

FORM 2 Rev 12/20

State of Colorado Oil and Gas Conservation Commission

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APPLICATION FOR PERMIT TO:

[X] Drill [] Deepen [] Re-enter [] Recomplete and Operate

Amend [] Refile [X] Sidetrack []

TYPE OF WELL OIL [X] GAS [] COALBED [] OTHER: ZONE TYPE SINGLE ZONE [X] MULTIPLE ZONES [] COMMINGLE ZONES []

Well Name: Castor 7-59 Well Number: 12-1-1 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 2422 Feet FEL Latitude: 40.583298 Longitude: -103.925119 GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 08/23/2018 Ground Elevation: 4877 Field Name: GEMINI Field Number: 29950

Well Plan: is [] Directional [X] 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 600 FWL Measured Depth of TPZ: 6833 True Vertical Depth of TPZ: 5952 FNL/FSL FEL/FWL Base of Productive Zone (BPZ) Sec: 1 Twp: 7N Rng: 59W Footage at BPZ: 600 FNL 600 FWL Measured Depth of BPZ: 16219 True Vertical Depth of BPZ: 5952 FNL/FSL FEL/FWL Bottom Hole Location (BHL) Sec: 1 Twp: 7N Rng: 59W Footage at BHL: 300 FNL 600 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:

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).

Building: 5280 Feet
 Building Unit: 5280 Feet
 Public Road: 2404 Feet
 Above Ground Utility: 2476 Feet
 Railroad: 5280 Feet
 Property Line: 510 Feet

- 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	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: 16519 Feet TVD at Proposed Total Measured Depth 5952 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: 41 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 NoneBeneficial 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
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	16519	1860	16519	2500

 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	Laramie-Fox Hills	0	0	414	413	0-500	USGS	
Confining Layer	Pierre Shale	414	413	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	3541	3187			
Hydrocarbon	Parkman	3541	3187	4441	3967			
Hydrocarbon	Sussex	4441	3967	5434	4882			
Hydrocarbon	Shannon	5434	4882	6333	5747			
Confining Layer	Sharon Springs Shale	6333	5747	6447	5827			
Hydrocarbon	Niobrara	6447	5827	16519	5952			

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 600' 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 as the Castor 7-59 12-1-2 (Morning Gun Exploration LLC), as measured using 3D manual calculations.

Nearest existing or permitted wellbore belonging to another operator is the PA Turner 1 API 05-123-05439 (O'Donnell & Edmondson), using 2D measurements.

This is a refile and no change has been made from the original APD.

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

Oil and Gas Development Plan Name _____ OGDID#: _____
 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

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 50202 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>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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)

Attachment List

Att Doc Num	Name
402709689	OffsetWellEvaluations Data
402709695	DEVIATED DRILLING PLAN
402709696	WELL LOCATION PLAT
402709698	DIRECTIONAL DATA

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)



Public Comments

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

