

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:

401282690

## APPLICATION FOR PERMIT TO:

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

Date Received:

08/25/2017

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☒ OTHER \_\_\_\_\_Refiling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Hahn

Well Number: 3

Name of Operator: CATAMOUNT ENERGY PARTNERS LLC

COGCC Operator Number: 10464

Address: 1801 BROADWAY #1000

City: DENVER State: CO Zip: 80202

Contact Name: Nolan Redmond

Phone: (720)484-2344

Fax: (720)484-2363

Email: nredmond@catamountep.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160137

## WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 15 Twp: 33N Rng: 8W Meridian: N

Latitude: 37.099620

Longitude: -107.701570

Footage at Surface: 1058 Feet FNL/FSL FSL 1703 Feet FEL/FWL FEL

Field Name: IGNACIO BLANCO

Field Number: 38300

Ground Elevation: 6710

County: LA PLATA

GPS Data:

Date of Measurement: 07/19/2017 PDOP Reading: 1.9 Instrument Operator's Name: Nelson Ross

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

 1768 FSL 898 FEL 1978 FSL 660 FEL  
 Sec: 15 Twp: 33N Rng: 8W Sec: 15 Twp: 33N Rng: 8W

## LOCATION SURFACE &amp; MINERALS &amp; 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.)

N/2 SE/4 Sec. 15 T33N R8W

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: 448 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 560 Feet  
Building Unit: 1472 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 1000 Feet  
Above Ground Utility: 1248 Feet  
Railroad: 5280 Feet  
Property Line: 287 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: 1123 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 660 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

## OBJECTIVE FORMATIONS

| Objective Formation(s) | Formation Code | Spacing Order Number(s) | Unit Acreage Assigned to Well | Unit Configuration (N/2, SE/4, etc.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| FRUITLAND COAL         | FRLDC          | 112-195                 | 320                           | S/2                                  |

## DRILLING PROGRAM

Proposed Total Measured Depth: 3678 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: 1296 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 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? No

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 608

## 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 |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| SURF        | 12+1/4       | 8+5/8          | 24    | 0             | 520           | 365       | 520     | 0       |
| 1ST         | 7+7/8        | 5+1/2          | 17    | 0             | 3678          | 382       | 3678    | 0       |

☒ 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 \_\_\_\_\_

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

Location ID: 311900

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: Nolan Redmond

Title: Geo/Eng Tech Date: 8/25/2017 Email: nredmond@catamountep.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: 10/18/2017

Expiration Date: 10/17/2019

### API NUMBER

05 067 10011 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) Set at least 520' of surface casing per Rule 317 (g) cement to surface</p> <p>2) The two closest water wells within 1/4 mile radius of the proposed bottom hole shall be sampled (Cause 112 Orders 156-157, 180-181 and rule 608 if not done previously.</p> <p>3) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply:</p> <p>a.) Before proceeding, contact the COGCC Regional Engineer for SW Colorado for verbal approval and provide an explanation as to what happened to the original borehole and what the plan is for the sidetrack.</p> <p>Contact Information:<br/>Mark Weems – Regional Engineer-SW Colorado<br/>970-259-4587 off<br/>970-749-0624 cell<br/>mark.weems@state.co.us</p> <p>b.) Adhere to the instructions provided in the “UNPLANNED Sidetrack While Drilling: Approval and Reporting Process – Southwestern Colorado San Juan Basing ONLY” that can be found on the COGCC website at:</p> <p>Go to COGCC Web Site for more details if necessary<br/>Forms<br/>Form 2-Permit to Drill<br/>Instructions</p> <p>4) Contact COGCC Regional Engineer – Mark Weems when encountering kicks requiring a mud weight increase of 0.5 ppg to control the kick, unexpected water flows, and unexpected Hydrogen Sulfide.</p> |
|--|---|

## Best Management Practices

### No BMP/COA Type

### Description

|   |                                |  |
|---|--------------------------------|--|
| 1 | Drilling/Completion Operations | Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached. |
|---|--------------------------------|--|

Total: 1 comment(s)

## Applicable Policies and Notices to Operators

|  |
|--|
| Policy   |
| Notice Concerning Operating Requirements for Wildlife Protection.<br><a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a> |

## Attachment Check List

### Att Doc Num

### Name

|           |                       |
|-----------|-----------------------|
| 1857851   | SELECTED ITEMS REPORT |
| 401282690 | FORM 2 SUBMITTED      |
| 401376970 | DIRECTIONAL DATA      |

|           |                        |
|-----------|------------------------|
| 401376972 | DEVIATED DRILLING PLAN |
| 401376976 | WELL LOCATION PLAT     |
| 401387886 | SURFACE AGRMT/SURETY   |
| 401434543 | OFFSET WELL EVALUATION |

Total Attach: 7 Files

### General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit            | Final Review Completed. No LGD or public comment received.   | 10/16/2017          |
| Permit            | Per phone conversation with operator on 10/16/2017:<br>1) Corrected surface owner dropdown and lease information<br>2) Amended 317.p BMP.<br>3) Corrected distance from wellhead (560' N) to nearest building.   | 10/16/2017          |
| Permit            | Surface and minerals tab will require confirmation by operator.<br>317.p BMP will require editing by operator.   | 10/03/2017          |
| Permit            | Corrected date of GPS measurement to reflect well location plat.   | 10/03/2017          |
| Engineer          | <p>Alluvial Fresh Water Reservoirs<br/>The proposed gas well is located within an area where fresh water aquifers are mostly developed in an alluvial deposit of gravel and sandstone commonly found in river, stream, and ephemeral creek valleys. Water wells found in these locations can vary in depth from 10' to 200'. These aquifers are commonly identified as the San Jose and Nacimiento formations.</p> <p>Bedrock Aquifers<br/>The proposed gas well is located within an area where unconfined fresh water aquifers are mostly developed in bedrock formations consisting mainly of shale with intermittent sandstone stringers with limited areal extent or having pockets of isolated water reservoirs. Water wells found in these locations can vary in depth from 100' to 800'. These aquifers are commonly identified as the Animas formation.</p> <p>Respective to the proposed gas well, a one (1) mile radius of investigation of all offsetting fresh water wells has determined that the deepest surface casing required to protect the aquifers is a depth of 520' (includes a 50' margin of additional protection). The operator proposed a depth of 500' which is 20' less than the minimal requirement; so, the surface casing has been deepened to 520'. The surface casing on the proposed well will be cemented from total depth to surface. The production casing on the proposed gas well will also be cemented from total depth to surface. This will serve two purposes (1) it will isolate and confine all hydrocarbon and brackish waters to their respective zones and (2) it will provide double protection for the fresh water aquifers which includes two concentric (2) steel casing strings and two concentric external (2) cement sheaths extending from total depth to surface (see attached SELECTED ITEMS REPORT).</p> | 09/28/2017          |
| Engineer          | <p>Spacing &amp; Formations Tab:<br/>The reported distance of 1123' from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted completed in the same formation is acceptable (Catamount HAHN GAS UNIT A #2 - API #067-07894)</p> <p>Drilling and Waste Plans Tab:<br/>The reported distance of 1296' from proposed wellbore to nearest existing or permitted wellbore belonging to another operator (Including plugged wells) is acceptable (Red Willow GORE GAS UNIT A #15-3 - API #067-09165)</p> <p>All other wells within 1500' of the proposed well have sufficient cement and casing for fracture stimulating the proposed well.</p>  | 09/28/2017          |
| Permit            | Edit: - "Well Location" tab: top of prod zone footage changed from "660 FEL" to match the PLAT footage of "898 FEL".<br>Passed Completeness.   | 09/01/2017          |

Total: 7 comment(s)