

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:

400407358

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 ☐

Date Received:

05/12/2014

Well Name: GP-Jackson

Well Number: 4-18-18

Name of Operator: MINERAL RESOURCES INC

COGCC Operator Number: 57667

Address: PO BOX 328

City: GREELEY

State: CO

Zip: 80632

Contact Name: CLAYTON DOKE

Phone: (720)420-5700

Fax: (720)420-5800

Email: cdoke@iptengineers.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090133

WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 20 Twp: 5N Rng: 65W Meridian: 6

Latitude: 40.390480

Longitude: -104.682510

Footage at Surface: 501 feet FNL/FSL FNL 1305 feet FEL/FWL FEL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4673

County: WELD

GPS Data:

Date of Measurement: 08/23/2013 PDOP Reading: 1.9 Instrument Operator's Name: C HOLMES

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

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FEL/FWL  
990 FSL 460 FEL 990 FSL 460 FWL  
Sec: 18 Twp: 5N Rng: 65W Sec: 18 Twp: 5N Rng: 65W

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.)

Please see attached Lease Map

Total Acres in Described Lease: 10 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: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 707 Feet

Building Unit: 707 Feet

High Occupancy Building Unit: 2558 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 331 Feet

Above Ground Utility: 380 Feet

Railroad: 386 Feet

Property Line: 177 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: 660 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

Proposed Spacing Unit: S/2 of Sec 18-T5N-R65W. PSU Map is attached.

## OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| CODELL                 | CODL           |                         | 320                           | GWA                                  |

## DRILLING PROGRAM

Proposed Total Measured Depth: 13727 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 105 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 318A

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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            |           |         |         |
| SURF        | 13+1/2       | 9+5/8          | 36    | 0             | 1000          | 828       | 1000    | 0       |
| 1ST         | 8+3/4        | 7              | 26    | 0             | 9383          | 1016      | 9383    | 3000    |
| 1ST LINER   | 6+1/8        | 4+1/2          | 13.5  | 9183          | 13727         |           |         |         |

☐ 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 Pad slot #39. This well is a Rule 318A.a(4)D Horizontal GWA Well; Operator notified on 03/01/14 all owners as defined in C.R.S. §34-60-103(7) within the proposed spacing unit and has received no written objections per Rule 318A.e(6)B. Certification of objections are attached. SUA is attached. Mineral Resources respectfully requests that the Rule 318A.a (4)D Horizontal well and proposed spacing unit be approved.

1. Distance to nearest wellbore completed in the same formation: 660 ft (to GP Jackson 2-18-18)
2. Distance to nearest wellbore penetrating the formation: 105 ft (to CDot 2 #D7)  
(Distances found via anti-collision report)

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

Location ID: 332837

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: CLAYTON DOKE

Title: SENIOR ENGINEER Date: 5/12/2014 Email: cdoke@iptengineers.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: 2/10/2015

Expiration Date: 02/09/2017

### API NUMBER

05 123 41141 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>  |
|-----------------|---|
|                 | Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.  |
|                 | Operator shall comply with Buffer Zone Move-In, Rig-Up Notice Policy dated 12-16-2013.  |
|                 | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.<br>2) Comply with Rule 317.i and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log.<br>3) Run and submit Directional Survey from TD to base of surface casing. The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well. |

## Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u>                    | <u>Description</u>  |
|-----------|--|---|
| 1         | Planning                               | Multi-well Pads. It is a multi-well pad located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas.  |
| 2         | Traffic control                        | Access roads. The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times.  |
| 3         | General Housekeeping                   | Fencing requirements. A permanent fencing plan will be reviewed by the surface owner, & the applicant.  |
| 4         | General Housekeeping                   | Removal of surface trash. All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as is applicable.  |
| 5         | Material Handling and Spill Prevention | Leak Detection Plan. Pumper will visit the location daily and visually inspect all tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR §112.  |
| 6         | Material Handling and Spill Prevention | Berm construction. Tank berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition.  |
| 7         | Material Handling and Spill Prevention | Load-lines. All load-lines shall be bull-plugged or capped.   |
| 8         | Material Handling and Spill Prevention | Tank specifications. Tanks will be designed, constructed and maintained in accordance with NFPA Code 30. The tanks are visually inspected once a day for issues, and recorded inspections are conducted once a month.   |
| 9         | Noise mitigation                       | Lighting abatement measures shall be implemented, including the installation lighting shield devices on all of the more conspicuous lights, & low density sodium lighting where practicable. At its election the operator may install temporary engineering controls consisting of perimeter sound walls shall be used on the location during drilling and completion activities to provide noise relief. Permanent equipment on location shall be muffled to reduce noise, or shall be appropriately buffered. |
| 10        | Drilling/Completion Operations         | Closed Loop Drilling Systems – Pit Restrictions. Not applicable; a closed-loop system will be used for drilling.  |

|    |                                |  |
|----|--------------------------------|--|
| 11 | Drilling/Completion Operations | Green Completions – Emission Control Systems. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate Green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flow-back gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flow-back within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustion where noncombustible gases are present.  |
| 12 | Drilling/Completion Operations | Blowout preventer equipment (“BOPE”). A double ram and annular preventer will be used during drilling. At least the drilling company shall have a valid well blowout prevention certifications.  |
| 13 | Drilling/Completion Operations | BOPE for well servicing operations. Adequate BOP equipment shall be used. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.   |
| 14 | Drilling/Completion Operations | Pit level indicators. Not applicable; a closed-loop system will be used and no pits shall be dug.  |
| 15 | Drilling/Completion Operations | Drill stem tests. Not applicable; no Drill Stem tests are planned.   |
| 16 | Drilling/Completion Operations | Control of fire hazards. All materials which are considered fire hazards shall be a minimum of 25’ from the wellhead tanks or separators. Electrical equipment shall comply with API RP 500 and will comply with the current national electrical code. An emergency response plan has been generated for this site.  |
| 17 | Drilling/Completion Operations | Guy line anchors. All guy line anchors shall be brightly marked pursuant to Rule 604.c (2)Q  |
| 18 | Drilling/Completion Operations | Bradenhead Monitoring BMP: Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.  |
| 19 | Drilling/Completion Operations | Anti-Collision BMP: Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed wells. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5. |
| 20 | Final Reclamation              | Well site cleared. Within 90-day subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site.   |
| 21 | Final Reclamation              | Identification of plugged and abandoned wells. P&A'd wells shall be identified pursuant to 319.a.(5).  |

Total: 21 comment(s)

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

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

### **Attachment Check List**

| <b>Att Doc Num</b> | <b>Name</b>                |
|--------------------|----------------------------|
| 1696466            | PROPOSED SPACING UNIT      |
| 1696469            | ANTI-COLLISION LETTER      |
| 400407358          | FORM 2 SUBMITTED           |
| 400582748          | WELL LOCATION PLAT         |
| 400593646          | OffsetWellEvaluations Data |
| 400593652          | EXCEPTION LOC WAIVERS      |
| 400593654          | DIRECTIONAL DATA           |
| 400593655          | DEVIATED DRILLING PLAN     |
| 400593656          | SURFACE AGRMT/SURETY       |
| 400593658          | EXCEPTION LOC REQUEST      |
| 400607134          | MINERAL LEASE MAP          |

Total Attach: 11 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u>      |
|-------------------|--|--------------------------|
| Permit            | Final Review Completed. Town of Greeley comment addressed (see OGLA comment on form 2); no public comment received.  | 2/10/2015<br>9:12:45 AM  |
| OGLA              | COGCC reviewed the City of Greeley USR for this location and the Operator submitted a Sundry (Doc #400691841) that was approved in September 2014 to add those BMPs that are appropriate and enforceable for this location.  | 2/9/2015 1:24:48<br>PM   |
| Permit            | Received and attached Anti-Collision 318A.n letter. ON HOLD: w/o Town of Greeley comment review.   | 1/29/2015<br>10:45:55 AM |
| Permit            | Per operator changed Right To Construct to SUA. Unchecked property line exception request. Received and attached corrected Proposed Spacing unit map. Changed the Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in same formation from 460' to 660'. Changed the distance to nearest permitted or existing wellbore penetrating objective formation from 460' to 105'. Removed of Exception Location Request letter for Rules 604.a.(1)A & 604.a.(2). ON HOLD: requesting Anti-Collision 318A.n letter.                           | 1/23/2015<br>2:59:30 PM  |
| LGD               | The City of Greeley has received, reviewed, and approved a Use by Special Review local land use permit for this expanded site. The USR (Planning File No. USR 1:14) was approved on April 22, 2014. The City of Greeley requests that, as part of the approval of the Form 2 Permit, all design and operational elements of the USR permit be honored, consistent, and incorporated. Please contact City staff for a copy of the approved and recorded Use by Special Review Permit, and please support the City requirement that this be available on-site for reference. | 7/3/2014 2:35:43<br>PM   |
| Permit            | ON HOLD: Requesting correction Right to Construct should be SUA. Removal of property line exception request. Requesting a corrected Proposed Spacing unit map. (PSU has the surface location in sec 24?). Corrected Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in same formation. Corrected Distance to nearest permitted or existing wellbore penetrating objective formation. Removal of Exception Location Request letter for Rules 604.a.(1)A & 604.a.(2). Missing a Rule 318A.n Anti-Collision waiver.                    | 7/2/2014 3:41:56<br>PM   |
| Permit            | Proposed spacing unit map is incorrect. Opr notified.  | 6/25/2014<br>3:28:59 PM  |
| Engineer          | Offset Wells Evaluated.  | 6/18/2014<br>2:37:30 PM  |
| Permit            | The comment period for this APD was extended per LGD request from 6/26/14 to 7/6/14.   | 6/11/2014<br>9:57:09 AM  |
| Permit            | Passed completeness.<br>1. Buffer zone blank because exception 304.b.(2) selected.<br>2. Conductor casing blank because they do not cement.<br>3. Application submitted with O&G Location Assessment application selected as "Yes." Changed to "No" as per conversation with operator  | 3/6/2014 3:47:33<br>PM   |
| Permit            | Return to draft:<br>1. Missing buffer zone notification date.<br>2. Related forms number missing.<br>3. Conductor casing info not complete.  | 5/13/2014<br>2:32:27 PM  |

Total: 11 comment(s)