

FORM
2
Rev
08/16

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:
401735319

APPLICATION FOR PERMIT TO:

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

Date Received:
08/16/2018

TYPE OF WELL OIL GAS COALBED OTHER _____
ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Refiling
Sidetrack

Well Name: Quiver Unit Well Number: 4
Name of Operator: MULL DRILLING COMPANY INC COGCC Operator Number: 61250
Address: 1700 N WATERFRONT PKWY B#1200
City: WICHITA State: KS Zip: 67206-6637
Contact Name: Mark Shreve Phone: (316)264-6366 Fax: (316)264-6440
Email: mshreve@mulldrilling.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20000063

WELL LOCATION INFORMATION

QtrQtr: SESE Sec: 2 Twp: 17S Rng: 48W Meridian: 6
Latitude: 38.601290 Longitude: -102.751230

Footage at Surface: 600 Feet ^{FNL/FSL} 600 Feet ^{FEL/FWL} FEL

Field Name: QUIVER Field Number: 70900

Ground Elevation: 4160 County: KIOWA

GPS Data:
Date of Measurement: 10/29/2008 PDOP Reading: 1.5 Instrument Operator's Name: Keith Westfall

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} _____

Sec: _____ Twp: _____ Rng: _____ Sec: _____ Twp: _____ Rng: _____

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.)

SE/4 2-17S-48W, 6th PM

Total Acres in Described Lease: 160 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: 600 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: 4610 Feet

Above Ground Utility: 850 Feet

Railroad: 5280 Feet

Property Line: 600 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: 1200 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 2040 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Quiver Unit Configuration: Township 17 South, Range 48 West, 6th PM. Section 1: S/2, S2N2; 2: SE/4; 11: NE, N2SE; 12: NW

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
SPERGEN	SPGN	560-2	1040	Sec 1, 2, 11, 12
ST LOUIS	STLS	560-2	1040	Sec 1, 2, 11, 12

DRILLING PROGRAM

Proposed Total Measured Depth: 5160 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? _____

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? _____ (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? _____

Will salt based (>15,000 ppm Cl) drilling fluids be used? _____

Will oil based drilling fluids be used? _____

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: _____ Drilling Fluids Disposal Methods: _____

Cuttings Disposal: _____ Cuttings Disposal Method: _____

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
SURF	12+1/4	8+5/8	24	0	453	275	453	0
1ST	7+7/8	5+1/2	15.5	0	5152	175	5152	4070
S.C. 1.1					2466	475	2466	0

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 Quiver Unit #4 Recompletion Procedure:
1. TOH with tubing, rods & pump.
2. Perforate the St. Louis formation at 4979'-4983' (4spf).
3. TIH with RBP, packer and tubing.
4. Set RBP at ~5010' and packer at ~4950'.
5. Acidize St. Louis formation with 500 gals. 15% MCA and 1000 gals. MOD-202 acid.
6. Swab back load & swab test.
7. TOH with tubing, packer and RBP.
8. Run tubing, pump and rods for production.
9. Put back on production producing both the Spergen and St. Louis.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 324889

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: Risa Carter

Title: Production Tech Date: 8/16/2018 Email: rcarter@mulldrilling.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: 2/21/2019

Expiration Date: 02/20/2021

API NUMBER
05 061 06762 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>

Best Management Practices

No BMP/COA Type

Description

No BMP/COA Type	Description

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

401735319	FORM 2 SUBMITTED
401735383	WELLBORE DIAGRAM
401735385	WELLBORE DIAGRAM
401735386	DRILLING PLAN

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

Permit	Final Review Completed.	02/15/2019
Permit	Corrected distance to nearest public road to 4610' (N to BB 00 per COGIS map layer).	02/15/2019
Permit	Passed Completeness.	08/20/2018

Total: 3 comment(s)