

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

Date Received: 10/21/2020

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

ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES

Refiling   
Sidetrack

Well Name: Mottled South      Well Number: 6-10HN

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: 40.613082      Longitude: -104.025201

Footage at Surface:      550      Feet      FSL      1519      Feet      FWL

Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 4968      County: WELD

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

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      FEL/FWL      Bottom Hole:      FNL/FSL      FEL/FWL

600      FNL      2085      FEL      600      FSL      2085      FEL

Sec: 6      Twp: 7N      Rng: 59W      Sec: 6      Twp: 7N      Rng: 59W

**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: 05/25/2018

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

Additional explanation of local process:

WOGLA18-0069 submitted 5/25/2018, Approved 6/4/2018.  
A WOGLA amendment will be submitted to update the location prior to construction.

## 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, Sec 6, 7N, 59W  
The wellbore does not cross lease described but lease is within DSU.

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: 1804 Feet  
Railroad: 5280 Feet  
Property Line: 550 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: 263 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**

\_\_\_\_\_

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.)
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NIOBRARA	NBRR	535-980	640	Sec 6: All
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## DRILLING PROGRAM

Proposed Total Measured Depth: 10921 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: 40 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	1650	560	1650	0
1ST	8+1/2	5+1/2	20	0	10921	1475	10921	

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 # 05-123-48224.

Mallard is proposing amendments to the Mottled Pad location to reduce the disturbance acreage, number of wells, and associated equipment.

As per the COGCC Refile Guidance Document dated March 20, 2017, no new plats or directional plans are required as the locations of the proposed wells have not moved. There are also no changes to the Surface & Minerals, Cultural Setbacks, Spacing & Formations, or casing/cementing program.

There have been no new buildings constructed. The well site has not yet been constructed. This location is not in a buffer or exception zone, so no notices are required under Rule 305. All previously submitted notices and letters are also still valid. The Local Government Information has been updated. The SHL, TPZ, and BHL are unchanged; cultural distances from wells are unchanged but have been updated to include school facility distances.

Nearest wellbore in proposed unit from anti-collision survey is the Mottled South 6-11HC.

Nearest permitted or existing wellbore belonging to another operator per anti-collision is the Paul 6-2 (API: 05-123-22632) DA Status. Well is DA Status there for 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? 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: 10/21/2020 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: 1/5/2021

Expiration Date: 01/04/2023

<b>API NUMBER</b>
05 123 48224 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>
Drilling/Completion Operations	If the location has not been built by the Form 2A (Doc #402427237) expiration date of 10/11/2023, Operator must Refile the Form 2A for approval prior to location construction.
Drilling/Completion Operations	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. 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. 3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered. 4) The Operator will abide by the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area, May 29, 2012. 5) Increase the setting depth of surface casing to 1650', adjust cement volume accordingly.
Drilling/Completion Operations	Bradenhead Testing 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: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 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. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	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. GREEN *5-12(API 05-123-22009) PAUL *6-9(API 05-123-22633) PAUL *6-2(API 05-123-22632)

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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 an 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 clearly 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 List

<u>Att Doc Num</u>	<u>Name</u>
402427249	FORM 2 SUBMITTED
402515375	OffsetWellEvaluations Data
402567028	OFFSET WELL EVALUATION

Total Attach: 3 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	01/04/2021
Permit	Permit review complete.	12/31/2020
Permit	COGCC conducted the technical review for the related Oil and Gas Location Assessment permit, Form 2A document #402427237 under the statutory authority provided through SB 19-181, including the Objective Criteria. The Director approved the Form 2A on 10/12/2020, amending Location ID #453399 subject to conditions included in the permit. The well proposed by this related Form 2 was contemplated during COGCC's review of the Form 2A. The Objective Criteria Review Memo (Doc# 2479271) can be found in the document file for this Location.	12/31/2020
Engineer	<ul style="list-style-type: none"><li>•Surface Casing Check complete</li><li>•Offset well review complete</li><li>317.r - No wells</li><li>317.s - No wells</li><li>•Engineering review complete</li></ul>	12/29/2020
Permit	Passed Completeness.	11/04/2020

Total: 5 comment(s)