

Bill Sanderson Residue and NGL Pipelines Project

As-Built Inspection Report

Docket Number: PU-20-247

Prepared for North Dakota Public Service Commission



December 2020

As-Built Inspection Report

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Contents

1	Executive Summary	2
2	Background and Scope	3
2.1	Introduction	3
2.2	Regulatory Purpose and Need	3
2.3	Scope of Work	3
3	Findings of Site Inspection.....	4
3.1	Methods	4
3.2	On-Site Inspection Observations.....	4
4	Issues to Resolve and Recommendations.....	4
5	Signatures	6

List of Appendices

Appendix A Photo Log and Observation Maps

1 Executive Summary

The North Dakota Public Service Commission (PSC) retained Barr Engineering Co. (Barr) to complete site inspections for the construction of the Bill Sanderson Residue and Natural Gas Liquids (NGL) pipelines in Williams County, North Dakota (ND), constructed by OE2 North LLC (OE2). The purpose of the inspections is to ensure the project is constructed in compliance with siting laws and rules and the applicable PSC Orders for the project.

A pre-construction conference call was held for the Project on 25 August 2020. Barr attended the call and reviewed project documents to become familiar with the Project and PSC Orders for the Project. Construction involving soil disturbance began 1 September 2020. Barr was to present to observe topsoil segregation by Jomax Construction Company, Inc. (Jomax) at the onset of the Project. Topsoil Removal Inspection and Construction Inspect Reports were previously submitted to the PSC.

As-built inspections were conducted on 11 December 2020. Seed mix certificates were examined prior to pipeline inspection. Seed mixes were found to be compliant with county and state recommendations. The pipeline route was inspected, and reclamation, fertilization, and reseeding were observed to be done according to Natural Resources Conservation Service (NRCS) recommendations. All fences and gates removed or damaged were repaired or replaced. The right of way was clear of waste, and grading had been completed to restore the area affected to as near as practicable to the grade as it existed prior to construction. Overall, project construction appears to be in compliance with the applicable siting laws, rules, and PSC orders.

2 Background and Scope

2.1 Introduction

The Bill Sanderson 8-inch NGL and 20-inch Residue Gas pipelines are two pipelines originating at the Bill Sanderson Gas Processing Plant located in Section 27, Township 154 North, Range 104 West. The pipelines are collocated for the first mile east of the plant, where the 8-inch NGL pipeline terminates at an interconnection with an existing Oneok pipeline. The 20-inch residue pipeline continues south for an additional 3.39 miles to a tie-in point with an existing Northern Border pipeline. The pipelines follow existing infrastructure for their entirety.

The pipe for the Project is designed to carry up to 250 million cubic feet per day (MMCFD) of residue gas and 80,000 barrels per day (BPD) of NGL. The maximum allowable operating pressure for each pipeline is 1,650 pounds per square inch gauge (psig), at a design temperature of 120 degrees Fahrenheit. The Project is under the jurisdiction of the North Dakota PSC, which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-20-247 on 26 August 2020, granting Certificates of Corridor Compatibility Nos. 218 and 219, and Route Permit Nos. 228 and 229 for the Project.

2.2 Regulatory Purpose and Need

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) charges the Public Service Commission with determining that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Inspections during construction ensure that such projects are built in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Orders.

2.3 Scope of Work

The North Dakota Public Service Commission retained Barr Engineering Co. to perform as-built inspections of the Project. Barr's scope of work was to complete and document an on-site as-built inspection upon completion of the construction phase of the project to verify the project was constructed in compliance with the siting laws, rules, and applicable Commission Orders and to verify the topsoil was replaced, seeded, and covered as required in compliance with the Commission's Order. This report contains site visit observations and a summary of findings and issues that should be addressed for the Project to be considered complete and in full compliance.

3 Findings of Site Inspection

3.1 Methods

Andrew Unbehaun, Project Manager/Field Inspector for Barr visited the Project site on 11 December 2020 to conduct as-built inspections. Representative for Palmer Consulting and Inspection (Palmer) Andrew Polk accompanied Barr staff on the visit. Palmer oversees daily work by construction contractors to ensure the work is being completed according to applicable codes and approved work plans and procedures.

The site was visually inspected by driving to the access points then driving via side-by-side off-road vehicle within the project right-of-way (ROW). Jomax Construction Company, Inc. (Jomax) is the contractor that constructed the pipeline for OE2. Completed grade restoration, seeding, and straw mulching were observed. Photos were taken at observation points at regular intervals along the pipeline route. Geographic coordinates were recorded at observation points using a handheld Global Navigation Satellite System (GLONASS) device (iPad Air 3rd Generation; <5m accuracy; WGS84 datum).

3.2 On-Site Inspection Observations

Mr. Unbehaun met with Palmer inspector Andrew Polk at the Jomax yard. Mr. Polk and Mr. Unbehaun then proceeded to the Project construction area. Recent weather conditions interfered with observation of reseeding, but in locations where it was visible, reseeding appeared to be in accordance with Natural Resources Conservation Service guidelines. The straw mulch placement and crimper punching also appeared to be in compliance with NRCS guidelines. Mr. Polk stated that Jomax had encountered issues with strong winds blowing away straw mulch and that the area had to be crimp punched more than once to ensure the straw mulch stayed in place. On one steep slope, matting was applied per NRCS guidelines (See Map 4 in **Appendix A**).

The contractors appear to have done a satisfactory job replacing subsoil and topsoil, reclaiming, reseeding, and constructing the project to meet all siting laws, rules, and Commission Orders. Palmer inspectors appeared to have a strong relationship with the contractor and were involved in ensuring soil was restored and the area was reclaimed properly. Work areas visited during the inspection were free of debris and waste, and fences and gates had been repaired or replaced.

4 Issues to Resolve and Recommendations

As-built inspection of the Bill Sanderson Residue and NGL Pipeline project verified that the project is constructed in compliance with the siting laws, rules, and applicable Commission Orders. No major issues were observed

during the as-built inspection. However, Barr makes the following recommendations to prevent potential issues at the project site:

Potential Issues	Recommendations
Erosion of straw-mulch covered areas	Monitor entire length of construction area with regular visual inspections. Repair any areas where straw mulch is damaged or removed by wind until revegetation is complete.
Slippage or damage to mat on steep slope	Regularly inspect mat to ensure integrity of mat and holding devices. Repair any tears, holes, or slippage as necessary.
Additional potential issues	Refer to project Storm Water Pollution Prevention Plan (SWPPP) for additional post-construction recommendations

5 Signatures

The services performed by Barr staff for this project have been conducted in a manner consistent with the technical skill and degree of care exercised by professionals currently practicing in this discipline under similar time and budget constraints. Findings and recommendations represent our professional judgement and are based on available information and accepted practices. No warranty is implied or expressed beyond this.



Andrew Unbehaun, Project Manager

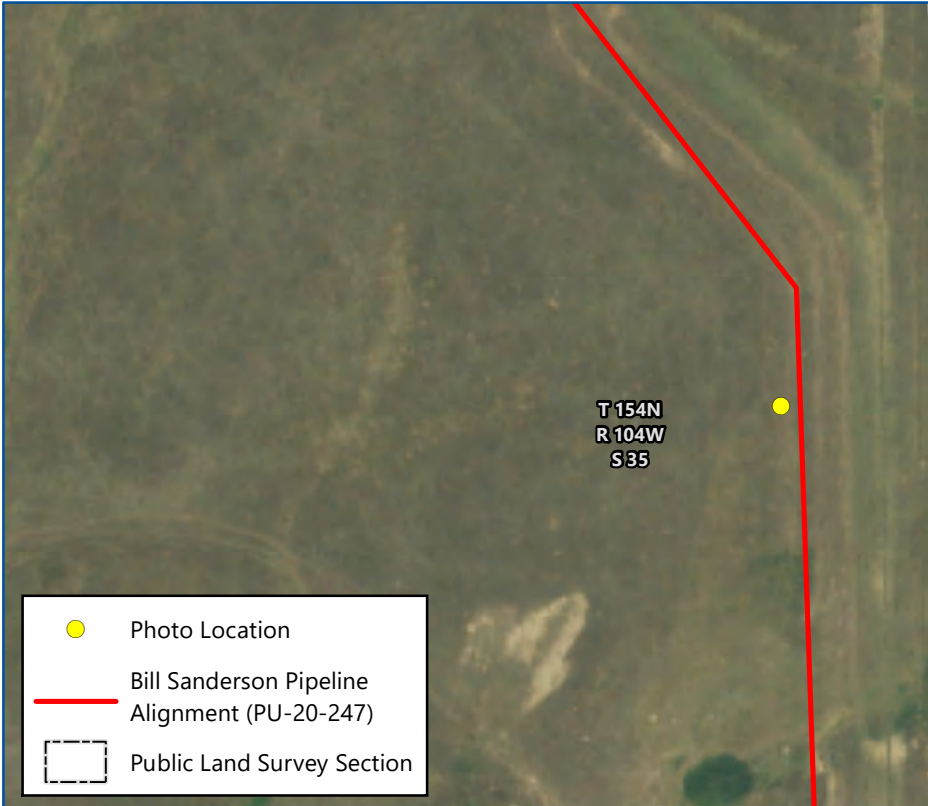
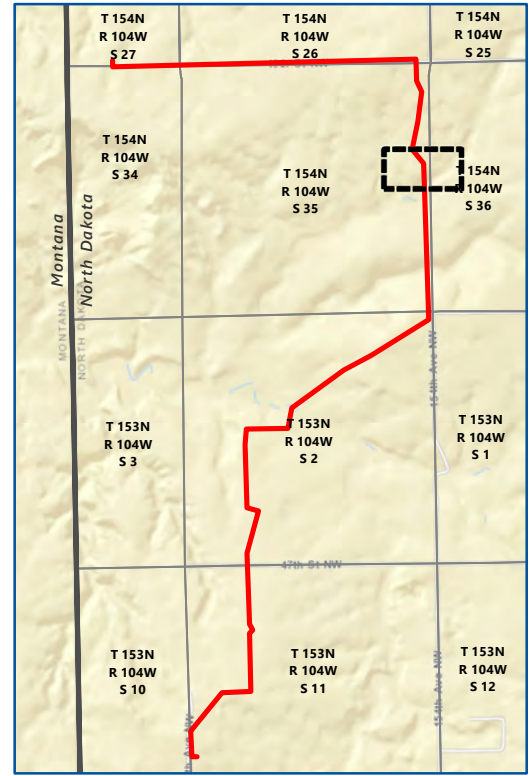
January 9, 2021

Date

Appendices

Appendix A

Photo Log and Observation Maps



- Photo Location
- Bill Sanderson Pipeline Alignment (PU-20-247)
- Public Land Survey Section

Map 3 of 10

BILL SANDERSON NGL PIPELINES RECLAMATION INSPECTION

PU-20-247

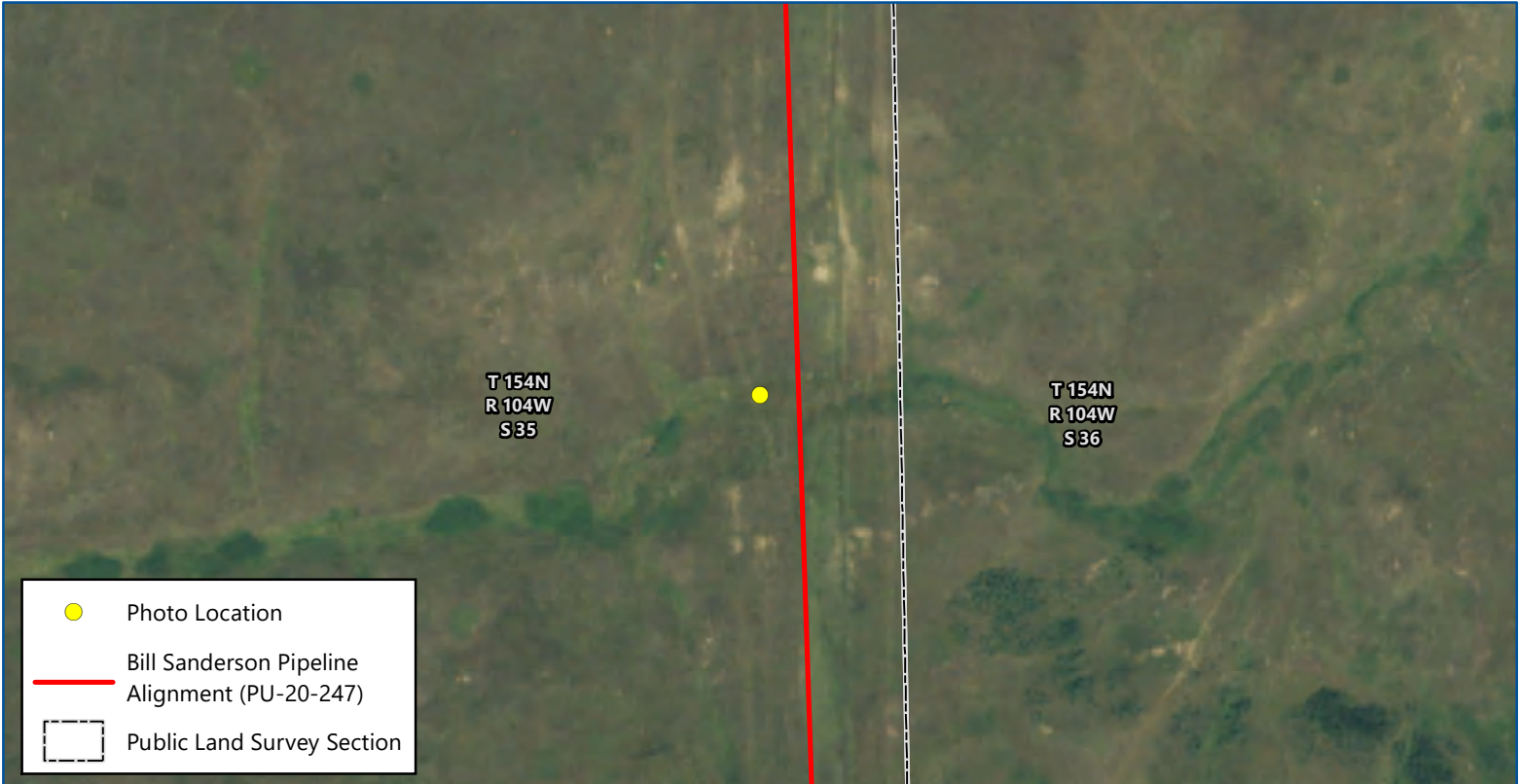
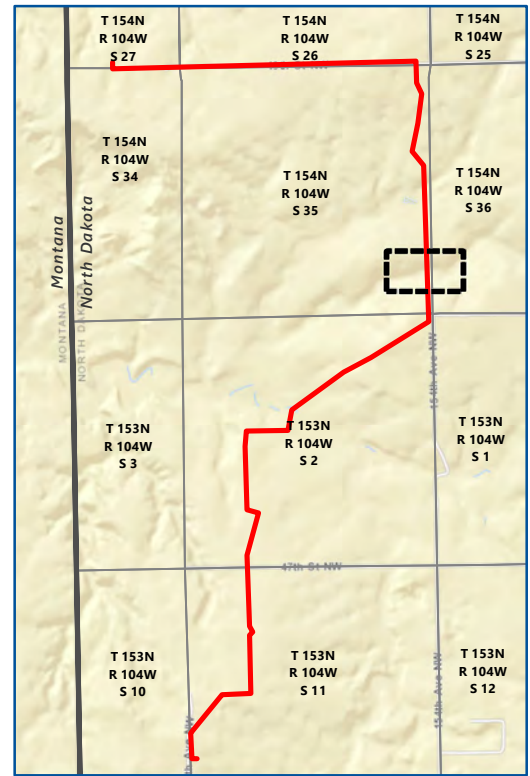
North Dakota Public Service Commission
Williams County, North Dakota

Imagery: USDA FSA (2020)

Date: 12/11/2020
 Photo Direction: South
 Comment: Crimped properly, no visible issues, silt fences installed.

Latitude: 48.119598
 Longitude: -104.014729
 Coordinates are in the WGS84 datum.



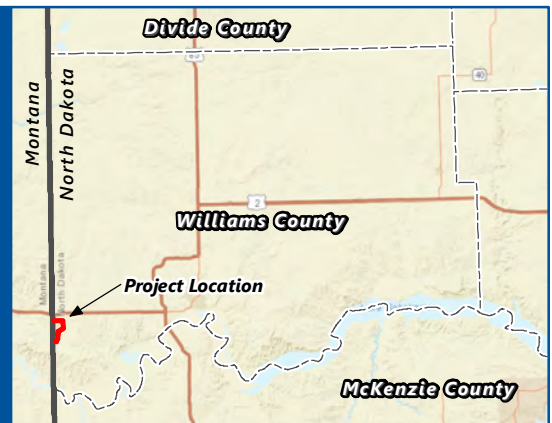


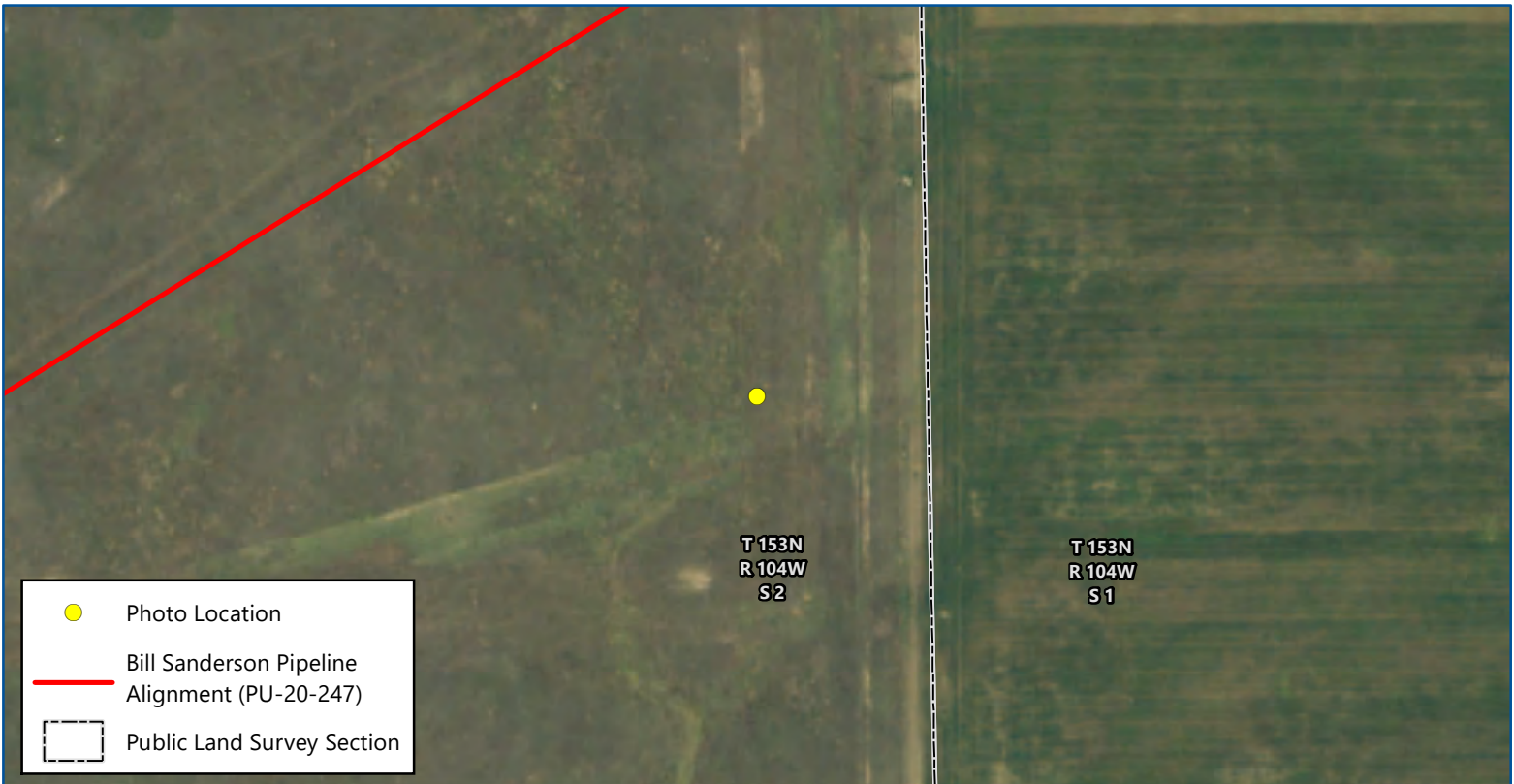
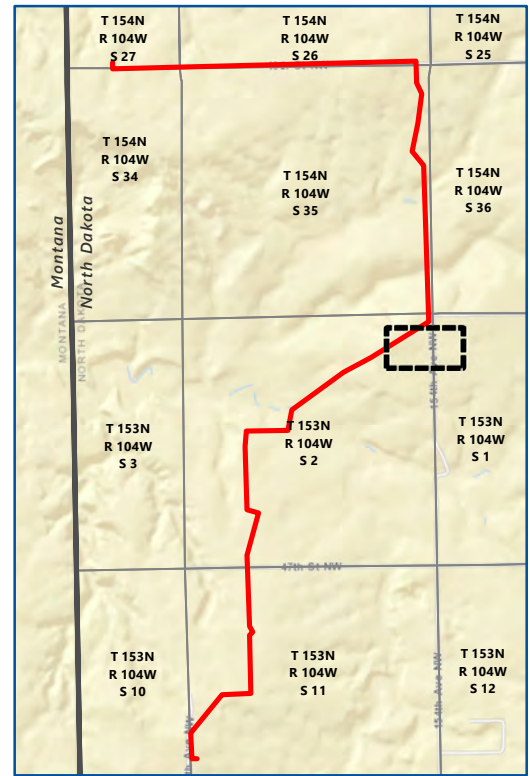
Map 4 of 10
**BILL SANDERSON NGL PIPELINES
 RECLAMATION INSPECTION**
PU-20-247
 North Dakota Public Service Commission
 Williams County, North Dakota

0 200
 Feet

Imagery: USDA FSA (2020)

Date: 12/11/2020
 Photo Direction: North
 Comment: Mat in place, no visible issues.
 Latitude: 48.113814
 Longitude: -104.014636
 Coordinates are in the WGS84 datum.





Map 5 of 10

BILL SANDERSON NGL PIPELINES RECLAMATION INSPECTION

PU-20-247

North Dakota Public Service Commission
Williams County, North Dakota

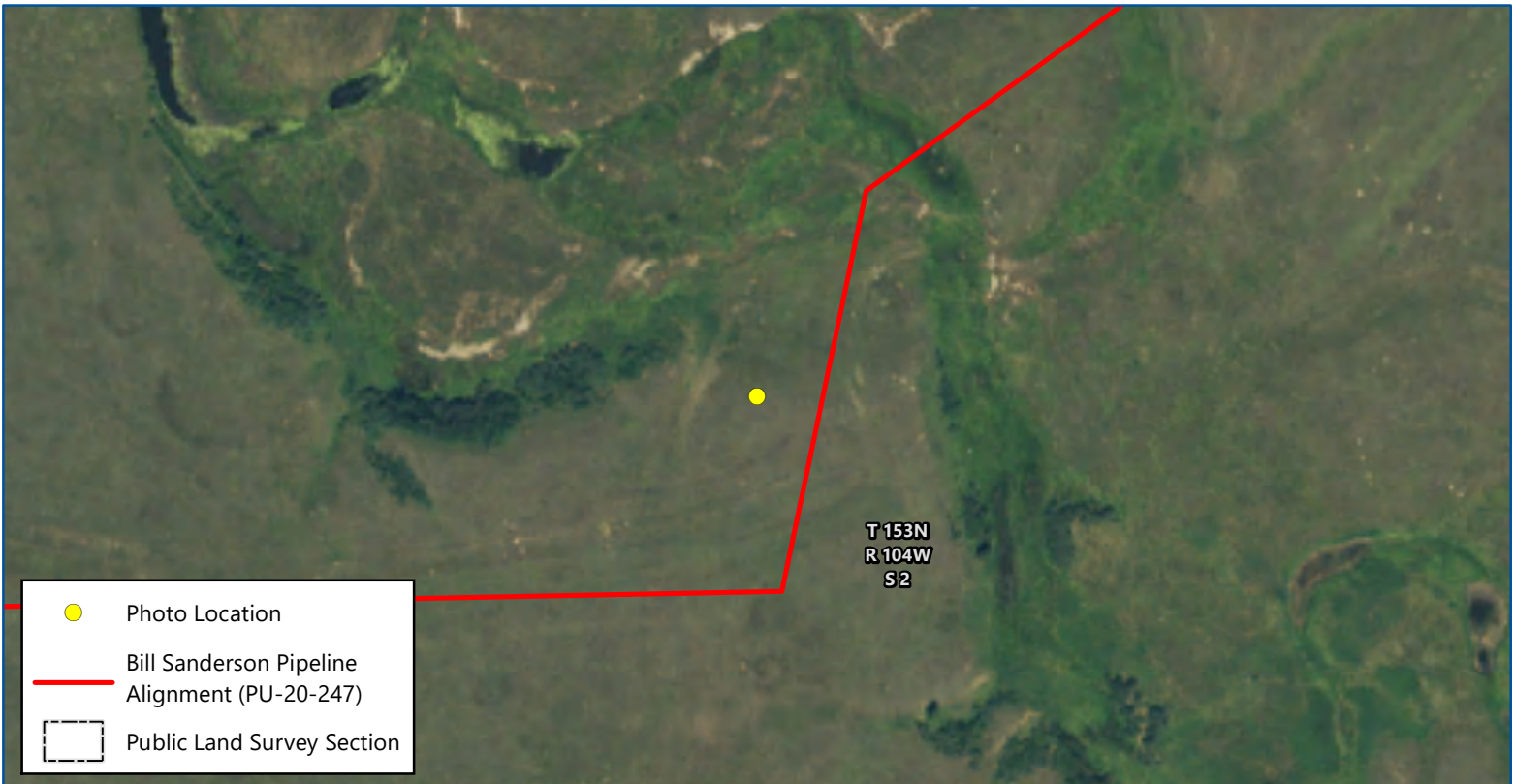
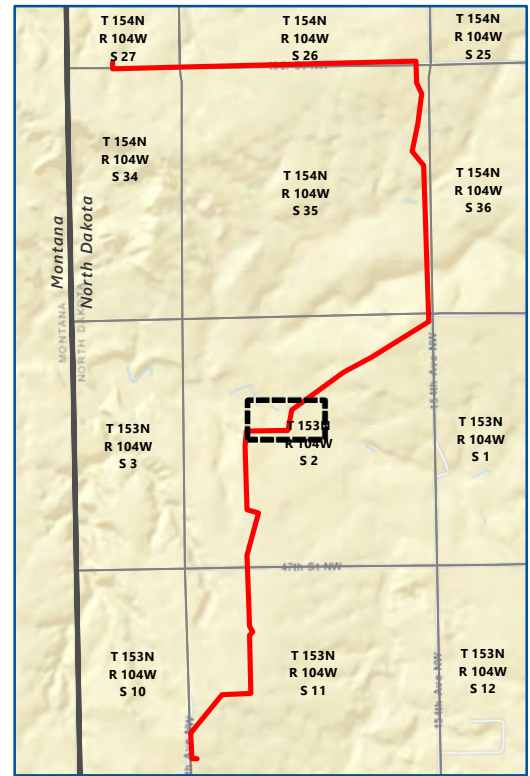
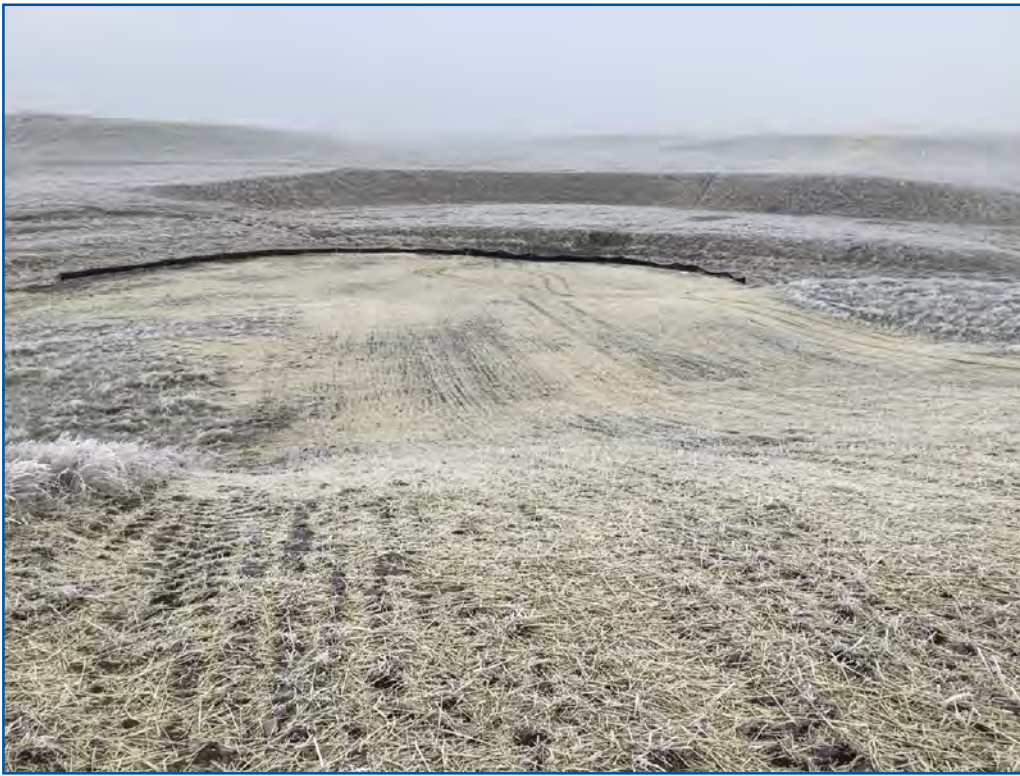
0 200
Feet

Imagery: USDA FSA (2020)

Date: 12/11/2020
Photo Direction: North
Comment: No visible issues.

Latitude: 48.109383
Longitude: -104.014742
Coordinates are in the WGS84 datum.






Map 7 of 10

BILL SANDERSON NGL PIPELINES RECLAMATION INSPECTION

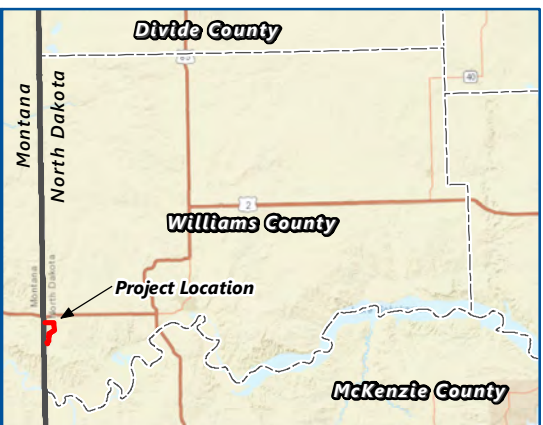
PU-20-247

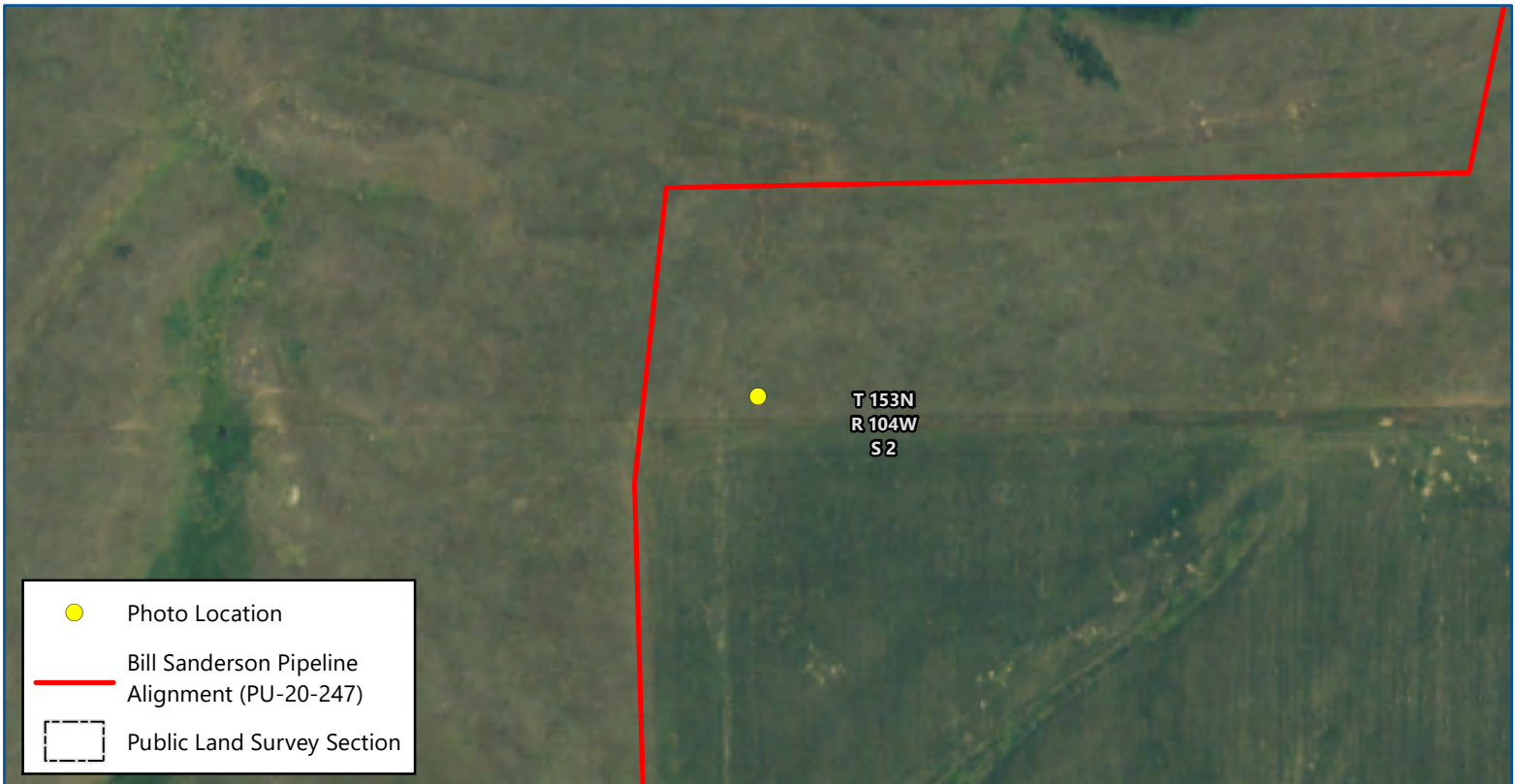
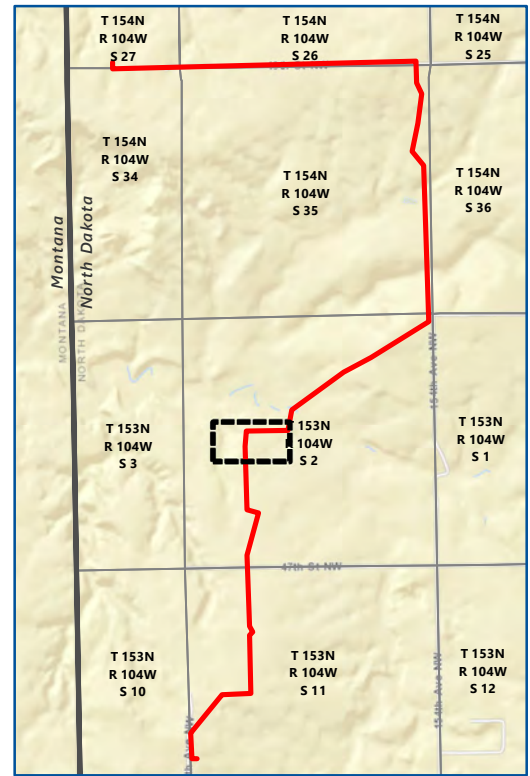
North Dakota Public Service Commission
Williams County, North Dakota


 0 200
 Feet
 Imagery: USDA FSA (2020)

Date: 12/11/2020
 Photo Direction: Southwest
 Comment: No visible issues.

Latitude: 48.105325
 Longitude: -104.026733
 Coordinates are in the WGS84 datum.

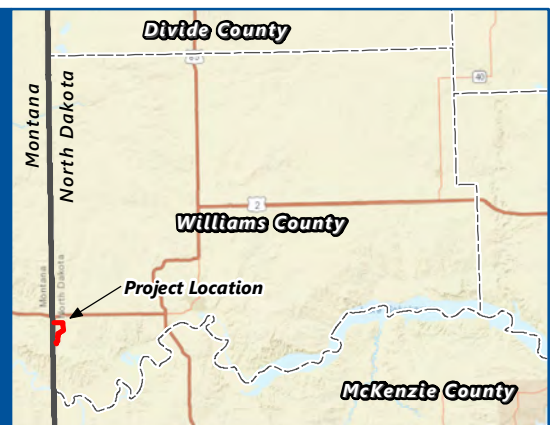


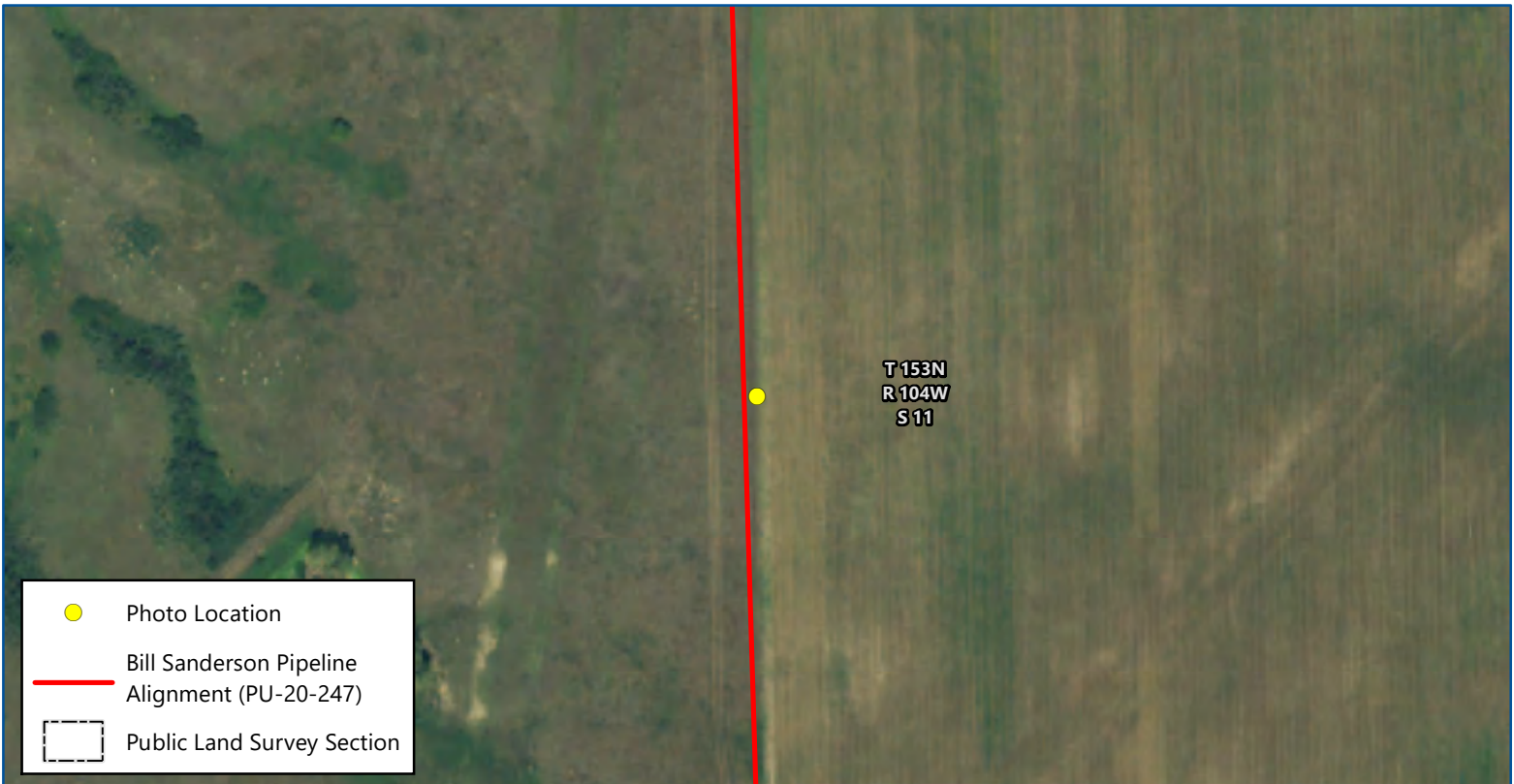
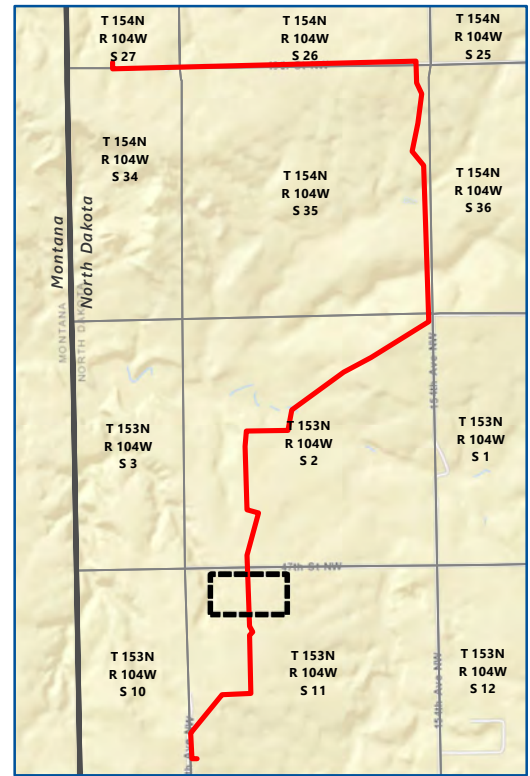


Map 8 of 10
**BILL SANDERSON NGL PIPELINES
 RECLAMATION INSPECTION**
PU-20-247
 North Dakota Public Service Commission
 Williams County, North Dakota

0 200
 Feet
 Imagery: USDA FSA (2020)

Date: 12/11/2020
 Photo Direction: Northeast
 Comment: No visible issues.
 Latitude: 48.104117
 Longitude: -104.029773
 Coordinates are in the WGS84 datum.





Map 9 of 10

**BILL SANDERSON NGL PIPELINES
RECLAMATION INSPECTION
PU-20-247**

North Dakota Public Service Commission
Williams County, North Dakota

Feet

Imagery: USDA FSA (2020)

Date: 12/11/2020
 Photo Direction: North
 Comment: No visible issues.

Latitude: 48.095309
 Longitude: -104.030144
 Coordinates are in the WGS84 datum.

