

FORM

2

Rev
05/22

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:

403824537

(SUBMITTED)

Date Received:

06/14/2024

APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☐TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____Refill ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐Well Name: Gaffney 2920Well Number: 08HName of Operator: VERDAD RESOURCES LLCECMC Operator Number: 10651Address: 1125 17TH STREET SUITE 550City: DENVER State: CO Zip: 80202Contact Name: Heather MitchellPhone: (720)845-6917 Fax: ()Email: regulatory@verdadresources.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): 20230030

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: SWNW Sec: 29 Twp: 8N Rng: 61W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 2098 Feet FNL 575 Feet FWLLatitude: 40.633987 Longitude: -104.237789GPS Data: GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 06/04/2024Ground Elevation: 4991Field Name: DJ HORIZONTAL NBRR-FH-CODL-CLField Number: 16952Well 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: 29 Twp: 8N Rng: 61W Footage at TPZ: 2340 FNL 338 FELMeasured Depth of TPZ: 8608 True Vertical Depth of TPZ: 6651 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 20 Twp: 8N Rng: 61WFootage at BPZ: 300 FNL 338 FELMeasured Depth of BPZ: 15941True Vertical Depth of BPZ: 6651 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 20 Twp: 8N Rng: 61WFootage at BHL: 210 FNL 338 FELFNL/FSL FEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: WELDMunicipality: 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: 01/27/2022

Comments: 1041WOGLA21-0006

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 ☐ Indian

Mineral 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.)

SW4NW4 Section 29 T8N R61W

Total Acres in Described Lease: 40

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

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 3824 Feet
Building Unit: 5280 Feet
Public Road: 2047 Feet
Above Ground Utility: 703 Feet
Railroad: 5280 Feet
Property Line: 566 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.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| NIOBRARA | NBRR | 535-1392 | 960 | T8N R61W Sec. 20 &29: 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: 300 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: 579 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

T8N R61W Sec. 20 &29: ALL

DRILLING PROGRAM

Proposed Total Measured Depth: 16031 Feet

TVD at Proposed Total Measured Depth 6651 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: 200 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? _____

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 | ASTM | 65 | 0 | 80 | 92 | 80 | 0 |
| SURF | 13+1/2 | 9+5/8 | J55 | 36 | 0 | 1984 | 539 | 1981 | 0 |
| 1ST | 8+1/2 | 5+1/2 | P110 | 20 | 0 | 16031 | 2030 | 16031 | 0 |

☐ 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 | Laramie | 0 | 0 | 255 | 256 | 501-1000 | USGS | USGS-403908104121101(911 mg/L) |
| Groundwater | Fox Hills | 255 | 256 | 559 | 559 | 501-1000 | USGS | USGS-403951104134001(570 mg/L) |
| Confining Layer | Pierre | 559 | 559 | 979 | 970 | | | |
| Groundwater | Upper Pierre Porosity | 979 | 970 | 1961 | 1853 | 1001-10000 | Other | CO DNR Report Project Number 2141 |
| Confining Layer | Pierre | 1961 | 1853 | 4187 | 3567 | | | |
| Hydrocarbon | Parkman | 4187 | 3567 | 4767 | 4012 | | | Non-productive horizon |
| Confining Layer | Pierre | 4767 | 4012 | 4995 | 4187 | | | |
| Hydrocarbon | Sussex | 4995 | 4187 | 5399 | 4497 | | | Non-productive horizon |
| Confining Layer | Pierre | 5399 | 4497 | 5887 | 4872 | | | |
| Hydrocarbon | Shannon | 5887 | 4872 | 6154 | 5077 | | | Non-productive horizon |
| Confining Layer | Pierre | 6154 | 5077 | 7900 | 6402 | | | |
| Hydrocarbon | Sharon Springs | 7900 | 6402 | 7922 | 6416 | | | Non-productive horizon |
| Hydrocarbon | Niobrara | 7922 | 6416 | 16031 | 6712 | | | |

OPERATOR COMMENTS AND SUBMITTAL

Comments

The nearest offset well completed in the same formation is the Gaffney 2920 07H measured in 2D. The nearest well belonging to another operator is the Harlequin 28-29-4HN operated by Bison IV Operating PR status and measured in 3D using the anti collision report, attached as other. This well has a bottom hole location beyond the unit boundary setback. The bottom of the completed interval will be within the boundary set back at 300 FNL and 338' FEL of Section 20. The wellbore beyond the unit setback will be physically isolated and will not be completed. This permit will replace the existing Gaffney 2-29-8-61 a form 6S is in process (Document 403802560).

This application is in a Comprehensive Area Plan _____ No _____ CAP #: _____
Oil and Gas Development Plan Name _____ OGDP ID#: _____

Location ID: 435303

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

Signed: _____ Print Name: Heather Mitchell

Title: Regulatory Manager Date: 6/14/2024 Email: regulatory@verdadresources.c

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: _____

Expiration Date: _____

API NUMBER

05

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

0 COA

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 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 measuredwhile-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 openhole 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 openhole logs were run. |
| 2 | Drilling/Completion Operations | Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable. |
| 3 | Drilling/Completion Operations | Operator will perform anti-collision evaluation of all active (producing, shut-in, of temporarily abandoned) offset wellbores that have the potential of being within 150' feet of the proposed well prior to drilling operations. Notice shall be given to all offset operators prior to drilling. |

Total: 3 comment(s)

ATTACHMENT LIST

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|----------------------------|
| 403824628 | WELL LOCATION PLAT |
| 403824630 | DEVIATED DRILLING PLAN |
| 403824631 | OTHER |
| 403824634 | DIRECTIONAL DATA |
| 403824838 | OffsetWellEvaluations Data |

Total Attach: 5 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)