

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>Unplanned</u>	Refiling <input type="checkbox"/>	Date Received: 11/04/2016
ZONE TYPE    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input checked="" type="checkbox"/>	

Well Name: Bison 4-64 15-16      Well Number: 2BHZ

Name of Operator: BISON OIL & GAS LLC      COGCC Operator Number: 10618

Address: 999 18TH STREET #3370

City: DENVER      State: CO      Zip: 80202

Contact Name: Abigail Wenk      Phone: (720)644-6997      Fax: (303)974-1767

Email: awenk@bisonog.com

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: 20160032

**WELL LOCATION INFORMATION**

QtrQtr: NWNE      Sec: 15      Twp: 4S      Rng: 64W      Meridian: 6

Latitude: 39.708012      Longitude: -104.535477

Footage at Surface: <u>676</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>2235</u> Feet	<u>FNL</u>	<u>FEL</u>

Field Name: CHALICE      Field Number: 10775

Ground Elevation: 5649      County: ARAPAHOE

GPS Data:  
Date of Measurement: 07/14/2016    PDOP Reading: 1.6    Instrument Operator's Name: Owen McKee

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

Footage at Top of Prod Zone: <u>650</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>638</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>2164</u> Feet	<u>FNL</u>	<u>FWL</u>	<u>FNL</u> <u>242</u> Feet	<u>FNL</u>	<u>FWL</u>

Sec: 15    Twp: 4S    Rng: 64W      Sec: 16    Twp: 4S    Rng: 64W

**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.)

Township 4 South, Range 64 West, 6th PM  
Section 16: ALL

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

Federal or State Lease # 80/5587-S

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 2365 Feet  
 Building Unit: 2678 Feet  
 High Occupancy Building Unit: 5280 Feet  
 Designated Outside Activity Area: 5280 Feet  
 Public Road: 2238 Feet  
 Above Ground Utility: 685 Feet  
 Railroad: 5280 Feet  
 Property Line: 673 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: 155 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 FWL of Section 16 depicted on the well location plat is less than the required 300' from unit boundary per Spacing Order 535-738. Operator will not be completing the well past 300' FWL of Section 16.

**OBJECTIVE FORMATIONS**

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	535-738	960	15-W/2, 16-ALL

## DRILLING PROGRAM

Proposed Total Measured Depth: 15026 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: 547 Feet  No well belonging to another operator within 1,500 feet

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? 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	1/4	0	100	10	100	0
SURF	13+1/2	9+5/8	36	0	2042	670	2042	0
1ST	8+1/2	5+1/2	20	0	15026	1710	15026	1900

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 was permitted to be a Niobrara B well, but during drilling, the wellbore encountered a complex fault which resulted in an unplanned sidetrack into the Niobrara C.

We reached a depth of 11703' in the wellbore being plugged back.

Casing Set - 9 5/8" CSG at 2042'.

This was an open hole sidetrack with no fish or plugs.

No cement was needed to plug.

Measured depth of proposed sidetrack kick-off point is 9638'.

We will be keeping the same planned target as the wellbore being abandoned, Niobrara B.

Bison's engineering staff received verbal plugback/sidetrack approval from COGCC Engineer Diana Burns on 11.3.16.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: \_\_\_\_\_

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: Abigail Wenk \_\_\_\_\_

Title: Regulatory Manager Date: 11/4/2016 Email: awenk@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 and applicable orders and is hereby approved.

COGCC Approved: Matthew Lee Director of COGCC Date: 11/4/2016

Expiration Date: 11/03/2018

**API NUMBER**  
05 005 07255 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**

### Best Management Practices

**No BMP/COA Type**

**Description**

1	Material Handling and Spill Prevention	Waste Management Plan: Bison uses licensed haulers and follows OSHA's RCRA requirements for storage, handling, transport and disposal of E&P wastes. Drill cuttings are disposed of at commercial facilities. A closed loop system is used for oil based mud and is disposed of at a licensed disposal facility.
2	Noise mitigation	Noise: operator shall provide and post 24-hour, 7 days per week contact information to deal with all noise complaints arising from operator's oil and gas facilities.
3	Noise mitigation	Prior to the start of construction of a well pad, Bison will evaluate the location and identify any occupied structures within ¼ mile (1320ft) of the proposed well head(s) on the well pad. If a structure is present, Bison may contract with a 3rd party noise expert to perform an analysis of the predicted noise levels at locations specified in COGCC rules 802C.(1) and 802(d). If noises levels are predicted to exceed COGCC limits, a Site-Specific Noise mitigation plan may be prepared for the site. Mitigation measures may include modifying the placement of equipment, the use of mufflers or the installation of temporary sound barriers, or other agreeable measures.
4	Emissions mitigation	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 where reservoir pressure, formation productivity, and wellbore conditions are likely to enable the well to be capable of naturally flowing hydrocarbon gas in flammable or greater concentrations at a stabilized rate in excess of five hundred (500) MCFD to the surface against an induced surface backpressure of five hundred (500) psig or sales line pressure, whichever is greater. In the absence of a viable gas sales line, the flowback 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 flowback 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 combustions where non-combustible gases are present. All salable quality gas shall be directed to the sales line as soon as practicable or shut in and conserved.
5	Odor mitigation	Odors and Dust: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.
6	Drilling/Completion Operations	A closed loop drilling system will be used. Only a reserve pit and/or emergency pit will be used as needed. A fresh water pit will not be used without the prior approval of a Form 15.
7	Drilling/Completion Operations	Alternative Logging Program - Multi-Well Pad: 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 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 "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.

Total: 7 comment(s)

## Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401142551	FORM 2 SUBMITTED
401142677	OffsetWellEvaluations Data
401142943	CORRESPONDENCE
401143255	WELLBORE DIAGRAM

Total Attach: 4 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	This is an unplanned sidetrack for API 005-07255-00. Added -01 extension to API# to create sidetrack API. Permit review complete.	11/04/2016
Permit	LGD and public comment periods waived by COGCC staff. Comment periods do not apply to this application for an unplanned sidetrack when drilling is in progress.	11/04/2016
Permit	Passed completeness.	11/04/2016

Total: 3 comment(s)