

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:

403159011

Date Received:

05/19/2023

APPLICATION FOR PERMIT TO

Drill Deepen Re-enter Recomplete and Operate

Amend

TYPE OF WELL OIL GAS COALBED OTHER: _____

Refile

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Sidetrack

Well Name: Ardourel 33081718 Well Number: 3HL
Name of Operator: NUEVIDA RESOURCES LLC COGCC Operator Number: 10764
Address: 5950 CEDAR SPRINGS RD STE #100
City: DALLAS State: TX Zip: 75235
Contact Name: Richard Pate Phone: (303)550-4880 Fax: ()
Email: dpate@nuevidaresources.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): 20200199

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: Lot 3 Sec: 18 Twp: 33N Rng: 8W Meridian: N

Footage at Surface: 1773 Feet FSL 292 Feet FWL

Latitude: 37.101193 Longitude: -107.767596

GPS Data: GPS Quality Value: 1.8 Type of GPS Quality Value: PDOP Date of Measurement: 12/22/2020

Ground Elevation: 6719

Field Name: IGNACIO BLANCO Field Number: 38300

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: 18 Twp: 33N Rng: 8W Footage at TPZ: 1766 FSL 600 FWL

Measured Depth of TPZ: 7541 True Vertical Depth of TPZ: 7109 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 17 Twp: 33N Rng: 8W Footage at BPZ: 1766 FSL 600 FEL
Measured Depth of BPZ: 17057 True Vertical Depth of BPZ: 7059 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 17 Twp: 33N Rng: 8W Footage at BHL: 1767 FSL 491 FEL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: LA PLATA 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.? No

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: 07/21/2022

Comments:

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
[] 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.)

Township 33 North, Range 8 West, N.M.P.M.
Section 17: All
Section 18: Lots 1(39.49), 2(40.12), 3(40.23), 4(39.68), E/2W/2, E/2 (a/k/a All)

Total Acres in Described Lease: 1280 Described Mineral Lease is: Fee State Federal Indian
Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2637 Feet
Building Unit: 2637 Feet
Public Road: 1773 Feet
Above Ground Utility: 1250 Feet
Railroad: 5280 Feet
Property Line: 292 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.) |
|------------------------|----------------|-------------------------|-------------------------------|---|
| MANCOS | MNCS | 112-299 | 1280 | T33N, R8W, Sec. 17: All; Section 18: Lots 1, 2, 3, 4, E½W½, E½ (a.k.a. All) |

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: 600 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: 5280 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

DRILLING PROGRAM

Proposed Total Measured Depth: 17167 Feet TVD at Proposed Total Measured Depth 7058 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: 114 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 |
|-------------|--------------|----------------|--------|-------|---------------|---------------|-----------|---------|---------|
| SURF | 17+1/2 | 13+3/8 | J-55 | 54.5 | 0 | 500 | 509 | 500 | 0 |
| 1ST | 12+1/4 | 9+5/8 | L-80HC | 40 | 0 | 6269 | 2695 | 6269 | 0 |
| 2ND | 8+1/2 | 5+1/2 | P-110 | 20 | 0 | 17167 | 3233 | 17167 | 5269 |

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 | ANIMAS | 10 | 10 | 1570 | 1570 | 0-500 | Groundwater Sample | |
| Groundwater | LOWER ANIMAS | 1570 | 1570 | 1780 | 1780 | 1001-10000 | USGS | WRI 4188 |
| Confining Layer | KIRTLAND | 1780 | 1780 | 1960 | 1960 | | USGS | WRI 95-4190 |
| Hydrocarbon | FARMINGTON SAND | 1960 | 1960 | 2499 | 2499 | | USGS | WRI 95-4190 |
| Confining Layer | KIRTLAND SHALE (LOWER) | 2499 | 2499 | 2671 | 2669 | | USGS | WRI 95-4190 |
| Hydrocarbon | FRUITLAND COAL | 2671 | 2669 | 3110 | 3106 | | USGS | WRI 4188 |
| Hydrocarbon | PICTURED CLIFFS | 3110 | 3106 | 3388 | 3382 | | USGS | WRI 4188 |
| Confining Layer | LEWIS SHALE | 3388 | 3382 | 4871 | 4859 | | USGS | WRI 4188 |
| Hydrocarbon | CLIFF HOUSE (MV) | 4871 | 4859 | 5309 | 5295 | | USGS | WRI 4188 |
| Hydrocarbon | MENEFEE (MV) | 5309 | 5295 | 5574 | 5558 | | USGS | WRI 4188 |
| Hydrocarbon | POINT LOOKOUT (MV) | 5574 | 5558 | 5970 | 5953 | | USGS | WRI 95-4190 |
| Confining Layer | MANCOS SHALE | 5970 | 5953 | 6700 | 6673 | | USGS | WRI 95-4190 |
| Hydrocarbon | MANCOS-MIDDLE | 6700 | 6673 | 7304 | 7274 | | USGS | WRI 95-4190 |

OPERATOR COMMENTS AND SUBMITTAL

Comments

- This well has a bottom hole location beyond the unit boundary setback for operational/cementing purposes. The bottom of the completed interval will be within the unit boundary of 600' FEL x 1766' FSL. The wellbore beyond the boundary set back will be isolated and will not be completed.
- NueVida Resources has no operated wells in the unit.
- There are no producing wells in the Mancos formation located in the unit.
- The Mancos TVD in the Ardourel #4U lateral wellbore is 7109'.
- The nearest well (non-operated) in the unit penetrating through the Mancos (per manual calculation) is at 240'. Harmon A-1A (API: 05-067-08194), Status : PR-DK. TD=8015'
- Wells within 150' of Ardourel #3HL lateral wellbore:
 1. SHALLOW OFFSET: 114', Slugger #1A (05-067-07461). FC, TD=3100'; Status: P&A 3/6/2007.
 2. SHALLOW OFFSET: 116', Helton MV GU#1 (05-067-05412). MV, TD=5715'; Status-PR.
 3. SHALLOW OFFSET: 116' Ignacio 33-8-18 (05-067-05406).FC, TD=2840'; Status: P&A 6/27/1979.
- Wellbore to wellbore distances populated from attached anti-collision report unless otherwise indicated.
- NueVida Resources will isolate the Animas/OjO Alamo formation (potential fresh water source) with surface casing set at 500' and intermediate casing set at 6300', both strings cemented to surface. Deepest water well (SESW 13-T33N-R9W) is approximately 3500' from Ardourel #3HL wellbore and has a TD=320'.

This application is in a Comprehensive Area Plan No CAP #:
 Oil and Gas Development Plan Name Ardourel OGDG OGDG ID#: 483343
 Location ID: 484496

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

Signed: _____

Print Name: RICHARD PATE _____

Title: CHIEF OPERATING OFFICER _____

Date: 5/19/2023 _____

Email: dpate@nuevidaresources.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: 7/10/2023 _____

Expiration Date: 05/16/2026 _____

| |
|--------------------------------------|
| API NUMBER 05 067 10037 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)The First String (9 5/8" casing) shall be cemented from the casing shoe to the surface by circulation methods. Verify production casing cement coverage with a cement bond log.</p> <p>2) The two closest water wells within 1/4 mile radius of the proposed lateral shall be sampled & analyzed (Cause 112 Orders 156-157 and rule 615) if not done previously.</p> <p>3) Oil based drilling fluid can only be used after all groundwater has been isolated.</p> <p>4) If borehole problems occur while drilling and an unplanned sidetrack is required, the following shall apply: a.) Before proceeding, contact the COGCC Engineer for verbal approval and provide an explanation as to what happened to the original borehole and what the plan is for the sidetrack. Contact Information: Alicia Duran – Area Engineer 303-548-7396 cell alicia.duran@state.co.us b.) Adhere to the instructions provided in the “UNPLANNED Sidetrack While Drilling: Approval and Reporting Process – Statewide” that can be found on the COGCC website at: Go to COGCC Web Site for more details if necessary Regulation, Forms, Form 2-Permit to Drill, Instructions</p> <p>4) Contact COGCC Engineer – Alicia Duran when encountering kicks requiring a mud weight increase of 0.5 ppg to control the kick, unexpected water flows, and unexpected Hydrogen Sulfide.</p> |
|--|---|

1 COA

Best Management Practices

| No | BMP/COA Type | Description |
|-----------|--|--|
| 1 | Wildlife | If new oil and gas operations must occur within CPW-mapped mule deer and elk severe winter range and/or winter concentration areas, the operator agrees to conduct new oil and gas operations outside the time period from December 1 through April 30. |
| 2 | Material Handling and Spill Prevention | Operator will use leak detection and monitoring during completions operations. |
| 3 | Material Handling and Spill Prevention | Operator will ensure that a fueling contractor is present during the entire fueling process to prevent overfilling, leaks and drips from improper connections. |
| 4 | Emissions mitigation | Operator will not use fracturing fluids which contain PFAS compounds. |
| 5 | Emissions mitigation | Venting/Flaring: Operator will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations |
| 6 | Odor mitigation | Operator will ensure that all drilling fluid is removed from pipes before storage. |
| 7 | Odor mitigation | Operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore. |
| 8 | Odor mitigation | Operator will cover trucks transporting drill cuttings. |
| 9 | Drilling/Completion Operations | One of the initial wells on the Ardourel 33081718 Pad (#3HL or #4HU) will be logged with an OH gamma-ray and resistivity from the base of the intermediate string to the surface casing. The wells will have a cement bond log and gamma ray ran on both the intermediate and production casing strings into the bottom of the surface casing. The horizontal portion (including the base of the intermediate string to the kick-off point) of the of the wells will be logged with a MWD-LWD drilling system. The LWD tools will consist of a gamma-ray (GR) and resistivity (Rt). The Form 5, Completion Report, for each well will list all the logs run and will be attached to the report. In the well that no OH logs will be run, a statement in the Form 5 will include: Alternative Logging Program (i.e. alternative well): No OH logs were run on this well and the OH logs (list of OH logs) were ran on the "alternate well"(identifying the specific well and API #). |

Total: 9 comment(s)

Attachment List

| Att Doc Num | Name |
|--------------------|----------------------------|
| 403159011 | FORM 2 SUBMITTED |
| 403307462 | OffsetWellEvaluations Data |
| 403307564 | DIRECTIONAL DATA |
| 403307570 | DEVIATED DRILLING PLAN |
| 403307572 | DEVIATED DRILLING PLAN |
| 403307583 | WELL LOCATION PLAT |
| 403316705 | WELLBORE DIAGRAM |
| 403458802 | OFFSET WELL EVALUATION |

Total Attach: 8 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit | Final Review Completed. | 07/10/2023 |
| Engineer | The potential flow and confining formation table lists groundwater below the depth of the planned surface casing. That groundwater will be isolated by fully cementing the production casing as required by commission order. | 07/05/2023 |
| Engineer | A one 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 458' (includes a 50' margin of additional protection corrected for elevation differences). The operator proposed a depth of 500' which is adequate. | 07/05/2023 |
| Engineer | Offset Well Evaluation: Existing offset wells within 1500' meet standards. No mitigation required. | 07/05/2023 |
| Permit | Operator supplied unit information, updated Safety Setbacks, and well logging BMP, which have all been input into this form. | 06/16/2023 |
| Permit | Missing unit information. Please confirm. Check Safety Setbacks for accuracy. Missing well logging BMP (see guidance document on COGCC website). | 06/15/2023 |
| OGLA | The Commission approved OGDG #483343 on May 17, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed. | 05/31/2023 |

Total: 7 comment(s)