

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:

401161333

(SUBMITTED)

Date Received:

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refilling ☐

ZONE TYPE SINGLE ZONE ☐ MULTIPLE ZONES ☒ COMMINGLE ZONES ☒

Sidetrack ☐

Well Name: BMC B

Well Number: 41B-13-07-96

Name of Operator: URSA OPERATING COMPANY LLC

COGCC Operator Number: 10447

Address: 1050 17TH STREET #1700

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: 20120125

WELL LOCATION INFORMATION

QtrQtr: SWNW Sec: 18 Twp: 7S Rng: 95W Meridian: 6

Latitude: 39.438868

Longitude: -108.046466

Footage at Surface: 2236 Feet FNL/FSL FNL 687 Feet FEL/FWL FWL

Field Name: GRAND VALLEY

Field Number: 31290

Ground Elevation: 5098

County: GARFIELD

GPS Data:

Date of Measurement: 06/16/2014 PDOP Reading: 1.7 Instrument Operator's Name: HOFFMANN

If well is ☒ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FNL 595 FNL 659 FEL 595 FNL 659 FEL
Sec: 13 Twp: 7S Rng: 96W Sec: 13 Twp: 7S Rng: 96W

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: No

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.)

A PORTION OF THE NE/4 OF SECTION 13-T7S-R96W. PLEASE SEE ATTACHED LEASE MAP.

Total Acres in Described Lease: 156 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: 17 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 374 Feet
Building Unit: 551 Feet
High Occupancy Building Unit: 3268 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 635 Feet
Above Ground Utility: 240 Feet
Railroad: 3895 Feet
Property Line: 230 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: 09/12/2015

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 09/24/2015

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: 329 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 595 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	440-73	320	SEC.13-E/2

DRILLING PROGRAM

Proposed Total Measured Depth: 7009 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: 995 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: Commercial Disposal

Other Disposal Description:

Please see Waste Management Plan attached to the associated 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	75	0	60	111	60	0
SURF	12+1/4	8+5/8	32	0	1844	381	1844	0
1ST	7+7/8	4+1/2	11.6	0	7009	575	7009	

☐ 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 As discussed via email with B. Westerdale and S. Freeman on 11/29/16, several bottom hole locations are being shifted between the BMC B and BMC D pads in order to maximize the total number of wells being drilled from each of these locations. No additional well locations, production facilities or surface disturbance are being proposed to the approved BMC B Form 2A (Loc ID 447695) at this time. A new multi-well plan will be submitted via Sundry (Doc ID 401160722) for inclusion with the approved Form 2A.

Production string TOC will be in accordance with Engineering COAs and will be a minimum of 650' above the Mesaverde Group to provide isolation of the Lower Wasatch. Distance to nearest well completed in the same formation / permitted or existing well penetrating objective formation was measured to the proposed BMC B 41C-13-07-95. Distance to nearest well completed in the same formation / permitted or existing well belonging to another operator was measured to the existing C&C Energy GM 544-12 (API 05-045-22427).

Please note that all pads depicted on the Exhibit B to the attached SUA are covered under one, single SUA. The entire PUD is governed by Battlement Mesa partners, who have executed the master surface use agreement. In addition to the redacted SUA, a map of the legal description per Exhibit A is attached as "Legal / Lease Description" for your reference.

The BMPs included in this Form 2 application are the BMPs previously approved with the Form 2A.

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

Location ID: 447695

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: _____ Email: JLIND@URSARESOURCES.C

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: _____

Expiration Date: _____

API NUMBER

05

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

Best Management Practices

No	BMP/COA Type	Description
1	General Housekeeping	<p>604.c.(2)P. - Removal of surface trash • The location will be managed in accordance with COGCC 907 and 907A Rules, which are incorporated into Ursa's Waste Management Plan, which addresses both E&P and non-E&P waste, including those under the jurisdiction of the CDPHE and EPA. The plan, in combination with Ursa's Spill Prevention and Management Plan, minimizes the potential for any exploration and production wastes, chemicals, fluids, etc. from leaving the location, using BMPs including berms, barriers, and use of spill control materials.</p>
2	Drilling/Completion Operations	<p>Garfield County COA #8 - Lighting • All lighting, except as demonstrated for safety reasons, shall be directed inward and downward and be shaded in order to prevent direct reflection on adjacent property and residences in the area. LED lights will be used when possible and practical. Workers will be advised when moving light plants to ensure that the light is focused directly on the work being done. Most lighting will be below the sound wall. Drilling mast lighting that is above the sound wall will be downcast and/or shielded to reduce fugitive light outside sound wall and well pad. Safety considerations will take precedence.</p> <p>Garfield County COA #9 - Completions • Well completion activity shall be limited to occurring between 7:00AM and 7:00PM. Once the wells are in production, vehicle trips to the pad shall be limited to the hours of 7:00AM to 7:00PM, with the exception of emergencies and episodic events beyond Ursa's control.</p> <p>"604.c.(2)B.i. - Closed Loop Drilling Systems – Pit Restrictions 317B.d.(1)" • A closed-loop (pitless) drilling system will be used.</p> <p>604.c.(2)B.ii-v. - Closed Loop Drilling Systems – Pit Restrictions • No stimulation, flowback or fresh water storage pits will be constructed for the BMC B pad location.</p> <p>604.c.(2)C.i. - Green Completions – Emission Control Systems • Green completions will be used for this well. Salable quality gas will be immediately routed to the sales line or shut in and conserved.</p> <p>"604.c.(2)C.ii. - Green Completions – Emission Control Systems 604.c.(4)B.iv. - Venting" • Ursa commits to zero venting / flaring of gas upon completion and flowback of these wells except during upset or emergency conditions only. If plans change and venting / flaring during completion and flowback operations becomes necessary, Ursa will obtain COGCC approval prior to venting / flaring when required in accordance with the Venting / Flaring NTO Policy and Rule 912.a.</p> <p>604.c.(2)C.iii.aa. - Green Completions – Emission Control Systems • Flowback equipment is sized to accommodate a minimum of 1.5 times the largest flowback volume of gas experienced in a ten (10) mile radius.</p> <p>604.c.(2)C.iii.bb. - Green Completions – Emission Control Systems • Flowback tanks will employ valves and porting available to divert gas to temporary equipment or to permanent flaring and oxidizing equipment. Open flares will not be used during flowback operations.</p> <p>604.c.(2)C.iii.cc. - Green Completions – Emission Control Systems • Flowback tanks will be equipped with auxiliary fuel with sufficient supply and heat to sustain combustion or oxidation of the gas mixture when the mixture includes non-combustible gases.</p> <p>604.c.(2)H.ii. - Blowout preventer equipment ("BOPE") • BOPE will meet minimum requirements per Rule 604.c.(2)H.ii. The person with Well Control Certification or Director approved training present during drilling will be identified using the sign-in sheet and training certifications will be available upon request by COGCC.</p> <p>604.c.(2)I. - BOPE testing for drilling operations • BOPE testing will be completed in accordance with Rule 604.c.(2)I.</p> <p>604.c.(2)J.i. - BOPE for well servicing operations • Adequate blowout prevention equipment will be used on all well servicing operations. This prevention equipment will be rated to pressures of 5000 psi.</p> <p>604.c.(2)J.ii. - BOPE for well servicing operations • Backup stabbing valves will be used on well servicing operations during reverse circulation. Valves will be pressure tested in accordance with Rule 604.c.(2)J.ii prior to being put into use. Ursa will keep valve pressure testing results on file for a minimum of one year and provide test results to COGCC upon request.</p> <p>604.c.(2)K. - Pit level indicators • Tank level indicators will be installed on all tanks associated with the drilling rig. No stimulation, flowback or freshwater storage pits will be constructed.</p> <p>604.c.(2)L. - Drill stem tests • Ursa does not plan to conduct drill stem tests. If plans change and drill stem tests are required, Ursa will notify COGCC via Form 4 prior to</p>

		<p>completing the test.</p> <p>604.c.(2)O. - Loadlines • All loadlines will be capped. The loadline ports will be located inside of the tank containment berms and will have sumps in place in the event of small drips or spills.</p> <p>604.c.(2)Q. - Guy line anchors • All guy line anchors left buried for future use will be identified as required per Rule 604.c.(2)Q.</p> <p>"604.c.(4)B.vi. - Proppant Garfield County COA #27 - Proppant" • Ursa plans to utilize "proppant-less" fracture stimulation. Should Ursa plans change to utilize silica proppant during completion of wells on the BMC B pad, silica proppant shall be utilized only with silica dust controls including dustless silos, sand boxes, or equivalent vacuum technology. Ursa will notify COGCC via Form 4 prior to using or changing proppant materials.</p> <p>604.c.(4)C.iv. - Remote Stimulation Operations "• Ursa plans to utilize the BMC B pad surface area for staging of completion operations. Staging at the pad location allows for planned BMPs (i.e. soundwalls, noise monitoring, etc.) to be in place for the duration of completion operations on this location. Due to difficult surface topography in the area as well as proximity to residences in the Battlement Mesa PUD, Ursa has determined that staging the completion operations on the pad rather than a remote location will minimize surface disturbance, noise, visual impacts and traffic to the surrounding neighborhoods. We have designed site specific noise mitigation plans for the BMC B pad that are based on actual equipment, topography, typical wind direction, and closest possible affected neighbor. Additionally, we have performed voluntary ambient noise studies to better help us determine the impacts of our operations. Fracking from a remote location (i.e. the existing Watson Ranch B pad) would require a several thousand feet of temporary high pressure line, which would cross 3 major traffic thoroughfares within Battlement Mesa and would be in close proximity to homes and other sensitive areas. Remote completions from any other area would move operations closer to residences, the Colorado river, high occupancy buildings or outdoor recreational areas. After careful consideration of several alternatives, it has been determined that the preferred completion staging area remains on the pad.</p> <p>Garfield County COA #12 - Green Completions • Ursa will comply with COGCC green completion practices and EPA's natural gas STAR program to reduce VOC emissions to the lowest level technically possible for the wells on the BMC B Pad. Additionally, Ursa commits to using carbon blankets over thief hatches on temporary tanks to reduce odors.</p> <ul style="list-style-type: none"> • Produced / flowback water used for well completions will be recycled and treated to the maximum extent practical at the location. Water that can't be recycled will be injected through the use of wells approved by COGCC and Garfield County, or transported via truck to the COGCC and Garfield County approved Wasatch E&P Facility. • All chemicals used will be tracked and reported in accordance with COGCC rules and submitted through FracFocus within 120 days of initiating well stimulation. <p>"</p>
3	Dust control	<p>"604.c.(2)S. - Access roads Garfield County COA # 7.c. & #14 - Dust Control" • The pad and access road will be graveled to reduce fugitive dust and maintained as required by COGCC rules. In addition, Operator will have water trucks onsite for dust abatement during construction. Water and other dust suppressants are used as required, dependent upon the level of activity, moisture conditions, etc. throughout all phases of operations. Ursa commits to ensuring truckloads of dirt, sand, aggregate materials, drilling cuttings, and similar materials are covered to reduce dust and PM emissions during transport.</p> <ul style="list-style-type: none"> • Remote monitoring and telemetry will be used to optimize truck trips and reduce resultant fugitive dust to the extent practical.

4	Noise mitigation	<p>"Garfield County COA #7.a. - Noise Garfield County COA #7.b. - Vibration" "• Volume of the sound generated: Every use shall be so operated that the volume of sound inherently and recurrently generated does not exceed 70 dB(A) from 7:00 AM to 7:00 PM and 65 dB(A) from 7:00 PM to 7:00 AM, measured 350 feet from the edge of the pad. As set forth in COGCC Regulation 802(b), the noise levels shall be subject to an increase by 10 dB(A) for a period not to exceed 15 minutes in any one (1) hour period and cannot exceed 65 dB (A) for shrill or periodic impulsive noise. Complaint protocols shall be governed by COGCC Rule 802(c). Every use shall be so operated that the ground vibration inherently and recurrently generated is not perceptible, without instruments, at any point of any boundary line of the property on which the use is located."</p> <p>604.c.(2)A. - Noise • Lighting, noise, odors, dust and related nuisances are managed in accordance with COGCC 600 and 802, 803, 804 and 805 Series Rules, and in accordance with Ursa policies, procedures and checklists. Additional noise monitoring above and beyond COGCC regulations may be conducted by Ursa on a voluntary basis. If conditions warrant further mitigation at the time of operations, Ursa will request approval as necessary from the COGCC to implement additional measures.</p> <p>"604.c.(4)C.i. - Noise Garfield County COA #26 - Noise Site Control Access" • Sound walls will be installed per the site specific plan provided by a professional third party firm to include on-pad mitigation designed for specific equipment and orientation of said equipment to be used during drilling and completion operations. This includes a combination of 32' and 40' sound walls to surround the entire pad including and acoustic gate to close off the entrance of the pad. Sound barriers shall be included around the perimeter of the well pad and internal completions equipment. Additional sound walls closer to residential units shall be available upon mutual agreement between the Operator, landowner, and homeowner (s).</p>
5	Odor mitigation	<p>604.c.(2)C. - Green Completions – Emission Control Systems • Combustor controls will be used to mitigate odors from all production and injection tanks. Ursa will perform inspections at minimum on a monthly basis to ensure potential emissions sources are properly managed. In addition, Ursa's pumper crew inspects each location on a daily basis.</p> <p>604.c.(4)B.v. - Tank gauging • Automated tank level indicators will be used in an effort to avoid opening tanks to the extent practicable. Occasional opening of hatches may occur while calibrating tank gauges, maintenance or in the event of emergency.</p>
6	Drilling/Completion Operations	<p>"• One of the first wells drilled 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 openhole logs were run."</p>

7	Community Outreach and Notification	<p>"Complaints</p> <ul style="list-style-type: none"> • Ursa has a dedicated phone line to address complaints and responds 24 hours per day, 7 days a week. All complaints received by Ursa are documented, investigated, responded to immediately with appropriate corrective actions and communicated to the complainant, landowner, county LGD and appropriate state agency officials. Coordination with Kirby Wynn, Garfield County LGD, will be ongoing to ensure the effectiveness of our complaint management process. The following phone numbers and websites are available to the community members to report complaints: <ul style="list-style-type: none"> - Ursa complaint / 24 hr hotline: 970-620-2787 - Ursa emergency / 24 hotline: 855-625-9922 - Community Counts: 866-442-9034 - Garfield County (Kirby Wynn): 970-987-2557 - Colorado Oil & Gas Conservation Commission: http://cogcc.state.co.us/complaints.html#/complaints"
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Total: 7 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401161365	DEVIATED DRILLING PLAN
401161366	WELL LOCATION PLAT
401161367	DIRECTIONAL DATA
401161368	LEGAL/LEASE DESCRIPTION
401161369	SURFACE AGRMT/SURETY
401162136	LEASE MAP

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

Public Comments

No public comments were received on this application during the comment period.

