

FORM

2

Rev
08/13

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:

400522333

APPLICATION FOR PERMIT TO:

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

Date Received:

12/11/2013

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____Refilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Schmunk EF

Well Number: 31-369HN

Name of Operator: GREAT WESTERN OPERATING COMPANY LLC

COGCC Operator Number: 10110

Address: 1801 BROADWAY #500

City: DENVER State: CO Zip: 80202

Contact Name: Shannon Hartnett

Phone: (303)398-0351

Fax: ()

Email: regulatorypermitting@gwogco.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090080

WELL LOCATION INFORMATION

QtrQtr: NWNE Sec: 31 Twp: 7N Rng: 65W Meridian: 6

Latitude: 40.537467

Longitude: -104.704025

Footage at Surface: 530 feet FNL/FSL FNL 2034 feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4851

County: WELD

GPS Data:

Date of Measurement: 10/29/2013 PDOP Reading: 1.4 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 FNL/FWL Bottom Hole: FNL/FSL FEL/FWL
 460 FNL 2350 FEL 470 FSL 2336 FEL
 Sec: 31 Twp: 7N Rng: 65W Sec: 31 Twp: 7N Rng: 65W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe 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.)

N/2 sec 31 7N 65W See attached map

Total Acres in Described Lease: 320 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: 533 Feet
Building Unit: 557 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 2173 Feet
Public Road: 520 Feet
Above Ground Utility: 619 Feet
Railroad: 3031 Feet
Property Line: 530 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: 11/06/2013

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 368 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

W/2E/2 Section 31 and E/2W/2 Section 31 T7N-R65W

OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| NIOBRARA | NBRR | | 320 | GWA |

DRILLING PROGRAM

Proposed Total Measured Depth: 11843 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 368 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H₂S 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: Land application

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Other

Other Disposal Description:

Land application

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 | 40 | 61 | 40 | 0 |
| SURF | 13+1/2 | 9+5/8 | 36 | 0 | 1025 | 426 | 1025 | 0 |
| 1ST | 8+3/4 | 7 | 23 | 0 | 7492 | 683 | 7492 | 725 |
| 1ST LINER | 6+1/8 | 4+1/2 | 11.6 | 6584 | 11844 | | | |

☐ 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: Offset well evaluation. Water Well Analysis:
Offset water well located in NE Quarter of Sec 31 is reported to be 341' deep. DWR records show that this well has 5" casing set at 243' and 4-3/4" hole to 341'. Offset oil and gas records combined with the DWR "Base Fox Hills" contour data indicate that the base of the Fox Hills reservoir in this area is +/-317'. So, even though the water well was drilled to a total depth of 341' it is still producing from the Fox Hills and all offset Oil and Gas wells in this review have adequately protected the Fox Hills either by setting surface casing below it or by covering it with cement during abandonment.

Location ID 309903 for the well location is an existing pad with the plan to expand and add wells. The location for the offsite production facilities will be an existing location that has no associated location ID, doc number is 400524779.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 309903

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: Shannon Hartnett

Title: Reg. Compl. Spec. Date: 12/11/2013 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: 2/13/2014

Expiration Date: 02/12/2016

API NUMBER
05 123 38934 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

| | |
|--|--|
| | Operator shall comply with Buffer Zone Move-In, Rig-Up Notice Policy dated 12-16-2013. |
| | <p>Operator acknowledges the proximity of the listed wells. Operator agrees to provide mitigation Option 1 or 2 (per the DJ Basin Horizontal Offset Policy, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42(s) ("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>Harsh #2 (API #123-12565) K&N Farms #5-32 (API #123-12192)</p> |
| | Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged. |
| | <p>Operator acknowledges the proximity of the listed non-producing wells. Operator agrees to provide mitigation Option 3 (per the DJ Basin Horizontal Offset Policy), ensure all applicable documentation is submitted, and submit Form 42(s) ("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>Grove's Homestead #1 (API #123-11028) Gies #1 (API #123-12357) Gies #2 (API #123-12430)</p> |
| | <p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU. 2) Comply with Rule 317.i and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) 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.</p> |

Best Management Practices

| No | BMP/COA Type | Description |
|-----------|--------------------------------|---|
| 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)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

| Att Doc Num | Name |
|--------------------|----------------------------|
| 2114413 | PROPOSED SPACING UNIT |
| 400522333 | FORM 2 SUBMITTED |
| 400522334 | DIRECTIONAL DATA |
| 400522335 | DEVIATED DRILLING PLAN |
| 400522336 | MINERAL LEASE MAP |
| 400522337 | SURFACE AGRMT/SURETY |
| 400522921 | EXCEPTION LOC WAIVERS |
| 400522923 | EXCEPTION LOC REQUEST |
| 400522925 | WELL LOCATION PLAT |
| 400524209 | OffsetWellEvaluations Data |

Total Attach: 10 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------------|
| Permit | Received correct Proposed Spacing Unit attachment. Corrected Buffer Zone Notification Date to 11/6/13 per operator. Ready to pass. | 12/16/2013 8:18:05 AM |
| Permit | BufferZone Notification Date does not match 2A. Closest well completed in the same formation and penetrating the formation is Schmunk 31-32 at 368'. Operator concurs. Incorrect Proposed spacing unit attachment. Corrected spacing unit acreage to 320. Corrected distance to nearest lease line to '0.' | 12/13/2013 1:08:13 PM |
| Permit | Passed completeness. | 12/11/2013 10:33:09 AM |

Total: 3 comment(s)