

FORM  
2

Rev  
05/22

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:

403611734

Date Received:

02/13/2024

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: Carrier Well Number: 0993-16-04W  
Name of Operator: LARAMIE ENERGY LLC ECMC Operator Number: 10433  
Address: 1700 LINCOLN ST STE 3950  
City: DENVER State: CO Zip: 80203  
Contact Name: Katy Middleton Phone: (970)9858240 Fax: ( )  
Email: kmiddleton@laramie-energy.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): 20210135

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: SWNE Sec: 16 Twp: 9S Rng: 93W Meridian: 6

Footage at Surface: 2141 Feet FNL 2282 Feet FEL

Latitude: 39.278107 Longitude: -107.773310

GPS Data: GPS Quality Value: 1.2 Type of GPS Quality Value: PDOP Date of Measurement: 07/07/2023

Ground Elevation: 7463

Field Name: BUZZARD CREEK Field Number: 9500

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: 16 Twp: 9S Rng: 93W Footage at TPZ: 1102 FNL 1905 FWL

Measured Depth of TPZ: 6175 True Vertical Depth of TPZ: 5970 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 16 Twp: 9S Rng: 93W Footage at BPZ: 1102 FNL 1905 FWL
Measured Depth of BPZ: 8766 True Vertical Depth of BPZ: 8561 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 16 Twp: 9S Rng: 93W Footage at BHL: 1102 FNL 1905 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: MESA 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? [X] Yes [ ] No

[X] 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: 07/25/2023

Comments: Mesa County, the local government with jurisdiction over the siting of this oil and gas location, determined that per the Mesa County Land Development Code Table 6-1: Use Table and Section 6.02(Q), "Oil and Gas Drilling " is an allowed use in the Agricultural, Forestry, Transitional (AFT) zone district. The subject parcel is designated by Mesa County as AFT zone district. Currier BCU 0993-16-07 well pad meets all the Mesa County zoning setback requirements for the AFT zone district. Advance Notice was sent to Mesa County's Community Development Department, notifying Mesa County of Laramie's intentions to submit an Oil and Gas Development Plan to the Commission. The notification included details regarding proposed operations at the Currier BCU 0993-16-07. The notice letter was sent on June 14, 2023, to Mesa County pursuant to ECMC Rule 302.e. The letter was received by Mesa County on June 20, 2023. While Oil and Gas Drilling is an allowed use, Oil and Gas Locations must be permitted within Mesa County. Laramie submitted an Oil and Gas Location Application to Mesa County on June 28, 2023. The Land Development Application Public Notice sign for the application was posted on the subject parcel, at the entrance to the Currier BCU 0993-16-07, on July 10th, 2023. The Mesa County Community Development Planning Division issued the Oil and Gas Site Location Approval Document (PRO2023-0191) on July 25, 2023. Representatives from Mesa County's Community Development Department attended the Pre-Application Onsite Meeting on June 12, 2023.

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

Surface Owner of the land at this Well's Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] 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):

- [X] 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. Carl V. Barnard et ux. (Laramie Lease CO002.0010)  
Township 9 South, Range 93 West, 6th P.M.  
SEC 16: N/2, SE/4 SESW

Total Acres in Described Lease: 80 Described Mineral Lease is:  Fee  State  Federal  Indian  
Federal or State Lease # \_\_\_\_\_

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 3334 Feet  
Building Unit: 3483 Feet  
Public Road: 3111 Feet  
Above Ground Utility: 2199 Feet  
Railroad: 5280 Feet  
Property Line: 1104 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.)
WILLIAMS FORK-ILES	WFILS	1-229		

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: 214 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: 366 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: 8766 Feet                      TVD at Proposed Total Measured Depth 8561 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: \_\_\_\_\_ 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? \_\_\_\_\_

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	SA-53B	36.94	0	90	120	90	0
SURF	11	8+5/8	J-55	24	0	1500	352	1500	0
1ST	7+7/8	4+1/2	HCP110	11.6	0	8766	1198	8766	1400

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	Freshwater/Groundwater	0	0	600	600	501-1000	DWR	Hayward ranch water well domestic – stock & irrigation
Confining Layer	Wasatch	600	600	2847	2759			
Hydrocarbon	Wasatch 'G' Sand	2847	2759	3315	3208	1001-10000	Other	Wasatch Producers Sec 5 & Sec 9 & Sec 15 T6S, R97W API: 5045200130001, 05045200230000, 05045106860000 (11/12/2020) (TDS: 760-2,050 mg/L. Fluid Present: Saltwater
Hydrocarbon	Fort Union	3315	3208	4333	4185			Potential Hazard: Instability
Hydrocarbon	Lower Wasatch	4333	4185	5090	4911			Fluid Present: Saltwater
Hydrocarbon	Ohio Creek	5090	4911	5304	5117	>10000	Produced Water Sample	Wells API# 05077087650000 Buzzard Creek 22-3 Potential Hazard: Loss circulation; Fluid Present: Saltwater
Hydrocarbon	Williams Fork	5304	5117	6175	5970	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L
Hydrocarbon	Top of Gas	6175	5970	7369	7164	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L
Hydrocarbon	Cameo	7369	7164	7845	7640	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L
Hydrocarbon	Rollins	7845	7640	8382	8177	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L
Hydrocarbon	Cozzette	8382	8177	8556	8351	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L
Hydrocarbon	Corcoran	8556	8351	8766	8561	>10000	Produced Water Sample	Sup & Shep 0993-25-16W. API# 05077105790000 McDaniel 2-1 API#05077093410000 Water TDS: 40,000 mg/L

## OPERATOR COMMENTS AND SUBMITTAL

Comments

Well Currier 0993-16-04W is not located in a mapped HPH.  
BHL Coordinates: Latitude 39.2809846° ; Longitude -107.7770382°  
BHL: NENW Section 16, Township 9 South, Range 93 West, 6th P.M.  
Conductor will be grouted in place  
The 2023 Currier BCU 0993-16-07 OGDG was approved on January 24, 2024 (Order No. 583-2).  
Nearest permitted or completed well in same formation: Currier BCU 0993-16-05W (Doc #403611729).

This application is in a Comprehensive Area Plan No CAP #: \_\_\_\_\_  
Oil and Gas Development Plan Name 2023 Currier BCU 0993-16-07 OGDG ID#: 485488  
Location ID: 485981

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

Signed: \_\_\_\_\_ Print Name: Katy Middleton

Title: Sr. Permit & Env Planner Date: 2/13/2024 Email: kmiddleton@laramie-

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: 5/15/2024

Expiration Date: 01/23/2027

**API NUMBER**

05 077 10625 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.

<u>COA Type</u>	<u>Description</u>
Planning	Pursuant to Rule 702.b.(2), the approval of this Application for Permit to Drill constitutes a "change in circumstance" to the approved Financial Assurance Plan. The Operator must file a revised Form 3, Financial Assurance Plan, within 10 days of this approval.
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 log three (3) 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 for a total of four wells logged.
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
Drilling/Completion Operations	1.Operator shall comply with the most current revision of the Northwest Notification Policy.  2.Operator shall provide stage cement or increase cement coverage for production casing 4 1/2" First String to provide coverage from 200' below the Fort Union top (also known locally by operators as the Atwell Gulch Member of the Wasatch Formation) to 200' above the Wasatch G Upper Interval (also known locally by operators as the Molina Member of the Wasatch Formation). These formations are defined by COGCC in the report "Casing and Cement Standards for Geologic Isolation Piceance Basin Bradenhead Monitoring Area and Nearby Fields," dated April 18, 2016, COGCC Document No. 2056199, Appendix A Field Scout Cards and Annotated Type Logs). Isolation is required for offset Wasatch G Sand production or UIC injection. Verify production casing cement coverage with a cement bond log.
5 COAs	

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Alternative Logging Program: One of the wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from TD 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 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.

Total: 1 comment(s)

## ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403611734	FORM 2 SUBMITTED
403666845	WELL LOCATION PLAT
403666852	DIRECTIONAL DATA

403666856	DEVIATED DRILLING PLAN
403666858	DEVIATED DRILLING PLAN
403672757	OffsetWellEvaluations Data
403672760	SURFACE AGRMT/SURETY
403672761	MINERAL LEASE MAP
403791423	OFFSET WELL EVALUATION

Total Attach: 9 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	04/19/2024
Permit	Added "Nearest permitted or completed well in same formation" comment to Submit tab per operator Passed Permitting review.	04/16/2024
Engineer	Well is located within Piceance BHMA Area and Wasatch G Coverage Area: Casing table provides details on cement coverage above the Wasatch G. Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information in addition to locally-available geophysical logs and hydrogeological information was used to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 160 feet.  Offset Well Evaluation: Existing offset oil and gas wells within 1,500 feet of this wellbore meet standards. No mitigation required.  There is no offset wells within 1 mile producing from the Wasatch G formation  Changed casing tops and cement top for conductor and surface casing to a MD of 0 ft	03/27/2024
OGLA	The Commission approved OGDG #485488 on January 24, 2024 for the Oil and Gas Location related to this Form 2. OGLA task passed.	02/14/2024

Total: 4 comment(s)