

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:
402691446
Date Received:
06/08/2021

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: Castor 7-59 Well Number: 12-1-5
Name of Operator: MORNING GUN EXPLORATION LLC COGCC Operator Number: 10656
Address: 1601 ARAPAHOE ST
City: DENVER State: CO Zip: 80202
Contact Name: Justin Dunn Phone: (303)847-1110 Fax: ()
Email: jdunn@morninggun.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20170040

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SWSE Sec: 12 Twp: 7N Rng: 59W Meridian: 6
Footage at Surface: 510 Feet FSL 2310 Feet FEL
Latitude: 40.583295 Longitude: -103.924716
GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 08/23/2018
Ground Elevation: 4875
Field Name: WILDCAT Field Number: 99999

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: 12 Twp: 7N Rng: 59W Footage at TPZ: 600 FSL 2072 FWL
Measured Depth of TPZ: 6467 True Vertical Depth of TPZ: 6030 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 1 Twp: 7N Rng: 59W Footage at BPZ: 600 FNL 2072 FWL
Measured Depth of BPZ: 15860 True Vertical Depth of BPZ: 6030 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 1 Twp: 7N Rng: 59W Footage at BHL: 300 FNL 2072 FWL
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: 12/09/2019

Comments: WOGLA 19-0147

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.)

Township 7 North, Range 59 West, 6th P.M.
Section 9: ALL
Section 10: SE
Section 11: S2
Section 12: S2
Section 14: S2
Section 22: E2
Section 24: S2

Total Acres in Described Lease: 2400 Described Mineral Lease is: Fee State Federal Indian
Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 5280 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- Enter 5280 for distance greater than 1 mile.

Building Unit: 5280 Feet
 Public Road: 2292 Feet
 Above Ground Utility: 2366 Feet
 Railroad: 5280 Feet
 Property Line: 510 Feet

- 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	535-1178	1280	1: ALL, 12: 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: 600 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: 376 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

The BHL footage FNL of the unit boundary shown on the well location plat is less than the required 600' from unit boundary per Spacing Order (Docket No. 181200899 DEC Hearing). Operator will not be completing the well past 600' FNL of the unit boundary.

DRILLING PROGRAMProposed Total Measured Depth: 16160 Feet TVD at Proposed Total Measured Depth 6030 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: 101 Feet No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs 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? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP Equipment Type: Annular Preventor Double Ram Rotating Head None

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	26	16	A53-B	43	0	100	50	100	0
SURF	13+1/2	9+5/8	J-55	36	0	1850	650	1850	0
1ST	8+1/2	5+1/2	P-110	20	0	16160	1860	16160	2500

 Conductor Casing is NOT planned**POTENTIAL FLOW AND CONFINING FORMATIONS**

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Groundwater	Laramie-Fox Hills	0	0	411	411	0-500	USGS	
Confining Layer	Pierre Shale	411	411	754	754			
Groundwater	Upper Pierre Aquifer	754	754	1490	1490	1001-10000	Other	CO DNR Report Project Number 2141
Confining Layer	Pierre Shale	1490	1490	3247	3185			
Hydrocarbon	Parkman	3247	3185	4049	3965			
Hydrocarbon	Sussex	4049	3965	4988	4880			
Hydrocarbon	Shannon	4988	4880	5869	5745			
Confining Layer	Sharon Springs	5869	5745	5967	5825			
Hydrocarbon	Niobrara	5967	5825	16160	6030			

OPERATOR COMMENTS AND SUBMITTAL

Comments

This well has a bottom-hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 600' FNL and 2072' FWL of Section 1. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

Nearest wellbore permitted or completed in the same formation is the Castor 7-59 12-1-4 (Morning Gun Exploration LLC), as measured using 3D manual calculations.

Nearest existing or permitted wellbore belonging to another operator is the PA H D LAUER 2 API 05-123-05409 (Dixon Oil Co), using 2D measurements.

This is a refile, no changes were made to the original APD

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

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

Location ID: 465272

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

Signed: _____ Print Name: Ryan Supercynski

Title: Landman Date: 6/8/2021 Email: rsupercynski@morninggun.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: 6/29/2021

Expiration Date: 06/28/2024

API NUMBER

05 123 50205 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) Provide cement coverage from TD to a minimum of 500' above Niobrara. Verify coverage with cement bond log. Confirm rule and cement coverage with COGCC Area Engineer prior to drilling this well.</p> <p>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p> <p>4) The Operator will abide by the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area, May 29, 2012.</p>
Drilling/Completion Operations	<p>Bradenhead Testing 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, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer 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 non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>H D LAUER ESTATE *1 (API 123-05404) H D LAUER *2 (API 123-05409) FRANK W. TURNER *1 (API 123-05419) ADDINGTON *1 (API 123-05425) TURNER *2 (API 123-05438) TURNER *1 (API 123-05439) SEIGFRIED *1 (API 123-05440) STATE *1 (API 123-05448) BOWMAN *1-1 (API 123-12600) LIND *1 (API 123-13278) LAUER *1 (API 123-13472) CASTOR *1 (API 123-13887) CASTOR *2 (API 123-14146) CASTOR *3 (API 123-14615) FAYE *1 (API 123-14643)</p>
Construction	<p>If location is not constructed by 2A expiration (6/10/2022), a refile Form 2A must be approved prior to location construction.</p>
Drilling/Completion Operations	<p>COGCC COA: Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.</p>
5 COAs	

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Anti-collision: 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	Alternative Logging Program: One of the first wells drilled on the pad will be logged with Open Hole Resistivity Log and Gamma Ray Log from the kick-off point to 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 clearly state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open hole logs were run.
3	Drilling/Completion Operations	If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations.

Total: 3 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment List

Att Doc Num	Name
402691446	FORM 2 SUBMITTED
402709851	DEVIATED DRILLING PLAN
402709852	WELL LOCATION PLAT
402709854	DIRECTIONAL DATA
402726853	OffsetWellEvaluations Data
402732337	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	06/24/2021
Engineer	<ul style="list-style-type: none"> •Surface Casing Check complete •Offset well review complete 408.t - No wells 408.u - No wells •Engineering review complete 	06/22/2021
Permit	-Received consent from the operator to add/ change the following: 1.Changed the field name to Wildcat 2.Added the drilling beyond the setback COA 3.Added the unbuilt location refile COA -Passed Permit Review	06/15/2021
Permit	-Waiting on the operator's response for the following: 1.Changing the field name to wildcat since field name are not assigned until the well is producing 2.Adding the drilling beyond the setback COA 3.Adding the unbuilt location refile COA	06/14/2021
OGLA	This Location (ID #465272) and its associated Form 2A materials was fully reviewed during the OGLA review of this APD in accordance with current Rules. CPW's current mapping information indicates that this location falls within High Priority Habitat for Mule Deer Severe Winter Range, Pronghorn Antelope Winter Concentration Areas, and Plains Sharp-Tailed Grouse Production Areas. Based on this information, species-specific wildlife BMPs for winter and spring timing limitations for all operations are required for this location. See Form 4 #402711008 for wildlife BMPs (mule deer, pronghorn, and plains sharp-tailed grouse construction, drilling, and completion operations winter timing limitation [December 1 to June 30] and production operation winter and spring daily visitations to occur between 9:00 am and 4:00 pm]). This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources. Passed OGLA Task.	06/14/2021

Total: 5 comment(s)