

FORM

2

Rev
02/20

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:

402343437

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 FedWell Number: 30-31-8HNName of Operator: MALLARD EXPLORATION LLCCOGCC Operator Number: 10670Address: 1400 16TH STREET SUITE 300City: DENVER State: CO Zip: 80202Contact Name: Erin MathewsPhone: (720)543 7951Fax: ()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: 6Latitude: 40.638428Longitude: -104.132735
 Footage at Surface: 751 Feet FNL 2042 Feet FEL
Field Name: WILDCATField Number: 99999Ground Elevation: 4947County: WELDGPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 08/10/2017Instrument Operator's Name: Ian CarabajalIf well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**
 Footage at Top of Prod Zone: FNL/FSL 900 FNL 305 FEL 300 FSL 305 FEL 300
 Sec: 30 Twp: 8N Rng: 60W Sec: 31 Twp: 8N Rng: 60W

LOCAL GOVERNMENT INFORMATION

County: WELDMunicipality: 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 ☐ NoIf 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: WOGLAThe 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

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: 4514 Feet

Building Unit: 4674 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 737 Feet

Above Ground Utility: 4652 Feet

Railroad: 5280 Feet

Property Line: 484 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: 16379 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: 333 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	1600	550	1600	0
1ST	8+1/2	5+1/2	20	0	16379	2325	16379	

☐ 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 05-123-47038.

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 30-31-7HN.

Nearest outside operated well per anti-collision is the Hill 31-9-11 (API: 05-123-19627) PA Status

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 47038 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

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	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

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

Att Doc Num	Name
402343437	FORM 2 SUBMITTED
402343676	DIRECTIONAL DATA
402344231	DEVIATED DRILLING PLAN
402344232	WELL LOCATION PLAT
402350420	OffsetWellEvaluations Data
402411672	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	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.	05/28/2020
Permit	Spacing Order Number is incorrect. Distance to Neareset Building Unit is incorrect. Operator BMP for logging is incorrect. With operator concurrence, the following was corrected: Spacing Order Number was corrected to 407-1273. Distance to Nearest Building Unit was corrected to 4674. Operator BMP for logging has been corrected to current standard language.	05/28/2020
Engineer	•Offset well review complete Wells requiring evaluation in additon to operator OWE - 05-123-09375, BUTLER-FEDERAL 1-20 No mitigation required 317.r - No wells 317.s - No wells •Engineering review complete	05/12/2020
Permit	Passed completeness.	04/06/2020

Total: 6 comment(s)