

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:
402404340

APPLICATION FOR PERMIT TO:

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

Date Received:
06/15/2020

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____
ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Refiling ☐
Sidetrack ☐

Well Name: Grande 4-65 20-19 Well Number: 4AH
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: Meghan Mearsha Phone: (720)410-8487 Fax: ()
Email: meghan.mearsha@crestonepr.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160104

WELL LOCATION INFORMATION

QtrQtr: NWSW Sec: 21 Twp: 4S Rng: 65W Meridian: 6
Latitude: 39.685698 Longitude: -104.676910
Footage at Surface: 1332 Feet FNL/FSL FSL 431 Feet FEL/FWL FWL
Field Name: WILDCAT Field Number: 99999
Ground Elevation: 5619 County: ARAPAHOE
GPS Data: GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 04/20/2018
Instrument Operator's Name: Jonathon Bayliff

If well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL
1110 FSL 460 FEL 1110 FSL 460 FWL
Sec: 20 Twp: 4S Rng: 65W Sec: 19 Twp: 4S Rng: 65W

LOCAL GOVERNMENT INFORMATION

County: ARAPAHOE Municipality: Aurora

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. ☒ 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 local government siting permit type is: Oil and Gas Permit

The local government siting permit was filed on: 12/18/2019

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

Local Oil and Gas Permit approved via Administrative Decision on 2/13/2020; Development Application Case Number 2017-6024003.

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: ☒ is the mineral owner beneath the location.

(check all that apply) ☒ is committed to an Oil and Gas Lease.

☒ has signed the Oil and Gas Lease.

☐ is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: No

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

All of Section 19, T4S-R65W.

Total Acres in Described Lease: 640 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 460 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1823 Feet

Building Unit: 1925 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 440 Feet

Above Ground Utility: 481 Feet

Railroad: 5280 Feet

Property Line: 431 Feet

School Facility: 5280 Feet

School Property Line: 5280 Feet

Child Care Center: 5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- 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, High Occupancy Building Unit, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone
☐ Exception Zone
☐ Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 707 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

All of Sections 17,18,19,20,29&30, T4S-R65W

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: _____

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
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NIOBRARA	NBRR	535-1167	3840	17,18,19,20,29&30
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DRILLING PROGRAM

Proposed Total Measured Depth: 18000 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 Operations Plan)

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

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	24	16	42	0	99	86	99	0
SURF	13+1/2	9+5/8	40	0	2250	1212	2250	0
1ST	8+1/2	5+1/2	20	0	18000	2617	18000	

☐ Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).
- ☐ Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 318.c. Exception Location from Rule or Spacing Order Number _____

☐ Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments The closest well permitted or completed in the same formation is the Grande 4-65 20-19 3CH well, which is also proposed on this location by Crestone.

There is no well belonging to another operator that is within 1500 of the proposed well.

Both distances calculated using the 3D Anti Collision Report, attached as Other.

This application is in a Comprehensive Drilling Plan _____ No _____ CDP #: _____

Location ID: 450063

Is this application being submitted with an Oil and Gas Location Assessment application? _____ No _____

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

Signed: _____ Print Name: Meghan Mearsha

Title: Senior Regulatory Analyst Date: 6/15/2020 Email: meghan.mearsha@crestonepr.

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: 1/14/2021

Expiration Date: 01/13/2023

API NUMBER

05 005 07488 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	If conductors are preset, Operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016).
Drilling/Completion Operations	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
Drilling/Completion Operations	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.
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.

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Neosteer CL a rotary steerable unit that reduces drilling time on-site will be used. Additionally, mud chillers will be used to control cuttings odor while drilling through hydrocarbon bearing zones.
2	Drilling/Completion Operations	Prior to drilling operations, Crestone will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, the Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as constructed gyro survey will be submitted to COGCC with the Form 5.
3	Drilling/Completion Operations	Crestone will comply with the "COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area", dated May 29, 2012.
4	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 to 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.
5	Drilling/Completion Operations	No drill stem tests will be performed.
6	Drilling/Completion Operations	Backup stabbing valves shall be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.
7	Drilling/Completion Operations	Adequate blowout prevention equipment will be used on all well servicing operations.
8	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 will 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 will 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.

Total: 8 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

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

Att Doc Num	Name
1557548	SURFACE AGRMT/SURETY

402404340	FORM 2 SUBMITTED
402418335	OffsetWellEvaluations Data
402419437	DIRECTIONAL DATA
402419438	DEVIATED DRILLING PLAN
402419439	OTHER
402419440	WELL LOCATION PLAT
402574847	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Corrected spacing information with Operator concurrence.	01/14/2021
Permit	Final Review Completed.	01/11/2021
Permit	With Operator concurrence, updated Related Forms to show newly filed Amended 2A.	09/21/2020
Permit	•Replaced SUA .pdf Doc. 402419443 with Doc. 1557548 provided by Operator	08/04/2020
Permit	Corrected with Operator concurrence: 1)Lease description and lease acreage size and removed incorrect attached lease map 2)Unit configuration	07/28/2020
Permit	Updated Local Gov't Information with application case number provided by Operator.	07/21/2020

LGD	<p>In response to this COGCC Form 2 application submitted by CRESTONE PEAK RESOURCES OPERATING LLC (Operator) for the development of Oil Gas Minerals at the GRANDE 4-65 20-19 4AH well, the City of Aurora is pleased to submit the following comments:</p> <ol style="list-style-type: none"> 1) The Operator received local location approval from the City of Aurora on June 5, 2019. 2) The Aurora City Council approved the location following a Public Hearing. 3) The location was approved via an Operator Agreement between the City of Aurora and ConocoPhillips Company. The City has since approved the transfer of the well and Operator Agreement to Crestone Peak Resources. 4) The Operator Agreement requires the Operator to employ 49 Best Management Practices (BMPs) and many other provisions contained in the Operator Agreement during the construction, drilling, completion, production, and reclamation of this well. 5) The BMPs are designed to protect public health, safety, welfare, the environment, and wildlife resources. 6) The City of Aurora is in regular communication with staff at Crestone Peak Resources regarding their operations in general and their plans for this well specifically. 7) The Operator received approval (with conditions) from the City of Aurora for construction of this location on February 13, 2020. Case Number: 2017-6024-03, Grande South (Phase 2) – Oil and Gas Permit. 8) The City of Aurora reminds the Operator to submit the remaining technical items to the Planning Department to receive a Notice to Proceed (NTP). The NTP from the City is required before drilling of this well can begin. 9) The City of Aurora supports Operator communication with Arapahoe County regarding usage of County roads for access to this well and payment of any required fees. <p>Thank you for the opportunity to submit these comments.</p> <p>Jeffrey S. Moore, P.G.</p> <p>Manager - Oil Gas Division - City of Aurora</p> <p>jsmoore@auroragov.org</p> <p>303-739-7676</p>	07/02/2020
Permit	Updated Related Forms per Operator.	06/29/2020
Permit	Passed completeness.	06/16/2020
Permit	Proposed total measured depth does not match Directional Data. Return to draft.	06/16/2020

Total: 10 comment(s)