

FORM
2
Rev
05/22

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:
403424136
Date Received:
06/06/2023

APPLICATION FOR PERMIT TO

Drill Deepen Re-enter Recomplete and Operate Amend
TYPE OF WELL OIL GAS COALBED OTHER: Unplanned Sidetrack Refile
ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES Sidetrack

Well Name: Cosslett East Well Number: 1N-22H-H168
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: Kate Miller Phone: (303)241-6910 Fax: ()
Email: kmiller@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: SENE Sec: 22 Twp: 1N Rng: 68W Meridian: 6
Footage at Surface: 1716 Feet FNL 1078 Feet FEL
Latitude: 40.039229 Longitude: -104.983901
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 07/24/2019
Ground Elevation: 5181
Field Name: WATTENBERG Field Number: 90750
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: 23 Twp: 1N Rng: 68W Footage at TPZ: 460 FNL 500 FEL
Measured Depth of TPZ: 10428 True Vertical Depth of TPZ: 7730 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 26 Twp: 1N Rng: 68W Footage at BPZ: 460 FSL 476 FEL

Measured Depth of BPZ: 20185 True Vertical Depth of BPZ: 7730 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 26 Twp: 1N Rng: 68W Footage at BHL: 460 FSL 476 FEL

FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD 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.? Yes

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? [X] Yes [] No

[X] 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: 10/26/2020

Comments: The WOGLA 1041WOGLA20-0018 was approved on October 26, 2020.

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: [X] Fee [] State [] Federal [] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] 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):

- [X] Fee
[] State
[X] 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.)

T1N R67W Sec. 19: Lots 1, 2; E/2W/2, SE/4; Sec. 29: NW/4, S/2; T1N R68W Sec. 3: Lot 2, S/2NW/4, SW/4, SE/4; Sec. 10: NW/4; S/2; Sec. 11: NW/4; S/2; Sec. 13: NW/4; S/2; Sec. 14: NW/4; S/2; Sec. 15: NW/4; S/2; Sec. 23: NW/4; S/2; Sec. 25; NW/4; S/2; Sec. 27: NW/4; S/2; Sec. 35: NW/4; S/2.

Total Acres in Described Lease: 5753 Described Mineral Lease is: Fee State Federal Indian
Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 596 Feet
Building Unit: 1015 Feet
Public Road: 518 Feet
Above Ground Utility: 807 Feet
Railroad: 4183 Feet
Property Line: 306 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.) |
|------------------------|----------------|-------------------------|-------------------------------|-----------------------------------------------------------------|
| CODELL | CODL | 407-2533 | 1920 | T1N R68W Sec. 22: E/2; Sec. 23: All; Sec. 26: All; Sec. 27: E/2 |

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: 460 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: 360 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

The OGDG Order No. 407-3397 approved the expansion of the Cosslett pad and approved the COGCC Form 2A.

DRILLING PROGRAM

Proposed Total Measured Depth: 20185 Feet TVD at Proposed Total Measured Depth 7730 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: 188 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? No

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 | 17+1/2 | 13+3/8 | J-55 | 54.5 | 0 | 589 | 920 | 589 | 0 |
| SURF | 12+1/4 | 9+5/8 | J-55 | 36 | 0 | 2818 | 900 | 2818 | 0 |
| 1ST | 8+1/2 | 5+1/2 | P-110 | 20 | 0 | 20185 | 3138 | 20185 | |
| NEW | 30 | 20 | A53B | 52.78 | 0 | 145 | 200 | 145 | 0 |

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 | 0 | 0 | 154 | 154 | 501-1000 | Groundwater Atlas | USGS HA-646 (Robson & Romero, 1981) |
| Groundwater | Laramie | 154 | 154 | 634 | 631 | 501-1000 | Groundwater Atlas | USGS HA-646 (Robson & Romero, 1981) |
| Groundwater | Fox Hills | 631 | 634 | 810 | 803 | 501-1000 | Groundwater Atlas | USGS HA-646 (Robson & Romero, 1981) |
| Confining Layer | Pierre Shale | 810 | 803 | 1067 | 1049 | | | |
| Groundwater | Upper Pierre Aquifer | 1067 | 1049 | 2157 | 1985 | 1001-10000 | Electric Log Calculation | Coslett B Unit 1X (05-123-12630) |
| Confining Layer | Pierre Shale | 2157 | 1985 | 5378 | 4363 | | | |
| Hydrocarbon | Larimer | 5378 | 4363 | 5937 | 4771 | | | Non-productive horizon. |
| Hydrocarbon | Shannon | 5378 | 4363 | 6990 | 5539 | | | |
| Hydrocarbon | Sussex | 5937 | 4771 | 5378 | 4363 | | | |
| Confining Layer | Pierre Shale | 6990 | 5539 | 10059 | 7613 | | | |
| Hydrocarbon | Sharon Springs | 10059 | 7613 | 10146 | 7618 | | | |
| Hydrocarbon | Niobrara | 10146 | 7618 | 10369 | 7883 | | | |
| Hydrocarbon | Codell | 10369 | 7883 | 10558 | 7905 | | | |

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being submitted for a sidetrack of the wellbore, the below is an account of what occurred prior to sidetracking and the proposed sidetrack procedure approved verbally by COGCC staff (see attached correspondence).

1. While drilling in the lateral section of our Cosslett East 1N-22H-H168 well, we were having difficulty steering the well and were becoming extremely close to drilling across a setback line to the east of the well. As we attempted to correct back to plan, we identified that we would likely drill past the setback line and potentially remain past the setback line for a significant portion of the remaining lateral to be drilled.
2. Total measured depth reached in the wellbore being plugged back: 18,436' MD
3. Casing set – size(s) and measured depth(s): 13-3/8" 54.5# Conductor Casing, Set at 589', 9-5/8" 36# Surface Casing, Set at 2,818'
4. Description of fish in the hole (if any) – including top and bottom measured depths: None
5. Description of proposed plugs: setting measured depths, heights, and cement volumes: None
6. Type of cement to be used for all plugs, including slurry weight (ppg) and yield (cf/sk): None
7. Measured depth of proposed sidetrack kick-off point: 12,450' MD
8. Proposed objective formation(s) for sidetrack hole: Codell
9. BHL target for sidetrack hole: Same BHL target as original wellbore.

Attached is a up to date wellbore diagram. There were no planned changes to BHL therefore no deviated drill plans or well plats are attached.

Distance from completed zone of this wellbore to nearest completed zone of an offset well within the same unit permitted or completed in the same formation was measured to the proposed Cosslett East 1M-22H-H168 operated by Crestone Peak Resources Operating LLC in 2D.

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells was measured to the DA Vert Coslett B Unit 1 (05-123-12595) operated by Vessels Oil & Gas. This distance was determined by the Anticollision report.

This application is in a Comprehensive Area Plan No CAP #: _____
Oil and Gas Development Plan Name Cosslett East 22H-H168 OGDP ID#: 482207
Location ID: 323151

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

Signed: _____ Print Name: Ashley Noonan

Title: Sr. Regulatory Analyst Date: 6/6/2023 Email: regulatory@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: 6/12/2023

Expiration Date: 10/25/2025

API NUMBER

05 123 51940 01

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 | 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. |
| Drilling/Completion Operations | Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document (option 4). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") 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 equip the well with at least a 5,000 psi wellhead and monitor casing (surface and production) pressures during the entire stimulation treatment. Surface and production casing pressures of this offset well list will be actively monitored during the entire stimulation treatment of this pad. If there is indication of communication between the stimulation treatment and an offset well, treatment will be stopped and COGCC Engineering notified. 014-20685 BURY CRANDELL #42-23 014-20688 HELEN #0-4-23 014-20707 CRANDELL #0-8-26 014-20708 HELEN #4-6-23 014-20712 BURY CRANDELL #6-0-23 123-47671 Cosslett #1C-22H-B168 123-47677 Cosslett #1D-22H-B168 123-47678 Cosslett #1E-22H-B168 123-47679 Cosslett #1A-22H-B168 |
| Drilling/Completion Operations | Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document) to mitigate the situation, 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. 014-12156 CRANDELL E UNIT #2 014-12170 HELEN E UNIT #1 014-13049 SHANNON ROBERTS #26-5 014-20649 HELEN #33-23 014-20636 ROBERTS #2 |
| 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 and from 500' below Shannon to 500' above Sussex. Verify coverage with a cement bond log. |
| 4 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 openhole 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)

Attachment List

| Att Doc Num | Name |
|--------------------|----------------------------|
| 403424136 | FORM 2 SUBMITTED |
| 403424594 | CORRESPONDENCE |
| 403424739 | OffsetWellEvaluations Data |
| 403425335 | WELLBORE DIAGRAM |

Total Attach: 4 Files

General Comments

| User Group | Comment | Comment Date |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| OGLA | The Oil and Gas Location, its associated Form 2A materials, and the Form 2 Application for Permit to Drill were fully reviewed and approved prior to the commencement of drilling operations for this well. Because this is an application for an unplanned sidetrack with drilling in progress, an Oil and Gas Location Assessment review is not applicable to this ongoing operation. | 06/07/2023 |
| Permit | Made the following changes with concurrence from the operator: <ul style="list-style-type: none"> •Corrected the Objective Formation on the Spacing & Formations tab to Codell. •Permitting review complete and task passed. | 06/07/2023 |
| Engineer | Sidetrack verbal approval given 4-Jun-2023 | 06/07/2023 |

Total: 3 comment(s)