

Appendix E

Tesoro High Plains Pipeline Company, LLC's Ten-Year Plan

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)¹ and the U.S. Geological Survey² in 2008 and 2010 indicate that 4.0 to 6.3 billion

¹ 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.³ 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, 2014.⁴

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.

² 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).

³ 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).

⁴ 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

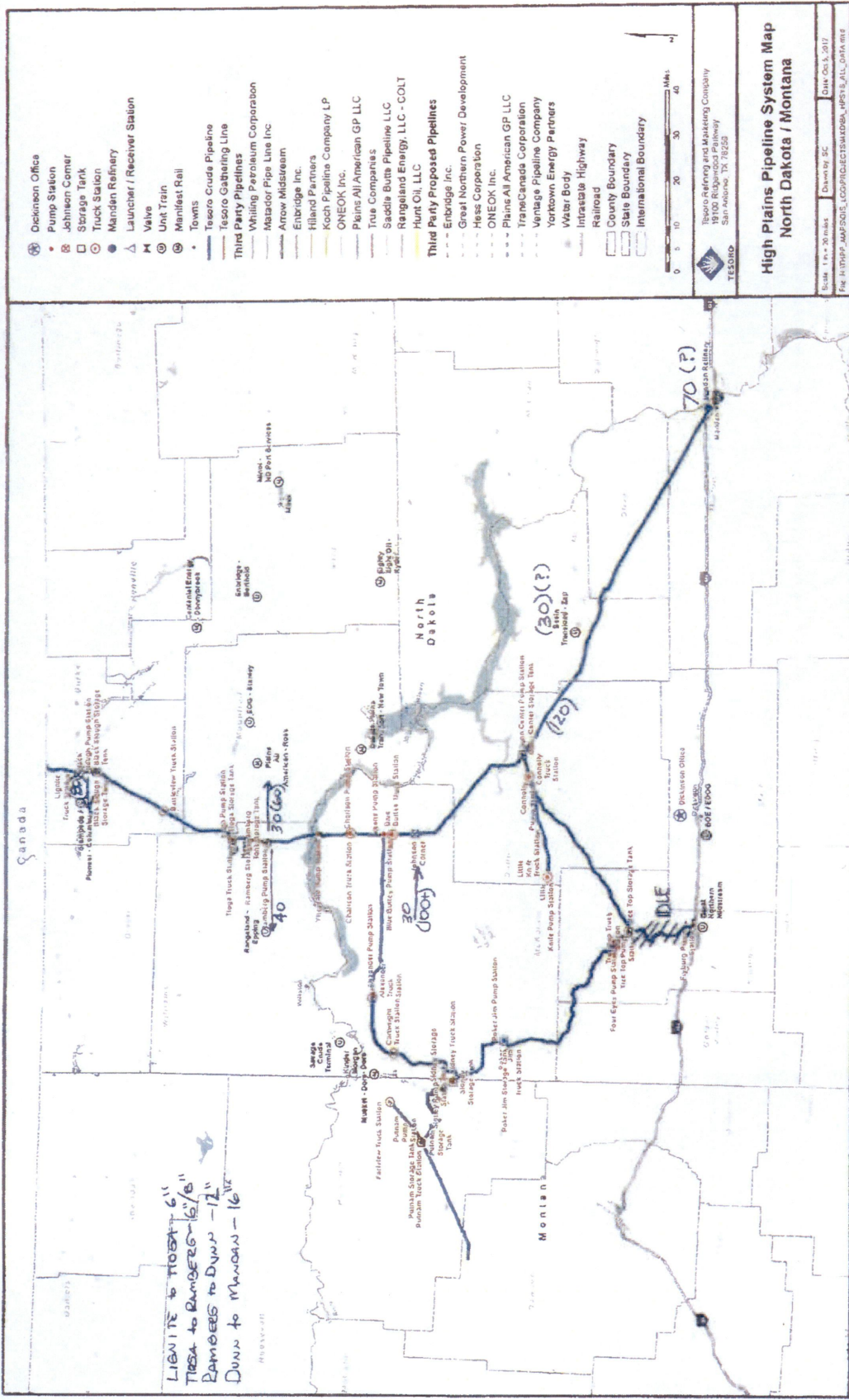
5) Pump station specifications – Maximum Operating Pumping Discharge (“MODP”) Pressure and Settings:

<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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LIGWITE to TOSCA 6"
 TOSCA to BURGERS 16 1/8"
 BURGERS to DUNN - 12"
 DUNN to MANDAN - 16"

