

FORM
2

Rev
05/22

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:

403228367

(SUBMITTED)

Date Received:

01/23/2023

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: Ottesen Federal Well Number: 05N
Name of Operator: GREAT WESTERN OPERATING COMPANY LLC COGCC Operator Number: 10110
Address: 1775 SHERMAN STREET STE 3000
City: DENVER State: CO Zip: 80203
Contact Name: Ally Ota Phone: (303)860-5800 Fax: ()
Email: regulatory@pdce.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

COGCC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the COGCC for this Well.

Surety ID Number (if applicable): 20160047

Federal Financial Assurance

☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ _____

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NWSE Sec: 33 Twp: 1N Rng: 66W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 1410 Feet FSL 1518 Feet FEL

Latitude: 40.004325 Longitude: -104.778108

GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 06/30/2016

Ground Elevation: 5076

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: 5 Twp: 1S Rng: 66W Footage at TPZ: 1185 FNL 460 FEL
Measured Depth of TPZ: 9064 True Vertical Depth of TPZ: 7534 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 6 Twp: 1S Rng: 66WFootage at BPZ: 1185 FNL 2505 FELMeasured Depth of BPZ: 16390True Vertical Depth of BPZ: 7594 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 6 Twp: 1S Rng: 66WFootage at BHL: 1185 FNL 2505 FEL

FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATIONCounty: WELDMunicipality: 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: 09/17/2018Comments: WOGLA18-0098**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 ☐ IndianMineral Owner beneath this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Surface Owner Protection Bond (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.)

See attached lease mapTotal Acres in Described Lease: 79Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ IndianFederal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1246 Feet
Building Unit: 1398 Feet
Public Road: 1402 Feet
Above Ground Utility: 1319 Feet
Railroad: 5280 Feet
Property Line: 1119 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.

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	407-2614	906	1S-66W Section 5: All 1S-66W Section 6: E2

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: 150 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: 175 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: 16390 Feet

TVD at Proposed Total Measured Depth 7594 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: 857 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? No

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	2424	957	2424	0
1ST	8+1/2	5+1/2	P-110	20	0	16390	2601	16390	2700

☒ 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	Arapahoe	139	139	495	495	1001-10000	DWR	COGCC UPWQ Study
Groundwater	Fox Hills Sandstone	867	867	1106	1106	1001-10000	DWR	COGCC UPWQ Study
Confining Layer	Pierre Shale	1515	1515	1642	1642			
Groundwater	UPIR/Pawnee Aquifer	1642	1642	2160	2160	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	2160	2160	4385	4385			
Hydrocarbon	Parkman	4385	4385	4585	4585			
Confining Layer	Pierre Shale	4585	4585	4765	4765			
Hydrocarbon	Sussex	4765	4765	4944	4944			
Confining Layer	Pierre Shale	4944	4944	5495	5495			
Hydrocarbon	Shannon	5495	5495	5572	5572			
Confining Layer	Pierre Shale	5572	5572	8303	7180			
Subsurface Hazard	Sharon Springs Shale	8303	7180	8326	7199			
Hydrocarbon	Niobrara	8326	7199	16390	7594			

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being refiled to update footages, drilling program, and well name. This location has been built.

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the Ottesen Federal 04N (05-123-44340). The distance to the nearest wellbore belonging to another operator on the "Drilling Plan" tab was measured to the plugged and abandoned Great Western Sugar 3X (05-001-06690). Both distances were measured via COGCC GIS mapping, 2D plain view.

This application is in a Comprehensive Area Plan _____ No _____ CAP #: _____
Oil and Gas Development Plan Name _____ OGDP ID#: _____
Location ID: 449521

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

Signed: _____ Print Name: Ally Ota

Title: Regulatory Analyst Date: 1/23/2023 Email: alexandria.ota@pdce.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 44334 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.

<u>COA Type</u>	<u>Description</u>
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0 COA

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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|---|--------------------------------|---|
| 1 | Drilling/Completion Operations | ALTERNATIVE PROGRAM: An existing well on the pad (Ottesen LE 06-311HC 05-123-44337) 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 | Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling. |

Total: 2 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
403228406	OffsetWellEvaluations Data
403228417	LEASE MAP
403228419	WELL LOCATION PLAT
403228420	DEVIATED DRILLING PLAN
403228423	DIRECTIONAL DATA

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Missing operator comment on whether the pad has been built.	12/02/2022

Total: 1 comment(s)

