

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



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05/16/2024

APPLICATION FOR PERMIT TO

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

Well Name: LUSSING TRUST 4-64

Well Number: 19-20 1BH

Name of Operator: CRESTONE PEAK RESOURCES OPERATING LLC

ECMC 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

ECMC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the ECMC 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 1 Sec: 19 Twp: 4S Rng: 64W Meridian: 6

Footage at Surface: 1321 Feet FNL/FSL 645 Feet FEL/FWL

Latitude: 39.692591 Longitude: -104.601090

GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP

Date of Measurement: 12/03/2021

Ground Elevation: 5696

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: 19 Twp: 4S Rng: 64W Footage at TPZ: 920 FNL 330 FWL

Measured Depth of TPZ: 8030

True Vertical Depth of TPZ: 7629

FNL/FSL

FEL/FWL

Base of Productive Zone (BPZ)Sec: 20 Twp: 4S Rng: 64WFootage at BPZ: 700 FNL 330 FELMeasured Depth of BPZ: 18166True Vertical Depth of BPZ: 7629 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 20 Twp: 4S Rng: 64WFootage at BHL: 700 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: 07/19/2023Comments: The City of Aurora has approved the local application.**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 19: ALL

Total Acres in Described Lease: 662

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

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1700 Feet
Building Unit: 4983 Feet
Public Road: 631 Feet
Above Ground Utility: 675 Feet
Railroad: 5280 Feet
Property Line: 645 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	535-1479	1302	T4SR64W: Sec 19 & 20 - 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: 570 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: 18166 Feet

TVD at Proposed Total Measured Depth 7629 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: 830 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

<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	36.95	0	80	105	80	0
SURF	13+1/2	9+5/8	J-55	36	0	3233	1316	3233	0
1ST	8+1/2	5+1/2	P-110	20	0	18166	2861	18166	

☐ 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	Denver Aquifer	24	24	639	639	0-500	Groundwater Atlas	USGS HA-646 (Robson & Romero, 1981)
Groundwater	Arapahoe Aquifer	639	639	1244	1239	0-500	Groundwater Atlas	USGS HA-647 (Robson et al, 1981)
Groundwater	Laramie-Fox Hills	1244	1239	1972	1959	0-500	Groundwater Atlas	USGS HA-650 (Robson et al, 1981)
Confining Layer	Pierre Formation	1972	1959	2468	2449			
Groundwater	Upper Pierre Aquifer	2468	2449	3136	3106	1001-10000	Electric Log Calculation	WATKINS 30-5-8H (05-005-07189-0000)
Confining Layer	Base of Upper Pierre	3136	3106	4107	4069			
Hydrocarbon	Larimer-Parkman sandstone	4107	4069	4238	4199			Not productive in this area
Confining Layer	Pierre Formation	4238	4199	5321	5269			
Hydrocarbon	Terry-Sussex sandstone	5321	5269	5493	5439			Not productive in this area
Confining Layer	Pierre Formation	5493	5439	6231	6169			
Hydrocarbon	Hygiene-Shannon sandstone	6231	6169	6464	6399			Not productive in this area
Confining Layer	Pierre Formation	6464	6399	7659	7514			
Subsurface Hazard	Sharon Springs Member	7659	7514	8029	7629			Sloughing shales
Hydrocarbon	Niobrara Formation	8029	7629	18166	7629			

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 Lussing Trust 4-64 19-20 2AH. This distance is measured in 2-dimensional space.

The nearest well belonging to another operator is measured to the Houlihan 4-64 22A 22-1, API #05-005-07279. This distance is measured in 2-dimensional space.

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

Oil and Gas Development Plan Name Lussing Trust North OGD OGD ID#: 485971

Location ID: 486500

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, Permitting Date: 5/16/2024 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. (2019).~~ 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: 6/23/2024
 Expiration Date: _____

API NUMBER 05 005 07569 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.

<u>COA Type</u>	<u>Description</u>
Drilling/Completion Operations	Operator will log one (1) additional well 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 two wells logged.
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.
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 COGCC 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 COGCC 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

<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.`
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Total: 2 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403758518	FORM 2 SUBMITTED
403758583	DEVIATED DRILLING PLAN
403758586	WELL LOCATION PLAT
403761658	OffsetWellEvaluations Data
403793828	DIRECTIONAL DATA
403832763	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	05/31/2024
Permit	Uploaded header info. Permitting task passed.	05/16/2024
Permit	Missing info on directional data excel sheet. Please upload a copy with said information.	05/16/2024
OGLA	The Commission approved OGDG #486500 on April 10, 2024 for the Oil and Gas Location related to this Form 2. OGLA task passed.	04/23/2024

Total: 4 comment(s)