

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:

403245946

Date Received:

02/06/2023

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: HaywardWell Number: 0993-25-16EName of Operator: LARAMIE ENERGY LLCCOGCC Operator Number: 10433Address: 1700 LINCOLN ST STE 3950City: DENVER State: CO Zip: 80203Contact Name: Katy Middleton Phone: (970)985-8240 Fax: ()Email: kmiddleton@laramie-energy.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): 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: SENE Sec: 25 Twp: 9S Rng: 93W Meridian: 6Footage at Surface: 2558 Feet FNL 896 Feet FELLatitude: 39.244833 Longitude: -107.715906GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 04/30/2019Ground Elevation: 8010Field Name: VEGA Field Number: 85930Well 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: 25 Twp: 9S Rng: 93W Footage at TPZ: 170 FSL 619 FELMeasured Depth of TPZ: 7016 True Vertical Depth of TPZ: 6437 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 25 Twp: 9S Rng: 93W Footage at BPZ: 170 FSL 619 FEL
Measured Depth of BPZ: 8965 True Vertical Depth of BPZ: 8387 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 25 Twp: 9S Rng: 93W Footage at BHL: 170 FSL 619 FEL
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? ☒ 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: 06/14/2022

Comments: 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. The Hayward 0993-25-09 Pad meets all the Mesa County zoning setback requirements for the AFT zone district. 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 May 19th, 2022. The Mesa County Community Development Planning Division issued the Oil and Gas Site Location Approval Document on June 14th, 2022, with conditions for operations. The Mesa County Permit is attached to this Form 2.

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 Lease Map. Fee and Federals Minerals committed to Federal Communitization Agreement: COC-076718 covering all of Section 25. The Hayward 0993-25-09 well pad will only target fee minerals. Laramie is proposing to drill 13 new directional natural gas wells that will produce fee minerals. There are no federal wells associated with proposed mineral development. The mineral development is for approximately 160-acres in the E½E½ of Section 25, Township 9 South, Range 93 West, 6th P.M.

Total Acres in Described Lease: 640

Described Mineral Lease is: ☒ Fee

☐ State

☐ Federal

☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 955 Feet
Building Unit: 955 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 398 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	369-12	640	Section 25: 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: 619 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: 282 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: 8966 Feet

TVD at Proposed Total Measured Depth 8397 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	16	SA-53B	36.94	0	60	150	60	0
SURF	11	8+5/8	J-55	24	0	1530	264	1530	0
1ST	7+7/8	4+1/2	P110IC	11.6	0	8966	1335	8966	2700

☐ 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. Water well top perf: 1610 ft depth. Deepest water well: 600 ft depth. (TDS: 300-1500 mg/L)
Confining Layer	Wasatch	600	600	3401	3137			N/A
Hydrocarbon	Wasatch 'G' Sand	3401	3137	3845	3535	1001-10000	Other	Wasatch Producers Sec 5 & Sec 9 & Sec 15 T6S, R97W API: 05045200130001, 05045200230000, 05045106860000 (11/12/2020) (TDS: 760-2,050 mg/L)
Hydrocarbon	Fort Union	3845	3535	5184	4735			Potential Hazard: Instability
Confining Layer	Lower Wasatch	5184	4735	5577	5087			Fluid Present: Saltwater
Hydrocarbon	Ohio Creek	5577	5087	5967	5437	>10000	Produced Water Sample	Wells API# 05077087650000 Buzzard Creek 22-3 Potential Hazard: Loss circulation; Fluid Present: Saltwater
Hydrocarbon	Williams Fork	5967	5437	7016	6437	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Top of Gas	7016	6437	8366	7787	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Cameo	8366	7787	8746	8167	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Base Cameo	8746	8167	8766	8187	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Rollins	8766	8187	8965	8387	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000

OPERATOR COMMENTS AND SUBMITTAL

Comments	<p>The Hayward 0993-25-16E well is not located within a mapped HPH. Laramie consulted with CPW regarding the proposed 13 wells and proposed operations at the Hayward Pad. The CPW Consultation Summary and CPW Waiver are attached to this Form 2.</p> <p>Laramie consulted with CDPHE regarding the proposed 13 wells and proposed operations at the Hayward Pad. The CDPHE Consultation Letter, which includes BMPs, are attached to this Form 2.</p> <p>BHL Coordinates: 39.237710; -107.714846</p> <p>The Hayward Pad (COGCC Location # is 455725) is an existing well pad which was constructed in 2019, but never drilled. Laramie is proposing to drill 13 new directional natural gas wells at the existing well pad (reduced from the originally permitted 22 wells). The Location was constructed during the summer and fall of 2019 following the approval by the Director on June 29, 2018 of a Form 2A Oil and Gas Location Assessment (2018 Form 2A - Document No. 401579042). Due to economic conditions and the pandemic, Laramie did not drill the wells proposed in the original 2018 Form 2A. Gas and water gathering lines are installed to the edge of the pad's perimeter. No additional surface disturbance is required in order to drill the 13 new directional wells. Laramie has submitted a Form 4 Sundry Notice (Document # 403312281) for the Hayward Pad. The 13 Form 2 APDs expired in June 2020 and Laramie has submitted refills Form 2s for the 13 wells.</p>
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This application is in a Comprehensive Area Plan _____ No _____ CAP #: _____
Oil and Gas Development Plan Name _____ OGDID ID#: _____
Location ID: 455725

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: Regulatory Specialist Date: 2/6/2023 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 COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: 3/17/2023

Expiration Date: 03/16/2026

API NUMBER

05 077 10597 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	1)Operator shall comply with the most current revision of the Northwest Notification Policy. 2)Operator shall comply with the Notice to Operators Drilling Wells in the Buzzard, Mamm Creek, and Rulison fields, Garfield County and Mesa County – Procedures and Submittal Requirements for Compliance with COGCC Order Nos. 1-107, 139-56, 191-22, and 369-2 (July 8, 2010). 3)During stimulation, operator shall monitor the bradenhead, casing, and tubing pressure of the proposed well and all offset wells under Operator's control which penetrate the stimulated formation and have a treated interval separation of 300 feet or less. Operator shall notify COGCC Engineering staff if bradenhead pressures increase by more than 200 psig.
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) wells with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the two stratigraphically deepest wells on each side of the pad
Interim Reclamation	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
4 COAs	

Best Management Practices

No	BMP/COA Type	Description
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

Att Doc Num	Name
403245946	FORM 2 SUBMITTED
403246434	WELL LOCATION PLAT
403246436	DEVIATED DRILLING PLAN
403246437	DEVIATED DRILLING PLAN
403246439	DIRECTIONAL DATA
403246560	SURFACE AGRMT/SURETY
403311431	CORRESPONDENCE
403311432	WAIVERS
403311433	OTHER
403311434	MINERAL LEASE MAP

Total Attach: 10 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Completed.	02/14/2023
Permit	Added refile comment per operator.	02/14/2023
Engineer	Offset Well Evaluation: There are no existing offset oil and gas wells within 1,500 feet of this wellbore. Taking into account BHL and directional data Sup & Shep Federal #25-11M & Sup & Shep Federal #25-12M are greater than 1500 ft from the wellbore Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available geophysical logs and hydrogeological information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 600 feet Changed surface string open hole size to 11" after contacting Operators engineer Changed the first string casing top to 0 ft. per attached drilling plans	02/14/2023
OGLA	This Location and its associated materials was fully reviewed in the review of this APD in accordance with current Rules. See Sundry Notice Form 4 #403312281 in Location #455725 file for additional information. This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources. OGLA task passed.	02/08/2023
Permit	Corrected Proposed TD to match survey	02/08/2023

Total: 5 comment(s)