

State of Colorado

Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

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Date Received:

08/07/2024

APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☐TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____Refile ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: CE 5-68

Well Number: 11-3-1H

Name of Operator: BISON IV OPERATING LLC

ECMC Operator Number: 10670

Address: 518 17TH STREET SUITE 1800

City: DENVER

State: CO

Zip: 80202

Contact Name: Rachel Milne

Phone: (720)370-8580

Fax: ()

Email: rmilne@bisonog.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

ECMC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the ECMC for this Well.

Surety ID Number (if applicable): 20170115

Federal Financial Assurance

☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ _____

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SENE Sec: 11 Twp: 5N Rng: 68W Meridian: 6

Footage at Surface: 2244 Feet FNL/FSL 519 Feet FEL/FWL

Latitude: 40.415550 Longitude: -104.966050

GPS Data: GPS Quality Value: 1.7 Type of GPS Quality Value: PDOP

Date of Measurement: 06/10/2022

Ground Elevation: 4981

Field Name: WATTENBERG

Field Number: 90750

Well Plan: is ☐ Directional ☒ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 2 Twp: 5N Rng: 68W

Footage at TPZ: 1600 FSL 350 FEL

Measured Depth of TPZ: 8873

True Vertical Depth of TPZ: 7252 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 3 Twp: 5N Rng: 68WFootage at BPZ: 1612 FSL 1700 FWLMeasured Depth of BPZ: 17396True Vertical Depth of BPZ: 7252 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 3 Twp: 5N Rng: 68WFootage at BHL: 1612 FSL 1700 FWLFNL/FSLFEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: LARIMERMunicipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of §

24-65.1-108 C.R.S.? Yes

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☒ 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 disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 08/25/2023Comments: Oil and Gas Development Permit PZ#22-00181 Approved 8/25/2023**SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION**Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ IndianMineral Owner beneath this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Surface Owner Protection Bond (if applicable): _____

Surety ID Number (if applicable): _____

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

☒ Fee☐ State☐ Federal☐ Indian☐ N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

* If this Well is within a unit, describe a lease that will be developed by the Well.

* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

T5NR68W Sec 2: SW/4, Sec 3: E/2SW, SE/4 and other lands for a total of 1182 acres.

Total Acres in Described Lease: 1182

Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1005 Feet
Building Unit: 1138 Feet
Public Road: 519 Feet
Above Ground Utility: 432 Feet
Railroad: 2874 Feet
Property Line: 405 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

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	407-3546	1685	T5N, R68W, Section 2: S½; Section 3: E½SW¼, SE¼; Section 10: E½W½, E½; Section 11: All

Federal or State Unit Name (if appl): _____

Unit Number: _____

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 350 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 1833 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: _____ Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: _____ Feet

Exception Location

☐ If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. _____

SPACING & FORMATIONS COMMENTS

DRILLING PROGRAM

Proposed Total Measured Depth: 17396 Feet

TVD at Proposed Total Measured Depth 7252 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: 111 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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26	16	N/A	37	0	80	50	80	0
SURF	13+1/2	9+5/8	J55	36	0	1900	787	1900	0
1ST	8+1/2	5+1/2	HCP110	20	0	17396	1860	17396	

☐ Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

Zone Type	Formation /Hazard	Top M.D.	Top T.V.D.	Bottom M.D.	Bottom T.V.D.	TDS (mg/L)	Data Source	Comment
Groundwater	UPPER PIERRE	534	534	1034	1034	0-500	DWR	
Confining Layer	PIERRE	1034	1034	3800	3524			
Hydrocarbon	PARKMAN	3800	3524	4559	4119			
Hydrocarbon	SUSSEX	4559	4119	5131	4568			
Hydrocarbon	SHANNON	5131	4568	8042	6852			
Confining Layer	SHARON SPRINGS	8042	6852	8121	6913			
Hydrocarbon	NIOBRARA	8121	6913	8662	7220			
Hydrocarbon	FORT HAYS	8662	7220	8733	7244			
Hydrocarbon	CODELL	8733	7244	17396	7252			Bottom TVD is bottom of the well and not bottom of the formation; the formation is not planned to be exited.

OPERATOR COMMENTS AND SUBMITTAL

Comments

Distance from completed zone of this wellbore to nearest completed zone of an offset well within the same unit permitted or completed in the same formation is to the SCHMERGE WEST #4-9HZ (05-123-52328) operated by KERR MCGEE OIL & GAS ONSHORE LP, this distance was measured via 2D. 408.u is not attached as the subject wells permitted/treated intervals are not within 150' of each other.

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells was measured to the ENCORE #40N-12HZ (05-069-06480) operated by KERR MCGEE OIL & GAS ONSHORE LP, this distance was measured via anticollision.

This application is in a Comprehensive Area Plan No CAP #: _____
Oil and Gas Development Plan Name CE OGDID #: 483259
Location ID: 485676

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Alison Parker

Title: Regulatory Analyst Date: 8/7/2024 Email: aparker@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 ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved:  Director of ECMC Date: 10/21/2024

Expiration Date: 11/28/2026

API NUMBER

05 069 06543 00

CONDITIONS OF APPROVAL, IF ANY LIST

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	Operator will log two (2) additional wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the stratigraphically deepest wells for a total of three wells logged.
Drilling/Completion Operations	1) Submit Form 42 electronically to ECMC 2 business days prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 2 business day spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j. and provide cement coverage from TD to a minimum of 500' above Niobrara. Verify coverage with a cement bond log.
Drilling/Completion Operations	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 is observed or if there is continuous flow, Operator must contact ECMC engineering for approval prior to stimulation. 2) If a delayed completion, a second test is required between 6-9 months after rig release and must be conducted prior to stimulation. If any pressure greater than 200 psi is observed or if there is continuous flow, Operator must contact ECMC engineering for approval prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
3 COAs	

Best Management Practices

No BMP/COA Type

Description

1 Drilling/Completion Operations	Blowout Prevention Equipment ("BOPE"): A double ram annular preventer will be used during drilling.
2 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.
3 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.

4	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 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.`
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Total: 4 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403862263	FORM 2 SUBMITTED
403863051	OTHER
403863054	DEVIATED DRILLING PLAN
403863056	WELL LOCATION PLAT
403863058	DIRECTIONAL DATA
403880105	OffsetWellEvaluations Data
403963856	OFFSET WELL EVALUATION

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	With operators concurrence corrected the mineral lease information and added OH Logging COA. Final Review Completed.	10/04/2024
Permit	Emailed operator requesting: clarification of mineral lease & addition of OH Logging COA	10/03/2024
OGLA	The Commission approved OGDG #483259 on November 29, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	08/11/2024

Total: 3 comment(s)