

**APPLICATION FOR PERMIT TO:**

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

Date Received:

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

ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES       Sidetrack

Well Name: Harlequin      Well Number: 33-32-2HC

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

Address: 1821 BLAKE STREET STE 2B

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: NENE      Sec: 33      Twp: 8N      Rng: 61W      Meridian: 6

Latitude: 40.622166      Longitude: -104.203761

Footage at Surface:      1192      Feet      FNL/FSL      546      Feet      FEL/FWL      FEL

Field Name: WILDCAT      Field Number: 99999

Ground Elevation: 5028      County: WELD

GPS Data:

Date of Measurement: 12/13/2017      PDOP Reading: 1.1      Instrument Operator's Name: Alan Hnizdo

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

790      FNL      600      FEL      790      FNL      600      FWL

   Sec: 33      Twp: 8N      Rng: 61W      Sec: 32      Twp: 8N      Rng: 61W

**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.)

NE/4, Sec 33; NW/4, Sec 34, T8N, R61W

Total Acres in Described Lease: 320 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: 4908 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 4741 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 546 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: 255 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

The spacing application has been filed for the March 2018 hearing and the Docket Number will be provided 1/16/2018.  
Unit Configuration = T8N-R61W: Sec 32: All, Sec 33: All

## OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| CODELL                 | CODL           | pending                 | 1280                          | 8N-61W;32:All,33:All                 |

## DRILLING PROGRAM

Proposed Total Measured Depth: 16567 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: 1310 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        | 12+1/4       | 9+5/8          | 36    | 0             | 1700          | 475       | 1700    | 0       |
| 1ST         | 8+1/2        | 5+1/2          | 20    | 0             | 16556         | 2325      | 16556   | 1700    |

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 Harlequin 33-32-1HN.  
Nearest permitted or existing wellbore belonging to another operator is the Staudinger #1-31H (API: 05-123-34161) PR Status, as calculated from footages.  
First string setting depth is intentionally set approximately 10' less than Total Measured Depth.

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

Location ID: \_\_\_\_\_

Is this application being submitted with an Oil and Gas Location Assessment application?  Yes  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: \_\_\_\_\_ Email: regulatory@ascentgeomatics.c

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: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

|                   |
|-------------------|
| <b>API NUMBER</b> |
| 05                |

### 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 |
|----------|-------------|
|          |             |

## Best Management Practices

| No | BMP/COA Type                   | Description   |
|----|--------------------------------|---|
| 1  | Planning                       | Plugged and abandoned wells will be identified pursuant to 319.a.(5).   |
| 2  | Drilling/Completion Operations | A closed-loop system will be used for drilling operations. Blowout Prevention Equipment ("BOPE"): A double ram annular preventer will be used during drilling.  |
| 3  | 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). |

Total: 3 comment(s)

## Attachment Check List

| Att Doc Num | Name                       |
|-------------|----------------------------|
| 401502524   | OffsetWellEvaluations Data |
| 401512028   | DIRECTIONAL DATA           |
| 401512030   | DEVIATED DRILLING PLAN     |
| 401512032   | WELL LOCATION PLAT         |

Total Attach: 4 Files

## General Comments

| User Group | Comment | Comment Date        |
|------------|---------|---------------------|
|            |         | Stamp Upon Approval |

Total: 0 comment(s)

**Public Comments**

No public comments were received on this application during the comment period.

