

FORM

2

Rev  
08/13

## 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:

400754286

## APPLICATION FOR PERMIT TO:

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

Date Received:

12/19/2014

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER \_\_\_\_\_Refilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: CSF I

Well Number: 21A-16-07-91

Name of Operator: URSA OPERATING COMPANY LLC

COGCC Operator Number: 10447

Address: 1050 17TH STREET #2400

City: DENVER State: CO Zip: 80265

Contact Name: JENNIFER LIND

Phone: (720)508-8362

Fax: ( )

Email: JLIND@URSARESOURCES.COM

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: \_\_\_\_\_

## WELL LOCATION INFORMATION

QtrQtr: SESE Sec: 9 Twp: 7S Rng: 91W Meridian: 6

Latitude: 39.454853

Longitude: -107.553335

Footage at Surface: 105 feet FNL/FSL FSL 1251 feet FEL/FWL FEL

Field Name: MAMM CREEK

Field Number: 52500

Ground Elevation: 7489

County: GARFIELD

GPS Data:

Date of Measurement: 08/12/2014 PDOP Reading: 1.6 Instrument Operator's Name: AIBNER

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

 114 FNL 1965 FWL 114 FNL 1965 FWL  
 Sec: 16 Twp: 7S Rng: 91W Sec: 16 Twp: 7S Rng: 91W

## LOCATION SURFACE &amp; MINERALS &amp; RIGHT TO CONSTRUCT

Surface Ownership: ☐ Fee ☐ State ☒ Federal ☐ IndianThe 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: 2288 Described Mineral Lease is: ☐ Fee ☐ State ☒ Federal ☐ Indian

Federal or State Lease # COC66579

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 114 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: 272 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 5280 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1340 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.)
WILLIAMS FORK	WMFK	191-32		

## DRILLING PROGRAM

Proposed Total Measured Depth: 8551 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1340 Feet (Including plugged wells)

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? 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: Other

Other Disposal Description:

Please see Waste Management Plan attached to form 2A.

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
CONDUCTOR	24	16	84	0	60	111	60	0
SURF	12+1/4	8+5/8	32	0	1100	232	1100	0
1ST	7+7/8	4+1/2	11.6	0	8551	651	8551	

☐ 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 First String / Production cement will be > 500 feet above TOG. Distance to nearest well completed in the same formation / permitted or existing well penetrating objective formation was measured to the proposed CSF I 31D-16-07-91.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: 441229

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: JENNIFER LIND

Title: REGULATORY ANALYST Date: 12/19/2014 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: 4/3/2015  
Expiration Date: 04/02/2017

API NUMBER

05 045 22830 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.

#### COA Type

#### Description

- 1)Operator shall comply with the most current revision of the Northwest Colorado Notification Policy. See attached notice.
- 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 this notice to operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see condition of approval #1). See attached notice.
- 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 this notice to operators are superseded by the requirements of the most current revision of the northwest Colorado notification policy (see Condition Of Approval #1). See attached notice.
- 4)Operator shall comply with the notice to operators drilling wells in the Buzzard, Mamm Creek, and Rulison Fields, Garfield County and Mesa County is required. (Procedures and Submittal Requirements for Compliance with COGCC Orders Nos. 1-107, 139-56, 191-22, and 369-2 (July 8, 2010)).
- 5)Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above all Mesa Verde Group (and Ohio Creek Formation, if present) oil, gas, and water-bearing sandstone and coalbed formations. Verify production casing cement coverage with a cement bond log.

## **Best Management Practices**

<b>No</b>	<b><u>BMP/COA Type</u></b>	<b><u>Description</u></b>
1	Drilling/Completion Operations	Open hole resistivity log with gamma ray will be run on the first well drilled on this pad to describe the stratigraphy of the vertical section of the wellbore and to adequately verify the setting depth of the surface casing and aquifer coverage. The Drilling Completion Report - Form 5 for every well on the pad will identify which well was logged.

Total: 1 comment(s)

## **Applicable Policies and Notices to Operators**

Mamm Creek Field Area Notice to Operators.
Piceance Rulison Field - Notice to Operators.
NW Colorado Notification Policy.
Bradenhead Pressure Reporting-Garfield County (Mamm Creek & Rulison Fields) Mesa County (Buzzard Field).
Notice Concerning Operating Requirements for Wildlife Protection.

## **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
400754286	FORM 2 SUBMITTED
400755468	DEVIATED DRILLING PLAN
400755469	WELL LOCATION PLAT
400755470	DIRECTIONAL DATA
400755472	LEASE MAP

Total Attach: 5 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	<p>Pushed this form from ON HOLD to ACTIVE. Operator (Jennifer Lind) provided the following:</p> <p>Ursa has reviewed the logs for the zone in question (05-045-06273, CSF 1-10W, NESW 10-7S-91W, 1005' to 1185' measured depth) and has made the following observation:</p> <p>There are 2 small sand/siltstones present in this interval (1021-1042' and 1118-1139') both of which have density porosities of 10% or less and therefore are tight sand/siltstones with any fluid in them being bound. The bound water is likely both capillary bound, due to the low porosity, and clay bound, due to the clay and siltstone composition of the Wasatch Formation. The interval between the two sandstones is washed out and any resistivity spikes between the two sandstones are likely related to the resistivity of the mud in the washed out interval.</p> <p>The CSF I pad is located ~500' up-dip (based on Williams Fork structure) and 3500' laterally. The sand/siltstone interval in question may pinch-out or be behind surface casing at the CSF I pad.</p> <p>To address the COGCC's concern at the CSF I pad, the first well drilled on the pad will be open hole logged to the surface casing shoe. If a high resistivity sand/siltstone is encountered cement will be pumped on the production string into the surface casing shoe to ensure isolation of this zone.</p>	4/2/2015 12:18:12 PM
Engineer	COGCC Engineering Staff contacted operator on 3/26/2015 to question potential isolation needs for a Wasatch Formation sandstone interval identified on an offset well's induction log (045-06273, CSF 1-10W, NESW 10-7S-91W, 1005' to 1185' measured depth). Correcting for ground surface elevation differences, the zone of concern may be below the planned surface casing setting depth of this proposed well. Pushed this form to ON HOLD, pending the operator's response.	3/27/2015 8:25:02 AM
Permit	Corrected the Open Hole logging BMP to include language that one of the first wells drilled on the pad will be logged, as per opr. Added location ID (2A has been approved) and removed related 2A doc. Final review complete.	3/17/2015 10:46:18 AM
LGD	KHW Pass: Please note any location with greater than 5,000 barrels of total storage capacity (pits/tanks) would require a Garfield County land use change permit.	1/19/2015 2:25:44 PM
Permit	Removed Plugging Bond and notified opr. Corrected cuttings disposal method to onsite to match form 2A and notified opr. Removed unit acreage and unit description from spacing information as per opr. Removed distance to unit boundary (114') as there is no unit. Opr agreed. Ready to pass.	1/6/2015 3:29:17 PM
Engineer	No existing offset wells within 1,500 feet of this wellbore. Offset water well check: There are no permitted water wells within 1 mile of this proposed surface hole location.	1/2/2015 10:18:53 AM
Permit	Passed completeness.	12/22/2014 3:22:40 PM

Total: 7 comment(s)