

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Date Received: 03/01/2019

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

Well Name: Grotheer 5-61 Well Number: 11B-2-3

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: SESE Sec: 11 Twp: 5N Rng: 61W Meridian: 6

Latitude: 40.409843 Longitude: -104.170327

Footage at Surface:	<u>460</u>	Feet	FNL/FSL	<u>1210</u>	Feet	FEL/FWL
			FSL			FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4690 County: WELD

GPS Data: GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 02/18/2019

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	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>460</u>	FSL	<u>1449</u>	<u>360</u>	FNL	<u>1527</u>
		FEL		FEL	

Sec: 11 Twp: 5N Rng: 61W Sec: 2 Twp: 5N Rng: 61W

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 location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition 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: 07/09/2019

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

Additional explanation of local process:

WOGLA was approved on 1/23/2020, WOGLA Permit #- WOGLA19-0159

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 5N, Range 61W:
Section 11: S2
Section 2: SWSE

Total Acres in Described Lease: 360 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: 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: 2666 Feet

Railroad: 5280 Feet

Property Line: 460 Feet

School Facility: 5280 Feet

School Property Line: 5280 Feet

Child Care Center: 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, 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: 484 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

The BHL footage FNL of Section 2 depicted on the well location plat is less than the required 460' from unit boundary per Spacing Order (Docket No. 190600376 JULY Hearing). Operator will not be completing the well past 460' FNL of Section 2.

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

OBJECTIVE FORMATIONS

<u>Objective Formation(s)</u>	<u>Formation Code</u>	<u>Spacing Order Number(s)</u>	<u>Unit Acreage Assigned to Well</u>	<u>Unit Configuration (N/2, SE/4, etc.)</u>
NIOBRARA	NBRR	407-3089	1280	S.11 & S.2: ALL

DRILLING PROGRAM

Proposed Total Measured Depth: 16401 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: 491 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 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	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	16401	1860	16401	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 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 460' FNL and 1526' FEL of Section 2. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

The Windows/Twinning exception location waiver are included in the SUA on Page 5 Section 10 Paragraph F

The Grotheer 5-61 11B-2-4 [Doc #: 401950072] (Bison Oil & Gas II, LLC), is the nearest well in the same formation, the distance was measured using 2D manual calculations.

The nearest wellbore belonging to another operator was measured to the WILLIAMS ET AL (JACK BAIN #1) [API #: 123 -05195], operated by DUNCAN OIL INC. The distance was measured using 2D manual calculations. The well status is DA.

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 No CDP #: _____

Location ID: 476593

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: Ariana Solis

Title: Regulatory Analyst Date: 3/1/2019 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: 12/29/2020

Expiration Date: 12/28/2022

API NUMBER
05 123 51440 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>
Drilling/Completion Operations	COGCC COA: 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.
Drilling/Completion Operations	1) Submit Form 42 electronically 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. 2) Provide cement coverage from TD to a minimum of 500' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.
Drilling/Completion Operations	Bradenhead Testing Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	Operator acknowledges the proximity of the non-operated listed well. Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. BEHRING *1 (API 123-05198)
Drilling/Completion Operations	Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. EMPIRE *1 (API 123-05190) BAIN *1 (API 123-05191) WILLIAMS ET AL (JACK BAIN *1 (API 123-05195) BAIN *1 (API 123-05196) PACKARD *1 (API 123-08763) DAILEY *33-2 (API 123-10086) JONES *1 (API 123-10936)

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Bison Oil & Gas II will comply with the "COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012
2	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."
3	Drilling/Completion Operations	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). 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.
4	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: 4 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

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

<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment List

Att Doc Num	Name
401950067	FORM 2 SUBMITTED
401956027	WELL LOCATION PLAT
401956029	DEVIATED DRILLING PLAN
401956030	DIRECTIONAL DATA
401956913	EXCEPTION LOC REQUEST
401957466	OffsetWellEvaluations Data
401962002	SURFACE AGRMT/SURETY
402562858	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/29/2020
Permit	Passed Permit Review	12/28/2020
Permit	COGCC conducted the technical review for the related Oil and Gas Location Assessment permit, Form 2A document #401949727 under the statutory authority provided through SB 19-181, including the Objective Criteria. The Director approved the Form 2A on 5/27/2020, establishing Location ID #476593 subject to conditions included in the permit. The well proposed by this related Form 2 was contemplated during COGCC's review of the Form 2A. The Objective Criteria Review Memo (Doc# 1347899) can be found in the document file for this Location.	12/28/2020
Permit	Received consent from the operator to add/ change the following: 1. Updated the plugging bond ID since the one listed has been released 2. Added the local government information 3. Added the spacing order number from the docket number 4. Updated the open hole logging BMP 5. Added the drilling beyond the setback COA 6. Added a comment on where the waivers for rules 318A.a and 318A.c are located in the SUA	11/11/2020
Permit	-Changed the commingle tab to no since the zone type is single zone -Added the location ID -Waiting on the operator's response about the following: 1.Updating the plugging bond ID since the one listed has been released 2.Adding the local government information 3.Adding the spacing order number from the docket number 4.Updating the open hole logging BMP 5.Adding the drilling beyond the setback COA 6.Adding a comment on where the waivers for rules 318A.a and 318A.c are located in the SUA	11/09/2020
Engineer	•Surface Casing Check complete •Offset well review complete 317.r - No wells 317.s - No wells •Engineering review complete	08/05/2020
Permit	Passed completeness.	03/08/2019
Permit	Added the SUA PDF as per operator	03/06/2019

Total: 8 comment(s)