# Belle Fourche Pipeline Company

## 8” Wilson to Bowline
## Pipeline Conversion Project
## McKenzie County, North Dakota

## Consolidated Application for Certificate of Corridor Compatibility and Route Permit

December 2018

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Belle Fourche Pipeline Company

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## INTRODUCTION

Belle Fourche Pipeline Company (Belle Fourche), submits this single consolidated application for a Certificate of Corridor Compatibility and Route Permit to the North Dakota Public Service Commission (NDPSC) for the conversion of an approximately 20-mile-long, 8-inch existing crude oil gathering pipeline to a transmission line. The pipeline is located within McKenzie County, North Dakota and is known as the Wilson to Bowline Pipeline Conversion Project (Project). The Project originates at the Wilson Station in McKenzie County approximately six miles South of Watford City, North Dakota and runs 20 miles to the Bowline Junction Station located 19 miles SE of Alexander, North Dakota. The pipeline interconnects with Belle Fourche's new Kermit to Wilson gathering line that gathers crude oil between Johnson's Corner and the Wilson Station. The pipeline will continue to gather the barrels it was previously gathering between Wilson and the Bowline Junction where it delivers crude into the Belle Fourche North Dakota System for further transport.

Belle Fourche seeks Commission approval for utilization of the Project as a transmission line. In accordance with Chapter 49-22.1 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, Belle Fourche provides the information in this application document to support its request for a Certificate of Corridor Compatibility and Route Permit for the Project.

## 1 DESCRIPTION OF PROPOSED FACILITY

### 1.1 Type

The proposed Project will convert an existing 8-inch crude oil gathering pipeline to a transmission pipeline utilizing existing infrastructure. The steel pipeline meets applicable United States Department of Transportation (DOT) regulation as outlined in 49 Code of Federal Regulations (CFR) Part 195.

### 1.2 Size

The Project consists of multiple connecting pipeline segments that have been laid from 1978 to 2012. The four miles of pipeline between Redwing Creek and the Bowline Junction were constructed in 1978. The newest sections of the line from Redwing Creek to the Wilson Station were constructed in 2012. All line pipe has an 8-inch nominal outside diameter with segment wall thicknesses of 0.188 inch. The line pipe is X52 from Wilson Station to Redwing Creek, and X42 from Redwing Creek to the Bowline Junction and the majority is coated in a two layer polyethylene tape coating. Bored pipe in the Wilson to Redwing segment is X52 with a wall thickness of 0.250 inch. The maximum allowable operating pressure is 1440 pounds per square inch gauge (psig).

All valves on the Project are 8-inch 600# ANSI, flanged end, full port ball valves. These valves were manufactured in accordance with API Standard 6D "API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service". These valves are of ASME 16.5 design. The maximum allowable operating pressure of the valve will be 1440 psig. Typical operating pressure used for the pipeline is 500 psig or below.

The carbon steel pipe utilized for construction of the Project meets United States DOT regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project was constructed as a gathering line per 49 C.F.R. Subpart 195(D). The Project will be operated and maintained per 49 C.F.R. part 195.

The maximum temperature of the crude is 90°F, which is within design parameters.

The current flow rate of the pipeline is 1,200 barrels per hour or 28,800 barrels per day (bpd). The maximum potential flow rate of the Project is 43,200 bpd.

### 1.3 Length

The Project is approximately 20 miles in length.

### 1.4 Aboveground Facilities

The Project's segments are buried underground. Surface structures are limited to pipeline markers, rectifier sites, and a block valve. Some small fenced-in enclosures were installed to house associated power and control systems to allow valves to be operated remotely. There are test stations approximately every mile where pipeline markers are located.

A pig launcher was installed at the Wilson Station and a receiver was installed at Bowline Junction when the Wilson station was constructed, which upgraded maintenance and monitoring activities associated with this pipeline.

There is a midline block valve located near the halfway point between the Wilson Station and Redwing Creek, or about 11.5 miles from the Wilson Station.

## 2 DESIGN OF THE PROPOSED FACILITY

### 2.1 Design

The Project is designed to convert an existing approximately 20-mile 8-inch diameter crude oil gathering pipeline into a crude oil transmission pipeline extending from the Wilson Station to the Bowline Junction.

### 2.2 Purpose and Need of the Facility

The purpose of the Project is to transport crude oil from smaller crude gathering systems and truck facilities to existing rail and pipeline network destinations. The Project will enable the transportation of crude oil produced in west and northwestern North Dakota to multiple shipping points for out of state sale.

Historically, Belle Fourche has operated a light sweet common stream system and will continue to accept sweet crude oil into its common stream. This specification is consistent with the quality of crude oil produced from the Bakken formation, which is currently the largest exploration play in the region.

Conversion of the Project will add (1) additional pipeline shipping capacity in North Dakota; (2) more access to liquid delivery options for Belle Fourche customers; and (3) a pipeline transportation alternative to trucking or railing crude oil to other shipping points and markets.

## 2.3 General Area to be Served

The Project will provide needed capacity to transport increased petroleum from western North Dakota where oil production is expected to increase until 2025.[1] The pipeline will transport crude oil from the Wilson Station near Watford City, North Dakota to the Bowline Junction, where the line interconnects with other Belle Fourche facilities for export to various markets.

## 2.4 Capacity

The maximum potential flow rate of the Project is 43,200 bpd.

## 2.5 Technology to be Deployed/Employed

The Project is designed, constructed, maintained, and inspected to the DOT Pipeline and Hazardous Materials Safety Administration regulations utilizing industry standards and company policies. The system will be controlled and monitored 24 hours a day, seven days a week, and 365 days a year by trained control room personnel. Additionally, the system will be set up with a monitoring and alarm system that continuously monitors the flow and pressure of the system, and readily signifies anything outside normal operating conditions.

## 2.6 Product

The proposed Project will transport crude oil produced from the Bakken Formation.

As a crude oil transmission facility, the Project will provide needed flexibility and capacity to transport petroleum crude oil from western North Dakota.

## 2.7 Final Destination of Product

Belle Fourche does not own any of the crude petroleum transported in its pipeline system. Belle Fourche does not determine markets or destinations for petroleum commodities. Belle Fourche's business is to provide a service which is available to anyone tendering commodities for transportation. Belle Fourche attempts to anticipate the need for additional pipeline capacity by relying upon forecasts for throughput generated by shippers on the system.

Belle Fourche's system of operating pipelines provides flexibility of transporting North Dakota's crude petroleum to multiple national markets. Once crude petroleum is delivered to Dakota Prairie Refinery, now known as the Andeavor Dickinson Refinery, and refined, the product is provided to customers nationwide including states such as Wyoming, Colorado, Oklahoma, as well as in-state markets.

[1] U.S. Energy Information Administration, "U.S. Crude Oil Production to 2025: Updated Projection of Crude Types," *available at* https://www.eia.gov/analysis/petroleum/crudetypes/pdf/crudetypes.pdf (accessed Sep 27, 2017).

## 2.8 Width of Right-of-Way (ROW)

Project work space was approximately 50 feet wide. Additional temporary work space may have been necessary during maintenance and inspection in areas such as steep slopes, and areas adjacent to streams and road crossings, for safety reasons, and construction activities associated with these features.

Belle Fourche notifies landowners during normal operating modifications or maintenance to the Project is carried out within the permanent ROW of the existing pipeline. The width of the ROW was established based on the need to provide adequate space and line separation for future line maintenance.

## 2.9 Requirement For and General Location of Any New Associated Facilities

Belle Fourche proposes no new changes or additions to the existing pipeline at this time. No new pumping facilities will be needed or other surface facilities will be installed. Pipeline markers, rectifiers, and block valves are already in place for the system, as well as small fenced-in enclosures to house associated power and control systems.

## 2.10 Estimated Distance Between Surface Structures for Pipeline Facilities

The Project is largely underground. Unlike electrical transmission lines, no major features of this system are installed aboveground. Aboveground features are generally limited to minor features such as pipeline markers, cathodic protection test sites and rectifier sites, and are located on existing pad sites.

## 2.11 Maximum Design Operating Pressure and Temperature for Pipeline Facilities

The maximum operating pressure of the pipeline is 1,440 pounds per square inch gauge. The maximum operating temperature is 120 degrees Fahrenheit. The normal operating conditions are 90 degrees Fahrenheit at 500 pounds per square inch gauge.

## 2.12 Maximum Design Flow Rate for Pipeline Facilities

The pipeline is capable of moving 43,200 bpd of crude oil.

## 2.13 Number and General Location for Compressor or Pumping Stations

The only pumps located along the Project corridor are located at the Wilson Station.

## 2.14 Estimated Total Cost of Construction

Installed cost of the system is extremely difficult to estimate given construction of multiple sections over different periods of time. The cost of the system in today's dollars would approximate $16 million.

## 2.15 Preferred Location of Facility

The pipeline is located entirely within McKenzie County, North Dakota. The Project originates at the Wilson Station in McKenzie County approximately 6 miles South of Watford City, North Dakota and runs 20 miles to the Bowline Junction Station located 19 miles SE of Alexander, North Dakota.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

## 2.16 Preferred Location of Corridor

Using this existing line for conversion to a transmission line avoids or minimizes potential adverse environmental and human impacts associated with a installing a new pipeline. Belle Fourche is seeking approval for a corridor that will align with the centerline of the pipeline route ("Project Route") of 200 feet wide ("Project Corridor").

Underground pipelines minimize potential impacts on human or animal welfare and aesthetics. Conversion of the Project is not expected to cause disruption to the environment, and will not result in long-term changes to the environment.

## 2.17 Description of ROW Preparation and Construction and Reclamation Procedures

The construction ROW was cleared, grubbed, and graded to allow for pipeline construction. Soil segregation was completed to standard operating procedures. All trenching was performed mechanically with either an excavator or a ditching machine to a depth allowing a minimum of four feet from the top of the pipe to the top of the cover. When rock was present, an excavator with rock teeth was used. Boring and horizontal directional drilling pipe installation was performed if crossing under a road, railroad, pipeline/utility, or areas where trenching was deemed unsafe or impractical. Casing of the pipelines was not used because it leads to corrosion issues. Typically, the ROW was continuously cleared of all construction material, uncovered rocks, and compacted areas. Holes and ruts were filled and graded. Reclamation of the ROW was completed at the end of the pipeline construction.

One of the unique aspects to a project involving a conversion of an existing gathering pipeline to transmission pipeline status, is the surface of the pipeline ROW can be surveyed for post construction impacts. As further detailed in other sections of this application, the field surveys performed by Keitu Engineers & Consultants, Inc. (Keitu) documented the effectiveness of Belle Fourche's reclamation efforts.

Consistent with the staged time sequence of construction, areas that have been left undisturbed for more than a decade are almost completely reclaimed with no lingering impact noted. Even areas with the most recent construction occurring just earlier this decade, areas with cultivated crops have been completely returned to their prior land-use and production levels. Of note, especially in these newer areas that are not under active cultivation, in limited areas vegetative cover does not yet exactly match the vegetative diversity outside of the impacted ROW surface. It is expected with normal vegetation management conditions diversity will increase along the ROW.

### 2.18 Landowner Notification, Easement Acquisition, and Compensation

The Project utilizes an existing ROW and will not require new ROW acquisition. All pipeline easements have been obtained. All easements were obtained voluntarily.

## 3 SCHEDULE

### 3.1 Obtaining Certificate of Corridor Compatibility

The Certificate of Corridor Compatibility Application is being submitted in December 2018.

### 3.2 Obtaining Route Permit

The Route Permit Application is being submitted in December 2018.

### 3.3 Completing ROW Acquisition

Additional ROW acquisition is not required.

### 3.4 Starting Construction

Construction of the pipeline is complete and no additional segments, or storage facilities are expected at this time.

### 3.5 Completing Construction

No new construction will occur as part of the Project.

### 3.6 Testing Operations

Construction of the pipeline is complete. No additional testing is expected at this time. See Section 8.12 for additional information on testing.

### 3.7 Commencing Operations

Belle Fourche Pipeline would commence operation of the Project as a crude oil transmission pipeline as soon as possible.

## 4 ALTERNATIVES

The pipeline is a permanent, ongoing system. As such, Belle Fourche has a continuing commitment to conduct its operations in an environmentally responsible manner. Substantial, continual effort is placed on pipeline integrity, operational safeguards, emergency response, and landowner relationships, all of which reduce the impact of the pipeline to the environment. The Company supplements the support from the existing internal environmental staff with engineering and environmental consultants as necessary to

assure compliance with environmental regulations and applicable Company policy. A brief discussion of other possible alternatives is provided below.

## 4.1 No Action Alternative

If the Project operated as a gathering pipeline, there would be utilization limitations and reduced flexibility. Additional production would have to be collected and transported to existing transmission pipeline unloading facilities and/or rail trans-ship facilities. This would result in increased truck traffic and additional wear and tear to county and state roads. Pipeline transportation is preferable because it: (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.

## 4.2 New Pipeline

Construction of a new pipeline was not a preferred alternative to the Project. Construction of a new pipeline was not preferred because it would create new impacts to the environment, and would result in costs that could otherwise be avoided by re-purposing the existing pipeline.

# 5 ENVIRONMENTAL STUDIES

Environmental data collected to date includes information on soils, land use, wetland and water body crossings, protected species, and cultural resources. Belle Fourche will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information as required during the permitting process.

Analysis of the Project entailed both desktop studies and field surveys. A one-mile-wide study corridor was utilized for the entire Project route ("Study Area"). Desktop studies for the one-mile-wide Study Area reviewed items such as Class I archeological file search and wildlife database search. Surveys were conducted along the entire route in the field on foot within the specified survey corridor ("Survey Area"). Survey areas for the Project were typically 200-feet-wide.

Belle Fourche engaged Keitu and Beaver Creek Archaeology, Inc. (BCA) to perform the environmental and cultural resource siting studies for the Project.

BCA performed a Class I archeological file search in August of 2017 using a one-mile-wide Study Area on the entire 18 miles of the Project route. A Class III field survey was performed on a 200-foot-wide Survey Area in September of 2017. The cultural resource location details are not presented in a publicly available document per the request of the State Historical Society of North Dakota. BCA has provided a redacted version of the cultural resource report and is found in Exhibit B. Additional details of these sites will be provided to NDPSC staff upon request.

Keitu conducted field surveys within a 300-foot-wide Survey Area in August 2018, to identify presence of wildlife and habitat assessment that covered threatened and endangered species. Keitu also conducted a tree, sapling, and shrub enumeration survey, and a noxious weed survey.

Keitu conducted a database search using a one-mile-wide study corridor for all other Exclusion or Avoidance Criteria 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.

## 5.1 Wetland and Waterbody Inventory

Belle Fourche, through its consultants, conducted a desktop survey using aerial photographs and U.S. Geological Survey topographic maps identifying wetlands along the pipeline route.

The Project crosses seven wetlands according to the United States Fish and Wildlife Service (USFWS) National Wetland Inventory that was last modified July 31, 2017. The table below describes the wetlands found via the National Wetland Inventory within the Project Corridor.

**Table 5.1.1**
**NWI Wetlands**

| Classification | Wetland Type | Acres |
|---|---|---|
| PSSCh | Freshwater Forested/Shrub Wetland | 0.19 |
| PABFh | Freshwater Pond | 4.18 |
| PEMCh | Freshwater Emergent Wetland | 0.16 |
| PUSCh | Other | 0.13 |
| PABFh | Freshwater Pond | 0.19 |
| PABFh | Freshwater Pond | 2.77 |
| PSSAh | Freshwater Forested/Shrub Wetland | 2.16 |

The table below describes the location of streams within the Project Corridor.

**Table 5.1.2**
**Streams**

| Classification | Stream Name | Length (Feet) |
|---|---|---|
| R4SBC | Tributary to Red Wing Creek | 230 |
| R4SBC | Tributary to Red Wing Creek | 373 |
| R4SBA | Tributary to Red Wing Creek | 241 |
| PEM1A | Tributary to Red Wing Creek | 251 |
| R4SBC | Tributary to Red Wing Creek | 273 |
| R4SBC | Tributary to Red Wing Creek | 219 |
| PEM1CH | Tributary to Red Wing Creek | 205 |
| R4SBC | Tributary to Red Wing Creek | 200 |
| R4SBC | Tributary to Red Wing Creek | 228 |
| PEM1C | Red Wing Creek | 220 |
| PEM1A | Red Wing Creek | 207 |
| PFOA | Tributary to Red Wing Creek | 406 |
| R4SBC | Unknown Tributary/Drainage | 223 |
| R4SBC | Unknown Tributary/Drainage | 270 |
| PSSAh | Tributary to Cherry Creek | 248 |

| Table 5.1.2<br>Streams | | |
|---|---|---|
| **Classification** | **Stream Name** | **Length (Feet)** |
| R4SBC | Tributary to Cherry Creek | 494 |
| R4SBC | Tributary to Cherry Creek | 223 |
| R4SBC | Tributary to Cherry Creek | 307 |
| R4SBC | Tributary to Cherry Creek | 200 |
| R4SBC | Tributary to Cherry Creek | 219 |
| R4SBC | Tributary to Cherry Creek | 289 |
| R4SBC | Tributary to Cherry Creek | 48 |
| R4SBC | Tributary to Cherry Creek | 210 |
| R4SBC | Tributary to Cherry Creek | 375 |

Conversion of the Project will not result in the permanent drainage or filling of wetlands or waterbodies. Belle Fourche will horizontally directionally drill any future wetlands or waterbodies in the Project Corridor if any Project maintenance is needed.

## 5.2 Vegetation Inventory

Botany surveys were performed along the 20 mile proposed pipeline route in McKenzie County in August 2018. Two surveyors conducted a thorough inspection of private land (starting east and proceeding west along the route), which consisted of cropland, rangeland, and pastureland.

The Project Corridor crosses predominantly agricultural land, which is discussed in detail in sections 6.18.1 (1) and B.4.j. Crested wheatgrass and smooth brome were primarily found in abundance throughout the majority of the route. Other grasses that were commonly identified were: blue grama (Bouteloua gracilis), foxtail barley (*Hordeum jubatum*), side oats grama (Bouteloua curtipendula), switchgrass (*Panicum virgatum*), little bluestem (Schizachyrium scoparium), prairie junegrass (Koeleria macrantha), and needle and thread grass (Hesperostipa comate). Other vegetation often found established in the Project area include alfalfa (Medicago sativa), black-eyed Susan (*Rudbecka hirta*), Canada goldenrod (*Solidago Canadensis*), cudweed sagewort (Artemisia ludoviciana), fringed sagewort (Artemisia frigida), curlycup gumweed (Grindelia squarrosa), kochia (Kochia scoparia), purple prairie clover (Dalea purpurea), prairie coneflower (Ratibida columnifera), prairie rose (Rose arkansana), prickly pear cactus (Opuntia humifusa), rubber rabbitbrush (Ericameria nauseosa), silver leaf scurfpea (Pediomelum argophyllum), skeletonweed (Chondrilla juncea), smooth fleabane (*Erigeron glabellus*) wild licorice (Glycyrrhiza lepidota), silver buffaloberry (Shepherdia argentea), chokecherry (*Prunus* virginiana), Russian olive (*Elaeagnus angustifolia*), and western snowberry (Symphoricarpos occidentalis).

Noxious weeds that were identified in the Survey Area were field bindweed (Convolvulus arvensis), absinth wormwood (Artemisia absinthium), Canada thistle (Cirsium arvense), and leafy spurge (Euphorbia esula). Field bindweed occurrences were primarily along access roads and well sites. Canada thistle, absinth wormwood, and leafy spurge were found in small populations spread throughout rangeland and pastures.

There were no sensitive, threatened, or endangered plant species detected in the Survey Area.

## 5.3 Wildlife Inventory

Investigations were conducted on potential impacts the Project could inflict upon wildlife and plant species. Information was gathered from a variety of sources to compile the existing conditions of plant and wildlife within the proposed route. These sources included field surveys, literature review, and personal communications with the North Dakota Game and Fish (NDGF), the USFWS, and the North Dakota Parks and Recreation Department (NDPRD).

Common terrestrial wildlife identified in the Survey Area include coyote (*Canis latrans*), ground squirrel (*Urocitellus richardsonii*), ring-necked pheasant (*Phasianus colchicus*), sharp-tailed grouse (*Tympanuchus phasianellus*), Hungarian partridge (*Perdix perdix*), various songbirds, migratory waterfowl, raptors, and deer. Sharp-tail grouse is on the North Dakota Wildlife Species of Concern List.

No prairie dog towns were located within the Survey Area at the time of the field survey. Prairie dog towns support a large community of wildlife species and are prone to disruption by construction projects. The black-footed ferret also inhabits prairie dog colonies. Although there have been no records of this species in the state for many decades, disruptions of prairie dog colonies should be avoided to prevent any impact on habitat or potential occurrences. The route does not invade any prairie dog towns and there should be no effect to this species or its habitat.

The North Dakota raptor species of concern detailed by the National Heritage Inventory with potential to be located in McKenzie County include the following: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), prairie falcon (*Falco mexicanus*), turkey vulture (*Cathartes aura*), American peregrine falcon (*Falco peregrinus anatum*), and the burrowing owl (*Athene cunicularia*).

The following state-listed Species of Concern were identified in the Study Corridor during the survey conducted in August 2018: bald eagle, northern harrier (*Circus cyaneus*), and Swainson's hawk.

Although raptors of concern were spotted during the survey, due to the range of these raptors, it is not uncommon for one to be seen at a distance greater than one mile from their nests, making it quite probable that the raptor species seen during the survey were in fact nesting outside the Corridor. Nesting behavior was not observed anywhere inside the Survey Corridor.

Findings are electronically presented as ESRI ArcGIS software compatible data files in Exhibit D.

## 5.4 Federally Protected Species Review

Contacts have been made with the NDGF, USFWS, and the NDPRD Natural Heritage Inventory 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.
See Section 7.0 or Exhibit C for agency notifications and replies.

Due to a lack of suitable habitat, the proposed Project likely did not result in take of the northern long-eared bat, the gray wolf, or black-footed ferret. The whooping crane, interior least tern, piping plover,

and rufa red knot have the potential to occur within the Study Area as migrants. However, due to the low probability of occurrence and only temporary disturbance during construction, adverse impacts to these species was unlikely to have occurred. Field surveys confirmed a lack of suitable habitat for the Dakota skipper; therefore, impacts to this species were unlikely to have occurred.

### *5.4.1 Migratory Bird Treaty Act*

Migratory birds are federally protected by the Migratory Bird Treaty Act, which prohibits the taking, killing, possession, and transportation of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. Both native prairie and non-native grasslands provide breeding, nesting, foraging, brood-rearing, and dispersal habitat for many species of migratory birds in North Dakota. The migratory bird nesting season in North Dakota is February 1 to July 15.

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

The Bald and Golden Eagle Protection Act (BGEPA) prohibits the take of a bald or golden eagle including their parts, nests, or eggs without a permit. Take is defined by the BGEPA as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. Impacts resulting from human activity occurring around previously used bald or golden eagle nesting sites is also addressed in the BGEPA.

Bald eagles are common throughout North Dakota and usually nest in large trees near waterbodies; however, they may also nest in other tall structures such as cliffs, communication towers, and utility poles. Golden eagles are less common in North Dakota but may breed in the westernmost portions of the state. Golden eagles typically nest in incised landscapes such as the badlands, as well as in tall buttes or trees that overlook native grassland and prairie habitats. Eagle nesting season in North Dakota is February 1 to July 31.

## 5.5 Tree/Shrub Inventory

Tree rows and woody areas occur in limited amounts, as isolated islands or rows throughout the Project area. The route crosses through wooded areas on rangeland. Wooded habitat provides shelter and safety for a number of wildlife species. Any trees will continue to be protected to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline.

Impacts on wooded areas due to conversion activity are not anticipated. During original construction, impacts to wooded areas was limited to clearing only what was necessary to accommodate bi-weekly aerial surveys required by the US DOT.

## 5.6 Noxious Weed Inventory

North Dakota law (North Dakota Century Code § 4.1-47-02) requires every person to do all things necessary and proper to control the spread of noxious weeds and makes it illegal for any person to distribute, sell, or offer for sale within this state a noxious weed. The 11 species of noxious weeds listed by the North Dakota Department of Agriculture are:

- Absinth Wormwood (*Artemisia absinthium*)
- Canada Thistle (*Cirsium arvense*)

- Dalmatian Toadflax (*Linaria genistifolia*)
- Diffuse Knapweed (*Centaurea diffusa*)
- Leafy Spurge (*Euphorbia esula*)
- Musk Thistle (*Carduus nutans*)
- Purple Loosestrife (*Lythrum salicaria*)
- Russian Knapweed (*Acroptilon repens*)
- Saltcedar (*Tamarix chinensis, T. parviflora, T. ramosissima*)
- Spotted Knapweed (*Centaurea maculosa*)
- Yellow Toadflax (*Linaria vulgaris*)

Local weed boards in North Dakota may develop a list of additional weeds for enforcement within the respective county's jurisdiction. The McKenzie County Weed Board has designated an additional six species of invasive weeds that are not listed as noxious weeds by the North Dakota Department of Agriculture. Those species include:

- Common burdock (*Arctium minus*)
- Houndstongue (*Cynoglossum officinale*)
- Black henbane (*Hyoschyamus niger*)
- Yellow toadflax (*Linaria vulgaris*)
- Halogeton (*Halogeton glomeratus*)
- Baby's Breath (*Gypsophila paniculata*)

A formal noxious weed inventory was not conducted prior to the original construction of the pipeline.

Noxious weeds that were identified in the Survey Area were field bindweed (*Convolvulus arvensis*), absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense)*, and leafy spurge (*Euphorbia esula)*. Field bindweed occurrences were primarily along access roads and well sites. Canada thistle, absinth wormwood, and leafy spurge were found in small populations spread throughout rangeland and pastures.

Belle Fourche will continue to implement mitigation requirements to avert the infestation of noxious weeds on previously reclaimed or disturbed land. Belle Fourche or the assigned contractor will implement weed treatments such as mowing prior to seed development or herbicide application to areas of noxious weed infestation prior to soil disturbing work for maintenance. Belle Fourche will use mechanical, chemical or biological management approaches, seeding, and erosion control blankets to prevent or minimize erosion, sedimentation, and the growth of the noxious weeds on applicable areas where maintenance activities occur.

During maintenance activities, Belle Fourche or their assigned contractor will clean the tracks, tires, and blades of equipment by hand (track shovel) or compressed air to remove excess soil prior to movement of equipment out of weed or soil-borne pest infested areas or utilize cleaning stations to remove vegetative materials using water under high pressure.

Belle Fourche or the assigned contractor will use mulch and straw or hay bales that are Certified Weed Free in the State of North Dakota for temporary erosion and sediment control. If seeding is needed for maintenance activities, weed-free native grass seed mixtures were used for all re-vegetation activities.

Typical agricultural herbicides, developed in consultation with county or state regulatory agencies, will be used as necessary. Herbicide types will be determined based on the weed species requiring control. Belle Fourche or the assigned contractor will apply herbicides, where required, within one week, or as deemed necessary for optimum mortality success, prior to disturbing the area by clearing, grading, trenching, or other soil disturbing work. Herbicides will be applied by applicators appropriately licensed or certified by the State of North Dakota. Belle Fourche will implement mitigation or protection measures in the use of pesticides and herbicides along the pipeline corridor to reduce potential impacts to avian and wildlife species. Belle Fourche or the assigned contractor will not use herbicides in or within 100 feet of a wetland or waterbody.

# 6 CRITERIA

## 6.1 Exclusion Areas

Exclusion Areas are geographic areas that must be excluded in the consideration of a route for a transmission facility. A corridor may contain an Exclusion Area; however, Exclusion Areas may not encompass more than 50 percent of the Project corridor width at any point, unless there is no reasonable alternative. Exclusion and Avoidance Areas are shown in Tables 6.1 and 6.8 below.

Exhibit A contains maps depicting Exclusion and Avoidance Areas along the Survey Area.

**Table 6.1**
**Exclusion Areas**
**NDPSC Certificate of Corridor Compatibility and Route Permit**

| Exclusion Area | Located within the Project Corridor | Crossed by Project Route | Description of Exclusion Area and Proposed Buffer |
|---|---|---|---|
| National Parks, Memorial Parks, Historic Sites and Landmarks, Natural Landmarks, Monuments, and Wilderness Areas | None | None | |
| State Parks, Historic Sites, Monuments, Historical Markers, Archaeological Sites, Nature Preserves | None | None | |
| County Parks and Recreation Areas, Municipal Parks, Parks Administered by other Governmental Subdivisions | None | None | |
| Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species | None | None | |
| Areas Where Animal or Plant Species Unique or Rare to the State Would be Irreversibly Damaged | None | None | |
| Areas Within 1,200 Feet of an ICBM Launch or Launch Control Facility | None | None | |
| Areas Within 30 Feet of a Direct Line Between ICBM Launch or Launch Control Facilities to Avoid Microwave Interference | None | None | |

## 6.2 Federal Resource Review

A review of the digital data available from the USFS, United States National Park Service, and the USFWS shows that there are no national parks, national memorial parks, national historic sites and landmarks, national wilderness areas or national monuments within the Project Corridor or crossed by the Project Route. Theodore Roosevelt National Park (North Unit) is located approximately four miles south of the Project. Direct impacts to national parks, historic sites, monuments, or wilderness areas as a result of the proposed Project are not anticipated.

## 6.3 State Resource Review

Review of digital data available from the NDPRD indicates that there are no designated or registered state parks, historic sites, monuments, historical markers, or nature preserves within the Project Corridor, or crossed by the Project Route. As indicated in Section 5.1, the original construction of the Project pipeline did not adversely affect cultural resources eligible for inclusion on the National Register of Historic Places, and no historic properties will be affected. Therefore, there will be no direct impacts to state parks, historic sites, monuments, historical markers, or nature preserves.

## 6.4 County Resource Review

Review of publicly available data shows that there are no county parks and recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions within the Project Corridor, or crossed by the Project Route. The nearest such areas are located in the vicinity of Watford City approximately six miles north of the Project. Therefore, no direct impacts are anticipated.

## 6.5 Areas of Critical Habitat

A pedestrian botany and wildlife survey was conducted in August 2018. No critical habitat was documented within the Project Corridor nor is crossed by the Project Route.

## 6.6 Areas Where Unique or Rare Species Would Be Irreversibly Damaged

Based upon agency correspondence and field surveys, the proposed Project will not result in irreversible impacts that are detrimental to sensitive plant and animal species or their habitats (see Section 7.1.4 herein).

## 6.7 Areas within 1,200 Feet of Intercontinental Ballistic Missile Facility or 30 Feet of Direct Line of Intercontinental Ballistic Missile Launch Facility

The USDOD confirmed on May 18, 2018 that the Air Force does not have any ICBM's near the Project Area.

## 6.8 Avoidance Areas

Avoidance Areas are areas that may not be considered in the routing of a transmission facility unless it is shown that there is no reasonable alternative under the circumstances. A buffer zone of a reasonable

width to protect the area must be included. A corridor may contain Avoidance Areas as long the Avoidance Areas do not encompass more than 50 percent of the Project Corridor width at any point, unless no reasonable alternative exists. The following table identifies and discusses Avoidance Areas within the Project Corridor.

Two Avoidance Areas were identified (see Table 6.8 below). Two (2) rural residences were identified within 500 feet of the Project Route. The residences and businesses do not encompass more than fifty percent of the width of the corridor in any location. Belle Fourche is in the process of obtaining waivers from the residence and business landowners.

**Table 6.8**
**Avoidance Areas**
**NDPSC Certificate of Corridor Compatibility and Route Permit**

| Avoidance Area | Located within the Project Corridor | Crossed by Project Route | Description of Avoidance Area and Proposed Buffer |
|---|---|---|---|
| National Historic Districts, Wildlife Areas, Wild, Scenic, or Recreational Rivers, Wildlife Refuges, Grasslands | Yes | Yes | USFS Dakota Prairie Grasslands See Section 6.9 |
| State Wild, Scenic or Recreational Rivers, Game Refuges, Game Management Areas, Management Areas, Forests, Forest Management Lands, Grasslands | None | None | |
| Historical Resources not specifically designated as Exclusion or Avoidance Areas | None | None | |
| Geologically Unstable Areas | None | None | |
| Within 500 Feet of a Residence, School, or Place of Business | Yes (Two (2) Residences within 500 feet of the Corridor | Yes (Two (2) Residences within 500ft of the Route | Pursuant to N.D.C.C. § 49-22.1-03, Belle Fourche will obtain landowner waivers |
| Reservoirs and Municipal Water Supplies | None | None | |
| Water Sources for Organized Rural Water Districts | None | None | |
| Irrigated Land | None | None | |
| Areas of Recreational Significance Not Designated as Exclusion Areas | None | None | |

## 6.9 Federal Resource Review

A review of public available data and field studies of Project area was conducted to confirm the presence or absence of registered historic districts, wildlife areas, wild, scenic or recreational rivers, wildlife refuges, or grasslands within the Project Corridor or crossed by the Project Route. The Project Route crosses four parcels of USFS National Grasslands. The Project will not have any adverse effects to USFS National Grasslands areas.

Belle Fourche will continue to implement mitigation requirements to avert the infestation of noxious weeds on previously reclaimed or disturbed land. See Section 5.6.

Belle Fourche will notify the USFS during normal operating modifications or maintenance to the Project if carried out within the permanent ROW of the existing pipeline on USFS lands.

The table 7.9 below describes the USFS National Grasslands areas within the Project Corridor.

| Table 7.9 |
|---|
| **Little Missouri National Grassland Township/Range/Section** |
| T. 147N, R. 101W Sec 8 |
| T. 147N, R. 101W Sec 4 |
| T. 148N, R. 101W Sec 33 |
| T. 148N, R. 100W Sec 17 |

## 6.10 State Resource Review

A review of publicly available information was conducted and confirmed the absence of designated or registered state wild, scenic, or recreational rivers, forests, forest management lands, or grasslands within the Project Corridor or crossed by the Project Route.

## 6.11 Historical Resources Not Designated as Exclusion/Avoidance Areas

The original construction of the pipeline did not adversely affect cultural resources eligible for inclusion on the National Register of Historic Places. BCA of Bismarck, North Dakota was engaged to review existing site file data maintained by the State Historical Society of North Dakota, North Dakota State Historic Preservation Office (NDSHPO) to determine if any portion of the Project Route was surveyed previously for cultural resources. Topographic maps and aerial photography were reviewed to determine the amount of pedestrian survey as advised by the SHPO State Archaeologist. Unplowed regions, landforms such as prominent hills, terraces, and any other water related landform were surveyed. After determining the areas for inventory, the proposed Project Corridor was inventoried by walking parallel pedestrian transects 20 meters apart across the Area of Potential Effect.

BCA was hired to conduct a Class I file search, a Class III intensive cultural resource inventory, and complete a cultural resource survey report for submittal to the PSC, the USFS, and the NDSHPO. The Survey Area for the Project, which was mapped over the centerline of the pipeline, measured approximately 20 miles long and 200' wide. This Class III pedestrian survey covered the portions of the project area that had not been surveyed previously; the Survey Area measured a total of 482 acres, of which 447 acres were surveyed as part of the current inventory.

The Class I file search revealed 37 sites, one site lead, and 16 isolated finds within a one-mile radius of the Survey Area. Four sites and one isolated find were located within or immediately adjacent to the Survey Area and were reviewed for the current inventory. In addition, three new historic sites were recorded: 32MZ3218, 32MZ3219, and 32MZ3220.

Isolated find 32MZx1446 (a quartzite flake) falls within the Survey Area, but no avoidance is necessary since it is ineligible for the NRHP (National Register of Historic Places).

Previously recorded sites 32MZ203 (a sparse scatter of lithic materials) and site 32MZ1602 (a historic homestead and a scatter of historical debris) have been previously recommended as ineligible for the NRHP. In addition, historic sites 32MZ3218 (a farmstead), 32MZ3219 (granaries), and 32MZ3220 (a cultural material scatter) have been recommended as ineligible for the NRHP. No avoidance is necessary for ineligible sites.

Site 32MZ91 (a prehistoric campsite) and site 32MZ119 (a prehistoric cultural material scatter) had been recommended as unevaluated for the NRHP. No cultural material was encountered during the inventory despite excellent ground surface visibility (GSV). Site 32MZ91 was located within the Survey Area but was not within the Pipeline Corridor, so it was unlikely that pipeline construction impacted the overall integrity of the site. The Project Route crossed through a portion of site 32MZ119 on the north side of the road. The surface exhibited heavily eroded clay pan deposits and several cut banks along a seasonal stream were inspected but no cultural material was observed. In addition, the site boundary was large and extended well outside of the Survey Area. Given the soils, the lack of cultural material, and the location of the site with respect to the Project Corridor, it was unlikely that pipeline construction impacted the overall integrity of 32MZ119. Nonetheless, if improvements or maintenance are required on the portion of the line by these sites, BCA recommends that proposed Project activities remain within areas of previous disturbance.

The cultural resource location details are not presented here in a publicly available document per the request of the State Historical Society of North Dakota. BCA has provided a redacted version of the report to be submitted as part of this application and is found in Exhibit B. Additional details of these sites will be provided to Commission staff upon request.

During the intensive pedestrian survey, no new cultural resources were encountered and no sign of site impact was seen on the previously recorded sites on file with the SHPO. As a result, BCA recommends a finding of No Historic Properties Affected for this project. The Class III Cultural Resource Inventory report has been submitted to NDSHPO with a request for concurrence with the report findings. A response is pending and will be submitted to the NDPSC upon receipt.

## 6.12 Geologically Unstable Areas

A desktop review of the North Dakota Geological Survey landslide mapping data was completed and it was confirmed that the Project Corridor did not intersect any known landslide prone landscape areas.

## 6.13 Areas within 500 Feet of a Residence, School, or Place of Business

There are two residences located within 500-feet of the Project Route. The table below describes the location of those sites. Pursuant to N.D.C.C. § 49-22.1-03, Belle Fourche is in the process of obtaining waivers from the owners of the inhabited residences.

**Table 6.13**
**Buildings**

| Location | Type |
|---|---|
| T. 148N, R. 101W, Sec 33 | Residence |
| T. 148N, R. 101W, Sec 27 | Residence |

## 6.14 Reservoirs and Municipal Water Supplies

The closest city to the Project is Watford City, North Dakota approximately six miles northeast of Wilson Station. Watford City receives its water supply from the Southwest Water Authority pipeline which is fed by the Missouri River (Lake Sakakawea). The city is not supplied by an aquifer system but retains the capability of purchasing water from the City of Williston from the Missouri River in case of emergency.

The proposed Project will not adversely affect any reservoirs or municipal water supplies.

## 6.15 Water Sources for Organized Rural Water Districts

The nearest known intake for rural water on the Missouri River is located approximately 25 miles north of the Project Corridor and would not be affected by the proposed Project.

## 6.16 Irrigated Land

Irrigated land does not apply to underground transmission pipelines. Additionally, the pedestrian botany and wildlife survey of the pipeline ROWs confirmed the absence of known irrigated land within the vicinity of Project Corridor.

## 6.17 Areas of Recreational Significance but Not Designated Exclusion Areas

The Project Route crosses the USFS National Grasslands, as discussed in Section 6.9 above, but does not cross any other areas of recreational significance, and adverse impacts are not anticipated.

## 6.18 Selection Criteria

The NDPSC's rules specify Selection Criteria to be considered in designating a pipeline corridor or route. Specifically, the NDPSC considers whether adverse effects from the location, construction, and maintenance of the facility as they relate to these criteria, will be at an acceptable minimum, and whether these effects will be managed and maintained at an acceptable minimum.

The Selection Criteria that were considered for the Project include:

- Agricultural Production
- Family Farms and Ranches
- Land Suitable for Irrigation
- Surface Drainage and Groundwater Flow Patterns
- Sound Sensitive Areas
- Visual Effects
- Extractive and Storage Resources
- Wetlands, Woodlands, and Wooded Areas
- Communication or Electric Control Facilities
- Human Health and Safety
- Animal Health and Safety
- Plant Life

The following sections discuss the potential impacts and measures to avoid or minimize the impacts related to each of the Selection Criteria.

### *6.18.1 Agricultural Impacts*

During the construction of the pipeline, impacts to agricultural production and ranching operations were minimized to the greatest extent possible. Belle Fourche consulted with landowners and negotiated easements with landowners along the pipeline ROW. Upon completion of pipeline construction, all lands (with the exception of existing aboveground facilities) were restored to pre-disturbance contours, elevations, and land use.

The location of pipeline markers is defined under 49 CFR part 195 for pipelines. Belle Fourche has worked with country officials and local landowners to ensure that pipeline markers or located in acceptable locations as required. The pipeline markers are placed in full view so as not to be accidentally damaged or cause damage to landowner or county-owned equipment.

No impacts to irrigated land will occur from the proposed Project. Construction techniques used during the original construction of the pipeline did not modify existing surface drainage patterns. Upon completing the pipeline construction, disturbed areas were restored to pre-disturbance contours and topography, and was revegetated.

Well data from the U.S. Geological Survey and NDSWC indicates that groundwater supplies through the Project Corridor is sufficiently below the surface so that impacts from the Project are not anticipated.

Groundwater flow and surface drainage patterns will not be affected by the proposed Project.

### *6.18.2 Family Farms and Ranches*

The conversion activity will not alter the patterns of landownership or create long-term disruptions of family farming operations. The conversion zone will be within an existing ROW. Belle Fourche's crop loss compensation program will compensate landowners if any crop damage were to occur during conversion. Crop damage resulting from future pipeline maintenance and repairs will also be addressed by Belle Fourche. All maintenance equipment used will be limited to access routes in agreement with the landowners to minimize disruption to soil, drainage, and crops.

Conversion to a transmission line has minimal impact to the maintenance activity required, which could have an indirect short-term disruption to livestock operations, and inconvenience to farm activities. Belle Fourche will work to minimize interference while in operation.

### *6.18.3 Land Suitable for Irrigation*

Conversion activity will not impact irrigated lands. Land that is most efficient for irrigation is relatively level and has soils that are well drained and highly permeable. The Project Route crosses silt and clay soils which contain low permeability, making them unsuitable for irrigated agriculture.

No existing aboveground irrigation systems have been identified along the Project Route.

### *6.18.4 Sound-Sensitive Land Uses*

There are two (2) inhabited residences within 500 feet of the Project Route (see Table 6.13). Construction is completed for this project therefore noise will not affect any residences or business in the area.

No noise is generated along the ROW during normal operation of the pipeline. No additional pump stations or noise increases at the pump station are proposed as part of the Project in North Dakota.

### *6.18.5 Visual Effect on Adjacent Areas*

The existing aboveground structures associated with the pipeline are finished with earth-toned painted surfaces. These structures are common throughout the landscape and not considered to be obtrusive.

### *6.18.6 Extractive and Storage Resources*

The Project will not affect known extractive or storage resources. Due to the narrow and linear nature of the pipeline ROW, future extractive development will not be substantially affected by the Project.

### *6.18.7 Wetlands, Woodlands, and Wooded Areas*

No wetlands or waterbodies were permanently drained or filled as part of the Project, and no future effects are anticipated.

No fertilizer, lime, or mulch would be applied in wetlands as part of the Project. The long-term operation and maintenance of the pipeline will not have adverse effects on wetland function or value as all features through wetlands are underground.

Tree rows and woody areas occur in limited amounts, as isolated islands or rows throughout the Project area. The route crosses through wooded areas on rangeland. Wooded habitat provides shelter and safety for a number of wildlife species. Any trees will continue to be protected to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline.

Impacts on wooded areas due to conversion activity are not anticipated. During original construction, impacts to wooded areas was limited to clearing only what was necessary to accommodate bi-weekly aerial surveys required by the U.S. DOT.

### *6.18.8 Radio and TV Reception and Other Communication or Electronic Facilities*

No impacts on television or radio reception or communication or electronic control facilities are anticipated as a result of the Project.

### *6.18.9 Human Health and Safety*

Belle Fourche, Bridger Pipeline, LLC, and Butte Pipeline Company are all part of the True Companies of Casper, Wyoming operating in western North Dakota, eastern Montana and Wyoming. By building and operating this extensive network, Belle Fourche has become one of the largest pipeline companies in

North Dakota and experienced in managing construction and operating pipeline systems that protect the public's health and safety.

#### *6.18.10 Animal Health and Safety*

No impacts on domestic animals and wildlife are expected during the course of the Project. No impacts to domestic animals and wildlife were reported during the original construction of the pipeline.

#### *6.18.11 Plant Life*

The Project is not anticipated to impact plant life, however in areas where vegetation has to be removed to perform inspection or maintenance activities, it will be reestablished to regulation standards from county agencies and the satisfaction of landowners. Permanent impacts on vegetation are not anticipated.

### 6.19 Policy Criteria

#### *6.19.1 Location and Design*

The conversion of the pipeline from a gathering system to transmission pipeline facility is not anticipated to result in additional construction. Using an existing line for transmission line service avoids or minimizes potential adverse environmental and human impacts associated with a new route and new construction.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

#### *6.19.2 Training and Utilization of In-State Labor*

No training of local labor is anticipated as a direct result of Project.

#### *6.19.3 Economies of Construction and Operation*

The Project is believed to be the most cost-effective and operationally sound means of meeting Belle Fourche's delivery obligations.

#### *6.19.4 Use of Citizen Coordinating Committees*

Citizen coordinating committees were not utilized for the Project.

#### *6.19.5 Commitment of Portion of Transmitted Product for Use In-State*

Belle Fourche does not own any of the crude petroleum or natural gas liquids transported in its pipeline system and does not determine markets or destinations for petroleum commodities.

#### *6.19.6 Labor Relations*

The Project will have no anticipated effect on labor relations within North Dakota.

### *6.19.7 Coordination of Facilities*

The existing 8-inch line and associated pumping, control and operating systems is used in conjunction with other segments of the Belle Fourche pipeline network to optimize system capacity.

### *6.19.8 Monitoring Impacts*

Belle Fourche will continue to deploy best management practices and environmental inspection to mitigated impacts associated with ongoing maintenance.

### *6.19.9 Using Existing and Proposed ROWs and Corridors*

The Project is on an existing ROW and uses existing pipeline.

The conversion of the pipeline from a gathering to transmission function does not require the installation of additional pipe. Additional temporary workspace will be kept to the minimum necessary to safely conduct work for any future maintenance or construction.

### *6.19.10 Other Existing or Proposed Transmission Facilities*

The pipeline interconnects with Belle Fourche’s new Kermit to Wilson gathering line that gathers crude oil between Johnson’s Corner and the Wilson Station in McKenzie County. The Project pipeline also interconnects with Belle Fourche’s Alex to Bowline pipeline at the Bowline Junction, which connects to the Bicentennial line to supply crude oil to various facilities in the Belle Fourche system.

## 7 AGENCY NOTIFICATIONS AND PERMITTING

In May 2018, Keitu, on behalf of Belle Fourche Pipeline, notified federal, state, and local agencies regarding comments or issues within the Project area. Letters and/or emails were submitted along with an overview map of the Project Corridor. Further details on each of these notifications are included in the following sections.

## 7.1 U.S. Fish and Wildlife Service

The USFWS administers several programs designed to identify and protect plant and animal species listed under the Endangered Species Act, critical habitats for listed species, migratory birds, bald and golden eagles, as well as wetland and grassland easements. A notification letter was sent to the USFWS on May 17, 2018 which included a description of the Project, site maps, and a request for comments regarding issued under USFWS jurisdiction.

A written response was received on June 1, 2018 stating that the USFWS did not find any issues with the Project as proposed.

## 7.2 U.S. Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for administering federal laws that regulate certain activities in the waters of the United States. The authority applicable to this responsibility is Section 404 of the Clean Water Act (33 U.S.C. 1344), which prohibits the discharge of dredged or fill material into waters of the United States without authorization in the form of a Department of the Army permit. A notification letter was sent to the USACE on May 17, 2018 which included a description of the project, site maps, and a request for comments regarding issues under USACE jurisdiction.

A written response was received from the USACE on May 25, 2018 which stated that as proposed, the Project would not involve a regulated discharge of dredged or fill material under Section 404 of CWA. Therefore, Project activity would not be subject to DA regulatory authorities and no permit pursuant to Section 404 would be required from the USACE.

## 7.3 Department of Defense- Air Force Cable Affairs

The United States Department of Defense (USDOD) possesses assets associated with ICBM and launch facilities in North Dakota. A notification letter was sent to the U.S. Air Force on May 17, 2018 which included a description of the project, site maps, and a request for comments regarding issues under U.S. Air Force jurisdiction.

A written response was received from the USDOD that stated the Minot Air Force Base did not have any assets near the proposed Project area.

## 7.4 U.S. Department of Agriculture, Natural Resource Conservation Service- McKenzie County Soil Conservation District

The National Resource Conservation Service (NRCS) administers the Wetland Reserve Program, which provides annual rental payments and cost-sharing assistance to landowners to establish long-term resource conservation of grasslands and wetlands. A notification letter was sent to the McKenzie County Soil Conservation District on May 17, 2018, which included a description of the Project, site maps, and a request for comments regarding issues under NRCS jurisdiction.

To date, a formal written response has not been received from the McKenzie County Soil Conservation District.

## 7.5 U.S. Forest Service- McKenzie Ranger District

The United States Forest Service (USFS) manages the National Grasslands in which portions of the Project ROW are located. A notification letter was sent to the USFS-McKenzie Ranger District on May 17, 2018 which included a description of the Project, site maps, and a request for comments regarding issues under USFS jurisdiction.

To date, a formal written response has not been received from the USFS- McKenzie Ranger District.

## 7.6 North Dakota State Historic Preservation Office

According to the North Dakota Energy Conversion and Transmission Facility Siting Act, among the "factors to be considered [by the Commission] in evaluating applications and designation of sites, corridors, and routes," is the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. The agency responsible for these sites is the North Dakota State Historic Preservation Office (NDSHPO). BCA was contracted to conduct a Class III Cultural Resource Inventory of the Project Corridor.

The Class III Cultural Resource Inventory report has been submitted to NDSHPO with a request for concurrence with the report findings. A response is pending and will be submitted to the NDPSC upon receipt.

## 7.7 North Dakota Game and Fish Department

The NDGF has oversight of the State's game species, State Conservation Priority Species, WMA's, and Private Land Open to Sportsman lands. A notification letter was sent to the NDGF on May 17, 2018, which included a description of the Project, site maps, and a request for comments regarding issues under NDGF jurisdiction.

To date, a formal written response has not been received from the NDGF.

## 7.8 North Dakota Parks and Recreation Department

The NDPRD Natural Resource Division has authority and expertise regarding recreation and biological resources in North Dakota, with a particular emphasis on rare species and ecological communities. The NDPRD maintains a database detailing the location and recorded occurrences of animal and plant species of special concern. The NDPRD is also responsible for the management of state park lands and Land and Water Conservation funded recreation projects. A notification letter was sent to the NDPRD on May 17, 2018 which included a description of the Project, site maps, and a request for comments regarding issues under NDPRD jurisdiction.

To date, a formal written response has not been received from the NDPRD.

## 7.9 North Dakota Department of Trust Lands

The North Dakota Department of Trust Lands (NDDTL) was sent a notification letter on May 17, 2018, which included a description of the Project, site maps, and request for comments regarding the presence of Mineral Trust Lands and School Trust Lands in the Project Corridor.

On June 8, 2018, a written response was received from the NDDTL that included a list of tracts in McKenzie that fall under NDDTL jurisdiction near the Project. The Project Corridor does not cross any Mineral or School Trust Lands; therefore, no amendments to existing pipeline easements are necessary for the proposed Project.

## 7.10 North Dakota State Water Commission

The North Dakota State Water Commission (NDSWC) was sent a notification letter on May 17, 2018, which included a description of the Project, site maps, and a request for comments regarding issues under NDSWC jurisdiction.

A written response was received from the NDSWC on June 4, 2018 that included comments regarding the proposed Project. The NDSWC requested that a water permit be acquired if surface water or groundwater will be diverted. The proposed Project, will not divert any surface water or groundwater, a permit is not required. The Water Appropriations Division of the State Engineer (OSE) requested to be notified if the Project impacted any water resources, agricultural drains, or wetlands. Any alterations, modifications, improvements, or impacts to those water resources may require a drainage permit or construction permit from the OSE. The proposed Project will not impact the water resources described by the NDSWC. Furthermore, the NDSWC did not identify any floodplains in the Project area. A floodplain development permit will not be required relative to the National Flood Insurance Program.

## 7.11 McKenzie County Planning Department

A notification letter was sent to the McKenzie County Planning Department on May 17, 2018, which included a description of the Project, site maps, and a request for comments regarding issues under the jurisdiction of the McKenzie County Planning Department.

Keitu, on behalf of Belle Fourche Pipeline, submitted an application for a Conditional Use Permit from the McKenzie County Planning Department. After all required documents were submitted and notification letters were sent to county officials and landowners along the ROW, the Project received approval for the Conditional Use Permit from the McKenzie Planning and Zoning Board on September 10, 2018.

## 7.12 McKenzie County Weed Board

The McKenzie County Weed board is responsible for the management of noxious weeds and developing an effective long-term integrated weed management plan for McKenzie County. It is their objective to educate the public and increase awareness about the impacts of noxious weeds by implementing programs as a cooperative effort between landowners, energy companies, and government agencies for the purpose of noxious weed control.

On July 23, 2018, Keitu, on behalf of Belle Fourche Pipeline, submitted a Weed Management Plan along with a notification letter which included a description of the Project, site maps, and a request for comments regarding issues pertaining to the control of noxious weeds in McKenzie County. The McKenzie County Weed board approved the Weed Management Plan on July 23, 2018 which fulfilled a requirement to obtain the Conditional Use Permit from the McKenzie County Planning Department.

# 8 OTHER FACTORS CONSIDERED

## 8.1 Public Health, Welfare, Natural Resources, and the Environment

Refer to Sections 5, 6 and 7.

## 8.2 New Transmission Technologies and Systems Designed to Minimize Adverse Environmental Effects

The Project does not include new energy conversion or transmission technologies. The pipeline design is consistent with existing pipeline technologies. However, Belle Fourche is constantly evaluating new energy conservation technologies to reduce the energy consumed in its operations.

However the key energy economic impact will be the substitution of the most energy efficient mode of crude oil transportation, i.e. pipeline for on-road transport via cargo tanker truck or via surface transportation by rail. Converting the existing line will open the 40,000 barrels per day gathering capacity of the existing system (which may or may not be operated at full capacity by Belle Fourche) to other crude oil companies wishing to use pipeline transportation for their product.

Beyond the direct energy benefit of using a more efficient mode of transportation, energy conservation is a major concern at Belle Fourche. Energy/power costs represent the largest single recurring expense in pipeline operation. Attention is continually being directed toward energy conservation.

Belle Fourche's energy conservation goal is to minimize power/energy unit costs, through the implementation of internal programs directed at continuous improvement of energy utilization efficiency. The following provides a brief explanation of the programs reviewed during the Project development phase:

Pipeline Control Center

Belle Fourche control operators are trained in applied hydraulics and pipeline control. They are trained to operate the pipeline at a natural flow rate using efficient combinations of pumps, thereby minimizing energy consumption. Operators have the capability to start and stop pumps and monitor pipeline operating conditions to assist in achieving an energy efficient operation.

Energy Efficient Pumps and Motors

For new installations, Belle Fourche purchases high efficiency pumps and motors at a premium initial cost in an effort to conserve long range energy requirements. Specifically, a high polish is used on the pump impeller, and motors are custom designed for high efficiency. Pumps are hydraulically designed and selected to obtain a high best efficiency point at the desired flow rates. The forecasts are continually being evaluated and if the flow rate is outside the best efficiency point range, impeller changes are typically implemented for improved efficiency. Installation of variable speed drives is used to minimize starting current and maximize pump efficiency in all operating conditions.

Drag Reducing Agents (DRA)

Belle Fourche currently uses drag reducing agents in selected segments of its pipeline system. Injection of DRA reduces flow turbulence of liquid hydrocarbons which results in reduced pressure loss between stations. This allows a high flow rate (increased throughput) at the same operating pressure, or a decrease in operating pressure while maintaining flow rate. These two scenarios allow increased throughput or decreased power use. The flexibility furthers opportunities to shift power use to improve economics or accommodate the utilities. In these cases, the economic benefits realized with the implementation of the

DRA program have outweighed the material cost of the DRA. As a result, lower unit energy costs and greater efficiency have occurred.

## 8.3 Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility

This Project does not require new construction for energy facilities; therefore, beneficial uses of waste energy from a proposed energy conversion facility does not apply to the Project.

## 8.4 Unavoidable Adverse Direct and Indirect Environmental Effects

Environmental impacts due to the original construction of the pipeline have been mitigated and unavoidable adverse direct and indirect environmental effects as a result of conversion of the pipeline are not expected.

No discernable long-term impacts to wildlife or wildlife habitat were noted anywhere within the Project's impact area.

## 8.5 Corridor or Route Alternatives Developed During the Hearing that Minimize Adverse Effects

The Project Corridor provides an established, direct route between Wilson Station and Bowline Junction Station. This corridor was originally selected to avoid or minimize environmental and socioeconomic impact. Conversion of an existing gathering line to transmission line status will avoid installation/construction of a new pipeline for this same purpose. The Project Route utilizes Belle Fourche's existing ROW.

## 8.6 Irreversible and Irretrievable Commitments of Natural Resources if Designated

The Project would require minimal irreversible and irretrievable commitments of natural resources because the Project is a conversion of an existing pipeline. Areas impacted by the original construction were returned to their pre-disturbance use, with the exception of the small areas where aboveground facilities are located.

## 8.7 Direct and Indirect Economic Impacts of the Facility

The Project presents an optimization of existing pipeline capacity to meet the needs for additional liquid petroleum transportation and supply/purchase options to this region. Belle Fourche's proposal represents an optimal use of existing pipelines on an existing route.

## 8.8 Existing Plans for Other Developments in the Vicinity

Belle Fourche is not aware of other development by state, local or governmental entities at or in the vicinity of the Project Corridor.

## 8.9 Effect of the Proposed Route on Existing Scenic Areas, Historic Sites and Structures, and Paleontological or Archeological Sites

During the intensive pedestrian survey, no new cultural resources were encountered and no sign of site impact was seen on the previously recorded sites on file with the SHPO. As a result, BCA recommends a finding of No Historic Properties Affected for this project. The SHPO reviewed the Class I and Class III Inventory Reports and concurred with the "No Significant Sites Affected" determination. Section 6.11 describes BCA's findings and a copy of BCA's report is presented in Exhibit B.

## 8.10 Effect of the Proposed Route on Areas That Are Unique Because of Biological Wealth or Because They Are Habitats for Rare and Endangered Species

Contacts have been made with the NDGF, the USFWS, and the Natural Heritage Inventory 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. See Section 7.0 and Exhibit C for agency comments.

The installation of the pipeline did not have adverse effects on critical habit for rare and endangered species or other areas of biological wealth.

## 8.11 Problems Raised by Federal, State, and Local Agencies

Agencies at the federal, state, and local levels were notified about the proposed project and no problems or concerns were raised.

## 8.12 Policies and Commitments to Limit Environmental Impact

Belle Fourche is a liquids pipeline operator that gathers and transports crude oil in the Williston Basin and the Powder River Basin.

Belle Fourche, Bridger Pipeline, LLC and Butte Pipeline Company are all part of the True Companies of Casper, Wyoming. True Companies operates pipeline systems in western North Dakota, eastern Montana and Wyoming. The True Companies have been family owned and operated since 1948, and now have over 1,000 employees in Wyoming, Colorado, Montana, North Dakota, Utah, Texas, Louisiana, Mississippi, New Mexico, Missouri, Oklahoma and Arizona.

Belle Fourche works to protect the environment, home to its employees and customers. Protection of the environment is an integral element in the conduct of Belle Fourche. Environmental protection efforts will span the entire Project, from planning through conversion, and into full operation.

The major causes of pipeline leaks in the United States are corrosion (both internal and external), excavation damage, pipe and weld failure, incorrect operations, or natural causes (e.g. floods or outside force). To prevent these categories of failures, Belle Fourche will improve or maintain the Project to meet or exceed industry and governmental requirements and standards. Specifically the steel pipe meets US DOT Pipeline and Hazardous Material Safety Administration federal codes under 49 CFR Part 195 (referred

to hereafter as PHMSA regulations) and follow standards issued by the American Society of Mechanical Engineers, National Association for Corrosion Engineers and API. As a safety factor, the Project is designed to withstand pressures over and above its normal operating pressures and will operate according to codes and regulations. All pipe is inspected and integrity-tested at the factory and transported per the highest technical standards. PHMSA conducts regularly scheduled field inspections of the pipeline facilities to ensure compliance with federal regulatory requirements, including the integrity testing of the pipeline through the use of internal inspection devices.

The existing pipeline will continue to be subjected to careful testing to verify its integrity and compliance with specifications. The line is subjected to hydrostatically testing per DOT/PHMSA regulations to an accurate and safe maximum allowable operating pressure.

As previously mentioned, the existing gathering pipeline has been maintained and inspected according to PHMSA regulations, industry codes and prudent pipeline operating techniques and will continue to be examined under the same scrutiny. All of Belle Fourche's mainline liquids pipelines are externally coated to resist corrosion, internally inspected at regular intervals using in-line inspection technology, and equipped with a cathodic-protection system to prevent external corrosion. Belle Fourche's cathodic protection system and internal inspection program were implemented prior to these techniques becoming a regulatory standard.

The Belle Fourche System ROWs are patrolled and inspected by air at least every three weeks but not less than 26 times per year to watch for abnormal conditions or dangerous activities, e.g., unauthorized excavation, along the routes of the lines. Belle Fourche also conducts extensive public education and outreach programs that exceed industry (API Recommended Practice 1162) and PHMSA (49 CFR 195.440) requirements concerning public awareness of pipelines and pipeline-safety matters. All Belle Fourche lines are marked with signage and warnings, per federal regulations, at road and highway crossings, railroad crossings, and other locations to alert the public to the presence of underground lines and to provide information, contact numbers, and emergency data.

Pipeline workers and contractors performing critical tasks are qualified under Occupational Safety and Health Administration safety standards and PHMSA "operator qualification" rules and are subjected to federal drug and alcohol testing requirements. Belle Fourche meets, and often exceeds, these requirements so that human error in construction and operation is minimized.

# 9 MITIGATION MEASURES

## 9.1 Measures to Preserve the Human Environment

Noise and dust pollution will not be generated by the Project.

Road crossing permits were obtained prior to construction, when and where required.

## 9.2 Measures to Protect Terrain and Geological Resources

Restoration of the Project ROW will not be conducted because no construction activities are necessary for the Project. Should any restoration become necessary, it will be compatible with the safe operation, maintenance, and inspection of the pipeline.

## 9.3 Measures to Protect Soils

If or when construction or maintenance activities are required, temporary erosion and sedimentation control measures may include installation of silt fence, straw bales, slope breakers, trench breakers, erosion control fabric and mulch, in any Project areas deemed susceptible to soil erosion.

## 9.4 Measures to Protect Vegetation and Wildlife

Belle Fourche already maintains the ROW to the extent necessary to assure suitable access for safe operation and maintenance of the pipeline. No changes to the current conditions are expected.

Belle Fourche and its contractors will effectively control or limit the spread of invasive plant species through control treatments and avoiding existing populations where possible. Treatments will be initiated prior to activity to disperse propagules in the area of disturbance. Monitoring and treatment should then be conducted on an annual basis to ensure a high degree of control and maximize treatment effectiveness.

No permanent revegetation will be necessary after completion of the Project.

Belle Fourche will take appropriate precautions to protect livestock and crops affected by maintenance and inspection of this project. Operation of the pipeline is not anticipated to significantly affect terrestrial wildlife, fisheries resources, or other aquatic species.

Shelter belts and trees will be protected by Belle Fourche to the extent possible in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

## 9.5 Measures to Protect Land Use Permits

Belle Fourche will obtain and comply with applicable county permits regulating zoning and land use for any necessary maintenance or future construction activities. Since portions of the pipeline were constructed as far back as the 1970s, at the time of the original construction, several areas of the current pipeline did not require county use permits; however, applicable county road and conditional use permits for the Project were obtained in September of 2018.

# 10 DEVELOPMENT

## 10.1 Present and Future Natural Resource Development in the Area

Belle Fourche has consulted with federal, state, and local agencies regarding the Project. As a result of these consultations, Belle Fourche was not made aware of any current or future developments of natural resources in the area that would affect the proposed Project.

## 11 QUALIFICATIONS OF PREPARERS

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

(1) Tad True, Vice President – Belle Fourche Pipeline Company

Degree: Bachelor of Business Administration, University of Notre Dame
Experience: 13-year experience in petroleum transportation field

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

Degree: Bachelor of Mechanical Engineering, Valparaiso University
Experience: 28-year 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 - Belle Fourche Pipeline Company

Experience: 27-year experience in petroleum transportation field with 16 years focused in regulatory affairs and compliance.

(4) 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: 36-year experience in petroleum refining and fuels transportation field as well as regulatory affairs and compliance.
Professional License
Registered Professional Engineer: North Dakota, Montana

(5) Karine Finken, Project Manager — Keitu Engineers & Consultants, Inc.

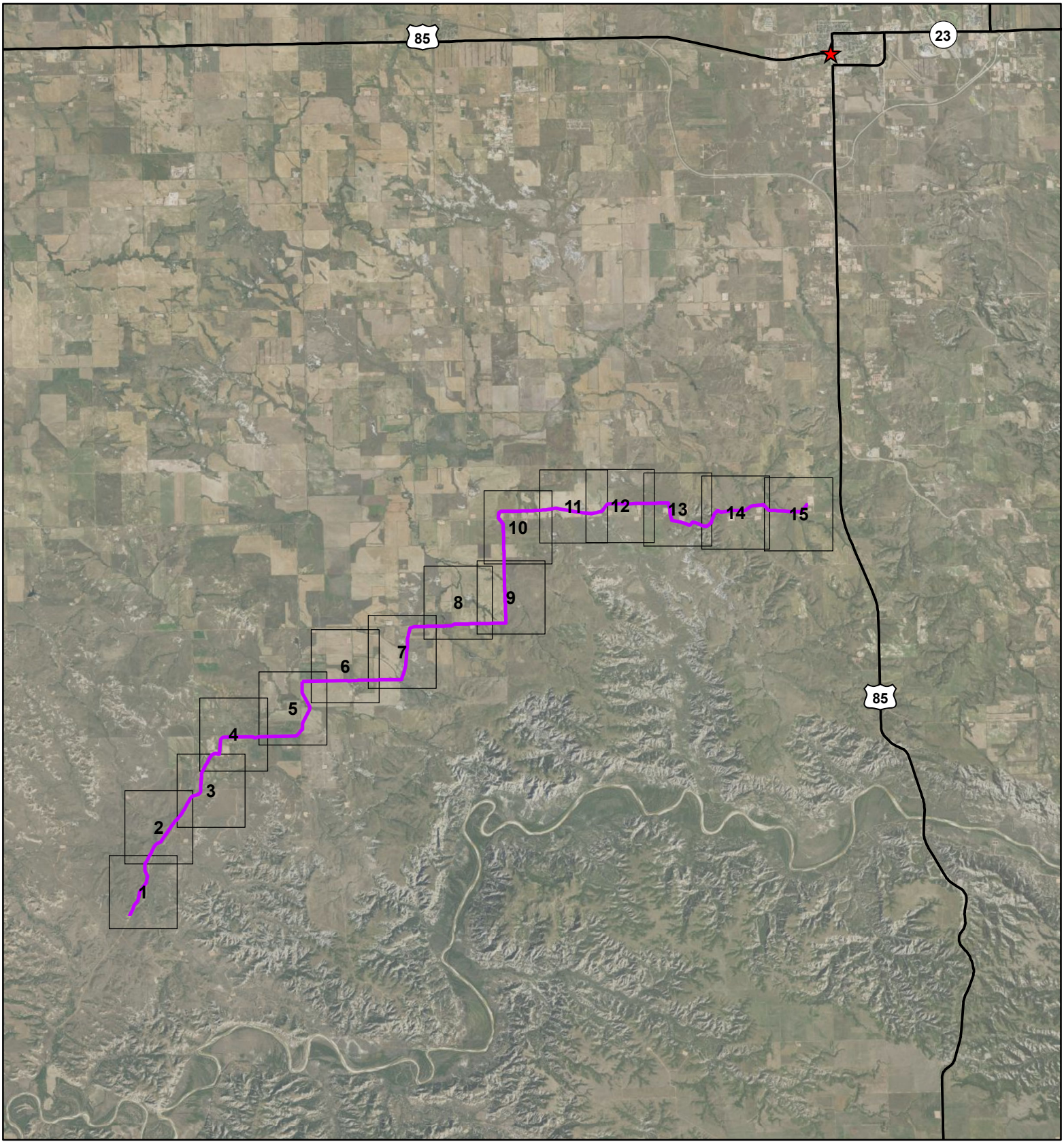
Degree: Bachelor of Science – Natural Resource Management, University of Minnesota - Crookston
Experience: 7-years' experience in natural resource management

(6) Zachary Peterson, Environmental Specialist- Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science- Wildlife and Fisheries Biology, South Dakota State University
Experience: 6-years' experience in natural resource management

# Exhibit A.1

# Aerial Mapbook




# 8" Wilson To Bowline Pipeline

Watford City

Wilson to Bowline Pipeline

Major Roads

Mapbook Page Layout

Belle Fourche Pipeline Company

0 2 4 Miles

0 5 10 Kilometers

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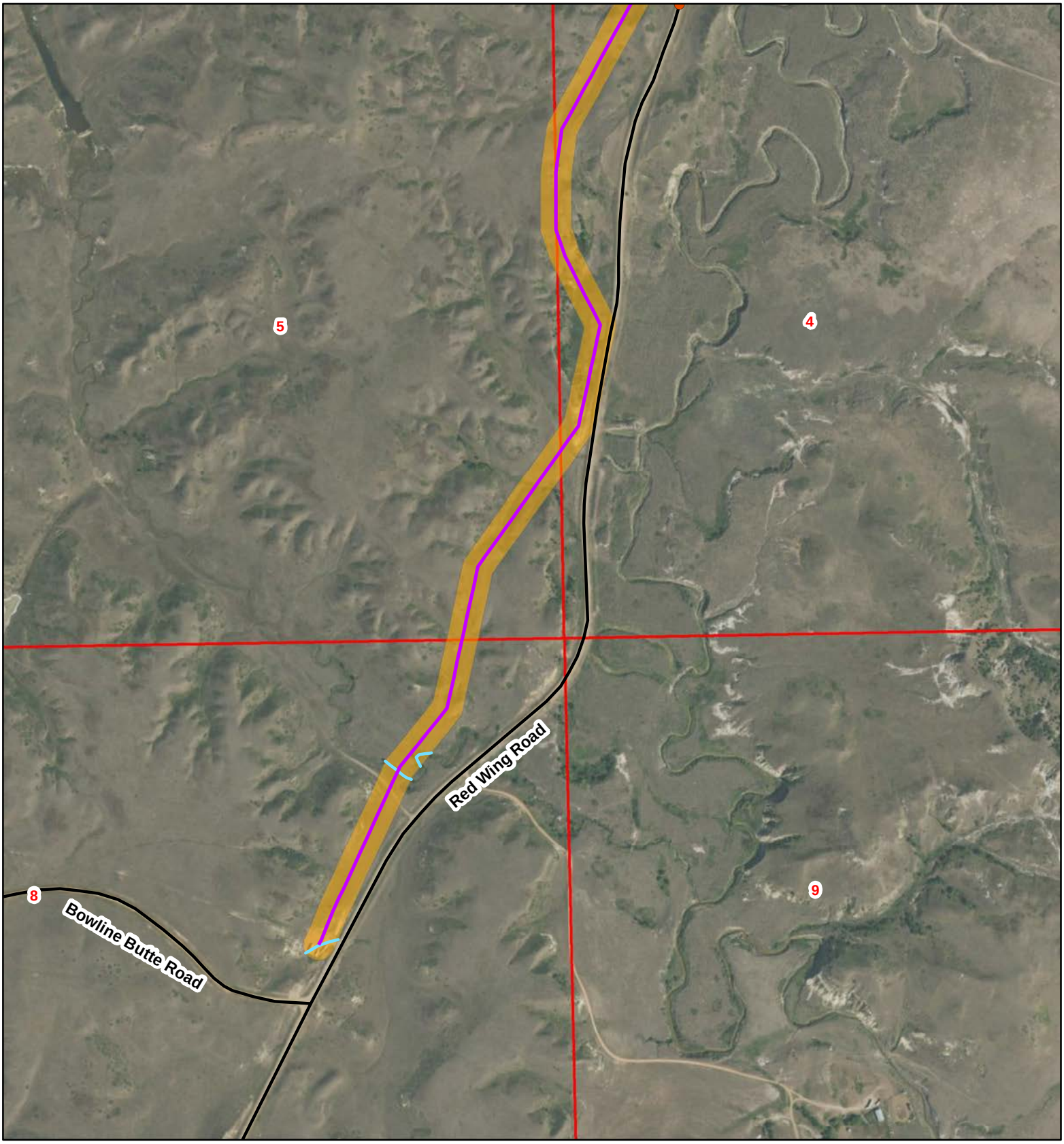


# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.1**

Page 1 of 15

T. 147N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

N

0 1,000 2,000 Feet

0 300 600 Meters


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**Figure: A.1**



T. 147N, R. 101W and T. 148N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

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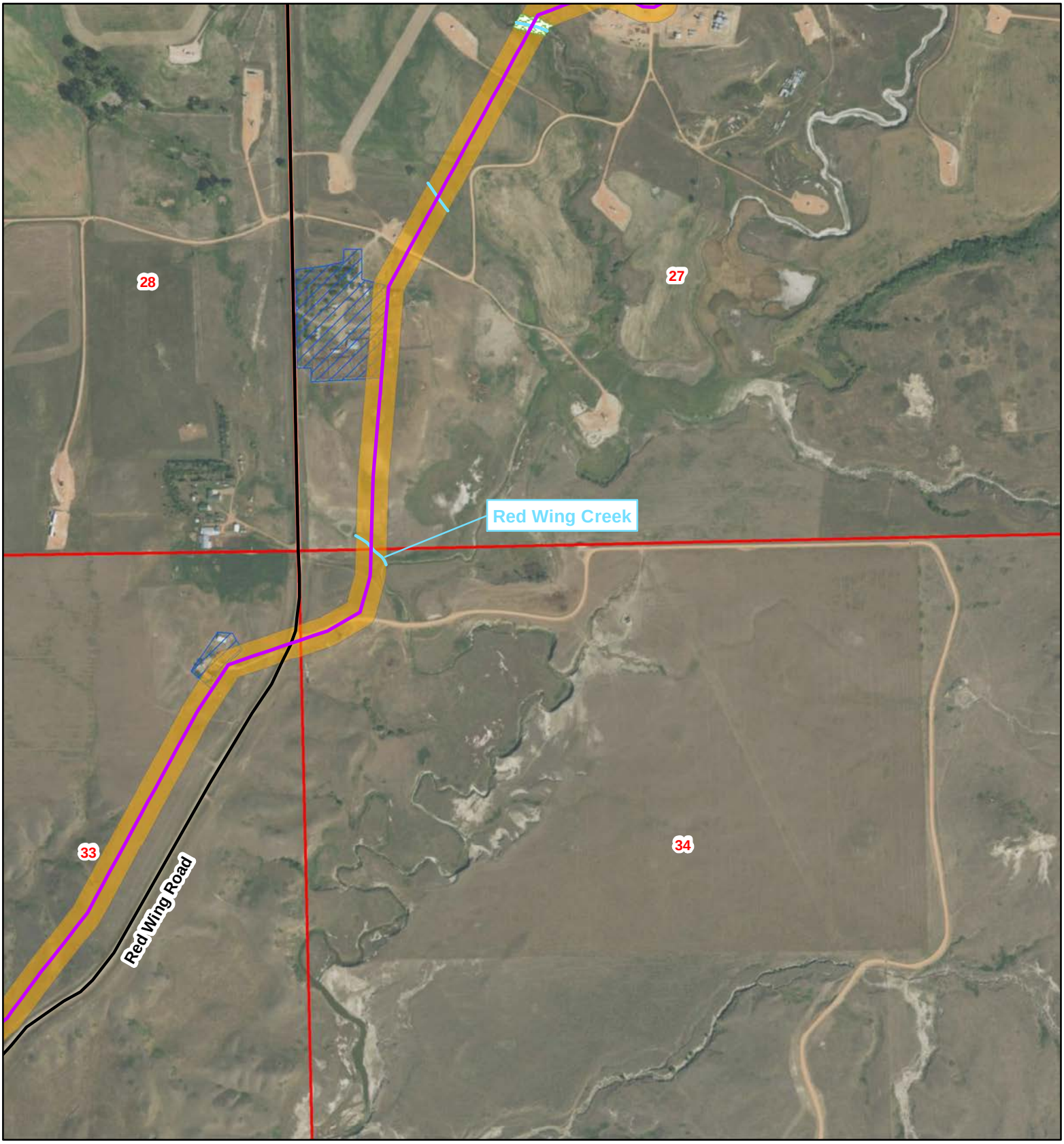


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T. 148N, R. 101W

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T. 148N, R. 101W

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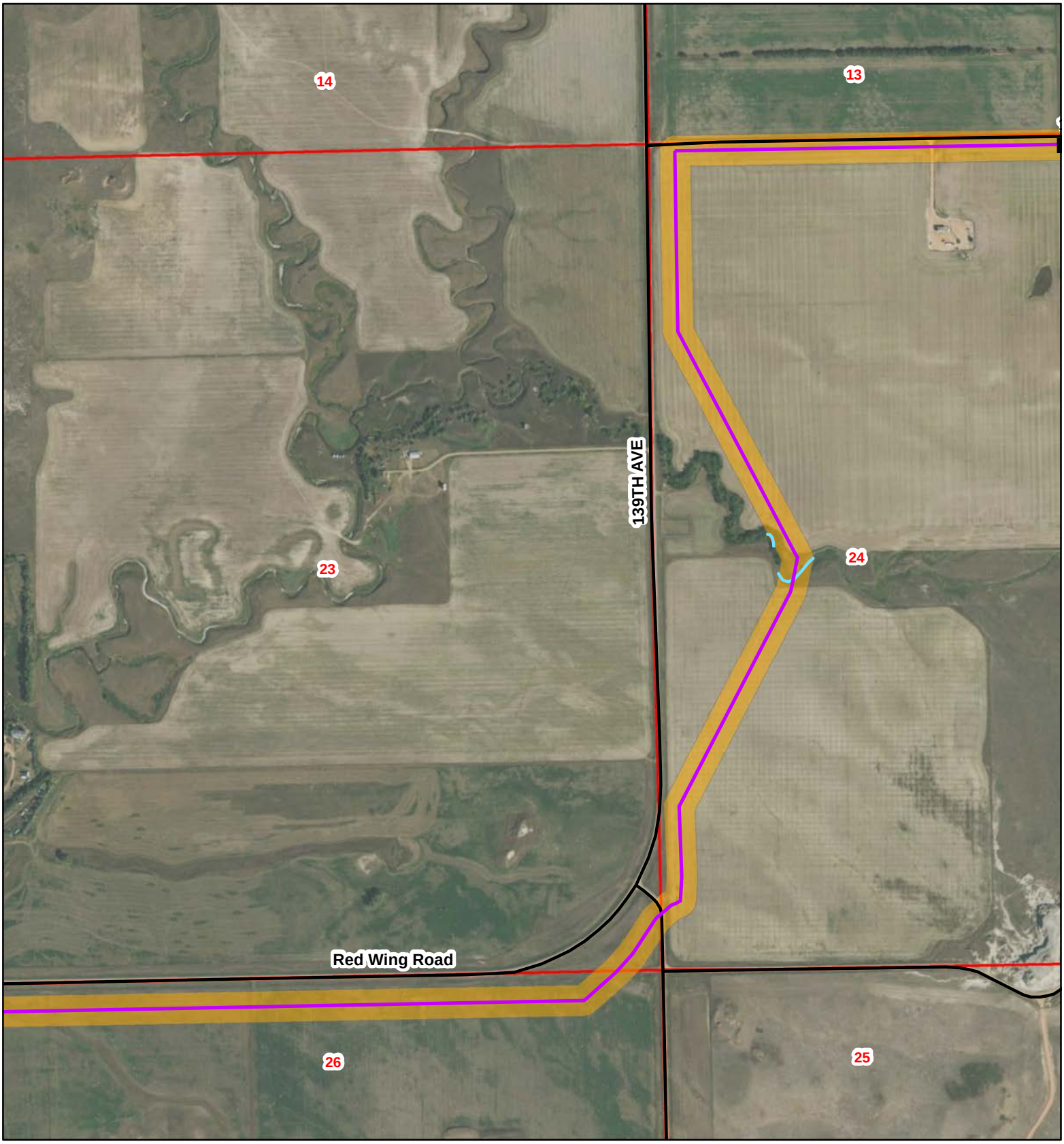


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T. 148N, R. 101W

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T. 148N, R. 101W and T. 148N, R. 100W

McKenzie County, North Dakota
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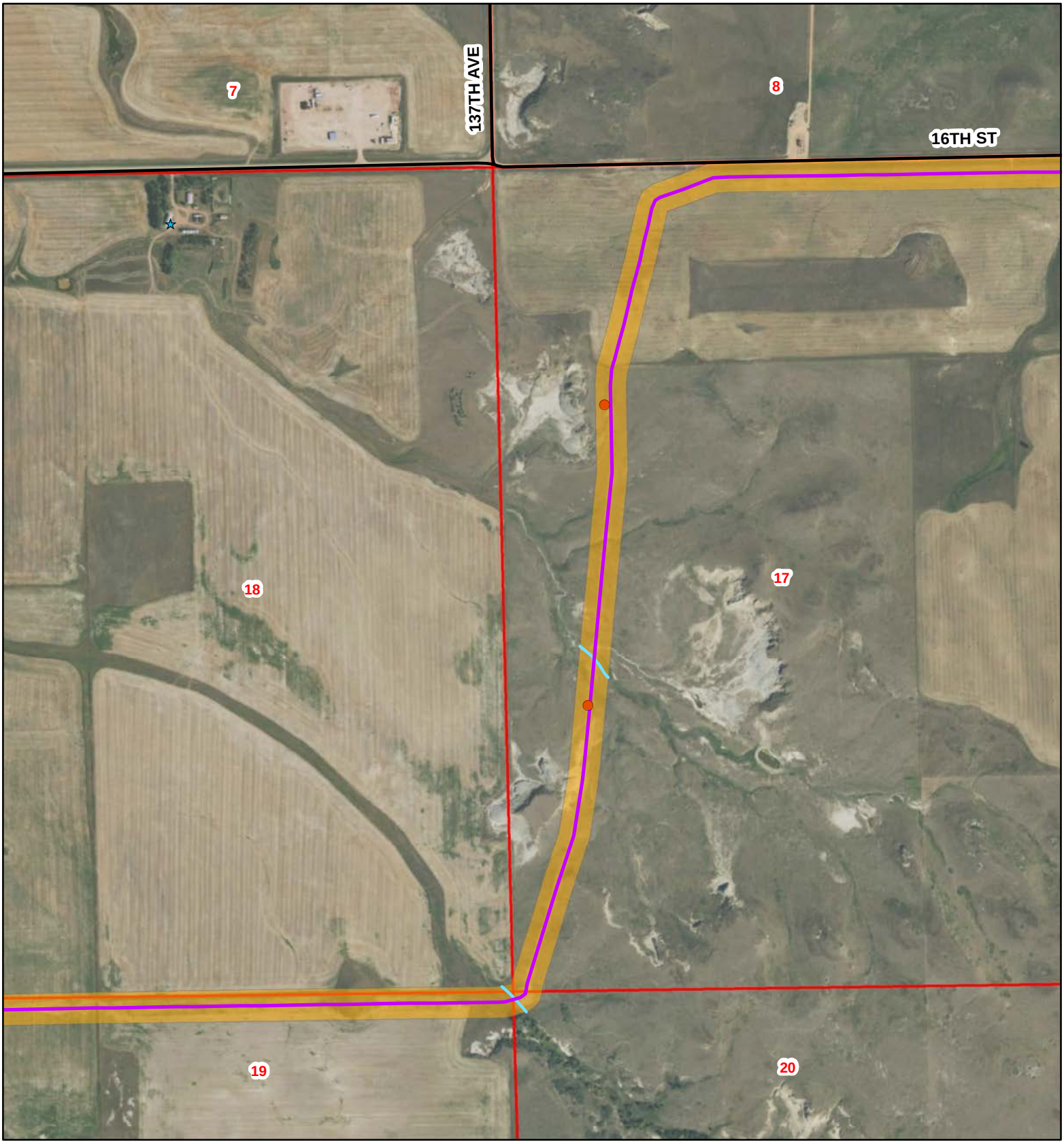


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T. 148N, R. 100W

McKenzie County, North Dakota
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Source: USDA/FSA - Aerial Photography Field Office

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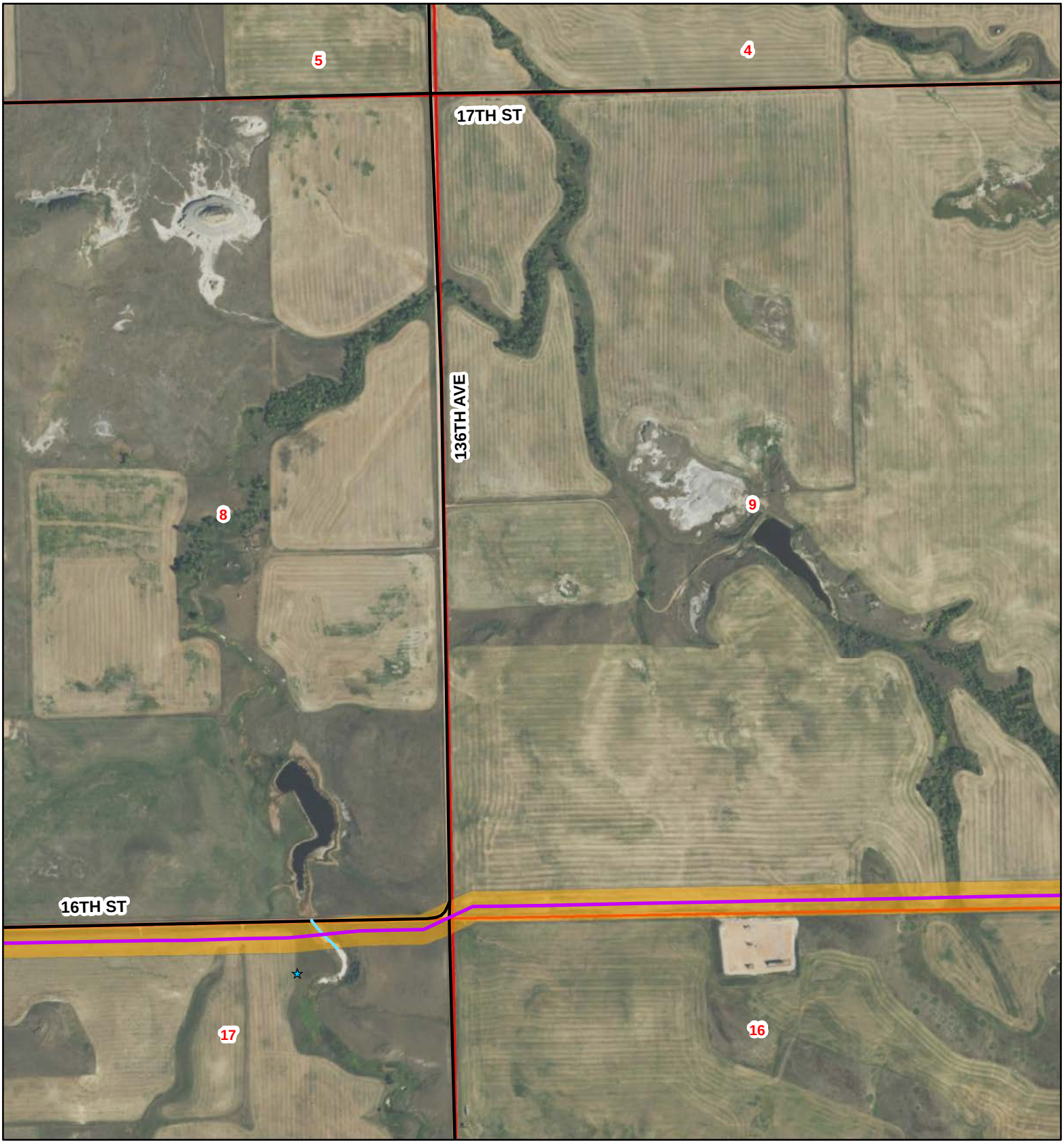


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T. 148N, R. 100W

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T. 148N, R. 100W

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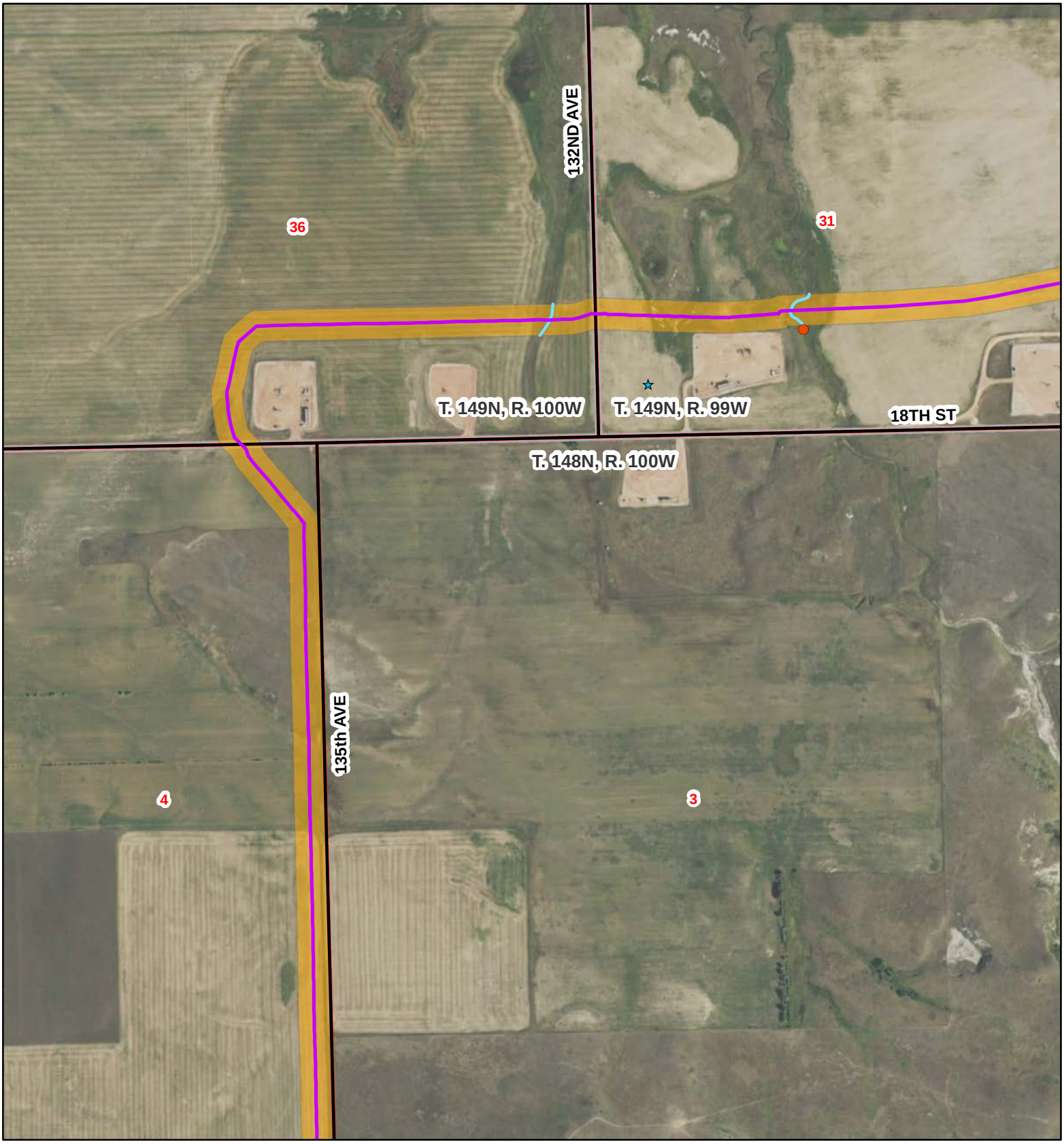


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T. 148N, R. 100W, T. 149N, R. 100W,
and T. 149N, R. 99W
McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
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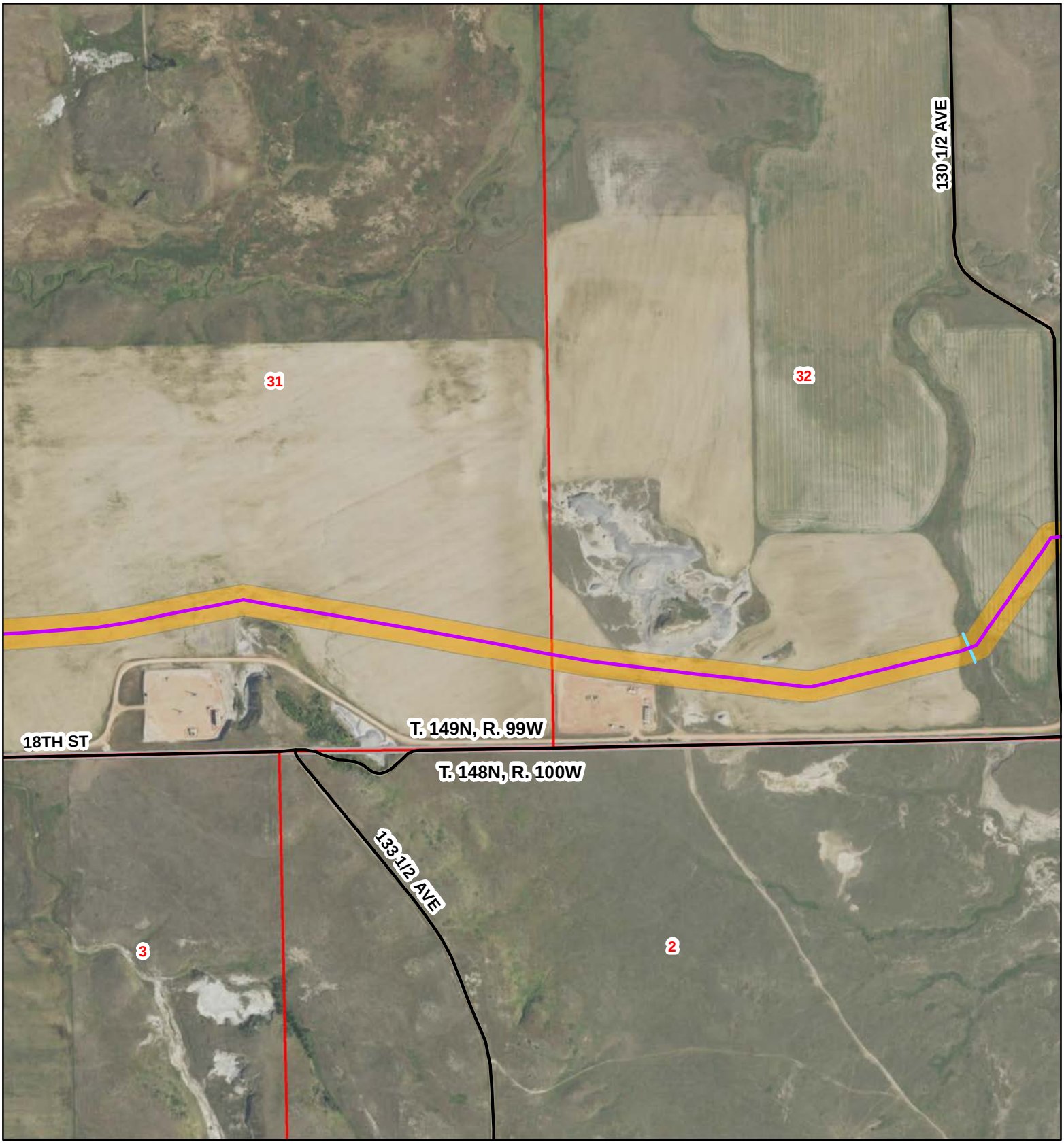


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T. 148N, R. 100W and T. 149N, R. 99W

McKenzie County, North Dakota
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Base Map: 2016 Aerial Imagery
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T. 148N, R. 100W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

N

0 1,000 2,000 Feet

0 300 600 Meters


# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.1**

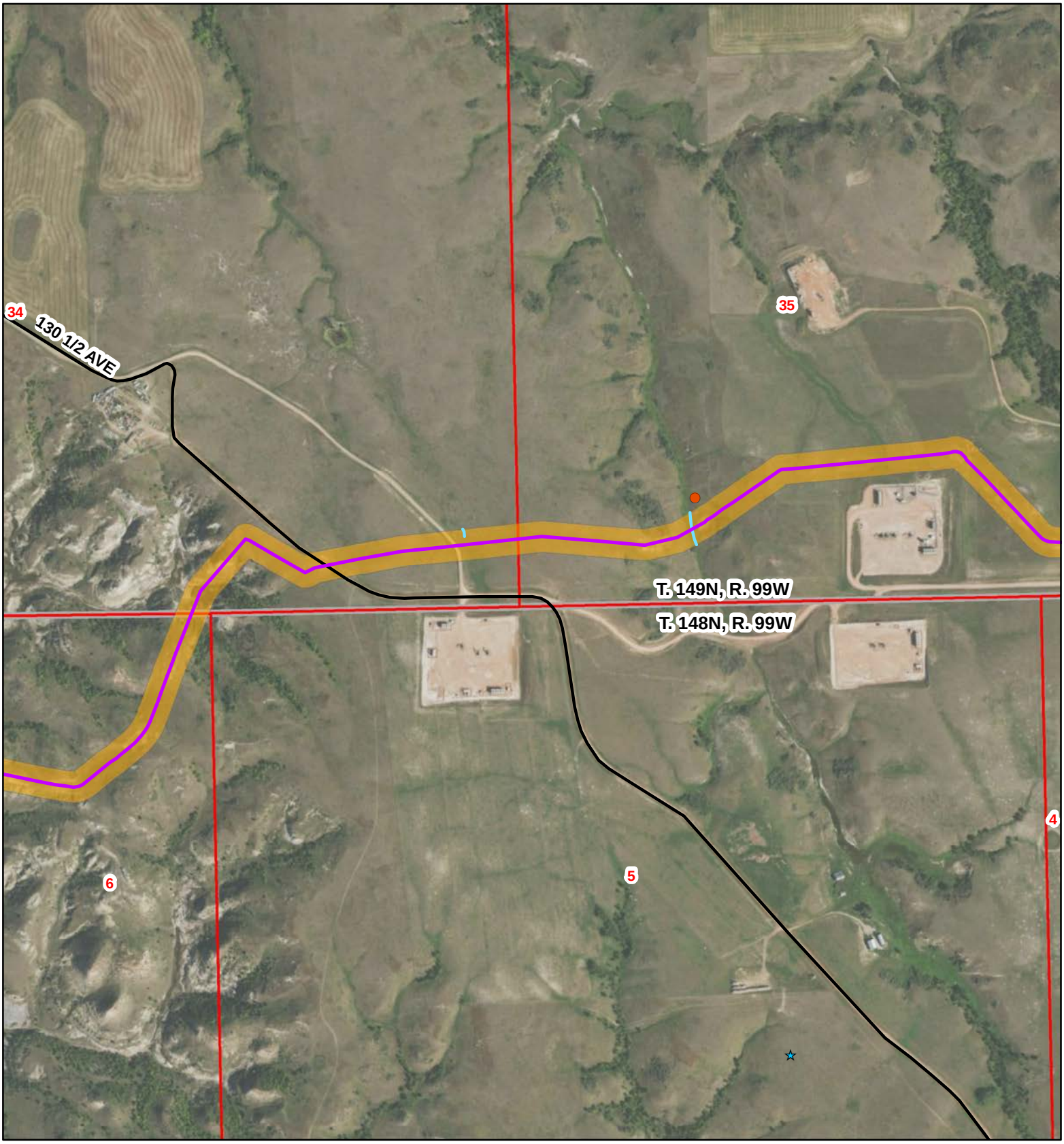


T. 148N, R. 100W, T. 148N, R. 99W,
and T. 149N, R. 99W
McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
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- Pipeline
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- Residence/Building
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- Township/Range Boundary

**Figure: A.1**



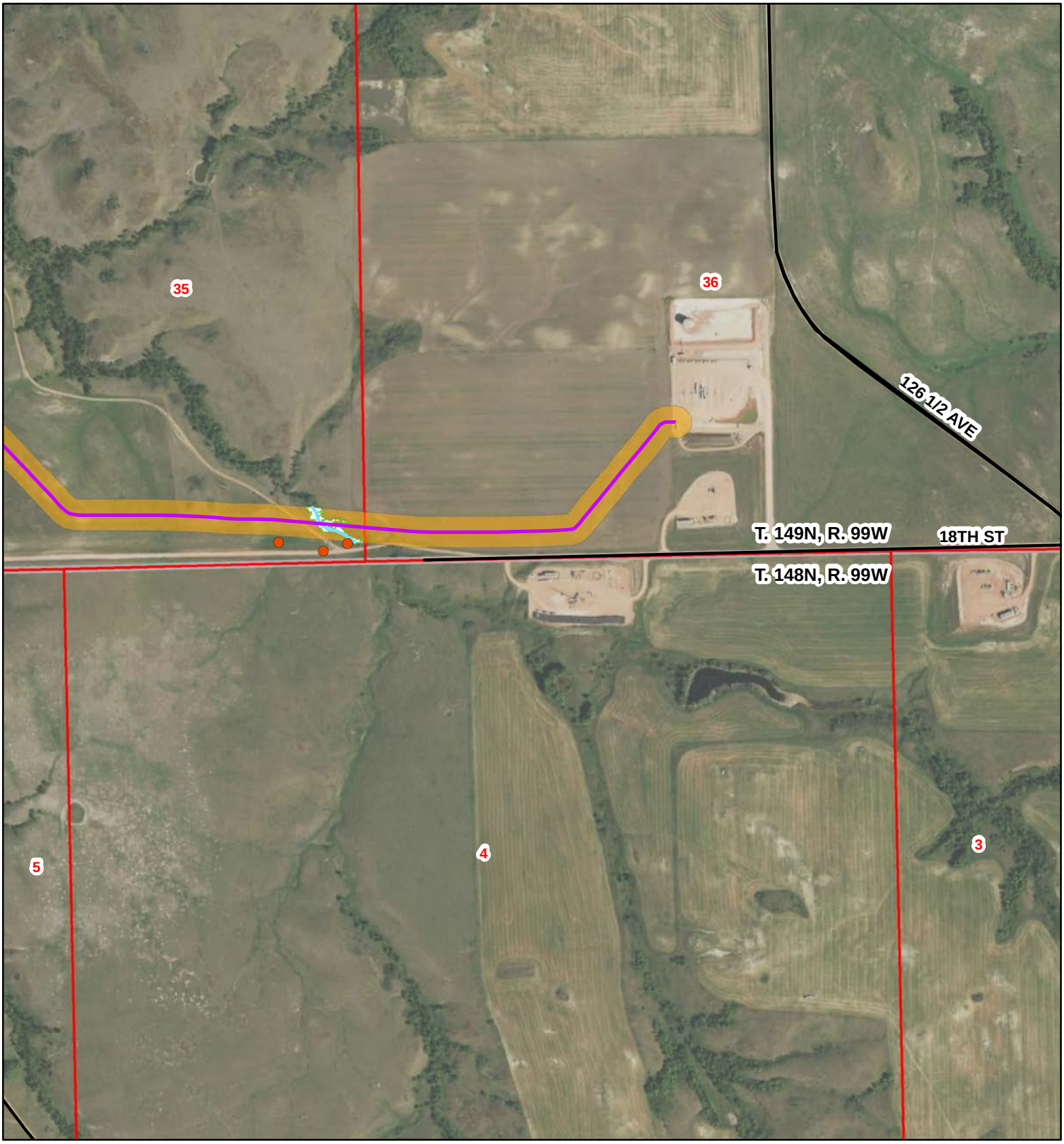
T. 148N, R. 99W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

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- Residence/Building
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- Township/Range Boundary

**Figure: A.1**



T. 148N, R. 99W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 2016 Aerial Imagery
Source: USDA/FSA - Aerial Photography Field Office

N

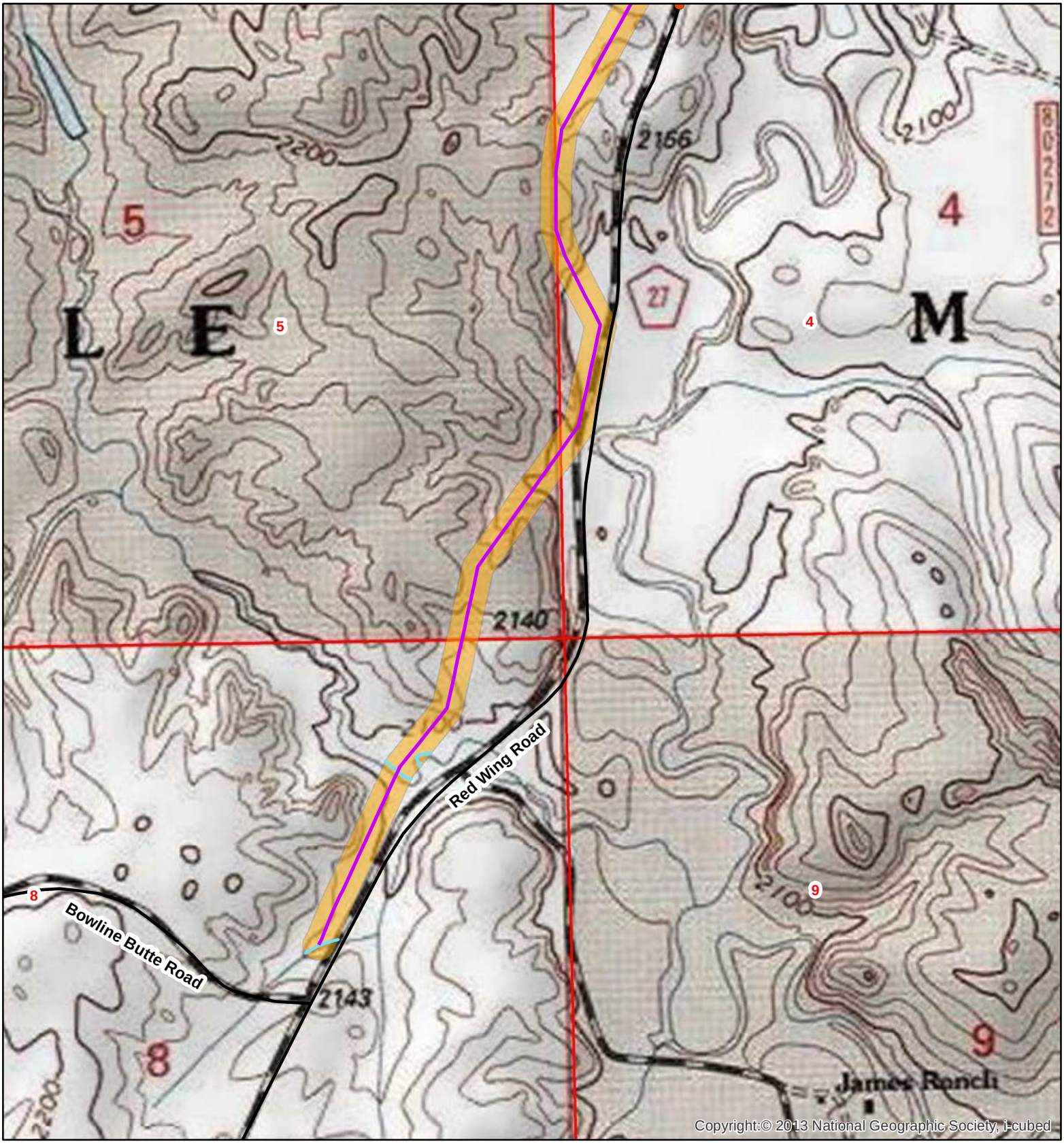
0 1,000 2,000 Feet

0 300 600 Meters

# Exhibit A.2

# Topographic

# Mapbook




# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



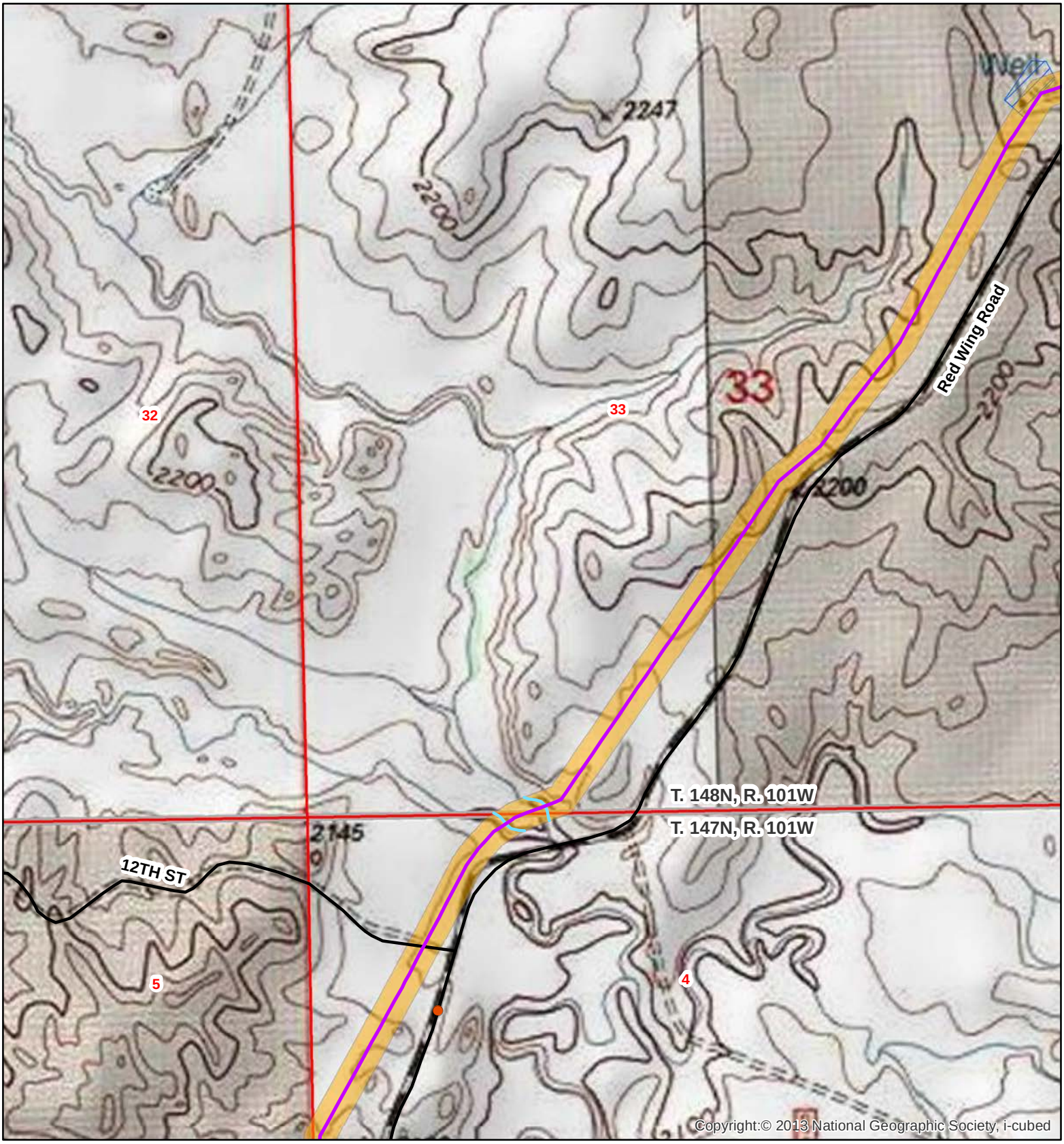
T. 147N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



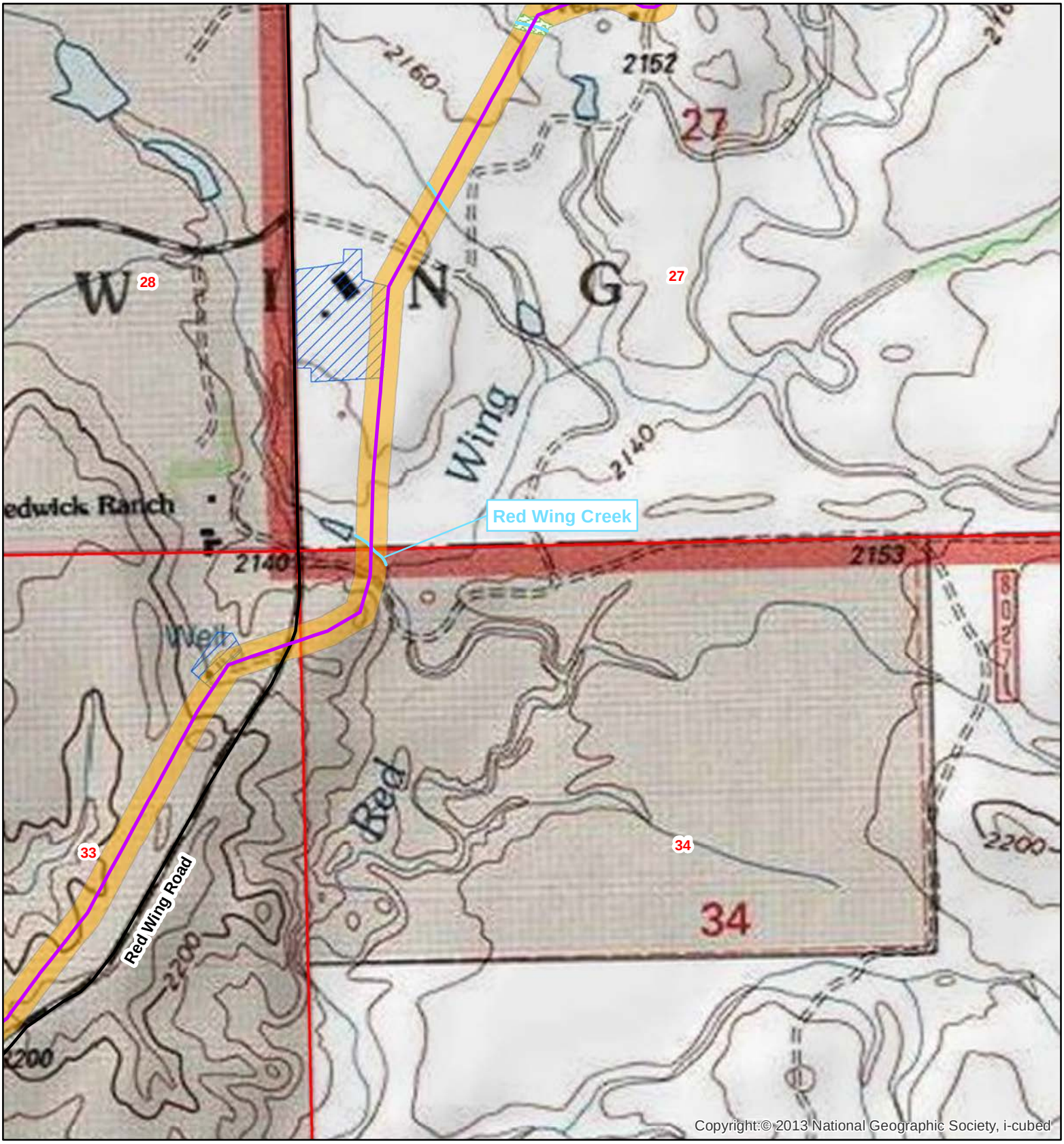
T. 147N, R. 101W and T. 148N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



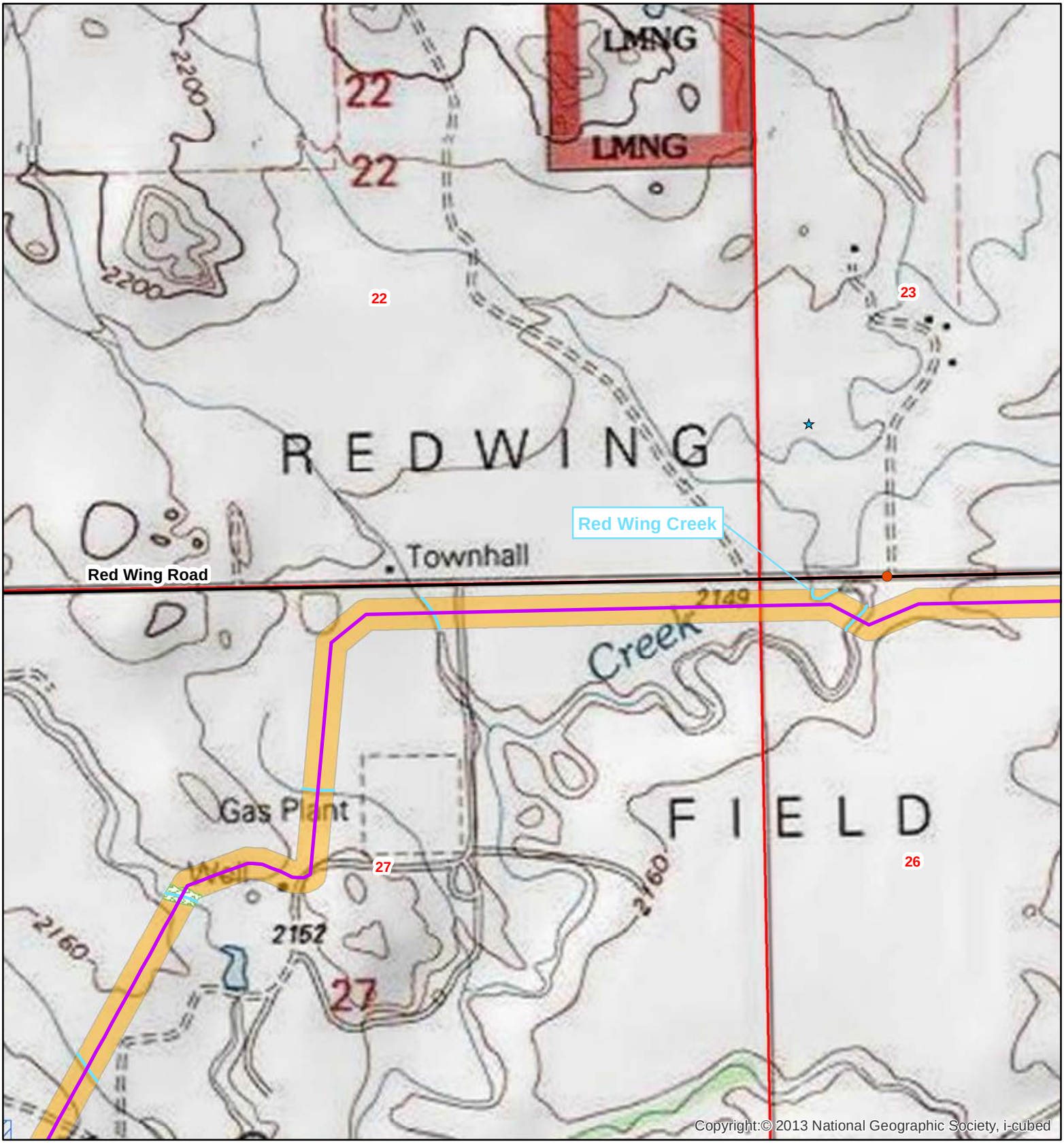
T. 148N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

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- Water Well
- Noxious Weed
- Block Valve
- Pipeline
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- Piipeline Corridor
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- Section Boundary
- Township/Range Boundary

**Figure: A.2**



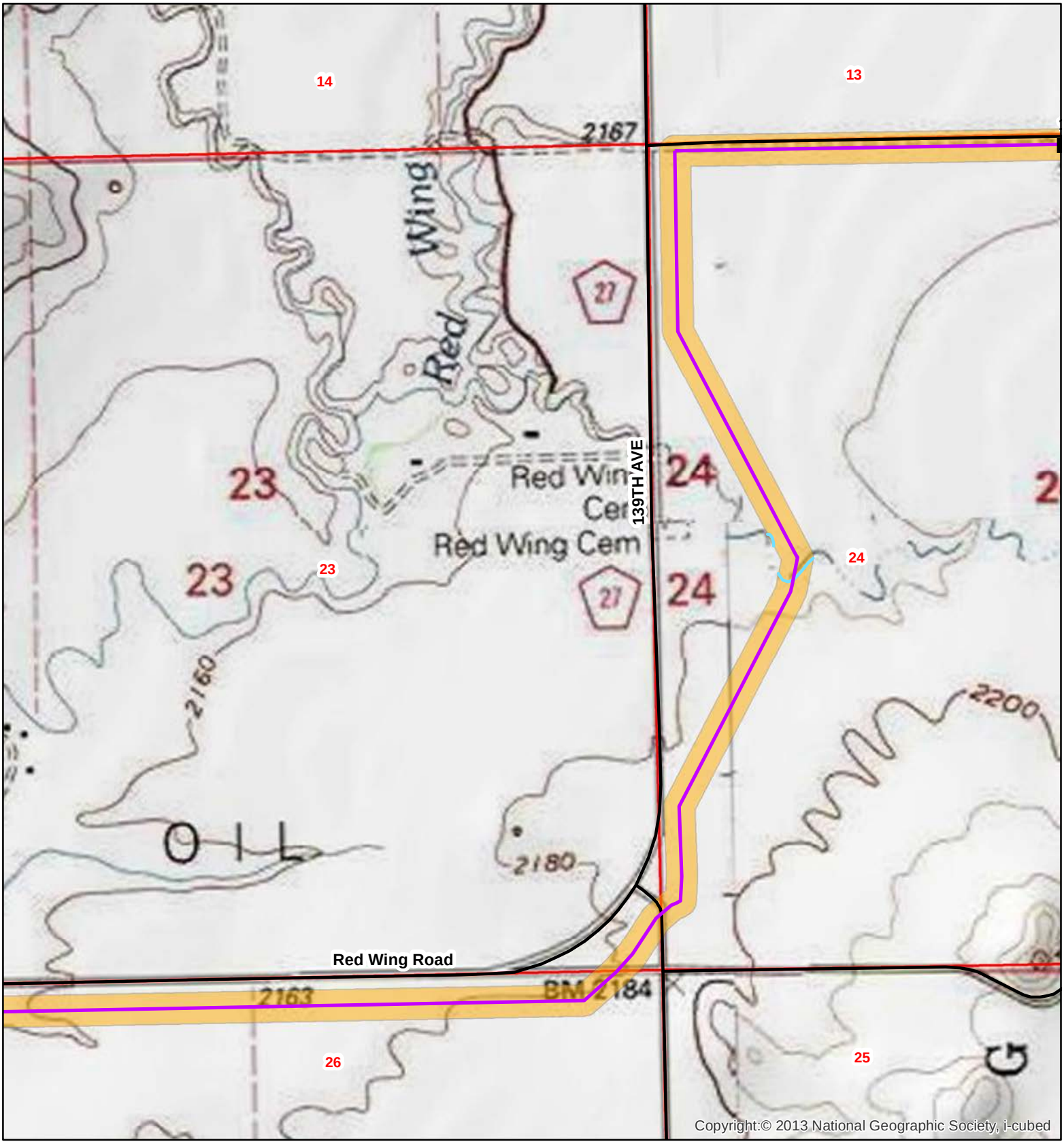
T. 148N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
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- Block Valve
- Pipeline
- Stream
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- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



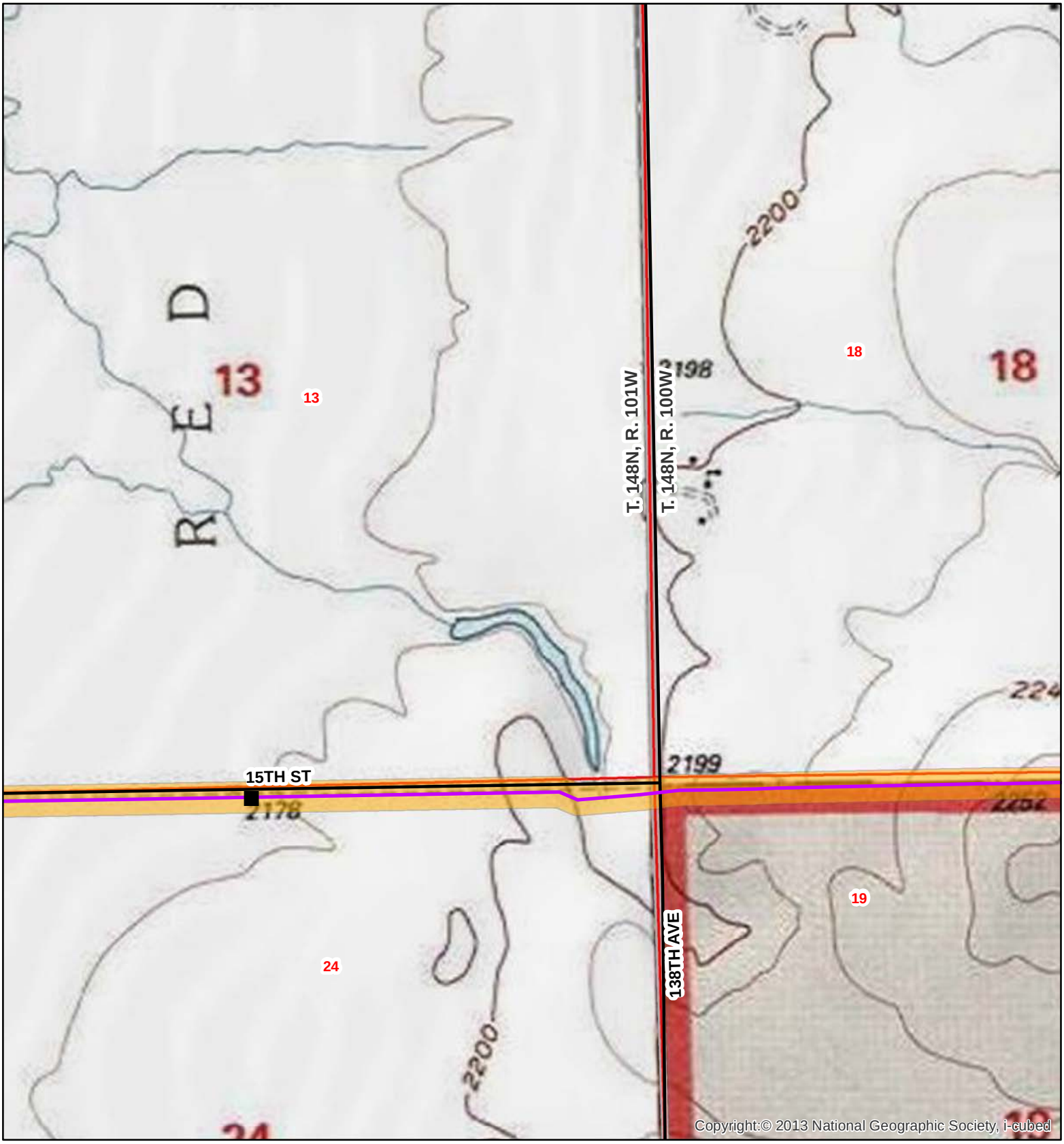
T. 148N, R. 101W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
- Noxious Weed
- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



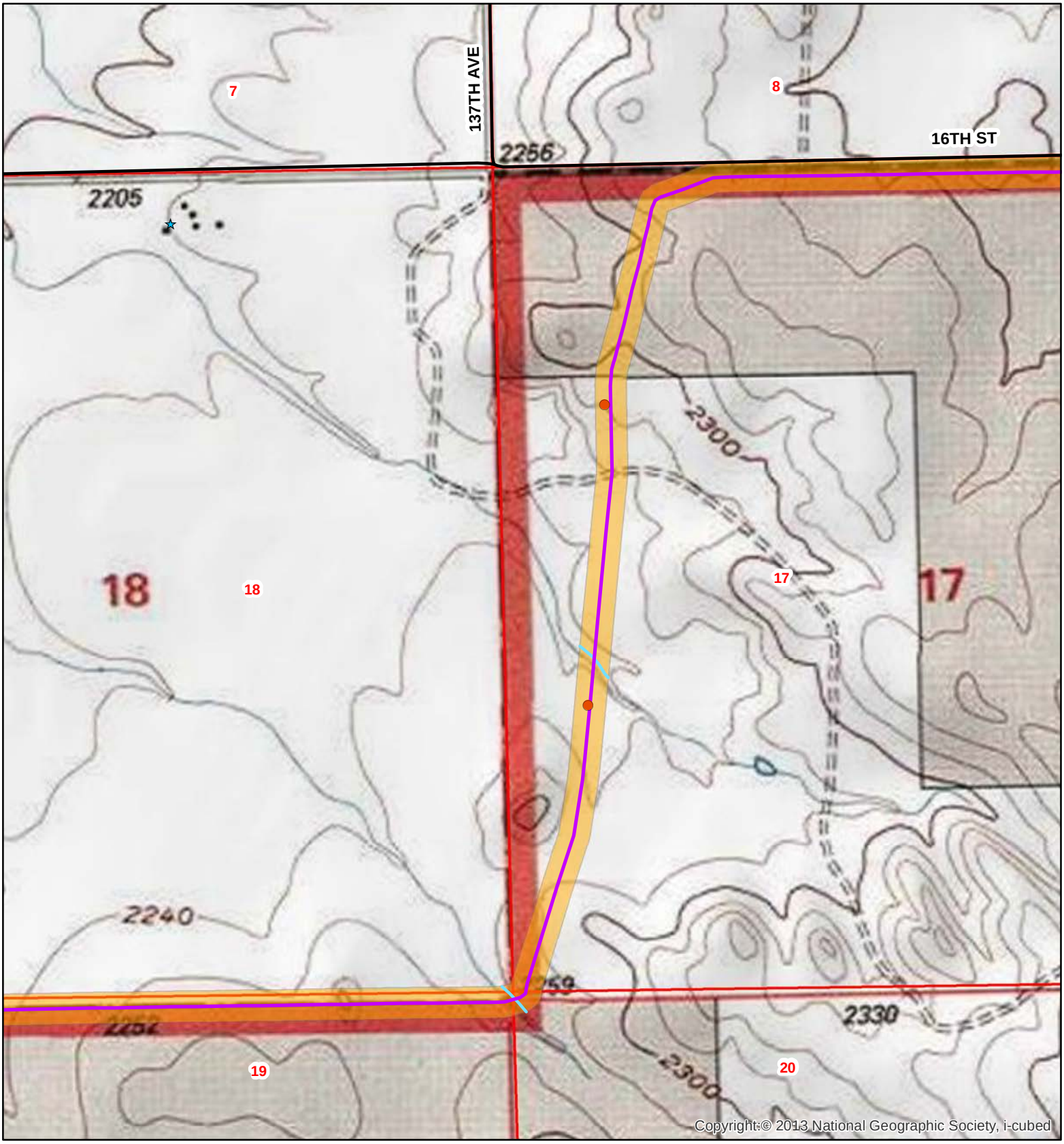
T. 148N, R. 101W and T. 148N, R. 100W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

- Water Well
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- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



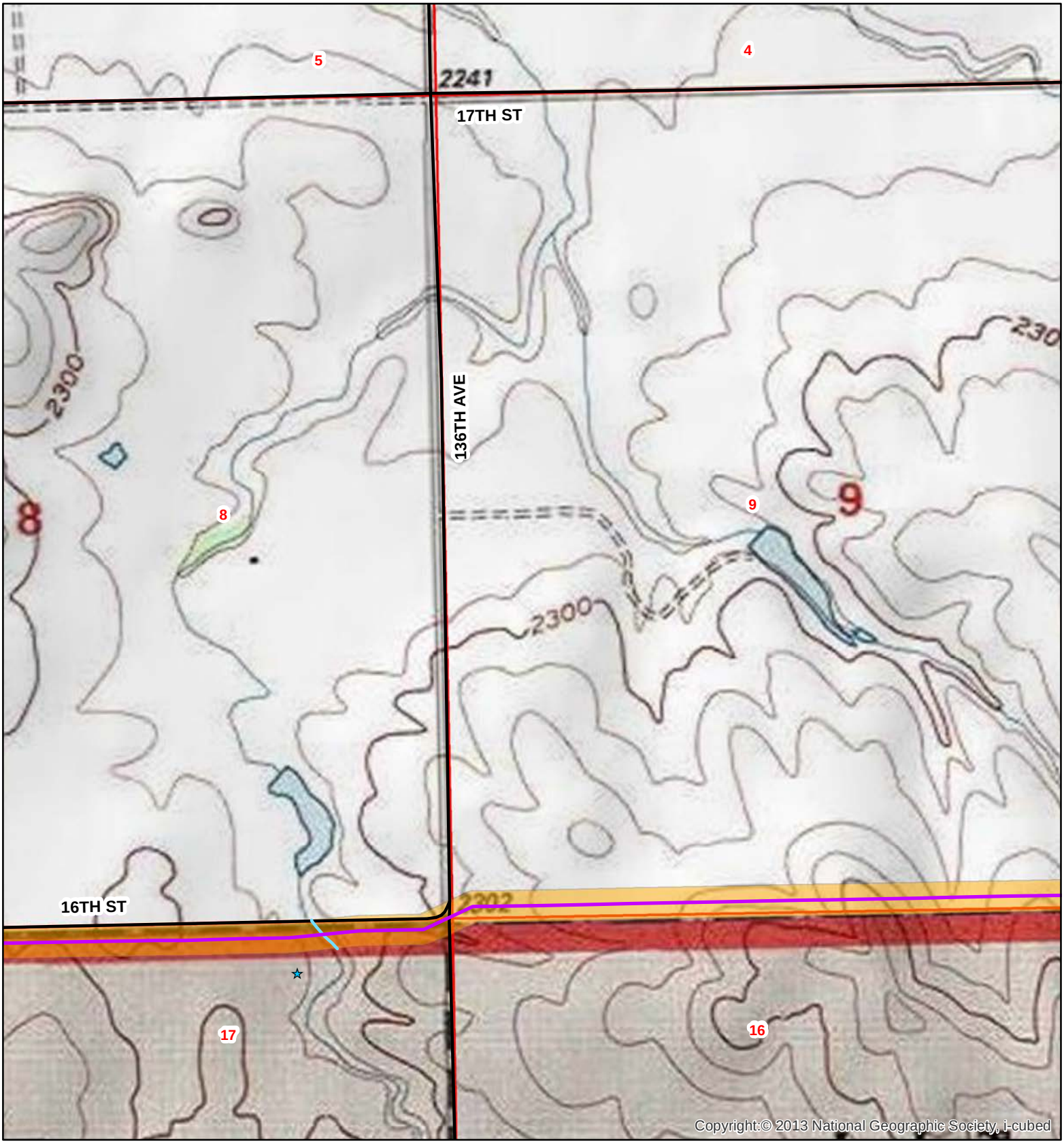
T. 148N, R. 100W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

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- Block Valve
- Pipeline
- Stream
- Road
- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



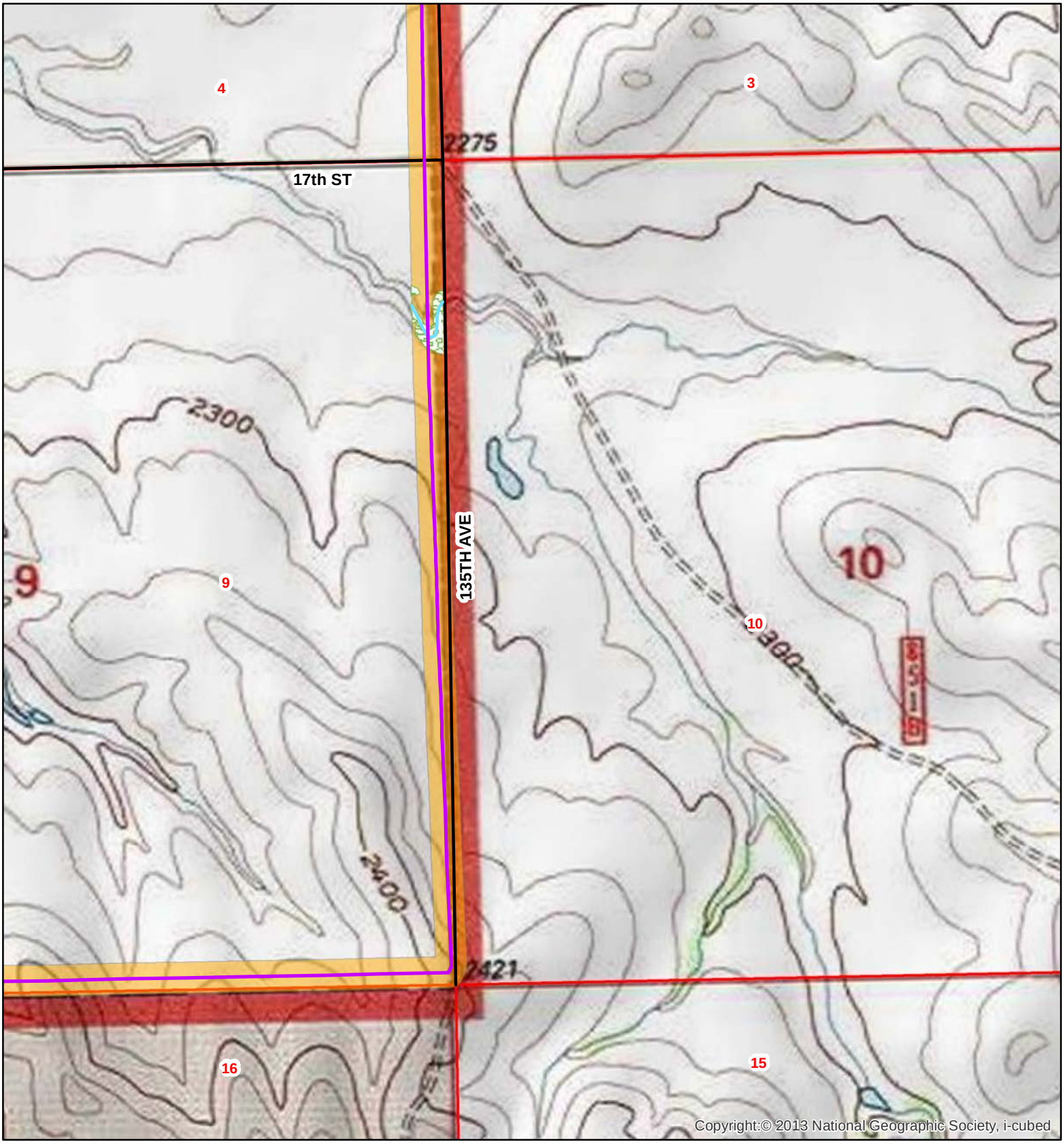
T. 148N, R. 100W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters




# 8" Wilson To Bowline Pipeline

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- Block Valve
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- Residence/Building
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**Figure: A.2**



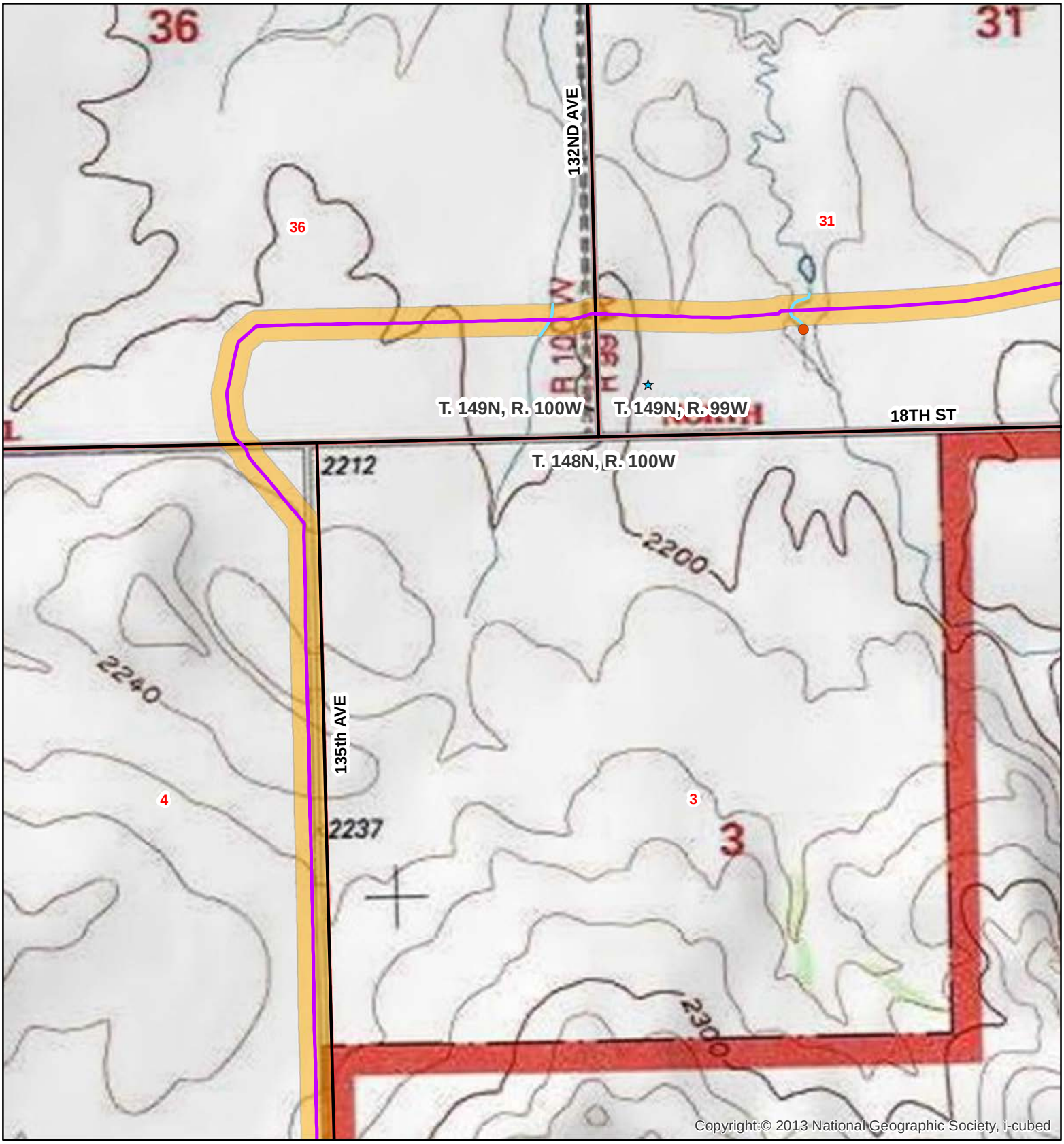
T. 148N, R. 100W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

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- Block Valve
- Pipeline
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**Figure: A.2**



T. 148N, R. 100W, T. 149N, R. 100W, and T. 149N, R. 99W
McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

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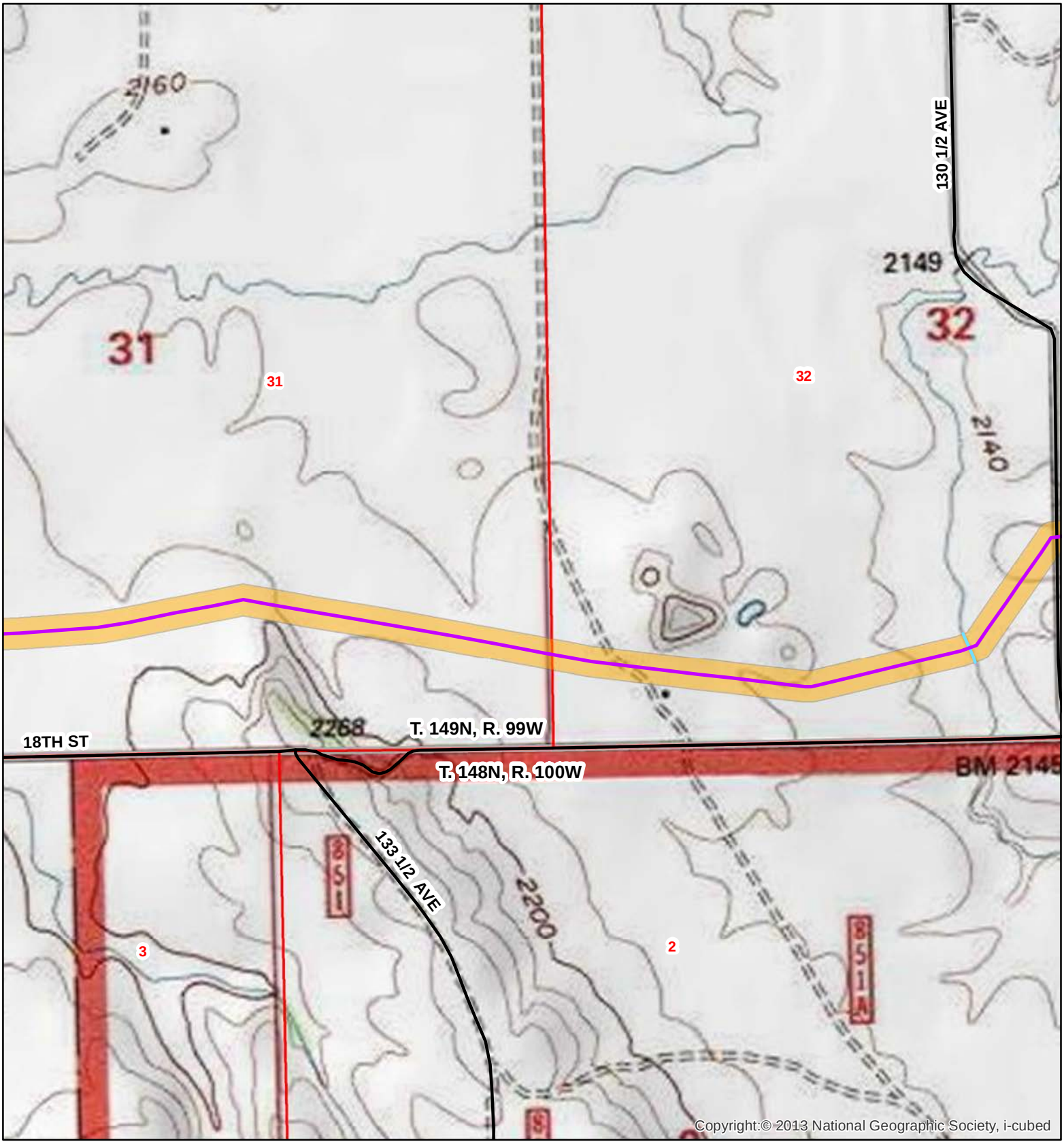


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- Block Valve
- Pipeline
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- Road
- Woody Vegetation
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- Residence/Building
- Section Boundary
- Township/Range Boundary

**Figure: A.2**



T. 148N, R. 100W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

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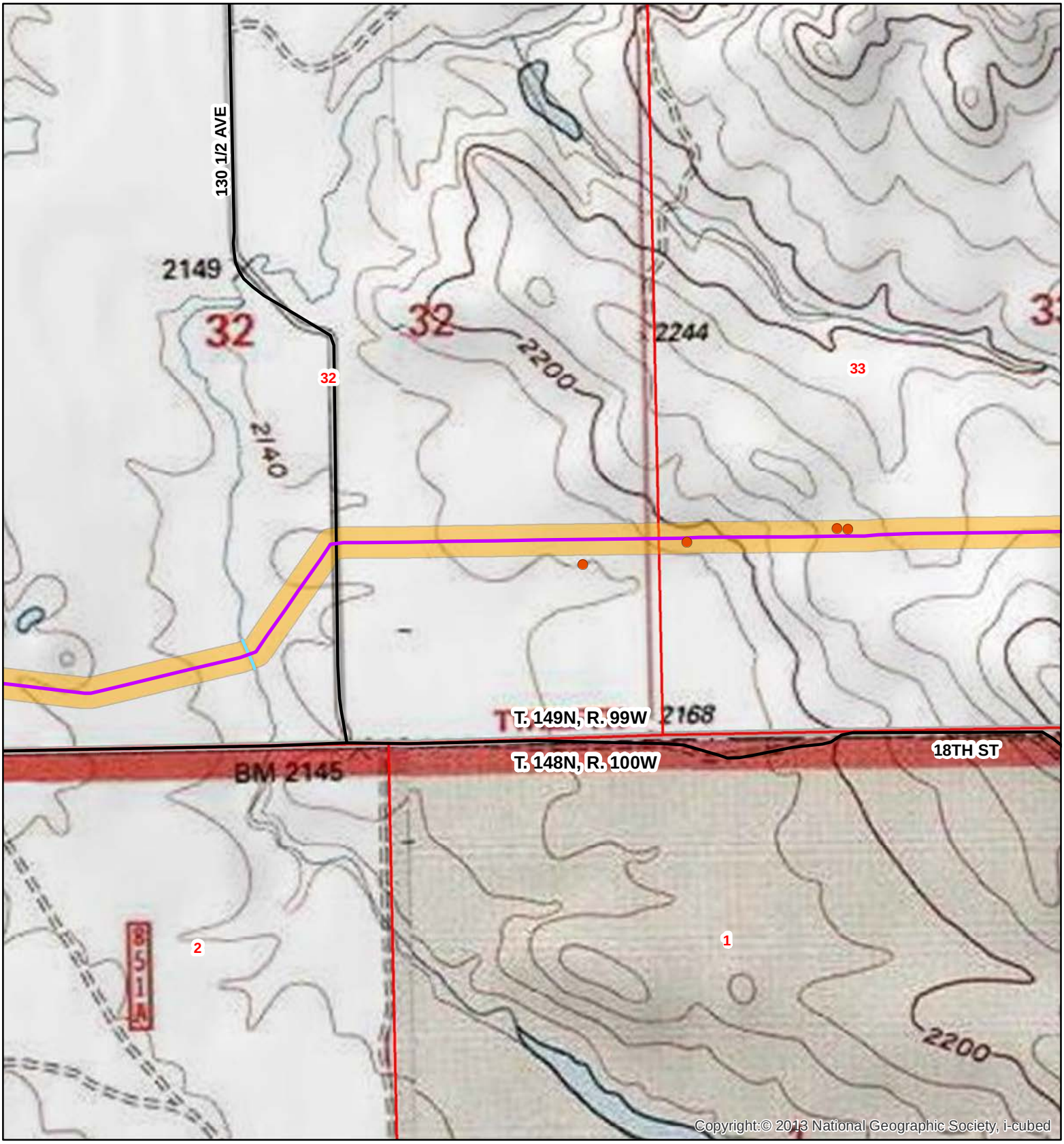


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- Pipeline
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- Woody Vegetation
- Piipeline Corridor
- Residence/Building
- Section Boundary
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**Figure: A.2**



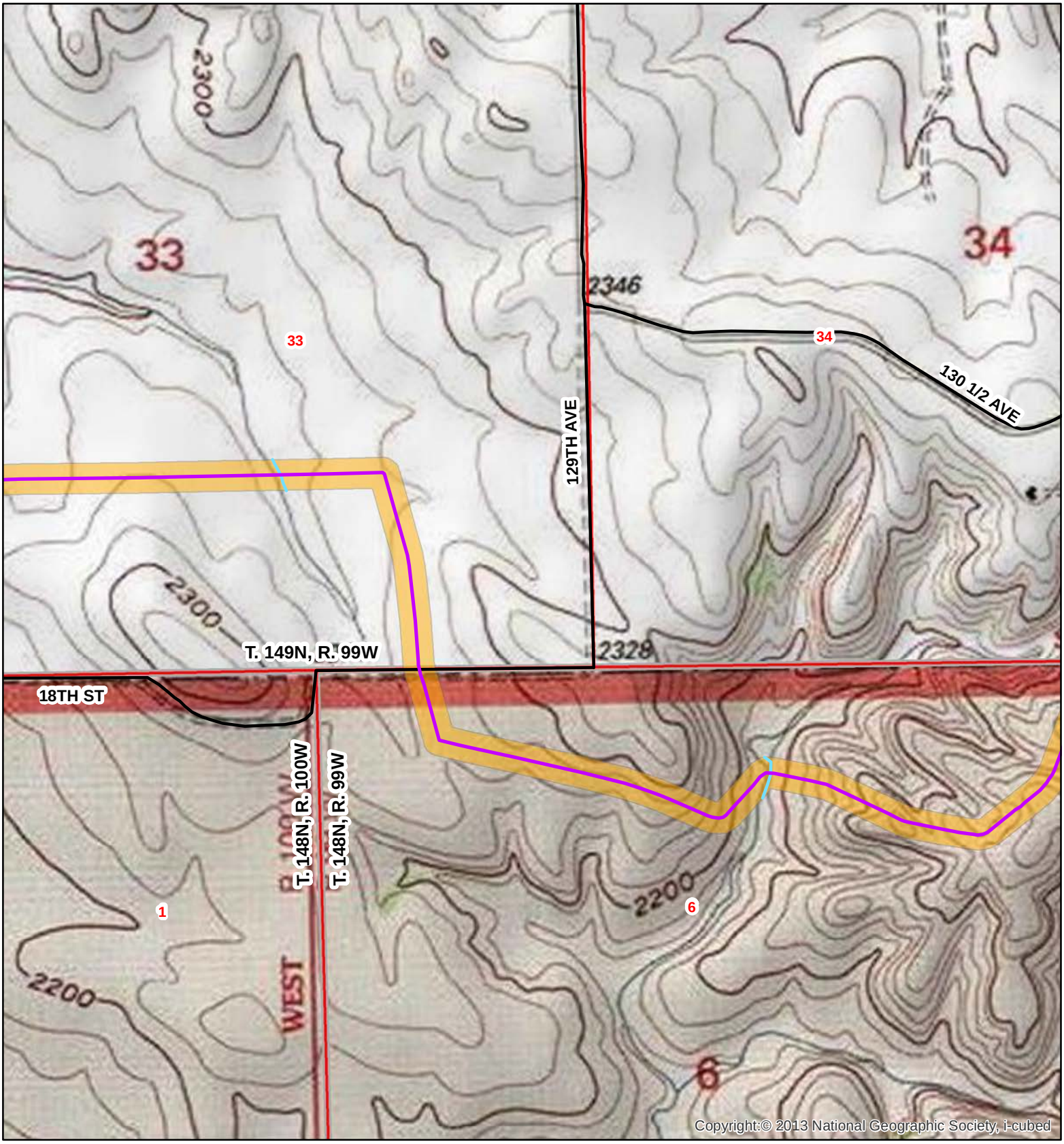
T. 148N, R. 100W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

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T. 148N, R. 100W, T. 148N, R. 99W,
and T. 149N, R. 99W
McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

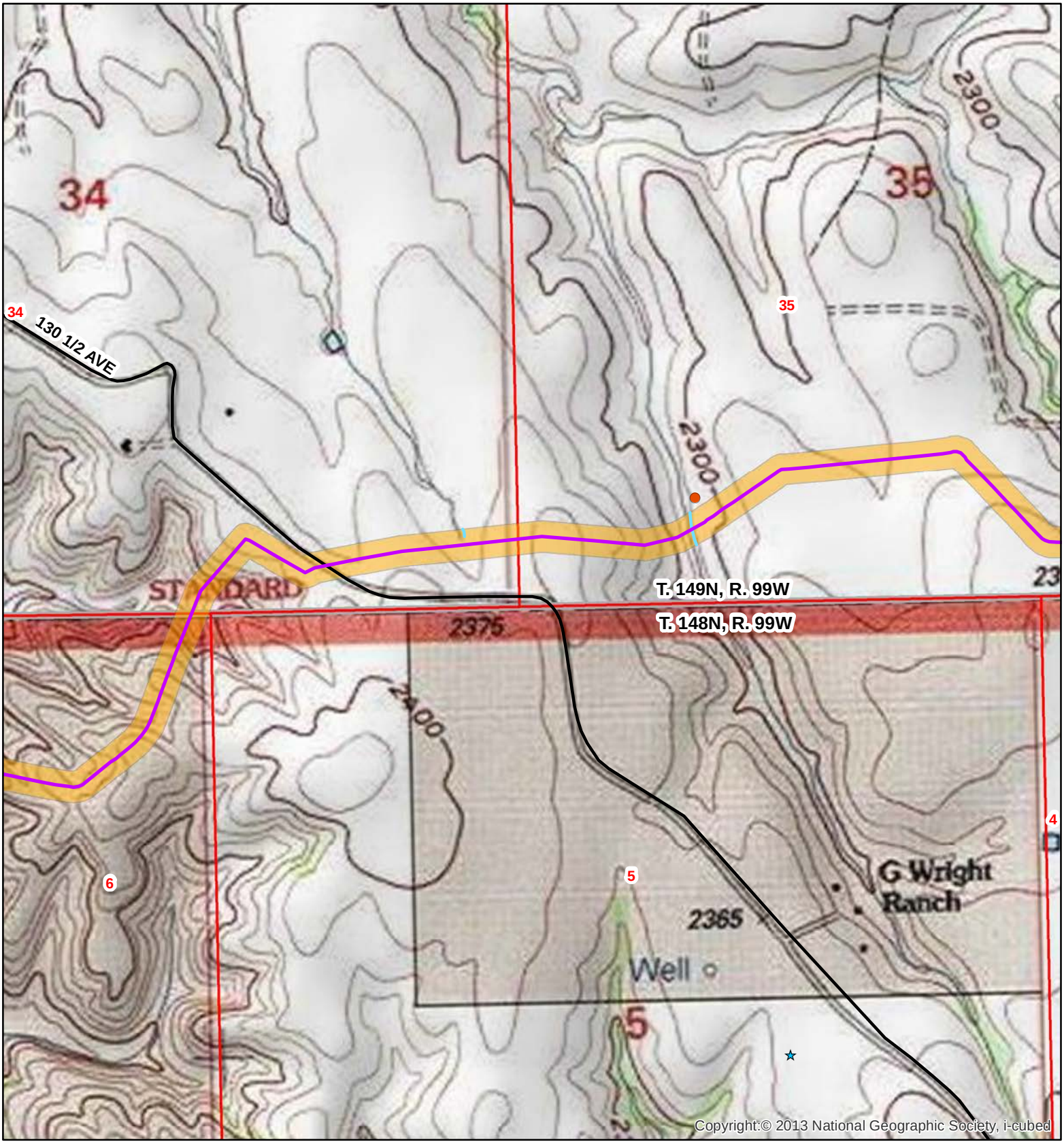


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**Figure: A.2**



T. 148N, R. 99W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

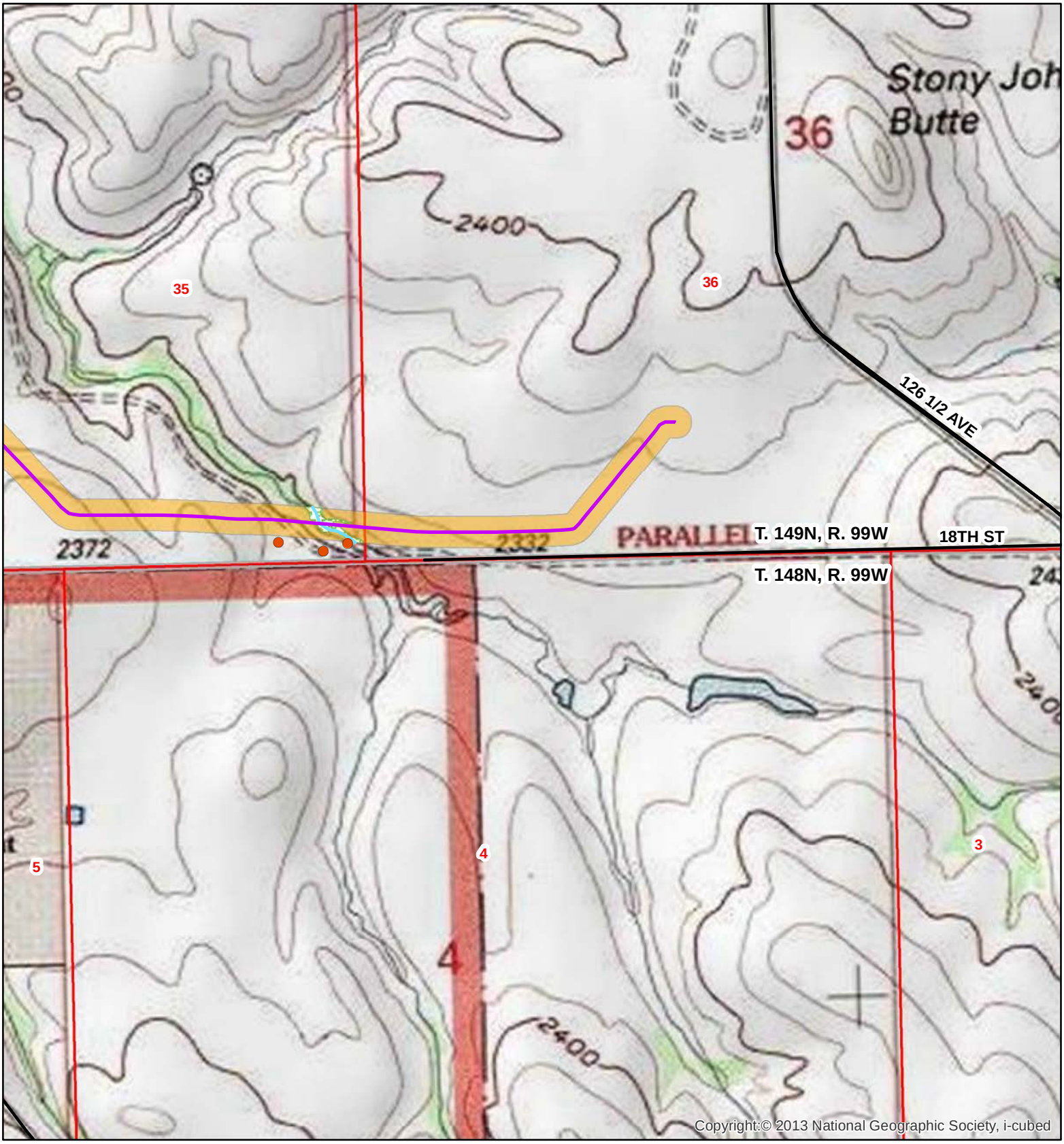


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**Figure: A.2**



T. 148N, R. 99W and T. 149N, R. 99W

McKenzie County, North Dakota
Projection: NAD 1983 UTM Zone13N
Base Map: 7.5' USGS Topographic Map
Source: esri map services

N

0 1,000 2,000 Feet

0 300 600 Meters

# Exhibit C.1

# Sample Notifications

05/17/2018

U.S. Air Force
**cy.munos@us.af.mil**

**RE: Belle Fourche Pipeline Company – Wilson to Bowline Pipeline Conversion**

Belle Fourche Pipeline Company ("Belle Fourche") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") for the conversion of an approximately 20-mile crude oil gathering pipeline to a crude transmission pipeline ("Project"). It originates from the Wilson Station and terminates at Bowline Junction near Watford City, North Dakota. The Project is located entirely within McKenzie County and will be known as the Wilson to Bowline Pipeline Conversion Project.

Keitu Engineers and Consultants, Inc. ("Keitu") is contracted by Belle Fourche to submit the Certificate of Corridor Compatibility and Route Application in September 2018. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at kfinken@keitu.com.

Karine Finken
Project Manager

*Enclosure: Proposed Pipeline Route*

05/17/2018

US Army Corps of Engineers
3319 University Drive
Bismarck, North Dakota 58504

**RE: Belle Fourche Pipeline Company – Wilson to Bowline Pipeline Conversion**

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Karine Finken
Project Manager

*Enclosure: Proposed Pipeline Route*

# Exhibit C.2

# Agency Responses

# North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
(701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • http://swc.nd.gov


June 4, 2018

Karine Finken
Keitu Engineers & Consultants, Inc.
PO Box 98
Mandan, ND 58554-0098

Dear Karine:

This is in response to your request for a review of the environmental impacts associated with the Belle Fourche Pipeline Company – Wilson to Bowline Pipeline Conversion project.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- If surface water or groundwater will be diverted for construction of the project, a water permit will be required per North Dakota Century Code (NDCC) § 61-04-02. Permits for temporary surface water diversions within the Little Missouri River Basin, if issued, have additional conditions per an Interim Policy signed by the State Engineer on June 22, 2017. Please consult with the Water Appropriations Division of the Office of the State Engineer (OSE) if you have any questions regarding this comment at 701-328-2754 or waterpermits@nd.gov.

- There are no floodplains identified and/or mapped where this proposed project is to take place. A floodplain development permit would not be required relative to the National Flood Insurance Program.

- The OSE Engineering and Permitting Section reviewed the project location and determined that the project route traverses over or through surface water resources. The OSE requests to be notified regarding the proposed project's impacts, if any, to water resources (i.e. streams or rivers), agricultural drains, and wetlands (i.e. ponds, sloughs, lakes, or any series thereof) as any alterations, modifications, improvements, or impacts to those water resources may require a drainage permit(s) or a construction permit(s) from the OSE. For further information on the OSE's permitting requirements, please visit the Regulation & Appropriation tab on the OSE's website (swc.nd.gov). Please contact Jordan Woroniecki of the OSE Engineering and Permitting Section at 701-328-4898 or jworoniecki@nd.gov if you have any questions regarding this comment.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 701-328-4967.

Sincerely,

Jared Huibregtse
Water Resource Planner IV

JH:dm/1570

1707 North 9th Street
PO Box 5523
Bismarck, ND 58506-5523
Phone: (701) 328 – 2800
Fax: (701) 328 – 3650

https://land.nd.gov

DEPARTMENT OF
NDTRUST LANDS
INVESTING FOR EDUCATION

Jodi A. Smith, Commissioner

June 8, 2018

KARINE FINKE PROJECT MANAGER
KEITU ENGINEERS & CONSULTANTS INC
1403 27TH STREET NW
PO BOX 98
MANDAN ND 58554

RE: BELE FOURCHE PIPELINE COMPANY – WILSON TO BOWLINE PIPELINE CONVERSION

Dear Karine Finken:

We received your letter dated May 17, 2018, regarding a request for comment on the proposed Wilson to Bowline Pipeline Conversion Project.

Enclosed a list of surface tracts managed by the North Dakota Department of Trust Lands (NDDTL) on behalf of the Board of University and School Lands, located within the project boundary as depicted on the received project map. NDDTL would need to amend any existing pipeline easement prior to the pipeline conversion. To obtain an easement or easement amendment across trust Lands, an on-line application form must be completed. This application can be found at: https://land.nd.gov/SurfaceROW/RightOfWay

The following items may be considered in the review of an easement application:

1. Financial benefit to the trusts;
2. Availability of alternate encumbrance site or route;
3. The least environmentally damaging site or route regardless of property ownership;
4. Physical stability of the landscape;
5. Other potential future uses for the trust lands, including urban development;
6. Potential mineral and other material development including oil, gas, coal, cement materials, sodium sulfate, sand and gravel, road material, building stone, chemical substances, metallic ores, uranium ores, or colloidal or other clays;
7. Feasibility for reclamation;
8. Maintenance of existing wetlands and water flows;
9. Any cultural, historical, archeological, and paleontological resources;
10. Federally listed threatened and endangered species;
11. Location of the proposed route or site in relation to section lines, quarter section lines and corridors;
12. Potential liability to the trusts;
13. Applicant's past encumbrances on trust lands;
14. Applicant's financial stability; and
15. Any other information relevant to the application which would assist in the determination.

If you have any questions, feel free to contact our office at 701-328-2800.

Sincerely,

Kayla Graber
Land Management Specialist

Enclosure: Tract List

g:\support\letters\lrs - dj\kayla lrs.doc

| Tracts | | | | |
|---|---|---|---|---|
| County | Township | Range | Section | Subdivsion |
| MCK | 150 | 102 | 36 | SW4 |
| MCK | 150 | 102 | 36 | SE4 |
| MCK | 150 | 102 | 16 | SW4 |
| MCK | 150 | 102 | 16 | SE4 |
| MCK | 150 | 102 | 16 | NW4 |
| MCK | 150 | 102 | 16 | NE4 |
| MCK | 148 | 102 | 36 | SW4 |
| MCK | 148 | 102 | 36 | SE4 |
| MCK | 148 | 102 | 36 | NW4 |
| MCK | 148 | 102 | 36 | NE4 |
| MCK | 148 | 102 | 16 | SW4 |
| MCK | 148 | 102 | 16 | SE4 |
| MCK | 148 | 102 | 16 | NW4 |
| MCK | 148 | 102 | 16 | NE4 |
| MCK | 147 | 102 | 36 | E2SE4, LOTS 7,13 |
| MCK | 147 | 102 | 16 | SW4 |
| MCK | 147 | 102 | 16 | SE4 |
| MCK | 147 | 102 | 16 | NW4 |
| MCK | 147 | 102 | 16 | NE4 |
| MCK | 148 | 101 | 16 | E2SE4 |
| MCK | 148 | 101 | 36 | SW4 |
| MCK | 148 | 101 | 36 | SE4 |
| MCK | 148 | 101 | 36 | NW4 |
| MCK | 148 | 101 | 36 | NE4 |
| MCK | 148 | 101 | 16 | SW4 |
| MCK | 148 | 101 | 16 | NW4 |
| MCK | 148 | 101 | 16 | E2NE4 |
| MCK | 147 | 101 | 36 | SW4 |
| MCK | 147 | 101 | 36 | SE4 |
| MCK | 147 | 101 | 36 | NW4 |
| MCK | 147 | 101 | 36 | NE4 |
| MCK | 147 | 101 | 16 | SW4 |
| MCK | 147 | 101 | 16 | SE4 |
| MCK | 147 | 101 | 16 | NW4 |
| MCK | 147 | 101 | 16 | NE4 |
| MCK | 148 | 100 | 13 | N2NW4 |
| MCK | 148 | 100 | 13 | N2NE4 |
| MCK | 148 | 100 | 12 | SE4 |
| MCK | 148 | 100 | 12 | SW4 |
| MCK | 150 | 100 | 36 | SW4 |

| Tracts | | | | |
|---|---|---|---|---|
| County | Township | Range | Section | Subdivsion |
| MCK | 150 | 100 | 36 | S2S2NE4 |
| MCK | 150 | 100 | 16 | NW4 |
| MCK | 150 | 100 | 16 | NE4 |
| MCK | 149 | 100 | 16 | SW4 |
| MCK | 149 | 100 | 16 | SE4 |
| MCK | 149 | 100 | 16 | NW4 |
| MCK | 149 | 100 | 16 | NE4 |
| MCK | 148 | 100 | 13 | SW4 |
| MCK | 148 | 100 | 13 | SE4 |
| MCK | 148 | 100 | 13 | S2NW4 |
| MCK | 148 | 100 | 13 | S2NE4 |
| MCK | 147 | 100 | 36 | SW4 |
| MCK | 147 | 100 | 36 | SE4 |
| MCK | 147 | 100 | 36 | NW4 |
| MCK | 147 | 100 | 36 | NE4 |
| MCK | 148 | 99 | 18 | NE4NW4 LOT 1 |
| MCK | 148 | 99 | 18 | N2NE4 |
| MCK | 148 | 99 | 6 | SE4 |
| MCK | 148 | 99 | 6 | E2SW4, LOTS 6, 7 |
| MCK | 148 | 99 | 7 | NE4 |
| MCK | 148 | 99 | 7 | E2NW4, LOTS 1, 2 |
| MCK | 148 | 99 | 7 | SE4 |
| MCK | 148 | 99 | 7 | E2SW4, LOTS 3, 4 |
| MCK | 150 | 99 | 16 | NW4 |
| MCK | 150 | 99 | 16 | NE4 |
| MCK | 149 | 99 | 16 | SE4 |
| MCK | 149 | 99 | 16 | NW4 |
| MCK | 149 | 99 | 16 | NE4 |
| MCK | 148 | 99 | 18 | E2SW4 LOTS 3, 4 |
| MCK | 148 | 99 | 18 | SE4 |
| MCK | 148 | 99 | 18 | SE4NW4, LOT 2 |
| MCK | 148 | 99 | 18 | S2NE4 |
| MCK | 148 | 99 | 16 | SW4 |
| MCK | 148 | 99 | 16 | SE4 |
| MCK | 148 | 99 | 16 | NW4 |
| MCK | 148 | 99 | 16 | NE4 |
| MCK | 147 | 99 | 16 | SW4 |
| MCK | 147 | 99 | 16 | SE4 |
| MCK | 147 | 99 | 16 | NW4 |
| MCK | 147 | 99 | 16 | NE4 |

**DEPARTMENT OF THE ARMY**
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

May 25, 2018

NWO-2018-00953-BIS

Keitu Engineers & Consultants, Inc.
Attn: Ms. Karen Finken
PO Box 98
Mandan, North Dakota 58554-0098

Dear Ms. Finken:

The U.S. Army Corps of Engineers (Corps) has reviewed the information you provided for the proposed Belle Fourche Pipeline Company; Wilson to Bowline Pipeline Conversion Project. This information was received by our office on May 22, 2018. The project is located south of Watford City, McKenzie County, North Dakota.

Specifically, the project will include the conversion of an approximately 20-mile crude oil gathering pipeline to a crude transmission pipeline.

The Corps is responsible for administering federal laws that regulate certain activities in the waters of the United States (WOUS). The authority applicable to this responsibility is Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), which prohibits the discharge of dredged or fill material into waters of the United States without authorization in the form of a Department of the Army (DA) permit.

Based on the information provided, the project will not involve a regulated discharge of dredged or fill material under Section 404 of CWA. Therefore, the activity is not subject to DA regulatory authorities and no permit pursuant to Section 404 is required from the Corps. However, a DA permit authorization may be required should changes be made in your project that result in a regulated discharge of dredged or fill material into waters of the U.S.

Although a Department of the Army permit is not required for this project, this does not eliminate the requirement that you obtain any other applicable Federal, State, Tribal or local permits as required.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number NWO-2018-00953-BIS in any correspondence concerning this project. If you have any questions, please contact Jeremy Nygard at the letterhead address, by email at *jeremy.s.nygard@usace.army.mil*, or telephone at (701) 255-0015 X 2006. For more information regarding our program, please visit our website at *http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx.*

Sincerely,

Patricia L. McQueary
State Program Manager
North Dakota

**From:** Baer, Kathy
**To:** Karine Finken
**Subject:** Re: [EXTERNAL] RE: Wilson to Bowline Pipeline Conversion
**Date:** Friday, June 01, 2018 4:20:31 PM
**Attachments:** image001.png

---

Karine,
I looked at the line in McKenzie County and the nearest easement is 5 miles east and 6 miles south of the line (146-100-7, 17, 20). So you are all clear of FWS. If you end up relocating to the SE, let me know.

Thank you for your cooperation/coordination.
Kathy

Kathy Baer
Wetland District Manager
Audubon NWR Complex
3275 11th St NW
Coleharbor, ND 58531
701-442-5474 ext. 114

*The Prairie is calling and I must go...*
--

On Thu, May 31, 2018 at 2:45 PM, Karine Finken <kfinken@keitu.com> wrote:

> Hi Kathy,
>
> Attached is the shapefiles. Please let me know if you need anything else.
>
> Thank you,
>
> Karine Finken
>
> Project Manager
>
> KEITU ENGINEERS & CONSULTANTS, INC.
>
> (701) 667-1800 www.keitu.com

**From:** Baer, Kathy [mailto:kathy_baer@fws.gov]
**Sent:** Thursday, May 24, 2018 8:08 AM
**To:** kfinken@keitu.com
**Subject:** Wilson to Bowline Pipeline Conversion

Karine,

I received your letter regarding the Wilson to Bowline Pipeline Conversion. The FWS does have a few Conservation Easements in McKenzie County. In order to facilitate determining if the pipeline may impact those easements, can you send me a shapefile of the propose route/corridor? The shapefile can be sent to me at this email address.

Thank you,

KB

Kathy Baer

Wetland District Manager

Audubon NWR Complex

3275 11th St NW

Coleharbor, ND 58531

701-442-5474 ext. 114

*The Prairie is calling and I must go...*

--

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**Date:** Friday, June 1, 2018 4:20:31 PM
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Kathy Baer

Wetland District Manager

Audubon NWR Complex

3275 11th St NW

Coleharbor, ND 58531

701-442-5474 ext. 114

*The Prairie is calling and I must go...*

--

## Zachary Peterson

**From:** aaranda@keitu.com
**Sent:** Friday, May 18, 2018 8:20 AM
**To:** 'Karine Finken'
**Subject:** FW: [Non-DoD Source] Project Review

-----Original Message-----
From: MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK <cy.munos@us.af.mil>
Sent: Friday, May 18, 2018 7:49 AM
To: aaranda@keitu.com
Subject: RE: [Non-DoD Source] Project Review

Ana,

The Minot Air Force base has no assets near the proposed pipeline route.
Thanks.

Cy Munos
Chief, Cable Affairs
91 MMXS/MMXSFK
Minot AFB, ND
DSN: 453-6053
COMM.: 701-723-6053
CELL: 701-720-8274

-----Original Message-----
From: aaranda@keitu.com [mailto:aaranda@keitu.com]
Sent: Thursday, May 17, 2018 2:09 PM
To: MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK <cy.munos@us.af.mil>
Cc: 'Karine Finken' <kfinken@keitu.com>
Subject: [Non-DoD Source] Project Review

Please see attachment for a proposed pipeline route.

Ana Aranda,

Bookkeeper

Office: (701) 667-1800

Direct Line: (701) 667-1808 Ext. 104

# Exhibit D

## Shapefiles