

FORM
2

Rev
08/16

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:

401332187

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Date Received:

06/18/2018

Well Name: Golft West Well Number: 4H-26H-O168
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: Erin Lind Phone: (720)410-8478 Fax: ()
Email: erin.lind@crestonepr.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160104

WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 26 Twp: 1N Rng: 68W Meridian: 6

Latitude: 40.015955

Longitude: -104.969792

Footage at Surface: 386 Feet FSL 2350 Feet FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 5176 County: BROOMFIELD

GPS Data:

Date of Measurement: 05/01/2017 PDOP Reading: 1.2 Instrument Operator's Name: Jason Dahlman

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

Footage at Top of Prod Zone: FNL/FSL 480 FSL 1435 FWL 460 FNL 1435 FWL
Sec: 26 Twp: 1N Rng: 68W Sec: 23 Twp: 1N Rng: 68W

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: Yes

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.)

T1N R68W, Sec 26: W2SE

Total Acres in Described Lease: 80 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: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1486 Feet
Building Unit: 1618 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 2339 Feet
Above Ground Utility: 386 Feet
Railroad: 5280 Feet
Property Line: 386 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, and Designated Outside Activity Area - 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: 210 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

DSU: T1N R68W:E2 SEC 22; ALL SEC 23; ALL SEC 26; E2 SEC 27

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	407-2533	1920	E2 22&27: ALL 23&26

DRILLING PROGRAM

Proposed Total Measured Depth: 17931 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: 210 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 318A

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	42.09	0	120	95	120	0
SURF	13+1/2	9+5/8	40	0	2450	941	2450	0
1ST	8+1/2	5+1/2	20	0	17931	2564	17931	

☐ 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 Nearest wellbore from completed portions to completed portion of the same formation is Goltl West 4I-26H-O168.

Nearest well to the proposed wellbore belonging to another operator is Mann 2 ,014-09049, formerly operated by H&R well Services. PA status.

Interwell distances were determined using our in-house 3D anti-collision reports.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 459593

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Toby Sachen

Title: Contractor Date: 6/18/2018 Email: toby.sachen@crestonepr.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 and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 12/7/2018

Expiration Date: 12/06/2020

API NUMBER

05 014 20833 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.

COA Type	Description
	<p>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.</p> <p>2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara and from 200' below Sussex to 200' above Sussex. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after setting surface casing.</p> <p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test:</p> <p>1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation.</p> <p>2) 6 months after rig release, prior to stimulation (delayed completions).</p> <p>3) Within 30 days of first production, as reported on Form 5A.</p>
	<p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will utilize Option 4 per the DJ Basin Horizontal Offset Policy. Prior to stimulation of this well, for this list of offset wells, conduct a bradenhead test and submit the Form 17 within ten days. If the starting pressure prior to opening the bradenhead valve is greater than 25 psig, then the offset well shall be plumbed to a tank and actively monitored during stimulation of this well or remediated prior to offset stimulation. A summary of monitoring data shall be submitted via Form 4 sundry. Submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the remediated wells, referencing the API Number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>05-123-32702, COSSLETT 8-2-22 ; 05-123-32703, COSSLETT 42-22 ; 05-123-32705, COSSLETT 41-22 ; 05-123-32736, COSSLETT 6-4-22 ; 05-014-20670, CRANDELL 24-26 ; 05-014-20671, CRANDELL 14-26 ; 05-014-20700, CRANDELL 4-6-26 ; 05-014-20701, CRANDELL 2-8-26 ; 05-014-20703, CRANDELL 0-6-26 ; 05-014-20704, CRANDELL 23-26 ; 05-014-20707, CRANDELL 0-8-26</p> <p>Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, or adequately demonstrate isolation is present, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>05-014-12308, HELEN E UNIT 2 ; 05-014-12021, CRANDELL E UNIT 1 ; 05-014-12156, CRANDELL E UNIT 2 ; 05-014-12309, ALAUX F UNIT 1 ; 05-014-19060, ALAUX 26-3 ; 05-014-19061, ALAUX 26-5 ; 05-014-13923 BAKER C UNIT 1</p> <p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 4). Operator will submit a Form 42 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. Operator will assure that the well's Bradenhead is open and monitored during the entire stimulation treatment – a person will monitor for any evidence of fluid, a Bradenhead test will be performed prior to the beginning of stimulation.</p> <p>05-123-12630, COSSLETT B UNIT 1X ; 05-123-13606, COSSLETT B UNIT 2 ; 05-014-20649, HELEN 33-23</p>

Best Management Practices

No	BMP/COA Type	Description
1	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.
2	Drilling/Completion Operations	Adequate blowout prevention equipment will be used on all well servicing operations.
3	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.
4	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.
5	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.
6	Drilling/Completion Operations	No drill stem tests will be performed.
7	Drilling/Completion Operations	Rule 317.p 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 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 clearly state ""No open-hole logs were run"" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run. "

Total: 7 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 Check List

Att Doc Num	Name
401332187	FORM 2 SUBMITTED
401660834	EXCEPTION LOC WAIVERS
401660835	OTHER

401660836	DEVIATED DRILLING PLAN
401660837	WELL LOCATION PLAT
401660838	SURFACE AGRMT/SURETY
401660839	DIRECTIONAL DATA
401668836	OffsetWellEvaluations Data
401670750	EXCEPTION LOC REQUEST
401866356	OFFSET WELL EVALUATION

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/07/2018
Permit	Public comment period extended 10 days under Rule 305.d.(1).A at the request of the Broomfield LGD.	06/27/2018
Permit	Passed Completeness.	06/25/2018

Total: 3 comment(s)