

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:

403365959

(SUBMITTED)

Date Received:

10/05/2023

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: Watkins Well Number: 4-64 30-29 1AH
Name of Operator: CRESTONE PEAK RESOURCES OPERATING LLC COGCC Operator Number: 10633
Address: 1801 CALIFORNIA STREET #2500
City: DENVER State: CO Zip: 80202
Contact Name: Jeff Annable Phone: (303)312-8529 Fax: ()
Email: jannable@civiresources.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

COGCC Financial Assurance

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

Surety ID Number (if applicable): 20160104

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: LOT 2 Sec: 30 Twp: 4S Rng: 64W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 2312 Feet FSL 490 Feet FWL

Latitude: 39.673572 Longitude: -104.601773

GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 11/17/2021

Ground Elevation: 5765

Field Name: DJ HORIZONTAL NIOBRARA Field Number: 16950

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: 30 Twp: 4S Rng: 64W Footage at TPZ: 350 FNL 330 FEL

Measured Depth of TPZ: 8489 True Vertical Depth of TPZ: 7659 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 29 Twp: 4S Rng: 64WFootage at BPZ: 400 FNL 330 FELMeasured Depth of BPZ: 18559True Vertical Depth of BPZ: 7659 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 29 Twp: 4S Rng: 64WFootage at BHL: 400 FNL 330 FELFNL/FSLFEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: ARAPAHOEMunicipality: Aurora

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.? No

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: 07/12/2023Comments: City of Aurora approval received 7/12/2023**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.)

Township 4 South, Range 64 West
Section 29: ALLTotal Acres in Described Lease: 640Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 4285 Feet
Building Unit: 4299 Feet
Public Road: 481 Feet
Above Ground Utility: 637 Feet
Railroad: 5280 Feet
Property Line: 374 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 | 535-1442 | 1298 | T4S R64W SEC 29: ALL, SEC 30: 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: 330 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: 500 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 PROGRAMProposed Total Measured Depth: 18559 FeetTVD at Proposed Total Measured Depth 7659 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: 419 Feet ☐ No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater thanor 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? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP 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 | N/A | 40 | 0 | 80 | 105 | 80 | 0 |
| SURF | 13+1/2 | 9+5/8 | J-55 | 36 | 0 | 3380 | 1376 | 3380 | 0 |
| 1ST | 8+1/2 | 5+1/2 | P-110 | 20 | 0 | 18559 | 2921 | 18559 | 3380 |

☐ 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 | Denver | 24 | 24 | 693 | 689 | 0-500 | Groundwater Atlas | USGS HA-646 (Robson & Romero, 1981) |
| Groundwater | Arapahoe | 693 | 689 | 1324 | 1289 | 0-500 | Groundwater Atlas | USGS HA-647 (Robson et al, 1981) |
| Groundwater | Laramie-Fox Hills | 1324 | 1289 | 2098 | 2009 | 0-500 | Groundwater Atlas | USGS HA-650 (Robson et al, 1981) |
| Confining Layer | Pierre Formation | 2098 | 2009 | 2645 | 2519 | | | |
| Groundwater | Upper Pierre | 2645 | 2519 | 3295 | 3124 | 1001-10000 | Electric Log Calculation | WATKINS 30-5-8H (05-005-07189-0000) |
| Confining Layer | Base of Upper Pierre | 3295 | 3124 | 4385 | 4139 | | | |
| Hydrocarbon | Parkman Sandstone | 4385 | 4139 | 4514 | 4259 | | | Not productive in this area |
| Confining Layer | Pierre Formation | 4514 | 4259 | 5642 | 5309 | | | |
| Hydrocarbon | Sussex Sandstone | 5642 | 5309 | 5813 | 5469 | | | Not productive in this area |
| Confining Layer | Pierre Formation | 5813 | 5469 | 6619 | 6219 | | | |
| Hydrocarbon | Shannon Sandstone | 6619 | 6219 | 6855 | 6439 | | | Not productive in this area |
| Confining Layer | Pierre Formation | 6855 | 6439 | 8081 | 7529 | | | |
| Subsurface Hazard | Sharon Springs | 8081 | 7529 | 8488 | 7659 | | | Sloughing shales |
| Hydrocarbon | Niobrara | 8488 | 7659 | 18559 | 7659 | | | |

OPERATOR COMMENTS AND SUBMITTAL

Comments

The distance to the completed portion of the nearest well in the same unit on the "Spacing & Formations" tab is measured to the proposed Watkins 4-64 30-29 1BH . This distance was measured in 2-dimensional space.

The distance to the nearest well belonging to another operator on the "Drilling Plan" tab was measured to the Lowry 11-29 (API #05-005-06451). This distance was measured in 3-dimensional space.

Attached as OTHER, is the anti-collision analysis which factors in three dimensional measurements as well as gyro surveys performed on some of the offset wellbores. All measurements to offset wellbores were derived from this analysis

This application is in a Comprehensive Area Plan Yes CAP #: 210700116

Oil and Gas Development Plan Name Chico Watkins South & Watkins 30-5- OGD ID#: 484799

Location ID: 485220

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

Signed: _____ Print Name: Jeff Annable

Title: Manager, Regulatory Date: 10/5/2023 Email: jannable@civiresources.com

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: _____

Expiration Date: _____

API NUMBER

05

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

| | |
|-------|--|
| | |
| 0 COA | |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--------------------------------|---|
| 1 | Drilling/Completion Operations | One of the first wells drilled on the pad during the first rig occupation will be logged with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for one of the stratigraphically deepest wells on the pad. 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 will state "Alternative Logging Program - No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which open-hole logs were run. |
| 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. |

Total: 2 comment(s)

Attachment List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|----------------------------|
| 403366068 | DIRECTIONAL DATA |
| 403366074 | WELL LOCATION PLAT |
| 403366076 | DEVIATED DRILLING PLAN |
| 403399670 | OffsetWellEvaluations Data |
| 403551270 | OTHER |

Total Attach: 5 Files

General Comments

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

Total: 0 comment(s)