

**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:  
03/19/2018

Well Name: Postle IC      Well Number: 11-119HC

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

Address: 1801 BROADWAY #500

City: DENVER      State: CO      Zip: 80202

Contact Name: Natalie Svendsen      Phone: (303)398-0394      Fax: (    )

Email: nsvendsen@gwogco.com

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

**WELL LOCATION INFORMATION**

QtrQtr: SWNW      Sec: 11      Twp: 3N      Rng: 68W      Meridian: 6

Latitude: 40.243969      Longitude: -104.978133

Footage at Surface: <u>1457</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>461</u> Feet	<u>FNL</u> <u>461</u> Feet	<u>FWL</u> _____

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 4977      County: WELD

GPS Data:  
Date of Measurement: 12/20/2016    PDOP Reading: 1.3    Instrument Operator's Name: Chad Meiers

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

Footage at Top of Prod Zone: <u>1400</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>1403</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>460</u> Feet	<u>FNL</u> <u>460</u> Feet	<u>FWL</u> _____	<u>FNL</u> <u>370</u> Feet	<u>FNL</u> <u>370</u> Feet	<u>FEL</u> _____

Sec: 11      Twp: 3N      Rng: 68W      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: 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. The applicable lease is colored in magenta.

Total Acres in Described Lease: 224 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: 1289 Feet

Building Unit: 1360 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 446 Feet

Above Ground Utility: 404 Feet

Railroad: 418 Feet

Property Line: 411 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: \_\_\_\_\_

## 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: 300 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	407-1907	640	S:11 ALL

## DRILLING PROGRAM

Proposed Total Measured Depth: 12245 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: 746 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	1500	624	1500	0
1ST	8+1/2	5+1/2	17	0	12245	1502	12245	

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 Postle 11-122HN, operated by Great Western Operating Co. is the nearest well in the same formation. The distance was measured in 3D.

The Owen 11-1 (123-10779), Operated by Sandlin Oil Corp. is the nearest well owned by another operator. This distance was measured in 3D. Well status PA.

No wells owned by other operators are Producing, Temporarily Abandoned or Shut-In within 150' of this wells productive lateral, therefore stimulation setback consent waivers are not needed

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 1403 FNL and 470 FEL of Section 11. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

Exception Location Waiver is located in the SUA, page 9 section 6.

Described Parcel Map in last page of SUA

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

Location ID: 433857

Is this application being submitted with an Oil and Gas Location Assessment application? No

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: 3/19/2018 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: 6/21/2018

Expiration Date: 06/20/2020

### API NUMBER

05 123 47156 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>
	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operation (dated January 5, 2017).
	If conductors are preset, Operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016).
	Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval, (2) describe how the wellbore beyond the unit boundary setback is physically isolated, and (3) certify that none of the wellbore beyond the setback was completed.
	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. 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. 3) Oil-based drilling fluid is to be used only after all fresh water 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: 1) Within 60 days of rig release and prior to stimulation or 2) If a delayed completion, 6 months after rig release and prior to stimulation. 3) Within 30 days after first production, as reported on Form 5A. If a Bradenhead test reports a surface casing pressure greater than 200 psig, stimulation is not allowed until the Engineering Supervisor has been consulted.

## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>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.</p>
2	Drilling/Completion Operations	<p>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.</p>
3	Drilling/Completion Operations	<p>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 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>
4	Drilling/Completion Operations	<p>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</p>
5	Drilling/Completion Operations	<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 (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 and number) the well in which open-hole logs were run.</p>
6	Drilling/Completion Operations	<p>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.</p>

Total: 6 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

<u>Att Doc Num</u>	<u>Name</u>
401365733	FORM 2 RESUBMITTED
401451945	FORM 2 SUBMITTED
401451946	FORM 2 REJECTED
401566234	OffsetWellEvaluations Data
401566248	EXCEPTION LOC REQUEST
401566249	DIRECTIONAL DATA
401566250	MINERAL LEASE MAP
401566256	WELL LOCATION PLAT
401566257	DEVIATED DRILLING PLAN
401576482	SURFACE AGRMT/SURETY
401682491	OFFSET WELL EVALUATION

Total Attach: 11 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	06/21/2018
Permit	Status Active - Revised comment on spacing tab for BHL beyond the unit setback, as provided by Operator.  Permitting review complete.	06/21/2018
Permit	Status Pending - contacted operator to request a revised comment meeting guidance critria on the BHL beyond unit setback.	06/18/2018
Permit	- Verified resistivity/gamma log cited in BMP meets criteria for open hole logging. Postle IC 11-159HC (123-39322; doc #400970155). - Clarified unit config by deleting Twp/Rng data. - Corrected multiple typos in open hole logging BMP.	06/18/2018
Engineer	Offset Wells Evaluated.	06/13/2018
Permit	Deleted PSU attachment with Operator concurrence.  Passed completeness.	04/11/2018
Permit	REJECTION COMMENT: This APD is being rejected per the Rejection Process criteria that a pad of Form 2s requiring a total of four or more attachments to be added will be rejected. This pad requires a corrected Exception Location Waiver attachment for a total of 31 APDs. Operator and COGCC staff have been consulted.	11/07/2017
Permit	Passed Completeness.	10/03/2017

Total: 8 comment(s)