

FORM

2

Rev
05/22

State of Colorado

Energy & Carbon Management Commission

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03/19/2024

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: Rusch

Well Number: 2W4CM

Name of Operator: NICKEL ROAD OPERATING LLC

ECMC Operator Number: 10669

Address: 3773 CHERRY CRK NORTH DR #670

City: DENVER

State: CO

Zip: 80209

Contact Name: ERIN LIND

Phone: (303)2267375

Fax: ()

Email: erin.lind@nickelroadoperating.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): 20230163

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: NESE Sec: 3 Twp: 7N Rng: 65W Meridian: 6

Footage at Surface: 1765 Feet FNL/FSL FSL 579 Feet FEL/FWL FEL

Latitude: 40.600383

Longitude: -104.641407

GPS Data:

GPS Quality Value: 1.4

Type of GPS Quality Value: PDOP

Date of Measurement: 11/07/2017

Ground Elevation: 4886

Field Name: WATTENBERG

Field Number: 90750

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: 3 Twp: 7N Rng: 65W

Footage at TPZ: 525

FNL

460

FEL

Measured Depth of TPZ: 8682

True Vertical Depth of TPZ: 7292

FNL/FSL

FEL/FWL

Base of Productive Zone (BPZ)Sec: 4 Twp: 7N Rng: 65WFootage at BPZ: 525 FNL 460 FWLMeasured Depth of BPZ: 18303True Vertical Depth of BPZ: 7315 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 4 Twp: 7N Rng: 65WFootage at BHL: 525 FNL 150 FWL

FNL/FSL

FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATIONCounty: WELDMunicipality: 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.? Yes

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? ☒ 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: 09/17/2020Comments: 1041WOGLA20-0055**SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION**Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ IndianMineral Owner beneath this Well's Oil and Gas 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.)

SEE LEASE MAP ON FILETotal Acres in Described Lease: 134Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 840 Feet
Building Unit: 871 Feet
Public Road: 573 Feet
Above Ground Utility: 550 Feet
Railroad: 5280 Feet
Property Line: 579 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.)
CODELL	CODL	407-2931	1280	T7N R65W SEC.3&4: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: 460 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: 173 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: 18613 Feet

TVD at Proposed Total Measured Depth 7316 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: 640 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

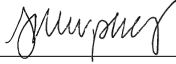
Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26	16	A52A	36.94	0	40	170	40	0
SURF	13+1/2	9+5/8	J55	36	0	1825	805	1825	0
1ST	8+1/2	5+1/2	EPP110	20	0	18613	2949	18613	1000

☐ 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	FOX HILLS SANDSTONE	0	0	360	360	1001-10000	DWR	
Confining Layer	PIERRE SHALE	360	360	1230	1230			
Groundwater	UPIR/PAWNEE AQUIFER	1230	1230	1700	1700	1001-10000	Other	COGCC UPWQ STUDY
Confining Layer	PIERRE SHALE	1700	1700	3938	3938			
Hydrocarbon	PARKMAN	3938	3938	4095	4095			
Confining Layer	PIERRE SHALE	4095	4095	4450	4450			
Hydrocarbon	SUSSEX	4450	4450	4720	4720			
Confining Layer	PIERRE SHALE	4720	4720	5211	5211			
Hydrocarbon	SHANNON	5211	5211	5365	5365			
Confining Layer	PIERRE SHALE	5365	5365	7649	6956			
Subsurface Hazard	SHARON SPRINGS SHALE	7649	6956	7686	6986			LEAST COMPETENT SHALES
Hydrocarbon	NIOBRARA	7686	6986	8207	7271			
Confining Layer	FORT HAYS	8207	7271	8372	7291			
Hydrocarbon	CODELL	8372	7291	18613	7316			CODELL TARGET

OPERATOR COMMENTS AND SUBMITTAL

Comments	<p>The following changes from the previously approved Form 2 are being made:</p> <ul style="list-style-type: none">- Well name and number- TPZ, BPZ & BHL footages- Objective Formation- Nearest well in DSU and offset well distances- Casing / Cementing program- PFZ Table data- Revised Well Location Plat, Deviated Drilling Plan, Directional Data Template and Offset Well Evaluation are attached <p>Distance from completed portion to nearest completed portion of wellbore permitted/completed in the same formation and subject to the proposed spacing order measured to the proposed Rusch 1W4NBM (123-51559). Distance measured in 3D anti-collision.</p> <p>Distance to nearest wellbore belonging to another operator measured to the TOPAZ EAST 12 (BAYSWATER /05-123-51537 / PR). There are no other operator wells with a treated interval less 175' from the treated interval of the proposed well. Distance measured in 2D map view.</p> <p>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 525' FNL and 460' FWL of Section 4. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.</p>
<p>This application is in a Comprehensive Area Plan No CAP #: _____</p> <p>Oil and Gas Development Plan Name _____ OGD ID#: _____</p> <p>Location ID: 479158 _____</p> <p>I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.</p> <p>Signed: _____ Print Name: ERIN LIND _____</p> <p>Title: REG & ENV MANAGER Date: 3/19/2024 Email: erin.lind@nickelroadoperating.c</p> <p>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).</p> <hr/> <p>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.</p> <p>ECMC Approved:  Director of ECMC Date: 6/16/2024 _____</p> <p>Expiration Date: 06/15/2027 _____</p> <div style="border: 2px solid black; padding: 10px; width: fit-content;"><p>API NUMBER</p><p>05 123 51558 00</p></div>	

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>
Construction	If conductors are preset, operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016).
Drilling/Completion Operations	Operator will ensure 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.
Construction	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
Drilling/Completion Operations	Operator will log two (2) additional wells during the first rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the stratigraphically deepest wells on each side of the pad for a total of three wells logged"
Drilling/Completion Operations	Per COGCC Order 1-232, 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 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	1) Submit Form 42 electronically to COGCC 2 business days prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 2 business days spud notice for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j and provide cement coverage from the end of production casing to a minimum of 500' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.
6 COAs	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.`
2	Drilling/Completion Operations	Alternative Logging Program: One of the first wells drilled on the pad will be logged with open-hole resistivity log with gamma-ray log from the kick-off point 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 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 shall state "Alternative Logging Program - No open-hole logs were run", and shall clearly identify the type of log and the well (by API#) in which open-hole logs were run.`

3	Drilling/Completion Operations	Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic Fracturing treatments in the Greater Wattenberg Area dated May 29, 2012.
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Total: 3 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
2168606	WELL LOCATION PLAT
403708659	FORM 2 SUBMITTED
403708670	OffsetWellEvaluations Data
403709663	DEVIATED DRILLING PLAN
403709665	DIRECTIONAL DATA
403826363	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	05/29/2024
Permit	-Form back in process -Received confirmation from the operator for the following: 1. Adding the additional open hole logging COA 2. Adding the refile COA for built locations 3. Adding the drilling beyond the setback COA -Passed Permit Review	05/14/2024
Permit	ON HOLD: This application has been reviewed by CECMC staff and cannot be approved based on the information submitted; therefore, the CECMC is placing this form ON HOLD until additional information is received from the applicant. In compliance with § 24-65.1-108(1), C.R.S., the CECMC is providing this written request for all additional information necessary for the CECMC to respond to this application. The applicant may provide all requested additional information to CECMC via email. Upon receipt of all requested information, the CECMC will have 60 days in which to approve, deny, or request all additional information necessary to complete the regulatory review. If the applicant no longer requires this application be approved, the applicant may request to withdraw the application. In addition to all standard required information and attachments, the CECMC hereby confirms the following information is necessary for review: 1. Adding the additional open hole logging COA 2. Adding the refile COA for built locations 3. Adding the drilling beyond the setback COA	05/09/2024
Permit	-Uploaded updated well plat from operator -Requesting the following from the operator: 1. Adding the additional open hole logging COA 2. Adding the refile COA for built locations 3. Adding the drilling beyond the setback COA	04/25/2024
OGLA	This Location and its associated Form 2A materials was fully evaluated during the review of this APD in accordance with the current Rules. This APD complies with all Colorado ECMC Rules and Staff does not anticipate any significant potential direct adverse impacts to public health, safety, welfare, the environment, and wildlife resources. OGLA task passed.	04/11/2024
Engineer	Offset Wells Evaluated.	03/25/2024

Total: 6 comment(s)