

FORM  
2

Rev  
12/20

## State of Colorado

### Oil and Gas Conservation Commission

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



Document Number:

402773776

Date Received:

08/12/2021

### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

Amend ☐

Refile ☒

Sidetrack ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: \_\_\_\_\_

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Well Name: Arkansas 4-64 Well Number: 3-2 3DH  
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: Kathy Denzer Phone: (720)822-8083 Fax: ( )  
Email: RegulatoryState@crestonepr.com

### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160104

### WELL LOCATION INFORMATION

#### Surface Location

QtrQtr: NWSW Sec: 3 Twp: 4S Rng: 64W Meridian: 6

Footage at Surface: 1983 Feet FSL 495 Feet FWL

Latitude: 39.729872 Longitude: -104.544072

GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 07/10/2018

Ground Elevation: 5611

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: 3 Twp: 4S Rng: 64W Footage at TPZ: 1370 FSL 330 FWL  
Measured Depth of TPZ: 8054 True Vertical Depth of TPZ: 7550 FNL/FSL FEL/FWL

##### Base of Productive Zone (BPZ)

Sec: 2 Twp: 4S Rng: 64W Footage at BPZ: 1370 FNL 330 FEL  
Measured Depth of BPZ: 17939 True Vertical Depth of BPZ: 7550 FNL/FSL FEL/FWL

##### Bottom Hole Location (BHL)

Sec: 2 Twp: 4S Rng: 64W Footage at BHL: 1370 FSL 330 FEL  
FNL/FSL FEL/FWL

## LOCAL GOVERNMENT PERMITTING INFORMATION

County: ARAPAHOE

Municipality: 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.? 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: 03/22/2018

Comments: The Administrative Oil & Gas Use By Special Review Plan by Arapahoe County was approved on March 22, 2018.

## 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 Financial Assurance (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.)

T4S R64W Sec. 3: Lots 1 (78.38), 2 (78.10), S/2N/2, SW/4

Total Acres in Described Lease: 476 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # \_\_\_\_\_

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 882 Feet

Building Unit: 1265 Feet

Public Road: 1857 Feet

Above Ground Utility: 520 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.

Railroad: 5280 Feet  
Property Line: 495 Feet

## 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	535-1355	1280	T4S R64W Sec. 2 & 3: 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: 930 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: 17939 Feet TVD at Proposed Total Measured Depth 7550 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 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 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**

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	26	16	A53B	42.09	0	100	114	100	0
SURF	13+1/2	9+5/8	J55	40	0	3024	1617	3024	0
1ST	8+1/2	5+1/2	P110	20	0	17939	2489	17939	

☐ Conductor Casing is NOT planned

**POTENTIAL FLOW AND CONFINING FORMATIONS**

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Groundwater	Laramie	0	0	1310	1299	0-500	Groundwater Atlas	USGS HA-650 (Robson et al, 1981)
Groundwater	Fox Hills	1310	1299	1590	1586	0-500	Groundwater Atlas	USGS HA-650 (Robson et al, 1981)
Confining Layer	Pierre	1590	1586	1843	1834			
Groundwater	Upper Pierre Aquifer	1843	1834	2098	2089	501-1000	Electric Log Calculation	CCIAS #2 1-4 (05-005-06508)
Confining Layer	Base of Upper Pierre Aquifer	2098	2089	2831	2805			
Hydrocarbon	Larimer	2831	2805	4768	4710			
Hydrocarbon	Sussex	4768	4710	5051	4990			
Confining Layer	Shannon	5051	4990	5844	5770			
Confining Layer	Pierre Shale	5844	5770	6190	6109			
Confining Layer	Sharon Springs	6190	6109	7674	7438			
Hydrocarbon	Niobrara	7674	7438	8054	7550			

**OPERATOR COMMENTS AND SUBMITTAL**

Comments Distance from completed portion of the wellbore to nearest wellbore permitted or completed well in the same formation and within the unit was measured to the proposed Arkansas 4-64 3-2 3CH measured in 2-D.

There are no wells within 1500' operated by another operator.

This location has an approved COGCC OGLA that is valid until 01/12/2024 therefore, an OGDP is not required.

Changes to the original Form 2 are: top of productive zone, bottom hole location, total depth, casing and cement program and spacing order. Please utilize the existing Surface Use Agreement in the COGIS file.

This application is in a Comprehensive Area Plan No CAP #: \_\_\_\_\_

OGDP ID#: \_\_\_\_\_ OGDP Name: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Location ID: 454808 Location Name: \_\_\_\_\_

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

Signed: \_\_\_\_\_ Print Name: Andrea Gross

Title: Permit Agent Date: 8/12/2021 Email: agross@upstreampm.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: 9/15/2021

**API NUMBER**

05 005 07363 00

Expiration Date: 09/14/2024

**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.

**Condition of Approval**

**COA Type**

**Description**

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, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer 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 COGCC 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.
	If location is not built by 2A expiration 1/12/2024, Operator must Refile Form 2A for approval prior to location construction.

3 COAs

**Best Management Practices**

**No BMP/COA Type**

**Description**

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 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 state "Alternative Logging Program - No open-hole logs were run" and shall 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)

## **Applicable Policies and Notices to Operators**

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.  
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

### **Attachment List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
402773776	FORM 2 SUBMITTED
402774230	WELL LOCATION PLAT
402774233	DEVIATED DRILLING PLAN
402774236	DIRECTIONAL DATA

Total Attach: 4 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
OGLA	Operator has provided updated Location BMPs via Form 4 Sundry Document #402779400.	09/14/2021
Permit	Final Review Completed.	08/27/2021
Permit	Requesting from operator -Missing Federal minerals in unit on Surface & Minerals Tab.	08/23/2021
Permit	With operators concurrence added Federal Minerals to the Surface & Minerals Tab Permitting Review Complete.	08/23/2021

Total: 4 comment(s)