



**TESORO**

**TESORO HIGH PLAINS PIPELINE**

**North Dakota Public Service Commission  
Consolidated Application**

**Certificate of Corridor Compatibility and  
Route Permit**

**Targa Antelope Lateral Pipeline**

**Prepared By:**

**Wood Group Mustang, Inc.**



**November 2015**



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Introduction: ..... 1

SECTION A: DESCRIPTION OF PROPOSED FACILITY ..... 2

A.1. Type and Size of Facility ..... 2

    A.1.1 Type of Facility ..... 2

    A.1.2 Size ..... 2

    A.1.3 Length..... 2

A.2. Purpose of Facility ..... 2

A.3. Location..... 2

A.4. Aboveground Facilities ..... 3

A.5. Time Schedule ..... 3

    A.5.1 Certificate of Corridor Compatibility ..... 3

    A.5.2 Route Permit ..... 3

    A.5.3 Land Acquisition ..... 3

    A.5.4 Construction Start Date ..... 3

    A.5.5 Construction Complete ..... 3

    A.5.6 In-Service Date ..... 3

SECTION B: STUDIES ..... 4

B.1 Corridor ..... 4

B.2 Environmental Desktop Analysis ..... 4

    B.2.1 Wetland & Waterbody Assessment:..... 4

    B.2.2 Wildlife Inventory Assessment ..... 4

    B.2.3 Tree/Sapling/Shrub Analysis ..... 7

B.3 Agency Consultations ..... 8

    B.3.1 U.S. Fish and Wildlife Service (USFWS)..... 8

    B.3.2 North Dakota Game and Fish Department (NDGFD) ..... 8

    B.3.3 North Dakota Parks and Recreation (NDPRD)..... 8

    B.3.4 North Dakota State Historic Preservation Office (SHPO)..... 8

    B.3.5 North Dakota Department of Health (NDDoH)..... 9

        B.3.5.1 NDDoH Pollution Discharge Elimination System ..... 9

    B.3.6 Other Agencies ..... 9

SECTION C: NEED FOR FACILITY ..... 11




---

- C.1 An Analysis Of The Need For The Proposed Facility Based On Present And Projected Demand For The Product Transmitted By The Facility, Including The Most Recent System Studies Supporting The Analysis Of The Need ..... 11
  - C.1.1 Planned Use and Purpose..... 11
  - C.1.2 Future North Dakota System Expansion(s) ..... 12
- SECTION D: CORRIDOR LOCATION AND CRITERIA EVALUATION ..... 14
- D.1 Corridor Location ..... 14
- D.2 Factors to be Considered in Evaluating Applications and Designation of Corridors and Routes (N.D.C.C. § 49-22-09) ..... 14
  - D.2.1 Feasible Alternatives to the Proposed Corridor or Route ..... 14
    - D.2.1.1 No Action Alternative ..... 14
    - D.2.1.2 Truck Alternative ..... 14
  - D.2.2 Irreversible and Irretrievable Commitments of Natural Resources should the Proposed Corridor be Designated..... 15
  - D.2.3 Existing Plans of the State, Local Government and Private Entities for Other Developments at or in the Vicinity of the Proposed Route. .... 15
  - D.2.4 Problems Raised by Federal Agencies, Other State Agencies and Local Entities. .... 15
- D.3 Exclusion Areas (N.D.A.C. § 69-06-08-02(1))..... 15
- D.4 Avoidance Areas (N.D.A.C. § 69-06-08-02(2)) ..... 16
- D.5 Selection Criteria (N.D.A.C. § 69-06-08-02(3)) ..... 16
  - D.5.1 Agricultural Impact..... 17
  - D.5.2 Noise and Visual Effects..... 17
  - D.5.3 Wetlands..... 17
  - D.5.4 Human Health and Safety ..... 18
  - D.5.5 Animal Health and Safety ..... 18
  - D.5.6 Plant Life..... 18
- D.6 Policy Criteria ..... 18
  - D.6.1 Location and Design..... 18
  - D.6.2 Training and Utilization of Available Labor in this State for the General and Specialized Skills Required ..... 19
  - D.6.3 Economies of Construction and Operation ..... 19
  - D.6.4 Use of Citizen Coordinating Committees..... 19
  - D.6.5 A Commitment of a Portion of the Transmitted Product for Use in this State..... 19



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D.6.6	Labor Relations .....	20
D.6.7	Coordination of Facilities .....	20
D.6.8	Monitoring of Impacts .....	20
D.6.8.1	Environmental Training .....	20
D.6.8.2	Environmental Monitoring .....	20
D.6.9	Utilization of Existing and Proposed Rights-of-Way and Corridors .....	20
D.6.10	Other Existing or Proposed Transmission Facilities .....	21
SECTION E: MITIGATIVE MEASURES .....		22
E.1	Location .....	22
E.2	Construction .....	22
E.3	Operation .....	22
SECTION F: QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY .....		23

**Appendices:**

**Appendix A: Maps**

- Appendix A-1 Tesoro High Plains Pipeline System Map**
- Appendix A-2 Targa Antelope Lateral Pipeline Alignment Map**
- Appendix A-3 Targa Antelope Lateral Pipeline Survey Area Location Maps**

**Appendix B: Field Study Reports**

- Appendix B-1 Inventory of Exclusion and Avoidance Areas Report**
- Appendix B-2 Federally-listed Threatened and Endangered Species Habitat Assessment Report**
- Appendix B-3 Potential Waters of the United States Assessment Report**

**Appendix C: Cultural/Archeological Evaluation Report Abstract**

**Appendix D: Agency Correspondence**

- Appendix D-1 U.S. Fish and Wildlife Service (USFWS)**
- Appendix D-2 North Dakota Game and Fish Department (NDGFD)**
- Appendix D-3 North Dakota Parks and Recreation (NDPRD)**
- Appendix D-4 North Dakota State Historic Preservation Office (SHPO)**
- Appendix D-5 North Dakota Department of Health (NDDoH)**
- Appendix D-6 United States Army Corps of Engineers (USACE)**
- Appendix D-7 North Dakota Department of Transportation (NDDOT)**

**Appendix E: Tesoro High Plains Pipeline Company, LLC’s Ten-Year Plan**



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**LIST OF TABLES**

**PAGE**

<b>TABLE 1</b>	<b>Species Reviewed for the Proposed Project in McKenzie County, North Dakota</b>	<b>5</b>
<b>TABLE 2</b>	<b>Agency Notifications</b>	<b>9</b>
<b>TABLE 3</b>	<b>Historical Oil Productions – North Dakota</b>	<b>11</b>
<b>TABLE 4</b>	<b>Exclusion Areas</b>	<b>15</b>
<b>TABLE 5</b>	<b>Avoidance Areas</b>	<b>16</b>
<b>TABLE 6</b>	<b>Selection Criteria</b>	<b>17</b>



**Introduction:**

Tesoro High Plains Pipeline Company LLC (“TESORO”) owns and operates a 233-mile existing underground petroleum gathering and mainline pipeline system that extends from eastern Montana through North Dakota to Mandan, North Dakota. The TESORO system also extends northward to the United States-Canadian International Border where it ties into a pipeline system near the town of Lignite in Burke County, North Dakota. (See Appendix A-1, TESORO System Overview Map).

TESORO is proposing to construct the Targa Antelope Lateral Pipeline (the “Project”), to be located in McKenzie County, North Dakota. The Project includes approximately 1.4 miles (~7,500 feet) of new, 12-inch diameter crude oil pipeline that would connect the Targa Resources, Inc. (“Targa”) surface site and associated facilities with TESORO’s existing main trunk line approximately 1-mile south of TESORO’s Charlson Station.

The Project will enable TESORO to more fully utilize its existing pipeline system, increase the storage and transportation capabilities of its system, and provide increased flexibility in transporting Bakken production to TESORO’s Mandan Refinery and other customer outlets for various Bakken Oil producers.

TESORO submits to the North Dakota Public Service Commission (“Commission”) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project (“Consolidated Application”).

The Consolidated Application provides the necessary information as required by:

- North Dakota Century Code Chapter 49-22, the Energy Conversion and Transmission Facility Siting Act; and
- North Dakota Administrative Code Article 69-06, Energy Conversion and Transmission Facility Siting, and specifically Chapter 69-06-05, Transmission Facility Permit.



## **SECTION A: DESCRIPTION OF PROPOSED FACILITY**

### **A.1. Type and Size of Facility**

#### **A.1.1 Type of Facility**

The proposed Project will consist of approximately 1.4-miles of new, 12-inch diameter crude oil transmission pipeline. The pipeline will meet U.S. Department of Transportation (“DOT”) regulations, specifically the design criteria outlined in 49 CFR 195.1, construction specifications per 49 CFR 195.2, and operation and maintenance requirements per 49 CFR 195.4. The product to be transported will be Bakken Area Crude Oil.

#### **A.1.2 Size**

The Project pipeline specifications are as follows:

- 12.75-inch outside diameter steel pipe
- 0.312-inch wall thickness
- Normal Operating Pressure: 500 pounds per square inch gauge (“psig”)
- Maximum Operating Pressure: 1480 psig
- Normal Throughput: approximately 30,000 barrels per day (“bpd”)
- Maximum Throughput: approximately 75,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

#### **A.1.3 Length**

The Project is approximately 1.4 miles in length.

### **A.2. Purpose of Facility**

The proposed 12-inch pipeline will connect the Targa surface site with TESORO’s existing main trunk line approximately one mile south of TESORO’s Charlson Station. The Project will enable TESORO to more fully utilize its existing pipeline system, increase the storage and transportation capabilities of its system, and provide increased flexibility in transporting Bakken production to TESORO’s Mandan Refinery and other customer outlets for various Bakken Oil producers.

Once completed, the Project is expected to provide approximately 30,000-75,000 barrels per day capacity for Bakken Crude Oil to flow to market.

### **A.3. Location**

TESORO proposes to install approximately 1.4-miles, or approximately 7,500 feet, of transmission pipeline in McKenzie County, North Dakota. The Project traverses due east for 5,100 feet, parallel to 40<sup>th</sup> St. NW, and then turns south across 40<sup>th</sup> St. NW approximately 2,400 feet. The proposed Project will be located in Sections 7, 8, and 17,



Township 152 North, Range 95 West. Please refer to the Project maps provided in Appendix A for the exact Project location.

**A.4. Aboveground Facilities**

As part of the connection to the Targa surface site, TESORO proposes to install meter and receipt facilities within the Targa facility location, along with associated pigging and automation controls required for operation. Additionally, the appropriate tap and pig receiving equipment will be installed adjacent to TESORO's existing 12-inch main line on a newly acquired easement approximately 100 feet by 100 feet.

**A.5. Time Schedule**

**A.5.1 Certificate of Corridor Compatibility**

TESORO seeks a Certificate of Corridor Compatibility by or before January of 2016.

**A.5.2 Route Permit**

TESORO seeks a Route Permit by or before January of 2016.

**A.5.3 Land Acquisition**

This Project will occur on newly acquired land rights to be negotiated between TESORO and individual land owners.

**A.5.4 Construction Start Date**

TESORO proposes to commence construction in January of 2016, or upon Commission approval.

**A.5.5 Construction Complete**

Construction is estimated to take approximately thirty (30) days to complete.

**A.5.6 In-Service Date**

The estimated in-service date of the Project is March 1, 2016.



## **SECTION B: STUDIES**

### **B.1 Corridor**

TESORO selected the proposed corridor considering various criteria designed to conform to the Commission's siting requirements and to avoid and minimize various socioeconomic, environmental, and cultural impacts, while maximizing the benefits to local resource developers.

The proposed corridor is a one-mile wide area ("Corridor") centered upon a proposed pipeline alignment which was selected utilizing web-based mapping tools (i.e., one-half mile on either side of the proposed alignment). Appendix A-3 illustrates the corridor map.

A comprehensive desktop analysis of the Corridor included consultations with the federal and state agencies identified below for the purpose of environmental resource assessment relative to the potential impacts associated with the siting and construction of the proposed Project. Please refer to Appendix D for copies of these consultations.

- U.S. Fish and Wildlife Service (USFWS);
- North Dakota Game and Fish Department (NDGFD);
- North Dakota Parks and Recreation Department (NDPRD);
- North Dakota State Historic Preservation Office (SHPO);
- North Dakota Department of Health (NDDoH); and
- United State Army Corps of Engineers (USACE)

### **B.2 Environmental Desktop Analysis**

#### **B.2.1 Wetland & Waterbody Assessment:**

A desktop analysis of aerial photography, National Wetland Inventory ("NWI") and National Hydrography Dataset (NHD) was conducted by Wood Group Mustang Inc. ("WGM") and Apex Titan Inc. ("Apex") within the 1-mile Corridor (0.5 mile either side of the proposed Project) to identify the extent of wetland and waterbodies within the Corridor area. Desktop analysis identified three (3) waterbodies, thirteen (13) waterways, and approximately thirty-seven (37) wetland features within the Corridor. TESORO commissioned field studies to augment the desktop analysis. The field study results are discussed in the associated Route Permit Application.

#### **B.2.2 Wildlife Inventory Assessment**

Approximately 160 wildlife species are residents or seasonal visitors to the greater Missouri River ecosystem, and hundreds of native fish species live in the mainstream and its tributaries. Some of these animal species classified as threatened or endangered by the Endangered Species Act ("ESA") may occur within the Project County.

TESORO engaged federal and state agencies in consultations to identify potential occurrences of sensitive species or their critical habitats. The USFWS identifies and



maintains a list of species and critical habitats that have been afforded protection by the ESA. The ESA provides a program for the conservation of threatened and endangered plants and animals and their critical habitats. On Behalf of TESORO, Apex reviewed USFWS published data and identified the following listed species and the potential for the species to occur within the Corridor.

**Table 1: Species Reviewed for the Proposed Project in McKenzie County, North Dakota**

Species	Federal Designation	Habitat
<b>Birds</b>		
Interior Least Tern	E	Sparsely vegetated sandbars on the Missouri and Yellowstone Rivers
Whooping Crane	E	Shallow wetlands that are characterized by cattails, bulrushes and sedges; may be found in upland areas, especially during migration
Piping Plover	T	Barren sand and gravel shores of rivers and lakes along Missouri and Yellowstone Rivers
Golden Eagle	Protected by the BGEPA	Undisturbed areas; variable habitat types
Bald Eagles	Protected by the BGEPA	Large rivers and lakes bordered with mature stands or old-growth trees
Red Knot	T	Coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves
Sprague's Pipit	C	Nest in large patches of undisturbed prairie
<b>Mammals</b>		
Black-footed Ferret	E	Short grass prairies, always within close proximity to prairie dog towns; no known populations in ND
Gray Wolf	E	Rare; likely habitat in ND is the forested areas in north-central and north-east ND, however, they may appear anywhere
Northern Long-eared Bat	T	Old-growth forests composed of trees 100 years old or older within relative proximity of caves or inactive mines
<b>Fish</b>		
Pallid Sturgeon	E	Missouri River; bottom of large, silty rivers with swift currents; prefer areas with sand flats and gravel bars
<b>Insect</b>		
Dakota Skipper	T	Undisturbed tall grass and mid- grass prairie; in the western part of its range, can be found in ungrazed native pastures with little bluestem, needle and thread, and purple coneflower

E = Endangered, T=Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate, BGEPA = Bald and Golden Eagle Protection Act - Source: USFWS 2015



A synopsis of the determinations for each of these species is included below. As such, there will be no effect on these species.

1. Interior Least Tern (*Sterna antillarum*)

No habitat for the interior least tern, such as sparsely vegetated sandbars within riverine habitat, is located in the proposed Project boundaries. The proposed Project is located primarily on uplands utilized for agriculture approximately 8 miles from the Missouri River. The likelihood of encountering interior least terns or their habitat in the proposed Project Corridor is very unlikely.

2. Whooping Crane (*Grus americana*)

Due to the presence of roadway and human activity and the relatively small size of the wetlands, no stopover habitat for the migrating whooping crane is located on or in the vicinity of the proposed Project. The likelihood of encountering whooping cranes or their habitat in the proposed Project Corridor is very low.

3. Sprague's Pipit (*Anthus spragueii*)

The proposed Project consists of primarily disturbed agricultural and range land. No undisturbed native prairie that may be utilized by the Sprague's pipit is likely to be located within the proposed Project Corridor. If this species was to occur in the proposed Project Corridor during construction, it will likely be flying overhead. The likelihood of encountering Sprague's pipit within the proposed Project Corridor is very low.

4. Red Knot (*Calidris canutus rufa*)

Red knots are very rare in North Dakota. No appropriate staging area habitat that may be utilized by the red knot during migration is located within the proposed Project Corridor. If this species was to occur in the proposed Project Corridor during construction, it will likely be flying overhead. The likelihood of encountering red knot within the proposed Project Corridor is extremely low.

5. Piping Plover (*Charadrius melodus*)

No habitat for the piping plover, such as alkali lakes or barren sand and gravel river shores, is located in the proposed Project Corridor. The likelihood of encountering piping plovers or their habitat within the proposed Project Corridor is very low.

6. Eagles

According to the North Dakota Game and Fish Department Golden Eagle Breeding Map, the proposed Project is entirely located within the secondary breeding range for the golden eagle (NDGF 2014). No ideal breeding habitat for the golden eagle, such as cliffs and forested areas with large trees, is located in the proposed Project Corridor. Bald eagles are not expected to nest in the geographic range of the proposed Project and no appropriate nesting habitat is intersected by the proposed Project. If bald or golden eagles were to occur in the proposed Project Corridor during construction, they would likely be flying overhead.



7. Black-footed Ferret (*Mustela nigripes*)

The black-footed ferret depends on prairie dogs (*Cynomys* spp.) for food and on prairie dog burrows for shelter. No wild or reintroduction populations are known to occur in North Dakota. Most unconfirmed sightings of black-footed ferrets come from the southwest part of the state (USFWS 2014b). The likelihood of encountering black-footed ferret or their habitat within the proposed Project Corridor is very low.

8. Gray Wolf (*Canis lupus*)

Gray wolves are very rare in North Dakota. The likelihood of encountering the gray wolf within the proposed Project Corridor is considered extremely low.

9. Northern Long-eared Bat (*Myotis septentrionalis*)

Mature, old-growth forests, caves, and inactive mines are not located on or within the vicinity of the proposed Project Corridor. If this species was to occur in the proposed Project Corridor during construction, it will likely be flying overhead. The likelihood of encountering the northern long-eared bat within the proposed Project Corridor is extremely low.

10. Pallid Sturgeon (*Scaphirhynchus albus*)

Habitat for the pallid sturgeon is not located within the proposed Project Corridor. The proposed Project consists of primarily disturbed agricultural and range land and no perennial streams are intersected by the proposed Project that exhibit the characteristics necessary for pallid sturgeon habitat such as a large channel and turbid and strong free-flowing water. The likelihood of encountering pallid sturgeon or their habitat within the proposed Project Corridor is very low.

11. Dakota Skipper (*Hesperia dacotae*)

The vegetation in and adjacent to the proposed Project consists of a primarily disturbed agricultural land setting adjacent to roadways. Native prairie containing high diversity of wildflowers and grasses was not identified on or in the vicinity of the proposed Project. This type of altered habitat is not conducive to the species. The likelihood of encountering Dakota skipper or their habitat within the proposed Project Corridor is very low.

### **B.2.3 Tree/Sapling/Shrub Analysis**

The density of the woody cover in this region is generally sparse, and typically associated with significant topographic relief such as defined banks or incised drainage channels or agricultural windrows. Aerial imagery indicates that the proposed Project Corridor is undeveloped with the exception of disturbance from agricultural practices, paved and unpaved roadways, well pads associated with oil and gas extraction, and transmission activities. There is no indication of any trees, saplings, or shrubs within the proposed Project survey Corridor. If any trees or shrubs require removal during construction, TESORO will comply with the Commission's Tree and Shrub Mitigation Specifications.



### **B.3 Agency Consultations**

#### **B.3.1 U.S. Fish and Wildlife Service (USFWS)**

The USFWS was contacted by Apex on June 17, 2015 via letter. The correspondence sought data and comments related to the ESA, the Migratory Bird Treaty Act ("MBTA"), the Bald and Golden Eagle Protection Act ("BGEPA"), and other resources of concern existing in or near the Project area. The USFWS has not responded concerning the proposed Project. Apex followed up with an e-mail to USFWS on August 13, 2015. Copies of the correspondence letter and the e-mail sent to the USFWS are included in Appendix D-1.

#### **B.3.2 North Dakota Game and Fish Department (NDGFD)**

On behalf of TESORO, Apex contacted the NDGFD. The letter to the NDGFD dated June 17, 2015 requested data and comments on Conservation Priority Species, Easements, and other resources of concern existing in or near the Project area. The NDGFD responded with Project concurrence on July 2, 2015, stating that the proposed Project will not have any significant adverse effects on wildlife or wildlife habitat including species of concern. A copy of the correspondence with the NDGFD is included in Appendix D-2.

#### **B.3.3 North Dakota Parks and Recreation (NDPRD)**

On behalf of TESORO, Apex contacted the NDPRD on June 17, 2015 via letter. The correspondence requested data and comments on NDPRD Natural Heritage Inventory occurrence, Natural Areas Registry resources, nature reserves, or other Department interests in or near the Project area. The NDPRD responded by letter dated June 30, 2015, stating no documented occurrence of the plant or animal species of concern or other significant ecological communities exist within or adjacent to the Project area. The NDPRD recommend that the Project be accomplished within minimal impacts and that all efforts be made to ensure that critical habitat not be disturbed in the Project area to help secure rare species conservation in North Dakota. NDPRD also recommended that any impacted areas be re-vegetated with species native to the Project area.

A copy of the correspondence with the NDPRD is included herein as Appendix D-3.

#### **B.3.4 North Dakota State Historic Preservation Office (SHPO)**

On behalf of TESORO, Apex requested North Dakota State Historic Preservation Office ("SHPO") concurrence with the findings of the archaeological survey and Project clearance for the proposed Project. The SHPO responded with Project concurrence on July 14, 2015, stating that SHPO concurred with the "No Significant Sites Affected" determinations for the Project, provided it remains as described and mapped in the Class III inventory.

A copy of the SHPO concurrence letter is included herein as Appendix D-4.



**B.3.5 North Dakota Department of Health (NDDoH)**

The NDDoH administers various water quality regulatory programs. These programs include construction stormwater permitting, hydrostatic test water discharges and other water discharges.

**B.3.5.1 NDDoH Pollution Discharge Elimination System**

The North Dakota Pollution Discharge Elimination System (“NDPDES”) is the regulatory program for water discharges such as construction stormwater, site dewatering, and hydrostatic water discharges. TESORO will procure, as necessary, the following NDPDES permits from the NDDoH as described below.

**Construction Stormwater:**

TESORO will seek coverage under NDR10-0000 *Authorization to Discharge Under the North Dakota Pollutant Discharge Elimination System* general permit for construction activities as necessary. A Storm Water Pollution Prevention Plan (“SWPPP”) would be prepared and maintained on-site for the duration of the Project. TESORO would properly implement the SWPPP, which would be designed to manage run-off and trench dewatering discharges in a manner that would minimize exposure to chemicals, waste and petroleum products, and to describe erosion control measures designed to minimize off-site transfer of sediments.

**Hydrostatic test water discharges:**

TESORO would seek coverage under NDG07-0000 *Authorization to Discharge under the North Dakota Pollutant Discharge Elimination* general permit for various temporary discharges including both construction site dewatering and hydrostatic test water discharges as necessary.

**B.3.6 Other Agencies**

Following is a list of all other agencies contacted with respect to the proposed Project. A sample of the letters sent to each agency is included in Appendix D. Any additional follow up correspondence, along with any agency response received, is also included in Appendix D to the consolidated application.

<b>Table 2: Agency Notifications</b>			
<b>Agencies</b>	<b>Type of Communication</b>	<b>Date Contacted</b>	<b>Date of Response</b>
U.S. Fish and Wildlife Service	Letter E-mail	6/17/2015 8/13/2015	None
North Dakota Game and Fish Department	Letter	6/17/2015	7/2/2015
North Dakota Parks and Recreation Department	Letter	6/17/2015	6/30/2015
North Dakota State Historical Society	Letter	6/17/2015	7/14/2015



North Dakota Department of Health	Letter	6/17/2015	6/26/2015
U.S. Army Corps of Engineers	Letter	6/17/2015	6/23/2015
North Dakota Aeronautics Commission	Letter	8/11/2015	None
North Dakota Department of Vocational Education	Letter	8/11/2015	None
North Dakota State Highway Department	Letter	8/11/2015	None
North Dakota Indian Affairs Commission	Letter	8/11/2015	None
North Dakota State Water Commission	Letter	8/11/2015	None
North Dakota Pipeline Authority	Letter	8/11/2015	None
North Dakota Office of Attorney General	Letter	8/11/2015	None
North Dakota Department of Human Services	Letter	8/11/2015	None
North Dakota Department of Commerce	Letter	8/11/2015	None
North Dakota Geological Survey	Letter	8/11/2015	None
North Dakota Department of Transportation	Letter	8/11/2015	9/10/2015
Job Service North Dakota	Letter	8/11/2015	None
Division Of Community Services	Letter	8/11/2015	None
North Dakota Industrial Commission	Letter	8/11/2015	None
Federal Aviation Administration	Letter	8/11/2015	None
McKenzie County Commission	Letter	8/11/2015	None
North Dakota Department of Agriculture	Letter	8/11/2015	None
North Dakota Department of Labor	Letter	8/11/2015	None
Energy Development Impact Office	Letter	8/11/2015	None
Office Of Governor	Letter	8/11/2015	None
North Dakota State Land Department	Letter	8/11/2015	None
North Dakota State Soil Conservation Committee	Letter	8/11/2015	None
United States Department Of Defense	Letter	8/11/2015	None
North Dakota Transmission Authority	Letter	8/11/2015	None



**SECTION C: NEED FOR FACILITY**

**C.1 An Analysis Of The Need For The Proposed Facility Based On Present And Projected Demand For The Product Transmitted By The Facility, Including The Most Recent System Studies Supporting The Analysis Of The Need**

**C.1.1 Planned Use and Purpose**

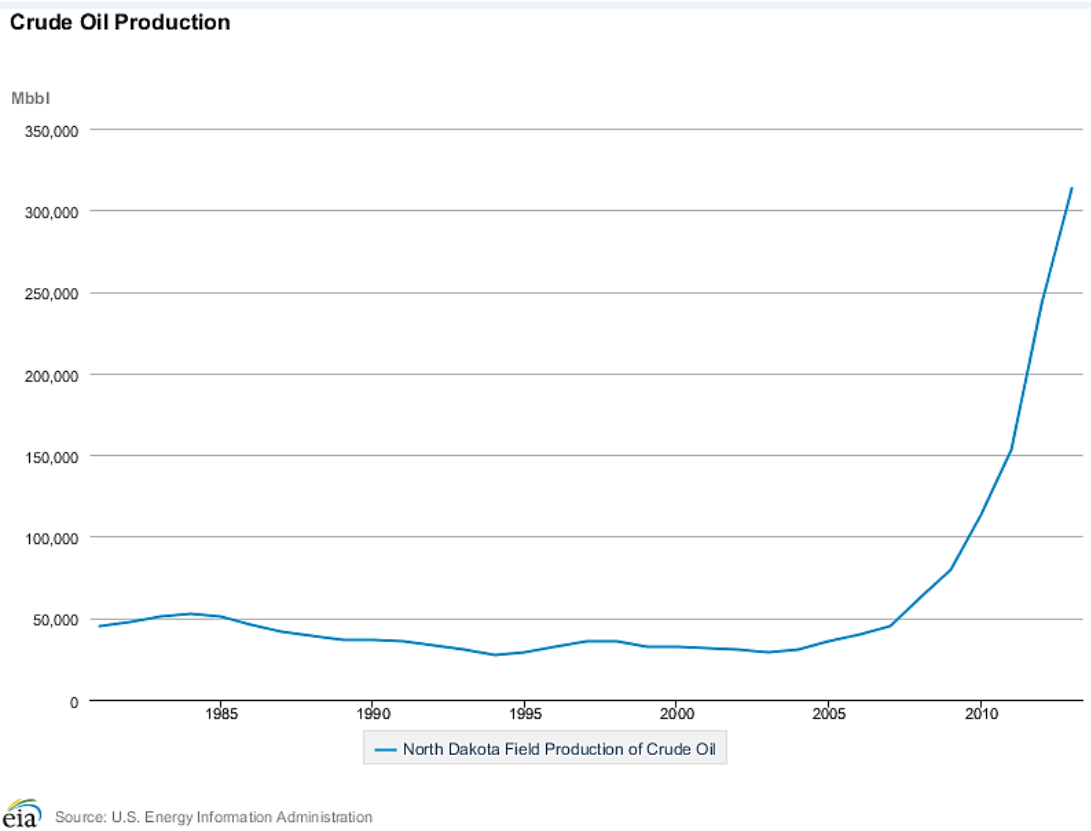
As demand for crude oil production from the Williston Basin of North Dakota continues to increase, so does the demand for pipeline capacity for crude oil transportation on the TESORO System.

TESORO is currently increasing its system capability to increase the pipeline flow rate of its mainline system by approximately 100,000 BPD (PU-13-740) in order to meet the demand of the increasing drilling and production activity. This Project will allow TESORO to supply the increased capacity of the existing pipeline and provide transportation flexibility to new and existing shippers.

The primary producing areas that will support the Project are Williams, McKenzie and Dunn counties in northwestern North Dakota. The U.S. Energy Information Administration indicates that crude oil production in North Dakota has more than doubled between 2011 and 2013.

**Table 3. Historical Oil Productions – North Dakota**

Historical Oil Production - North Dakota		
Year	Total Crude Oil Production, Barrel	% Gain over 2008
2008	62.8 million	-
2009	79.7 million	26.9%
2010	113.1 million	80.1%
2011	153.0 million	143.6%
2012	242.5 million	286.1%
2013	313.4 million	499.0%



[http://www.eia.gov/dnav/pet/pet\\_crd\\_crdpn\\_adc\\_mbbbl\\_a.htm](http://www.eia.gov/dnav/pet/pet_crd_crdpn_adc_mbbbl_a.htm)

In June 2014, the production reached 1 million barrels a day.

The forecasts continue to indicate additional drilling and production for several years with significant upside potential which are considered more than sufficient to supply the additional capacities of this Project. Further Project details are below.

- The Project will be operationally integrated into the existing TESORO System.
- The economic life of the Project for this purpose is based on a 25-year depreciation cycle. However, the functional life of the proposed facilities is indefinite following normal maintenance and inspection practices of the federal regulated interstate pipeline system.
- TESORO's System operates year-round, round-the-clock, with the exception of planned system down-time for inspection, maintenance or repair purposes, or unplanned down-time due to interruptions in receipts or refinery outages and/or operational disruptions caused by regional power outages or other reasons.

### **C.1.2 Future North Dakota System Expansion(s)**

TESORO continually works closely with its shippers to develop long term plans that best serve the shippers' increasing oil storage and transportation requirements.



With the increased drilling activity in the Williston Basin production area, TESORO continues to receive requests for additional capacity on its North Dakota system. TESORO is responding to those requests with a number of potential future projects that are (subject to approvals) designed to meet the shippers' needs and provide access to other pipeline systems, where shippers will have numerous refinery and marketing options via TESORO's mainline system or through other third-party pipelines.



## **SECTION D: CORRIDOR LOCATION AND CRITERIA EVALUATION**

### **D.1 Corridor Location**

TESORO identified a preferred Corridor, which is a one mile-wide area centered upon the preferred pipeline alignment. The selection of the proposed Corridor was a multidisciplinary effort, which included socioeconomic, environmental, logistics, engineering, and financial considerations. The Corridor described in this application provides TESORO with the opportunity to utilize existing assets, and minimize landowner and environmental impacts.

TESORO performed internet based research and desktop analysis of the Corridor. These efforts were augmented by field studies, including natural and cultural resource field surveys. The results of the field studies are discussed in detail in the associated Route Permit Application.

### **D.2 Factors to be Considered in Evaluating Applications and Designation of Corridors and Routes (N.D.C.C. § 49-22-09)**

#### **D.2.1 Feasible Alternatives to the Proposed Corridor or Route**

TESORO has performed a reasonable and defensible alternative analysis that involves consideration of environmental, engineering and economic factors in a multi-disciplinary and iterative fashion. This analysis resulted in the following alternatives to the Project.

##### **D.2.1.1 No Action Alternative**

In light of the overall increase in Williston Basin production, the shippers' requirements for increased storage and transportation capacity and the current apportionment that is being experienced on the TESORO System, a "no action" alternative is unacceptable to TESORO and its clients.

##### **D.2.1.2 Truck Alternative**

As an alternative to installing the equipment described above, trucks could be used to transport the additional volumes directly to various rail facility outlets. However, this alternative has multiple negative aspects, including:

- Does not fully utilize the maximum capacity of TESORO's existing pipeline system.
- Utilizing this option will significantly overburden current public road capacity, especially considering that trucks will require round-trip routing.
- Reliability of this alternative in northern climates is compromised by periodic restrictions in truck traffic due to winter storms and other uncertainties associated with travel by road.
- Public safety will be adversely affected by the increased truck traffic on local roads.
- Limits shipper access to markets within reasonable trucking distance of supply.
- Fails to provide storage and balancing required for effective dispatching volumes to account for periodic interruptions and delays.



**D.2.2 Irreversible and Irretrievable Commitments of Natural Resources should the Proposed Corridor be Designated.**

TESORO is not aware of any irreversible or irretrievable commitments of natural resources that would result from the requested approvals.

**D.2.3 Existing Plans of the State, Local Government and Private Entities for Other Developments at or in the Vicinity of the Proposed Route.**

TESORO is aware of possible future development in the vicinity of the route. However, the Project will not conflict with any known developments planned in the area.

**D.2.4 Problems Raised by Federal Agencies, Other State Agencies and Local Entities.**

On behalf of TESORO, Apex and WGM provided Project specific consultations to various federal, state, and local agencies. A more complete discussion of agency communications is discussed in Section D of the Route portion of the Consolidated application.

**D.3 Exclusion Areas (N.D.A.C. § 69-06-08-02(1))**

Exclusion areas are geographical areas that must be excluded from consideration when siting a transmission facility. A proposed corridor may contain exclusion areas; however, exclusion areas may not encompass more than fifty (50) percent of the corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss exclusion areas identified within the Corridor.

**Table 4. Exclusion Areas**

Exclusion Area	Within Corridor
Designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, and wilderness areas	No
Designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, and nature preserves	Yes
County parks and recreational areas, municipal parks, and parks owned or administered by other governmental subdivisions	No
Areas critical to the life stages of threatened or endangered animal or plant species	No
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged	No
Areas within 1,200 feet of Intercontinental Ballistic Missile (ICBM) Launch or Launch Control Facility	No
Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference	No

On behalf of TESORO, Apex/Metcalf Archaeological Consultants, Inc. performed a Class I and Class III Cultural Resources Inventory for the Project. Class I inventories identified previously recorded historic properties and cultural resources within the Project Corridor. The search revealed that 22 cultural resources have been recorded in the Project Corridor.



These resources consist of four archeological sites, one historical archaeological site, two historical archaeological site leads, seven precontact archaeological sites and eight precontact archaeological isolated finds. Of these resources, one site 32MZ2082, is located within the Project Corridor.

The manuscript files search revealed that 19 cultural resource inventories have taken place in the Corridor. These inventories were conducted in connection with 13 pipeline and gathering line surveys, three transportation projects, two communication projects and one waterline survey. Mitigation details are discussed in the associated Route Permit Application. The Class I and Class III inventory report abstract is provided in Appendix C. A copy of the full Cultural Resources Report is available upon request.

**D.4 Avoidance Areas (N.D.A.C. § 69-06-08-02(2))**

As set forth in Section 69-06-08-02(2) of the North Dakota Administrative Code, Avoidance Areas are areas that are not to be considered in the routing of a transmission facility unless it is shown that, under the circumstances, there is no reasonable alternative. Avoidance Areas may encompass only up to fifty percent of the width of a transmission facility corridor unless there is no reasonable alternative. Table 5 lists the criteria and determined Avoidance Areas observed during the corridor assessment.

**Table 5. Avoidance Areas**

Avoidance Area	Within Corridor
Designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands	No
Designated or registered state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands	No
Historical resources which are not specifically designated as exclusion or avoidance areas	No
Geologically Unstable Areas	No
Areas within five hundred feet of a residence, school, or place of business	Yes
Reservoirs and municipal water supplies	No
Water sources for organized rural water districts	No
Irrigated Land (not applicable to underground facilities)	N/A
Areas of recreational significance which are not designated as exclusion areas	No

Based on the Arial photography, approximately three residential and thirteen industrial sites were identified within the Project Corridor. Please refer to the associated Route Permit Application regarding potentially occupied structures within 500 feet of the route.

**D.5 Selection Criteria (N.D.A.C. § 69-06-08-02(3))**

Selection Criteria are those environmental resources on which the Project must have an acceptable minimum amount of impact, as determined by the Commission. Table 6 below identifies Selection Criteria that were considered for the Project. A discussion of



potential impacts and mitigation measures that will be implemented is provided in those instances where impacts to Selection Criteria are possible.

**Table 6. Selection Criteria**

<b>Selection Criteria</b>	<b>Corridor Impact</b>
Agricultural Production	No Permanent Impacts are anticipated
Family Farms and Ranches	No Permanent Impacts are anticipated
Land Suitable for Irrigation	No Permanent Impacts are anticipated
Surface and Groundwater Flow Patterns	No Permanent Impacts are anticipated
Noise Sensitive Areas	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Visual Effects	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Extractive and Storage Resources	No Permanent Impacts are anticipated
Wetlands/ Watercourses	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Woodlands	No Permanent Impacts are anticipated
Communication or Electric Control Facilities	No Permanent Impacts are anticipated
Human Health and Safety	No Permanent Impacts are anticipated
Animal Health and Safety	No Permanent Impacts are anticipated
Plant Life	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.

**D.5.1 Agricultural Impact**

The proposed Project will be located on previously disturbed agricultural land within areas of oil and gas development and intersecting roadways. No permanent impacts are anticipated as a result of the proposed underground pipeline. Minimal temporary impacts will occur due to the construction activities.

**D.5.2 Noise and Visual Effects**

The surrounding and adjacent land use to the south is agricultural and industrial. Permanent noise or visual effects are not foreseen as a result of the proposed Project. Temporary, minor noise or visual impacts are anticipated during construction.

**D.5.3 Wetlands**

A comprehensive desktop review of published data, including aerial photography and NWI data, was conducted to assess the presence or absence of wetlands, woodlands, and wooded areas. The review of the proposed Corridor confirmed the presence of these resources. TESORO commissioned field surveys to identify and record the locations of these resources along the proposed route. Refer to Section B in this document for a comprehensive discussion of the results of the field studies.



#### **D.5.4 Human Health and Safety**

Despite its excellent safety record, the transportation of crude oil involves some risk to the public. Perhaps the most obvious risk to human health is the potential for fire in the event of an accident and subsequent release. Toxic exposure from crude oil through skin contact, ingestion, or vapor inhalation can also be a risk from exposure to significant quantities or in confined spaces.

TESORO will design, construct, test, operate, and maintain the Project in accordance with all applicable laws and standards. The U.S. Department of Transportation's pipeline standards are published in Parts 194 and 195 of Title 49 of the Code of Federal Regulations. The regulations are intended to ensure adequate protection of the public and to prevent accidents and failures. Part 195 specifically addresses petroleum pipeline safety issues. It specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion. Part 194 prescribes emergency planning to prepare for prompt shutdown, containment, and cleanup to minimize the effects of a pipeline release, should one occur.

#### **D.5.5 Animal Health and Safety**

The wildlife currently inhabiting the Corridor is common and is generally mobile. The local wildlife inhabitants would not be displaced by the Project and no measurable impact to the viability of these populations would occur. TESORO does not anticipate species of special concern being permanently impacted by the Project.

#### **D.5.6 Plant Life**

No long term impacts to plant life associated with the construction or operation of the Project are anticipated. No species of special concern would be impacted by the Project.

### **D.6 Policy Criteria**

#### **D.6.1 Location and Design**

The proposed 12-inch pipeline that would connect the Targa facility with TESORO's existing main trunk line is designed to handle maximum flowing volume of 75,000 bpd at a normal operating pressure of 500 psig.

TESORO proposes to install approximately 1.4-miles, or approximately 7,500 feet, of transmission pipeline in McKenzie County, North Dakota. The Project will traverse due east for 5,100 feet, parallel to 40<sup>th</sup> St. NW, and then turn south across 40<sup>th</sup> St. NW approximately 2,400 feet. The proposed Project will be located in Sections 7, 8, and 17, Township 152 North, Range 95 West.

The Project corridor and route have been located and designed to minimize impact to area resources and landowners.



#### **D.6.2 Training and Utilization of Available Labor in this State for the General and Specialized Skills Required**

Locally hired construction workers will be dependent on the qualified contractor selected for the Project. Pipeline construction is a specialized market and it is unlikely that there are qualified local pipeline contractors in the immediate vicinity capable of completing the Project. If a non-local contractor is awarded this Project, it is likely that up to 75 percent of the workers may be non-local. The remaining 25 percent may be hired from the local population currently residing in nearby areas of North Dakota.

#### **D.6.3 Economies of Construction and Operation**

Crude oil and natural gas are North Dakota's leading mineral products. North Dakota is the second largest producer of crude oil in the country. The Project will boost the State's economy and allow the State to capitalize on tax revenue gathered from increased production and extraction taxes.

State and local economies will also benefit during construction from the temporary hiring of local construction workers, and from a relatively large-scale, temporary influx of non-local construction workers. Unemployment in the area would see a temporary drop, and payroll taxes would temporarily rise.

Local businesses will benefit from the demand for goods and services generated by the temporary workforce's need for food and lodging. In addition, TESORO will purchase some of the materials necessary for construction of the Project locally. TESORO estimates that local purchases made for construction of the Project will primarily include consumables, fuel, equipment rental, and miscellaneous construction-related materials (e.g., office supplies).

#### **D.6.4 Use of Citizen Coordinating Committees**

No Citizen Coordinating Committee is anticipated as a result of the Project. TESORO does not believe that a Citizen Coordinating Committee is necessary given the Project is located in an area of the state where crude gathering and transmission pipelines already exist. As such, the public is familiar with the permitting, construction, and operation of pipeline facilities.

#### **D.6.5 A Commitment of a Portion of the Transmitted Product for Use in this State**

TESORO does not own any of the crude oil in its system, and, as a common carrier pipeline, does not determine the destinations for the products transported by its system. TESORO's business is to provide transportation service to its customers as a common carrier, and to receive a fee for that service pursuant to tariffs authorized by the Federal Energy Regulatory Commission pursuant to the Interstate Commerce Act.



#### **D.6.6 Labor Relations**

TESORO maintains positive labor relations with its staff and contract workforce and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

#### **D.6.7 Coordination of Facilities**

As previously mentioned, TESORO has designed the Project to maximize impacts to the greatest extent possible. The proposed Project is coordinated with adjacent land owners and facility owners.

#### **D.6.8 Monitoring of Impacts**

TESORO is committed to protecting the environment and complying with all applicable environmental laws, regulations, and standards. TESORO is proposing to implement environmental training and will designate an environmental representative to oversee the Project and to ensure and document environmental compliance throughout the course of the Project.

##### **D.6.8.1 Environmental Training**

To communicate the Project's environmental requirements to Project personnel, TESORO will require environmental training of all Project personnel prior to construction. TESORO will:

- Require environmental training of all personnel (both contractor and TESORO) visiting or working at the job site;
- Require everyone who attends training to sign an acknowledgement form and be issued, as a proof-of- training, a hardhat sticker; and
- Require all personnel to display a hardhat sticker when on a job site or dismiss personnel from the job site until it is obtained through completion of training.

##### **D.6.8.2 Environmental Monitoring**

Environmental monitoring, in the form of ongoing site inspection, will be conducted during and following construction. Contract specifications will incorporate environmental protection and mitigation measures required by regulation, TESORO specifications, or environmental permits. Contractors will be expected to implement these measures in the field. Contractor training and project orientation will also be provided by TESORO.

TESORO will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information during the permitting process.

#### **D.6.9 Utilization of Existing and Proposed Rights-of-Way and Corridors**

The entire ROW for the Project has been obtained to construct the proposed pipeline.



**D.6.10 Other Existing or Proposed Transmission Facilities**

Appendix A-1 contains a map of the existing TESORO system. Appendix E contains TESORO's Ten Year Plan, which contains details regarding existing and planned TESORO assets.



## **SECTION E: MITIGATIVE MEASURES**

### **E.1 Location**

Mitigation measures to minimize adverse impacts of the Project are identified throughout this document. TESORO will develop a Storm Water Pollution Prevention Plan (“SWPPP”) and place it on project site during construction to prevent the erosion control and sediment from escaping from the site. It will also help prevent impacts to sensitive environmental features on site during construction. In addition, TESORO will develop a Spill Prevention, Containment and Control Plan (“SPCCP”) that describes planning, prevention and control measures to minimize impacts of Project-related spills. The SWPPP and SPCCP are comprehensive, controlling documents that will be included in contract specifications.

### **E.2 Construction**

To communicate the Project’s environmental requirements to Project personnel, TESORO will require environmental training of all Project personnel prior to construction. TESORO will:

- Require environmental training of all personnel (both contractor and TESORO) visiting or working at the job site;
- Require everyone who attends training to sign an acknowledgement form and be issued, as a proof-of- training, a hardhat sticker; and
- Require all personnel to display a hardhat sticker when on a job site or dismiss personnel from the job site until it is obtained through completion of training.

Environmental monitoring, in the form of ongoing site inspection, will be conducted during and following construction. Contract specifications will incorporate environmental protection and mitigation measures required by regulations, TESORO specifications, or environmental permits. Contractors will be expected to implement these measures in the field. Contractor training and project orientation will also be provided by TESORO.

Environmental data has been assessed, (specifically cultural resources, wetlands, and protected species), as described in Section B of this application. TESORO will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information during the permitting process.

### **E.3 Operation**

Once put into service, the Project will operate continuously, delivering crude oil from the Targa facility to TESORO’s existing main trunk line. Normal pipeline operations are imperceptible to the public, as they are silent, buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW may be required to remain in compliance.



**SECTION F: QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY**

**Craig Straub**

Degree: Ph.D. in Human Ecology  
Experience: 20 years of experience in the Northern Plains

**Tracy White**

Degree: Ph.D. in Environmental Systems  
Experience: 5 years of experience in the Great Plains

**Lauren Dill**

Degree: M.A.G. in Applied Geography  
Experience: 10 years of experience in the Great Plains

**Robin Laine**

Degree: BS in Biology  
Experience: 9 years of experience in the Great Plains

**William Bluemle**

Degree: M.A. in Anthropology  
Experience: 23 years of experience in the Northern Plains

**Ashley Shelton**

Degree: B.S. in Anthropology  
Experience: 2 years of experience in the Northern Plains

**Emily Sakariassen**

Degree: M.S. in Historic Preservation  
Experience: 4 years of experience in the Northern Plains

**Liz France**

Degree: M.A. in Anthropology,  
Experience: 7.5 years of experience in the Northern Plains

**Divyang Surati, PE**

Degree: M.S. Environmental Engineering,  
Experience: 8 years of experience in the environmental engineering and permitting



**TESORO**

**TESORO HIGH PLAINS PIPELINE**

**North Dakota Public Service Commission Consolidated  
Application**

**Application for Route Permit**

**Targa Antelope Lateral Pipeline**

**Prepared By:**

**Wood Group Mustang, Inc.**



**November 2015**



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Introduction: ..... 1

SECTION A: DESCRIPTION OF PROPOSED FACILITY ..... 2

A.1. Type of Transmission Facility ..... 2

A.2. Purpose of Transmission Facility ..... 2

A.3. Length, Size, and Design of Pipeline Facility ..... 2

    A.3.1 Length of Facility ..... 2

    A.3.2 Pipe Size ..... 2

    A.3.3 Operating Pressure and Throughput ..... 2

A.4. Aboveground Facilities ..... 2

A.5. Width of Right-of-Way ..... 3

A.6. Location ..... 3

A.7. Time Schedule ..... 3

    A.7.1 Certificate of Corridor Compatibility ..... 3

    A.7.2 Route Permit ..... 3

    A.7.3 Land Acquisition ..... 3

    A.7.4 Construction Start Date ..... 3

    A.7.5 Construction Complete ..... 3

    A.7.6 In-Service Date ..... 3

SECTION B: ROUTE ANALYSIS AND ENVIRONMENTAL STUDIES ..... 4

B.1. Pipeline Route ..... 4

B.2. Route Alternatives ..... 4

    B.2.1 No Action Alternative ..... 4

    B.2.2 Truck Alternative ..... 4

B.3. Environmental Analysis ..... 5

    B.3.1 Noxious Weeds ..... 5

    B.3.2 Tree/Sapling/Shrub Survey ..... 6

    B.3.3 Wetland and Waterbodies Survey ..... 6

    B.3.4 Threatened and Endangered Species: ..... 6

    B.3.5 Migratory Birds: ..... 9

    B.3.6 Soils: ..... 9



---

B.3.7 Vegetation:..... 10

B.3.8 Land Cover and Land Uses: ..... 10

B.3.9 Cultural Resources:..... 10

B.4. Agency Consultations: ..... 10

B.4.1 U.S. Fish and Wildlife Service (USFWS): ..... 10

B.4.2 North Dakota Game and Fish Department (NDGFD): ..... 10

B.4.3 North Dakota Parks and Recreation (NDPRD): ..... 11

B.4.4 North Dakota State Historic Preservation Office (SHPO)..... 11

B.4.5 North Dakota Department of Health (NDDoH)..... 11

    B.4.5.1 NDDoH Pollution Discharge Elimination System..... 11

B.4.6 Other Agencies ..... 12

SECTION C: NEED FOR FACILITY..... 14

C.1. An analysis of the need for the proposed pipeline facility based on present and projected demand for the product transmitted by the facility, including the most recent system studies supporting the analysis of the need..... 14

C.1.1 Planned use and purpose..... 14

C.1.2 Future North Dakota System Expansion(s) ..... 16

SECTION D: SITING CRITERIA EVALUATION..... 17

D.1. Factors to be considered in evaluating applications and designations of sites, Corridors and Routes (N.D.C.C. § 49-22-09)..... 17

D.1.1 Available research and investigation relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources and the environment:..... 17

D.1.2 The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects:..... 17

D.1.3 The potential for beneficial uses of waste energy from a proposed energy conversion facility:..... 17

D.1.4 Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated: ..... 18

D.1.5 Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects: ..... 18

D.1.6 Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated:..... 18

D.1.7 Direct and indirect economic impacts of the proposed facility: ..... 18




---

D.1.8 Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed route: ..... 18

D.1.9 The effect of the proposed route on existing scenic areas, historic sites and structures and paleontological or archaeological sites: ..... 19

D.1.10 The effect of the proposed route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species:..... 19

D.1.11 Problems raised by federal agencies, other state agencies and local entities:..... 19

D.1.11.1 North Dakota Game and Fish Department (NDGFD): ..... 19

D.1.11.2 North Dakota Parks and Recreation (NDPRD):..... 19

D.1.11.3 North Dakota Department of Health (NDDoH) ..... 20

D.2. Exclusion Areas (N.D.A.C. § 69-06-08-02(1)) ..... 20

D.3. Avoidance Areas (N.D.A.C. § 69-06-08-02(2)) ..... 21

D.4. Selection Criteria (N.D.A.C. § 69-06-08-02(3))..... 22

D.4.1 Agricultural Production ..... 22

D.4.2 Noise and Visual Effects..... 22

D.4.3 Wetlands/Watercourses ..... 23

D.4.4 Human Health and Safety ..... 23

D.4.5 Animal Health and Safety ..... 23

D.4.6 Plant Life..... 23

D.5. Policy Criteria (N.D.A.C. § 69-06-08-02(4)) ..... 23

D.5.1. Location and Design ..... 24

D.5.2 Training and Utilization of Available Labor in this State for the General and Specialized Skills Required ..... 24

D.5.3 Economies of Construction and Operation..... 24

D.5.4 Use of Citizen Coordinating Committees ..... 24

D.5.5 A Commitment of a Portion of the Transmitted Product for Use in this State ..... 25

D.5.6 Labor Relations ..... 25

D.5.7 Coordination of Facilities ..... 25

D.5.8 Monitoring of Impacts..... 25

D.5.9 Utilization of Existing and Proposed Rights-of-Way and Corridors..... 25

D.5.10 Other Existing or Proposed Transmission Facilities ..... 25

SECTION E: MITIGATIVE MEASURES ..... 26



---

E.1 Location .....26  
E.2 Construction .....26  
E.3 Operation .....26  
SECTION F: DESCRIPTION OF RIGHT-OF-WAY PREPARATION, CONSTRUCTION AND RECLAMATION PROCEDURE .....27  
SECTION G: EASEMENT, ACQUISITION, LANDOWNER NOTIFICATION AND EASEMENT COMPENSATION PLAN .....33  
SECTION H: QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY .....34

**Appendices:**

**Appendix A: Maps**

- Appendix A-1 Tesoro High Plains Pipeline System Map**
- Appendix A-2 Targa Antelope Lateral Pipeline Alignment Map**
- Appendix A-3 Targa Antelope Lateral Pipeline Survey Area Location Maps**

**Appendix B: Field Study Reports**

- Appendix B-1 Inventory of Exclusion and Avoidance Areas Report**
- Appendix B-2 Federally-listed Threatened and Endangered Species Habitat Assessment Report**
- Appendix B-3 Potential Waters of the United States Assessment Report**

**Appendix C: Cultural/Archeological Evaluation Report Abstract**

**Appendix D: Agency Correspondence**

- Appendix D-1 U.S. Fish and Wildlife Service (USFWS)**
- Appendix D-2 North Dakota Game and Fish Department (NDGFD)**
- Appendix D-3 North Dakota Parks and Recreation (NDPRD)**
- Appendix D-4 North Dakota State Historic Preservation Office (SHPO)**
- Appendix D-5 North Dakota Department of Health (NDDoH)**
- Appendix D-6 United States Army Corps of Engineers (USACE)**
- Appendix D-7 North Dakota Department of Transportation (NDDOT)**

**Appendix E: Tesoro High Plains Pipeline Company, LLC’s Ten-Year Plan**



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**LIST OF TABLES**

**PAGE**

<b>TABLE 1</b>	<b>Documented Noxious Weed-Occupied Area in McKenzie County, North Dakota</b>	<b>5</b>
<b>TABLE 2</b>	<b>Species Reviewed for the Proposed Project in McKenzie County, North Dakota</b>	<b>6</b>
<b>TABLE 3</b>	<b>Agency Notifications</b>	<b>12</b>
<b>TABLE 4</b>	<b>Historical Oil Productions – North Dakota</b>	<b>14</b>
<b>TABLE 5</b>	<b>Exclusion Areas</b>	<b>20</b>
<b>TABLE 6</b>	<b>Avoidance Areas</b>	<b>21</b>
<b>TABLE 7</b>	<b>Selection Criteria</b>	<b>22</b>



**Introduction:**

Tesoro High Plains Pipeline Company LLC (“TESORO”) owns and operates a 233-mile existing underground petroleum gathering and mainline pipeline system that extends from eastern Montana through North Dakota to Mandan, North Dakota. The TESORO system also extends northward to the United States-Canadian International Border where it ties into a pipeline system near the town of Lignite in Burke County, North Dakota. (See Appendix A-1, TESORO System Overview Map).

TESORO is proposing to construct the Targa Antelope Lateral Pipeline (the “Project”), to be located in McKenzie County, North Dakota. The Project includes approximately 1.4 miles (~7500 feet) of new, 12 inch diameter crude oil pipeline that would connect the Targa Resources, Inc. (“Targa”) surface site and associated facilities with TESORO’s existing pipeline approximately 1-mile south of TESORO’s Charlson Station.

The Project will enable TESORO to more fully utilize its existing pipeline system, increase the storage and transportation capabilities of its system, and provide increased flexibility in transporting Bakken production to TESORO’s Mandan Refinery and other customer outlets for various Bakken Oil producers.

TESORO submits to the North Dakota Public Service Commission (“Commission”) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project.

The application provides the necessary information as required by:

- North Dakota Century Code Chapter 49-22, the Energy Conversion and Transmission Facility Siting Act; and
- North Dakota Administrative Code Article 69-06, Energy Conversion and Transmission Facility Siting, and specifically Chapter 69-06-05, Transmission Facility Permit.



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## **SECTION A: DESCRIPTION OF PROPOSED FACILITY**

### **A.1. Type of Transmission Facility**

The Project will consist of approximately 1.4-miles of new, 12-inch diameter crude oil transmission pipeline. The pipeline will meet U.S. Department of Transportation (“DOT”) regulations, specifically the design criteria outlined in 49 CFR 195.1, construction specifications per 49 CFR 195.2, and operation and maintenance requirements per 49 CFR 195.4. The product to be transported will be Bakken Area Crude Oil.

### **A.2. Purpose of Transmission Facility**

The proposed 12-inch pipeline will connect the Targa surface site with TESORO’s existing main trunk line approximately one mile south of TESORO’s Charlson Station. The Project will enable TESORO to more fully utilize its existing pipeline system, increase the storage and transportation capabilities of its system, and provide increased flexibility in transporting Bakken production to TESORO’s Mandan Refinery and other customer outlets for various Bakken Oil producers.

TESORO estimates the Project will cost approximately \$8.9 million to develop.

### **A.3. Length, Size, and Design of Pipeline Facility**

#### **A.3.1 Length of Facility**

The proposed Project will be approximately 1.4 miles in length.

#### **A.3.2 Pipe Size**

The Project pipeline specifications are as follows:

- 12.75-inch outside diameter steel pipe
- 0.312-inch wall thickness

#### **A.3.3 Operating Pressure and Throughput**

The proposed 12-inch pipeline associated with the Project is designed to handle a maximum flowing volume of 75,000 bpd at a normal operating pressure of 500 psig.

### **A.4. Aboveground Facilities**

As part of the connection to the Targa surface site, TESORO proposes to install meter and receipt facilities within the Targa facility location, along with associated pigging and automation controls required for operation. Additionally, the appropriate tap and pig receiving equipment will be installed adjacent to TESORO’s existing 12-inch main line on a newly acquired easement approximately 100 feet by 100 feet.



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**A.5. Width of Right-of-Way**

TESORO proposes to install the pipeline within a newly acquired 50-foot wide permanent easement. Temporary workspace easement will also be required.

**A.6. Location**

TESORO proposes to install approximately 1.4-miles, or approximately 7,500 feet, of transmission pipeline in McKenzie County, North Dakota. The Project will traverse due east for 5,100 feet, parallel to 40<sup>th</sup> St. NW, and then turn south across 40<sup>th</sup> St. NW approximately 2,400 feet. The proposed Project will be located in Sections 7, 8, and 17, Township 152 North, Range 95 West. Please refer to the Project maps provided in Appendix A for the exact Project location.

**A.7. Time Schedule**

**A.7.1 Certificate of Corridor Compatibility**

TESORO seeks a Certificate of Corridor Compatibility by or before January of 2016.

**A.7.2 Route Permit**

TESORO seeks a Route Permit by or before January of 2016.

**A.7.3 Land Acquisition**

This Project will occur on newly acquired land rights to be negotiated between TESORO and individual land owners.

**A.7.4 Construction Start Date**

TESORO proposes to commence construction in January of 2016, or upon Commission approval.

**A.7.5 Construction Complete**

Construction is estimated to take approximately thirty (30) days to complete.

**A.7.6 In-Service Date**

The estimated in-service date is March 1, 2016.



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## **SECTION B: ROUTE ANALYSIS AND ENVIRONMENTAL STUDIES**

### **B.1. Pipeline Route**

TESORO has conducted a thorough analysis of the Project corridor as reported in the Application for a Certificate of Corridor Compatibility. This analysis was a broad based study of the proposed corridor (a one-mile corridor centered upon a proposed route). The purpose of this analysis was to confirm the Project corridor is suitable and would cause minimal environmental impacts, thus conforming to the Commission's siting criteria.

In conjunction with these efforts, TESORO developed the proposed Project alignment ("Route"). TESORO chose this Route to meet landowner requests and to minimize impacts to environmental features. The Route meets the Project's objectives while conforming to the PSC's transmission route siting requirements. In support of TESORO's route selection, the desktop studies from the corridor were refined and augmented with field studies of the Route.

Trained natural and cultural resource specialists conducted field studies on October 21, 2014 and June 8, 2015. The purpose of the field studies was two-fold: (1) to definitively identify any potential resource issues (e.g., wetlands, waterbodies, protected species, critical habitats or cultural resources) within the survey corridor; and (2) to provide the baseline field data necessary to prescribe alternative routing or mitigation as necessary to minimize environmental impacts. The environmental survey corridor was a minimum of 200 feet on either side of the Route, centered on the proposed Route ("Survey Corridor"). The results of these field surveys are summarized in the following sections; the Natural Resources & cultural resources report information is located in Appendix B and Appendix C, and guidance from the North Dakota State Historic Preservation Office on cultural resource report submittal can be found in Appendix D. The Survey Corridor is depicted on the maps in Appendix A-3.

### **B.2. Route Alternatives**

TESORO has performed a reasonable and defensible alternative analysis that involves consideration of environmental, engineering and economic factors in a multi-disciplinary and iterative fashion. This analysis resulted in the following alternatives to the Project.

#### **B.2.1 No Action Alternative**

In light of the overall increase in Williston Basin production, the shippers' requirements for increased storage and transportation capacity and the current apportionment that is being experienced on the TESORO System, a "no action" alternative is unacceptable to TESORO and its clients.

#### **B.2.2 Truck Alternative**

As an alternative to installing the equipment described above, trucks could be used to transport the additional volumes directly to various rail facility outlets. However, this alternative has multiple negative aspects, including:



- Does not fully utilize the maximum capacity of TESORO’s existing pipeline system.
- Utilizing this option will significantly overburden current public road capacity, especially considering that trucks will require round-trip routing.
- Reliability of this alternative in northern climates is compromised by periodic restrictions in truck traffic due to winter storms and other uncertainties associated with travel by road.
- Public safety will be adversely affected by the increased truck traffic on local roads.
- Limits shipper access to markets within reasonable trucking distance of supply.
- Fails to provide storage and balancing required for effective dispatching volumes to account for periodic interruptions and delays.

### B.3. Environmental Analysis

On behalf of TESORO, Apex Titan Inc. (“Apex”) conducted the field investigation and prepared the Potential Waters of the United States Assessment report, the Federally-listed Threatened and Endangered Species Habitat Assessment report, and the Inventory of Exclusion and Avoidance Areas report for the proposed Targa Antelope Lateral Project. The copies of the reports are available in Appendix B.

#### B.3.1 Noxious Weeds

“Noxious weeds” is a general term used to describe plant species that are not native to a given area, spread rapidly, and have adverse ecological and economic impacts. These species may have high reproduction rates and are usually adapted to occupy a diverse range of habitats otherwise occupied by native species. These species may subsequently out-compete native plant species for resources, causing a reduction in native plant populations. Noxious weeds have the potential to detrimentally affect public health, ecological stability, and agricultural practices. North Dakota Century Code (Chapter 63-01.1) and the North Dakota Department of Agriculture recognize 11 species as noxious, as shown in Table 1 (North Dakota Department of Agriculture 2014). In 2012, five noxious weed species were found on 39,192 acres in McKenzie County.

**Table 1. Documented Noxious Weed-Occupied Area in McKenzie County, North Dakota**

Common Name	Scientific Name	Acres
Absinth wormwood	<i>Artemisia absinthium</i>	12
Canada thistle	<i>Cirsium arvense</i>	178
Diffuse knapweed	<i>Centaurea diffusa</i>	2
Leafy spurge	<i>Euphorbia esula</i>	38
Musk thistle	<i>Carduus nutans</i>	2
Purple loosestrife	<i>Lythrum salicaria</i>	0
Russian knapweed	<i>Acroptilon repens</i>	1
Spotted knapweed	<i>Centaurea stoebe</i>	9
Yellow toadflax	<i>Linaria vulgaris</i>	1
Dalmatian toadflax	<i>Linaria dalmatica</i>	0
Salt cedar	<i>Tamarix ramosissima</i>	3
Total		246

Source: North Dakota Department of Agriculture (2014).



During the field investigation, Apex observed Canada Thistle in drainage and immediately adjacent upland areas. Refer to Appendix B for the Federally-listed Threatened and Endangered Species Habitat Assessment Report and Section E for proposed mitigation procedures that would be implemented during construction activities.

**B.3.2 Tree/Sapling/Shrub Survey**

Aerial imagery and field observations by Apex indicates that the proposed Project corridor is undeveloped with the exception of disturbance from agricultural practices, paved and unpaved roadways, well pads associated with oil and gas extraction, and transmission activities. Apex, during the desktop reviews of site photos, Google Earth, USDA Farm Service Agency, and NASA imagery, confirmed no current or past indication of trees/saplings or shrub presence within the corridor boundary.

**B.3.3 Wetland and Waterbodies Survey**

On behalf of TESORO, Apex completed a wetland delineation of the Survey Corridor on October 21, 2014. During the site assessment, two potential linear features (Sand Creek) and one potential freshwater emergent wetland were identified along the proposed Project Route. The Potential Waters of the United States Assessment report along with site photographs are provided in in Appendix B. The proposed Project would not include the construction or installation of intake structures; therefore, preconstruction notification under the reporting requirements for US Army Corps of Engineers (“USACE”) Nationwide Permit 12 (NWP 12) is not anticipated based on observed site conditions.

**B.3.4 Threatened and Endangered Species:**

On behalf of TESORO, Apex conducted a habitat assessment of the Survey Corridor on October 21, 2014. Assessments for federally listed threatened, endangered and proposed, and candidate species habitat were conducted by evaluating historic and present occurrences, and by determining if potential habitats exist within the Survey Corridor. Determinations were made concerning direct and cumulative effects of the proposed activity on each species and their habitat. Table 2 includes the federally listed species documented in McKenzie County.

<b>Table 2: Species Reviewed for the Proposed Project in McKenzie County, North Dakota</b>			
<b>Species</b>	<b>Federal Designation</b>	<b>Habitat</b>	<b>Species likely to be crossed by the Project Route?</b>
<b>Birds</b>			
Interior Least Tern	E	Sparsely vegetated sandbars on the Missouri and Yellowstone Rivers	No
Whooping Crane	E	Shallow wetlands that are characterized by cattails, bulrushes and sedges; may be found in upland areas, especially during migration	No



Piping Plover	T	Barren sand and gravel shores of rivers and lakes along Missouri and Yellowstone Rivers	No
Golden Eagle	Protected by the BGEPA	Undisturbed areas; variable habitat types	No
Bald Eagles	Protected by the BGEPA	Large rivers and lakes bordered with mature stands or old-growth trees	No
Red Knot	T	Coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves	No
Sprague's Pipit	C	Nest in large patches of undisturbed prairie	No
<b>Mammals</b>			
Black-footed Ferret	E	Short grass prairies, always within close proximity to prairie dog towns; no known populations in ND	No
Gray Wolf	E	Rare; likely habitat in ND is the forested areas in north-central and north-east ND, however, they may appear anywhere	No
Northern Long-eared Bat	T	Old-growth forests composed of trees 100 years old or older within relative proximity of caves or inactive mines	No
<b>Fish</b>			
Pallid Sturgeon	E	Missouri River; bottom of large, silty rivers with swift currents; prefer areas with sand flats and gravel bars	No
<b>Insect</b>			
Dakota Skipper	T	Undisturbed tall grass and mid- grass prairie; in the western part of its range, can be found in ungrazed native pastures with little bluestem, needle and thread, and purple coneflower	No

E = Endangered, T=Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate, BGEPA = Bald and Golden Eagle Protection Act  
Source: USFWS 2015

A synopsis of the determinations for each of these species is included below. As such, there will be no effect on these species.

Interior Least Tern (Sterna antillarum)

No habitat for the interior least tern, such as sparsely vegetated sandbars within riverine habitat, is located in the proposed Project boundaries. The proposed Project is located primarily on uplands utilized for agriculture approximately 8 miles from the Missouri River. The likelihood of encountering interior least terns or their habitat by the proposed Project Route is very unlikely.

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Whooping Crane (*Grus americana*)

Due to the presence of roadway and human activity and the relatively small size of the wetlands, no stopover habitat for the migrating whooping crane is located on or in the vicinity of the proposed Project. The likelihood of encountering whooping cranes or their habitat by the proposed Project Route is very low.

Sprague's Pipit (*Anthus spragueii*)

The land crossed by the proposed Project Route consists of primarily disturbed agricultural and range land. No undisturbed native prairie that may be utilized by the Sprague's pipit is likely to be located at the proposed Project site. If this species was to occur along the proposed Project Route during construction, it will likely be flying overhead. The likelihood of encountering Sprague's pipit by the proposed Project Route is very low.

Red Knot (*Calidris canutus rufa*)

Red knots are very rare in North Dakota. No appropriate staging area habitat that may be utilized by the red knot during migration is located along the proposed Project Route. If this species was to occur in the proposed Project during construction, it will likely be flying overhead. The likelihood of encountering red knot along the proposed Project Route is extremely low.

Piping Plover (*Charadrius melodus*)

No habitat for the piping plover, such as alkali lakes or barren sand and gravel river shores, is located along the proposed Project Route. The likelihood of encountering piping plovers or their habitat along the proposed Project Route is very low.

Eagles

According to the North Dakota Game and Fish Department Golden Eagle Breeding Map, the proposed Project is entirely located within the secondary breeding range for the golden eagle (NDGF 2014). No ideal breeding habitat for the golden eagle, such as cliffs and forested areas with large trees, is located in the proposed Project boundaries. Bald eagles are not expected to nest in the geographic range of the proposed Project and no appropriate nesting habitat is intersected by the proposed Project Route. If bald or golden eagles were to occur along the proposed Project Route during construction, they would likely be flying overhead.

Black-footed Ferret (*Mustela nigripes*)

The black-footed ferret depends on prairie dogs (*Cynomys* spp.) for food and on prairie dog burrows for shelter. No wild or reintroduction populations are known to occur in North Dakota. Most unconfirmed sightings of black-footed ferrets come from the southwest part of the state (USFWS 2014b). The likelihood of encountering black-footed ferrets or their habitat along the proposed Project Route is very low.

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Gray Wolf (*Canis lupus*)

Gray wolves are very rare in North Dakota. The likelihood of encountering the gray wolf along the proposed Project Route is considered extremely low.

Northern Long-eared Bat (*Myotis septentrionalis*)

Mature, old-growth forests, caves, and inactive mines are not located on or within the vicinity of the proposed Project Route. If this species was to occur in the proposed Project area during construction, it will likely be flying overhead. The likelihood of encountering the northern long-eared bat along the proposed Project Route is extremely low.

Pallid Sturgeon (*Scaphirhynchus albus*)

Habitat for the pallid sturgeon is not located along the proposed Project Route. The land crossed by the proposed Project Route consists of primarily disturbed agricultural and range land and no perennial streams are intersected by the proposed Project that exhibit the characteristics necessary for pallid sturgeon habitat such as a large channel and turbid and strong free-flowing water. The likelihood of encountering pallid sturgeon or their habitat along the proposed Project Route is very low.

Dakota Skipper (*Hesperia dacotae*)

The vegetation in and adjacent to the proposed Project Route consists of a primarily disturbed agricultural land setting adjacent to roadways. Native prairie containing high diversity of wildflowers and grasses was not identified on or in the vicinity of the proposed Project. This type of altered habitat is not conducive to the species. The likelihood of encountering Dakota skipper or their habitat along the proposed Project Route is very low.

**B.3.5 Migratory Birds:**

Numerous migratory birds pass through or breed and nest in North Dakota from February 1st to July 15th each year. Migratory birds are protected under the Migratory Bird Treaty Act ("MBTA") (16 U.S.C. §§ 703-712) and Executive Order 13186. In order to fully comply with the MBTA and in a good faith effort to protect North Dakota bird species, TESORO will implement all avoidance strategies recommended by the USFWS in order to avoid impacts to migratory birds.

**B.3.6 Soils:**

On behalf of TESORO, Apex reviewed the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Soil Survey Geographic Database (SSURGO) soil data from McKenzie County (USDA NRCS 2013). Eight soil units are intersected by the proposed Project Route. Two soil units are listed as hydric in McKenzie County. Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

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### **B.3.7 Vegetation:**

The vegetation along the proposed Project Route consists primarily of non-native herbaceous species due to the extensive agricultural practices in the area. Plants observed during field investigations in drainages and immediately adjacent upland areas include: broadleaf cattail (*Typha latifolia*), Canada thistle (*Cirsium arvense*), smooth brome (*Bromus inermis*), meadow fescue (*Festuca pratensis*), foxtail barley (*Hordeum jubatum*), and prairie cordgrass (*Spartina pectinata*).

### **B.3.8 Land Cover and Land Uses:**

The majority of the proposed Project Route is within the Cultivated Crops land cover designation, according to the National Land Cover Database (NLCD) (Fry et al. 2011). Open Space land cover designation is along paved and dirt roads. Aerial imagery and field observations note the proposed Survey Corridor as undeveloped with the exception of disturbance from agricultural practices, paved and unpaved roadways, well pads associated with oil and gas extraction, and transmission activities.

### **B.3.9 Cultural Resources:**

On behalf of TESORO, Metcalf Archaeological Consultants, Inc. (“Metcalf”) of Bismarck, North Dakota conducted a Class III Cultural Resource Inventory in June of 2015 on the Survey Corridor. No cultural resources were identified during the survey. Site 32MZ2082 was updated and recommended not eligible for inclusion in the NRHP due in large part to the distinct lack of integrity. Metcalf recommended a finding of “No Historic Properties Affected” as a result of the Project. A report abstract of the survey’s findings and recommendations is included as Appendix C. A full copy of the Cultural Resources Report is available upon request.

## **B.4. Agency Consultations:**

### **B.4.1 U.S. Fish and Wildlife Service (USFWS):**

The USFWS was contacted by Apex on June 17, 2015 via letter. The correspondence sought data and comments related to the Endangered Species Act, the MBTA, the Bald and Golden Eagle Protection Act, and other resources of concern existing in or near the Project area. A follow-up e-mail correspondence was sent by Apex on August 13, 2015. The USFWS has not responded concerning the proposed Project. A representative copy of the correspondence letter sent to the USFWS is included in Appendix D. The follow-up e-mail sent to the USFWS is included in Appendix D-1.

### **B.4.2 North Dakota Game and Fish Department (NDGFD):**

On behalf of TESORO, Apex contacted the NDGFD. The letter to the NDGFD dated June 17, 2015 requested data and comments on Conservation Priority Species, Easements, and other resources of concern existing in or near the Project area. The NDGFD responded with Project concurrence on July 2, 2015, stating that the proposed Project will not have any significant adverse effects on wildlife or wildlife habitat including

species of concern. A copy of the correspondence letter with the NDGFD is included in Appendix D-2.

#### **B.4.3 North Dakota Parks and Recreation (NDPRD):**

On behalf of TESORO, Apex contacted NDPRD on June 17, 2015 via letter. The correspondence requested data and comments on NDPRD Natural Heritage Inventory occurrence, Natural Areas Registry resources, nature reserves, or other Department interests in or near the Project area. The NDPRD responded by letter dated June 30, 2015, indicating no documented occurrence of the plant or animal species of concern or other significant ecological communities exist within or adjacent to the Project area. The NDPRD recommend that the Project be accomplished within minimal Impact and that all efforts be made to ensure that critical habitat not be disturbed in the Project area to help secure rare species conservation in North Dakota. The NDPRD also recommended that any impacted areas be re-vegetated with species native to the Project area.

A copy of the correspondence with the NDPRD is included herein as Appendix D-3.

#### **B.4.4 North Dakota State Historic Preservation Office (SHPO)**

On behalf of TESORO, Apex requested North Dakota State Historic Preservation Office (SHPO) concurrence with the findings of the archaeological survey and Project clearance for the proposed Project. The SHPO responded with Project concurrence on July 14, 2015, stating that SHPO concurred with the "No Significant Sites Affected" determinations for the Project, provided it remains as described and mapped in the Class III inventory.

A copy of the concurrence letter received from the SHPO is included herein as Appendix D-4.

#### **B.4.5 North Dakota Department of Health (NDDoH)**

The NDDoH administers various water quality regulatory programs. These programs include construction stormwater permitting, hydrostatic test water discharges and other water discharges.

##### **B.4.5.1 NDDoH Pollution Discharge Elimination System**

The North Dakota Pollution Discharge Elimination System ("NDPDES") is the regulatory program for water discharges such as construction stormwater, site dewatering, and hydrostatic water discharges. TESORO would procure the following NDPDES permits from the NDDoH as described below as necessary.

##### **Construction Stormwater:**

TESORO would seek coverage under NDR10-0000 Authorization to Discharge under the North Dakota Pollutant Discharge Elimination System general permit for construction activities as necessary. A Storm Water Pollution Prevention Plan ("SWPPP") would be prepared and maintained on-site for the duration of the Project. TESORO would properly implement the SWPPP, which would be designed to manage run-off and trench dewatering discharges in a manner that would minimize exposure to chemicals, waste



and petroleum products, and to describe erosion control measures designed to minimize off-site transfer of sediments.

**Hydrostatic test water discharges:**

TESORO would seek coverage as necessary under NDG07-0000 Authorization to Discharge under the North Dakota Pollutant Discharge Elimination general permit for various temporary discharges including both construction site dewatering and hydrostatic test water discharges.

**B.4.6 Other Agencies**

Following is a list of all other agencies contacted with respect to the proposed Project. A sample of the letters sent to each agency is included in Appendix D. Any additional follow up correspondence, along with any agency response received, is also included in Appendix D to the consolidated application.

<b>Agencies</b>	<b>Type of Communication</b>	<b>Date Contacted</b>	<b>Date of Response</b>
U.S. Fish and Wildlife Service	Letter E-mail	6/17/2015 8/13/2015	None
North Dakota Game and Fish Department	Letter	6/17/2015	7/2/2015
North Dakota Parks and Recreation Department	Letter	6/17/2015	6/30/2015
North Dakota State Historical Society	Letter	6/17/2015	7/14/2015
North Dakota Department of Health	Letter	6/17/2015	6/26/2015
U.S. Army Corps of Engineers	Letter	6/17/2015	6/23/2015
North Dakota Aeronautics Commission	Letter	8/11/2015	None
North Dakota Department of Vocational Education	Letter	8/11/2015	None
North Dakota State Highway Department	Letter	8/11/2015	None
North Dakota Indian Affairs Commission	Letter	8/11/2015	None
North Dakota State Water Commission	Letter	8/11/2015	None
North Dakota Pipeline Authority	Letter	8/11/2015	None
North Dakota Office of Attorney General	Letter	8/11/2015	None
North Dakota Department of Human Services	Letter	8/11/2015	None
North Dakota Department of Commerce	Letter	8/11/2015	None




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North Dakota Geological Survey	Letter	8/11/2015	None
North Dakota Department of Transportation	Letter	8/11/2015	09/10/2015
Job Service North Dakota	Letter	8/11/2015	None
Division Of Community Services	Letter	8/11/2015	None
North Dakota Industrial Commission	Letter	8/11/2015	None
Federal Aviation Administration	Letter	8/11/2015	None
McKenzie County Commission	Letter	8/11/2015	None
North Dakota Department of Agriculture	Letter	8/11/2015	None
North Dakota Department of Labor	Letter	8/11/2015	None
Energy Development Impact Office	Letter	8/11/2015	None
Office Of Governor	Letter	8/11/2015	None
North Dakota State Land Department	Letter	8/11/2015	None
North Dakota State Soil Conservation Committee	Letter	8/11/2015	None
United States Department Of Defense	Letter	8/11/2015	None
North Dakota Transmission Authority	Letter	8/11/2015	None



**SECTION C: NEED FOR FACILITY**

**C.1. An analysis of the need for the proposed pipeline facility based on present and projected demand for the product transmitted by the facility, including the most recent system studies supporting the analysis of the need**

**C.1.1 Planned use and purpose**

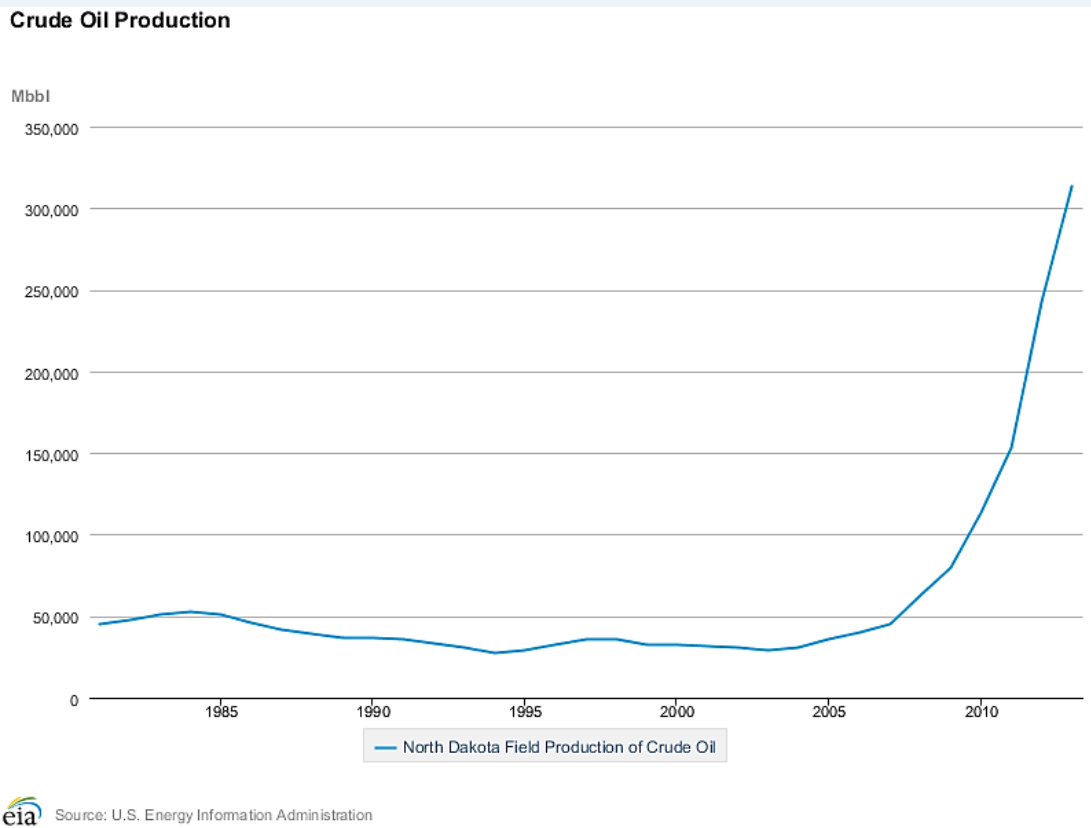
As demand for crude oil production from the Williston Basin of North Dakota continues to increase, so does the demand for pipeline capacity for crude oil transportation on the TESORO System.

TESORO is currently increasing its system capability to increase the pipeline flow rate of its mainline system by approximately 100,000 BPD (PU-13-740) in order to meet the demand of the increasing drilling and production activity. This Project will allow TESORO to supply the increased capacity of the existing pipeline and provide transportation flexibility to new and existing shippers.

The primary producing areas that will support the Project are Williams, McKenzie and Dunn counties in northwestern North Dakota. The U.S. Energy Information Administration indicates that crude oil production in North Dakota has more than doubled between 2011 and 2013.

**Table 4. Historical Oil Production – North Dakota**

Historical Oil Production - North Dakota		
Year	Total Crude Oil Production, Barrel	% Gain over 2008
2008	62.8 million	-
2009	79.7 million	26.9%
2010	113.1 million	80.1%
2011	153.0 million	143.6%
2012	242.5 million	286.1%
2013	313.4 million	499.0%



[http://www.eia.gov/dnav/pet/pet\\_crd\\_crdpn\\_adc\\_mbbbl\\_a.htm](http://www.eia.gov/dnav/pet/pet_crd_crdpn_adc_mbbbl_a.htm)

In June 2014, the production reached 1 million barrels a day.

The forecasts continue to indicate additional drilling and production for several years with significant upside potential which are considered more than sufficient to supply the additional capacities of this Project. Further Project details are below.

- The Project will be operationally integrated into the existing TESORO System.
- The economic life of the Project for this purpose is based on a 25-year depreciation cycle. However, the functional life of the proposed facilities is indefinite following normal maintenance and inspection practices of the federal regulated interstate pipeline system.
- TESORO's System operates year-round, round-the-clock, with the exception of planned system down-time for inspection, maintenance or repair purposes or unplanned down-time due to interruptions in receipts or refinery outages and/or operational disruptions caused by regional power outages or other reasons.



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### C.1.2 Future North Dakota System Expansion(s)

TESORO continually works closely with its shippers to develop long term plans that best serve the shippers' increasing oil storage and transportation requirements.

With the increasing drilling activity in the Williston Basin production area, TESORO continues to receive requests for additional capacity on its North Dakota system. TESORO is responding to those requests with a number of potential future projects that are (subject to approvals) designed to meet the shippers' needs and provide access to other pipeline systems, where shippers will have numerous refinery and marketing options via TESORO's mainline system or through other third-party pipelines.

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## **SECTION D: SITING CRITERIA EVALUATION**

### **D.1. Factors to be considered in evaluating applications and designations of sites, Corridors and Routes (N.D.C.C. § 49-22-09)**

#### **D.1.1 Available research and investigation relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources and the environment:**

TESORO is proposing the Targa Antelope Lateral pipeline that will connect the Targa facility site with TESORO's existing main trunk line approximately 1-mile south of TESORO's Charlson Station. The Project will enable TESORO to more fully utilize its existing pipeline system, increase the storage and transportation capabilities of its system, and provide increased flexibility in transporting Bakken production to TESORO's Mandan Refinery and other customer outlets for various Bakken Oil producers.

In connection with route planning between TESORO's Targa facility tie-in (eastern end) and TESORO's existing main trunk line (western end) approximately 1-mile south of TESORO's Charlson Station, several route options for the proposed Project were identified and evaluated. The studies conducted were designed to define a preferred route that achieves project objectives, is technologically and economically feasible to construct, and minimizes impacts on landowners and the environment.

Field studies were conducted to identify environmental, biological and cultural resources along the Route. The results of the field studies are discussed in Section B of this document. On behalf of TESORO, Apex conducted the field investigation and prepared the Potential Waters of the United States Assessment report (Appendix B-3), the Federally-listed Threatened and Endangered Species Habitat Assessment report (Appendix B-2), and the Inventory of Exclusion and Avoidance Areas report (Appendix B-1) for the proposed Project. As noted, copies of the reports are available in Appendix B to the Consolidated Application. The Class I and Class III inventory report abstract is provided in Appendix C.

#### **D.1.2 The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects:**

The proposed Project does not include energy conversion or transmission technologies/systems specifically designed to minimize adverse environmental impacts. The Project will be constructed in compliance with environmental permits. The conditions of these permits are designed to minimize adverse environmental impacts.

#### **D.1.3 The potential for beneficial uses of waste energy from a proposed energy conversion facility:**

The proposed Project does not involve construction of an energy conversion facility.

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**D.1.4 Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated:**

Direct and indirect environmental effects associated with the proposed Project will be temporary and minimized through compliance with environmental permits. TESORO intends to mitigate these temporary impacts to the maximum extent possible. Refer to Section E for a full description of the mitigative measures planned to minimize impacts resulting from the Project's location, construction, and operation.

**D.1.5 Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects:**

TESORO will fully participate in the hearing process and will address any alternatives developed during the hearing process, as applicable.

**D.1.6 Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated:**

TESORO is not aware of any irreversible or irretrievable commitments of natural resources that would result from the requested approvals.

**D.1.7 Direct and indirect economic impacts of the proposed facility:**

Crude oil and natural gas are North Dakota's leading mineral products. North Dakota is the second largest producer of crude oil in the country. The Project will boost the State's economy and allow the State to capitalize on tax revenue gathered from increased production and extraction taxes.

State and local economies will also benefit during construction of the Project from the temporary hiring of local construction workers, and from a relatively large-scale, temporary influx of non-local construction workers. Unemployment in the area would see a temporary drop, and payroll taxes would temporarily rise.

Local businesses will benefit from the demand for goods and services generated by the temporary workforce's need for food and lodging. In addition, TESORO will purchase some of the materials necessary for construction of the Project locally. TESORO estimates that local purchases made for construction of the Project will primarily include consumables, fuel, equipment rental, and miscellaneous construction-related materials (e.g., office supplies).

**D.1.8 Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed route:**

TESORO is aware of possible future development in the vicinity of the route. However, the Project will not conflict with any known developments planned in the area.

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**D.1.9 The effect of the proposed route on existing scenic areas, historic sites and structures and paleontological or archaeological sites:**

TESORO commissioned Class I and Class III cultural resource inventories for the Project. TESORO developed mitigation plans for registered or eligible sites that encroach on the proposed construction corridor. The proposed mitigation measures are detailed in Section E of this document. All related agency consultations can be found in Appendix D, and supporting documentation of field studies can be found in Appendix B. The cultural resources report abstract is included in Appendix C.

Project-specific consultation with various federal, state and local agencies did not identify any scenic areas within the Route. Please refer to Appendix D for a record of these consultations.

**D.1.10 The effect of the proposed route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species:**

The proposed Route is not anticipated to result in permanent impacts to the environment. Refer to Section B for a comprehensive discussion of TESORO's effort to identify sensitive environmental resources along the proposed Route. Provided the environmental permit conditions are executed, the Project would not result in any impact to listed or sensitive species or their habitats. Please refer to Appendix D for complete federal and state agency consultations.

**D.1.11 Problems raised by federal agencies, other state agencies and local entities:**

On behalf of TESORO, Apex and Wood Group Mustang, Inc. provided Project specific consultations to various federal, state, and local agencies. Through this consultation process, these agencies had the opportunity to identify possible sensitive environmental resources along the Route and any related agency concerns. A summary of agency concerns are listed below, with a complete record of communications found in Appendix D.

**D.1.11.1 North Dakota Game and Fish Department (NDGFD):**

The NDGFD's primary concern is protecting wetlands within the Project corridor. The NDGFD recommended that no alteration should be made to existing drainage patterns and above-ground appurtenances should not be placed in the wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.

**D.1.11.2 North Dakota Parks and Recreation (NDPRD):**

The NDPRD reviewed the North Dakota Natural Heritage biological conservation database to determine if any plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the Project Route. Based on the review, the NDPRD identified no documented occurrence within or adjacent to the Project area. However, the NDPRD indicated that there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The NDPRD recommends that the Project be accomplished



with minimal impacts and that all efforts be made to ensure that critical habitats are not disturbed in the Project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, the NDPRD recommended that any impacted areas be re-vegetated with species native to the Project area.

**D.1.11.3 North Dakota Department of Health (NDDoH)**

The NDDoH administers various water quality regulatory programs. These programs include construction stormwater permitting, hydrostatic test water discharges and other water discharges. The NDDoH provided various conditions to minimize possible environmental impacts due to construction. Please refer to Appendix D for correspondence with the NDDoH.

TESORO intends to minimize any environmental impact to the maximum extent possible during and after the construction via implementing environmental monitoring, utilizing various construction methods, and developing a stormwater pollution prevention plan (SWPPP) for the Project.

**D.2. Exclusion Areas (N.D.A.C. § 69-06-08-02(1))**

As set forth in Section 69-06-08-02(1) of the North Dakota Administrative Code, Exclusion Areas are geographic areas that must be excluded in the consideration of a route for a transmission facility. On behalf of TESORO, Apex prepared an Inventory of Exclusion and Avoidance Areas report for the proposed Project. In connection with this report, a 300-foot-wide area (“Project Area”) was surveyed for the presence of Exclusion and Avoidance Areas. No Exclusion Areas were identified within the Project Area. Accordingly, no Exclusion Areas will be crossed by the Project Route. Refer to Appendix B-1 for a detailed explanation of each criterion set forth in Table 5.

**Table 5. Exclusion Areas**

<b>Exclusion Area</b>	<b>Within Proposed Project Area</b>	<b>Crossed by Route</b>
Designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, and wilderness areas	No identified occurrences within the proposed Project area.	No
Designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, and nature preserves	No identified occurrences within the proposed Project area.	No
County parks and recreational areas, municipal parks, and parks owned or administered by other governmental subdivisions	No identified occurrences within the proposed Project area.	No
Areas critical to the life stages of threatened or endangered animal or plant species	No identified occurrences within the proposed Project area.	No
Areas where animal or plant species that	No identified occurrences within the	No



are unique or rare to this state would be irreversibly damaged	proposed Project area.	
Areas within 1,200 feet of Intercontinental Ballistic Missile (ICBM) Launch or Launch Control Facility	No identified occurrences within the proposed Project area.	No
Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference	No identified occurrences within the proposed Project area.	No

**D.3. Avoidance Areas (N.D.A.C. § 69-06-08-02(2))**

As set forth in Section 69-06-08-02(2) of the North Dakota Administrative Code, Avoidance Areas are areas that are not to be considered in the routing of a transmission facility unless it is shown that, under the circumstances, there is no reasonable alternative. In connection with the survey conducted for the Exclusion and Avoidance Areas report, no Avoidance Areas were identified within the Project Area. Accordingly, no Avoidance Areas will be crossed by the Project Route. Refer to Appendix B-1 for a detailed explanation of each criterion set forth in Table 6.

**Table 6. Avoidance Areas**

<b>Avoidance Area</b>	<b>Within Proposed Project Area</b>	<b>Crossed by Route</b>
Designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands	No identified occurrences within the proposed Project area.	No
Designated or registered state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands	No identified occurrences within the proposed Project area.	No
Historical resources which are not specifically designated as exclusion or avoidance areas	No identified occurrences within the proposed Project area.	No
Geologically Unstable Areas	No identified occurrences within the proposed Project area.	No
Within five hundred feet of a residence, school, or place of business	No identified occurrences within the proposed Project area.	No
Reservoirs and municipal water supplies	No identified occurrences within the proposed Project area.	No
Water sources for organized rural water districts	No identified occurrences within the proposed Project area.	No
Irrigated Land	Not applicable for underground transmission facilities.	N/A
Areas of recreational significance which are not designated as exclusion areas	No identified occurrences within the proposed Project area.	No



**D.4. Selection Criteria (N.D.A.C. § 69-06-08-02(3))**

The North Dakota Administrative Code specifies several selection criteria to be considered in designating a transmission facility corridor or route. Specifically, the Commission considers whether adverse effects from the location, construction, and maintenance of the facility as they relate to the selection criteria will be at an acceptable minimum, and whether these effects will be managed and maintained at an acceptable minimum. Table 7 below identifies Selection Criteria that were considered for the Project. A discussion of potential impacts and mitigation measures that will be implemented is provided below in those instances where impacts to Selection Criteria are possible.

**Table 7. Selection Criteria**

<b>Selection Criteria</b>	<b>Corridor &amp; Route Impact</b>
Agricultural Production	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Family Farms and Ranches	No Permanent Impacts are anticipated
Land Suitable for Irrigation	No Permanent Impacts are anticipated
Surface and Groundwater Flow Patterns	No Permanent Impacts are anticipated
Noise Sensitive Areas	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Visual Effects	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Extractive and Storage Resources	No Permanent Impacts are anticipated
Wetlands/ Watercourses	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.
Woodlands	No Permanent Impacts are anticipated
Communication or Electric Control Facilities	No Permanent Impacts are anticipated
Human Health and Safety	No Permanent Impacts are anticipated
Animal Health and Safety	No Permanent Impacts are anticipated
Plant Life	No permanent impacts are anticipated. Temporary, Minor Impacts as a result of construction will occur.

**D.4.1 Agricultural Production**

The proposed Project Route is located on disturbed agricultural land with areas of oil and gas development and intersecting roadways. There will be no permanent impacts anticipated as a result of the proposed underground pipeline. Minimal temporary impacts will occur due to the construction activities.

**D.4.2 Noise and Visual Effects**

The surrounding and adjacent land use to the south is agricultural and industrial. Permanent Noise or visual effects are not foreseen as a result of the proposed Project. Temporary, minor noise or visual impacts are anticipated during construction.



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#### **D.4.3 Wetlands/Watercourses**

A comprehensive desktop review of published data, including aerial photography and NWI data, was conducted to assess the presence or absence of wetlands, woodlands and wooded areas. The review of the proposed Corridor confirmed the presence of these resources. TESORO commissioned field surveys to identify and record the locations of these resources along the proposed route. Refer to Section B in this document for a comprehensive discussion of the field studies results.

#### **D.4.4 Human Health and Safety**

Despite its excellent safety record, the transportation of crude oil involves some risk to the public. Perhaps the most obvious risk to human health is the potential for fire in the event of an accident and subsequent release. Toxic exposure from crude oil through skin contact, ingestion, or vapor inhalation can also be a risk from exposure to significant quantities or in confined spaces.

TESORO will design, construct, test, operate, and maintain the Project in accordance with all applicable laws and standards. The U.S. Department of Transportation's pipeline standards are published in Parts 194 and 195 of Title 49 of the Code of Federal Regulations. The regulations are intended to ensure adequate protection of the public and to prevent accidents and failures. Part 195 specifically addresses petroleum pipeline safety issues. It specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion. Part 194 prescribes emergency planning to prepare for prompt shutdown, containment, and cleanup to minimize the effects of a pipeline release, should one occur.

#### **D.4.5 Animal Health and Safety**

The wildlife currently inhabiting the Corridor is common and is generally mobile. The local wildlife inhabitants would not be displaced by the Project and no measurable impact to the viability of these populations would occur. TESORO does not anticipate species of special concern being permanently impacted by the Project.

#### **D.4.6 Plant Life**

No long term impacts to plant life associated with the construction or operation of the Project are anticipated. No species of special concern would be impacted by the Project.

### **D.5. Policy Criteria (N.D.A.C. § 69-06-08-02(4))**

The Commission may give preference to an applicant that will maximize benefits resulting from the adoption of policies and practices identified in Section 69-06-08-02(4) of the North Dakota Administrative Code. These policies, and the extent to which the Project aligns with or reinforces these policies, are discussed further below.



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#### **D.5.1. Location and Design**

The proposed 12-inch pipeline that would connect the Targa facility site with TESORO's existing main trunk line is designed to handle a maximum flowing volume of 75,000 bpd at a normal operating pressure of 500 psig.

TESORO proposes to install approximately 1.4-miles, or approximately 7,500 feet, of transmission pipeline in McKenzie County, North Dakota. The Project traverses due east for 5,100 feet, parallel to 40<sup>th</sup> St. NW, and then turns south across 40<sup>th</sup> St. NW approximately 2,400 feet. The proposed Project will be located in Sections 7, 8, and 17, Township 152 North, Range 95 West.

The Project corridor and route have been located and designed to minimize impacts to area resources and landowners.

#### **D.5.2 Training and Utilization of Available Labor in this State for the General and Specialized Skills Required**

Locally hired construction workers will be dependent on the qualified contractor selected for the Project. Pipeline construction is a specialized market and it is unlikely that there are qualified local pipeline contractors in the immediate vicinity capable of completing the Project. If a non-local contractor is awarded this Project, it is likely that up to 75 percent of the workers may be non-local. The remaining 25 percent may be hired from the local population currently residing in nearby areas of North Dakota.

#### **D.5.3 Economies of Construction and Operation**

Crude oil and natural gas are North Dakota's leading mineral products. North Dakota is the second largest producer of crude oil in the country. The Project will boost the State's economy and allow the State to capitalize on tax revenue gathered from increased production and extraction taxes.

State and local economies will also benefit during construction from the temporary hiring of local construction workers, and from a relatively large-scale, temporary influx of non-local construction workers. Unemployment in the area would see a temporary drop, and payroll taxes would temporarily rise.

Local businesses will benefit from the demand for goods and services generated by the temporary workforce's need for food and lodging. In addition, TESORO will purchase some of the materials necessary for construction of the Project locally. TESORO estimates that local purchases made for construction of the Project will primarily include consumables, fuel, equipment rental, and miscellaneous construction-related materials (e.g., office supplies).

#### **D.5.4 Use of Citizen Coordinating Committees**

No Citizen Coordinating Committee is anticipated as a result of the Project. TESORO does not believe that a Citizen Coordinating Committee is necessary given the Project is



located in an area of the state where crude gathering and transmission pipelines already exist. As such, the public is familiar with the permitting, construction, and operation of pipeline facilities.

#### **D.5.5 A Commitment of a Portion of the Transmitted Product for Use in this State**

TESORO does not own any of the crude oil in its system, and, as a common carrier pipeline, does not determine the destinations for the products transported by its system. TESORO's business is to provide transportation service to its customers as a common carrier, and to receive a fee for that service pursuant to tariffs authorized by the Federal Energy Regulatory Commission pursuant to the Interstate Commerce Act.

#### **D.5.6 Labor Relations**

TESORO maintains positive labor relations with its staff and contract workforce and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

#### **D.5.7 Coordination of Facilities**

As previously mentioned, TESORO has designed the Project to maximize impacts to the greatest extent possible. The proposed Project is coordinated with adjacent land owners and facility owners.

#### **D.5.8 Monitoring of Impacts**

TESORO is committed to protecting the environment and complying with all applicable environmental laws, regulations, and standards. TESORO is proposing to implement environmental training and will designate an environmental representative to oversee the Project and to ensure and document environmental compliance throughout the course of the Project.

#### **D.5.9 Utilization of Existing and Proposed Rights-of-Way and Corridors**

The entire ROW for the Project has been obtained to construct the proposed pipeline.

#### **D.5.10 Other Existing or Proposed Transmission Facilities**

Appendix A-1 contains a map of the existing TESORO system. Appendix E contains TESORO's Ten Year Plan, which contains details regarding existing and planned TESORO assets.



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## **SECTION E: MITIGATIVE MEASURES**

### **E.1 Location**

Mitigation measures to minimize adverse impacts of the Project are identified throughout this document. TESORO will develop a Storm Water Pollution Prevention Plan (“SWPPP”) and place it on project site during construction to prevent the erosion control and sediment from escaping from the site. It will also help prevent impacts to sensitive environmental features on site during construction. In addition, TESORO will develop a Spill Prevention, Containment and Control Plan (“SPCCP”) that describes planning, prevention and control measures to minimize impacts of Project-related spills. The SWPPP and SPCCP are comprehensive, controlling documents that will be included in contract specifications.

### **E.2 Construction**

To communicate the Project’s environmental requirements to Project personnel, TESORO will require environmental training of all Project personnel prior to construction. TESORO will:

- Require environmental training of all personnel (both contractor and TESORO) visiting or working at the job site;
- Require everyone who attends training to sign an acknowledgement form and be issued, as a proof-of- training, a hardhat sticker; and
- Require all personnel to display a hardhat sticker when on a job site or dismiss personnel from the job site until it is obtained through completion of training.

Environmental monitoring, in the form of ongoing site inspection, will be conducted during and following construction. Contract specifications will incorporate environmental protection and mitigation measures required by regulations, TESORO specifications, or environmental permits. Contractors will be expected to implement these measures in the field. Contractor training and project orientation will also be provided by TESORO.

Environmental data has been assessed, (specifically cultural resources, wetlands, and protected species), as described in Section B of this application. TESORO will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information during the permitting process.

### **E.3 Operation**

Once put into service, the Project will operate continuously, delivering crude oil from the Targa facility site to TESORO’s existing main trunk line. Normal pipeline operations are imperceptible to the public, as they are silent, buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW may be required to remain in compliance.



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## **SECTION F: DESCRIPTION OF RIGHT-OF-WAY PREPARATION, CONSTRUCTION AND RECLAMATION PROCEDURE**

Construction will be an assembly-line process and will include the following general tasks: surveying and staking, clearing and grading, trenching, pipe stringing, pipe bending, welding, coating, hydrostatic testing, lowering in, tie-ins, backfilling, rough grading, and final restoration (e.g., topsoil replacement, final grading, seeding and mulching, where required).

At any location in the Project area, construction activities will require approximately 3 months to complete from start to finish, except when weather-related delays affect the schedule. However, construction activity at any location will not be continual but will occur in distinct phases with several days or weeks between each phase. For example, clearing and grading may require ten hours to progress for one mile along the pipeline ROW, but trenching may not follow in the area for several weeks. During the interim, activity in the area may be completely lacking or limited to occasional vehicular or pedestrian traffic.

**Surveying and Staking:** Prior to construction activities, TESORO will stake the centerline and establish the boundaries of the approved work areas (e.g., the construction ROW boundaries and temporary extra workspace areas), and flag the location of approved access roads and foreign utility lines. Wetland boundaries and other environmentally sensitive areas also will be marked or fenced for protection at this time.

**Clearing and Grading:** Prior to clearing, landowner fences will be braced and cut, and temporary gates and fences will be installed to control livestock where necessary. A clearing crew will clear the work area of vegetation and obstacles that may be encountered (e.g., remaining trees, stumps, logs, brush, and rocks) in the work area.

The ROW will be graded, where necessary, to provide a reasonably level work surface and to segregate topsoil. Topsoil would be carefully removed and stored along the edge(s) of the ROW in a manner that allows for a haul road and trench line. The topsoil depth in the area is variable, but generally, the topsoil is between two and nine inches deep with the deepest topsoil in valleys and the thinnest topsoil on the hillsides and hilltops. The topsoil depth and the layer removed will be determined in the field; upon completion of pipeline construction, the trench will be backfilled and topsoil will be returned to the upper soil horizon. All disturbed areas shall be graded to restore the original contours.

Where steep slopes or side slopes are encountered, the construction contractor may re-grade the slope, or in areas of side slopes, two-tone the area to create level working surface. At these locations, excess spoil will be pushed to the side of the construction ROW, distributed over the working area and travel lane, or stored in alternative temporary workspace. This material will be returned to the original location and preconstruction contours reestablished during restoration.

Concurrent with grading, erosion and sediment control devices will be installed as required by state stormwater permit conditions. Waterbodies may be bored using horizontal directional drilling (HDD) methods to place pipe under the waterbody without disturbing it. The pipeline would be placed such that adequate cover from the bottom of the waterbody would be in place. This will be individual to the waterbody. Erosion and sediment control



devices, which may include silt fences, straw wattles, straw bales and road access pads, will be installed where necessary to prevent soil and sediment from leaving the construction work area.

Following installation of the pipe and backfilling of subsoil in the trench, the ROW will be returned to the original grade and the topsoil will be redistributed over the work area.

**Trenching:** The trench will be excavated by using backhoes to a depth that provides sufficient cover over the pipeline after backfilling. The bottom width of the trench will be sufficient to accommodate the 12-inch diameter pipeline. Typically, the trench will be excavated to a depth of about five feet deep to allow for a minimum of four feet of cover after construction. In cultivated areas, the depth of cover will be sufficient and safely below the maximum tillage depth. Additional cover requirements may be applicable at public road crossings.

Trench spoil will be stored adjacent to but will not be mixed with topsoil on the non-working side of the ROW. In some cases, however, where sufficient space is lacking on the non-working side, trench spoil may be side cast on the travel lane and spread over the working side of the ROW.

**Pipe Stringing, Bending, and Welding:** Sections of externally coated pipe up to 60- feet long (e.g., joints) may be transported over public roads to the ROW by truck and placed or “strung” along the ROW parallel to the trench in a continuous line. After the pipe sections are strung along the trench and before they are welded together, individual sections of the pipe may be bent, where necessary, so the finished pipeline sections conform to the natural contours of the land. Typically, a track-mounted, hydraulic pipe-bending machine will be used. Where multiple or complex bends greater than what can be properly bent in the field are required, a factory made “fitting” will be used.

After the pipe sections are bent, the joints will be welded together into sections and placed on temporary supports. Welding will comply with requirements listed in Title 49 CFR Part 195 and API Standard 1104 Welding of Pipelines and Related Facilities. Each weld will be tested by using radiographic non-destructive examination to ensure no defective welds were present and TESORO engineering standards were met.

Welds that do not meet standards and specifications will be removed and/or repaired.

A third-party contractor certified in non-destructive inspection will be used and inspections will be performed as outlined in Title 49 CFR Part 195. After the welds are approved, a protective epoxy coating will be applied to the welded joints. The pipeline will subsequently be electronically and visually inspected for defects in the epoxy coating. Damage to or defects in the coating will be repaired prior to lowering in the pipeline. Cathodic protection systems will also be directly bonded to the pipe at that time.

**Lowering-in and Backfilling:** The trench will be inspected for the presence of rocks and other debris, which could damage the pipe or protective coating. If rocks or other obstructions are observed, these will be removed or the pipeline trench bottom will be padded with subsoil or sand prior to the pipeline being lowered into the trench.



If the trench bottom is obscured by water, the trench will be dewatered. Where dewatering may be required, TESORO will pump water from the trench into well vegetated upland areas or into sediment filtration/energy dissipation devices.

In areas of steep slopes, breakers consisting of sand bags or foam may be installed to prevent 'piping' from occurring along the pipe in the trench after the area is backfilled.

The trench will be backfilled using the native material removed and compacted; however, the trench may be crowned slightly to accommodate settling.

**Hydrostatic Testing:** TESORO will hydrostatically test the pipeline. Hydrostatic testing will conform to DOT standards and will establish the maximum operating pressure (MOP) for the pipeline when it is operational. Testing involves installation of test headers, which control the pressure applied. The test headers will be later removed upon the completion of a successful pressure test. The test procedures are a function of pressure and time. Once the desired test pressure has been achieved, the test section must hold the pressure for an eight hour period, without a significant change in pressure. Once testing is completed, the test water will be evacuated. The line is then dried and prepared for commissioning. TESORO will either procure discharge permit(s) from the NDDOH, with the ensuing discharge conforming to the conditions stipulated in the permit, or capture the water and transport it offsite for disposal.

**Final Tie-in and Commissioning:** Following successful pressure testing, test manifolds will be removed and the final pipeline tie-ins will be made. After final tie-ins are complete, the tie-in welds will be inspected, the line will be sufficiently dried, and the pipeline will be commissioned. Commissioning involves activities to verify equipment is properly installed and working, the controls and communications systems are functional, and the pipeline is ready for service. The pipeline will be cleaned and dried using mechanical devices, and the line will be purged of air and then loaded with product.

**Cleanup and Restoration:** Final cleanup will begin after backfilling, as soon as weather and site conditions permit. During cleanup, construction debris remaining on the ROW will be collected and disposed of properly. Work areas will be graded and restored to preconstruction contours as closely as practical.

During restoration, segregated topsoil will be spread over the surface after final grading and permanent erosion controls will be installed. After permanent erosion control devices are installed, disturbed, non-cultivated areas will be seeded and slopes will be mulched where required. Seed mixes will be approved in advanced by the landowner, with seeding to occur within the recommended seeding dates for the Project area.

For cultivated areas, no seed or mulch will be applied after the topsoil is replaced unless specifically requested by the landowner.

Markers showing the location of the pipeline will be installed at fence and road crossings in order to identify the owner of the pipeline and convey emergency information in accordance

with applicable governmental regulations, including DOT safety requirements. Special markers providing information and guidance to aerial patrol pilots will also be installed.

The horizontal directional drilling bore method involves setting a horizontal drill rig at one or both ends of the bore area. If the drill rig is located on or near the stream bank, erosion countermeasures will be installed to minimize bank disturbance and prevent further erosion during the drilling operation. The drill bores underneath the waterbody and the main pipe, known as the string pipe, will be pulled into place once the bore has been completed. The string pipe will then be connected to the main pipeline.

Following installation of the pipeline crossing, the stream bank will be restored as necessary. TESORO will compact the banks and install erosion and sediment control blankets on the banks after seeding to prevent scour and discharge of sediment to the waterbody. In addition, sediment control barriers will be installed on the top of the banks to prevent sediment generated from the ROW from entering the waterbody. These barriers will remain in place until the ROW approaches are adequately vegetated.

For any ephemeral, intermittent and perennial crossings associated with the Project, TESORO will implement the following mitigative measures:

- Temporary extra workspaces will be located at least 50 feet from the edges of the waterbody, unless a ten foot setback was identified for waterbodies located in actively cultivated agricultural fields.
- Temporary extra workspaces will be limited to the minimum size needed to construct the waterbody crossing.
- Riparian vegetation will be preserved by limiting clearing of vegetation between temporary extra workspace areas and waterbody edges.
- Temporary sediment and erosion control devices will be installed across the width of the ROW after clearing but before ground disturbance. These devices will remain in place throughout construction until stream banks and adjacent upland areas are stabilized.
- Trench spoil placement will be restricted to at least ten feet from the water's edge on the ROW, or in temporary extra workspace areas.
- Waterbody buffers will be maintained (e.g., temporary extra workspace area setbacks, refueling restrictions) in the field with signs until construction related ground-disturbing activities are complete.
- The use of equipment operating in the waterbody will be limited to that needed to construct the crossing.
- Construction will be completed across minor waterbodies (i.e., less than or equal to ten feet wide) within a single 24-hour time period.
- Storage and refueling activities will be restricted near surface waters, and procedures in the Spill Prevention, Containment and Countermeasure (SPCC) Plan will be promptly implemented if a spill or leak occurs during construction.
- Bank stabilization and re-establishment of streambed and bank contours will be required after construction.
- A permanent slope breaker will be installed across the ROW at the base of slopes greater than five percent that are less than 50 feet from the water's edge.



**Wetland Restoration:** Following pipeline installation, the trench will be backfilled with the material excavated and, to the maximum extent possible, restored to preconstruction contours. Replacing the wetland soil and restoring pre-construction hydrology will promote the rapid re-establishment of hydrophytic vegetation.

TESORO will also take precautionary measures outside wetland boundaries to prevent construction in uplands from having an impact on wetlands. These measures include:

- Installing sediment barriers across the entire construction ROW immediately upslope of the wetland boundary where necessary to prevent sediment flow into the wetlands.
- Installing sediment barriers along the edge of the construction work area where wetlands are adjacent to the construction ROW and the ground surface slopes toward the wetland.

Following backfilling, topsoil segregated before trenching would be returned to the area from which it was stripped. If timber mats or riprap were used, TESORO would remove the supports from the wetland. No lime, mulch or fertilizer would be used in wetlands, but TESORO would apply annual ryegrass in wetlands without standing water.

All materials used for equipment crossings in wetlands would be removed in their entirety following construction, and the area would be restored and stabilized according to the relevant permit authorizations.

**Agricultural Land Restoration:** Extensive portions of the Project would involve heavy construction through agricultural areas. These areas consist of active croplands predominately used to grow durum, hard red spring wheat, red winter wheat, barley, sunflowers and canola. Additionally, agricultural lands are used as range or pasture land used for livestock production. TESORO would utilize the following general construction methods in agricultural areas, consistent with the requirements of landowners:

- Prior to construction, landowners would be contacted and irrigation facilities, and wells, waterlines and other and livestock watering systems would be located.
- Water flow would be maintained in supply systems unless shutoff was coordinated with the affected parties.
- Existing fences would be cut and braced along the ROW, and temporary gates and fences, if necessary, would be installed to control livestock and limit public access.
- On all active agricultural lands, which include fallow or rotated cropland, hayfields, improved pastures and rangeland, TESORO would remove the topsoil removal and segregate the soil from subsoil.
- TESORO would decompact the travel lane on the ROW if requested by the landowner.
- On all actively cultivated lands free of shallow bedrock, the trench would be excavated to sufficient depth to allow a minimum of four feet of soil cover between the top of the pipe and the final land surface after backfilling.
- Restoration and revegetation practices (i.e., seeding) would comply with the requirements outlined in the landowner line list.



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- TESORO would not plant an annual cover crop on actively cultivated land unless requested by the landowner.
  - Weed-free mulch would be used on steep slopes to control erosion unless the landowner requests mulch not be applied. Mulch would be crimped into the soil.
  - Earthen diversion berms would be constructed to reduce runoff on steep slopes only when the landowner approves.
  - No erosion control fabric would be used in rangeland without having landowner approval.
  - Fences and gates would be replaced in accordance with landowner agreements.
  - Private roads would be restored to equal pre-construction condition.
  - TESORO would respond promptly to landowner concerns following construction to mitigate areas of subsidence and erosion problems should they occur.
  - TESORO would require the contractor to clean thoroughly the equipment and materials (e.g., timber mats, bridges, etc.) at the contractor yard prior to mobilization to the ROW to prevent spread of noxious weeds.



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**SECTION G: EASEMENT, ACQUISITION, LANDOWNER NOTIFICATION AND EASEMENT  
COMPENSATION PLAN**

**G.1 LANDOWNER INFORMATION REGARDING EASEMENT ACQUISITION, AND  
NECESSARY EASEMENT CONDITIONS AND RESTRICTIONS**

Once a preliminary route is been established, a review of records is conducted for the purpose of identifying the current landowner. TESORO initiates contacts with affected landowners via telephone to be followed with personal visits and e-mail correspondence. Contact by mail may be used as a last resort if no other means of landowner contact is successful.

The refinement of the Route includes adjustments made per landowner request. TESORO, at all times, negotiates in good faith and necessary easement conditions and restrictions are presented and discussed.

**G.2 COMPENSATION POLICY**

TESORO's practice for determining landowner compensation for easements is based on research of comparable fair market pricing and prior experience negotiating easements locally.

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**SECTION H: QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY**

**Craig Straub**

Degree: Ph.D. in Human Ecology  
Experience: 20 years of experience in the Northern Plains

**Tracy White**

Degree: Ph.D. in Environmental Systems  
Experience: 5 years of experience in the Great Plains

**Lauren Dill**

Degree: M.A.G. In Applied Geography  
Experience: 10 years of experience in the Great Plains

**Robin Laine**

Degree: BS in Biology  
Experience: 9 years of experience in the Great Plains

**William Bluemle**

Degree: M.A. in Anthropology  
Experience: 23 years of experience in the Northern Plains

**Ashley Shelton**

Degree: B.S. in Anthropology  
Experience: 2 years of experience in the Northern Plains

**Emily Sakariassen**

Degree: M.S. in Historic Preservation  
Experience: 4 years of experience in the Northern Plains

**Liz France**

Degree: M.A. in Anthropology  
Experience: 7.5 years of experience in the Northern Plains

**Divyang Surati, PE**

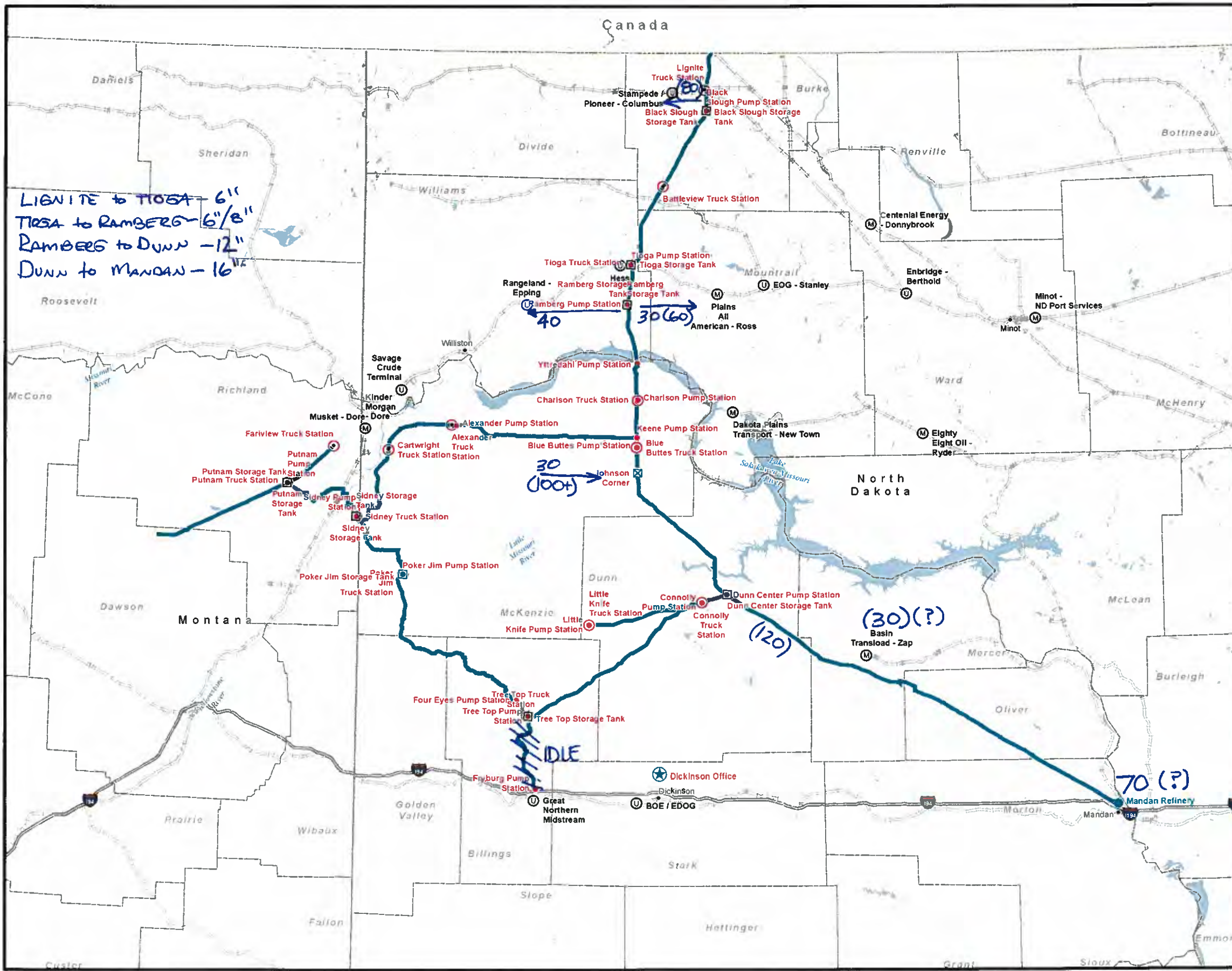
Degree: M.S. Environmental Engineering  
Experience: 8 years of experience in environmental engineering and permitting

# Appendix A

## Maps

# **Appendix A-1**

Tesoro High Plains Pipeline System Map



- Dickinson Office
- Pump Station
- Johnson Corner
- Storage Tank
- Truck Station
- Mandan Refinery
- Launcher / Receiver Station
- Valve
- Unit Train
- Manifest Rail
- Towns
- Tesoro Crude Pipeline
- Tesoro Gathering Line
- Third Party Pipelines**
- Whiting Petroleum Corporation
- Matador Pipe Line Inc.
- Arrow Midstream
- Enbridge Inc.
- Hiland Partners
- Koch Pipeline Company LP
- ONEOK Inc.
- Plains All American GP LLC
- True Companies
- Saddle Butte Pipeline LLC
- Rangeland Energy, LLC - COLT
- Hunt Oil, LLC
- Third Party Proposed Pipelines**
- Enbridge Inc.
- Great Northern Power Development
- Hess Corporation
- ONEOK Inc.
- Plains All American GP LLC
- TransCanada Corporation
- Vantage Pipeline Company
- Yorktown Energy Partners
- Water Body
- Intrastate Highway
- Railroad
- County Boundary
- State Boundary
- International Boundary

Scale: 0 5 10 20 30 40 Miles

Tesoro Refining and Marketing Company  
 19100 Ridgewood Parkway  
 San Antonio, TX 78259

## High Plains Pipeline System Map North Dakota / Montana

## **Appendix A-2**

Targa Antelope Lateral Pipeline Alignment Map

MCKENZIE COUNTY, NORTH DAKOTA  
SECTIONS 7, 8 AND 17, T152N-R95W



NOTES:  
1. ALL DATA PROVIDED BY TESORO LOGISTICS.  
2. NO SURVEY OF EXISTING OR PROPOSED FACILITIES WAS PERFORMED BY WOOD GROUP MUSTANG.

**DRAWING IN PROGRESS**  
LAST UPDATED  
7/7/2015

**FOR DISCUSSION ONLY**  
07/07/2015

- PROPOSED 12" PIPELINE
- EXISTING 12" TESORO HIGH PLAINS PIPELINE
- SECTION LINE
- LIMITS OF DISTURBANCE
- PROPOSED TARGA SURFACE SITE
- WETLAND

REV.	DESCRIPTION	DATE	DRAWN	CHKD.	APPD.
A	ISSUED FOR DISCUSSION	07/07/15	JM	MEH	RCH

DRAWING APPROVAL	
SIGNATURE	DATE

CLIENT

**TESORO LOGISTICS**

PROJECT TITLE  
TESORO - TARGA ANTELOPE

CLIENT PROJECT NUMBER  
AFE 60012230

PROJECT NUMBER  
104883

**WOOD GROUP MUSTANG, INC.**

PROJECT NO: 104883

DWG. TITLE  
TESORO - TARGA ANTELOPE ALIGNMENT SHEET

MCKENZIE COUNTY, NORTH DAKOTA

SCALE  
1"=200'

DWG. NO.  
**LOCATION MAP**

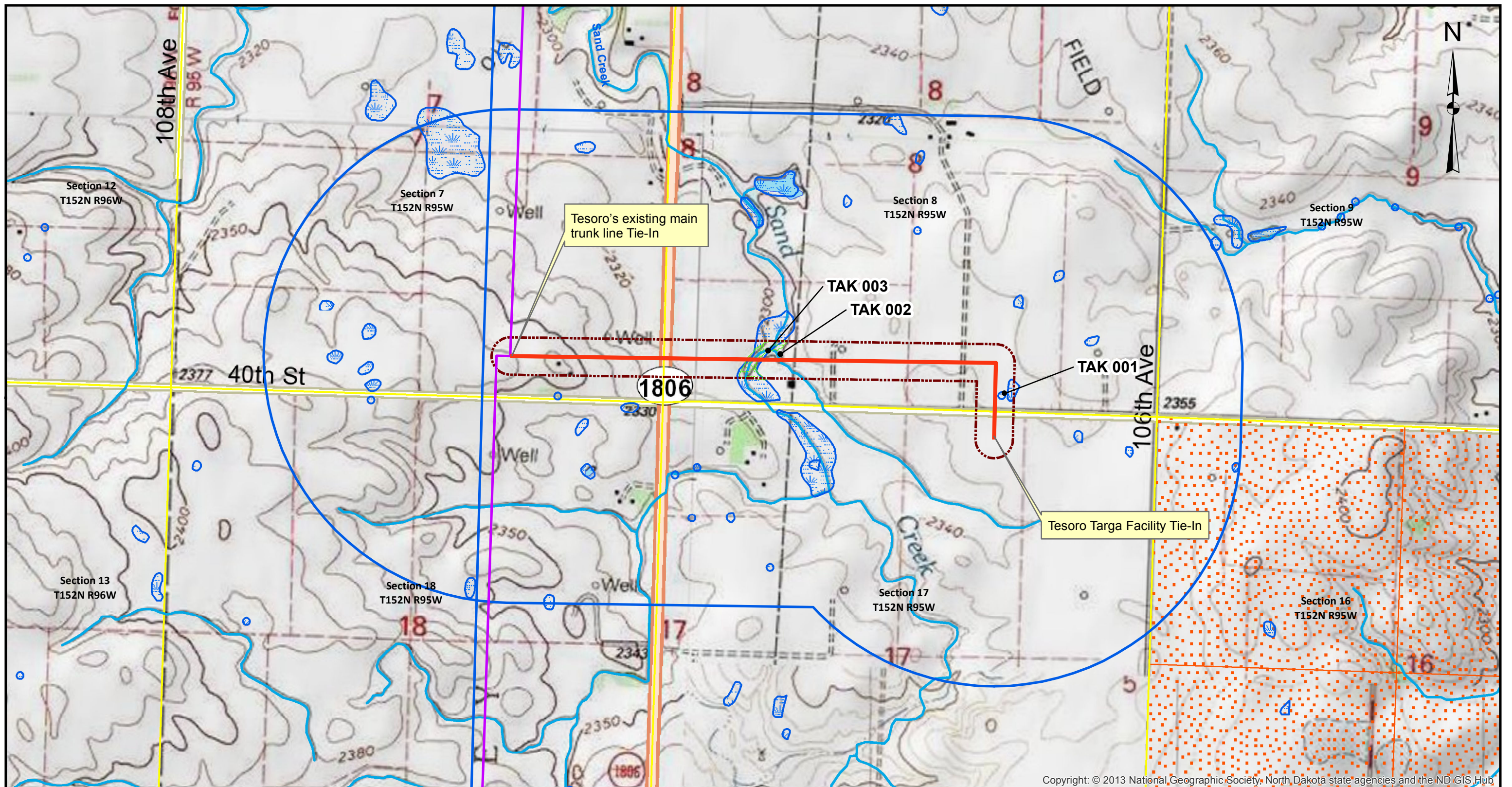
REV.  
A

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## **Appendix A-3**

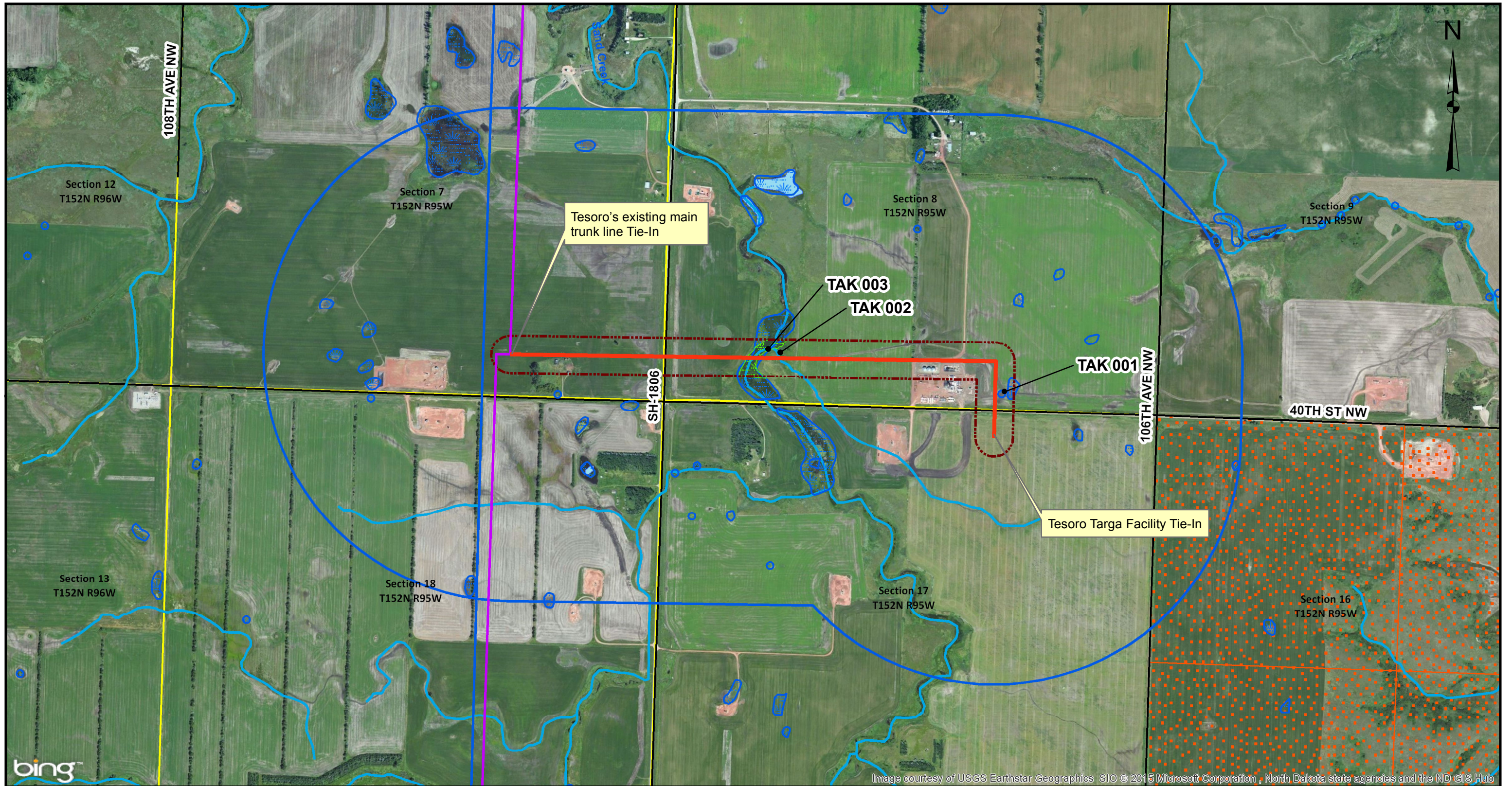
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Targa Antelope Lateral Pipeline Survey Area Location  
Maps



Copyright: © 2013 National Geographic Society, North Dakota state agencies and the ND GIS Hub

<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: red;">—</span> Proposed 12-Inch Antelop Lateral Pipeline</li> <li><span style="color: purple;">—</span> Keene to Antelope Pipeline</li> <li><span style="color: blue;">—</span> Tesoro High Plain Pipeline</li> <li><span style="border: 1px solid blue; padding: 2px;"> </span> Corridor (1-Mile)</li> <li><span style="border: 1px dashed red; padding: 2px;"> </span> Field Survey Corridor (400 feet)</li> <li><span style="background-color: #90EE90; border: 1px solid green; padding: 2px;"> </span> Field Survey Wetland</li> <li><span style="background-color: #ADD8E6; border: 1px solid blue; padding: 2px;"> </span> NWI Wetland</li> <li><span style="color: blue;">—</span> NHD Waterway</li> <li><span style="background-color: #ADD8E6; border: 1px solid blue; padding: 2px;"> </span> NHD Waterbody</li> <li><span style="background-color: #FFDAB9; border: 1px solid orange; padding: 2px;"> </span> North Dakota Mineral Trust Lands</li> </ul>				<p>McKenzie County, North Dakota</p>	
<p><b>12-Inch Antelope Lateral Pipeline Natural Resource - Aerial Map</b></p>					
<p>Date: 05/28/2015</p>		<p>Project Number: 104796</p>		<p>Exhibit A-3</p>	

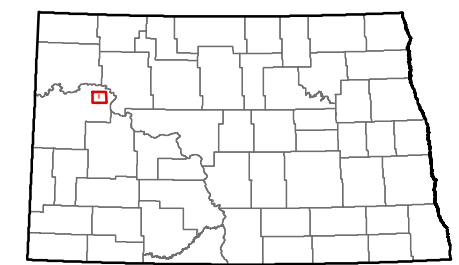


bing™

Image courtesy of USGS Earthstar Geographics SIO © 2015 Microsoft Corporation, North Dakota state agencies and the ND GIS Hub

**Legend**

- Proposed 12-Inch Antelop Lateral Pipeline
- Keene to Antelope Pipeline
- Tesoro High Plain Pipeline
- Corridor (1-Mile)
- Field Survey Corridor (400 feet)
- Field Survey Wetland
- NWI Wetland
- NHD Waterway
- NHDWaterbody
- NDHUB\_ROADS\_COUNTY\_line
- North Dakota Mineral Trust Lands
- NDHUB\_ROADS\_STATEFEDERAL\_line



McKenzie County, North Dakota

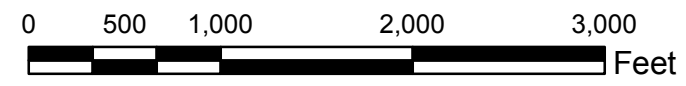


**Targa Antelope Lateral Pipeline  
Survey Area location Map - Aerial**

Date: 05/28/2015

Project Number: 104796

Exhibit A-3



# **Appendix B**

Field Study Reports

# **Appendix B-1**

Inventory of Exclusion and Avoidance Areas Report



## **INVENTORY OF EXCLUSION AND AVOIDANCE AREAS**

**Targa Antelope Lateral Project – 7,500 feet  
McKenzie County, North Dakota**

Apex Project No. 7010815N031

June 2015

Prepared for:

**Wood Group Mustang, Inc.**  
16001 Park Ten Place  
Houston, Texas 77084

## TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	Energy Conversion and Transmission Facility Siting Act.....	1
3.0	Transmission facility corridor and route criteria.....	1
3.1	Exclusion Areas.....	2
3.1.1	Areas of National Significance .....	2
3.1.2	Areas of State Significance .....	2
3.1.3	Areas of Local Significance .....	3
3.1.4	Areas Critical to Threatened and Endangered Species .....	3
3.1.5	Areas Critical to Unique and Rare State Species.....	3
3.1.6	Areas within 1,200 feet of Intercontinental Ballistic Missile (ICBM) Launch or Launch Control Facility.....	4
3.1.7	Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference .....	4
3.2	Avoidance Areas .....	4
3.2.1	Areas of National Significance .....	4
3.2.2	Areas of State Significance .....	5
3.2.3	Other Historical Resources .....	5
3.2.4	Geologically Unstable Areas .....	6
3.2.5	Residences, Schools, and Businesses .....	6
3.2.6	Reservoirs and Municipal Water Supplies.....	6
3.2.7	Rural Water Districts .....	6
3.2.8	Irrigated Land .....	7
3.2.9	Other Recreational Areas.....	7
3.3	Summary of Exclusion and Avoidance Criteria .....	7
4.0	REFERENCES.....	9

APPENDIX A: Figures  
Figure 1 – Project Location

**Inventory of Exclusion and Avoidance Areas  
Targa Antelope Lateral Project – 7,500 Feet  
McKenzie County, North Dakota**

**Apex Project No. 7010815N031**

## **1.0 INTRODUCTION**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7,500 feet of transmission pipeline, east to west, in McKenzie County, North Dakota. The western terminus of the proposed Project is located within an undeveloped agricultural field located approximately 0.33 mile northwest of the intersection of 40th Street NW and 107th Avenue NW. The pipeline traverses east, terminating in an undeveloped agricultural field located approximately 0.67 mile southeast of the intersection of 40th Street NW and 107th Avenue NW. The proposed Project includes the installation of a gathering pipeline within an assumed 50-foot-wide permanent easement. It is assumed a 50-foot wide temporary workspace easement will be utilized during construction (**Figure 1**).

## **2.0 ENERGY CONVERSION AND TRANSMISSION FACILITY SITING ACT**

North Dakota Century Code (N.D.C.C.) Chapter 49-22: North Dakota Energy Conversion and Transmission Facility Siting Act (Act) states, “it is necessary to ensure that the location, construction, and operation of energy conversion facilities and transmission facilities will produce minimal adverse effects on the environment and upon the welfare of the citizens of this state by providing that no energy conversion facility or transmission facility shall be located, constructed, and operated within this state without a certificate of site compatibility or a route permit.” When developing and evaluating potential corridors and routes, the applicant is required to consider the criteria identified in North Dakota Administrative Code (N.D.A.C.) §69-06-08, which include exclusion areas, avoidance areas, selection areas, and policy criteria.

The purpose of this report is to evaluate the exclusion and avoidance criteria in N.D.A.C. §69-06-08-02(1) and §69-06-08-02(2), respectively, for the proposed Project, by identifying and discussing the exclusion and avoidance areas as they relate to the proposed Project. This report does not include an evaluation of selection or policy criteria in §69-06-08-02(3) and §69-06-08-02(4), respectively.

## **3.0 TRANSMISSION FACILITY CORRIDOR AND ROUTE CRITERIA**

Pursuant to N.D.A.C. §69-06-08-02, the following criteria must be used in the preparation of the inventory of exclusion and avoidance areas. The criteria identify those environmentally and socially important areas that may be impacted by the proposed Project and provide clear guidance as to areas where no facilities can be sited and which areas to avoid.

The following sections identify and discuss the exclusion and avoidance criteria as they relate to the proposed Project.

### **3.1 Exclusion Areas**

Pursuant to N.D.A.C. §69-06-08-02(1), some geographic areas must be excluded from consideration in siting a transmission facility corridor.

#### *3.1.1 Areas of National Significance*

Among these geographic areas are designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, and wilderness areas.

#### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, much of the proposed Project alignment has been utilized primarily for agricultural purposes since at least 1995. Review of the North Dakota Hub Explorer (NDSG 2014); National Park Service (NPS) data, including NPS digital maps (NPS 2014a); National Register of Historic Places spreadsheet of listed properties (NPS 2014b); North Dakota Game and Fish Department maps (NDGFD 2014a); National Historic Landmarks Survey Listing of National Historic Landmarks by State for North Dakota (NPS 2014c); cultural resource survey report (Metcalf 2015); National Registry of Natural Landmarks (NPS 2009); the list of wilderness areas in North Dakota on Wilderness.net (Wilderness Institute 2014); and aerial imagery indicates that no designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, or wilderness areas are located in the proposed Project area.

#### **Potential Impacts**

No impacts to designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, or wilderness areas would occur as a result of the proposed Project.

#### *3.1.2 Areas of State Significance*

Among these geographic areas are designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, and nature preserves.

#### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project alignment has been utilized primarily for agricultural purposes since at least 1995. Review of the North Dakota Hub Explorer (NDSG 2014), the North Dakota Parks and Recreation Department digital maps (NDPRD 2014), North Dakota Game and Fish Department maps (NDGFD 2014a), cultural resource survey report (Metcalf 2015), and State Historical Society of North Dakota digital map (SHSND 2014) indicates that no designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, or nature preserves are located in the proposed Project area.

#### **Potential Impacts**

No impacts to designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, or nature preserves would occur as a result of the proposed Project.

### 3.1.3 Areas of Local Significance

Among these geographic areas are county parks and recreational areas, municipal parks, and parks owned or administered by other governmental subdivisions.

#### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project alignment has been utilized for agricultural purposes since at least 1995. Review of the McKenzie County website, including digital maps (McKenzie County 2009) and aerial imagery indicates that no county parks and recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions are located in the proposed Project area.

#### **Potential Impacts**

No impacts to county parks and recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions would be impacted by the proposed Project.

### 3.1.4 Areas Critical to Threatened and Endangered Species

Among these geographic areas are areas critical to the life stages of threatened or endangered animal or plant species.

#### **Existing Conditions**

A Federally-listed Threatened and Endangered Species Habitat Assessment for the proposed Project was conducted in June 2015 (Apex 2015). According to the online USFWS Information, Planning and Conservation (IPaC) System, a Project-specific species list identified 10 federally protected, proposed, or candidate species in McKenzie County to be included in an effects analysis for the proposed Project: interior least tern (*Sterna antillarum*), whooping crane (*Grus americana*), Sprague's pipit (*Anthus spragueii*), red knot (*Calidris canutus rufa*), piping plover (*Charadrius melodus*), northern long-eared bat (*Myotis septentrionalis*), black-footed ferret (*Mustela nigripes*), gray wolf (*Canis lupus*), pallid sturgeon (*Scaphirhynchus albus*), and Dakota skipper (*Hesperia dacotae*) (USFWS 2015). Critical habitat for the Dakota skipper has been designated in McKenzie County; however, based on review of the critical habitat maps in the listing package, the proposed Project does not appear to intersect critical habitat for the Dakota skipper (USFWS 2014). Due to the current and historic agricultural practices, no habitat for any federally-listed threatened/endangered, proposed, or candidate species was identified within the proposed Project alignment during the habitat evaluation.

#### **Potential Impacts**

The likelihood of encountering federally-listed threatened/endangered species within the proposed Project is unlikely; therefore, no impacts to these species would likely occur as a result of the proposed Project.

### 3.1.5 Areas Critical to Unique and Rare State Species

Among these geographic areas are areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.

#### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project alignment has been utilized for agricultural

purposes since at least 1995. Review of information regarding rare and unique plant and animal species in North Dakota (Bry 1986, USFWS 2004, NDGFD 2014b) indicates that the proposed Project area is unlikely to contain habitat for animal or plant species that are unique or rare to the state. Also, due to the current and historic agricultural practices, it is unlikely that rare and unique plant and animal species in North Dakota would be located within the proposed Project alignment.

### **Potential Impacts**

The likelihood of encountering animal or plant species that are unique or rare to the state within the proposed Project is unlikely; therefore, it is unlikely that such species would be irreversibly damaged by the proposed Project.

#### *3.1.6 Areas within 1,200 feet of Intercontinental Ballistic Missile (ICBM) Launch or Launch Control Facility*

### **Existing Conditions**

Review of aerial imagery indicates that the proposed Project is not within 1,200 feet of the geographic center of an ICBM launch or launch control facility.

### **Potential Impacts**

No impacts would occur to an ICBM launch or launch control facility as a result of the proposed Project and no impacts from an ICBM launch or launch control facility would impact the proposed Project.

#### *3.1.7 Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference*

### **Existing Conditions**

Review of aerial imagery indicates that the proposed Project is not within 30 feet on either side of a direct line between ICBM launch or launch control facilities.

### **Potential Impacts**

No ICBM launch or launch control facilities microwave interference would occur as a result of the proposed Project.

## **3.2 Avoidance Areas**

Pursuant to §69-06-08-02(2), some areas may not be considered in the routing of a transmission facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an avoidance area should be designated for a facility, the commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative routes. Economic considerations alone will not justify approval of these areas.

### *3.2.1 Areas of National Significance*

Among these geographic areas are designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.

### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project alignment has been utilized for agricultural purposes since at least 1995. The proposed Project is approximately 4 miles north of the Little Missouri National Grassland. Review of the North Dakota Hub Explorer (NDSG 2014); National Park Service (NPS) data, including NPS digital maps (NPS 2014a); National Register of Historic Places spreadsheet of listed properties (NPS 2014b); cultural resource survey report (Metcalf 2015); North Dakota Game and Fish Department maps (NDGFD 2014a); Wild and Scenic Rivers information (NWSRS 2014); aerial imagery; and topographic map indicates that no designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; or grasslands are located in the proposed Project area.

### **Potential Impacts**

No impacts to designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; or grasslands would occur as a result of the proposed Project.

#### *3.2.2 Areas of State Significance*

Among these geographic areas are designated or registered state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands.

### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project site has been utilized for agricultural purposes since at least 1995. Review of the North Dakota Hub Explorer (NDSG 2014), North Dakota Game and Fish Department maps (NDGFD 2014a), State Historical Society of North Dakota digital map (SHSND 2014), and aerial imagery indicates that no designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, or nature preserves are located in the proposed Project area.

### **Potential Impacts**

No impacts to designated or registered national state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands would occur as a result of the proposed Project.

#### *3.2.3 Other Historical Resources*

Among these geographic areas are historical resources which are not specifically designated as exclusion or avoidance areas.

### **Existing Conditions**

Review of the cultural resource survey report (Metcalf 2015) indicates that no historical resources which are not specifically designated as exclusion or avoidance areas are located within the proposed Project boundary.

### **Potential Impacts**

No impacts to historical resources which are not specifically designated as exclusion or avoidance areas would occur as a result of the proposed Project.

### 3.2.4 *Geologically Unstable Areas*

Among these geographic areas are areas which are geologically unstable.

#### **Existing Conditions**

The proposed Project area is in the Glacial Sediment-Glacial Sediment Draped Over Pre-existing Topography (Qcdn) geologic unit, which is characterized by thin glacial sediment draped over and only slightly modifying the non-glacial topography existing before the last glacial advance (Clayton 1980). It consists of unbedded, unsorted mixture of clay, silt, sand, and pebbles, and a few cobbles and boulders, and is as thick as 100 feet (Clayton 1980). No known fault zones or areas of subsidence occur within the proposed Project (USGS 1979). The proposed Project is in a low earthquake probability area and a low landslide probability area (NDSG 2014 and Clayton 1980).

#### **Potential Impacts**

The proposed Project area is not in a geologically unstable area.

### 3.2.5 *Residences, Schools, and Businesses*

These geographic areas include areas which are within five hundred feet of a residence, school, or place of business.

#### **Existing Conditions**

Review of the North Dakota Hub Explorer (NDSG 2014) and aerial imagery indicates that no residences, schools, or places of business are within five hundred feet of the proposed Project alignment.

#### **Potential Impacts**

No impacts to residences, schools, or businesses would occur as a result of the proposed Project.

### 3.2.6 *Reservoirs and Municipal Water Supplies*

#### **Existing Conditions**

Review of aerial imagery and the North Dakota Hub Explorer (NDSG 2014) indicates that no reservoirs or municipal water supplies are located within the proposed Project.

#### **Potential Impacts**

No impacts to reservoirs or municipal water supplies would occur as a result of the proposed Project.

### 3.2.7 *Rural Water Districts*

These geographic areas include water sources for organized rural water districts.

#### **Existing Conditions**

Review of the North Dakota Hub Explorer (NDSG 2014) indicates that no water sources for organized rural water districts are located within the proposed Project.

#### **Potential Impacts**

No impacts to water sources for organized rural water districts would occur as a result of the proposed Project.

### 3.2.8 Irrigated Land

#### **Existing Conditions**

Review of aerial imagery indicates that the proposed Project does not appear to be located on irrigated lands.

#### **Potential Impacts**

No impacts to irrigated land would occur as a result of the proposed Project.

### 3.2.9 Other Recreational Areas

These geographic areas include areas of recreational significance which are not designated as exclusion areas.

#### **Existing Conditions**

The proposed Project is located on disturbed agricultural and range land, with areas of what appear to be oil and gas development and intersecting roadways. Based on a review of historical aerial imagery, the proposed Project alignment has been primarily utilized for agricultural purposes since at least 1995.

#### **Potential Impacts**

No impacts to areas of recreational significance which are not designated as exclusion areas would occur as a result of the proposed Project.

### 3.3 Summary of Exclusion and Avoidance Criteria

Table 1 provides a summary of the inventory of exclusion and avoidance areas for the proposed Project.

**Table 1: Summary of Exclusion and Avoidance Criteria**

	<b>Criteria</b>	<b>Proposed Project Area</b>
<b>Exclusion Areas</b>	Designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, and wilderness areas	No identified occurrences within the proposed Project alignment.
	Designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, and nature preserves	No identified occurrences within the proposed Project alignment.
	County parks and recreational areas, municipal parks, and parks owned or administered by other governmental subdivisions	No identified occurrences within the proposed Project alignment.
	Areas critical to the life stages of threatened or endangered animal or plant species	No identified occurrences within the proposed Project alignment.
	Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged	No identified occurrences within the proposed Project alignment.
	Areas within 1,200 feet of Intercontinental Ballistic Missile (ICBM) Launch or Launch Control Facility	No identified occurrences within the proposed Project alignment.
	Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference	No identified occurrences within the proposed Project alignment.
<b>Avoidance</b>	Designated or registered national historic	No identified occurrences within the

<b>Areas</b>	districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands	proposed Project alignment.
	Designated or registered state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands	No identified occurrences within the proposed Project alignment.
	Historical resources which are not specifically designated as exclusion or avoidance areas	No identified occurrences within the proposed Project alignment.
	Geologically Unstable Areas	No identified occurrences within the proposed Project alignment.
	Within five hundred feet of a residence, school, or place of business	The proposed Project alignment would not be located within 500 feet of a residence, school, or place of business.
	Reservoirs and municipal water supplies	No identified occurrences within the proposed Project alignment.
	Water sources for organized rural water districts	No identified occurrences within the proposed Project alignment.
	Irrigated Land	No identified occurrences within the proposed Project alignment.
	Areas of recreational significance which are not designated as exclusion areas	No identified occurrences within the proposed Project alignment.

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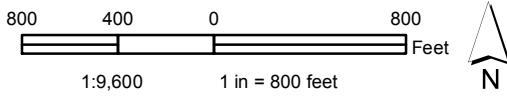
**APPENDIX A**  
**FIGURES**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

Figure 1: Project Location  
Inventory of Exclusion and Avoidance Areas  
Antelope Loop  
June 2015  
Apex No. 7010815N031

**Legend**  
— Antelope Lateral



## **Appendix B-2**

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Federally-listed Threatened and Endangered Species  
Habitat Assessment Report



## **Federally-listed Threatened and Endangered Species Habitat Assessment**

**Targa Antelope Lateral Project – 7,500 feet  
McKenzie County, North Dakota**

Apex Project No. 7010815N031

Prepared for:

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June 2015

## Table of Contents

1.0	Introduction .....	1
1.1	Regulatory Framework .....	1
2.0	Project Description .....	1
2.1	Ecoregion .....	2
2.2	Hydrology .....	2
2.3	Topography .....	2
2.4	Vegetation .....	3
2.5	Land Use .....	3
2.6	Soil.....	3
3.0	Methodology .....	3
4.0	Federally-listed Species .....	4
5.0	Migratory Birds .....	12
6.0	Summary of Best Management Practices.....	12
7.0	Conclusion .....	14
8.0	References.....	15

## Appendices

### Appendix A – Figures

Figure 1: Project Location

Figure 2: Topography (USGS 7.5')

## FEDERALLY-LISTED THREATENED AND ENDANGERED SPECIES HABITAT ASSESSMENT

### Targa Antelope Lateral Project – 7,500 Feet McKenzie County, North Dakota

#### Apex Project No. 7010815N031

## 1.0 INTRODUCTION

The purpose of this assessment is to review the proposed approximately 7,500-foot Targa Antelope Lateral Pipeline located within McKenzie County, North Dakota, hereafter referred to as the proposed Project, for potential federally-listed threatened, endangered, proposed, and candidate species habitat.

### 1.1 Regulatory Framework

#### ***The Endangered Species Act of 1973***

The United States Fish and Wildlife Service (USFWS) has authority under the Endangered Species Act (ESA) to list and monitor the status of species whose populations are considered imperiled. Species listed as threatened or endangered by the USFWS are provided full protection under the ESA including a prohibition of indirect “take.” The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct with regards to a federally-endangered species. Critical habitat is also protected under the ESA. Critical habitat is defined as areas that are essential for the conservation of a threatened or endangered species and that may require special management and protection.

#### ***The Bald and Golden Eagle Protection Act***

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from “taking” bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof” (USFWS 1999).

#### ***Migratory Bird Treaty Act of 1918***

The migratory Bird Treaty Act (MBTA) makes it illegal to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird...or any part, nest, or egg of any such bird.”

## 2.0 PROJECT DESCRIPTION

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7,500 feet of transmission pipeline, east to west, in McKenzie County, North Dakota.

The western terminus of the proposed Project is located within an undeveloped agricultural field located approximately 0.33 mile northwest of the intersection of 40th Street NW and 107th

Avenue NW. The pipeline traverses east, terminating in an undeveloped agricultural field located approximately 0.67 mile southeast of the intersection of 40th Street NW and 107th Avenue NW.

The proposed Project includes the installation of a gathering pipeline within an assumed 50-foot-wide permanent easement. It is assumed a 50-foot wide temporary workspace easement will be utilized during construction.

A map of the proposed Project location is included as Appendix A, Figure 1.

Ecoregion, hydrology, topography, vegetation, land use, and soil within the proposed Project were reviewed for characteristics that may assist in the evaluation of federally-listed species habitat.

## **2.1 Ecoregion**

The proposed pipeline alignment crosses one distinct ecoregion, as mapped by the Environmental Protection Agency Level III and IV Ecoregions of North Dakota and South Dakota poster (Bryce et al. 1996) and digital data.

The Missouri Plateau (43a) Ecoregion includes much of North Dakota west of the Missouri River, the landscape opens up to become the "wide open spaces" of the American West. This ecoregion is a semiarid rolling plain of shale, siltstone, and sandstone punctuated by occasional buttes and badlands. Native shortgrass prairie persists in areas of steep or broken topography, but they have been largely replaced by spring wheat, alfalfa, and grazing land over most of the ecoregion. Agriculture is limited by erratic precipitation patterns and limited opportunities for irrigation (Bryce et al. 1996).

Field investigations confirmed the proposed Project as exhibiting the characteristics of this designation.

## **2.2 Hydrology**

The proposed Project is located within one major (HUC 8) watershed, Lake Sakakawea Watershed (10110101) (EPA 2014).

According to United States Geological Survey (USGS) topographic maps, two blue-line tributaries, Sand Creek and a tributary of Sand Creek, are intersected by the proposed Project. No additional potential tributaries not delineated as USGS blue-lines were identified on aerial imagery. Sand Creek generally flows to the northwest, entering the Missouri River/Lake Sakakawea approximately 11 aerial miles north of the proposed Project.

The National Wetlands Inventory (NWI) (USFWS 2014a) identified two freshwater emergent wetlands delineated within the proposed Project boundaries. One freshwater emergent wetland is isolated and the other is associated with Sand Creek.

## **2.3 Topography**

Elevation of the proposed Project ranges from 2,359 feet above mean sea level (msl) at the western terminus to 2,306 feet above msl near the center of the alignment where the alignment intersects Sand Creek. The overall topographic relief of the proposed Project alignment generally reflects the rolling plains of the Missouri Plateau ecoregion with drops in elevation when in proximity to drainages (Bryce et al 1996).

A topographic map of the proposed Project is included as Appendix A, Figure 2.

## 2.4 Vegetation

The vegetation in the proposed Project area consisted primarily of non-native herbaceous species due to the extensive agricultural practices in the area. Plants observed during field investigations in drainages and immediately adjacent upland areas include: broadleaf cattail (*Typha latifolia*), Canada thistle (*Cirsium arvense*), smooth brome (*Bromus inermis*), meadow fescue (*Festuca pratensis*), foxtail barley (*Hordeum jubatum*), and prairie cordgrass (*Spartina pectinata*).

## 2.5 Land Use

The majority of the proposed Project is within the Cultivated Crops land cover designation, according to the National Land Cover Database (NLCD) (Fry et al. 2011). Open Space land cover designation is along paved and dirt roads.

Aerial imagery and field observations note the proposed Project area as undeveloped with the exception of disturbance from agricultural practices, paved and unpaved roadways, well pads associated with oil and gas extraction, and transmission activities.

## 2.6 Soil

Eight soil units are intersected by the proposed Project alignment. Table 1 lists the soil units within a 100-foot corridor along the proposed Project (NRCS 2013).

**Table 1: Soil Units within the Proposed Project Corridor**

Map Unit Symbol	Map Unit Name	Acres in Corridor	% of Corridor
E3527B	Williams-Bowbells loams, 3 to 6 percent slopes	0.2	1.1%
E3541B	Williams-Zahl loams, 3 to 6 percent slopes	8.1	50.6%
E3541C	Williams-Zahl loams, 6 to 9 percent slopes	1.3	8.0%
E3567F	Zahl-Max loams, dissected, 15 to 45 percent slopes	0.9	5.8%
E0447B	Daglun-Belfield complex, 0 to 6 percent slopes	1.0	6.0%
E3513B	Niobell-Williams loams, 3 to 6 percent slopes	1.9	12.0%
E3527A	Williams-Bowbells loams, 0 to 3 percent slopes	2.5	15.4%
E4542B	Lehr-Bowdle loams, 2 to 6 percent slopes	0.1	1.0%
<b>Totals for Area of Interest</b>		<b>16.0</b>	<b>100.0%</b>

Two soil units are listed as hydric in McKenzie County: E3513B and E3527A (NRCS 2014). Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

## 3.0 METHODOLOGY

Desktop and field investigations were conducted along the proposed Project alignment to determine the potential for listed species and habitat. A review for potential habitat for each listed species was conducted using aerial photography, topographic maps, and vegetative and

ecoregion data along the proposed alignment. Field investigations were conducted by Apex biologists on October 21, 2014 at tributary crossings and along various upland portions of the proposed alignment. The presence of riparian vegetation, canopy cover, tree height range, tree maturity, percent ground cover, and general landscape features were noted throughout the survey area.

#### 4.0 FEDERALLY-LISTED SPECIES

According to the USFWS Information, Planning, and Conservation System (IPaC), nine federally protected species should be considered in an effects analysis for the proposed Project: interior least tern (*Sterna antillarum*), northern long-eared bat (*Myotis septentrionalis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), Dakota skipper (*Hesperia dacotae*), black-footed ferret (*Mustela nigripes*), and gray wolf (*Canis lupus*) (USFWS 2015).

The Sprague’s pipit (*Anthus spragueii*) is a candidate species in McKenzie County. Candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species receive no statutory protection under the ESA.

Table 2 provides a summary review of the endangered, threatened, and candidate species reviewed for the proposed Project in McKenzie County.

**Table 2: Species Reviewed for the Proposed Project in McKenzie County, North Dakota**

Species	Federal Designation	Habitat	Species likely to occur in Project?
<b>Birds</b>			
Interior Least Tern	E	Sparsely vegetated sandbars on the Missouri and Yellowstone Rivers	No
Whooping Crane	E	Shallow wetlands that are characterized by cattails, bulrushes and sedges; may be found in upland areas, especially during migration	No
Piping Plover	T	Barren sand and gravel shores of rivers and lakes along Missouri and Yellowstone Rivers	No
Golden Eagle	Protected by the BGEPA	Undisturbed areas; variable habitat types	No
Bald Eagles	Protected by the BGEPA	Large rivers and lakes bordered with mature stands or old-growth trees	No
Red Knot	T	Coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves	No
Sprague’s Pipit	C	Nest in large patches of undisturbed prairie	No

Species	Federal Designation	Habitat	Species likely to occur in Project?
<b>Mammals</b>			
Black-footed Ferret	E	Short grass prairies, always within close proximity to prairie dog towns; no known populations in ND	No
Gray Wolf	E	Rare; likely habitat in ND is the forested areas in north-central and north-east ND, however, they may appear anywhere	No
Northern Long-eared Bat	T	Old-growth forests composed of trees 100 years old or older within relative proximity of caves or inactive mines	No
<b>Fish</b>			
Pallid Sturgeon	E	Missouri River; bottom of large, silty rivers with swift currents; prefer areas with sand flats and gravel bars	No
<b>Insect</b>			
Dakota Skipper	T	Undisturbed tall grass and mid-grass prairie; in the western part of its range, can be found in ungrazed native pastures with little bluestem, needle and thread, and purple coneflower	No

E = Endangered, T=Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate, BGEPA = Bald and Golden Eagle Protection Act  
Source: USFWS 2015

### Interior Least Tern (*Sterna antillarum*)

Least tern was federally-listed as threatened in U.S. Northern Great Plains on May 28, 1985. The interior population of the least tern currently breeds along over 4,600 km (2,858 mi) of river channels across the Great Plains and the Lower North Dakota River Valley. In North Dakota, the least tern is found mainly on sparsely vegetated riverine and reservoir sandbars in the Missouri River from Garrison Dam south to Lake Oahe, and on the Missouri and Yellowstone Rivers upstream of Lake Sakakawea (USFWS 2013a). The first complete range-wide survey for interior least tern was completed in 2005. The survey observed around 225 adult terns in North Dakota, 26 (5 colonies) of which were on the Missouri River-Lake Sakakawea and 199 (20 colonies) of which were on the Missouri River-Garrison River (Lott 2006).

The breeding season for the interior least tern lasts from May through August. The peak of the nesting season occurs from mid-June to mid-July. Least terns are colonial nesters with colonies ranging in size from a few breeding birds to over 1,200. Vegetation-free sand or gravel islands are preferred for nesting, though sandbanks, point bars, and beaches may also be utilized. Terns may also nest on manmade sites near water bodies with appropriate feeding habitat, including industrial sites, deposition sites, sand pits, and rooftops. Terns prefer areas distant

from trees or other vegetation that may hide or support predators. Terns migrate as far as 2,000 miles to their winter habitats in Central and South America (USFWS 2013a).

No critical habitat has been established for the interior least tern.

#### *Results*

No habitat for the interior least tern, such as sparsely vegetated sandbars within riverine habitat, is located in the proposed Project boundaries. The proposed Project is located primarily on uplands utilized for agriculture approximately 8 miles from the Missouri River. The likelihood of encountering interior least terns or their habitat in the proposed Project is very unlikely.

#### **Whooping Crane (*Grus americana*)**

The whooping crane was originally listed as an endangered species on March 11, 1967, following establishment of the Endangered Species Preservation Act and is currently listed as endangered under the Endangered Species Act of 1973. The historical breeding range of the whooping crane extended from Illinois, northwest through North Dakota, and up to the Northwest Territories. The last nesting record for North Dakota was in McHenry County in 1915 (Johnsgard 2009). About 264 whooping cranes presently occur in the wild. Almost all of these birds are in the Aransas-Wood Buffalo flock, which migrates through North Dakota in the summer and in the fall. The spring migration occurs from late April to mid-June; the fall migration occurs from September to October. Birds can show up in all parts of North Dakota, although most sightings occur in the western two-thirds of the State (CWS and USFWS 2007).

Whooping cranes may migrate alone, in pairs, in family groups, or in small flocks. Migration habitat typically includes wetland sites with good horizontal visibility, water depth of 30 centimeters or less, and minimum wetland size of 0.04 hectares for roosting. Wetlands within a half-mile of human activity are generally considered unsuitable. Wetlands with adjacent food sources, like crop fields, may be more attractive as stopover sites (Armbruster 1990).

Critical habitat for the whooping crane was designated on May 15, 1978 for nine locations in the U.S., none of which are in North Dakota (USFWS 1978a).

#### *Results*

Due to the presence of roadway and human activity and the relatively small size of the wetlands, no stopover habitat for the migrating whooping crane is located on or in the vicinity of the proposed Project. The likelihood of encountering whooping cranes or their habitat in the proposed Project is very low.

#### **Sprague's Pipit (*Anthus spragueii*)**

Sprague's pipit was listed as a candidate species on September 15, 2010. Sprague's pipit breeds from north central Alberta to central Manitoba, south to Montana and north central South Dakota, and east to northwestern Minnesota. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358 acres). Pipits strongly prefer native grasslands but are increasingly utilizing planted grasslands if the vegetative structure is appropriate. Preferred vegetative structure includes well drained, open grasslands with grass heights of 10 to 30 cm (4 to 12 inches) and without excessive shrubs. They are rarely found in cultivated areas and may avoid roads, trails, and habitat edges. The wintering range includes parts of Arizona, Texas, Oklahoma, Arkansas, Louisiana, North Dakota, and Mexico (USFWS 2010a).

### *Results*

The proposed Project consists of primarily disturbed agricultural and range land. No undisturbed native prairie that may be utilized by the Sprague's pipit is likely to be located at the proposed Project site. If this species was to occur in the proposed Project during construction, it will likely be flying overhead. The likelihood of encountering Sprague's pipit within the proposed Project is very low.

### **Red Knot (*Calidris canutus rufa*)**

The red knot is a threatened species for listing under the Endangered Species Act. The *rufa* subspecies is one of six recognized subspecies of red knot and one of three subspecies occurring in North America. This subspecies makes one of the longest distance migrations known in the animal kingdom as it travels between breeding areas in the central Canadian Arctic and wintering areas that are primarily in southern South America along the coast of Chile and Argentina. They migrate along the Atlantic coast of the U.S. where they may be found from Maine to Florida. The Delaware Bay area (in Delaware and New Jersey) is the largest known spring migration stopover area with far fewer migrants congregating elsewhere along the Atlantic coast. The concentration in the Delaware Bay area occurs from the middle of May to early June, corresponding to the spawning season of horseshoe crabs. The knots feed on horseshoe crab eggs, rebuilding energy reserves needed to complete migration to the Arctic and arrive on the breeding grounds in good condition (USFWS 2006).

Both in the spring and fall, migrating red knots can be found anywhere along the coastal and inland migration corridors from Canada to Argentina. The USFWS proposes to protect the red knot across all of its range, which includes North Dakota, based on historical and current occurrence data; the red knot's U.S. range includes 40 states and two territories. The red knot occurs primarily along the coasts, but the United States' data sets contain roughly 1,900 records of red knots more than 25 miles from any ocean coast. Most records in the interior states show small numbers (fewer than 10) of red knots, but there are multiple records in nearly every inland state (USFWS 2010b).

While migrating red knots will stop and actively feed at intermediate points known as 'staging areas.' Staging stops include coastal beaches, sandbars, mudflats, salt marshes, river deltas, and rock shelves (DeGraaf and Rappole 1995). Knots rarely occur inland from the coast during migration (Hayman et al. 1986).

### *Results*

Red knots are very rare in North Dakota. No appropriate staging area habitat that may be utilized by the red knot during migration is located at the proposed Project site. If this species was to occur in the proposed Project during construction, it will likely be flying overhead. The likelihood of encountering red knot within the proposed Project is extremely low.

### **Piping Plover (*Charadrius melodus*)**

The Great Plains piping plover population was federally-listed as threatened on December 11, 1985. North Dakota is the most important state in the Great Plains for nesting piping plovers. The state's population of piping plovers has increased from around 300 pairs in 1986 to close to 800 pairs as recently as 2008, which meets the North Dakota recovery goal of 650 pairs (USFWS 2009).

Piping plovers inhabit barren sand and gravel shores of rivers and lakes. The species typically avoids areas of dense vegetation. Nearly all natural lakes used by plovers in North Dakota are

alkaline in nature and have salt-encrusted, white beaches and are probably selected due to their sparse vegetation. Beaches used by piping plovers are generally 10 to 40 yards wide. Piping plovers also use barren river sandbars. In North Dakota, this habitat type is found on the Missouri and Yellowstone Rivers. More than three-fourths of piping plovers in North Dakota nest on prairie alkali lakes, while the remainder uses the Missouri River. The North Dakota population spends fall to early spring primarily in the Gulf of Mexico, especially the Texas coast (USFWS 2009).

The USFWS has established various places along the Missouri River and numerous alkali lakes as critical habitat for the piping plover in North Dakota.

#### *Results*

No habitat for the piping plover, such as alkali lakes or barren sand and gravel river shores, is located on the proposed Project. The likelihood of encountering piping plovers or their habitat along the proposed Project is very low.

#### **Eagles**

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaestros canadensis*) are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, which prohibits anyone from "taking" bald eagles, including their parts, nests, or eggs, without a permit issued by the Secretary of the Interior.

Bald eagles prefer large rivers and lakes bordered with mature stands or old-growth trees such as cottonwood. Breeding habitat often includes some type of edge and relatively open canopy. The large nests are usually built within the top quarter of tall, living trees. Nests are relatively close to water, typically less than 2 km (NDGF 2012a).

Golden eagles can be found in a variety of habitats, including tundra, grasslands, forested habitat, woodland-brushlands, and in arid deserts. They are aerial predators and eat small to mid-sized reptiles, birds, and mammals up to the size of mule deer fawns and coyote pups. They also are known to scavenge and utilize carrion. Golden eagles build nests on cliffs or in the largest trees of forested stands with unobstructed views of the surrounding habitat. Their nests usually include sticks and soft material added to existing nests; nests are strong, flat or bowl shaped platforms. Golden eagles avoid nesting near urban habitat and do not generally nest in densely forested habitat. Individuals will occasionally nest near semi-urban areas where housing density is low and in farmland habitat; however, golden eagles have been noted to be sensitive to some forms of human presence (USFWS 2011a).

In North Dakota, bald eagle breeding pairs mostly nest along the Missouri River south of the Garrison Dam and in the eastern part of the state (Johnson 2010). Golden eagles occur in the southwestern part of North Dakota but are considered uncommon (NDGF 2012b).

#### *Results*

According to the North Dakota Game and Fish Department Golden Eagle Breeding Map, the proposed Project is entirely located within the secondary breeding range for the golden eagle (NDGF 2014). No ideal breeding habitat for the golden eagle, such as cliffs and forested areas with large trees, is located in the proposed Project boundaries. Bald eagles are not expected to nest in the geographic range of the proposed Project and no appropriate nesting habitat is intersected by the proposed Project. If bald or golden eagles were to occur in the proposed Project during construction, they would likely be flying overhead.

### **Black-footed Ferret (*Mustela nigripes*)**

The black-footed ferret was originally listed as an endangered species on March 11, 1967, following establishment of the Endangered Species Preservation Act and is currently listed as endangered under the Endangered Species Act of 1973. The historic range of the black-footed ferret spanned much of western North America's intermountain and prairie grasslands, extending from Canada to Mexico. Ferrets have a close association with prairie dogs. Habitat destruction, poisoning, and disease in native prairie dog populations was an important factor in the decline of the black-footed ferret. Ferrets were thought to be extremely rare until a small population was located in Mellette County, South Dakota in 1964. After wild and captive individuals of the Mellette population died, the ferret was thought to be extinct until a remnant population was discovered near Meeteetse, Wyoming in 1981. Since 1991, 20 black-footed ferret reintroduction projects have been conducted across eight states and Mexico. None of the reintroduction sites are in North Dakota. It is very unlikely that any undiscovered wild populations remain (USFWS 2015).

Black-footed ferrets are exempt from the requirement to designate critical habitat because they were listed prior to the 1978 amendments requiring critical habitat.

### *Results*

The black-footed ferret depends on prairie dogs (*Cynomys* spp.) for food and on prairie dog burrows for shelter. No wild or reintroduction populations are known to occur in North Dakota. Most unconfirmed sightings of black-footed ferrets come from the southwest part of the state (USFWS 2014b). The likelihood of encountering black-footed ferret or their habitat within the proposed Project is very low.

### **Gray Wolf (*Canis lupus*)**

Various gray wolf subspecies were listed as endangered under the Endangered Species Conservation Act of 1969 and under the Endangered Species Act of 1973. In 1978, the USFWS published a rule reclassifying the gray wolf (*Canis lupus*) as an endangered population at the species level (USFWS 1978b). The Western Great Lakes Distinct Population Segment (DPS), including eastern North Dakota, was determined recovered and delisted in 2011 (USFWS 2011b). Western North Dakota, including the proposed Project, falls within the range of the species which is still listed as endangered. In June 2013, the USFWS proposed to remove the gray wolf in the contiguous 48 states from the list of endangered species after confirmation of successful recovery (USFWS 2013c). Under the proposal, protection of the species would fall to state wildlife management agencies. A final determination has not been made at the time of this report.

Historically, gray wolves have only rarely occurred in North Dakota (Licht and Huffman 1996). The few lone individuals that have been more recently detected in these areas are believed to be dispersing away from the more saturated habitat in the primary range (of the recovered DPSs or Canada populations) into peripheral areas where wolves are scarce or absent. The USFWS has no information suggesting that persistent breeding pairs have become established in the Great Plains outside of DPSs (USFWS 2012).

### Results

Gray wolves are very rare in North Dakota. The likelihood of encountering the gray wolf within the proposed Project is considered extremely low.

### **Northern Long-eared Bat (*Myotis septentrionalis*)**

A threatened species under the Endangered Species Act, the northern long-eared bat ranges across much of the eastern and north central United States, and all Canadian provinces west to the southern Northwest Territories and eastern British Columbia. However, in all these places, the species is patchily distributed and rarely found in large numbers. The species' range within the United States includes: Alabama, Arkansas, Connecticut, Delaware, the District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin, although the species is rare in the northwestern portion and some of the southern states within its range (USFWS 2013d). Although the northern long-eared bat is not a migratory species, movements of the species between summer roost and winter hibernacula can be up to 35 miles (NatureServe 2014).

Summer roost habitat is defined variably across the species' range; however, its presence is generally correlated with old-growth forests composed of trees 100 years old or older. Relevant late-successional forest features include a high percentage of old trees, uneven forest structure (resulting in multilayered vertical structure), single and multiple tree-fall gaps, standing snags, and woody debris. Males typically roost singly and prefer coniferous trees in conifer-dominated stands, while females roost singly or in small groups, preferring shade-tolerant deciduous trees of mid-stage decay in mature stands. Females may form small maternity colonies behind exfoliating bark, in tree snags, and in stumps, as well as in bat houses and behind building shutters (USFWS 2013d).

Northern long-eared bats may hibernate solitarily or in multispecies hibernacula, and are commonly found in caves or inactive mines. The species appears to favor small cracks or crevices in cave ceilings, preferring cooler, higher humidity areas for hibernation (USFWS 2013d).

### Results

Mature, old-growth forests, caves, and inactive mines are not located on or within the vicinity of the proposed Project. If this species was to occur in the proposed Project area during construction, it will likely be flying overhead. The likelihood of encountering the northern long-eared bat within the proposed Project is extremely low.

### **Pallid Sturgeon (*Scaphirhynchus albus*)**

Pallid sturgeon was federally-listed as endangered on September 6, 1990. This large fish species occupies large, turbid, free-flowing riverine habitat, typically in strong currents over firm gravel or sandy substrate. Sturgeons primarily utilize main channel, secondary channel, and channel border habitats, and are rarely observed in areas without flowing water (USFWS 2014c).

Historically, pallid sturgeons were found in the Missouri and Yellowstone Rivers in Montana downstream to the Missouri-North Dakota confluence and in the North Dakota River from near Keokuk, Iowa downstream to New Orleans, Louisiana. They were also documented in lower

reaches of larger tributaries to the Missouri, North Dakota, and Yellowstone Rivers, including the Tongue, Milk, Niobrara, Platte, Kansas, Big Sioux, St. Francis, Grande, and Big Sunflower Rivers (USFWS 2014c).

Today, pallid sturgeon populations are fragmented by dams on the Missouri River. Pallid sturgeons are scarce in the upper Missouri River above Ft. Peck Reservoir, in the Missouri and lower Yellowstone Rivers between Ft. Peck Dam and Lake Sakakawea, in the Missouri River downstream of Gavins Point Dam, and in the North Dakota and Atchafalaya Rivers. Pallid sturgeons are not known to occupy Lake Sakakawea near the proposed Project (USFWS 2014c).

No critical habitat has been established for the pallid sturgeon.

#### *Results*

Habitat for the pallid sturgeon is not located within the proposed Project. The proposed Project consists of primarily disturbed agricultural and range land and no perennial streams are intersected by the proposed Project that exhibit the characteristics necessary for pallid sturgeon habitat such as a large channel and turbid and strong free-flowing water. The likelihood of encountering pallid sturgeon or their habitat within the proposed Project is very low.

#### **Dakota Skipper** (*Hesperia dacotae*)

The Dakota skipper was federally-listed as threatened on October 24, 2014. This species is a small- to medium-sized butterfly with a wingspan of 2.4 to 3.2 centimeters (cm) (0.9 to 1.3 inches (in)) and hooked antennae (USFWS 2011c). The most significant remaining populations of Dakota skipper occur in western Minnesota, northeastern South Dakota, and north central and southeastern North Dakota (USFWS 2014d). The only known population of Dakota skipper in McKenzie County is the Eagle Nest Butte population within the boundaries of the Fort Berthold Indian Reservation (USFWS 2011c).

This species is found in undisturbed, high quality native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily (*Lilium philadelphicum*), harebell (*Campanula rotundifolia*), and smooth camas (*Zygadenus elegans*); and 2) upland (dry) prairie dominated by bluestem grasses, needlegrass, pale purple coneflower (*Echinacea pallida*), upright coneflower (*Ratibida columnifera*), and blanketflower (*Gaillardia aristata*) (USFWS 2011c).

Dakota skippers have been historically reported from 50 sites in 18 North Dakota counties. This species is now possibly extirpated from fourteen sites and three counties in North Dakota, primarily due to heavy grazing, weed control, and other disturbances (USFWS 2011c). The species is now considered to be present at only 18 sites in the State. The nearest two occupied sites in McKenzie County are over 15 miles northwest of the proposed Project. In addition, the Eagle Nest Butte population is over 25 miles southwest of the proposed Project. The likelihood that significant numbers of undiscovered Dakota skipper populations occur in North Dakota is low (USFWS 2013e).

In North Dakota, critical habitat has been proposed for Dakota skipper in Richland, Ransom, McHenry, Rolette, McKenzie, and Wells counties (USFWS 2013e).

### Results

The vegetation in and adjacent to the proposed Project consists of a primarily disturbed agricultural land setting adjacent to roadways. Native prairie containing high diversity of wildflowers and grasses was not identified on or in the vicinity of the proposed Project. This type of altered habitat is not conducive to the species. The likelihood of encountering Dakota skipper or their habitat within the proposed Project is very low.

## 5.0 MIGRATORY BIRDS

Numerous migratory birds pass through or breed and nest in North Dakota from February 1st to July 15<sup>th</sup> each year. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) (916 U.S.C. 703-711) and Executive Order 13186. It is important to note that though while EO 13186 emphasizes the preservation of migratory bird habitat, destruction of habitat is not included in the definition of “take” in the MBTA and is therefore not unlawful under the MBTA.

In order to fully comply with the MBTA and in a good faith effort to protect North Dakota bird species, Apex recommends implementing all avoidance strategies recommended by the USFWS in order to avoid impacts to migratory birds. Strategies may include the following efforts, which are listed in order of preference:

- Avoid construction during the migratory bird nesting season (February 1 to July 15).
- Clear and grub any potential nesting habitat prior to the spring nesting period. Any areas that are cleared and grubbed prior to the migratory bird season but that are not constructed within a reasonable timeframe would be maintained, as practicable and necessary, to avoid the regrowth of nesting habitat.
- Survey for nesting birds within five days of construction in any areas that were not cleared prior to February 1. If nests are identified during surveys, work would stop within 0.1 mile of the nest. Construction would restart after nest had failed or the chicks have fledged.
- Other reasonable, prudent, and effective measures include use of suitable mufflers on engines to minimize noise and use of approved roadways for construction traffic.

In order to reestablish bird habitat as much as practicable following construction, all grassland areas (native and non-native) impacted by construction should be promptly reclaimed using approved NRCS seed mixes based on ecological site and seeding will be timed to maximize establishment of native species. By implementing these USFWS-recommended avoidance measures and revegetating disturbed areas, no impacts to migratory birds are expected to occur and only minor impacts to their habitat may occur during construction of the Project. Furthermore, once built, the Project would result in reduced truck traffic and human use of the area, which would be beneficial to migratory birds that avoid human presence.

Under the no-impact scenario afforded by the minimization and avoidance strategies implemented for this Project, implementation of a detailed conservation plan, purchase of a grassland easement, or implementation of habitat mitigation is not proposed as necessary for this Project.

## 6.0 SUMMARY OF BEST MANAGEMENT PRACTICES

In an effort to minimize potential effects to listed species and migratory birds, Apex recommends implementation of the following measures during construction and operation of the Project.

- Site the Project in areas with existing disturbances to the greatest extent practicable.
- Co-locate the crude oil and produced water pipelines in the same trench.
- Minimize the width of the pipeline trench to be excavated.
- Minimize the removal of trees and woody shrubs.
- Separate topsoil from subsoil and protect and stabilize stockpiles until reclamation.
- Avoid construction and vehicle use during wet conditions that could result in excessive rutting or compaction.
- Maintain buffer strips or use other sediment control measures such as earth berms, fiber rolls, or straw wattles to avoid sediment migration to drainages during construction.
- Implement approved Stormwater Pollution Prevention Plan, SPCC Plan, and BMPs during construction to prevent erosion, sedimentation, and contaminants from entering drainages.
- Install culverts to maintain drainage where needed.
- During construction, plan transportation to reduce vehicle density and post speed limits on roads.
- Store human trash and waste generated during construction in appropriate containers and dispose at a state-approved facility.
- Conduct reclamation as soon as practicable after construction of segments of the pipeline are complete.
- Contour disturbed areas to approximate original contour of the landscape.
- During reclamation, replace topsoil last and protect it from erosion until vegetation growth provides satisfactory stabilization.
- Re-seed areas not used for cultivation with a NRCS grassland mix from an approved source.
- Implement a noxious weed management plan.
- Design any above ground facilities to minimize visual impacts.
- Use of a SCADA communications system and leak detection metering.
- If a bald or golden eagle begins to nest within 0.5 mile of the Project boundaries during construction, the USFWS would be contacted to determine appropriate buffers or timing restrictions for construction activities near the nest.
- If a whooping crane is sighted within one mile of the Project area while it is under construction, all work shall cease within one mile of that part of the Project. Work may resume after the bird(s) leave the area (record sighting, bird departure time, and work start and stop time). Contact the USFWS if cranes are lingering in the area rather than flying overhead.
- If possible, construction timing would occur outside of the prime breeding season for migratory birds, February 1<sup>st</sup> to July 15<sup>th</sup>. If construction cannot be avoided during this period, then either 1) vegetation would be mown or completely removed within the Project ROW prior to the breeding season, or 2) avian surveys within the Project ROW would be completed no more than five days before construction begins. If nests are identified during surveys, work would stop within 0.1 mile of the nest. Construction would restart after nest had failed or the chicks have fledged. If any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.
- Implement other reasonable, prudent, and effective measures to avoid impacts to migratory birds during construction and operation, including use of suitable mufflers on engines to minimize noise and use of approved roadways by construction traffic.

## 7.0 CONCLUSION

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7,500 feet of transmission pipeline, in McKenzie County, North Dakota. This habitat assessment was prepared in order to determine if the proposed Project may intersect habitat for various federally-listed threatened and endangered species. Desktop review and field investigations were conducted to evaluate if the vegetative and landscape characteristics of the proposed Project location were consistent with threatened and endangered species habitat characteristics.

Habitat for the ten federally-listed and candidate species in McKenzie County, interior least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), Dakota skipper (*Hesperia dacotae*), black-footed ferret (*Mustela nigripes*), gray wolf (*Canis lupus*), red knot (*Calidris canutus*), northern long-eared bat (*Myotis septentrionalis*), and Sprague's pipit (*Anthus spragueii*), was not observed within the proposed Project alignment. Due to the proposed Project's lack of appropriate aquatic and forested habitat and primarily disturbed agricultural and rangeland vegetation, potential for these species to occur within the proposed Project is considered highly unlikely.

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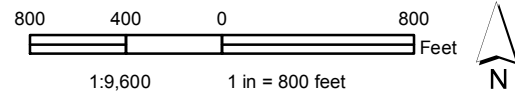
## **APPENDIX A**

### **FIGURES**



Figure 1: Project Location  
 T&E Species Habitat Assessment  
 Antelope Loop  
 June 2015  
 Apex No. 7010815N031

**Legend**  
 Antelope Lateral



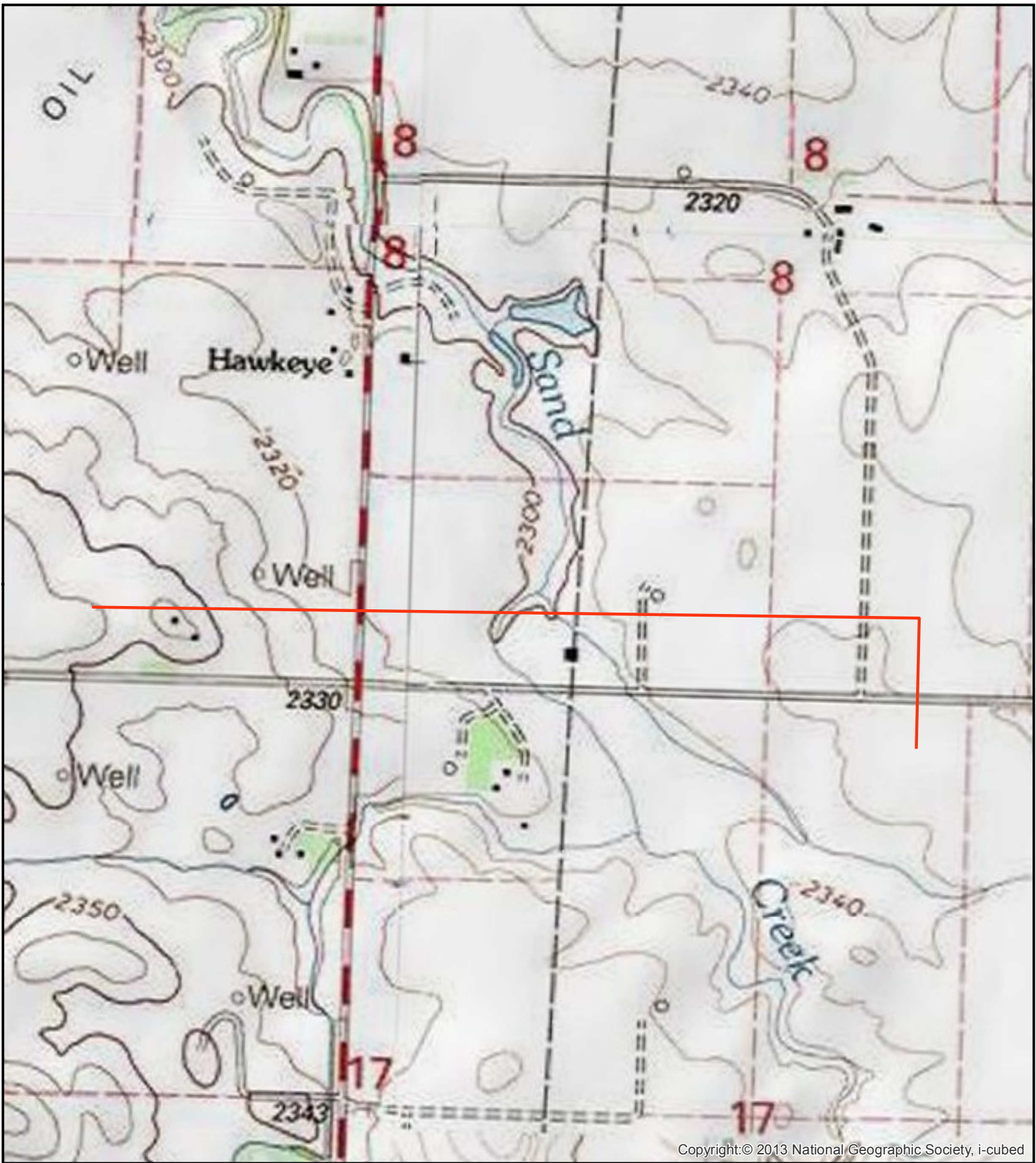
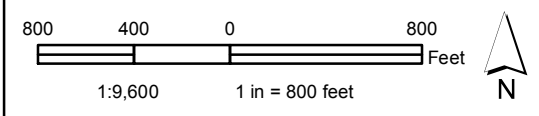


Figure 2: Topography (USGS 7.5')  
 T&E Species Habitat Assessment  
 Antelope Loop  
 June 2015  
 Apex No. 7010815N031

**Legend**  
 — Antelope Lateral



## **Appendix B-3**

Potential Waters of the United States Assessment Report



## **Potential Waters of the United States Assessment**

**Targa Antelope Lateral Project – 7,500 feet  
McKenzie County, North Dakota**

Apex Project No. 7010815N031

Prepared for:

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June 2015

## Table of Contents

1.0	Introduction .....	1
1.1	Regulatory Background .....	1
1.2	Nationwide Permit 12 .....	2
2.0	Project Description .....	2
3.0	Project Summary and Setting .....	2
3.1	Topography .....	2
3.2	Hydrology .....	3
3.3	Vegetation .....	3
3.4	Soils.....	3
4.0	Methodology.....	4
5.0	Results .....	4
6.0	Non-jurisdictional Areas .....	8
7.0	Requirements for Preconstruction Notification.....	8
8.0	Summary.....	10
9.0	References.....	11

## Appendices

### Appendix A – Figures

Figure 1: Project Location

Figure 2: Topography (USGS 7.5')

Figure 3: Results

## POTENTIAL WATERS OF THE U.S. ASSESSMENT

### Targa Antelope Lateral Project – 7,500 Feet McKenzie County, North Dakota

#### Apex Project No. 7010815N031

## 1.0 INTRODUCTION

The purpose of this assessment is to review the proposed approximately 7,500-foot Targa Antelope Lateral Pipeline located within McKenzie County, North Dakota, hereafter referred to as the proposed Project, for waters of the United States (U.S.) and to determine if preconstruction notification (PCN) to the U.S. Army Corps of Engineers (USACE) may be required in accordance with Nationwide Permit (NWP) 12 reporting conditions at any crossings.

### 1.1 Regulatory Background

Under Section 404 of the Clean Water Act, the USACE has the authority to permit the discharge of dredged or fill material into waters of the U.S. The term “waters of the U.S.” is defined as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; and
- The territorial seas.

In 2006, *Rapanos v. United States* clarified that waters of the U.S. are also defined as: Traditional Navigable Waters (TNW) and their adjacent wetlands; non-navigable tributaries of TNWs that are relatively permanent; and wetlands that directly abut such tributaries. In addition, the *Rapanos* decision clarified that the USACE asserts jurisdiction over every water body that is not a relatively permanent water (RPW) if that water body is determined to have a significant nexus with a TNW. A significant nexus exists if the tributary, in combinations with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, or biological integrity of a TNW.

The limit of USACE jurisdiction for non-tidal waters of the U.S. in the absence of adjacent wetlands is the ordinary high water mark (OHWM). “Ordinary high water mark” is defined as that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). To be considered a wetland, an area must have: (1) a prevalence of hydrophytic vegetation, (2) hydric soils, and (3) appropriate wetland hydrology. The feature must have a hydric connection or significant nexus to a waters of the U.S. in order to be considered jurisdictional under Section 404.

Certain geographic features are generally not considered waters of the U.S. by the Environmental Protection Agency (EPA) and USACE. These geographic features include swales, erosional features, and small washes characterized by low volume, infrequent and short duration flow; ditches draining wholly uplands and that do not carry a relatively permanent flow of water; and upland transporting of overland flow generated from precipitation. In addition, isolated features that do not have a significant nexus or connection to a water of the U.S. are not considered waters of the U.S. and are not federally regulated.

### **1.2 Nationwide Permit 12**

The USACE utilizes a Nationwide Permit program to authorize discharge and fill into waters of the U.S. Under the Nationwide Permit program, Nationwide Permit (NWP) 12 - Utility Line Activities, would be most applicable to the proposed Project. NWP 12 authorizes activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the U.S., provided the activity does not result in the loss of greater than 1/2-acre of waters of the U.S. for each single and complete crossing.

## **2.0 PROJECT DESCRIPTION**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate approximately 7,500 feet of transmission pipeline, east to west, in McKenzie County, North Dakota.

The western terminus of the proposed Project is located within an undeveloped agricultural field located approximately 0.33 mile northwest of the intersection of 40th Street NW and 107th Avenue NW. The pipeline traverses east, terminating in an undeveloped agricultural field located approximately 0.67 mile southeast of the intersection of 40th Street NW and 107th Avenue NW.

The proposed Project includes the installation of a gathering pipeline within an assumed 50-foot-wide permanent easement. It is assumed a 50-foot wide temporary workspace easement will be utilized during construction.

A map of the proposed Project is included as Appendix A, Figure 1.

## **3.0 PROJECT SUMMARY AND SETTING**

Topography, hydrology, vegetation, and soils within the proposed Project alignment are detailed below.

### **3.1 Topography**

Elevation of the proposed Project ranges from 2,359 feet above mean sea level (msl) at the western terminus to 2,306 feet above msl near the center of the alignment where the alignment

intersects Sand Creek. The overall topographic relief of the proposed Project alignment is generally rolling plains with drops in elevation when in proximity to drainages.

A topographic map of the proposed Project is included as Appendix A, Figure 2.

### 3.2 Hydrology

The proposed Project is located within one subwatershed (HUC 12): Upper Sand Creek (101101011001). This subwatershed is located with the Lake Sakakawea major watershed (HUC 8 10110101) (EPA 2014).

According to United States Geological Survey (USGS) topographic maps, two blue-line tributaries, TAK 003 (Sand Creek) and TAK 002 (a potential tributary of Sand Creek) are intersected by the proposed Project (Appendix A, Figure 3). No additional potential tributaries not delineated as USGS blue-lines were identified on aerial imagery. Sand Creek, an RPW, generally flows to the northwest, entering the Missouri River/Lake Sakakawea, a TNW, approximately 11 aerial miles north of the proposed Project.

According to the National Wetlands Inventory (NWI) (USFWS 2014), two freshwater emergent wetlands are delineated within the proposed Project boundaries. One freshwater emergent wetland is isolated [TAK 001 (0.10 acre)] and the other is associated with a blue-line tributary [TAK 003 (5.58 acres)].

### 3.3 Vegetation

The majority of the proposed Project is within the Cultivated Crops land cover designation, according to the National Land Cover Database (NLCD) (Fry et al. 2011). Open Space land cover designation is along paved and dirt roads.

### 3.4 Soils

Eight soil units are intersected by the proposed Project alignment. Table 1 lists the soil units within a 100-foot corridor along the proposed Project (NRCS 2013).

**Table 1: Soil Units within the Proposed Project Corridor**

Map Unit Symbol	Map Unit Name	Acres in Corridor	% of Corridor
E3527B	Williams-Bowbells loams, 3 to 6 percent slopes	0.2	1.1%
E3541B	Williams-Zahl loams, 3 to 6 percent slopes	8.1	50.6%
E3541C	Williams-Zahl loams, 6 to 9 percent slopes	1.3	8.0%
E3567F	Zahl-Max loams, dissected, 15 to 45 percent slopes	0.9	5.8%
E0447B	Daglum-Belfield complex, 0 to 6 percent slopes	1.0	6.0%
E3513B	Niobell-Williams loams, 3 to 6 percent slopes	1.9	12.0%
E3527A	Williams-Bowbells loams, 0 to 3 percent slopes	2.5	15.4%
E4542B	Lehr-Bowdle loams, 2 to 6 percent slopes	0.1	1.0%
<b>Totals for Area of Interest</b>		<b>16.0</b>	<b>100.0%</b>

Two soil units are listed as hydric in McKenzie County: E3513B and E3527A (NRCS 2014). Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

#### **4.0 METHODOLOGY**

Prior to the field investigation, a detailed desktop Geographic Information System (GIS) analysis was conducted to determine the locations of potential tributary crossings that required field inspection. USGS topographic maps were used to identify the locations of potential tributaries and wetlands that may be intersected by the proposed Project, as well as to identify the flow regime of the proposed Project to determine downstream connectivity to a TNW. Aerial imagery of the proposed Project was reviewed for evidence of channel characteristics including inundation, sparsely vegetated surfaces, changes in vegetation type, clearly defined channels, and manmade disturbances.

Two potential linear features and one potential freshwater emergent wetland were identified as requiring field inspection.

Following the GIS study, pedestrian field reconnaissance was performed by Apex biologists on October 21, 2014. Field investigations were done to compare background data to existing conditions and to determine the current extent of waters of the U.S. within the proposed Project.

#### **5.0 RESULTS**

One potential waters of the U.S. delineated as a USGS blue-line was identified during field survey. Table 2 summarizes the results of the field reconnaissance; a description of each potential waters of the U.S. follows Table 2.

Please note the final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.

A map of the results of the investigation is included in Appendix A, Figure 3. A digital kml file of the boundaries of the delineated waters of the U.S. has been prepared to accompany this report.

**Table 2: Potential Waters of the U.S. Summary Table**

ID	Lat/Long (dd)	Resource Type	OHWM (ft)	Linear Feet in Proposed Project Area	Impact Type	Sq. Feet of Impact	Acres of Impact	PCN Required?	Reason
TAK 003	47.993405, 102.872884	PS/NFW	122.3	125.6	D/T	13,547.2	0.311	N	

**Resource Type**

NFW – Non-forested wetland, FW – Forested Wetland, PS – Perennial Stream, IS – Intermittent Stream, ES – Ephemeral Stream, I – Impoundment

**Impact Types**

D/P – Direct and Permanent, D/T – Direct and Temporary, I/P – Indirect and Permanent, I/T – Indirect and Temporary

**Reason**

- A – Mechanized Land Clearing
- B – Requires a Section 10 Permit
- C – Utility line exceeds 500 feet in waters of the US, excluding overhead lines
- D – Utility line is within a jurisdictional area and the utility line runs parallel to a stream bed that is within that jurisdictional area
- E – The loss of waters exceeds 0.10 acre
- F – Permanent access roads are constructed above grade in waters of the US for a distance of more than 500 feet
- G – Permanent access roads are constructed in waters of the US with impervious materials
- H – Potential endangered species
- I – Potential historic resources
- J – Other

### **TAK 003 (Sand Creek)**

This perennial stream is Sand Creek and an OHWM was not visible due to the extensive freshwater emergent wetland surrounding the drainage. At the time of field investigations, there was approximately six inches of standing water in the wetland. There was a noticeable change in vegetation patterns between areas adjacent to the drainage and uplands; canopy riparian vegetation was lacking at this crossing of Sand Creek. Vegetation included broadleaf cattail (*Typha latifolia*), smooth brome (*Bromus inermis*), and prairie cordgrass (*Spartina pectinata*).

Sand Creek may transmit flow downstream, carry pollutants and/or floodwaters, and have the ability to maintain water quality. Generally draining to the northwest, Sand Creek is a primary tributary to the Missouri River/Lake Sakakawea, which is located approximately 11.5 aerial miles northwest of the proposed Project crossing.



TAK 003 facing upstream



TAK 003 facing downstream

## 6.0 NON-JURISDICTIONAL AREAS

Two crossings, including one linear feature and one NWI-delineated freshwater emergent wetland, identified during desktop analysis as potential features were observed as unlikely to be waters of the U.S. during field reconnaissance. A description of each potentially non-jurisdictional crossing is included below. Please note the final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.

TAK 001 – This feature is an isolated NWI 0.10-acre freshwater emergent wetland that has been impacted by agricultural practices. This feature does not exhibit a downstream connection; therefore, this feature does not contribute more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of any downstream TNW. This feature is not likely to be considered a water of the U.S. (no photograph available)

TAK 002 – This blue-line crossing has been impacted by agricultural practices and historical oil and gas development. An OHWM or downstream connection was not observed during field reconnaissance; therefore, this feature does not contribute more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of any downstream TNW. This feature is not likely to be considered a water of the U.S. (no photograph available)

## 7.0 REQUIREMENTS FOR PRECONSTRUCTION NOTIFICATION

One potential waters of the U.S. delineated as a USGS blue-line was identified during desktop analysis and field reconnaissance.

Under NWP 12, the construction, maintenance, or repair of utility lines and the associated excavation, backfill, or bedding for the utility line is typically authorized by the USACE, without pre-construction notification (PCN) to the USACE, provided there is no change in pre-construction contours and the proposed Project meets all general conditions. A PCN to and written authorization from the USACE would be required for the proposed Project, if any of the following criteria are met at a single and complete crossing:

Mechanized land clearing in a forested wetland for the utility line right-of-way is required  
No forested wetlands were identified within the proposed Project boundaries.

A Rivers and Harbors Section 10 permit is required  
No waters subject to Section 10 of the Clean Water Act were identified in the proposed Project boundaries.

The utility line in waters of the United States, excluding overhead lines, exceeds 500 feet  
The proposed Project does not exceed 500 feet within waters of the U.S.

The utility line is placed within a jurisdictional area (i.e., water of the United States) and it runs parallel to a stream bed that is within that jurisdictional area  
The proposed Project alignment does not run parallel to any stream bed within a jurisdictional area.

Discharges that result in the loss of greater than 1/10-acre of waters of the United States

Impacts to waters of the U.S. that would result from the proposed pipeline construction are generally considered temporary, provided all construction is temporary in nature and the tributaries are restored to preconstruction contours, such that no net loss of waters occurs. For the proposed Project, open-cut trenching activities would be consistent with this designation of temporary impacts. No permanent losses are anticipated; therefore, the proposed Project will not trigger PCN from this criterion.

Permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet, and/or permanent access roads are constructed in waters of the United States with impervious materials (Sections 10 and 404)

No permanent access roads are proposed for the proposed Project at any of the crossings.

It is important to note that though a PCN may not be required under the above conditions, the activities affecting the waters of the U.S. are still authorized by NWP 12 and are subject to the General Conditions of the NWP program, including evaluation of impacts to federally-listed species and cultural resources. Evaluation of these resources can be found in their entirety under separate covers.

*2012 North Dakota Regional Conditions*

The USACE Omaha District has issued regional conditions applicable to all projects within the State of North Dakota. These regional conditions issued in 2012 list six conditions applicable to all nationwide permits. The six conditions listed would not require notification to the USACE for the proposed Project due to the proposed Project's lack of impact to wetlands classified as peatland, natural springs, the Missouri River (including Lake Sakakawea and Lake Oahe), borrow sites or Class III or higher waters as identified on the 1978 Stream Evaluation Map for the State of North Dakota.

In addition, the 2012 regional conditions in North Dakota include one condition identified as applicable specifically to NWP 12. The proposed Project would not include the construction or installation of intake structures; therefore, notification to the USACE or required specifications of the facilities based on this condition is not anticipated.

## **8.0 SUMMARY**

One potential waters of the U.S. delineated as a USGS blue-line, which is intersected by the proposed Project, was identified during desktop analysis and field reconnaissance. Preconstruction notification under the reporting requirements for NWP 12 is not anticipated based on observed site conditions.

These services and this report were performed and prepared in accordance with generally accepted local assessment practices at the time the services were performed; no warranties, express or implied, are intended or made. The limitations of this assessment should be recognized as Wood Group Mustang, Inc. formulates conclusions on the environmental risks associated with construction of the proposed Project. Furthermore, the services herein shall in no way be construed, designed, or intended to be relied upon as legal interpretation or advice.

## 9.0 REFERENCES

- (EPA) United States Environmental Protection Agency. 2014. Surf Your Watershed. Available at: <http://cfpub.epa.gov/surf/locate/index.cfm>. (Accessed on November 6, 2014)
- Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J. 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PE&RS, Vol. 77(9):858-864.
- (NRCS) Natural Resources Conservation Service. 2013. Web Soil Survey. Available online at: <http://websoilsurvey.nrcs.usda.gov/>. (Accessed on November 6, 2014)
- (NRCS) Natural Resources Conservation Service. 2014. Lists of hydric soils, national list, all states. March 2014 version. Available online at: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. (Accessed on November 6, 2014)
- (USACE) U.S. Army Corps of Engineers. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- (USFWS) U.S. Fish and Wildlife Service Fisheries and Habitat Conservation. 2014. National Wetlands Inventory. Available online at: [www.fws.gov/wetlands/Data/Mapper.html](http://www.fws.gov/wetlands/Data/Mapper.html). (Accessed on November 6, 2014)

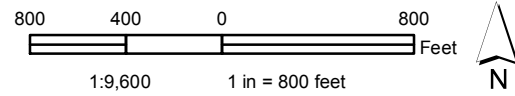
# Appendix A

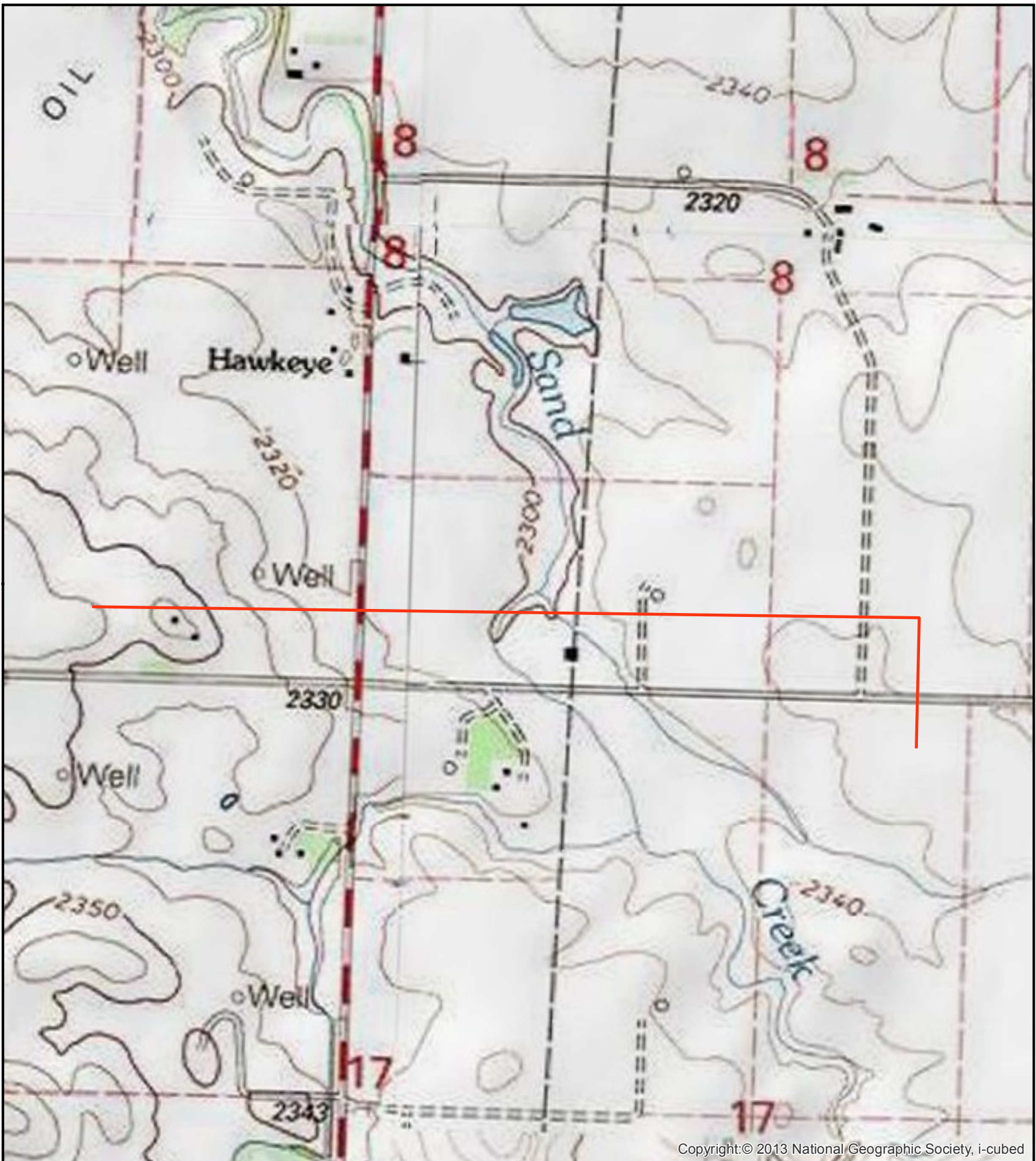
## Figures



Figure 1: Project Location  
 Potential Waters of the U.S. Assessment  
 Antelope Loop  
 June 2015  
 Apex No. 7010815N031

**Legend**  
 Antelope Lateral





Copyright: © 2013 National Geographic Society, i-cubed

Figure 2: Topography (USGS 7.5')  
 Potential Waters of the U.S. Assessment  
 Antelope Loop  
 June 2015  
 Apex No. 7010815N031

**Legend**  
 Antelope Lateral

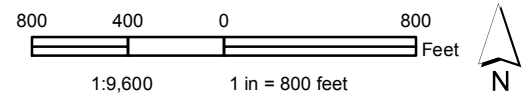
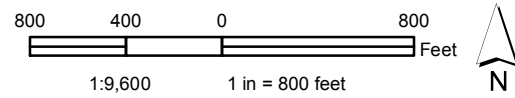




Figure 3: Results  
 Potential Waters of the U.S. Assessment  
 Antelope Loop  
 June 2015  
 Apex No. 7010815N031

- Legend**
- Non-Jurisdictional
  - Potential Waters of the U.S.
  - Antelope Lateral

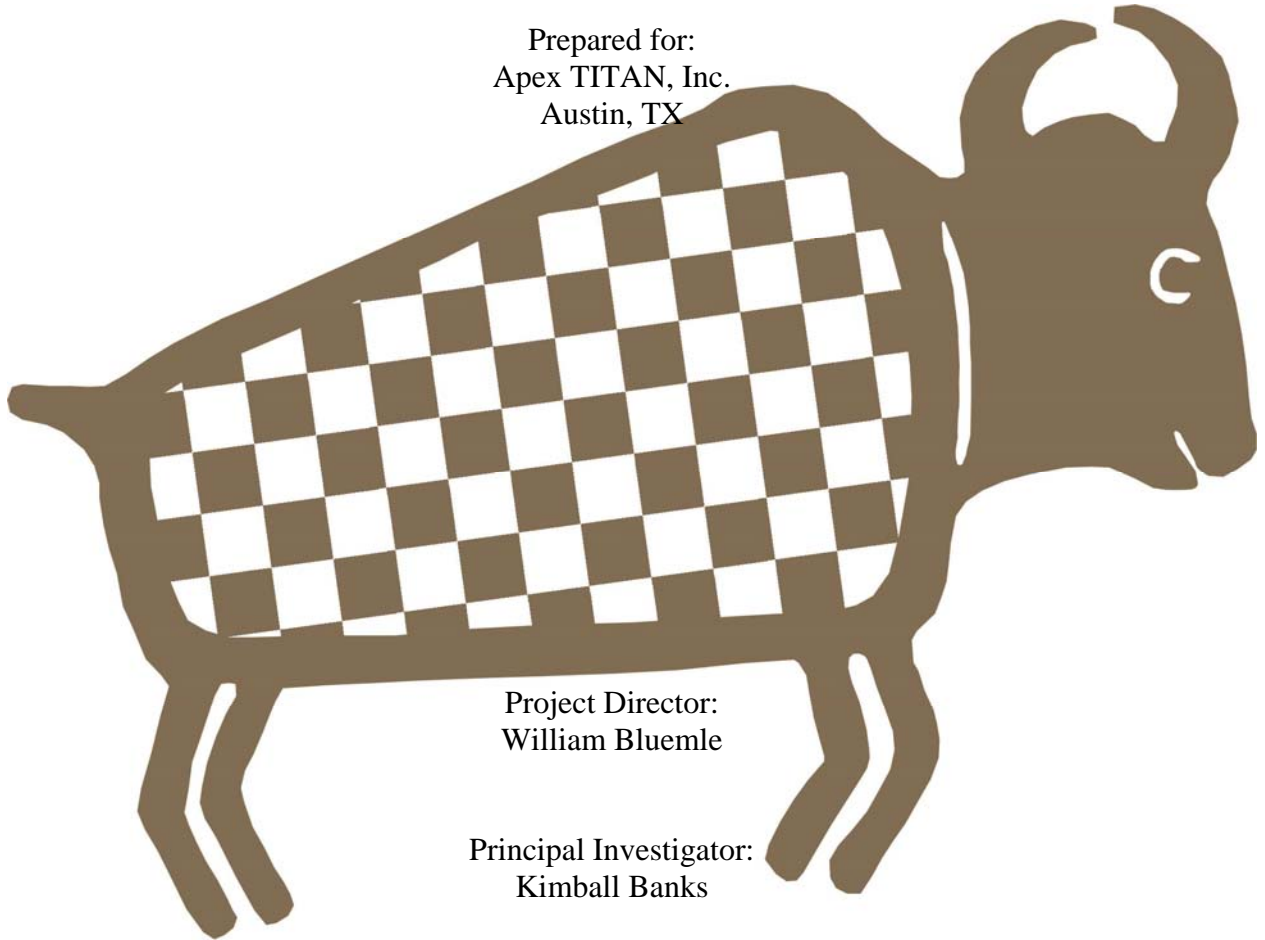


# **Appendix C**

Cultural/Archeological Evaluation Report Abstract

**APEX TITAN, INC.'S TARGA-ANTELOPE LATERAL  
PIPELINE: A CLASS III CULTURAL RESOURCE  
INVENTORY IN MCKENZIE COUNTY, NORTH  
DAKOTA**

Prepared for:  
Apex TITAN, Inc.  
Austin, TX



Project Director:  
William Bluemle

Principal Investigator:  
Kimball Banks

Prepared by:  
Emily Sakariassen  
Metcalf Archaeological Consultants, Inc.  
Bismarck, North Dakota

June 2015

*Locational information for archaeological and historic sites is protected under North Dakota Century Code § 55-02-07.*  
All reports (Class I, II, III, Testing, or Data Recovery) or any loose maps that will be distributed outside the agency or client should not contain site locational information. Site locational information includes the location of a site on a topographic map or aerial photographs, the location of a site in tables, such as Township, Range, and Section, or photograph of sites. It is acceptable to mention the Smithsonian Trinomial designation (e.g., 32EM0123) as this does not contain locational information, other than state and county.



## ABSTRACT

Apex TITAN, Inc. proposes to construct a 1.4-mile-long stretch of lateral pipeline northeast of the town of Keene in McKenzie County, North Dakota. Apex TITAN, Inc. contracted Metcalf Archaeological Consultants, Inc. to conduct a Class I and Class III cultural resource inventory of the project area. Fieldwork was conducted on June 8, 2015 by Metcalf Principle Investigator William Bluemle and Field Technician Ashley Shelton. A total of 57.7 acres were surveyed at a Class III level. During the inventory, Metcalf Archaeological Consultants, Inc. updated one architectural site, 32MZ2082.

Site 32MZ2082 has been evaluated against the National Register of Historic Places Criteria for Evaluation and is recommended *not eligible* for inclusion. No avoidance is recommended for the site and Metcalf Archaeological Consultants, Inc. recommends a finding of *No Historic Properties Affected* for the proposed undertaking as surveyed, mapped, and documented herein.

# **Appendix D**

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Agency Correspondence

# **Appendix D-1**

U.S. Fish and Wildlife Service (USFWS)



June 17, 2015

Scott Larson  
Field Supervisor  
North Dakota Field Office  
U.S. Fish and Wildlife Service  
3425 Miriam Avenue  
Bismarck, ND 58501-7926

**RE: Application to the North Dakota Public Service Commission for a Corridor Compatibility and Pipeline Route Certificate for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota. In accordance with North Dakota Century Code §49-22-07, transport pipelines require permitting by the North Dakota Public Service Commission (PSC). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for Corridor Compatibility and Pipeline Route Certificates for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline is located at the intersection with another pipeline at 47.993237, -102.883489. The pipeline traverses due east for 5,100 feet then turns south across 40<sup>th</sup> St NW. The northeastern terminus consists of an undeveloped agricultural field located approximately 0.67 mile east of the intersection of 40th Street NW and 107th Avenue NW. A map of the project is provided as Exhibit 1. A list of Township-Section-Ranges intersected by the project is attached as Exhibit 2.

Per North Dakota Administrative Code 69-06-01-05 Tesoro High Plains Pipeline Company, LLC respectfully requests review of the project for applicable concern or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this project. We respectfully request return of a response by July 3, 2015. Please do not hesitate to contact Divyang Surati at 832-809-5521 with any questions.

Sincerely,

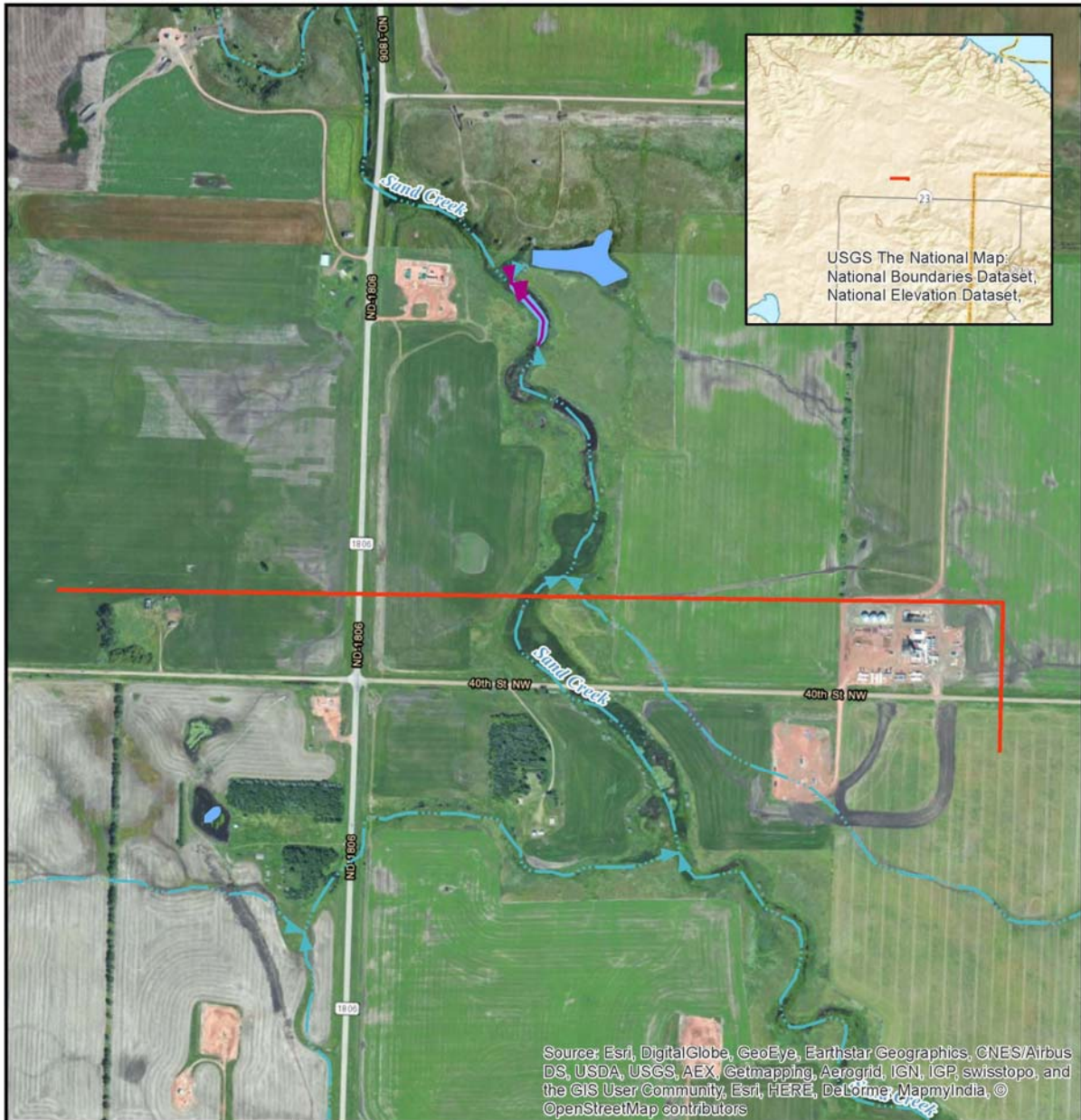


Robin Laine  
National Program Manager  
Apex TITAN, Inc.  
1601 Rio Grande Street, Suite 420  
Austin, Texas 78701

CC: Divyang Surati, Wood Group Mustang, Inc.  
John Miller, Tesoro High Plains Pipeline Company, LLC  
James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



<p>Exhibit 1: Project Location          Antelope Lateral          McKenzie County, ND          June 2015          Apex No. 7010815N031</p>	<p><b>Legend</b></p> <p><span style="color: red;">—</span> Antelope Lateral</p>	<p>800 400 0 800 Feet</p> <p>1:9,600 1 in = 800 feet</p> <p style="text-align: right;">N</p> 
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**Exhibit 2. Project Township-Range-Section Numbers**

<b>Township</b>	<b>Range</b>	<b>Sections</b>
152	95	7, 8, 17

**From:** [Robin Laine](#)  
**To:** [ndfieldoffice@fws.gov](mailto:ndfieldoffice@fws.gov)  
**Cc:** [Surati, Divyang \(WG Mustang\)](#)  
**Subject:** Request for Review  
**Date:** Thursday, August 13, 2015 8:40:29 AM  
**Attachments:** [Antelope Lateral PSC Request for Review.pdf](#)

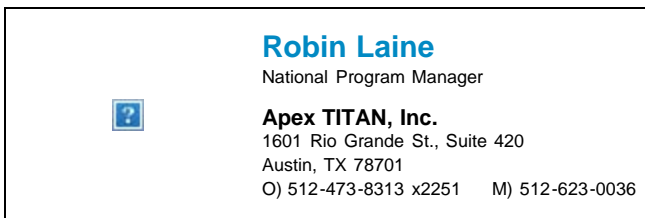
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Good morning,

This email is to follow up on a request for review and comment for a Public Service Commission (PSC) Certificate of Corridor Compatibility for a proposed crude oil pipeline project in McKenzie County, North Dakota. To date we have not received a response from your office. At your very earliest convenience, we respectfully request that you please provide any comments, information, or guidance regarding limitations or permits that may be warranted or necessary for the Antelope Lateral project.

I have reattached the original request for your reference.

Very Best Regards,  
Robin Laine



**Privacy Notice:** This message and any attachment(s) hereto are intended solely for the individual(s) listed in the masthead. This message may contain information that is privileged or otherwise protected from disclosure. Any review, dissemination or use of this message or its contents by persons other than the addressee(s) is strictly prohibited and may be unlawful. If you have received this message in error, please notify the sender by return e-mail and delete the message from your system. Thank you.

## **Appendix D-2**

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North Dakota Game and Fish Department (NDGFD)



June 17, 2015

Terry Steinwand  
Director  
North Dakota Game and Fish Department  
100 N. Bismarck Expressway  
Bismarck, ND 58501-5095

**RE: Application to the North Dakota Public Service Commission for a Corridor Compatibility and Pipeline Route Certificate for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota. In accordance with North Dakota Century Code §49-22-07, transport pipelines require permitting by the North Dakota Public Service Commission (PSC). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for Corridor Compatibility and Pipeline Route Certificates for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline is located at the intersection with another pipeline at 47.993237, -102.883489. The pipeline traverses due east for 5,100 feet then turns south across 40<sup>th</sup> St NW. The northeastern terminus consists of an undeveloped agricultural field located approximately 0.67 mile east of the intersection of 40th Street NW and 107th Avenue NW. A map of the project is provided as Exhibit 1. A list of Township-Section-Ranges intersected by the project is attached as Exhibit 2.

Per North Dakota Administrative Code 69-06-01-05 Tesoro High Plains Pipeline Company, LLC respectfully requests review of the project for applicable concern or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this project. We respectfully request return of a response by July 3, 2015. Please do not hesitate to contact Divyang Surati at 832-809-5521 with any questions.

Sincerely,

A handwritten signature in black ink that reads "Robin Laine". The signature is written in a cursive, slightly slanted style.

Robin Laine

National Program Manager

Apex TITAN, Inc.

1601 Rio Grande Street, Suite 420

Austin, Texas 78701

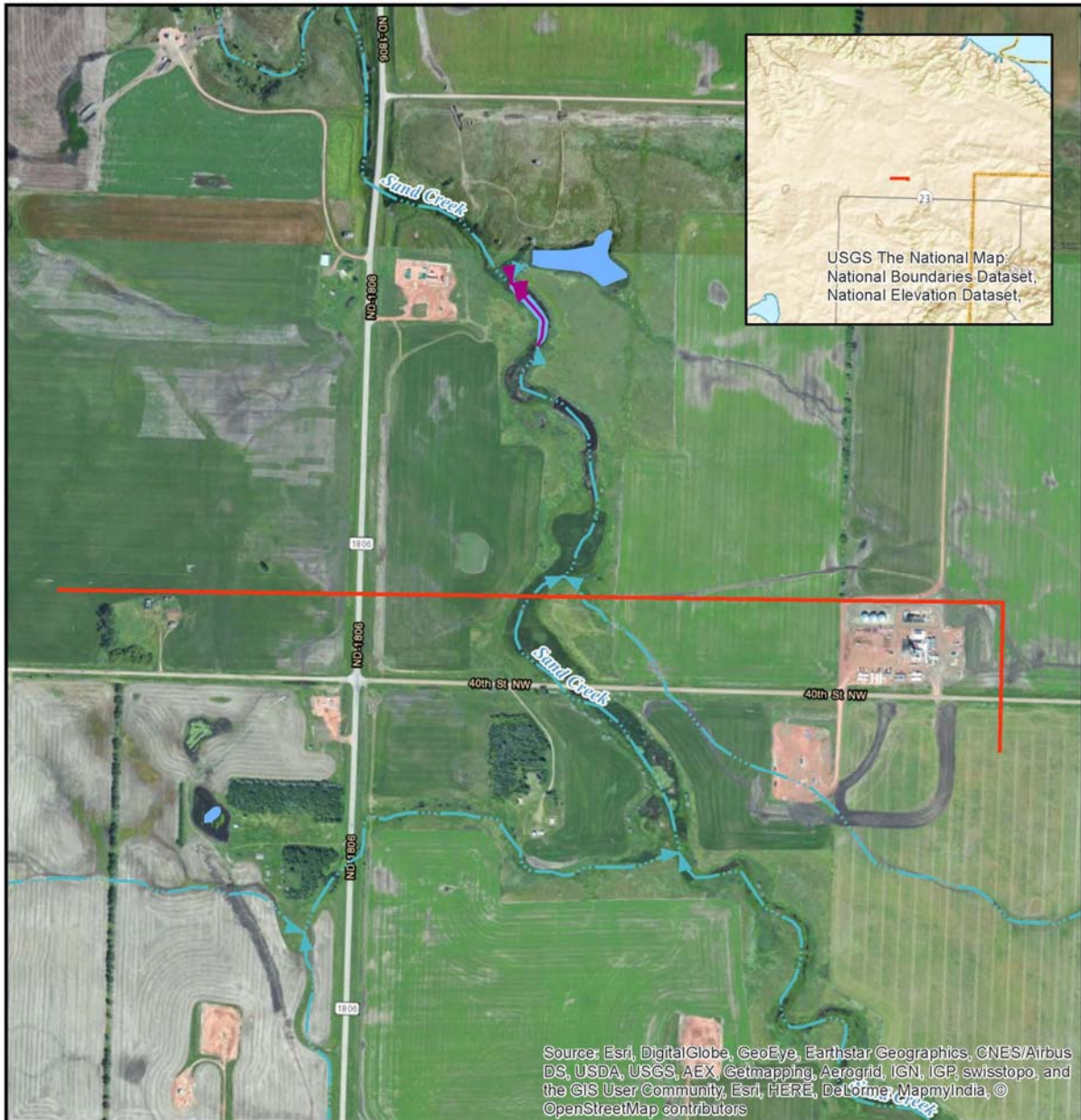
CC: Divyang Surati, Wood Group Mustang, Inc.

John Miller, Tesoro High Plains Pipeline Company, LLC

James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



<p>Exhibit 1: Project Location          Antelope Lateral          McKenzie County, ND          June 2015          Apex No. 7010815N031</p>	<p><b>Legend</b></p> <p><span style="color: red;">—</span> Antelope Lateral</p>	<p>800 400 0 800 Feet</p> <p>1:9,600 1 in = 800 feet</p> <p style="text-align: right;">N</p> 
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**Exhibit 2. Project Township-Range-Section Numbers**

<b>Township</b>	<b>Range</b>	<b>Sections</b>
152	95	7, 8, 17



"VARIETY IN HUNTING AND FISHING"

## NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

July 2, 2015

Robin Laine  
National Program Manager  
Apex TITAN, Inc.  
1601 Rio Grande Street, Suite 420  
Austin, TX 78701

Dear Ms. Laine:

RE: Antelope Lateral Crude Oil Pipeline

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota.

The National Wetland Inventory indicates various wetlands within the proposed project corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.

We do not believe this project will have any significant adverse effects on wildlife or wildlife habitat, including species of concern, provided these recommendations are implemented where appropriate and disturbed areas are reclaimed to pre-project conditions.

Sincerely,

A handwritten signature in blue ink that reads "Steve Dyke". The signature is fluid and cursive.

(for)

Greg Link  
Chief  
Conservation & Communication Division

js

## **Appendix D-3**

North Dakota Parks and Recreation (NDPRD)



June 17, 2015

Mark Zimmerman  
Director  
North Dakota Parks and Recreation Department  
1600 E. Century Avenue  
Suite 3  
Bismarck, ND 58503-0649

**RE: Application to the North Dakota Public Service Commission for a Corridor Compatibility and Pipeline Route Certificate for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota. In accordance with North Dakota Century Code §49-22-07, transport pipelines require permitting by the North Dakota Public Service Commission (PSC). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for Corridor Compatibility and Pipeline Route Certificates for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline is located at the intersection with another pipeline at 47.993237, -102.883489. The pipeline traverses due east for 5,100 feet then turns south across 40<sup>th</sup> St NW. The northeastern terminus consists of an undeveloped agricultural field located approximately 0.67 mile east of the intersection of 40th Street NW and 107th Avenue NW. A map of the project is provided as Exhibit 1. A list of Township-Section-Ranges intersected by the project is attached as Exhibit 2.

Per North Dakota Administrative Code 69-06-01-05 Tesoro High Plains Pipeline Company, LLC respectfully requests review of the project for applicable concern or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this project. We respectfully request return of a response by July 3, 2015. Please do not hesitate to contact Divyang Surati at 832-809-5521 with any questions.

Sincerely,



Robin Laine

National Program Manager

Apex TITAN, Inc.

1601 Rio Grande Street, Suite 420

Austin, Texas 78701

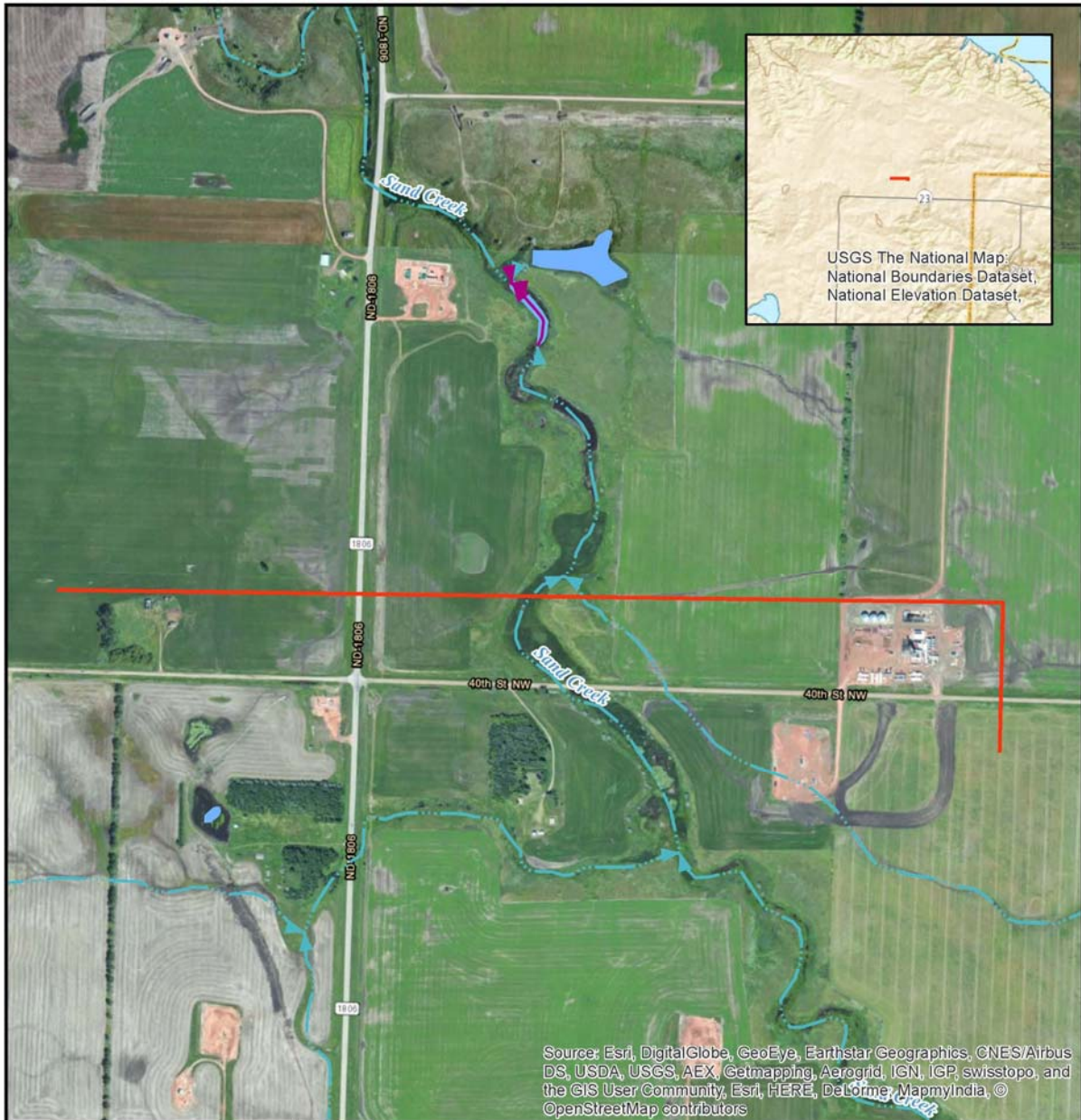
CC: Divyang Surati, Wood Group Mustang, Inc.

John Miller, Tesoro High Plains Pipeline Company, LLC

James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



<p>Exhibit 1: Project Location          Antelope Lateral          McKenzie County, ND          June 2015          Apex No. 7010815N031</p>	<p><b>Legend</b></p> <p><span style="color: red;">—</span> Antelope Lateral</p>	<p>800 400 0 800 Feet</p> <p>1:9,600 1 in = 800 feet</p> <p style="text-align: right;">N</p> 
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**Exhibit 2. Project Township-Range-Section Numbers**

<b>Township</b>	<b>Range</b>	<b>Sections</b>
152	95	7, 8, 17



Jack Dalrymple, Governor  
Mark A. Zimmerman, Director  
1600 East Century Avenue, Suite 3  
Bismarck, ND 58503-0649  
Phone 701-328-5357  
Fax 701-328-5363  
E-mail [parkrec@nd.gov](mailto:parkrec@nd.gov)  
[www.parkrec.nd.gov](http://www.parkrec.nd.gov)

June 30, 2015

Robin Laine  
Apex TITAN Inc.  
1601 Rio Grande Street, Suite 420  
Austin, TX 78701

Re: Tesoro High Plains Pipeline Company – 1.14-mile Transmission Lateral Pipeline Project

Dear Ms. Laine,

The North Dakota Parks and Recreation Department (the Department) has reviewed the above referenced proposed 1.14 transmission lateral pipeline in McKenzie County, North Dakota.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no documented occurrences in our database within or adjacent to project area. Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact me at (701-328-5370 or [kgduttonhefner@nd.gov](mailto:kgduttonhefner@nd.gov)). Thank you for the opportunity to comment on this proposed project.

Sincerely,

*Kathy Duttonhefner*

Kathy Duttonhefner, Coordinator  
Natural Resources Division

R.USNDNHI\*2015\_051KD6.30.2015DL7.3.2015

• • • • •  
*Play in our backyard!*

## **Appendix D-4**

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North Dakota State Historic Preservation Office (SHPO)



**STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA**

Jack Dalrymple  
*Governor of North Dakota*

**North Dakota  
State Historical Board**

Calvin Grinnell  
*New Town - President*

A. Ruric Todd III  
*Jamestown - Vice President*

Margaret Puetz  
*Bismarck - Secretary*

Albert I. Berger  
*Grand Forks*

Gereld Gerntholz  
*Valley City*

Diane K. Larson  
*Bismarck*

Chester E Nelson, Jr.  
*Bismarck*

Sara Otte Coleman  
*Director  
Tourism Division*

Kelly Schmidt  
*State Treasurer*

Alvin A. Jaeger  
*Secretary of State*

Mark Zimmerman  
*Director  
Parks and Recreation  
Department*

Grant Levi  
*Director  
Department of Transportation*

Claudia J. Berg  
*Director*

*Accredited by the  
American Alliance  
of Museums since 1986*

November 24, 2014

Ms. Robin Laine  
Director Natural Resources  
Apex TITAN, Inc.  
1604 Rio Grande  
Austin, TX 78701

ND SHPO REF: 15-0181 COE "Apex TITAN Inc.'s Targa Antelope to Keene Pipeline: A Class III Cultural Resource Inventory in McKenzie County, North Dakota" in portions of [T152N R95W Sections 7, 8, 18, 31 and T151N R95W Section 7]

Dear Ms. Laine,

We reviewed ND SHPO REF: 15-0181 COE "Apex TITAN Inc.'s Targa Antelope to Keene Pipeline: A Class III Cultural Resource Inventory in McKenzie County, North Dakota," and find the report acceptable. We concur with a "No Significant Sites" (State of North Dakota) determination, provided the projects remain as described and mapped in the associated report dated November 2014.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in further correspondence for this project. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701)328-3576 or [squinnell@nd.gov](mailto:squinnell@nd.gov)

Sincerely,

Fern Swenson  
Deputy State Historic Preservation Officer (North Dakota)

C: MAC, Bismarck

## **Appendix D-5**

North Dakota Department of Health (NDDoH)



June 17, 2015

Dr. Terry Dwelle  
State Health Officer  
North Dakota Department of Health  
600 East Boulevard Avenue  
Bismarck, ND 58505-0200

**RE: Application to the North Dakota Public Service Commission for a Corridor Compatibility and Pipeline Route Certificate for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota. In accordance with North Dakota Century Code §49-22-07, transport pipelines require permitting by the North Dakota Public Service Commission (PSC). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for Corridor Compatibility and Pipeline Route Certificates for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline is located at the intersection with another pipeline at 47.993237, -102.883489. The pipeline traverses due east for 5,100 feet then turns south across 40<sup>th</sup> St NW. The northeastern terminus consists of an undeveloped agricultural field located approximately 0.67 mile east of the intersection of 40th Street NW and 107th Avenue NW. A map of the project is provided as Exhibit 1. A list of Township-Section-Ranges intersected by the project is attached as Exhibit 2.

Per North Dakota Administrative Code 69-06-01-05 Tesoro High Plains Pipeline Company, LLC respectfully requests review of the project for applicable concern or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this project. We respectfully request return of a response by July 3, 2015. Please do not hesitate to contact Divyang Surati at 832-809-5521 with any questions.

Sincerely,



Robin Laine

National Program Manager

Apex TITAN, Inc.

1601 Rio Grande Street, Suite 420

Austin, Texas 78701

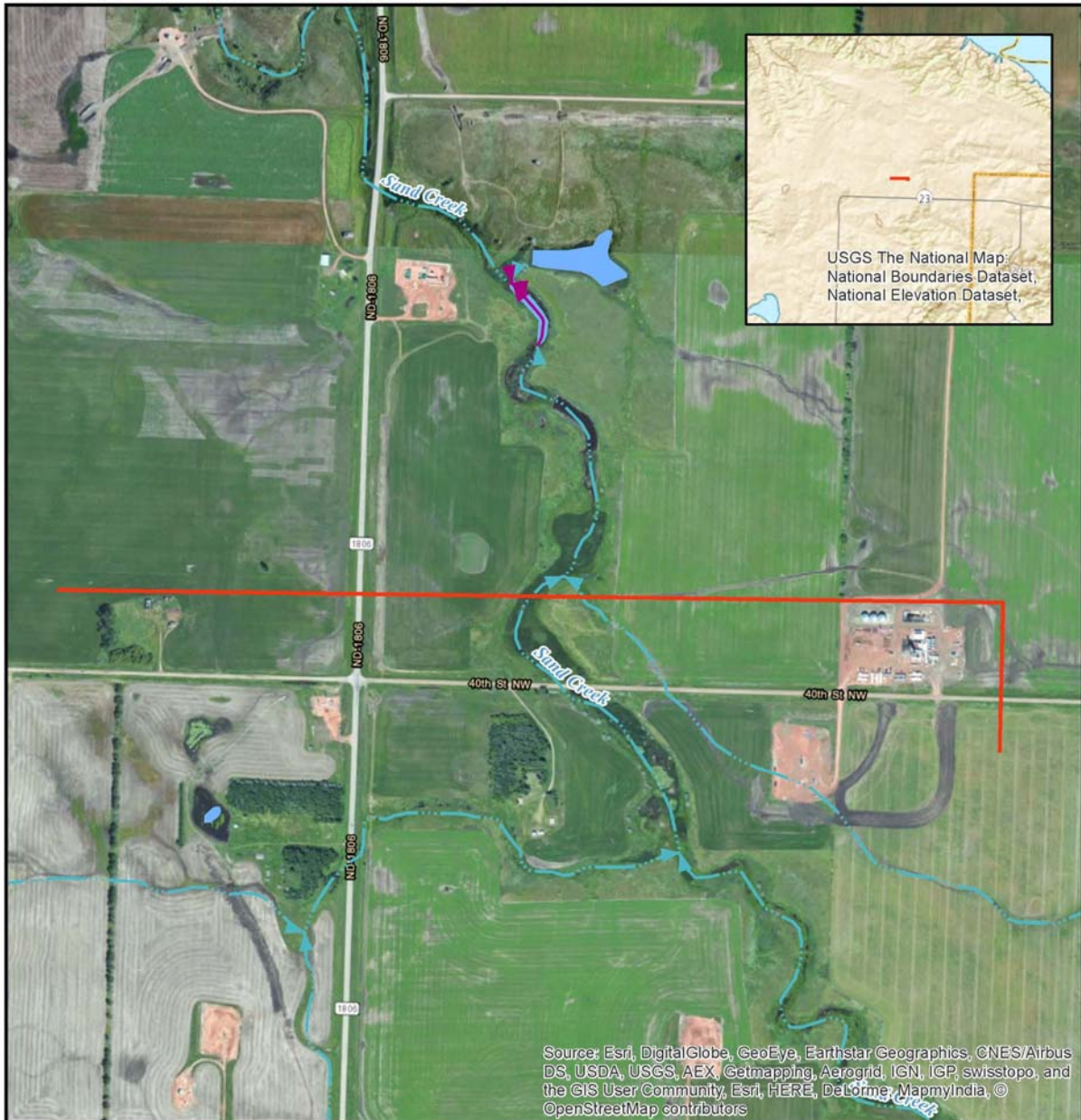
CC: Divyang Surati, Wood Group Mustang, Inc.

John Miller, Tesoro High Plains Pipeline Company, LLC

James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



<p>Exhibit 1: Project Location          Antelope Lateral          McKenzie County, ND          June 2015          Apex No. 7010815N031</p>	<p><b>Legend</b></p> <p><span style="color: red;">—</span> Antelope Lateral</p>	<p>800 400 0 800 Feet</p> <p>1:9,600 1 in = 800 feet</p> <p style="text-align: right;">N</p> 
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**Exhibit 2. Project Township-Range-Section Numbers**

<b>Township</b>	<b>Range</b>	<b>Sections</b>
152	95	7, 8, 17



June 26, 2015

Robin Laine  
National Program Manager  
Apex TITAN, Inc.  
1601 Rio Grande Street, Suite 420  
Austin, TX 78701

Re: Antelope Lateral Crude Oil Pipeline  
McKenzie County

Dear Ms. Laine:

This department has reviewed the information concerning the above-referenced project submitted under date of June 17, 2015, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.
3. Oil and gas related construction activities disturbing one or more acres that have the ability to discharge sediment laden storm water to waters of the state are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the Department's website or by calling the Division of Water Quality (701.328.5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

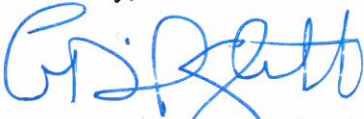
4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.
5. Projects that involve construction of pipelines should select locations that minimize the potential for environmental damage during construction and in the event of a spill, restrict fluids from reaching surface waters. Environmental damage can be reduced by developing a spill response plan that emphasizes rapid deployment of prepositioned assets necessary to contain spills and subsequent cleanup. Proper surveillance and monitoring of pipelines is necessary for the early detection of leaks.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,



L. David Glatt, P.E., Chief  
Environmental Health Section

LDG:cc  
Attach.



## Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

### Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

### Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

### Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

## **Appendix D-6**

United States Army Corps of Engineers (USACE)



June 17, 2015

Daniel Cimarosti  
Regulatory Program Manager  
U.S. Army Corps of Engineers  
North Dakota Regulatory Office  
1513 South 12th Street  
Bismarck, ND 58504

**RE: Application to the North Dakota Public Service Commission for a Corridor Compatibility and Pipeline Route Certificate for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.14-mile transmission lateral pipeline in McKenzie County, North Dakota. In accordance with North Dakota Century Code §49-22-07, transport pipelines require permitting by the North Dakota Public Service Commission (PSC). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for Corridor Compatibility and Pipeline Route Certificates for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline is located at the intersection with another pipeline at 47.993237, -102.883489. The pipeline traverses due east for 5,100 feet then turns south across 40<sup>th</sup> St NW. The northeastern terminus consists of an undeveloped agricultural field located approximately 0.67 mile east of the intersection of 40th Street NW and 107th Avenue NW. A map of the project is provided as Exhibit 1. A list of Township-Section-Ranges intersected by the project is attached as Exhibit 2.

Per North Dakota Administrative Code 69-06-01-05 Tesoro High Plains Pipeline Company, LLC respectfully requests review of the project for applicable concern or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this project. We respectfully request return of a response by July 3, 2015. Please do not hesitate to contact Divyang Surati at 832-809-5521 with any questions.

Sincerely,



Robin Laine

National Program Manager

Apex TITAN, Inc.

1601 Rio Grande Street, Suite 420

Austin, Texas 78701

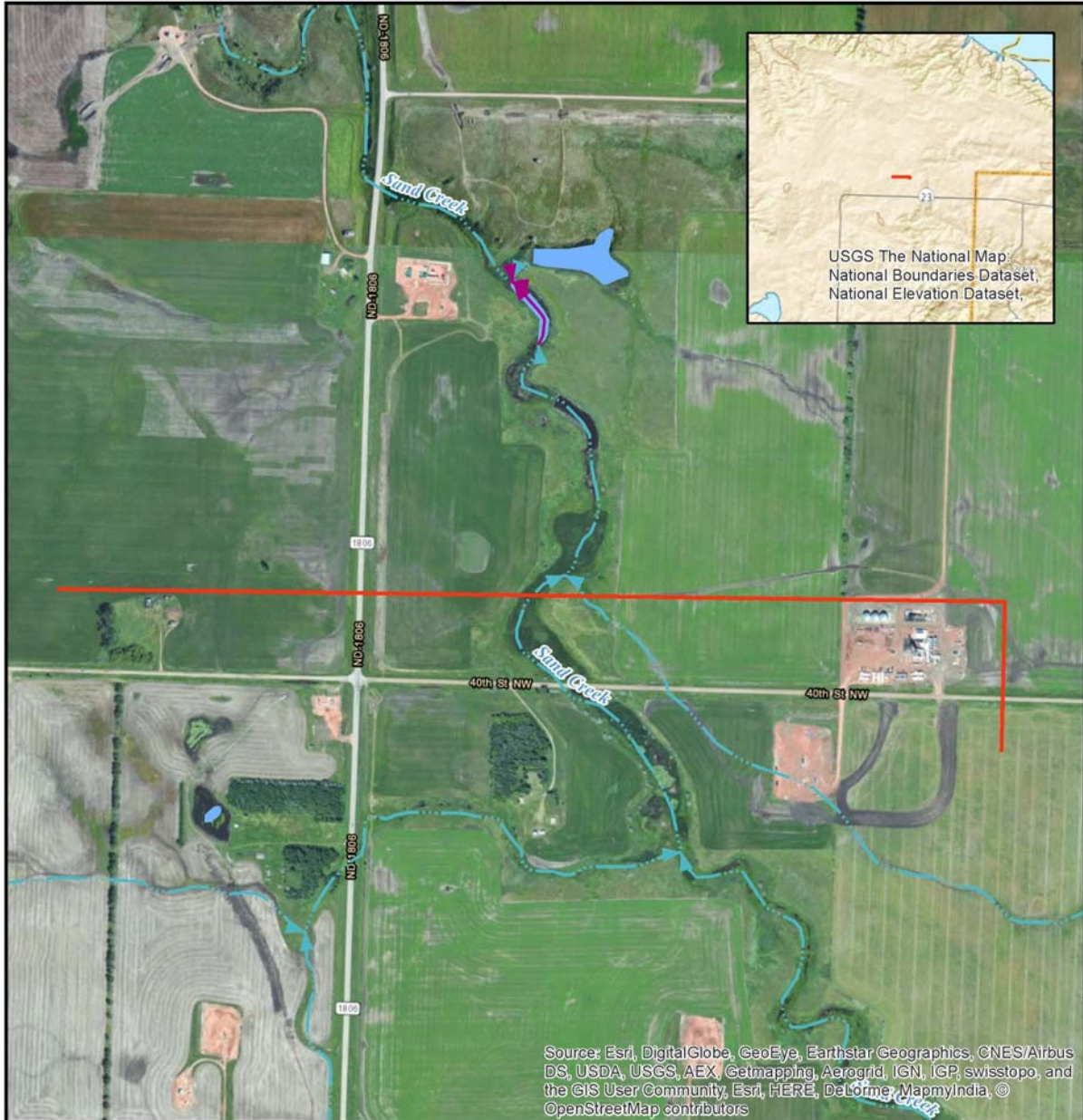
CC: Divyang Surati, Wood Group Mustang, Inc.

John Miller, Tesoro High Plains Pipeline Company, LLC

James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



<p>Exhibit 1: Project Location          Antelope Lateral          McKenzie County, ND          June 2015          Apex No. 7010815N031</p>	<p><b>Legend</b></p> <p><span style="color: red;">—</span> Antelope Lateral</p>	<p>800 400 0 800 Feet</p> <p>1:9,600 1 in = 800 feet</p> <p style="text-align: right;">N</p> 
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**Exhibit 2. Project Township-Range-Section Numbers**

<b>Township</b>	<b>Range</b>	<b>Sections</b>
152	95	7, 8, 17



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 SOUTH 12TH STREET  
BISMARCK ND 58504-6640

June 23, 2015

North Dakota Regulatory Office

Robin Laine  
Apex TITAN, Inc.  
1601 Rio Grande Street, Suite 420  
Austin, Texas 78701

Dear Mr. Laine:

This is in response to your letter dated June 17, 2015, requesting comments on the proposed Antelope Lateral Crude Oil Pipeline located in Sections 7, 8, and 17, Township 152 North, Range 95 West, McKenzie County, North Dakota.

Corps of Engineers (Corps) Regulatory Offices administer Section 10 of the Rivers and Harbors Act (Section 10) and Section 404 of the Clean Water Act (Section 404). Section 10 regulates work in, over, or under navigable water, and based upon your information, does not apply. Section 404 regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. A discharge of fill in waters of the United States would require a Section 404 permit. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

If the proposed project would result in a discharge of fill in waters of the United States, complete the enclosed application and submit it to the letterhead address.

If we can be of further assistance or should you have any questions regarding our program, please do not hesitate to contact this office by letter or phone at (701) 255-0015.

Sincerely,

Daniel E. Cimarosti  
Regulatory Program Manager  
North Dakota

Enclosure

## **Appendix D-7**

North Dakota Department of Transportation (NDDOT)



**WOOD GROUP  
MUSTANG**

Wood Group Mustang, Inc.  
17325 Park Row  
Houston, TX 77084  
United States  
T: +832 809 8000  
[www.mustangeng.com](http://www.mustangeng.com)

August 8, 2015

North Dakota Department of Transportation  
608 E. Boulevard Ave.  
Bismarck, ND 58505-0700

**RE: Application to the North Dakota Public Service Commission for a Certificate of Corridor Compatibility and Pipeline Route Permit for the Antelope Lateral Crude Oil Pipeline in McKenzie County, North Dakota**

Tesoro High Plains Pipeline Company, LLC is proposing to construct and operate an approximately 1.4-mile transmission lateral pipeline in McKenzie County, North Dakota, known as the Antelope Lateral Crude Oil Pipeline (“Antelope Lateral Pipeline” or “Project”). In accordance with North Dakota Century Code § 49-22-07, transmission pipelines require permitting by the North Dakota Public Service Commission (“PSC”). As such, Tesoro High Plains Pipeline Company, LLC is preparing an application for a Certificate of Corridor Compatibility and Pipeline Route Permit for submittal to the PSC.

The western terminus of the Antelope Lateral Pipeline will be located at the intersection with another pipeline at 47.993237, -102.883489. The Antelope Lateral Pipeline will traverse due east for 5,100 feet then turn south across 40<sup>th</sup> St NW. The northeastern terminus will consist of an undeveloped agricultural field located approximately 0.67 miles east of the intersection of 40<sup>th</sup> Street NW and 107<sup>th</sup> Avenue NW. A map of the Project is provided herewith as Exhibit 1. A list of legal descriptions of the lands to be intersected by the Antelope Lateral Pipeline is attached as Exhibit 2.

Per North Dakota Administrative Code § 69-06-01-05, Tesoro High Plains Pipeline Company, LLC respectfully requests review of the Project for applicable concerns or constraints by your agency. Please also provide comments, information, or guidance regarding limitations or permits that may be warranted or necessary.

Similar letters have been provided to other federal and state agencies and offices regarding this Project. We respectfully request return of a response by August 20, 2015. Please do not hesitate to contact me at 832-809-5521 or divyang.surati@woodgroup.com with any questions.

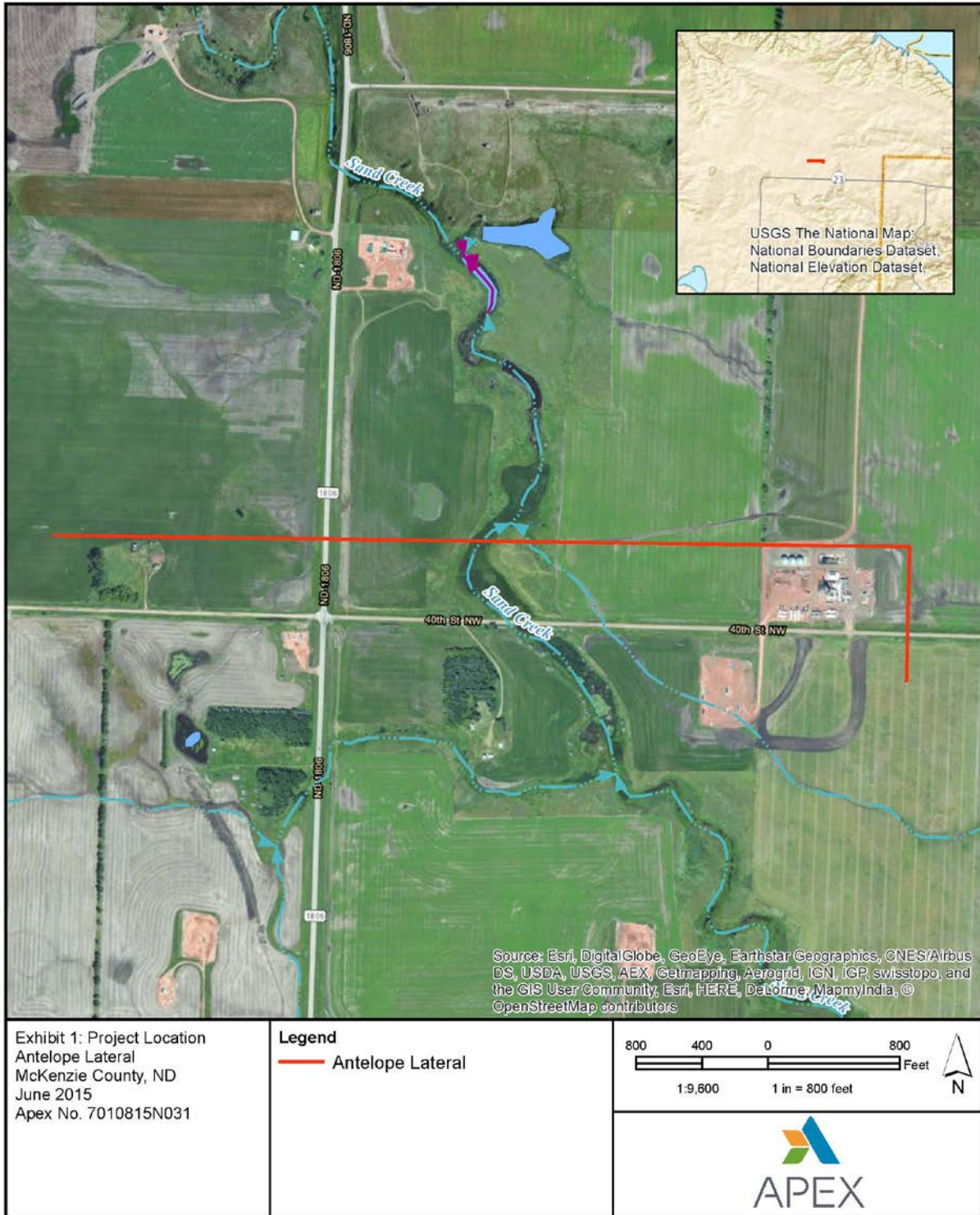
Sincerely,

Divyang Surati, PE  
Sr. Environmental Permitting Specialist  
Wood Group Mustang, Inc.

CC:  
John Miller, Tesoro High Plains Pipeline Company, LLC  
James Sanford, Tesoro High Plains Pipeline Company, LLC

Encl.

# Exhibit 1. Project Location



**Exhibit 2. Project Township-Range-Section Numbers**

Township	Range	Sections
152	95	7, 8, 17



# North Dakota Department of Transportation

Grant Levi, P.E.  
*Director*

Jack Dalrymple  
*Governor*

September 10, 2015

Divyang Surati, P.E.  
Wood Group Mustang, Inc.  
17325 Park Row  
Houston, TX 77084

TESORO TO CONSTRUCT AND OPERATE A 1.4 MILE ANTELOPE LATERAL PIPELINE,  
MCKENZIE COUNTY, NEAR ALEXANDER, NORTH DAKOTA

We have reviewed your August 8, 2015, letter.

This project should have no adverse effect on the North Dakota Department of Transportation highways.

However, if because of this project any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineer, Joel Wilt at 701-774-2700.

A handwritten signature in blue ink that reads "Robert Fode".

ROBERT A. FODE, P.E., DIRECTOR - OFFICE OF PROJECT DEVELOPMENT

57\raf\js

c: Joel Wilt, Williston District Engineer

# **Appendix E**

Tesoro High Plains Pipeline Company, LLC's Ten-Year Plan

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**TEN YEAR PLAN: 2015-2025**  
**Tesoro High Plains Pipeline Company LLC**

**November 2015**

In accordance with Section 49-22-04 of the North Dakota Century Code and Chapter 69-06-02 of the North Dakota Administrative Code, Tesoro High Plains Pipeline Company LLC (“Tesoro”) submits the following Ten Year Plan for years 2015 through 2025.

- (1) *A description of the general location, size, and type of all facilities to be owned or operated by the utility during the ensuing ten years, as well as those facilities to be removed from service during the ten-year period.*

Tesoro currently owns and operates an existing underground petroleum gathering and mainline pipeline system that extends from eastern Montana through North Dakota to Mandan, North Dakota. This system also extends northward to the United States-Canadian International Border where it ties into a pipeline system near the town of Lignite in Burke County, North Dakota. Attached hereto as Exhibit A is a description of the existing Tesoro pipeline transmission facilities. Also attached hereto as Exhibit B is a Tesoro System Overview Map.

Tesoro recently submitted a Siting Exclusion Certification to the North Dakota Public Service Commission (“Commission”) for an approximately 7.35 mile transmission pipeline from Tesoro’s Keene Station to the Charlson Station to be located in McKenzie County, North Dakota (“Keene to Charlson Pipeline”). The Keene to Charlson Pipeline will be constructed adjacent to and wholly within the geographic location for an existing Tesoro crude oil pipeline constructed prior to 1975, thereby allowing Tesoro to submit a Siting Exclusion Certification for construction. The Commission has acknowledged Tesoro’s Siting Exclusion Certification for the Keene to Charlson Pipeline.

Tesoro plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the Commission to construct an approximately 1.3 mile, 12-inch crude oil pipeline to be known as the Targa Antelope Lateral Pipeline Project (“Antelope Lateral Project”), to be located in McKenzie County. The Antelope Lateral Project will connect to existing Tesoro pipeline facilities and will allow Tesoro to more fully utilize its existing pipeline system, increase storage and transportation capabilities of the system, and provide increased flexibility in transportation to Tesoro’s Mandan Refinery.

Tesoro may construct other pipeline transmission facilities in North Dakota in the ensuing ten years. The need for and timing of other transmission pipeline facilities are subject to further commercial discussions within Tesoro.

Tesoro does not own or operate any facilities that it plans to remove from service during the next ten years.

- (2) *An identification of the location of the tentative preferred site for all energy conversion facilities and the tentative location of all transmission facilities on which construction is intended to be commenced within the ensuing five years and such other information as may be required by the commission. The site and corridor identification shall be made in compliance with the criteria published by the commission pursuant to section 49-22-05.1.*

Tesoro has no proposed energy conversion facilities on which construction is intended within the ensuing five years in North Dakota.

As discussed above, Tesoro recently submitted to the Commission a Siting Exclusion Certification for the Keene to Charlson Pipeline. The approximately 7.35 mile transmission pipeline will run from Tesoro's Keene Station to the Charlson Station in McKenzie County, North Dakota. The Keene to Charlson Pipeline is located within the footprint of an existing Tesoro crude oil pipeline. Tesoro conducted studies in compliance with Chapter 49-22 of the North Dakota Century Code to minimize any environmental impacts and to ensure no exclusion or avoidance areas will be affected by the project, as discussed in the documentation submitted in accordance with the Siting Exclusion Certification in Case No. PU-15-446.

Tesoro will also be submitting a Certificate of Corridor Compatibility and Route Permit Application for the Targa Antelope Lateral Pipeline Project to be located in McKenzie County, North Dakota. The Antelope Lateral Project will begin at the Antelope Station located in Section 17, Township 152 North, Range 95 West in McKenzie County and proceed north and then west to connect with the Keene to Charlson Pipeline in Section 7, Township 152 North, Range 95 West in McKenzie County.

Tesoro evaluated a study area to determine the best location for the placement of the corridor and route for the Antelope Lateral Project in order to minimize any potential land use and environmental impacts, maximize public benefits, and to accommodate design and construction limitations and economics. The proposed location of the route within the corridor was made in compliance with Section 49-22-05.1, as discussed in the Application for a Certificate of Corridor Compatibility and Route Permit Tesoro will be filing with the Commission.

- (3) *A description of the efforts by the utility to coordinate the plan with other utilities so as to provide a coordinated regional plan for meeting the utility needs of the region.*

In developing the above-described pipeline projects, Tesoro coordinated with affected landowners and many local, state, and federal government agencies to eliminate conflicts in land use. Tesoro does coordinate regionally with producers and shippers of crude oil, however, Tesoro does not generally have contact or coordinate with other pipeline companies due to confidentiality concerns.

- (4) *A description of the efforts to involve environmental protection and land-use planning agencies in the planning process, as well as other efforts to identify and minimize environmental problems at the earliest possible stage in the planning process.*

Tesoro has employed a qualified environmental consulting firm to conduct studies of and identify avoidance and exclusion areas within the corridor and route, in accordance with Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, for the Keene to Charlson Pipeline and the Antelope Lateral Project discussed above. To date, no environmental or siting concerns have been identified that would preclude development either project within the study area.

Tesoro recognizes the various federal, state, and municipal regulatory agencies within the state of North Dakota that have environmental compliance authority over the construction, operation, and maintenance of transmission pipelines. Tesoro is committed to developing and fostering an ongoing working relationship with each of these agencies, and will consult and coordinate with federal, state, and local agencies and governmental units regarding the projects. Tesoro will obtain all required permits for the Keene to Charlson Pipeline and the Antelope Lateral Project.

Tesoro is committed to environmental compliance during the execution of any future projects and will seek the approval of and comply with the conditions of all federal, state, and municipal agencies having jurisdictional authority over the construction and installation of any new facilities.

- (5) *A statement of the projected demand for the service rendered by the utility for the ensuing ten years and the underlying assumptions for the projection, with that information being as geographically specific as possible, and a description of the manner and extent to which the utility will meet the projected demands.*

The development of hydrocarbon production in the Williston Basin has increased significantly in recent years due to advancements in deep horizontal directional drilling techniques and subsequent oil extraction in the Bakken and Three Forks shale formations. The total recoverable amount of Bakken and Three Forks oil reserves is subject to interpretation and speculation. Studies conducted by the North Dakota Department of Mineral Resources (NDDMR)<sup>1</sup> and the U.S. Geological Survey<sup>2</sup> in 2008 and 2010 indicate that 4.0 to 6.3 billion

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<sup>1</sup> Bohrer, M., Fried, S., Helms, L., Hicks, B., Juenker, B., McCusker, D., Anderson, F., LeFever, J., Murphy, E., and Nordeng, S., North Dakota Department of Mineral Resources. State of North Dakota Bakken Resource Study Project 23 (2008).

barrels of recoverable reserves are available in North Dakota's Bakken and Three Forks formations. The most recent U.S. Geological Survey information estimated there may be 7.4 billion barrels of oil still undiscovered in the Bakken and Three Forks formations.<sup>3</sup> Statistics from the NDDMR indicate that oil production has increased dramatically over the past eight years from approximately 110,000 bpd in 2007 to nearly 1,230,000 bpd in December, 2014.<sup>4</sup>

The major constraint in transporting oil and gas from North Dakota to refining centers is the lack of pipeline capacity. Several major projects have been planned to address the growing volumes, but pipeline capacity is not expected to keep pace with the production, leaving incremental volumes to find alternative transportation methods, primarily by rail. Tesoro's Antelope Lateral Project and Keene to Charlson Project will allow Tesoro to more fully utilize its existing pipeline system, increase storage and transportation capabilities of the system, and provide increased flexibility in transportation to Tesoro's Mandan Refinery. In addition, to accommodate the ever-increasing Bakken development in northwestern North Dakota, the construction of even more processing and transmission infrastructure will be required, and Tesoro may develop additional facilities to address this need within the next ten years.

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<sup>2</sup> United States Geological Survey, Assessment of Undiscovered Oil Resources in the Devonian-Mississippian Bakken Shale Formation, Williston Basin Province, Montana and North Dakota (2008), available at <http://pubs.usgs.gov/fs/2008/3021/> (last visited Aug. 13, 2015).

<sup>3</sup> United States Geological Survey, Assessment of Undiscovered Oil Resources in the Bakken and Three Forks Formations, Williston Basin Province, Montana, North Dakota, and South Dakota (2013), available at <http://pubs.usgs.gov/fs/2013/3013/> (last visited Aug. 13, 2015).

<sup>4</sup> North Dakota Department of Mineral Resources, North Dakota Monthly Oil Production Statistics, available at <https://www.dmr.nd.gov/oilgas/stats/historicaloilprodstats.pdf> (last visited Aug. 9, 2015).

**EXHIBIT A**

A. FACILITY DESCRIPTION – DOT TRANSMISSION PIPELINES

Tesoro’s transmission pipeline system consists of DOT-jurisdictional pipelines that run from the Canadian Border in the north to the Mandan refinery towards the southeast. Additionally, there are also DOT jurisdictional pipelines that originate as far west as Richey, Montana and tie into the main north-south system at various points and stations.

B. TYPE AND CAPACITY

- 1) Product Type: Crude oil
- 2) Length of system: Approximately 512 miles
- 3) Pipe Size: Diameters vary between 6, 8, 10, 12, and 16 inches
- 4) Maximum Operating Pressure (“MOP”):

<u>Pipeline Segment</u>	<u>Pipeline MOP (psi)</u>	<u>Year</u>	<u>Diameter (in.)</u>
Border to Lignite	1440	1993	8
Lignite Black Slough	1440	1993	8
Lignite to Stampede	1440	2013	10
Black Slough to Battleview	1390	1993	6
Battleview to Tioga	1390	1993	6
Tioga to Ramberg	1440	1990	8
Tioga to Ramberg	1410	2012	6
Ramberg to Yttredahl	775	1953	12
Yttredahl to Charlson	775	1953	12
Charlson to Keene	768	1953	12
Keene to Blue Butte	768	1953	12
Blue Butte to Dunn Center	768	1953	12

Dunn Center to Dodge	492	1953	16
Dodge to Mandan	492	1953	16
Zap Block Valve to Beulah Basin	1480	2014	10
Fairview to Putnam	330	1969	6
Putnam to Richey	490	1969	6
Sidney to Putnam	740	1978	8
Cartwright to Sidney	740	1984	6
Alexander to Cartwright	740	1984	6
Alexander to Keene	1440	1984	6
Sidney to Poker Jim	740	1978	8
Poker Jim to Tree Top	740	1979	8
Tree Top to Dunn Center	1440	1980	10
Little Knife to Dunn Center	453	1977	8

5) Pump station specifications – Maximum Operating Pumping Discharge (“MODP”) Pressure and Settings:

<u>Location</u>	<u>DISCHARGE</u>		
	<u>Pump MODP</u>	<u>High Pressure Shut Down Setting</u>	<u>Pump Relief Valve Setting</u>
Black Slough (7-inch liner)	575	550	575
Tioga – Unit #1 – (6-inch liner)	780	720	740
Tioga – Unit #2 – (5.5-inch liner)	1125	720	740
BASH Units #1 and #2	504	460	No RV
Ramberg – Unit #1 – (6-inch liner)	780	690	740

Ramberg – Unit #2 – (5.5-inch liner)	930	690	740
Yttredahl	1125	700	740
Charlson	780	700	740
Keene #1 1500 (2.5-inch liner)	1400	550	600
Keene #1 1700 (5.5-inch liner)	551	550	600
Keene #2 Unit #1, #2, and #3	826		
Keene #2 Unit #4 and #5	285		
Blue Buttes (6-inch liner)	780	550	700
Johnson Corner Units #1, #2, and #3 PD	535	500	535
Johnson Corner Low Press #1 and #2	740		
Johnson Corner High Press			
Alexander Unit #1	930	700	720
Alexander Unit #2	930	700	720
Fairview	550	400	450
Putnam – Units #1 and #2	595	600	610
Sidney – Units #1 and #2	550	670	660
Sidney – Unit #3	595	700	700
Cartwright	1360	700	720
Poker Jim – Unit 1 PD	665	679	679
Poker Jim – Unit 2 Centrifugal	1400	679	No RV
Tree Top		no-flow switch	No RV
Connolly Units #1 and #2		350	No RV
Dunn Center Units #1 and #2	1800	480	No RV

Dodge 1 (5.5-inch liner)	930	480	490
Dodge 2 (5.25-inch liner)	1025	480	490
Little Knife Unit #1	1025	400	650
Little Knife Unit #2	1650	400	650
HWY 22	605	400	500

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