

FORM
2

Rev
08/19

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:

402016840

Date Received:

04/30/2019

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 ☐

Well Name: Castor Fed 8-59

Well Number: 19-24-4

Name of Operator: BISON OIL & GAS II LLC

COGCC Operator Number: 10661

Address: 518 17TH STREET #1800

City: DENVER

State: CO

Zip: 80202

Contact Name: Abigail Wenk

Phone: (720)6446997

Fax: ()

Email: awenk@bisonog.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20190035

WELL LOCATION INFORMATION

QtrQtr: NESE Sec: 19 Twp: 8N Rng: 59W Meridian: 6

Latitude: 40.644568

Longitude: -104.012530

Footage at Surface: 1476 Feet FSL 560 Feet FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 4854

County: WELD

GPS Data:

Date of Measurement: 04/05/2019 PDOP Reading: 1.5 Instrument Operator's Name: RYAN WILLIAMS

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

Footage at Top of Prod Zone: FNL/FSL 1634 FNL 300 FEL 1623 FNL 2440 FEL

Sec: 19 Twp: 8N Rng: 59W Sec: 24 Twp: 8N Rng: 60W

LOCAL GOVERNMENT INFORMATION

County: WELD

Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this COGCC application? If the local government has waived its right to precede the COGCC in siting determination, indicate by selecting "NO" here and selecting "Waived" below.

☒ Yes ☐ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☒

The local government siting permit type is: WOGLA

The local government siting permit was filed on: 08/28/2017

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

Location is existing.
The WOGLA for this location has been approved prior to the refile of the APDs- WOGLA17-0069.
WOGLA was approved on 10/04/2017

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: 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.)

Township 8 North, Range 59 West, 6th PM
Section 19: Lot 4 & SE/4 SW/4
Section 30: Lot 1 & NE/4 NW/4

Total Acres in Described Lease: 166 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: | <u>5280</u> Feet |
| Building Unit: | <u>5280</u> Feet |
| High Occupancy Building Unit: | <u>5280</u> Feet |
| Designated Outside Activity Area: | <u>5280</u> Feet |
| Public Road: | <u>1511</u> Feet |
| Above Ground Utility: | <u>547</u> Feet |
| Railroad: | <u>5280</u> Feet |
| Property Line: | <u>560</u> Feet |
| School Facility: | <u>5280</u> Feet |
| School Property Line: | <u>5280</u> Feet |
| Child Care Center: | <u>5280</u> 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, Designated Outside Activity Area, School Facility, and Child Care Center – 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: 195 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 300 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

The BHL footage FEL of Section 24 depicted on the well location plat is less than the required 300' from unit boundary per Spacing Order (Docket No. 190700495 JULY Hearing). Operator will not be completing the well past 300' FEL of Section 24.

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: _____

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 | 535-1211 | 960 | S.19: ALL S.24: E2 |

DRILLING PROGRAM

Proposed Total Measured Depth: 14692 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: 346 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? Yes

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: 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 | 26 | 16 | 43 | 0 | 100 | 50 | 100 | 0 |
| SURF | 13+1/2 | 9+5/8 | 36 | 0 | 1850 | 650 | 1850 | 0 |
| 1ST | 8+1/2 | 5+1/2 | 20 | 0 | 14692 | 1860 | 14692 | 4000 |

☐ 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 refile APD is being submitted to update the SHL, TPZ, BHL, and Unit Spacing.

This well has a bottom-hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 1623' FNL and 2340' FEL of Section 24. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

Nearest wellbore permitted or completed in the same formation is the Castor Fed 8-59 19-24-5 (Bison Oil & Gas II, LLC), as measured using 2D manual calculations.

Nearest existing or permitted wellbore belonging to another operator is the Peterson PC LG 19-06 API 05-123-33378 (Noble Energy Inc), measured using 2D manual calculations.

No wells owned by other operators are Producing, Temporarily Abandoned, or Shut-In within 150' of this wells productive lateral, therefore stimulation setback consent is not needed.

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

Location ID: 452871

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: Ariana Solis _____

Title: Regulatory Analyst _____

Date: 4/30/2019 _____

Email: asolis@bisonog.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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____

Director of COGCC

Date: 9/27/2019 _____

Expiration Date: 09/26/2021 _____

API NUMBER

05 123 45850 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**

| | |
|--------------------------------|--|
| Drilling/Completion Operations | <p>1) Submit Form 42 online to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad.</p> <p>2) Provide cement coverage to a minimum of 200' above Niobrara. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after setting surface casing.</p> <p>Bradenhead</p> <p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.:</p> <p>1) All: Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</p> <p>2) Delayed completion: 6 months after rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</p> <p>3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.</p> |
| Drilling/Completion Operations | <p>Operator acknowledges the proximity of the listed offset well(s). Operator agrees to comply with the DJ Basin Horizontal Offset Policy to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the mitigated well(s), stating that appropriate mitigation was completed prior to the hydraulic stimulation of this well.</p> <p>Offset wells to mitigate: 05-123-09270, TRUEBLOOD-SKEETERS 1-13</p> |
| Drilling/Completion Operations | <p>Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.</p> |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--------------------------------|---|
| 1 | Drilling/Completion Operations | Alternative Logging Program - One of the first wells drilled on the pad will be logged with Open Hole Resistivity Log and Gamma Ray Log from the kick-off point to 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 horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. 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 "Alternative Logging Program - No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run. |
| 2 | Drilling/Completion Operations | <p>When a skid is performed, if a previous well on that pad has completed a full BOPE test within the past 21 days, then the only required BOPE tests are for the BOPE connections that were broken during the skid. The purpose of this is to prevent the wear and tear on the choke line and kill line valves. The annular and double rams will be tested as per usual and all broken connections will also be tested (annular to 70% of rated pressure, all other valves and connections will be tested to full rated pressure).</p> <p>Under no circumstances will 21 days be exceeded without completing a full BOPE test to all connections including all choke and kill line valves. Daily function test / activation of pipe rams are still required in addition to a preventer operator test on each trip.</p> |
| 3 | Drilling/Completion Operations | Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling. |

Total: 3 comment(s)

Applicable Policies and Notices to Operators

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> |
|--------------------|--------------------------------|
| 1347704 | OBJECTIVE CRITERIA REVIEW MEMO |
| 402016840 | FORM 2 SUBMITTED |
| 402016861 | DIRECTIONAL DATA |
| 402016863 | WELL LOCATION PLAT |
| 402016865 | DEVIATED DRILLING PLAN |
| 402016868 | OffsetWellEvaluations Data |
| 402191980 | OFFSET WELL EVALUATION |

Total Attach: 7 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit | Final Review Completed. | 09/27/2019 |
| Permit | <p>COGCC staff conducted its technical review of this Form 2 Application for Permit to Drill (APD) within the context of SB 19-181 and the required Objective Criteria. This APD met Objective Criteria #8.</p> <p>The Objective Criteria Review Memo (Doc# 1347704) is attached to this Form 2 Application for Permit to Drill (APD). Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.</p> | 09/27/2019 |
| Permit | Passed Permit Review | 09/17/2019 |
| Permit | COGCC Staff has updated the Local Government siting permit information | 09/03/2019 |
| Permit | <p>-Updated the distance to the nearest well as per operator</p> <p>Received consent from the operator to add/ change the following:</p> <ol style="list-style-type: none"> 1. Added the spacing order number from the docket number 2. Updated the open hole logging BMP 3. Added the drilling beyond the setback COA | 08/30/2019 |
| Permit | <p>-The wellbore does not cross lease described but the lease is within DSU.</p> <p>-Waiting on the operator's response about the following:</p> <ol style="list-style-type: none"> 1. Added the spacing order number from the docket number 2.Updating the open hole logging BMP 3.Adding the drilling beyond the setback COA | 08/27/2019 |
| OGLA | <p>COGCC reviewed the public comments on this Form 2. The primary concerns raised relate to air emissions and air quality. CDPHE regulates air quality through their implementation of the Clean Air Act and other programs; this facility is subject to permitting and regulation by CDPHE-Air Pollution Control Division (APCD). Site-specific measures to reduce emissions of VOCs, which are a precursor to ozone, include the following:</p> <ul style="list-style-type: none"> • Green Completions – Gas separated off during flowback and flash gas off the flowback tanks that is not salable will be managed through Vapor Recovery Units, VOC Combustors, and Vapor Recovery Towers. • Tank Emissions – Because this Location is within the 8-hour Ozone Non-Attainment area, the tank battery emissions are subject to controls as required by APCD. These controls must be operated to achieve 95% VOC emissions destruction efficiency—which is typically achieved by a combustor or ECD that is capable of achieving 98 or 99% efficiency allowing for occasional downtime during upset conditions. The APCD has issued AIRS ID 123-9CF2 for the tank battery. • Other Operational Controls – Engines used for gas compressors are required to meet emissions standards set by APCD. <p>See Form 2A document number 401340464 for additional details.</p> | 08/13/2019 |
| Permit | Passed completeness. | 06/10/2019 |
| Permit | Returned to draft: Operator to complete Local Government Information. This form has not been reviewed for completeness. | 05/30/2019 |

Total: 9 comment(s)