

FORM
2

Rev
08/16

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:

401614703

APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Date Received:

05/16/2018

Well Name: Mottled South

Well Number: 6-4HN

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 7951

Fax: ()

Email: emathews@mallardexploration.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20170115

WELL LOCATION INFORMATION

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

Latitude: 40.613084

Longitude: -104.025633

Footage at Surface: 550 Feet FNL/FSL FSL 1399 Feet FEL/FWL FWL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4968

County: WELD

GPS Data:

Date of Measurement: 09/15/2017 PDOP Reading: 1.7 Instrument Operator's Name: Aaron Rivera

If well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FNL/FWL
600 FNL 1345 FWL 600 FSL 1345 FWL
Sec: 6 Twp: 7N Rng: 59W Sec: 6 Twp: 7N Rng: 59W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: ☐ is the mineral owner beneath the location.
(check all that apply) ☐ is committed to an Oil and Gas Lease.

☐ has signed the Oil and Gas Lease.

☐ is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: No

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: Surface Surety ID:

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

NW/4, Sec 6, T7N-R59W

Total Acres in Described Lease: 166 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease #

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 531 Feet

Above Ground Utility: 1914 Feet

Railroad: 5280 Feet

Property Line: 550 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- 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, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone
☐ Exception Zone
☐ Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 300 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 600 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

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	Sec 6:All

DRILLING PROGRAM

Proposed Total Measured Depth: 10645 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: 57 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 Operations Plan)

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

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26	16	43	0	80	50	80	0
SURF	13+1/2	9+5/8	36	0	1555	525	1555	0
1ST	8+1/2	5+1/2	20	0	10645	1425	10645	1555

☐ Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).
- ☐ Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 318.c. Exception Location from Rule or Spacing Order Number _____

☐ Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments Nearest wellbore in proposed unit from anti-collision survey is the Mottled South 6-3HN
Nearest permitted or existing wellbore belonging to another operator per anti-collision is the Wickstrom 6-5 (API: 05-123-21315) SI Status. Well is a D Sand producer with a top interval of 6836'. The proposed well is a Niobrara with a TVD of 6217'. Producing zones are >150' apart, no 317.s required.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 453399

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Aaron Cross

Title: Permitting Technician Date: 5/16/2018 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 and applicable orders and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: 10/17/2018

Expiration Date: 10/16/2020

API NUMBER

05 123 48216 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.

COA Type

Description

	<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 to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after setting surface casing.</p> <p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <p>1) All: Within 60 days of rig release, prior to stimulation.</p> <p>2) Delayed completion: 6 months after rig release, prior to stimulation.</p> <p>3) All: Within 30 days of first production, as reported on Form 5A.</p>
	<p>Operator acknowledges the proximity of the listed offset well(s). Operator agrees to comply with the DJ Basin Horizontal Offset Policy to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the mitigated well(s), stating that appropriate mitigation was completed prior to the hydraulic stimulation of this well.</p> <p>Offset wells to mitigate:</p> <p>05-123-22009, GREEN 5-12</p> <p>05-123-22632, PAUL 6-2</p> <p>05-123-22633, PAUL 6-9</p> <p>05-123-30654, CHALK 31-13</p>

Best Management Practices

No BMP/COA Type

Description

1	Drilling/Completion Operations	317.p One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from 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 the logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run).
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	Blowout Prevention Equipment ("BOPE"): A double ram annular preventer will be used during drilling.

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

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401614703	FORM 2 SUBMITTED
401617861	WELL LOCATION PLAT
401617959	DIRECTIONAL DATA
401617962	DEVIATED DRILLING PLAN
401638746	OffsetWellEvaluations Data
401639220	SURFACE AGRMT/SURETY
401800685	OFFSET WELL EVALUATION

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Permitting review complete, passed Final Review.	10/15/2018
Permit	Added spacing order number. Passed permitting.	09/25/2018
Permit	Passed Completeness.	05/22/2018

Total: 3 comment(s)