

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:  
402343428

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: \_\_\_\_\_

Refiling ☒

Date Received:  
03/26/2020

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Gadwall Well Number: 30-31-1HN  
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: NWNE Sec: 30 Twp: 8N Rng: 60W Meridian: 6  
Latitude: 40.638437 Longitude: -104.133546  
Footage at Surface: 746 Feet FNL 2267 Feet FEL  
Field Name: WILDCAT Field Number: 99999  
Ground Elevation: 4948 County: WELD  
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 08/10/2017  
Instrument Operator's Name: Ian Carabajal

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

Footage at Top of Prod Zone: FNL/FSL 900 FNL 305 FWL 300 FSL 305 FWL 300  
Sec: 30 Twp: 8N Rng: 60W Sec: 31 Twp: 8N Rng: 60W

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. ☒ 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 local government siting permit type is: WOGLA

The local government siting permit was filed on: 07/09/2018

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

WOGLA 18-0087 submitted 7/9/2018, approved 9/5/2018

## 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: Yes

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.)

Township 8 North, Range 60W, 6th PM

Section 29: NW4

Section 30: NE4

The wellbore does not cross lease described but the lease is within DSU.

Total Acres in Described Lease: 318 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: 4391 Feet

Building Unit: 4556 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 734 Feet

Above Ground Utility: 4533 Feet

Railroad: 5280 Feet

Property Line: 309 Feet

School Facility: 5280 Feet

School Property Line: 5280 Feet

Child Care Center: 5280 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, Designated Outside Activity Area, School Facility, and Child Care Center – 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: 665 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 300 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: \_\_\_\_\_

## 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           | 535-1273                | 2560                          | Sec 29,30,31,32: All                 |

## DRILLING PROGRAM

Proposed Total Measured Depth: 16861 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: \_\_\_\_\_ 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 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             | 1600          | 550       | 1600    | 0       |
| 1ST         | 8+1/2        | 5+1/2          | 20    | 0             | 16861         | 2400      | 16861   |         |

☐ 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

This Form 2 is being submitted as a refile of API 05-123-47034.

The Gadwall Fed 30-31-9HN (API: 05-123-47036), Gadwall Fed 30-31-10HN (API: 05-123-47040), Gadwall Fed 30-31-11HC (API: 05-123-47041), Gadwall Fed 30-31-12HN (API: 05-123-47042), Gadwall Fed 30-31-13HN (API: 05-123-47045), Gadwall Fed 30-31-14HN (API: 05-123-47043), Gadwall Fed 30-31-15HC (API: 05-123-47039), and Gadwall Fed 30-31-16HN (API: 05-123-47037) are being abandoned.

The laterals for the Gadwall 30-31-1HN (API: 05-123-47034), Gadwall 30-31-2HN (API: 05-123-47033), Gadwall 30-31-3HN (API: 05-123-47032), Gadwall 30-31-4HN (API: 05-123-47031), Gadwall Fed 30-31-5HN (API: 05-123-47035), Gadwall Fed 30-31-6HN (API: 05-123-47030), Gadwall Fed 30-31-7HN (API: 05-123-47044), and Gadwall Fed 30-31-8HN (API: 05-123-47038) are being respaced across Sections 30 and 31 and with TPZ and BHL updated to reflect the revised DSU setbacks of approved Order 535-1273.

The well site has not been constructed. There have been no new buildings constructed and no changes to the surrounding land use, Surface & Minerals, Right to Construct, or mineral lease descriptions. All of the previous Codell wells are being converted to Niobrara. All previously submitted notices, Surface Use Agreements, and letters are also still valid. This location is not in a buffer or exception zone, so no notices are required under Rule 305.

The Local Government Information and Cultural Distances are updated.

The nearest well in information has been updated to reflect the respaced laterals.

Nearest well in unit per anti-collision is the Gadwall 30-31-2HN.

There are no outside-operated wells within 1500'.

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

Location ID: 455385

Is this application being submitted with an Oil and Gas Location Assessment application? No

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

Signed: \_\_\_\_\_ Print Name: Justin Garrett

Title: Regulatory Analyst Date: 3/26/2020 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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 6/3/2020

Expiration Date: 06/02/2022

**API NUMBER**

05 123 47034 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>   |
|--------------------------------|--|
| Construction                   | If the location has not been built by the Form 2A (Doc 401393767) expiration date of 06/08/2021, Operator must Refile the Form 2A for approval prior to location construction.   |
| Drilling/Completion Operations | <p>General</p> <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) Comply with Rule 317.j. and provide cement coverage from TD 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 all fresh water aquifers are covered.</p> <p>4) The Operator will apply the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area, May 29, 2012, to this well and surrounding wells, in a manner similar to that described in the policy. COGCC acknowledges that this location is outside the GWA.</p>  |
| 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> <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>Offset Well Mitigation</p> <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 4). Operator will submit a Form 42 ("OTHER- AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. Bradenhead to remain open and monitored during all fracs. Be prepared to react to any increase in pressure or flow by shutting down frac and mitigating offset well bradenhead pressure prior to resuming frac. Notify COGCC via Form 42 - Notice of High Bradenhead Pressure During Stimulation. DOC POWELL 30-14-11 (05-123-19447)</p> <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. JAWS 6-3 (05-123-20978)</p> |

## **Best Management Practices**

| <b>No</b> | <b>BMP/COA Type</b>            | <b>Description</b>  |
|-----------|--------------------------------|---|
| 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 | Multi Well Open-Hole Logging – Rule 317.p: 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 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)

## **Applicable Policies and Notices to Operators**

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](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 Check List**

| <b>Att Doc Num</b> | <b>Name</b>                |
|--------------------|----------------------------|
| 402343428          | FORM 2 SUBMITTED           |
| 402343463          | DIRECTIONAL DATA           |
| 402344150          | DEVIATED DRILLING PLAN     |
| 402344151          | WELL LOCATION PLAT         |
| 402350385          | OffsetWellEvaluations Data |
| 402411668          | OFFSET WELL EVALUATION     |

Total Attach: 6 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit            | Final Review Completed.  | 06/01/2020          |
| Permit            | Permit review complete.  | 05/28/2020          |
| Permit            | Spacing Order Number is incorrect.<br>Operator BMP for logging is incorrect.<br><br>With operator concurrence, the following was corrected:<br>Spacing Order Number was corrected to 407-1273.<br>Operator BMP for logging has been updated to current standard language.  | 05/28/2020          |
| OGLA              | Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, and welfare and the environment, including wildlife resources set by SB 19-181. The Objective Criteria Review Memo (Doc# 1347915) can be found in the document file for Location ID 455385. | 05/15/2020          |
| Engineer          | •Offset well review complete<br>Wells requiring evaluation in additon to operator OWE -<br>05-123-09375, BUTLER-FEDERAL 1-20 No mitigation required<br>317.r -<br>No wells<br>317.s -<br>No wells<br>•Engineering review complete  | 05/12/2020          |
| Permit            | Passed completeness.   | 04/06/2020          |

Total: 6 comment(s)