

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:

402864407

(SUBMITTED)

Date Received:

01/13/2022

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: Stillroven Farm HC Well Number: 34-322HNX
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)595-2118 Fax: ()
Email: ljones@gwp.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160041

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NENE Sec: 5 Twp: 3N Rng: 68W Meridian: 6
Footage at Surface: 581 Feet FNL/FSL 310 Feet FEL/FWL FEL
Latitude: 40.260704 Longitude: -105.018806
GPS Data: GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 06/16/2021
Ground Elevation: 5074
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: 33 Twp: 4N Rng: 68W Footage at TPZ: 865 FSL 460 FWL
Measured Depth of TPZ: 7783 True Vertical Depth of TPZ: 7087 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 34 Twp: 4N Rng: 68W Footage at BPZ: 865 FSL 460 FEL
Measured Depth of BPZ: 17423 True Vertical Depth of BPZ: 7087 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 34 Twp: 4N Rng: 68W Footage at BHL: 865 FSL 370 FEL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD

Municipality: N/A

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.? Yes

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: 09/11/2017

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.)

Section 33: All, Sec 34: All

Total Acres in Described Lease: 1280 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 509 Feet
Building Unit: 608 Feet
Public Road: 288 Feet
Above Ground Utility: 326 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.

Railroad: 5280 Feet
Property Line: 310 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	407-3040	1280	Section 33: All Section 34: All

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: 180 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: 17513 Feet TVD at Proposed Total Measured Depth 7087 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: 196 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:

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	13+1/2	9+5/8	J-55	36	0	2020	852	2020	0
1ST	8+1/2	5+1/2	HCP-11	20	0	17513	2491	17513	2500

☒ Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

Zone Type	Formation /Hazard	Top M.D.	Top T.V.D.	Bottom M.D.	Bottom T.V.D.	TDS (mg/L)	Data Source	Comment
Groundwater	Fox Hills	0	0	0	0	501-1000	USGS	WSP 2302
Confining Layer	Pierre Fm	23	23	495	495			
Groundwater	Upper Pierre Acquier	495	495	1434	1434	501-1000	Other	COGCC report, Paper 2141
Confining Layer	Pierre Fm	1434	1434	3613	3613			
Hydrocarbon	Parkman	3613	3613	3822	3822			
Confining Layer	Pierre Fm	3822	3822	4087	4087			
Hydrocarbon	Sussex	4087	4087	4256	4255			
Confining Layer	Pierre Fm	4256	4255	4580	4572			
Hydrocarbon	Shannon	4580	4572	4703	4689			
Confining Layer	Pierre Fm	4703	4689	7326	6936			
Confining Layer	Sharon Springs	7326	6936	7586	7057			
Hydrocarbon	Nionara	7586	7057	17513	7087			The TVD of the deepest hydrocarbon zone is the bottom of the well and not the bottom of the formation. The formation is not planned to be exited

OPERATOR COMMENTS AND SUBMITTAL

Comments	<p>Based on 2D calculation of difference in footages, the nearest well permitted or completed in the same formation is Stillroven Farm HC 34-322HNC, proposed by Great Western.</p> <p>Nearest well belonging to another operator is McCoy 2-6-33, API 05-123-35229, operated by Captiva Energy Partners. The distance was measured in 3D. The completed portions are more than 150' apart.</p> <p>Great Western ran an open hole composite log on the Stillroven Farm 7 (API 05-123-45412), which satisfies Rule 408.r.</p> <p>This is a built location with producing wells so no issue with an expired 2A.</p> <p>A sundry has been submitted to update the Cultural & Safety Setbacks (doc # 402924264).</p> <p>This is a refile Form 2; there are changes to the Well Name, Surface Hole Location, safety setback distances, Total Depth, casing and cement program, and Drilling and Spacing Unit. Updated Offset Well Evaluation, well location plat, deviated drilling plan, and directional data template are attached.</p>
----------	--

This application is in a Comprehensive Area Plan No CAP #: _____

Oil and Gas Development Plan Name _____ OGDP ID#: _____

Location ID: 452112

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

Signed: _____ Print Name: Linsey Jones

Title: Regulatory Analyst Date: 1/13/2022 Email: ljones@gwp.com

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: _____
Expiration Date: _____

API NUMBER

05 123 45411 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

--	--

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Multi Well Open-Hole Logging – Rule 408.r Alternative Logging Program: An existing well on the pad was 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.
2	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
3	Drilling/Completion Operations	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 the 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.
4	Drilling/Completion Operations	Great Western will comply with Rule 419 and Order 1-232 for all Bradenhead compliance, as applicable

Total: 4 comment(s)

Attachment List

Att Doc Num	Name
402864608	DIRECTIONAL DATA
402864742	DEVIATED DRILLING PLAN
402865963	WELL LOCATION PLAT
402866445	OffsetWellEvaluations Data
402922065	OffsetWellEvaluations Data

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	<p>RETURNED TO DRAFT: This application has been reviewed by COGCC staff and cannot be approved based on the information submitted; therefore, the COGCC is returning this form to DRAFT for the applicant to resolve the issues. In compliance with § 24-65.1-108(1), C.R.S., the COGCC is returning this application to the applicant to remedy the deficiencies. The applicant may resubmit this application for COGCC review; upon resubmittal of any application, the COGCC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review. In addition to all standard required information and attachments, the COGCC hereby confirms the following information is necessary for review:</p> <ol style="list-style-type: none">1)Distances on the Safety Setback tab do not agree with the approved Form 2A . Distances need to be corrected either on this Form or a Form 4 Sundry needs to be submitted to update the distances for the location.2)Provide a comment on Submit tab identifying the Well that contains the Open Hole log and satisfies Rule 408.r.3)Upload the Offset Well Evaluation using the new template so that the Offset Wells Evaluation tab is populated correctly.4)Since this is a refile application, the API# has been assigned and should be placed within the directional data template.5)Provide one entire mineral lease on the Surface & Minerals tab.6)Correct the unit acreage on the Spacing & Formations tab.7)Attached Well Location Plat does not agree with the information provided on the Well Location tab. Either, upload a new Plat, or provide complete & correct information on the tab. The following requires correction.<ul style="list-style-type: none">•Surface Location Footages•TPZ & BPZ Section, Township, Range•Elevation•Latitude/Longitude.8)Multi-Well Open Hole Logging BMP needs to be proofread for errors.	01/04/2022

Total: 1 comment(s)

Public Comments

No public comments were received on this application during the comment period.

