

State of Colorado  
Oil and Gas Conservation Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number:

401141886

Date Received:

11/17/2016

## Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: \_\_\_\_\_

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:

**449070**

Expiration Date:

**01/30/2020**☒ 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: Wayne P Bankert

Phone: (970) 812-5310

Fax: ( )

email: wbankert@laramie-energy.com

## RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20120081☐ Gas Facility Surety ID: \_\_\_\_\_☐ Waste Management Surety ID: \_\_\_\_\_

## LOCATION IDENTIFICATION

Name: Gunderson

Number: 20-03 Pad

County: MESA

QuarterQuarter: NENW Section: 20 Township: 9S Range: 93W Meridian: 6 Ground Elevation: 7137

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: 1032 feet FNL from North or South section line

1985 feet FWL from East or West section line

Latitude: 39.266756 Longitude: -107.795281

PDOP Reading: 1.4 Date of Measurement: 08/19/2015

Instrument Operator's Name: Braden Box

## 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	<u>23</u>	Oil Tanks*	<u>0</u>	Condensate Tanks*	<u>8</u>	Water Tanks*	<u>0</u>	Buried Produced Water Vaults*	<u>0</u>
Drilling Pits	<u>0</u>	Production Pits*	<u>0</u>	Special Purpose Pits	<u>0</u>	Multi-Well Pits*	<u>0</u>	Modular Large Volume Tanks	<u>0</u>
Pump Jacks	<u>0</u>	Separators*	<u>23</u>	Injection Pumps*	<u>0</u>	Cavity Pumps*	<u>0</u>	Gas Compressors*	<u>0</u>
Gas or Diesel Motors*	<u>0</u>	Electric Motors	<u>0</u>	Electric Generators*	<u>0</u>	Fuel Tanks*	<u>0</u>	LACT Unit*	<u>0</u>
Dehydrator Units*	<u>0</u>	Vapor Recovery Unit*	<u>0</u>	VOC Combustor*	<u>1</u>	Flare*	<u>0</u>	Pigging Station*	<u>0</u>

## 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:

The Gunderson 20-03 pad will have a 243' leg of a buried 12" gas gathering line to be tied into the existing 16" gas gathering line that feeds to the Mega Vega Compressor(43003) Facility in NENE Sec. 22, T9S, R93W 6th PM Mesa County. See Attached exhibit for specifics.

The Gunderson 20-03 will have 243' leg of an 8-10" HDPE low pressure produced water gathering line that will be tied into a planned to the existing Harrison Creek Water Treatment Facility(413056) located in the NENE Sec. 22, T9S, R93W 6th PM Mesa County, CO.

The flowlines from the wellhead to the separators will be 2" welded steel. The "dump" lines from the separators to the tanks will be 2" steel.

There will be six 4-pack separators on location.

There will eight 400-bbl Condensate/Produced Water tanks onsite. As the wells decrease in production, some of these tanks will eventually be removed.

## CONSTRUCTION

Date planned to commence construction: 02/15/2017 Size of disturbed area during construction in acres: 7.52

Estimated date that interim reclamation will begin: 04/18/2020 Size of location after interim reclamation in acres: 1.51

Estimated post-construction ground elevation: 7145

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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:

Cuttings will be stacked on location. Once sufficiently dried, cuttings will be tested to 910 standards and once acceptable be covered with soil.  
Drilling mud will be Recycled/Reused in other drilling operations.

Beneficial reuse or land application plan submitted? \_\_\_\_\_

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

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

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Jerry E Gunderson

Phone: 702-292-2948

Address: 944 T Road

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: jerryegunderson@gmail.com

City: Mack State: CO Zip: 81525

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: oil and gas lease

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

Date of Rule 306 surface owner consultation 10/15/2015

## 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:	1151 Feet	1079 Feet
Building Unit:	1152 Feet	1073 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1219 Feet	1108 Feet
Above Ground Utility:	1232 Feet	1127 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	265 Feet	143 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: \_\_\_\_\_

## 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.

## 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: Map Unit Symbol 39: Fughes-Hesperus Complex 3 o 12 percent slopes

NRCS Map Unit Name: Map Unit Symbol 47: Hesperus-Empedrado, moist Pagoda Complex 5 to 35 percent slopes

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: 11/04/2016

List individual species:

### 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: 345 Feet

water well: 2642 Feet

Estimated depth to ground water at Oil and Gas Location 70 Feet

Basis for depth to groundwater and sensitive area determination:

Buzzard creek is 345' NNW. Water well is 2642' NE of location across Buzzard Creek and up gradient of location. Ground water depth estimated based on Buzzard Creek Elevation nearest to pad and pad elevation difference. 7166'(Pad elev.) -7096' (Creek elev.)

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

## 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 \_\_\_\_\_

### 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

Location Drawing  
Production Layout  
Access Road Map  
Hydrology Map  
Stormwater  
Wildlife BMP's

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

Signed: \_\_\_\_\_ Date: 11/17/2016 Email: wbankert@laramie-energy.com

Print Name: Wayne P Bankert Title: Reg. & Env. Manager

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: 1/31/2017

### 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

	In addition to the notifications required by COGCC listed in the Northwest Notification Policy (Notice of Intent to Construct a New Location, Notice of Intent to Spud Surface Casing, and Notice of Intent to Commence Hydraulic Fracturing Operations) and Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to pipeline testing (flowlines from wellheads to separators to tanks; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.
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Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals as required by CDPHE (at least every 14 days and after precipitation events), and maintained in good condition.

The design/build of any perimeter berm or fluid management structures shall be sized, constructed, and compacted sufficiently to contain and/or manage potential fluid releases during operations in a manner that prevents or controls potential sedimentation and scouring on adjacent lands and drainages. Such design/build of perimeter berms or fluid management structures may include, but are not limited to the following: on location berms; diversion ditches; down gradient baffles intended to slow and control water flow and sediment; enhanced vegetation; or other design features necessary to achieve the goal of protecting adjacent lands and drainages from potential sedimentation and scouring.

The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented; prior to, during, and after any re-construction activities, as well as during all drilling and completion operations; at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.

The access road will be constructed and maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.

Strategically apply fugitive dust control measures, including encouraging established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.

Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around permanent produced water storage tanks.

	<p>The moisture content of drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. No offsite reuse of cuttings to another oil and gas location shall occur without prior approval of a Beneficial Reuse or Land Application Plan (submitted via a Form 4 Sundry Notice) specifying reuse or application, location, and waste characterization method. Commercial disposal of drill cuttings and drilling fluids will only require the operator to maintain documentation (manifests, bills of lading, etc) of drill cuttings and drilling fluids disposal.</p> <p>Flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline storage vessel, or other open top containment located on the well pad; or into tanker trucks for offsite disposal. No open top tanks can be used for initial flowback fluids containment. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. No additional downgradient berming is required if operator constructs a sufficiently sized perimeter berm.</p> <p>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p>
	<p>Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent surface/buried pipelines and following any reconfiguration of the pipeline network. All permanent flowlines from wellheads to separators and from the separators to the tank will also be pressure tested annually.</p> <p>Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>

### **Best Management Practices**

<b><u>No</u></b>	<b><u>BMP/COA Type</u></b>	<b><u>Description</u></b>
1	Wildlife	<p>LARAMIE ENERGY, LLC</p> <p>Best Management Practices (BMP's) To Reduce Impacts to Wildlife on the Gunderson 20-03 Pad For Operations in Sec. 20, Twn.9S, Rng. 93W 6th PM Mesa County, CO</p> <p>COGCC Mapping indicates: ** NO RSO (Restricted Surface Occupancy) on the Gunderson 20-03 Pad ** Other than Black Bear, there is NO SWH (Sensitive Wildlife Habitat) on the Gunderson 20-03 Pad .</p> <p>In an effort to minimize the impacts to wildlife, the following BMP's are part of Laramie Energy's (LE) standard operating procedures for drilling and operations within the Piceance Basin. This list is a partial of LE's policy.</p> <p>Initial Stages for Infrastructure and Roads</p> <p>1. Road design and General</p> <ul style="list-style-type: none"> <li>- No firearms, no dogs on location, and no feeding of wildlife.</li> <li>- Minimize the amount of traffic on lease roads within 3 hours of sunrise and sunset.</li> <li>- Use existing routes as much as possible to avoid new disturbance and habitat</li> </ul>



fragmentation and minimize new road construction.

- Maximize the topography as much as possible in designing roads to reduce, visual, noise, impacts, etc.
- Participate in road sharing agreements with other Operators when possible.
- Design and surface roads based on the traffic, speed, and type of vehicles to reduce, dust, mud, and environmental damage.
- Locate roads away from riparian areas and bottoms of drainages as much as possible or re-route entirely.
- Obtain Army Corp of Engineer Permits for any stream crossings prior to construction.
- Analyze crossings and flow characteristics to determine the best method of crossing, (i.e. culvert, bridge, or low water).
- Armor all stream crossings to reduce erosion and to comply with Stormwater Requirements.
- Implementation of fugitive dust control measures including but not limited to water or magnesium chloride applications, and road surfacing.
- Limit traffic to the minimum needed for safe and efficient operations.
- No driving or parking off of disturbed areas.
- Install and use locked gates or other means when allowed by landowner or Federal Agencies to prevent unauthorized travel on roads and rights-of ways.

## 2. Well pad design and location

- Locate well pads to maximize directional drilling practices. PE currently plans and attempts to locate pads for the maximum number of wells which can safely be developed from each pad. This is normally 16-20 wells per pad which equates to roughly 4 well pads per section.
- Design each location to accommodate both current and future gas production.
- Locate well pads to minimize disturbance yet maximize use to reduce surface impacts.
- Review State and Federal GIS mapping to avoid Sensitive Wildlife Habitat (SWH), Restricted Surface Occupancy (RSO) areas, steep slopes, etc., as much as possible with roads and pad location.
- Design and install gathering lines within the disturbed area of new roads and adjacent to as much as possible to reduce disturbance construction.
- Design Rights-of Way widths to the minimum needed for safe and efficient construction of pipelines
- Remote Telemetry for production operations

## 3. Drilling and Production Operations

- Implement remote telemetry in all operations
- Where topographically possible and subject to landowner approval, use centralized water gathering and transportation systems.
- Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents, and openings.
- Locate facilities to minimize visual effects (e.g. paint color, screening, etc.)
- PE implements a dewatering system in its operations. No fluid pits are constructed or used during drilling or completion operations.
- PE implements an aggressive weed management program. PE incorporates and uses the BLM Colorado River Valley Field Office's "Noxious and Invasive Weed Management Plan for Oil and Gas Operators- March 2007" for all operations. Each spring, Laramie Energy inventories all pads, roads, and pipelines to insure no noxious weeds have been introduced. If noxious weeds are found, the county will be notified and the weeds will be treated. Weeds are continuously monitored and treated throughout the growing season. Only herbicides approved by the EPA and State are used by certified weed applicators.

## 4. Reclamation

- Strip and segregate topsoil from other soil horizons during pad, road, and pipeline construction.
- Minimize topsoil degradation by windrowing no higher than 5 feet when possible.
- Immediately seed topsoil to reduce erosion and prevent weed establishment and maintain soil microbial activity.
- Use only certified weed free native seed mixes, unless recommended otherwise by

		<p>Federal Agencies or the Landowner.</p> <ul style="list-style-type: none"> <li>- Use locally adapted seed when available.</li> <li>- Use diverse seed mixes to mirror the surrounding area unless recommended otherwise by Federal Agencies or the Landowner.</li> <li>- Monitor re-vegetation success until a minimum of 75% of preferred perennial plant cover (no weeds) is established.</li> <li>- Perform "interim" reclamation on all disturbed areas not needed for active producing operations.</li> <li>- If possible, conduct interim and final reclamation during optimum periods (e.g. late fall/early winter or early spring).</li> <li>- If needed, fence reclaimed areas to minimize livestock/wildlife impact until plant species have are capable of sustaining grazing.</li> </ul> <p>LARAMIE ENERGY, LLC  BMPs FOR  Sensitive Wildlife Habitat and Restricted Surface Occupancy  Areas Specific to Laramie Energy, LLC  Operations Within the Piceance Basin  Mesa County, CO</p> <p>Sensitive Wildlife Habitat (SWH)</p> <p>Black Bear</p> <ul style="list-style-type: none"> <li>• Initiate a food and waste/refuse management program that uses bear-proof food storage containers and trash receptacles.</li> <li>• Initiate an education program that reduces bear conflicts.</li> <li>• Establish policy to prohibit keeping food and trash in sleeping quarters.</li> <li>• Establish policy to support enforcement of state prohibition on feeding of black bear.</li> <li>• Report bear conflicts immediately to CPW .</li> </ul> <p>Signature <u>Wayne P. Bankert</u> Date <u>11/10/2016</u>  Wayne P. Bankert  Piceance Reg. &amp; Env. Manager</p>	
2	Storm Water/Erosion Control	<p>CDPHE Stormwater Certification Number COR03K454 for Laramie's North Vega Project Area will be amended to include this location.</p> <p>Standard stormwater BMPs must be implemented at this location prior to construction, throughout construction, drilling, and completion operations to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.</p> <p>The access road will be constructed and maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p>	
3	Dust control	<p>Laramie will apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p>	
4	Drilling/Completion Operations	<p>Laramie will notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations (if different than the start of hydraulic stimulation operations) using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).</p> <p>Laramie will ensure secondary containment for any volume of fluids contained at tank site during operations (as shown on the Location Drawing and the Construction Layout</p>	

		<p>Drawings attachments); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days and after significant precipitation events, and/or in accordance with CDPHE regulations), and maintained in good condition.</p> <p>The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented at this location prior to construction, throughout construction, drilling, and completion operations to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.</p> <p>The moisture content of drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1.</p> <p>Landfarming of E&amp;P waste is prohibited on the location; however, this shall not preclude onsite disposal of E&amp;P waste in accordance with COGCC Rules and permit conditions.</p> <p>After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. Laramie will not dispose of cuttings offsite to another oil and gas location without prior approval of a an amended Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will only require notification to COGCC via a Form 4 Sundry Notice.</p> <p>The access road will be constructed and maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.</p> <p>The moisture content of drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1.</p> <p>Landfarming of E&amp;P waste is prohibited on the location; however, this shall not preclude onsite disposal of E&amp;P waste in accordance with COGCC Rules and permit conditions.</p> <p>After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a an amended Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will only require notification to COGCC via a Form 4 Sundry Notice.</p>	
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		<p>If the wells are to be hydraulically stimulated, flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated. Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network. Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>
5	Drilling/Completion Operations	<p>The wells will be hydraulically stimulated, flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated. Laramie will pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network. Laramie utilizes, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This helps to reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>

Total: 5 comment(s)

### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2108036	MULTI-WELL PLAN
2108037	CORRESPONDENCE
401141886	FORM 2A SUBMITTED
401147162	NRCS MAP UNIT DESC
401147163	NRCS MAP UNIT DESC
401149127	REFERENCE AREA PICTURES
401149137	REFERENCE AREA MAP
401151453	ACCESS ROAD MAP
401151456	LOCATION DRAWING
401151457	LOCATION PICTURES
401151474	FACILITY LAYOUT DRAWING
401151479	CONST. LAYOUT DRAWINGS
401151480	CONST. LAYOUT DRAWINGS
401151493	OTHER
401151495	SURFACE AGRMT/SURETY
401151499	HYDROLOGY MAP

Total Attach: 16 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Corrected date of construction from 1/30/17 to 2/15/17 as per operator. Final review complete.	01/31/2017
OGLA	Initiated/Completed OGLA Form 2A review on 01-19-17 by Dave Kubeczko; COGCC will be attaching the following conditions of approval (COAs) based on the information and data Laramie has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review; sent the following COAs to the operator on 01-19-17 - notification, fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, tank berming, sediment and dust control, odor control, and pipeline testing and routing; received silent acknowledgement of COAs from operator on 01-19-17; corrected 'LOCATION IDENTIFICATION' Ground Elevation from 7145' to 7138 based on surveyor data on the Construction Layout Drawings attachment; corrected the number of wells and separators from 24 to 23 per operator concurrence of the withdrawal of one of the original Form 2 APDs at this location (the Multi-Well Plan attachment has been revised); changed Date planned to commence construction from 01/18/2017 to 01/30/2017; location does not fall within 'Sensitive Wildlife Habitat (SWH) nor 'Restricted Surface Occupancy' (RSO) areas, therefore, no CPW consultation is required; passed OGLA Form 2A review on 01-20-17 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, flowback to tanks only, cuttings low moisture content, tank berming, sediment and dust control, odor control, and pipeline testing and routing COAs.	01/19/2017
Permit	Preliminary review complete. Ready to pass pending OGLA review and approval.	01/10/2017
Permit	The 20-02E (doc 401141984) well has been withdrawn. Check multi-well plan as we may need a new one.	12/06/2016
Permit	Passed completeness.	11/23/2016

Total: 5 comment(s)