

FORM  
2Rev  
12/05

## 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:

400446999

Date Received:

07/16/2013

PluggingBond SuretyID

20090080

## APPLICATION FOR PERMIT TO:

1. ☒ Drill, ☐ Deepen, ☐ Re-enter, ☐ Recomplete and Operate

## 2. TYPE OF WELL

OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_  
SINGLE ZONE ☒ MULTIPLE ☐ COMMINGLE ☐Refiling ☐Sidetrack ☐

3. Name of Operator: GREAT WESTERN OPERATING COMPANY LLC

4. COGCC Operator Number: 10110

5. Address: 1700 BROADWAY SUITE 650

City: DENVER State: CO Zip: 80290

6. Contact Name: Shannon Hartnett Phone: (303)8309893 Fax: ()

Email: shartnett@gwogco.com

7. Well Name: Willow Bend LD Well Number: 18-23HC

8. Unit Name (if appl): Unit Number:

9. Proposed Total Measured Depth: 12893

## WELL LOCATION INFORMATION

10. QtrQtr: NENE Sec: 18 Twp: 1S Rng: 67W Meridian: 6

Latitude: 39.970962 Longitude: -104.924311

Footage at Surface: 336 feet FNL/FSL 646 feet FEL/FWL  
FNL FEL

11. Field Name: Spindle Field Number: 77900

12. Ground Elevation: 5235 13. County: ADAMS

## 14. GPS Data:

Date of Measurement: 06/05/2013 PDOP Reading: 1.9 Instrument Operator's Name: B. Hardenbergh

15. 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  
460 FNL 1665 FEL 470 FSL 1665 FEL  
Sec: 18 Twp: 1S Rng: 67W Sec: 18 Twp: 1S Rng: 67W16. Is location in a high density area? (Rule 603b)? ☐ Yes ☒ No

17. Distance to the nearest building, public road, above ground utility or railroad: 305 ft

18. Distance to nearest property line: 335 ft 19. Distance to nearest well permitted/completed in the same formation(BHL): 368 ft

## 20. LEASE, SPACING AND POOLING INFORMATION

| 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                                  |

21. Mineral Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian Lease #: \_\_\_\_\_22. Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian23. Is the Surface Owner also the Mineral Owner? ☒ Yes ☐ No Surface Surety ID#:23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease? ☒ Yes ☐ No23b. If 23 is No: ☒ Surface Owners Agreement Attached or ☐ \$25,000 Blanket Surface Bond ☐ \$2,000 Surface Bond ☐ \$5,000 Surface Bond

24. Using standard QtrQtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):

See attached map.

25. Distance to Nearest Mineral Lease Line: 335 ft

26. Total Acres in Lease: 624

### DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS CL) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 28 or 29 are yes, is this location in a sensitive area (Rule 901.e)? ☐ Yes ☒ No

31. Mud disposal: ☒ Offsite ☐ Onsite

If 28, 29, or 30 are "Yes" a pit permit may be required.

Method: ☐ Land Farming ☒ Land Spreading ☐ Disposal Facility Other: \_\_\_\_\_

Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.

| Casing Type | Size of Hole | Size of Casing | Wt/Ft | Csg/Liner Top | Setting Depth | Sacks Cmt | Cmt Btm | Cmt Top |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| SURF        | 12+1/4       | 9+5/8          | 36    | 0             | 1230          | 273       | 1230    | 0       |
| 1ST         | 8+3/4        | 7              | 23    | 0             | 8589          | 790       | 8589    | 725     |
| 1ST LINER   | 6+1/8        | 4+1/2          | 11.6  | 7816          | 12893         |           |         |         |

32. BOP Equipment Type: ☒ Annular Preventer ☒ Double Ram ☐ Rotating Head ☐ None

33. Comments - No Conductor casing will be set.- Proposed spacing unit is Sec 18 T1S R67W- Cement will be set at least 200 feet above the Niobrara- DJ Basin Horizontal Offset Policy spreadsheet is attached- Casing 2nd string: uncemented liner with packers and ports 30 day notification is not applicable for this location as Great Western is at 100% well interest

34. Location ID: \_\_\_\_\_

35. Is this application in a Comprehensive Drilling Plan ? ☐ Yes ☐ No

36. Is this application part of submitted Oil and Gas Location Assessment ? ☒ Yes ☐ No

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

Signed: \_\_\_\_\_

Print Name: Shannon Hartnett

Title: Reg. Compl. Spec.

Date: 7/16/2013

Email: shartnett@gwogco.com

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: 9/26/2013

#### API NUMBER

05 001 09776 00

Permit Number: \_\_\_\_\_

Expiration Date: 9/25/2015

#### CONDITIONS OF APPROVAL, IF ANY:

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.

**Description**

- 1) Note surface casing depth change from 1025' to 1230'. Increase cement volumes accordingly.
- 2) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.
- 3) Comply with Rule 317.i and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara and from 200' below the Sussex to 200' above Sussex. Verify coverage with cement bond log.
- 4) Comply with Rule 321. Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.

Operator acknowledges the proximity of the following wells: Front Range 3 API # 001-08738, Great Western Front Range 2 API # 001-06862, McElwain #2 API # 001-06288. Operator agrees to: provide mitigation option 4 (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 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. Operator option 4 of retrievable bridge plug above Niobrara accepted.

**Applicable Policies and Notices to Operators**

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

**Attachment Check List**

| <b><u>Att Doc Num</u></b> | <b><u>Name</u></b>     |
|---------------------------|------------------------|
| 1792842                   | PROPOSED SPACING UNIT  |
| 400446999                 | FORM 2 SUBMITTED       |
| 400447797                 | PLAT                   |
| 400447836                 | DEVIATED DRILLING PLAN |
| 400447846                 | EXCEPTION LOC WAIVERS  |
| 400447850                 | SURFACE AGRMT/SURETY   |
| 400448706                 | MINERAL LEASE MAP      |
| 400448707                 | EXCEPTION LOC REQUEST  |
| 400459204                 | OFFSET WELL EVALUATION |
| 400460155                 | DIRECTIONAL DATA       |

Total Attach: 10 Files

**General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>  | <b><u>Comment Date</u></b> |
|--------------------------|--|----------------------------|
| Permit                   | Final review completed. Note LGD comments.   | 9/26/2013<br>5:35:44 AM    |
| Permit                   | Operator requested change of distance to the nearest well.   | 9/6/2013 9:19:04<br>AM     |
| LGD                      | All access points will be approved by the Adams County Dept. of Public Works. All Rig Moves both into and out of this location will require a Rig Move Permit. If this location goes into production, a Gas and Oil Well Facilities Permit will be required. For information regarding these permits, please contact Mr. Mark Russell at 720-523-6965. | 3/2/2013 5:07:37<br>PM     |
| Permit                   | This form has passed completeness.   | 7/30/2013<br>3:39:53 PM    |
| Permit                   | REturned to draft: missing offset well spreadsheet.<br>Line 22b should be N/A because surface owner is the mineral owner.<br>Directional data not loaded.  | 7/17/2013<br>2:27:07 PM    |

Total: 5 comment(s)

## **Best Management Practices**

| <b>No</b> | <b><u>BMP/COA Type</u></b>     | <b><u>Description</u></b>   |
|-----------|--------------------------------|---|
| 1         | Planning                       | 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. |
| 2         | 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: 2 comment(s)