

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:

403265761

(SUBMITTED)

Date Received:

12/23/2022

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: Mottled South Well Number: 6-16HN
 Name of Operator: MALLARD EXPLORATION LLC COGCC Operator Number: 10670
 Address: 1400 16TH STREET SUITE 300
 City: DENVER State: CO Zip: 80202
 Contact Name: Erin Mathews Phone: (720)543 7959 Fax: ()
 Email: emathews@mallardexploration.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): 20170115

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: SESW Sec: 31 Twp: 8N Rng: 59W Meridian: 6

Footage at Surface: 550 Feet FSL 1639 Feet FWL

Latitude: 40.613080 Longitude: -104.024769

GPS Data: GPS Quality Value: 1.8 Type of GPS Quality Value: PDOP Date of Measurement: 09/15/2017

Ground Elevation: 4969

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: 6 Twp: 7N Rng: 59W Footage at TPZ: 600 FNL 605 FEL
Measured Depth of TPZ: 7497 True Vertical Depth of TPZ: 6325 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 6 Twp: 7N Rng: 59W Footage at BPZ: 600 FSL 605 FEL
Measured Depth of BPZ: 11524 True Vertical Depth of BPZ: 6325 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 6 Twp: 7N Rng: 59W Footage at BHL: 600 FSL 605 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: 05/28/2021

Comments: WOGLA18-0069 amended as 1041WOGLA-AMD21-0052, approved 5/28/2021

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.)

NW, Sec 6, 7N, 59W

Total Acres in Described Lease: 166 Described Mineral Lease is: [X] 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: 531 Feet
Above Ground Utility: 1694 Feet
Railroad: 5280 Feet
Property Line: 550 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	535-980	640	7N-59W Sec 6: 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: 745 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 PROGRAMProposed Total Measured Depth: 11524 FeetTVD at Proposed Total Measured Depth 6325 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: 143 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

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	N/A	43	0	80	50	80	0
SURF	13+1/2	9+5/8	J55	36	0	1650	560	1650	0
1ST	8+1/2	5+1/2	HCP110	20	0	11524	1550	11524	

 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	0	0	190	190	0-500	DWR	
Groundwater	LARAMIE FOX HILLS	190	190	577	575	0-500	DWR	
Groundwater	PIERRE SHALE	577	575	890	880	0-500	DWR	
Groundwater	UPPER PIERRE	890	880	1655	1580	0-500	DWR	
Confining Layer	PIERRE SHALE	1655	1580	3621	3271			
Hydrocarbon	RICHARD SANDSTONE	3621	3271	3752	3383			
Hydrocarbon	PARKMAN SANDSTONE	3752	3383	4139	3716			
Confining Layer	PIERRE SHALE	4139	3716	6865	6053			
Confining Layer	SHARON SPRINGS SHALE	6865	6053	6920	6094			
Hydrocarbon	NIOBRARA SHALE	6920	6094	11524	6325			The TVD of the deepest hydrocarbon zone is the bottom of the well and not the bottom of the formation. The formation is not planned to be exited.

OPERATOR COMMENTS AND SUBMITTAL

Comments

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

0 COA	
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Best Management Practices

No BMP/COA Type

Description

1	Drilling/Completion Operations	Blowout Prevention Equipment ("BOPE"): A double ram annular preventer will be used during drilling.
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 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.

Total: 3 comment(s)

Attachment List

Att Doc Num

Name

403270548	OffsetWellEvaluations Data
403270549	DEVIATED DRILLING PLAN
403270550	DIRECTIONAL DATA

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)