

FORM  
2

Rev  
08/16

## State of Colorado

### Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400913433

Date Received:

09/08/2016

#### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Evenstar EE

Well Number: 01-279HC

Name of Operator: GREAT WESTERN OPERATING COMPANY LLC

COGCC Operator Number: 10110

Address: 1801 BROADWAY #500

City: DENVER

State: CO

Zip: 80202

Contact Name: Callie Fiddes

Phone: (303)398-0550

Fax: ( )

Email: regulatorypermitting@gwogco.com

#### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160041

#### WELL LOCATION INFORMATION

QtrQtr: SWSW Sec: 2 Twp: 7N Rng: 66W Meridian: 6

Latitude: 40.599686

Longitude: -104.752061

Footage at Surface: 925 Feet FNL/FSL FSL 613 Feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4966

County: WELD

GPS Data:

Date of Measurement: 08/23/2016

PDOP Reading: 1.2

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

1583

FSL

460

FWL

1603

FSL

470

FEL

Sec: 2

Twp: 7N

Rng: 66W

Sec: 1

Twp: 7N

Rng: 66W

#### 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: Yes

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.)

Please see attached map.

Total Acres in Described Lease: 150 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: 659 Feet

Building Unit: 998 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 601 Feet

Above Ground Utility: 585 Feet

Railroad: 3847 Feet

Property Line: 613 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, and Designated Outside Activity Area - 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: 10/09/2015

## 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: 100 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

## 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           | 407-1871                | 1280                          | Sec 1 & 2: All                       |

## DRILLING PROGRAM

Proposed Total Measured Depth: 17953 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: \_\_\_\_\_ 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? No

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             | 1600          | 665       | 1600    | 0       |
| 1ST         | 8+1/2        | 5+1/2          | 17    | 0             | 17953         | 2291      | 17953   | 0       |

☒ 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 Surface Use Agreement has waivers for Rule 318A.a & 318A.c.  
The nearest well in the same formation is the Evenstar EE 01-279HN. The distance was measured in 2D.

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

Location ID: \_\_\_\_\_

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: Callie Fiddes

Title: Regulatory Specialist Date: 9/8/2016 Email: regulatorypermitting@gwogco.c

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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

COGCC Approved:  Director of COGCC Date: 2/6/2017

Expiration Date: 02/05/2019

### API NUMBER

05 123 44158 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.

### **COA Type**

### **Description**

|  |   |
|--|---|
|  | This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location. The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.   |
|  | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad and provide 48 hour spud notice for each subsequent well drilled on the pad.<br>2) Comply with Rule 317.j and provide cement coverage from TD to a minimum of 200' above the Niobrara. Verify coverage with cement bond log.<br>3) Oil based drilling fluid is to be used only after all aquifers are covered. |
|  | Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test:<br>1) Within 60 days of rig release and prior to stimulation and<br>2) If a delayed completion, 6-7 months after rig release and prior to stimulation.<br>3) Within 30 days after first production, as reported on Form 5A.   |

## **Best Management Practices**

### **No BMP/COA Type**

### **Description**

|   |          |  |
|---|----------|--|
| 1 | Planning | Drill stem tests (Rule 604.c.(2)L<br><br>Conventional drill stem tests will not be conducted on DJ Basin horizontal wells currently being executed or planned by GWOC. If plans change in the future a well specific drill stem testing plan will be prepared for that particular well. Note that GWOC may elect to use one of several available wireline deployed tools for the purpose of measuring downhole formation pressures and/or collecting downhole fluid samples from the target formation(s) of a particular well. |
| 2 | Planning | Identification of P&A wells (Rule 604.c.(2)U<br><br>GWOC shall identify the location of the P&A wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument. P&A wellbores shall be cutoff well below ground surface in agricultural areas to provide for landowners to safely farm the reclaimed well area.   |

|   |                                |  |
|---|--------------------------------|--|
| 3 | Emissions mitigation           | <p>Green Completions (Rule 604.c.(2)C.</p> <p>As applicable, per COGCC Rule 805, GWOC will utilize all reasonable and cost-efficient best practices, including but not limited to those listed in Rule 805, to maximize resource recovery and mitigate releases to the environment.</p> <ul style="list-style-type: none"> <li>• Initial frac and drill out effluent is routed through a sand catcher/trap and a junk/sand tank to remove sand and well frac debris.</li> <li>• Once any hydrocarbons are detected but prior to encountering salable quality combustible gas or significant volumes of liquid hydrocarbons (condensate or oil) (greater than 10 barrels per day average) the effluent is routed through a high-pressure separator and closed-top tanks to minimize emissions to the environment. Hydrocarbon liquids, produced water, and sand are separated utilizing the high-pressure separator.</li> <li>• The quality (combustibility) of the gas is typically monitored directly at the high-pressure separator. When salable (combustible) quality gas is measured/ detected the gas stream is immediately diverted to the sales pipeline or the well is shut in or a form 42 for flaring will be submitted for approval.</li> <li>• The separated produced water and hydrocarbon liquids (condensate/oil) are directed to specific tanks for storage until being unloaded and hauled to disposal or sales as appropriate.</li> </ul> |
| 4 | Drilling/Completion Operations | <p>BOPE for well servicing (Rule 604.c.(2)J</p> <p>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 10 minutes each. The ram preventers will be tested to 250 psi low and 2,500 psi high for 10 minutes each. All remaining well control equipment will be tested to 250 psi low and 2,500 psi high for 10 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 &amp; 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 GWOC onsite representative will be certified in Well Control Operations by a Well-Cap certified training service.</p>    |
| 5 | Drilling/Completion Operations | <p>Bradenhead Monitoring</p> <p>GWOC will comply with the "COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012</p>   |
| 6 | Drilling/Completion Operations | <p>Multi Well Open Hole Logging</p> <p>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 clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name &amp; number) the well in which open-hole logs were run.</p>  |

Total: 6 comment(s)

### **Applicable Policies and Notices to Operators**

|  |
|--|
| Policy   |
| Notice Concerning Operating Requirements for Wildlife Protection.<br><a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>   |
| Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.<br><a href="http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf">http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf</a> |

### **Attachment Check List**

| <b><u>Att Doc Num</u></b> | <b><u>Name</u></b>         |
|---------------------------|----------------------------|
| 400913433                 | FORM 2 SUBMITTED           |
| 401106352                 | OffsetWellEvaluations Data |
| 401106353                 | DIRECTIONAL DATA           |
| 401106354                 | DEVIATED DRILLING PLAN     |
| 401106355                 | WELL LOCATION PLAT         |
| 401106356                 | SURFACE AGRMT/SURETY       |
| 401106357                 | EXCEPTION LOC REQUEST      |
| 401106358                 | MINERAL LEASE MAP          |
| 401203392                 | OFFSET WELL EVALUATION     |

Total Attach: 9 Files

### **General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>   | <b><u>Comment Date</u></b> |
|--------------------------|---|----------------------------|
| Permit                   | Added approved Spacing Order 407-1871 to Spacing & Formation tab. Final Review Completed.   | 02/01/2017                 |
| Permit                   | ON HOLD: W/o January hearing for Spacing order.   | 01/30/2017                 |
| Permit                   | Per operator added "The nearest well in the same formation is the Evenstar EE 01-279HN. The distance was measured in 2D. " to operator comments. Changed "Will minerals beneath the Surface location be developed" to yes. Permitting Review Complete.<br>Permitting Review Complete. | 01/30/2017                 |
| Permit                   | Surface Use Agreement has waivers for Rule 318A.a & 318A.c.   | 01/30/2017                 |
| Permit                   | Open Hole Logging BMP submitted by operator.  | 01/30/2017                 |
| Engineer                 | Evaluated offset wells.<br>Removed mislabelled anti collision BMP at the operator's request. No wells within 150'. No replacement required.   | 10/13/2016                 |
| Permit                   | Per operator correct the distance to a high occupancy building unit to 5280'.   | 10/04/2016                 |
| Permit                   | Passed completeness.  | 09/22/2016                 |
| Permit                   | Corrected ground elevation typo and checked box for "Submitter's Name and Email are the same as CONTACT Name and Email" on the Submit Tab, per Operators request.   | 09/22/2016                 |

Total: 9 comment(s)