

FORM

2

Rev
10/24

State of Colorado

Energy & Carbon Management Commission

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Document Number:

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Date Received:

12/02/2024

APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☐TYPE OF WELL OIL ☐ GAS ☒ COALBE ☐ GEOTHERMAL ☐ OTHER: _____Refile ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Ardourel 33081718

Well Number: 5HL

Name of Operator: NUEVIDA RESOURCES LLC

ECMC Operator Number: 10764

Address: 5950 CEDAR SPRINGS RD STE #100

City: DALLAS

State: TX

Zip: 75235

Contact Name: Richard Pate

Phone: (303)5504880

Fax: ()

Email: dpate@nuevidaresources.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

ECMC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the ECMC 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: 1813 Feet FNL/FSL FSL 286 Feet FEL/FWL FWL

Latitude: 37.101301

Longitude: -107.767616

GPS Data:

GPS Quality Value: 1.7

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: 1900 FNL 600 FWL

Measured Depth of TPZ: 7710

True Vertical Depth of TPZ: 7093 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 17 Twp: 33N Rng: 8WFootage at BPZ: 1900 FNL 600 FELMeasured Depth of BPZ: 17207True Vertical Depth of BPZ: 7110 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 17 Twp: 33N Rng: 8WFootage at BHL: 1900 FNL 480 FELFNL/FSLFEL/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 and §37-90.5-107(2)(b)(I) C.R.S, the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas or Geothermal Locations.

The Energy and Carbon Management Act and the Geothermal Resources Act provide 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.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☒ Yes ☐ No☒ 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: 07/21/2022Comments:

GEOTHERMAL

Well Overview

The following questions determine informational requirements based on Well type:

Which type of Geothermal Well is this? Select one of the following:

Will this well be constructed using cementing methodologies other than those listed in Rule 408.f?

If Yes, what method will be used:

Please describe the cementing method to be used in detail:

Geothermal Resource Units

Fill out the information below to submit an application for a Geothermal Resource Unit (GRU) as part of the current permit application. This may also be completed later using a Form 4 Sundry.

Will this Well be in an existing GRU?

Are you submitting your application for a new GRU as part of the current application?

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

Surface Owner of the land at this Well's Oil and Gas Or Geothermal Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Mineral Owner beneath this Well's Oil and Gas Or Geothermal Location: ☒ 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):

- ☒ 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), 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: 2677 Feet

Building Unit: 2677 Feet

Public Road: 1813 Feet

Above Ground Utility: 1290 Feet

Railroad: 5280 Feet

Property Line: 286 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, Section 17; All; Section 18: Lots 1,2,3,4, E1/2W1/2, E1/2 (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: 666 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: 17328 Feet

TVD at Proposed Total Measured Depth 7110 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: 43 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	26	20	J55	94.0	0	500	1366	500	0
1ST	17+1/2	13+3/8	K55-HC	54.5	0	3380	2572	3380	
2ND	12+1/4	9+5/8	L80-HC	40.0	0	6484	1768	6484	
3RD	8+1/2	5+1/2	P110	20.0	0	17328	2924	17238	

☒ 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	1600	1570	0-500	USGS	WRI 4188
Groundwater	Lower Animas	1600	1570	1802	1747	1001-10000	USGS	WRI 95-4190
Confining Layer	Kirtland	1802	1747	1970	1930		USGS	WRI 95-4190
Hydrocarbon	Farmington Sand	1970	1930	2020	1980		USGS	WRI 95-4190
Confining Layer	Kirtland Shale (lower)	2020	1980	2741	2656		USGS	WRI 4188
Hydrocarbon	Fruitland Coal	2741	2656	3202	3102		USGS	WRI 4188
Hydrocarbon	Picture Cliffs	3202	3102	3302	3197		USGS	WRI 4188
Confining Layer	Lewis Shale	3302	3197	5080	4854		USGS	WRI 4188
Hydrocarbon	Cliff House (MV)	5080	4854	5465	5290		USGS	WRI 4188
Hydrocarbon	Menefee (MV)	5465	5290	5695	5553		USGS	WRI 4188
Hydrocarbon	Point Lookout (MV)	5695	5553	6120	5948		USGS	WRI 95-4190
Confining Layer	Mancos Shale	6120	5948	6910	6670		USGS	WRI 95-4190
Hydrocarbon	Middle Mancos	6910	6670	17328	7710		USGS	WRI 95-4190

OPERATOR COMMENTS AND SUBMITTAL

Comments

1. This well has a bottom-hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 1900' FNL and 600' FEL of Section 17. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.
2. NueVida Resources recently completed 2 horizontal Mancos wells in August 2024 (#3HL: API 05-067-10037 and #4HU-ST1: API 05-067-10038-01). Both the #3HL (TVD @ 7,118') and #4HU-ST1 (TVD @ 6,874') are producing from the Middle Mancos interval(s). The #3HL is a W-E lateral located @ 1652' FSL x 600' FEL; the #4HU-ST1 is a W-E lateral located at 2,566' FNL x 600' FEL.
3. The nearest well (non-operated) in the unit penetrating through the Mancos (per manual calculation) is at 580". The VD Helton #1 well (API: 05-067-05749); Status: PR-DK, TD @ 7,949'.
4. There are 2 wells located within less than 150 ft. Both wells are shallow CBM wells: Julian GU #2 (API: 05-067-09751) TD @ 3040' and Harmon 33-8-17 #3 (API: 05-067-09365) TD @ 3320'. The Ardourel #5HL TVD is projected @ 7110'. Refer to the Attachment for Offset Well Evaluations Data for detail.
5. Wellbore to wellbore distances populated from attached anti-collision report unless otherwise indicated.
6. NueVida Resources will isolate the Animas/Ojo Alamo formation (potential fresh water sources) with surface casing set @ 500' and cemented to surface. Deepest water well (SESW 10-T33N-R9W) is approximately 3500' from the Ardourel #5HL wellbore and has a TD=320'.

This application is in a Comprehensive Area Plan No CAP #: _____
Oil and Gas Development Plan Name Ardourel OGD OGD 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: COO - VP Engr/Opns Date: 12/2/2024 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 ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved:  Director of ECMC Date: 12/20/2024
Expiration Date: 05/16/2026

API NUMBER

05 067 10055 00

CONDITIONS OF APPROVAL, IF ANY LIST

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

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. 067-05749 V D HELTON *1
Drilling/Completion Operations	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 5 psig is observed or if there is evidence of communication, Operator must contact ECMC engineering for approval prior to stimulation. 2) A post-production test within 60 days after first sales.
Drilling/Completion Operations	1) Submit Form 42 electronically to ECMC 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) Operator shall provide cement coverage from the end of Intermediate Casing (1st and 2nd strings) to a minimum of 500' above Farmington Sand. Verify intermediate casing cement coverage with a cement bond log or circulation to surface. 3) Operator shall provide cement coverage from TD to a minimum of 500' above Mancos. Verify production casing (3rd string) cement coverage with a cement bond log. 4) Oil based drilling fluid can only be used after all groundwater has been isolated.
3 COAs	

Best Management Practices

No BMP/COA Type

Description

1	Drilling/Completion Operations	An existing well on the pad was logged with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for one of the stratigraphically deepest wells on the pad. 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 will state "Alternative Logging Program - No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which open-hole logs were run.
2	Drilling/Completion Operations	Operator will insure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.

Total: 2 comment(s)

ATTACHMENT LIST

Att Doc Num

Name

404011171	FORM 2 SUBMITTED
404011178	OffsetWellEvaluations Data

404011179	WELL LOCATION PLAT
404011180	DEVIATED DRILLING PLAN
404011181	DEVIATED DRILLING PLAN
404011182	OFFSET WELL EVALUATION
404011183	WELLBORE DIAGRAM
404011185	DIRECTIONAL DATA

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/19/2024
Permit	<p>Per operator regarding well logging program:</p> <p>1. Open Hole Logs (GR-Resistivity-Sonic-Caliper) were ran in the Ardourel 33081718 #3HL well on August 22, 2023. These logs were submitted with Form 5 (#3HL: 05-067-10037). These OH logs fulfilled the requirement for the Ardourel 33081718 Multi-Well Pad and the #2HU & #5HL will not require OH logs.</p> <p>2. MWD with GR-Resistivity will be ran on both the proposed Ardourel #2HU and #5HL wells.</p> <p>3. GR-CCL-CBL logs will be ran in both wells (Ardourel #2HU & #5HL) on all intermediate and production casing strings. All CBL logs will be run to surface.</p>	12/18/2024
Permit	Slight corrections to well location information to reflect well location plat. Contacted operator to provide well logging BMP.	12/18/2024
Engineer	<p>67 water wells within 1 mile deepest water well 408'</p> <p>Production within 1 mile: MNCS, MVRD, DKTA, FRLDC, FRLD.</p> <p>Offset well evaluation within 1500' of wellbore completed.</p>	12/13/2024
OGLA	The Commission approved OGDG #483343 on May 17, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	12/03/2024

Total: 5 comment(s)