

FORM
2

Rev
10/24

State of Colorado

Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



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: 2HU
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: 1753 Feet ^{FNL/FSL} FSL 295 Feet ^{FEL/FWL} FWL

Latitude: 37.101138 Longitude: -107.767586

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: 659 ^{FSL} 600 ^{FWL}

Measured Depth of TPZ: 7512 True Vertical Depth of TPZ: 6924 ^{FNL/FSL} ^{FEL/FWL}

Base of Productive Zone (BPZ)

Sec: 17 Twp: 33N Rng: 8W Footage at BPZ: 600 FSL 600 FEL
Measured Depth of BPZ: 17040 True Vertical Depth of BPZ: 6954 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 17 Twp: 33N Rng: 8W Footage at BHL: 600 FSL 480 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 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: 07/21/2022

Comments:

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: 2617 Feet
Building Unit: 2617 Feet
Public Road: 1753 Feet
Above Ground Utility: 1230 Feet
Railroad: 5280 Feet
Property Line: 295 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,E/1/2W1/2,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: 1052 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: 17161 Feet TVD at Proposed Total Measured Depth 6954 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: 425 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	3413	2592	3413	
2ND	12+1/4	9+5/8	L80-HC	40.0	0	6481	1811	6481	
3RD	8+1/2	5+1/2	P110	20.0	0	17161	2899	17161	

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	USGS	WRI 4188
Groundwater	Lower Animas	1600	1570	1832	1797	1001-10000	USGS	WRI 95-4190
Confining Layer	Kirtland	1832	1797	2000	1960		USGS	WRI 95-4190
Hydrocarbon	Farmington Sand	2000	1960	2050	2010		USGS	WRI 95-4190
Confining Layer	Kirtland Shale (lower)	2050	2010	2771	2686		USGS	WRI 4188
Hydrocarbon	Fruitland Coal	2771	2686	3232	3132		USGS	WRI 4188
Hydrocarbon	Picture Cliffs	3232	3132	3332	3227		USGS	WRI 4188
Confining Layer	Lewis Shale	3332	3227	5110	4884		USGS	WRI 4188
Hydrocarbon	Cliff House (MV)	5110	4884	5495	5320		USGS	WRI 4188
Hydrocarbon	Menefee (MV)	5495	5320	5725	5583		USGS	WRI 4188
Hydrocarbon	Point Lookout (MV)	5725	5583	6150	5978		USGS	WRI 95-4190
Confining Layer	Mancos Shale	6150	5978	6940	6700		USGS	WRI 95-4190
Hydrocarbon	Middle Mancos	6940	6700	7512	6954		USGS	WRI 95-4190

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.

<u>COA Type</u>	<u>Description</u>
Drilling/Completion Operations	<p>Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test:</p> <p>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.</p> <p>2) A post-production test within 60 days after first sales.</p>
Drilling/Completion Operations	<p>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 actively monitor casing (surface, intermediate, and production) pressures 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 ECMC Engineering notified. Stimulation shall not resume without explicit approval from ECMC Engineering. Within 60 days after stimulation is complete, a Form 4 Sundry shall be submitted for each offset well on this list describing how Option 4 work was completed and include a summary of the monitoring details.</p> <p>067-10037 ARDOUREL 33081718 *3HL (Bradenhead history) 067-10038 ARDOUREL 33081718 *4HU-ST1 (Bradenhead history)</p>
Drilling/Completion Operations	<p>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.</p> <p>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.</p> <p>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.</p> <p>4) Oil based drilling fluid can only be used after all groundwater has been isolated.</p>
3 COAs	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	<p>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.</p>
2	Drilling/Completion Operations	<p>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.</p>

Total: 2 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
404011101	FORM 2 SUBMITTED
404011103	WELL LOCATION PLAT
404011104	DEVIATED DRILLING PLAN
404011105	DEVIATED DRILLING PLAN
404011106	OFFSET WELL EVALUATION
404011167	DIRECTIONAL DATA
404011168	OffsetWellEvaluations Data
404011186	WELLBORE DIAGRAM

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	Per operator regarding well logging program: 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. 2. MWD with GR-Resistivity will be ran on both the proposed Ardourel #2HU and #5HL wells. 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.	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	67 water wells within 1 mile deepest water well 408' Production within 1 mile: MNCS, MVRD, DKTA, FRLDC, FRLD. Offset well evaluation within 1500' of wellbore completed. 3 DKTA wells: 067-08182 HARMON *1A, 067-08194 HARMON A *1A, 067-08185 JULIAN *1A	12/10/2024
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)