

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:

401617497

APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER _____

Refiling ☒

ZONE TYPE SINGLE ZONE ☐ MULTIPLE ZONES ☒ COMMINGLE ZONES ☒

Sidetrack ☐

Date Received:

04/27/2018

Well Name: NORCROSS Well Number: A6
Name of Operator: URSA OPERATING COMPANY LLC COGCC Operator Number: 10447
Address: 1600 BROADWAY ST STE 2600
City: DENVER State: CO Zip: 80202
Contact Name: CHRIS MCRICKCARD Phone: (720)508-8362 Fax: ()
Email: CMCRICKARD@URSARESOURCES.COM

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20120125

WELL LOCATION INFORMATION

QtrQtr: NESW Sec: 13 Twp: 6S Rng: 93W Meridian: 6

Latitude: 39.523001

Longitude: -107.728694

Footage at Surface: 1388 Feet FSL 1430 Feet FWL

Field Name: MAMM CREEK Field Number: 52500

Ground Elevation: 5493 County: GARFIELD

GPS Data:

Date of Measurement: 03/02/2018 PDOP Reading: 1.2 Instrument Operator's Name: HOFFMANN

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
1256 FSL 1591 FWL 1256 FSL 1591 FWL
Sec: 13 Twp: 6S Rng: 93W Sec: 13 Twp: 6S Rng: 93W

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.)

PLEASE SEE ATTACHED LEASE MAP.

Total Acres in Described Lease: 147 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: 71 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 317 Feet

Building Unit: 788 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 597 Feet

Above Ground Utility: 205 Feet

Railroad: 5280 Feet

Property Line: 200 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: 401 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 1256 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.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| ILES | ILES | 191-25 | 320 | SEC.13 - S/2 |
| WILLIAMS FORK | WMFK | 191-13 | 320 | SEC.13 - S/2 |

DRILLING PROGRAM

Proposed Total Measured Depth: 8697 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: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

If cuttings meet table 910 then they will be beneficially reused.

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 | 65 | 0 | 60 | 70 | 60 | 0 |
| SURF | 12+1/4 | 8+5/8 | 32 | 0 | 1000 | 416 | 1000 | 0 |
| 1ST | 7+7/8 | 4+1/2 | 11.6 | 0 | 8697 | 761 | 8697 | |

☐ 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 refile is being submitted to maintain the existing, open conductor pipe set for this well and future development plans. Conductor information provided on the Casing tab is actual, as-drilled information. The Norcross A pad is an existing pad containing 10 producing wells. There is no additional surface disturbance associated with this refile, therefore a refiled / amended Form 2A is not required at this time. Surface location has been updated to the as-drilled location taken at the time the conductor was set. No changes to the BHL or wellbore construction are proposed with this refile. There have been no changes in land use or surface use agreement. Updated lease acreage and map are attached.

Distance from completed portion to nearest completed portion of wellbore permitted/completed in the same formation measured to the Norcross A14 (PR, 045-15168). No non-op wells within 1500'.

Updated well location plat, deviated drilling plan and directional data template provided with this refile. Please refer to previously approved APDs for all other required attachments.

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

Location ID: 335544

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: JENNIFER LIND

Title: REGULATORY ANALYST Date: 4/27/2018 Email: JLIND@URSARESOURCES.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 and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 7/22/2018

Expiration Date: 07/21/2020

API NUMBER

05 045 15176 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>The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. The operator has indicated in the 'DRILLING WASTE MANAGEMENT PROGRAM SECTION' of the Form 2A; that 'Cuttings Disposal' will be "OFFSITE" and that the 'Cuttings Disposal Method' will be "Beneficial reuse", 'Other Disposal Description' indicates that "If cuttings meet Table 910 they will be beneficially reused." Any proposed offsite disposal or beneficial reuse of cuttings to another oil and gas location shall not occur until approval of a Form 4 Sundry Notice specifying disposal or beneficial reuse location and cuttings material sampling and characterization methods. Remediated or amended cuttings shall not be made available as fill material to the general public.</p> <p>Any changes to drill cuttings management and disposal on this location will require submittal (via a Form 4 Sundry Notice) and approval of a Beneficial Reuse Plan detailing the changes (specifying cuttings characterization methods, cuttings management, amendment, and onsite disposal location[s]). Any of the WBM drill cuttings that will remain on the well pad location must be sampled and meet the applicable standards of Table 910-1.</p> |
| | If conductors are preset, operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016). |
| | This Permit to Drill is approved subject to all the BMP's and COA's on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location (Location ID # 335544). The most recently approved Form 2A and any subsequent Form 4's containing applicable COA's for this location shall be posted onsite during construction, drilling, and completions operations. |
| | Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017). |
| | <p>1)Operator shall comply with the most current revision of the Northwest Notification Policy.</p> <p>2)Operator shall comply with the most current revision of the Garfield County Rulison Field Notice to Operators, with the following exception: All field notice requirements specified in that Notice to Operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see Condition of Approval #1).</p> <p>3)Operator shall comply with the most current revision of the Mamm Creek Field Notice to Operators, with the following exception: All field notice requirements specified in that Notice to Operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see Condition of Approval #1). Operator shall submit the primary cement job Cement Bond Log (CBL) with either the Form 4 Sundry Notice - Request to Complete or the Form 5 Drilling Completion Report.</p> <p>4)Operator shall comply with the Notice to Operators Drilling Wells in the Buzzard, Mamm Creek, and Rulison fields, Garfield County and Mesa County – Procedures and Submittal Requirements for Compliance with COGCC Order Nos. 1-107, 139-56, 191-22, and 369-2 (July 8, 2010).</p> <p>5)Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 500' above the Lower Wasatch (as defined by COGCC in the report "Casing and Cement Standards for Geologic Isolation Piceance Basin Bradenhead Monitoring Area and Nearby Fields," dated April 18, 2016, COGCC Document No. 2056199, Appendix A Field Scout Cards and Annotated Type Logs) to provide isolation of all Mesaverde Group and underlying formations, if penetrated, the Ohio Creek Formation, and the lower portion of the Wasatch Formation. Verify production casing cement coverage with a cement bond log.</p> |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|------------------|--------------------------------|--|
| 1 | Planning | <p>DUST CONTROL - The pad and access road will be graveled to reduce fugitive dust. In addition, water and other dust suppressants may be used as required, dependent upon the level of activity, moisture conditions, etc.</p> <p>ODORS - Combustor controls will be used to mitigate odors from production tanks.</p> <p>ODORS - Well completions will utilize flowback completion technologies and/or flares to reduce odors from plug drill-out, and venting of salable and non-salable gas</p> <p>NOISE – Noise levels will be monitored in accordance with COGCC regulations and any COAs.</p> <p>LIGHT – All lights will be aimed inward and downward on the drill pad to prevent fugitive light from leaving the pad location.</p> |
| 2 | Drilling/Completion Operations | <p>An existing well on the pad logged with open-hole resistivity log with gamma-ray, from TD into the surface casing (Norcross A4, API 05-045-15178). All wells on the pad will have a cement bond log (CBL) with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. 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 will state "No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which openhole logs were run.</p> |

Total: 2 comment(s)

Applicable Policies and Notices to Operators

Mamm Creek Field Area Notice to Operators.

<http://cogcc.state.co.us/documents/reg/Policies/Mamm%20Creek%20Drilling.pdf>

Piceance Rulison Field - Notice to Operators.

<http://cogcc.state.co.us/documents/reg/Policies/NoticeToOp-20060623-2.pdf>

NW Colorado Notification Policy.

http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf

Bradenhead Pressure Reporting-Garfield County (Mamm Creek & Rulison Fields) Mesa County (Buzzard Field).

http://cogcc.state.co.us/documents/reg/Policies/NT0_07082010.pdf

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> |
|---------------------------|------------------------|
| 401617497 | FORM 2 SUBMITTED |
| 401634026 | DEVIATED DRILLING PLAN |
| 401634027 | WELL LOCATION PLAT |
| 401634030 | DIRECTIONAL DATA |
| 401637084 | LEASE MAP |

Total Attach: 5 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit | Final review complete. | 07/19/2018 |
| Permit | Added OGLA review task for drilling and waste program and for buffer zone. New multi-well plan was submitted by Sundry Doc 401637093 and approved 5/16/18. | 05/24/2018 |
| Engineer | <p>Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 400 feet.</p> <p>Offset Well Evaluation: Offset wells within 1500 feet of the planned wellbores on this pad meet standards. No mitigation required.</p> <p>Removed Operator's comment that production casing cement will be >500 feet above TOG. See Condition of Approval #5 for cement coverage requirements. Operator to revise cement quantity accordingly.</p> | 05/22/2018 |
| Permit | Form passes completeness. | 05/17/2018 |
| Permit | Returning the form to draft for a corrected lease map. | 05/10/2018 |
| Permit | Requested information on lease and acreage. Map in file is not clear and doesn't show how many acres are in the lease. Back to draft. | 05/09/2018 |
| Permit | Returning form to draft. I've requested new well location plat, deviated drilling plans and data sheet. | 05/01/2018 |

Total: 7 comment(s)