

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:

400517028

## APPLICATION FOR PERMIT TO:

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

Date Received:

01/10/2014

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_Refilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Raindance FD

Well Number: 30-029HN

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: SWSE Sec: 30 Twp: 6N Rng: 67W Meridian: 6

Latitude: 40.451517

Longitude: -104.935406

Footage at Surface: 352 feet FNL/FSL FSL 2479 feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 5002

County: WELD

GPS Data:

Date of Measurement: 10/31/2013 PDOP Reading: 1.6 Instrument Operator's Name: Robert Kay

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

Footage at Top of Prod Zone: FNL/FSL FNL/FSL Bottom Hole: FNL/FSL FEL/FWL

 460 FSL 2150 FWL 470 FNL 2150 FWL  
 Sec: 30 Twp: 6N Rng: 67W Sec: 30 Twp: 6N Rng: 67W

## LOCATION SURFACE &amp; MINERALS &amp; 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.)

See attached map

Total Acres in Described Lease: 1098 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: 2416 Feet

Building Unit: 2787 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 3962 Feet

Public Road: 364 Feet

Above Ground Utility: 2364 Feet

Railroad: 5280 Feet

Property Line: 352 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 561 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/2 Sec 30

## 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	407-851	320	W/2 Sec 30

## DRILLING PROGRAM

Proposed Total Measured Depth: 11868 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 561 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 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? 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	12+1/4	9+5/8	36	0	1025	273	1025	0
1ST	8+3/4	7	23	23	7571	690	7571	725
2ND	6+1/8	4+1/2	11.6	6671	11869			

☐ 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 Existing location ID 433424 this permit application is to add wells to the existing location.

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

Location ID: 433424

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: Shannon Harnett

Title: Reg. Compl. Spec. Date: 1/10/2014 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.

**COA Type****Description**

	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 Form 5 for every well on the pad shall identify which well was logged.
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## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Community Outreach and Notification	<p>Town of Windsor</p> <p>Great Western is aware of the Conditional Use Grant process with the Town of Windsor and will comply with such process and COA's in addition to the granting of the COGCC permit. In addition to the CUG process Great Western will implement the following for this location:</p> <ol style="list-style-type: none"> <li>1. Traffic associated with drilling, completion, and production activities shall be limited to a reasonable speed and posted signs.</li> <li>2. Appropriate signs for crossing the Poudre Trail for the safety of the town users of the trail and the vehicles crossing.</li> </ol>
2	General Housekeeping	<p>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.</p>
3	Drilling/Completion Operations	<p>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.</p>
4	Drilling/Completion Operations	<p>Great Western will comply with the "COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012</p>

Total: 4 comment(s)

## 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>Att Doc Num</b>	<b>Name</b>
2167663	SURFACE AGRMT/SURETY
400517028	FORM 2 SUBMITTED
400517717	DIRECTIONAL DATA
400517718	DEVIATED DRILLING PLAN
400517734	MINERAL LEASE MAP
400529459	EXCEPTION LOC REQUEST
400529461	PLAT
400530510	EXCEPTION LOC WAIVERS
400537743	OffsetWellEvaluations Data

Total Attach: 9 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
LGD	<p>Truck traffic associated with this CUG shall be allowed to use 7th Street and New Liberty Road to access the site.</p> <p>i. Engine muffler brakes shall not be utilized when entering or leaving the site on New Liberty Road or 7th Street.</p> <p>ii. Should the Town receive excessive noise and/or traffic complaints related to this CUG, an alternative truck route may be required.</p> <p>iii. The alternative truck route may include the use of Weld County Road 13 for site access.</p> <p>iv. The Town Planning Department, in consultation with the Engineering and Public Works departments will administratively approve the alternate truck route.</p>	<p>1/15/2014 11:26:44 AM</p>
LGD	<p>Approval of the Conditional Use Grant is subject to the following conditions:</p> <p>1. Prior to the commencement of drilling, the applicant shall submit comprehensive "Drilling and Site Improvement Plans" for review and approval by the Town. Such plans shall address initial drilling activities, initial installation of site improvements and details, and on-going perpetual maintenance of the subject site including, but not limited to, the following:</p> <p>a. Site access plan. The Drilling and Site Improvement Plans and supplemental information shall address site access points and haul routes for review and approval.</p> <p>b. Public street clean-up and tracking prevention. The Drilling and Site Improvement Plans and supplemental information shall include a tracking pad for review and approval.</p> <p>c. Site grading. The Drilling and Site Improvement Plans and supplemental information shall address site grading, including any earth berms for emergency containment.</p> <p>d. Site lighting. The Drilling and Site Improvement Plans and supplemental information shall include details regarding site lighting fixtures and locations. Security and other site lighting shall utilize full cutoff light fixtures to mitigate light pollution.</p>	<p>1/15/2014 11:26:07 AM</p>

<p>e. Temporary screening. The applicant shall install a buffer to screen the initial drilling activities and installation of site improvements from surrounding neighborhoods, trails, and streets. The temporary buffer shall include hay bales to enclose the drilling operations to provide noise mitigation.</p> <p>f. Permanent screening. Given the close proximity to the Poudre Trail, the Drilling and Site Improvement Plans shall depict proposed long-term screening materials, including landscaping, earth berms, and other screening methods to mitigate visual impacts.</p> <p>g. Fencing. The Drilling and Site Improvement Plans shall depict fencing of the perimeter of the site. Fencing materials shall be reviewed for approval by the Town based upon the character of the surrounding neighborhood.</p> <p>h. Oil and gas equipment.</p> <p>(1) The applicant shall utilize electric motors in order to mitigate the noise impacts to the neighboring properties.</p> <p>(2) The applicant shall ensure that the wells and tanks are of the minimum size required to satisfy present and future functional requirements to mitigate visual impacts.</p> <p>(3) Low profile tanks shall be utilized and shall be installed in the least visible manner possible.</p> <p>(4) All tanks and equipment shall be painted to blend-in with the surrounding landscape.</p> <p>i. Air quality.</p> <p>(1) The applicant shall participate in any required Environmental Protection Agency (EPA) air quality monitoring and/or testing by allowing EPA to install equipment on site for said monitoring and testing.</p> <p>(2) The applicant shall install and operate an emissions control device (ECD) capable of reducing Volatile Organic Compound (VOC) emissions on the subject oil and gas equipment in accordance with Colorado Oil and Gas Conservation Commission (COGCC) and/or the Colorado Department of Public Health and Environment (CDPHE) rules and regulations.</p> <p>(3) The applicant shall submit to the Town copies of all air emissions reporting as</p>		
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	<p>required by the COGCC and/or the CDPHE's Air Pollution Control Division.</p> <p>j. Water quality.</p> <p>(1) The applicant shall ensure that any hydrocarbon discharges from the site comply with all state and federal water quality requirements.</p> <p>(2) The applicant shall participate in the Colorado Oil and Gas Association (COGA) Baseline Groundwater Quality Sampling Program utilizing independent third party sampling and laboratories and shall provide to the Town test results obtained before and after drilling operations.</p> <p>k. Emergency containment. The secondary containment berm surrounding all storage vessels shall be designed and constructed to contain a minimum of 110% of the volume of the largest vessel located within the containment area or to State of Colorado standards, whichever requirements are more stringent.</p> <p>l. Waste disposal. The applicant shall submit to the Town copies of all waste management reports as required by the COGCC and/or the CDPHE rules and regulations.</p> <p>m. The following certification blocks shall be included on the Drilling and Site Improvement Plans:</p> <p>(1) A signed owner's acknowledgement certification block.</p> <p>(2) A signed drilling operator's acknowledgement certification block.</p> <p>n. The following notes shall be included on the Drilling and Site Improvement Plans:</p> <p>(1) The applicant shall comply with all rules and regulations of the Colorado Oil and Gas Conservation Commission (COGCC).</p> <p>(2) The applicant shall comply with all rules and regulations of the Colorado Department of Public Health and Environment (CDPHE).</p> <p>(3) The applicant shall maintain on-going compliance with all conditions of the Town and Windsor-Severance Fire Rescue.</p> <p>(4) The facilities shall be kept clean and otherwise properly maintained at all times.</p> <p>(5) The existing access may be utilized for oil and gas well activities. This access point is temporary and will be required to be removed at such time that permanent access is available in the future.</p> <p>2. The applicant shall address and comply with the conditions of Windsor-Severance Fire Rescue.</p>		
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	<p>3. The applicant shall address and comply with the comments and conditions of the Town</p> <p>of Windsor Engineering Department.</p> <p>a. The drilling pad shall not be situated in the sixty (60) foot right of way.</p> <p>b. Cut over the Town's waterline, as shown on the submitted Production Facility Layout, is not acceptable. Drilling pad cut/fill areas shall be altered accordingly.</p> <p>c. All right of ways and easements shall be shown on the Drilling and Site Improvement Plan.</p> <p>d. Regarding the Poudre Trail,</p> <p>i. During drilling operations, the applicant/operator shall maintain the Poudre Trail in a safe, passable condition.</p> <p>ii. After completion of drilling operations, the applicant/operator shall repair the Poudre Trail to an acceptable condition. The applicant/operator shall consult with the Town to determine necessary repairs to the trail.</p> <p>iii. The Planning Department, in consultation with the Engineering and Parks, Recreation, and Culture departments, shall administratively approve trail improvement plans.</p> <p>iv. The trail crossing shall be improved to accommodate the truck traffic that is associated with this CUG.</p> <p>e. Drilling pad location shall not be situated on top of the Town's 20" diameter waterline.</p> <p>f. Any crossing of the waterline shall be in a defined location and shall be engineered</p> <p>for truck/equipment weight loads crossing the waterline. The Town shall approve waterline crossing locations prior to commencement of drilling activities.</p> <p>g. A perpetual road maintenance plan shall be submitted to the Town for approval. Drilling operations shall not commence until the Town has approved a perpetual road maintenance plan.</p> <p>4. The applicant shall address and comply with the comments and conditions of the Town of</p> <p>Windsor Parks, Recreation and Culture Department.</p> <p>a. Applicant/operator shall ensure safe/unobstructed passage of trail users and maintain space for trail maintenance operations, a minimum of ten (10) feet from edge of concrete.</p>		
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	b. Applicant/operator shall improve the approach on both sides of the trail to prevent rocks on the trail due to truck traffic. Such improvements shall be reviewed, inspected and approved by the Engineering and Park, Recreation and Culture departments prior to commencement of drilling activities. All damage to the trail caused by truck traffic shall be repaired to the Town's trail standards within 30 days of Town notification to the applicant/operator.		
Permit	Attached corrected SUA as per opr. Added related 2A doc. Checking on spacing order with opr.	1/15/2014 8:46:51 AM	
Permit	Passed completeness.	1/13/2014 8:04:21 AM	

Total: 4 comment(s)