

Base of Productive Zone (BPZ)											
Sec:	<u>10</u>	Twp:	<u>6S</u>	Rng:	<u>97W</u>	Footage at BPZ:	<u>1793</u>	FSL	<u>661</u>	FEL	
Measured Depth of BPZ:				<u>10217</u>		True Vertical Depth of BPZ:		<u>9343</u>		FNL/FSL	FEL/FWL
Bottom Hole Location (BHL)											
Sec:	<u>10</u>	Twp:	<u>6S</u>	Rng:	<u>97W</u>	Footage at BHL:	<u>1793</u>	FSL	<u>661</u>	FEL	
								FNL/FSL		FEL/FWL	

LOCAL GOVERNMENT PERMITTING INFORMATION

County: GARFIELD 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: Garfield County is the local government with jurisdiction over the siting of this proposed oil and gas location, Advance Notice was sent to Garfield County's Community Development Department, notifying Garfield County of Laramie's intentions to submit an Oil and Gas Development Plan to COGCC. The notification included the proposed locations, including the Cascade Creek 0697-15-08 well pad. The notice letter was sent on July 14, 2021, to Garfield County pursuant to COGCC Rule 302.e. Garfield County, the local government with jurisdiction over the siting of this proposed oil and gas location, determined that per the Garfield County Land Use and Development Code Table 3-403: Use Table, "Oil and Gas Drilling and Production" and "Hydraulic Fracturing, Remote Surface Location" are a use by right if 1) the Location does not require an Alternative Location Analysis or 2) the Operator does not request higher permissible noise and light levels from Garfield County. The CC 0697-15-08 Well Pad Location did not require an Alternative Location Analysis and Laramie did not request from Garfield County increased permissible noise and light levels from Garfield County. Therefore, "Oil and Gas Drilling and Production" and "Hydraulic Fracturing, Remote Surface Location" are a use-by-right and are exempt from Land Use Regulation in the Resource Lands Zone District.

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.)

See Attached Lease Map

Total Acres in Described Lease: 8262 Described Mineral Lease is: Fee State Federal Indian
Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1389 Feet
Building Unit: 5280 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 322 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: 661 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: 332 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: 10217 Feet

TVD at Proposed Total Measured Depth 9343 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 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? 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	18	SA-53B	47.44	0	90	150	90	0
SURF	14+3/4	9+5/8	J-55	36	0	2530	1130	2530	0
1ST	8+3/4	4+1/2	P110IC	11.6	0	10217	1660	10217	

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	Uinta	0	0	792	790	0-500	CGS	CGS - Nearby Springs
Confining Layer	Green River/Mahogany	792	790	3000	2758			Confining layer/Oil Shale. Mahogany permeability has been determined to be approximately 30 Nano Darcie
Confining Layer	Wasatch	3000	2758	5347	4758			
Hydrocarbon	Wasatch 'G' Sand	5347	4758	5594	4968	1001-10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water. TDS: 750-2050 mg/L)
Hydrocarbon	Fort Union	5594	4968	7140	6292	1001-10000	Produced Water Sample	Gas well water analysis: 05045122270000-0100 Salt Water
Hydrocarbon	Ohio Creek	7140	6292	7341	6480	>10000	Other	SWD well water analysis: API: 05045068710000. CC 604-01 (Sec 4 6S 97W) Salt Water. TDS 10,850 mg/L
Hydrocarbon	Williams Fork	7341	6480	8080	7206	>10000	Other	SWD well water analysis: API: 05045068710000. CC 604-01 (Sec 4 6S 97W) Salt Water. TDS 10,850 mg/L
Hydrocarbon	Top of Gas	8080	7206	9604	8730	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Cameo	9604	8730	10002	9128	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Base Cameo Coal	10002	9128	10017	9143	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Rollins	10017	9143	10217	9343	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water

OPERATOR COMMENTS AND SUBMITTAL

Comments

A parasite string will be strapped to the outside of surface casing with injection mandrel set approximately 120 feet above the surface shoe. The parasite string will be utilized for air injection while drilling the production hole section which will lower Downhole hydrostatic pressure to mitigate loss circulation. The parasite string will be permanently cemented off after production casing is cemented. The parasite string outer diameter will be 1.9 inches with a weight of 2.76 pounds per foot. The new parasite string (Grade: J-55) will be set at a depth of 2410 feet. The well is not located within High Priority Habitat.

This application is in a Comprehensive Area Plan No CAP #: _____

Oil and Gas Development Plan Name 2021 Cascade Creek Oil and Gas DP OGDID#: 481179

Location ID: 481743

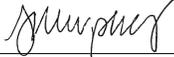
I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Lori Muhr

Title: Regulatory Analyst Date: 1/6/2025 Email: LMuhr@Laramie-Energy.com

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: 2/21/2025

Expiration Date: 02/21/2028

API NUMBER

05 045 24534 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>
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 two (2) additional wells during the second 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 three wells logged.
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
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 stimulation. If any pressure greater than threshold pressure is observed or if there is evidence of communication, Operator must contact ECMC engineering for approval prior to stimulation. 2) A post-production test within 60 days after first sales
Drilling/Completion Operations	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. 2) Operator shall provide cement coverage from the first string casing shoe to a minimum of 500' above the Wasatch G Formation. Verify cement coverage with a cement bond log. 3) Operator shall comply with the most current revision of the Northwest Notification Policy.
5 COAs	

Operator 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>
404007910	APD APPROVED
404007971	OffsetWellEvaluations Data
404007975	DIRECTIONAL DATA
404007986	WELL LOCATION PLAT
404007988	LEASE MAP
404007989	DEVIATED DRILLING PLAN
404007990	DEVIATED DRILLING PLAN

404078891	OffsetWellEvaluations Data
404103241	OFFSET WELL EVALUATION
404103248	FORM 2 SUBMITTED
404103280	PUBLIC COMMENT-0

Total Attach: 11 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Complete.	02/21/2025
Permit	Passed Permitting review.	02/18/2025
Engineer	Offset well CASCADE CREEK #697-15-01 045-10686 Operated by Laramie Energy produces from the Wasatch G formation and is within 1 mile of the proposed wellbores. There are no domestic water wells within 1 mile Uploaded offset well review emailed by the Operator with additional wells to the North of the pad	02/03/2025
OGLA	The Commission approved OGDG #481179 on February 24, 2022 for the Oil and Gas Location related to this Form 2. OGLA task passed.	01/21/2025

Total: 4 comment(s)