FORM 2 Rev 12/20

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: 402808063 **(SUBMITTED)**

Date Received:` 01/27/2022

APPLICATION FOR PERMIT TO:

[X] **Drill** [ ] Deepen [ ] Re-enter [ ] Recomplete and Operate

Amend [ ] Refile [X] Sidetrack [ ]

TYPE OF WELL OIL [ ] GAS [X] COALBED [ ] OTHER:

ZONE TYPE SINGLE ZONE [X] MULTIPLE ZONES [ ] COMMINGLE ZONES [ ]

Well Name: CC Well Number: 0697-10-08W

Name of Operator: LARAMIE ENERGY LLC COGCC Operator Number: 10433

Address: 1001 17TH STREET #1900

City: DENVER State: CO Zip: 80202

Contact Name: Wayne P Bankert Phone: (970)812-5310 Fax: ( )

Email: wbankert@laramie-energy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20120081

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NENW Sec: 10 Twp: 6S Rng: 97W Meridian: 6

Footage at Surface: 130 Feet FNL (FNL/FSL) 2429 Feet FWL (FEL/FWL)

Latitude: 39.544326 Longitude: -108.206860

GPS Data: GPS Quality Value: 0.6 Type of GPS Quality Value: PDOP Date of Measurement: 04/23/2020

Ground Elevation: 8592

Field Name: GRAND VALLEY Field Number: 31290

Well Plan: is [X] 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: 10 Twp: 6S Rng: 97W Footage at TPZ: 2438 FNL (FNL/FSL) 1974 FWL (FEL/FWL)

Measured Depth of TPZ: 7646 True Vertical Depth of TPZ: 7208

Base of Productive Zone (BPZ)

Sec: 10 Twp: 6S Rng: 97W Footage at BPZ: 2438 FNL (FNL/FSL) 1974 FWL (FEL/FWL)

Measured Depth of BPZ: 10333 True Vertical Depth of BPZ: 9895

Bottom Hole Location (BHL)

Sec: 10 Twp: 6S Rng: 97W Footage at BHL: 2438 FNL (FNL/FSL) 1974 FWL (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 0610-21-41 well site. 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 0610-21-41 Well Site 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 Financial Assurance (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: 5280 Feet

Building Unit: 5280 Feet

Public Road: 5280 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 2906 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	0	T6S R97W: 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? 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: 2438 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: 361 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: 10333 Feet TVD at Proposed Total Measured Depth 9895 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_2S 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	10333	1689	10333	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	Uinta	0	0	793	792	0-500	CGS	CGS - Nearby Springs
Confining Layer	Green River/ Mahogany	793	792	2891	2760			Confining layer/Oil Shale. Mahogany permeability has been determined to be approximately 30 Nano Darcie.
Confining Layer	Wasatch	2891	2760	4823	4550			
Hydrocarbon	Wasatch 'G' Sand	4823	4550	5050	4760	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	5050	4760	6706	6294	1001-10000	Produced Water Sample	Gas well water analysis: 05045122270000-0100 Salt Water
Hydrocarbon	Ohio Creek	6706	6294	6907	6482	>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	6907	6482	7646	7208	>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	7646	7208	9170	8732	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Cameo	9170	8732	9568	9130	>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	9568	9130	9583	9145	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Rollins	9583	9145	9833	9395	>10000	Produced Water Sample	Gas well water analysis: API :05045200130001, 05045200230000, 05045106860000 Section 5, Section 9 & Section 15 T6S R97W. Salt Water
Hydrocarbon	Cozzette	9833	9395	10053	9615	>10000	Produced Water Sample	Gas well water analysis: API : 05045152520000 Sec 17 6S 97W
Hydrocarbon	Corcoran	10053	9615	10333	9895	>10000	Produced Water Sample	Gas well water analysis: API : 05045152520000 Sec 17 6S 97W

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 OGDP ID#: 481179

Location ID: 383264

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

Signed: Print Name: Wayne P Bankert

Title: Reg. & Enviro. Manager Date: 1/27/2022 Email: wbankert@laramie-energy.com

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:

Expiration Date:

API NUMBER

05 045 24267 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

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
402913477	WELL LOCATION PLAT
402913478	LEASE MAP
402913719	DEVIATED DRILLING PLAN
402913720	DEVIATED DRILLING PLAN
402919774	DIRECTIONAL DATA
402928780	SURFACE AGRMT/SURETY

Total Attach: 6 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)

Public Comments

No public comments were received on this application during the comment period.