

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:
401313983

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

Date Received:
07/13/2017

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

Refiling
Sidetrack

Well Name: IGS Well Number: 145B
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: NENE Sec: 20 Twp: 33N Rng: 8W Meridian: N
Latitude: 37.093510 Longitude: -107.735550

Footage at Surface: 1167 Feet FNL/FSL FNL 1081 Feet FEL/FWL FEL

Field Name: IGNACIO BLANCO Field Number: 38300
Ground Elevation: 6752 County: LA PLATA

GPS Data:
Date of Measurement: 06/07/2017 PDOP Reading: 1.8 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
785 FNL 2463 FEL 660 FNL 2575 FWL
Sec: 20 Twp: 33N Rng: 8W Sec: 20 Twp: 33N Rng: 8W

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.)

NE/4, N/2NW/4, SE/4NW/4, S20 T33N R8W

Total Acres in Described Lease: 280 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: 660 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 656 Feet

Building Unit: 985 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 1053 Feet

Above Ground Utility: 1045 Feet

Railroad: 5280 Feet

Property Line: 152 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: 06/07/2017

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: 1275 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	N/2

DRILLING PROGRAM

Proposed Total Measured Depth: 3899 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: 35 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? 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	365	250	365	0
1ST	7+7/8	5+1/2	17	0	3899	500	3899	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: 311896

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: 7/13/2017 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: Matthew Lee Director of COGCC Date: 10/18/2017

Expiration Date: 10/17/2019

API NUMBER
05 067 10010 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>
	<p>1) 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>Because there are two (2) PA conventional wells within a 1/4 mile of the proposed well, the distance to find water wells to test increases from 1/4 mile to 1/2 mile. 05-067-05795 ,MCELVAIN_UNIT1 - AMERADA HESS CORP</p> <p>2) 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: Mark Weems – Regional Engineer-SW Colorado 970-259-4587 off 970-749-0624 cell 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 Forms Form 2-Permit to Drill Instructions</p> <p>3) 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> <p>4) 05-067-05795,MCELVAIN_UNIT1 - AMERADA HESS CORP and for the 05-067-08244 - Elm Ridge Expl: Conduct onsite surface field inspections of the surrounding grass & foliage for these two)2) wells in addition to installing soil vapor monitoring tubes.</p>

Best Management Practices

<u>No BMP/COA Type</u>	<u>Description</u>
1 Drilling/Completion Operations	<p>One of the first wells drilled on the pad will be logged with Casedhole Pulsed Neutron Log with Gamma Ray Log from TD 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 Form 5, Completion Report, for each well on the pad will list all logs run in that well and have those logs attached. The Form 5 for each well shall clearly state “No open-hole logs were run” and shall reference the Rule 317.p Exception granted for the well.</p> <p>The existing open hole well log was taken on the IGS 111 well (067-09139).</p>

Total: 1 comment(s)

Applicable Policies and Notices to Operators

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

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1857845	SELECTED ITEMS REPORT
401313983	FORM 2 SUBMITTED
401338631	DIRECTIONAL DATA
401338643	WELL LOCATION PLAT
401338646	DEVIATED DRILLING PLAN
401348986	SURFACE AGRMT/SURETY
401433422	OFFSET WELL EVALUATION

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Per phone conversation with operator, corrected distance to nearest building unit to 985' (NE).	10/02/2017
Permit	317.p BMP has been updated, per operator request.	09/27/2017
Permit	Final Review Completed.	09/08/2017
Permit	Corrected 317.p BMP, as there is currently a resistivity log of acceptable quality on another well on this pad (067-09139).	09/08/2017

Engineer	<p>This is a build and hold directional well bore (straight line-constant angle). The operator will likely fracture stimulate this well.</p> <p>Alluvial Fresh Water Reservoirs 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 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 382' (includes a 50' margin of additional protection). The operator proposed a depth of 365' which is 17' shallower than the minimal requirement. The surface casing will be deepened to a depth of 382'. 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> <p>The offsetting logs within 1500 feet of this proposed well bore do not indicate any deeper probable fresh water aquifers.</p> <p>Spacing & Formations Tab: Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted completed in the same formation is acceptable.</p> <p>Drilling and Waste Plans Tab: Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator (Including plugged wells)" is acceptable 05-067-08244, Herrera B 1A - Elm Ridge Expl.</p> <p>There are two (2) plugged and abandoned wells within a 1500 feet of the proposed well bore: (1) 05-067-05795, MCELVAIN UNIT 1 AMERADA HESS CORP and (2) 05-067-08244, Herrera B 1A Elm Ridge Expl. A review of the PA submitted reports from the operators indicate the wells were plugged properly.</p> <p>Soil Gas Survey for PA Well Within a ¼ Mile Since the plugged and abandoned wells depicted above are located within a ¼ mile of the proposed gas well, a soil gas vapor monitoring program shall be designed to determine a possible lack of zonal isolation along wellbores of the plugged and abandoned well to help determine whether or not there is lack of zonal isolation of formation fluids and whether or not they are migrating to surface (Rule 608 a. (2))</p> <p>Since the PA wells were conventional gas wells, the areal extent for sampling water wells will extend from 1/4 mile to 1/2 mile.</p> <p>All other well bores within 1500' of the proposed well bore have more than 200' of cement above the Fruitland coal.</p>	08/22/2017
LGD	A land use permit will be required from the La Plata County Planning Department	08/04/2017

Permit	Passed Completeness. Added wellbore email, per Operator's request.	08/04/2017
Permit	Returned to draft for: - Buffer zone notification <30 days before upload - missing wells used for open hole loggin exception (Rule 317.p.)	07/21/2017
Permit	Returned to draft for: - "Well Name & Contact Info" tab: the "Plugging and Abandonment Bond Surety ID" is expired, please replace with the current active plugging surety ID - "Surface & Minerals" tab: the right to construct is listed as "Surface Use Agreement", but there is no "Surface Use Agreement" attachment - "Cultural Setbacks" tab: there is no date given for "Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners" - "Operator BMP/COA" tab: the Rule 317.p. MBP references an Exception, but no openhole logging exception is attached, nor is there an openhole logging exception request attached	07/20/2017

Total: 9 comment(s)