

KC HARVEY
ENVIRONMENTAL, LLC

October 29, 2013

North Dakota Public Service Commission
Patrick Fahn
600 E. Boulevard, Dept 408
Bismark, ND 58505-0480



RE: Tree and Shrub Reclamation Plan for Vantage Pipeline Case No. PU-11-109

Dear NDPSC and Mr. Fahn,

In accordance with the North Dakota Public Service Commission (NDPSC) Tree and Shrub Mitigation Specifications, KC Harvey is submitting the Tree and Shrub Reclamation Plan for the Vantage Pipeline Case Number PU-11-109 for your review and approval.

The enclosed Tree and Shrub Reclamation Plan provides the following information as requested by the NDPSC Mitigation Specifications:

- The number and variety of trees and shrubs removed
- Reclamation plan for replacing these species at a 2:1 ratio
- The variety, location, and date of replacement plantings

Upon approval of this Reclamation Plan, replacement plantings will be initiated. Please contact me if you require any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "David P. Cameron".

David P. Cameron, P.E.
Principal Engineer
KC Harvey Environmental, LLC.

79 **PU-11-109** Filed: 11/6/2013 Pages: 60
Tree and shrub reclamation plan

KC Harvey Environmental, LLC

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TREE AND SHRUB RECLAMATION PLAN

Prepared for:

State of North Dakota Public Service Commission
Vantage Pipeline
Case No: PU-11-109

October 29, 2013

KC HARVEY
ENVIRONMENTAL, LLC



VANTAGE
PIPELINE US LP

Introduction

This document outlines the methods Vantage Pipeline US LP will use to replant the trees and shrubs that have been removed within their pipeline corridor. The 79.8 miles pipeline alignment is from Tioga, ND to the Canadian border northwest of Fortuna, ND within Divide and Williams Counties. The construction right-of-way (ROW) was 70 feet wide. A permanent ROW (PROW), approximately 30 feet of the ROW, will be maintained for the lifetime of the pipeline. Vantage Pipeline agrees to comply with all stipulations in the State of North Dakota Public Service Commission’s (PSC) Tree and Shrub Mitigation Specifications, including the reclamation requirements outlined in this document.

Field Inventory

The Tree and Shrub Sampling Plan for the Vantage Pipeline was submitted to and approved by the PSC in June 2013. The field inventory of trees and shrubs present on the ROW and PROW occurred in July and August of 2013, prior to construction. During construction, the actual number of tree and shrubs removed were recorded. Data collected during the inventory included:

- GPS location of trees or shrubs
- Species
- Area occupied by shrub or tree (individual plant, 0.1 acre, 0.25 acre, 0.5 acre)
- Location on the pipeline route (PROW, ROW, TWS, pipeline station #)
- Whether the trees or shrubs are native growth, part of a windrow or shelterbelt, or planted
- Land-cover in the area (native grassland, cropland, etc.)
- Designation to remove or avoid tree or shrub
- Number of trees or shrubs at each location (by species)
- Whether the species is native or invasive
- Any known landowner specifications for tree or shrub replacement

The inventories identified fourteen species of tree and shrubs along the Vantage Pipeline ROW (Table 1).

Table 1. Tree and shrub species present on the Vantage Pipeline ROW.

Common Name	Latin Name	Native Status
Caragana	<i>Caragana arborescens</i>	Non-native
Chokecherry	<i>Prunus virginiana</i>	Native
Dogwood	<i>Cornus stolonifera</i>	Native
Green Ash	<i>Fraxinus pennsylvanica</i>	Native
Juniper	<i>Juniperus scopulorum</i>	Non-native
Laurel Willow	<i>Salix pentandra</i>	Non-native
Maple	<i>Acer ginnala</i>	Non-native
Ponderosa Pine	<i>Pinus ponderosa</i>	Native
Prairie Rose	<i>Rosa arkansana</i>	Native
Russian Olive	<i>Elaeagnus angustifolia</i>	Non-native
Siberian Elm	<i>Ulmus pumila</i>	Non-native
Silver Buffaloberry	<i>Shepherdia argentea</i>	Native
Silverberry	<i>Elaeagnus commutata</i>	Native
Snowberry	<i>Symphoricarpos occidentalis</i>	Native

Reclamation Plan

This reclamation plan has been developed with input from the North Dakota Forest Service (NDFS). Plants are currently being secured through the Williams and Divide County Conservation Districts. Trees will be at least two-year-old saplings, and shrubs will be seedlings or root cuttings. Upon approval of this plan, the trees and shrubs may be replanted beginning in November 2013 and continuing until November 2014 as weather conditions permit. All planting will be completed by November 30, 2014.

During construction, tree and shrub species within the right-of-way (ROW) were avoided when practical. The trees and shrubs that were removed within the ROW will be replaced at a 2:1 ratio. Woody species within the thirty foot PROW were removed and the PROW will remain free of tree or shrubs to maintain the integrity of the pipeline. Therefore, trees and shrubs removed from the PROW will be replaced outside the PROW.

There were six species of trees and shrubs removed in windbreaks, shelterbelts or planted areas (Table 2). The same species will be replaced in approximately the same locations. Plants will be replaced either within the ROW or in gaps within the existing windrow (Appendix A). Siberian elm and caragana can be considered invasive species where they escape cultivation and spread into native grasslands. When Siberian elm and caragana are in windbreaks surrounded by cropland, as they are on the Vantage Pipeline, the NDFS recommends replanting these species (Smith 2013).

Russian olive and Siberian elm are considered invasive species when they colonize native grassland. There are four locations on the Vantage Pipeline where either Russian olive or Siberian elm are present in native grasslands (Table 3). Following the NDFS recommendations, these two species will be replaced with a native shrub or tree species. The landowner where each location occurs will be contacted regarding the suggested replacement species (Table 3). The planting location will be in the vicinity of the trees removed (Appendix A).

Table 2. Windbreak, shelterbelt and planted trees and shrubs.

Species	Number of Individuals Inventoried	Number of Replacements
Siberian Elm	14	28
Green Ash	33	66
Laurel Willow	4	8
Caragana	156	312
Maple	1	2
Ponderosa Pine	4	8

Table 3. Invasive trees and shrubs in native grasslands will be replaced with native species.

Species	Number of Individuals Inventoried	Suggested Replacement Species	Number of Replacements
Siberian Elm	2	Chokecherry	4
Russian olive	2	Chokecherry	4

Seven species of native shrubs were inventoried on the pipeline alignment within grassland areas (Table 4). The totals for shrubs inventoried represent the number of stems in the ROW. Snowberry and rose are rhizomatous shrubs, and chokecherry, silverberry and silver buffaloberry are suckering shrubs. Snowberry and rose stems branch off an individual plant’s rhizomes (lateral roots) every 1 to 3 feet; therefore, one plant can have hundreds of stems emerging from the ground (Hauser 2006 and 2007). In fact, individual snowberry plants can form multi-stem colonies 3 - 700 feet in diameter (Hauser 2007). The growth habit of these rhizomatous species made it difficult to determine the number of individual plants within the ROW. It is likely many of the plants are connected underground and the totals in Table 4 are an over estimation of unique snowberry and rose individuals. For replacement purposes we estimate that one plant has an average of ten stems. Therefore the replacement ratio for snowberry and rose natural regeneration will be a 2:1 ratio assuming that 1 plant replaced had 10 pre-disturbance stems.

Following the PSC guidelines, in native growth areas the shrubs within the PROW will be replaced. However, where possible in native growth areas outside the PROW, shrubs were cut flush with the ground to leave the root mass and seed bank in place for natural regeneration. Where soil disturbance was necessary, the soil was preserved and replaced after construction to allow for natural regeneration of the shrubs from roots and seeds in the soil.

The juniper and dogwood will be re-planted because they do not regenerate well from root stock in the soil. The chokecherry, silverberry and silver buffaloberry can regenerate from root stock; however, they will be direct planted to ensure their establishment. These five species will be replanted in the approximate location they were removed at a 2:1 ratio (Appendix A).

Snowberry shrubs regenerate vegetatively by root segments (rhizomes) and prairie rose regenerates from seed and sprouting root crowns. The snowberry and rose will sprout following mowing or cutting to regenerate naturally along the pipeline (Table 4). Their root segments and seed will be preserved in topsoil and re-distributed along the ROW during reclamation. In addition, snowberry and rose seed will be purchased and broadcast applied to areas the species were present pre-pipeline disturbance. Seed will be broadcast at rate proportionate to the number of inventoried stems per location. For example, a location with 1,000 rose stems will be seeded at 0.025 lbs/acre.

Table 4. Native shrubs found in grasslands along the Vantage Pipeline.

Species	Number of Stems Inventoried	Number of Replacements	Suggested Replacement Method
Juniper	1	2	Planting
Dogwood	5	10	Planting
Chokecherry	70	140	Planting
Silverberry	210	420	Planting
Silver buffaloberry	50	100	Planting
Rose	767	153	Natural Regeneration + Seeding
Snowberry	37,152	7,430	Natural Regeneration + Seeding

All tree and shrub replacements will be inspected annually in September for three years to monitor survival rate. This will include the areas where natural regeneration is the reclamation strategy. The first annual inspection will be at least one growing season from the anniversary of the planting date. A report with the results of each annual inspection will be provided to the PSC by October of each year. If the annual survival of the planted trees and shrubs does not meet or exceed 75% survival, then additional trees and shrubs will be planted.

The natural regeneration of snowberry and rose will be monitored by counting the density of stems re-establishing. The number of snowberry and rose stems will not be replaced at a 2:1 rate since the number of stems inventoried are likely an overestimation of individual shrubs (see above). Instead, the desired re-established density of snowberry and rose will be 1 stem re-established / 10 stems disturbed. This 1:10 ratio assumes each individual snowberry or rose plant has rhizome producing stems 3 feet long (approximately 1 plant / 9ft²). After three years of monitoring the successful regeneration of the snowberry and rose would be 1.5 stems / 9ft². If the desired density is not reached during the second year of monitoring, then additional seeding or direct planting of rose and snowberry will be implemented.

References

- Hauser, A. S. 2007. *Symphoricarpos occidentalis*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2013, September 25].
- Hauser, A. S. 2006. *Rosa arkansana*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2013, September 25].
- Smith, L.M. 2013. Personal Communications with the Stewardship Specialist, ND Forest Service. October 21, 2013.

Appendix A

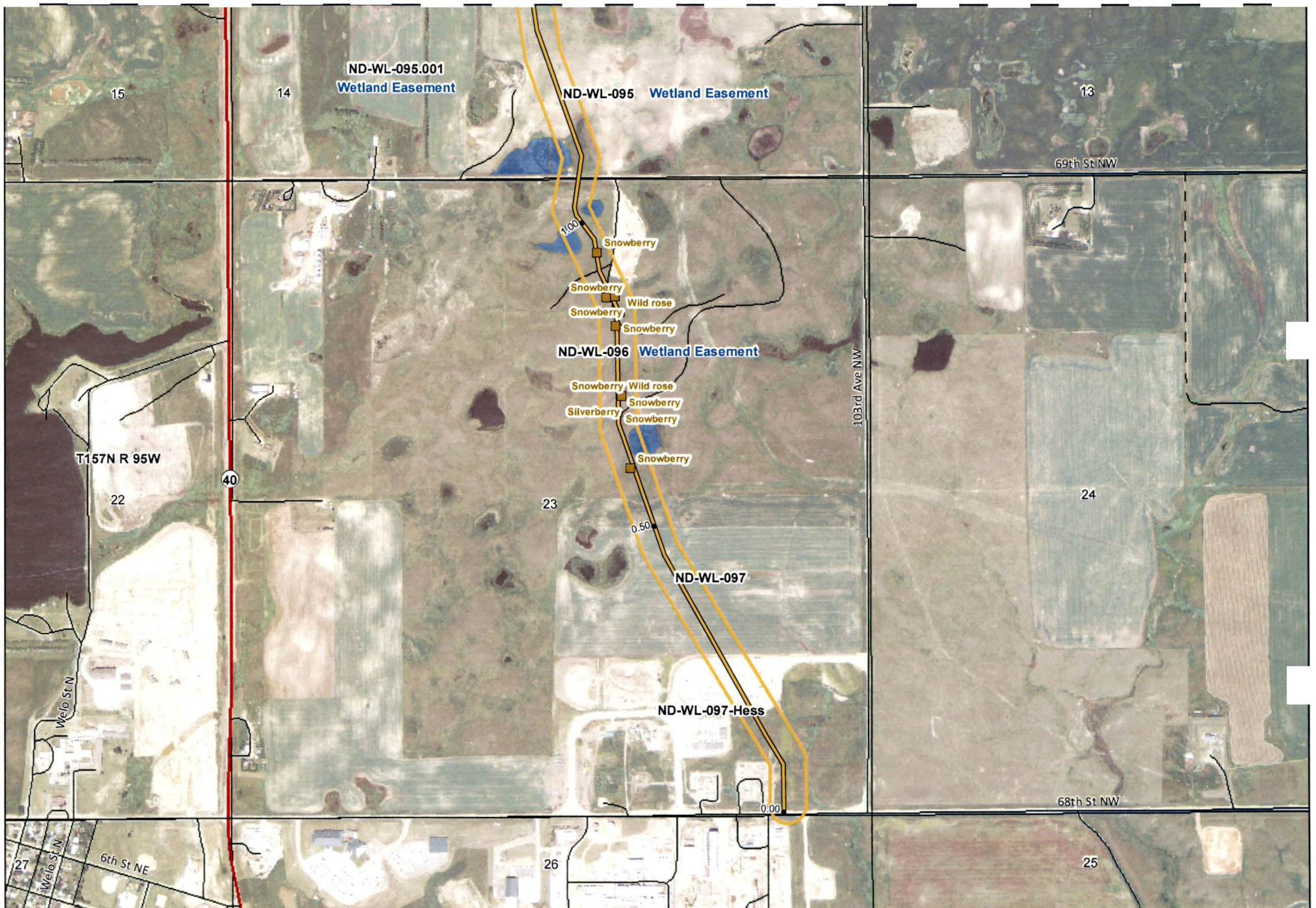
Line List and Map Book with Planting Locations

Pipeline Milepost	Inventory Species	Inventory Plant Type	Inventory Stem Count	Mitigation Plan	Mitigation Species	Mitigation Plant Type	Mitigation Stem Count	Latitude	Longitude	Land Tract ID	Land Tract Owner Name
0.60	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.409344	-102.915501	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.69	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.410637	-102.915911	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.71	Silverberry	Shrub	25	Natural Regeneration and seeding	Silverberry	Shrub	5.00	48.410999	-102.915779	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.71	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.410999	-102.915779	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.71	Wild rose	Shrub	100	Natural Regeneration and seeding	Wild rose	Shrub	20.00	48.410999	-102.915779	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.71	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.410999	-102.915779	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.82	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.412589	-102.915962	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.85	Wild rose	Shrub	35	Natural Regeneration and seeding	Wild rose	Shrub	7.00	48.412901	-102.915804	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.85	Snowberry	Shrub	70	Natural Regeneration and seeding	Snowberry	Shrub	14.00	48.412901	-102.915804	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.87	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.413262	-102.915976	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.88	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.413244	-102.916279	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
0.95	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.414267	-102.916589	ND-WL-096	Rehak, Dennis A; Rehak, Rhonda K
2.50	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.430252	-102.930402	ND-WL-088.001	Ongstad, Astrid
2.50	Russian Olive	Tree	1	Replace with chokecherry, 2 to 1	Chokecherry	Shrub	2.00	48.430252	-102.930402	ND-WL-088.001	Ongstad, Astrid
3.03	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.432624	-102.939744	ND-WL-086.001	Ives, Howard M
3.08	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.433332	-102.940402	ND-WL-086.001	Ives, Howard M
3.11	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.433611	-102.940714	ND-WL-086.001	Ives, Howard M
3.15	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.434206	-102.941151	ND-WL-086.001	Ives, Howard M
3.15	Chokecherry	Shrub	50	Replace same, 2 to 1	Chokecherry	Shrub	100.00	48.434206	-102.941151	ND-WL-086.001	Ives, Howard M
3.21	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.434887	-102.941744	ND-WL-086.001	Ives, Howard M
3.25	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.435412	-102.942214	ND-WL-086.001	Ives, Howard M
3.51	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.438632	-102.945076	ND-WL-086	Hiepler Family Trust
3.51	Dogwood	Shrub	5	Replace same, 2 to 1	Dogwood	Shrub	10.00	48.438632	-102.945076	ND-WL-086	Hiepler Family Trust
3.53	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.438944	-102.945194	ND-WL-086	Hiepler Family Trust
3.60	Wild rose	Shrub	100	Natural Regeneration and seeding	Wild rose	Shrub	20.00	48.439786	-102.945939	ND-WL-086	Hiepler Family Trust
3.60	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.439786	-102.945939	ND-WL-086	Hiepler Family Trust
3.64	Snowberry	Shrub	10000	Natural Regeneration and seeding	Snowberry	Shrub	2000.00	48.440234	-102.946511	ND-WL-086	Hiepler Family Trust
3.70	Snowberry	Shrub	350	Natural Regeneration and seeding	Snowberry	Shrub	70.00	48.440926	-102.947359	ND-WL-086	Hiepler Family Trust
3.78	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.441979	-102.947851	ND-WL-086	Hiepler Family Trust
4.04	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.445237	-102.950644	ND-WL-085	Borstad, Sandra; Borstad, Howard
4.24	Siberian Elm	Tree	1	Replace with chokecherry, 2 to 1	Chokecherry	Shrub	2.00	48.448119	-102.950657	ND-WL-085	Borstad, Sandra; Borstad, Howard
4.30	Wild rose	Shrub	200	Natural Regeneration and seeding	Wild rose	Shrub	40.00	48.449031	-102.950807	ND-WL-089.501	Borstad, Sandra; Borstad, Howard
4.35	Chokecherry	Shrub	2	Replace same, 2 to 1	Chokecherry	Shrub	4.00	48.449421	-102.951551	ND-WL-089.5	Kjelvik, Bruce; Kjelvik, Corrine
4.35	Green Ash	Tree	10	Replace same, 2 to 1	Green Ash	Tree	20.00	48.449421	-102.951551	ND-WL-089.5	Kjelvik, Bruce; Kjelvik, Corrine
4.36	Willow	Tree	2	Replace same, 2 to 1	Willow	Tree	4.00	48.449617	-102.951551	ND-WL-089.5	Kjelvik, Bruce; Kjelvik, Corrine
4.55	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.452361	-102.951462	ND-WL-088.5	Borstad, Sandra; Borstad, Howard
4.59	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.452939	-102.951384	ND-WL-088.5	Borstad, Sandra; Borstad, Howard
4.66	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.453944	-102.951361	ND-WL-088.5	Borstad, Sandra; Borstad, Howard
4.76	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.455449	-102.951602	ND-WL-088.5	Borstad, Sandra; Borstad, Howard
4.95	Silverberry	Shrub	100	Natural Regeneration and seeding	Silverberry	Shrub	20.00	48.458092	-102.952177	ND-WL-088.5	Borstad, Sandra; Borstad, Howard
5.24	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.462299	-102.952297	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.28	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.462766	-102.952267	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.30	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.463192	-102.952232	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.36	Chokecherry	Shrub	10	Replace same, 2 to 1	Chokecherry	Shrub	20.00	48.463806	-102.951457	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.40	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.464406	-102.951232	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.44	Wild rose	Shrub	50	Natural Regeneration and seeding	Wild rose	Shrub	10.00	48.464956	-102.951129	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.47	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.465347	-102.951237	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.52	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.465917	-102.951702	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.59	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.466621	-102.952752	ND-WL-087.5	Borstad, Sandra; Borstad, Howard
5.68	Silverberry	Shrub	75	Natural Regeneration and seeding	Silverberry	Shrub	15.00	48.467617	-102.953991	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.68	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.467617	-102.953991	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.71	Silverberry	Shrub	10	Natural Regeneration and seeding	Silverberry	Shrub	2.00	48.468012	-102.954017	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.71	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.468012	-102.954017	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.75	Wild rose	Shrub	50	Natural Regeneration and seeding	Wild rose	Shrub	10.00	48.468506	-102.954552	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.75	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.468506	-102.954552	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
5.78	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.468846	-102.955102	ND-WL-085.501	Borstad, Sandra; Borstad, Howard
6.01	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.470229	-102.959297	ND-WL-085.5	Ives, Howard M
6.04	Wild rose	Shrub	50	Natural Regeneration and seeding	Wild rose	Shrub	10.00	48.470519	-102.959904	ND-WL-085.5	Ives, Howard M
6.04	Snowberry	Shrub	150	Natural Regeneration and seeding	Snowberry	Shrub	30.00	48.470519	-102.959904	ND-WL-085.5	Ives, Howard M

Pipeline Milepost	Inventory Species	Inventory Plant Type	Inventory Stem Count	Mitigation Plan	Mitigation Species	Mitigation Plant Type	Mitigation Stem Count	Latitude	Longitude	Land Tract ID	Land Tract Owner Name
6.07	Green Ash	Tree	5	Replace same, 2 to 1	Green Ash	Tree	10.00	48.470707	-102.960544	ND-WL-085.5	Ives, Howard M
6.07	Caragana	Shrub	10	Replace same, 2 to 1	Caragana	Shrub	20.00	48.470707	-102.960544	ND-WL-085.5	Ives, Howard M
6.21	Dead Green Ash	Tree	2	Replace same, 2 to 1	Green Ash	Tree	4.00	48.471542	-102.963276	ND-WL-084.5	Ives, Howard M
6.21	Caragana	Shrub	15	Replace same, 2 to 1	Caragana	Shrub	30.00	48.471542	-102.963276	ND-WL-084.5	Ives, Howard M
6.35	Dead Green Ash	Tree	2	Replace same, 2 to 1	Green Ash	Tree	4.00	48.472432	-102.966036	ND-WL-084.5	Ives, Howard M
6.35	Caragana	Shrub	16	Replace same, 2 to 1	Caragana	Shrub	32.00	48.472432	-102.966036	ND-WL-084.5	Ives, Howard M
6.48	Green Ash	Tree	6	Replace same, 2 to 1	Green Ash	Tree	12.00	48.473236	-102.968559	ND-WL-083.5	Lalim, Gordon
6.48	Caragana	Shrub	20	Replace same, 2 to 1	Caragana	Shrub	40.00	48.473236	-102.968559	ND-WL-083.5	Lalim, Gordon
6.67	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.474409	-102.972352	ND-WL-082.5	Lalim, Gordon
6.72	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.474681	-102.973259	ND-WL-081.5	Lalim, Gordon
6.77	Silver Buffaloberry	Shrub	50	Replace same, 2 to 1	Silver Buffaloberry	Shrub	100.00	48.475024	-102.974199	ND-WL-081.5	Lalim, Gordon
6.84	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.475494	-102.975579	ND-WL-081.5	Lalim, Gordon
6.88	Wild rose	Shrub	50	Natural Regeneration and seeding	Wild rose	Shrub	10.00	48.475739	-102.976377	ND-WL-081.5	Lalim, Gordon
6.91	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.475956	-102.977022	ND-WL-081.5	Lalim, Gordon
6.96	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.476411	-102.977824	ND-WL-081.5	Lalim, Gordon
7.00	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.476821	-102.978481	ND-WL-080.5	Evelyn Hoseth Family Trust
7.26	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.480017	-102.981189	ND-WL-080.5	Evelyn Hoseth Family Trust
7.28	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.480274	-102.981374	ND-WL-080.5	Evelyn Hoseth Family Trust
7.33	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.480952	-102.981892	ND-WL-080.5	Evelyn Hoseth Family Trust
7.40	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.481919	-102.982256	ND-WL-079.5	Eisenzimmer, Susan
7.43	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.482382	-102.982461	ND-WL-079.5	Eisenzimmer, Susan
7.47	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.482894	-102.982741	ND-WL-079.5	Eisenzimmer, Susan
7.53	Snowberry	Shrub	300	Natural Regeneration and seeding	Snowberry	Shrub	60.00	48.483752	-102.983077	ND-WL-079.5	Eisenzimmer, Susan
7.63	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.485094	-102.983916	ND-WL-078.5	Eide, Donna
7.63	Juniper	Tree	1	Replace same, 2 to 1	Juniper	Tree	2.00	48.485094	-102.983916	ND-WL-078.5	Eide, Donna
7.70	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.485964	-102.984252	ND-WL-078.5	Eide, Donna
7.73	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.486344	-102.984544	ND-WL-078.5	Eide, Donna
7.78	Snowberry	Shrub	500	Natural Regeneration and seeding	Snowberry	Shrub	100.00	48.486962	-102.985114	ND-WL-078.5	Eide, Donna
7.87	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.488019	-102.986072	ND-WL-078.5	Eide, Donna
7.99	Snowberry	Shrub	1500	Natural Regeneration and seeding	Snowberry	Shrub	300.00	48.489347	-102.987659	ND-WL-077.5	Eide, Donna
8.09	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.490697	-102.988581	ND-WL-077.5	Eide, Donna
8.15	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.491557	-102.988771	ND-WL-077.5	Eide, Donna
8.21	Snowberry	Shrub	250	Natural Regeneration and seeding	Snowberry	Shrub	50.00	48.492496	-102.988796	ND-WL-077.5	Eide, Donna
8.33	Snowberry	Shrub	150	Natural Regeneration and seeding	Snowberry	Shrub	30.00	48.494169	-102.988662	ND-WL-077.5	Eide, Donna
8.37	Snowberry	Shrub	350	Natural Regeneration and seeding	Snowberry	Shrub	70.00	48.494716	-102.988692	ND-WL-077.5	Eide, Donna
8.41	Chokecherry	Shrub	1	Replace same, 2 to 1	Chokecherry	Shrub	2.00	48.495347	-102.988796	ND-WL-077.5	Eide, Donna
8.53	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.496969	-102.989284	ND-WL-076.5	Eide, Donna
11.93	Russian Olive	Tree	1	Replace with chokecherry, 2 to 1	Chokecherry	Shrub	2.00	48.518284	-103.048117	ND-WL-067.5	Eileen L Samdahl Living Trust
11.97	Wild rose	Shrub	100	Natural Regeneration and seeding	Wild rose	Shrub	20.00	48.518316	-103.048939	ND-WL-066.5	Eileen L Samdahl Living Trust
11.97	Snowberry	Shrub	150	Natural Regeneration and seeding	Snowberry	Shrub	30.00	48.518316	-103.048939	ND-WL-066.5	Eileen L Samdahl Living Trust
12.43	Siberian Elm	Tree	7	Replace same, 2 to 1	Siberian Elm	Tree	14.00	48.522256	-103.056524	ND-WL-066.5	Eileen L Samdahl Living Trust
14.84	Snowberry	Shrub	1500	Natural Regeneration and seeding	Snowberry	Shrub	300.00	48.538844	-103.098287	ND-WL-056.502	Johnson, Gregory Alfred
15.04	Snowberry	Shrub	1250	Natural Regeneration and seeding	Snowberry	Shrub	250.00	48.538804	-103.102772	ND-WL-056.502	Johnson, Gregory Alfred
15.10	Siberian Elm	Tree	1	Replace with chokecherry, 2 to 1	Chokecherry	Shrub	2.00	48.538906	-103.104134	ND-WL-056.501	Johnson, Gregory Alfred
16.08	Snowberry	Shrub	550	Natural Regeneration and seeding	Snowberry	Shrub	110.00	48.539101	-103.122779	ND-WL-056	Dahl, James A
16.09	Chokecherry	Shrub	1	Replace same, 2 to 1	Chokecherry	Shrub	2.00	48.539076	-103.123144	ND-WL-056	Dahl, James A
21.36	Maple	Tree	1	Replace same, 2 to 1	Maple	Tree	2.00	48.561226	-103.219047	ND-WL-043	Magnuson, Lynden A
21.38	Green Ash	Tree	8	Replace same, 2 to 1	Green Ash	Tree	16.00	48.561036	-103.219367	ND-WL-043	Magnuson, Lynden A
21.39	Willow	Tree	2	Replace same, 2 to 1	Willow	Tree	4.00	48.561002	-103.219542	ND-WL-043	Magnuson, Lynden A
30.24	Chokecherry	Shrub	1	Replace same, 2 to 1	Chokecherry	Shrub	2.00	48.589116	-103.378831	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.32	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.589131	-103.380584	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.34	Snowberry	Shrub	50	Natural Regeneration and seeding	Snowberry	Shrub	10.00	48.589092	-103.380871	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.34	Chokecherry	Shrub	3	Replace same, 2 to 1	Chokecherry	Shrub	6.00	48.589111	-103.380904	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.42	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.588994	-103.382571	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.46	Snowberry	Shrub	100	Natural Regeneration and seeding	Snowberry	Shrub	20.00	48.589086	-103.383527	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.48	Chokecherry	Shrub	2	Replace same, 2 to 1	Chokecherry	Shrub	4.00	48.589099	-103.383907	ND-WL-024	Halvorson, Lucy J; Halvorson, Henry C
30.72	Snowberry	Shrub	200	Natural Regeneration and seeding	Snowberry	Shrub	40.00	48.589119	-103.389191	ND-WL-023	Bilquist, Richard D; Bilquist, Donna M
30.76	Snowberry	Shrub	1000	Natural Regeneration and seeding	Snowberry	Shrub	200.00	48.589277	-103.390009	ND-WL-023	Bilquist, Richard D; Bilquist, Donna M
30.79	Snowberry	Shrub	850	Natural Regeneration and seeding	Snowberry	Shrub	170.00	48.589414	-103.390556	ND-WL-023	Bilquist, Richard D; Bilquist, Donna M

Pipeline Milepost	Inventory Species	Inventory Plant Type	Inventory Stem Count	Mitigation Plan	Mitigation Species	Mitigation Plant Type	Mitigation Stem Count	Latitude	Longitude	Land Tract ID	Land Tract Owner Name
33.44	Ponderose Pine	Tree	4	Replace same, 2 to 1	Ponderose Pine	Tree	8.00	48.601897	-103.439417	ND-WL-011	Overland, Keith A
38.91	Snowberry	Shrub	23	Natural Regeneration and seeding	Snowberry	Shrub	4.60	48.647381	-103.508951	ND-DV-093	Jack A.and Andora M.Eichmann Trust
40.16	Siberian Elm	Tree	7	Replace same, 2 to 1	Siberian Elm	Tree	14.00	48.647653	-103.536226	ND-DV-091	Johnson, Lester
42.08	Snowberry	Shrub	21	Natural Regeneration and seeding	Snowberry	Shrub	4.20	48.667214	-103.556661	ND-DV-087	Haugen, Mervin K.
42.17	Snowberry	Shrub	18	Natural Regeneration and seeding	Snowberry	Shrub	3.60	48.667897	-103.558331	ND-DV-087	Haugen, Mervin K.
48.44	Snowberry	Shrub	18	Natural Regeneration and seeding	Snowberry	Shrub	3.60	48.734006	-103.636334	ND-DV-070	Ordean Rude Family Trust
48.44	Wild rose	Shrub	4	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.734007	-103.636336	ND-DV-070	Ordean Rude Family Trust
50.63	Snowberry	Shrub	13	Natural Regeneration and seeding	Snowberry	Shrub	2.60	48.746717	-103.675316	ND-DV-066	Fred Eberle, Life Estate
50.73	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.747717	-103.676762	ND-DV-066	Fred Eberle, Life Estate
50.73	Snowberry	Shrub	14	Natural Regeneration and seeding	Snowberry	Shrub	2.80	48.747717	-103.676762	ND-DV-066	Fred Eberle, Life Estate
50.77	Snowberry	Shrub	12	Natural Regeneration and seeding	Snowberry	Shrub	2.40	48.748244	-103.677176	ND-DV-066	Fred Eberle, Life Estate
50.85	Snowberry	Shrub	8	Natural Regeneration and seeding	Snowberry	Shrub	1.60	48.749429	-103.677690	ND-DV-066	Fred Eberle, Life Estate
50.93	Snowberry	Shrub	6	Natural Regeneration and seeding	Snowberry	Shrub	1.20	48.750461	-103.678127	ND-DV-065.001	Aaberg, Leslie C.
51.11	Snowberry	Shrub	17	Natural Regeneration and seeding	Snowberry	Shrub	3.40	48.753006	-103.679171	ND-DV-065.001	Aaberg, Leslie C.
51.12	Snowberry	Shrub	9	Natural Regeneration and seeding	Snowberry	Shrub	1.80	48.753222	-103.679281	ND-DV-065.001	Aaberg, Leslie C.
51.32	Snowberry	Shrub	4	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.755744	-103.680867	ND-DV-065.001	Aaberg, Leslie C.
51.62	Snowberry	Shrub	5	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.759456	-103.683144	ND-DV-065	Aaberg, Leslie C.
51.62	Snowberry	Shrub	6	Natural Regeneration and seeding	Snowberry	Shrub	1.20	48.759572	-103.683152	ND-DV-065	Aaberg, Leslie C.
51.68	Wild rose	Shrub	3	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.760354	-103.683564	ND-DV-065	Aaberg, Leslie C.
51.68	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.760354	-103.683564	ND-DV-065	Aaberg, Leslie C.
51.74	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.760522	-103.684412	ND-DV-064.001	Aaberg, Warren
51.79	Snowberry	Shrub	20	Natural Regeneration and seeding	Snowberry	Shrub	4.00	48.760292	-103.685599	ND-DV-064.001	Aaberg, Warren
51.81	Snowberry	Shrub	23	Natural Regeneration and seeding	Snowberry	Shrub	4.60	48.760324	-103.685901	ND-DV-064.001	Aaberg, Warren
51.95	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.760452	-103.688946	ND-DV-064.001	Aaberg, Warren
52.04	Wild rose	Shrub	1	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.760609	-103.690894	ND-DV-064.001	Aaberg, Warren
52.04	Snowberry	Shrub	24	Natural Regeneration and seeding	Snowberry	Shrub	4.80	48.760609	-103.690894	ND-DV-064.001	Aaberg, Warren
52.19	Snowberry	Shrub	6	Natural Regeneration and seeding	Snowberry	Shrub	1.20	48.760959	-103.694092	ND-DV-064.001	Aaberg, Warren
52.25	Wild rose	Shrub	2	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.761621	-103.694977	ND-DV-064.001	Aaberg, Warren
52.25	Snowberry	Shrub	5	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.761621	-103.694977	ND-DV-064.001	Aaberg, Warren
52.33	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.762471	-103.696164	ND-DV-064	Aaberg, Warren
52.36	Snowberry	Shrub	20	Natural Regeneration and seeding	Snowberry	Shrub	4.00	48.762867	-103.696579	ND-DV-064	Aaberg, Warren
52.45	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.764182	-103.696812	ND-DV-063.001	Fred Eberle, Life Estate
52.53	Snowberry	Shrub	9	Natural Regeneration and seeding	Snowberry	Shrub	1.80	48.765227	-103.697596	ND-DV-063.001	Fred Eberle, Life Estate
52.61	Snowberry	Shrub	21	Natural Regeneration and seeding	Snowberry	Shrub	4.20	48.766287	-103.698061	ND-DV-063.001	Fred Eberle, Life Estate
53.85	Snowberry	Shrub	9	Natural Regeneration and seeding	Snowberry	Shrub	1.80	48.783011	-103.707259	ND-DV-061	Stern, Virginia R.; Stern, David
53.89	Snowberry	Shrub	16	Natural Regeneration and seeding	Snowberry	Shrub	3.20	48.783539	-103.707632	ND-DV-061	Stern, Virginia R.; Stern, David
53.95	Snowberry	Shrub	17	Natural Regeneration and seeding	Snowberry	Shrub	3.40	48.784046	-103.708657	ND-DV-061	Stern, Virginia R.; Stern, David
53.99	Snowberry	Shrub	16	Natural Regeneration and seeding	Snowberry	Shrub	3.20	48.784407	-103.709427	ND-DV-061	Stern, Virginia R.; Stern, David
54.19	Snowberry	Shrub	14	Natural Regeneration and seeding	Snowberry	Shrub	2.80	48.786269	-103.712792	ND-DV-060	Cornwall Holm Revocable Trust
54.30	Snowberry	Shrub	12	Natural Regeneration and seeding	Snowberry	Shrub	2.40	48.787421	-103.713977	ND-DV-060	Cornwall Holm Revocable Trust
61.52	Caragana	Shrub	95	Replace same, 2 to 1	Caragana	Shrub	190.00	48.865836	-103.793207	ND-DV-039.002	Odegaard Land Company
64.50	Snowberry	Shrub	16	Natural Regeneration and seeding	Snowberry	Shrub	3.20	48.897044	-103.822434	ND-DV-031	Legaard, Stuart J.
64.54	Snowberry	Shrub	2	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.897477	-103.822785	ND-DV-031	Legaard, Stuart J.
64.62	Snowberry	Shrub	29	Natural Regeneration and seeding	Snowberry	Shrub	5.80	48.898522	-103.823387	ND-DV-031	Legaard, Stuart J.
65.91	Snowberry	Shrub	2	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.916419	-103.830427	ND-DV-028	Robert H. Constantine & Irene G. Constantine Trust Agreement
67.76	Snowberry	Shrub	7	Natural Regeneration and seeding	Snowberry	Shrub	1.40	48.934944	-103.847610	ND-DV-024.002	McNally, Arlene; McNally, Patrick
67.79	Snowberry	Shrub	12	Natural Regeneration and seeding	Snowberry	Shrub	2.40	48.935046	-103.848257	ND-DV-024.002	McNally, Arlene; McNally, Patrick
68.17	Snowberry	Shrub	16	Natural Regeneration and seeding	Snowberry	Shrub	3.20	48.938254	-103.854702	ND-DV-023.004	Leininger, C. DuWayne
68.21	Snowberry	Shrub	20	Natural Regeneration and seeding	Snowberry	Shrub	4.00	48.938792	-103.855275	ND-DV-023.004	Leininger, C. DuWayne
68.27	Snowberry	Shrub	23	Natural Regeneration and seeding	Snowberry	Shrub	4.60	48.939337	-103.856154	ND-DV-023.004	Leininger, C. DuWayne
68.30	Snowberry	Shrub	9	Natural Regeneration and seeding	Snowberry	Shrub	1.80	48.939791	-103.856545	ND-DV-023.004	Leininger, C. DuWayne
68.33	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.940157	-103.856779	ND-DV-023.004	Leininger, C. DuWayne
68.62	Wild rose	Shrub	3	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.943514	-103.859665	ND-DV-023.003	Wehrman, Wanda
68.62	Snowberry	Shrub	5	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.943514	-103.859665	ND-DV-023.003	Wehrman, Wanda
68.72	Snowberry	Shrub	5	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.945014	-103.859654	ND-DV-023.003	Wehrman, Wanda
69.10	Wild rose	Shrub	2	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.950396	-103.860029	ND-DV-023.002	McNally, Arlene; McNally, Patrick
69.10	Snowberry	Shrub	6	Natural Regeneration and seeding	Snowberry	Shrub	1.20	48.950396	-103.860029	ND-DV-023.002	McNally, Arlene; McNally, Patrick

Pipeline Milepost	Inventory Species	Inventory Plant Type	Inventory Stem Count	Mitigation Plan	Mitigation Species	Mitigation Plant Type	Mitigation Stem Count	Latitude	Longitude	Land Tract ID	Land Tract Owner Name
69.64	Snowberry	Shrub	12	Natural Regeneration and seeding	Snowberry	Shrub	2.40	48.958189	-103.859974	ND-DV-019.002	R & M Whiting Living Trust; Nielsen, Eric; Nielsen, Cynthia A.; Nielsen, Whiting
69.73	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.959451	-103.860075	ND-DV-019.002	R & M Whiting Living Trust; Nielsen, Eric; Nielsen, Cynthia A.; Nielsen, Whiting
74.01	Snowberry	Shrub	5	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.961746	-103.942262	ND-DV-013	Huffman, Ardith
74.04	Snowberry	Shrub	6	Natural Regeneration and seeding	Snowberry	Shrub	1.20	48.961542	-103.943052	ND-DV-013	Huffman, Ardith
74.11	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.960939	-103.944135	ND-DV-013	Huffman, Ardith
74.23	Wild rose	Shrub	6	Natural Regeneration and seeding	Wild rose	Shrub	1.20	48.960026	-103.946177	ND-DV-013	Huffman, Ardith
74.29	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.960076	-103.947497	ND-DV-012.001	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.47	Snowberry	Shrub	35	Natural Regeneration and seeding	Snowberry	Shrub	7.00	48.960226	-103.951145	ND-DV-012.001	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.51	Snowberry	Shrub	23	Natural Regeneration and seeding	Snowberry	Shrub	4.60	48.959969	-103.951990	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.53	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.959917	-103.952314	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.62	Wild rose	Shrub	6	Natural Regeneration and seeding	Wild rose	Shrub	1.20	48.959196	-103.953979	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.62	Snowberry	Shrub	25	Natural Regeneration and seeding	Snowberry	Shrub	5.00	48.959196	-103.953979	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.65	Snowberry	Shrub	20	Natural Regeneration and seeding	Snowberry	Shrub	4.00	48.958982	-103.954564	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
74.77	Snowberry	Shrub	20	Natural Regeneration and seeding	Snowberry	Shrub	4.00	48.958407	-103.957012	ND-DV-012	Haugland, Kent; Haugland, Gerald; Haugland, Diane M; Haugland, Diane L
79.13	Snowberry	Shrub	2	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.985489	-104.012227	ND-DV-003.003	State of North Dakota
79.29	Wild rose	Shrub	3	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.987672	-104.012082	ND-DV-003.003	State of North Dakota
79.29	Snowberry	Shrub	10	Natural Regeneration and seeding	Snowberry	Shrub	2.00	48.987672	-104.012082	ND-DV-003.003	State of North Dakota
79.36	Snowberry	Shrub	1	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.988654	-104.011864	ND-DV-003.003	State of North Dakota
79.36	Wild rose	Shrub	2	Natural Regeneration and seeding	Wild rose	Shrub	1.00	48.988654	-104.011864	ND-DV-003.003	State of North Dakota
79.47	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.990129	-104.011832	ND-DV-003.002	State of North Dakota
79.61	Snowberry	Shrub	3	Natural Regeneration and seeding	Snowberry	Shrub	1.00	48.992062	-104.011864	ND-DV-003.002	State of North Dakota
79.88	Snowberry	Shrub	12	Natural Regeneration and seeding	Snowberry	Shrub	2.40	48.996009	-104.011845	ND-DV-003.002	State of North Dakota
80.18	Snowberry	Shrub	15	Natural Regeneration and seeding	Snowberry	Shrub	3.00	48.999994	-104.010050	ND-DV-001	McCaill, Vicki

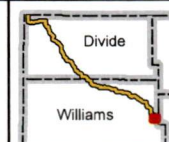


KC HARVEY ENVIRONMENTAL, LLC

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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



Mistral Energy Inc.

Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 1



Date: 10/29/2013

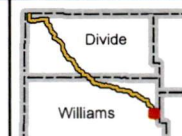


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| Pipeline Route | Wetlands | Highway |
| 300 ft PSC Corridor | County Boundary | Local Road |
| Shrub Location | Township Range Boundary | 4WD |
| Tree Location | Section Boundary | Operational Railroad |
| | Land Tract | Abandoned Railroad |
| | | North Dakota Land Department |
| | | Water Fowl Production Area |
| | | National Wildlife Refuge |

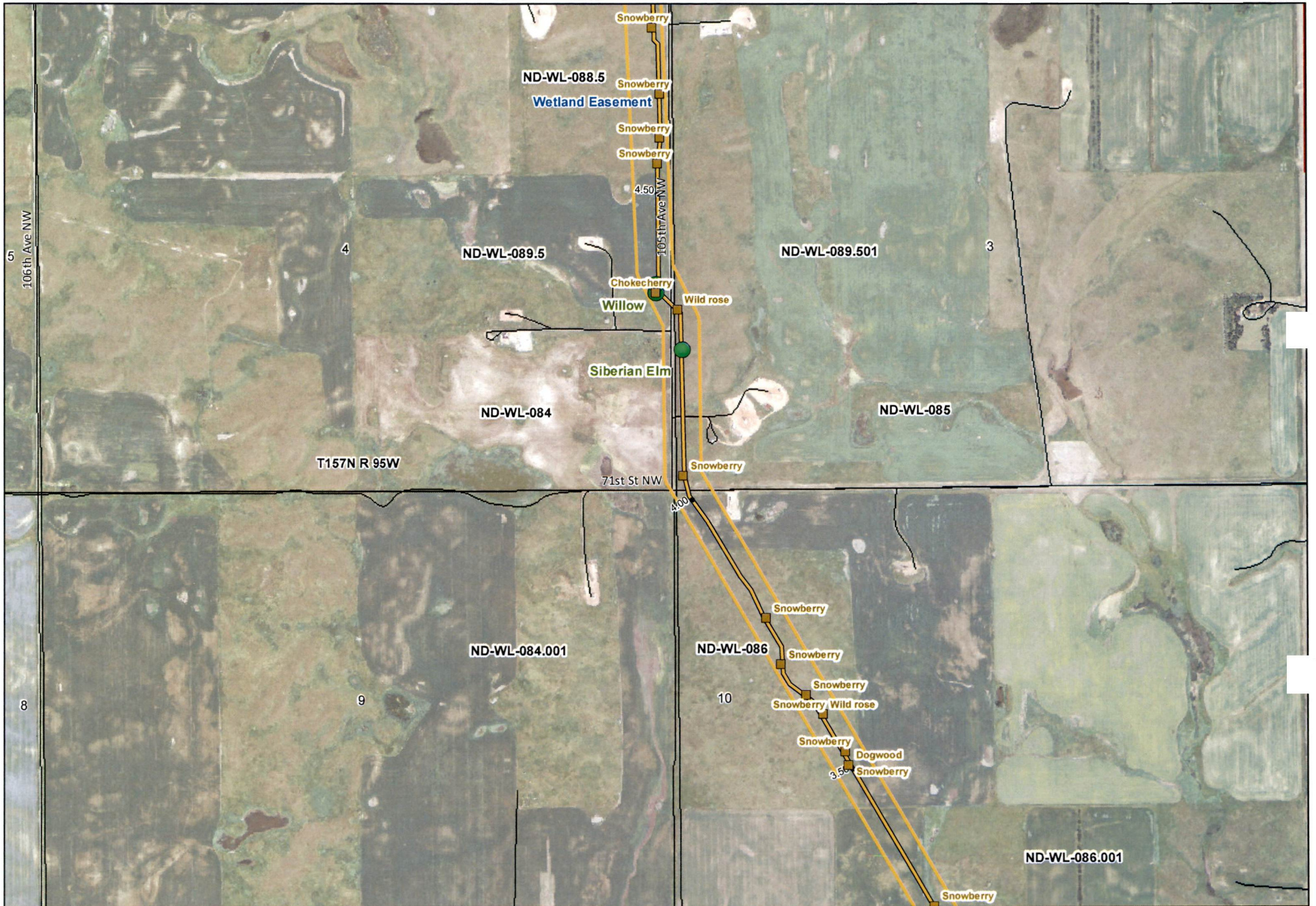


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Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 2



Date: 10/29/2013

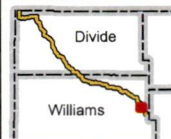


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
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| | Land Tract | Abandoned Railroad | |

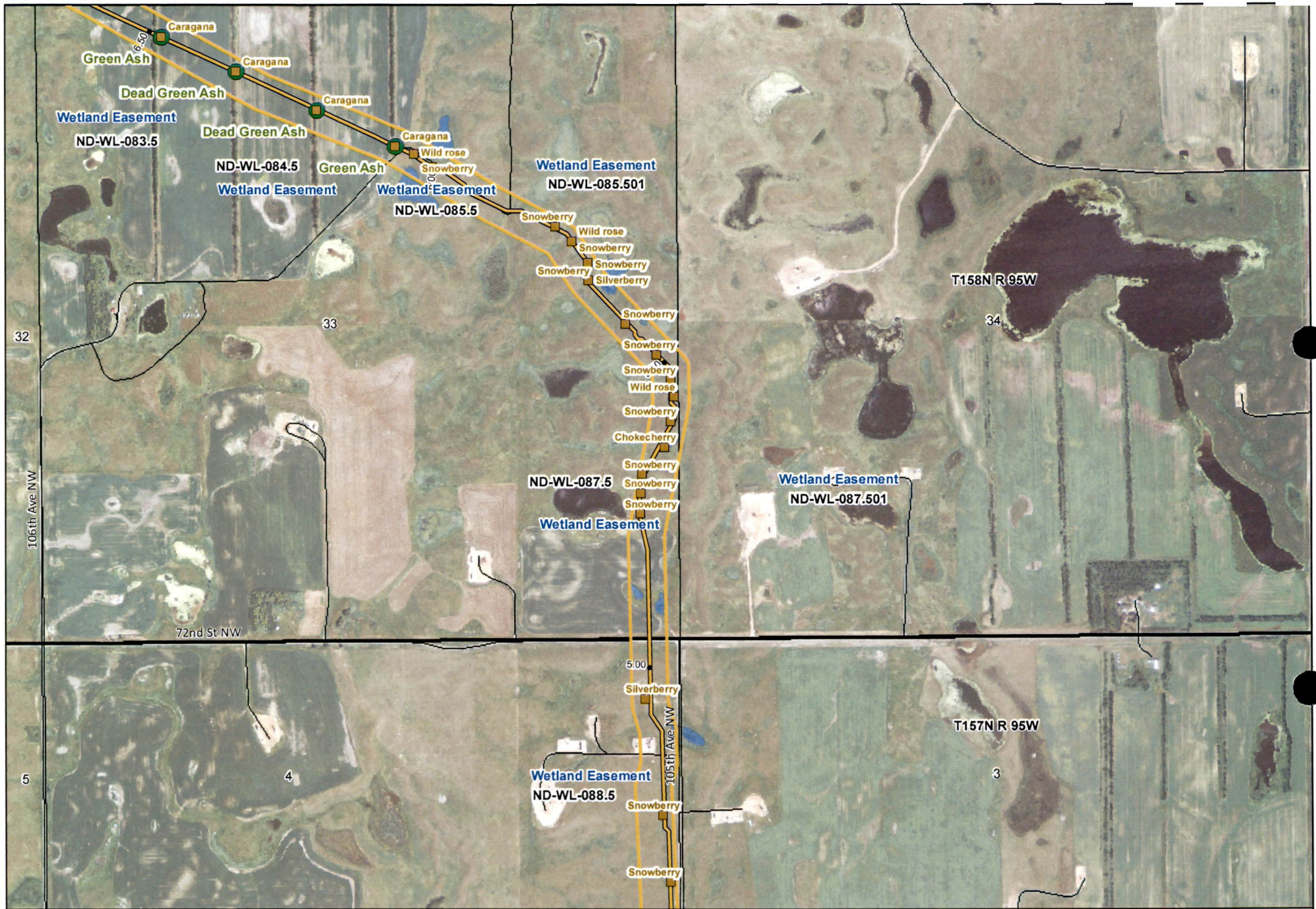


Mistral Energy Inc.

Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 3

Date: 10/29/2013



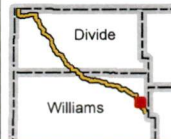


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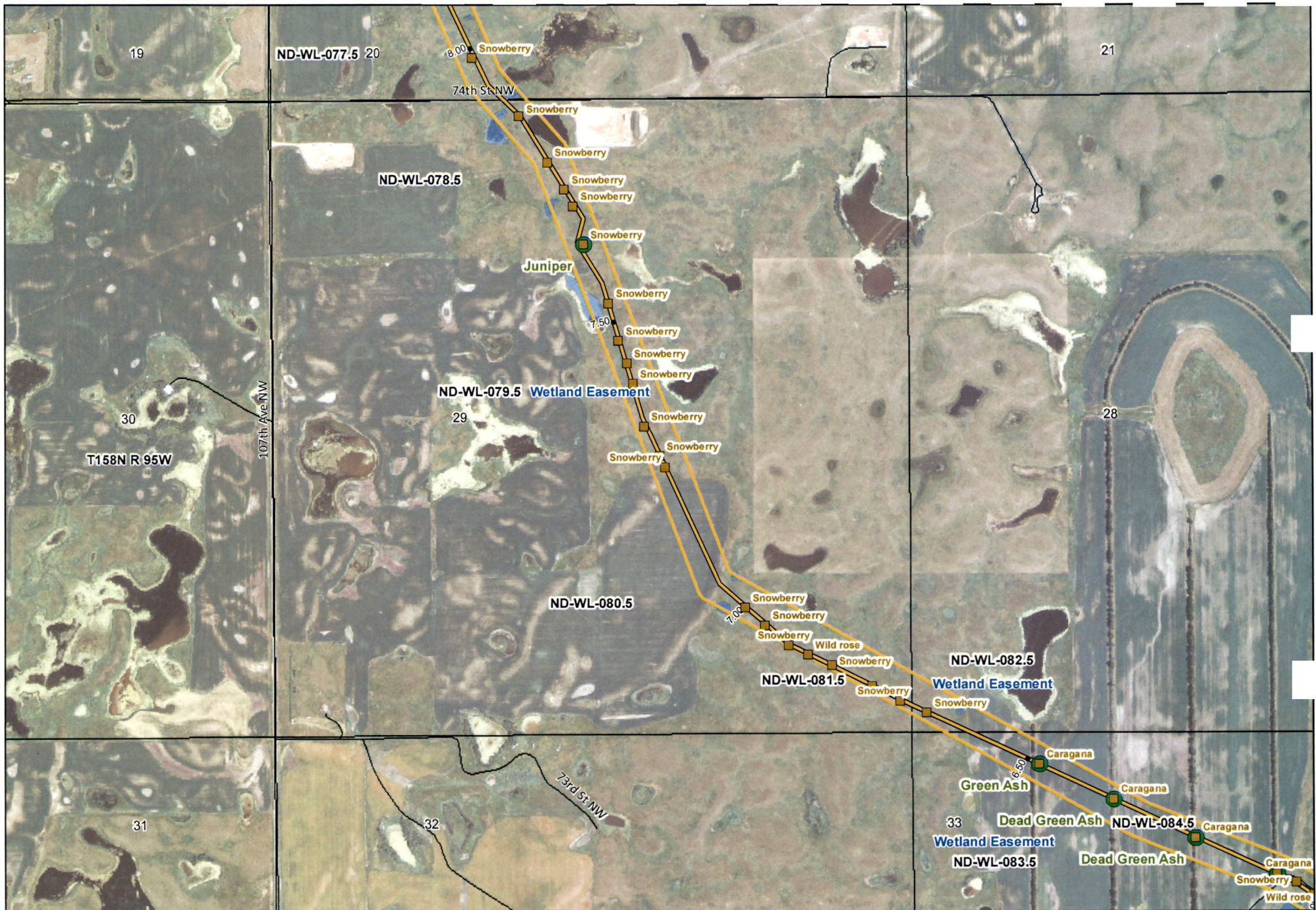
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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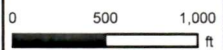
Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 4

Date: 10/29/2013

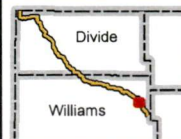


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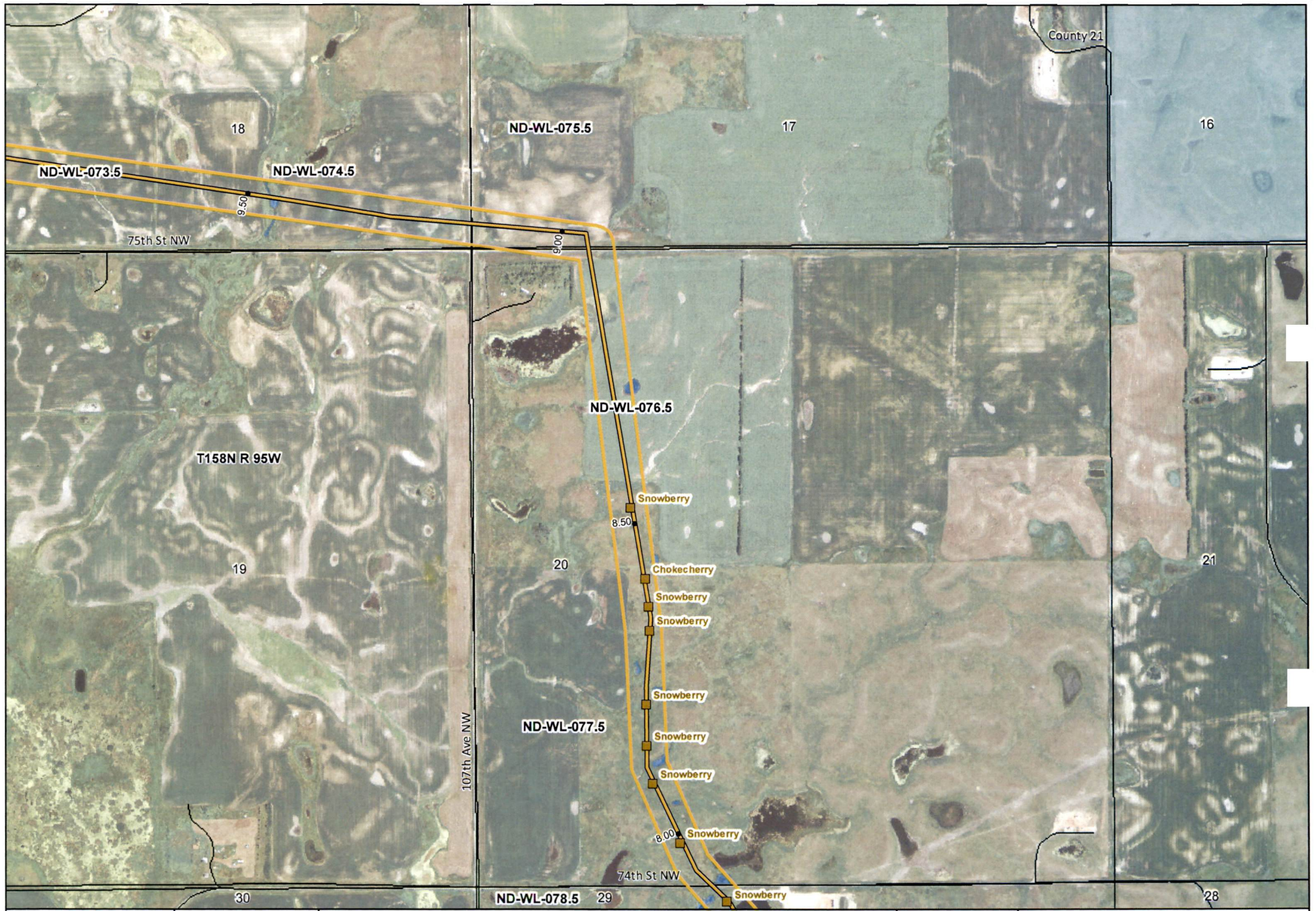
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

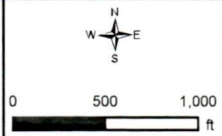


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

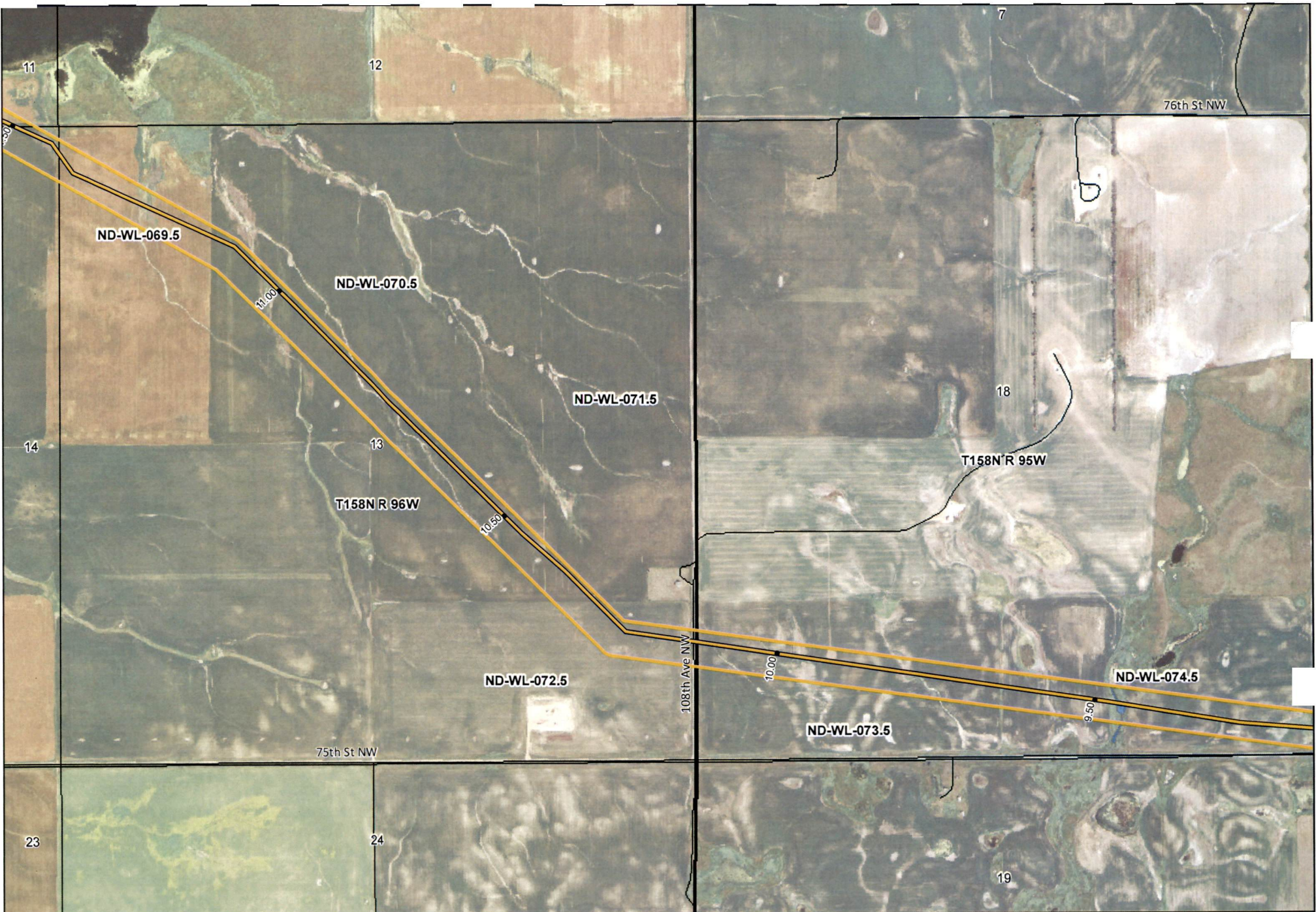


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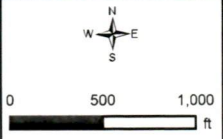
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 6

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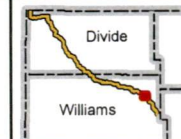


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| Pipeline Route | Wetlands | Highway |
| 300 ft PSC Corridor | County Boundary | Local Road |
| Shrub Location | Township Range Boundary | 4WD |
| Tree Location | Section Boundary | Operational Railroad |
| | Land Tract | Abandoned Railroad |

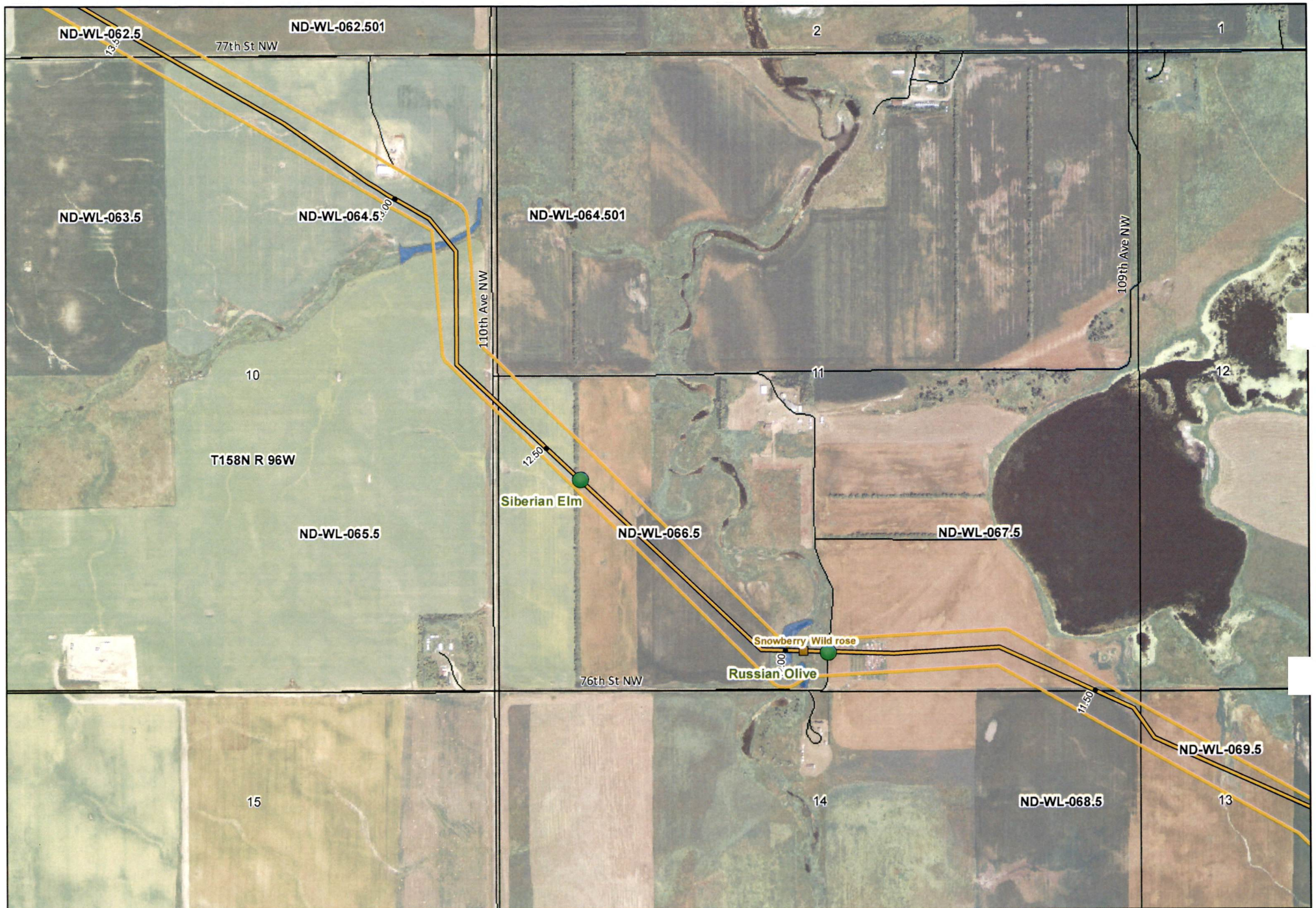
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| North Dakota Land Department |
| Water Fowl Production Area |
| National Wildlife Refuge |



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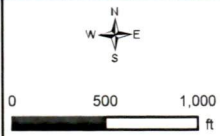
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 7

Date: 10/29/2013

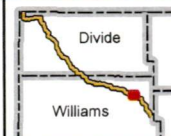


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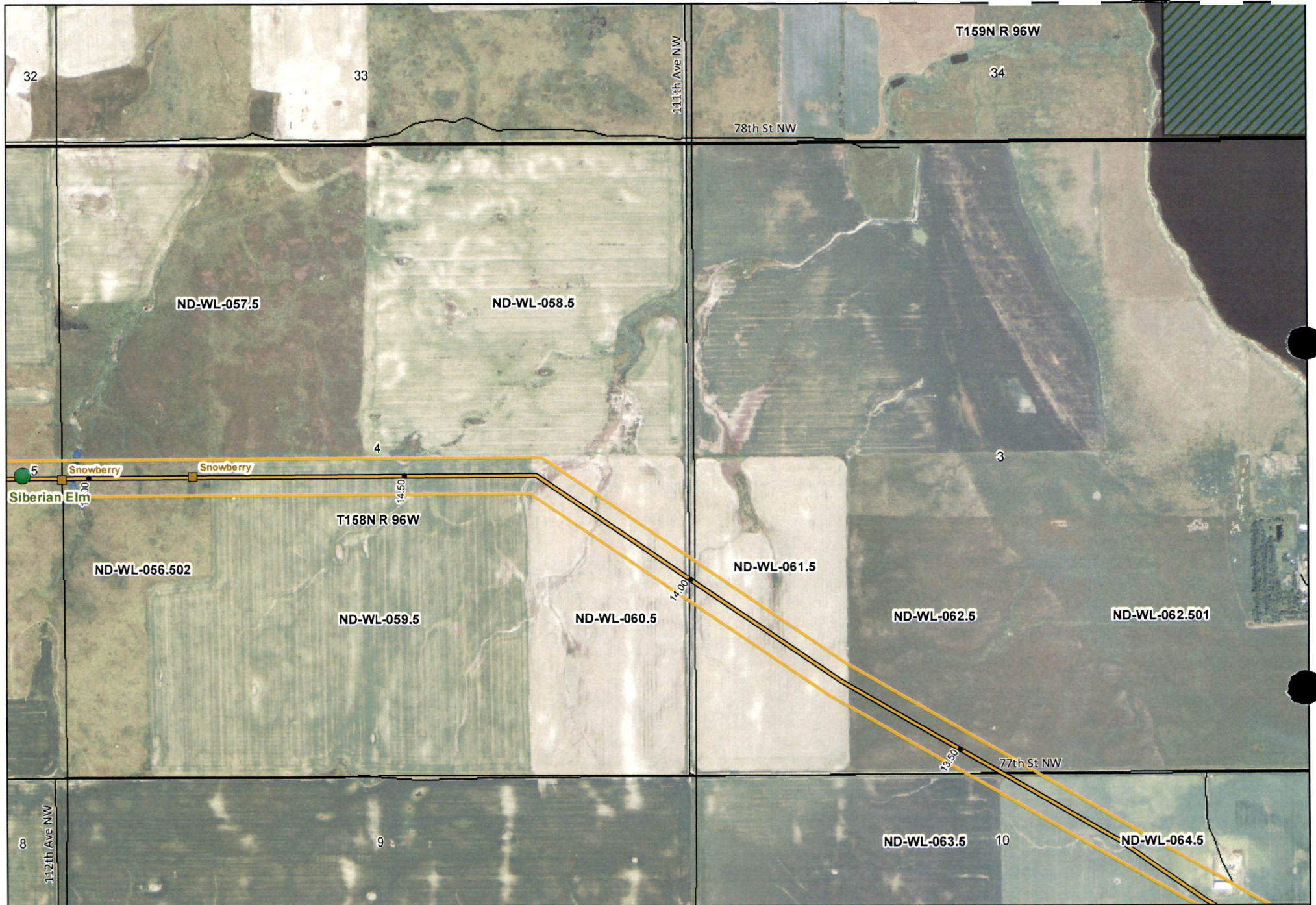
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| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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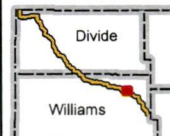


- Pipeline Route
- 300 ft PSC Corridor
- Shrub Location
- Tree Location

- Wetlands
- County Boundary
- Township Range Boundary
- Section Boundary
- Land Tract

- Highway
- Local Road
- 4WD
- Operational Railroad
- Abandoned Railroad

- North Dakota Land Department
- Water Fowl Production Area
- National Wildlife Refuge

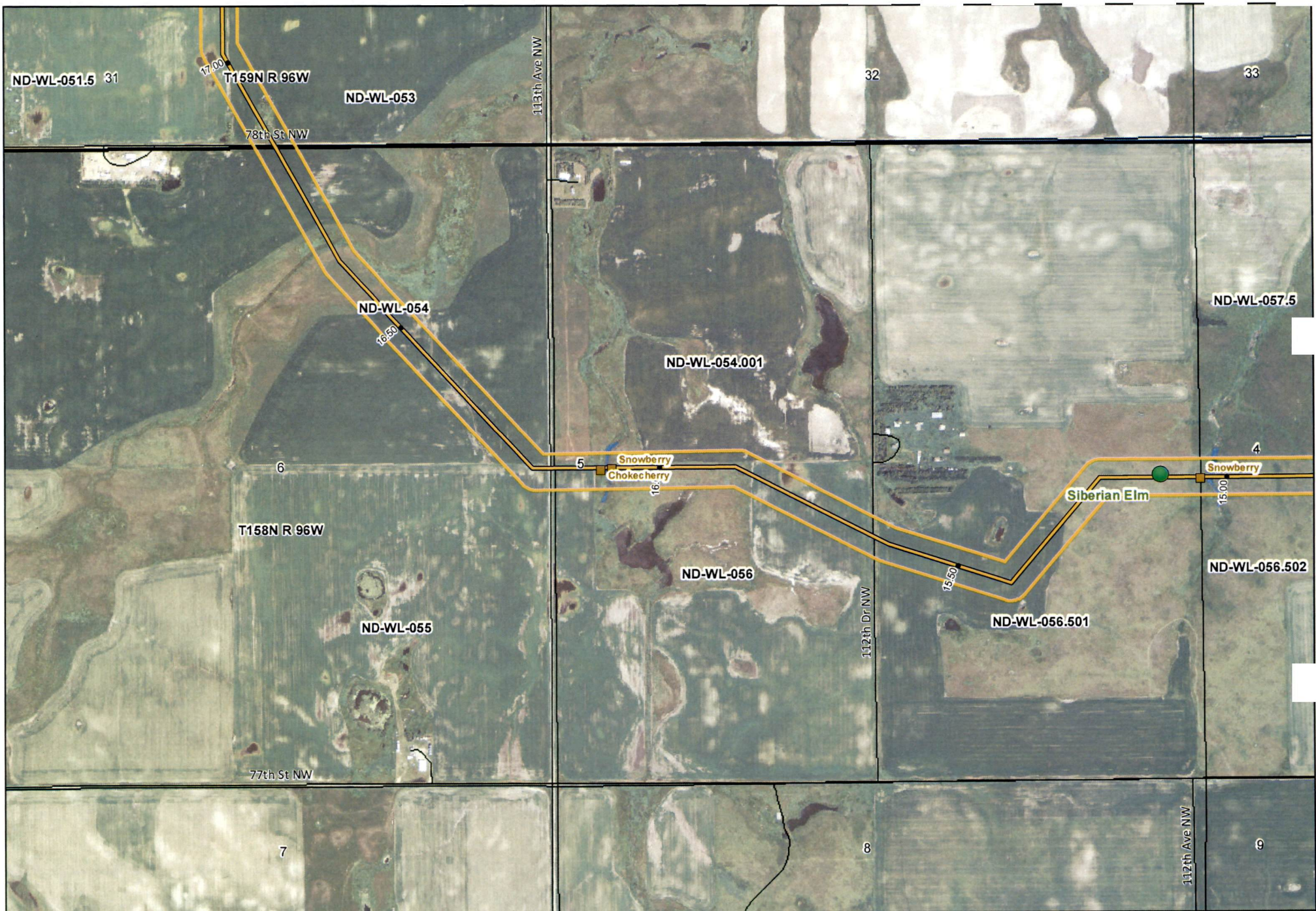


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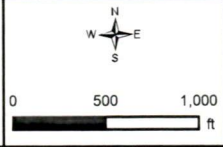
Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 9



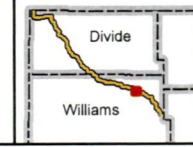
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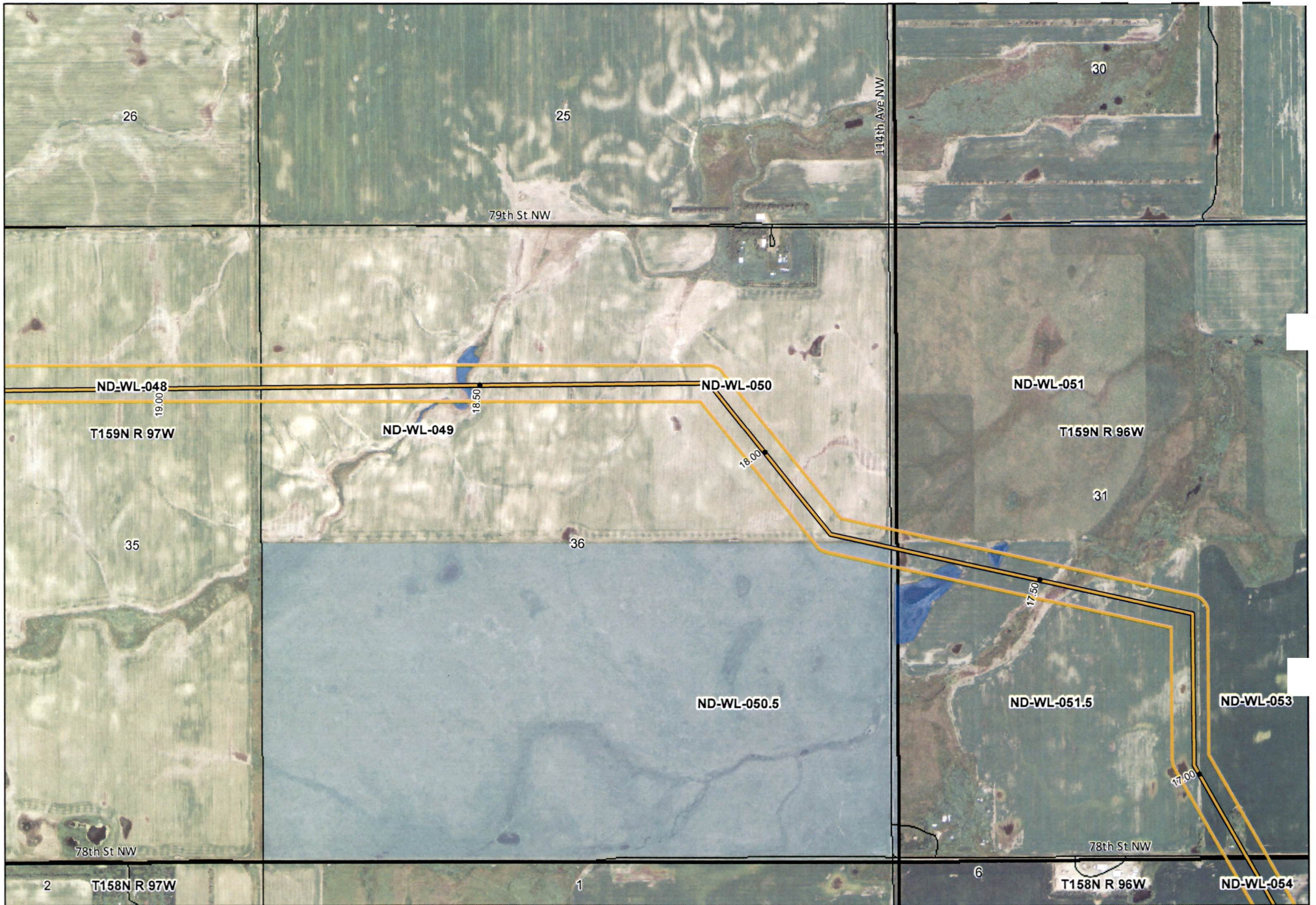


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
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| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
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 Date: 10/29/2013



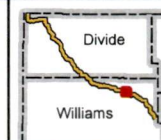


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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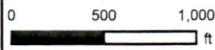
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

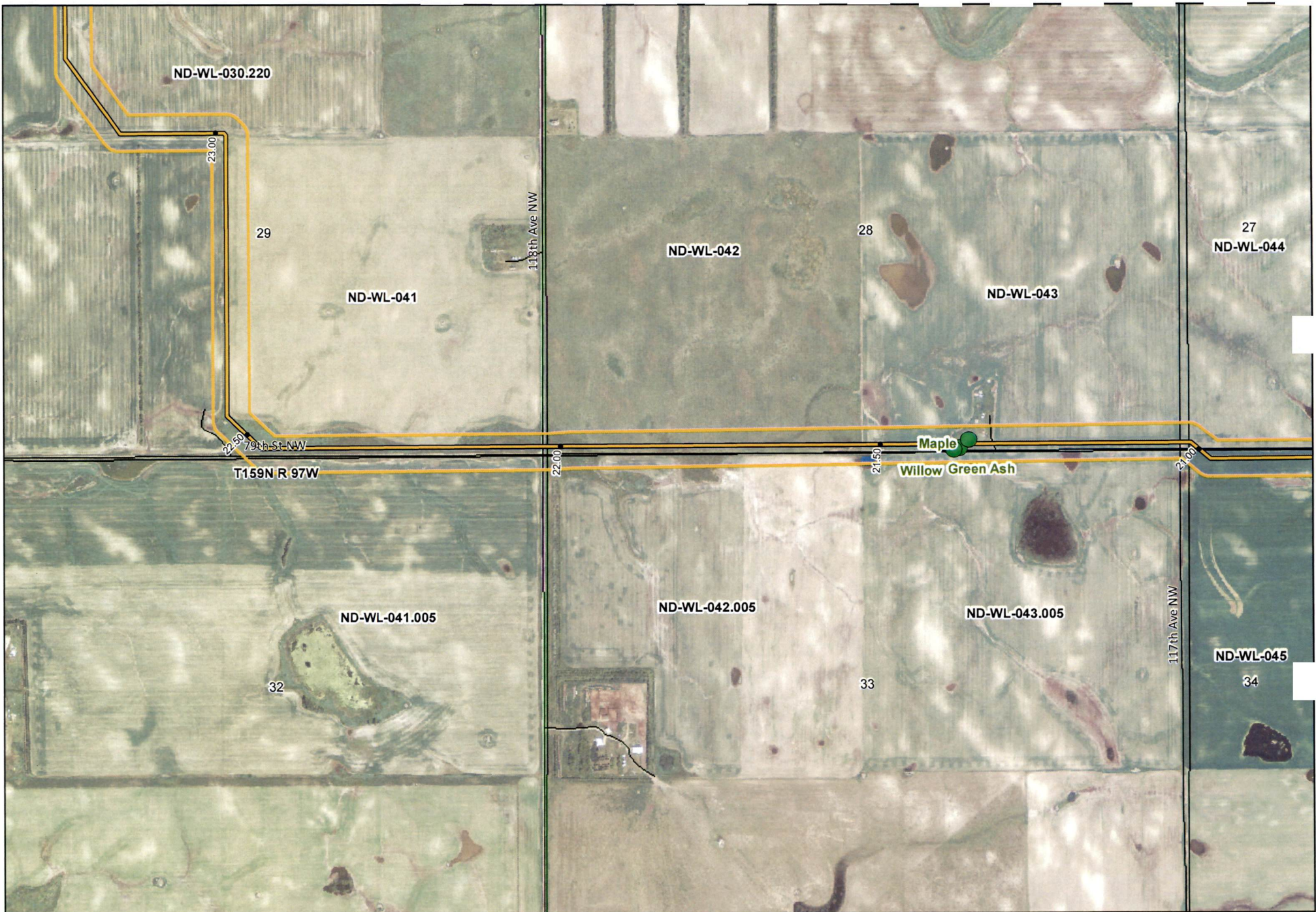


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 Tree and Shrub Mitigation Mapbook
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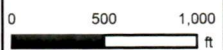
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
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| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 13

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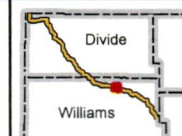


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

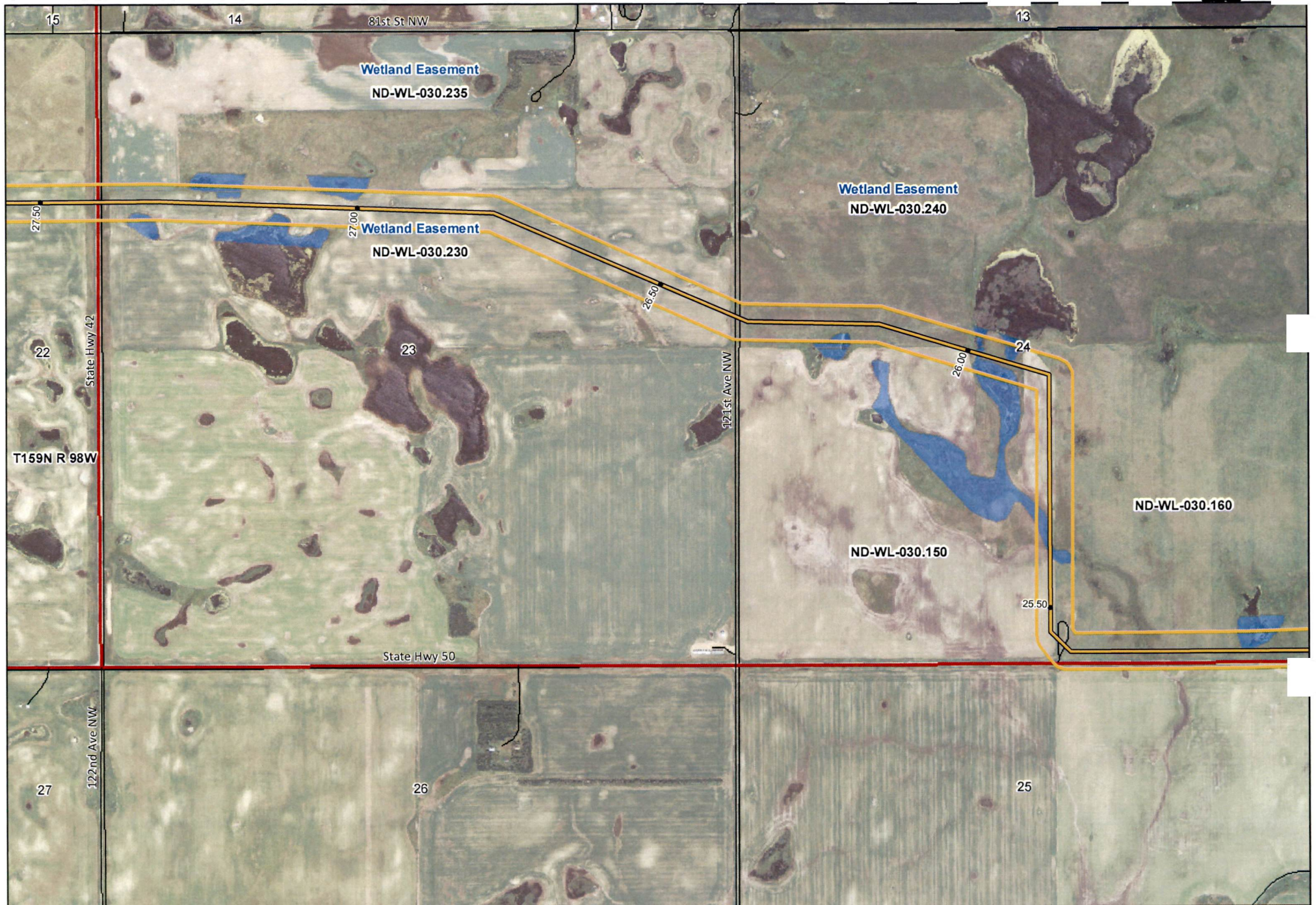


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Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 14

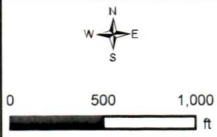


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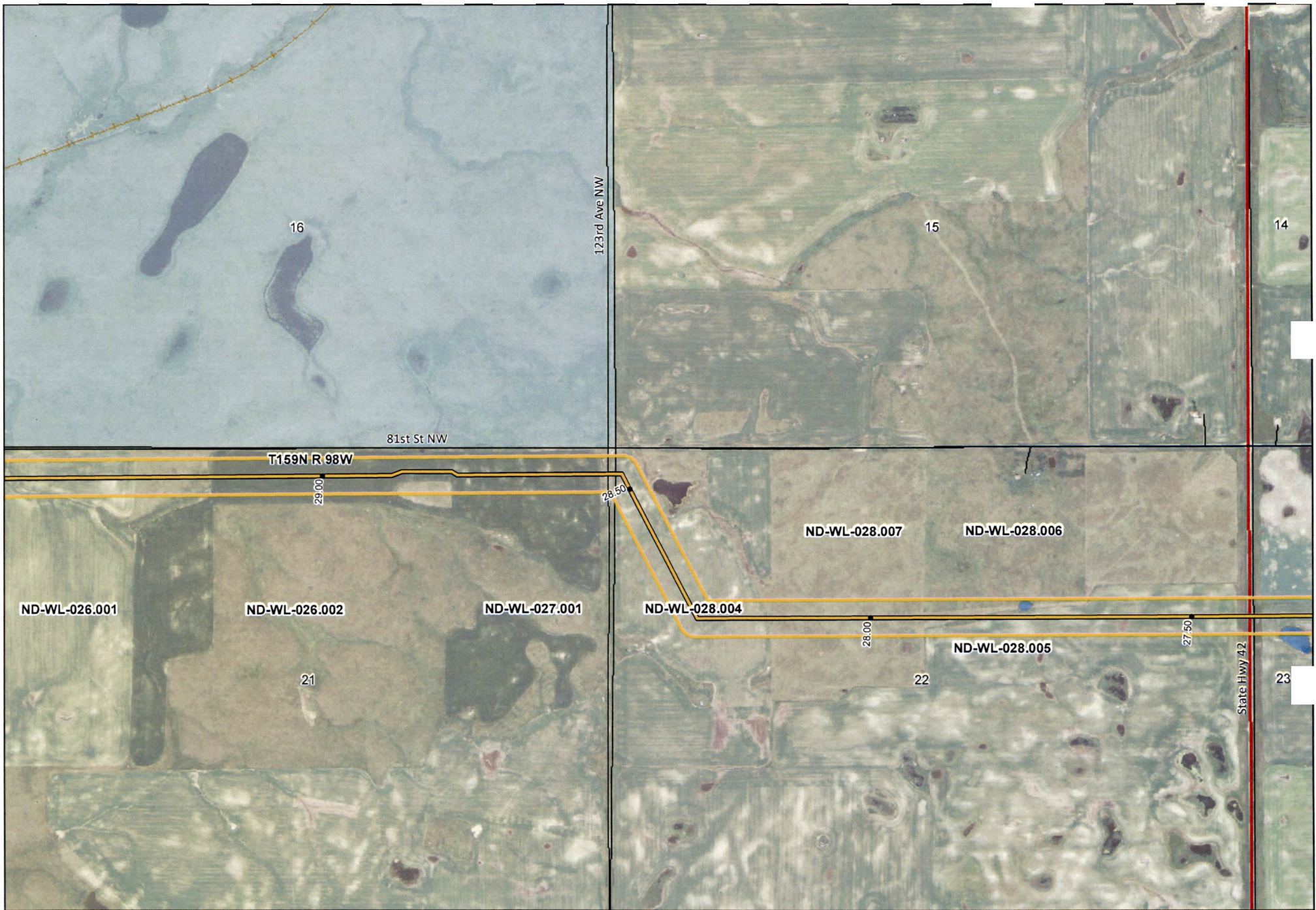
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| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
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| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
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Date: 10/29/2013

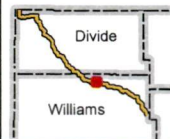


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

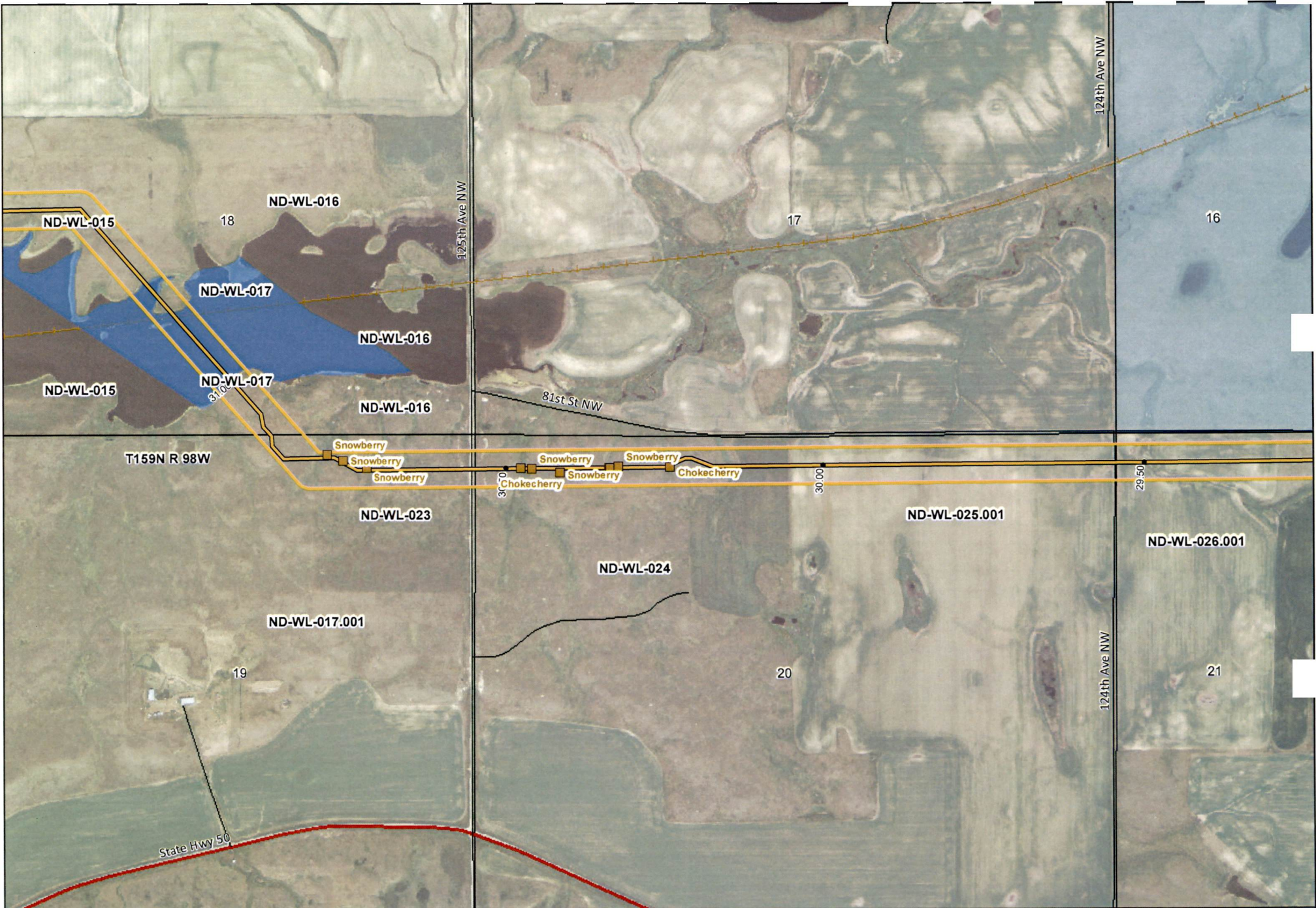


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Tree and Shrub Mitigation Mapbook
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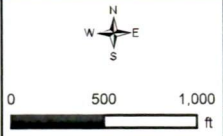
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
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| | Land Tract | Abandoned Railroad | |

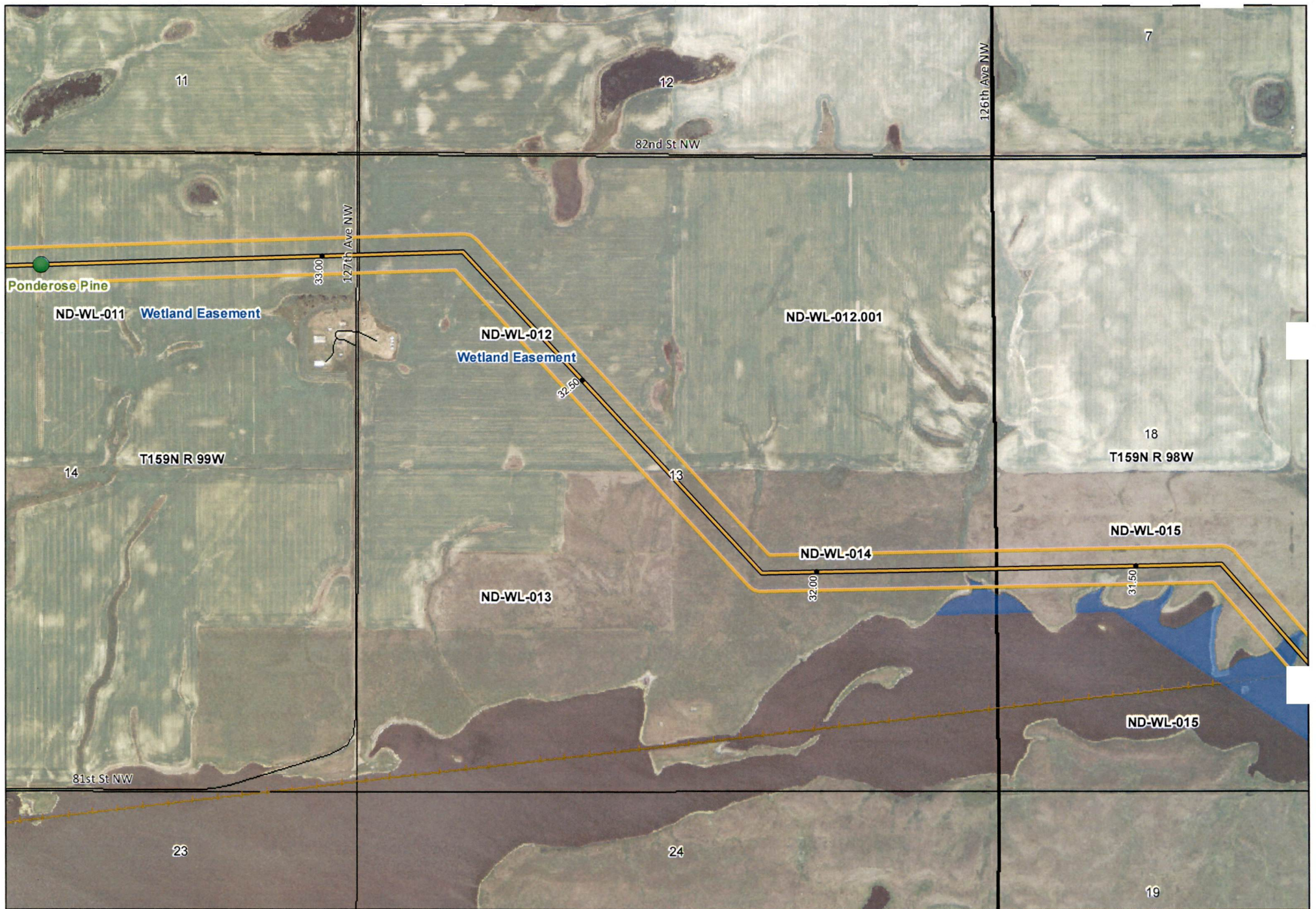


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Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 17

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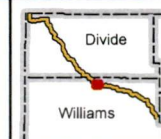


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

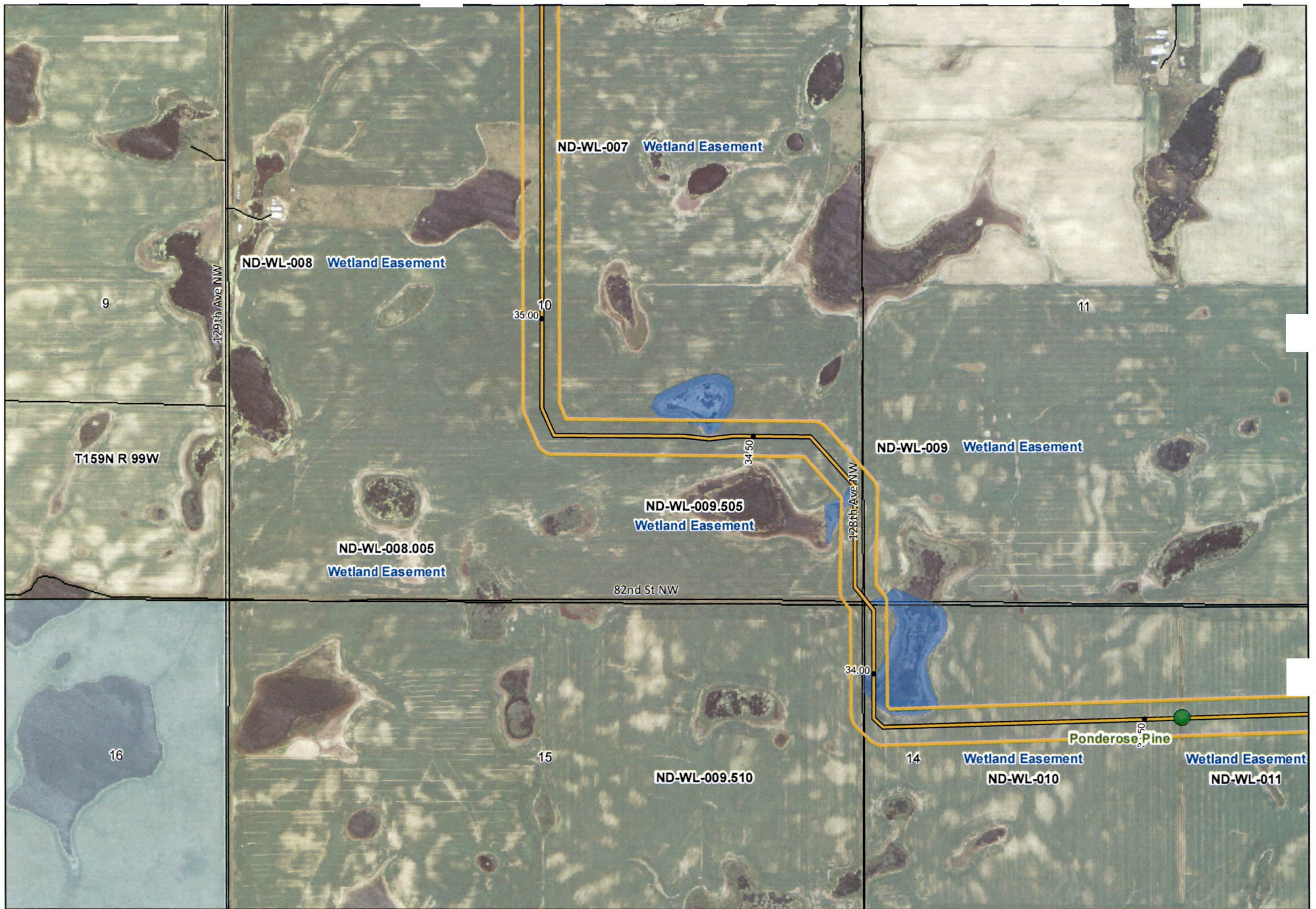


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Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 18

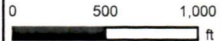


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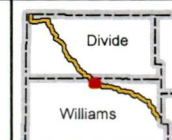


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

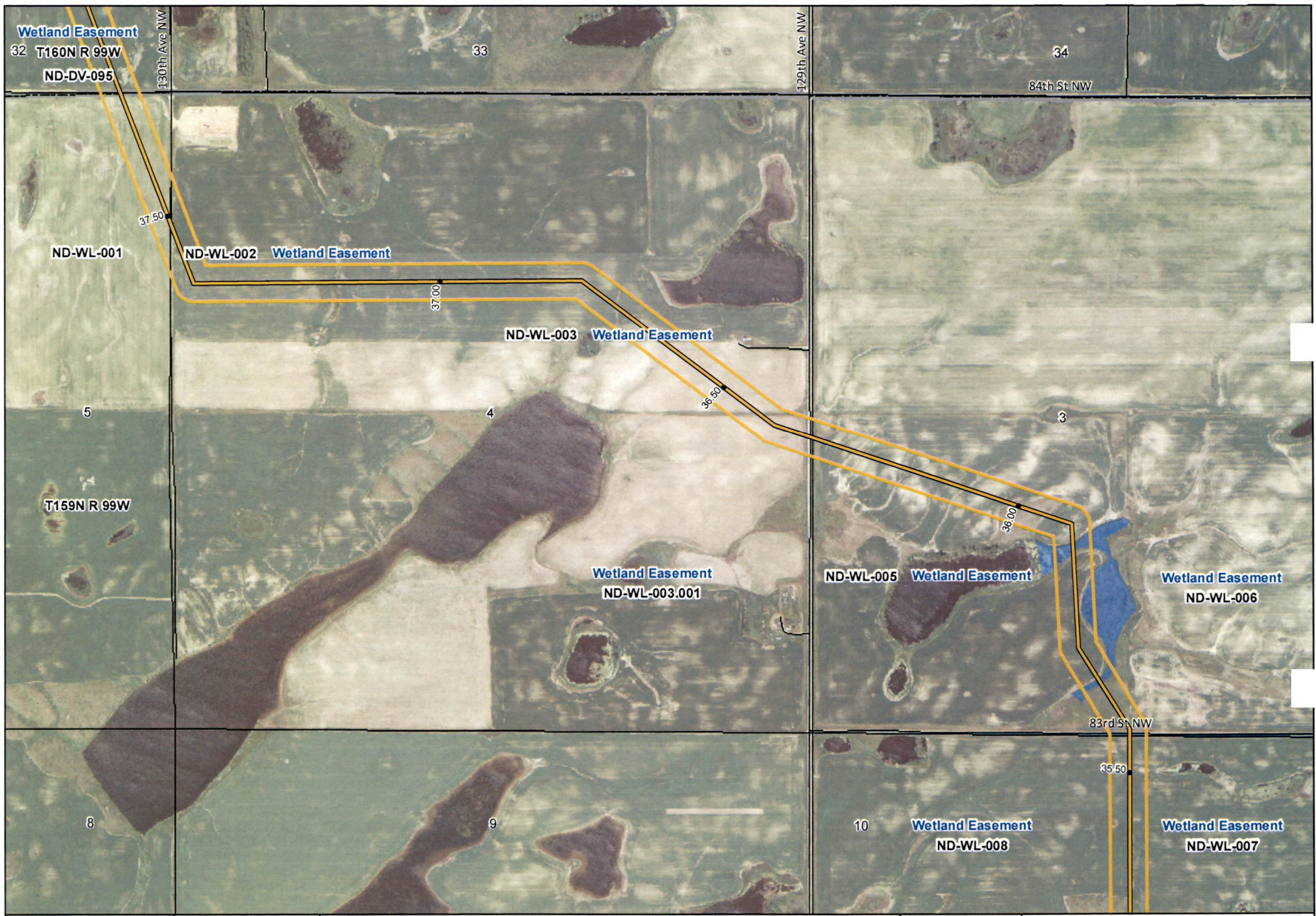


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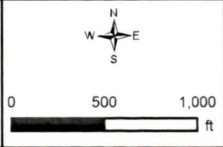
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 19



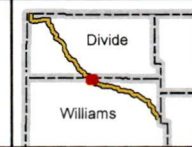
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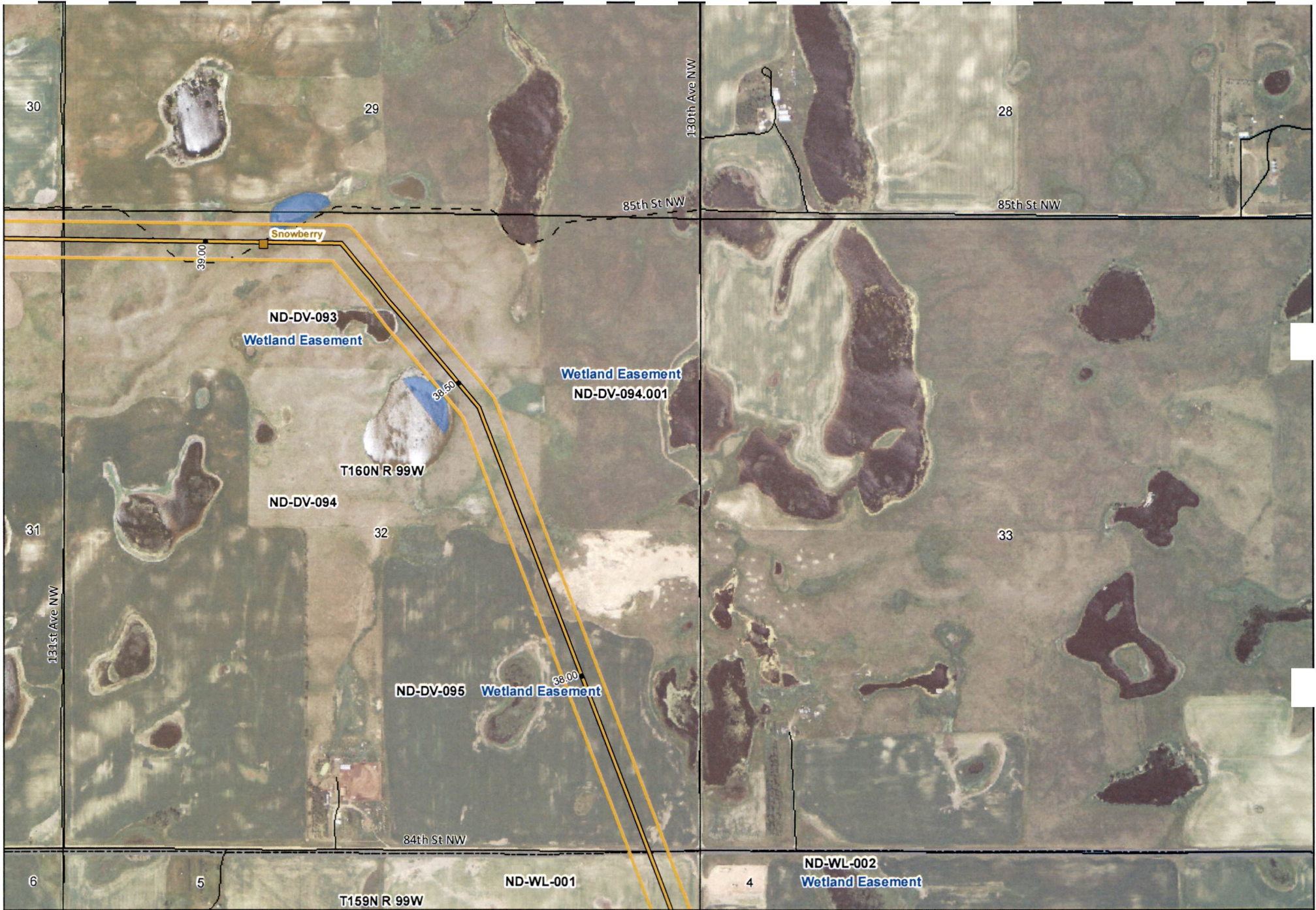


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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



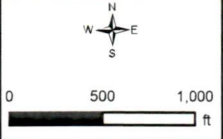
Mistral Energy Inc.
 Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 20
 Date: 10/29/2013



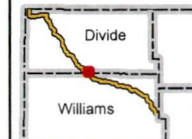


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| Pipeline Route | Wetlands | Highway |
| 300 ft PSC Corridor | County Boundary | Local Road |
| Shrub Location | Township Range Boundary | 4WD |
| Tree Location | Section Boundary | Operational Railroad |
| | Land Tract | Abandoned Railroad |
| | | North Dakota Land Department |
| | | Water Fowl Production Area |
| | | National Wildlife Refuge |

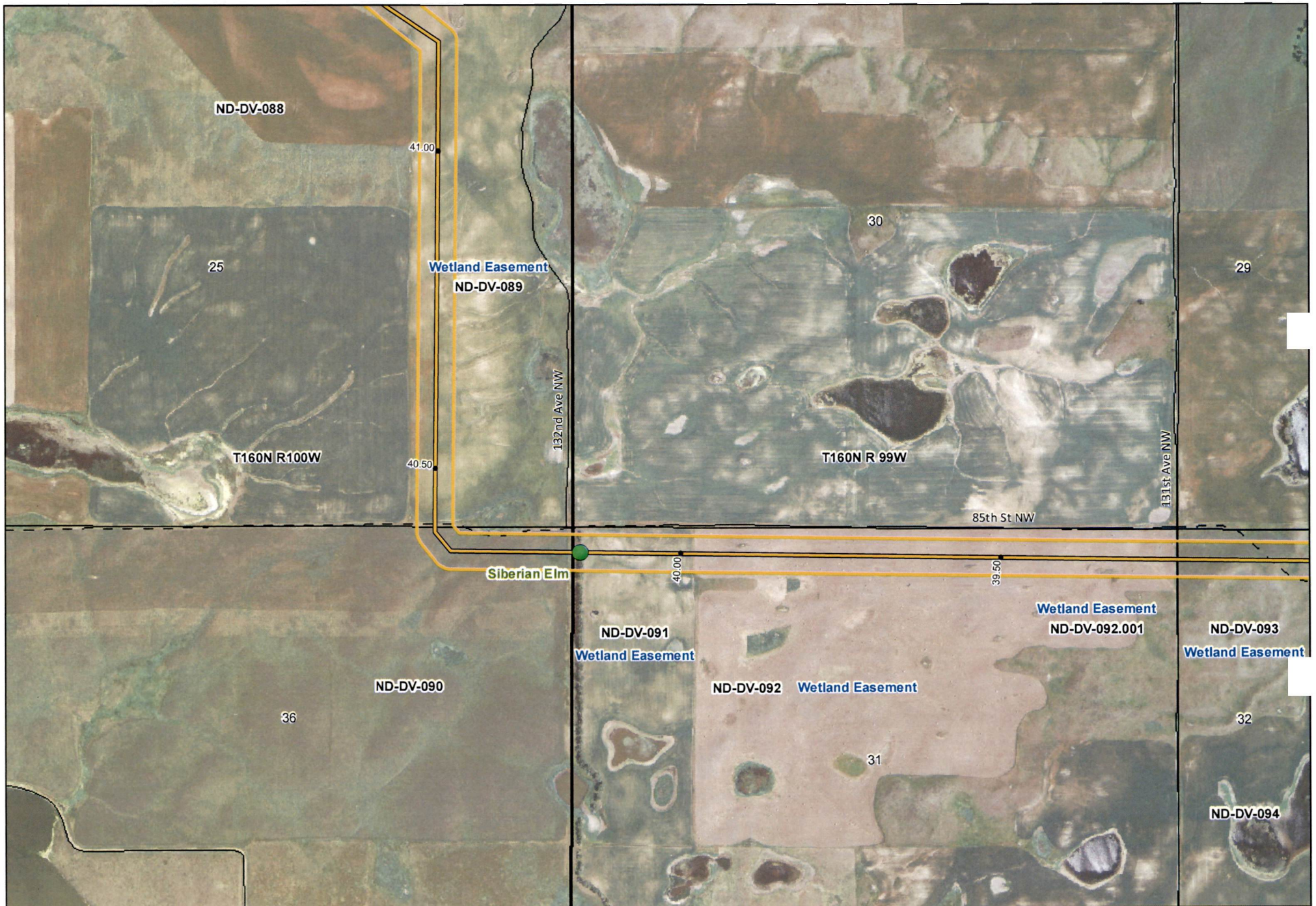


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 Tree and Shrub Mitigation Mapbook
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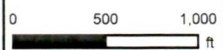
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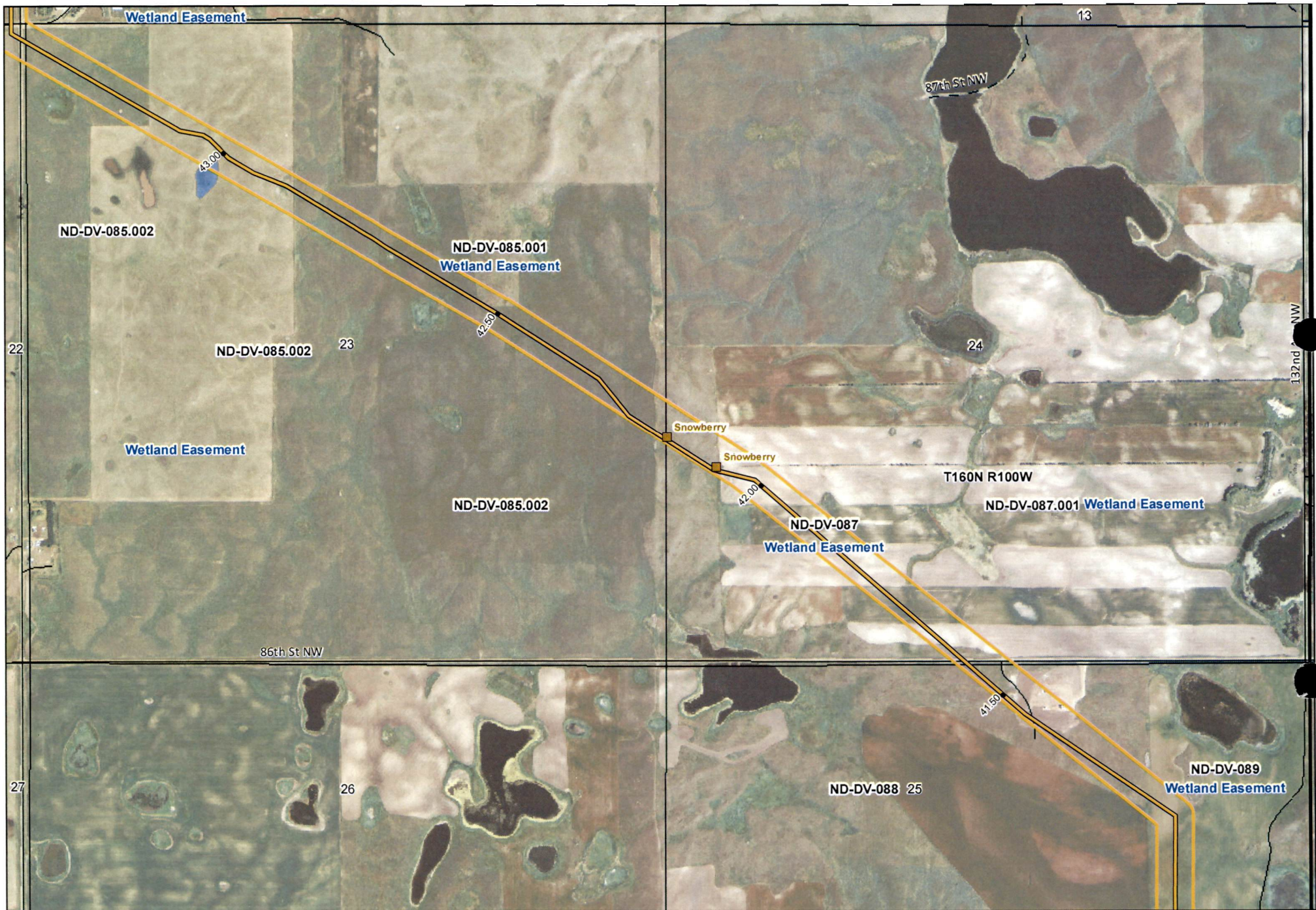
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| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
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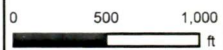
Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 22

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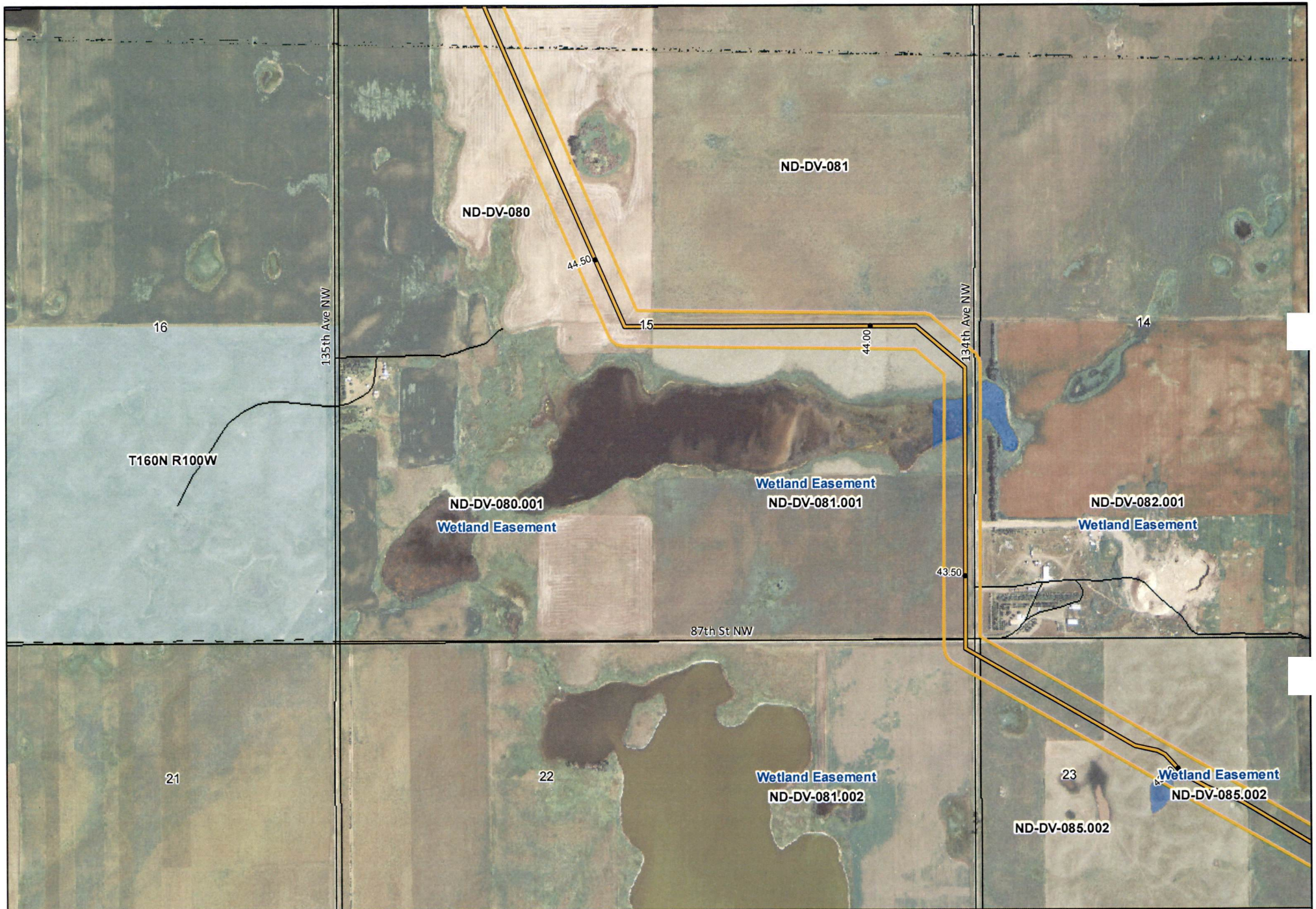
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| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
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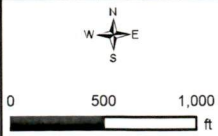
Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 23

Date: 10/29/2013

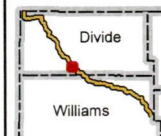


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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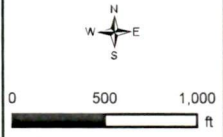
Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 24

Date: 10/29/2013






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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 25
 Date: 10/29/2013



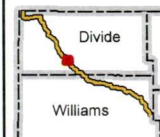


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 26



Date: 10/29/2013

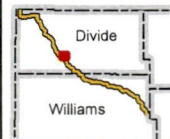


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- | | | | |
|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Tree and Shrub Mitigation Mapbook
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Date: 10/29/2013



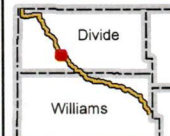


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Fax: 406-585-7428




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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
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- Pipeline Route
- 300 ft PSC Corridor
- Shrub Location
- Tree Location

- Wetlands
- County Boundary
- Township Range Boundary
- Section Boundary
- Land Tract

- Highway
- Local Road
- 4WD
- Operational Railroad
- Abandoned Railroad

- North Dakota Land Department
- Water Fowl Production Area
- National Wildlife Refuge

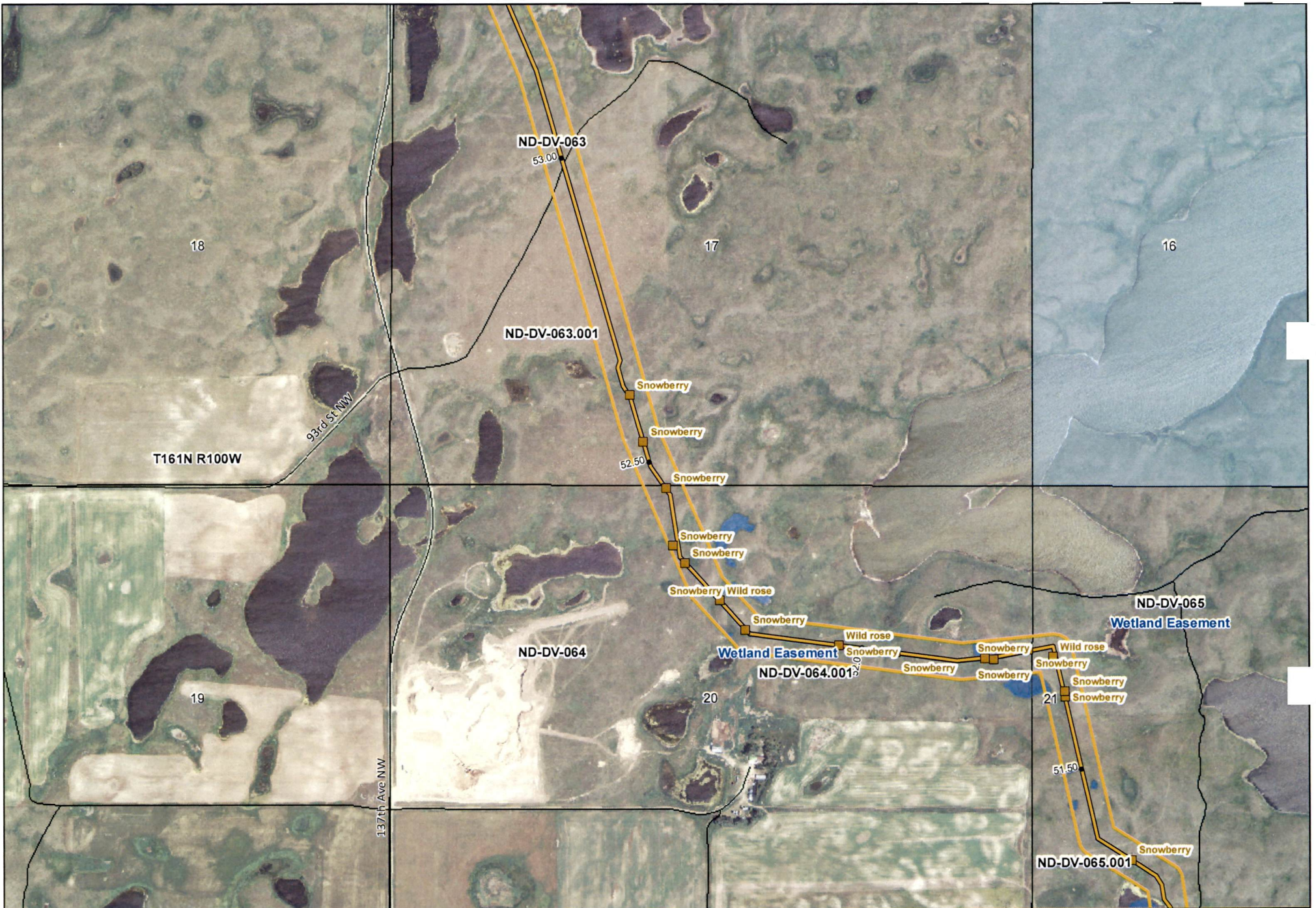


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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 29



Date: 10/29/2013

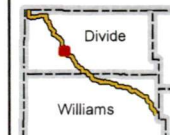


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

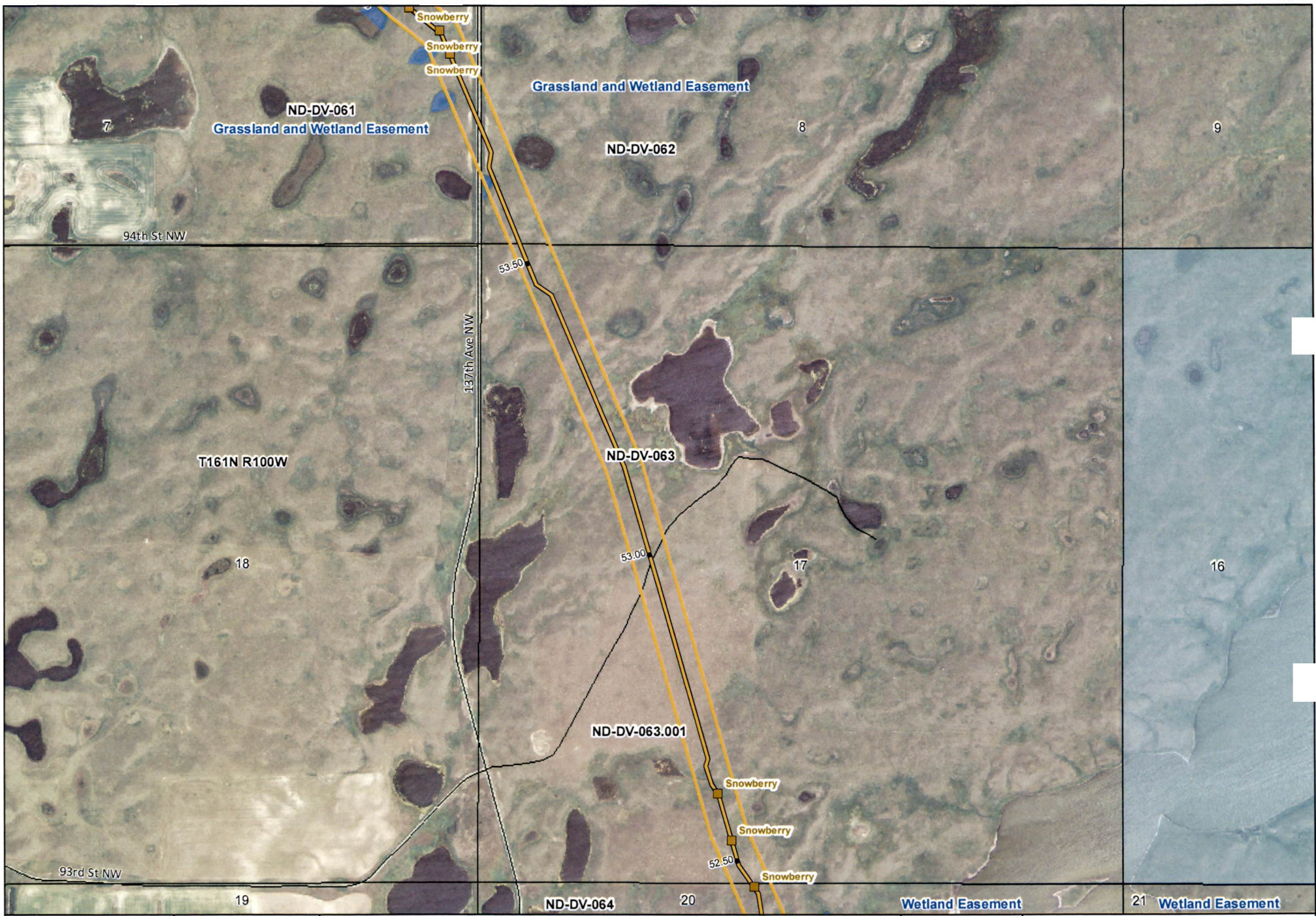


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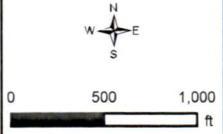
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 30



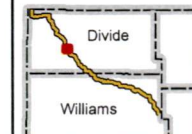
Date: 10/29/2013




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 Fax: 406-585-7428

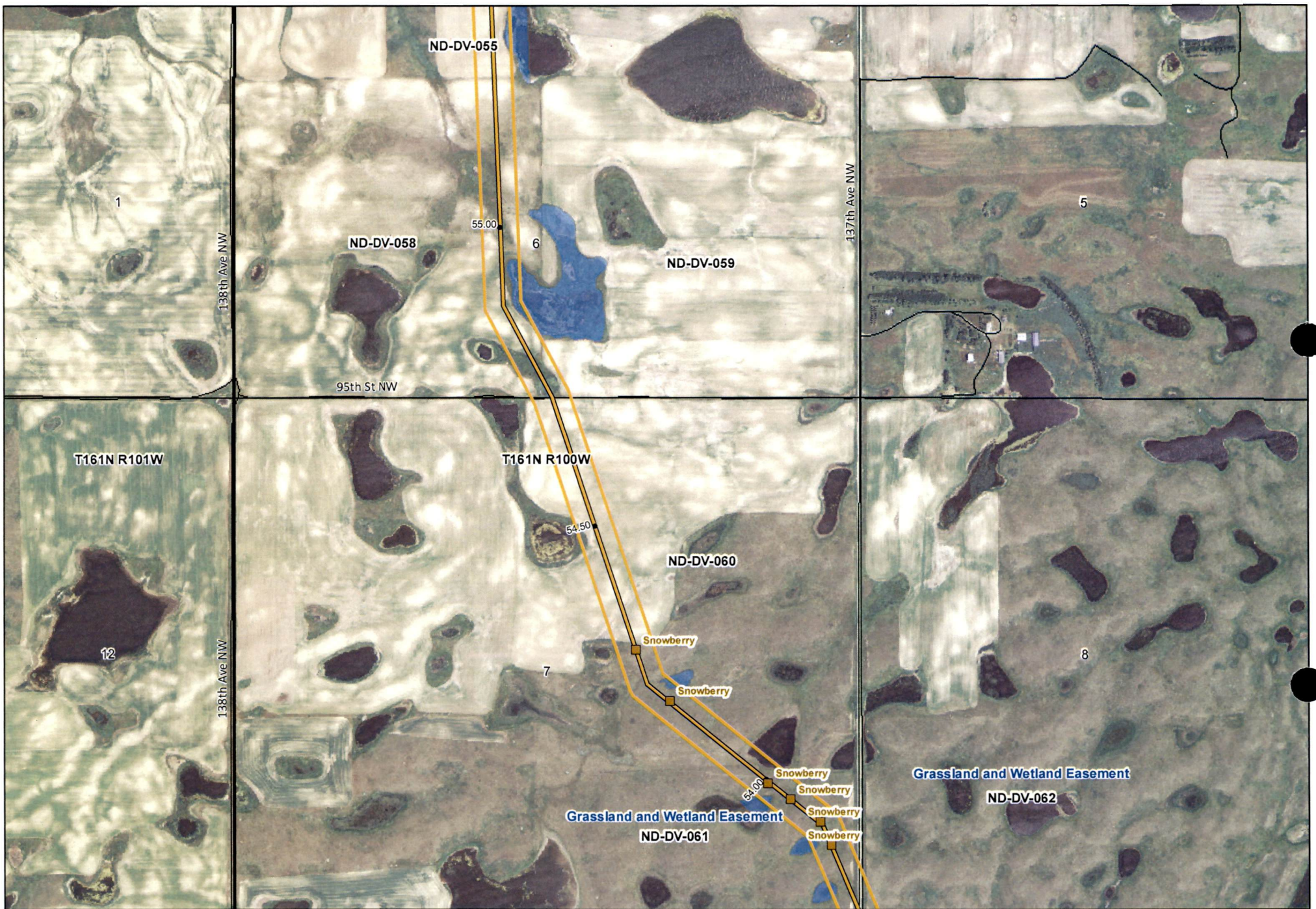


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 32

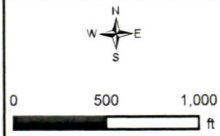


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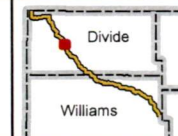


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

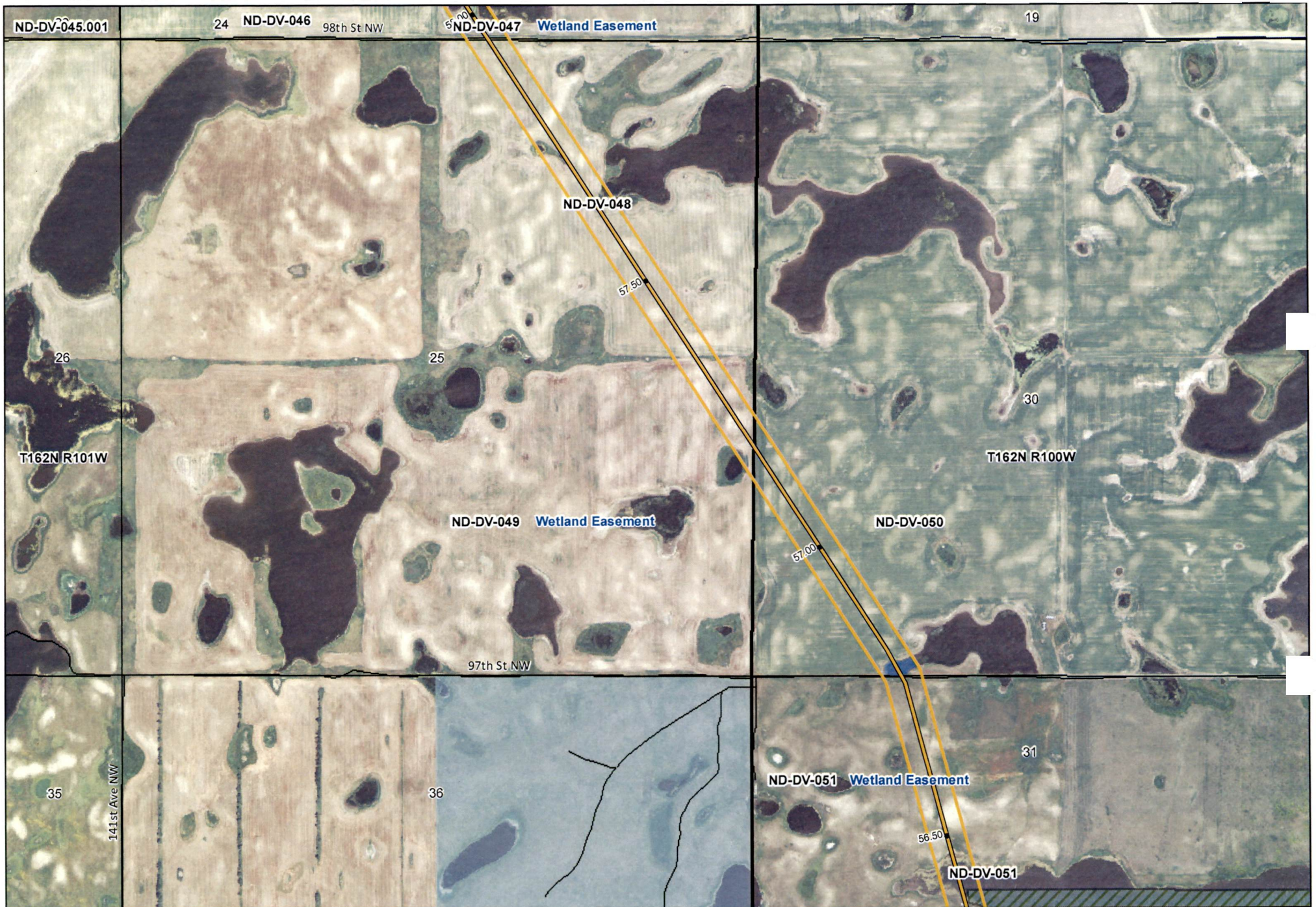


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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 33

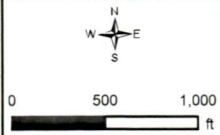
Date: 10/29/2013





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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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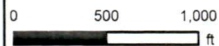
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 34

Date: 10/29/2013

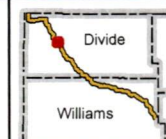


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

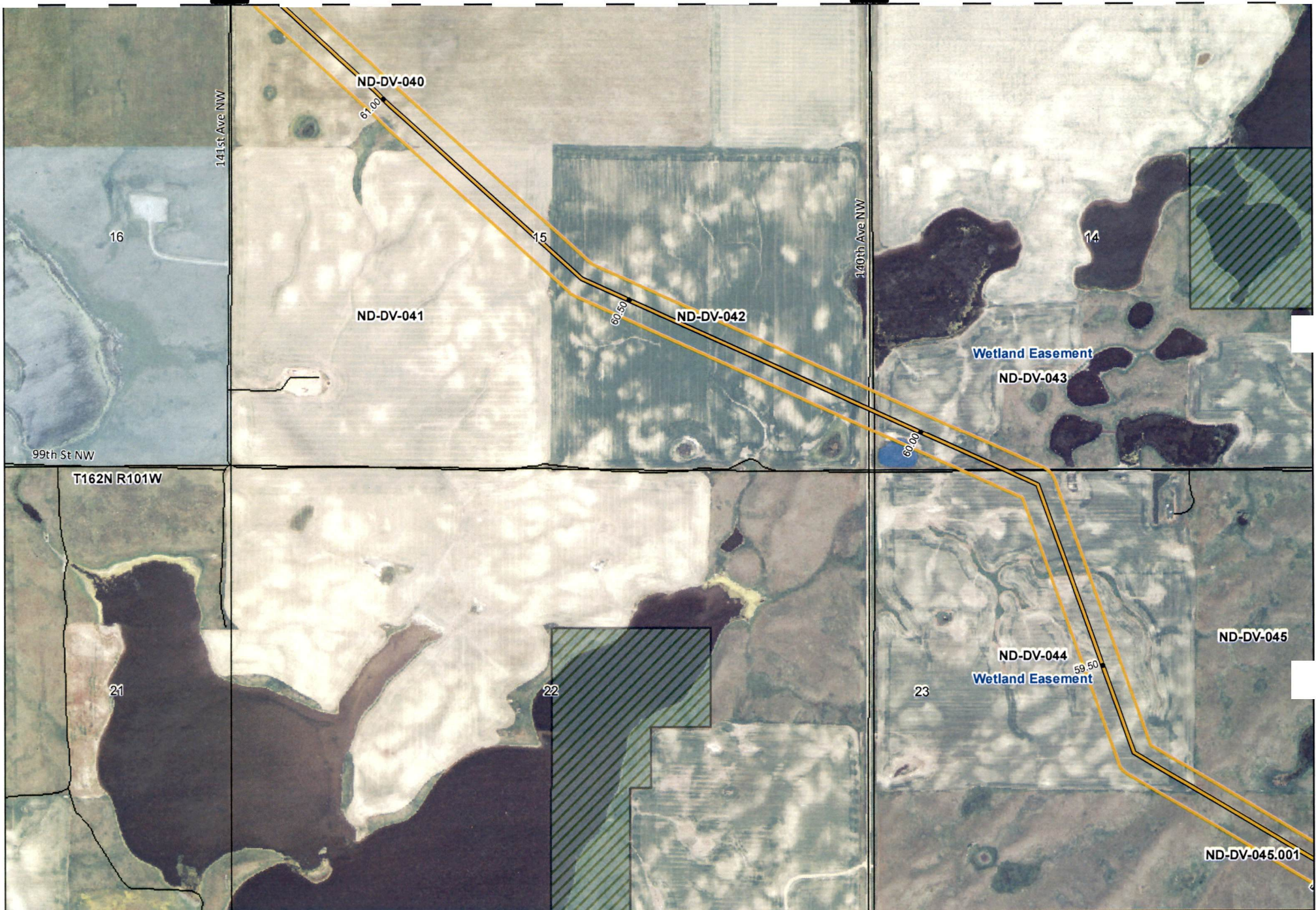


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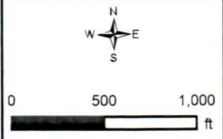
Vantage Pipeline Project
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1:12,000, Sheet: 35



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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
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Date: 10/29/2013





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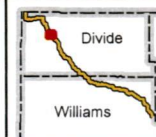


- Pipeline Route
- 300 ft PSC Corridor
- Shrub Location
- Tree Location

- Wetlands
- County Boundary
- Township Range Boundary
- Section Boundary
- Land Tract

- Highway
- Local Road
- 4WD
- Operational Railroad
- Abandoned Railroad

- North Dakota Land Department
- Water Fowl Production Area
- National Wildlife Refuge

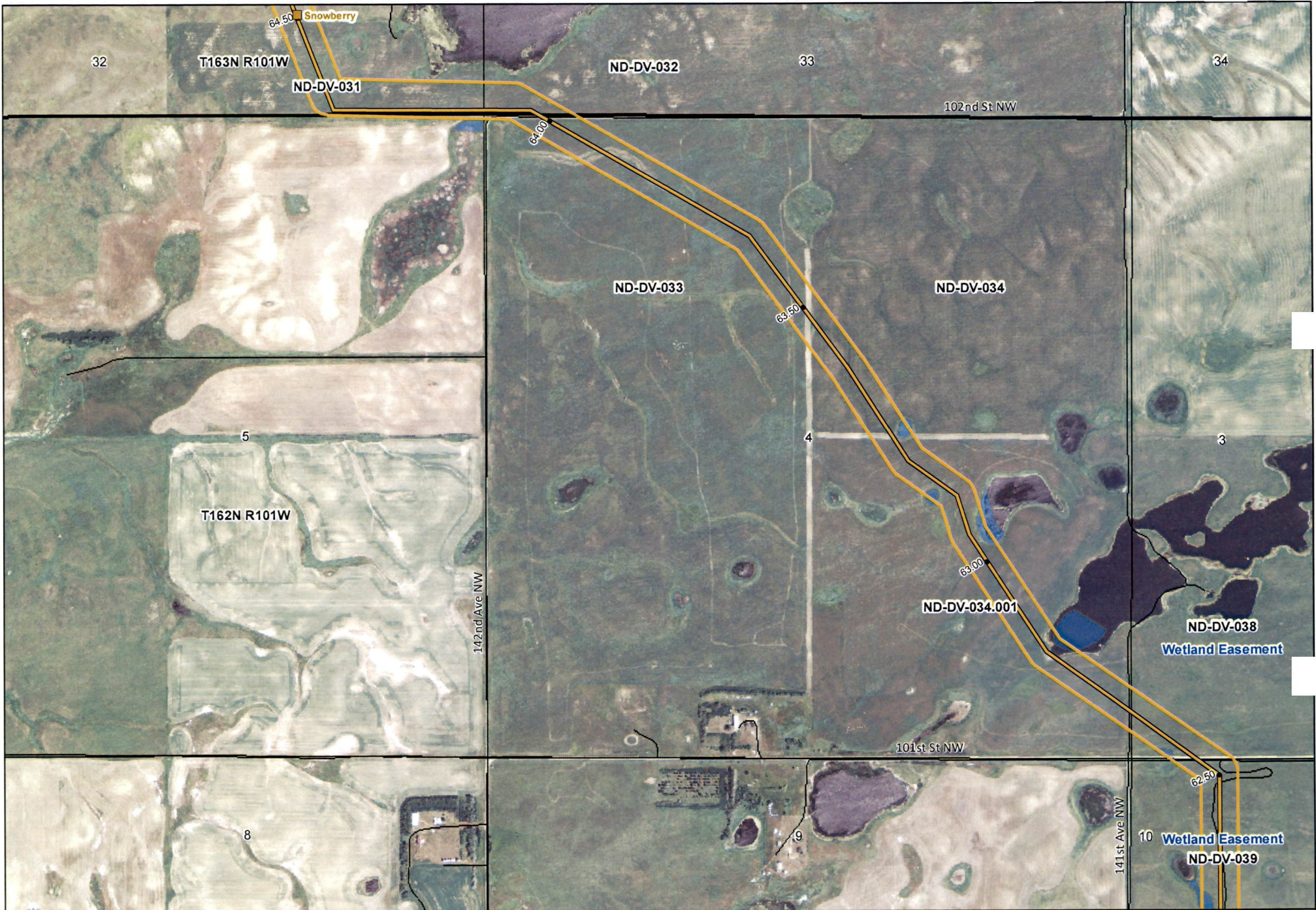


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 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 37



Date: 10/29/2013

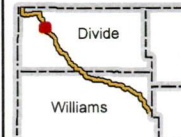


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
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Date: 10/29/2013

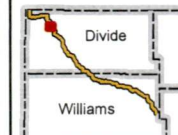


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 39

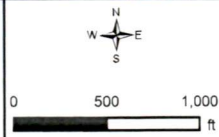


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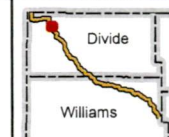


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 40



Date: 10/29/2013

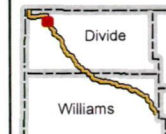


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

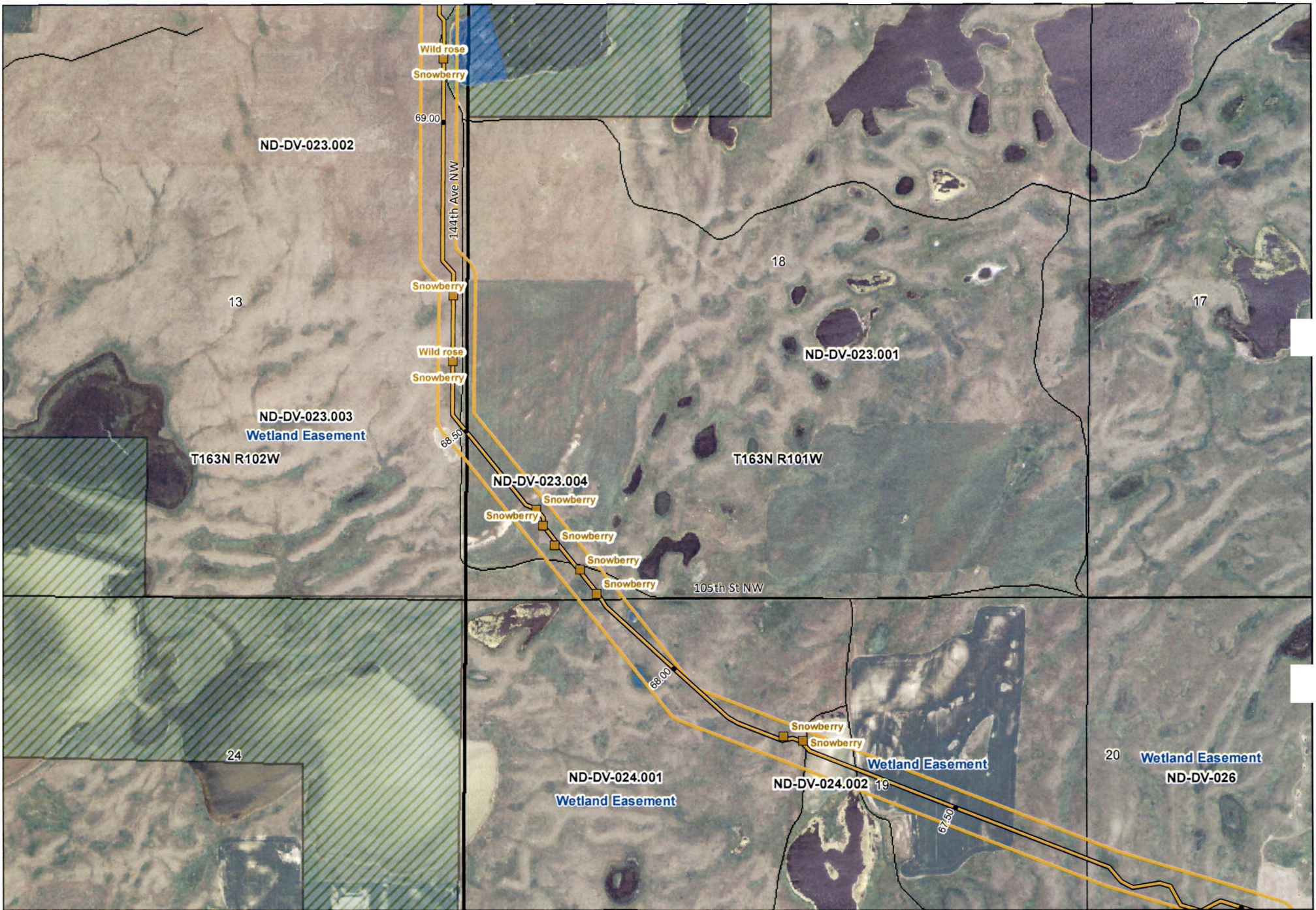


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Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 41



Date: 10/29/2013



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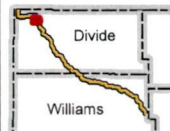


- Pipeline Route
- 300 ft PSC Corridor
- Shrub Location
- Tree Location

- Wetlands
- County Boundary
- Township Range Boundary
- Section Boundary
- Land Tract

- Highway
- Local Road
- 4WD
- Operational Railroad
- Abandoned Railroad

- North Dakota Land Department
- Water Fowl Production Area
- National Wildlife Refuge

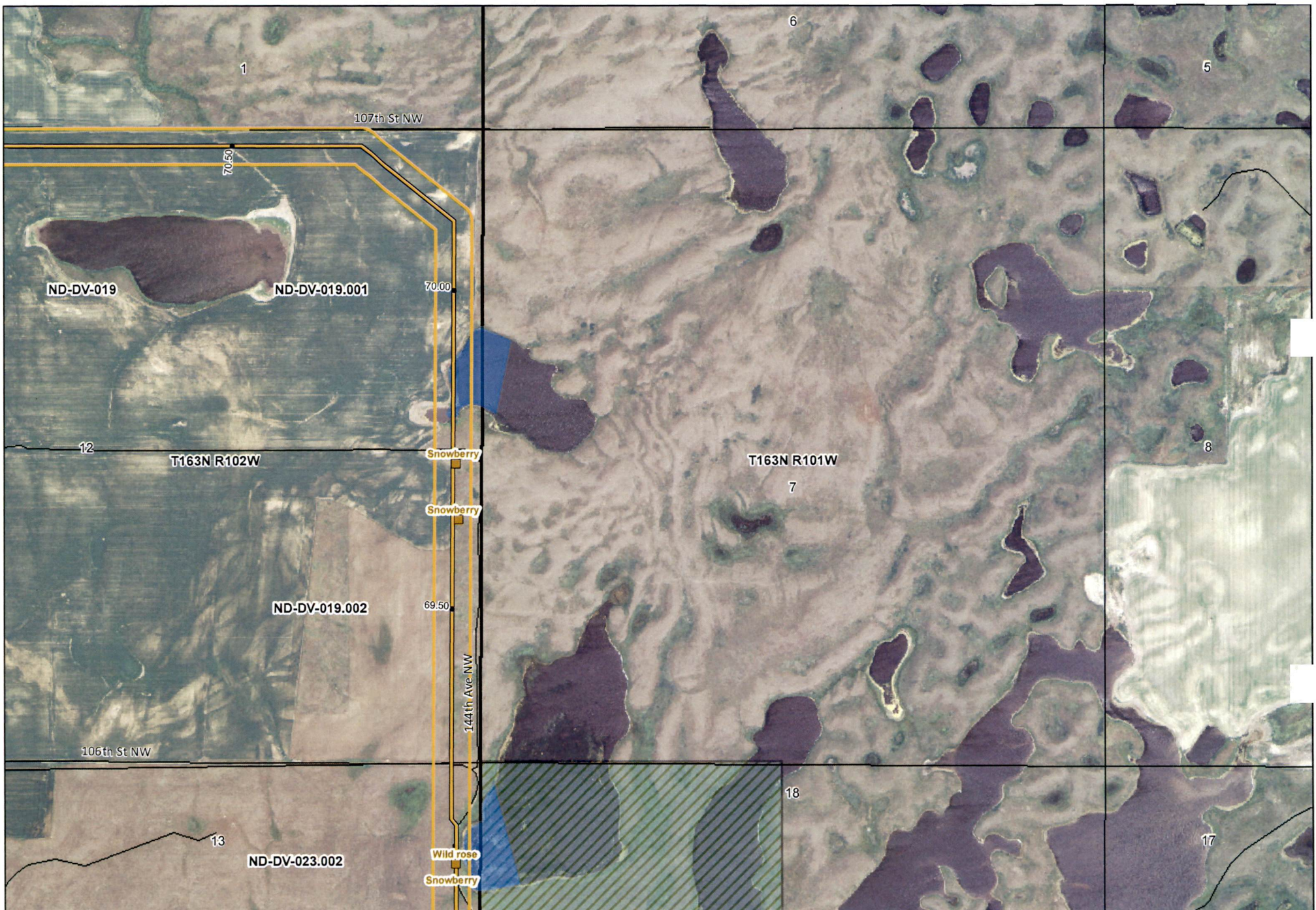


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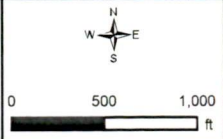
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 42



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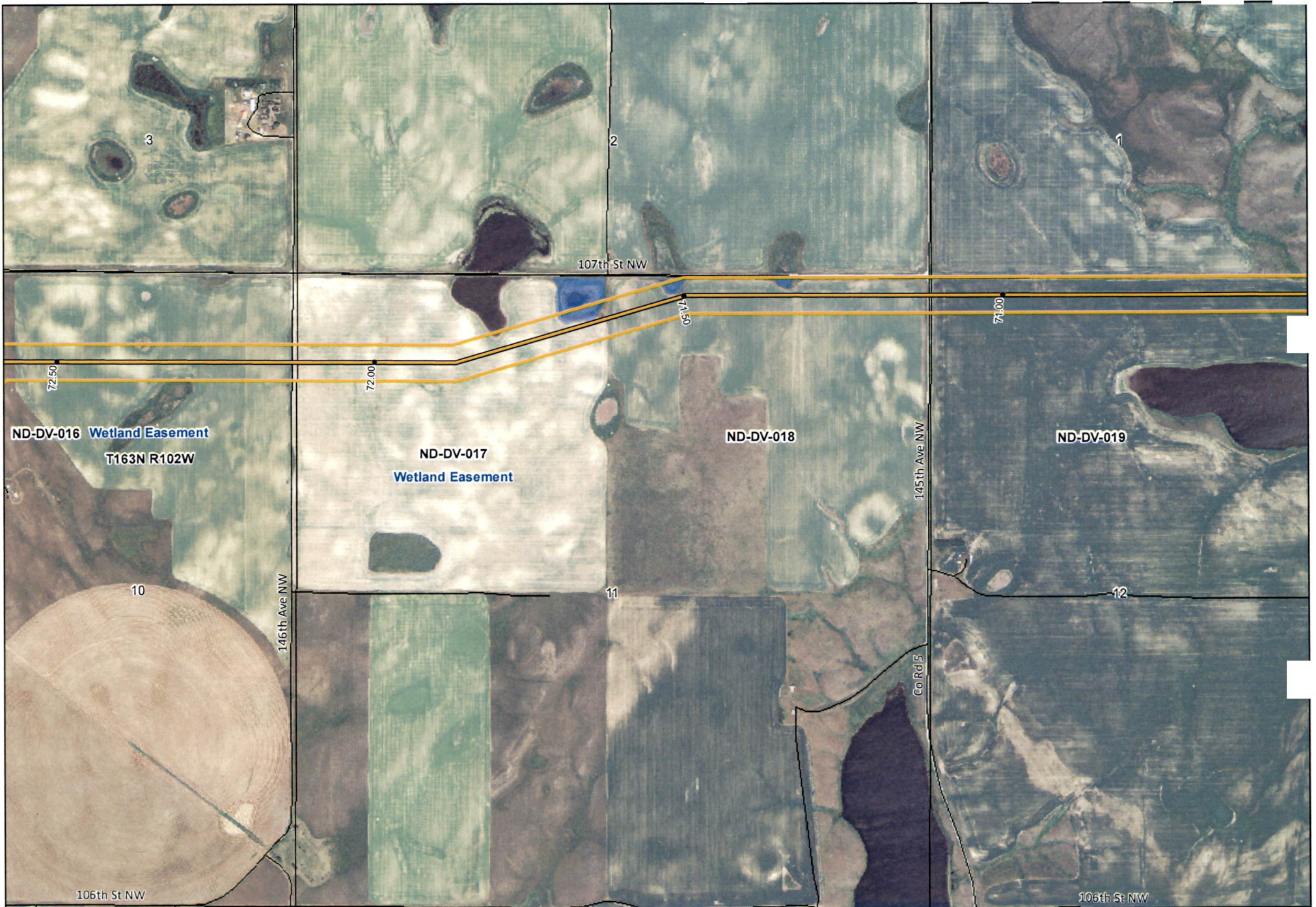


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 43
 Date: 10/29/2013



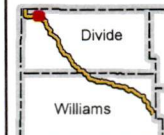


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 Fax: 406-585-7428



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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

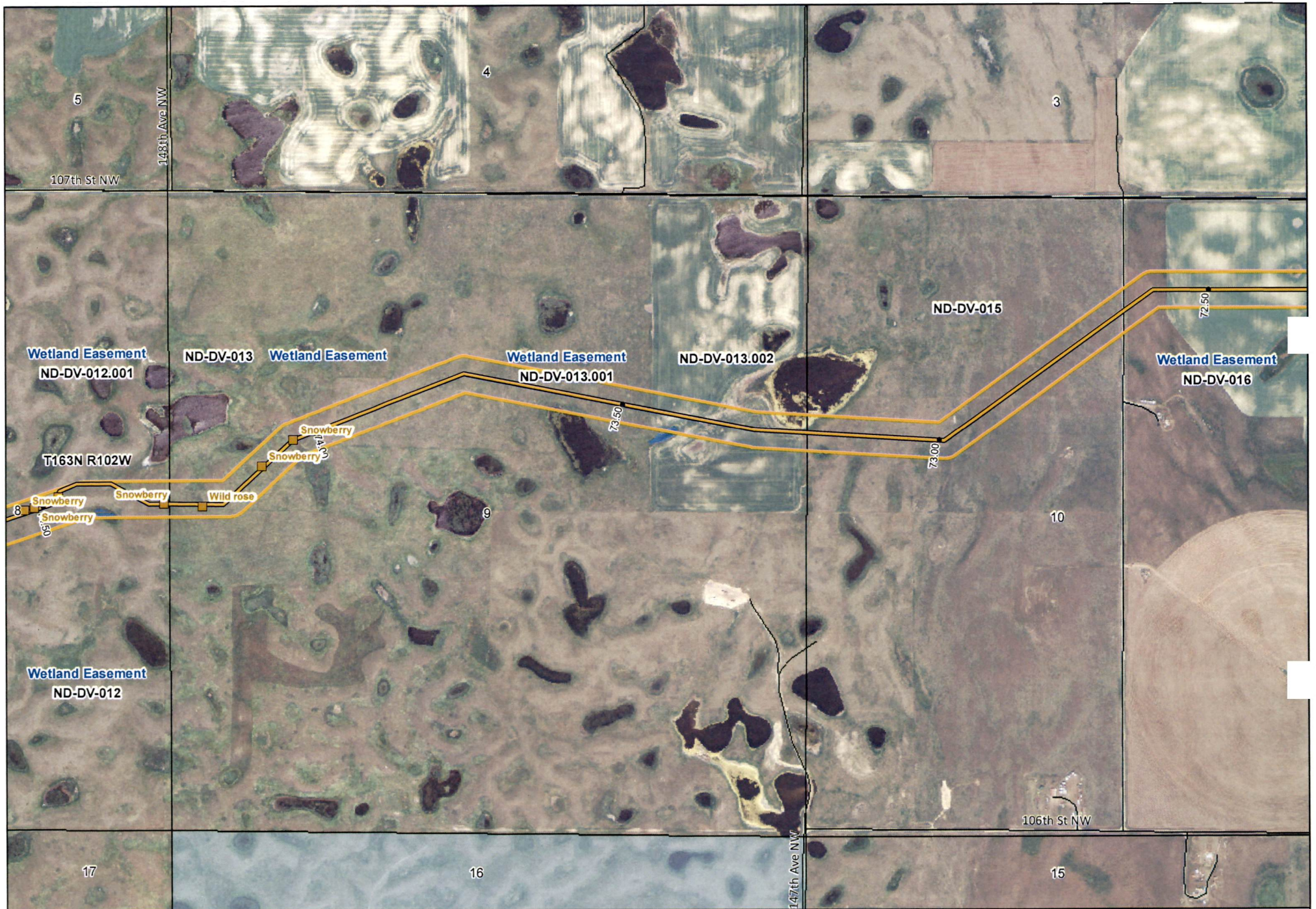


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 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 44

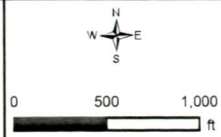


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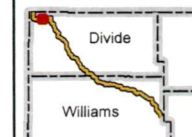


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 Fax: 406-585-7428



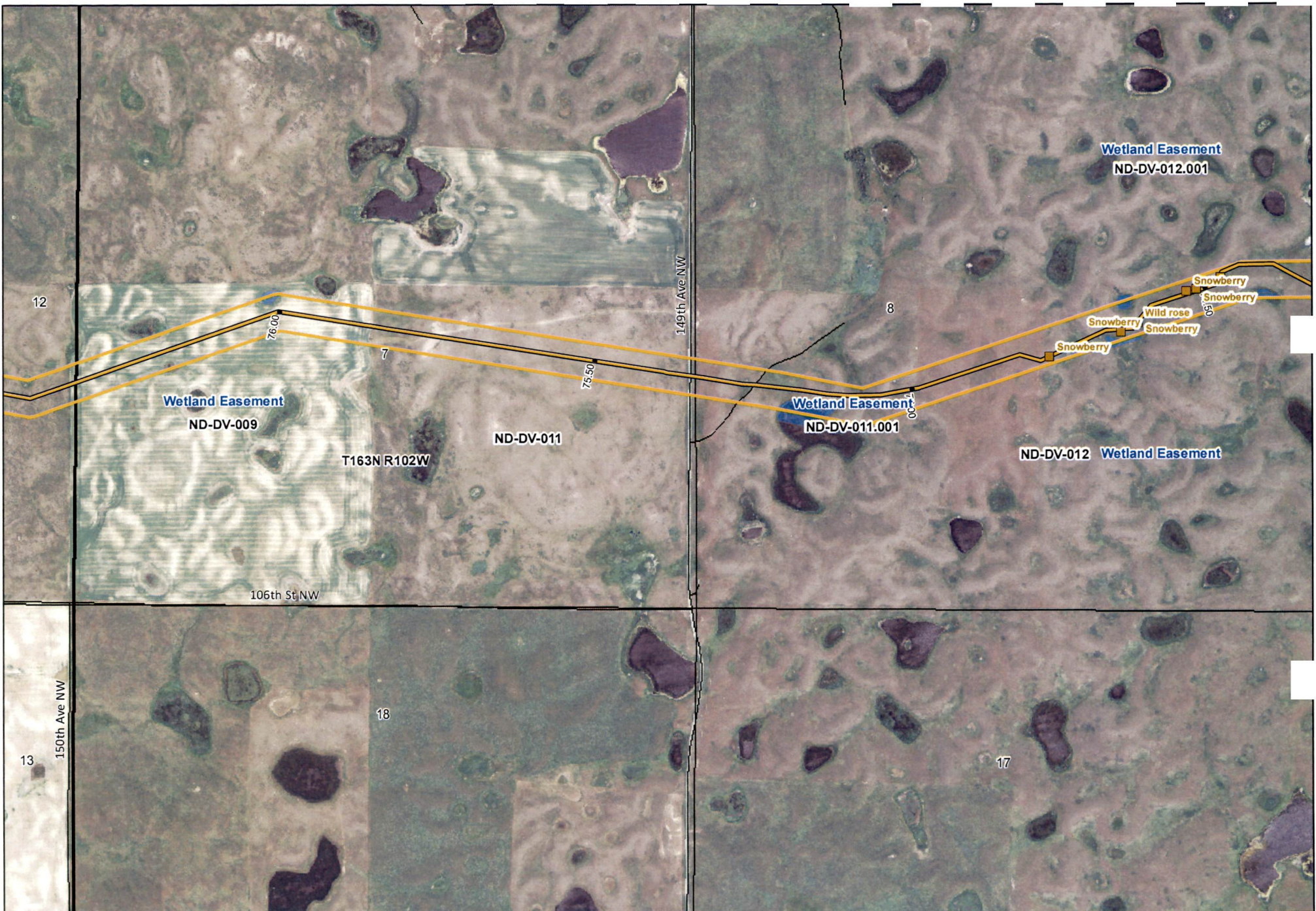
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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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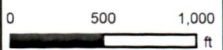
Vantage Pipeline Project
 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 45

Date: 10/29/2013

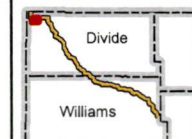


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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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 Tree and Shrub Mitigation Mapbook
 1:12,000, Sheet: 46

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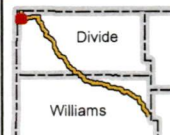


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Fax: 406-585-7428




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|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |

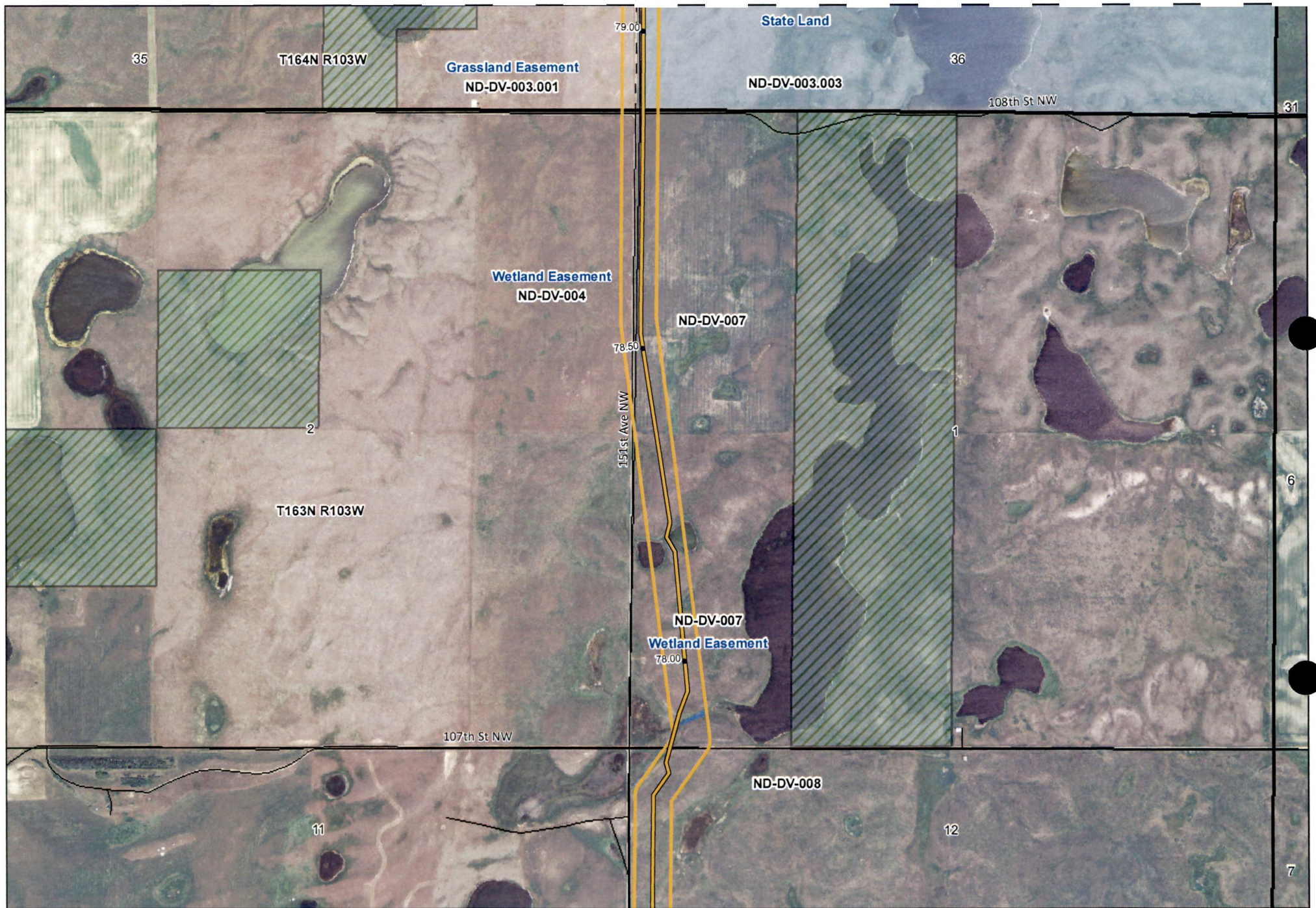


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Tree and Shrub Mitigation Mapbook
1:12,000, Sheet: 47

Date: 10/29/2013





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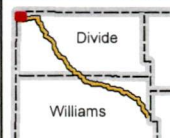
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ft

- Pipeline Route
- 300 ft PSC Corridor
- Shrub Location
- Tree Location

- Wetlands
- County Boundary
- Township Range Boundary
- Section Boundary
- Land Tract

- Highway
- Local Road
- 4WD
- Operational Railroad
- Abandoned Railroad

- North Dakota Land Department
- Water Fowl Production Area
- National Wildlife Refuge



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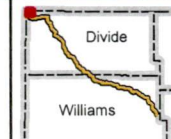


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- | | | | |
|---------------------|-------------------------|----------------------|------------------------------|
| Pipeline Route | Wetlands | Highway | North Dakota Land Department |
| 300 ft PSC Corridor | County Boundary | Local Road | Water Fowl Production Area |
| Shrub Location | Township Range Boundary | 4WD | National Wildlife Refuge |
| Tree Location | Section Boundary | Operational Railroad | |
| | Land Tract | Abandoned Railroad | |



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