

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:

403020490

Date Received:

12/10/2022

APPLICATION FOR PERMIT TO

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

Amend ☐

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER: Helium

Refill ☐

ZONE TYPE SINGLE ZONE ☐ MULTIPLE ZONES ☒ COMMINGLE ZONES ☒

Sidetrack ☐

Well Name: Pfaffly Well Number: 1-12
Name of Operator: NAVEX RESOURCES LLC COGCC Operator Number: 10360
Address: 1020 E LEVEE STREET, SUITE 130
City: DALLAS State: TX Zip: 75207
Contact Name: Conrad Mirochna Phone: (214)382-3223 Fax: (214)373-8035
Email: cmirochna@trekresources.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): 20210168

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: NWSW Sec: 12 Twp: 11S Rng: 46W Meridian: 6

Footage at Surface: 1602 Feet FNL/FSL 1269 Feet FEL/FWL
FSL FWL

Latitude: 39.103763 Longitude: -102.516761

GPS Data: GPS Quality Value: 2.0 Type of GPS Quality Value: PDOP Date of Measurement: 10/02/2021

Ground Elevation: 4467

Field Name: SMOKY HILL Field Number: 77570

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: Twp: Rng: Footage at TPZ:

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

Base of Productive Zone (BPZ)

Sec: _____ Twp: _____ Rng: _____ Footage at BPZ: _____
Measured Depth of BPZ: _____ True Vertical Depth of BPZ: _____ FNL/FSL _____ FEL/FWL _____

Bottom Hole Location (BHL)

Sec: _____ Twp: _____ Rng: _____ Footage at BHL: _____
FNL/FSL _____ FEL/FWL _____

LOCAL GOVERNMENT PERMITTING INFORMATION

County: KIT CARSON 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? ☐ 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: _____ Date of Final Disposition: _____

Comments:

The Kit Carson County Department of Public Health and Environment confirmed on 11/17/21 that local permitting does not apply to the Oil & Gas Location. The county requested a description of the development and its location, which were provided with the 30-day Notice to Local Government on 12/16/21.

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 ☐ Indian

Mineral 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.)

W/2 Section 12 T11S-R46W

Total Acres in Described Lease: 320

Described Mineral Lease is: ☒ Fee

☐ State

☐ Federal

☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

Public Road: 1269 Feet

Above Ground Utility: 4055 Feet

Railroad: 5280 Feet

Property Line: 1167 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.)
CAMBRIAN	CMBR			
CRETACEOUS	CRTC			
MISSISSIPPIAN	MSSP			
ORDOVICIAN	ORDV			
PENNSYLVANIAN	PENN			
PERMIAN	PRMN			

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? No

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: _____ 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: _____ Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: 1269 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: 6300 Feet

TVD at Proposed Total Measured Depth 6300 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: 550 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? Yes

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

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
CONDUCTOR	20+0/0	16+0/0	A500	52.49	0	10	10	10	0
SURF	12+1/4	8+5/8	J-55	24	0	630	400	630	0
1ST	7+7/8	5+1/2	J-55	15.5	0	6300	400	6300	3000
	7+7/8	5+1/2	J-55	Stage Tool		3000	250	3000	0

☐ Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Groundwater	Ogallala	0	0	281	281	0-500	USGS	
Confining Layer	Pierre	281	281	1379	1379			
Subsurface Hazard	Niobrara	1379	1379	1949	1949			Possible circulation loss
Confining Layer	Shale	1949	1949	2363	2363			
Subsurface Hazard	Dakota-Cheyenne	2363	2363	2797	2797			Possible circulation loss
Confining Layer	Shale	2797	2797	3603	3603			
Subsurface Hazard	Stone Corral	3603	3603	3642	3642			Salt section
Subsurface Hazard	Wolfcamp	3642	3642	3866	3866			Possible circulation loss
Confining Layer	Shale	4177	4177	4233	4233			Unnamed shale
Hydrocarbon	Foraker	4233	4233	4517	4517			Non-productive
Confining Layer	Virgilian Shale	4517	4517	4533	4533			
Hydrocarbon	Shawnee	4533	4533	4717	4717			No frac planned
Subsurface Hazard	Lansing	4717	4717	5023	5023			Possible circulation loss No frac planned
Hydrocarbon	Marmaton	5023	5023	5157	4717			No frac planned
Hydrocarbon	Cherokee	5157	5157	5266	5266			No frac planned
Hydrocarbon	Morrow	5415	5415	5540	5540			No frac planned
Subsurface Hazard	Lower Morrow	5540	5540	5606	5606			Possible circulation loss No frac planned
Hydrocarbon	Spergen	5606	5606	5666	5666			No frac planned
Hydrocarbon	Reagan	6065	6065	6150	6150			No frac planned

OPERATOR COMMENTS AND SUBMITTAL

Comments

This application is in a Comprehensive Area Plan CAP #:
 Oil and Gas Development Plan Name OGDID #:
 Location ID:

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

Signed: Print Name:

Title: Date: Email:

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: 12/19/2022

Expiration Date: 12/18/2025

API NUMBER

05 063 06353 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

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. 2) 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 with a rig on the pad. 2) If the production casing is set, comply with Rule 408.j. and provide cement coverage from TD to a minimum of 500' above the shallowest completed interval and from the base of the Cheyenne to 500' above the Niobrara (3000-1400' +/-). Run and submit a cement bond log to verify coverage.
Drilling/Completion Operations	If well is a dry hole set plugs at the following depths: 40 sks cement +/- 50' above the Spergen, 40 sks cement +/- 50' above the Morrow, 40 sks cement +/- 50' above the Shawnee, 40 sks cement across any DST w/ show, 50 sks cement 100' below base of Cheyenne (est 3000' up), 50 sks cement +/-50' above top of Cheyenne (est. 2600' up), 50 sks cement +/-50' above top of Dakota (est. 2300' up), 50 sks cement +/-50' above top of Niobrara, 50 sks cement from 50' below surface casing shoe up into surface casing, 10 sks cement in top of surface csg, cut 4 ft below GL, weld on plate, 5 sks cement in rat hole and mouse hole.

3 COAs

Best Management Practices

No BMP/COA Type

Description

1	Drilling/Completion Operations	Open-hole resistivity log with gamma-ray log will be run from TD into the surface casing. A cement bond log with gamma-ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.
---	--------------------------------	--

Total: 1 comment(s)

Attachment List

<u>Att Doc Num</u>	<u>Name</u>
901855	WELL LOCATION PLAT
403020490	FORM 2 SUBMITTED
403201588	WELLBORE DIAGRAM

403230087	OffsetWellEvaluations Data
403230120	OTHER
403265259	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Added well logging BMP, per operator.	12/19/2022
Permit	Final Review Completed.	12/16/2022
Engineer	<ul style="list-style-type: none"> •Surface Casing Check complete •Offset well review complete 408.t - No wells 408.u - No wells •Engineering review complete 	12/13/2022
Permit	Well location plat provided by operator and attached to this Form 2.	12/12/2022
Permit	Type of well changed from OIL to GAS as Helium is the primary target. Oil may still be evaluated as a potential target.	12/12/2022
Permit	1) Type of well should be reviewed (change from OIL to GAS?) 2) Well location plat does not meet the requirements of Rule 308.b.(4). Returned to draft	12/09/2022
Engineer	Returning to draft to have the Operator attach an OWE and correct the surface casing setting depth and the Potential Flow Zone table to include formations over the entire wellbore. Done.	11/15/2022
OGLA	The Commission approved OGDG #482416 on September 28, 2022 for the Oil and Gas Location related to this Form 2. OGLA task passed.	11/04/2022

Total: 8 comment(s)