

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:
402983903
Date Received:
05/23/2022

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: Hebron 0780 Well Number: 8-18H
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

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): 20210083

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: Lot 4 Sec: 18 Twp: 7N Rng: 80W Meridian: 6
Footage at Surface: 275 Feet FSL 275 Feet FWL
Latitude: 40.571183 Longitude: -106.424225
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 06/10/2016
Ground Elevation: 8208
Field Name: NORTH PARK HORIZONTAL Field Number: 60120
NIOBRARA
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: 18 Twp: 7N Rng: 80W Footage at TPZ: 1049 FSL 1650 FWL
Measured Depth of TPZ: 7407 True Vertical Depth of TPZ: 6663 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 18 Twp: 7N Rng: 80W Footage at BPZ: 300 FNL 1650 FWL

Measured Depth of BPZ: 11544 True Vertical Depth of BPZ: 6663 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 18 Twp: 7N Rng: 80W Footage at BHL: 300 FNL 1650 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: _____ 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 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.)

7N, 80W Section 18: ALL

Total Acres in Described Lease: 617 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 4085 Feet
 Building Unit: 4085 Feet
 Public Road: 4751 Feet
 Above Ground Utility: 4816 Feet
 Railroad: 5280 Feet
 Property Line: 275 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	531-39	617	Sec 18: 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: 269 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

531-30 authorized 5 additional wells for a total of 9. 531-39 modifies unit boundary setbacks to 100 ft. 531-39 doesn't reference 531-30 but should have as all orders for the applications lands modify original order (531-2) that created unit.

DRILLING PROGRAM

Proposed Total Measured Depth: 11544 Feet TVD at Proposed Total Measured Depth 6663 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: _____ 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	190	90	0
SURF	12+1/4	9+5/8	J55	36	0	2500	629	2500	0
1ST	8+3/4	5+1/2	P110	20	0	11544	1879	11544	0

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	Coalmont Sand	0	0	1645	1645	501-1000	USGS	Site name: SB00708018BCC1 TD@600' TDS@923
Confining Layer	Coalmont Shale	1645	1645	3161	3160			
Confining Layer	Upper Pierre	3161	3160	4448	4400			
Hydrocarbon	Sussex	4448	4400	4865	4800			
Confining Layer	Pierre Lower (Shale)	4865	4800	5023	4950			
Hydrocarbon	Shannon	5023	4950	5073	5000			
Confining Layer	Pierre Lower (Shale)	5073	5000	6539	6348			
Hydrocarbon	Niobrara	6539	6348	11544	6663			Bottom TVD is bottom of the well and not bottom of the formation; The formation is not planned to be exited.

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being submitted as a refile of API # 05-057-06577.

There have been no new buildings constructed and no changes to the surrounding land use, Surface & Minerals, cultural distance setbacks, formations, or mineral lease description. The SHL/TPZ/BHL/TMD/TVD do not change, so no revised directional data is required. All previously submitted notices, plats (Doc #401080535), Surface Use Agreements, and letters are also still valid.

The nearest well in unit per anti-collision is unchanged as the Hebron 5-18H (API: 05-057-06502) @ 269'. No well belonging to another operator within 1,500 feet.

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 _____ OGDP ID#: _____
Location ID: 447512

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: 5/23/2022 Email: regulatory@ascentgeomatics.c

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: 8/22/2022

Expiration Date: 08/21/2025

API NUMBER
05 057 06577 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 2 business days prior to MIRU (spud notice) for the first well activity with a rig on the pad.</p> <p>2) The Coalmont Formation is considered a potential freshwater resource in the North Park Basin (CGS Ground Water Atlas of Colorado, 2003). Operator shall provide cement coverage from the production casing shoe (5 1/2" First String) to a minimum of 200' above the surface casing shoe to provide full isolation of the Coalmont Formation. Verify production casing cement coverage with a cement bond log.</p>
Drilling/Completion Operations	<p>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 is observed or if there is continuous flow, Operator must contact COGCC engineering for approval 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 listed wells. Operator assures that this offset will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document (option 4). Operator will submit a Form 42 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. A Bradenhead test will be performed on the offset wells listed below within 30 days prior to the beginning of stimulation of this well. Surface and production casing pressures of this offset well list will be actively monitored during stimulation of this well. Operator will assure that the offset well's bradenhead is open and actively monitored during the entire stimulation treatment of this pad– a person will monitor for any evidence of fluid. If there is indication of communication between the stimulation treatment and an offset well, treatment will be stopped and COGCC Engineering notified.</p> <p>HEBRON *02-07H(API 057-06499) Hebron *01-18HR(API 057-06536) Peters 0781 *15-13H12(API 057-06581) Peters 0781 *11-13H12(API 057-06583) Peters 0781 *10-13H12(API 057-06590) Peters 0781 *16-12H13(API 057-06597)</p>
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
4 COAs	

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Alternative Logging Program: An existing well (Peters 0781 9-13H12 (API 05-057-06584) on the pad was logged with open-hole resistivity 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 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
402983903	FORM 2 SUBMITTED
403024456	OffsetWellEvaluations Data
403143491	OFFSET WELL EVALUATION

Total Attach: 3 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Completed.	08/09/2022
Engineer	<ul style="list-style-type: none"> •Surface Casing Check complete Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally available geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within two miles is 651 feet. •Offset well review complete 408.t - No wells 408.u - No wells •Engineering review complete <p>8/8/22 - Email operator for OWE COA consent. Received</p>	08/08/2022
Permit	<ul style="list-style-type: none"> -Corrected Surety ID number to active blanket plugging bond -Corrected spacing order from 531-30 to 531-39 -Corrected field name to North Park Horizontal Niobrara -All corrections made with operator concurrence -Permit review complete 	07/13/2022
Engineer	Return to draft. Update PFZ table with Coalmont groundwater details. Submit OWE with all wells within 1500'.	04/12/2022
OGLA	This Location (ID #447512) and its associated Form 2A materials were fully reviewed during the OGLA review of this APD in accordance with current Rules. This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources.	03/21/2022

Total: 5 comment(s)