-016HN

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged well was measured in 2D is ZZ - NBL TASHIRO-UPRR 1, API No 05-001-06841 owned by Noble Energy Inc

This well has a bottom hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 200' FNL and 1120' FWL of Section 17. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

This well has an Entry Point beyond the unit boundary setback. The top of the completed interval will be within the unit boundary setback at 460' FSL and 1120' FWL of Section 20. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

The API is being reused from a previously submitted Brighton Lakes APD. Every aspect of the wellbore is changing including the well name, drilling and casing program, offset well evaluation, and Attachments.

This application is in a Comprehensive Drilling Plan No CDP #: \_\_\_\_\_

Location ID: 450942

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: \_\_\_\_\_ Print Name: Linsey Jones

Title: Regulatory Analyst Date: 2/10/2020 Email: ljones@gwogco.com

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: \_\_\_\_\_ Director of COGCC Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

**API NUMBER**

05 001 10066 00

## Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

<u>COA Type</u>	<u>Description</u>
<b><u>Best Management Practices</u></b>	
<u>No BMP/COA Type</u>	<u>Description</u>
1 Drilling/Completion Operations	Closed Loop Drilling – Pit Restrictions Rule 604.c.(2)B. Great Western Operating Company, LLC (GWOC) will be utilizing a closed loop drilling system.
2 Drilling/Completion Operations	Drill stem tests (Rule 604.c.(2)L) Conventional drill stem tests will not be conducted on DJ Basin horizontal wells currently being executed or planned by Great Western. If plans change in the future a well specific drill stem testing plan will be prepared for that particular well. Note that GREAT WESTERN may elect to use one of several available wireline deployed tools for the purpose of measuring down hole formation pressures and/or collecting down hole fluid samples from the target formation(s) of a particular well.
3 Drilling/Completion Operations	Wellbore Collision Prevention – Rule 317.r Prior to drilling operations, Great Western will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottom hole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment.
4 Drilling/Completion Operations	Stimulation Setback – Rule 317.s Great Western shall obtain signed written consent for any portion of the proposed wellbore's treated interval within 150' of an existing (producing, Shut-in, or temporarily abandoned) or permitted oil and gas well's treated interval belonging to another operator prior to completion of the well.
5 Drilling/Completion Operations	BOPE for well servicing (Rule 604.c.(2)J) A BOPE with a minimum pressure rating of 3,000 psi will be utilized. At a minimum it will consist of 2 ram preventers and 1 annular preventer. The blind rams will be positioned below the pipe rams. A backup system of pressure control will be onsite consisting of at a minimum 1,000 psi accumulator (backup pressure). Accumulator is tested to 1,000 psi. Operator may use fixed sized pipe rams matching the tubular size. The annular preventer will be pressure tested to 250 psi low and 2,000 psi high for 5 minutes each. The ram preventers will be tested to 250 psi low and 2,500 psi high for 5 minutes each. All remaining well control equipment will be tested to 250 psi low and 2,500 psi high for 5 minutes each. The pressure tests will be conducted when the equipment is first installed and every 30 days thereafter. Pipe rams and blind rams will be function tested before every well service operation. Annual BOP inspections and pressure tests will be performed by the service company and will be charted & retained for 1 year. Backup stabbing valves shall be used on operations that require reverse circulation. Valves will be pressure tested before each well service operation in low pressure and high pressure range. The Great Western onsite representative will be certified in Well Control Operations by a Well-Cap certified training service.

6	Drilling/Completion Operations	Bradenhead Monitoring Great Western will comply with the "COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012
7	Drilling/Completion Operations	Multi Well Open-Hole Logging – Rule 317.p Alternative Logging Program: One of the first wells drilled on the pad will be logged with open-hole resistivity log and gamma-ray log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.

Total: 7 comment(s)

### Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402297020	FORM 2 SUBMITTED
402298924	OffsetWellEvaluations Data
402298958	WELL LOCATION PLAT
402298959	DEVIATED DRILLING PLAN
402298962	MINERAL LEASE MAP
402307924	DIRECTIONAL DATA
402307925	SURFACE AGRMT/SURETY
402307926	EXCEPTION LOC REQUEST

Total Attach: 8 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit (Rejected)	REJECTION: This APD has been rejected per the COGCC Rejection Process (updated May 21, 2019). Surface & Minerals Tab: The response to, "Minerals beneath this Oil and Gas Location will be developed by this Well", is incorrect; the attached Surface Use Agreement is expired and needs to be replaced with the same SUA that was attached to the Form 2A (Doc#402165116). These errors are on this APD and on 15 other APDs on the pad. This entire form was not reviewed by permitting staff.	09/10/2020
Permit	Passed completeness.	02/11/2020

Total: 2 comment(s)

## Public Comments

The following comments were provided by members of the public and were considered during the technical review of this application.

<u>No.</u>	<u>Comment</u>	<u>Comment Date</u>
1	<p>I am Mick Richardson, manager of Brighton Lakes, LLC. I request that the Prairie LE wells be approved. Brighton Lakes is the surface owner and developer where the Prairie LE wells are located. I am also a mineral owner that would receive royalties from the production of minerals. The MOU with the City of Brighton and the location of the pad site agreed to by Great Western and Brighton Lakes LLC (the land and mineral interest owner of 500 acres surrounding the pad site) provides the following benefits:</p> <ul style="list-style-type: none"><li>•Brighton Lakes LLC met with the City of Brighton prior to entering into a lease to ensure that the City supported the location of the drilling site.</li><li>•Ward Petroleum had received previous COGCC approval for this pad.</li><li>•The City of Brighton and Great Western, with Brighton Lakes collaboration, have entered into an MOU agreement that includes enhanced best management practices.</li><li>•The pad site was selected to be adjacent to 136th Avenue which has a major arterial designation in the City of Brighton Transportation Plan and is directly accessible to State Highway 85 and Interstate 76 (less than one mile). The site has separate direct access to 136th Avenue.</li><li>•As a condition of our lease, we required the operator to utilize best efforts to install oil and gas pipelines to transport oil off-site resulting in less truck traffic and damage to roads. This pipeline was completed and operational in 2017 and the operator has committed to utilize this pipeline.</li><li>•Brighton Lakes recently provided an easement for a water disposal pipeline which will also decrease truck traffic and damage to roads.</li><li>•Brighton Lakes has agreed not to plat or build any homes within 1000 feet of the wells for seven years and Great Western has agreed in their MOU to complete drilling within a seven year period.</li><li>•It will be beneficial to the City of Brighton and the Brighton Lakes Development to complete drilling prior to residential development adjacent to the wells.</li><li>•Irrigation ditches and storage are near the site which should alleviate water trucking.</li><li>•The Brighton Lakes SUA and the City of Brighton's MOU provide for enhanced landscaping and visual screening agreed to by Great Western.</li></ul>	02/28/2020

Total: 1 comment(s)