

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 _____	Refiling <input type="checkbox"/>
ZONE TYPE	SINGLE ZONE <input checked="" type="checkbox"/>	MULTIPLE ZONES <input type="checkbox"/>	COMMINGLE ZONES <input type="checkbox"/>		Sidetrack <input type="checkbox"/>

Date Received:
09/12/2018

Well Name: Red Poll Well Number: 8-21

Name of Operator: MURFIN DRILLING COMPANY INC COGCC Operator Number: 61650

Address: 250 N WATER ST STE 300

City: WICHITA State: KS Zip: 67202

Contact Name: Shauna Gunzelman Phone: (316)267-3241 Fax: ()

Email: sgunzelman@murfininc.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20010057

WELL LOCATION INFORMATION

QtrQtr: SENE Sec: 21 Twp: 10S Rng: 56W Meridian: 6

Latitude: 39.166330 Longitude: -103.661370

Footage at Surface: 1900 Feet FNL/FSL FNL 605 Feet FEL/FWL FEL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 5489 County: LINCOLN

GPS Data:
Date of Measurement: 09/05/2018 PDOP Reading: 2.2 Instrument Operator's Name: Elijah Frane

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: 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.)

Section 21: All

Total Acres in Described Lease: 640 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: 605 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 4682 Feet

Building Unit: 4682 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 3390 Feet

Above Ground Utility: 4646 Feet

Railroad: 5280 Feet

Property Line: 605 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: 1482 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary _____ 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.)
CRETACEOUS	CRTC			
MISSISSIPPIAN	MSSP			
PENNSYLVANIAN	PENN			

DRILLING PROGRAM

Proposed Total Measured Depth: 8500 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? 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? No

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: Recycle/reuse

Cuttings Disposal: ONSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

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	425	280	425	0
1ST	7+7/8	5+1/2	17	0	8500	410	8500	4450

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

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Sarah Kerstetter

Title: Agent for Operator Date: 9/12/2018 Email: skerstetter@murfininc.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: 10/26/2018

Expiration Date: 10/25/2020

API NUMBER
05 073 06754 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>
	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <ol style="list-style-type: none"> 1) All: Within 60 days of rig release, prior to stimulation. 2) Delayed completion: 6 months after rig release, prior to stimulation. 3) All: Within 30 days of first production, as reported on Form 5A.
	<ol style="list-style-type: none"> 1) Provide 48 hour notice prior to spud via electronic Form 42. 2) Set surface casing to 425' (5% of Total Vertical Depth). 3) If production casing is set provide cement coverage to at least 200' above the shallowest completed interval or 200' above Marmaton, whichever is shallower, and across Cheyenne/Dakota interval. Run and submit CBL to verify cemented intervals. 4) If well is a dry hole set plugs at the following depths: 40 sks cement +/- 50' above the Osage, 40 sks cement +/- 50' above the Cherokee, 40 sks cement +/- 50' above the Marmaton, 40 sks cement across any DST w/ show, 40 sks cement 100' below top of Morrison, 40 sks cement 50' above top of Dakota group, 50 sks cement from 50' below surface casing shoe up into surface casing, 15 sks cement in top of surface casing, cut 4 ft below GL, weld on plate, 5 sks cement each in rat hole and mouse hole.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	<p>BMP Plan Murfin Drilling Company, Inc. 250 N Water, Ste 300 Wichita, KS 67202 P - 316-267-3241; F - 316-267-6004 Certification of Discharge under DCPHE COR-03000 Stormwater Discharges Associate with Construction Certification #COR03R275 Prior to construction activities, structural stormwater BMP's will be installed around the perimeter of the disturbance boundary. Once the drill site is constructed a variety of BMP's will be utilized for the sites specific conditions. The following BMP's may include but are not limited to:</p> <ul style="list-style-type: none"> - Dirt Berms - Surface roughening/surface rip - Erosion control blankets - Straw bale barrier - Straw wattle - Check dams - Culvert/culvert protection - Silt Fence <p>Reclamation activities will be performed per the COGCC 1000 Series Rules.</p>
2	Drilling/Completion Operations	<p>Open-hole Resistivity log with Gamma Ray log will be run from TD into the surface casing. A Cement Bond log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.</p>

Total: 2 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

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401758877	FORM 2 SUBMITTED
401758907	SURFACE AGRMT/SURETY
401759498	TOPO MAP
401759499	WELL LOCATION PLAT
401759512	OTHER

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	10/24/2018
Permit	Removed the drilling pit and updated the Waste Management Program per Operator request.	10/24/2018
Engineer	Operator wrote they will use a closed-loop drilling system.	10/15/2018
Engineer	Proposed Total Measured depth 8400' -vs- Casing setting depth 8500' changed PTMD to match Casing depth 8500'. Increased surface casing to 825' (5% of TPVD).	10/15/2018
Permit	Passed completeness.	09/21/2018

Total: 5 comment(s)