

FORM
2A

Rev
08/13

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:

401573375

(SUBMITTED)

Date Received:

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 311747

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

311747

Expiration Date:

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # _____
- ☐ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 10433

Name: LARAMIE ENERGY LLC

Address: 1401 SEVENTEENTH STREET #1400

City: DENVER State: CO Zip: 80202

Contact Information

Name: Joan Proulx

Phone: (970) 263-3641

Fax: ()

email: jproulx@laramie-energy.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20120081

☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: BCU

Number: 13A Pad

County: MESA

QuarterQuarter: NENE Section: 13 Township: 9S Range: 93W Meridian: 6 Ground Elevation: 7392

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 189 feet FNL from North or South section line

703 feet FEL from East or West section line

Latitude: 39.281269 Longitude: -107.715613

PDOP Reading: 1.1 Date of Measurement: 01/22/2018

Instrument Operator's Name: T Sherrill

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID #

FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	3	Oil Tanks*		Condensate Tanks*	3	Water Tanks*		Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*	3	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*	1	Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

There is an existing buried steel 3" gas gathering line which ties into an existing 4" flex line. A temporary surface water line will be installed. Flowlines from the wellheads to the separators and from separators to the tanks will be 2" steel. The produced water/condensate flowlines from the separators to the tanks will be 2" steel. All flowlines will be buried 4' deep.

CONSTRUCTION

Date planned to commence construction: 03/21/2018

Size of disturbed area during construction in acres: 4.20

Estimated date that interim reclamation will begin: 05/01/2019

Size of location after interim reclamation in acres: 1.50

Estimated post-construction ground elevation: 7392

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: ONSITE

Cuttings Disposal Method: Other

Other Disposal Description:

Due to character limit, see submittal comments for Drilling Waste Management

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Plateau Vly Grazing Pool

Phone: _____

Address: P O Box 40

Fax: _____

Address: _____

Email: _____

City: Molina State: CO Zip: 81646

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☒ is the mineral owner

☐ is committed to an oil and Gas Lease

☐ has signed the Oil and Gas Lease

☐ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation _____

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): _____

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	829 Feet	715 Feet
Building Unit:	829 Feet	715 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	423 Feet	505 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	423 Feet	505 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- 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, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- ☒ Buffer Zone
- ☐ Exception Zone
- ☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.
- Large UMA Facility - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 12/19/2017

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- ☒ Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- ☒ By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

The surrounding area was examined to determine if there were any other suitable surface locations that would accommodate the planned bottom hole locations while minimizing surface impact. Possible alternative locations to the north and east are precluded by a surface owner who is unwilling to allow the operation, and the locations would require a large amount of new surface disturbance for a new pad and access road. Possible locations to the south and east across Buzzard Creek would not allow some of the planned bottom hole locations to be reached due to the increased horizontal distance, and would require the construction of a new bridge across Buzzard Creek and a large amount of new surface disturbance for a new pad and access road. In addition, a fairly large cut on the steep hillside would very likely create visual impact issues. See comments for remainder of rationale.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: NRCS Map Unit Symbol 28

NRCS Map Unit Name: NRCS Map Unit Symbol 39

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☒ NRCS or, ☐ field observation Date of observation: _____

List individual species: Map Unit Symbol 28: Western wheatgrass, Great basin wildrye, Basin big sagebrush
Map Unit Symbol 39: Gambel oak, Elk sedge, Slender wheatgrass, Western wheatgrass, Saskatoon serviceberry, True mountain mahogany, Mountain snowberry

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- ☒ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- ☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- ☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- ☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- ☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- ☐ Alpine (above timberline)
- ☐ Other (describe): _____

WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 273 Feet

water well: 878 Feet

Estimated depth to ground water at Oil and Gas Location 20 Feet

Basis for depth to groundwater and sensitive area determination:

Water Well permit #258499, water level at 26'. Pad lies 273'NE and 50' higher in elevation, from Buzzard Creek.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? ☒ No ☐ Yes Floodplain Data Sources Reviewed (check all that apply)

☐ Federal (FEMA)

☐ State

☒ County

☐ Local

☒ Other COGCC GIS

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

WILDLIFE

☐ This location is included in a Wildlife Mitigation Plan

☐ This location was subject to a pre-consultation meeting with CPW held on _____

Operator Proposed Wildlife BMPs

No	Target Species	BMP Type	Description
1	Black Bear	Wildlife - Avoidance	The operator agrees to report bear conflicts immediately to CPW staff.
2	Cutthroat Trout	Wildlife - Avoidance	

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments

The BCU 13A pad is a planned multiple well expansion of an existing oil and gas well pad that has been in place since 1991 when the Buzzard Creek Unit #13-1 Well was drilled. The goal of the pad expansion is to minimize surface impact to the fullest extent possible by expanding an existing pad and using an existing access road, while also providing a suitable surface location for the planned wells to be able to reach their projected bottom hole targets through directional drilling practices.

In 2010, Delta Petroleum, the previous operator, received approval on the Form 2A to expand the pad and a new pad location number was assigned (334478). Since the expansion did not take place, the original location number of 311747 is being used for this Form 2A.

In June, 2017, the Buzzard Creek 13-1 well was plugged and abandoned.

The 3 wells being drilled from the BCU Pad 13A have BHLs in Lot 2 of Section 18, 9S 92W. The wellbores pass through BLM lease COC 064394. These wells will not be completed inside this BLM lease. The BLM has indicated that these wellbores do not require a BLM permit, nor do they constitute a BLM ROW.

The building located near the pad is occupied on an intermittent/seasonal basis by ranch hands to move the cattle.

Disposal Description: (Drilling Waste Management)

Laramie plans to drill the wells within this project boundary with a dewatering system with no need for a reserve pit. Drilling fluids are recycled and re-used with cuttings being de-watered and captured in a catch pan, stacked in a cuttings management area and allowed to dry. Once the cuttings are dry and satisfy the COGCC for Rule 910 analytics, the cuttings will be stacked along the cut slope then buried and covered with a minimum of 3 feet of cover. This operation will occur after the completion of all the wells.

Buffer zone rationale:

The conclusion is that the use and expansion of the existing Pad 13A would cause the least amount of additional surface disturbance, would take advantage of existing infrastructure, and would be protective of cutthroat trout habitat with the use of appropriate best management practices. In addition, the surface owner has indicated a desire to expand the existing pad to minimize additional disturbance on their property.

Location pictures and reference area pictures will be taken during the growing season and submitted later.

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

Signed: _____ Date: _____ Email: jproulx@laramie-energy.com

Print Name: Joan Proulx Title: Regulatory Analyst

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: _____

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type

Description

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Best Management Practices

No	BMP/COA Type	Description
1	Wildlife	<p>Black Bear</p> <ul style="list-style-type: none"> • Initiate a food and waste/refuse management program that uses bear-proof food storage containers and trash receptacles. • Initiate an education program that reduces bear conflicts. • Establish policy to prohibit keeping food and trash in sleeping quarters. • Establish policy to support enforcement of state prohibition on feeding of black bear. • Report bear conflicts immediately to CPW.
2	Wildlife	<p>BCU 13A Pad Best Management Practices for Cutthroat Trout Habitat NENE Sec. 13 T9S R93W Mesa County, Colorado</p> <ol style="list-style-type: none"> 1. New surface disturbance will be minimized through the maximum use of an existing well pad and access road. 2. Any new surface disturbance will be in a direction away from the existing Buzzard Creek channel. 3. No stream disturbances will occur on this project, which will avoid impacts to spawning cutthroat trout. 4. Requirements for site preparation and stabilization, interim reclamation, and final reclamation of the well site under the COGCC 1000 Series Reclamation Regulations will be complied with. 5. Best management practices will be implemented and maintained to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation in accordance with Colorado Department of Public Health and the Environment (CDPHW) and COGCC requirements as detailed in the Stormwater Management Plan for the Vega Unit and Harrison Creek Area, Mesa County, Colorado. These measures may include, but are not limited to: <ul style="list-style-type: none"> -Stormwater diversion ditches up-gradient from the disturbed area to prevent stormwater entry into disturbed areas. Check dams, rock armoring, and erosion control fabric will be installed as needed in the ditches to prevent erosion. -Wattles will be installed down-gradient of all disturbed areas in accordance with manufacturer recommendations to prevent sediment migration towards waterways. -A berm will be installed around the perimeter of the pad location to prevent discharge of sediment or contaminants from the location. -The pad and access roads will be graveled as soon after construction as possible to prevent mud tracking and dust. -Sediment basins may be installed at strategic locations to retain sediment generated during ground disturbing activities. -Culverts of sufficient size to accommodate all anticipated stormwater flow will be installed at appropriate locations along the access road to facilitate proper drainage of undisturbed areas. -Rock armoring and/or wattles will be installed at and below outfalls to prevent erosion and sediment migration. -Erosion control blankets may be used to protect slopes while interim revegetation is instituted. -Stormwater control measures will be inspected and documented every 14 days and after storm events to ensure that proper maintenance occurs. 6. Apply certified weed-free mulch and crimp or tacy to remain in place to reclaim areas for seed preservation and moisture retention. 7. The access road and location will be sufficiently graveled to minimize the generation of fugitive dust and contribution of sediment to downstream areas. No other dust suppression activities will occur within 300 feet of the ordinary high water mark of Buzzard Creek or its tributaries. 8. Implement the "Noxious and Invasive Weed Management Plan for Oil and Gas Operators, Grand Junction Field Office and Grand Valley Ranger District, March 2007"

which has been approved by the Grand Junction Field office of the Bureau of Land Management and the Mesa County Pest and Weed Inspector.

9. Closed-loop or pitless drilling practices will be utilized.

10. Tanks and flowlines will be used instead of pits for flowback of well completion fluids.

11. Remote monitoring (i.e. SCADA) systems will be utilized.

12. Perform sampling and analysis to establish baseline water quality in Buzzard Creek both upstream and downstream of the Pad 13A area prior to commencing oil and gas operations. Perform follow up sampling and analysis to monitor water quality in Buzzard Creek once every six months while drilling and completion operations are being conducted and within six months after the drilling and completion operations are concluded. This applies to each period of drilling and completion operations if the drilling rig is removed and there is a break in the drilling operations.

13. Automated emergency response systems including high tank alarms and emergency shut down systems will be installed on the producing well facilities.

14. Emergency spill response equipment will be stored within a five-mile radius so that it is available to expedite effective spill response.

15. Report any spills or releases of exploration and production waste that affect wildlife to the Colorado Parks and Wildlife (CPW) no later than 24 hours after discovery.

3	Noise mitigation	<p>Laramie Energy</p> <p>RE: BCU 13A pad NENE Section 13, Township 9S, Ranch 93W Mesa County, Colorado</p> <p>Rule 604.c.2 Mitigation Measures:</p> <p>A. Noise and Lighting - Noise and Lighting Mitigation Measures for the nearby (715') building unit (seasonal cabin used and owned by the surface owner of the well pad location) will likely not be needed as the building is occupied on an intermittent/seasonal basis by ranch hands to move the cattle. The drilling and completion operations are planned to be completed prior to that time.</p> <p>B. Closed Loop Drilling Systems – Pit Restrictions: A closed loop system will be used.</p> <p>C. Green Completions – Emission Control Systems: Green completions will be used.</p> <p>D. Traffic Plan: The pad access road lies entirely on the surface owner's property from County Road 71.4; no traffic plan is required by the local jurisdiction.</p> <p>E. Multi-well Pads: The BCU 13A pad is an existing pad which had been planned to be used as a multi-well pad by two previous operators. Rather than create additional surface disturbance, the existing pad and access road will be utilized to drill 3 wells.</p> <p>F. Leak Detection Plan: A plan is in place to monitor production facilities on a regular schedule to identify fluid leaks.</p> <p>H. Blowout preventer equipment (BOPE): A rig with a Kelly will be utilized.</p> <p>I. BOPE testing for drilling operations: BOPE testing will occur upon initial rig-up and at least once every thirty days during drilling operations.</p> <p>J. BOPE for well servicing operations: Adequate BOP equipment will be used on all well servicing operations.</p> <p>K. Pit level indicators: No pit is planned for this location.</p> <p>M. Fencing requirements: The access road (on the surface owner's property) will be fenced, gated and locked.</p> <p>N. Control of fire hazards: Fire hazards will be controlled.</p> <p>P. Removal of surface trash: Surface trash will be removed.</p> <p>S. Access roads: The access road is existing and has been constructed to accommodate local emergency vehicle access requirements and maintained.</p> <p>T. Well site cleared: Within 90 days after a well is plugged and abandoned, the well site will be cleared of all non-essential equipment, trash, and debris.</p> <p>U. Identification of plugged and abandoned wells: Plugged and abandoned wells will be identified with a permanent monument, including the well number and date of plugging.</p>	
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Total: 3 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401573571	WASTE MANAGEMENT PLAN
401573578	OTHER
401573590	NRCS MAP UNIT DESC
401573595	NRCS MAP UNIT DESC
401573602	REFERENCE AREA MAP
401573604	REFERENCE AREA PICTURES
401573609	LOCATION PICTURES
401574052	CONST. LAYOUT DRAWINGS
401574057	LOCATION DRAWING
401574065	OTHER
401574074	FACILITY LAYOUT DRAWING
401574086	HYDROLOGY MAP
401574095	ACCESS ROAD MAP
401574103	MULTI-WELL PLAN
401574117	SURFACE AGRMT/SURETY

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

Public Comments

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

