

ND PSC Case No. PU-10-555

**8-Inch Natural Gas Main & Lateral Pipeline
Certificate of Corridor Compatibility Application**

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INTRODUCTION

Hiland Operating, LLC (Hiland Operating), submits this Certificate of Corridor Compatibility Application to the North Dakota Public Service Commission (Commission) for an approximately 5.1-mile-long, 8-inch natural gas main and lateral pipeline project to be located in McKenzie County, North Dakota (the Project). The Project will be located approximately nine miles northeast of Cartwright, North Dakota and will transport pipeline quality natural gas from Hiland Operating's natural gas processing plant (Hiland Operating Plant) near Cartwright, North Dakota, which is currently under construction, to points of interconnection with a Williston Basin Interstate Pipeline Company (WBI) transmission pipeline and a Northern Border Pipeline Company (Northern Border) transmission pipeline.

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, Hiland Operating 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 Describe the type of transmission facility including a description of the purpose of the facility and the technology to be employed:

The Project will consist of an underground main line and lateral line that will transport pipeline quality natural gas. Both the main line and the lateral line will utilize 8-inch steel pipeline. The approximately 5.1-mile-long main line will originate at the Hiland Operating Plant four miles north and eight miles east of Cartwright, North Dakota, and will terminate at and interconnect to Northern Border's transmission pipeline at the Hiland Operating-Northern Border Tap Site, approximately five miles north of Cartwright, North Dakota. The approximately 1,500-foot-long lateral line will extend off of the Project main line and interconnect to WBI's transmission pipeline at a point approximately one-half mile from the Project main line's point of termination at the Northern Border transmission pipeline. The Project will be located completely within McKenzie County, North Dakota, and a map illustrating the Project's general location is provided as Figure 1.A.1.

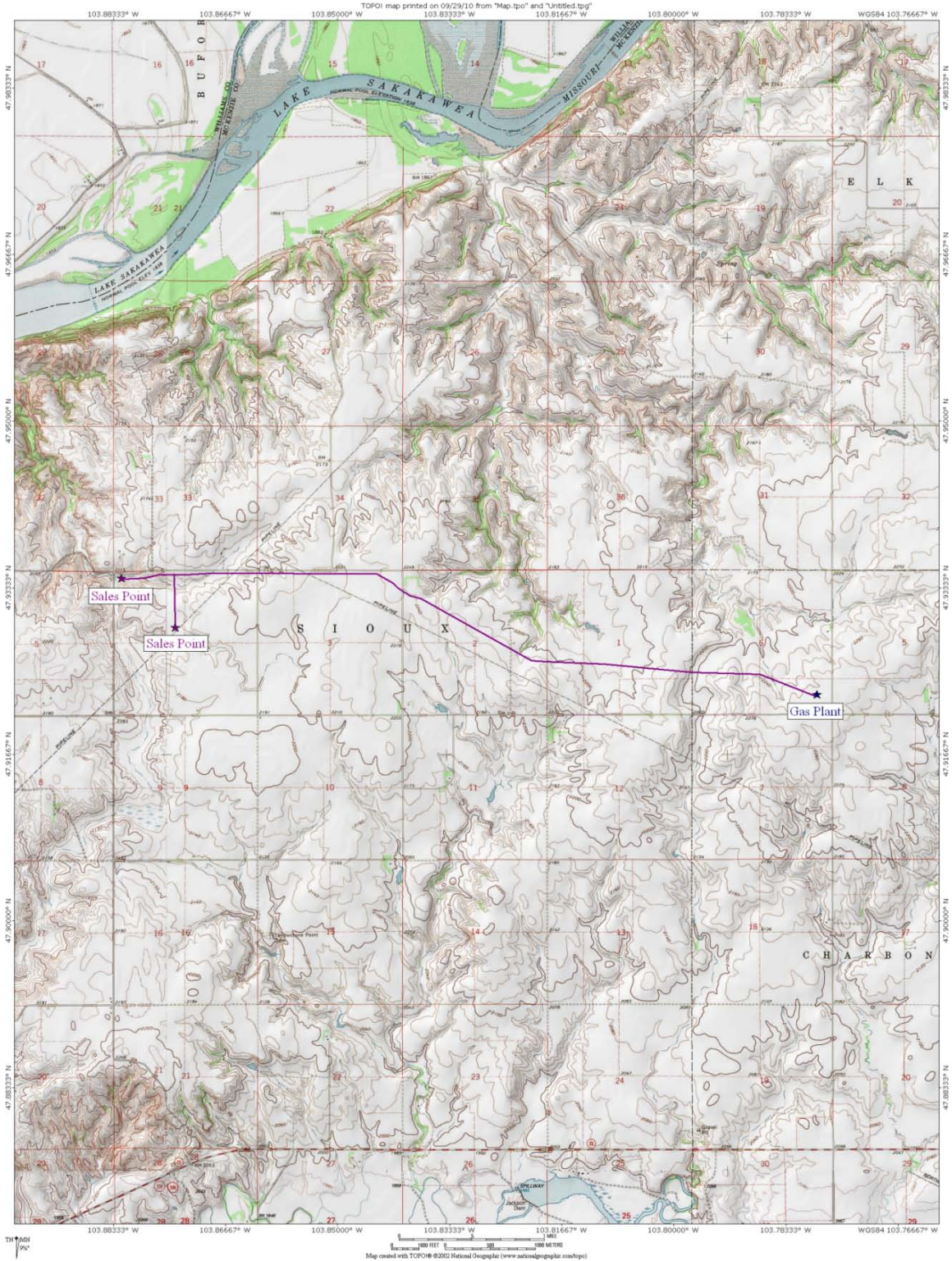
Surface facilities installed as part of the Project will be limited to pipeline markers, rectifiers, "pig" launchers, receivers and block valves. Some small fenced-in enclosures to house associated power and control systems may be installed to allow valves to be operated remotely.

The steel pipeline utilized for the Project will meet US Department of Transportation design criteria outlined in 49 CFR 195.100. The Project will be constructed per 49 CFR 195.200, and operated and maintained per 49 CFR 195.400.

Upon completion, the Project will enable transportation of natural gas produced in northwestern North Dakota to two markets: (1) local markets via WBI's Transmission System; and (2) markets in eastern Illinois and western Indiana via Northern Border's Transmission System. This market flexibility is critical to assure the best overall value is obtained for North Dakota's natural gas production. The Project will provide needed capacity to transport increased production of processed natural gas from the Bakken and Three Forks formations.

The estimated cost of the project is \$3.4 million.

Figure 1.A.1
Hiland Operating, LLC Williston Basin Natural Gas Pipeline Vicinity Map



A.2 Describe the type, source, and final destination of the product to be transmitted by the proposed facility.

Hiland Operating is currently constructing the Hiland Operating Plant, which will have a 60 million standard cubic feet per day capacity to purify and fractionate raw natural gas produced from oil fields in western North Dakota. The Hiland Operating Plant will deliver pipeline-quality natural gas that can be used as fuel by residential, commercial and industrial consumers. As noted above, upon completion, the proposed Project will enable transportation of natural gas via pipeline from the Hiland Operating Plant to one of two sale points: (1) the Northern Border Transmission System; or (2) the WBI Cabin Creek Transmission System. Natural gas shipped on the Northern Border Transmission System will be delivered to the mid-America hubs in eastern Illinois and western Indiana. Natural gas shipped on the WBI Cabin Creek Transmission System will be delivered for sale in-state, as well as possibly out-of-state.

A.3 Pipeline size and design.

A.3 (a) Width of the Right of Way

The Project right-of-way (ROW) will generally be 125 feet wide to allow adequate room for topsoil separation, work equipment and pipe stringing. This ROW will consist of both a permanent easement and temporary workspace, which will be utilized only during construction and includes material staging areas and temporary access roads. The ROW will be wide enough to provide areas for prefabrication of a section of pipeline and storage of top soil/subsoil material. To support construction activities, Hiland Operating will temporarily use property at the Hiland Operating Plant as a contractor staging and pipe storage area. Hiland Operating will use existing public roads to access the ROW, and does not expect to modify roads or construct new permanent access roads.

Hiland Operating has acquired or will acquire a 100-foot permanent easement for the Project, as well as for possible future liquid pipeline(s) installation. The permanent easement width was selected based on the following criteria:

- Provision of adequate space and line separation for future line maintenance; and
- Allowance of adequate space to facilitate construction of additional lines, while minimizing potential damage to the existing line(s), if additional lines are installed in the future.

A.3 (b) Estimated Distances Between Surface Structures

The Project's main and lateral lines will be buried underground. Unlike power transmission lines with towers, only a few surface structures are associated with an underground pipeline system. In this case, the gas compressors will be located at the natural gas plant, along with associated pipeline pig launcher, block valves and pressure and flow controllers. A pig trap and isolation valves will be installed at each of the Project's points of interconnection.

With the exception of pipeline markers, plus rectifiers and test stations associated with the cathodic protection systems, no surface structures will be installed between the start and the end of the pipeline.

Estimated distances between surface structures along the route is 4 miles.

A.3 (c) Pipe Size

The proposed Project will involve installation of 8-inch nominal diameter pipe with a nominal wall thickness of 0.219 inches denoted as American Petroleum Institute (API) Code 5LX specification X52/X42 pipeline pipe. The maximum allowable operating pressure (MAOP) will be 1625 pounds of pressure per square inch gauge (psig).

The valves to be installed will be 8-inch ANSI 900, weld end by weld end, full port, rising stem gate valves. These valves will be manufactured in accordance with API Standard 6D "API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service". The MAOP of the valves will be 1625 psig.

A.3 (d) Approximate Length of Facility

The Project requires the installation of approximately 5.1 miles of pipe.

A.3 (e) Maximum Design Operating Pressure and Temperature

The MAOP of the pipe will be 1625 psig. The maximum temperature of the gas will be 120°F which is within design parameters. However the Project will typically operate between 60°F to 120°F.

A.3 (f) Maximum Design Flow Rate

The pipeline will have a maximum capacity of 70 million standard cubic feet per stream day with a typical operating flow of volume of 10 to 50 million standard cubic feet per day.

A.3 (g) The Number and General Location of Compressor Stations

The only compressor units associated with the Project will be installed at Hiland Operating Plant, located on the east end of the Project.

A.4 TIME SCHEDULE

Despite more than \$350 million state-wide spent in infrastructure improvements, the number of producing wells not recovering natural gas for sale is as of July 1, 2010 is over 17% and climbing per data presented by the North Dakota Pipeline Authority (see Appendix 2.B). With over 150 oil drilling rigs currently in operation, the state's natural gas production is expected to continue to climb and additional processing and associated transportation capacity is necessary. Therefore, it would benefit all stakeholders to begin construction as soon as possible.

A.4 (a) Certificate of Corridor Compatibility

The Certificate of Corridor Compatibility Application is being submitted in October 2010 as part of this consolidated Certificate of Corridor Compatibility and Route Permit Application.

A.4 (b) Route Application

The Route Permit Application is being submitted in October 2010 as part of this consolidated Certificate of Corridor Compatibility and Route Permit Application.

A.4 (c) Issuance of Certificate of Corridor Compatibility and Route Permit

A Certificate of Corridor Compatibility and a Route Permit for the proposed Project are expected to be issued on or before November 30, 2010.

A.4 (d) Construction Start Date

Hiland Operating plans to begin construction of the Project as soon as possible. Construction in the fourth quarter 2010 would allow the proposed Project to be operational in the first quarter of 2011.

A.4 (e) Construction Complete

The estimated Project construction completion date is on or before March 1, 2011.

A.4 (f) In-Service Date

The estimated in-service date for the Project is on or before March 1, 2011.

SECTION B STUDIES

Hiland Operating conducted siting studies for the proposed Project using a 1-mile wide corridor (i.e., ½-mile on either side of the expected Project route). The study corridor utilized is consistent with Section 69-06-04-02(1)(b) of the North Dakota Administrative Code, which requires that a corridor's width be at least ten percent of the length of the proposed Project (i.e., 0.51 miles), but not less than one mile or greater than six miles wide unless approved by the North Dakota Public Service Commission (Commission). The studies conducted were undertaken to evaluate the proposed Project's potential impacts to 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 identified during the corridor study relative to the proposed pipeline corridor are provided in Tab 4 as Figure 4.1a and Figure 4.2a which are overlaid on an aerial photograph taken in 2009. The route is also presented superimposed on a USGS Topographic map as Figure 4.1b and Figure 4.2b also located 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.

SECTION C NEED FOR FACILITY

C.1 Describe the need for the facility based on current and projected demand for the product transmitted by the facility including the most recent system studies supporting the analysis of the need.

a. Planned Use and Purpose

Raw natural gas produced at the well sites contains varying levels of sulfur compounds and other contaminants (including water) as well as varying heat content. This raw gas must either be flared or processed to meet standardized specifications prior to sale.

The Hiland Operating Plant will produce pipeline grade natural gas, propane and butane mixture (i.e., Liquefied Petroleum Gas (LPG)), and natural gasoline liquid. The pipeline grade natural gas will be primarily methane with some ethane and trace amounts of heavier petroleum compounds. The proposed Project will connect the Hiland Operating Plant to sale points via the existing Northern Border and WBI Transmission Systems.

b. Statement Justifying Deviations from the Most Recent Ten-Year Plan

Hiland Operating's 2010 Ten-Year Plan, will be submitted to the Commission under separate cover. The proposed Project is consistent with this plan.

c. Recent System Studies Supporting the Analysis of the Need.

A copy of "An Update on North Dakota's Natural Gas Infrastructure" Report prepared by North Dakota Pipeline Authority Director Justin Kringstad is presented in Tab 2 as Appendix 2.A.

According to the report, as of July 1, 2010, over 17% of producing wells in the state do not recover the natural gas produced for sale. With over 150 drilling rigs currently in operation and approximately 90 new wells being completed each month, the state's natural gas production is expected to continue to climb and more processing and associated transportation capacity is necessary. Production records in the state have been set every month subsequent since May 2010.¹

In August 2009, the North Dakota Industrial Commission reported that 30% of North Dakota's produced natural gas was flared as an unmarketable byproduct of oil production. The 26 billion cubic feet flared was about twice the annual natural gas consumption of the state.²

C.2 Alternatives to the Proposed Facility

While it is generally accepted that pipeline transportation is the only practical alternative for transporting natural gas to and from a processing plant, Hiland Operating did

¹ U.S. Dept of Energy, EIA webpage statistics, crude oil production by state, Retrieved September 21, 2010

² Bismarck Tribune newspaper article, *Company gets Funds for Flare Project*, January 27, 2010

consider and dismiss one alternative destination, one alternative route and an alternative pipe design/size.

a. Alternative Destination - Routing to Prairie Rose Pipeline:

Pecan Pipeline (North Dakota), Inc., began operation of the Prairie Rose Pipeline in February 2010, which transports under-processed natural gas from its origin in Mountrail County to the Alliance Pipeline near Bantry, North Dakota. Selecting the Prairie Rose Pipeline as an interconnection point was dismissed for two reasons: (1) the full value of the processed natural gas produced at the Hiland Operating Plant would not be monetized by delivery into a “rich gas” system; and (2) the pipeline length would need to be expanded to over 70 miles in length with proportional increases in installation costs.

b. Alternative Routing – Parallel Existing Transmission Pipeline(s):

The proposed route does not parallel either of the two existing transmission pipelines (i.e., the Northern Border and the WBI transmission pipelines). Hiland Operating considered alternative routes that would parallel each of the existing lines for at least part of the route, but such alternatives were discarded in order to: (a) avoid transecting property with existing irrigation systems; and (b) meet the desired routing of the surface landowner(s).

Hiland Operating found willing landowners along the proposed route and easement agreements with **all** landowners have either been finalized, or are in the process of being finalized. In addition, the proposed corridor is the most advantageous for siting liquid pipelines to transfer LPG and natural gasoline liquids to a rail siding for rail transport, should the opportunity present itself in the future.

c. Alternative Pipeline Design/Size:

Alternatives were examined with respect to the size of the pipeline, but the 8-inch line is best suited to match the capacity of the Hiland Operating Plant and is the most economically suited to meet the shipping requirements of the Northern Border and WBI transmission pipelines.

SECTION D LOCATION

D.1 Study Area:

The Project area is located approximately 24 miles northwest of Watford City, 8 miles northwest of Alexander, 9 miles northeast of Cartwright and 17 miles southwest of Williston in unincorporated rural McKenzie County, North Dakota.

Hiland Operating conducted siting studies for the proposed Project using a 1-mile wide corridor (i.e., ½-mile on either side of the expected Project route). The study corridor utilized is consistent with Section 69-06-04-02(1)(b) of the North Dakota Administrative Code, which requires that a corridor's width be at least ten percent of the length of the proposed Project (i.e., 0.51 miles), but not less than one mile or greater than six miles wide unless approved by the Commission. The studies conducted were undertaken to evaluate the proposed Project's potential impacts to recreational, environmental and cultural resources.

D.2 Map of Proposed Corridor:

Since 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 relative to the proposed route are also depicted on the maps provided.

D.3 Relative Value of Each of the Criteria:

Since this application is part of a consolidated application for a Certificate of Corridor Compatibility and a Route Permit, these matters are discussed in Sections B.4, B.5 and B.6 of the Route Permit portion of the application (see Tab 3).

D.4 Criteria to be Evaluated:

Since this application is part of a consolidated application for a Certificate of Corridor Compatibility and a Route Permit, the relative value of each of the criteria considered is discussed in Sections B.4, B.5 and B.6 of the Route Permit portion of the application (see Tab 3).

D.5 General Mitigative Measures to be Taken:

Since this application is part of a consolidated application for a Certificate of Corridor Compatibility and a Route Permit, the mitigative measures that Hiland Operating proposes to take with respect to the Project are discussed in Sections B.4, B.5 and B.6 of the Route Permit application (see Tab 3).

D.6 Qualifications of Persons Contributing to the Study:

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

(1) Kent Christopherson, Vice President/Chief Operations Officer - Hiland Partners, LP

Degrees: B.S. in Mining Engineering & Geology
South Dakota School of Mines and Technology
Masters of Business Administration
Nova Southeastern University

Qualifications: Certified Maintenance & Reliability Professional by the Society of
Maintenance & Reliability Professionals
Certified Lubrication Specialist by the Society of Tribologists &
Lubrication Engineers.

Experience: 30 years in petroleum transportation field

(2) Michael Higgins, Director Project Management – Hiland Operating, LLC

Degree: Bachelor of Business Administration, Kennedy Western University

Experience: 15 years experience in petroleum transportation field

(3) 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: 29 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

D.7 Maps.

a. Map of Criteria Within Study Area:

Since 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 Tab 4 Appendix B of the Route Permit portion of the application. The location of Exclusion and Avoidance Areas, as defined in Section 69-06-08-02 of the North Dakota Administrative Code, within the corridor relative to the proposed route are also depicted on the maps provided.

b. Mylar maps of study area:

Use of Mylar[®] maps for recording and transmitting survey information has been replaced by geographic information systems (GIS) data management technology. A waiver request from this requirement is submitted in conjunction with this Consolidated Application.

The GIS software in current use by the 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 in lieu of providing Mylar[®] map documentation and can be found in Tab 7.