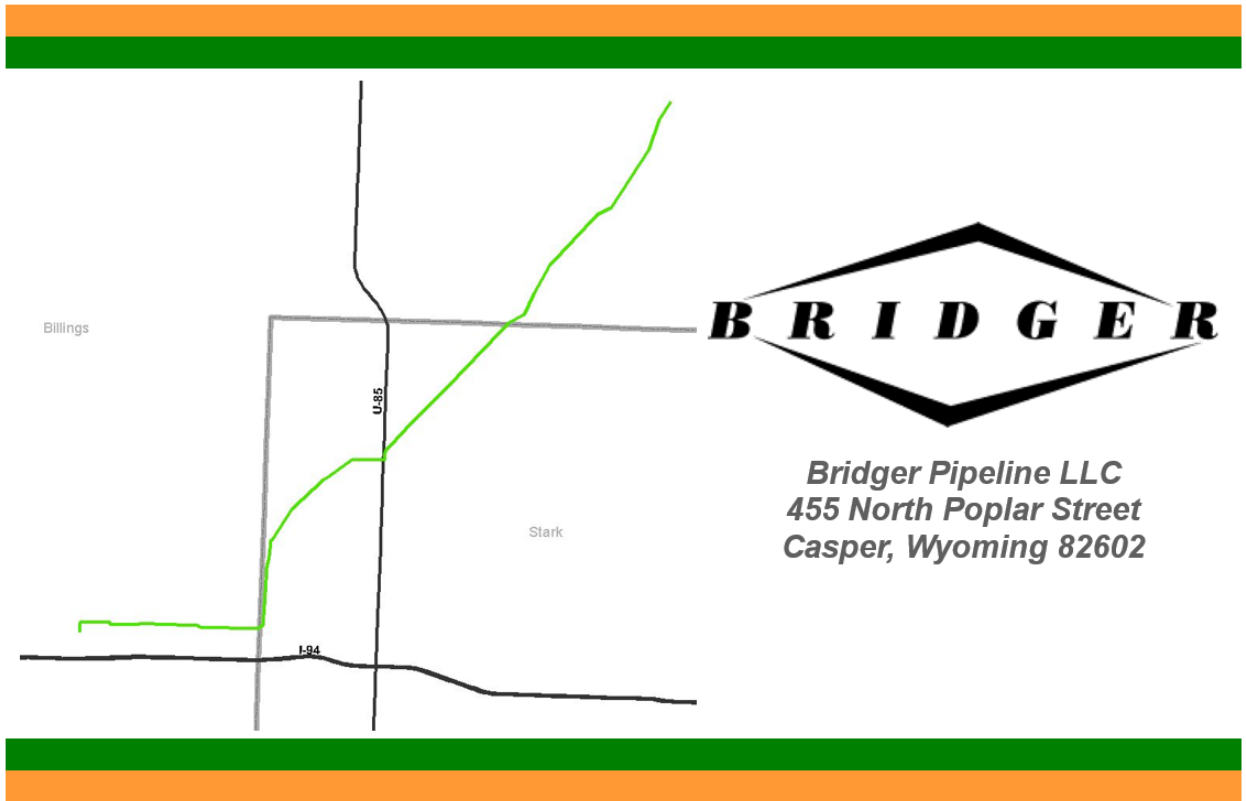


*Heart River Pipeline
Billings and Stark Counties*

Pipeline Corridor Application



January 2015

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SECTION A DESCRIPTION OF PROPOSED FACILITY

A.1 Describe the type of transmission facility addressed in this application. The description shall include the purpose of the facility and the technology to be employed:

Bridger Pipeline LLC (Bridger) proposes to construct and operate a new 15-mile-long, 16-inch liquid petroleum pipeline (Project) that will interconnect with Bridger facilities at Skunk Hills Station and Fryburg Station with future delivery to Baker, MT. This system is currently connected to Bridger Pipeline’s 12-inch Four Bears crude pipeline. The new section of pipeline parallels an existing Bridger 8-inch line from Skunk Hill Station to Fryburg Station and will be operationally integrated into the existing operations of Bridger.

In most cases, no additional right-of-way (ROW) will be required, as Bridger has multiple line rights in their existing ROW. Where new ROW is required, the ROW has been acquired from landowners adjacent to the existing Bridger ROW for its existing 8-inch pipeline. The pipeline will be buried underground. No new pumping facilities will be needed at this time within North Dakota. No new surface facilities will be installed in the State of North Dakota, other than pipeline markers, rectifiers, and block valves. Some small fenced-in enclosures to house associated power and control systems may be installed to allow some valves to be operated remotely.

The estimated cost of the Project is approximately \$10.4 million.

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

The new pipeline will provide needed capacity to transport increased production of petroleum from western North Dakota. This additional pipeline will increase the capacity of the system by 125,000 barrels per day (bpd) on an annual average.

Due to the increased volume of crude oil being transported through the existing pipeline, it is necessary for Bridger to install a parallel pipeline to increase the system capacity.

Although Bridger does not explicitly specify the type of crude it will transport; historically it is a sweet common stream system and will continue to accept sweet crude oil into its common stream. Bridger does not have any plans to accept any other crude other than sweet crude.

Generally, liquid pipelines are designed at a specified capacity for a known liquid. Most liquid pipelines transport a variety of different liquids. The change in fluid characteristics (density, viscosity, etc.) of the transported liquids will affect the capacity of the pipeline. Liquids are also batched in a pipeline generally in a repeatable sequence. Both fluid characteristics and batch sequence will affect the capacity of the pipeline.

A.3 PIPELINE SIZE AND DESIGN: provide a description of the size and design of the PIPELINE facility including, but not limited to, the following:

- a. Width of ROW;
- b. Estimated distance between surface structures such as manholes or block valves;
- c. Pipe size;
- d. Approximate length of facility;
- e. Maximum design operating pressure and temperature;
- f. Maximum design flow rate; and
- g. The number and general location of compressor or pumping stations

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

Construction work space will be approximately 100 feet wide to allow adequate room for topsoil separation, work equipment and pipe stringing. Additional temporary work space may be necessary during construction in areas such as steep slopes and staging areas for streams, wetlands, and road crossings, for safety reasons, to provide an area for prefabrication of a section of pipeline, or for storage of top soil and subsoil material. Bridger also has access to the adjacent 50 feet of ROW from its existing line ROW along the majority of the route.

In most cases, the Heart River Pipeline Loop will be installed 25 to 50 feet from the existing pipeline. By request, on US Forest Service (USFS) land the Project will be placed 10 feet from the existing line. The distance has been established 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 the 16-inch pipeline while minimizing potential damage to the existing lines.

A.3 (b) Estimated Distances Between Surface Structures

Surface structures will be limited to pipeline markers and rectifier sites, which are part of the cathodic protection system.

A.3 (c) Pipe Size

The pipe to be installed will be 16-inch outside diameter, 0.312 inch wall meeting API 5L-X52 specifications with fusion bonded epoxy (FBE) coating.

The valves to be installed will be 16-inch 600# ANSI, flanged end, full port ball 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".

Section line roads, highways and standing water will be horizontally directionally bored (HDD). To accommodate greater external loads, extra thick wall pipe with heavier FBE coating will be used. Bore pipe will be nominal 16-inch, 0.375 inch wall, API 5L-X52, w/ 14-16 mil FBE & 30 mil abrasion resistant overlay (ARO).

A.3 (d) Approximate Length of Facility

The Project is expected to install approximately 15 miles of pipe.

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

The initial Annual Capacity of the Project will be 125,000 bpd. The maximum allowable operating pressure of this pipe will be 1440 psig. The maximum temperature of the petroleum will be 80°F.

A.3 (f) Maximum Design Flow Rate

The design flow rate of the Project is 125,000 bpd.

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

Electric pumping units will be installed within Bridger's existing Skunk Hills Crude Station. No new mid-route stations will be necessary for this pipeline.

A.4 TIME SCHEDULE

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

A.4 (a) Certificate of Corridor Compatibility

The Certificate of Corridor Compatibility Application is being submitted in January 2015 as part of this consolidated Certificate of Corridor Compatibility and Route Application. Approval is expected on or before March 31, 2015.

A.4. (b) Route Application

The Route Permit Application is being submitted in January 2015 as part of this consolidated Certificate of Corridor Compatibility and Route Application. Approval is expected on or before March 31, 2015.

A.4 (c) Route Permit

Expected on or before March 31, 2015.

A.4 (d). Construction Start Date

Proposed commencement date for construction is April 1, 2015.

A.4 (e) Construction Complete

Estimated construction completion date is on or before July 31, 2015.

A.4 (f) In Service Date

Estimated in service date is on or before August 1, 2015.

SECTION B STUDIES

Contacts have been made with the North Dakota Game and Fish Department (NDGFD), the U.S. Fish and Wildlife Service (FWS), the USFS, and the North Dakota Parks and Recreation Department's North Dakota Natural Heritage Inventory System to identify species and ecologically significant habitats within the ROW and the Project corridor. Possible areas of concern discussed were federally listed endangered, threatened, candidate, sensitive, or watch species, state-listed protected species, and critical habitat that is located on or within the pipeline route.

The NDGFD was provided with the proposed route. The NDGFD does not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided any unavoidable destruction or degradation of wetland acres is mitigated in kind, and disturbed areas are reclaimed to pre-project conditions.

The FWS was provided with the proposed route and is currently under review. Areas that are analyzed by the FWS include federally listed endangered, threatened, candidate species, and designated critical habitat in North Dakota.

The USFS was provided with the proposed route and is currently under review. Areas that are analyzed by the USFS include federally listed endangered, threatened, candidate species, and noxious and invasive species, and USFS listed sensitive species. The portion of the route that crosses USFS land will need approval from the USFS. An SF-299 Application has been submitted with the USFS Medora District office and is currently under review.

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

A field survey was conducted in September and October 2014 using a 500-foot-wide corridor for botany and a 1-mile wide corridor for wildlife, in accordance with FWS field study protocols.

No sensitive wildlife or botany issues were identified within the corridor. The results of this field study are presented in Tab 3 Section B.4.i in the route permit application submitted as part of this consolidated permit application.

The North Dakota Natural Heritage Inventory System listed Species of Concern in the state that have been identified within the Project area (see Tab 3 Section B.4.i). The field study concluded that the Project area is within safe distance from the species listed and will not have an effect on the species or their habitat.

Metcalf performed a Class I archeological file search in August 2014 using a 2-mile-wide study corridor on the 15 miles of the pipeline route. A Class III field survey was performed in September and October of 2014. The cultural resource location details are not presented here in a publicly available document per request of the North Dakota State Historic Society. Metcalf

has provided a redacted version of the report to be submitted as part of this application located in Tab 4.

Additional details of these sites will be provided to the North Dakota Public Service Commission staff upon request.

SECTION C NEED FOR FACILITY

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

a. Planned Use and Purpose

Application of horizontal drilling technology and steady and relatively 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, resulting in more than doubling of oil production in North Dakota in the last three years. A summary of annual crude oil production in the state is presented in Table 1.1, below.

TABLE 1.1 – Historical Oil Production in North Dakota¹

Year	Total Crude Oil Production, Barrels	% Gain over 2008
2008	62.8 million	---
2009	79.7 million	27 %
2010	113.1 million	80 %
2011	153.0 million	144 %
2012	243.8 million	288 %
2013	313.9 million	300 %

Oil production in North Dakota is expected to continue to grow until 2025. The purpose of the Project is to provide “midstream” transportation alternatives for the expanding volumes of crude oil produced in North Dakota.

Rail transportation of crude oil from the Bakken has surged in recent years. Rail transportation to east and west coast crude oil markets allows for producers in North Dakota to get a better price on their crude oil.

¹ U.S. Department of Energy, EIA webpage statistics, crude oil production by state, available at http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbb1_a.htm (accessed September 24, 2014).

b. Pipeline Capacity Constrained in Western North Dakota

Crude oil in North Dakota is shipped to one of three pipeline sale outlets or demand points: (1) Tesoro's Mandan, North Dakota refinery; (2) the Guernsey, Wyoming interconnection hub; and/or (3) the Clearbrook, Minnesota interconnection hub.

Rail transportation of crude oil increased more than tenfold during the period from April 2011 to April 2013 from approximately 60,000 bpd to over 650,000 bpd. 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.²

c. Applicant's project increases capacity in western North Dakota:

This additional pipeline will increase the capacity of the system by 125,000 bpd on an annual average. This product will subsequently be delivered to Baker, MT.

d. Other Expansions on the Bridger System:

No additional Bridger expansions are planned at this time. However market forces may open the economics of other alternatives considered. As predominately a gathering and transfer system, much of the Bridger transportation flexibility is subject to changes by larger pipeline transportation companies. As the pipeline and rail transportation systems expand, more opportunities may present themselves.

e. Recent System Studies Supporting the Analysis of the Need

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 1,110,642 bpd in July 2014. Bakken and Three Forks formations accounted for 94% of this record production.³

One challenge North Dakota faces is moving crude oil intrastate. The Project is located in Billings and Stark Counties in North Dakota. In Billings County, 57% of the production is currently being moved by truck from the wellhead. In Stark County, 45% of the production is currently being moved by truck from the wellhead.⁴ Gathering system pipelines are being encouraged throughout the state to limit truck transportation and provide a safer, more efficient solution.

Key slides from the May 23, 2013 presentation of North Dakota Pipeline Authority to the North Dakota Oil & Gas Research Council are presented in Tab 2 as Appendix 2.A. The

² N.D. Pipeline Authority, North Dakota Oil and Gas Research Council Presentation, Justin J. Kringstad, May 23, 2013.

³ NDIC, "Director's Cut," available at: <https://www.dmr.nd.gov/oilgas/directorscut/directorscut-2014-09-12.pdf> (accessed September 24, 2014).

⁴ N.D. Pipeline Authority, North Dakota Oil and Gas Research Council Presentation, Justin J. Kringstad, May 23, 2013.

September 2014 Director's Cut by Lynn Helms of the NDIC Department of Mineral Resources is presented in Tab 2 as Appendix 2.B.

C.2 Alternatives to the Proposed Facility

Three alternatives to the proposed Project were considered.

a. No Action Alternative:

The status quo could be allowed to continue, supported by trucking crude oil. 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) is a more efficient and safer mode of transportation, reducing both costs and the potential for accidents. A "no action" alternative is unacceptable to Bridger and its customers.

b. Alternative Bridger Pipeline Route:

A full route alternative analysis was completed by Bridger. Bridger identified and evaluated several options for routing its Project. These studies were designed to define a preferred route that achieves Project objectives, technologically and economically feasible to construct, and minimizes impacts on landowners and the environment. Based on this assessment Bridger focused the examination of routing alternatives to a route generally within or adjacent to existing Bridger ROW. This approach allowed the Applicant the benefit of utilizing existing pumping station and equipment at existing Bridger fee-owned pump station sites to further reduce the Project's environmental and public impact.

Bridger next evaluated this existing pipeline route for the optimum configuration. It was determined that to generally locate the Project adjacent to its existing ROW would require the least amount of additional new permanent ROW.

c. Alternative Pipeline Design/Size:

Based on the crude petroleum forecast and discussions with shippers and producers, the Applicant determined that an annual capacity of 125,000 bpd would be required and sufficient to meet the transportation requirements of its shippers. The alternatives examined with respect to sizing the Project to efficiently and cost effectively provide 125,000 bpd of crude petroleum annual capacity included 12-inch and 16-inch diameters. The 16-inch design provides the most efficient and cost effective combination of capital cost and pumping horsepower requirements for the required capacity.

- The in-service date for the 16-inch Heart River Pipeline Loop Project expected to be on or before August 1, 2015.
- The 16-inch Heart River Pipeline Loop Project operations will be operationally integrated with the Bridger Pipeline transportation and gathering system located in North Dakota, Wyoming and Montana.

- The cost of the 16-inch Heart River Pipeline Loop Project is \$10.4 million.
- The economic life of the 16-inch Heart River Pipeline Loop Project for this purpose is based on 25-year depreciation; however, the functional life of this pipeline is indefinite following normal maintenance and inspection practices of a federally regulated interstate pipeline system.
- The 16-inch Heart River Pipeline Loop Project will reliably operate 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.

d. Statement concerning Deviations from most recent 10-year Plan:

Bridger's Ten Year Plan for 2014-2024 was filed with the Commission on July 4, 2014.

No specific Transmission Facilities are planned for the next five years.

No specific Transmission Facilities are planned for the next ten years. However, given the intense drilling and production activity in our service area of Western North Dakota and the demand for crude oil transportation by pipeline, major new pipeline projects by Bridger are likely.

SECTION D LOCATION

D.1 Study Area:

The study area and corridor selected comprise the existing ROW in which Bridger's existing Skunk Hill to Fryburg line is located. Bridger has historically maintained the existing easements in North Dakota by clearing brush and trees for approximately a 50-foot width. The pipeline is proposed to be installed within existing easements adjacent to the existing 8-inch pipeline.

D.2 Map of Proposed Corridor:

Since this application is a consolidated application for a corridor certificate and a route permit, maps showing the location of exclusion and avoidance areas in area of the corridor are attached as Tab 4 Appendix B of the route permit portion of the application. The original corridor and route of Bridger's existing Skunk Hill to Fryburg line were selected prior to the adoption of the North Dakota Siting Act but are wholly compatible with the criteria established in the Act.

D.3 Relative Value of Each of the Criteria:

Since this application is a consolidated application for a corridor certificate 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 a consolidated application for a corridor certificate 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.5 General Mitigative Measures to be Taken:

Since this application is a consolidated application for a corridor certificate 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.6 Qualifications of Persons Contributing to the Study:

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

(1) Tad True, Vice President – True Companies; Bridger Pipeline Company

Degree: Bachelor of Business Administration, University of Notre Dame
Experience: 10 years' experience in petroleum transportation field

(2) Robert Stamp, Commercial/Engineering Supervisor – Bridger Pipeline Company

Degree: Bachelor of Mechanical Engineering, Valparaiso University
Experience: 25 years' experience in petroleum transportation field as well as regulatory affairs and compliance.
Professional License
Registered Professional Engineer: Wyoming

(3) Ken Dockweiler, Director – Land, Government, and Compliance - Bridger Pipeline

Experience: 23 years' experience in petroleum transportation field.

(4) Kathleen Spilman, Managing Director – Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science - Chemical Engineering, University of North Dakota
Masters in Management, University of Mary
Experience: 32 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

(5) 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.

D.7 Maps:

a. Map of Criteria Within Study Area:

Since a consolidated application for a corridor certificate and a route permit is being submitted, the copy of the Project map including U.S.G.S. Quad and Aerial Maps of the Project can be found in Appendix B of the route application presented in Tab 4. Maps of the North Dakota Public Service Commission Exclusion and Avoidance Areas with the route of the Project are also attached as Tab 4 Appendix B of the route permit portion of the application.

b. Maps of study area:

The GIS software in current use by the North Dakota Public Service Commission staff is ESRI's ArcGIS and companion software packages. A CD-ROM containing electronic copies of ArcGIS shapefiles resulting from the field survey has been included with this application (see Tab 7).