

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



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CUMULATIVE IMPACTS DATA IDENTIFICATION

Per Rule 303, this form and all required components and attachments will be submitted for any Oil and Gas Development Plan.

Form Type: [X] OGD P [] Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: 10433
Name of Operator: LARAMIE ENERGY LLC
Address: 1001 17TH STREET #1900
City: DENVER State: CO Zip: 80202
Contact Name and Telephone:
Name: Wayne P Bankert
Phone: (970) 8125310
Email: wbankert@laramie-energy.com

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: Laramie Energy 2021 CC OGD P
Oil & Gas Development Plan Docket #: 210800138
Oil & Gas Development Plan ID #: Data not required
This OGD P is included in a Comprehensive Area Plan. CAP ID #:

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: CC 0697-15-08 Number: 0697-15-08 Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402609520
Loc ID#:
Oil & Gas Location: QTRQTR: SENE Sec: 15 Twp: 6S Rng: 97W Meridian: 6
Total number of wells planned: 18

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 4
Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 16
Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1
Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 4
Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1
Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No
Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 360

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during construction, drilling, and completions activities. Noise may impact wildlife species and migratory birds by causing avoidance of cover and forage habitat and nest abandonment. Pre-production activities are anticipated to take approximately 33 weeks to complete. Due to the short duration of noise related impacts and the amount of available wildlife and nesting habitat on the Roan Plateau it is unlikely the well pad would have impacts to wildlife and migratory birds at a population level.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during the production phase of this location. It is not anticipated that activities (i.e. maintenance and operation) associated with the production stage of this location would generate noise that would impact wildlife species present in the surrounding area.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for lighting used during drilling activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Lighting would be used on site during drill rig mobilization, drilling, completions, and flowback activities. These activities would result in an estimated 176 days of lighting use. Laramie has prepared a lighting mitigation plan to help reduce impacts to wildlife species. Due to the short duration of lighting use with pre-production activities and with the implementation of the lighting mitigation measures it is unlikely that light associated with drilling activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that lighting will be used when personnel are not present onsite. Laramie will minimize continuous lighting when personnel are not onsite. Due to the limited lighting that would be used during the production stage it is unlikely that lighting would have an adverse effect on wildlife in the surrounding area.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for odor produced during drilling and completions activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Due to the short duration (25 weeks) of drilling, completions, and flowback activities and with the implementation of the wildlife BMPs it is unlikely that odors associated with pre-production activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that odors that may be produced during the production stage would have an adverse effect on wildlife in the surrounding area.

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 100

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>2</u>	<u>800</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>4</u>	<u>1600</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>0</u>	<u>0</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

Two (2) Gunbarrel tanks will be installed at the Oil & Gas Location. Each Gunbarre (GB) tank will have a capacity of 400 barrels. The total volume for the Gunbarrel tanks will be 800 bbls.

Scale and corrosion inhibitors chemicals will be stored on-site in two (2) 330-gallon chemical storage units. Each portable chemical storage unit is outfitted with a containment feature which is adequate for the size of the storage tank prevent discharges.

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	2640	E	There are no known wetlands within 2,640 feet of the well pad. The direction is not applicable and "East" was selected for validation purposes.
Wetland	2640	E	There are no perennial surface waters within 2,640 feet of the well pad. The nearest intermittent stream is approximately 137 feet downstream of the well pad. The direction is not applicable and "East" was selected for validation purposes.
Surface Waters of the State	137	NW	Downgradient surface water features consist of intermittent and perennial flow streams and a spring. A spring exists 1311 feet to the southeast. The distances to mapped intermittent flow stream is 1012 feet to the southeast and 137 feet to the northwest. The intermittent drainage identified on the USGS 137 feet northwest from the pad does not have an identifiable ordinary high water mark or defined channel and thus should not be considered an intermittent drainage. A consultation with the US Army Corps of Engineers will be conducted in the spring to confirm.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	5280	SE	The CC 0697-15-08 well site is not located upgradient within 15 streams miles of a Public Water System intake. The nearest Public Water System intake is located in Parachute, Colorado. Parachute's intake is located on the Colorado River, upgradient of Parachute Creek.

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)		Percentage
Surface Water	110281	Recycled Water (Produced Water)	162000	Unspecified Source	0		93 %
Ground Water	0	Recycled Water (non-Produced Water)	49181	Total Water Usage	177946		
					2		

If an unspecified water source is planned to be used, provide a description of the source.

Not applicable.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

While it's not feasible to reuse produced water for drilling mud due to water chemistry constraints, recycled produced water can and will be used for completions operations, which results in 94% of water used being recycled water.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Greater Sage-grouse General Habitat Management Area	438	0
Aquatic Sportfish Management Water	4756	0
Greater Sage-Grouse Priority Habitat Management Area	3110	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	7.6	0	No HPH acreage would be disturbed by this location.
Post-interim Reclamation	1.8	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage			
Crop Land: Irrigated	0	Non-Irrigated	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land: Rangeland	2138	Forestry	0	Recreation	0	Other	0
Subdivided: Industrial	0	Commercial	0	Residential	0		

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

All land within 1-mile of the proposed location is zoned Resource Lands or Public Lands as defined by Garfield County. The surrounding land is not zoned Industrial by Garfield County; therefore, all existing acreage was identified as non-crop land: rangeland. Non-Oil and Gas industrial facilities are not located within the 1-mile buffer; however, oil and gas facilities are installed within the 1-mile radius.

If any land use is "Other", provide a description of the land use.

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage			
Disturbed Grassland	0	Shrub Land	7.6	Mountain Riparian	0	Wetland Aquatic	0
Native Grassland	0	Plains Riparian	0	Forest Land	0	Alpine	0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

Construction of the well pad would result in an incremental increase of disturbance to the shrubland vegetation community; however, in comparison to the amount of available shrubland habitat present in the surrounding area this loss would be negligible. The other 7 vegetation communities would not be impacted.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Parachute-Irigul complex, 5 to 30 percent slopes	4.34
Northwater-Adel complex, 5 to 50 percent slopes	2.77
Parachute-Irigul-Rhone association, 25 to 50 percent slopes	0.56

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

	0'-2,000'	2,001'-5,280'
Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

State Parks, State Trust Lands, and State Wildlife Area are not located within 1 mile of the CC 0697-15-08 well site (the proposed location).

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

Designated Outdoor Activity Areas are not located within 1 mile of the Oil & Gas Location.

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

Mapped trails that support outdoor recreational activities are not located within 1-mile of the Oil & Gas Location.

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0.05	0.04	0	0	0	63.24	0
Storage Tanks	0	0	0.37	0.27	0.15	0.03	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0.04	0.2	0	0	0	293	0
Non-Road Internal Combustion Engines	3.49	2	0.24	6.88	0.98	407.35	1.37
Drill Mud	0	0	0.25	1.48	0.21	0.16	0
Flowback or Completions	0	0	7.32	43.96	6.25	4.88	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	0	0	0	0	0	0	0
Process Heaters or Boilers	0.05	0.04	0	0	0	63.24	0
Storage Tanks	0	0	0.39	0.28	0.16	0.04	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0
Fugitives			0.04	0.18	0.04	0	
Venting or Blowdowns	0	0	1.48	1.08	0.58	0.11	0
Combustion Control Devices	0.04	0.21	0	0	0	303.85	0
Loadout	0	0	0	0.01	0	0.01	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.08	0.49	0.07	0.05	0
Well Maintenance	0	0	0.65	3.91	0.56	0.43	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 87 During Completions: 2943
 During Drilling: 6060 During Interim Reclamation: 87
 During Production: 0

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0.04	0.01	0	0	0.03	0.01	0	0.47	0.07	0.63
Storage Tanks	9.97	25.16	0.88	9.16	33.25	2.43	0	0	0	80.84
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	3.51	1.23	0.05	0.43	2.47	0.57	0	45.78	6.83	60.86
Drill Mud	3.51	8.06	0.37	3.5	12.96	0.03	0	0	0.16	28.59
Flowback or Completions	104.53	240.01	10.92	104.17	385.67	0.97	0	0	4.88	851.14
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0.04	0.01	0	0	0	0.01	0	0.47	0.07	0.63
Storage Tanks	10.33	26.09	0.92	9.5	34.48	2.52	0	0	0	83.84
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.59	1.35	0.06	0.59	2.18	0.01	0	0	0.03	4.8
Venting or Blowdowns	24.11	77.44	2.53	36.71	103.16	7.4	0	0	0	251.35
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	0.07	0.08	0	0.02	0.12	0.01	0	0	0	0.3
Well Bradenhead	1.16	0	0	0	4.29	0.01	0	0	0.05	5.51
Well Maintenance	9.29	21.33	0.97	9.26	34.28	0.09	0	0	0.43	75.66

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of pre-production emissions are unlikely.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of production emissions are unlikely.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	60	282	1409	10	30
Annual	60	1100	1409	10	365

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

0

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

No proppant will be used during completions activities for this location.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	<u>15</u>	Active, built	<u>44</u>
Permitted by COGCC, unbuilt	<u>0</u>	Permitted by COGCC, unbuilt	<u>0</u>
Permitted by Relevant Local Government & not COGCC, unbuilt	<u>0</u>	Proposed	<u>0</u>
Proposed	<u>0</u>	Plugged and Abandoned	<u>3</u>

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 53.4

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial PhotosOther
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input type="checkbox"/> Field Observation/Measurement	Oil <u>0</u>	<u> </u>
<input checked="" type="checkbox"/> COGCC Location Files	Condensate <u>15</u>	<u> </u>
<input checked="" type="checkbox"/> Aerial PhotosOther	Produced Water <u>22</u>	<u> </u>
<input type="checkbox"/> Other	Pits <u>3</u>	<u>3</u>

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

2 Oil & Gas Location Name: CC 0603-23-32 Number: 0603-23-32 Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402609514

Loc ID#: 335647

Oil & Gas Location: QTRQTR: NESW Sec: 3 Twp: 6S Rng: 97W Meridian: 6

Total number of wells planned: 22

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 3

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 20

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 4

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 360

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during construction, drilling, and completions activities. Noise may impact wildlife species and migratory birds by causing avoidance of cover and forage habitat and nest abandonment. Pre-production activities are anticipated to take approximately 40 weeks to complete. Due to the short duration of noise related impacts and the amount of available wildlife and nesting habitat on the Roan Plateau it is unlikely the well pad would have impacts to wildlife and migratory birds at a population level.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during the production phase of this location. It is not anticipated that activities (i.e. maintenance and operation) associated with the production stage of this location would generate noise that would impact wildlife species present in the surrounding area.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for lighting used during drilling activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Lighting would be used on site during drill rig mobilization, drilling, completions, and flowback activities. These activities would result in 232 days of lighting use. Laramie has prepared a lighting mitigation plan to help reduce impacts to wildlife species. Due to the short duration of lighting use with pre-production activities and with the implementation of the lighting mitigation measures it is unlikely that light associated with drilling activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that lighting will be used when personnel are not present onsite. Laramie will minimize continuous lighting when personnel are not onsite. Due to the limited lighting that would be used during the production stage it is unlikely that lighting would have an adverse effect on wildlife in the surrounding area.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for odor produced during drilling and completions activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Due to the short duration (33 weeks) of drilling, completions, and flowback activities and with the implementation of the wildlife BMPs it is unlikely that odors associated with pre-production activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that odors that may be produced during the production stage would have an adverse effect on wildlife in the surrounding area.

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 200

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>2</u>	<u>800</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>4</u>	<u>1600</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>0</u>	<u>0</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

Two (2) Gunbarrel tanks will be installed at the Oil & Gas Location. Each Gunbarre (GB) tank will have a capacity of 400 barrels. The total volume for the Gunbarrel tanks will be 800 bbls.

Scale and corrosion inhibitors chemicals will be stored on-site in two (2) 330-gallon chemical storage units. Each portable chemical storage unit is outfitted with a containment feature which is adequate for the size of the storage tank prevent discharges.

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	<u>2640</u>	<u>E</u>	There are no known riparian corridors within 2,640 feet of the well pad. The direction is not applicable and "East" was selected for validation purposes.
Wetland	<u>2640</u>	<u>E</u>	There are no known wetlands within 2,640 feet of the well pad.
Surface Waters of the State	<u>814</u>	<u>SW</u>	The nearest down-gradient stream is an intermittent flow drainage is approximately 814 feet to the southwest of the well site perimeter. Other surface water features within 2,640-foot radius are not downgradient of the Location.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	<u>5280</u>	<u>SW</u>	The site is not located within 2,640 feet of any public water system facilities or located less than 15 stream miles from a downgradient Public Water System intake. The De Beque Public Water System intake, located on the Colorado River, over 17 stream miles distance from the proposed site location.

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)	Volume (bbls)	Volume (bbls)	Percentage Recycled Water
Surface Water	<u>146077</u>	Recycled Water (Produced Water)	<u>216000</u>	93 %
		Unspecified Source	<u>0</u>	
			<u>0</u>	

Ground Water 0

Recycled Water 66539
(non-Produced Water)

Total Water Usage 237261
6

If an unspecified water source is planned to be used, provide a description of the source.

N/A

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

While it's not feasible to reuse produced water for drilling mud due to water chemistry constraints, recycled produced water can and will be used for completions operations, which results in 93% of water used being recycled water.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Greater Sage-grouse General Habitat Management Area	216	0
Aquatic Sportfish Management Water	1309	0
Elk Production Area	4105	0
Greater Sage-Grouse Lek Site	5247	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	<u>3.9</u>	<u>0</u>	No HPH acreage would be disturbed by this location
Post-interim Reclamation	<u>3.2</u>	<u>0</u>	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage
Crop Land: Irrigated	<u>0</u>	Non-Irrigated <u>0</u>	Conservation Reserve Program(CRP) <u>0</u>	
Non-Crop Land: Rangeland	<u>2231.7</u>	Forestry <u>0</u>	Recreation <u>0</u>	Other <u>0</u>
Subdivided: Industrial	<u>0</u>	Commercial <u>0</u>	Residential <u>0</u>	

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

All land within 1-mile of the proposed location is zoned Resource Lands or Public Lands as defined by Garfield County. The surrounding land is not zoned Industrial by Garfield County; therefore, all existing acreage was identified as non-crop land: rangeland. Non-Oil and Gas industrial facilities are not located within the 1-mile buffer; however, oil and gas facilities are installed within the 1-mile radius.

If any land use is "Other", provide a description of the land use.

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage
Disturbed Grassland	<u>0</u>	Shrub Land <u>4.72</u>	Mountain Riparian <u>0</u>	Wetland Aquatic <u>0</u>
Native Grassland	<u>0</u>	Plains Riparian <u>0</u>	Forest Land <u>0</u>	Alpine <u>0</u>

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

Expansion of this existing well pad would result in a minute incremental increase of disturbance to the shrubland vegetation community. The other 7 vegetation communities would not be impacted. Total surface area of previous disturbance at the subject location is estimated at 2.8 acres. The existing location will be expanded and graded to 6.7 acres, resulting in 3.9 within the working pad surface. After drilling activities, approximately 3.5 acres will be reclaimed, reducing the well site to 3.2 acres for production operational phase. Laramie will install a new pipeline adjacent to the working pad surface resulting in 0.82 acres of new disturbance. Acres of new disturbance for the location associated with the proposed OGD for the CC 0603-23-32 is 4.72 acres, including working pad surface and proposed pipeline. Total acreage disturbance (proposed and existing), including working pad surface and proposed pipeline will be 7.52 acres.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Parachute-Irigul complex, 5 to 30 percent slopes	5.6
Northwater-Adel complex, 5 to 50 percent slopes	0.89
Parachute-Irigul-Rhone association, 25 to 50 percent slopes	0.13

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

State Parks, State Trust Lands, and State Wildlife Area are not located within 1 mile of the CC 0603-23-32 well site (the proposed location).

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

Designated Outdoor Activity Areas are not located within 1 mile of the Oil & Gas Location.

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

Mapped trails that support outdoor recreational activities are not identified within 1-mile of the Oil & Gas Location.

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0.07	0.06	0	0	0	84.32	0
Storage Tanks	0	0	0.5	0.36	0.2	0.05	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0.05	0.27	0	0	0	390.66	0
Non-Road Internal Combustion Engines	4.65	2.67	0.32	9.17	1.3	543.14	1.83
Drill Mud	0	0	0.33	1.97	0.28	0.22	0
Flowback or Completions	0	0	9.76	58.62	8.34	6.51	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	0	0	0	0	0	0	0
Process Heaters or Boilers	0.07	0.06	0	0	0	84.32	0
Storage Tanks	0	0	0.51	0.38	0.21	0.05	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0
Fugitives			0.06	0.25	0.05	0	
Venting or Blowdowns	0	0	1.97	1.44	0.77	0.15	0
Combustion Control Devices	0.05	0.28	0	0	0	405.14	0
Loadout	0	0	0	0.01	0.01	0.02	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.11	0.65	0.09	0.07	0
Well Maintenance	0	0	0.87	5.21	0.74	0.58	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction:	<u>65</u>	During Completions:	<u>3335</u>
During Drilling:	<u>7935</u>	During Interim Reclamation:	<u>65</u>
During Production:	<u>0</u>		

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0.05	0.02	0	0.01	0.03	0.01	0	0.63	0.09	0.84
Storage Tanks	13.29	33.54	1.18	12.21	44.33	3.24	0	0	0	107.79
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	4.68	1.64	0.06	0.57	3.29	0.76	0	61.03	9.11	81.15
Drill Mud	4.68	10.75	0.49	4.67	17.27	0.04	0	0	0.22	38.12
Flowback or Completions	139.37	320.01	14.56	138.89	514.22	1.3	0	0	6.5	1134.85
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0.05	0.02	0	0.01	0.03	0.01	0	0.63	0.09	0.84
Storage Tanks	13.78	34.79	1.22	12.67	45.97	3.36	0	0	0	111.79
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.79	1.8	0.08	0.78	2.9	0.01	0	0	0.04	6.4
Venting or Blowdowns	32.14	103.25	3.38	48.94	137.55	9.86	0	0	0	335.13

Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	0.09	0.11	0	0.03	0.15	0.01	0	0	0	0.4
Well Bradenhead	1.55	0	0	0	5.71	0.01	0	0	0.07	7.35
Well Maintenance	12.39	28.45	1.29	12.35	45.71	0.12	0	0	0.58	100.88

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of pre-production emissions are unlikely.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of production emissions are unlikely.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	45	282	1715	10	30
Annual	45	1100	1715	10	365

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

0

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

Proppant will not be used during completions of the wells for this location.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations	Total Number of Wells
Active, built	8	37
Permitted by COGCC, unbuilt	0	44
Permitted by Relevant Local Government & not COGCC, unbuilt	0	0
Proposed	0	1

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 19.75

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial Photos/Other
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
 NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:		Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input type="checkbox"/> Field Observation/Measurement	Oil	0	0
<input checked="" type="checkbox"/> COGCC Location Files	Condensate	7	7
<input checked="" type="checkbox"/> Aerial Photos/Other	Produced Water	5	5
<input type="checkbox"/> Other	Pits	2	2

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

3 Oil & Gas Location Name: CC 0610-21-41 Number: 0610-21-41 Status: Active, built

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 401598341

Loc ID#: 383264

Oil & Gas Location: QTRQTR: NENW Sec: 10 Twp: 6S Rng: 97W Meridian: 6

Total number of wells planned: 24

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 0

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 20

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 4

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 360

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during construction, drilling, and completions activities. Noise may impact wildlife species and migratory birds by causing avoidance of cover and forage habitat and nest abandonment. Pre-production activities are anticipated to take approximately 36 weeks to complete. Due to the short duration of noise related impacts and the amount of available wildlife and nesting habitat on the Roan Plateau it is unlikely the well pad would have impacts to wildlife and migratory birds at a population level.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the proposed well pad that would be impacted by noise during the production phase of this location. It is not anticipated that activities (i.e. maintenance and operation) associated with the production stage of this location would generate noise that would impact wildlife species present in the surrounding area.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for lighting used during drilling activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Lighting would be used on site during drill rig mobilization, drilling, completions, and flowback activities. These activities would result in an estimated 225 days of lighting use. Laramie has prepared a lighting mitigation plan to help reduce impacts to wildlife species. Due to the short duration of lighting use with pre-production activities and with the implementation of the lighting mitigation measures it is unlikely that light associated with drilling activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that lighting will be used when personnel are not present onsite. Laramie will minimize continuous lighting when personnel are not onsite. Due to the limited lighting that would be used during the production stage it is unlikely that lighting would have an adverse effect on wildlife in the surrounding area.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. There is the potential for odor produced during drilling and completions activities to impact wildlife species present in the area surrounding the well pad causing wildlife avoidance of forage and cover. Due to the short duration (32 weeks) of drilling, completions, and flowback activities and with the implementation of the wildlife BMPs it is unlikely that odors associated with pre-production activities would impact wildlife species at a population level.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential buildings within 1 mile of the well pad. It is not anticipated that odors that may be produced during the production stage would have an adverse effect on wildlife in the surrounding area.

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 200

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>2</u>	<u>800</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>4</u>	<u>1600</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>0</u>	<u>0</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

Two (2) Gunbarrel tanks will be installed at the Oil & Gas Location. Each Gunbarre (GB) tank will have a capacity of 400 barrels. The total volume for the Gunbarrel tanks will be 800 bbls.

Scale and corrosion inhibitors chemicals will be stored on-site in two (2) 330-gallon chemical storage units. Each portable chemical storage unit is outfitted with a containment feature which is adequate for the size of the storage tank prevent discharges.

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

Distance	Direction	Evaluation of Baseline Condition
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Riparian Corridor	2640	E	There are no known riparian corridors within 2,640 feet of the site perimeter. The direction is not applicable and "East" was selected for validation purposes.
Wetland	2640	E	There are no known wetlands within 2,640 feet of the well pad. The direction is not applicable and "East" was selected for validation purposes.
Surface Waters of the State	1611	W	The nearest downgradient water feature is an intermittent flow drainage, which is approximately 1,611 feet to the west from the edge of the WPS. The intermittent flow drainage flows to the perennial stream, which is 2402 feet to the southwest from the WPS.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	5280	SW	The CC 0610-21-41 well site is not located upgradient within 15 stream miles of a Public Water System intake. The nearest Public Water Systems are located in Parachute and De Beque, Colorado. Parachute's intake is located on the Colorado River, upgradient of Parachute Creek and the De Beque Public Water System intake, located on the Colorado River, over 17 stream miles distance from the proposed site location.

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)	Volume (bbls)	Volume (bbls)	Percentage Recycled Water	%	
Surface Water	140111	Recycled Water (Produced Water)	207000	Unspecified Source	0	93 %
			0			
Ground Water	0	Recycled Water (non-Produced Water)	63646	Total Water Usage	227375	
					7	

If an unspecified water source is planned to be used, provide a description of the source.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

While it's not feasible to reuse produced water for drilling mud due to water chemistry constraints, recycled produced water can and will be used for completions operations, which results in 94% of water used being recycled water.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Greater Sage-grouse General Habitat Management Area	776	0
Aquatic Sportfish Management Water	3012	0
Elk Production Area	3479	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	0	0	No HPH acreage would be disturbed by this location.
Post-interim Reclamation	1.7	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage			
Crop Land: Irrigated	0	Non-Irrigated	0	Conservation Reserve Program(CRP)	0		
Non-Crop Land: Rangeland	2237.83	Forestry	0	Recreation	0	Other	0

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

All land within 1-mile of the proposed location is zoned Resource Lands or Public Lands as defined by Garfield County. The surrounding land is not zoned Industrial by Garfield County; therefore, all existing acreage was identified as non-crop land: rangeland. Non-Oil and Gas industrial facilities are not located within the 1-mile buffer; however, oil and gas facilities are installed within the 1-mile radius.

If any land use is "Other", provide a description of the land use.

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage		Estimated Disturbed Acreage
Disturbed Grassland	<u>0</u>	Shrub Land	<u>0</u>	Mountain Riparian	<u>0</u>	Wetland Aquatic	<u>0</u>
Native Grassland	<u>0</u>	Plains Riparian	<u>0</u>	Forest Land	<u>0</u>	Alpine	<u>0</u>

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

None of the vegetation communities would not be impacted from the proposed well site, since the site is already constructed. The Cascade Creek 0610-21-41 was previously constructed as a well pad is existing and no new/additional disturbance will be required. The existing well pad size is approximately 7.0 acres.

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Parachute-Irigul complex, 5 to 30 percent slopes	5.25
Parachute-Irigul-Rhone association, 25 to 50 percent slopes	1.35
Northwater-Adel complex, 5 to 50 percent slopes	0.42

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	<u>0</u>	<u>0</u>
Total Number of non-school AND non child care center High Occupancy Building Units:	<u>0</u>	<u>0</u>
Total number of School Facilities:	<u>0</u>	<u>0</u>
Total number of Child Care Centers:	<u>0</u>	<u>0</u>

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

State Parks, State Trust Lands, and State Wildlife Area are not located within 1 mile of the Oil & Gas Location.

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

Designated Outdoor Activity Areas are not located within 1 mile of the Oil & Gas Location.

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

Mapped trails that support outdoor recreational activities are not located within 1-mile of the Oil & Gas Location.

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0.07	0.06	0	0	0	80.81	0
Storage Tanks	0	0	0.47	0.35	0.2	0.04	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0.05	0.26	0	0	0	374.39	0
Non-Road Internal Combustion Engines	4.45	2.56	0.3	8.78	1.25	520.51	1.76
Drill Mud	0	0	0.31	1.89	0.27	0.21	0
Flowback or Completions	0	0	9.36	56.18	7.99	6.24	0
Loadout	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	0	0	0	0	0	0	0
Process Heaters or Boilers	0.07	0.06	0	0	0	80.81	0
Storage Tanks	0	0	0.49	0.36	0.2	0.05	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0
Fugitives			0.05	0.24	0.05	0	
Venting or Blowdowns	0	0	1.88	1.38	0.74	0.14	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0	0	0	0.01	0	0.02	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0
Well Bradenhead	0	0	0.1	0.62	0.09	0.07	0
Well Maintenance	0	0	0.83	4.99	0.71	0.55	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 0 During Completions: 3335
 During Drilling: 8240 During Interim Reclamation: 87
 During Production: 0

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0.05	0.02	0	0.01	0.03	0.01	0	0.61	0.09	0.81
Storage Tanks	12.73	32.14	1.13	11.71	42.48	3.1	0	0	0	103.3
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	4.49	1.58	0.06	0.55	3.15	0.73	0	58.49	8.73	77.76
Drill Mud	4.49	10.3	0.47	4.47	16.56	0.04	0	0	0.21	36.54
Flowback or Completions	133.56	306.67	13.96	133.1	492.8	1.24	0	0	6.23	1087.56
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas

Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0.05	0.02	0	0.01	0.03	0.01	0	0.61	0.09	0.81
Storage Tanks	13.21	33.34	1.17	12.14	44.05	3.22	0	0	0	107.13
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0.75	1.73	0.08	0.75	2.78	0.01	0	0	0.04	6.13
Venting or Blowdowns	30.8	98.95	3.24	46.9	131.82	9.45	0	0	0	321.17
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	0.09	0.1	0	0.03	0.15	0.01	0	0	0	0.38
Well Bradenhead	1.48	0	0	0	5.48	0.01	0	0	0.07	7.04
Well Maintenance	11.87	27.26	1.24	11.83	43.8	0.11	0	0	0.55	96.67

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of pre-production emissions are unlikely

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

There are no residential buildings within 1 mile of the well pad. The well pad is located in a remote part of Garfield County where short and long-term impacts to public health as a result of production emissions are unlikely.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	0	286	1715	10	30
Annual	0	1350	1715	10	365

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

0

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

No proppant will be used during completions of the wells associated with this location.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations	Total Number of Wells
Active, built	10	55
Permitted by COGCC, unbuilt	4	29
Permitted by Relevant Local Government & not COGCC, unbuilt	0	0
Proposed	1	1

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 29.83

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial Photos/Other
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:		Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input type="checkbox"/> Field Observation/Measurement	Oil	0	_____
<input checked="" type="checkbox"/> COGCC Location Files	Condensate	8	_____
<input checked="" type="checkbox"/> Aerial Photos/Other	Produced Water	0	_____
<input type="checkbox"/> Other	Pits	2	2

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

4 Oil & Gas Location Name: Annex Cuttings Facility Number: 479533 Status: Proposed

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 402585327

Loc ID#: _____

Oil & Gas Location: QTRQTR: SWSE Sec: 15 Twp: 6S Rng: 97W Meridian: 6

Total number of wells planned: 0

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 10

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 0

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 0

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 0

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 0

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 60

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

The proposed Annex Cuttings Management Facility would be located greater than one mile from residential building units; thus, there will be no noise related impacts to residential housing as a result of the project. There is the potential for wildlife in the project vicinity to be impacted by incremental adverse noise during project construction activities by causing avoidance of suitable habitat. Equipment and personnel would work only during daylight hours which would reduce the impact to wildlife in the surrounding area. Project construction activities are anticipated to take 10 days. Due to the short duration of the project and timing of activities (daylight hours) it is unlikely that adverse noise levels would impact wildlife at a population level. Wildlife would likely return to pre-construction activities once project construction is completed.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

The proposed Annex Cuttings Management Facility would be located greater than one mile from residential building units; thus, there will be no noise related impacts to residential housing as a result of the project. There is the potential for wildlife in the project vicinity to be impacted by incremental adverse noise related to vehicle traffic and cuttings management activities. Associated activities may cause wildlife to avoid suitable habitat in the project vicinity. Truck transport of the cuttings would only occur during daylight hours, for approximately 3-5 days during each phase of treatment, for a total of 30-50 days of truck related traffic noise for the lifespan of the facility. Due to the intermittent and short duration of truck related traffic noise and the planned operating hours of the facility (daylight hours) it is unlikely that adverse noise levels would impact wildlife at a population level. The cuttings management facility will comply with regulation for permissible noise levels for the light industrial standard.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There are no residential building units within 1 mile of the proposed cuttings management facility that would be impacted by lights. Construction and grading activities are planned to occur during daylight hours. No lighting will be installed or utilized at the proposed location.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There are no residential building units within 1 mile of the proposed cuttings management facility that would be impacted by lights. Operation and transport of cuttings material is planned to occur during daylight hours. No lighting will be installed or utilized at the proposed location.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

The proposed Annex Cuttings Management Facility would be located greater than one mile from residential building units; thus, there will be no odor related impacts to residential housing as a result of the project. It is not anticipated that construction and grading activities associated with the facility will create a nuisance odor that will impact wildlife in the surrounding area.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

The proposed Annex Cuttings Management Facility would be located greater than one mile from residential building units; thus, there will be no odor related impacts to residential housing as a result of the project. It is not anticipated that operation of the facility will create a nuisance odor that will impact wildlife in the surrounding area.

WATER RESOURCES

This Oil & Gas Location is listed as a sensitive area for water resources.

This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 250

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u> 0 </u>	<u> 0 </u>
Condensate	<u> 0 </u>	<u> 0 </u>
Produced Water	<u> 0 </u>	<u> 0 </u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u> 0 </u>	<u> 0 </u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

0

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	2640	E	There are no known riparian corridors within 2,640 feet of the WPS. The direction is not applicable and "East" was selected for validation purposes.
Wetland	2640	E	There are no known wetlands within 2,640 feet of the WPS. The direction is not applicable and "East" was selected for validation purposes.
Surface Waters of the State	1072	SE	The nearest downgradient water feature is an intermittent flow drainage, which is approximately 1,072 feet to the southeast from the edge of the WPS. A spring, is located 2420 feet to the northeast of the proposed WPS. A Sensitive Area Determination Assessment was conducted by a hydrogeologist at WestWater Engineering, Inc. The analysis concluded that the ACF should not be classified as sensitive area for water resources. The Sensitive Area Determination Assessment is attached to the Form 2B.

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

	Distance	Direction	Evaluation of Baseline Condition
Public Water System Intake	5280	SE	The ACF well site is not located upgradient within 15 streams miles of a Public Water System intake. The nearest Public Water System intake is located in Parachute, Colorado. Parachute's intake is located on the Colorado River, upgradient of Parachute Creek.

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)	Volume (bbls)	Volume (bbls)	Percentage	%	
Surface Water	0	Recycled Water (Produced Water)	0	Unspecified Source	0	
Ground Water	0	Recycled Water (non-Produced Water)	0	Total Water Usage	0	0
				Recycled Water		

If an unspecified water source is planned to be used, provide a description of the source.

The proposed facility would only manage for the treatment and disposal of drill cuttings from three proposed well pad locations. No freshwater or recycled water usage is anticipated for drilling and completions activities, since drilling and completions activities will not occur at the proposed facility.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

The proposed facility would only manage for the treatment and disposal of drill cuttings from three proposed well pad locations. No freshwater or recycled water usage is anticipated for drilling and completions activities, since drilling and completions activities will not occur at the proposed facility. Fresh water will be utilized for dust abatement. The ACF Water Plan, attached to the Form 2A, addresses freshwater usage for grading and construction activities. Laramie estimates 300 barrels of freshwater will be utilized during operations of the ACF for dust mitigation. Laramie will not use produced water at ACF.

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Greater Sage-grouse Priority Habitat	83	0
Aquatic Sportfish Management Water	4686	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	2.9	0	
Post-interim Reclamation	0	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage
Crop Land: Irrigated	0	Non-Irrigated 0	Conservation Reserve Program(CRP)	0
Non-Crop Land: Rangeland	2120	Forestry	Recreation	0
Subdivided: Industrial	0	Commercial	Residential	0
			Other	0

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

All land within 1-mile of the proposed location is zoned Resource Lands or Public Lands as defined by Garfield County. The surrounding land is not zoned Industrial by Garfield County; therefore, all existing acreage was identified as non-crop land: rangeland. Non-Oil and Gas industrial facilities are not located within the 1-mile buffer; however, oil and gas facilities are installed within the 1-mile radius.

If any land use is "Other", provide a description of the land use.

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage
Disturbed Grassland	0	Shrub Land	0	Mountain Riparian
Native Grassland	0	Plains Riparian	0	Forest Land
				Wetland Aquatic
				Alpine

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

Cuttings management facility will be located on an existing well pad. During construction of the facility areas that had been reseeded during interim reclamation would be redisturbed. There will be a negligible loss of vegetation as a result of this project. The total ground disturbance is 2.945 acres (128,267 square feet).

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
56—Parachute-Irigul-Rhone association, 25 to 50 percent	2.89
52—Northwater-Adel complex, 5 to 50 percent slopes	0.06

PUBLIC WELFARE

This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	0
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Drill Mud	0	0	0	0	0	0	0	0	0	0
Flowback or Completions	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	0	0	0	0	0	0	0	0	0	0
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	0	0	0	0	0	0	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	0	0	0	0	0	0	0	0	0	0
Loadout	0	0	0	0	0	0	0	0	0	0
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
Well Maintenance	0	0	0	0	0	0	0	0	0	0

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

The cuttings management facility will be below the Regulation 3 reporting thresholds of 2 tons per year of each uncontrolled criteria pollutant and 250 lbs. per year of each individual HAP; and will not require air permits or APEN notices. The facility is not expected to have reportable emissions from any activity or equipment listed above.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

The cuttings management facility will be below the Regulation 3 reporting thresholds of 2 tons per year of each uncontrolled criteria pollutant and 250 lbs. per year of each individual HAP; and will not require air permits or APEN notices. The facility is not expected to have reportable emissions from any activity or equipment listed above.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	31	7	0	55	0
Annual	31	85	0	55	0

Estimated total pounds (lbs) of proppant to be used during completions activities. 0

Provide the type of proppant(s) that are planned to be used during completions activities.

Completions activities will not occur on the site and proppant will not be utilized during any operations at the proposed facility. The facility is being managed for the treatment and disposal of cuttings.

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

Completions activities will not occur on the site and proppant will not be utilized during any operations at the proposed facility. The facility is being managed for the treatment and disposal of cuttings.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	<u>14</u>	Active, built	<u>60</u>
Permitted by COGCC, unbuilt	<u>0</u>	Permitted by COGCC, unbuilt	<u>0</u>
Permitted by Relevant Local Government & not COGCC, unbuilt	<u>0</u>	Proposed	<u>0</u>
Proposed	<u>0</u>	Plugged and Abandoned	<u>3</u>

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 46.2

Source for acreage total:

- Field Observation/Measurement
- COGCC Location Files
- Aerial Photos/Other
- Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:		Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
<input type="checkbox"/> Field Observation/Measurement	Oil	<u>0</u>	<u> </u>
<input checked="" type="checkbox"/> COGCC Location Files	Condensate	<u>15</u>	<u> </u>
<input checked="" type="checkbox"/> Aerial Photos/Other	Produced Water	<u>22</u>	<u> </u>
<input type="checkbox"/> Other	Pits	<u>2</u>	<u> </u>

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

OIL & GAS DEVELOPMENT PLAN-SCALE DATA

List High Priority Habitats (HPH) that are estimated be disturbed by the construction of new roads, including access roads, pipelines, and utilities for this OGD, along with the estimated disturbed acreage of each HPH.

High Priority Habitat (HPH) Name	Estimated Acreage Disturbed
N/A	0

List the total estimated of disturbed acreage and the total disturbed High Priority Habitat (HPH) area (in acres) during construction and the acreage that will remain disturbed after interim reclamation of the following for the entire OGDG:

	Construction		Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)	Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	0	0	New roads, including access roads	0
Pipelines	0.82	0	Pipelines	0
Utilities	0	0	Utilities	0

Provide any further information regarding the HPH disturbance from the construction of new roads, including access roads, pipelines, and utilities for this OGDG.

The Cascade Creek OGDG will not occur within mapped HPH areas.

Number of miles of the existing lease road that are planned to be used to access these location(s): 8.05

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGDG: 0

Total number of tanks planned to be removed from existing locations through the approval of this OGDG:

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Oil Tanks: 0

Total number of acres that are planned to be reclaimed through the closing of existing locations: 0

Condensate Tanks: 0

Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Produced Water Tanks: 0

Estimated number of vehicle trips that are planned to be prevented from the above mentioned facility closures and equipment upgrades (on an annual basis): 0

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding community directly and indirectly from this OGDG.

Approval of Laramie Energy’s OGDG is a crucial piece to the economic vitality of the Western Slope of Colorado. According to the 2019 study “Economic Contribution of the Oil and Gas Industry in the Piceance Basin” by Nathan Perry, the total economic contribution of the Oil and Gas Industry to Western Colorado (Garfield, Mesa, Rio Blanco, Delta, Gunnison and Moffat County) is 9.2% of Gross Regional Product, totaling \$1,083,361,743. The Oil and Gas Industry of the Piceance Basin is responsible for the employment of 10,959 people both directly and indirectly. Indirect employment includes jobs supported by the payment of severances taxes, federal mineral lease royalties, ad valorem property taxes and royalties. Approval of the Laramie Energy 2021 Cascade Creek OGDG will allow Laramie Energy to bring a drill rig to the Piceance Basin, generating economic growth and jobs. The study indicates each addition drilling rig creates 208 direct jobs.

The 2019 study “Economic Contribution of the Oil and Gas Industry in the Piceance Basin” by Nathan Perry, is attached to the Form 2B.

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding wildlife and ecosystems directly and indirectly from this OGDG.

In order to reduce impacts to wildlife and ecosystems present on the Roan Plateau, Laramie has selected well pad locations that are either existing or are in the vicinity of existing oil and gas infrastructure. Laramie will use existing infrastructure to the greatest extent possible during development of this OGDG. Well pads were selected to maximize directional drilling practices for both current and future gas production. During drilling operations produced water will be recycled which will reduce truck traffic and impacts to wildlife in the project vicinity. Laramie will also adhere to CPW’s big game winter timing stipulations and avoid vegetation removal during the nesting season for migratory birds. During interim reclamation the locations will be reseeded using a BLM approved seed mix that promotes healthy range conditions for wildlife.

MITIGATION INFORMATION

No Mitigation Measures Listed

OPERATOR COMMENTS AND SUBMITTAL

Print Name: Wayne P Bankert

Title: Reg. & Env. Manager

Email: wbankert@laramie-energy.com

Date: 08/26/2021

Based on the information provided herein, this Cumulative Impacts Data Identification Form 2B complies with COGCC Rules and is hereby accepted into the Cumulative Impacts Data Evaluation Repository (CIDER database).
Contact OGLA Staff for consultation.

COGCC Approved: _____

Director of COGCC

Date: _____

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402791462	OTHER
402846009	OTHER

Total Attach: 2 Files

General Comments

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

Total: 0 comment(s)