

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:

402974789

(SUBMITTED)

Date Received:

05/02/2022

APPLICATION FOR PERMIT TO:

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

Amend ☒

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Castle 0780 Well Number: 2-17H20R
Name of Operator: D90 ENERGY LLC COGCC Operator Number: 10706
Address: 952 ECHO LANE SUITE 480
City: HOUSTON State: TX Zip: 77024
Contact Name: Doug Sandridge Phone: (303)330 4847 Fax: ()
Email: doug@fulcrumef.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20180090

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NWNW Sec: 17 Twp: 7N Rng: 80W Meridian: 6
Footage at Surface: 338 Feet FNL 568 Feet FWL
Latitude: 40.583835 Longitude: -106.405077
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 08/08/2016
Ground Elevation: 8149
Field Name: NORTH PARK HORIZONTAL NIOBRARA Field Number: 60120

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: 17 Twp: 7N Rng: 80W Footage at TPZ: 1116 FNL 440 FWL
Measured Depth of TPZ: 7492 True Vertical Depth of TPZ: 7150 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 20 Twp: 7N Rng: 80W Footage at BPZ: 300 FSL 350 FWL
Measured Depth of BPZ: 16719 True Vertical Depth of BPZ: 7150 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 20 Twp: 7N Rng: 80W Footage at BHL: 300 FSL 350 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: JACKSON

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.? 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: Waived Date of Final Disposition: _____

Comments: Jackson County does not regulate oil & gas

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.)

T7N R80W Sec. 17: N2

Federal minerals within the spacing unit are coal only

Total Acres in Described Lease: 320 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2774 Feet
Building Unit: 2687 Feet
Public Road: 533 Feet
Above Ground Utility: 299 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: 568 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	531-22	1280	Sec. 17 & 20: 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: 300 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: 441 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: 16719 Feet TVD at Proposed Total Measured Depth 7150 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: 229 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
CONDUCTOR	26	16+1/4	J55	42	0	90	189	90	0
SURF	12+1/4	9+5/8	J55	36	0	2500	576	2500	0
1ST	8+3/4	5+1/2	P110HC	20	0	16719	2975	16719	2300

☐ 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	North Park FM	0	0	500	500	1001-10000	USGS	Site Name: SB00708019BCD1 TD@500' TDS@1240 30' Water Depth
Confining Layer	Coalmont FM	500	500	3178	3172			
Confining Layer	Upper Pierre	3178	3172	5000	4945			
Hydrocarbon	Sussex	5000	4945	5450	5383			
Confining Layer	Pierre Lower (Shale)	5450	5383	5500	5430			
Hydrocarbon	Shannon	5500	5430	5550	5479			
Confining Layer	Pierre Lower (Shale)	5550	5479	6992	6879			
Hydrocarbon	Niobrara	6992	6879	16719	7150			Bottom TVD is bottom of the well and not bottom of the formation; The formation was not exited.

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being submitted as a refile of API: 05-057-06534.

There have been no new buildings constructed and no changes to the surrounding land use, Surface & Minerals, Formations, or mineral lease description. The well site has been constructed.

The SHL change is within the previously approved location, does not change QQ, and does not change the status of any revised cultural distance setbacks. TPZ, BPZ, and BHL changes are within the existing DSU. All previously submitted notices, Surface Use Agreements, and letters are also still valid.

The nearest well in unit per anti-collision is revised to the Castle 0780 1-17H20 (API: 05-057-06542) PR Status @ 441'. The nearest outside operated well per 2-D calculation is the Evans 7-80 17-1 (API: 05-057-06439) DA Status @ 229'.

PFZ Comment: The upper shallow section of the North Park is not well defined. We used the depth and lithology components to define two separate sections; one being sand (as North Park FM) which is most likely a possible source of groundwater and the second being a shale (as Coalmont FM) which should not be a source of groundwater. The shale should not be a source of groundwater and has not been found to be a source of groundwater in the USGS dataset.

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

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

Location ID: 324757

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

Signed: _____ Print Name: Justin Garrett

Title: Sr. Regulatory Analyst Date: 5/2/2022 Email: regulatory@ascentgeomatics.c

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

05 057 06534 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**

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Best Management Practices

No BMP/COA Type **Description**

1	Drilling/Completion Operations	Multi Well Open-Hole Logging - Rule 317.p: Alternative Logging Program: One of the first wells drilled on the pad - Hebron 0780 4-7H (API 05-057-06545) - has been logged with a triple Combo run 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	Blowout Prevention Equipment ("BOPE"): A double ram annular preventer will be used during drilling.

Total: 2 comment(s)

Attachment List

Att Doc Num **Name**

403024318	OffsetWellEvaluations Data
403024330	DEVIATED DRILLING PLAN
403024332	DIRECTIONAL DATA
403033916	WELL LOCATION PLAT

Total Attach: 4 Files

General Comments

User Group **Comment** **Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)

Public Comments

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

