

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>UNPLANNED</u>	Refiling <input type="checkbox"/>	Date Received: 03/18/2019
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input checked="" type="checkbox"/>	

Well Name: Green Teal Fed Well Number: 34-27-15HN

Name of Operator: MALLARD EXPLORATION LLC COGCC Operator Number: 10670

Address: 1400 16TH STREET SUITE 300

City: DENVER State: CO Zip: 80202

Contact Name: Dustin Dyk Phone: (720)543-7954 Fax: ()

Email: ddyk@mallardexploration.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20170115

WELL LOCATION INFORMATION

QtrQtr: SESW Sec: 34 Twp: 8N Rng: 60W Meridian: 6

Latitude: 40.612877 Longitude: -104.080898

Footage at Surface: <u>500</u> Feet	FNL/FSL	<u>1962</u> Feet	FEL/FWL
	FSL		FWL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 4923 County: WELD

GPS Data:
Date of Measurement: 08/23/2017 PDOP Reading: 1.8 Instrument Operator's Name: Ian Carabajal

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

Footage at Top of Prod Zone: <u>300</u> FSL	FEL/FWL	Bottom Hole: <u>300</u> FNL	FEL/FWL
	FSL		FEL

Sec: 34 Twp: 8N Rng: 60W Sec: 27 Twp: 8N Rng: 60W

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: oil and gas lease

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 60 West, 6th PM
Section 34: E2, SW4

Total Acres in Described Lease: 480 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: 4602 Feet
 Building Unit: 4602 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 491 Feet
 Above Ground Utility: 470 Feet
 Railroad: 5280 Feet
 Property Line: 500 Feet
 School Facility: #Error Feet
 School Property Line: #Error Feet
 Child Care Center: #Error 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: 210 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

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	535-1153	1280	Sec 27 & 34 - All

DRILLING PROGRAM

Proposed Total Measured Depth: 17196 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: 185 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	24	16	43	0	80	50	80	0
SURF	12+1/4	9+5/8	36	0	1719	600	1719	0
1ST	8+1/2	5+1/2	20	0	17196	2450	17196	1550

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 On Friday March 15, 2018 during drilling of the Green Teal 34-27-15HN (API 05-123-46177-00) lateral, Ensign 147 reached a total MD of 13,123'. The target was the Niobrara B bench, however, inadvertently entered into the C bench. The position of this lateral is critical to Mallard's evaluation of this acreage, therefore a sidetrack was performed at 10,435'. The sidetrack was started at approximately 7:00pm and was achieved by midnight. The following information is provided:

Total MD Drilled – 13,123'
Surface Casing – 1719'
No fish in the hole
Open hole sidetrack drilling plan:
Depth of Sidetrack – 10,435' MD
Objective formation of sidetrack – Same: Niobrara
Proposed BHL – Same: Sec 27 Township 8N Range 60W, 300 FNL & 1000 FEL.

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

Location ID: 453517

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: Dustin Dyk

Title: Chief Operating Officer Date: 3/18/2019 Email: ddyk@mallardexploration.com

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: 3/26/2019

Expiration Date: 03/25/2021

API NUMBER
05 123 46177 01

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>

Best Management Practices

No BMP/COA Type

Description

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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

Att Doc Num

Name

2114693	CORRESPONDENCE
401975940	FORM 2 SUBMITTED
401976151	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

Engineer	Corrected the following: Total proposed measured depth (17196'), depth and cement quantity for surface casing (depth 1719', cement quantity 600 sks), based on the sidetrack email, operator comments and wellbore diagram attachment.	03/22/2019
Permit	With Operators concurrence attached correct email under correspondence Final Review Completed.	03/22/2019
Permit	With operators concurrence corrected Refile to No, this is an Unplanned Sidetrack, not a Refile. QtrQtr/Lot corrected to SESW to reflect Doc #401398790. Latitude corrected to 40.612877 to reflect Doc #401398790. Corrected Distance from Completed portion of wellbore to Nearest Lease Line of described lease to 0 ft. to reflect Doc #401398790. Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation is incorrect. Spacing Order Number is incorrect. Added Location ID Number 453517. Corrected API number to reflect an -01 sidetrack.	03/21/2019
Permit	LGD and Public Comment waived for this application for an unplanned sidetrack with drilling in progress.	03/21/2019
Permit	Passed completeness.	03/21/2019

Total: 5 comment(s)