

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL	OIL <input type="checkbox"/>	GAS <input checked="" type="checkbox"/>	COALBED <input type="checkbox"/>	OTHER _____	Refiling <input type="checkbox"/>
ZONE TYPE	SINGLE ZONE <input type="checkbox"/>	MULTIPLE ZONES <input checked="" type="checkbox"/>	COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>	Date Received: 11/15/2017

Well Name: JIMMY GULCH 3K Well Number: 13B-3-3-97

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: CARI MASCIOLI Phone: (970)284-3244 Fax: ()

Email: cmascioli@ursaresources.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: _____

WELL LOCATION INFORMATION

QtrQtr: NESW Sec: 3 Twp: 3S Rng: 97W Meridian: 6

Latitude: 39.815832 Longitude: -108.269565

Footage at Surface:	<u>1720</u>	Feet	FNL/FSL	<u>1596</u>	Feet	FEL/FWL
			FSL			FWL

Field Name: SULPHUR CREEK Field Number: 80090

Ground Elevation: 6713 County: RIO BLANCO

GPS Data:
Date of Measurement: 05/15/2017 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
<u>2248</u>	FSL	<u>787</u>	<u>2248</u>	FSL	<u>787</u>
		FWL			FWL
Sec: <u>3</u>	Twp: <u>3S</u>	Rng: <u>97W</u>	Sec: <u>3</u>	Twp: <u>3S</u>	Rng: <u>97W</u>

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 MINERAL LEASE MAP.

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # COC14302

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 787 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: 5280 Feet

Above Ground Utility: 4424 Feet

Railroad: 5280 Feet

Property Line: 2745 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: 330 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.)
ILES	ILES	528-2		
WILLIAMS FORK	WMFK	528-1		

DRILLING PROGRAM

Proposed Total Measured Depth: 13101 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:

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	55	0	60	111	60	0
SURF	13+1/2	9+5/8	36	0	4035	685	4035	2288
1ST	8+3/4	4+1/2	13.5	0	13101	1598	13101	
		9+5/8	Stage Tool		2288	616	2288	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 Distance to nearest well completed in the same formation / permitted or existing well penetrating objective formation was measured to Ursa's proposed JG 3K 13A-3-3-97. Distance to the nearest well completed in the same formation / permitted or existing well belonging to another operator was measured at 5950' to the XTO Energy Inc's Freedom Unit 297-33A5 (API 05-103-11295).

This well is being proposed from an existing pad on Fed-owned surface. The proposed well will BHL on federal minerals. Pre-application notifications were not required as all surface owners within 1000' are Federal and there are no building units located within 1000' of the pad location. Ursa will be pursuing Federal APDs for the proposed Jimmy Gulch 3K wells concurrently with this application.

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

Location ID: 335705

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: CARI MASCIOLI

Title: REGULATORY ANALYST Date: 11/15/2017 Email: cmascioli@ursaresources.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: *Matthew Lee* Director of COGCC Date: 2/15/2018

Expiration Date: 02/14/2020

API NUMBER
05 103 12316 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>1)Operator shall comply with the most current revision of the Northwest Colorado Notification Policy.</p> <p>2)Operator shall provide cement coverage for the production casing (4+1/2" FIRST STRING) to 200' above the Wasatch G sand. Isolation is required for offset Wasatch G UIC injection. Addition of a stage tool to the production casing requires prior approval on a sundry notice, Form 4. Verify production casing cement coverage with a cement bond log.</p>
	<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 2; that 'Cuttings Disposal' will be "OFFSITE" and that the 'Cuttings Disposal Method' will be "Beneficial reuse", 'Other Disposal Description' as "PLEASE SEE WASTE MANAGEMENT PLAN ATTACHED TO FORM 2A." 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. A Form 4 Sundry Notice must also be submitted for any of the WBM drill cuttings that will remain on the well pad location and must be sampled and meet the applicable standards of Table 910-1.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	<p>One of the first wells that Ursa Operating Company drills on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from TD 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 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 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.</p>

Total: 1 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.
http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.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>
2108353	WELL LOCATION PLAT
401359019	FORM 2 SUBMITTED
401436206	DEVIATED DRILLING PLAN
401436218	MINERAL LEASE MAP
401436222	DIRECTIONAL DATA

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	02/14/2018
Engineer	<p>Geologic prognosis for planned well Jimmy Gulch 3G 32C-3-3-97 has TVD 5122.0 for the Ft Union. Vertical well Federal #397 3-1 API#103-08817 (formerly operated by Whiting) reportedly injects into the Wasatch G (reported at 5131'). Perforation depths are 5648' to 5708'. Emailed operator to see if some revision to the injection well formation reporting needs to be made.</p> <p>2/13: Operator responded that the offset well does inject into the Wasatch G sand package. See Condition of Approval #2 for cement coverage requirement.</p> <p>Offset Well Evaluation: Existing offset oil and gas wells within 1,500 feet of this wellbore meet standards. No mitigation required. Federal #397 3-1 API#103-08817 injects into the Wasatch G.</p> <p>Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. All permitted water wells within the search radius show zero for reported depths. Depths to formation tops in offset oil and gas wells, locally-available geophysical logs, and hydrogeologic information was used to evaluate the adequacy of the operator's proposed surface casing setting depth.</p>	02/13/2018
OGLA	01/05/18 - with operator's verbal concurrence - attached revised 'Well Location Plat'; revised the Distance to the nearest cultural feature: from Well to Building from 1254' to 5280' (same as Building Unit since the original distance was measured to an 'oil and gas' operations building, not owned or accessible by any public or private entity); and from Well to Public Road from 201' to 5280' (distance to Rio Blanco County Road 5 since the original distance was measured to the 'oil and gas' lease road that is gated and is not accessible by any public or private entity) - based on review of COGCC's Online GIS Map Aerial Photo for 2015 layer, Roads & Railroads (CDOT) layer, and the operator's indication that the buildings are oil and gas operations buildings and that the lease road is gated.	01/08/2018
Permit	Spacing order does not create a unit. Removed distance to unit boundary, unit acreage and unit configuration with operator concurrence. Corrected 317.p BMP as per operator. There are other wells that were drilled on this pad, but drilled by previous operator. URSA will run new logs as per BMP. Preliminary review complete.	12/14/2017
Permit	Passed Completeness.	11/27/2017

Total: 5 comment(s)