

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:
403243902
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: Hayward Well Number: 0993-25-06E
Name of Operator: LARAMIE ENERGY LLC COGCC Operator Number: 10433
Address: 1700 LINCOLN ST STE 3950
City: DENVER State: CO Zip: 80203
Contact 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: 6
Footage at Surface: 2557 Feet FNL 864 Feet FEL
Latitude: 39.244824 Longitude: -107.715795
GPS Data: GPS Quality Value: 1.8 Type of GPS Quality Value: PDOP Date of Measurement: 04/30/2019
Ground Elevation: 8007
Field Name: VEGA Field Number: 85930
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: 25 Twp: 9S Rng: 93W Footage at TPZ: 1889 FNL 680 FEL
Measured Depth of TPZ: 6598 True Vertical Depth of TPZ: 6552 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 25 Twp: 9S Rng: 93W Footage at BPZ: 1889 FNL 680 FEL
Measured Depth of BPZ: 8548 True Vertical Depth of BPZ: 8502 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 25 Twp: 9S Rng: 93W Footage at BHL: 1889 FNL 680 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? [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: 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, 2022The 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: [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. 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: 987 Feet
Building Unit: 987 Feet
Public Road: 5280 Feet
Above Ground Utility: 5280 Feet
Railroad: 5280 Feet
Property Line: 429 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: 680 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: 304 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: 8548 Feet TVD at Proposed Total Measured Depth 8502 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	8548	1269	8548	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	3278	3252			N/A
Hydrocarbon	Wasatch 'G' Sand	3278	3252	3698	3668	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	3698	3668	4865	4824			Potential Hazard: Instability
Confining Layer	Lower Wasatch	4865	4824	5247	5202			Fluid Present: Saltwater
Hydrocarbon	Ohio Creek	5247	5202	5598	5552	>10000	Produced Water Sample	Wells API# 05077087650000 Buzzard Creek 22-3 Potential Hazard: Loss circulation; Fluid Present: Saltwater
Hydrocarbon	Williams Fork	5598	5552	6598	6552	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Top of Gas	6598	6552	7948	7902	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Cameo	7948	7902	8328	8282	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Base Cameo	8328	8282	8348	8302	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000
Hydrocarbon	Rollins	8348	8302	8548	8502	>10000	Produced Water Sample	Sup & Shep 0993-25-16W API# 05077105790000

OPERATOR COMMENTS AND SUBMITTAL

Comments

The Hayward 0993-25-06E 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. 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.

BHL Coordinates: 39.246610; -107.715164

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 refiles Form 2s for the 13 wells.

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
403243902	FORM 2 SUBMITTED
403246336	DIRECTIONAL DATA
403246342	DEVIATED DRILLING PLAN
403246346	DEVIATED DRILLING PLAN
403246348	WELL LOCATION PLAT
403246523	SURFACE AGRMT/SURETY
403310590	WAIVERS
403310603	MINERAL LEASE MAP
403311134	CORRESPONDENCE
403311135	OTHER

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	<p>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</p> <p>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</p> <p>Changed surface string open hole size to 11" after contacting Operators engineer</p> <p>Changed the first string casing top to 0 ft. per attached drilling plans</p>	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	Passed Permitting review.	02/08/2023

Total: 5 comment(s)