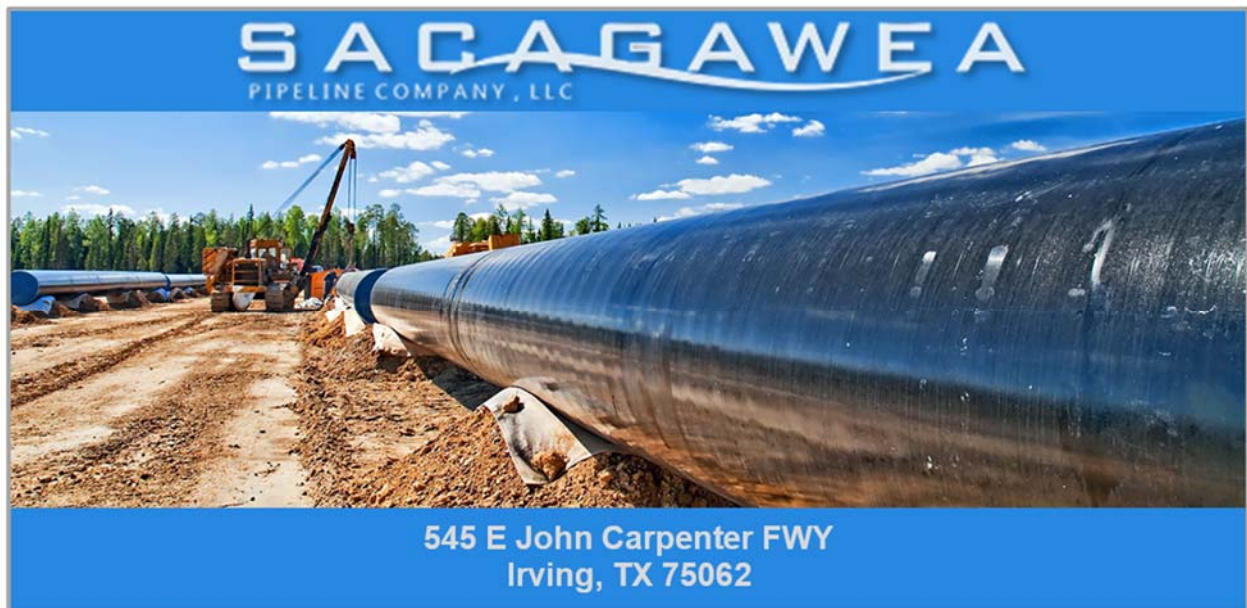


Pipeline Corridor Application

***Palermo to Enbridge Crude Oil Pipeline
Mountrail County***

September 2015



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LIST OF EXHIBITS – TAB 2

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APPENDIX 2.B	Bentek Energy LLC "The Williston Basin: Greasing the Gears for Growth in North Dakota" North Dakota Forecast Study July 2012 – pp. 47-49 only
APPENDIX 2.C	Lynn Helms, NDIC – Director's Cut Presentation May 13, 2015

INTRODUCTION

Sacagawea Pipeline Company, LLC ("Sacagawea"), submits this Certificate of Corridor Compatibility Application to the North Dakota Public Service Commission ("Commission" or "PSC") for the proposed construction of a 12-inch crude oil pipeline approximately 8 miles in length located in Mountrail County, North Dakota. The pipeline will be known as the Palermo to Enbridge Pipeline Project ("Project"). The proposed pipeline would originate at the Palermo Rail Facility owned by Phillips 66 Partners Terminal, LLC in Mountrail County and terminate at the Enbridge Crude Oil Terminal located in Stanley, North Dakota, also in Mountrail County.

The Project is needed to address transportation of growing volumes of crude oil. The pipeline system will be constructed to allow crude to flow in either direction. This feature allows for greater flexibility and access to more sales points depending on market conditions, and acts as a balancing point allowing the best price for North Dakota crude producers. The interconnection with the Enbridge Crude Oil Terminal will allow access to all of Enbridge North Dakota's existing pipeline as well as the Sandpiper Pipeline, which has an anticipated in-service date of 2017. Enbridge also operates a crude oil rail terminal at Berthold. The Project and its interconnections to rail terminals and other pipeline systems will provide access to multiple refinery markets throughout the United States.

In accordance with Chapter 49-22 of the North Dakota Century Code, Section 69-06-08-02 of the North Dakota Administrative Code, and the Commission's Energy Conversion and Transmission Facility Siting Guidelines, Sacagawea provides the following information to support its request for a Certificate of Corridor Compatibility for the Project.

SECTION A DESCRIPTION OF PROPOSED FACILITY

A.1 Type and Size of Facility

A.1 (a) Type

The proposed Project will result in a new crude oil transmission pipeline approximately 8 miles in length. The steel pipe utilized for construction of the Project will meet United States Department of Transportation ("US DOT") regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project will be constructed per 49 C.F.R. Subpart 195(D). The Project will be operated and maintained per 49 C.F.R. Subpart 195(F).

A.1 (b) Size

The capacity of the proposed Project will be 100,000 barrels of oil per day ("bbls/day").

Construction of the Project will involve the installation of 12-inch nominal diameter, steel, X-52 pipe with a nominal wall thickness of 0.312 inches. The maximum operating pressure ("MOP") of the pipeline will be 1,440 pounds of pressure per square inch gauge ("psig").

Valves will be 12-inch ANSI 600 manufactured in accordance with American Petroleum Institute ("API") Standard 6D "API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service." Valves will be installed pursuant to US DOT regulations. The MOP of the valves will be 1,440 psig.

The maximum temperature of the crude will be 120°F, which is within design parameters. The proposed Project will typically operate between 60°F and 120°F.

A.1 (c) Length

The Project will involve approximately 8 miles of pipeline installation.

A.2 Purpose of Facility

The pipeline system will be constructed to allow crude to flow in either direction. This feature allows for greater flexibility and access to more sales points depending on market conditions, and acts as a balancing point allowing the best price for North Dakota crude producers. The purpose of the Project will be to transport crude oil either from the Palermo Rail Facility to the Enbridge Crude Oil Terminal located in Stanley, North Dakota, or from the Enbridge Crude Oil Terminal to the Palermo Rail Facility. The Project is needed to address transportation of growing volumes of crude oil. The interconnection with the Enbridge Crude Oil Terminal will allow access to all of Enbridge's existing pipeline as well as the proposed Sandpiper Pipeline, which has an anticipated in-service date of 2017. The pipeline and its interconnections to rail terminals and other pipeline systems will provide access to multiple refinery markets throughout the United States.

A.3 Location

The Project would originate at the Palermo Rail Facility owned by Phillips 66 Partners Terminal, LLC and terminate at the Enbridge Crude Oil Terminal located in Stanley, North Dakota. The Project is entirely located within Mountrail County, North Dakota. Figure 1.A.1 shows the general location of the proposed Project.

A.4 Aboveground Facilities

Surface facilities to be installed along the route will be limited to one block valve, check valves, pig launchers and receivers, pipeline markers, and rectifiers. The above ground block valve will be installed at the midpoint of the Project within the ROW. This block valve will have the capability of being operated remotely.

The Palermo Rail Facility and the Enbridge Crude Oil Terminal are existing above-ground sites and the addition of the equipment for the Project will result in minimal additional visual impacts. Above-ground facilities at the Palermo Rail Facility will include a valve and pumping equipment. Above-ground valves and meters will be installed at the Enbridge Crude Oil Terminal.

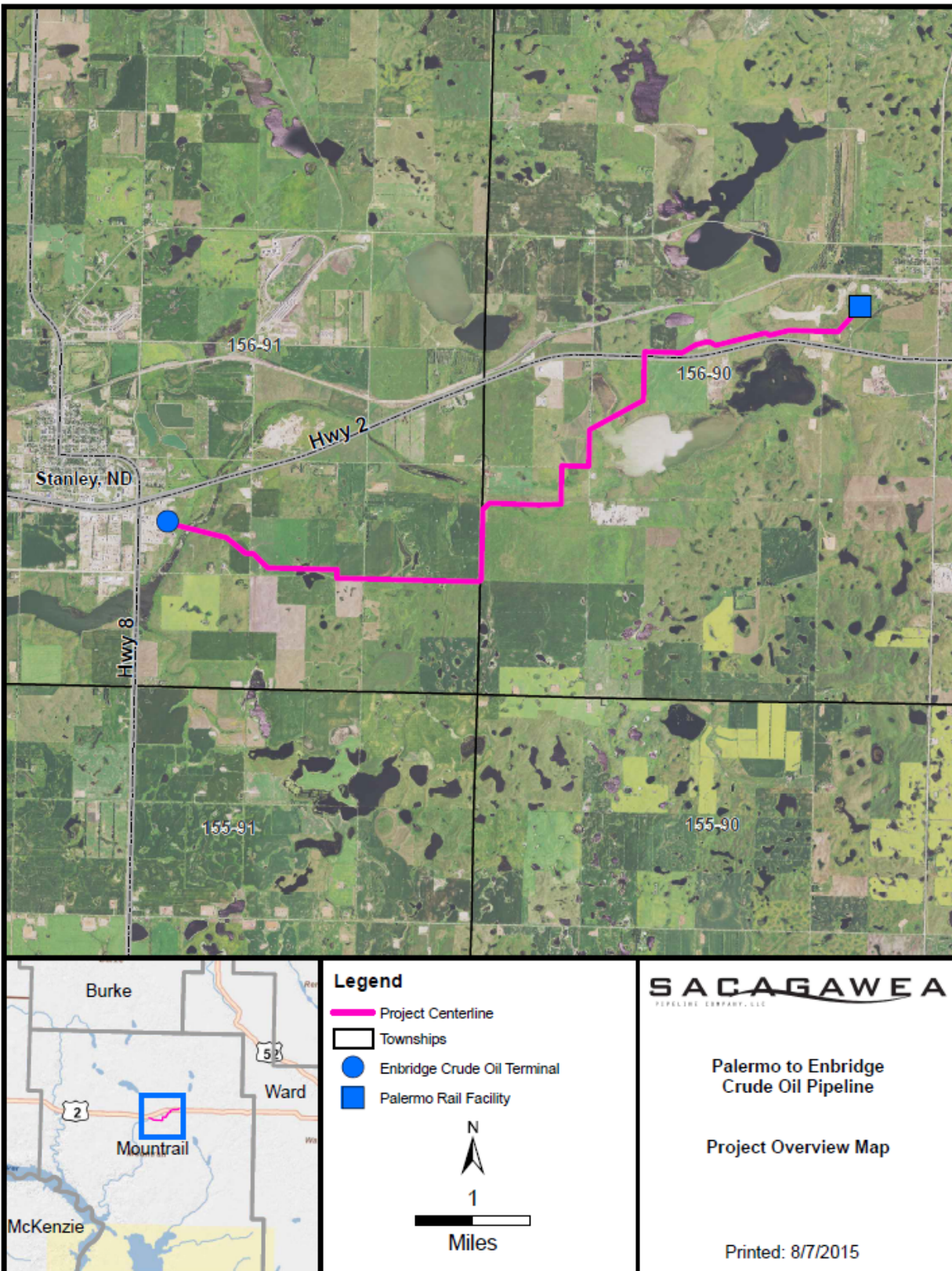


FIGURE 1.A.1 – General Project Location Map

A.5 Project Schedule

Sacagawea proposes to develop the Project on the following time schedule:

A.5 (a) Certificate of Corridor Compatibility

The Certificate of Corridor Compatibility Application is being submitted in September of 2015 as part of this Consolidated Certificate of Corridor Compatibility and Route Permit Application.

A.5 (b) Route Application

The Route Permit Application is being submitted in September of 2015 as part of this Consolidated Certificate of Corridor Compatibility and Route Permit Application.

A.5 (c) Right-of Way Acquisition Date

Right-of-Way acquisition is anticipated to be completed by October of 2015.

A.5 (d) Issuance of Certificate of Corridor Compatibility and Route Permit

A Certificate of Corridor Compatibility and a Route Permit for the Project are expected to be issued in December of 2015.

A.5 (e) Construction Start Date

Construction is expected to begin in the first quarter of 2016.

A.5 (f) Construction Complete

Construction for the Project is anticipated to last approximately two to three months following application approval.

A.5 (g) Test Operations

Test operations will occur following construction of the proposed Project.

A.5 (h) In-Service Date

All facilities are estimated to be in-service in or before June of 2016.

SECTION B STUDIES

B.1 Corridor

Section 69-06-05-01(2)(f) of the North Dakota Administrative Code requires that a corridor's width be at least ten percent of the length of the proposed project (i.e., 0.8 miles), but not less than one mile or greater than six miles wide unless approved by the Commission. In conjunction with the application for proposed construction of the Project, a one-mile-wide field corridor was studied.

B.2 Environmental Analysis

Studies were undertaken in conjunction with the proposed construction to evaluate the Project's potential impacts on recreational, environmental, and cultural resources. Specific study findings for the proposed corridor are discussed in detail in the Route Application (see Tab 3) and associated exhibits (see Tab 4). Significant features are depicted in Tab 4 on Figures 4.B.a which are overlaid on an aerial photograph. The Project route is also presented superimposed on a USGS Topographic map as Figures 4.B.b in Tab 4. This information is also presented as shapefiles on the enclosed CD-ROM disk in Tab 7 suitable for viewing with ESRI's ArcGIS mapping software.

Sacagawea engaged Keitu Engineers & Consultants, Inc. ("Keitu") to perform the environmental and cultural resource siting studies for the Project.

Keitu engaged Beaver Creek Archaeology, Inc. to perform a Class I archeological file search using a 1-mile-wide study corridor of the pipeline route. A Class III field survey was performed on a 300-foot-wide corridor in May, June, July, and August of 2015. Significant features are discussed in the Route Application (see Tab 3). The cultural resource location details are not presented here in a publicly available document per request of the North Dakota State Historic Society. Beaver Creek Archaeology has provided a redacted version of the report to be submitted as part of this application. Additional details of these sites will be provided to the Commission staff upon request.

Keitu conducted a database search using a 1-mile-wide study corridor for all other exclusion or avoidance criteria, as outlined in the North Dakota Administrative Code, along the Project route. Items reviewed included federal and state parks, protected and sensitive plants and animals, and civil and social structures such as recreational areas, rural homes, and farmsteads. In May, June, and August of 2015, a field study was conducted using a 500-foot-wide corridor for botany and a 1-mile wide corridor for wildlife, in accordance with U.S. Fish and Wildlife Service field study protocols.

SECTION C NEED FOR FACILITY

C.1 Need for Facility Based on Current and Projected Demand

C.1 (a) Planned Use and Purpose

The purpose of the Project is to provide “mid-stream” transportation alternatives for the expanding volumes of crude oil produced in North Dakota and to facilitate efficient access to downstream takeaway markets. The pipeline system will be constructed to allow crude to flow in either direction. This feature allows for greater flexibility and access to more sales points depending on market conditions, and acts as a balancing point allowing the best price for North Dakota crude producers.

The Project will transport crude oil either from the Palermo Rail Facility to the Enbridge Crude Oil Terminal or from the Enbridge Crude Oil Terminal to the Palermo Rail Facility. The Project is needed to address transportation of growing volumes of crude oil. The interconnection with the Enbridge Crude Oil Terminal will allow access to all of Enbridge’s existing pipeline as well as the proposed Sandpiper Pipeline, which has an anticipated in-service date of 2017. The pipeline and its interconnections to rail terminals and other pipeline systems will provide access to multiple refinery markets throughout the United States.

C.1 (b) Pipeline Capacity is Constrained in Western North Dakota

Application of horizontal drilling technology and historically high crude oil prices have resulted in a resurgence of oil drilling activity in North Dakota. Unprecedented success has occurred in the Bakken oil formation. Oil production in North Dakota is expected to continue to grow until 2025.

Due to the constraints on pipeline capacity, rail transportation of crude oil increased more than tenfold during the period from April 2011 to April 2013 from approximately 60,000 bbls/day to over 650,000 bbls/day. Shipments are made to East Coast, West Coast, and Gulf Coast destinations. Over 70% of all crude oil produced in North Dakota leaves the state by rail.¹

C.1 (c) Recent System Studies Supporting the Analysis of the Need

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. 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.² Information from the North Dakota Department of Mineral Resources indicates that oil production has increased dramatically over the past five years from approximately 277,640 bbls/day in March of

¹ N.D. Pipeline Authority, North Dakota Oil and Gas Research Council Presentation, Justin J. Kringstad, May 23, 2013 (see Appendix 2.A).

² 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/>.

2010 to over 1,190,583 bbls/day in March of 2015,³ with production expected to continue to increase.

An excerpt from “The Williston Basin: Greasing the Gears for Growth in North Dakota” prepared by Bentek Energy, LLC under contract from the North Dakota Pipeline Authority is presented in Tab 2 as Appendix 2.B. The 129-page report released July 25, 2012 highlights that oil production from the Williston Basin, which includes the Dakotas and Montana, soared more than 400% in the five years prior to the report. Oil production from the Williston Basin is expected to continue to grow until 2025. In the report, Bentek Energy, LLC also estimates that planned refinery and pipeline projects will not be able to accommodate the increased production. Producers will therefore continue to rely on more expensive transportation options until additional pipeline capacity is available.⁴

Due in large part to production from the Bakken and Three Forks formations, the State of North Dakota is currently the second largest producer of crude oil in the United States. The state produced an all-time high of 1,227,483 bbls/day in December 2014.⁵

Sacagawea's proposed projects will provide needed capacity to transport increased production of crude oil from the Bakken and Three Forks formations.

C.1 (d) Other Expansions on the Sacagawea System

Sacagawea has submitted a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the Commission to construct an approximately 70 mile crude oil pipeline originating at Paradigm Midstream Services' Keene Crude Oil Terminal located approximately 2.8 miles south of Keene, North Dakota in McKenzie County and terminating at the Palermo Rail Facility owned by Phillips 66 Partners Terminal, LLC in Mountrail County.

Sacagawea plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the Commission to construct an approximately 12 mile crude oil pipeline originating from a location 3 miles east of Johnson's Corner, North Dakota in McKenzie County and terminating at Paradigm Midstream Services' Keene Crude Oil Terminal located approximately 2.8 miles south of Keene, North Dakota in McKenzie County.

Sacagawea may construct other pipeline transmission facilities in McKenzie County to transport crude oil to the Keene Terminal for transport on the Sacagawea Pipeline. Sacagawea may also construct other transmission facilities in Mountrail County to deliver crude oil to points other than the Palermo Rail Facility. The need for and timing of other transmission pipeline facilities are subject to further commercial discussions and an expanded open season for Sacagawea.

³ 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 May 27, 2015).

⁴ Bentek Energy, LLC, “The Williston Basin: Greasing the Gears for Growth in North Dakota,” July 25, 2012, pp. 35, 47.

⁵ NDIC, “Director's Cut,” *available at* <https://www.dmr.nd.gov/oilgas/directorscut/directorscut-2015-05-13.pdf> (accessed May 27, 2015). This document is also presented in Tab 2 as Appendix 2.C.

C.1 (e) Statement Concerning Deviations from Most Recent 10-year Plan

Sacagawea's Ten Year Plan for 2015-2025 was filed with the Commission on May 14, 2015, in Case No. PU-15-188. This plan outlined Sacagawea's plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the Commission to construct an approximately 8 mile crude oil pipeline originating from the Palermo Rail Facility owned by Phillips 66 Partners Terminal, LLC in Mountrail County and terminating at the Enbridge Crude Oil Terminal located in Stanley, North Dakota in Mountrail County.

C.2 Alternatives to the Proposed Facility

Three alternatives to the Project were considered.

C.2 (a) No Action Alternative

The status quo could be allowed to continue, supported by trucking crude oil to existing pipeline unloading facilities and/or rail trans-ship facilities. Finding qualified cargo tank operators, already a critical issue, will continue to be difficult. Further, there will be additional wear and tear to county and state roads due to high truck traffic. Pipeline transportation (1) reduces truck traffic on the area's road network; (2) provides access to a wider range of markets; and (3) results in a more efficient and safer mode of transportation by reducing costs and the potential for accidents. A "no action" alternative is unacceptable to Sacagawea and its customers.

C.2 (b) Alternative Pipeline Design/Size

Based on the crude petroleum forecast and discussions with shippers and producers Sacagawea determined that an annual capacity of 100,000 bbls/day would be sufficient to meet the transportation requirements of its shippers. The 12-inch design provides the most efficient and cost effective combination of capital cost and pumping horsepower requirements for the required capacity.

C.2 (c) Alternative Pipeline Route

A full route alternative analysis was completed by Sacagawea. Sacagawea identified and evaluated several options for routing its Project. These studies were designed to define a preferred corridor that achieves Project objectives, is technologically and economically feasible to construct, and minimizes impacts on landowners and the environment. Sacagawea next evaluated this corridor for the optimum configuration. It was determined that the proposed route would minimize environmental and landowner impacts.

SECTION D LOCATION

D.1 Study Area

The proposed pipeline would originate from the Palermo Rail Facility owned by Phillips 66 Partners Terminal, LLC and run approximately 8 miles west, terminating at the Enbridge Crude Oil Terminal located in Stanley, North Dakota. The Project is located entirely in Mountrail County, North Dakota.

In conjunction with the application for construction of the proposed Project, a one-mile-wide corridor was studied. Field studies were completed using a variable 300-foot to 1-mile-wide corridor. The Class I archeological file search was completed using a 1-mile-wide study corridor of the route. A Class III field survey was performed on a 300-foot-wide corridor. A biological field study was conducted using a 500-foot-wide corridor for botany and a 1-mile-wide corridor for wildlife, in accordance with US Fish and Wildlife Service field study protocols.

D.2 Map of Proposed Corridor

Because a consolidated application for a Certificate of Corridor Compatibility and a Route Permit is being submitted, maps (including U.S.G.S. Quad and Aerial Maps) of the proposed corridor and route for the Project can be found in Appendix 4.B of the Route Application (see Tab 4). The location of exclusion and avoidance areas, as defined in Section 69-06-08-02 of the North Dakota Administrative Code, within the corridor are also depicted on the maps provided.

D.3 Criteria to be Evaluated

Because this application is part of a consolidated application for a Certificate of Corridor Compatibility and a Route Permit, the criteria to be evaluated are discussed in Section C of the Route Permit portion of the application (see Tab 3).

D.4 Relative Value of Each of the Criteria

Because this application is part of a consolidated application for a Certificate of Corridor Compatibility and Route Permit, the relative value of each of the criteria considered is discussed in Section C of the Route Permit portion of the application (see Tab 3).

SECTION E GENERAL MITIGATIVE MEASURES TO BE TAKEN

Because this application is part of a consolidated application for a Certificate of Corridor Compatibility and a Route Permit, the mitigation measures that Sacagawea proposes to take with respect to the Project are discussed in Section D of the Route Permit application (see Tab 3).

SECTION F QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY

The qualifications of the personnel who contributed to the corridor location study are:

(1) Thomas G. Janik, VP Engineering – Paradigm Energy Partners, LLC

Degree: Bachelor of Science - Civil Engineering, Texas A&M University

Experience: 38 years of experience in the oil and gas industry including executive management experience in engineering and corrosion services, project and construction management, operations, and pipeline and facilities construction. In addition, he is experienced in the development and management of pipeline integrity management process safety management programs.

(2) Kathleen Spilman, Managing Director — Keitu Engineers & Consultants, Inc.

Degrees: Bachelor of Science - Chemical Engineering, University of North Dakota
Masters in Management, University of Mary

Experience: 33 years' experience in petroleum refining and fuels transportation field as well as regulatory affairs and compliance.

Professional License: Registered Professional Engineer: North Dakota, South Dakota, Montana

(3) Heather Patch, Staff Engineer (Chemical) — Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science - Chemical Engineering, University of North Dakota

Experience: 3 years' experience in regulatory affairs and compliance.

SECTION G MAPS

G.1 Map of Criteria within Study Area

Because a consolidated application for a Certificate of Corridor Compatibility and a Route Permit is being submitted, the maps (including U.S.G.S. Quad and Aerial Maps) of the proposed corridor and route of the Project can be found in Appendix B of the Route Permit portion of the application (see Tab 4). The location of exclusion and avoidance areas, as defined in Section 69-06-08-02 of the North Dakota Administrative Code, within the corridor are also depicted on the maps provided.

G.2 Maps of Study Area

The GIS software currently in use by Commission staff is ESRI's ArcGIS and companion software packages. A CD-ROM containing electronic copies of ArcGIS shapefiles outlining the proposed corridor has been included with this application as Tab 7.