

# Bartlett & West

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**PSC Case No. PU-17-48**

**Arrow Field Services LLC**

**10" Residue Gas and 8" Natural Gas Liquid Pipelines - McKenzie County  
Reclamation and Vegetation Report - 8/19/2019**

Per the existing contract, on August 19, 2019, Bartlett & West (BW) inspector Larry Kirschmann conducted a final reclamation and vegetation inspection of the nearly 3-mile long Arrow Field Services (AFS) 10" Residue Gas and 8" Natural Gas Liquid Pipelines (Case No. PU-17-48). The inspection was completed along the entire length of the right-of-way (ROW). Permit regulations and reclamation was reviewed and inspected, and no significant compliance issues were identified.

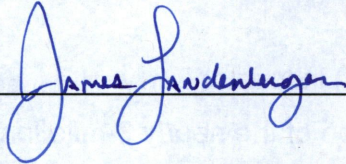
No construction activities were being observed on the day of the inspection and the project looked to be complete. Randy Sell, a AFS representative was contacted to advise him of our observation taking place. The area in review did not follow an access road and most of the observation area required walking access only to enter the pipeline ROW. The observation started at the north end of the project on County Road 37 and proceeded in a southwest general direction, ending at the Dervote Tank Farm. At the end of this report are reference maps which include detailed photographs and limited information for each location.

We report that overall the pipeline ROW has been adequately reclaimed and we did not identify any significant areas of concern. The pipeline ROW vegetation is mostly established with a mixture of non-harvested crops (wheat and alfalfa), native grasses, and some weeds. Please reference the attached Photographs #1-9. In one lone location (Photograph #7), the vegetation was not as well established as the other areas. It appears this limited stretch does not have adequate vegetation growing along the pipeline and because of that, there are signs of minor soil erosion occurring. This is an area that AFS should investigate and address.

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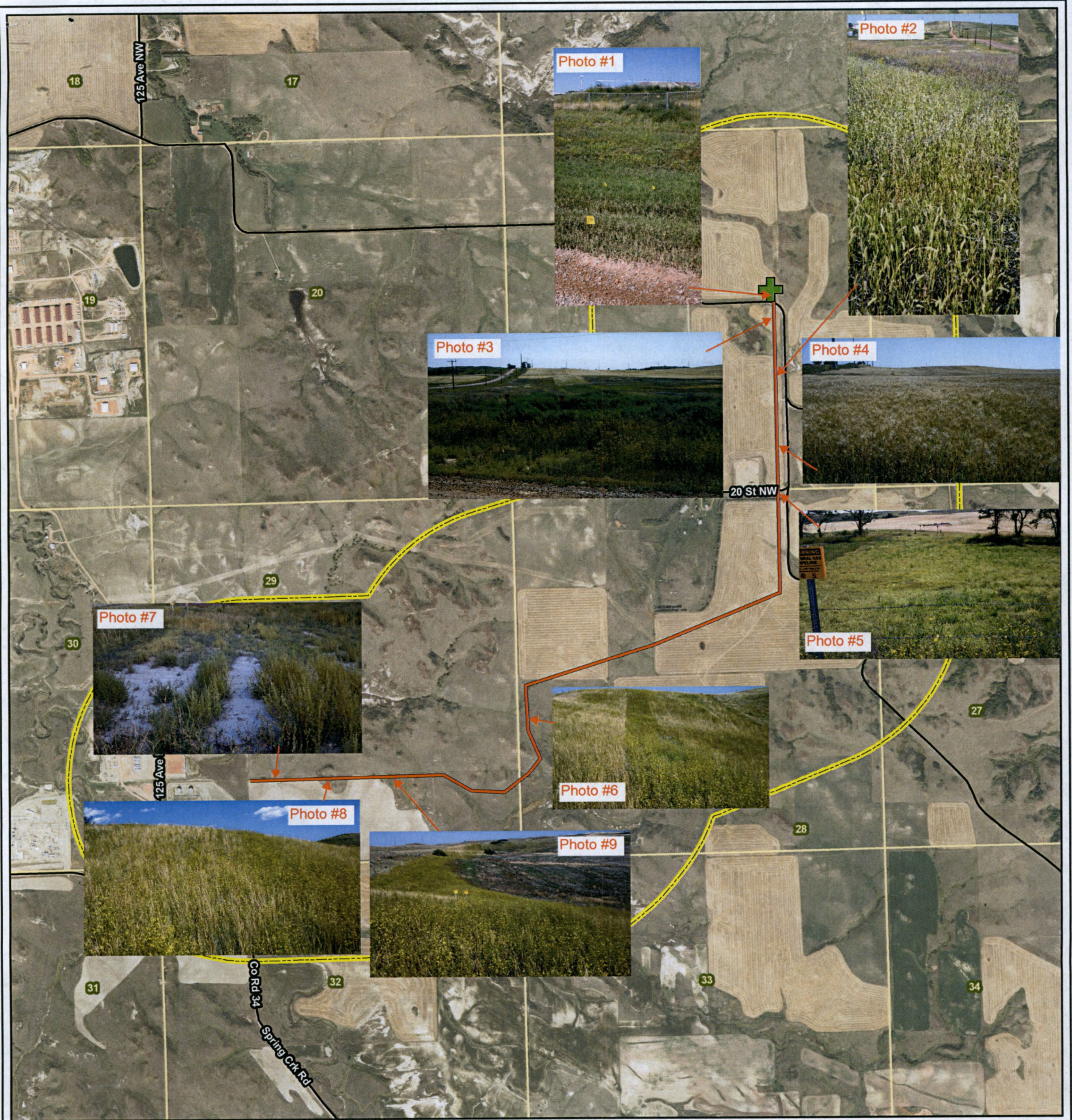
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After one growing season, it appears that the project has been successfully reclaimed and vegetated in compliance with the siting laws and rules, and the North Dakota PSC Order for the project, with the one lone exception mentioned above. The remaining report includes photographs taken during the inspection and a location map.








James Landenberger, P.E.

Project Manager



## Legend

-  Proposed Gas Plant Location
-  Section Boundary
-  Existing Road
-  Proposed Transmission Pipeline
-  1.0-mile Study Area

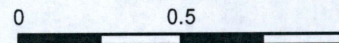
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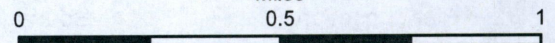
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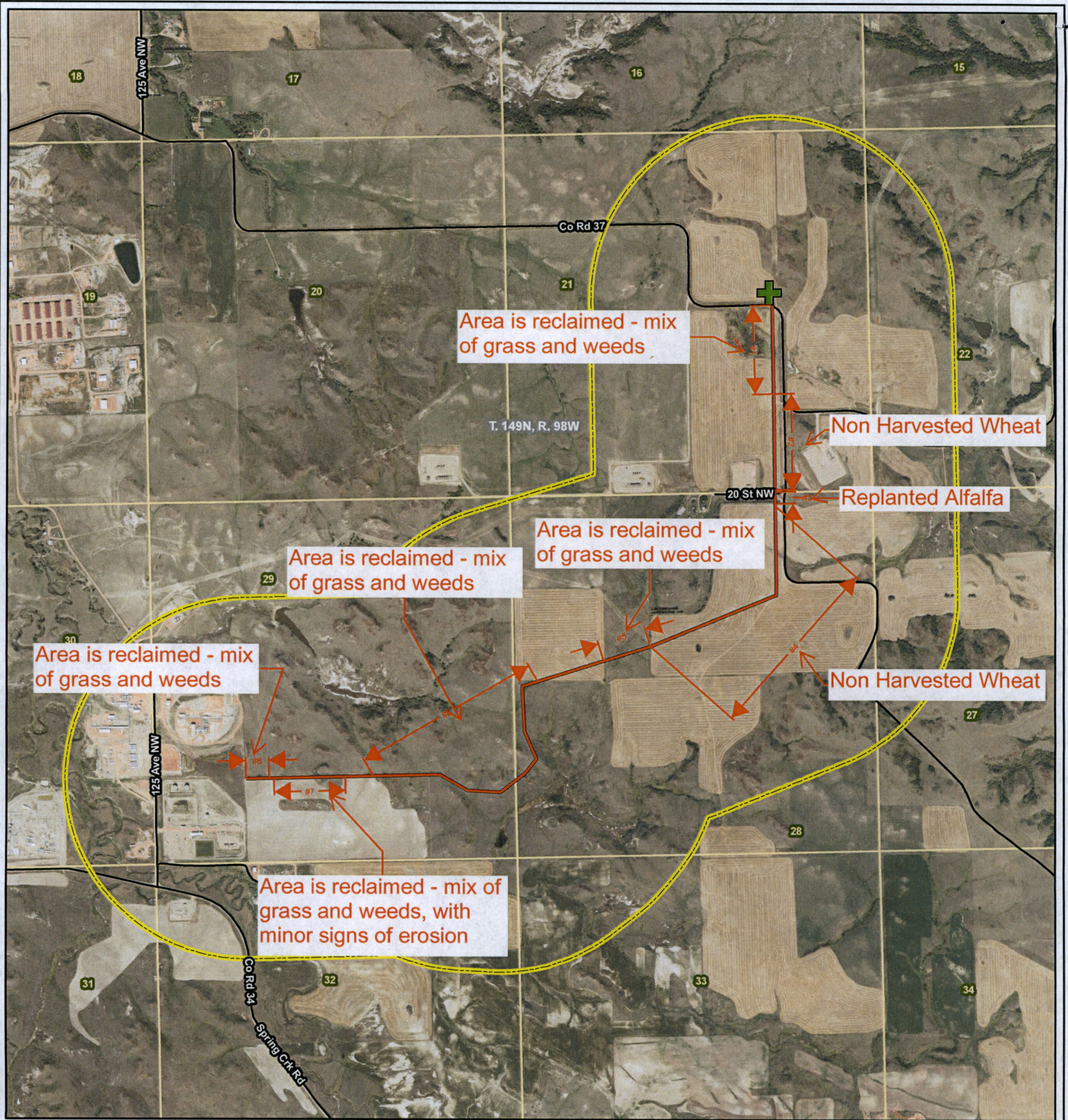
Base Map: 2015 Aerial Imagery  
Source: USDA/FSA -  
Aerial Photography Field Office

Quadrangle: Teepee Buttes (1995),  
Lone Butte NW (1995)  
T. 149N, R. 98W






McKenzie County, North Dakota

Projection: NAD 1983 UTM Zone 13N





### Legend

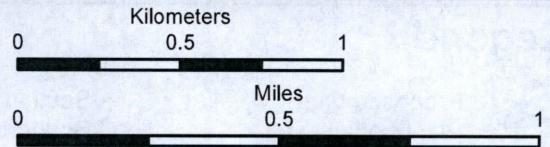
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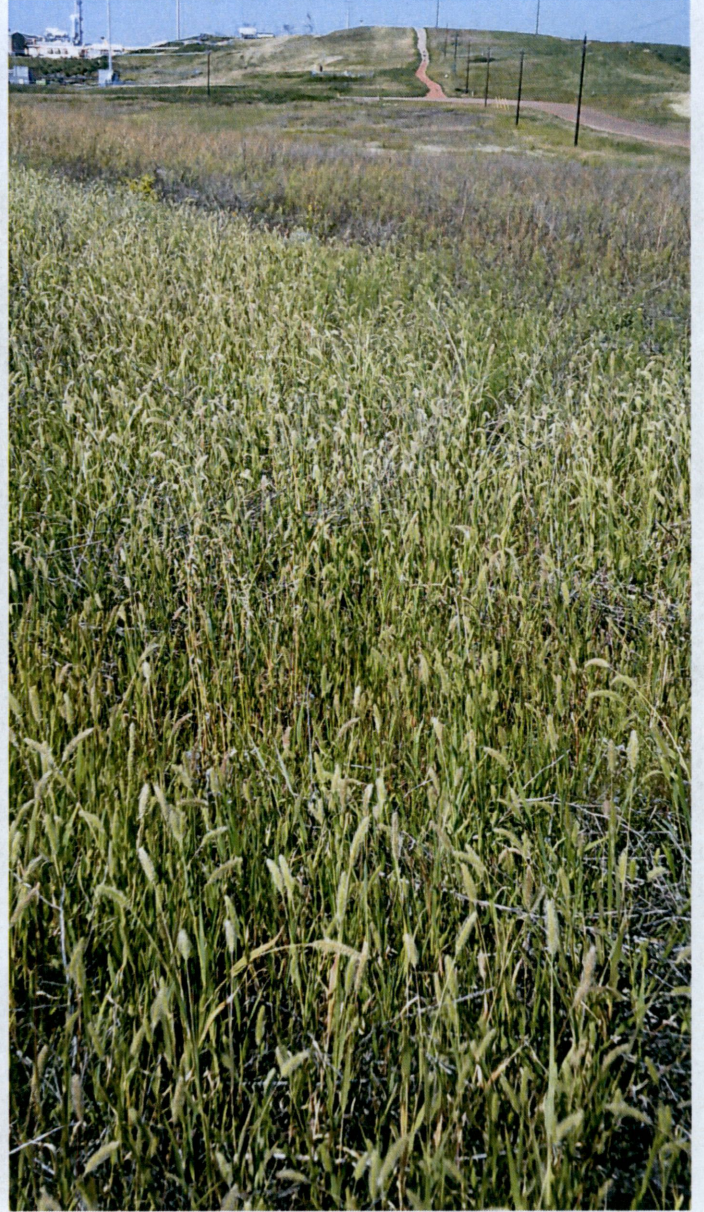


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Photo#1 North side of County Road 37 start of project area very north end of observation area looking to the north



Photo#2 South side of County Road 37 observation at the half mile mark looking north

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Photo#3 (above) South side of County Road 37 looking to the south with non-harvested wheat fields in the distance.



Photo#4 (above) Area of non-harvested wheat.

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Photo#5 (above) Reclaimed area with alfalfa.



Photo#6 (above) Reclaimed area vegetation establishment with a mix of grass and weeds

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Photo#7 (above) Reclaimed area, vegetation not well established, mix of grass and weeds and signs of minor erosion.



Photo#8 (above) Reclaimed area vegetation established with grass and weeds.

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Photo#9 (above) Reclaimed area vegetation established with grass and weeds.