

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:
402855740
Date Received:
12/20/2021

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: Schrute Well Number: 1NR
Name of Operator: PDC ENERGY INC COGCC Operator Number: 69175
Address: 1775 SHERMAN STREET - STE 3000
City: DENVER State: CO Zip: 80203
Contact Name: Ally Ota Phone: (303)860-5800 Fax: ()
Email: alexandria.ota@pdce.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160047

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NESW Sec: 16 Twp: 5N Rng: 64W Meridian: 6

Footage at Surface: 2265 Feet FSL 1687 Feet FWL

Latitude: 40.398290 Longitude: -104.558370

GPS Data: GPS Quality Value: 2.1 Type of GPS Quality Value: PDOP Date of Measurement: 02/21/2019

Ground Elevation: 4613

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: 16 Twp: 5N Rng: 64W Footage at TPZ: 2533 FSL 175 FWL
Measured Depth of TPZ: 7557 True Vertical Depth of TPZ: 6696 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 15 Twp: 5N Rng: 64W Footage at BPZ: 2533 FSL 175 FEL
Measured Depth of BPZ: 17709 True Vertical Depth of BPZ: 6641 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 15 Twp: 5N Rng: 64W Footage at BHL: 2533 FSL 175 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: 09/18/2019

Comments: WOGLA19-0081 was approved 9/18/2019

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.)

5N-64W Sec 16: All

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # 81/6052-S

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1457 Feet
 Building Unit: 1810 Feet
 Public Road: 1679 Feet
 Above Ground Utility: 1660 Feet
 Railroad: 4859 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: 100 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	407-2937	1280	S.15 & 16: 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: 175 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: 266 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: 17709 Feet TVD at Proposed Total Measured Depth 6641 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: 20 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	12+1/4	9+5/8	J-55	36	0	1600	920	1600	0
1ST	8+1/2	5+1/2	P-110	20	0	17709	2035	17709	

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	485	485	720	720	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	720	720	865	865			
Groundwater	UPIR/Pawnee Aquifer	865	865	1385	1385	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1385	1385	3485	3485			
Hydrocarbon	Parkman	3485	3485	3785	3785			
Confining Layer	Pierre Shale	3785	3785	3940	3940			
Hydrocarbon	Sussex	3940	3940	4275	4275			
Confining Layer	Pierre Shale	4275	4275	4845	4845			
Hydrocarbon	Shannon	4845	4845	4950	4950			
Confining Layer	Pierre Shale	4950	4950	6487	6487			
Subsurface Hazard	Sharon Springs Shale	6487	6487	6504	6504			
Hydrocarbon	Niobrara	6522	6522	17709	6641			

OPERATOR COMMENTS AND SUBMITTAL

Comments While drilling the vertical portion of the well at 357' we lost circulation. An attempt was made to pick up out of the hole and establish circulation. While picking up out of the hole the BHA became stuck at 208'. The MWD tool was wireline retrievable so we were able to recover the MWD first thing. Several fishing attempts were made to recover the BHA with no success. We backed off the string at the UBHO sub (Universal Bottom Hole Orientation) and filled the hole to surface with cement.. Left in the hole was a UBHO sub (2.67'), Non Magnetic Pony (17.7'), 8" Mud Motor (31.79'), 12-1/4 Drill Bit (1.85'). Total fish length was 54', Top of fish was 154', bottom of fish was 208', bottom of hole was 357'. Hole was filled with Class G Neat cement. Cement specs are as follows: 1.15 cu/sk, 15.8 PPG, 498 sks pumped, Water to Cement 5 gal/sk, 102bbls of total cement pumped.
Verbal/email approval to plug, skid rig, and spud replacement well granted by Diana Burn- Verbal approval on 12/19/2021, email approval on 12/20/2021. See attached correspondence.

This application is in a Comprehensive Area Plan No CAP #: _____
 OGDID#: _____ OGDID Name: _____ Expiration Date: _____
 Location ID: 471020 Location Name: Schrute 5N64W16 1-10

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: 12/20/2021 Email: alexandria.ota@pdce.com

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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: 

Director of COGCC

Date: 12/22/2021

Expiration Date: 12/21/2024

API NUMBER

05 123 51655 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	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad.</p> <p>2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara and from 500' below Sussex to 500' above Sussex. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p>
Drilling/Completion Operations	<p>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:</p> <p>1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</p> <p>2) If a delayed completion, a second test is required between 6-9 months after rig release and must be conducted prior to stimulation. If any pressure greater than 200 psi is observed or if there is continuous flow, Operator must contact COGCC engineering for approval prior to stimulation.</p> <p>3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the non-operated listed well. Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>LOUSTALET B 15-15X API - 05-123-27338 PATRIOT B16-8 API - 05-123-15097 PATRIOT B16-5 API - 05-123-15561 PATRIOT B16-6 API - 05-123-15562 PATRIOT B16-7 API - 05-123-15563</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 4). Operator will submit a Form 42??????OTHER- AS SPECIFIED BY PERMIT CONDITION??????</p> <p>stating that appropriate mitigation will be completed, during the hydraulic stimulation of this pad. This Form 42 shall be filed 48 hours prior to stimulation. Operator will monitor casing (surface and production) pressures during the entire stimulation treatment of the pad. After stimulation is complete, a Form 4 Sundry shall be submitted for the offset well on describing how Option 4 work was completed and include a summary of the monitoring details.</p> <p>Peterson 14Y-304 API - 05-123-39800 Cecil's Kersey Farm 17B-302 API - 05-123-42906 Schaumberg 17F-332 API - 05-123-43087 Schaumberg 17F-202ST API - 05-123-43088 Schaumberg 17G-312 API - 05-123-43093 Schaumberg 17G-202 API - 05-123-43095 Schaumberg 17F-232 API - 05-123-43096 Gillham 18X-102 API - 05-123-42865 Klein 19N-312 API - 05-123-40247</p>
4 COAs	

Best Management Practices

No	BMP/COA Type	Description
1	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.
2	Drilling/Completion Operations	OPEN HOLE LOGGING EXCEPTION: One of the first wells drilled on the pad will be logged with cased-hole neutron log with 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 in that well and have those logs attached. The Form 5 for each well shall state "Open Hole Logging Exception - 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.

Total: 2 comment(s)

Attachment List

Att Doc Num	Name
402301075	EXCEPTION LOC REQUEST
402301076	EXCEPTION LOC WAIVERS
402855740	FORM 2 SUBMITTED
402904306	DIRECTIONAL DATA
402904609	DEVIATED DRILLING PLAN
402904610	WELL LOCATION PLAT
402905290	CORRESPONDENCE

Total Attach: 7 Files

General Comments

User Group	Comment	Comment Date
Approval	Added the exception location request and signed waiver for well's placement less than the required 150' from a property line. The encroached-upon surface owner is the same as the surface owner where the well is sited.	12/22/2021
Approval	The approval of this APD and creation of a new API# on the Schrute 5N64W16 1-10 Location (Loc ID#471020) will temporarily establish 11 active wells on the Location, which is only permitted for 10 wells. PDC has already plugged the original Schrute 1N well (API# 123-50956) and submitted a Form 6 Subsequent Report of Abandonment (doc# 402905135) to report the plugging. Upon the approval of that Form 6, the status of the original well will be PA, and the total active well count will be reduced back down to the 10 permitted wells on the Location.	12/22/2021
Permit	Final Review Completed.	12/21/2021
Engineer	Note: No offset well evaluation provided. This APD is being submitted to replace APD 402119663. Previous offset well evaluation remains valid; no significant change to planned wellbore trajectory.	12/21/2021
Permit	Permitting review complete.	12/21/2021
OGLA	The Oil and Gas Location, its associated Form 2A materials, and the Form 2 Application for Permit to Drill were fully reviewed and approved prior to the commencement of drilling operations for this well. Because this is an application for an unplanned rig skid with drilling in progress, an Oil and Gas Location Assessment review is not applicable to this ongoing operation.	12/21/2021

Total: 6 comment(s)