

# PU-19-368 Tioga Lateral NGL Pipeline Construction Inspection Report



*Prepared for:*  
**North Dakota  
Public Service Commission**

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*Prepared by:*

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# Executive Summary

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The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete site inspections during construction of the ONEOK Tioga Lateral Pipeline (i.e., the Project). The project is a 16-inch Natural Gas Liquids (NGL) pipeline in Williams County, North Dakota, constructed by ONEOK Bakken Pipeline L.L.C. (ONEOK). The purpose of the inspections was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Orders for the Project.

A pre-construction conference call was held for the Project on 9 April 2020; Wenck attended the call. Wenck reviewed Project documents to become familiar with the Project and PSC Orders for the Project. Construction involving soil disturbance for the Project began 15 April 2020. Wenck visually inspected the Project area on 15 and 16 April 2020 and observed topsoil and subsoil removal and segregation conducted by Jomax Construction Company Inc. (Jomax). A Topsoil Inspection report was previously submitted to the PSC.

Construction inspections were conducted on 28-29 May 2020, and 23 June 2020. Pipe depth was documented at multiple locations and the pipeline was installed with the depth of cover required by the Commission's Order. Horizontal Directional Drilling (HDD) was conducted where proposed. During construction site inspections, there were some isolated soil segregation mixing issues observed, primarily along shoulder slopes and HDD entry/exit points. To resolve these issues, Wenck recommended care be taken during subsequent trench backfilling to minimize further mixing, and to assure subsoil and topsoil remains segregated to the best extent feasible. Wenck also recommends the implementation of spotters during machinery use to ensure topsoil stockpiles are kept free from subsoil mixing during soil handling procedures. Wenck also observed a wetland was crossed without controls and subsoils were stockpiled too close causing a discharge into the wetland. Wenck recommends no waterbodies are to be crossed without appropriate controls, stockpiles should be placed sufficiently away from waterbodies, and erosion controls should be inspected and maintained throughout the life of the Project. Overall, construction of the Project appears to be in compliance with the applicable siting laws, rules, and PSC orders.

The July Monthly Construction Progress Report for the Project, provided by ONEOK on 14 July 2020, shows that construction activities are largely now complete, and that 100% of ditching and 98% of backfilling has been completed. Wenck anticipates conducting an As-Built Inspection of the Project later this fall, or early in 2021, depending on progress of soil reclamation and re-seeding activities.

# 1.0 Background and Scope

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## 1.1 INTRODUCTION

The Tioga Lateral 16-inch Natural Gas Liquids (NGLs) transmission pipeline PU-19-368 is comprised of two pipeline segments, all within Williams County. The first segment, Spread 1, is approximately 35.4 miles originating from the Hess Corporation's (HESS) Tioga Gas Processing Plant in Williams County T157N, R95W, Section 23. The second segment, Spread 2, is approximately 39.2 miles terminating at ONEOK's Stateline to Riverview NGL Pipeline in Williams County T155N, R103W, Section 21. Jomax Construction Company is conducting ROW topsoil clearing and pipeline construction of all identified project spreads.

The Route is approximately 74.6 miles in length, ranging from northeast of Tioga, ND to northwest of Williston, ND. Approximately 58 percent of the Route is co-located with existing linear infrastructure.

The pipe for the Project will be 16-inch diameter steel pipe with 0.281-inch wall thickness standard, 0.312-inch wall thickness road crossings, and 0.500-inches for railroad crossings. The maximum operating pressure will be 1,480 pounds per square inch and the maximum flow rate will be 30,000 barrels per day. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-19-368 on 1 April 2020, granting Certificate of Corridor Compatibility No. 214 and Route Permit No. 224 for the Project.

## 1.2 REGULATORY PURPOSE AND SCOPE OF WORK

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine 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. Construction inspections ensure that such projects are constructed 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.

The North Dakota PSC retained Wenck Associates, Inc. (Wenck) to complete construction inspections of the Project. Wenck's scope of work was to perform and document on-site inspections during the construction phase of the Project to verify that the project is being constructed in compliance with the siting laws, siting rules, and applicable Commission Orders and to verify that the pipeline was installed with the depth of cover required by the Commission's Order. The inspection process included a review of the Application for Corridor Compatibility and Route Permit, the Project's Order, and other applicable documents. This report includes documentation of 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.

# 2.0 Findings of Site Inspection

## 2.1 METHODS

Wenck staff members Joseph Sander, Field Inspector/Environmental Scientist and Sam Mauch, Field Inspector/Civil Engineer-In-Training, visited the Project site to conduct construction inspections on 28-29 May 2020 and 23 June 2020. Representatives from ONEOK, Timothy Swan, Construction Coordinator and Epcon Partners Inc. (Epcon), Beau Eddins, Chief Inspector, Spread 1, and Harlan Quinalty, Chief Inspector, Spread 2 made themselves available to answer any questions or be summoned as an accompany. Wenck did not require an accompany; however, did contact these representatives and inquired about pertinent Project location works, progress, and goals.

The site was inspected visually by driving to access points and walking or driving within the Project right-of-way (ROW). Jomax is the pipeline contractor company working on the Project. Contractors/equipment operators were observed during the topsoil removal, trench digging, pipe installation, trench filling, and topsoil re-spreading phases of the Project to check that soils had been properly removed, segregated, and replaced during the construction process. Pipe depths, measured from open trenches, were inspected. General construction procedures were also observed. Digital photographs were taken showing typical Project infrastructure and documenting problem areas (**Appendix A**). Geographic coordinates were recorded at observation points and potential problem areas using ESRI ArcGIS Collector and Survey123 software applications on a tablet utilizing internal satellite triangulation software or paired with a Trimble Global Positioning System (GPS) (**Table 1**). Observation Point locations were then overlaid on GIS generated maps along the Project route (**Figures 1-10**).

## 2.2 ON-SITE INSPECTION OBSERVATIONS

The first construction inspections were conducted on 28-29 May 2020. Mr. Sander and Mr. Mauch contacted Timothy Swan, Harlan Quinalty, and Beau Eddins as notification of construction inspection proceedings and to gain an up to date understanding of active construction locations and conditional progress of previous and future planned works. The final construction inspections were conducted on 23 June 2020 by Mr. Mauch. Mr. Mauch made contact with Timothy Swan on this date for notification of construction inspection proceedings and to gain an up to date understanding of active construction locations and conditional progress of previous and future planned works. At this time, it was reported by ONEOK that approximately 75% of trenching, 70% of pipe laying, and 67% of backfill had been completed for the project.

In general, the overall construction of the Project was conducted in compliance with PSC requirements, the majority of observations made were found to be adequate. The contractors appear to have done a satisfactory job with the stripping of topsoil and project construction. Pipe in trench measurements were appropriate in depth and at or deeper than required. Trench wall profiles showed that topsoil had been stripped appropriately. Observations were made that waterbodies, wetlands, noxious weeds, and other environmentally sensitive areas were all marked clearly to mitigate against construction impacts. Nesting bird surveys were conducted ahead of topsoil stripping. Construction safety measures were followed, including but not limited to, posted warning signs, traffic control, overhead electrical wires marked, equipment spotters, and personal protective

equipment was worn. Work areas visited during the inspection were kept free of debris and waste. Potentially problematic observations made included:

1. A buried underground utility was severed during trenching operations (**Observation Point 2**).
  - a. Follow-up communications were made with Timothy Swan, inquiring about the scenario and if the notification protocol had been followed. Timothy responded that the line was unmarked by the one call system due to it being abandoned. He also stated that the contractor immediately called the line representatives for a statement of ownership; in this case, Mountrail-Williams Electric Cooperative stated "it could be ours" [sic]. Wenck is of the opinion, ONEOK followed the One-call Excavation Notice System requirements if the above statements from ONEOK are indeed correct; however, Wenck cannot prove compliance as proof of communications are not required to be submitted to the PSC. Wenck is also of the opinion, ONEOK is required to notify the PSC in compliance with the Certification Relating to Order Provisions – Transmission Facility Siting #34; however, notifications are not required to be submitted to the case files, therefore, Wenck cannot prove compliance with PSC notification. Wenck did not notify the PSC of the scenario due to the evident abandonment of the line and clear indication of work stoppage and ONEOK's response of compliance.
2. A linear area of land had been stripped of topsoil occurring near a change of direction of the planned pipeline route, seemingly out of the ROW (**Observation Point 6**).
3. A wetland crossing conducted via HDD, was subsequently crossed with equipment via a timber bridge; however, evidence of crossing through the wetland south of timber bridge without controls is evident, as well as subsoil stockpile erosion into the wetland (**Observation Point 9**).
4. Subsoil stockpile encroachment upon unstripped topsoil (**Observation Point 11**)
5. Lack of adequate erosion and sediment controls on stockpiles, especially along backslopes (**Observation Points 7, 12, 14, 15, 19**).
6. Minor mixing of topsoil and subsoils evident within trench stockpiles located primarily along shoulder slopes (**Observation Points 8, 32, 33, 36, 40**).
7. Mixing of topsoil and subsoils was indicated near HDD entry/exit points (**Observation Points 5, 25**).

## 3.0 Recommendations for Resolution of Issues

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Construction Inspections of The Tioga Lateral Pipeline PU-19-368 have verified that the project is overall being constructed in compliance with the siting laws, siting rules, and applicable Commission Orders. Measurements of pipe depth within trenches confirm that the pipeline is being installed with the depth of cover required. No major issues were observed during construction inspections. However, Wenck makes the following recommendations to alleviate minor issues observed at the project:

- ▲ Ensure the PSC was notified as per Certification Relating to Order Provisions #34.
- ▲ Continue implementing and inspecting erosion control measures, especially along shoulder and backslopes and near waterbodies, as well as replace and repair non-functioning BMPs (i.e., silt fences).
- ▲ Inquire about topsoil stripping near Observation Point 6.
- ▲ Inquire as to the purpose and methods of wetland crossing near Observation Point 9. Reclaim subsoils from wetland and reclaim wetland crossing.
- ▲ Inquire as to the methodologies implemented for bell hole excavation at HDD entry/exit points, and determine if additional reclamation and/or amended practices are necessary for topsoil segregation at associated HDD excavations.

## 4.0 Signatures

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The services performed by Wenck staff for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.



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Matthew Retka, Project Manager

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07/24/2020  
Date



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Joseph Sander, Environmental Scientist

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07/24/2020  
Date

# Tables

## 1. Observation Point Coordinates

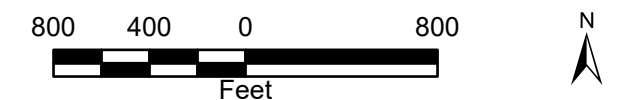
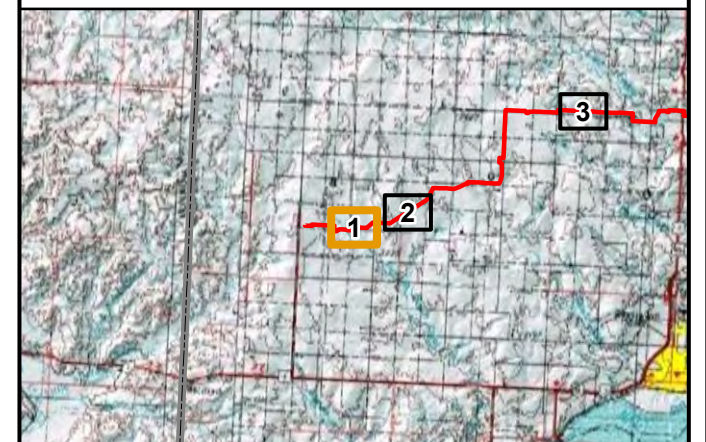
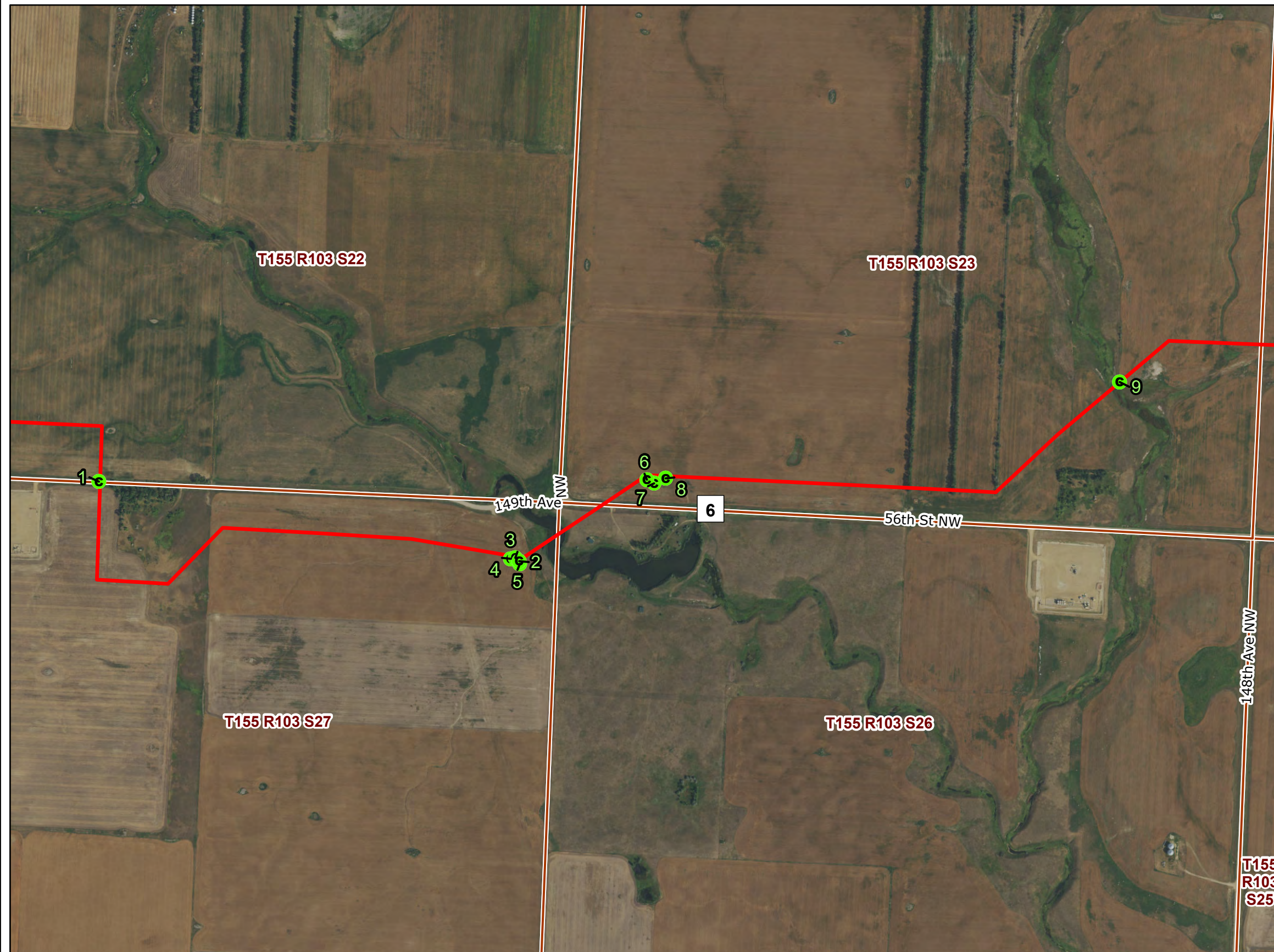
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2	5/28/2020	48.22559871	-103.9077664	38	6/23/2020	48.24885132	-103.5390726
3	5/28/2020	48.22566295	-103.907889	39	6/23/2020	48.30308617	-103.5944537
4	5/28/2020	48.22563646	-103.9080353	40	6/23/2020	48.30302306	-103.5933921
5	5/28/2020	48.22554298	-103.9077432				
6	5/28/2020	48.22740656	-103.9039079				
7	5/28/2020	48.22733821	-103.9036774				
8	5/28/2020	48.22745037	-103.9033243				
9	5/28/2020	48.22986906	-103.8893434				
10	5/28/2020	48.23537929	-103.8633087				
11	5/28/2020	48.23494755	-103.864448				
12	5/28/2020	48.23965329	-103.8535703				
13	5/29/2020	48.29964721	-103.6962822				
14	5/29/2020	48.29960532	-103.6937854				
15	5/29/2020	48.29959241	-103.6967058				
16	5/29/2020	48.29959368	-103.6968326				
17	5/29/2020	48.29990071	-103.7293963				
18	5/29/2020	48.29992841	-103.7293671				
19	5/29/2020	48.29981882	-103.7249404				
20	5/29/2020	48.29982148	-103.7243315				
21	5/29/2020	48.300495	-103.7134499				
22	5/29/2020	48.31286641	-103.0799108				
23	5/29/2020	48.3130031	-103.0797611				
24	5/29/2020	48.31289821	-103.079692				
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31	6/23/2020	48.28552147	-103.1953653				
32	6/23/2020	48.28718507	-103.1869993				
33	6/23/2020	48.28711957	-103.1868945				
34	6/23/2020	48.26457103	-103.2583951				
35	6/23/2020	48.2580909	-103.2698975				
36	6/23/2020	48.25603473	-103.3135725				

## Construction Observation Locations

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Tioga Lateral Pipeline  
Figure 1

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



Responsive partner. Exceptional outcomes.

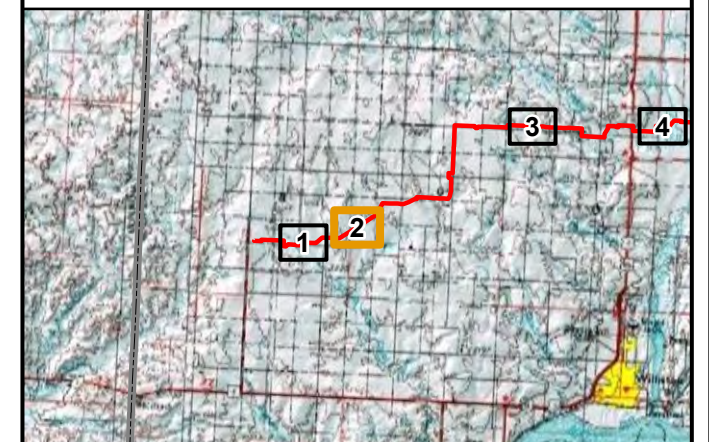
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Map 1 of 10

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Tioga Lateral Pipeline  
Figure 2

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



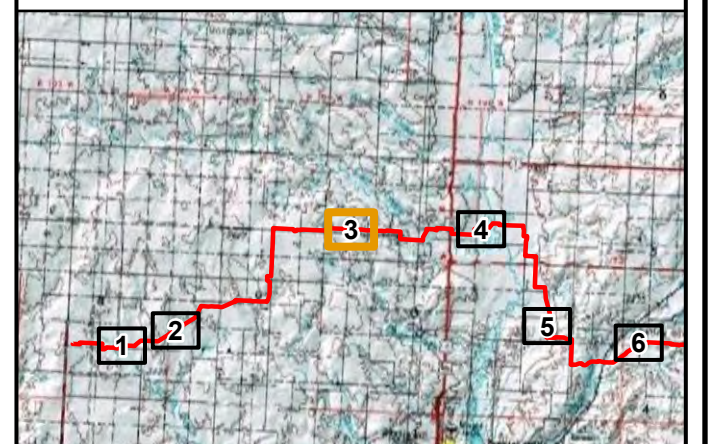
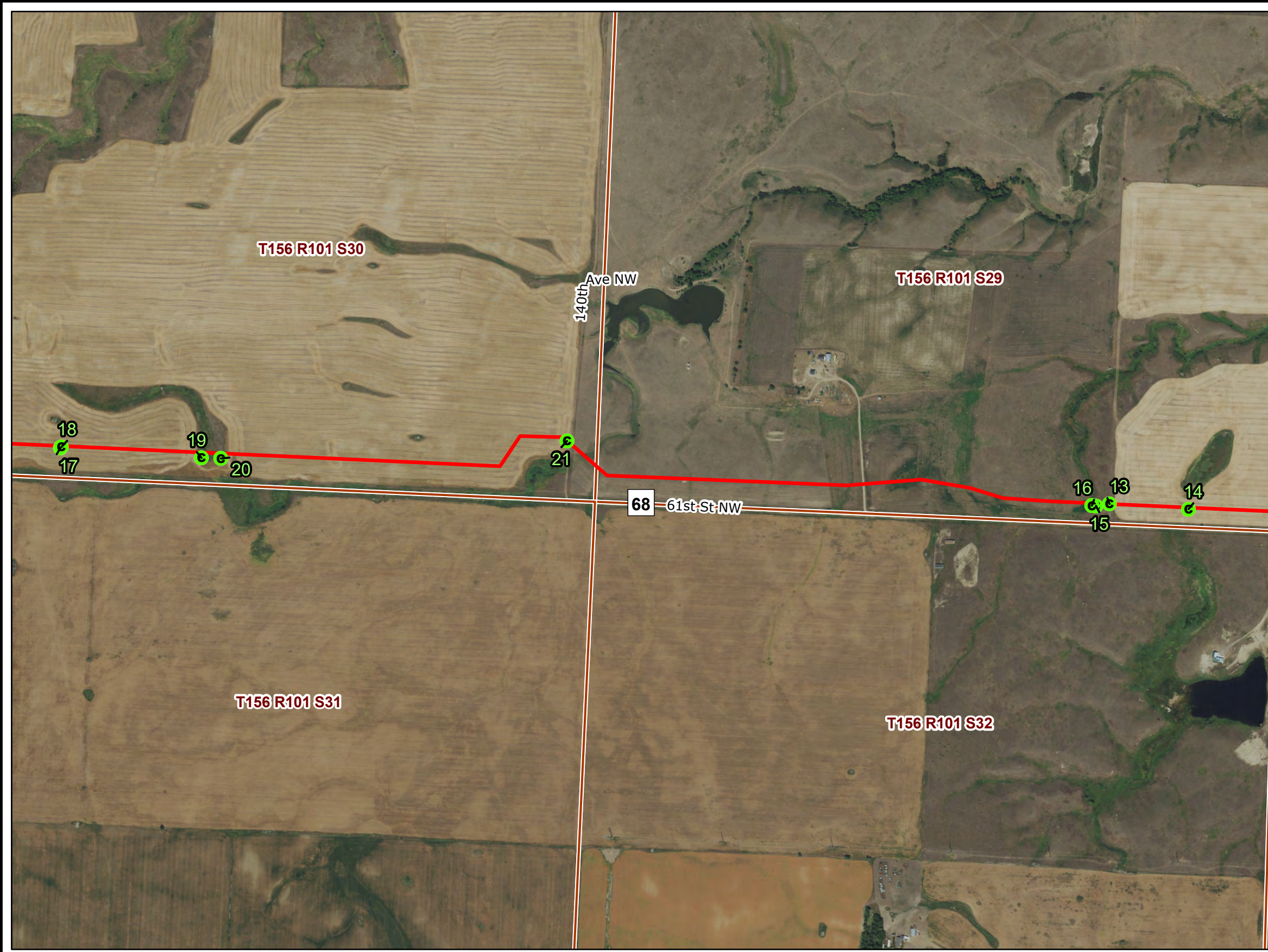
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**Tioga Lateral Pipeline  
Figure 3**

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)

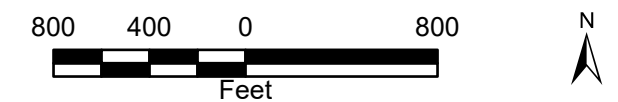
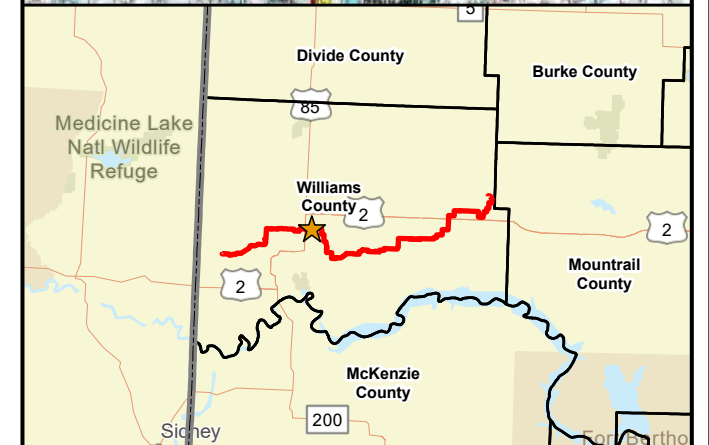
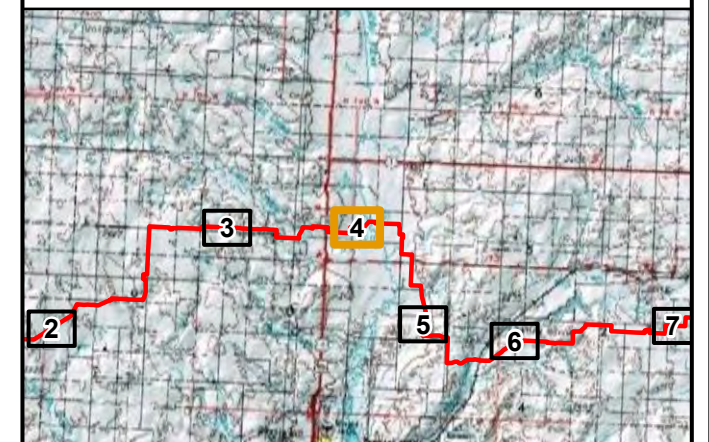


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North Dakota  
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Tioga Lateral Pipeline  
Figure 4

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



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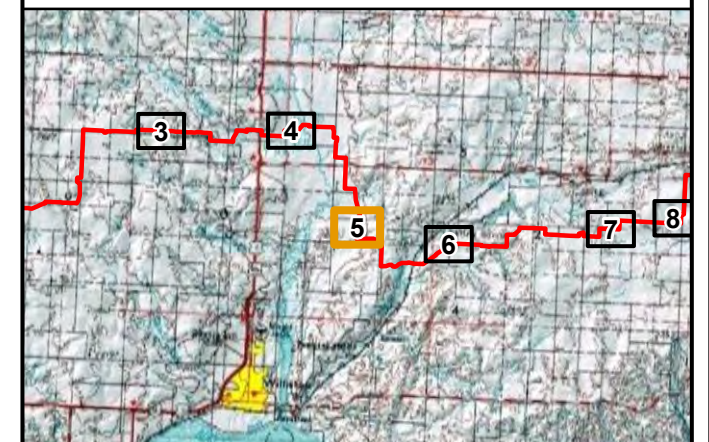
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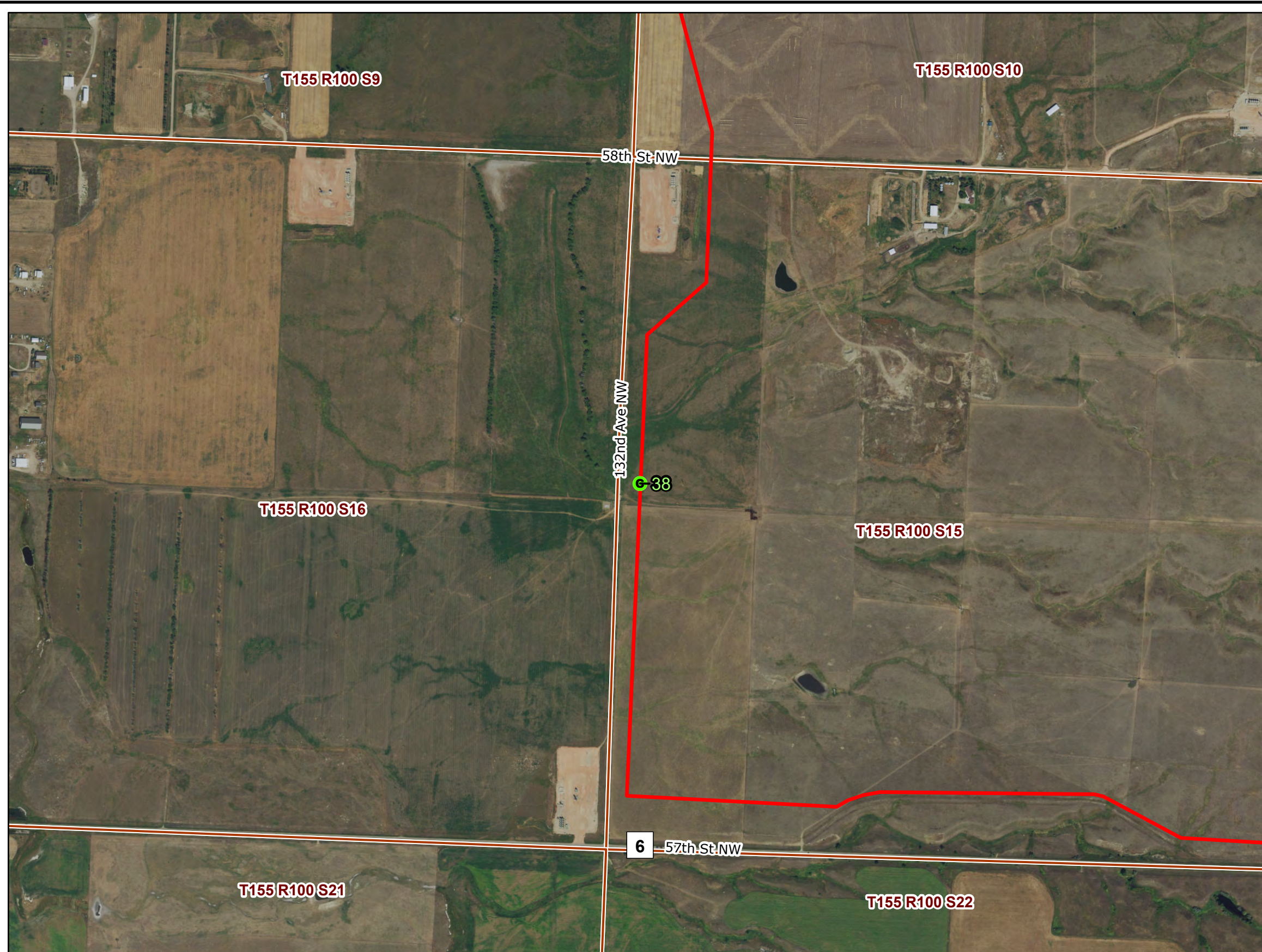
Tioga Lateral Pipeline  
Figure 5

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



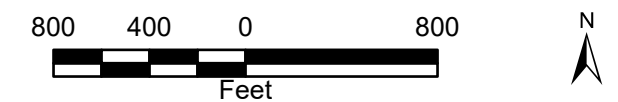
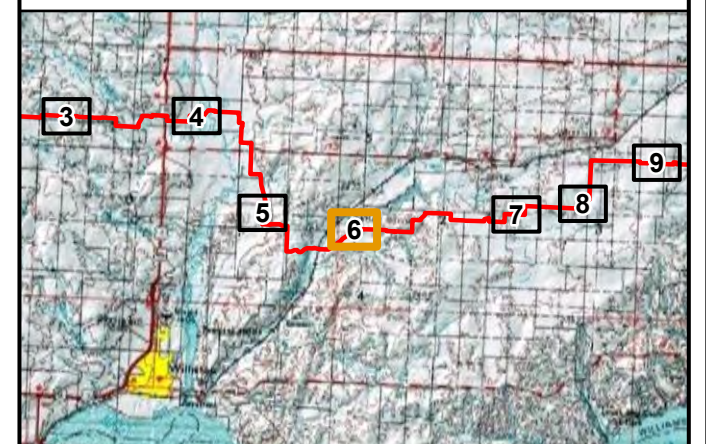
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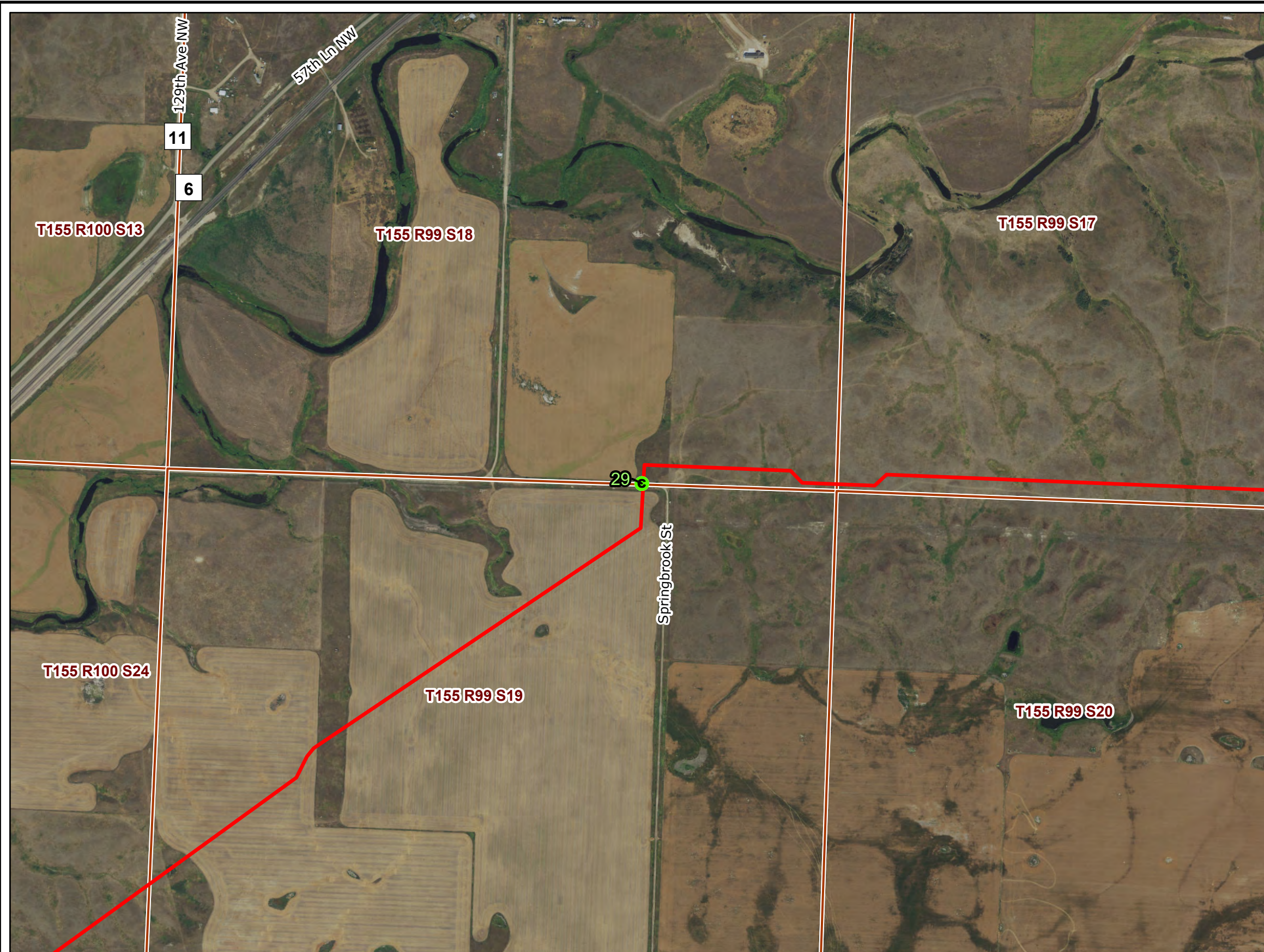
Tioga Lateral Pipeline  
Figure 6

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



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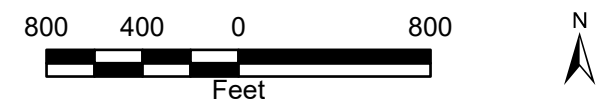
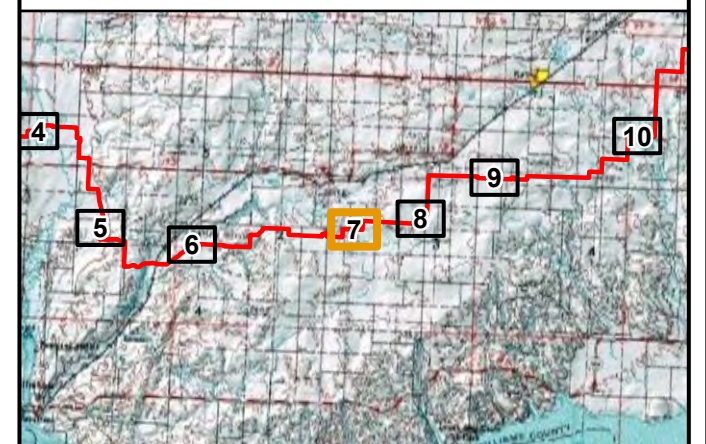
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Tioga Lateral Pipeline  
Figure 7

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



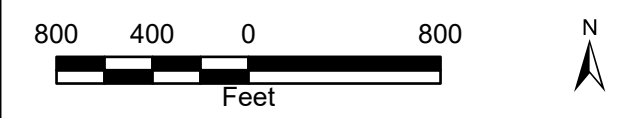
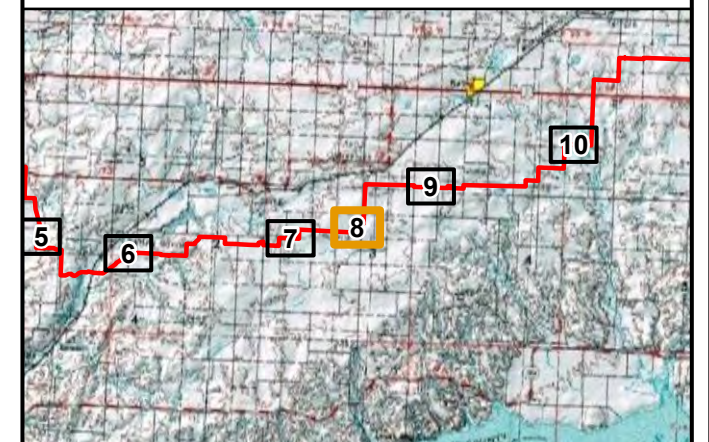
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Tioga Lateral Pipeline  
Figure 8

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



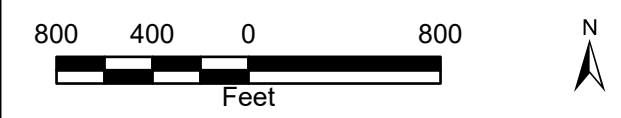
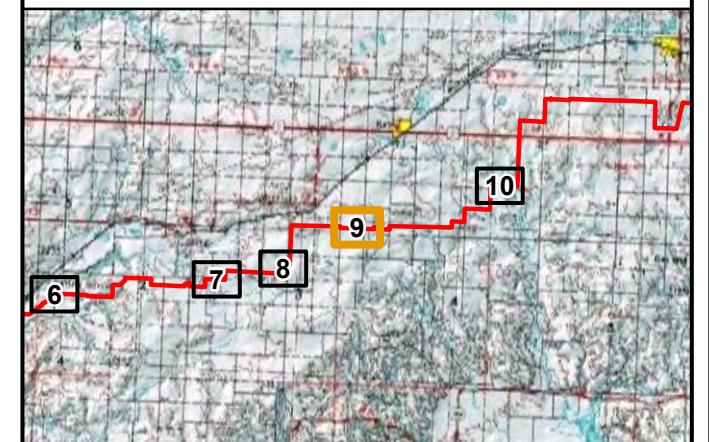
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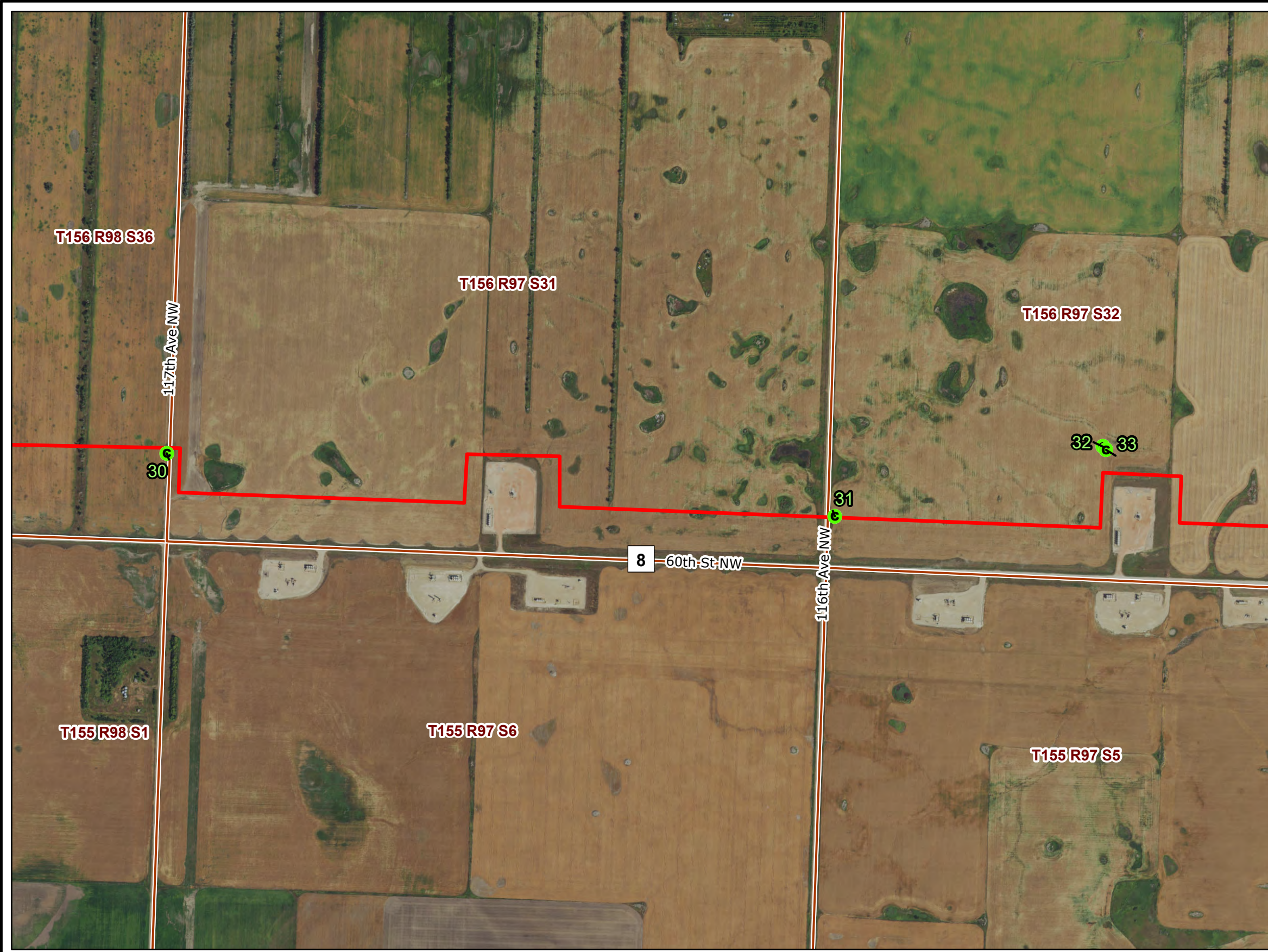
Tioga Lateral Pipeline  
Figure 9

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



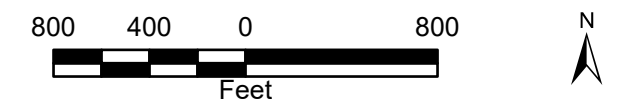
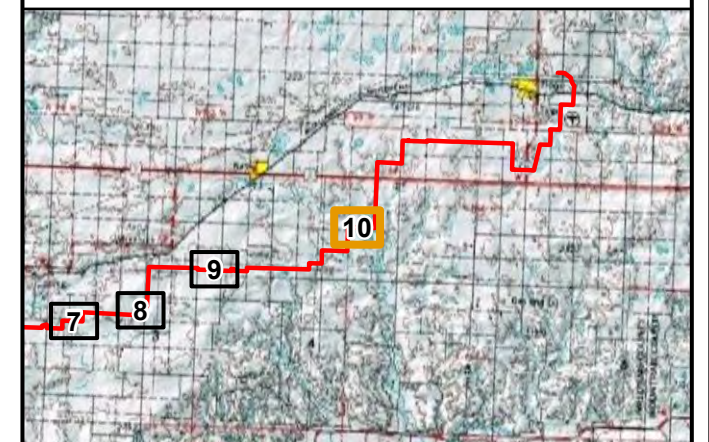
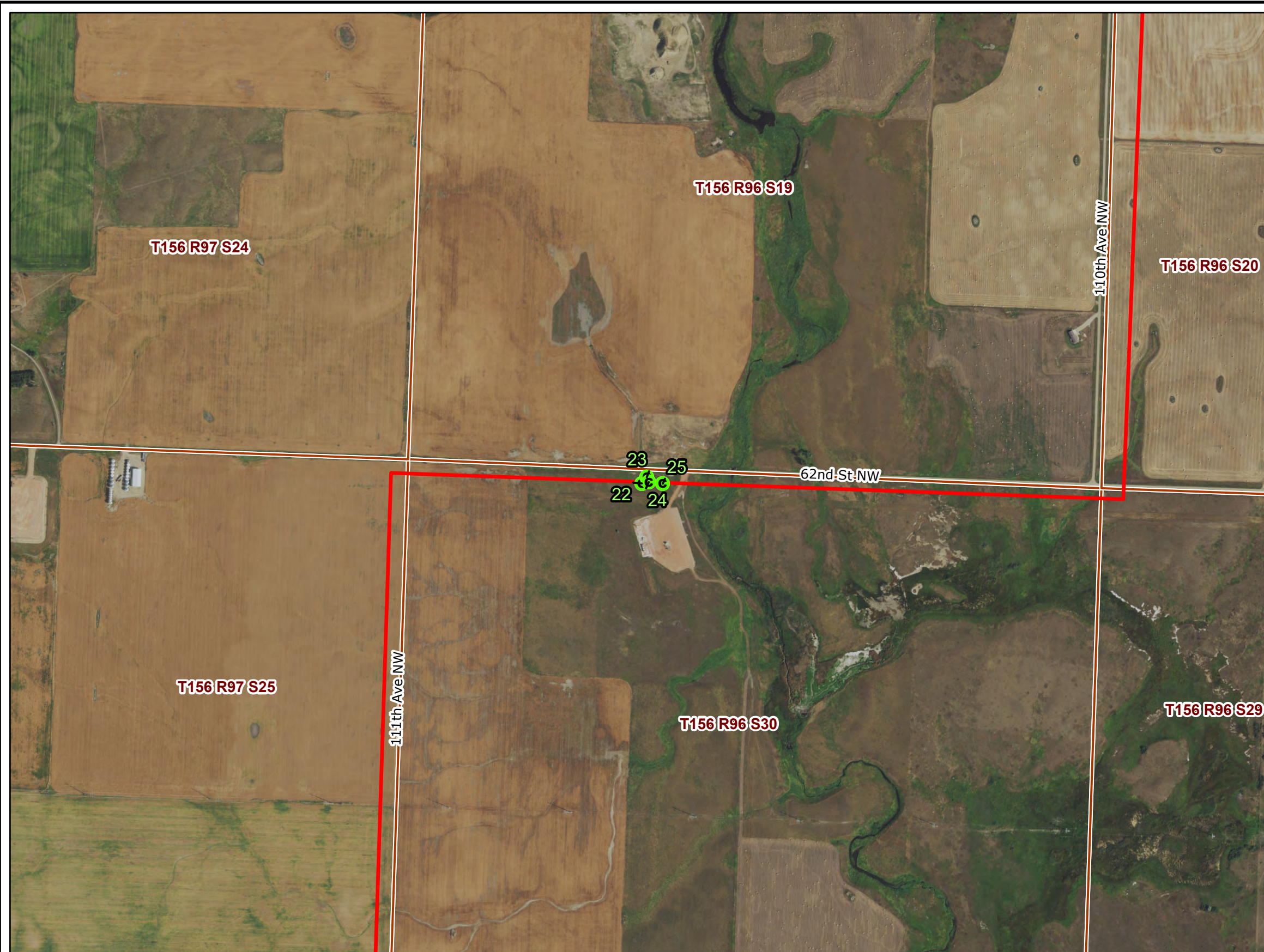
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**Tioga Lateral Pipeline  
Figure 10**

- Construction Observation Point Location
- Tioga Lateral Centerline (PU-19-368)



2018 Aerial Photograph (Source: NAIP)

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PU-19-368 TIOGA LATERAL PIPELINE CONSTRUCTION INSPECTION

Construction Observation Locations



Responsive partner. Exceptional outcomes.

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Observation Point Photolog

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 1**

Date Taken: 05/28/2020 3:43 PM  
Direction Photo is Taken: South  
Spread: 2

Photo Description: Pipe has been installed and backfilled, timber mat access from road present.

Latitude: 48.22686055  
Longitude: -103.92094167



**Observation Point: 2**

Date Taken: 05/28/2020 3:58 PM  
Direction Photo is Taken: East  
Spread: 2

Photo Description: HDD entry point, appears to have severed underground utility. This line was understood to be abandoned.

Latitude: 48.22559871  
Longitude: -103.90776644



**Observation Point: 3**

Date Taken: 05/28/2020 4:04 PM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Open trench prior to pipe install, existing saltwater pipe shown (black).

Latitude: 48.22566295  
Longitude: -103.90788898

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 4**

Date Taken: 05/28/2020 4:08 PM  
Direction Photo is Taken: South  
Spread: 2

Photo Description: Subsoils are stockpiled on south side of trench where the topsoil stockpiles are typically. In the background of the photo there is a small amount of topsoil stockpiled comparatively to the area stripped, potential compaction of topsoil.

Latitude: 48.22563646  
Longitude: -103.90803527



**Observation Point: 5**

Date Taken: 05/28/2020 4:13 PM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Subsoil mixing has occurred with topsoil from HDD bell hole excavation.

Latitude: 48.22554298  
Longitude: -103.90774321



**Observation Point: 6**

Date Taken: 05/28/2020 4:24 PM  
Direction Photo is Taken: Northeast  
Spread: 2

Photo Description: Soil stripping has apparently occurred off ROW, unknown if it relates to construction activity of project.

Latitude: 48.22740656  
Longitude: -103.90390787

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 7**

Date Taken: 05/28/2020 4:28 PM

Direction Photo is Taken:

Spread: 2

Photo Description: No erosion controls present, erosion and sedimentation present along ROW boundary.

Latitude: 48.22733821

Longitude: -103.90367736



**Observation Point: 8**

Date Taken: 05/28/2020 4:32 PM

Direction Photo is Taken: East

Spread: 2

Photo Description: Isolated minor mixture of topsoil and subsoil present in stockpile, on shoulder slope.

Latitude: 48.22745037

Longitude: -103.90332428



**Observation Point: 9**

Date Taken: 05/28/2020 4:45 PM

Direction Photo is Taken: Southwest

Spread: 2

Photo Description: Timber matting bridge wetland crossing. South of timber crossing, uncontrolled wetland crossing evident. HDD under wetland. Subsoil stockpile erosion into wetland.

Latitude: 48.22986906

Longitude: -103.88934343

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 10**

Date Taken: 05/28/2020 5:08 PM

Direction Photo is Taken: West

Spread: 2

Photo Description: Pipe installed and partially backfilled. Subsoil access road beside topsoil stockpile, top of pipe depth is greater than 72" at unimproved section line.

Latitude: 48.23537929

Longitude: -103.86330873



**Observation Point: 11**

Date Taken: 05/28/2020 5:16 PM

Direction Photo is Taken: Northeast

Spread: 2

Photo Description: Topsoil cut not present suggesting subsoil stockpile encroachment and potential mixing.

Latitude: 48.23494755

Longitude: -103.86444796



**Observation Point: 12**

Date Taken: 05/28/2020 5:39 PM

Direction Photo is Taken: Northwest

Spread: 2

Photo Description: Wetland open cut trench, backfilling, timber matting used to cross wetland. Erosion controls currently present are ineffective, need for greater erosion control. Does not appear that subsoil and topsoil were segregated during cut.

Latitude: 48.23965329

Longitude: -103.85357027

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 13**

Date Taken: 05/29/2020 10:11 AM  
Direction Photo is Taken: East  
Spread: 2

Photo Description: Topsoil appropriately not present in trench profile. Stockpiles and stripped area free of mixing.

Latitude: 48.29964721  
Longitude: -103.69628218



**Observation Point: 14**

Date Taken: 05/29/2020 10:20 AM  
Direction Photo is Taken: Northwest  
Spread: 2

Photo Description: Inadequate ESC (Erosion and Sediment Control) measures along slope and adjacent to wetland.

Latitude: 48.29960532  
Longitude: -103.69378541



**Observation Point: 15**

Date Taken: 05/29/2020 10:27 AM  
Direction Photo is Taken: Northeast  
Spread: 2

Photo Description: BMPs inadequate to protect drainage and absent along slope.

Latitude: 48.29959241  
Longitude: -103.69670578

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 16**

Date Taken: 05/29/2020 10:30 AM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Topsoil stockpile appropriately not placed within drainageway.

Latitude: 48.29959368  
Longitude: -103.69683256



**Observation Point: 17**

Date Taken: 05/29/2020 10:47 AM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Backfilling over laid pipe. Equipment and stockpile appropriately within ROW.

Latitude: 48.29990071  
Longitude: -103.72939631



**Observation Point: 18**

Date Taken: 05/29/2020 10:51 AM  
Direction Photo is Taken: East  
Spread: 2

Photo Description: Laid pipe depth greater than 60 inches below adjacent ground surface.

Latitude: 48.29992841  
Longitude: -103.72936709

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 19**

Date Taken: 05/29/2020 10:58 AM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Erosion present along southern boundary of topsoil stockpile.

Latitude: 48.29981882  
Longitude: -103.7249404



**Observation Point: 20**

Date Taken: 05/29/2020 11:02 AM  
Direction Photo is Taken: East  
Spread: 2

Photo Description: Active pipe installation.

Latitude: 48.29982148  
Longitude: -103.7243315



**Observation Point: 21**

Date Taken: 05/29/2020 11:26 AM  
Direction Photo is Taken: Southeast  
Spread: 2

Photo Description: Bottom of trench 84 inches below subsurface soils at unimproved section line. Strip cut adjacent to trench approximately 8-12 inches.

Latitude: 48.300495  
Longitude: -103.71344993

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 22**

Date Taken: 05/29/2020 1:14 PM

Direction Photo is Taken: West

Spread: 1

Photo Description: Trench profile properly shows little evidence of topsoil. Trench is continually being dewatered.

Latitude: 48.31286641

Longitude: -103.07991077



**Observation Point: 23**

Date Taken: 05/29/2020 1:20 PM

Direction Photo is Taken: West

Spread: 1

Photo Description: Dewatering filter bag effectively being used to control sediment releases.

Latitude: 48.3130031

Longitude: -103.07976106



**Observation Point: 24**

Date Taken: 05/29/2020 1:26 PM

Direction Photo is Taken: East

Spread: 1

Photo Description: Top of pipe depth approximately 48 inches.

Latitude: 48.31289821

Longitude: -103.07969195

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 25**

Date Taken: 05/29/2020 1:29 PM  
Direction Photo is Taken: Northwest  
Spread: 1

Photo Description: HDD bell hole excavation area. Topsoil mixing present in subsoil stockpile.

Latitude: 48.31287723  
Longitude: -103.07925496



**Observation Point: 26**

Date Taken: 06/23/2020 7:26 AM  
Direction Photo is Taken: North  
Spread: 2

Photo Description: Topsoil and subsoil segregated well. Top of pipe depth roughly 60" to top of trench prior to subsoil and topsoil backfill.

Latitude: 48.2999995769933  
Longitude: -103.604837609455



**Observation Point: 27**

Date Taken: 06/23/2020 8:01 AM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: Top of pipe depth roughly 70" to current top of trench near section line. Assume backfill and topsoil replacement will create minimum 72" total cover.

Latitude: 48.302982696332  
Longitude: -103.603537240997

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 28**

Date Taken: 06/23/2020 8:10 AM

Direction Photo is Taken: East

Spread: 2

Photo Description: Topsoil and subsoil segregation is adequate. Topsoil stockpile to the south, subsoil stockpile to the north.

Latitude: 48.3030194090679

Longitude: -103.60406764782999



**Observation Point: 29**

Date Taken: 06/23/2020 9:28 PM

Direction Photo is Taken: North

Spread: 2

Photo Description: Top of pipe depth estimated to be greater than 72" at section line. Topsoil and subsoil segregation adequate.

Latitude: 48.2413410488516

Longitude: -103.459795145318



**Observation Point: 30**

Date Taken: 06/23/2020 10:31 PM

Direction Photo is Taken: West

Spread: 1

Photo Description: Top of pipe depth 75" to current top of trench on section line. Topsoil stockpile to the south and subsoil stockpile to the north.

Latitude: 48.2863536290824

Longitude: -103.216472184286

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 31**

Date Taken: 06/23/2020 12:28 PM

Direction Photo is Taken: East

Spread: 1

Photo Description: Bottom of trench to top of trench measured 85" near section line. Topsoil and subsoil layers well segregated.

Latitude: 48.2855214737356

Longitude: -103.195365294814



**Observation Point: 32**

Date Taken: 06/23/2020 12:54 PM

Direction Photo is Taken: East

Spread: 1

Photo Description: Bottom of trench to top of trench measured 75".

Latitude: 48.2871850719675

Longitude: -103.186999317259



**Observation Point: 33**

Date Taken: 06/23/2020 12:59 PM

Direction Photo is Taken: East

Spread: 1

Photo Description: Subsoil stockpile appears to have only traces of topsoil present in it.

Latitude: 48.2871195673943

Longitude: -103.18689445965

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 34**

Date Taken: 06/23/2020 1:26 PM  
Direction Photo is Taken: North  
Spread: 1

Photo Description: Open cut through wet area not delineated as wetland, near delineated wetland. Topsoil spread and well graded. Timber matting used for driving access present.

Latitude: 48.2645710324869  
Longitude: -103.258395111188



**Observation Point: 35**

Date Taken: 06/23/2020 1:33 PM  
Direction Photo is Taken: West  
Spread: 1

Photo Description: Open cut through drainage. Topsoil spread and graded well to match existing topography.

Latitude: 48.2580908993259  
Longitude: -103.269897513092



**Observation Point: 36**

Date Taken: 06/23/2020 1:43 PM  
Direction Photo is Taken: North  
Spread: 1

Photo Description: Bottom of trench to top of trench measured 85". Stockpiles not well segregated along ROW and showed evidence of topsoil mixing with subsoil.

Latitude: 48.2560347346589  
Longitude: -103.313572509214

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 37**

Date Taken: 06/23/2020 2:05 PM  
Direction Photo is Taken: East  
Spread: 1

Photo Description: Top of pipe depth approximately 75" to current top of trench.

Latitude: 48.2535503385589  
Longitude: -103.330066921189



**Observation Point: 38**

Date Taken: 06/23/2020 2:36 PM  
Direction Photo is Taken: North  
Spread: 2

Photo Description: Top of pipe depth roughly 55" to current top of trench. Minimum of 6" of topsoil will be re-graded to match existing topography. Topsoil and subsoil segregation adequate.

Latitude: 48.2488513179123  
Longitude: -103.539072610438



**Observation Point: 39**

Date Taken: 06/23/2020 3:11 PM  
Direction Photo is Taken: West  
Spread: 2

Photo Description: HDD under wetland.

Latitude: 48.3030861709267  
Longitude: -103.594453688711

**PU-19-368 (ONEOK Tioga Lateral): Observation Point Photolog**



**Observation Point: 40**

Date Taken: 06/23/2020 3:36 PM

Direction Photo is Taken: Northeast

Spread: 2

Photo Description: Located on east side of wetland. Top of pipe depth approximately 90" to current top of trench. Traces of subsoil and topsoil in their respective stockpiles.

Latitude: 48.3030230551958

Longitude: -103.593392120674



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