

Initial Topsoil Inspection



To: Adam Renfandt, CFA
From: Matt Retka, Wenck Associates, Inc.
Date: May 24, 2019
Subject: PU-18-399, Demicks Lake Pipeline Initial Topsoil Inspection

Project Introduction

Wenck Associates (Wenck) conducted a topsoil removal inspection at the Demicks Lake Pipeline Project Case No. PU-18-399 on May 14th and 15th 2019, on behalf of the North Dakota Public Service Commission. Matt Retka, Project Manager/Soil Classifier, met with personnel from ONEOK Bakken Pipeline, L.L.C. (ONEOK), Onshore Quality Control Specialists, L.L.C. (QCS), and Jomax Construction Company Inc. (Jomax).

Matt Retka, Project Manager/Soil Classifier, Jeremy Hackley, Field Inspector, and Jansen Howe, Field Inspector (all with Wenck), attended the initial safety presentation during project kick-off meeting on May 14th in Watford City. Wenck staff met with Blake Holland, ONEOK environmental Project Manager, Kelly Hawkins, QCS Chief Inspector, and Dub Jeffrey, QCS Construction Manager, to receive project overview, review construction progress timelines, contact information, and project starting points.

Later in the day of May 14, 2019, Mr. Retka and Mr. Hackley met with Rob Jeffrey, QCS Chief Inspector for Spread 2 in Sidney, Montana to obtain information of rescheduled starting date, contact information, and best opportunities to observe Spread 2 topsoil removal crew.

Inspections and Field Review

Spread 1 Crew Inspection

Wenck Project Manager and Field Inspectors met with Dave Prescott, Jomax crew lead for Spread 1. Topsoil removal by Jomax personnel began around noon of May 14th, 2019. Topsoil was removed within a cultivated field north of the Demicks Lake Gas Processing Plant in McKenzie County T151N, R96W, Section 17.

Mr. Retka explained some of the complexities of varying topsoil depths and associated landscape correlation to the crew prior to initiation of topsoil stripping. Jomax personnel appeared competent in their duties, taking care to ensure just the topsoil was removed and stockpiled. Bulldozers were used to remove topsoil, which ranged from approximately 7-12 inches in depth at the observed locations. Jomax personnel further understood the need to protect topsoil from possibilities of water erosion and kept proper segregation from subsoil.

Spread 2 Crew Inspection

Topsoil removal was also initially to be conducted along Spread 2 on May 14th, 2019 per the pre-construction conference call for the project. Spread 2 had scheduling difficulties which delayed planned topsoil removal and inspections. Rob Jeffrey offered for Spread 2 topsoil removal crew to travel to Spread 1 to be observed performing topsoil stripping activities.

Mr. Retka met with Clay Willson, Jomax crew lead for Spread 2 at Spread 1 on May 15th, 2019 between 9:00-11:00 am. Observations of the Spread 2 crew were held. Again, Jomax personnel showed competence in the task of removing topsoil and control of stripping depth. Spread 2 crew further showed compliance with the understanding of the need to protect topsoil detention area from water erosion and segregated from subsoil. Both bulldozers and a motor grader were employed by the Spread 2 crew.

Field Review Summary

Topsoil was stockpiled north and east of the Right of Way (ROW). Topsoil depth was in an approximate range of 7-12 inches to a subsoil clay pan or calcareous soil horizon. Portions of a potential buried quarter section road revealing scoria deposits was un-earthed at station 13+00. Topsoil stripping was terminated at that location. Observation of color changes during stripping unveiled a calcareous subsoil at Station 22+00. Topsoil stripping was terminated with very little subsoil deposited in the topsoil stockpile area at that location. Construction of a road approach was observed at station 10+00. Fill was obtained using subsoil from surrounding work area (see Attachment A and B).

At this time, no non-compliance areas were observed, nor are any further recommendations offered. Further topsoil inspections are scheduled for the near future. Observations will be held both on Spread 1 and Spread 2 respectively. Start date and construction crews for Spread 3 are yet unknown.

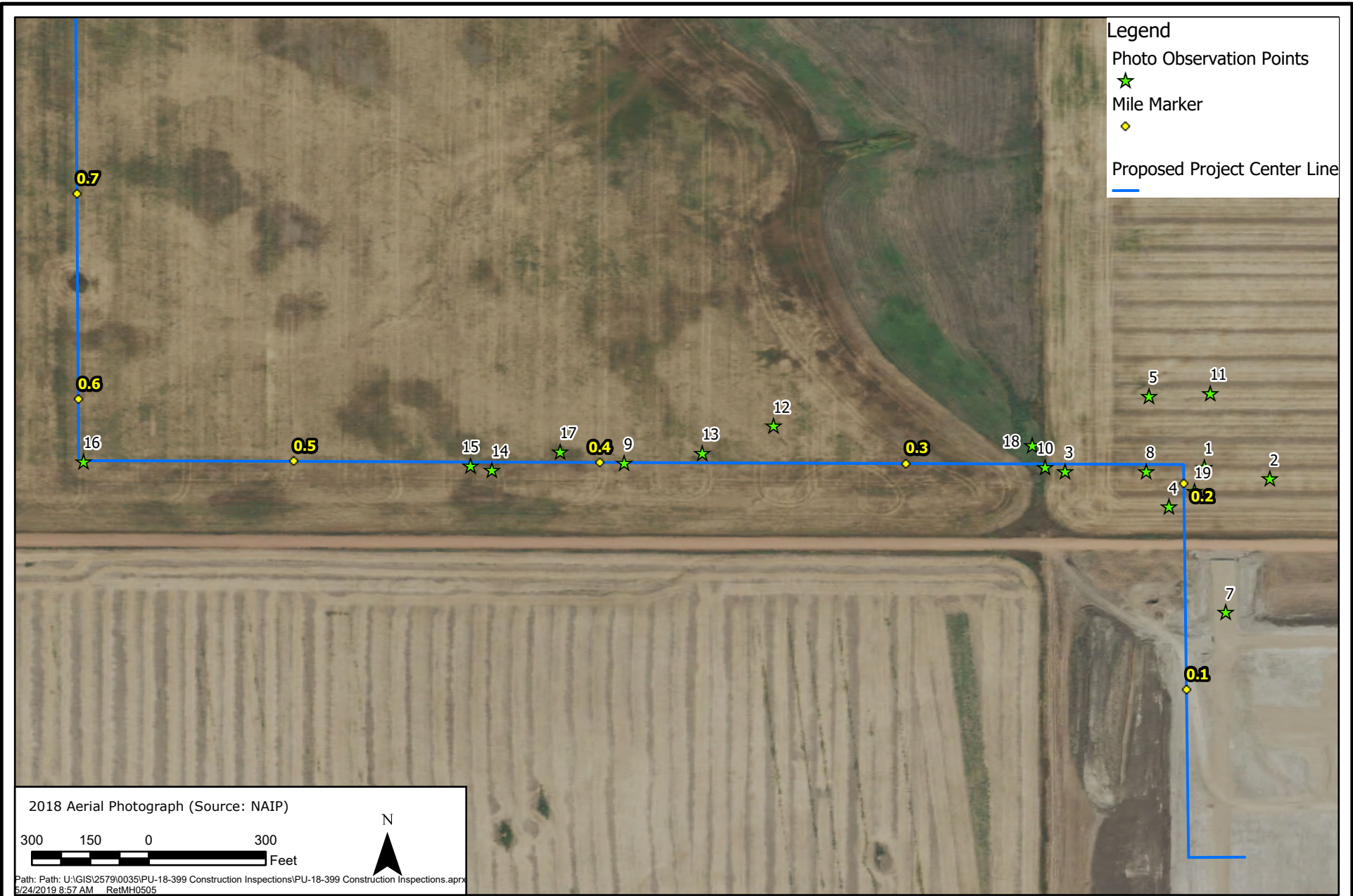
Please contact me at 701-893-2322 if you have any questions or comments.

Respectfully submitted,



Matt Retka
Project Manager/Soil Classifier

Attachment A: Initial Topsoil Removal Photograph Map
Attachment B: Field On-Site Photographs



PU-18-399 CONSTRUCTION INSPECTION

Initial Topsoil Removal Photographs



Responsive partner. Exceptional outcomes.

MAY 2019

Figure 1

Appendix A- On-Site Photographs



Observation Point: 1

Date Taken: 14-May-2019

Direction Photo is Taken: West

Photo Description: Start of topsoil stripping on ROW by Jomax contractors on Station 12+00 of Spread 1.

Latitude: 47.89145

Longitude: -102.99406



Observation Point: 2

Date Taken: 14-May-2019

Direction Photo is Taken: South

Photo Description: Topsoil stockpile creation at Station 10+00 Spread 1.

Latitude: 47.89137

Longitude: -102.99360



Observation Point: 3

Date Taken: 14-May-2019

Direction Photo is Taken: North

Photo Description: Station 12+00 of Spread 1. Topsoil stockpile and spotter in background ensuring topsoil remains within ROW.

Latitude: 47.89142

Longitude: -102.99504

Appendix A- On-Site Photographs



Observation Point: 4a

Date Taken: 14-May-2019

Direction Photo is Taken: East

Photo Description: Station 10+00 Spread 1. Topsoil stripped width of ROW.

Latitude: 47.89117

Longitude: -102.99431



Observation Point: 4b

Date Taken: 14-May-2019

Direction Photo is Taken: East

Photo Description: Westside of ROW. Topsoil stripped to subsoil. Topsoil depth at approximately 10 inches.

Latitude: 47.89117

Longitude: -102.99431



Observation Point: 5

Date Taken: 14-May-2019

Direction Photo is Taken: West

Photo Description: Station 12+00 Spread 1. Topsoil stockpile line. Spotter ensuring ROW containment of topsoil.

Latitude: 47.89195

Longitude: -102.99445

Appendix A- On-Site Photographs



Observation Point: 6

Date Taken: 14-May-2019

Direction Photo is Taken: North

Photo Description: Station 10+00 Spread 1 as seen from Station 08+00. South of sectional road running West to East.

Latitude: 47.89043

Longitude: -102.99391



Observation Point: 7

Date Taken: 14-May-2018

Direction Photo is Taken: East

Photo Description: After final cut of topsoil to subsoil (claypan). Field measurement shows approximately 7 inches to claypan at this location of Station 12+00 Spread 1.

Latitude: 47.89142

Longitude: -102.99447



Observation Point: 8

Date Taken: 14-May-2019

Direction Photo is Taken: East

Photo Description: West along ROW overlooking Stations 10+00 and 12+00 of Spread 1. East of Station 12+00 is the outline of Station 11+00.

Latitude: 47.89148

Longitude: -102.99814

Appendix A- On-Site Photographs



Observation Point: 9

Date Taken: 14-May-2019

Direction Photo is Taken: East

Photo Description: Potential old road that has been exposed during topsoil stripping. Scoria and other road material were found along the quarter section line of the SE and SW quarters of S17, T151N, R96W. Topsoil stripping was terminated at that location.

Latitude: 47.89145

Longitude: -102.99518



Observation Point: 10

Date Taken: 14-May-2019

Direction Photo is Taken: South southwest

Photo Description: Topsoil stripping and stockpile at Station 11+00 Spread 1.

Latitude: 47.89197

Longitude: -102.99402



Observation Point: 11

Date Taken: 15-May-2019

Direction Photo is Taken: East

Photo Description: Topsoil stripping by Jomax. Starting Station 16+00 Spread 1.

Latitude: 47.89174

Longitude: -102.99709

Appendix A- On-Site Photographs



Observation Point: 12

Date Taken: 15-May-2019

Direction Photo is Taken: North

Photo Description: Observation of color change of a calcareous subsoil. Stripping terminated at correct depth. Very small amount entered topsoil stockpile, as to be expected in some cases.
Station 18+00 Spread 1

Latitude: 47.89155

Longitude: -102.99759



Observation Point: 13

Date Taken: 15-May-2019

Direction Photo is Taken: West

Photo Description: Approximate topsoil stripped at shoulder slope of hill along southside of ROW. Cut by motor grader which resulted in very steep angle of ROW depression allowinf accurate measurement of stripping depth. Zahl/Cabb soil.
Station 22+00 Spread 1.

Latitude: 47.89143

Longitude: -102.99907



Observation Point: 14

Date Taken: 15-May-2019

Direction Photo is Taken: West

Photo Description: Motor grader at work smoothing subsoil/topsoil transition along ROW.
Station 28+00 Spread 1.

Latitude: 47.89146

Longitude: -102.99922

Appendix A- On-Site Photographs



Observation Point: 15

Date Taken: 15-May-2019

Direction Photo is Taken: East

Photo Description: Motor grader initial stripping of ROW. From Station 30+00 Spread 1.

Latitude: 47.89149

Longitude: -103.00194



Observation Point: 16

Date Taken: 15-May-2019

Direction Photo is Taken: East northeast

Photo Description: Topsoil stockpile and ROW. Station 18+00 Spread 1. Topsoil mostly stripped awaiting motor grader.

Latitude: 47.89156

Longitude: -102.99859



Observation Point: 17

Date Taken: 15-May-2019

Direction Photo is Taken: West northwest

Photo Description: Topsoil stripped at Station 16+00 Spread 1. Awaiting motor grader finishing.

Latitude: 47.89160

Longitude: -102.99527

Appendix A- On-Site Photographs



Observation Point: 18

Date Taken: 15-May-2019

Direction Photo is Taken: South

Photo Description: Creation of road approach for Station 10+00 Spread 1. Motor grader pushing subsoil. Backhoe placing subsoil over culvert.

Latitude: 47.89128

Longitude: -102.99413