

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:  
400634645

APPLICATION FOR PERMIT TO:

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

Date Received:

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER UNPLANNED

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☒

Well Name: Willow Bend Well Number: 18-22HC  
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: 20090080

WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 18 Twp: 1S Rng: 67W Meridian: 6  
Latitude: 39.970961 Longitude: -104.923989

Footage at Surface: 336 feet FNL/FSL FNL 557 feet FEL/FWL FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 5233 County: ADAMS

GPS Data:

Date of Measurement: 11/12/2013 PDOP Reading: 1.3 Instrument Operator's Name: Loren Shanks

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

Footage at Top of Prod Zone: FNL/FSL 460 FNL 700 FEL 470 FSL 700 FEL 470  
Sec: 18 Twp: 1S Rng: 67W Sec: 18 Twp: 1S Rng: 67W

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: oil and gas lease

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.)

See attached map

Total Acres in Described Lease: 624 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: 460 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 745 Feet  
Building Unit: 745 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 321 Feet  
Above Ground Utility: 305 Feet  
Railroad: 5280 Feet  
Property Line: 336 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: 01/15/2014

## SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest 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

Sec 18 All T1SR67W  
The Front Range #3 is the closest wellbore completed in the same formation - NB-CD

## 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		640	GWA

## DRILLING PROGRAM

Proposed Total Measured Depth: 12677 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 100 Feet (Including plugged wells)

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 H2S 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? No

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
CONDUCTOR	24	16	42	0	80	61	80	0
SURF	13+1/2	9+5/8	36	0	1297	500	1297	0
1ST	8+3/4	7	26	0	8372	710	8372	725
1ST LINER	6+1/8	4+1/2	11.6	6620	12677			

☐ 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

- i. The reason the well is being sidetracked is because the 4-3/4" mud motor parted while drilling the lateral leaving a fish in the hole.
- ii. A 6-1/8" hole has been drilled to 8915' / 8082' MD/TVD.
- iii. A string of 9-5/8", 36#, J-55, LTC surface casing has been set and cemented at 1297' MD/TVD and a string of 7", 26#, P-110, LTC casing has been run and cemented at 8372' / 8062' MD/TVD
- iv. There is a fish in the hole consisting of:
  - a. A 6-1/8" PDC bit that is approximately 12" long
  - b. The bottom section of the 4-3/4" mud motor that is approximately 30" long.
- v. Approximately 29 bbls of cement will be placed from TD at 8915 to 8100' MD (815' long plug).
- vi. Cement used will be Halliburton Class-G with additives mixed at 17.5 ppg and 0.94 ft3/sack.
- vii. Cement will be cleaned out to beneath the 7" casing shoe and the well will be sidetracked from +/-8,400' MD.
- viii. The proposed objective formation will not be changed and is the Codell.
- ix. The sidetrack BHL will not be changed from the previously approved location of 470' FSL and 700 FEL of Sec 18, T1S, R67W.

HZ offset well data has not changed even with the need to sidetrack this well. Please see previous form 2 doc# 400447157 if that data is needed.

The Front Range #3, which is our own well, lies 100' away from the Willow Bend LD 18-22HC. GWOG waives the 150' anti-collision requirement. Attached is the exception request for the director.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 434399

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: Callie Fiddes

Title: Regulatory Tech Date: \_\_\_\_\_ 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

05 001 09774 02

## 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.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	General Housekeeping	General housekeeping will consist of neat and orderly storage of materials and fluids. Wastes will be temporarily stored in sealed containers and regularly collected and disposed of at offsite, suitable facilities. If spills occur prompt cleanup is required to minimize any commingling of waste materials with storm water runoff. Routine maintenance will be limited to fueling and lubrication of equipment. Drip pans will be used during routine fueling and maintenance to contain spills or leaks. Any waste product from maintenance will be containerized and transported offsite for disposal or recycling. There will be no major equipment overhauls conducted onsite. Equipment will be transported offsite for major overhauls. Cleanup will consist of patrolling the roadways, access areas, and other work areas to pick up trash, scrap debris, other discarded materials, and any contaminated soil. These materials will be disposed of properly and promptly.
2	Drilling/Completion Operations	Prior to drilling operations, Operator 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. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5.
3	Drilling/Completion Operations	Great Western will comply with the "COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012

Total: 3 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400634749	MINERAL LEASE MAP
400634945	CORRESPONDENCE
400634950	DIRECTIONAL DATA
400634953	WELLBORE DIAGRAM
400634955	WELL LOCATION PLAT
400634956	EXCEPTION LOC WAIVERS
400634957	EXCEPTION LOC REQUEST
400634958	PROPOSED SPACING UNIT
400634960	ANTI-COLLISION WAIVER
400634961	SURFACE AGRMT/SURETY

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)