

**APPLICATION FOR PERMIT TO:**

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

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE       SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:  
11/03/2018

Well Name: BERRY IC      Well Number: 11-159HC

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: Natalie Svendsen      Phone: (720)595-2194      Fax: (    )

Email: nsvendsen@gwogco.com

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

**WELL LOCATION INFORMATION**

QtrQtr: NWNW      Sec: 8      Twp: 3N      Rng: 67W      Meridian: 6

Latitude: 40.244159      Longitude: -104.920366

Footage at Surface: <u>1304</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>810</u> Feet	<u>FNL</u>	<u>FWL</u>

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 4843      County: WELD

GPS Data:  
Date of Measurement: 02/09/2018    PDOP Reading: 1.4    Instrument Operator's Name: JAMES FRESHWATER

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

Footage at Top of Prod Zone: <u>1888</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>1875</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>330</u> Feet	<u>FNL</u>	<u>FEL</u>	<u>FNL</u> <u>420</u> Feet	<u>FNL</u>	<u>FEL</u>

Sec: 7      Twp: 3N      Rng: 67W      Sec: 11      Twp: 3N      Rng: 68W

**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.)

Irregular mineral lease, please see attached map. The lease is colored in yellow.

Total Acres in Described Lease: 560 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: 1047 Feet

Building Unit: 1189 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 804 Feet

Above Ground Utility: 843 Feet

Railroad: 5280 Feet

Property Line: 810 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: 08/21/2018

## 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: 221 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 330 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

T3N-R67W  
Sec 7: All  
Sec 8: W2W2

T3N-R68W  
Sec 11: E2E2  
Sec 12: All

PSU Attached

## 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		1600	GWA

**DRILLING PROGRAM**Proposed Total Measured Depth: 18337 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: 55 Feet  No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs 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? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP 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 DisposalCuttings 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	1500	624	1500	0
1ST	8+1/2	5+1/2	17	0	18337	1668	18337	

 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

The Berry IC 11-159HN (Doc #401744227) operated by Great Western Operating Company LLC. Is the nearest well in the same formation. The distance was measured in 3D.

The nearest wellbore belonging to another operator was measured to Morales 32-12 (API# 05-123-29997) operated by Blue Chip Oil Inc. The distance was measured in 3D. The well status is PR.

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 1875' FNL and 420' FEL of Section 11. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

Twinning and Windows Waiver is located in SUA, page 3 & 4

Described parcel map is in the last page of the SUA.

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: Natalie Svendsen

Title: Regulatory Analyst Date: 11/3/2018 Email: regulatorypermitting@gwogco.c

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: \_\_\_\_\_

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

**API NUMBER**

05

## 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>
Drilling/Completion Operations	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 48 hour spud notice for all subsequent wells drilled on the pad.</p> <p>2) Comply with Rule 317.j and provide cement coverage from the end of production casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the following non-operated listed well: Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>05-123-12161 UCLI 6-2</p>
Drilling/Completion Operations	<p>Operator will submit signed Rule 317.s Stimulation Setback Consents via Sundry Notice, Form 4 prior to stimulation of this well.</p> <p>In the Form 5A comments, operator will (1) certify that this well has no treated interval within 150' of the treated interval of another operator's well for which a signed Stimulation Setback Consent was not obtained, (2) provide the following information for all other operator's offset wells without consent that have a treated interval within 150' of this as-drilled wellbore: well name and API number, depth of the perforation in this well nearest to the treated interval of the offset well, and the distance between the wells at that depth, and (3) address the wells listed below as either (a) obtained consent or (b) treated interval more than 150' away from this as-drilled wellbore.</p> <p>Morales 32-12 (API 123-29997)</p>
Drilling/Completion Operations	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test:</p> <p>1) Within 60 days of rig release and prior to stimulation or</p> <p>2) If a delayed completion, 6 months after rig release and prior to stimulation.</p> <p>3) Within 30 days after first production, as reported on Form 5A.</p> <p>If a Bradenhead test reports a surface casing pressure greater than 200 psig, stimulation is not allowed until the Engineering Supervisor has been consulted.</p>

## Best Management Practices

No BMP/COA Type	Description
1 Planning	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 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 down hole formation pressures and/or collecting down hole fluid samples from the target formation(s) of a particular well.
2 Drilling/Completion Operations	Wellbore Collision Prevention – Rule 317.r Prior to drilling operations, GWOG 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.
3 Drilling/Completion Operations	Stimulation Setback – Rule 317.s GWOG 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.
4 Drilling/Completion Operations	Bradenhead Monitoring GWOC will comply with the "COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012
5 Drilling/Completion Operations	Multi Well Open-Hole Logging – Rule 317.p The Postle IC 11-159HC (123-39322-00) has been logged with an Open-Hole Resistivity 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 (intermediate casing or production liner if run) to the surface casing. The horizontal portion of every well will be logged with a MWD/GR 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 an open hole log shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name and number) the well in which open-hole logs were run.

Total: 5 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)

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.  
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

### Attachment Check List

Att Doc Num	Name
401744226	FORM 2 SUBMITTED
401746037	WELL LOCATION PLAT
401754759	EXCEPTION LOC REQUEST
401754760	SURFACE AGRMT/SURETY
401754761	LEASE MAP
401763217	DEVIATED DRILLING PLAN
401799709	PROPOSED SPACING UNIT
401823544	OffsetWellEvaluations Data

401837298

DIRECTIONAL DATA

Total Attach: 9 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit (Rejected)	REJECTION COMMENT: This APD is being rejected per the Rejection Process criteria that a pad of Form 2's requiring a total of four or more attachments to be added will be rejected. This pad requires a complete and accurate 30 Day Certification Letter and Proposed Spacing Unit map for a total of 26 APD's. The Operator and COGCC staff have been consulted.	01/24/2019
Engineer	Modified distance on the "Drilling & Waste Plans" tab to 55'. Operator in agreement.	11/16/2018
Permit	Passed completeness.	11/13/2018
Permit	Sent to draft - Directional Data TD does not match survey	11/13/2018

Total: 4 comment(s)

## **Public Comments**

No public comments were received on this application during the comment period.