

FORM

2

Rev  
05/22

## State of Colorado

## Energy &amp; Carbon Management Commission

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

Document Number:

403803560

Date Received:

04/08/2025

## 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: Longknife Well Number: 1  
 Name of Operator: ST CROIX OPERATING INC ECMC Operator Number: 81490  
 Address: P O BOX 13799  
 City: DENVER State: CO Zip: 80201  
 Contact Name: Paul Melnychenko Phone: (303)489-9298 Fax: ( )  
 Email: stcroixexp@aol.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): 20000108

## 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: NENW Sec: 6 Twp: 3S Rng: 50W Meridian: 6
 Footage at Surface: 614 Feet FNL 1846 Feet FWL  
FNL/FSL FEL/FWL
Latitude: 39.828790 Longitude: -103.022540GPS Data: GPS Quality Value: 1.0 Type of GPS Quality Value: PDOP Date of Measurement: 12/20/2023Ground Elevation: 4563Field Name: LONGKNIFE Field Number: 51460Well 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: WASHINGTON 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:

**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.)

Total Acres in Described Lease: 79 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: 5280 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 614 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.)
J SAND	JSND			

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: 614 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

No existing well in same completed zone on same lease

## DRILLING PROGRAM

Proposed Total Measured Depth: 4300 Feet

TVD at Proposed Total Measured Depth 4300 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: 904 Feet ☐ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H<sub>2</sub>S 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? 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

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	12+1/4	8+5/8	J-55	24	0	430	170	430	0
1ST	7+7/8	5+1/2	J-55	15.5	0	4300	290	4300	2539

☒ 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	Ogallala	0	0	271	271	0-500	Groundwater Atlas	TDS and groundwater sampling are from groundwater samples on ECMC site.
Confining Layer	Pierre	271	271	3039	3039			
Hydrocarbon	Niobrara	3039	3039	3460	3460			
Confining Layer	Ft. Hays	3460	3460	3510	3510			
Confining Layer	Carlile Shale	3510	3510	3635	3635			
Confining Layer	Greenhorn	3635	3635	3685	3685			
Confining Layer	Bentonite	3685	3685	3885	3885			
Hydrocarbon	D Sand	3885	3885	3985	3985			
Hydrocarbon	J Sand	3985	3985	4300	4300			

## OPERATOR COMMENTS AND SUBMITTAL

Comments

This application is in a Comprehensive Area Plan No

CAP #: \_\_\_\_\_

Oil and Gas Development Plan Name Longknife

OGDP ID#: 489041

Location ID: 489699

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

Signed: \_\_\_\_\_

Print Name: Jessica Donahue

Title: Compliance Specialist

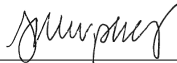
Date: 4/8/2025

Email: jdonahue@ardorenvironmental.

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: 5/2/2025

Expiration Date: 03/25/2028

**API NUMBER**

05 121 11109 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	Added J Sand to Potential Flow table per Operator instructions.
Drilling/Completion Operations	1) Submit Form 42(MIRU) electronically to ECMC two business days prior to MIRU and a Form 42(SP) two business days prior to spud. 2) If production casing is set provide cement coverage from TD to at least 500' above the Niobrara. Planned top of cement is now 2539' with 290 sx. Run and submit CBL to verify cemented intervals. 3) An annular BOP is required. 4) ECMC approval required prior to any hydraulic fracturing of this well. 5) If well is a dry hole set plugs at the following depths: set 60 sks cement at J-Sand top, 40 sks cement +/-50' above Niobrara, 40 sks cement across any DST w/ oil/gas show, 40 sks cement at +/-1500', 50 sks cement from 50' below surface casing shoe to 50' above surface casing shoe, 15 sks cement from 50' to surface, cut off casing 4' below GL, weld on plate inscribed with the Well's legal location, Well name and number, and API Number, place 5 sks cement in rat hole & 5 sks cement in mouse hole.
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 production. 2) A test within 60 days after first production, as reported on the Form 10, Certificate of Clearance.

3 COAs

**Operator 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.
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Total: 1 comment(s)

**ATTACHMENT LIST**

<u>Att Doc Num</u>	<u>Name</u>
403803560	FORM 2 SUBMITTED
404103392	OffsetWellEvaluations Data
404103396	WELL LOCATION PLAT
404188005	OFFSET WELL EVALUATION

Total Attach: 4 Files

### **General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Complete.	05/02/2025
Permit	Permitting Review Complete.	05/02/2025
OGLA	The Commission approved OGDG #489041 on March 26, 2024 for the Oil and Gas Location related to this Form 2. OGLA task passed.	04/09/2025
OGLA	Returned to Draft for missing Location Name, ID, and OGDG Name and ID.	04/08/2025

Total: 4 comment(s)