

## Stormwater Inspection Report

<b>Operator:</b>	Laramie Energy, LLC
<b>Project:</b>	Cascade Creek
<b>Location:</b>	CC 697-16-16 Pad & Lower Loop Road
<b>Date:</b>	Thursday, August 20, 2020
<b>Weather:</b>	Overcast, Light Wind, Hi 99°, Lo 63°



Type of Inspection Report	14-Day Routine	Monthly Routine	Post-Storm	Corrective Action	Winter Exclusion	Stabilization Complete	Site Review
				<b>X</b>			

Phase(s) of Construction Inspected	No Activity	Clear & Grade	Facility Installation	Drilling Operations	Reclamation	Acres of Disturbance Inspected
	<b>X</b>					0

Stormwater Compliance Questions		YES	NO	N/A
1	Any BMPs Fail or Require Maintenance?		<b>X</b>	
2	Any Issues Identified Requiring the Installation of Additional BMPs?	<b>X</b>		
3	Any Sediment or Other Pollutants Discharged Outside Project Boundaries?		<b>X</b>	
4	Any BMPs Repaired or Maintained?		<b>X</b>	
5	Any New BMPs Installed?	<b>X</b>		
6	Any Hazardous Materials Spilled or Leaked?		<b>X</b>	
7	Any Deviation from the Minimum Inspection Schedule?		<b>X</b>	

Comments / Descriptions / Explanations
<p>One BMP crew began addressing items identified by COGCC as being deficient on the CC 697-16-16 location. A mini-ex was used prepare the base of the eastern fill slope for the installation of excelsior wattle. Excess material was cast upslope to begin forming a water bar above the wattle installation. To the extent practical, and as safety allowed, material was retrieved and placed upslope of the wattle installation. The fill slope is extremely steep preventing some material from being retrieved. Some material would have required the removal mature native brush to retrieve and EI deemed this to be detrimental. The BMP crew also removed wattle previously installed in the southern intermittent drainage crossed by the Lower Loop Road. Wattle was originally installed to stabilize sediment that discharged into the drainage during spring runoff in 2019. Work is scheduled to continue on the Lower Loop Road and on the CC 697-16-16 pad.</p>

**Photo 1**



*Removing Wattle along Lower Loop Road*

**Photo 2**



*Preparing the CC 697-16-16 for Wattle Installation*

**Photo 3**



**Photo 4**



**Inspector Name and Title**

Mark Carlson, Environmental Inspector

*Mark Carlson*

**Inspector Signature**

8/20/2020

**Date of Signature**

**Part I.A.3.f. Compliance Signature Requirement**

*"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."*

**Stormwater Manager Certification Signature**

## Stormwater Inspection Report

<b>Operator:</b>	Laramie Energy, LLC
<b>Project:</b>	Cascade Creek
<b>Location:</b>	CC 697-16-16 Pad & Lower Loop Road & Upper Pads
<b>Date:</b>	Friday, August 21, 2020
<b>Weather:</b>	Hazy, Light Wind, Hi 96°, Lo 57°



Type of Inspection Report	14-Day Routine	Monthly Routine	Post-Storm	Corrective Action	Winter Exclusion	Stabilization Complete	Site Review
		<b>X</b>		<b>X</b>			

Phase(s) of Construction Inspected	No Activity	Clear & Grade	Facility Installation	Drilling Operations	Reclamation	Acres of Disturbance Inspected
	<b>X</b>					5

Stormwater Compliance Questions		YES	NO	N/A
1	Any BMPs Fail or Require Maintenance?	<b>X</b>		
2	Any Issues Identified Requiring the Installation of Additional BMPs?	<b>X</b>		
3	Any Sediment or Other Pollutants Discharged Outside Project Boundaries?		<b>X</b>	
4	Any BMPs Repaired or Maintained?	<b>X</b>		
5	Any New BMPs Installed?	<b>X</b>		
6	Any Hazardous Materials Spilled or Leaked?		<b>X</b>	
7	Any Deviation from the Minimum Inspection Schedule?		<b>X</b>	

Comments / Descriptions / Explanations
<p>One BMP crew continued operations within the Cascade Creek Project Area working on the CC 697-16-16 pad and on the Lower Loop Road. Activities on the CC 697-16-16 focused on addressing issues previously identified by COGCC as being deficient. A mini-ex was used to finish preparing the eastern fill slope for wattle installation and complete the installation of two water bars above the wattle installation site. Due to how porous the material was used to construct the water bars they will likely function as a filtration berm. Runoff during heavy precipitation events will be interrupted by the water bars, water velocity slowed, and water will be allowed to percolate into the soil over a large area. After equipment work was completed, excelsior wattle was laid out along the base of the eastern fill slope. Excelsior wattle was removed from the drainage below the Fire Pond. Wattle was originally installed in this location to stabilize sediment discharged during spring runoff in 2018 and 2019. Sediment has been removed and/or stabilized in place and wattle no longer serves a purpose. Approximately 300 feet of wattle was removed and disposed of properly. EI began completing the routine 30-day stormwater inspection for the Cascade Creek Project Area. The project area has received relatively limited precipitation since the last round of maintenance was completed. Therefore, most BMPs remain in good condition. Cattle are present in the project area and are causing isolated damage to BMPs. Small precipitation events have occurred in the recent past which have also impacted some BMPs. Approximately 50% of the rock socks on the Mountain and Upper Loop Roads require maintenance due to being impacted by runoff or slides. Roughly five feet of wattle has been damaged by cattle on the CC 610-24-43 pad and multiple sections of silt fence need to be maintained on the CC 610-21-41 pad.</p>



**Photo 1**



*Removing Wattle from the Lower Loop Road*

**Photo 2**



*Laying Out Wattle on CC 697-16-16 Pad*

**Photo 3**



*Wattle Damaged on the CC 610-24-43*

**Photo 4**



*Damaged Silt Fence on CC 610-21-41*

**Inspector Name and Title**

Mark Carlson, Environmental Inspector

*Mark Carlson*

**Inspector Signature**

8/21/2020

**Date of Signature**

**Part I.A.3.f. Compliance Signature Requirement**

*"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."*

**Stormwater Manager Certification Signature**

## Stormwater Inspection Report

<b>Operator:</b>	Laramie Energy, LLC
<b>Project:</b>	Cascade Creek
<b>Location:</b>	CC 697-16-16 Pad & Lower Loop Road
<b>Date:</b>	Monday, August 24, 2020
<b>Weather:</b>	Partly Cloudy, Light Wind, Hi 99°, Lo 65°



Type of Inspection Report	14-Day Routine	Monthly Routine	Post-Storm	Corrective Action	Winter Exclusion	Stabilization Complete	Site Review
				<b>X</b>			

Phase(s) of Construction Inspected	No Activity	Clear & Grade	Facility Installation	Drilling Operations	Reclamation	Acres of Disturbance Inspected
	<b>X</b>					0

Stormwater Compliance Questions		YES	NO	N/A
1	Any BMPs Fail or Require Maintenance?	<b>X</b>		
2	Any Issues Identified Requiring the Installation of Additional BMPs?	<b>X</b>		
3	Any Sediment or Other Pollutants Discharged Outside Project Boundaries?		<b>X</b>	
4	Any BMPs Repaired or Maintained?	<b>X</b>		
5	Any New BMPs Installed?	<b>X</b>		
6	Any Hazardous Materials Spilled or Leaked?		<b>X</b>	
7	Any Deviation from the Minimum Inspection Schedule?		<b>X</b>	

Comments / Descriptions / Explanations
<p>One BMP crew continued installing and maintaining BMPs in the Cascade Creek Project Area. Activities occurred on the CC 697-16-16 pad and along the Lower Loop Road. Excelsior wattle was installed below the southern and eastern fill slopes on the CC 697-16-16 pad to address issues identified by COGCC. 875 feet of wattle was installed but the wattle face will need to be backfilled tomorrow. It is anticipated that all remaining COGCC items on this location will be addressed by the end of shift tomorrow. A mini-ex was used to remove sediment from a stock pond below the Lower Loop Road. With the dry conditions this year, this location which is typically saturated was able to be accessed by light equipment. Spoils removed were placed on the north side of the pad to be hauled off or repurposed. Excelsior wattle will be installed around this stockpiled material tomorrow.</p>



**Photo 1**



*Installing Excelsior Wattle on CC 697-16-16 Pad*

**Photo 2**



*Installing Excelsior Wattle on CC 697-16-16 Pad*

**Photo 3**



*Stock Pond on Lower Loop Road before Cleaned*

**Photo 4**



*Stock Pond on Lower Loop Road after Cleaned*

**Inspector Name and Title**

Mark Carlson, Environmental Inspector

*Mark Carlson*

**Inspector Signature**

8/24/2020

**Date of Signature**

**Part I.A.3.f. Compliance Signature Requirement**

*"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."*

**Stormwater Manager Certification Signature**

## Stormwater Inspection Report

<b>Operator:</b>	Laramie Energy, LLC
<b>Project:</b>	Cascade Creek
<b>Location:</b>	CC 697-16-16 Pad & Lower Loop Road
<b>Date:</b>	Tuesday, August 25, 2020
<b>Weather:</b>	Scattered T-Storms, Light Wind, Hi 97°, Lo 63°



Type of Inspection Report	14-Day Routine	Monthly Routine	Post-Storm	Corrective Action	Winter Exclusion	Stabilization Complete	Site Review
				<b>X</b>			

Phase(s) of Construction Inspected	No Activity	Clear & Grade	Facility Installation	Drilling Operations	Reclamation	Acres of Disturbance Inspected
	<b>X</b>					0

Stormwater Compliance Questions		YES	NO	N/A
1	Any BMPs Fail or Require Maintenance?	<b>X</b>		
2	Any Issues Identified Requiring the Installation of Additional BMPs?	<b>X</b>		
3	Any Sediment or Other Pollutants Discharged Outside Project Boundaries?		<b>X</b>	
4	Any BMPs Repaired or Maintained?	<b>X</b>		
5	Any New BMPs Installed?	<b>X</b>		
6	Any Hazardous Materials Spilled or Leaked?		<b>X</b>	
7	Any Deviation from the Minimum Inspection Schedule?		<b>X</b>	

Comments / Descriptions / Explanations
<p>A second BMP crew was mobilized to the Cascade Creek Project Area to assist with work on the Lower Loop Road and on the CC 697-16-16 pad. The remaining issues identified by COGCC on the CC 697-16-16 pad were addressed today. 500 pounds of 12-12-12 fertilizer, 32 pounds of QuickGuard, and 50 pounds of Upper Cascade Seed Mix were applied to the location to help expedite vegetation development. Excelsior wattle installed yesterday was backfilled to create the seal. The entire location was swept for noxious weeds, litter, and construction debris. Approximately 50 noxious weeds were removed by hand including bull thistle, houndstongue, and common mullein. The berm failure on the northwest side of the location was replaced with a small sediment trap and rock apron. 125 feet of excelsior wattle was installed below the rock apron to provide additional protection. Two outlet pipes on sediment traps located below the Lower Loop Road have failed. Runoff has eroded material along these pipes, allowing stormwater to flow beside the pipe instead of inside the pipe. These failures were exposed by hand and repairs were started. 300 pounds of concrete was applied to the face of the first pipe, but additional concrete is needed to finish that repair and to repair the second pipe. 90 feet of excelsior wattle was installed below stockpiled material removed from the stock pond yesterday.</p>



**Photo 1**



*BMPs Installed Below the Lower Loop Road*

**Photo 2**



*Seeding the Northern End of CC 697-16-16 Pad*

**Photo 3**



*Pockmarking Previously Installed Water Bars*

**Photo 4**



*Spreading Fertilizer on the CC 697-16-16 Pad*

**Inspector Name and Title**

Mark Carlson, Environmental Inspector

*Mark Carlson*

**Inspector Signature**

8/25/2020

**Date of Signature**

**Part I.A.3.f. Compliance Signature Requirement**

*"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."*

**Stormwater Manager Certification Signature**