

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:

403365679

Date Received:

10/05/2023

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: Chico

Well Number: 4-65 25-26 4BH

Name of Operator: CRESTONE PEAK RESOURCES OPERATING LLC

COGCC Operator Number: 10633

Address: 555 17TH STREET SUITE 3700

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: NWSW Sec: 30 Twp: 4S Rng: 64W Meridian: 6

Footage at Surface: 2152 Feet FNL/FSL FSL 490 Feet FEL/FWL FWL

Latitude: 39.673133

Longitude: -104.601776

GPS Data:

GPS Quality Value: 1.4

Type of GPS Quality Value: PDOP

Date of Measurement: 11/17/2021

Ground Elevation: 5767

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: 25 Twp: 4S Rng: 65W

Footage at TPZ: 400 FSL 330 FEL

Measured Depth of TPZ: 8196

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

Base of Productive Zone (BPZ)

Sec: 26 Twp: 4S Rng: 65W Footage at BPZ: 400 FSL 330 FWL
Measured Depth of BPZ: 18061 True Vertical Depth of BPZ: 7659 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 26 Twp: 4S Rng: 65W Footage at BHL: 400 FSL 330 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: ARAPAHOE Municipality: 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: 07/12/2023

Comments: 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 ☐ 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.)

Township 4 South, Range 65 West
Section 25: ALL

Total Acres in Described Lease: 640

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

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 4209 Feet
Building Unit: 4221 Feet
Public Road: 480 Feet
Above Ground Utility: 739 Feet
Railroad: 5280 Feet
Property Line: 460 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	1280	TT4S R65W SEC 25: ALL, SEC 26: 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: 700 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: 18061 Feet

TVD 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: _____ 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	N/A	40	0	80	105	80	0
SURF	13+1/2	9+5/8	J-55	36	0	3280	1335	3280	0
1ST	8+1/5	5+1/2	P-110	20	0	18061	2847	18061	

☐ 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	1311	1289	0-500	Groundwater Atlas	USGS HA-647 (Robson et al, 1981)
Groundwater	Laramie-Fox Hills	1311	1289	2052	2009	0-500	Groundwater Atlas	USGS HA-650 (Robson et al, 1981)
Confining Layer	Pierre Formation	2052	2009	2577	2519			
Groundwater	Upper Pierre	2577	2519	3200	3124	1001-10000	Electric Log Calculation	WATKINS 30-5-8H (05-005-07189-0000)
Confining Layer	Base of Upper Pierre	3200	3124	4245	4139			
Hydrocarbon	Parkman Sandstone	4245	4139	4368	4259			Not productive in this area
Confining Layer	Pierre Formation	4368	4259	5449	5309			
Hydrocarbon	Sussex Sandstone	5449	5309	5614	5469			Not productive in this area
Confining Layer	Pierre Formation	5614	5469	6386	6219			
Hydrocarbon	Shannon Sandstone	6386	6219	6613	6439			Not productive in this area
Confining Layer	Pierre Formation	6613	6439	7796	7529			
Subsurface Hazard	Sharon Springs	7796	7529	8196	7659			Sloughing shales
Hydrocarbon	Niobrara	8196	7659	18061	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 Chico 4-65 25-26 4AH . This distance was measured in 2-dimensional space.

There are no wells well belonging to another operator within 1500' of the proposed wellbore.

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

Oil and Gas Development Plan Name Chico Watkins South & Watkins 30-5- OGDID #: 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

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: 11/6/2023

Expiration Date: _____

API NUMBER

05 005 07547 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	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 on each side of the pad for a total of three wells logged.
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.
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.
3 COAs	

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>
403365679	FORM 2 SUBMITTED
403365784	DIRECTIONAL DATA
403365787	WELL LOCATION PLAT
403365788	DEVIATED DRILLING PLAN
403399664	OffsetWellEvaluations Data

403585677	OFFSET WELL EVALUATION
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Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Emailed operator requesting: Correct qtr/qtr, add COAs. With operators concurrence added COAs, changed lot to qtr/qtr. Final Review Completed.	11/03/2023
OGLA	The Commission approved OGDG #484799 on September 27, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	10/09/2023

Total: 2 comment(s)