

FORM  
2

Rev  
05/22

# State of Colorado Oil and Gas Conservation Commission

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Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402796480

**(SUBMITTED)**

Date Received:

10/17/2022

## 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: Castor 7-59 Well Number: 11-2-12  
 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

### 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): 20170040

#### 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: SWSW Sec: 11 Twp: 7N Rng: 59W Meridian: 6

Footage at Surface: 460 Feet FSL 704 Feet FWL

Latitude: 40.583407 Longitude: -103.951675

GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 12/11/2018

Ground Elevation: 4947

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: 11 Twp: 7N Rng: 59W Footage at TPZ: 600 FSL 614 FEL  
Measured Depth of TPZ: 7936 True Vertical Depth of TPZ: 6228 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 2 Twp: 7N Rng: 59W Footage at BPZ: 600 FNL 747 FEL  
Measured Depth of BPZ: 17310 True Vertical Depth of BPZ: 6228 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 2 Twp: 7N Rng: 59W Footage at BHL: 300 FNL 751 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? [X] Yes [ ] No

[X] 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: 10/12/2022

Comments: Approved WOGLA 1041WOGLA22-0019

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] 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):

- [X] 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 2: S2  
Section 11: S2, NW  
Section 14: N2  
Section 15: N2, SW  
Section 23: NW, W2NE, S2  
Section 24: NE, E2NW

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  
Building Unit: 5280 Feet  
Public Road: 4547 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 460 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.)
CODELL	CODL	535-1177	1280	S.2, S.11: ALL

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

Enter 5280 for distance greater than 1 mile.

## SUBSURFACE MINERAL SETBACKS

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: 379 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. 181200898 DEC Hearing). Operator will not be completing the well past 600' FNL of the unit boundary.

## DRILLING PROGRAM

Proposed Total Measured Depth: 17611 Feet      TVD at Proposed Total Measured Depth 6228 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: 1155 Feet       No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No      If yes, attach an H<sub>2</sub>S 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	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	17611	1860	17611	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	495	484	0-500	USGS	
Confining Layer	Pierre Shale	495	484	797	797			
Groundwater	Upper Pierre Aquifer	797	797	1580	1580	1001-10000	Other	CO DNR Report Project Number 2141
Confining Layer	Pierre Shale	1580	1580	4117	3288			
Hydrocarbon	Parkman	4117	3288	5133	4068			
Hydrocarbon	Sussex	5133	4068	6323	4983			
Hydrocarbon	Shannon	6323	4983	7233	5848			
Confining Layer	Sharon Springs Shale	7233	5848	7321	5928			
Hydrocarbon	Niobrara	7321	5928	7683	6173			
Hydrocarbon	Fort Hays	7683	6173	7860	6223			
Hydrocarbon	Codell	7860	6223	17611	6228			

## OPERATOR COMMENTS AND SUBMITTAL

Comments



## Best Management Practices

No	BMP/COA Type	Description
1	Construction	If location is not constructed by 2A expiration (10/27/2022), a refile Form 2A must be approved prior to location construction.
2	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.
3	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 measuredwhile-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 openhole 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 openhole logs were run.
4	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.
5	Drilling/Completion Operations	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</li> <li>4) The Operator will abide by the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area, May 29, 2012.</li> </ol>
6	Drilling/Completion Operations	<p>Bradenhead Testing</p> <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> <ol style="list-style-type: none"> <li>1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</li> <li>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.</li> <li>3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.</li> </ol>
7	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>TURNER *1 (API 123-05439)  O E DOTY *1 (API 123-05446)  FISCUS *1 (API 123-14252)  NICOLA *15-35 (API 123-12130)</p>
8	Drilling/Completion Operations	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.

Total: 8 comment(s)

## Attachment List

<u>Att Doc Num</u>	<u>Name</u>
402799363	DEVIATED DRILLING PLAN
402799365	WELL LOCATION PLAT
402946995	DIRECTIONAL DATA
402948545	OffsetWellEvaluations Data

Total Attach: 4 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	<p>RETURNED TO DRAFT: This application has been reviewed by COGCC staff and cannot be approved based on the information submitted; therefore, the COGCC is returning this form to DRAFT for the applicant to resolve the issues. In compliance with § 24-65.1-108(1), C.R.S., the COGCC is returning this application to the applicant to remedy the deficiencies. The applicant may resubmit this application for COGCC review; upon resubmittal of any application, the COGCC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review.</p> <p>In addition to all standard required information and attachments, the COGCC hereby confirms the following information is necessary for review</p> <ol style="list-style-type: none"><li>1. Form cannot be processed since the WOGLA is still in process</li><li>2. The submitter is not listed as agent for the operator</li></ol>	11/15/2021

Total: 1 comment(s)

**Public Comments**

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

