

Additional Aurora Wind Project Area Class III Cultural Resources Inventory, Mountrail and Williams Counties, North Dakota

Aurora Wind Project, LLC

Project No. 104200

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Aurora Wind Project, LLC

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ABSTRACT

This report describes the results of a Class III archaeological survey for a series of reroutes and additions to the proposed 300-megawatt Aurora Wind Project and associated transmission line (Project) to be constructed in portions of Mountrail and Williams Counties, North Dakota. The proposed Project updates include 1,006 acres of Class III survey along segments of associated access roads, buried collection lines, temporary work areas, and other related facilities, as well as six additional wind turbine locations. This Project update covers a total of 1,006 acres. A total of 4 previously unrecorded archaeological sites were identified during the investigation. All these sites are historic period and are recommended as not eligible for inclusion in the National Register of Historic Places (NRHP). All work was conducted to professional standards and in accordance with the guidelines set forth by the North Dakota State Historic Preservation Office (NDSHPO) in *North Dakota SHPO Guidelines Manual for Cultural Resources Inventory Projects* (2017), consultation with the NDSHPO, *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44742), and in accordance with the *Secretary's Standard for Identification* (48 FR 44720-44723).

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
AMSL	above mean sea level
Aurora Wind	Aurora Wind Project, LLC
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
cm	centimeters
ca.	circa
GIS	Geographic Information System
GSV	ground surface visibility
kV	kilovolt
MWs	megawatts
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NDSHPO	North Dakota State Historic Preservation Office
Project	Aurora Wind Project and associated transmission line
SHSND	State Historical Society of North Dakota
Study Area	1-mile buffer around the construction footprint
Survey Area	construction footprint and additional adjustment area
USGS	U.S. Geological Survey

1.0 INTRODUCTION

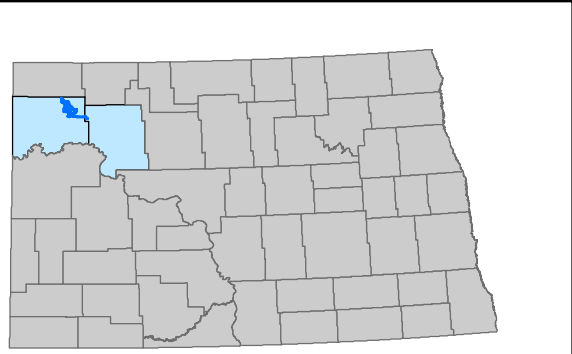
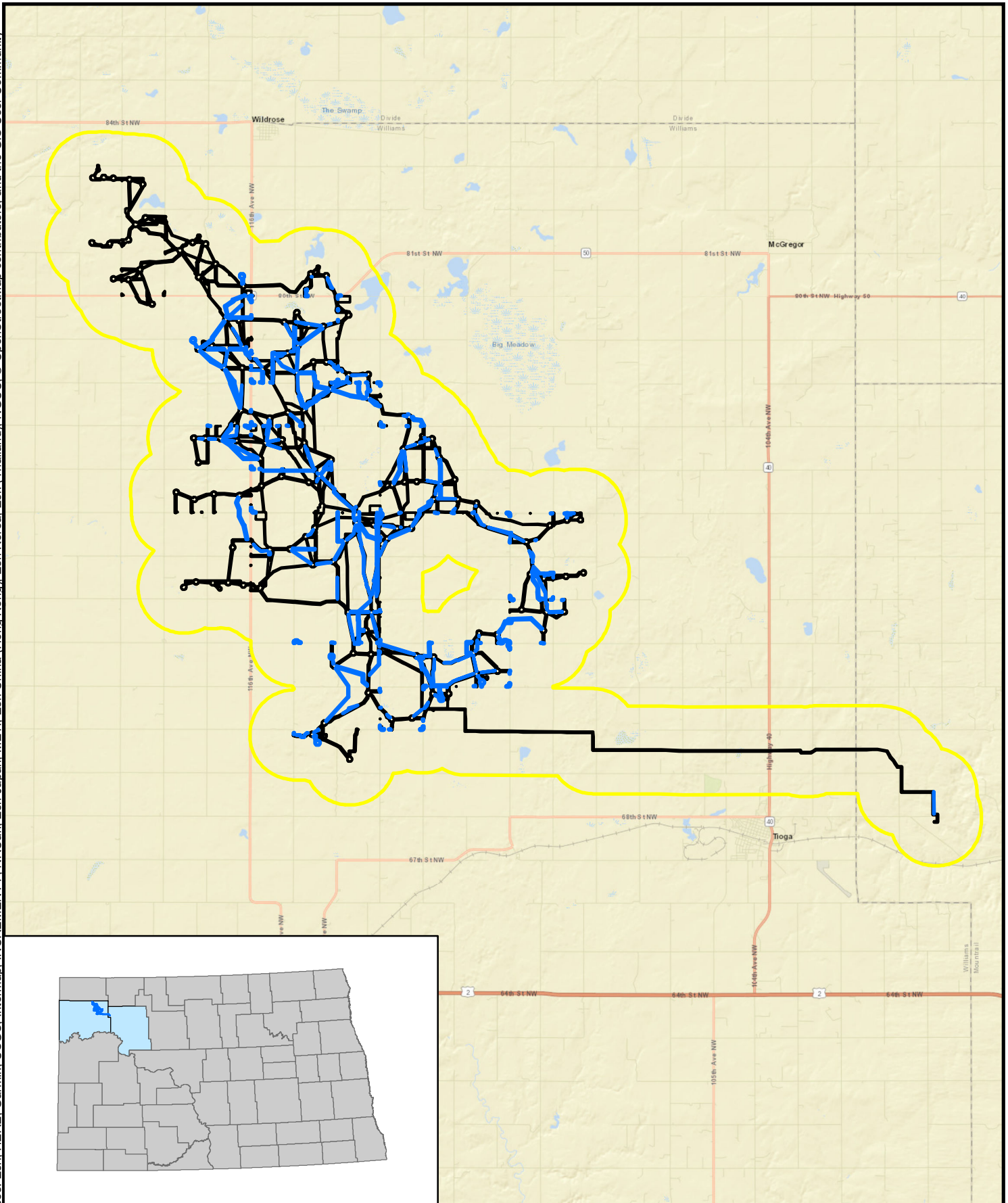
This report describes the results of the Class III archaeological survey for a series of reroutes and additions to the proposed Aurora Wind Project and associated transmission line (Project) in Mountrail and Williams Counties, North Dakota (Figure 1-1) for Aurora Wind Project, LLC (Aurora Wind). A Class III archaeological survey was conducted in 2018 for the original Project construction design (Latham 2019). The current investigation follows the same approach and incorporates much of the same background information reported in the previous investigation.




Currently, the Project does not require a Federal permit or compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA). However, Aurora Wind has received a Certificate of Corridor Compatibility and Route Permit from the North Dakota Public Service Commission. As a result, the survey was conducted to satisfy the requirements of State historic preservation legislation (North Dakota Century Code [55-02-07]).

1.1 Description of Project Area

The Project will generate up to 300 megawatts (MWs) of electricity at rated capacity and will result in the construction of up to 121 wind turbines, depending on the final turbine model selected. Additional Project facilities include access roads, electrical collection and communication systems and cabling, an operations and maintenance building, permanent meteorological towers, and a Project substation. Aurora Wind also will construct an approximately 20-mile-long, 345-kilovolt (kV) transmission line to facilitate the Project's interconnection. The proposed transmission line would extend from the Project substation in Williams County to the point of interconnection at the existing Basin Electric Power Cooperative's Tande 345-kV Substation, located in Mountrail County. The additional investigations reported here include modifications to previously surveyed areas, newly proposed linear facilities, and additional turbine locations.

The archaeological investigation of the Project area included the proposed construction footprint provided by Aurora Wind. The area surveyed was much larger than the actual construction footprint to allow for any adjustments that may be needed to avoid significant sites (Survey Area). A total of 4,436 acres were evaluated during the 2018 archaeological site detection survey (Latham 2019). Historic-age buildings were also surveyed from public access roads and documented in a separate report (Harris et al. 2019). The current investigation surveyed an additional 1,006 acres for archaeological resources.



-  New Survey Corridor
-  Previous Survey Corridor
-  1-Mile Study Area

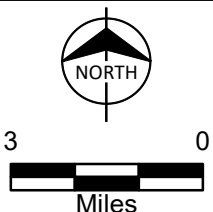


Figure 1-1
 General Location
 Aurora Wind Farm
 Aurora Wind Project, LLC
 Mountrail and Williams
 Counties, North Dakota

1.2 Objectives of the Investigation

The primary objective of the archaeological investigation was to identify cultural resources through a systematic survey of the proposed adjustments to previously surveyed facilities and the 2019 proposed additional construction corridors and wind turbine locations for the Project (Appendix A). All work was conducted to professional standards in accordance with the guidelines set forth by the North Dakota State Historic Preservation Office (NDSHPO) in *North Dakota SHPO Guidelines Manual for Cultural Resources Inventory Projects* (2017), consultation with the NDSHPO, the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*, (48 FR 44716-44742) the *Secretary's Standard for Identification* (48 FR 44720-44723), and generally following the approach used for surveys for other recent wind projects (Latham 2008, 2009, 2010a, 2010b, 2012, 2016, 2019; Latham et al. 2017; Latham and Bevitt 2014; Latham and Houghton 2011).

1.3 Schedule and Personnel

The archival research for the Project included a review of the site files and survey records maintained by the State Historical Society of North Dakota (SHSND) in July 2019 in accordance with the Cultural Resources 2019 Annual Permit. The current investigation followed the same research and fieldwork guidance as supplied for the 2018 investigations and reported in the final report (Latham 2019). Mark A. Latham acted as Principal Investigator for the archaeological investigations, which were conducted July 22 to 29, 2019. Mr. Latham also conducted archival research, artifact analysis, and authored the report. Kim House produced the report figures and coordinated Global Information System (GIS) data.

1.4 Report Format

This report is presented in a format following the guidelines set forth by the NDSHPO and the format used by Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) on similar projects. For the background chapters, including the Environmental Setting, Cultural History, Research Design and Methods, and Previous Investigations of the Study Area, please refer to the 2018 survey report (Latham 2019). Chapter 2.0 of this report summarizes the results of the original survey discussed in Latham 2019. Chapter 3.0 contains the Results of Investigation including a detailed discussion of the archaeological resources recorded during the current investigation. Conclusions and Recommendations is Chapter 4.0, which summarizes the results of the investigation, reviews the significance of the findings, and offers recommendations concerning the proposed Project. A References Cited section is also included in the report as Chapter 5.0. Four appendices are included in the report. Appendix A includes topographic maps showing the Project layout, areas surveyed, and sites recorded. Project area and site photographs are

found in Appendix B, and site maps in Appendix C. Please refer to the 2018 investigation report for the Unanticipated Discovery Plan for the Project (Latham 2019, Appendix D).

2.0 PREVIOUS INVESTIGATIONS OF THE STUDY AREA

The 2018 review of the SHSND site and GIS files identified 32 previously recorded archaeological sites and historic-age non-archaeological resources, 6 isolated finds, and 21 site leads within the Study Area for the Project (1-mile buffer around the construction footprint) (Latham 2019). During the 2018 Burns & McDonnell archaeological survey, 23 additional sites and 3 isolated finds were recorded (Latham 2019). Two of these resources were unevaluated stone circle sites that were avoided by the Project. The remaining 21 archaeological sites and 3 isolated finds were recommended not eligible for inclusion in the National Register of Historic Places (NRHP).

The July 2019 review of SHSND site and GIS files found there had been only one newly recorded site, other than those recorded by Burns & McDonnell, in the Study Area since the 2018 records check (Table 5-1). Site 32MN1527 is a rock cairn site of unknown Native American cultural affiliation. The unevaluated site included three cairns and is located near the Project transmission line corridor in Mountrail County.

Two archaeological surveys have been conducted within portions the Study Area since the 2018 Burns & McDonnell records search (Latham 2019) (Table 2-1). One of these surveys was linear and the other was a series of small block survey areas. All the surveys included portions of multiple counties. As with the current investigation, site density for these investigations was low in the Study Area.

Table 2-1: Previous Archaeological Surveys within the Study Area

MS Number	Date	Title	Author(s)
018203	2018	<i>Class III Resources Inventories for the Fisher Sand & Gravel Company 2017 Material Source Areas in Emmons, Kidder, Mountrail, Oliver, Pierce, Sheridan Counties, North Dakota</i>	Neumiller, Alex and Matthew Beavers
018236	2019	<i>Burke Transmission Line: A Class III Cultural Resources Inventory in Burke and Mountrail Counties, North Dakota</i>	McCarthy, Melinda et al.

3.0 RESULTS OF INVESTIGATION

This chapter details the archaeological investigation undertaken for the Project, including a summary of the field investigations followed by a discussion of resources identified during this investigation. All of the sites identified were restricted to Williams County, North Dakota. The field surveys were limited to the construction corridors, buffers, and structure footprint areas of the proposed Project. During the current investigation, historic period maps were consulted to assist in developing the survey procedures and site interpretations and assessments. The 1914 county plat map depicts occupied houses as well as the size of the parcel, the landowner, and the resident of the house (Ogle 1914).

The Project area was rolling uplands that have been predominately farmland since the early twentieth century (Photographs B-1 through B-5 in Appendix B). Field surveys were undertaken in July 2019; therefore, most segments were surveyed prior to harvest and others were cultivated field not yet planted. The ground surface visibility (GSV) was above 30 percent in all the segments within the agricultural fields. Grassland pastures were encountered in two areas of the Survey Area and required shovel probing in areas due to poor GSV.

In following the methods used in the 2018 investigation, a shovel probe was placed in the center of each proposed turbine location. Six newly proposed turbine locations were surveyed, and shovel probes excavated in the center of each (Table 3-1). All the new turbine locations were in agricultural fields. The shovel probes were negative for cultural resources and, in some cases, indicated the A horizon was nearly absent. The shallow A horizon was likely due to erosion from years of cultivation.

Table 3-1: Wind Turbine Shovel Probe Summary, Aurora Wind Project

Shovel Probe	Turbine Number	Land Use	Zone I Depth (cm)	Zone I Soil Description	Zone II Depth (cm)	Zone II Soil Description	Results
101	B	Wheatfield	0 to 10	Loam with gravel 10YR3/2	10 to 20+	Loam with gravel 10YR4/2	Negative
102	A	Wheatfield	0 to 5	Silt loam with gravel 10YR3/2	5 to 15+	Silt loam with gravel 10YR4/3	Negative
103	E	Wheatfield	0 to 12	Silt clay with gravel 10YR3/2	12 to 20+	Clay with gravel 10YR4/3	Negative
104	C	Wheatfield	0 to 10	Clay with gravel 10YR3/2	10 to 20+	Clay with gravel 10YR4/6	Negative

Shovel Probe	Turbine Number	Land Use	Zone I Depth (cm)	Zone I Soil Description	Zone II Depth (cm)	Zone II Soil Description	Results
105	D	Wheatfield	0 to 18	Loam with gravel 10YR3/2	18 to 30+	Loam with gravel 10YR4/4	Negative
106	F	Canola	0 to 9	Loam with gravel 10YR3/2	9 to 15+	Loam with gravel 10YR4/4	Negative

The maps, photographs, and artifact tables referenced in the following site discussions are presented in a series of appendices. Appendix A includes the topographic maps that depict the Survey Area and the locations of the sites recorded. Appendix B includes the photographs of the Survey Area, archaeological site overviews, and cultural features documented in association with the sites. Appendix C includes the site maps for each recorded site.

3.1 Archaeological Sites

The archaeological site types recorded during the current investigation were typical of those previously recorded in the area (see Latham 2019). A total of 4 archaeological sites were recorded during the investigation of the Project area. The historic-era sites include two farmsteads and two dumpsites. Each archaeological site is discussed in detail below.

3.1.1 Site 32Wlxxxx (Temporary Site A-101)

Summary Data

Site Type:	Farmstead
Component:	Early to mid-twentieth century
Site Area:	105 meters (north-south) by 107 meters (east-west); 9,250 square meters (2.29 acres)
Topography:	Level plain
Elevation:	709 meters above mean sea level (AMSL)
Soil Type:	Lehr loam, 2 to 6 percent slopes; Williams-Bowbells loam, 3 to 6 percent slopes; Straw-Fluvaquents channeled, 0 to 2 percent slope, frequently flooded
Nearest Water:	Well on site
Field Method:	Visual inspection
Site Integrity:	Fair
NRHP Status:	Not eligible

3.1.1.1 Site Description

This site was identified as a farmstead just west of a county road and along the northern bank of an intermittent drainage (Appendix A). The mowed area of the abandoned farmstead is currently used for grain storage and work/staging area for agricultural activities (Photograph B-6). Four metal grain bins and

a metal Quonset hut style barn have been added to the site after it was abandoned. The two southern grain bins rest on a large concrete pad that once served as a barn floor (Photograph B-7; Figure C-1).

The site boundaries were defined by the distribution of features, surface artifacts, a section line road, and a pond. The north-south section line road defines the eastern limits of the site, while the northern boundary is defined by the pond created by a dam of an intermittent drainage. The southern and western limits were defined by the artifact and feature distribution. The features observed at the site include the concrete barn floor mentioned above, a well casing located in the southern portion of the site (Photograph B-8), and a retention dam made of glacial cobbles in the section line road ditch (Photograph B-9).

A small cluster of architectural debris and a power pole was observed in the center of the site, which is likely where the farmhouse was located. The GSV in this mowed area was 40 to 90 percent in areas where recent grading of the surface, recent storing of haybales (since removed), and farm-related activities have exposed some area of the ground surface. The GSV was about 30 percent in less disturbed areas. The low artifact density, combined with the level ground surface in this area of the site (most of the site area was gently sloped or undulating), indicates that debris was removed from the former house location and the area leveled and seeded to grass.

A review of the 1914 plat map indicated the site was occupied in the early twentieth century (Ogle 1914). Two houses were depicted on the 120-acre tract that contains the site. The northernmost house appears to be the one within the site boundaries. The second is depicted to the southwest, outside the Survey Area. In 1914, the owner of the parcel was Fred Gustofson, who patented the property in 1908 (Bureau of Land Management 2019). Several of the adjacent landowners also had the surname Gustofson, suggesting extended family resided and farmed in the area. The residence was abandoned by 1978, as only a barn appears on the topographic map (U.S. Geological Survey [USGS] 1978).

3.1.1.2 Artifact Descriptions

A total of 34 historic-age items, representing 4 artifact classes, were recovered from the site (Table 3-2). Architectural and domestic artifacts accounted for about 75 percent of the assemblage. Production date ranges were identified for some of the assemblage, including most of the glass and ceramics. The architectural class included three window glass shards that postdate 1917 (Fowle 1924). Three colors of domestic class glass were identified, including colorless, aqua, and cobalt blue. Production date ranges for the aqua glass suggest an early twentieth century occupation. Aqua glass was commonly used in the production of jars and bottles prior to 1920 (Lindsey 2016). Cobalt glass was used from the 1890s to the

1960s (Fike 2006), and the single piece recovered was machine-made, indicating a post-1905 date (Lockhart et al. 2010).

Two types of glazing, Albany and Bristol, were identified on the stoneware sherds, both of which have well-established production date ranges. From circa (ca.) 1884 to ca. 1920, Bristol and Albany glazes were commonly used in combination with one another (Greer 2005). Bristol glazed stoneware postdates 1915 (Greer 2005).

Table 3-2: Site 32Wlxxxx Historic Artifacts

Artifact Class	Material	Object	Information	Surface
Activity	graphite	battery core		1
	<i>graphite total</i>			1
	Metal	harrow spike		1
		washer		1
		barbed wire-roll		1
<i>metal total</i>			3	
<i>Activity Total</i>				4
Heating	slag			4
<i>Heating Total</i>				4
Architectural	brick	fragment-red		4
	glass	flat glass-colorless	post-1917 (Fowle 1924)	3
	concrete	fragments		7
<i>Architectural Total</i>				14
Domestic	glass	body-colorless		4
		body-aqua	pre-1920 (Lindsey 2016)	2
		body-cobalt blue		1
	<i>glass total</i>			7
	stoneware	body-brown and white	Bristol & Albany ca. 1884 to ca. 1920 (Greer 2005)	3
		body-white	Bristol interior & exterior, post- 1915 (Greer 2005)	2
<i>stoneware total</i>			5	
<i>Domestic Total</i>				12
<i>Totals</i>				34

3.1.1.3 Site Summary, Site 32Wlxxxx

The aspects of the site are described below, in addition to the significance and recommendations.

3.1.1.3.1 Horizontal and Vertical Extent of Cultural Deposit

The site covers a 105-by-107-meter area, with most of it limited to the ground surface.

3.1.1.3.2 Site Integrity

The site appears to have fair integrity.

3.1.1.3.3 Site Function

The function of the site appears to be a farmstead.

3.1.1.3.4 Cultural Affiliation

Based on the features and artifacts present, and review of available historic period maps, the site was occupied from the early to mid-twentieth century.

3.1.1.3.5 Presence of Subsurface Features

The well is the only indication of a subsurface feature identified during the current investigation of the site.

3.1.1.3.6 Site Significance

The site lacks significance due to the late occupation age, razing and removal of most of the surface features, and site integrity. It is the opinion of the investigator that the current investigation has exhausted the research potential of the site.

3.1.1.3.7 Impact

It is the opinion of the investigator that the proposed Project would not impact significant cultural resources at this site.

3.1.1.3.8 Recommendations

No further archaeological investigations or avoidance of this site with construction or operations activities is recommended for this site within the survey corridor

3.1.2 Site 32Wlxxxx (Temporary Site A-102)

Summary Data

Site Type:	Farmstead
Component:	Early to late twentieth century
Site Area:	143 meters (northeast-southwest) by 265 meters (northwest-southeast); 30,019 square meters (7.42 acres)
Topography:	Rolling upland

Elevation:	725 meters AMSL
Soil Type:	Williams-Bowbells loam, 3 to 6 percent slopes
Nearest Water:	110 meters to pond; well and cistern on site
Field Method:	Visual inspection
Site Integrity:	Good
NRHP Status:	Not eligible

3.1.2.1 Site Description

This site was identified as a farmstead on an elevated landform in a rolling upland area marked with several sloughs and potholes (Figure A-1). At the time of the investigation, most of the site area had been recently tilled, and the GSV was 100 percent (Photograph B-10). A narrow strip of grass, oriented north-south, was near the eastern edge of the site (Figure C-2). A metal grain bin and several historic-era features were within or immediately adjacent to the narrow strip of grass. The site boundaries were defined by the limits of the surface artifact distribution.

Six historic-era features were identified at the site. The first two features were associated with the house area, located west of the grass strip, and included a trash-filled basement and cistern surrounded by the recently tilled agricultural field (Photograph B-11). The basement was filled with and surrounded by architectural rubble, including yellow and red bricks, mortar, concrete, wire nails, metal guttering, door hinges, flat glass, and a variety of lumber. Many domestic items were also in and around the basement, as were several pieces of plastic and other modern trash. Just to the west of the basement, was a rock- and mortar-lined cistern that included a 1.5-inch galvanized pipe connecting this feature with an adjacent basement (Photograph B-12). The cistern was also filled with architectural and domestic debris, which was overlain by a thick layer of modern trash.

Besides the grain bin, four other features were noted in and around the grass strip. The most obvious was the metal-framed windmill. Another well was located immediately south of the windmill. It features a metal handpump sitting in the base of a depression partially surrounded by a rock and mortar foundation (Photograph B-13). This foundation was likely for a wellhouse. To the north of the windmill and on the northern edge of the grass, were two other features. On the northeast corner of the grass, and extending into the cultivated field, was a portion of concrete pad (Photograph B-14). This feature has been severely damaged by encroachment of cultivation equipment, and only a portion remains. To the west of the concrete pad was a round, rock and mortar-lined feature that a local visitor to the site stated represented the remnants of an icehouse (Photograph B-15).

A review of the 1914 plat map indicated the site was occupied in the early twentieth century (Ogle 1914). A house was depicted on the 80-acre tract that contains the site. In 1914, the owner of the parcel was

Wilke Rutten, but the resident was listed as A.S. McKay. John Rutten patented the parcel in 1908 (Bureau of Land Management 2019). A house and barn were depicted in the site area on the 1978 topographic map (USGS 1978). A review of Google Earth aerial imagery showed the house was no longer present by 1995.

3.1.2.2 Artifact Descriptions

Because of the very high artifact and modern trash density at the site, an inventory was not attempted. The most common items were architectural debris and domestic items, of which both numbered in the thousands. Mixed in with these artifacts were hundreds of pieces of modern trash, as the depressions were used on occasion as dumpsites.

3.1.2.3 Site Summary, Site 32Wlxxx

The aspects of the site are described below, in addition to the significance and recommendations.

3.1.2.3.1 Horizontal and Vertical Extent of Cultural Deposit

The site covers a 143-by-265-meter area, with most of it limited to the ground surface.

3.1.2.3.2 Site Integrity

The site appears to have good integrity.

3.1.2.3.3 Site Function

The function of the site appears to be a farmstead.

3.1.2.3.4 Cultural Affiliation

Based on the features and artifacts present and review of available historic period maps and modern aerial photographs, the site was occupied from the early to late twentieth century.

3.1.2.3.5 Presence of Subsurface Features

Five features were identified that extend into the subsurface; two wells, a cistern, a basement, and a possible icehouse.

3.1.2.3.6 Site Significance

The site lacks significance due to its occupation well into the modern era and the continued dumping and mixing of the artifact assemblage with modern debris, which has diminished the sites integrity and ability to provide information about the state's early settlement. It is the opinion of the investigator that the current investigation has exhausted the research potential of the site.

3.1.2.3.7 Impact

It is the opinion of the investigator that the proposed Project would not impact significant cultural resources at this site.

3.1.2.3.8 Recommendations

No further archaeological investigations or avoidance of this site by construction or operations activities is recommended within the survey corridor.

3.1.3 Site 32Wlxxxx (Temporary Site A-103)

Summary Data

Site Type:	Dumpsite
Component:	Early twentieth century
Site Area:	59 meters (north-south) by 95 meters (east-west); 4,739 square meters (0.93 acres)
Topography:	Level plain
Elevation:	713 meters AMSL
Soil Type:	Williams-Bowbells loam, 0 to 3 percent slopes
Nearest Water:	540 meters to pond
Field Method:	Visual inspection
Site Integrity:	Poor
NRHP Status:	Not eligible

3.1.3.1 Site Description

This site was identified as a discard site on a nearly level plain (Figure A-1). The broad scatter of artifacts was in a wheat field that afforded 40 percent GSV (Photograph B-11; Figure C-3). Site boundaries were determined by the limits of the surface artifact scatter. A review of the 1914 plat map indicates the site was within a parcel that did not contain a house (Ogle 1914).

3.1.3.2 Artifact Descriptions

A total of 30 historic-age items were recovered from the site, representing three artifact classes (Table 3-3). The 24 domestic artifacts accounted for 80 percent of the assemblage; the 5 architectural artifacts were the second most common at 17 percent. The farm activity artifact class was represented by a single artifact. The following discussion focuses on the production date ranges of the items recovered from the site.

Table 3-3: Site 32Wlxxx Historic Artifacts

Artifact Class	Material	Object	Information	Surface
Farm Activity	metal	section of disk	farm equipment	1
	<i>metal total</i>			1

Artifact Class	Material	Object	Information	Surface
<i>Farm Activity Total</i>				1
Architectural	glass	flat glass	postdate 1917 (Fowle 1924)	5
	<i>glass total</i>			5
<i>Architectural Total</i>				5
Domestic	glass	body-colorless		3
		body-brown		1
		body- green		3
		body-solarized amethyst	1880s to ca. 1920 (Lockhart 2006)	12
	<i>glass total</i>			19
	stoneware	body-white	Bristol post- 1890 (Greer 2005)	2
	<i>stoneware total</i>			2
	whiteware	body-plain	Post-1840 (Miller 1993)	3
<i>whiteware total</i>			3	
<i>Domestic Total</i>				24
<i>Totals</i>				30

About 80 percent of the assemblage was glass, which included items associated with architecture and domestic functions. The manufacturing date for the eight flat glass shards is post-1917 (Fowle 1924). The domestic related artifacts were glass, stoneware, and whiteware. The 19 glass shards were the most common domestic item and included four different colors. The 12 solarized amethyst glass shards were the most common artifact collected. Production date for this type of glass was generally from ca. late 1880s to ca. 1920 (Lockhart 2006). The additional colors of glass include colorless, green, and brown.

Manufacturing dates were obtained for stoneware and whiteware ceramic artifacts. Manufacturing date ranges determined for the Bristol glazed stoneware postdates 1915 (Greer 2005). The plain whiteware postdates 1840 (Miller 1993).

3.1.3.3 Site Summary, Site 32Wlxxx

The aspects of the site are described below, in addition to the significance and recommendations.

3.1.3.3.1 Horizontal and Vertical Extent of Cultural Deposit

The site covers a 59-by-95-meter area and is limited to the plowzone.

3.1.3.3.2 Site Integrity

The site appears to have poor integrity.

3.1.3.3.3 Site Function

Based on the historic period maps and artifact assemblage, the function of the site appears to be a single episode discard or dumpsite.

3.1.3.3.4 Cultural Affiliation

Based on the artifact assemblage, the site dates to the early twentieth century.

3.1.3.3.5 Presence of Subsurface Features

No evidence of subsurface features was identified during the current investigation of the site.

3.1.3.3.6 Site Significance

The surface site lacks research potential because it was a single episode discard or dumpsite, and the cultural affiliation and associated persons are unknown. It also lacks significance because it was a surface site of late age that has been extensively cultivated. It is the opinion of the investigator that the current investigation has exhausted the research potential of the site.

3.1.3.3.7 Impact

It is the opinion of the investigator that the proposed Project would not impact significant cultural resources at this site.

3.1.3.3.8 Recommendations

No further archaeological investigations or avoidance of this site with construction or operations activities is recommended for this site within the survey corridor.

3.1.4 Site 32Wlxxx (Temporary Site A-104)

Summary Data

Site Type:	Dumpsite
Component:	Early to mid- twentieth century
Site Area:	57 meters (north-south) by 92 meters (east-west); 4,416 square meters (1.09 acres)
Topography:	Rolling upland
Elevation:	713 meters AMSL
Soil Type:	Williams-Zahl loams, 3 to 6 percent slopes
Nearest Water:	175 meters to pond

Field Method: Visual inspection
Site Integrity: Poor
NRHP Status: Not eligible

3.1.4.1 Site Description

This site was identified as a discard site on a gentle upland slope (Figure A-1). The broad scatter of artifacts was in a wheat field that afforded 80 percent GSV (Photograph B-17; Figure C-4). Site boundaries were determined by the limits of the surface artifact scatter. A review of the 1914 plat map indicates the site was within the same parcel associated with site 32WI2323; however, it was several hundred feet away and no building or structure is depicted at the current site location. Site 32WI2323 was a farmstead within a 160-acre tract owned by F.H Stoltze but occupied by Henry Wagner (Ogle 1914). It is possible this trash dump was associated with this early to mid-twentieth century farmstead (Latham 2019). No buildings were depicted in or near the site area on the 1978 topographic map (USGS 1978).

3.1.4.2 Artifact Descriptions

A total of 13 historic-age items were recovered from the site, representing two artifact classes (Table 3-4). The nine domestic artifacts accounted for 69 percent of the assemblage. The following discussion focuses on the production date ranges of the items recovered from the site.

Table 3-4: Site 32WIxxxx Historic Artifacts

Artifact Class	Material	Object	Information	Surface
Architectural	glass	flat glass-colorless	post-1917 (Fowle 1924)	3
	<i>glass total</i>			3
	metal	wire nail	popular post-1900 (Adams 2002)	1
	<i>metal total</i>			1
<i>Architectural Total</i>				4
Domestic	glass	body-solarized amethyst	solarized ca. 1865-ca. 1920 (Lockhart 2006)	1
		body-colorless		5
	<i>glass total</i>			6

	stoneware	body-white	Bristol interior & exterior, post-1915 (Greer 2005)	3
	<i>stoneware total</i>			3
	<i>Domestic Total</i>			9
	<i>Totals</i>			13

Over 80 percent of the assemblage was glass, which included items associated with architecture and domestic functions. The manufacturing date for the three flat glass shards is post-1917 (Fowle 1924). The domestic related artifacts were glass and stoneware. The 6 glass shards were the most common domestic item, and included five colorless shards and 1 solarized amethyst glass shard. Production dates for solarized amethyst glass was generally from ca. late 1880s to ca. 1920 (Lockhart 2006). Manufacturing dates for the Bristol glazed stoneware postdates 1915 (Greer 2005). Wire nails were most common after 1900 (Adams 2002).

3.1.4.3 Site Summary, Site 32Wlxxxx

The aspects of the site are described below, in addition to the significance and recommendations.

3.1.4.3.1 Horizontal and Vertical Extent of Cultural Deposit

The site covers a 57-by-92-meter area and is limited to the plowzone.

3.1.4.3.2 Site Integrity

The site appears to have poor integrity.

3.1.4.3.3 Site Function

Based on the historic period maps and the low-density artifact assemblage the function of the site appears to be a single episode discard or dumpsite.

3.1.4.3.4 Cultural Affiliation

Based on the artifact assemblage, the site dates to the early to mid-twentieth century.

3.1.4.3.5 Presence of Subsurface Features

No evidence of subsurface features was identified during the current investigation of the site.

3.1.4.3.6 Site Significance

The surface site lacks research potential because it was a single episode discard or dumpsite, and the cultural affiliation and associated persons are unknown. It also lacks significance because it was a surface site of late age that has been extensively cultivated. It is the opinion of the investigator that the current investigation has exhausted the research potential of the site.

3.1.4.3.7 Impact

It is the opinion of the investigator that the proposed Project would not impact significant cultural resources at this site.

3.1.4.3.8 Recommendations

No further archaeological investigations or avoidance of this site with construction or operations activities is recommended for this site within the survey corridor.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The objectives of this cultural resources investigation were to identify, record, and provide a preliminary assessment of the cultural resources found within the Survey Area. The Principal Investigator used the same criteria established during the 2018 investigation to evaluate these resources (see Latham 2019).

This section summarizes the investigation, including conclusions and site recommendations based on the NRHP criteria of significance (36 CFR 60.4), guidelines established by the SHSND (2016, 2017), and the 2018 guidance of the NDSHPO (Latham 2019).

4.1 Summary Evaluations of Sites

Four archaeological sites were recorded during the investigation of the proposed Project construction areas (Table 4-1). As with most linear surveys, some of the sites extended beyond the boundaries of the Survey Area. Portions of sites outside the Survey Area were also investigated to document the full extent, integrity, and significance of each resource investigated. It is the opinion of the investigator that the current investigation has exhausted the research potential for these 4 historic-age sites, and they should not be considered eligible for inclusion in the NRHP. Due to their lack of significance, the Principal Investigator recommends that significant cultural resources will not be impacted by the Project and the Project should be allowed to proceed as planned.

Table 4-1: Recommendations for Williams County Sites

Site	Site Type	Identified Component	Site Integrity	NRHP Status within Survey Corridor	Recommend
32WIxxxx (A-101)	Farmstead	Historic-age early to mid-20th century	Poor	Not eligible	No further investigation
32WIxxxx (A-102)	Farmstead	Historic-age early to mid-20th century	Good	Not eligible	No further investigation
32WIxxxx (A-103)	Dumpsite	Historic-age early to mid-20th century	Fair	Not eligible	No further investigation
32WIxxxx (A-104)	Dumpsite	Historic-age early 20th century	Poor	Not eligible	No further investigation

The four sites recorded had historic-age components. Two of the sites were farmsteads and two were trash dumpsites. All the cultural resources documented were associated with early to late twentieth century farming. Generally, these sites are not considered eligible for the NRHP in North Dakota (Latham 2019).

The same approach for evaluating significance was used during the original survey was applied to the analysis of these four sites.

It is the opinion of the Principal Investigator that the current investigation has exhausted the research potential of the portions of all four historic-age archaeological sites found within the Survey Area. The history of Williams County and the Project area indicates these resources are not unique, but rather very common. These cultural resources are not recommended for inclusion in the NRHP individually or as a district.

4.2 Stipulations

Burns & McDonnell recommends archaeological clearance for the current Project with the following stipulations:

- If the Project area is changed, additional Class III investigations and construction monitoring may be necessary.
- If human burials or buried archaeological deposits are encountered during Project construction, the Unanticipated Discovery Plan will be implemented (Latham 2019, Appendix D).

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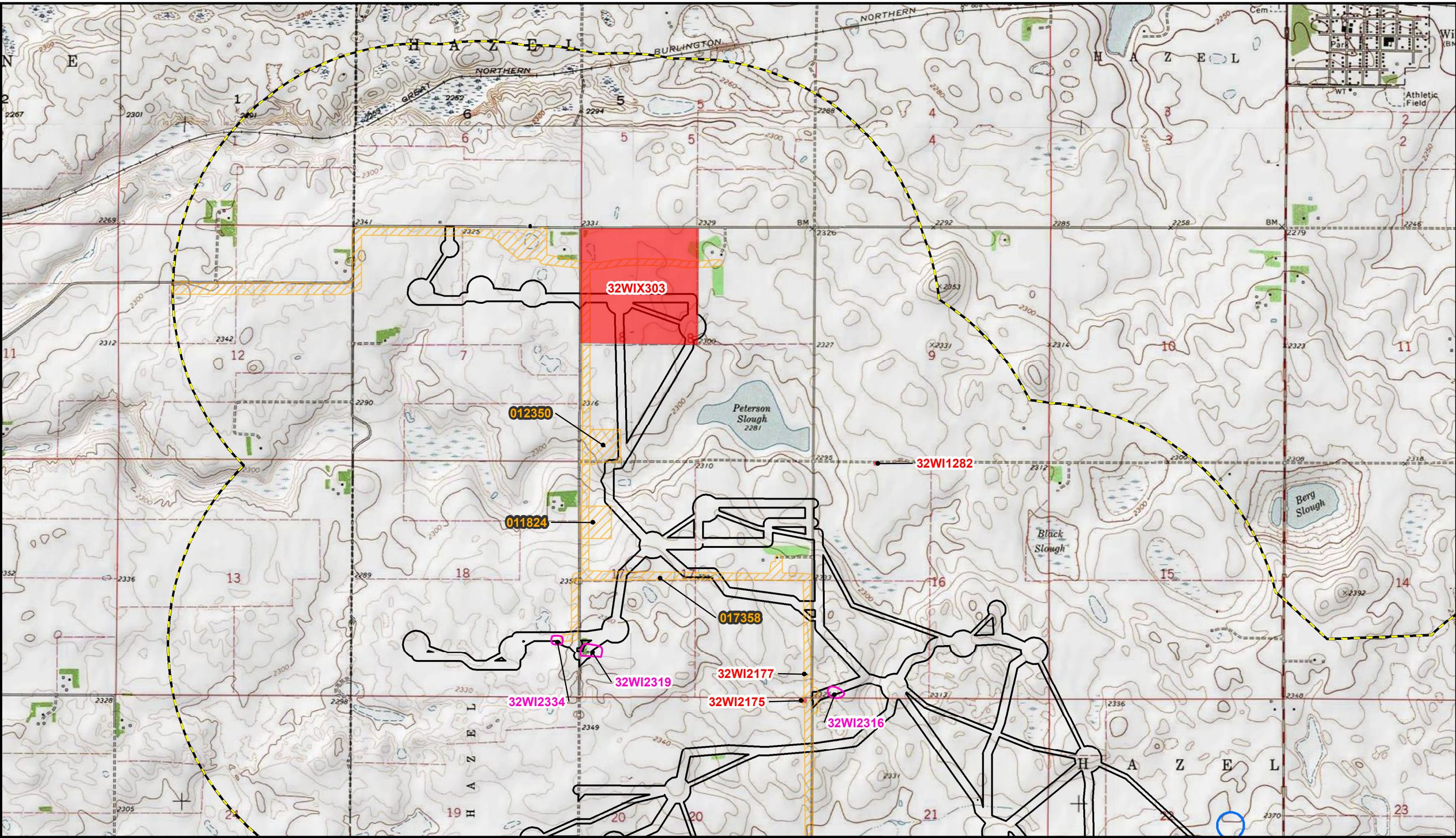
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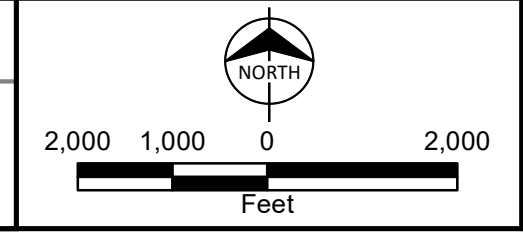
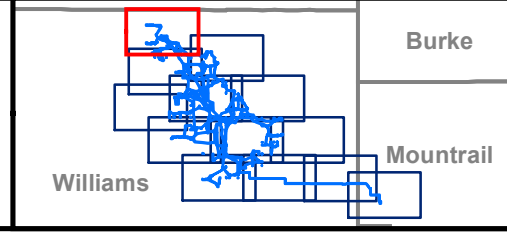
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APPENDIX A - PROJECT MAPS

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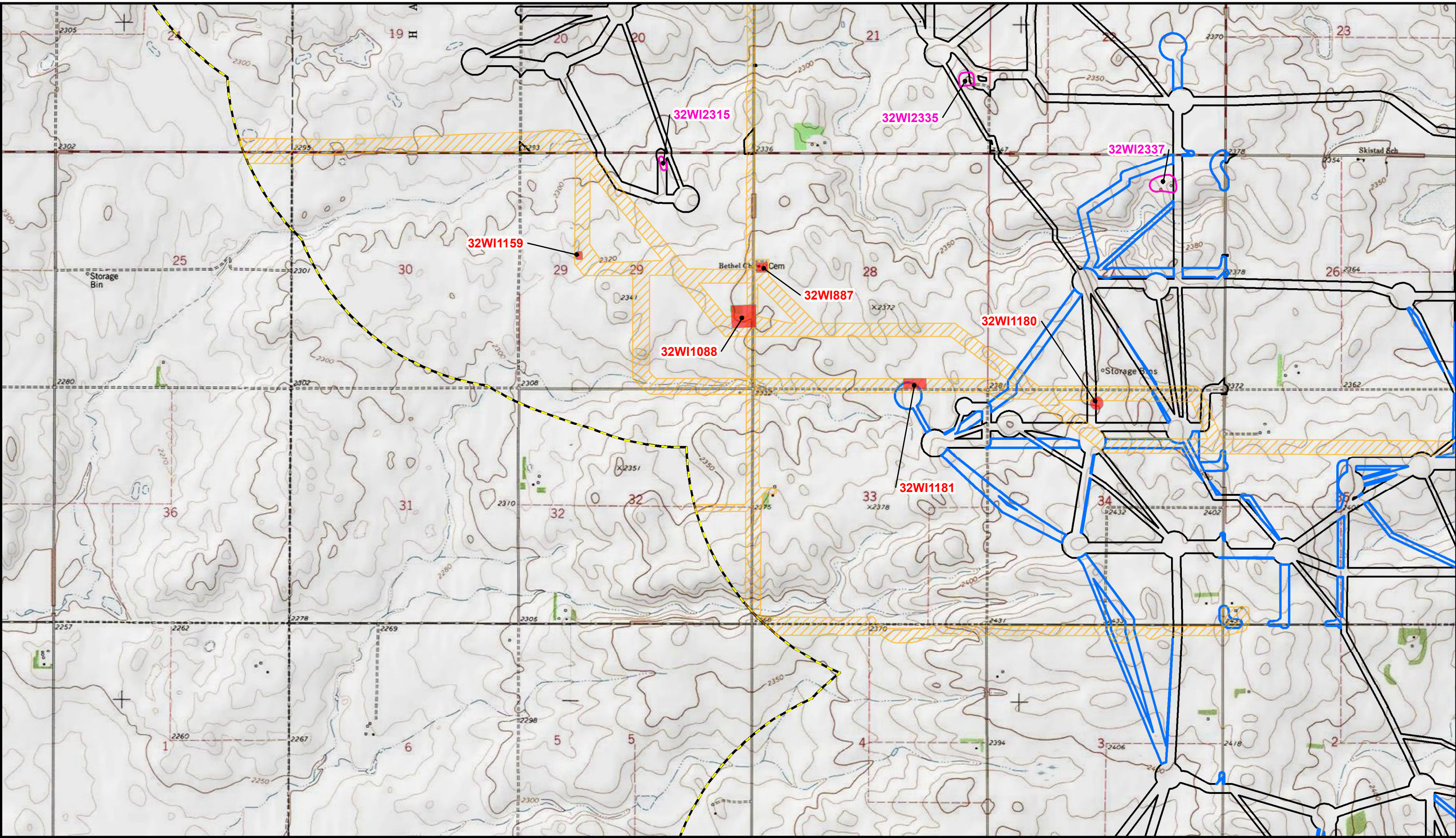


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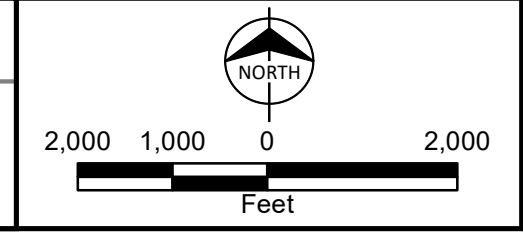
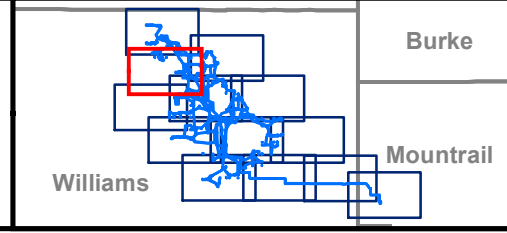


Appendix A
 Aurora Wind Farm
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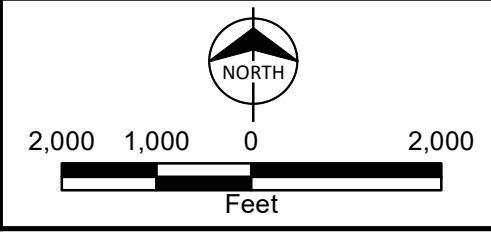
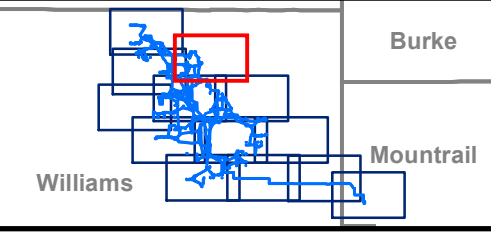
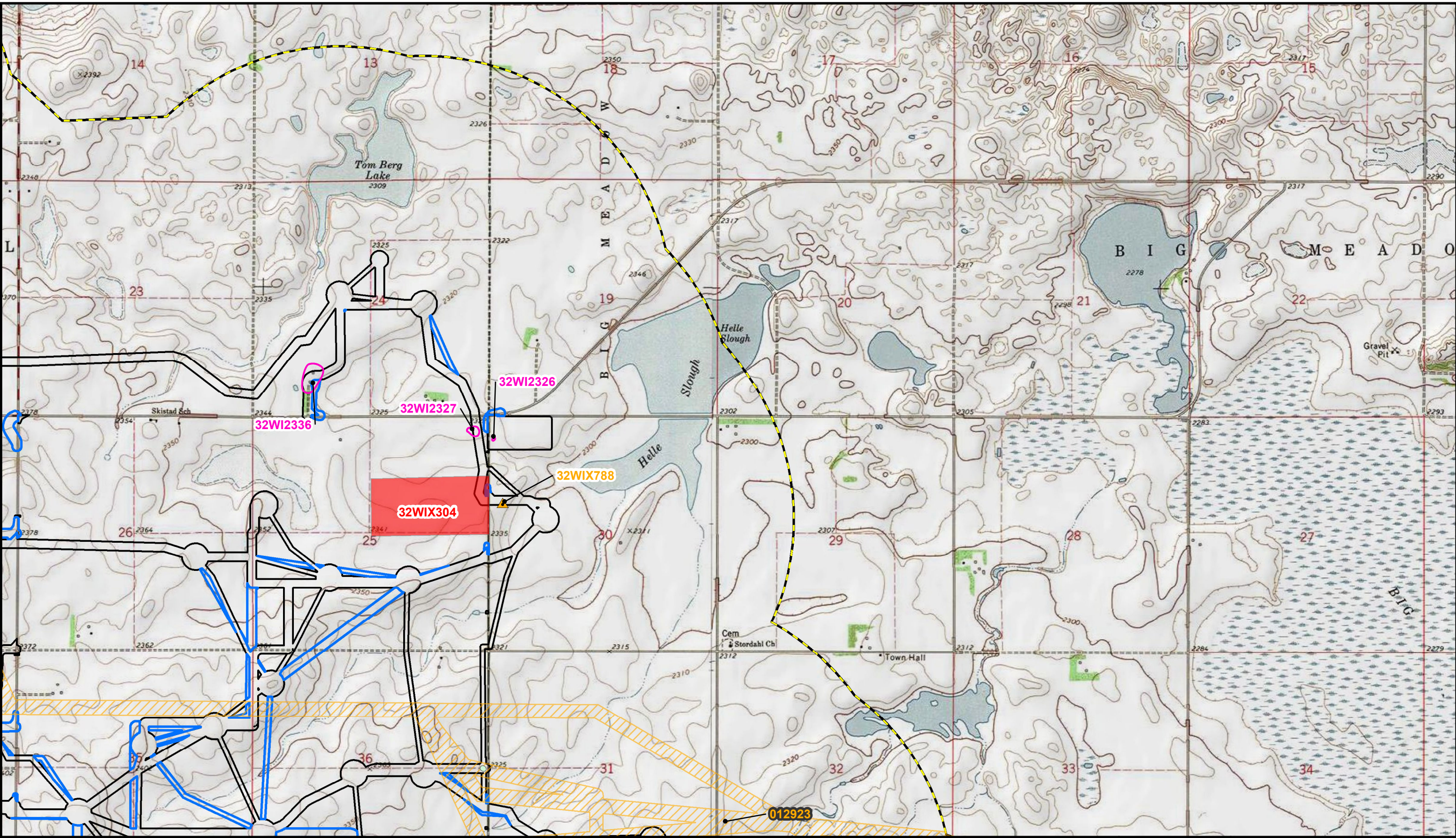


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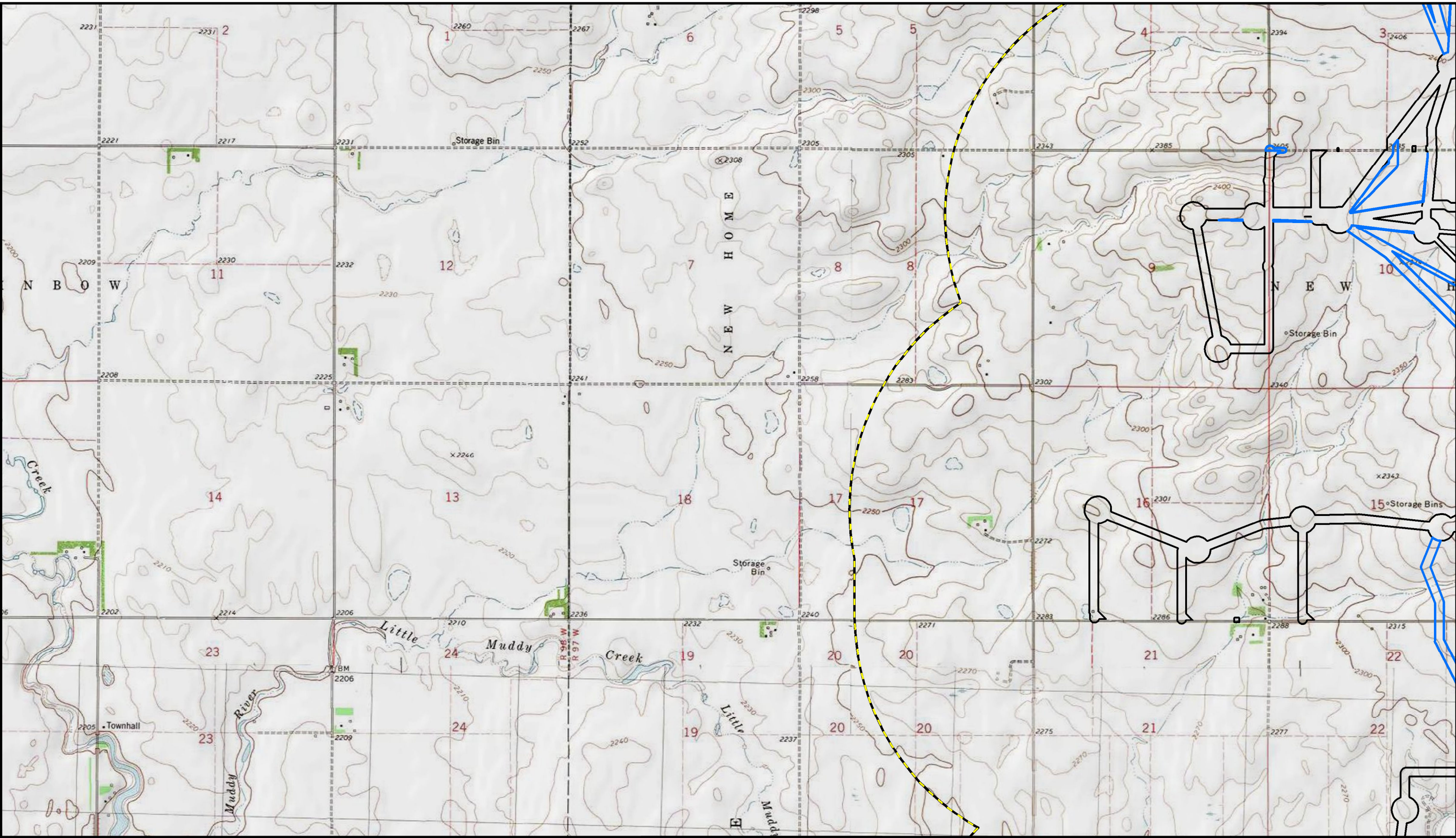
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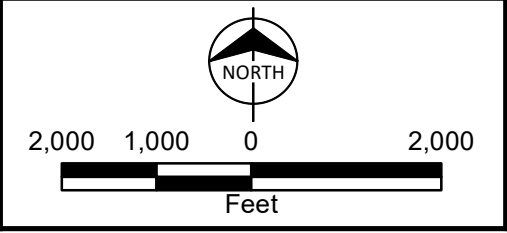
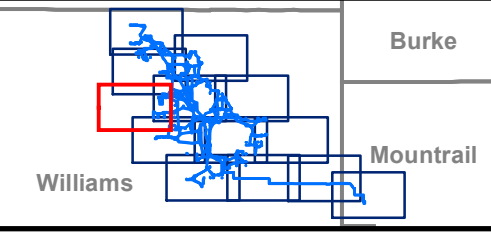


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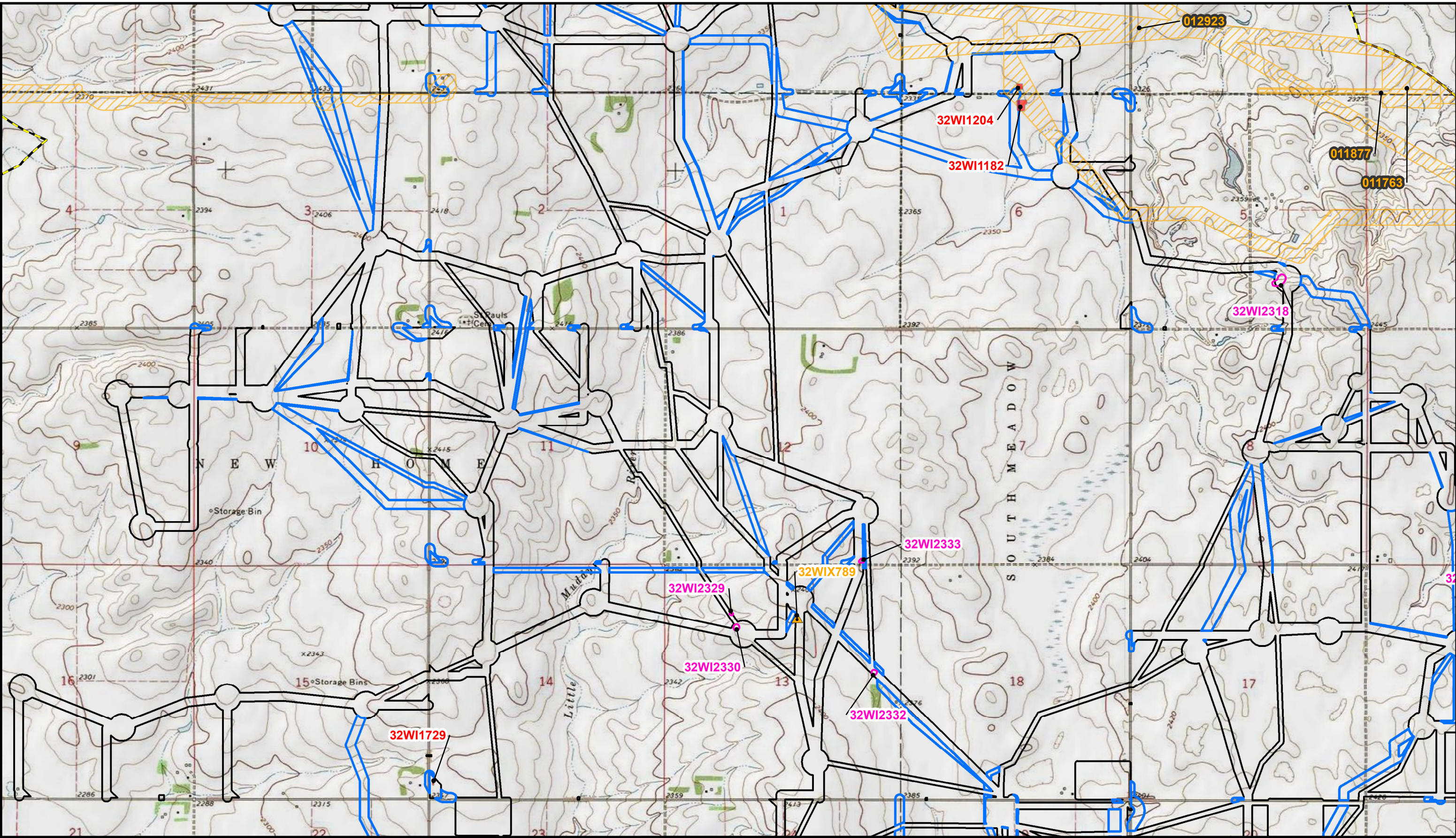


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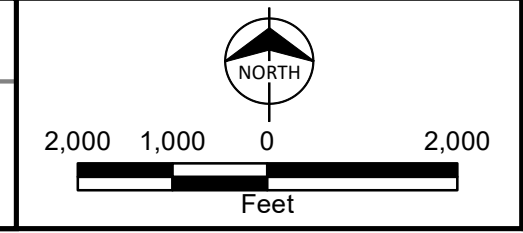
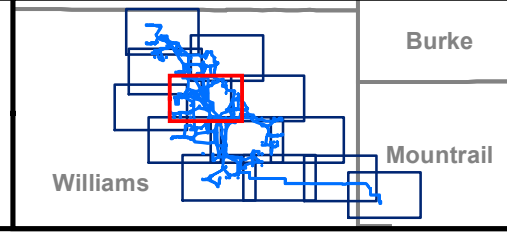


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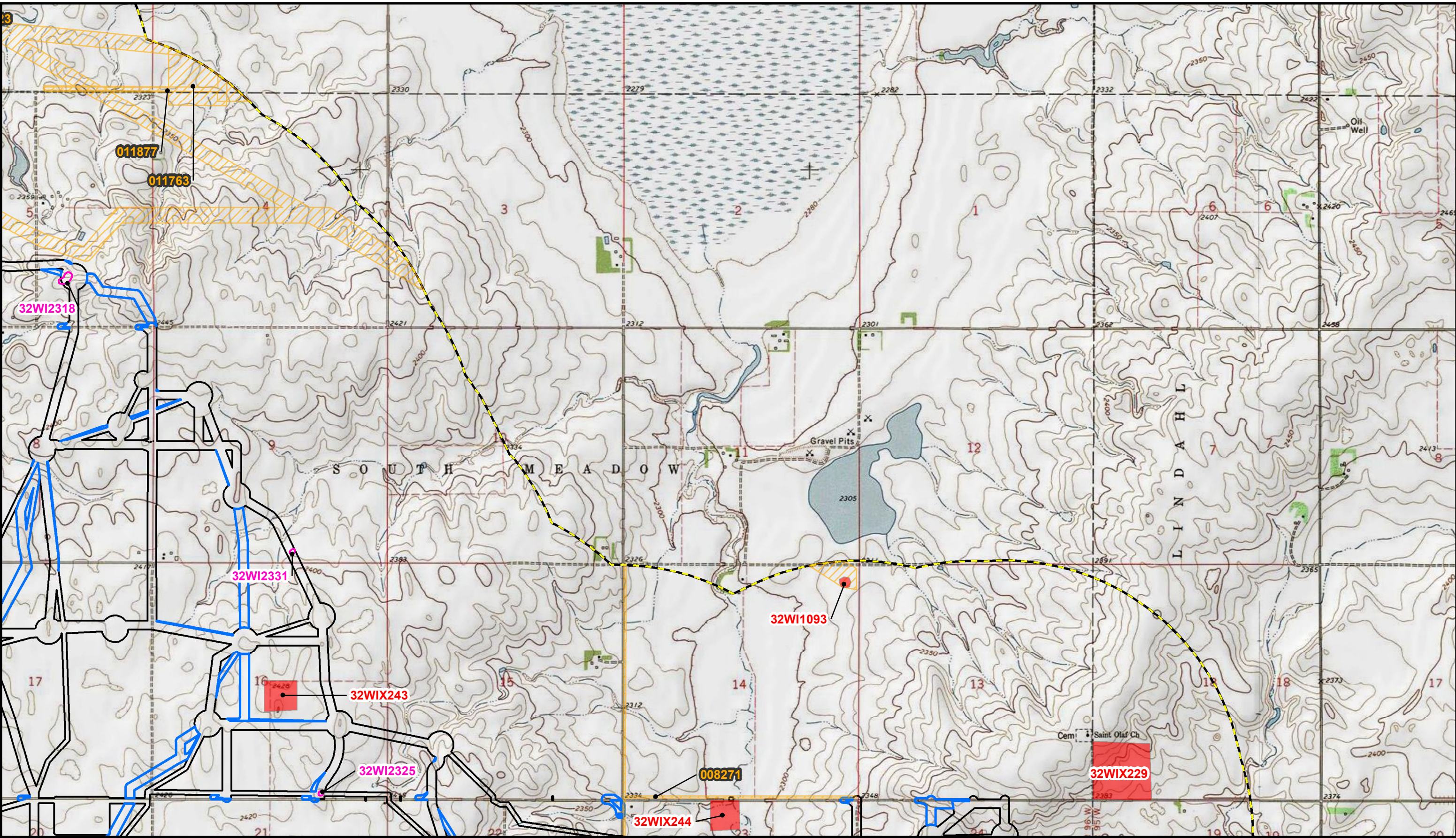


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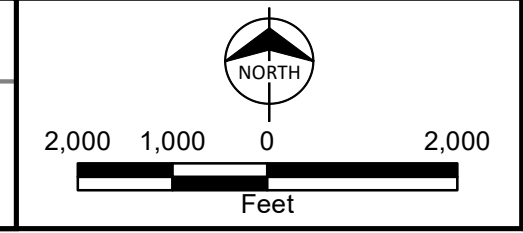
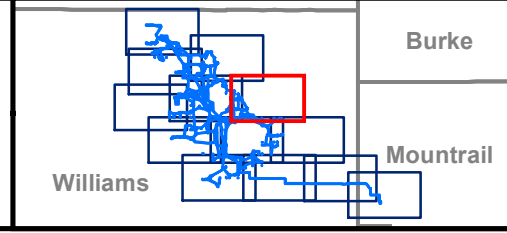


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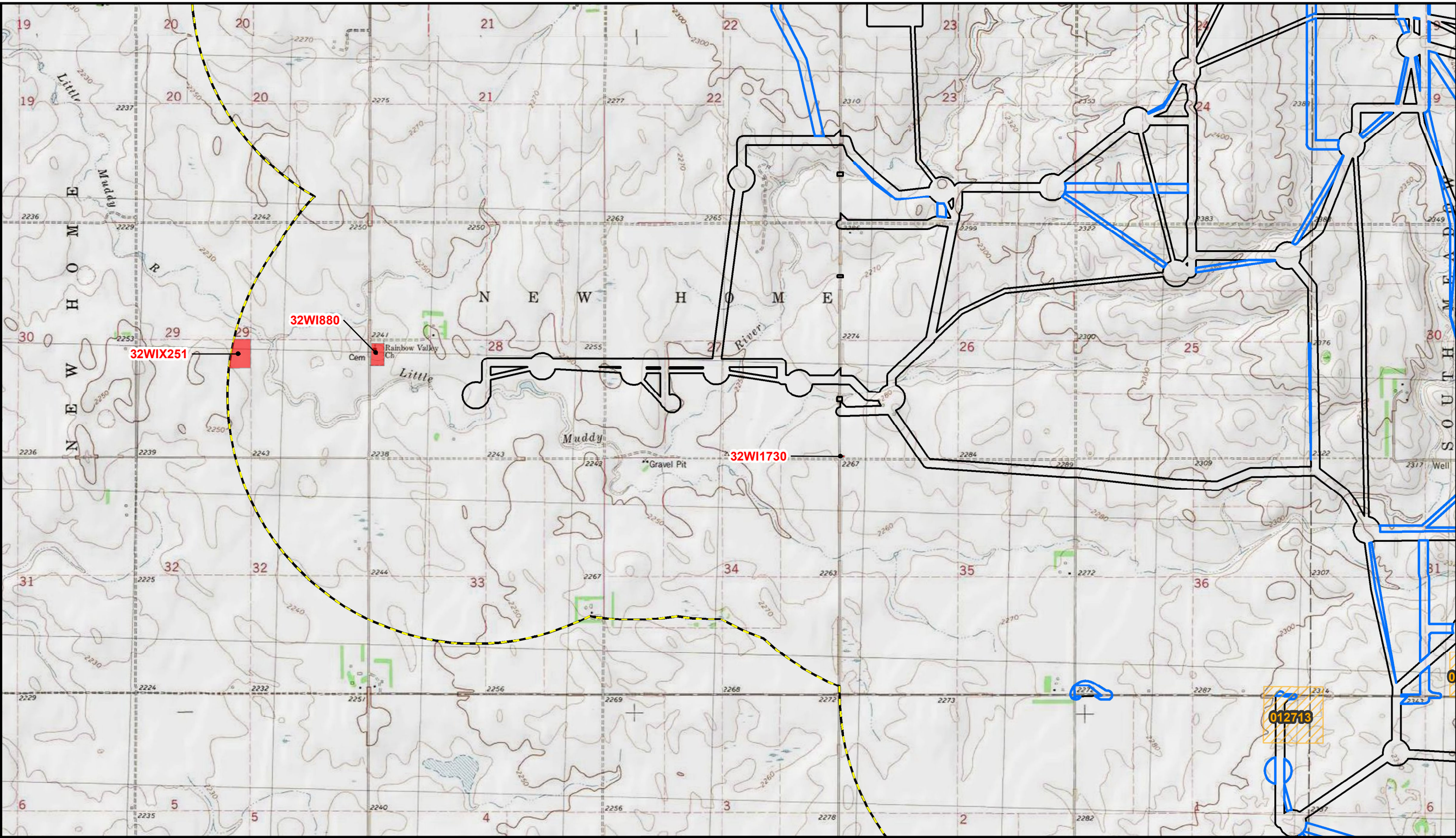







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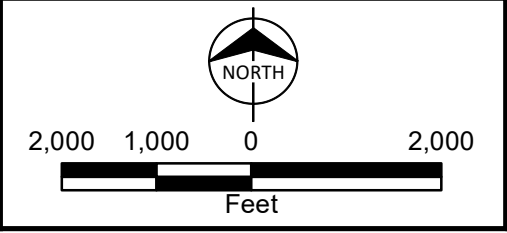
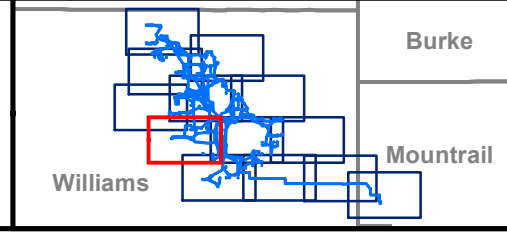


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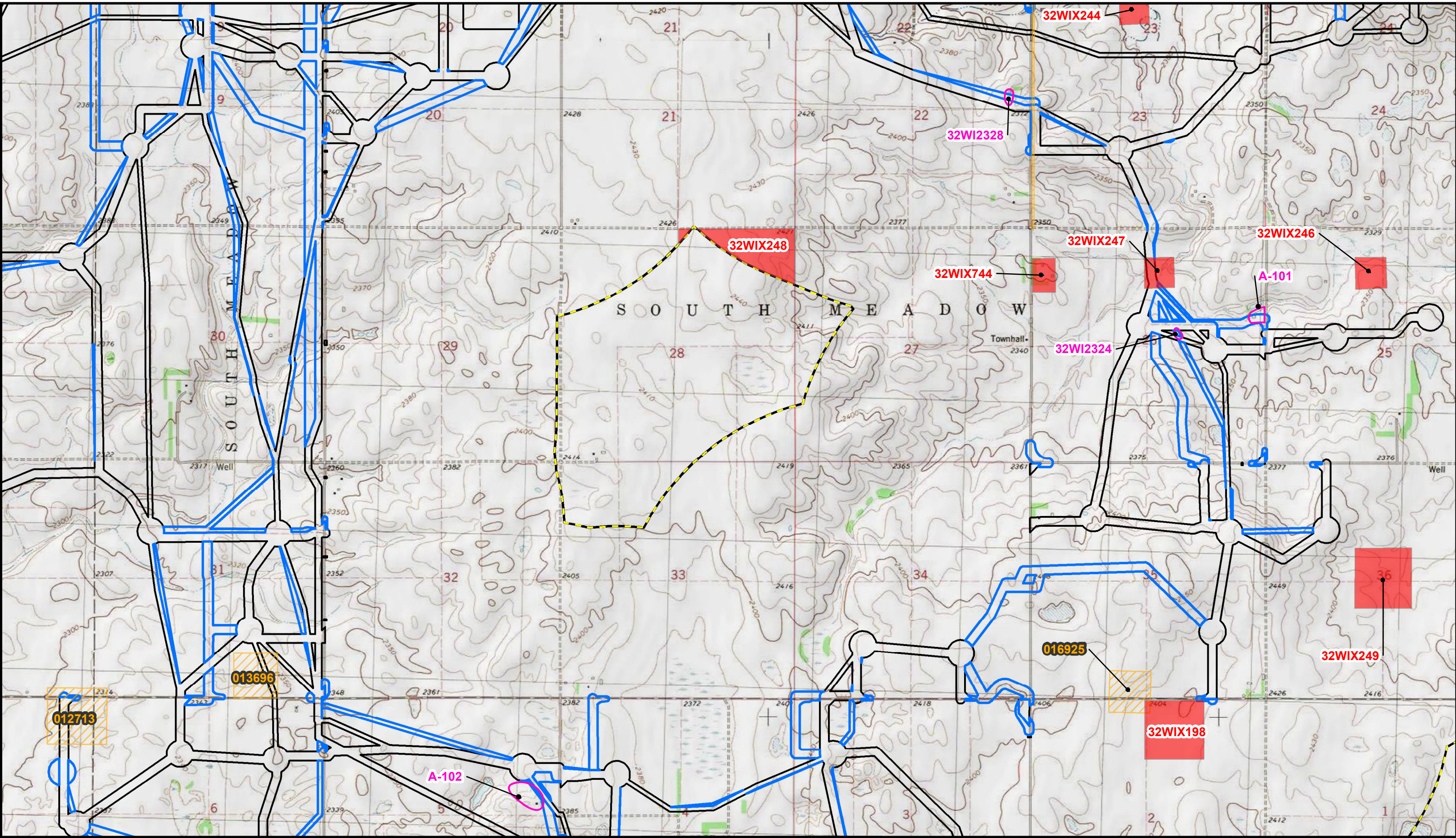


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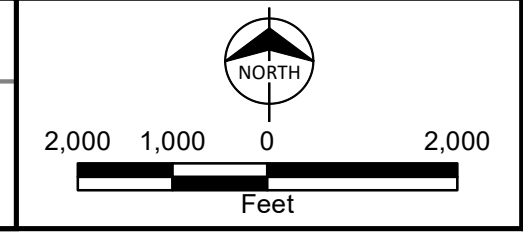
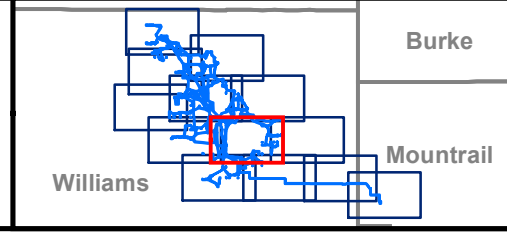


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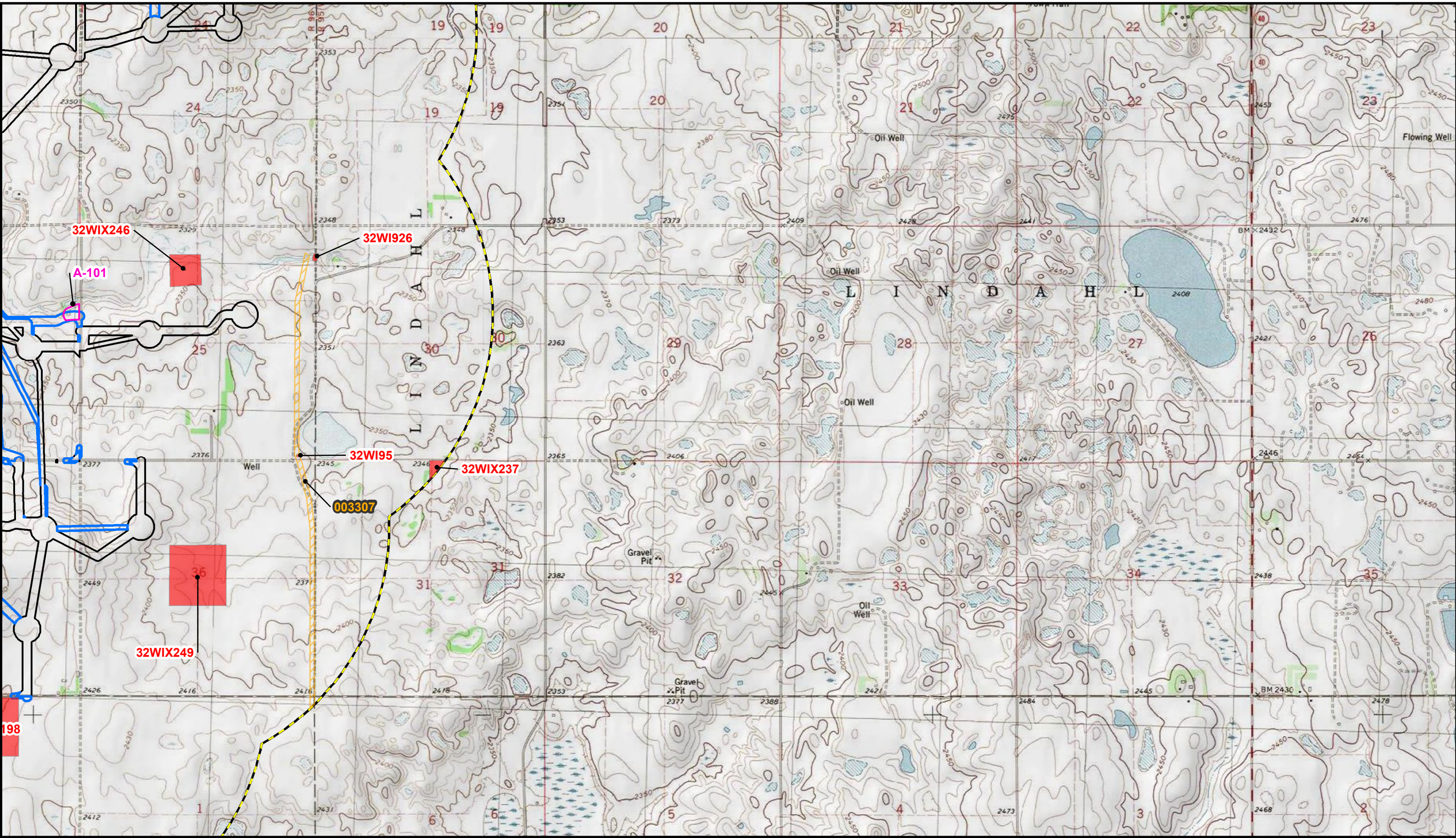


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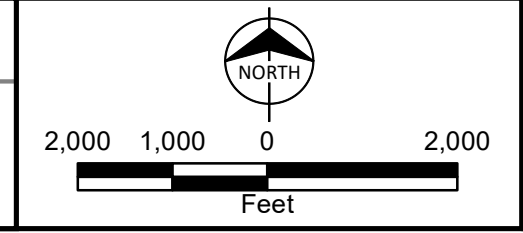
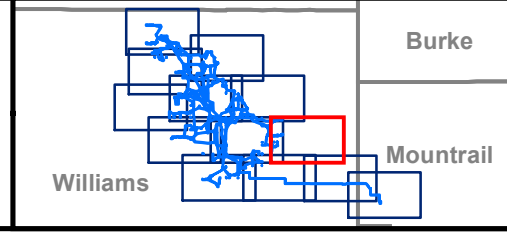


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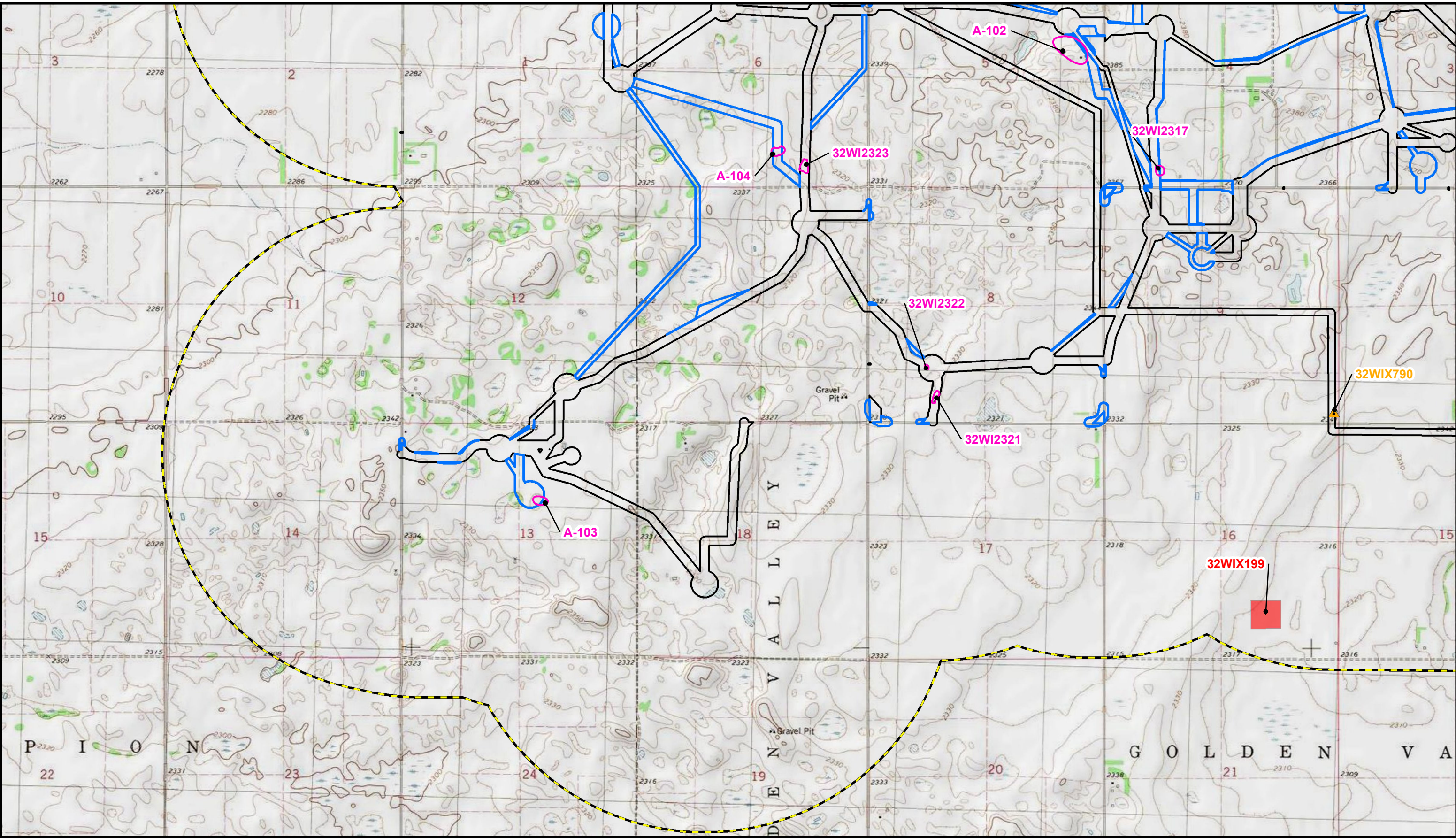



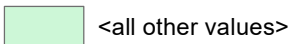

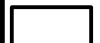

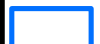
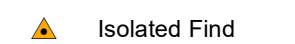
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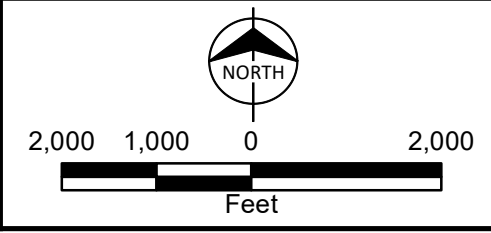
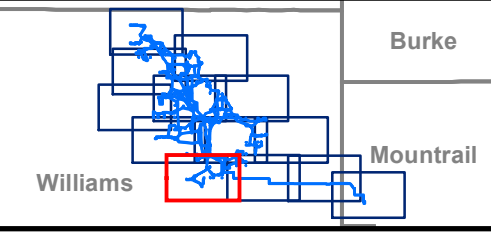


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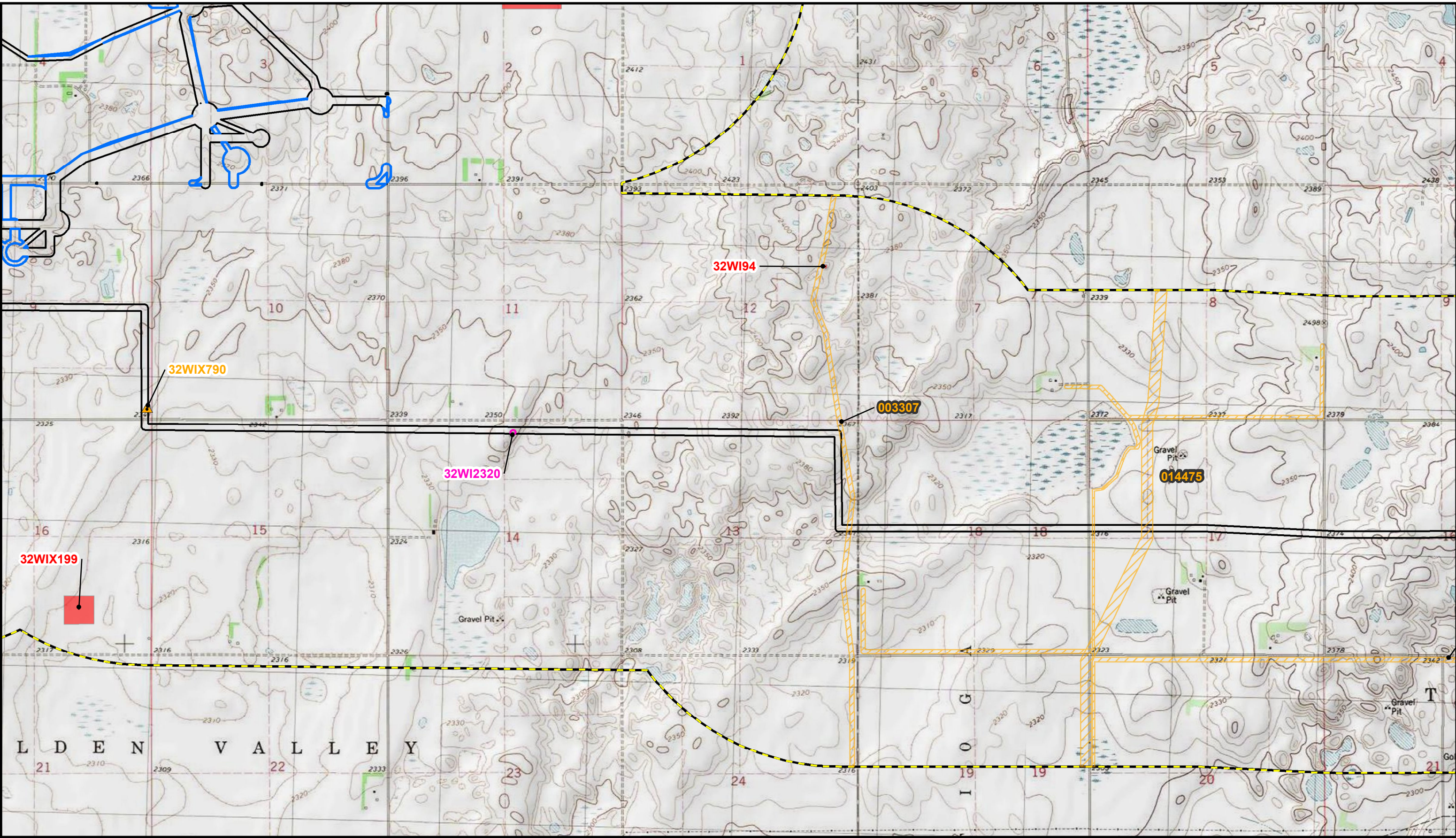


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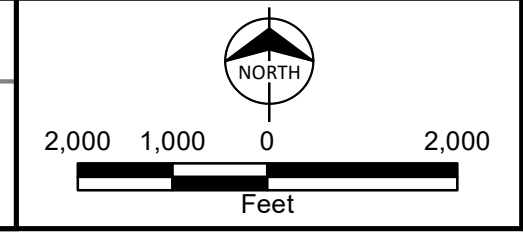
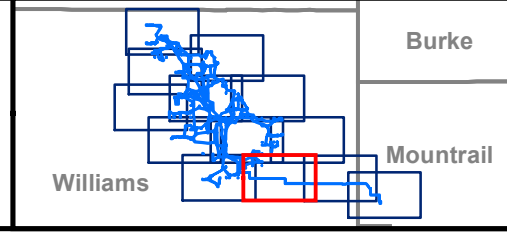


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 1:24,000 Topographic Map
 Aurora Wind Project, LLC
 Williams and Mountrail
 Counties, North Dakota
 Page 10 of 13

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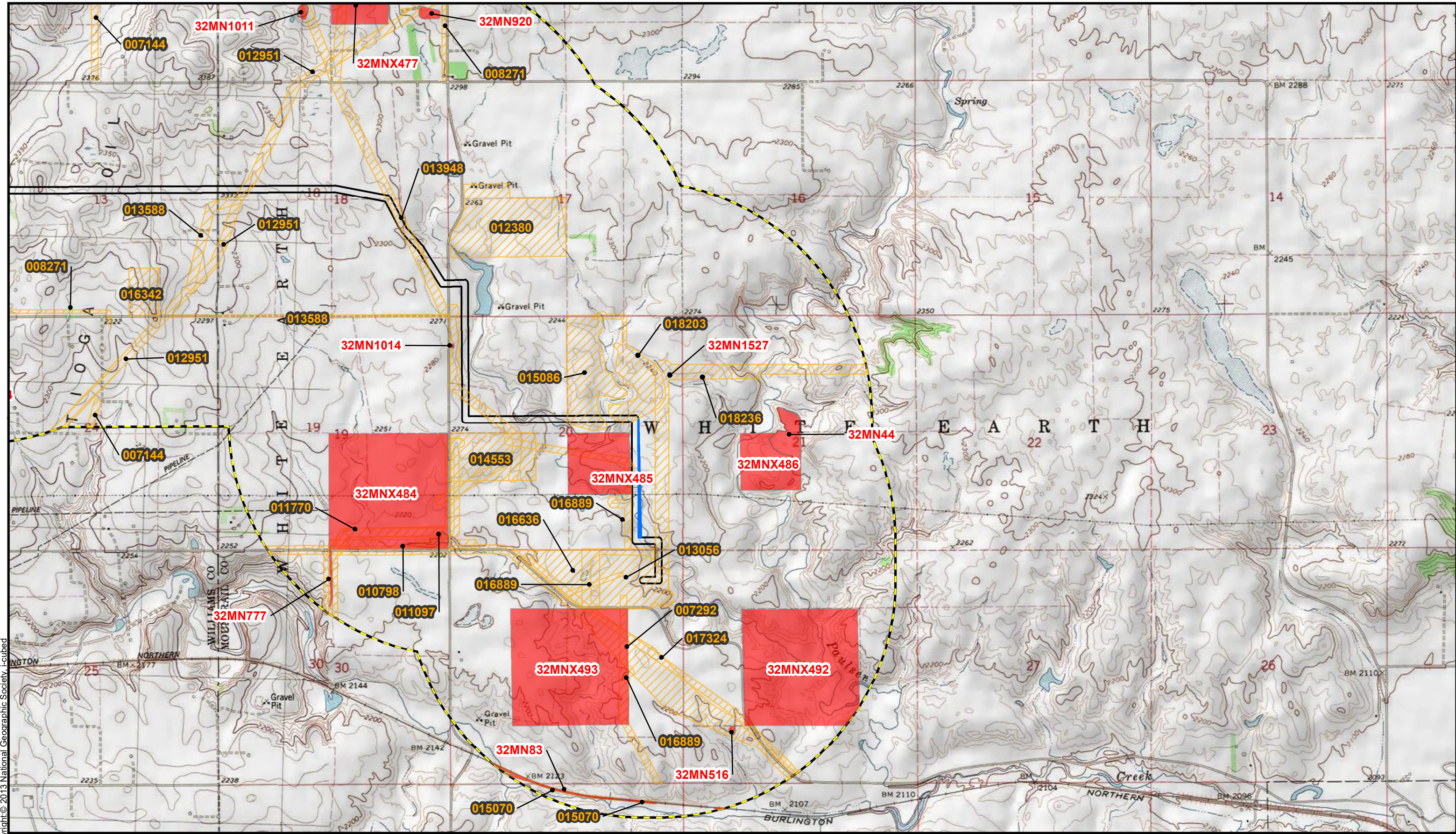


1-Mile Study Area	<all other values>	Previously Identified Sites and Leads
Completed Survey Corridor	Newly Identified Site	Previous Surveys
New Survey Corridor	Isolated Find	

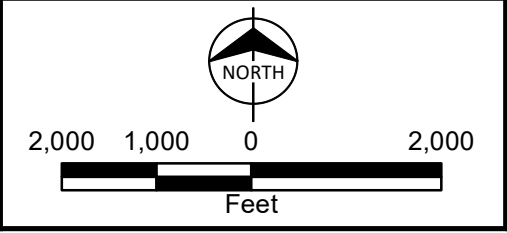
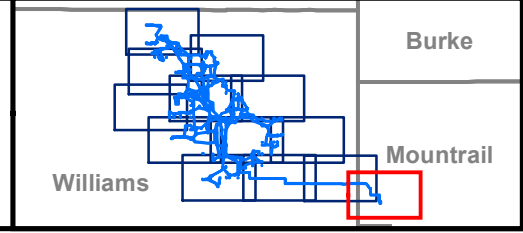


Appendix A
 Aurora Wind Farm
 1:24,000 Topographic Map
 Aurora Wind Project, LLC
 Williams and Mountrail
 Counties, North Dakota
 Page 11 of 13

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1-Mile Study Area	Previously Identified Sites and Leads
Completed Survey Corridor	Previous Surveys
New Survey Corridor	



Appendix A
Aurora Wind Farm
1:24,000 Topographic Map
Aurora Wind Project, LLC
Williams and Mountrail
Counties, North Dakota
Page 13 of 13

APPENDIX B - PROJECT AREA AND SITE PHOTOGRAPHS



Photograph B-1: Example of soybean field in survey corridor, facing north.



Photograph B-2: Example of wheat field in survey corridor, facing west.

Aurora Wind Project, LLC.



Project Area and Site Photographs
July 22 to 29, 2019
Williams and Mountrail Counties,
North Dakota



Photograph B-3: Example of a cultivated field in survey corridor, facing west.



Photograph B-4: Example of pasture in survey corridor, facing north.



Photograph B-5: Example of canola field in survey corridor, facing east.



Photograph B-6: Site A-101 overview, facing north northwest.



Photograph B-7: Modern grains bins on concrete pad barn floor, site A-101, facing northwest.



Photograph B-8: Well on south edge of site A-101, facing south.



Photograph B-9: Retention dam in road ditch, east edge of site A-101, facing northwest.



Photograph B-10: Site A-102 overview, facing west.



Photograph B-11: Basement and cistern overview, site A-102, facing west.



Photograph B-12: Cistern (foreground) and adjacent trash-filled basement, site A-102, facing east.



Photograph B-13: Well in base of depression, site A-102, facing east.



Photograph B-14: Remnant of concrete pad in northern portion of site A-10, facing north.



Photograph B-15: Partially collapsed and backfilled ice house, site A-102, facing southeast.



Photograph B-16: Site A-103 overview (left background of photograph) facing south.



Photograph B-17: Site A-104 overview, facing north.

Aurora Wind Project, LLC.



Project Area and Site Photographs
July 22 to 29, 2019
Williams and Mountrail Counties,
North Dakota

APPENDIX C - SITE MAPS

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- Project Area
- Newly Identified Archaeological Site
- Concrete Pad
- Power Pole

- Retention Dam in Ditch
- Stone Pier
- Well
- Road

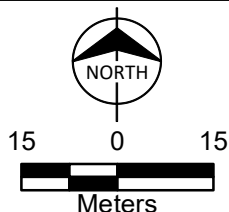


Figure C-1
Site BMCD-A-101
 Aurora Wind Project, LLC
 Williams County, North Dakota

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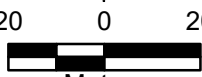





	Project Area		Ice House	  20 0 20 Meters
	Newly Identified Archaeological Site		Concrete Pad	
	Cellar		Cistern	
			Windmill	



Figure C-2
 Site BMCD-A-102
 Aurora Wind Project, LLC
 Williams County, North Dakota

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-  Project Area
-  Newly Identified Archaeological Site

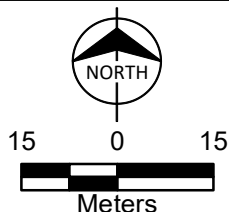


Figure C-3
Site BMCD-A-103
Aurora Wind Project, LLC
Williams County, North Dakota

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-  Project Area
-  Newly Identified Archaeological Site

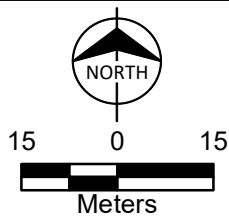


Figure C-4
Site BMCD-A-104
Aurora Wind Project, LLC
Williams County, North Dakota



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