

FORM
2
Rev
12/20

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:
402080775
Date Received:
04/21/2021

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Amend

TYPE OF WELL OIL GAS COALBED OTHER: _____

Refile

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Sidetrack

Well Name: Raindance FC Well Number: 26-289HN
Name of Operator: GREAT WESTERN OPERATING COMPANY LLC COGCC Operator Number: 10110
Address: 1001 17TH STREET #2000
City: DENVER State: CO Zip: 80202
Contact Name: Linsey Jones Phone: (720)595-2218 Fax: ()
Email: ljones@gwp.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160041

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NENE Sec: 30 Twp: 6N Rng: 67W Meridian: 6
Footage at Surface: 899 Feet FNL 323 Feet FEL
Latitude: 40.462515 Longitude: -104.927621
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 10/14/2016
Ground Elevation: 4783
Field Name: WATTENBERG Field Number: 90750

Well Plan: is Directional Horizontal (highly deviated) Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)
Sec: 30 Twp: 6N Rng: 67W Footage at TPZ: 1536 FSL 460 FEL
Measured Depth of TPZ: 7992 True Vertical Depth of TPZ: 7019 FNL/FSL FEL/FWL
Base of Productive Zone (BPZ)
Sec: 26 Twp: 6N Rng: 68W Footage at BPZ: 1536 FSL 2178 FEL
Measured Depth of BPZ: 19964 True Vertical Depth of BPZ: 7019 FNL/FSL FEL/FWL
Bottom Hole Location (BHL)
Sec: 26 Twp: 6N Rng: 68W Footage at BHL: 1536 FSL 2178 FEL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD

Municipality: Windsor

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? No

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? Yes No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 06/12/2017

Comments:

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: Fee State Federal Indian

Mineral Owner beneath this Well's Oil and Gas Location: Fee State Federal Indian

Surface Owner Protection Financial Assurance (if applicable): _____ Surety ID Number (if applicable): _____

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- Fee
- State
- Federal
- Indian
- N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

- * If this Well is within a unit, describe a lease that will be developed by the Well.
 - * If this Well is not subject to a unit, describe the lease that will be produced by the Well.
- (Attach a Lease Map or Lease Description or Lease if necessary.)

Irregular mineral lease. See attached map.

Total Acres in Described Lease: 455 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 308 Feet
 Building Unit: 1052 Feet
 Public Road: 2840 Feet
 Above Ground Utility: 364 Feet
 Railroad: 5280 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

Property Line: 323 Feet

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	407-1900	771	T6N R67W: Sec 30:S2; T6N R68W: Sec 25:S2; Sec 26:SE4

Federal or State Unit Name (if appl): _____ Unit Number: _____

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 460 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 281 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: _____ Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: _____ Feet

Exception Location

If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. _____

SPACING & FORMATIONS COMMENTS

DRILLING PROGRAM

Proposed Total Measured Depth: 19964 Feet TVD at Proposed Total Measured Depth 7019 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: 19 Feet No well belonging to another operator within 1,500 feet

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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

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 provide water in the location set forth in the Water rights decree COGCC 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).

COGCC Approved:  Director of COGCC Date: 5/18/2021

Expiration Date: 05/17/2024

API NUMBER 05 123 37005 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.

Condition of Approval

<u>COA Type</u>	<u>Description</u>
Drilling/Completion Operations	COA: Operator will drill and complete this well within 18 months of approval of this Form 2. If conditions beyond the control of the Operator prevent compliance with this COA, then the Operator will meet with the COGCC Director and Staff no less than 90 days prior to the compliance deadline. At that meeting, Operator will provide a timeline to finish drilling and completion, and the Director will determine if additional Best Management Practices or Conditions of Approval are necessary and reasonable to protect and minimize impacts to public health, safety, welfare, the environment and wildlife resources.
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operation (dated January 5, 2017).
Construction	If conductors are preset, operator shall comply with Rule 406.e.
Drilling/Completion Operations	Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	1) Submit Form 42 electronically to COGCC 2 business days prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 2 business days spud notice for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j and provide cement coverage from the end of production casing to a minimum of 500' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.
5 COAs	

Best Management Practices

No BMP/COA Type	Description
1 Drilling/Completion Operations	Drill stem tests Rule 603.g Conventional drill stem tests will not be conducted on DJ Basin horizontal wells currently being executed or planned by Great Western. If plans change in the future a well specific drill stem testing plan will be prepared for that particular well. Note that Great Western 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.
2 Drilling/Completion Operations	Wellbore Collision Prevention – Rule 408.t Prior to drilling operations, Great Western 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. Operator will perform anti-collision evaluation of all active (Producing, Shut In, or Temporarily Abandoned) offset wellbores that have the potential of being within 150' of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.
3 Drilling/Completion Operations	Stimulation Setback – Rule 408.u Great Western 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.
4 Drilling/Completion Operations	Multi Well Open-Hole Logging – Rule 408.r Alternative Logging Program: One of the first wells drilled on the pad will be logged with open-hole resistivity log 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 state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.
5 Drilling/Completion Operations	Bradenhead Monitoring – Rule 419 Great Western will comply with Rule 419 and Order 1-232 for all Bradenhead compliance, as applicable.

Total: 5 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

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment List

Att Doc Num	Name
402080775	FORM 2 RESUBMITTED
402497977	FORM 2 REJECTED
402505702	MINERAL LEASE MAP
402507980	WELL LOCATION PLAT
402507981	DIRECTIONAL DATA
402598373	OffsetWellEvaluations Data
402614573	DEVIATED DRILLING PLAN
402692299	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
OGLA	This Location and its associated materials was fully reviewed in the review of this APD in accordance with current Rules. See Sundry doc # 402467665 in Location # 427917 file for additional information. This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources. OGLA task passed.	05/17/2021
Permit	Final Review Completed.	05/17/2021
Permit	•Permitting review complete and task passed.	05/11/2021
Engineer	Offset Wells Evaluated.	05/11/2021
Permit	Returned to Draft: •Distance from the Completed Zone of this Well to the Completed Zone of an offset Well is incorrect.	04/13/2021
Permit	The Surface Location of this Well is not in an area designated as one of State interest and is not subject to the requirements of § 24-65.1-108 C.R.S. This Answer should be No. Requesting concurrence for this change.	03/10/2021
Permit	It is unlikely these APDs will be approved before 1/15/2021 when the new rules go into effect. COGCC is recommending that these forms be returned to draft.	12/14/2020
Permit	Returned to Draft: •Missing response to Sidetrack question on the Well Name & Contact Info Tab. •Requesting clarification of a statement in the operator comments.	10/30/2020
Permit (Rejected)	REJECTION: This APD has been rejected per the COGCC Rejection Process (updated May 21, 2019). The lease acreage and attached lease map are inconsistent across all APDs. This applies to this APD and 36 other APDs on the pad. Other APDs on the pad also had a missing Buffer Zone acknowledgment and missing date of notification to building unit owners. This APD has not been reviewed.	09/25/2020
OGLA	COGCC staff reviewed and considered all public comments received for this Form 2.	09/03/2020
LGD	DECISION OF THE WINDSOR PLANNING COMMISSION AND THE WINDSOR TOWN BOARD ZONING CERTIFICATE This certificate is evidence that on May 17, 2017, the Windsor Planning Commission and on June 12, 2017, the Windsor Town Board granted to: Great Western Oil Gas Company Applicant and	10/24/2019

Martin Lind

Raindance Aquatic Investments, LLC

owner(s) of property interests described as follows:

Water Valley West Subdivision, Lot 5

Windsor, Colorado 80550

A Conditional Use Grant for oil and gas facilities for fifty-nine (59) oil and gas wells located on Lot 5, Water Valley West Subdivision, approximately one mile west of 7th Street and approximately $\frac{3}{4}$ mile north of New Liberty Road in the Residential Mixed Use (RMU) zoning district.

Approval of the Conditional Use Grant is subject to the following conditions:

1. All Planning Commission and staff comments are addressed.
2. The truck hauling route shall remain in accordance with Exhibit A attached hereto, unless otherwise approved by the Town.
3. Truck hauling periods shall avoid before and after school traffic (7:30 a.m. – 8:15 a.m. and 2:45 p.m. - 3:30 p.m.), and avoid peak times of commuter traffic (7:00 a.m. – 8:30 a.m. and 4:30 – 6:00 p.m.).
4. All landscape screening shown on plan shall be completed no later than 60 days after the initial drilling phase and shall not be postponed until development of the golf course. Irrigation shall be included to ensure establishment of all plant materials.
5. Sound walls shall be setback a minimum of 30 feet from the Poudre Trail temporary and permanent trails.
6. The Town's standard conditions of approval for oil and gas facilities, with amendments, as noted:
 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:
 - 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.
 - 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.
 - c. Site grading. The Drilling and Site Improvement Plans and supplemental information shall address site grading, including any earth berms for emergency containment.
 - 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.
 - e. Temporary screening. The applicant shall install a buffer to screen the initial drilling activities and installation of site improvements from surrounding neighborhoods and streets. The temporary buffer/sound walls shall enclose the drilling operations to provide screening and noise mitigation barriers in the direction of nearby homes, as appropriate.
 - f. Permanent screening. Given the close proximity to residential neighbors, the Drilling and Site Improvement Plans shall depict proposed long-term screening materials including landscaping, earth berms and any other screening methods to mitigate visual impacts.

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.

h. Oil and gas equipment.

(1) The applicant shall utilize electric motors in order to mitigate the noise impacts to the neighboring properties. The applicant shall utilize noise dampening methods consistent with the best management practices (BMPs) utilized in the basin. Such methods include, but are not limited to, sound walls, blankets, and other noise mitigation installed at the source of any equipment creating such noise. Noise mitigation methods known as "Quite Fleet Technology," utilized by Liberty Oilfield Services, shall be used as examples of BMPs to be replicated.

(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.

(3) Low profile tanks shall be utilized and shall be installed in the least visible manner possible.

(4) All tanks and equipment shall be painted to blend-in with the surrounding landscape.

i. Air quality.

(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.

(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.

(3) The applicant shall submit to the Town copies of all air emissions reporting as required by the COGCC and/or the CDPHE's Air Pollution Control Division.

j. Water quality.

(1) The applicant shall ensure that any hydrocarbon discharges from the site comply with all state and federal water quality requirements. Any hydrocarbon discharges shall be properly reported to COGCC, and remediated according to COGCC requirements in all cases. Reportable hydrocarbon discharges shall also be reported to the Windsor Local Government Designee (LGD).

(2) The applicant shall provide test results from Groundwater Baseline Sampling and Monitoring required by COGCC Rule 318A.e(4) to the Town. (condition updated 10/28/13 to reflect updated COGCC rule)

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.

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.

m. The following certification blocks shall be included on the Drilling and Site Improvement Plans:

(1) A signed owner's acknowledgement certification block.

(2) A signed drilling operator's acknowledgement certification block.

n. The following notes shall be included on the Drilling and Site Improvement Plans:

	<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)If access to the site is proposed from a Town of Windsor street, such access point(s) shall require approval from the Town of Windsor Engineering Department and any required access improvements, street clean-up, tracking pads, etc., shall be addressed accordingly.</p> <p>2. The applicant shall address and comply with the conditions of Windsor-Severance Fire Rescue.</p> <p>3. All trucks and equipment that are used by primary contractors of Great Western Oil and Gas Company (e.g. drilling, completions, roustabout services) exclusively on the location during drilling and completion activities will be equipped with white noise backup alarms. As per OSHA regulations, in cases where rear view cameras and/or spotters are used 100% of the time, the truck or equipment will not have a backup alarm. Some vehicles, other than those noted above, may have backup alarms.</p>	
Permit	Passed Completeness.	10/17/2019

Total: 12 comment(s)