



NDIC Brine Pond Study

Phase II: Site Assessments

Submitted to:

North Dakota Department of Mineral Resources - Oil and Gas Division

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June 25, 2018

rev. September 10, 2018

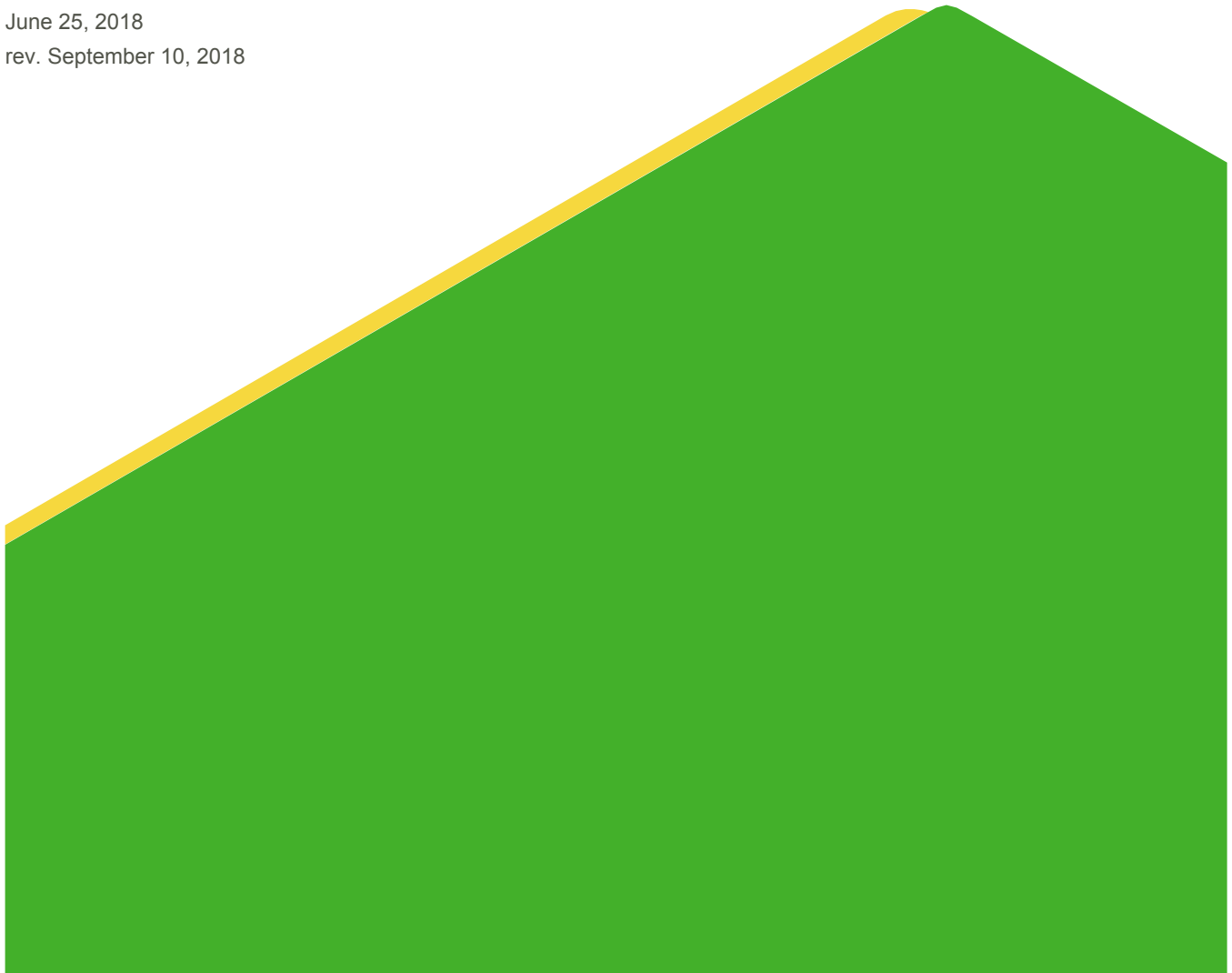


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1.0 INTRODUCTION

The work described herein is being performed for the North Dakota Industrial Commission (NDIC) Oil and Gas Division in support of the House Bill 1347 Brine Pond Assessment Program (Brine Pond Study). The Brine Pond Study includes a remote sensing and visual assessment of historical oil and gas produced water evaporation ponds (brine ponds) believed to be active in the State of North Dakota between 1951 and 1984.

Brine ponds were used to manage water extracted from oil bearing formations during oil and gas exploration and production (E&P) during periods of early oil and gas development in North Dakota. The typically high salinity brine was managed through retention and evaporation in brine ponds as early as 1951. In 1972, brine ponds were outlawed in North Dakota due to increasing research indicating brine was infiltrating into the soil profile rather than just evaporating¹. Between 1972 and 1984, brine ponds were drained and backfilled as a closure technique. Removal of salt-affected soils during brine pond closure was not common, and impacts from historical brine disposal remains a potential environmental threat.

Golder Associates Inc. (Golder) was retained under the current Environmental Services Consultant Contract to identify former brine ponds in North Dakota in two phases, as follows:

- Phase I includes a desktop investigation of publicly available historical aerial imagery and other historical records to identify former brine ponds in north-central North Dakota.
- Phase II includes conducting a visual environmental assessment in conformance with American Society for Testing and Materials (ASTM) standard E1527-13 Section 9 for each brine pond identified during Phase I.

This Summary Report (Report) is for Phase II of the project, which Golder performed starting May 1st, 2018. As specified in the authorized scope of work (SOW) provided by the NDIC and upon further discussions with NDIC, Phase II of the project targeted sites in Bottineau, Renville, and Ward Counties, North Dakota (the Counties). The authorized SOW is provided as Appendix A.

The NDIC authorized the work described herein on December 20th, 2017.

1.1 Phase II Objectives

The primary objective of Phase II of the Brine Pond Study is to conduct site reconnaissance of the historical brine ponds previously identified in Phase I. Due to budgetary constraints, it was agreed with NDIC that only brine ponds identified in the Counties in Phase I of the Study were to be visited and documented. Documentation included a summary of conditions observed at each site, including photographic documentation and approximate measurement of impacts.

2.0 SITE ASSESSMENT METHODOLOGY

Golder performed Phase II of the Brine Pond Study by visiting the identified brine ponds from Phase I in the Counties. An inspection report was created for each individual site visited. Visual assessments were conducted in accordance with ASTM standard E1527-13 Section 9, and included the following information:

- Brine pond site access and adjoining roads;
- Current land use and adjacent land use;

¹ Doll et al. *Characterization of Detrimental Effects of Salts and Other Chemical Constituents Carried in Surface and Subsurface Waters from Brine and Drilling Fluid Disposal Pits Buried During Oil Development*. North Dakota State University, 1985.

- Any evidence of buildings, structures, equipment, or oil and gas equipment on-site or in the vicinity of the site;
- Visual impacts such as barren areas, stressed vegetation, salt crusting, or evidence of erosion;
- Potential receptors in the vicinity such as wetlands, intermittent creeks, or residences;
- General topography and drainage in the vicinity;
- Evidence of utilities on-site or in the vicinity of the site;
- Photographs of the site and the surrounding areas; and
- Interviews conducted, if any.

3.0 RESULTS

Golder completed a site assessment at each of the 216 historical brine ponds identified in the Counties during Phase I of the brine pond study. Bottineau County brine pond locations and site assessment reports are provided in Table 1 and Appendix B, respectively. Renville County brine pond locations and site assessment reports are provided in Table 2 and Appendix C, respectively. Ward County brine pond locations and site assessment reports are provided in Table 3 and Appendix D, respectively. During the initial inspection, 12 sites in Bottineau County and 10 sites in Renville County had been recently plowed at the time of the site visit, and no impacts could be observed due to the ground disturbance. These sites were revisited in August 2018 to assess for visual impacts.

4.0 CLOSING

Using publicly available historical aerial imagery, a total of 216 historical brine ponds were identified in the Counties during Golder's remote sensing survey of north-central North Dakota under Phase I of the Brine Pond Study. Brine ponds were typically observed to be angular, in close proximity to oil and gas facilities, and exhibiting visual signs of salt impact.

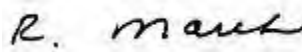
Locations of the brine ponds identified in the Counties were mapped and associated data were tabulated. Brine ponds in Burke, Divide, Mountrail, and Williams Counties were mapped and a Google Earth KMZ file indicating their locations is being provided to NDIC in-lieu of tabulated data. The data were used to conduct Phase II of the Brine Pond Study, which involved completing a site assessment of each brine pond identified in the Counties in accordance with ASTM standard E1527-13 Section 9. Conditions observed at each brine pond identified in the Counties are documented in Appendices B, C, and D of this report.

Signature Page

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APPENDIX A

Scope of Work

Assessment of Brine ponds active between 1951&1984 Project

Intent

Per HB 1347 section 2 1a. this project is to determine how many brine ponds there are in the north central portion of the state that require remediation of salt and any other contamination from the surrounding soil. These ponds were active between 1951 and 1984.

Directions

Phase 1: Desktop Investigation

A desktop investigation will be performed to identify locations of former brine evaporation ponds. This investigation will be performed using publicly available data as follows:

- 1) Current and historical aerial imagery.
- 2) List and map of potential locations of former brine evaporation ponds compiled by the North Dakota Geological Survey.
- 3) Locatable historical records from the 1984 NDSU study of former brine evaporation ponds.
- 4) Will include north-central portions of North Dakota that have undergone oil and gas development. Portions will begin with Renville and Bottineau counties and may expand to surrounding counties if necessary. Expansion past Renville and Bottineau counties will be approved prior to investigation.

The following results of the desktop investigation will be provided to the North Dakota Department of Mineral Resources Oil and Gas Division:

- 1) Monthly progress report with time and materials billing for the month the work was performed.
- 2) A final report to include the following:
 - a. Tabular list of all identified brine ponds including geographical coordinates.
 - b. Map of all identified brine ponds.
 - c. Copies or references for all publicly available data utilized.

Phase 2: Assessment

Phase 2 will include a Phase I Environmental Site Assessment (ESA) site reconnaissance per ASTM E1527-13 Section 9 or E2247-16 Section 9 for each brine pond identified in Phase 1 for total impacts observed. Full Phase I ESAs will not be provided.

The following results of the assessment will be provided to the North Dakota Department of Mineral Resources Oil and Gas Division:

- 1) A report briefly summarizing conditions observed at each site.
 - a. Documentation of any records review performed
 - b. Photo documentation of the inspection
 - c. Documentation of any interviews conducted.
 - d. Documentation of any measurement (size) of impacts. (No sampling is required for this project)

This effort will be billed on a time and materials basis per the rates in the Environmental Services Contract. Costs cannot exceed \$100,000.

APPENDIX B

**Bottineau County Site
Assessment Reports**

B1-1



Photograph facing north off of an oilfield lease road showing no visual impacts in agricultural field.



Photograph facing northeast off of an oilfield lease road showing no visual impacts in agricultural field.

Site Inspection Observations

B1-1 was inspected on May 15th, 2018, and is located approximately 500 feet north of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used as agricultural land, and is surrounded by agricultural fields. Visual impacts were not observed from a distance at the time of the site visit. A wetland was observed to the south of the site. The site topography is generally flat, and a drainage direction could not be assessed due to access limitations.

B1-2



Photograph facing north off of an oilfield lease road showing no visual impacts in agricultural field. Wetlands were observed northwest of the site.



Photograph facing northeast off of an oilfield lease road showing no visual impacts in agricultural field. Aboveground powerlines were observed north of the site.

Site Inspection Observations

B1-2 was inspected on May 15th, 2018, and is located approximately 200 feet north of oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently an agricultural field that was recently plowed, and is surrounded by agricultural fields. Visual impacts were not observed from a distance at the time of the site visit. A wetland was observed to the north of the site. The site topography is generally flat and slopes to the northwest. Aboveground powerlines were observed approximately 100 feet north of the site.

B1-3



Photograph facing north off of an oilfield lease road showing a visually impacted area. Barren ground and stressed vegetation is visible in an approximately 100 feet by 100 feet area. A pump jack pad is located 75 feet to the northeast.



Photograph facing northeast off of an oilfield lease road showing visually impacted area and wetland located approximately 75 feet southeast.

Site Inspection Observations

B1-3 was inspected on May 15th, 2018, and is located approximately 200 feet east of 32nd Ave NW and 50 feet north of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands. An oil & gas facility consisting of one pump jack was observed to the northeast of the site. Visual impacts were observed, including an area of barren ground with stressed vegetation; the area of visual impacts measured approximately 100 feet by 100 feet. The impacted area appeared to have been migrating from the pump jack to the northeast. A wetland was observed to the southeast of the site. The site topography is generally flat and slopes to the southwest. Aboveground powerlines were observed to the west of the site.

B1-4



Photograph facing east off of an oilfield lease road showing visual impacts. Two areas were observed with barren ground, a lack of vegetation, and salt crusts.



Photograph facing southeast off of an oilfield lease road showing one of the two visually impacted areas and a wetland to the south.

Site Inspection Observations

B1-4 was inspected on May 15th, 2018, and is located approximately 50 feet east of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands. An oil & gas facility consisting of one pump jack was observed to the northwest of the site. Visual impacts were observed, including two areas of barren ground with little to no vegetation and salt crusting. The areas measured approximately 50 feet by 40 feet and approximately 40 feet by 40 feet. A wetland was observed to the south of the site. The site topography is generally flat and slopes to the southwest. Aboveground powerlines were observed to the west of the site.

B1-5



Photograph facing northwest off of an oilfield lease road showing agricultural fields. The site is located 1,000 feet further northwest and could not be accessed.



Photograph facing north off of an oilfield lease road showing an agricultural field. The site could not be accessed due to access limitations.

Site Inspection Observations

B1-5 was inspected on May 16th, 2018, and is located approximately 1,000 feet northwest of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts could be observed at the time of site visit due to access limitations. The site topography is generally flat but a drainage direction could not be assessed due to access limitations.

B1-6



Photograph facing west from 30th Ave NW showing a visually impacted area. Depression and stressed vegetation are visible from the road approximately 500 feet west.



Photograph facing northwest off of 30th Ave NW showing a residential area approximately 1,000 feet northwest of the site.

Site Inspection Observations

B1-6 was inspected on May 16th, 2018, and is located approximately 500 feet west of 30th Ave NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. From the road, a slight depression with stressed vegetation could be observed. However, the area could not be measured because of access limitations. The site topography is generally flat and seems to drain towards the north to northwest.

B1-7



Photograph facing east off of an oilfield lease road showing a visually impacted area. Extensive dead zones with salt crusts were visible in an area approximately 80 feet by 30 feet. Aboveground powerlines were observed to the east.



Photograph facing southwest off of an oilfield lease road showing a visually impacted area. Cracks and salt crusts were observed.

Site Inspection Observations

B1-7 was inspected on May 15th, 2018, and is located approximately 150 feet south of 104th St NW and 50 feet east of an oilfield lease road. The site is currently native grassland. Native grasslands lie to the east and south, and agricultural fields lie to the north. An oil & gas facility consisting of 11 aboveground storage tanks, one pump jack, and three heater-treaters was observed to the west of the site. Visual impacts were observed, including an area of barren ground with stressed vegetation and salt crusting; the area of visual impacts measured approximately 80 feet by 30 feet. The site topography is generally flat and slopes to the southeast. Aboveground powerlines were observed to the east of the site, and underground oil & gas pipelines were observed to the north, just south of 104th St NW.

B1-8



Photograph facing north off of 104th St NW showing a visually impacted area. Extensive dead zones and salt crusts were observed.



Photograph facing northwest off of 104th St NW showing visually impacted area with salt crusts in an agricultural field.

Site Inspection Observations

B1-8 was inspected on May 15th, 2018, and is located approximately 100 feet north of 104th St NW and 200 feet west of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed, including an area of barren ground with stressed vegetation and salt crusting; the area of visual impacts measured approximately 125 feet by 100 feet. The site topography slopes steeply to the south. Aboveground powerlines were observed to the south of the site.

B1-9



Photograph facing west off of an oilfield lease road showing a visually impacted area. Extensive dead zones, salt crusts, and soil cracks are visible in a 200 feet by 100 feet area. The impacted area is adjacent to pad containing oilfield equipment.



Photograph facing southwest off of oilfield lease road showing wetland adjacent to the south of the site.

Site Inspection Observations

B1-9 was inspected on May 15th, 2018, and is located approximately 500 feet east of 31st Ave NW and 700 feet south of 104th St NW. The site is currently native grassland. Native grasslands lie to the north and south, and agricultural fields lie to the east. An oil & gas facility lies to the east, consisting of a field office, a pump jack, a pipeline riser, and miscellaneous field equipment. Visual impacts were observed, including an area of barren ground with little to no vegetation; the area of visual impacts measured approximately 200 feet by 100 feet. A wetland was observed to the north. The site topography is generally flat, and slopes to the south. A pipeline riser was observed to the west, indicating the likelihood of underground pipeline utilities in the vicinity of the site.

B1-10



Photograph facing southeast off of an oilfield lease road showing no visual impacts. A pump jack is located approximately 1,000 feet east of site.



Photograph facing southwest off of oilfield lease road showing no visual impacts. A wetland is located approximately 100 feet south of the site.

Site Inspection Observations

B1-10 was inspected on May 15th, 2018, and is located approximately 200 feet south of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands to the west, south, and east. Agricultural fields lie to the north. No visual impacts were observed at the time of the site visit. A wetland was observed to the south. The site topography is generally flat, and slopes to the north.

B1-11



Photograph facing east off of 31st Ave NW showing native grasslands with no visual impacts. The site is located approximately 500 feet further southeast in a fenced off field.



Photograph facing south off of 31st Ave NW. The site is located approximately 500 feet southeast in a fenced off field. Aboveground powerlines are located approximately 500 west of site.

Site Inspection Observations

B1-11 was inspected on May 15th, 2018, and is located approximately 500 feet south of 31st Ave NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and is surrounded by grasslands. Visual impacts were not observed from a distance at the time of the site visit. A wetland was observed to the south of the site. The site topography is generally flat and slopes to the north.

B1-12



Photograph facing south off of 31st Ave NW showing native grassland. The site is approximately 1,000 feet further south in the fenced-off field. Aboveground powerlines are located approximately 500 feet west of site.



Photograph facing southwest from 31st Ave NW. Site could not be accessed due to fence.

Site Inspection Observations

B1-12 was inspected on May 16th, 2018, and is located approximately 1,000 feet south of 31st Ave NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and is surrounded by grasslands. Visual impacts could not be observed at the time of site visit due to access limitations. A wetland was observed to the south of the site. The site topography is generally flat but a drainage direction could not be assessed due to access limitations.

B1-13



Photograph facing southwest off of 31st Ave NW. Site is in fenced off pasture land approximately 1,500 feet further southwest.



Photograph facing southwest off of 31st Ave. NW. The site is in fenced-off pasture land. Aboveground powerlines are located approximately 500 feet east of the site.

Site Inspection Observations

B1-13 was inspected on May 15th, 2018, and is located approximately 1,500 feet south of 31st Ave NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and is surrounded by grasslands. Visual impacts were not observed from a distance at the time of the site visit. The site topography appears to drain to the north.

B1-14



Photograph facing northeast off of an oilfield lease road showing a visually impacted area including barren areas with no vegetation. The impacted area is approximately 200 feet by 175 feet. Oil pipeline risers are located southwest of site.



Photograph facing northeast off of oilfield lease road showing salt crusts and soil cracks on site. The site is adjacent to a wetland measuring approximately 300 feet by 100 feet.

Site Inspection Observations

B1-14 was inspected on May 15th, 2018, and is located approximately 50 feet east of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands to the east, south, and west. Oil & gas facilities lie to the northwest (consisting of one pump jack), and to the east (consisting of one pump jack). Visual impacts were observed, including an area of barren ground with little to no vegetation and salt crusting; the area of visual impacts measured approximately 200 feet by 175 feet. A wetland was observed to the north. The site topography is generally flat and slopes to the northeast. Aboveground pipeline risers were observed to the west of the site, indicating the likelihood of underground pipelines in the vicinity of the site.

B2-1 (May 2018)



Photograph facing east of an oilfield lease road. No visual impacts were observed at the time of the May 16, 2018 site visit. The site is surrounded by agricultural fields with an oil & gas facility located to the west.

Site Inspection Observations

B2-1 was inspected on May 16th, 2018 and is located approximately 350 feet north of 104th St NW and 50 feet east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility consisting of two aboveground storage tanks, one heater-treater, and one pump jack was observed to the west of the site. No visual impacts were observed at the time of the site visit. A wetland was observed to the southeast of the site. The site topography is generally flat and slopes to the west and northwest. Aboveground powerlines were observed to the south of the site.

B2-1 (August 2018)



Photograph facing northeast off of an oilfield lease road showing the northern portion of the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 100 feet by 20 feet.



Photograph facing southeast off of an oilfield lease road showing the southern portion of the visually impacted area.

Site Inspection Observations

B2-1 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 100 feet by 20 feet.



Photograph facing north of 29th Ave NW. The site is located approximately 500 feet further north from the location of the picture and could not be accessed during the time of the inspection.



Photograph facing northwest of the wetland located to the southwest of the site. No visual impacts could be observed at the time of the visit due to access limitations.

Site Inspection Observations

B2-2 was inspected on May 16th, 2018, and is located approximately 500 feet northeast of 29th Ave NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts could be observed from a distance at the time of the site visit. A wetland was observed to the southwest of the site. The site topography is generally flat and slopes to the southwest.

B2-3



Photograph facing northwest showing site conditions. A 50 feet by 50 feet area of visual impacts can be seen in the foreground.



Photograph facing west showing site conditions. Minimal visual impacts were observed. The wetland observed southwest of the site can be seen in the left side of the photograph.

Site Inspection Observations

B2-3 was inspected on May 16th, 2018, and is located approximately 450 feet west of 28th Ave NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields to the north, west, and south. An oil & gas facility consisting of four aboveground storage tanks, one heater-treater, one wellhead, and one flare pit was observed to the east of the site. Minimal visual impacts were observed, including an area of lighter colored soils and stressed vegetation; the area of visual impacts measured approximately 50 feet by 50 feet. A wetland was observed to the southwest of the site. The site topography is generally flat and slopes to the east.

B3-1



Photograph facing southwest from the northeast corner of the site, showing visual impacts, including salt residues, barren soils and stressed vegetation, within the oil & gas pad.



Photograph facing west from the east side of the site, showing site conditions.

Site Inspection Observations

B3-1 was inspected on May 16th, 2018, and is located at the center of an active oil & gas facility. The site is currently used as an oil & gas facility. The facility consists of 16 aboveground storage tanks, four heater-treaters, four shacks, and one horizontal separator. Visual impacts were observed, including an area of barren soils with little to no vegetation and salt residues; the area of visual impacts measured approximately 50 feet by 50 feet. The site topography is generally flat and slopes to the northeast. An aboveground powerline was observed on the oil pad facility, running east-west.

B3-2 (May 2018)



Photograph facing east off of 19th Ave NW. No visual impacts were observed at the time of the May 16, 2018 site visit.

Site Inspection Observations

B3-2 was inspected on May 16th, 2018 and is located approximately 500 feet east of 19th Ave NW and 50 feet north of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility consisting of one wellhead was observed to the east of the site. No visual impacts were observed at the time of the site visit. The site topography is generally flat and slopes to the east.

B3-2 (August 2018)



Photograph facing east off of an oilfield lease road showing a visually impacted area. Barren ground and stressed vegetation were observed in numerous areas.



Photograph facing north off of an oilfield lease road showing a visually impacted area. Stressed vegetation was observed in numerous areas.

Site Inspection Observations

B3-2 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in four distinct areas. One area measuring approximately 20 feet by 15 feet is located in the eastern portion of the site, while 3 additional areas measuring 20 feet by 10 feet, 20 feet by 20 feet, and 30 feet by 15 feet are located to the north of the lease road.

B3-3 (May 2018)



Photograph facing east off of 19th Ave NW. No visual impacts were observed at the time of the May 16, 2018 site visit.



Photograph facing southwest looking onto the oil & gas facility. Soils shown in the foreground were part of the oil & gas pad, and not part of the site.

Site Inspection Observations

B3-3 was inspected on May 16th, 2018 and is located approximately 450 feet east of 19th Ave NW and just north of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the south of the site, consisting of two aboveground storage tanks, one wellhead, one pump jack, and one shack. Two grain bins were also located on the site, just north of the oil & gas facility. No visual impacts were observed at the time of the site visit. The site topography is generally flat and slopes to the northwest.

B3-3 (August 2018)



Photograph facing northeast off of an oilfield lease road showing stressed vegetation in an agricultural field. The area measured approximately 20 feet by 15 feet.



Photograph facing north off of an oil lease road showing two grain bins located at site and lighter colored grasses, which could potentially indicate stressed vegetation.

Site Inspection Observations

B3-3 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of stressed vegetation in an area measuring approximately 20 feet by 15 feet. An area of lighter colored grasses was also observed, measuring approximately 15 feet by 10 feet, which could indicate stressed vegetation.

B3-4



Photograph facing east off of an oilfield lease road. No visual impacts were observed at the time of the site visit.

Site Inspection Observations

B3-4 was inspected on May 16th, 2018, and is located approximately 800 feet north of 107th St NW and 100 feet east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility consisting of one wellhead and one pump jack was observed to the west/southwest of the site. No visual impacts were observed at the time of the site visit. The site topography is generally flat and slopes to the southeast.

B3-5



Photograph facing east of site conditions off of 19th Ave NW. Visual impacts including barren soils with little to no vegetative growth and salt crusting were observed.



Photograph facing west from the eastern portion of the site. The oil & gas facility can be seen in the background of the photograph.

Site Inspection Observations

B3-5 was inspected on May 16th, 2018, and is located approximately 600 feet east of 19th Ave NW and 100 feet east of an oilfield lease road. The site is currently native grassland, and is surrounded by agricultural fields. An oil & gas facility consisting of one pump jack was observed to the west of the site. Visual impacts were observed, including an area of barren soils with little to no vegetative growth and salt crusting; the area of visual impacts measured approximately 125 feet by 75 feet. The site topography is generally flat and slopes to the northwest.

B3-6



Photograph facing northwest off of an oilfield lease road. An area of stressed vegetation, measuring approximately 100 feet by 100 feet can be seen in the center of the photograph.



Photograph facing southeast, taken northwest of the wetland. The wetland lies northwest of the area of stressed vegetation. The site topography is generally flat and slopes to the west.

Site Inspection Observations

B3-6 was inspected on May 16th, 2018, and is located approximately 600 feet west of 24th Ave NW and 150 feet north of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands. An oil & gas facility consisting of one pump jack was observed to the southeast of the site. A wetland was observed to the northwest of the site. Visual impacts were observed, including an area of stressed vegetation; the area of visual impacts measured approximately 100 feet by 100 feet. The site topography is generally flat and slopes to the west.

B4-1



Photograph facing northwest off of an oilfield lease road. Barren soils with no vegetation and salt crusting was observed in an area approximately 75 feet by 15 feet.



Photograph facing west/northwest off of an oilfield lease road. Visual impacts were observed within the road ditch.

Site Inspection Observations

B4-1 was inspected on May 16th, 2018, and is located approximately 50 feet west of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility consisting of one pump jack was observed to the north of the site. Visual impacts were observed, including an area of barren soils with little to no vegetation and salt crusting; the area of visual impacts measured approximately 75 feet by 15 feet. The impacts appear to be confined to a roadside ditch along the lease road, just south of the pump jack. The site topography is generally flat and slopes to the roadside ditch along the lease road. An aboveground power line was observed to the south of the site.

B4-2



Photograph facing east off of US Highway 83. The site is located approximately 1,500 feet farther east, on private property. No visual impacts could be observed due to access limitations.

Site Inspection Observations

B4-2 was inspected on May 16th, 2018, and is located approximately 1,500 feet east of US Highway 83. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts could be observed at the time of site visit due to access limitations. The site topography is generally flat but a drainage direction could not be assessed due to access limitations.

B4-3



Photograph facing northwest off of an oilfield lease road. Visual impacts were observed, including barren soils and salt residues.

Site Inspection Observations

B4-3 was inspected on May 16th, 2018, and is located approximately 2,500 feet north of 108th St NW and 125 feet northwest of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility consisting of seven aboveground storage tanks, two heater-treaters, and one shack was observed to the south of the site. Visual impacts were observed, including an area of barren soils with little to no vegetation and salt residues; the area of visual impacts measured approximately 150 feet by 100 feet. The site topography is generally flat and slopes to the southwest.

B4-4



Photograph facing southwest off of 108th St NW. Barren soils with little to no vegetation and salt residues were observed.



Photograph facing south off of 108th St NW, showing the eastern extent of the area of visual impacts.

Site Inspection Observations

B4-4 was inspected on May 17th, 2018, and is located approximately 50 feet south of 108th St NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Grasslands lie to the north, across 108th St NW. Visual impacts were observed, including an area of barren soils with little to no vegetation and salt residues; the area of visual impacts measured approximately 200 feet by 100 feet. The site topography is generally flat and slopes to the north. An electrical transformer and a power pole were observed to the east of the site.

B4-5



Photograph facing east off of an oilfield lease road, showing an area of stressed vegetation and salt residues.



Photograph showing a closer view of the area of stressed vegetation and salt residues.

Site Inspection Observations

B4-5 was inspected on May 17th, 2018, and is located approximately 600 feet south of 108th St NW and just east of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural land lies to the north and grasslands lie to the east and south. An oil & gas facility was observed to the west, consisting of five aboveground storage tanks, one heater treater, one flare pit, and one shack. Visual impacts were observed, including an area of stressed vegetation and salt residues; the area of visual impacts measured approximately 50 feet by 50 feet. The site topography is generally flat and slopes to the east/southeast.

B4-6



Photograph facing northwest off of an oil & gas facility showing the visually impacted area. Visual impacts follow the edge of the oil & gas facility.



Photograph facing northeast off of the oil & gas facility showing the visually impacted area between the facility and an agricultural field. The Souris River can be seen in the background.



Photograph facing southeast off of the oil & gas facility showing the visually impacted area between the facility and an agricultural field. The Souris River can be seen in the background.

Site Inspection Observations

B4-6 was inspected on May 17th, 2018, and is located approximately 250 feet south of 108th St NW and just east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of one shack. Visual impacts were observed along the eastern edge of the oil & gas facility, including an area of stressed vegetation and salt residues; the area of visual impacts measured approximately 200 feet by 20 feet. The site topography is generally flat and slopes to the southeast.

B5-1



Photograph facing south off of 109th St NW showing the site. No visual impacts were observed at the time of the site visit.

Site Inspection Observations

B5-1 was inspected on May 17th, 2018, and is located approximately 400 feet south of 109th St NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and is surrounded by grasslands. Two small wetlands were observed at the site. Visual impacts were not observed from a distance at the time of the site visit. The site topography is generally flat and slopes to the northeast. An underground natural gas pipeline was observed to the north, running south of 109th St NW.

B5-2



Photograph facing southwest off of an oil & gas facility showing the visually impacted area lacking vegetation.



Photograph facing southwest off of an oil & gas facility showing the visually impacted area lacking vegetation. The visually impacted area is north of a wetland visible in the background.

Site Inspection Observations

B5-2 was inspected on May 17th, 2018, and is located approximately 200 feet south of an oilfield lease road. The site is currently used for agricultural purposes. A wetland lies to the west/southwest, and agricultural fields lie to the east/southeast. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks, one heater-treater, one flare pit, one pump jack, and one shack. Visual impacts were observed, including an area of barren soils with little to no vegetation growth; the area of visual impacts measured approximately 100 feet by 50 feet. The site topography is generally flat and slopes to the northwest.

B5-3



Photograph facing southeast off of an oil & gas facility. A visually impacted area lacking vegetative growth can be seen.



Photograph facing south off of an oil & gas facility showing the lack of vegetative growth in the visually impacted area.

Site Inspection Observations

B5-3 was inspected on May 17th, 2018 and is located approximately 600 feet east of County Road 27A and just east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of four aboveground storage tanks, two heater-treaters, one flare pit, one pump jack, and one shack. Visual impacts were observed, including an area of barren soils with little to no vegetation growth; the area of visual impacts measured approximately 100 feet by 75 feet. The site topography is generally flat and slopes to the north.

B5-4



Photograph facing southeast off of an oilfield lease road showing the site. No visual impacts were observed at the time of the site visit.

Site Inspection Observations

B5-4 was inspected on May 17th, 2018 and is located approximately 400 feet west of 11th Ave NW and 50 feet south of an oilfield lease road. The site is currently native grassland and is surrounded by grasslands. An oil & facility was observed to the south, consisting of one pump jack. An abandoned well pad was also observed to the northwest. Visual impacts were not observed at the time of the site visit. The site topography is generally flat and slopes to the east.

B5-5



Photograph facing west off of an oil & gas facility, looking into an area of the facility used as a laydown yard. A visually impacted area with cracking soils was observed.



Photograph facing west showing a closer view of the cracking soils at the visually impacted area located within the laydown yard of the oil & gas facility.

Site Inspection Observations

B5-5 was inspected on May 17th, 2018, and is located approximately 500 feet south of 104th St NW. The site is currently an oil & gas facility and is surrounded by agricultural fields. The oil & facility consisted of four aboveground storage tanks, one heater-treater, and two shacks. Visual impacts were observed on the well pad at the laydown yard, including an area of stressed vegetation and cracking soils; the area of visual impacts measured approximately 75 feet by 75 feet. The site topography is generally flat and slopes to the southeast.

B6-1



Photograph facing northwest off of an oilfield lease road showing the site. No visual impacts could be observed due to access limitations.

Site Inspection Observations

B6-1 was inspected on May 17th, 2018, and is located approximately 500 feet northwest of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were not able to be observed at the time of site visit due to access limitations. The site topography is generally flat and slopes to the south. An aboveground powerline was observed to the south of the oilfield lease road and west of the site.

B6-2



Photograph facing south off of an oilfield lease road showing the site. No visual impacts could be observed due to access limitations.

Site Inspection Observations

B6-2 was inspected on May 17th, 2018, and is located approximately 500 feet southwest of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were not able to be observed at the time of site visit due to access limitations. The site topography is generally flat and slopes to the north.

B6-3 (May 2018)



Photograph facing south off of an oilfield lease road showing the site. No visual impacts could be determined at the time of the May 17, 2018 site visit due to recent disturbance in the field.

Site Inspection Observations

B6-3 was inspected on May 17th, 2018 and is located approximately 1,500 feet north of 106th St. NW and 200 feet south of an oilfield lease road. The site is currently an agricultural field that was freshly plowed and is surrounded by agricultural fields. Visual impacts were not observed due to the recent disturbance. The site topography is generally flat and slopes to the west/northwest.

B6-3 (August 2018)



Photograph facing southeast off of an oilfield lease road showing the eastern portion of the visually impacted area. Barren ground and stressed vegetation were observed in an approximately 150 feet by 20 feet area.



Photograph facing southwest off of an oilfield lease road showing western portion of visually impacted area.

Site Inspection Observations

B6-3 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 150 feet by 20 feet.

B6-4 (May 2018)



Photograph facing south off of an oilfield lease road showing the site. No visual impacts were observed at the time of the May 17, 2018 site visit.

Site Inspection Observations

B6-4 was inspected on May 17th, 2018 and is located approximately 1,800 feet west of 5th Ave NW and 200 feet south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the northwest, consisting of one aboveground storage tank, one heater-treater, and one pump jack. A wetland was observed to the south, and a residential property was observed approximately 1,500 feet to the east. Visual impacts were not observed at the time of the site visit. The site topography is generally flat and slopes to the south. An aboveground powerline was observed to the north.

B6-4 (August 2018)



Photograph facing south off of an oilfield lease road showing a visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 100 feet by 50 feet.



Photograph facing southeast off of an oilfield lease road showing a visually impacted area. Aboveground storage tanks are visible to the right of the picture, located north of the site.

Site Inspection Observations

B6-4 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 100 feet by 50 feet.

B6-5



Photograph facing south off of an oilfield lease road showing the site. A wetland and aboveground powerlines can be seen in the background.



Photograph facing south off of an oilfield lease road showing the site. A small area of slightly stressed vegetation was observed at the time of the site visit.

Site Inspection Observations

B6-5 was inspected on May 17th, 2018 and is located approximately 300 feet north of 103rd St NW and 100 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Oil & gas facilities were observed to the west and north, consisting of two aboveground storage tanks, one heater-treater, and one pump jack. A barn and grain silo were observed to the southwest. A wetland was observed to the south. Minimal visual impacts were observed, including an area of slightly stressed vegetation; the area of visual impacts measured measuring approximately 25 feet by 25 feet. The site topography is generally flat and slopes to the south towards the aforementioned wetland. An aboveground powerline was observed to the south of the site.

B6-6



Photograph facing southwest off of 103rd St NW showing the visually impacted area lacking vegetation with salt crusting.



Photograph facing southwest showing a closer view of the visually impacted area.

Site Inspection Observations

B6-6 was inspected on May 17th, 2018, and is located approximately 100 feet south of 103rd St. NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A wetland was observed to the west. Visual impacts were observed, including an area of barren soils, stressed vegetation, and salt residues; the area of visual impacts measured approximately 120 feet by 120 feet. The site topography is generally flat and slopes slightly to the north.

B7-1



Photograph facing south off of 109th St NE showing the site. The site appears to have been recently reclaimed. No visual impacts were observed during the site visit.

Site Inspection Observations

B7-1 was inspected on May 16th, 2018, and is located approximately 300 feet south of 109th St NE. The site appears to be a recently reclaimed oil & gas pad. Agricultural fields lie to the south and west, and grasslands lie to the east. A wetland was observed to the east of the site. No visual impacts were observed at the time of the site visit. The site topography is generally flat and slopes to the northeast towards the wetland.

B7-2



Photograph facing west off of an oilfield lease road showing the site. No visual impacts were observed at the time of the site inspection.

Site Inspection Observations

B7-2 was inspected on May 16th, 2018 and is located approximately 50 feet west of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A wetland was observed to the north of the site. No visual impacts were observed at the time of the site visit. The site topography is generally flat and slopes to the west.

B7-3



Photograph facing northeast off of an oilfield lease road showing the visually impacted area.



Photograph showing a closer view of the visually impacted area. A lack of vegetative growth and salt crusting can be seen. A wetland can be seen in the background.

Site Inspection Observations

B7-3 was inspected on May 16th, 2018 and is located approximately 75 feet north of an oilfield lease road. The site is currently native grassland. Oil & gas facilities lie to the north, east, and south of the site. The facility to the north consists of three aboveground storage tanks and one pump jack. The facility to the east consists of two aboveground storage tanks. The facility to the south consists of five aboveground storage tanks and one heater treater. Wetlands were observed to the west, east, and south of the site. Visual impacts were observed, including a barren area with salt crusting; the area of visual impacts measured approximately 50 feet by 20 feet. The site is located in a low area, between the aforementioned wetlands. Aboveground powerlines were observed to the south of the site.

B7-4



Photograph facing west/northwest off of 3rd Ave NE showing the visually impacted area. Visual impacts were minimal and included slightly stressed vegetation.

Site Inspection Observations

B7-4 was inspected on May 16th, 2018, and is located approximately 2,000 feet south of 106th St NE and 200 feet west of 3rd Ave. NE. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A wetland was observed to the south/southeast of the site. Minimal visual impacts were observed, including an area of stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is generally flat and slopes to the south/southeast.

B7-5



Photograph facing north off of an oilfield lease road showing the visually impacted area lacking vegetative growth.

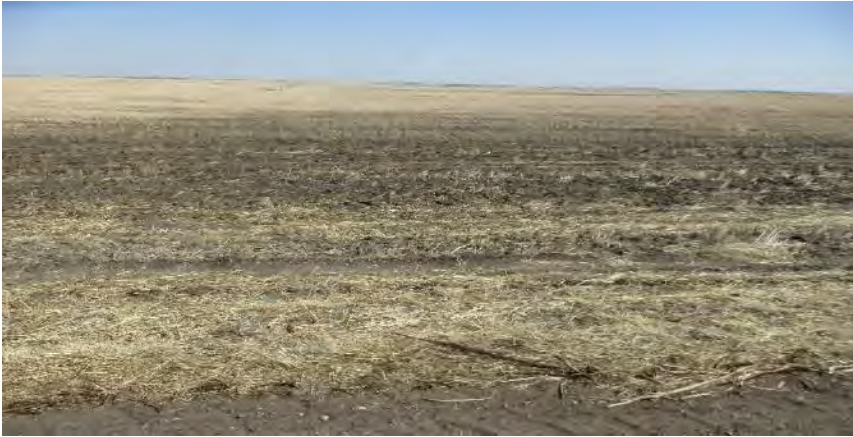


Photograph facing north off of an oilfield lease road showing the visually impacted area lacking vegetative growth.

Site Inspection Observations

B7-5 was inspected on May 16th, 2018 and is located approximately 50 feet north of an oilfield lease road. The site is currently native grassland and is surrounded by grasslands. A wetland was observed to the east/northeast of the site. Visual impacts were observed, including an area of barren soils with little to no vegetative growth, and salt crusting; the area of visual impacts measured approximately 30 feet by 10 feet. There is a slight rise to the east of the impacted area, and the site drains away from the hill. Aboveground powerlines were observed to the north of the site. A pipe was observed protruding from the ground west of the site, indicating there may potentially be underground utilities in the area.

B11-1



Photograph facing south off of 101st St. NW showing the site. The site could not be accessed at the time of the site visit and no visual impacts were visible from the roadway.

Site Inspection Observations

B11-1 was inspected on May 16th, 2018, and is located approximately 700 feet south of 101st St. NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A wetland was observed to the southwest of the site, and a pond was observed to the southeast of the site. No visual impacts were observed from a distance at the time of the site visit. The site topography is generally flat and slopes to the north.

B11-2



Photograph facing east off of an oilfield lease road showing the visually impacted area lacking vegetation. A wetland can be seen in the background.



Photograph facing west from the east edge of the visually impacted area. Salt crusting and a lack of vegetation can be seen. The oilfield lease road can be seen in the background.

Site Inspection Observations

B11-2 was inspected on May 16th, 2018 and is located approximately 800 feet south of 97th St NW and 50 feet east of an oilfield lease road. The site is currently native grassland, and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of one pump jack. A wetland was observed to the south of the site. Visual impacts were observed, including an area of barren soil, stressed vegetation, and salt crusting; the area of visual impacts measured approximately 70 feet by 50 feet. The site topography is generally flat and slopes to the southeast. An aboveground powerline was observed west of the site.

B11-3



Photograph facing northeast off of an oilfield lease road showing the visually impacted area and the lack of vegetative growth. The impacted area is directly east of the oilfield lease road.



Photograph facing southeast off of an oilfield lease road showing the visually impacted area. Lack of vegetative growth and salt crusting can be seen.



Photograph facing south showing a closer view of the visually impacted area and the salt crusting. Aboveground powerlines can be seen in the background.

Site Inspection Observations

B11-3 was inspected on May 16th, 2018 and is located approximately 150 feet north of 96th St NW and just east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility lies immediately to the west, consisting of one pump jack. A wetland was observed to the northeast of the site. Visual impacts were observed, including an area of barren soil and salt crusting; the area of visual impacts measured approximately 350 feet by 100 feet. The site topography is generally flat and slopes to the southwest. An aboveground powerline was observed west of the site running east-west, and an underground oil & gas pipeline was observed west of the site running north-south.

B11-4



Photograph facing southwest off of an oilfield lease road showing the visually impacted area lacking vegetative growth.



Photograph facing southwest showing a closer view of the visually impacted area located on agricultural land. Aboveground powerlines and an intermittent stream can be seen in the background.

Site Inspection Observations

B11-4 was inspected on May 16th, 2018, and is located approximately 250 feet north of 96th St NW and 50 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility lies to the east, consisting of eight aboveground storage tanks, one heater-treater, and one pump jack. A wetland was observed to the north of the site, and an intermittent stream was observed 200 feet south of the site. Visual impacts were observed, including an area of barren soil with stressed vegetation; the area of visual impacts measured approximately 40 feet by 15 feet. The site topography is generally flat and slopes to the west/southwest. An aboveground powerline was observed west of the site.

B12-1



Photograph facing west/southwest off of 25th Ave NW showing the visually impacted area north/northeast of aboveground storage tanks. A wetland bordering the site was observed northeast along the road.



Photograph facing southwest off of 25th Ave NW showing the visually impacted area and wetland bordering the site. Aboveground powerlines were observed south of the oilfield lease road.



Photograph facing west off of 25th Ave NW showing the wetland adjacent to road, and agricultural land to the north.

Site Inspection Observations

B12-1 was inspected on May 4th, 2018, and is located approximately 10 feet west of 25th Ave NW and 40 feet north of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields are located to the north, east, and west. An oil & gas facility was observed to the south, consisting of seven aboveground storage tanks, two horizontal separators, a wellhead, and a pump jack. Visual impacts included an area with barren soil lacking vegetation with salt crusting; the area of visual impacts measured approximately 50 feet by 25 feet. A wetland was also observed to the northeast of the site. The site topography is generally flat, slightly undulating, and slopes slightly to the southeast. Aboveground powerlines were observed to the south of the lease road.

B13-1



Photograph facing east off of an oil & gas facility showing the visually impacted area lacking vegetation and exhibiting salt crusting.



Photograph facing west/southwest off of an oilfield lease road showing the visually impacted area.



Photograph facing south off of an oilfield lease road showing visually impacted area. Soil cracking and salt crusting can be seen. A wetland is located adjacent to the site as can be seen in the background.

Site Inspection Observations

B13-1 was inspected on May 14th, 2018 and is located approximately 200 feet west of 23rd Ave NW and just south of an oilfield lease road. The site is currently for agricultural purposes and in part as an oil & gas facility. Oil & gas facilities were observed to the northwest and southeast of the site, including four aboveground storage tanks and two pump jacks. Agricultural fields surround the site otherwise. Visual impacts were observed, including a barren area devoid of vegetation and exhibiting salt crusting. The impacted area measured approximately 120 feet by 100 feet. A wetland was also observed adjacent to the east of the impacted area. The site topography is generally flat and drains to the northeast.

B13-2



Photograph facing southwest off of an oil & gas facility showing the visually impacted area. Soil cracking and salt crusting were observed.



Photograph facing northwest off of an oil & gas facility showing the visually impacted area. Salt crusting and a lack of vegetative growth can be seen.



Photograph facing northeast off of an oil & gas facility showing the visually impacted area.

Site Inspection Observations

B13-2 was inspected on May 14th, 2018 and is located approximately 500 feet west of 23rd Ave NW and just east of an oilfield lease road. The site is currently used as an oil & gas facility, consisting of six aboveground storage tanks, one heater treater, and one horizontal vessel. Wetlands surround the site to the west, east, and south. Native grassland lies to the north. Extensive visual impacts were observed, including numerous barren areas devoid of vegetation and exhibiting salt crusting. Three major impacted areas were observed, which were located south and northwest of the oil & gas facility. The areas measured approximately 50 feet by 50 feet, 50 feet by 30 feet, and 50 feet by 50 feet. The site topography is generally flat and drains to the east.

B13-3



Photograph facing northeast off of an oil & gas facility showing the visually impacted area. A lack of vegetative growth can be seen.



Photograph facing west off of an oil & gas facility showing additional salt crusting on an oil & gas well pad, where a pump jack was located.

Site Inspection Observations

B13-3 was inspected on May 14th, 2018 and is located approximately 500 feet north of 97th St NW and 200 feet northwest of an oilfield lease road. The site is currently grassland and also used in part for agricultural purposes. Agricultural fields lie to the north, and grasslands lie to the east and south. A wetland lies to the west. An oil & gas facility consisting of one pump jack lies to the southeast of the site. Visual impacts were observed, including a barren area devoid of vegetation and salt crusting; the area of visual impacts measured approximately 100 feet by 50 feet. Additional salt crusting was observed on the oil & gas pad to the southeast, where the pump jack is located. The site topography is generally flat and drains to the north.

B13-4



Photograph facing north off of an oil & gas well pad showing visually impacted area with salt crusting.



Photograph facing southeast off of an oil & gas well pad showing the visually impacted area with salt crusting. A wetland and aboveground powerlines can be seen in the background.

Site Inspection Observations

B13-4 was inspected on May 14th, 2018 and is located approximately 100 feet north of 97th St NW and 50 feet west of 23rd Ave NW, just south of an oilfield lease road. The site is currently used as an oil & gas facility, consisting of one pump jack. Grassland lies to the south of the site, and wetlands lie to the east and west. Another oil & gas facility consisting of one pump jack lies further north of the site. Visual impacts were observed, including salt crusting on the oil & gas pad where the pump jack is located. The impacted area measured approximately 100 feet by 50 feet. The site topography is generally flat and drains to the east. Aboveground powerlines were also observed to the south and east, running along 97th St NW and 23rd Ave NW, respectively.

B14-1



Photograph facing southeast off of an oilfield lease road showing the visually impacted area. Slightly stressed vegetation can be seen.



Photograph facing east off of an oilfield lease road showing the northern portion of the visually impacted area.

Site Inspection Observations

B14-1 was inspected on May 16th, 2018 and is located approximately 500 feet north of 101st St NW and 100 feet east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of two aboveground storage tanks, one heater treater, and one pump jack. Visual impacts were observed, including an area of slightly stressed vegetation; the area of visual impacts measured approximately 100 feet by 20 feet. The site topography is generally flat and slopes to the east. A burning smell from an unknown source was encountered during the site visit.

B14-2



Photograph facing north/northeast off of an oilfield lease road showing the recently reclaimed site. No visual impacts were observed during the time of the site inspection due to recent site reclamation.

Site Inspection Observations

B14-2 was inspected on May 16th, 2018, and is located approximately 500 feet northeast of an oilfield lease road. The site appears to be recently reclaimed, and is currently used for agricultural purposes. The site is surrounded by agricultural fields. No visual impacts were observed during the site visit, as the area appears to be recently reclaimed. The site topography is generally flat and slopes to the southwest.

B14-3



Photograph facing north off of an oil & gas facility showing the extents of the visually impacted area with stressed vegetative growth.



Photograph showing a closer view of stressed vegetation and soil cracking present at the site.

Site Inspection Observations

B14-3 was inspected on May 16th, 2018 and is located approximately 600 feet east of 15th Ave SE and 100 feet north of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the south, consisting of five aboveground storage tanks, one heater treater, and one pump jack. A wetland with standing water was observed south of the oil & gas facility. Visual impacts were observed, including stressed vegetation; the area of visual impacts measured approximately 120 feet by 30 feet. A small depressed area with stressed vegetation was also observed to the northwest, which measured approximately 50 feet by 50 feet. The site topography is generally flat and slopes to the south/southwest.

B14-4



Photograph facing south off of an oilfield lease road showing a slightly impacted area.

Site Inspection Observations

B14-4 was inspected on May 16th, 2018 and is located approximately 2,000 feet east of 15th Ave SE and 50 feet south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks and one horizontal vessel. Visual impacts were observed, including slightly stressed vegetation; the area of visual impacts measured approximately 20 feet by 15 feet. The site topography is generally flat and slopes to the north/northeast.

B14-5



Photograph facing west off of 15th Ave SE showing the visually impacted area with stressed vegetation.

Site Inspection Observations

B14-5 was inspected on May 16th, 2018, and is located approximately 50 feet west of 15th Ave SE. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A wetland was observed to the east of the site, past 15th Ave SE. Visual impacts were observed, including lighter colored soils and stressed vegetation; the area of visual impacts measured approximately 50 feet by 25 feet. The site topography is generally flat and slopes to the north/northeast. Aboveground powerlines were observed to the east of the site, along 15th Ave SE.

B14-6 (May 2018)



Photograph facing east off of an oil & gas facility showing the site. No visual impacts were observed at the time of the May 16, 2018 site inspection as the site had been recently disturbed for agricultural purposes.

Site Inspection Observations

B14-6 was inspected on May 16th, 2018 and is located approximately 500 feet north of 99th St NW and 50 feet east of oilfield lease road. The site is an agricultural field that was recently plowed and is surrounded by agricultural fields. An oil & gas facility was observed to the east, consisting of two aboveground storage tanks, a heater treater, and a pump jack. No visual impacts were observed at the time of site visit as the field had been recently disturbed. The site topography is generally flat and slopes to the northeast. Aboveground powerlines were observed to the east of the oil & gas facility.

B14-6 (August 2018)



Photograph facing east off of an oil and gas facility showing a visually impacted area. Patches of barren ground and stressed vegetation were observed in an area measuring approximately 50 feet by 20 feet.

Site Inspection Observations

B14-6 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of patches of barren ground and stressed vegetation in an area measuring approximately 50 feet by 20 feet.

B14-7



Photograph facing southeast off of an oilfield lease road showing the visually impacted area slightly lacking vegetative growth.



Photograph facing east off of an oilfield lease road showing the visually impacted area slightly lacking vegetative growth.

Site Inspection Observations

B14-7 was inspected on May 15th, 2018, and is located approximately 500 feet west of 12th Ave NW and 100 feet east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of three aboveground storage tanks and one pump jack. Visual impacts were observed, including an area with slightly stressed vegetation; the area of visual impacts measured approximately 300 feet by 50 feet. The site topography is generally flat and slopes to the west.

B14-8



Photograph facing north off of an oilfield lease road showing the visually impacted area with some barren soils and slightly stressed vegetation.



Photograph facing north west off of an oilfield lease road showing the visually impacted area.

Site Inspection Observations

B14-8 was inspected on May 16th, 2018 and is located approximately 600 feet north of 98th St NW and just north of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of two aboveground storage tanks, one heater treater, and one pump jack. Visual impacts were observed, including an area of slightly barren ground with slightly stressed vegetation; the area of visual impacts measured approximately 50 feet by 20 feet. The site topography is generally flat and slopes to the southwest. Aboveground power lines and an underground oil & gas pipeline were observed to the north of the site, along 98th St NW.

B14-9



Photograph facing west off of an oil & gas facility showing the visually impacted area with little vegetative growth.



Photograph facing northwest showing the visually impacted area with stressed vegetation. The impacts appeared to be migrating from the oil & gas facility that lies to the north.

Site Inspection Observations

B14-9 was inspected on May 16th, 2018 and is located approximately 700 feet south of 99th St NW and just south of an oilfield lease road. The site is an agricultural field that was recently plowed and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks, one heater treater, and one pump jack. Visual impacts were observed, including an area of slightly barren ground with stressed vegetation; the area of visual impacts measured approximately 25 feet by 10 feet. The impacts appeared to be migrating from the oil & gas pad from the north. Stressed vegetation was also observed in the plowed agricultural field but appeared to be a result of the ground disturbance. The site topography is generally flat and slopes to the south/southeast. Aboveground powerlines were observed to the north of the site, on the oil & gas pad, running to the south across the site.

B14-10



Photograph facing north off of an oil & gas facility showing the visually impacted area 100 feet north of the facility.



Photograph facing north off of an oil & gas facility showing the visually impacted area located in a field used in agricultural production.

Site Inspection Observations

B14-10 was inspected on May 16th, 2018 and is located approximately 1,000 feet south of 98th St NW and 100 feet south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of two aboveground storage tanks, one heater treater, and one pump jack. A small puddle of standing water measuring 20 feet by 20 feet was observed southwest of the site. Visual impacts were observed, including an area of barren ground with stressed vegetation; the area of visual impacts measured approximately 200 feet by 30 feet. The site topography is generally flat and slopes to the south/southwest. Aboveground powerlines were observed to the north of the site along the eastern edge of the oil & gas pad, and along 98th St NW.

B14-11 (May 2018)



Photograph facing north off of 97th St. NW. The site is located approximately 100 feet north of 97th St. NW in a field used in agricultural production. No visual impacts were observed at the time of the May 15, 2018 site visit.

Site Inspection Observations

B14-11 was inspected on May 15th, 2018, and is located approximately 100 feet north of 97th St. NW. The site is currently an agricultural field that was recently plowed and is surrounded by agricultural fields. Visual impacts were not observed at the time of the site visit. The site topography is generally flat and slopes to the south. Aboveground powerlines were observed to the south, along 97th St NW.

B14-11 (August 2018)



Photograph facing north off of 97th St. NW. The site is located approximately 100 feet north of 97th St. NW in a field used in agricultural production. Visual impacts consisting of barren ground and stressed vegetation were observed in three distinct areas.

Site Inspection Observations

B14-11 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in three distinct areas. One area with barren ground measured approximately 30 feet by 25 feet. Two areas with stressed vegetation measured approximately 45 feet by 35 feet and 50 feet by 20 feet, respectively.

B14-12



Photograph facing west off of 12th Ave NW showing the site. No visual impacts could be observed due to access limitations.

Site Inspection Observations

B14-12 was inspected on May 16th, 2018, and is located approximately 600 feet west of 12th Ave. NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes and is surrounded by agricultural fields. Visual impacts could not be observed at the time of the site visit due to access limitations. Two separate depressions were observed towards the center of the site, one measuring approximately 100 feet by 50 feet and the other approximately 50 feet by 25 feet. The site topography is generally flat and slopes to the two aforementioned depressions. Aboveground powerlines were observed to the east of the site.

B14-13



Photograph facing south off of North Dakota Highway 5 showing the site. No visual impacts could be observed from the roadway.

Site Inspection Observations

B14-13 was inspected on May 15th, 2018, and is located approximately 500 feet south of North Dakota Highway 5. The site could not be accessed at the time of the site visit. The site appears to be a wetland surrounded by agricultural fields. Visual impacts could not be observed from a distance at the time of site visit. The site topography is generally flat and slopes to the north towards the wetland.

B14-14 (May 2018)



Photograph facing east off of 12th Ave NW showing the site. No visual impacts were noted during the May 16, 2018 site inspection. A flare can be seen in the background.

Site Inspection Observations

B14-14 was inspected on May 16th, 2018, and is located approximately 100 feet east of 12th Ave. NW and 100 feet south of an oilfield lease road. The site is an agricultural field that was recently plowed, and is surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of two aboveground storage tanks and one heater treater. A flare was observed to the east. Visual impacts were not observed at the time of the site visit. The site topography is generally flat, with a slight rise towards the south of the site. The site drains outwards from this rise. Aboveground power lines were observed to the west of the site, along 12th Ave NW.

B14-14 (August 2018)



Photograph facing northeast off of 12th Ave NW showing a visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 75 feet by 10 feet.



Photograph facing southeast off of 12th Ave NW showing the visually impacted area.

Site Inspection Observations

B14-14 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 75 feet by 10 feet.

B14-15



Photograph facing north off of an oil & gas facility showing the visually impacted area directly adjacent to the facility. The agricultural field to the north of the site can be seen in the background.



Photograph facing northeast off of the oil & gas facility showing the visually impacted area adjacent to the facility. The agricultural field surrounding the site can be seen in the background.

Site Inspection Observations

B14-15 was inspected on May 15th, 2018, and is located at the end of an oilfield lease road. The site is currently used in part for agricultural purposes, and in part as an oil & gas facility measuring approximately 500 feet by 100 feet. The facility consists of two pump jacks and one shack. Agricultural fields surround the site. Visual impacts were observed, including salt crusting and barren soils along the north and west edges of the oil & gas pad. The area of visual impacts measured approximately 200 feet by 100 feet in total. The site topography is generally flat and slopes to the north.

B14-16



Photograph facing south west off of 98th St. NW showing the visually impacted area with stressed vegetation.



Photograph facing south east off of 98th St. NW showing the visually impacted area with stressed vegetation.

Site Inspection Observations

B14-16 was inspected on May 15th, 2018, and is located approximately 25 feet south of 98th St. NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed, including small areas of barren soil and stressed vegetation. Three separate areas were observed, and measured approximately 10 feet by 10 feet, 30 feet by 10 feet, and 10 feet by 10 feet, respectively. The site topography is generally flat and slopes to the north.

B14-17



Photograph facing east off of an oil & gas facility showing the visually impacted area with slightly stressed vegetation.



Photograph facing southeast off of an oil & gas facility showing the visually impacted area with slightly stressed vegetation. The site is located in an agricultural field.

Site Inspection Observations

B14-17 was inspected on May 15th, 2018, and is located approximately 150 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was also observed to the west, consisting of one pump jack. Minimal visual impacts were observed, including slightly stressed vegetation; the area of visual impacts measured approximately 40 feet by 20 feet. The site topography is generally flat, slightly undulating, and slopes to the southeast.

B14-18



Photograph facing east off of 11th Ave NW showing a lack of vegetative growth and salt residues. The impacted area is approximately 20 feet by 20 feet in size. An oil & gas facility can be seen in the background.



Photograph facing east off of 11th Ave NW showing the visually impacted area.

Site Inspection Observations

B14-18 was inspected on May 15th, 2018, and is located approximately 50 feet west of 11th Ave NW and 100 feet north of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the south, consisting of six aboveground storage tank, one heater treater and several shacks. Visual impacts were observed, including a barren area with salt crusting; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is generally flat and slopes to the northeast. An aboveground powerline was also observed to the east, east of 11th St NW.

B14-19



Photograph facing northeast off of an oil & gas facility showing slightly stressed vegetation in the agricultural field. An aboveground powerline at the site can be seen.



Photograph facing north off of an oil & gas facility showing the slightly impacted area. An aboveground powerline at the site can be seen.

Site Inspection Observations

B14-19 was inspected on May 15th, 2018, and is located at the terminating point of an oilfield lease road. The site is currently used partly for agricultural purposes and partly as an oil & gas facility. The facility consisted of a single shack. Minimal visual impacts were observed, including minor stressed vegetation along the northeast edge of the pad and some soil cracking on the oil & gas pad. The area of visual impacts measured approximately 30 feet by 10 feet. The site topography is generally flat and slopes to the southeast. An aboveground powerline was also observed to the north of the site.

B20-1



Photograph facing southeast off of an oil & gas facility showing the visually impacted area. Barren soil lacking vegetative growth, salt crusting, and cracking soil can be seen. The site is directly east of the oil & gas facility.



Photograph facing east off of an oil & gas facility showing the visually impacted area. Barren soil lacking vegetative growth, salt crusting, and cracking soil can be seen. The visual impacts appear to be migrating from the oil & gas facility located to the west.



Photograph facing south off of 95th St NW showing the impacts that may have migrated from the oil & gas facility located to the west.

Site Inspection Observations

B20-1 was inspected on May 10th, 2018, and is located approximately 400 feet south of 95th St NW and just east of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the north, south, and east. Immediately adjacent to the west of the site is an oil & gas facility consisting of three aboveground storage tanks and two shacks. A wetland was also observed to the south of the site. Visual impacts including barren ground lacking vegetation and salt crusting were observed at two locations. The first area measured approximately 200 feet by 100 feet, and the second area measured approximately 400 feet by 50 feet. The first impacted area was along the outskirts of the oil & gas facility pad and appeared to extend to the northeast into the second impacted area. It appears the impacts may have migrated from a previous spill at the oil & gas facility. The site topography is generally flat and slopes slightly to the northeast. Aboveground powerlines were observed to the west of the site.

B20-2



Photograph facing west off of an oilfield lease road showing the visually impacted area. Barren soil lacking vegetative growth and stressed vegetation can be seen.



Photograph facing showing the visually impacted area. Barren soil lacking vegetation and soil cracking can be seen.



Photograph facing north showing the visually impacted area. Hydrocarbon impacts can be observed in a small 10 foot by 10 foot section on the northwestern portion of the site.

Site Inspection Observations

B20-2 was inspected on May 10th, 2018, and is located approximately 100 feet east of 35th Ave NW and 50 feet north of an oilfield lease road. The site is currently native grassland. Agricultural fields lie to the north and south. Grassland lie to the east and west. An oil & gas facility consisting of two aboveground storage tanks was also observed to the east/northeast. A wetland was observed to the north/northeast of the site. Visual impacts were observed, including barren ground lacking vegetation and salt crusting; the area of visual impacts measured approximately 100 feet by 100 feet. Within this area, hydrocarbon impacts were observed in an area approximately 10 feet by 10 feet. The site topography is generally flat and slopes slightly to the northwest. An Enbridge underground petroleum product pipeline was observed to the north of the site, and aboveground powerlines were observed to the west of the site.

B20-3



Photograph facing southeast off of an oilfield lease road showing the visually impacted area. Small areas of barren soil lacking vegetation can be observed. The site is located within a perimeter berm.



Photograph facing southeast off of an oilfield lease road showing a closer view of the visually impacted area lacking vegetative growth.

Site Inspection Observations

B20-3 was inspected on May 10th, 2018, and is located approximately 200 feet north of 96th St NW. The site is currently used as a storage yard for derelict equipment and parts. Agricultural fields lie to the north and south. A farmhouse lies to the north east, and storage of derelict parts lies to the west. A stream was also observed to the south of the site. Numerous small areas of barren soils lacking vegetation were observed, each measuring approximately 10 feet by 10 feet. The site topography is generally flat and a berm surrounds the site, measuring approximately 200 feet by 200 feet.

B20-4



Photograph facing north showing the visually impacted area. Barren ground with little vegetative growth and cracking soil can be seen. A pump jack located north of the site can be seen in the background.



Photograph facing east showing the visually impacted area. Barren ground with little vegetative growth and cracking soil can be seen. The visually impacted area measured approximately 150 feet by 100 feet.



Photograph facing southeast showing the visually impacted area. Barren ground with little vegetative growth and cracking soil can be seen. The site is located in a field used in agricultural production.

Site Inspection Observations

B20-4 was inspected on May 10th, 2018, and is located approximately 250 feet north of 95th St NW and east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the north, and consisted of a single pump jack. A wetland was observed to the northeast of the site. Visual impacts were observed, including barren ground lacking vegetation and salt crusting; the area of visual impacts measured approximately 150 feet by 100 feet. The site topography is generally flat and drains to the northwest. An aboveground powerlines was also observed to the northwest.

B21-1



Photograph facing west/northwest off of oilfield lease road showing visually impacted area with barren soils and no vegetation. The impacted area is approximately 400 feet east of 25th Ave NW. Oil & gas facilities are located west of site.



Photograph facing north off of oilfield lease road showing visually impacted area and wetland located approximately 15 feet to the northeast of site. Aboveground powerlines running north-south and a shack to the northeast are visible.

Site Inspection Observations

B21-1 was inspected on May 2nd, 2018, and is located approximately 400 feet east of 25th Ave NW and 30 feet west of an oilfield lease road. The site is currently native grassland. Agricultural fields lie to the north, east, and south. An oil & gas facility was observed to the west, consisting of seven aboveground storage tanks, shacks, pumps, and pipeline risers. Visual impacts were observed, including barren soils lacking vegetative growth; the area of visual impacts measured approximately 50 feet by 30 feet. A wetland was observed east of the site. The site topography is predominantly flat and slopes slightly to the north/northeast. Aboveground powerlines were observed to the south, east, and northeast of the site.

B21-2



Photograph facing north/northwest off of 93rd St NW. The site is located on private grassland, approximately 500 feet north of road, but could not be accessed.



Photograph facing northwest off of 93rd St NW. Wetlands and residential buildings were observed approximately 1,000 feet to the northeast.

Site Inspection Observations

B21-2 was inspected on May 2nd, 2018, and is located approximately 500 feet north of 93rd St NW on private land. The site is currently native grassland with residential buildings approximately 1,000 feet to the northeast. No visual impacts could be observed at the time of the site visit due to access limitations. A wetland was observed approximately 1,000 feet northeast of the site. Agricultural fields are located to the west and south, with native grasslands to the north and east. The site topography is predominantly flat, and a drainage direction could not be assessed due to access limitations. Aboveground powerlines are located to the south of 93rd St. NW.

B21-3



Photograph facing north/northeast off of an oilfield lease road showing visual impacts at the site. 25th Ave NW is approximately 400 feet east of the site. Aboveground powerlines were observed to the east.



Photograph facing south off of the oilfield lease road showing visual impacts, including soil cracks, stressed vegetation, and tan soils.



Photograph facing west showing oilfield equipment approximately 25 feet from site.

Site Inspection Observations

B21-3 was inspected on May 2nd, 2018, and is located approximately 400 feet west of 25th Ave NW and just north of an oilfield lease road. The site is currently native grassland. Agricultural fields lie to the north, east, and south. An oil & gas facility consisting of a wellhead, two chemical injection tanks, and other miscellaneous equipment was observed to the west. Visual impacts were observed, including stressed vegetation, barren ground, soil cracks, and tan soils; the area of visual impacts measured approximately 75 feet by 20 feet. A wetland is located approximately 50 feet northeast of the site. The site topography is predominantly flat and drains to the east/northeast.

B21-4



Photograph facing south/southeast off of an oilfield lease road showing visually impacted area, including barren soil and salt crusts. 93rd St NW is approximately 1,000 feet north of site.



Photograph facing south off of an oilfield lease road showing visually impacted area. A wetland is located along the oilfield lease road.



Photograph facing northwest off of an oilfield lease road showing wetland area adjacent to the west of site and standing water along road. Oilfield facilities and aboveground storage tanks are located northwest of site.

Site Inspection Observations

B21-4 was inspected on May 2nd, 2018, and is located approximately 1,000 feet south of 93rd St NW and 25 feet south of an oilfield lease road. The site is currently native grassland with wetlands to the north and east. Agricultural fields are located to the south. Oil & gas facilities were observed to the north, consisting of seven aboveground storage tanks, a pump jack, a shack, and other miscellaneous oilfield equipment. Visual impacts were observed, including barren ground, salt crusts, and stressed vegetation; the area of visual impacts measured approximately 100 feet by 50 feet. The site topography is predominantly flat and drains to the south.

B21-5



Photograph facing south off of an oilfield lease road showing visually impacted area. The site is on native grassland, with a wetland to the west and agricultural fields to the east.



Photograph facing south off of oilfield lease road showing close up of visual impact area. Salt crusts and extensive dead zones are visible.

Site Inspection Observations

B21-5 was inspected on May 2nd, 2018, and is located approximately 50 feet south of an oilfield lease road. The site is currently native grassland with wetlands approximately 100 feet to the east. Agricultural fields lie to the west and south. An oil & gas facility was observed to the north, consisting of four aboveground storage tanks, a pump jack, and a shack. Visual impacts were observed, including barren ground and stressed vegetation; the area of visual impacts measured approximately 400 feet by 200 feet. The site topography slopes inward to a depression at the center of the site.

B21-6



Photograph facing south off of an oilfield lease road showing visually impacted area. Site is on native grassland adjacent to a wetland to the south.



Photograph facing south off of an oilfield lease road showing close up of visually impacted area. Extensive dead zones were observed.

Site Inspection Observations

B21-6 was inspected on May 2nd, 2018, and is located approximately 200 feet west of 25th Ave NW and 100 feet south of an oilfield lease road. The site is currently native grassland with wetlands to the east and south. Agricultural fields are located to the north and south. Oil & gas facilities were observed to the north, consisting of four aboveground storage tanks, a pump jack, two horizontal separators, a shack, and other miscellaneous oilfield equipment. Visual impacts were observed, including barren ground and stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography slopes inward toward a depression at the center of the site. Aboveground powerlines and underground oil & gas lines were observed to the north, in the vicinity of the oil & gas facilities.

B21-7



Photograph facing south off of an oilfield lease road showing visually impacted area. The site is on the border between agricultural fields and wetlands.



Photograph facing southwest off of an oilfield lease road showing impacted area and wetland along the road.



Photograph facing north off of an oilfield lease road showing agricultural fields and wetland along the road.

Site Inspection Observations

B21-7 was inspected on May 2nd, 2018, and is located approximately 4,000 feet south of 93rd St NW and 100 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A wetland was also observed to the west. An oil & gas facility was observed to the east, consisting of five aboveground storage tanks and a storage shack. Visual impacts were observed, including an extensive dead zone, salt crusts, and stressed vegetation; the area of visual impacts measured approximately 50 feet by 50 feet. The site topography is generally flat and slopes to the northwest. Aboveground powerlines were observed to the north of the site.

B21-8



Photograph facing northeast off of an oilfield lease road showing no visual impact at the site. The site is on native grassland.



Photograph facing north/northeast off of an oilfield lease road showing no visual impact at the site.

Site Inspection Observations

B21-8 was inspected on May 2nd, 2018, and is located approximately 200 feet east of an oilfield lease road. The site is currently native grassland and shows no visible impacts. An oil & gas facility is located to the northwest, consisting of four aboveground storage tanks and pipeline risers. The site topography is generally flat, slightly undulating, and drains to the north. An aboveground powerline was observed to the north.

B21-9



Photograph facing southwest off of an oilfield lease road showing two large visually impacted areas. The site is located on native grassland.



Photograph facing south-southwest off of an oilfield lease road showing one visually impacted area of approximately 200 feet by 200 feet.



Photograph facing north-northeast off of 92nd St NW showing another visually impacted area of approximately 400 feet by 300 feet.

Site Inspection Observations

B21-9 was inspected on May 2nd, 2018, and is located approximately 200 feet north of 92nd St NW. The site is currently native grassland and is surrounded by grasslands. Oil & gas facilities were observed further to the southeast and northwest. Visual impacts were observed, including two areas of extensively barren soils with little to no vegetation. The western area is approximately 200 feet by 200 feet and the eastern area is approximately 400 feet by 300 feet. The site topography is generally flat and generally slopes to the north. The west side of the site slopes to a slight depression towards the center of the site.

B21-10



Photograph facing southeast off of an oilfield lease road showing visually impacted area measuring approximately 400 feet by 100 feet. The site is on native grassland.



Photograph facing northeast off of an oilfield lease road showing visually impacted area.

Site Inspection Observations

B21-10 was inspected on May 2nd, 2018, and is located approximately 400 feet south of 93rd St NW and 30 feet east of an oilfield lease road. The site is currently native grassland. Agricultural fields are located to the west and south. An oil & gas facility was observed to the west, consisting of three aboveground storage tanks and a shack. Wetlands are located to the east and west of the site. Visual impacts were observed, including extensive dead zones, soil cracks, and salt crusts; the area of visual impacts measured approximately 400 feet by 100 feet. The site topography is generally flat and drains to the north-northwest.

B21-11



Photograph facing southeast off of an oilfield lease road, showing a visually impacted area of stressed vegetation measuring approximately 150 feet by 20 feet. The site is located on agricultural production land.



Photograph facing northeast off of oilfield lease road showing visually impacted area.

Site Inspection Observations

B21-11 was inspected on May 2nd, 2018, and is located approximately 1,500 feet south of 93rd St NW and 100 feet east of an oilfield lease road. The site is currently used agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the southwest of the site, consisting of one pump jack. Wetlands are located to the south and northwest of the site. Visual impacts were observed, including stressed vegetation and some barren spots; the area of visual impacts measured approximately 150 feet by 20 feet. The site topography is generally flat and drains to the north-northwest.

B21-12



Photograph facing west off of oilfield lease road and private drive way. The site is on private land approximately 300 feet off of road, and could not be accessed at the time of site visit.



Photograph facing southwest off of oilfield lease road. The site is on native grassland near a pump jack.

Site Inspection Observations

B21-12 was inspected on May 2nd, 2018, and is located approximately 500 feet west of 24th Ave NW and 300 feet west of an oilfield lease road and. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Visible impact could not be observed due to access limitations. An oil & gas facility was observed to the northeast, consisting of one pump jack. A residential home is located approximately 300 feet southeast of site. The site topography is generally flat and slightly undulating.

B21-13



Photograph facing southwest off of an access road. Site is approximately 50 feet west of 25th Ave NW. The site is on native grassland that appeared to be recently drilled for wells. Salt crusts and soil cracks are visible in extensive dead zones.



Photograph facing west off of 25th Ave NW showing visually impacted area. Recent drilling activity was evident. Drill pits were observed on-site.



Photograph facing northwest off of 25th Ave NW showing visually impacted area of salt crusts and barren soil.

Site Inspection Observations

B21-13 was inspected on May 2nd, 2018, and is located approximately 50 feet west of 25th Ave NW. The site appeared to have undergone recent drilling activity, as drill pits full of water were observed at the site. Three recently drilled wells and five drill pits were observed. Grasslands lie to the north, east, and south, and agricultural fields lie to the west. A wetland approximately 50 feet by 20 feet is located in the northern section of the site. Another wetland lies to the southeast of the site. An oil & gas facility was observed to the northwest, consisting of one pump jack. Visual impacts were observed, including extensive dead zones, salt crusts, and soil cracks. The visual impacts were observed throughout the site in a number of areas, each measuring approximately 30 feet by 15 feet. The site is approximately 500 feet by 500 feet in area. The site appears to be a low spot in the surrounding area, and slopes inwards.

B21-14



Photograph facing northeast off of an oilfield lease road, showing visually impacted area. The site is approximately 100 feet east of an oil & gas facility. Extensive dead zones and salt crusts were observed.



Photograph facing east off of an oilfield lease road showing large patches of barren ground and stressed vegetation.

Site Inspection Observations

B21-14 was inspected on May 2nd, 2018, and is located approximately 500 feet south of 92nd St NW and 100 feet east of an oilfield lease road. The site is currently native grassland, with agricultural fields to the north and grasslands to the west, south, and east. An oil & gas facility was also observed to the west, consisting of six aboveground storage tanks and other oilfield equipment. Wetlands were observed to the north, east, and south of the site. Visual impacts were observed, including extensive dead zones, salt crusts, and soil cracks; the area of visual impacts measured approximately 100 feet by 50 feet. The site topography is generally flat, and slopes towards a depression at the center of the site. Aboveground pipelines were observed on-site, and an aboveground powerline was observed to the west/southwest.

B21-15



Photograph facing north off of an oilfield lease road, showing visually impacted area measuring approximately 100 feet by 100 feet.



Photograph facing east-northeast off of an oilfield lease road, showing an extensive dead zone. Site is approximately 150 feet west of a pump jack. The site is on native grassland adjacent to wetlands to the south and east.

Site Inspection Observations

B21-15 was inspected on May 2nd, 2018, and is located approximately 600 feet east of 25th Ave NW and 200 feet north of an oilfield lease road. The site is currently native grassland and is surrounded by grasslands. An oil & gas facility was observed to the northeast, consisting of two pump jacks. A wetland was also observed to the south of the site. Visual impacts were observed, including extensive dead zones and stressed vegetation, in three areas. The areas measured approximately 100 feet by 100 feet, 25 feet by 25 feet, and 50 feet by 20 feet. The site topography is generally flat and gently slopes towards the south and southwest. Impacted areas appear to drain south to the wetland.

B21-16



Photograph facing south off of oilfield lease road showing two visually impacted areas. One area runs parallel to the road the other, smaller, area is located approximately 100 feet further south. The site is on native grassland.



Photograph facing southwest off of oilfield lease road showing site along road, with extensive dead zones and stressed vegetation.

Site Inspection Observations

B21-16 was inspected on May 2nd, 2018, and is located approximately 600 feet east of 25th Ave NW and 100 feet south of an oilfield lease road. The site is currently native grassland, surrounded by grasslands. Wetlands were observed extensively around the site. Oil & gas facilities were observed to the north and northeast, consisting of two pump jacks. Visual impacts were observed, including barren ground and sandy, crusty surfaces, in two areas. The first area measured approximately 75 feet by 15 feet and the second area measured approximately 20 feet by 20 feet. The site topography is relatively flat and drains predominantly to the north.

B21-17 (May 2018)



Photograph facing southwest off of an oilfield lease road showing no visual impact during the May 2, 2018 site visit due to recent agricultural work.



Photograph facing southeast off of an oilfield lease road showing no visual impact during the May 2, 2018 site visit due to recent agricultural work.

Site Inspection Observations

B21-17 was inspected on May 2nd, 2018 and is located approximately 300 feet west of 25th Ave NW and 20 feet west of an oilfield lease road. The site is currently used for agricultural purposes and was recently plowed. Agricultural fields also surround the site. An oilfield shack was observed to the northwest. No major visual impacts were observed due to the recent site disturbance. A large wetland was observed approximately 1,500 feet south of site. The site drains predominantly north to northwest.

B21-17 (August 2018)



Photograph facing southwest off of an oilfield lease road showing a visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 50 feet by 20 feet.

Site Inspection Observations

B21-17 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no visual impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 50 feet by 20 feet.

B21-18



Photograph facing north off of an oilfield lease road showing a visually impacted area. Extensive dead zones, salt crusts, and soil cracks were observed. The site is on native grassland adjacent to agricultural land.



Photograph facing southeast off of oilfield lease road. Large section of salt crusting is visible along berm.

Site Inspection Observations

B21-18 was inspected on May 2nd, 2018, and is located approximately 500 feet west of 25th Ave NW and just north of oilfield lease road. The site is currently native grassland, and is surrounded by agricultural land. An oil & gas facility was also observed to the south, consisting of eight aboveground storage tanks, numerous shacks, and other miscellaneous oilfield equipment. A wetland was observed to the north. Visual impacts were observed, including extensive dead zones, soil cracks, and salt crusts; the area of visual impacts measured approximately 200 feet by 200 feet. The site topography is relatively flat and slightly drains to the northwest. Aboveground powerlines were observed to the north of the site, and an underground powerline was observed to the south.

B21-19



Photograph facing northeast off of an oilfield lease road showing visually impacted area. Extensive dead zones, salt crusts, and soil cracks were observed. The site is on native grassland adjacent to agricultural land. Residential areas and wetlands were observed to the northeast.



Photograph facing southwest off of an oilfield lease road. Large sections of barren ground, soil cracks, erosion, and salt crust along berm were observed.

Site Inspection Observations

B21-19 was inspected on May 2nd, 2018, and is located approximately 500 feet west of 25th Ave NW and 25 feet north of an oilfield lease road. The site is currently native grassland, and is surrounded by agricultural land. An oil & gas facility was observed to the south, consisting of eight aboveground storage tanks, a heater treater, and a horizontal separator. A wetland and residential areas were observed to the northeast. Visual impacts were observed, including extensive dead zones, soil cracks, and salt crusts; the area of visual impacts measured approximately 500 feet by 375 feet. The site topography is relatively flat and slopes to the north/northeast. The impacts appear to be migrating from the oil & gas facility located to the south. An aboveground powerline was observed to the north.

B21-20



Photograph facing northeast off of an oilfield lease road showing a visually impacted area. Extensive dead zones, salt crusts, and soil cracks were observed. The site is adjacent to an oilfield pad surrounded by agricultural land.



Photograph facing south off of an oilfield lease road showing soil cracks, salt crusts, and dead zones.



Photograph facing north off of an oilfield lease road showing patches of stressed vegetation and salt crusts.

Site Inspection Observations

B21-20 was inspected on May 2nd, 2018, and is located approximately 2,000 feet east of 27th Ave. NW and just south of an oil & gas facility. The oil & gas facility consists of four aboveground storage tanks, a heater treater, and a horizontal separator. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A wetland was observed to the south. Visual impacts were observed, including extensive dead zones, soil cracks, and salt crusts; the area of visual impacts measured approximately 250 feet by 200 feet. A small area of subsidence measuring approximately 5 feet by 5 feet by 2 feet deep was observed on the east side of the site. The site topography is relatively flat and appeared to slope towards the south.

B21-21



Photograph facing southwest off of an oilfield lease road showing extensive barren ground, soil cracking, and salt crusts.



Photograph facing southeast off of oilfield lease road showing dead zone and erosion next to wetlands. A shack is located further southeast.

Site Inspection Observations

B21-21 was inspected on May 2nd, 2018, and is located approximately 400 feet east of 26th Ave NW and 100 feet south of an oilfield lease road. The site is currently native grassland and is surrounded by agricultural fields. A shack was observed to the northeast. Wetlands lie to the north, east, and southwest of the site. Visual impacts were observed, including an extensive dead zone and salt crusting; the area of visual impacts measured approximately 300 feet by 100 feet. The site topography is predominantly flat and drains to the north/northeast.

B21-22



Photograph facing northeast from 91st St NW. Site could not be accessed due to it being located on private agricultural land. No evidence of visual impacts in the agricultural field was apparent.



Photograph facing northwest from 91st St NW. Site could not be accessed due to it being located on private agricultural land.

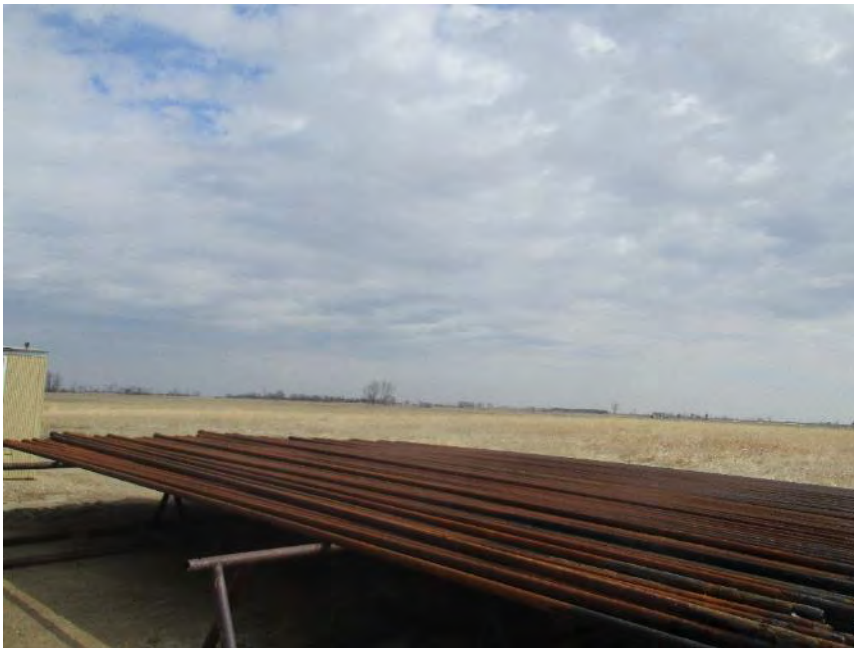
Site Inspection Observations

B21-22 was inspected on May 2nd, 2018, and is located approximately 600 feet north of 91st St NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts were observed from a distance at the time of the site visit. Wetlands were observed to the east. The site is generally flat, and a drainage direction could not be determined due to access limitations.

B21-23



Photograph facing south from an oilfield lease road. Site could not be accessed due to it being located on private land. No evidence of visual impacts at the site was apparent.



Photograph facing southwest from an oilfield lease road, with a shack and pipe rack on location. Site could not be accessed due to it being located on private land. No evidence of visual impacts at the site was apparent.

Site Inspection Observations

B21-23 was inspected on May 2nd, 2018, and is located approximately 600 feet south of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently native grassland, surrounded by agricultural fields. An oil & gas facility was observed to the northeast, consisting of a shack and pipe rack. No visual impacts were observed from a distance at the time of the site visit. Wetlands were observed to the east. The site is generally flat, and a drainage direction could not be determined due to access limitations.

B21-24



Photograph facing southeast off of an oilfield lease road showing multiple visually impacted areas of dead zones and stressed vegetation.



Photograph facing southeast off of oilfield lease road showing dead zone and soil cracks in impacted area.

Site Inspection Observations

B21-24 was inspected on May 2nd, 2018, and is located approximately 20 feet southeast off of an oilfield lease road. The site is currently native grassland, and surrounded by native grassland to the west, south, and east. An oil & gas facility was observed to the north, consisting of four aboveground storage tanks, two heater treaters, and one flare. A wetland was observed to the south. Visual impacts were observed, including multiple small areas of barren soils with little to no vegetation, salt crusting, and soil cracking; the areas of visual impacts measured approximately 125 feet by 50 feet in total. The site topography is generally flat and drains to the southeast. A hydrogen sulfide odor was noted during the site visit.

B21-25



Photograph facing south on an oilfield lease road showing salt crusts and barren soils. The site is partly used as an oil & gas facility.



Photograph facing northeast from oilfield production pad showing dead zone and stressed vegetation.



Photograph showing a closer view of soil cracks with slight salt crusts on site.

Site Inspection Observations

B21-25 was inspected on May 2nd, 2018, and is located approximately 400 feet west of 24th Ave NW. The site is partly used as an oil & gas facility, consisting of 10 aboveground storage tanks, two heater treaters, a shack, and miscellaneous oilfield equipment. The site is surrounded by grasslands. Visual impacts were observed, including dead zones, soil cracks, and salt crusts. The impacts were located on the oil & gas production pad, and measured approximately 40 feet by 30 feet. The site topography is predominantly flat and drains to the south.

B22-1



Photograph facing south off of an oilfield lease road showing the visually impacted area. Stressed vegetation and some lighter soils were observed at the site.



Photograph facing northwest off of an oilfield lease road showing the visually impacted area. Four aboveground storage tanks that are part of an oil & gas facility are visible. Residential and farming buildings are visible further in the background.

Site Inspection Observations

B22-1 was inspected on May 3rd, 2018, and is located approximately 400 feet east of 24th Ave NW and just south of an oilfield lease road. The site is currently an agricultural field that had been recently plowed. Immediately adjacent to the north of the site is an oil & gas facility consisting of three aboveground storage tanks, a pump jack, and a separator. A flare is apparent to the east, and an oil & gas pipeline riser is apparent to the south. 24th Ave NW is adjacent to the site to the west. Visual impacts were observed at a number of locations ranging from roughly 5 feet by 5 feet to 10 feet by 30 feet, most notably around the oil field equipment. These impacts were relatively minor, and consisted of white surficial crusting and discoloration. The site topography is predominantly flat with a slight rise in the center of the site, and slopes slightly to the east and west from this high point.

B22-2



Photograph facing south off of an oilfield lease road showing the visually impacted area. Dead zones, barren soils and salt crusts were observed in an approximately 20 feet by 20 feet area. The site is adjacent to oilfield production pad. Two aboveground storage tanks were observed.



Photograph facing north off of 92nd St NW. A wetland is located adjacent to site. A large pond approximately 300 feet by 300 feet is located northeast of site.

Site Inspection Observations

B22-2 was inspected on May 3rd, 2018, and is located approximately 200 feet north of 92nd St NW and 50 feet east of an oilfield lease road. The site is currently native grassland with an operating oil & gas facility adjacent to the northwest. Native grasslands surround the site where there are no oil & gas facilities. Oil & gas equipment consisted of three aboveground storage tanks and a flare. Visual impacts including white surficial crusting were observed around the flare; the area of visual impacts measured approximately 20 feet by 20 feet. A wetland is located to the east of the apparent surficial crusting. A large pond measuring roughly 300 feet by 300 feet was also observed 200 feet northeast of the site. The site topography is predominantly flat and slopes towards the east.

B22-3 (May 2018)



Photograph facing northeast off of an oilfield lease road showing stressed vegetation, white residue, and salt crusts. Aboveground storage tanks are visible on an oilfield production pad in the background.

Site Inspection Observations

B22-3 was inspected on May 3rd, 2018 and is approximately 600 feet west of 23rd Ave NW and 20 feet north of an oilfield lease road. The site is currently an agricultural field that had been recently plowed. Visual impacts were observed, including light salt crusting and stressed to barren vegetation; the area of visual impacts measured approximately 100 feet by 500 feet. Some wetlands were noted approximately 200 feet to the south along the lease road, and across the oilfield lease road further south. Agricultural fields surround the site. The site topography is predominantly flat and drains to a low spot at the center of the site, where some standing water was observed.

B22-3 (August 2018)



Photograph facing northeast off of an oilfield lease road showing the eastern portion of the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 500 feet by 100 feet.

Site Inspection Observations

B22-3 was revisited on August 20th, 2018. This follow-up investigation confirmed visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 500 feet by 100 feet as initially estimated during the May 3, 2018 site visit.

B22-4



Photograph facing south off of an oilfield lease road showing the site. Patches of barren soil and dead zones were observed in an approximately 50 feet by 20 feet area.



Photograph facing southwest off of an oilfield lease road showing the site. Wetlands can be seen in the background.

Site Inspection Observations

B22-4 was inspected on May 3rd, 2018, and is located approximately 50 feet south of an oil & gas facility. The site is approximately 200 feet east of an oilfield lease road. The site is partly native grassland, and partly used as an oil & gas facility. Oilfield equipment consisted of four aboveground storage tanks, a flare, and a separator, and a shack. Visual impacts were observed, including patches of barren ground, stressed vegetation, salt crusts, and cracks in the surface soils. The impacts were generally located in one area measuring approximately 50 feet by 20 feet. Wetlands were observed immediately west and east of the impacted areas. Agricultural land lies to the south of the site. The site topography is predominantly flat, slightly undulating, and drains to the south/southeast. An Enbridge underground petroleum pipeline was apparent to the west of the site.

B22-5



Photograph facing south off of an oilfield lease road showing the site. Extensive dead zones and salt crusting were observed.



Photograph showing closer view of the visually impacted area.

Site Inspection Observations

B22-5 was inspected on May 3rd, 2018, and is located approximately 200 feet east of 24th Ave NW and 50 feet south of an oilfield lease road. The site is currently native grassland with wetlands to the west and south. A residential structure and oilfield equipment were located across the lease road to the north, beyond which lies agricultural land. Native grassland is apparent to the east. Visual impacts were observed, including barren ground with no vegetation and salt crusting; the area of visual impacts measured approximately 200 feet by 50 feet. Underground utilities that may potentially include power, water, phone, and cable may be at the site due to the presence of the residential home. The site topography drains slightly to the west.

B22-6



Photograph facing north west off of an oilfield lease road showing the site. One of the ponds observed at the site can be seen in the background.



Photograph facing north/northwest off of an oilfield lease road showing the site. Residential properties are located approximately 2,000 feet further northwest from the site.

Site Inspection Observations

B22-6 was inspected on May 3rd, 2018, and is located approximately 150 feet northwest of the terminating point of an oilfield lease road. The site is currently native grassland with wetlands scattered across the site. Several ponds were observed to be full of water, and no clear signs of stressed vegetation or historical brine impacts were observed at the time of inspection. The site is surrounded by agricultural fields. A residence is located approximately 2,000 feet northwest of the site. The site topography is gently undulating, and drains to several low spots that observed to be filled with water at the time of inspection.

B22-7



Photograph facing west off of an oilfield lease road showing the site with the large pond observed.



Photograph facing southeast off of an oilfield lease road showing the pond.

Site Inspection Observations

B22-7 was inspected on May 3rd, 2018, and is located approximately 200 feet south of site B22-6. A pond was observed at a topographical low spot at the site. The pond measured approximately 150 feet by 75 feet, and was filled with water at the time of inspection. Wetlands surround the site. No clear signs of stressed vegetation or historical brine impacts were observed at the time of inspection.

B22-8



Photograph facing south off of an oilfield lease road showing the site. Dead zones and stressed vegetation were observed.



Photograph facing west off of an oil & gas pad showing soil cracks, salt residues, and barren zones.

Site Inspection Observations

B22-8 was inspected on May 3rd, 2018, and is located approximately 500 feet west of 23rd Ave NW and 50 feet south of an oilfield lease road. The site is extensively surrounded by wetlands. An oil & gas facility was observed to the north, consisting of eight aboveground storage tanks, a heater treater, and a horizontal separator. Agricultural land lies further north of the lease road. A barren area with no vegetation was observed at the site, measuring approximately 50 feet by 20 feet. A power pole was observed to the north, indicating underground utilities may be found at the site. The site drains slightly to the southwest.

B22-9



Photograph facing northeast off of 24th Ave NW showing an area of barren soils with no vegetation.



Photograph facing south off of 24th Ave NW showing the visually impacted area. Standing water was observed in a ditch along 24th Ave NW, as can be seen in the bottom right-hand corner of the photograph.

Site Inspection Observations

B22-9 was inspected on May 2nd, 2018, and is located approximately 300 feet east of 24th Ave NW and 500 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A pump jack and a wetland were apparent further to the north. Visual impacts were observed, including an area of little to no vegetation and patchy ground; the area of visual impacts measured approximately 150 feet by 50 feet. The site topography is generally flat, and drains to the area where the visual impacts were observed, which appeared to be a low spot compared to the rest of the site.

B22-10



Photograph facing east off of 24th Ave NW showing the site. Barren areas with no vegetation and some white residues were observed from a distance.



Photograph facing north off of 24th Ave NW showing standing water in a ditch along the road.

Site Inspection Observations

B22-10 was inspected on May 2nd, 2018, and is located approximately 300 feet east of 24th Ave NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Visual impacts were observed from a distance, including barren patches with no vegetation and white surficial staining. Measurements of the impacted area could not be obtained due to access limitations. A wetland was observed to the west of the site, and agricultural fields surround the site. The site is generally flat and drains to the southwest.

B22-11



Photograph facing west off of an oilfield lease road showing stressed vegetation, dead zones, and salt crusts at the site.



Photograph facing east off of an oilfield lease road showing stressed vegetation, dead zones, and salt crusts.

Site Inspection Observations

B22-11 was inspected on May 3rd, 2018, and is located approximately 500 feet east of 24th Ave NW and 10 feet north of the terminating point of an oilfield lease road. The site is currently used for agricultural and oil & gas purposes. A pump jack was apparent to the south, on the lease road. Agricultural fields surround the site otherwise. Visual impacts were observed, including stressed vegetation, a lack of vegetation, and apparent salt crusting; the area of visual impacts measured approximately 50 feet by 20 feet. The site topography is generally flat and drains to the east/southeast. An underground power line was observed to the southeast.

B22-12



Photograph facing south off of an oilfield lease road showing the site. The site could not be accessed at the time of the site visit.



Photograph facing southeast off of an oilfield lease road showing the site.

Site Inspection Observations

B22-12 was inspected on May 3rd, 2018, and is located approximately 500 feet west of 23rd Ave NW and 500 feet southeast of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts could be observed at the time of the site visit due to access limitations. The site topography is generally flat and slightly undulating, with a slight rise in topography at the location of the site.

B22-13



Photograph facing south off of 91st St NW showing barren soils and stressed vegetation at the site.



Photograph facing south off of 91st St NW showing a closer view of the impacted area.

Site Inspection Observations

B22-13 was inspected on May 3rd, 2018, and is located approximately 500 feet south of 91st St NW. The site is located in a wetland area, and was observed to show visual evidence of stressed vegetation and barren grounds. The largest of these visually impacted areas was approximately 100 feet by 100 feet, with a smaller area approximately 20 feet by 20 feet also evident. Wetlands and natural grassland surround the site. The site topography is undulating, with several depressions on the site, and generally drains to the north. Aboveground powerlines were observed to the north along 91st St NW.

B22-14



Photograph facing north off of 91st St NW showing stressed vegetation, tan to grey soils, and potential salt crusting at the site.



Photograph facing east off of 91st St NW showing the impacted area and adjacent wetland. The wetland runs along road and was observed with standing water.

Site Inspection Observations

B22-14 was inspected on May 3rd, 2018, and is located approximately 100 feet north of 91st St NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed, including stressed vegetation, gray soils, and minor salt crusting; the area of visual impacts measured approximately 600 feet by 100 feet. Wetlands were also observed along the 91st St NW roadside ditch to the south of the site. The site topography is generally flat and drains towards the south.

B22-15



Photograph facing north off of an oilfield lease road showing the site. No visual impacts were observed at the time of the site visit.



Photograph facing northwest off of an oilfield lease road, showing the site. A pond is visible in the background.

Site Inspection Observations

B22-15 was inspected on May 3rd, 2018, and is located approximately 200 feet north of an oilfield lease road. The site is currently native grassland, and is surrounded by native grassland. No visible impacts were observed at the time of the site visit. A pond was observed approximately 100 feet west of the site roughly 100 feet by 200 feet in size. The site topography is generally flat and drains slightly to the west.

B22-16



Photograph facing north off of oilfield pad and staging area showing salt crusting, soil cracking, and dead zones. Stressed vegetation was observed in the agricultural field.



Photograph facing south off of the oilfield pad showing extensive dead zones, soil cracks, salt crusts and stressed vegetation along the perimeter of the pad.

Site Inspection Observations

B22-16 was inspected on May 3rd, 2018, and is located approximately 1,000 feet north of 91st St NW. The site is currently used as part of an oil & gas equipment staging area. Oilfield equipment were observed at the site, including 10 aboveground storage tanks, injection units, a separator, a pump jack, and other miscellaneous oilfield equipment. Visual impacts were observed, including salt residues, cracking of grayish colored soils, and extensive barren soils lacking vegetation; the area of visual impacts measured approximately 200 feet by 100 feet. Agricultural fields surround the site. The site topography is generally flat and drains predominantly to the south.

B22-17



Photograph facing east off of an oilfield pad showing slightly stressed vegetation in an agricultural field.



Photograph facing southeast off of an oilfield pad showing slightly stressed vegetation.

Site Inspection Observations

B22-17 was inspected on May 3rd, 2018, and is located approximately 750 feet east of 23rd Ave NW and 50 feet northeast of an oil & gas facility, which houses a shack used by Scout EP. The site is located on agricultural land and showed slightly stressed vegetation, but impact observed was minimal. The area of slightly stressed vegetation measured approximately 10 feet by 10 feet. The site is surrounded by agricultural lands. The site is generally flat, with a slight depression towards the center of the site.

B22-18



Photograph facing east off of 23rd Ave NW showing the site further to the east. The site could not be accessed at the time of the site visit.



Photograph facing north east off of 23rd Ave NW. Grain silos were observed northeast of site and aboveground powerlines run along 91st St NW.

Site Inspection Observations

B22-18 was inspected on May 3rd, 2018, and is located approximately 200 feet east of 23rd Ave NW and 400 feet south of 91st St NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Wetlands lie to the east and north, with agricultural land to the west and south. No visual impacts could be observed at the time of site visit due to access limitations. The site topography is relatively flat, and a drainage direction could not be observed at the time of site visit.

B22-19



Photograph facing southeast off of 91st St NW showing the site further southeast. The site could not be accessed at the time of the site visit. No visual impacts could be observed from a distance. Aboveground powerlines run along 91st St NW.



Photograph facing southwest off of 91st St. NW showing the site. A wetland is located to the west of the site.

Site Inspection Observations

B22-19 was inspected on May 3rd, 2018, and is located approximately 500 feet south of 91st St NW. The site could not be accessed at the time of the site visit. The site appears to have been reclaimed, and is currently used for agricultural purposes. Visual impacts were not observed from a distance at the time of the site visit. Agricultural lands lie to the south, east, and west. A wetland was observed to the west. The site topography is generally flat and appears to drain to the south and southwest.

B23-1



Photograph facing west off of 12th Ave NW showing the site. The site could not be accessed at the time of the site visit. No visual impacts were observed from a distance.

Site Inspection Observations

B23-1 was inspected on May 15th, 2018, and is located 500 feet west of 12th Ave NW and 50 feet south of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Agricultural fields lie to the north, west, and south. An oil & gas facility was observed to the east, and consisted of a single shack. Grasslands lie further to the east, before 12th Ave NW. Visual impacts could not be observed from a distance at the time of the site visit. The site topography is predominantly flat, but drainage direction could not be determined due to access limitations.

B24-1



Photograph facing south off of an oilfield lease road showing the site. No visual impacts were observed.



Photograph facing southwest off of an oilfield lease road. Aboveground powerlines are visible in the background, approximately 500 feet south of site.

Site Inspection Observations

B24-1 was inspected on May 15th, 2018, and is located approximately 100 feet west of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the northeast, consisting of a heater treater, shack and a storage tank. Visual impacts were not observed at the time of the site visit. A slight depression was observed at the site in the middle of the agricultural field. The site topography is generally flat and drains towards the depression.

B24-2



Photograph facing north off of an oilfield lease road showing the visually impacted area. Extensive dead zones, cracks, and salt crusts are visible. Aboveground powerlines were observed at the site running along 10th Ave NW



Photograph facing northeast off of an oilfield lease pad showing the visually impacted area. Farming equipment is parked on-site.

Site Inspection Observations

B24-2 was inspected on May 15th, 2018, and is located approximately 50 feet east of 10th Ave NW and 50 feet north of an oil & gas facility. The site is currently a combination of natural grassland, agricultural field, and an oil & gas facility. The oil & gas facility consisted of a heater treater, storage tank, and shack. Agricultural fields lie to the north, east, and west. Visual impacts were observed, including an area of barren soil with little to no vegetation and salt crusting; the area of visual impacts measured approximately 100 feet by 100 feet. The site topography is generally flat and drains south and west. Aboveground powerlines were observed over the site, along the east side of 10th Ave NW. Farming equipment were also observed on the site.

B24-3 (May 2018)



Photograph facing southeast off of an oilfield lease road showing a plowed agricultural field. During the May 15, 2018 inspection, slight impacts were noted, such as lighter colored soils and some stressed vegetation.



Photograph facing east off of an oilfield lease road showing the visually impacted area. Lighter soils and stressed vegetation are visible towards the left side of the photograph. Impacts appear to be minimal.

Site Inspection Observations

B24-3 was inspected on May 15th, 2018 and is located approximately 500 feet north of 94th St NW and 100 feet southeast of an oilfield lease road. The site is currently used as an agricultural field and was recently plowed. The site is also surrounded by agricultural fields. An oil & gas facility was observed to the west, consisting of a single shack. Slight visual impacts were observed, including some slightly stressed vegetation; the area of visual impacts measured approximately 25 feet by 25 feet. The site topography is generally flat and drains to the east. Aboveground powerlines were observed to the south of the site, along 94th St NW.

B24-3 (August 2018)



Photograph facing southeast off of an oilfield lease road showing a visually impacted area. Stressed vegetation was observed in an area measuring approximately 30 feet by 30 feet.



Photograph facing northeast off of an oilfield lease road showing visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 100 feet by 100 feet.

Site Inspection Observations

B24-3 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and observed impacts could have been obscured by the disturbance. This follow-up investigation identified visual impacts consisting of barren ground in an area measuring approximately 100 feet by 100 feet, and stressed vegetation in areas measuring approximately 30 feet by 30 feet and 25 feet by 25 feet, respectively.

B24-4



Photograph facing northeast off of an oilfield lease road showing the visually impacted area. Dead zones, salt crusts, and soil cracks are visible.



Photograph facing southeast north off of an oilfield lease road showing the visually impacted area.

Site Inspection Observations

B24-4 was inspected on May 15th, 2018, and is located approximately 1,000 feet east of 9th Ave NW and 100 feet east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Oilfield pad observed immediately to the west appears to be a storage area, consisting of four aboveground storage tanks, a dumpster, a tanker, and three shacks. Visual impacts were observed, including lighter colored soils, stressed vegetation, and salt residues; the area of visual impacts measured approximately 80 feet by 20 feet. The site topography is generally flat and drains to the northwest. Aboveground powerlines were observed to the east of the site, along 9th Ave NW.

B24-5 (May 2018)



Photograph facing southeast off of an oilfield lease road showing the site. No visual impacts were observed at the time of the May 15, 2018 site visit. A pump jack is visible in the background.



Photograph facing southwest off of an oilfield lease road showing the site. The site is located on agricultural lands.

Site Inspection Observations

B24-5 was inspected on May 15th, 2018 and is located approximately 500 feet north of 92nd St NW and 100 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A pump jack is located to the east of the site and oil & gas facilities, consisting of 14 above ground storage tanks, heater treater, separator, and various shacks. No visual impacts were observed during the site visit. The site topography is generally flat and drains to the west.

B24-5 (August 2018)



Photograph facing southeast off of an oilfield lease road showing the eastern portion of the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 200 feet by 30 feet.



Photograph facing southwest off of an oilfield lease road showing the western portion of the visually impacted area.

Site Inspection Observations

B24-5 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 200 feet by 30 feet.

B24-6



Photograph facing east off of an oilfield lease road showing the visually impacted area. Barren ground, dead zones, soil cracks, and salt crusts are visible in an approximately 500 feet by 20 feet area. Oil & gas facilities are located west of site.



Photograph facing northeast off of an oilfield lease road showing the visually impacted area. Aboveground powerlines were observed along 92nd St. NW.

Site Inspection Observations

B24-6 was inspected on May 15th, 2018, and is located approximately 400 feet north of 92nd St NW. The site is currently used as an oil & gas facility, and is surrounded by agricultural fields. The oil & gas facility consisted of aboveground storage tanks, separator, heater treater, and a shack. Visual impacts were observed, including barren land with little to no vegetation and salt crusting; the area of visual impacts measured approximately 500 feet by 20 feet. The impacted area was directly adjacent to the east of the oil & gas pad. The site topography is generally flat and drains to the west/southwest.

B24-7



Photograph facing south off of 92nd St NW. The site is located 2,000 feet further south, and could not be accessed at the time of the site visit.

Site Inspection Observations

B24-7 was inspected on May 15th, 2018, and is located approximately 2,000 feet south of 92nd St NW. The site could not be accessed at the time of the site visit. The site appeared to be used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts could not be observed at the time of site visit due to access limitations. The site topography could not be observed at the time of site visit due to access limitations.

B24-8



Photograph facing north west off of 9th Ave NW showing the visually impacted area. Stressed vegetation and lighter colored soils are visible.



Photograph facing west off of 9th Ave NW showing the visually impacted area in a trough like depression. Aboveground powerlines are located on the east side of 9th Ave NW and a barn is located approximately 300 feet to the south.

Site Inspection Observations

B24-8 was inspected on May 15th, 2018, and is located approximately 30 feet west of 9th Ave NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed, including lighter colored soils with stressed vegetation; the area of visual impacts measured approximately 50 feet by 30 feet. The site topography is generally flat, and drains to a slight depression in the middle of the site. A barn was observed to the south of the site, and aboveground powerlines were observed east of the site.

B24-9



Photograph facing south off of an oilfield lease road showing the visually impacted area. Stressed vegetation and lighter colored soils were observed.



Photograph facing south west off of an oilfield lease road showing the visually impacted area. A wetland is visible in the background.

Site Inspection Observations

B24-9 was inspected on May 15th, 2018, and is located approximately 1,000 feet east of County Road 27B and 200 feet south of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the west, east, and south. An oil & gas facility was observed to the north, consisting of two aboveground storage tanks, one pump jack, and a heater treater. A wetland was observed towards the center of the site. Visual impacts were observed, including stressed vegetation and salt residue. Salt residues were observed in an area measuring approximately 100 feet by 50 feet just to the south of the oil & gas facility. Stressed vegetation was observed south of the wetland, measuring approximately 150 feet by 30 feet. The site topography is generally flat and drains towards the wetland. Aboveground powerlines were observed north of the site, on the oil & gas facility.

B25-1



Photograph facing west/southwest off of 5th Ave NW looking towards the site, which lies approximately 500 feet further west. The site appeared to have been reclaimed, but lighter soils, potential dead zones, and slumping in field were visible from road.



Photograph facing northwest off of 5th Ave NW showing potentially impacted area. Aboveground powerlines were observed along 5th Ave NW.

Site Inspection Observations

B25-1 was inspected on May 15th, 2018, and is located approximately 500 feet west of 5th Ave NW. The site could not be accessed at the time of the site visit. The site appears to be a potential former oilfield pad in the process of reclamation. Agricultural land lies to the north, south, and east. A wetland was observed to the west. Visual impacts were observed from a distance, including lighter soils with little to no vegetation. These impacted areas included three separate areas estimated to measure approximately 30 feet by 20 feet, 20 feet by 20 feet, and 10 feet by 10 feet. The site topography is generally flat, slightly undulating, and drains to the east. Aboveground powerlines were observed to the east of the site.

B25-2



Photograph facing east off of an oilfield lease road showing the visually impacted area.



Photograph facing southeast off of an oilfield lease road showing visually impacted area. Dead zones are visible along oilfield production pad.

Site Inspection Observations

B25-2 was inspected on May 15th, 2018, and is located approximately 500 feet south of 93rd St NW and 200 feet east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was located to the southwest of the site, consisting of one aboveground storage tank, one pump jack, and miscellaneous oilfield equipment. Visual impacts were observed, including barren soils and stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. Additional barren soil was visible next to oilfield production pad. The site topography is generally flat and slopes to the east. Aboveground powerlines were observed to the north of the site.

B25-3



Photograph facing south off of an oilfield lease road showing the visually impacted area. Dead zones and barren areas were observed.



Photograph facing southwest off of an oilfield lease road showing the visually impacted area in agricultural land. Dead zones and barren soils were observed.

Site Inspection Observations

B25-3 was inspected on May 15th, 2018, and is located approximately 10 feet south of an oil & gas facility located on an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. The oil & gas facility is located to the north of the site, consisting of two aboveground storage tanks and one pump jack. Visual impacts were observed just south of the oil & gas facility, including barren soils with little to no vegetation and slight salt crusting; the area of visual impacts measured approximately 30 feet by 10 feet. The site topography is generally flat and slopes to the north.

B25-4



Photograph facing north off of an oilfield lease road showing minimal impacts. Slightly stressed vegetation was observed in an agricultural field.



Photograph facing northeast off of an oilfield lease road showing the visually impacted area.

Site Inspection Observations

B25-4 was inspected on May 15th, 2018, and is located approximately 30 feet north of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the south, consisting of four aboveground storage tanks, one pump jack, and a heater treater. Visual impacts were observed, including slightly stressed vegetation; the area of visual impacts measured approximately 50 feet by 25 feet. A residential building was observed approximately 1,500 feet to the northwest. The site topography is generally flat and drains to a slight depression towards the center of the site.

B25-5



Photograph facing west off of 4th Ave NW showing the visually impacted area. Slightly stressed vegetation and barren areas were observed.



Photograph facing northwest off of 4th Ave NW showing visually impacted area and a residential area located approximately 3,000 feet to the northwest. Wetlands are located approximately 1,000 feet to the southwest and 2,000 feet to the west of site.

Site Inspection Observations

B25-5 was inspected on May 15th, 2018, and is located approximately 150 feet west of 4th Ave NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed, including slightly barren soils and stressed vegetation; the area of visual impacts measured approximately 200 feet by 200 feet. The site topography is generally flat and drains to a slight depression towards the center of the site, where the impacts were observed.

B25-6



Photograph facing northwest off of an oilfield lease road showing the visually impacted area. Extensive dead zones and stressed vegetation were observed in an agricultural field.



Photograph facing north off of an oilfield lease road showing the visually impacted area. A wetland is located approximately 500 feet to the north of the site.

Site Inspection Observations

B25-6 was inspected on May 15th, 2018, and is located approximately 700 feet east of 4th Ave NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A wetland was observed to the north. Visual impacts were observed, including barren soils and stressed vegetation; the area of visual impacts measured approximately 500 feet by 200 feet. The site topography is generally flat and drains to a depression towards the center of the site, where the impacts were observed.

B25-7



Photograph facing east off of an oilfield lease road showing the visually impacted area. Stressed vegetation and dead zones were observed.



Photograph facing northeast off of an oilfield lease road showing the visually impacted area in an agricultural field. The site is adjacent to a pump jack, which is located approximately 20 feet south of site.

Site Inspection Observations

B25-7 was inspected on May 15th, 2018, and is located approximately 20 feet north of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the south of the site, consisting of one pump jack. Visual impacts were observed, including an area of barren soils measuring approximately 20 feet by 10 feet, and an area of stressed vegetation measuring approximately 50 feet by 20 feet. The site topography is generally flat and slopes to the north. An underground powerline appears to service the pump jack, to the south.

B41-1



Photograph facing southeast off of an oilfield lease road showing the visually impacted area. Stressed vegetation with barren spots were observed. The site is adjacent to an oilfield pad.



Photograph facing east off of an oilfield lease road showing the visually impacted area. Salt crusts and lighter colored soils were observed.

Site Inspection Observations

B41-1 was inspected on May 14th, 2018, and is located approximately 200 feet east of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the north and south. A wetland lies to the east, and an oil & gas facility lies to the west. The oil & gas facility consisted of five aboveground storage tanks, a heater treater, and one pump jack. Visual impacts were observed, including a barren area with stressed vegetation; the area of visual impacts measured approximately 500 feet by 50 feet. The site topography is generally flat and drains to the east. Odors of hydrocarbon and hydrogen sulfide were also observed during the site visit.

B41-2



Photograph facing northeast off of an oilfield lease road showing the visually impacted area. Lighter soils and salt crusts were observed around the southeast edge of the wetland.



Photograph facing north off of an oilfield lease road showing the visually impacted area and wetland located approximately 50 feet to the north of site. Stressed vegetation is visible within the agricultural field.

Site Inspection Observations

B41-2 was inspected on May 14th, 2018, and is located approximately 100 feet north of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the east and west. A wetland and pond lie to the north, and an oil & gas facility lies to the south. The oil & gas facility consisted of one wellhead with chemical injection equipment. Visual impacts were observed, including stressed vegetation and salt crusting; the area of visual impacts measured approximately 25 feet by 10 feet. Barren soils were also observed along the southeast edge of the wetland, measuring approximately 50 feet by 5 feet. The site topography is generally flat and drains to the north.

B41-3



Photograph facing south off of 79th St. NW showing a large wetland measuring approximately 1,000 feet by 500 feet located towards the center of the site. The site could not be accessed at the time of the site visit.



Photograph facing north off of oilfield lease road showing agricultural field. Site is located approximately 1,000 feet further north. Potentially stressed vegetation is visible on edge of wetland.

Site Inspection Observations

B41-3 was inspected on May 14th, 2018, and is located approximately 1,000 feet south of 79th St NW. The site could not be accessed at the time of site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A wetland was observed towards the center of the site. Visual impacts were observed from a distance at the time of site visit from a distance. Impacts included stressed vegetation and salt crusts along the shore of the pond. Measurements of the impacts could not be taken due to access limitations. The wetland at the center of the site presents a low point such that the rest of the site drains inwards to it.

B42-1



Photograph facing east/northeast off of an oilfield lease road showing the visually impacted area. Stressed vegetation was observed in an approximately 15 feet by 15 feet area.



Photograph facing east off of an oilfield lease road showing the visually impacted area and a wetland located northeast of site.

Site Inspection Observations

B42-1 was inspected on May 14th, 2018, and is located approximately 800 feet east of 22nd Ave NW and 200 feet east of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was also observed to the west, consisting of a single pump jack. A wetland was observed towards the east of the site. Minimal visual impacts were observed, including stressed vegetation; the area of visual impacts measured approximately 15 feet by 15 feet. The site topography is generally flat and drains east to the wetland. An aboveground powerline was also observed west of the site, along 22nd Ave NW.

B42-2



Photograph facing north off of 79th St NW showing the visually impacted area. Stressed vegetation was observed in an agricultural field. Two aboveground storage tanks are located west of the site.



Photograph facing southeast off of an oilfield lease road showing the visually impacted area in an agricultural field.

Site Inspection Observations

B42-2 was inspected on May 14th, 2018, and is located approximately 500 feet north of 79th St NW and 300 feet east of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the north, east, and south. An oil & gas facility was observed to the west, consisting of two aboveground storage tanks and a shack. A wetland was observed towards the northeast of the site. Minimal visual impacts were observed, including stressed vegetation in an area of subsidence; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is generally flat and drains southeast. To the west of the site, an Enbridge underground pipeline running north-south along the lease road to the aboveground storage tanks was also observed.

APPENDIX C

Renville County Site Assessment Reports

R1-1



Photograph facing south showing the visually impacted area measuring approximately 300 feet by 125 feet and consisting of barren ground with little to no vegetative growth. A wetland can be seen in the background.



Photograph facing north showing the visually impacted area. A pad containing a wellhead can be seen in the western portion of the photograph.



Photograph facing south showing the southern-most portion of the visually impacted area. Cracking in the soil present at the site is shown. A wetland is located in the background of the photograph.

Site Inspection Observations

R1-1 was inspected on May 14th, 2018 and is located approximately 400 feet north of 107th St NW and just south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A pump jack was also observed to the north at the terminating point of the lease road. Visual impacts were observed, including a barren area with little to no vegetation and salt crusting; the area of visual impacts measured approximately 300 feet by 125 feet. Wetlands were also observed to the south of the site. The site topography is generally flat and drains to the southwest. Aboveground powerlines were observed to the north, along 107th St NW.

R3-1



Photograph facing east off of oilfield lease road showing the visually impacted area located in a field used for agricultural purposes. Minimal stressed vegetation was observed during the site visit.



Photograph facing east off of oilfield lease road showing a close up view of the visually impacted area. The area was noted to have minimal visual impacts of slightly stressed vegetation approximately 15 feet by 15 feet in size.

Site Inspection Observations

R3-1 was inspected on May 14th, 2018 and is located approximately 250 feet north of 107th St NW and 100 feet east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. Minimal visual impacts were observed, including an area with slightly stressed vegetation; the area of visual impacts measured approximately 15 feet by 15 feet. The site topography is generally flat and drains to the northwest. Aboveground powerlines were observed to the west of the site.

R3-2



Photograph facing southeast off of an oilfield lease road showing natural grassland and land used in agricultural production. No visual impacts were observed at the time of the site inspection. An oil & gas facility is located north of site.



Photograph facing south to southwest off of an oilfield lease road showing natural grassland and agricultural land. No visual impacts were observed at the time of the site inspection.

Site Inspection Observations

R3-2 was inspected on May 14th, 2018 and is located approximately 3,000 feet north of 107th St NW and just south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was also observed immediately to the north, and consisted of three aboveground storage tanks, one heater-treater, one horizontal separator, and one pump jack. No visual impacts were observed at the time of the site visit. A wetland was observed to the northeast of the site. The site topography is generally flat and drains to the southwest. Aboveground powerlines were observed to the east of the site.

R3-3



Photograph facing east off of 44th Ave NW showing the agricultural field on which the site is located. No visual impacts were observed at the time of the site visit from the road.

Site Inspection Observations

R3-3 was inspected on May 14th, 2018, and is located approximately 450 feet east of 44th Ave. NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Agricultural fields lie to the east and south, and residences lie to the north and west. No visual impacts could be observed from a distance at the time of site visit. The site topography is generally flat and drains to the northwest. Aboveground powerlines were observed to the east of the site.

R3-4



Photograph facing north off of 108th St NW. The site is native grassland and no visual impacts were observed from the road.

Site Inspection Observations

R3-4 was inspected on May 14th, 2018, and is located approximately 300 feet north of 108th St. NW. The site could not be accessed at the time of the site visit. The site is currently native grassland. Grasslands lie to the north and south, an agricultural field lies to the west, and a residential structure lies to the east. No visual impacts could be observed from a distance at the time of site visit. The site topography is generally flat and drains to the southwest. Aboveground powerlines were observed to the east of the site.

R3-5



Photograph facing southeast off of oilfield lease road showing the site. No visual impacts were observed during the site visit. A flare and flare pit can be seen in the photograph.



Photograph facing southeast to east off of oilfield lease road showing the site. No visual impacts were observed during the site visit. A flare and flare pit can be seen in the photograph.

Site Inspection Observations

R3-5 was inspected on May 14th, 2018 and is located approximately 200 feet north of 108th St NW and just east of an oilfield lease road. The site is currently used in part as an oil & gas facility. Grasslands lie to the north and south, while agricultural fields lie to the east and west. An oil & gas facility was observed at the site, and consisted of two aboveground storage tanks, one heater-treater, one pump jack, and one flare. No visual impacts were observed at the time of site visit. The site topography is generally flat and drains to the south. Aboveground powerlines were observed to the south of the site, along 108th St NW.

R3-6



Photograph facing west off of an oilfield lease road showing the site. No visual impacts were observed during the site inspection. A former flare pit was observed, as can be seen in the center of the photograph. Oil & gas facilities are located east of site.



Photograph facing north off of oilfield production facility showing native grasslands and a wetland near the site. An oil & gas facility is shown on the right side of the photograph and is located directly east of the site.

Site Inspection Observations

R3-6 was inspected on May 15th, 2018 and is located approximately 600 feet south of 108th St NW and just west of an oilfield lease road. The site is currently grasslands and used in part as an oil & gas facility. Agricultural fields lie to the north and west. The oil & gas facility lies slightly to the east, consisting of two aboveground storage tanks, one heater-treater, and one flare pit. Wetlands lie to the northeast and to the south of the site. No visual impacts were observed at the time of site visit. The site topography is generally flat and drains to the south. Aboveground powerlines were observed to the north and to the east.

R3-7



Photograph facing northwest off of an oilfield lease road showing visually impacted area with stressed vegetation; the impacted area measured approximately 150 feet by 150 feet. A flare pit can be seen in the foreground of the photograph.



Photograph facing west off of oilfield lease road showing visually impacted area with stressed vegetation. Lighter colored soil and salt crusting can be seen in the visually impacted area.



Photograph facing northwest off of oilfield lease road showing visually impacted area with stressed vegetation. Oil & gas facilities can be seen in the background.

Site Inspection Observations

R3-7 was inspected on May 15th, 2018 and is located approximately 500 feet west of 43rd Ave NW and just west of an oilfield lease road. The site is currently used in part for agricultural purposes and in part as an oil & gas facility. Agricultural fields lie to the north, south, and west. The oil & gas facility is located slightly to the east, consisting of three aboveground storage tanks, one heater-treater, and one flare pit. A wetland lies to the north of the site. Visual impacts were observed, including salt crusting and stressed vegetation; the area of visual impacts measured approximately 150 feet by 150 feet. The site topography is generally flat and slopes to the southeast. Two underground utility markers were observed to the east, and an aboveground powerline was observed to the east.

R3-8 (May 2018)



Photograph facing south off 109th St NW showing the agricultural field where the site is located. No visual impacts were observed at the time of the May 15, 2018 site visit.

Site Inspection Observations

R3-8 was inspected on May 15th, 2018, and is located approximately 50 feet south of 109th St. NW. The site is currently used for agricultural purposes and is surrounded by agricultural fields. Visual impacts were not observed at the time of the site visit. The site topography is generally flat and slopes to the north. An aboveground powerline was observed to the north.

R3-8 (August 2018)



Photograph facing northwest off of 109th St NW showing the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 50 feet by 20 feet.



Photograph facing northeast off of 109th St NW showing barren ground and stressed vegetation.

Site Inspection Observations

R3-8 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 50 feet by 20 feet.

R3-9



Photograph facing east/northeast off of oilfield lease road showing the visually impacted area, which measured approximately 200 feet by 75 feet in size. The Canadian border crossing can be seen in the background.



Photograph facing north/northeast showing the visually impacted area. Cracking and lighter colored soils can be seen along with the lack of vegetative growth in the area.



Photograph showing a close of view salt crusting and cracking soil located inside the visually impacted area.

Site Inspection Observations

R3-9 was inspected on May 15th, 2018 and is located approximately 600 feet west of County Road 28, just east of an oilfield lease road. The Canadian border was located approximately 1,000 feet to the north. The site is currently native grassland and is surrounded by native grassland. An oil & gas facility was observed to the west, consisting of a single pump jack. Visual impacts were observed, including barren soil with little to no vegetation and salt crusting; the area of visual impacts measured approximately 200 feet by 75 feet. The site topography is generally flat and slopes to the northwest. An aboveground powerline was observed to the west.

R3-10



Photograph facing west off of an oilfield lease road showing visually impacted area, including lack of vegetative growth. The visually impacted area measured approximately 50 feet by 50 feet. An oil & gas facility is located east of the site.



Photograph facing west off of oilfield lease road showing visually impacted area, including a lack of vegetative growth.

Site Inspection Observations

R3-10 was inspected on May 15th, 2018 and is located approximately 500 feet west of 43rd Ave NW, just west of an oilfield lease road. The site is currently used as agricultural land and is surrounded by agricultural fields. An oil & gas facility was observed to the east and northeast, consisting of two aboveground storage tanks, a heater-treater, a pump jack, and a flare pit. A wetland was observed just north of the pump jack, to the north/northeast. Visual impacts were observed, including barren soil with little to no vegetation; the area of visual impacts measured approximately 50 feet by 50 feet. The site topography is generally flat and slopes to the northeast. An aboveground powerline was observed to the east.

R3-11



Photograph facing east off of oilfield lease road showing the visually impacted area with a lack of vegetation; the area of visual impacts measured approximately 100 feet by 20 feet. Oil & gas facilities are located west of site and a pump jack is located southeast of the site.



Photograph facing south east showing a visually impacted wetland. The visually impacted area appears to have migrated and affected a wetland east of the site. A pump jack and an oilfield lease road can be seen in the background.

Site Inspection Observations

R3-11 was inspected on May 15th, 2018 and is located approximately 800 feet west of 44th St NW, just north of an oilfield lease road. The site is currently part grassland and part oil & gas facility. The oil & gas facility is located towards the center of the site, and consists of six aboveground storage tanks, a heater treater, and a pump jack. Grasslands surround the site otherwise. A small wetland was observed just north of the oil & gas facility. Visual impacts were observed, including barren soil with little to no vegetation and salt crusting; the area of visual impacts measured approximately 100 feet by 20 feet. The impacts appear to be migrating to the aforementioned wetland. The site topography is generally flat and slopes to the east/northeast. An aboveground powerline was observed to the north.

R3-12



Photograph facing west off of 44th Ave NW showing the visually impacted area lacking vegetative growth. Wetlands are located to the north, east, and west of the site.



Photograph facing west off of 44th Ave NW showing a closer view of the visually impacted area lacking vegetative growth.

Site Inspection Observations

R3-12 was inspected on May 14th, 2018, and is located approximately 100 feet west of 44th Ave. NW. The site could not be accessed at the time of the site visit. The site is currently natural grassland and is surrounded by agricultural fields. Visual impacts were observed from a distance at the time of site visit. Visual impacts included an area of barren ground with stressed vegetation and salt crusting; the area of visual impacts measured approximately 150 feet by 100 feet. Wetlands were also observed to the north, west, and east of the site. The site topography is generally flat and drains to the east/southeast. Aboveground powerlines were observed to the east of the site, along 44th Ave. NW.

R4-1



Photograph facing north off of an oilfield lease road showing visually impacted area including a lack of vegetative growth, which measured approximately 150 feet by 75 feet. A wetland is located north of the site.



Photograph facing north off of an oilfield lease road showing a close up of the visually impacted area. A wetland is visible in the background north of the site.

Site Inspection Observations

R4-1 was inspected on May 15th, 2018 and is located approximately 100 feet north of an oilfield lease road. The site is currently natural grassland, and is surrounded by natural grasslands. A wetland was observed to the north of the site. Visible impacts were observed, including stressed vegetation; the area of visual impacts measured approximately 150 feet by 75 feet. The site topography is generally flat and drains to the northeast.

R4-2



Photograph facing east off of an oilfield lease road showing the visually impacted area, including a lack of vegetative growth, cracking soils, and salt crusting. The area of visual impacts measured approximately 200 feet by 100 feet. A wetland is located to the south and east of the site.



Photograph facing north off showing the visually impacted area and wetland located to the east of site. A lack of vegetative growth can be seen.



Photograph facing west on the edge of the visually impacted area near the wetland east of the site. Salt crusting and cracking soil can be seen. The impacts from the site appear to be migrating to the wetland to the east of the site.

Site Inspection Observations

R4-2 was inspected on May 15th, 2018, and is located approximately 200 feet south and 400 feet west of an oilfield lease road. The site is currently natural grassland, and is surrounded by natural grasslands. An oil & gas facility lies to the southwest, consisting of two aboveground storage tanks and a heater treater. A wetland was observed to the east of the site. Visible impacts were observed, including barren soils, stressed vegetation, and salt crusting; the area of visual impacts measured approximately 200 feet by 100 feet. The impacts appeared to have migrated to the wetland east of the site. The site topography is generally flat and drains to the northeast.

R4-3



Photograph facing northeast off of an oilfield lease road showing the visually impacted area, including slightly stressed vegetation. The impacted area measured approximately 20 feet by 20 feet. An oil & gas facility is located to the west of the site.



Photograph facing northeast off of an oilfield lease road showing a closer view of the visually impacted area, where slightly stressed vegetation was observed.

Site Inspection Observations

R4-3 was inspected on May 15th, 2018 and is located approximately 150 feet south of 109th St. NW. The site is currently used for agricultural purposes. Agricultural fields lie to the east and south. Grazing pastures lie to the north. An oil & gas facility lies to the west, consisting of two aboveground storage tanks, a heater treater, a vehicle garage, a pump jack, and a flare pit. Visible impacts were observed, including slightly stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is generally flat and slopes to the northwest. Aboveground powerlines were observed to the north and west of the site.

R6-1



Photograph facing west from 50th Ave NW showing visually impacted area measuring approximately 200 feet by 100 feet. The site is on native grassland surrounded by agricultural fields.



Photograph facing northwest from 50th Ave NW showing wetland adjacent to site.

Site Inspection Observations

R6-1 was inspected on May 9th, 2018, and is located on a private land approximately 400 feet west of 50th Ave NW. The site could not be accessed at the time of the site visit. The site is native grassland with wetlands directly northeast of site. Visual impacts were observed from a distance during the site visit. These impacts included an area with barren ground lacking vegetation. The area of visual impacts measured approximately 200 feet by 100 feet. Fields used in agricultural production surround the site. The site topography is relatively flat and drains predominantly to the southeast.



Photograph facing north from 101st St NW showing the site. No visual impacts were observed at the time of the site visit.



Photograph facing northwest from 101st St NW showing a small area of potentially stressed vegetation in the field.

Site Inspection Observations

R6-2 was inspected on May 9th, 2018, and is located on private land approximately 500 feet north of 101st St NW. The site could not be accessed at the time of the site visit. The site is located near wetlands surrounded by agricultural fields. No major visual impacts could be observed from a distance. A small area of potentially stressed vegetation was observed from a distance, but could not be measured due to access restrictions. The site topography is relatively flat and drains predominantly to the southeast.

R7-1 (May 2018)



Photograph facing south showing the visual impacts at the site. The area of visual impacts measured approximately 100 feet by 100 feet.



Photograph facing east showing the visual impacts located at the site. An agricultural field and tree row can be seen in the background.

Site Inspection Observations

R7-1 was inspected on May 10th, 2018 and is located approximately 300 feet north of 98th St NW and just east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west and consisted of a single shack. Visual impacts were observed, including patches of barren ground lacking vegetation with salt crusting; the area of visual impacts measured approximately 100 feet by 100 feet. A wetland lies to the north. The site topography is generally flat and drains to the east/northeast.

R7-1 (August 2018)



Photograph facing south showing the visual impacts at the site. Barren ground and stressed vegetation are visible in an approximately 100 feet by 100 feet area.



Photograph facing east showing barren ground and stressed vegetation in an area measuring approximately 100 feet by 100 feet.

Site Inspection Observations

R7-1 was revisited on August 20th, 2018. This follow-up investigation confirmed visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 100 feet by 100 feet as initially estimated during the May 10th, 2018 site visit.

R7-2 (May 2018)



Photograph facing east from an oilfield lease road showing the visually impacted area measuring approximately 20 feet by 20 feet. The site is on agricultural land surrounded by agricultural fields and oilfield production.



Photograph facing east from an oilfield lease road showing a closer view of the visual impacts at the site. Soil cracking and stressed vegetation can be seen. An agricultural field is in the background.

Site Inspection Observations

R7-2 was inspected on May 10th, 2018 and is located approximately 350 feet south and 50 feet east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the south and consisted of a single pump jack. Visual impacts were observed, including an area of lighter colored soil with no vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. A wetland lies to the northeast. The site topography is generally flat and drains to the east/northeast. An aboveground powerline was observed to the west of the site.

R7-2 (August 2018)



Photograph facing south from an oilfield lease road showing the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 200 feet by 200 feet.



Photograph facing south from an oilfield lease road showing the visually impacted area.

Site Inspection Observations

R7-2 was revisited on August 20th. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 200 feet by 200 feet.

R7-3



Photograph facing south from an oilfield lease road showing the visually impacted area, which measured approximately 100 feet by 20 feet. The site is on native grassland directly east of an oilfield lease road.



Photograph facing north showing the extents of the visually impacted area. A wetland and pump jack can be seen in the background.

Site Inspection Observations

R7-3 was inspected on May 10th, 2018 and is located approximately 300 feet south of 97th St. NW and 50 feet east of an oilfield lease road. The site is currently a native grassland and is surrounded by agricultural fields. An oil & gas facility was observed to the west and consisted of a single shack. Visual impacts were observed, including an area of barren ground and stressed vegetation; the area of visual impacts measured approximately 100 feet by 20 feet. A wetland lies to the northeast. The site topography is generally flat and drains to the north. An aboveground powerline was observed to the south of the site.



Photograph facing south from an oil & gas facility showing the visually impacted area, which measured approximately 40 feet by 15 feet. The area showed a lack of vegetation and salt crusting and lies directly north of a wetland.



Photograph facing southwest from an oil & gas facility showing the location of the visually impacted area in relation to an adjacent wetland. Soil cracking and a lack of vegetative growth can be seen.

Site Inspection Observations

R7-4 was inspected on May 10th, 2018 and is located approximately 400 feet west of 46th Ave NW and 50 feet south of an oilfield lease road. The site is currently used as an oil & gas facility. Oilfield equipment consisted of a pump jack, an aboveground storage tank, and pipeline risers. Agricultural fields lie to the north and west. Wetlands lie to the east and south, with agricultural lands beyond that. Visual impacts were observed, including an area of barren ground with no vegetation and salt crusting; the area of visual impacts measured approximately 40 feet by 15 feet. The site topography is generally flat and drains to the northeast. Utilities including an aboveground powerline and potential underground piping were observed to the north of the site.

R7-5



Photograph facing west from an oilfield lease road. The site is 200 feet east of the oilfield lease road and is located on agricultural land surrounded by agricultural fields. No visual impacts were observed during the site inspection.



Photograph facing west from an oilfield lease road showing a closer view of the site. A wetland and above ground power pole can be seen in the background.

Site Inspection Observations

R7-5 was inspected on May 10th, 2018 and is located approximately 500 feet north of 96th St NW and 200 feet west of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was located to the east and consisted of a single pump jack. No visual impacts were observed at the time of the site visit. A wetland lies to the south. The site topography is generally hilly and drains to the south/southeast. An aboveground powerline was observed to the west of the site.

R8-1



Photograph facing south from an oil & gas facility showing the visually impacted area, which measured approximately 400 feet by 100 feet. The area is currently native grassland lacking vegetation and is immediately north of a wetland.



Photograph facing south from an oil & gas facility showing the visually impacted area. A wetland can be seen further to the south in the background of the photograph.



Photograph facing south from an oil & gas facility showing the visually impacted area. Two grave markers located at the site can be seen.

Site Inspection Observations

R8-1 was inspected on May 10th, 2018 and is located approximately 500 feet south of 99th St NW and just south of an oilfield lease road. The site is currently native grassland and is surrounded by grassland. An oil & gas facility was observed to the north, and consisted of one aboveground storage tank and one heater-treater. Visual impacts were observed, including barren ground lacking vegetation with salt crusting; the area of visual impacts measured approximately 400 feet by 100 feet. Two grave markers were found in the middle of the impacted area. A wetland lies to the south of the site, and a pond lies to the northeast. The site topography is generally flat and drains to the south/southwest.

R8-2



Photograph facing southwest off of 36th Ave NW. The site is located 500 feet west of 36th Ave NW. No visual impacts could be observed from the roadway.



Photograph facing northwest off of 36th Ave NW. No visual impacts could be observed from the roadway.

Site Inspection Observations

R8-2 was inspected on May 10th, 2018, and is located approximately 500 feet west of 36th Ave NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and is surrounded by grasslands. Visual impacts could not be observed from a distance at the time of the site visit. The site topography is generally flat.

R10-1



Photograph facing east off of Country Road 3 showing the site. No visual impacts could be observed from the roadway at the time of the site visit.

Site Inspection Observations

R10-1 was inspected on May 9th, 2018 and is located approximately 500 feet east of County Road 3. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Agricultural fields surround the site. No visual impacts could be observed from a distance at the time of site visit. The site topography is generally flat and drains slightly to the west.

R10-2



Photograph facing east off of County Road 3. The site is located 500 feet east of the roadway in an agricultural field. No visual impacts were observed from the roadway. Above ground powerlines can be seen in the background.

Site Inspection Observations

R10-2 was inspected on May 9th, 2018 and is located approximately 500 feet east of County Road 3. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes. Agricultural fields surround the site. No visual impacts could be observed from a distance at the time of site visit. The site topography is generally flat and appeared to drain slightly to the northwest. Aboveground powerlines were also observed to the east of the site.

R10-3



Photograph facing southwest showing the visually impacted area. Visual impacts include barren soils and stressed vegetation. The area of visual impacts measured approximately 20 feet by 10 feet. The visually impacted area is located directly east of an oil & gas facility.



Photograph facing east showing the extents of visual impacts on the site. Grassland and an agricultural field can be seen in the background.

Site Inspection Observations

R10-3 was inspected on May 9th, 2018 and is located approximately 700 feet east of 52 Ave. NW. The site is located adjacent to an oil & gas facility. The site is currently natural grassland, and is adjacent to oilfield equipment that lie to the west and south. The oilfield equipment consisted of seven aboveground storage tanks, one heater-treater, and two shacks. Agricultural fields lie to the north and east. A wetland also lies approximately 50 feet to the north. Visual impacts were observed, including barren soils and stressed vegetation; the area of visual impacts measured approximately 20 feet by 10 feet. The site topography is generally flat and drains to the southeast. Aboveground powerlines were also observed running to the southwest.

R10-4



Photograph facing north off of an oil & gas facility showing the agricultural field where the site is located. No visual impacts were observed at the time of the site inspection.

Site Inspection Observations

R10-4 was inspected on May 9th, 2018 and is located approximately 200 feet north of an oilfield lease road. The site is currently used for agricultural purposes and is adjacent to an oil & gas facility consisting of a small shack that lies to the south. Agricultural fields surround the site to the north, west, and east. No visual impacts were observed at the time of site visit. The site topography is generally flat and drains slightly to the south.

R11-1



Photograph facing east off of oilfield lease road showing the visually impacted area with a lack of vegetative growth. The visually impacted area measured approximately 60 feet by 20 feet. An oil & gas facility is located west of site.



Photograph facing southwest showing the visually impacted area. A lack of vegetative growth and cracking soil can be seen.

Site Inspection Observations

R11-1 was inspected on May 9th, 2018 and is located approximately 800 feet north of 93rd St NW and 50 feet east of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields lie to the north, east, and south. A residence is located approximately 1,000 feet to the east. A wetland is located approximately 500 feet to the southeast. An oil & gas facility lies at the end of the lease road, to the southwest. Oilfield equipment consist of a pump jack, two aboveground storage tanks, and one heater-treater. Visual impacts were observed, including barren soils lacking vegetation and cracking soil; the area of visual impacts measured approximately 60 feet by 20 feet. The site topography is generally flat and drains to the southwest.

R14-1



Photograph facing east off of 42nd Ave NW showing the site. No visual impacts could be observed from the roadway. A wetland can be seen in the background.

Site Inspection Observations

R14-1 was inspected on May 9th, 2018, and is located approximately 400 feet west of 42nd Ave NW. The site could not be accessed during the site visit. The site is currently used for agricultural purposes, and agricultural fields surround the site. No visual impacts could be observed from a distance during the site visit. The site topography is generally flat and possibly drains slightly to the south.

R14-2



Photograph facing north off of an oil & gas facility showing the site. No visual impacts were observed during the site inspection. A flare pit can be seen in the photograph.

Site Inspection Observations

R14-2 was inspected on May 9th, 2018 and is located immediately west of 42nd Ave NW and northwest of an oil & gas facility. The site is currently on a native grassland. Agricultural fields lie to the north and west. The oil & gas facility was observed to the south, and consisted of two aboveground storage tanks, two heater treaters, and a flare pit. Native grassland lies to the east, past 42nd Ave NW. A wetland was also observed further north of the site. No visual impacts were observed at the site. The site topography is generally flat and drains to the northeast. Aboveground power lines were also observed to the west of the site.

R14-3



Photograph facing north off of 85th St NW showing the site. The site is located 500 feet north of 85th St NW, and no visual impacts could be observed from the roadway.

Site Inspection Observations

R14-3 was inspected on May 9th, 2018, and is located approximately 500 feet north of the intersection of ND-28 and 85th St. NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. No visual impacts could be observed from a distance during the site visit. The site topography is generally flat and drains to the southwest.

R15-1



Photograph facing southeast off of oilfield lease road showing the visually impacted area lacking vegetative growth. The impacted area measured approximately 100 feet by 40 feet. An oil & gas facility is located to the northwest of the site.



Photograph facing northwest showing the visually impacted area lacking vegetative growth. An oil & gas facility can be seen in the background.

Site Inspection Observations

R15-1 was inspected on May 9th, 2018 and is located approximately 400 feet south of 88th St NW and 25 feet south of an oilfield lease road. The site is currently used for agricultural purposes. Agricultural fields also lie to the south and east. An oil & gas facility was observed to the northwest, and consisted of three aboveground storage tanks, two heater treaters, and a pump jack. A wetland was also observed immediately southeast of the site. Visual impacts were observed, including an area lacking vegetation with grayish colored soils; the area of visual impacts measured approximately 100 feet by 40 feet. The site topography is generally flat and drains slightly to the east. Aboveground power lines were also observed to the northeast of the site.

R15-2



Photograph facing east off of an oilfield lease road showing the visually impacted area lacking vegetative growth with cracking soil. The impacted area measured approximately 20 feet by 10 feet. An oil & gas facility is located to the northeast of the site.



Photograph facing southwest off of oilfield lease road showing visually impacted area and the wetland located approximately 30 feet to the south of site. Aboveground powerlines running are visible in the background.

Site Inspection Observations

R15-2 was inspected on May 9th, 2018 and is located approximately 200 feet north of 86th St NW and immediately west of an oilfield lease road. The site is currently used for agricultural purposes, and agricultural fields surround the site. An oil & gas facility was observed to the northeast, and consisted of three aboveground storage tanks, one heater treater, and a pump jack. A wetland was also observed 30 feet to the south of the site. Visual impacts were observed, including lack of vegetation and grayish colored soils; the area of visual impacts measured approximately 20 feet by 10 feet. The site topography is generally flat and drains slightly to the south. Aboveground power lines were also observed to the east of the site.

R15-3



Photograph facing southeast off of an oil & gas facility showing the visually impacted area lacking vegetative growth. The visually impacted area measured approximately 70 feet by 70 feet.



Photograph facing east off of an oil & gas facility showing the visually impacted area. White colored soils and soil cracking is present. An oil & gas facility can be seen in the background.

Site Inspection Observations

R15-3 was inspected on May 9th, 2018 and is located immediately east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west, and consisted of three aboveground storage tanks and an injection shack. Visual impacts were observed, including a lack of vegetation and white-colored soils, the area of visual impacts measured approximately 70 feet by 70 feet. The site topography is generally flat and appeared to be a low point. An underground pipeline was observed at the site running east-west, and aboveground power lines were observed to the west of the site.

R17-1 (May 2018)



Photograph facing west/southwest off of an oilfield lease road showing the site. No visual impacts were observed at the time of the May 9, 2018 site visit. An oil & gas facility is located to the west of the site.

Site Inspection Observations

R17-1 was inspected on May 9th, 2018 and is located approximately 50 feet south of 80th St NW and 50 feet east of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west and consisted of two aboveground storage tanks and a heater treater. A pump jack was also located to the southeast. No visual impacts were observed at the site during the site visit. The site topography is generally flat and drains to the northeast.

R17-1 (August 2018)



Photograph facing southwest off of an oilfield lease road showing the visually impacted area. Barren ground and stressed vegetation were observed in an area measuring approximately 100 feet by 100 feet.



Photograph facing west southwest off of an oilfield lease road showing the visually impacted area.

Site Inspection Observations

R17-1 was revisited on August 21st, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 100 feet by 100 feet.

R17-2



Photograph facing south off of 80th St NW showing the visually impacted area lacking vegetation. The visually impacted area measured approximately 100 feet by 50 feet. An oil & gas facility is located west of the site.



Photograph facing south off of 80th St NW showing a closer view of the visually impacted area with cracking soil. Aboveground power lines and a wetland can be seen in the background.

Site Inspection Observations

R17-2 was inspected on May 9th, 2018, and is located approximately 50 feet south of 80th St NW and 100 feet west of an 43rd Ave NW. The site is currently native grass land. Additional grassland lies to the south. Agricultural fields lie to the north and east. An oil & gas facility was observed to the west, and consisted of three aboveground storage tanks, a heater treater, and a flare pit. Visual impacts were observed, including barren ground lacking vegetation and cracking soil; the area of visual impacts measured approximately 100 feet by 50 feet. A wetland was also observed to the south. The site topography is generally flat and drains to the northwest. An aboveground power line was observed approximately 350 feet to the south of the site.

R17-3



Photograph facing south off of an oilfield lease road showing the visually impacted area, including stressed vegetation. The area of visual impacts measured approximately 60 feet by 20 feet.



Photograph facing south east showing the visually impacted area. An aboveground power line can be seen in the background.

Site Inspection Observations

R17-3 was inspected on May 9th, 2018, and is located approximately 500 feet south of 80th St NW and 125 feet west of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A pump jack was observed approximately 125 feet to the east. Visual impacts were observed, including an area of stressed vegetation; the area of visual impacts measured approximately 60 feet by 20 feet. A number of wetlands were also observed to the northwest and southeast. The site topography is generally flat and drains to the southeast. An aboveground power line was observed approximately 75 feet to the north of the site.

R17-4



Photograph facing east off of an oil & gas facility showing the visually impacted area with a lack of vegetative growth. A heater treater can be seen immediately west of the site.



Photograph facing east off of oil & gas facility showing the visually impacted area, which measured approximately 20 feet by 20 feet.

Site Inspection Observations

R17-4 was inspected on May 9th, 2018 and is located approximately 50 feet west of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west and consisted of three aboveground storage tanks and one heater treater. Visual impacts were observed, including an area lacking vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is generally flat and drains to the northwest. An aboveground power line was observed to the west of the site.

R17-5



Photograph facing north off of an oil field lease road. The site was approximately 1,500 feet north of the lease road. The land is currently used as grazing land for cattle and is surrounded by a barbwire fence. No visual impacts could be seen from roadway.

Site Inspection Observations

R17-5 was inspected on May 8th, 2018 and is located approximately 0.2 miles east of 42nd Ave. NW. The site could not be accessed at the time of the site visit. The site is currently used as grazing land for cattle. No visual impacts could be observed during the site visit due to access limitations.

R17-6 (May 2018)



Photograph facing south off 80th St NW showing the visually impacted area. The impacted area measured approximately 100 feet by 30 feet.



Photograph facing south off 80th St NW oilfield lease road showing the visually impacted area. Lighter colored soil can be observed.

Site Inspection Observations

R17-6 was inspected on May 9th, 2018, and is located approximately 25 feet south of 80th St. NW. The site is currently used for agricultural purposes and is surrounded by agricultural fields. The site appeared to have been worked on recently. An oil & gas facility was observed approximately 150 feet to the east and consisted of two aboveground storage tanks and one shack. Visual impacts were observed, including an area with lighter colored soils and slightly stressed vegetation; the area of visual impacts measured approximately 100 feet by 30 feet. The site topography is generally flat and drains to the north. Some ponding water was observed approximately 200 feet to the northwest. An aboveground power line was observed approximately 125 feet to the south of the site.

R17-6 (August 2018)



Photograph facing south off of 80th St NW showing the visually impacted area. Barren ground and were observed in an area measuring approximately 200 feet by 30 feet along the oilfield lease road.



Photograph facing west off oilfield lease road showing the visually impacted area.

Site Inspection Observations

R17-6 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and minimal visual impacts were observed. This area with lighter colored soils and slightly stressed vegetation measured approximately 100 feet by 30 feet. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 200 feet by 30 feet.

R18-1 (May 2018)



Photograph facing northeast off of an oilfield lease road showing the visually impacted area lacking vegetative growth. The visually impacted area measured approximately 300 feet by 15 feet. An oil & gas facility is located southwest of the site.



Photograph facing east showing the visually impacted area. Little to no vegetative growth was observed at the site.



Photograph facing east showing a closer view of the visually impacted area. White colored soil lacking vegetation can be seen.

Site Inspection Observations

R18-1 was inspected on May 9th, 2018 and is located approximately 250 feet north of County Road 26. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the west, and consisted of five aboveground storage tanks and two heater treaters. Visual impacts were observed, including an area lacking vegetation and white colored soils; the area of visual impacts measured approximately 300 feet by 150 feet. The site topography is generally flat and drains to the northwest. An aboveground power line was observed to the west of the site.

R18-1 (August 2018)



Photograph facing northeast off of an oilfield lease road showing the visually impacted area lacking vegetative growth. The visually impacted area measured approximately 300 feet by 150 feet.

Site Inspection Observations

R18-1 was revisited on August 20th, 2018. This follow-up investigation confirmed visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 300 feet by 150 feet as initially estimated during the May 9th, 2018 site visit.

R18-2



Photograph facing north off of County Road 26. No visual impacts could be observed from the roadway.

Site Inspection Observations

R18-2 was inspected on May 9th, 2018 and is located approximately 400 feet north of County Road 26. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes and is surrounded by agricultural fields. A shack was observed approximately 150 feet south of the site. Visual impacts could not be observed from a distance at the time of the site visit. The site topography is generally flat and drains to the northwest.

R18-3



Photograph facing east off County Road 9 showing the visually impacted area as observed from a distance. The site could not be accessed at the time of the site visit.



Photograph facing west off of County Road 9 showing a closer view of the visually impacted area. A wetland can be seen to the north of the site.

Site Inspection Observations

R18-3 was inspected on May 9th, 2018, and is located approximately 500 feet west of County Road 9. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. Visual impacts were observed from a distance during the site visit, including several barren areas lacking vegetation. Visually impacted areas could not be measured due to access limitations. Several wetlands were observed on the site. The site topography is generally flat and appears to drain to the west. Aboveground powerlines were observed on the east side of County Road 9.

R19-1



Photograph facing south east off of 50th Ave NW showing the site. A no trespassing sign was posted at the gate. No observations could be made due to access limitations.

Site Inspection Observations

R19-1 was inspected on May 9th, 2018, and is located approximately 0.8 miles east of 50th Ave NW. The site was unable to be accessed at the time of the site visit; a no trespassing sign was posted at the gate. No observations could be made at the time of site visit because of access limitations.

R20-1



Photograph facing northeast off of an oilfield lease road showing the site. No visual impacts were observed at the time of the site inspection.

Site Inspection Observations

R20-1 was inspected on May 8th, 2018 and is located approximately 50 feet north of an unnamed oilfield lease road. The site is currently used as grazing pasture for cattle. Pastures lie to the north and west, and land as part of the Upper Souris National Wildlife Refuge lie to the east and south. No visual impacts were observed at the site during the time of site visit. The site topography is generally flat with slightly undulating flows to the northeast.

R20-2



Photograph facing east off of an oilfield lease road showing a visually impacted area with slightly stressed vegetation. The visually impacted area measured approximately 20 feet by 20 feet.



Photograph facing east off of an oilfield lease road showing a closer view of the visually impacted area with slightly stressed vegetation.

Site Inspection Observations

R20-2 was inspected on May 8th, 2018 and is located approximately 50 feet east of an oilfield lease road. The site is currently natural grassland, and is surrounded by grassland. Visual impacts were observed, including slightly stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. A pond was also observed 50 feet north of the site. The site topography is hilly and drains to the south. An aboveground powerline was also observed to the west.

R20-3



Photograph facing east off of an oil & gas facility showing a visually impacted area lacking vegetative growth north of a wetland. The visually impacted area measured approximately 50 feet by 50 feet.



Photograph facing southeast off of an oil & gas facility showing a second visually impacted area lacking vegetative growth north of a wetland. The second visually impacted area measured approximately 70 feet by 60 feet.



Photograph facing southeast off of an oil & gas facility showing a third visually impacted area lacking vegetative growth. The third visually impacted area measured approximately 70 feet by 20 feet.

Site Inspection Observations

R20-3 was inspected on May 8th, 2018 and is located approximately 100 feet east of an oilfield lease road. The site is currently natural grassland and is surrounded by grassland. An oil & gas facility was observed to the west, and consisted of one pump jack, eight aboveground storage tanks, two heater-treaters, and one flare. Visual impacts were observed, including three areas of barren ground with little to no vegetation. These areas measured approximately 50 feet by 50 feet, 70 feet by 60 feet, and 70 feet by 20 feet. A pond and several wetlands were also observed near the center of the site, and additional wetlands were also observed further to the south of the site. A strong hydrogen sulfide odor was observed at the time of the site visit. The site topography is generally flat and drains to the west.

R20-4



Photograph facing south off of 77th St NW showing the visually impacted area with stressed vegetation. The impacted area measured approximately 100 feet by 100 feet.



Photograph facing south off of 77th St NW showing a closer view of the visually impacted area. A wetland can be seen in the background.

Site Inspection Observations

R20-4 was inspected on May 8th, 2018, and is located approximately 75 feet south of 77th St. NW. The site is currently used for agricultural purposes, and is surrounded by agricultural fields to the north, west, and south. Grasslands lie to the east. Visual impacts were observed, including an area of stressed vegetation; the area of visual impacts measured approximately 100 feet by 100 feet. Wetlands were also observed to the south and to the northeast of the site. The site topography is generally flat and drains to the north.

R23-1 (May 2018)



Photograph facing southwest off of an oilfield lease road showing the site. Visual impacts were observed, including slightly stressed vegetation and lighter colored soils; the area of visual impacts measured approximately 50 feet by 50 feet.



Photograph facing southwest showing a closer look at the visual impacts noted during the inspection. Slight slumping soil with a lighter color than the surrounding soil was noted.

Site Inspection Observations

R23-1 was inspected on May 4th, 2018 and is located approximately 500 feet south of 78th St NW and 200 feet west of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the east, consisting of eight aboveground storage tanks, a pump jack, and other miscellaneous oilfield equipment. A wetland is located approximately to the southwest. Visual impacts were observed, including slightly stressed vegetation and lighter colored soils; the area of visual impacts measured approximately 50 feet by 50 feet. The site is generally flat and drains to the south. The visually impacted area appeared to be a topographical low point.

R23-1 (August 2018)



Photograph facing southwest off of an oilfield lease road showing the visually impacted area. Visual impacts included stressed vegetation and lighter colored soils in an area measuring approximately 50 feet by 20 feet.



Photograph facing southwest showing a closer view of the visual impacts noted during the inspection.

Site Inspection Observations

R23-1 was revisited on August 20th, 2018. Visual impacts initially observed during the May investigation included an area of stressed vegetation and lighter colored soils. The area of visual impacts measured approximately 50 feet by 50 feet. This follow-up investigation revealed an area of barren ground and stressed vegetation measuring approximately 50 feet by 20 feet.

R23-2

Site Inspection Observations

R23-2 was inspected on May 1st, 2018. The site is approximately 750 feet north of 77th St. NW and 900 feet west of an oilfield lease road. The site was located on private land and could not be accessed at the time of the site visit. The site could not be observed from a distance due to access limitations.

R23-3



Photograph facing north showing the visually impacted area. Little to no vegetative growth was observed. A wetland can be seen in the background.



Photograph facing north showing the visually impacted area and its proximity to the northern wetland. Aboveground power lines can be seen in the background.

Site Inspection Observations

R23-3 was inspected on May 1st, 2018, and is located approximately 450 feet south of 77th St NW and 150 feet west of an oilfield lease road. The site is currently native grassland with agricultural land and oilfield development in the surrounding area. An oil & gas facility was observed to the southeast, consisting of an aboveground storage tank and miscellaneous oilfield equipment. A wetland is located just north of the visually impacted area. Visual impacts were observed, including barren soils with no vegetation and soil cracking; the area of visual impacts measured approximately 100 feet by 100 feet. The area of visual impacts appears to be a topographical high point in the area, with drainage at the site flowing away from this high point.

R23-4



Photograph facing south off of 77th St NW showing reclaimed area where an oilfield production facility and lease road previously existed.



Photograph facing southwest off of 77th St NW showing reclaimed area where an oilfield production facility and lease road previously existed.

Site Inspection Observations

R23-4 was inspected on May 1st, 2018, and is located approximately 650 feet south of 77th St NW. The site appeared to have recently been reclaimed. An oil & gas facility and lease road that were previously located at the site appeared to have been reclaimed. Due to the recent reclamation activity, no visual impacts could be observed at the site.

R23-5



Photograph facing southeast off of an oilfield production pad showing an area of visual impacts, including barren soils, stressed vegetation, and erosion.



Photograph facing southwest off of an oilfield production pad showing soil cracks, salt crusts, and dead zones.

Site Inspection Observations

R23-5 was inspected on May 4th, 2018, and is located approximately 2,000 feet west of 23rd Ave NW and just south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed immediately to the west, consisting of five aboveground storage tanks, a pump jack, and other miscellaneous oilfield equipment. A wetland was observed to the south. Visual impacts were observed, including a barren area of no vegetative growth, soil cracking, and salt crusting; the area of visual impacts measured approximately 50 feet by 50 feet. The site topography is generally flat with drainage predominantly to the southwest.

R23-6



Photograph facing south off of an oilfield lease road showing visual impacts, including dead zones, soil cracks, stressed vegetation, and tan soils.



Photograph facing southwest off of an oilfield lease road showing a wetland approximately 75 feet from site and running along 24th Ave NW. Aboveground powerlines were observed west of the site.

Site Inspection Observations

R23-6 was inspected on May 4th, 2018, and is approximately 100 feet east of 24th Ave NW and 50 feet south of an oilfield lease road. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks. A wetland was observed to the west, along 24th Ave NW. Visual impacts were observed, including barren soils with no vegetative growth, soil cracking, and lighter colored soils; the area of visual impacts measured approximately 50 feet by 30 feet. The site topography is generally flat and slopes slightly to the north.

R23-7



Photograph facing northeast from 76th St NW showing stressed vegetation and tan soils on the edge of an agricultural field. Wetlands were observed east of the site.



Photograph facing north from 76th St NW showing a closer view of the impacted area. Aboveground powerlines were observed east of the site.

Site Inspection Observations

R23-7 was inspected on May 4th, 2018, and is approximately 400 feet north of 76th St NW and 900 feet east of 24th Ave NW. The site is currently used for agricultural purposes and is surrounded by agricultural fields. Wetlands and a pond were observed to the east, and residential properties were observed approximately 1,000 feet to the east. Visual impacts were observed, including an area of barren ground with stressed vegetation; the area of visual impacts measured approximately 20 feet by 20 feet. The site topography is predominantly flat and drains to the east. Aboveground powerlines were observed east of the site.

R23-8 (May 2018)



Photograph facing south off an oilfield lease road showing visual impacts, including dead zones, salt crusts, and soil cracks.



Photograph facing east off an oilfield lease road showing oil & gas facility next to agricultural fields. The town of Glenburn is visible in the background and is approximately 3,000 feet to the northeast.

Site Inspection Observations

R23-8 was inspected on May 4th, 2018 and is located approximately 50 feet east of 24th Ave NW and 30 feet south of an oilfield lease road. The site is currently used for agricultural purposes and is surrounded by agricultural fields. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks. Wetlands were observed to the west and south, and the town of Glenburn lies approximately 3,000 feet to the northeast. Visual impacts were observed, including extensive dead zones, salt crusts, and soil cracking; the area of visual impacts measured approximately 100 feet by 50 feet. The site topography is generally flat and drains to the north/northwest. Aboveground powerlines were observed to the west and to the north.

R23-8 (August 2018)



Photograph facing southeast off of an oilfield lease road showing visual impacts, including dead zones, salt crusts, soil cracks, and stressed vegetation. The area of visual impacts measured approximately 300 feet by 100 feet.



Photograph facing southeast off an oilfield lease road showing the area of barren ground and stressed vegetation.

Site Inspection Observations

R23-8 was revisited on August 20th, 2018. During the initial site visit, visual impacts were observed, including extensive dead zones, salt crusts, and soil cracking; the area of visual impacts measured approximately 100 feet by 50 feet. This follow-up investigation identified a larger area of barren ground with spots of stressed vegetation measuring approximately 300 feet by 100 feet.

R23-9



Photograph facing southeast off of an oil & gas facility showing visual impacts, including extensive dead zones, salt crusts, soft soils and soil cracking. The site is located next to an oil & gas facility and adjacent to a large pond.



Photograph facing northwest off of an oil & gas facility showing pond with salt crusts on the shore. Also shown are barren soils on site.



Photograph facing southwest off of the oil & gas facility showing pond and extensive dead zones in the foreground.

Site Inspection Observations

R23-9 was inspected on May 4th, 2018, and is located approximately 500 feet south of 75th St NW and 30 feet west of an oilfield lease road. The site is used in part as agricultural land and in part as an oil & gas facility. The oil & gas facility is located immediately to the east, and consisted of four aboveground storage tanks and miscellaneous oilfield equipment. Native grasslands lie to the north and further east, and agricultural fields lie to the south. A large pond was observed to the west. Visual impacts were observed, including extensive dead zones with barren soils and no vegetation, salt crusting, and soil cracking; the area of visual impacts measured approximately 100 feet by 50 feet. A hydrogen sulfide odor was noted during the site visit. The site topography is generally flat, lightly undulating, and drains to the south/southwest.

R24-1



Photograph facing south taken from the center of the visually impacted area. Barren ground with little to no vegetation growth was observed. A pump jack and aboveground storage tanks can be seen in the background.



Photograph facing southwest of a second visually impacted area showing little to no vegetative growth. A pump jack and a wetland can be seen in the background.



Photograph of a closer view of the second visually impacted area. Lighter colored and white soil can be seen next to the native vegetative growth in the area.

Site Inspection Observations

R24-1 was inspected on May 4th, 2018 and is located approximately 100 feet south of 78th St NW and 20 feet west of an oilfield lease road. The site is currently native grassland with grasslands to the south and surrounded by agricultural fields. An oil & gas facility was observed to the southeast, consisting of three aboveground storage tanks and a pump jack. A pond was located to the north, past 78th St NW. Wetlands were observed to the west and east of the site. Visual impacts were observed, including barren ground with no vegetation, cracking soils, and lighter colored soils. Two areas of visual impacts were noted, the first measuring approximately 60 feet by 15 feet, and the second measuring approximately 20 feet by 20 feet. The site topography is generally flat and drains to the east. Aboveground powerlines were observed to the southeast of the site.

R24-2



Photograph facing east taken from 22nd Ave. NW. The site could not be accessed at the time of the site visit. The site was observed with signs of slight sloughing and some standing water. Oilfield equipment can be seen in the background.



Photograph facing southwest taken from an oilfield lease road. An aboveground storage tank and oilfield facility can be seen in the background.

Site Inspection Observations

R24-2 was inspected on May 4th, 2018 and is located approximately 150 feet west of 22nd Ave NW and 400 feet south of an oilfield lease road. The site is located on private land and could not be accessed at the time of the site visit. The site is currently native grassland and is surrounded by agricultural fields to the north, west, and east. Grasslands were observed to the south. An oil & gas facility consisting of a single shack was observed to the north. No visual impacts could be observed at the time of the site visit due to access restrictions. However, signs of slight sloughing and standing water were observed at the site. The site topography is generally flat and appeared to drain towards the depression observed with standing water.

R24-3



Photograph facing south showing the site. A wetland/pond can be seen in the background.



Photograph showing slightly stressed vegetation at the site.

Site Inspection Observations

R24-3 was inspected on May 4th, 2018 and is located approximately 300 feet east of 22nd Ave NW and 400 feet south of an oilfield lease road. The site is currently native grassland and surrounded by grasslands. An oil & gas facility was observed to the east, consisting of one pump jack. A pond/wetland was observed to the south. Visual impacts were observed, including slightly stressed vegetation with scoria remnants; the area of visual impacts measured approximately 30 feet by 30 feet. The site topography is generally flat and drains to the south/southwest.

R24-4



Photograph facing north showing native grasslands. No visually impacted areas were observed at the site.



Photograph facing south showing native grasslands. No visually impacted areas were observed at the site. A pump jack and an oil field production facility can be seen in the background.

Site Inspection Observations

R24-4 was inspected on May 1st, 2018, and is located approximately 1,700 feet east of 22nd Avenue NW and 50 feet north of an oilfield lease road. The site is currently native grassland, and is surrounded by grasslands. An oil & gas facility was observed to the south, consisting of one pump jack. No visual impacts were observed at the time of the site visit. The site is generally flat and drains to the southwest.

R24-5



Photograph facing west showing visually impacted area, including barren soils with no vegetation. A wetland bordering the western portion of the visually impacted area can be seen in the background.



Photograph facing north showing visually impacted area and a field used in agricultural production. Oilfield production equipment can be seen in the background.



View facing south west showing injection facility directly south of the site. The injection facility consists of several aboveground storage tanks and a holding pond. An earthen berm separates the site from the injection facility.

Site Inspection Observations

R24-5 was inspected on May 1st, 2018, and is located just north of an oilfield lease road and an injection facility. The site is currently used for agricultural purposes. Agricultural fields lie to the north, west, and east. Several aboveground storage tanks and a holding pond were observed at the injection facility, located just south of the site. An earthen berm separates the site from the injection facility. A wetland was observed to the west of the site. Visual impacts were observed, including an area of barren soils lacking vegetation; the area of visual impacts measured approximately 75 feet by 20 feet. The topography of the site is generally flat and drains to the west toward the wetland.

R24-6



Photograph facing north off of 76th St NW. A visually impacted area lacking vegetation was observed between the barbwire fence and the oilfield production facility in the background.



Photograph facing north showing a closer view of the visually impacted area.



View facing east showing the visually impacted area. A wetland and barbwire fence can be seen in the foreground. Aboveground powerlines and oilfield equipment can be seen in the background.

Site Inspection Observations

R24-6 was inspected on May 1st, 2018, and is located approximately 500 feet north of 76th St NW and just south of an oil & gas facility. The site is located on private land and could not be accessed at the time of the site visit. The site appeared to be used as a staging area for oil & gas activities, and is surrounded by agricultural fields to the east, west, and south. The oil & gas facility to the north consisted of four aboveground storage tanks and a heater treater. A wetland was observed to the west of the site. Visual impacts were observed from a distance at the time of the site visit, including an area lacking vegetation; the area of visual impacts measured approximately 150 feet by 100 feet. Steven Eldevik, the landowner, was interviewed at the time of the site inspection. Mr. Eldevik noted that the visually impacted area was a result of a recent saltwater release from the oilfield production facility to the north, and not from historical impacts. The site topography is generally flat and slopes slightly to the southwest. Aboveground powerlines were observed to the south and to the west.

R24-7



Photograph facing east off of 21st Ave. NW. A visually impacted area lacking vegetation can be observed. Aboveground powerlines can be seen in the foreground.



Photograph facing west showing a close up of the grain bins and various farming equipment located approximately west of the site.

Site Inspection Observations

R24-7 was inspected on May 1st, 2018, and is located approximately 400 feet northeast of the intersection of 76th St NW and 21st Ave NW. The site could not be accessed at the time of the site visit. The site is currently native grassland, and surrounded by agricultural fields to the north and east. Grasslands lie to the south. A residential property with agricultural equipment and numerous grain bins lies to the west, across 21st Ave NW. Visual impacts were observed from a distance during the site visit. These impacts included an area lacking vegetative growth, which was estimated to measure approximately 225 feet by 150 feet. The site appeared to be a slightly depressed area in relation to the rest of the surrounding areas. Aboveground powerlines were observed to the west of the site.

R24-8 (May 2018)



Photograph facing east taken off an oilfield lease road showing the site. No visual impacts were observed at the time of the May 1, 2018 site visit.



Photograph facing southeast taken off an oilfield lease road showing the site. The site had recently been plowed and no signs of visual impacts were observed.

Site Inspection Observations

R24-8 was inspected on May 1st, 2018 and is located approximately 300 feet south off 76th St NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes and was observed to have been recently plowed at the time of the site visit. Agricultural fields lie to the north, east, and south. A wetland is located to the south of the site. An oil & gas facility was observed to the west, consisting of five aboveground storage tanks, a shack, and other miscellaneous oilfield equipment. Visual impacts were not observed from a distance at the time of the site visit. The site is generally flat and slopes slightly to the northwest. Aboveground powerlines were observed to the west of the site.

R24-8 (August 2018)



Photograph facing east taken off of an oil lease road showing the visually impacted area. An area of barren ground and stressed vegetation measuring approximately 300 feet by 200 feet was observed.



Photograph facing southwest taken off of 76th St NW showing the visually impacted area.

Site Inspection Observations

R24-8 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 300 feet by 200 feet.

R24-9



Photograph facing east taken off of 21st Ave NW. A visually impacted area lacking vegetation was observed north of a wetland/pond. Aboveground powerlines can be seen in the foreground and background.



Photograph facing east taken off of 21st Ave NW, showing a closer view of the visually impacted area lacking vegetation.



View facing southeast showing the visually impacted area. The proximity of the visually impacted area to the wetland/pond can be seen. Above ground power lines can be seen in the background.

Site Inspection Observations

R24-9 was inspected on May 1st, 2018 and is located approximately 150 feet east of 21st Ave NW and just south of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently native grassland and is surrounded by agricultural fields. Oil & gas facilities were located to the west and south. Each of these facilities consists of one pump jack. A pad used for industrial purposes was also observed to the east. A wetland/pond is located to the south of the site. Visual impacts were observed from a distance at the time of the site visit, including an area of barren soils lacking vegetation. The area was estimated to measure approximately 150 feet by 60 feet. It appears the impacts may have migrated south towards the wetland. The site topography is generally flat and slopes slightly to the south. Aboveground powerlines are located to the north and west of the site. An underground petroleum pipeline was observed to the north of the site, just north of the oilfield lease road.

R24-10



Photograph facing west taken off of 21st Ave NW. A visually impacted area lacking vegetation was observed. An oil & gas facility can be seen in the background.



Photograph facing west taken off of 21st Ave NW showing a closer view of the impacted area.



Photograph facing north taken from an oilfield lease road showing the visually impacted area.

Site Inspection Observations

R24-10 was inspected on May 1st, 2018 and is located approximately 250 feet west of 21st Ave NW and just south of an oil & gas facility. The site is currently used for agricultural purposes and surrounded by agricultural fields. An oil & gas facility was observed to the south, consisting of four aboveground storage tanks, two heater treaters, two horizontal separators, and a flare pit. Visual impacts were observed from a distance, including numerous areas with barren soils lacking vegetation; the area of visual impacts was estimated to measure approximately 250 feet by 50 feet. The site topography is generally flat and slopes slightly to the east and southeast. An underground petroleum pipeline was observed to the south. Hydrogen sulfide odors were observed during the site visit.

R24-11



Photograph facing east taken off of 22nd Ave NW. Visual impacts including an area lacking vegetation can be seen in the foreground. A wetland east of the impacted area can be seen in the background.



Photograph facing northeast taken off of 22nd Ave NW. The area lacking vegetation can be seen in the foreground. A wetland east of the impacted area is located in the background.



Photograph facing east taken off of 22nd Ave NW showing a closer view of the area lacking vegetation.

Site Inspection Observations

R24-11 was inspected on May 1st, 2018 and is located approximately 125 feet east of 22nd Ave NW. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes, and is surrounded by agricultural fields. A wetland was observed to the east. Visual impacts were observed from a distance, including an area slightly lacking vegetation. The area was estimated to measure approximately 100 feet by 75 feet. The site topography is generally flat, with the impacted area appearing to be a low spot compared to the surrounding areas. Aboveground powerlines were observed to the west.

R24-12 (May 2018)



Photograph facing south taken off of an oilfield lease road. No visual impacts were observed at the time of the May 1, 2018 site visit.



Photograph facing southwest taken off of the oilfield lease road. An Enbridge underground pipeline marker can be seen in the foreground.



Photograph facing southeast taken off the oilfield lease road, showing the site.

Site Inspection Observations

R24-12 was inspected on May 1st, 2018 and is located approximately 350 feet east of 21st Ave NW and just south of an oilfield lease road. The site could not be accessed at the time of the site visit. The site is currently used for agricultural purposes and appeared to be recently plowed. Agricultural fields surround the site. An oil & gas facility was observed to the northeast, consisting of a single shack. A wetland lies to the north, just past the oilfield lease road. Visual impacts were not observed from a distance during the site visit. The site topography is generally flat and slopes slightly to the west. An underground petroleum pipeline was observed to the north.

R24-12 (August 2018)



Photograph facing south taken off of an oilfield lease road showing the visually impacted area. Barren ground with stressed vegetation was observed in an area measuring approximately 45 feet by 35 feet.



Photograph facing southeast taken off of an oilfield lease road, showing the visually impacted area.

Site Inspection Observations

R24-12 was revisited on August 20th, 2018. During the initial inspection, the site had recently been plowed, and no impacts could be observed. This follow-up investigation identified visual impacts consisting of barren ground and stressed vegetation in an area measuring approximately 45 feet by 35 feet.

APPENDIX D

Ward County Site Assessment Reports

Ward-1



Photograph facing southwest from the oil & gas facility towards the Ward-1 site. Visual impacts including barren soils with salt crusting can be seen adjacent to the rock pile. The 3 feet by 3 feet area containing surficial oil staining can be seen in the center of the photograph.



Photograph facing south from the oil & gas facility of the visually impacted area. Note the crude oil pipeline marker as well as the aboveground powerlines. The wetland located to the south of the site can be seen on the left side of the photograph.

Site Inspection Observations

Ward-1 was inspected on June 19th, 2018, and is located approximately 350 feet northwest of the intersection of 268th St NW and 46th Ave NW. An oil & gas facility was observed to the north, consisting of three aboveground storage tanks, two horizontal separators, a pump jack, a propane tank and a chemical drum. The site is currently used as agricultural land, and is surrounded by agricultural fields. Visual impacts included an area with barren soil lacking vegetation with salt crusting. The area of visual impacts measured approximately 250 feet by 100 feet. Surficial oil staining was also noted within this area, and measured approximately 3 feet by 3 feet. The area of oil staining was located on the south side of the oil & gas facility berm. A wetland was also observed to the south of the site. The site topography generally slopes south towards the wetland. Aboveground powerlines were observed running north and south along 268th St NW. Underground crude oil pipeline markers were observed on the southwest side of the oil & gas facility as well as at the intersection of 268th St NW and 46th Ave NW.

Ward-2



Photograph facing northwest from 268th St NW towards the Ward-2 site. Visual impacts including barren soils with salt crusting were observed. Note the area of discoloration and lacking vegetation inside the visually impacted area as seen in the center of the photograph.



Photograph facing southeast showing ground conditions of an agricultural field adjacent to the Ward-2 site. The field lies across 268th St NW to the east. Indicators of alkaline soils were present in the surrounding landscape similar to conditions noted at the Ward-2 site.

Site Inspection Observations

Ward-2 was inspected on June 19th, 2018, and is located approximately 200 feet west of 268th St NW. The site is currently used as agricultural land, and is surrounded by agricultural fields. Visual impacts were observed, including an area of barren soil with salt crusting, lacking vegetation. The area of visual impacts measured approximately 200 feet by 25 feet. A wetland was also observed to the east of the site across 268th St NW. During the site inspection, multiple areas in the surrounding landscape showed indicators of alkaline soil similar to condition noted at the Ward-2 site. The site is at a topographical low point with drainage patterns sloping towards the visually impacted area. Aboveground powerlines were observed running north and south along 268th St NW.

Tables

Table 1
Bottineau County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude</i> ¹	<i>Longitude</i> ¹	<i>PLSS Description</i> ²	<i>Most Visible Imagery</i> ³	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
B1-1	48.992158°	-101.467019°	NENW S32 T164N R83W	SWC 1961	1/4/2018	No visual impacts	Agriculture	
B1-2	48.997636°	-101.482953°	NWSE S30 T164N R83W	GE 1995	1/4/2018	No visual impacts	Agriculture	
B1-3	48.930214°	-101.408394°	SWNW S23 T163N R83W	GE 1995	1/4/2018	10,000	Natural Grassland	
B1-4	48.930764°	-101.395706°	SWNE S23 T163N R83W	SWC 1961	1/4/2018	3,600	Natural Grassland	
B1-5	48.930389°	-101.379636°	SENE S24 T163N R83W	SWC 1961	1/4/2018	No visual impacts	Agriculture	
B1-6	48.926019°	-101.368106°	NESE S24 T163N R83W	SWC 1961	1/4/2018	No site access	Agriculture	Site Access Limitations
B1-7	48.921814°	-101.396914°	NWNE S26 T163N R83W	SWC 1961	1/4/2018	2,400	Natural Grassland	
B1-8	48.923064°	-101.402453°	SESW S23 T163N R83W	SWC 1961	1/4/2018	12,500	Agriculture	
B1-9	48.92015°	-101.384747°	NWNW S25 T163N R83W	SWC 1961	1/4/2018	20,000	Natural Grassland	
B1-10	48.913633°	-101.383017°	NWSW S25 T163N R83W	SWC 1961	1/4/2018	No visual impacts	Natural Grassland	
B1-11	48.906133°	-101.383464°	NWNW S36 T163N R83W	SWC 1961	1/4/2018	No visual impacts	Natural Grassland	
B1-12	48.904447°	-101.383847°	NWNW S36 T163N R83W	SWC 1961	1/4/2018	No visual impacts	Natural Grassland	
B1-13	48.902481°	-101.391689°	SENE T163N R83W	GE 1995	1/4/2018	No visual impacts	Natural Grassland	
B1-14	48.930756°	-101.401106°	SENE S23 T163N R83W	SWC 1961	1/4/2018	35,000	Natural Grassland	
B2-1	48.923728°	-101.356772°	SESW S19 T163N R82W	SWC1961	1/9/2018	2,000	Agriculture	
B2-2	48.927583°	-101.340386°	NWSW S20 T163N R82W	SWC1961	1/9/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
B2-3	48.931494°	-101.324619°	SENE S20 T163N R82W	SWC1961	1/9/2018	2,500	Agriculture	
B3-1	48.963719°	-101.116472°	NENW S12 T163N R81W	SWC 1961	1/16/2018	2,500	Oil & Gas	
B3-2	48.971331°	-101.121383°	NWSW S1 T163 R81W	SWC 1961	1/16/2018	1,350	Agriculture	
B3-3	48.967872°	-101.1218°	SWSW S1 T163 R81W	SWC 1961	1/16/2018	450	Agriculture	
B3-4	48.968733°	-101.111775°	SWSE S1 T163N R81W	SWC 1961	1/16/2018	No visual impacts	Agriculture	
B3-5	48.957022°	-101.120686°	NWSW S12 T163N R81W	SWC 1961	1/16/2018	9,375	Natural Grassland	
B3-6	48.920639°	-101.23185°	NWNW S30 T163N R81W	GE 1997	1/16/2018	10,000	Natural Grassland	
B4-1	48.990156°	-101.001711°	SWNE S35 T164N R80W	SWC 1991	1/16/2018	1,125	Agriculture	
B4-2	48.991078°	-101.006711°	SENE S35 T164N R80W	SWC 1991	1/16/2018	No site access	Agriculture	Site Access Limitations
B4-3	48.990738°	-100.990449°	SWNW S36 T164N R80W	SWC 1991	1/16/2018	15,000	Agriculture	
B4-4	48.980258°	-100.984786°	NENW S1 T163N R80W	SWC 1991	1/16/2018	20,000	Agriculture	
B4-5	48.978286°	-100.979033°	NWNE S1 T163N R80W	SWC 1991	1/16/2018	2,500	Agriculture	
B4-6	48.980281°	-100.978908°	NWNE S1 T163N R80W	SWC 1996	1/16/2018	40,000	Agriculture	
B5-1	48.994267°	-100.855228°	SENE S36 T164N R79W	SWC 1961	1/17/2018	No visual impacts	Natural Grassland	
B5-2	48.988604°	-100.847097°	NENW S36 T164N R79W	SWC 1961	1/17/2018	5,000	Agriculture	
B5-3	48.956453°	-100.947939°	NWSW S8 T163N R79W	SWC 1969	1/17/2018	7,500	Agriculture	
B5-4	48.960561°	-100.952758°	SENE S7 T163N R79W	SWC 1961	1/17/2018	No visual impacts	Natural Grassland	
B5-5	48.920811°	-100.881208°	NWNW S26 T163N R79W	SWC 1961	1/17/2018	5,625	Oil & Gas	
B6-1	48.990436°	-100.827436°	SWNE S31 T164N R78W	SWC 1961	1/17/2018	No visual impacts	Agriculture	
B6-2	48.986139°	-100.827922°	NWSE S31 T164N R78W	SWC 1961	1/17/2018	No visual impacts	Agriculture	
B6-3	48.956592°	-100.778947°	NESE S9 T13N R78W	SWC 1961	1/17/2018	3,000	Agriculture	
B6-4	48.916756°	-100.826944°	SWNE S30 T163N R78W	SWC 1961	1/17/2018	5,000	Agriculture	
B6-5	48.909136°	-100.826572°	SWSE S30 T163N R78W	SWC 1961	1/17/2018	625	Agriculture	
B6-6	48.907389°	-100.823592°	NENE S31 T163N R78W	SWC 1961	1/17/2018	14,400	Agriculture	
B7-1	48.994497°	-100.660969°	NWNW S33 T164N R77W	SWC 1961	1/19/2018	No visual impacts	Reclaimed	
B7-2	48.991886°	-100.654392°	NENW S33 T164N R77W	SWC 1961	1/19/2018	No visual impacts	Agriculture	
B7-3	48.986525°	-100.650578°	NWSE S33 T164N R77W	SWC 1961	1/19/2018	1,000	Natural Grassland	
B7-4	48.944028°	-100.647304°	NESE S33 T164N R77W	SWC 1961	1/19/2018	400	Agriculture	
B7-5	48.989040°	-100.652265°	SWNE S33 T164N R77W	USDA Imagery	2/27/2018	300	Natural Grassland	
B11-1	48.875982°	-101.381789°	NENW S12 T162N R83W	NHAP 1984	1/18/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
B11-2	48.819019°	-101.477088°	NENE S31 T162N R83W	GE 2009	1/18/2018	3,500	Natural Grassland	
B11-3	48.807794°	-101.482984°	SWSE S31 T162N R83W	GE 2007	1/18/2018	35,000	Agriculture	
B11-4	48.808059°	-101.471100°	SWSW S32 T162N R83W	GE 1995	1/18/2018	600	Agriculture	

Table 1
Bottineau County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude¹</i>	<i>Longitude¹</i>	<i>PLSS Description²</i>	<i>Most Visible Imagery³</i>	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
B12-1	48.815772°	-101.25665°	SENE S35 T162N R82W	GE1995	1/30/2018	1,250	Agriculture	
B13-1	48.826132°	-101.214133°	NESE S30 T162N R81W	SWC 1961	2/27/2018	12,000	Agriculture	
B13-2	48.818545°	-101.215100°	NENE S31 T162N R81W	SWC 1961	2/27/2018	6,500	Oil & Gas	
B13-3	48.822472°	-101.219728°	SWSE S30 T162N R81W	SWC 1961	2/27/2018	5,000	Natural Grassland	
B13-4	48.821629°	-101.213599°	SESE S30 T162N R81W	SWC 1961	2/27/2018	5,000	Oil & Gas	
B14-1	48.880578°	-101.034867°	SWSW S3 T162N R80W	SWC 1961	2/8/2018	2,000	Agriculture	
B14-2	48.873761°	-101.003411°	SWNE S11 T162N R79W	SWC 1961	2/8/2018	No visual impacts	Reclaimed	
B14-3	48.874464°	-101.035611°	SWNW S10 T162N R79W	SWC 1961	2/8/2018	6,100	Agriculture	
B14-4	48.869817°	-101.030592°	NESW S10 T162N R79W	SWC 1961	2/8/2018	300	Agriculture	
B14-5	48.865983°	-101.040072°	SESE S9 T162N R79W	SWC 1961	2/8/2018	1,250	Agriculture	
B14-6	48.851589°	-101.024097°	SWSE S15 T162N R79W	SWC 1961	2/8/2018	1,000	Agriculture	
B14-7	48.856206°	-100.974894°	NESE S13 T162N R79W	SWC 1961	2/8/2018	15,000	Agriculture	
B14-8	48.837822°	-100.991144°	SWSW S24 T162N R79W	SWC 1961	2/8/2018	1,000	Agriculture	
B14-9	48.848161°	-101.007456°	NENW S23 T162N R79W	SWC 1961	2/8/2018	250	Agriculture	
B14-10	48.833711°	-100.986678°	NENW S25 T162N R79W	SWC 1961	2/8/2018	6,000	Agriculture	
B14-11	48.822567°	-100.97975°	SWSE S25 T162N R79W	SWC 1961	2/8/2018	3,325	Agriculture	
B14-12	48.8251°	-100.975375°	NESE S25 T162N R79W	SWC 1961	2/8/2018	6,250	Agriculture	
B14-13	48.819033°	-100.976292°	NENE S36 T162N R79W	SWC 1961	2/8/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
B14-14	48.825231°	-100.972078°	NWSW S30 T162N R79W	SWC 1961	2/8/2018	750	Agriculture	
B14-15	48.812097°	-100.958978°	NWSE S31 T162N R79W	SWC 1961	2/8/2018	20,000	Agriculture	
B14-16	48.83535°	-100.948431°	NWNW S29 T162N R79W	SWC 1961	2/8/2018	500	Agriculture	
B14-17	48.833519°	-100.952717°	NENE S30 T162N R79W	SWC 1961	2/8/2018	800	Agriculture	
B14-18	48.84175°	-100.952583°	NESE S19 T162N R79W	SWC 1961	2/8/2018	400	Agriculture	
B14-19	48.841025°	-100.942092°	NESW S20 T162N R79W	SWC 1961	2/8/2018	300	Agriculture	
B20-1	48.791220°	-101.478217°	NENE S7 T161N R83W	GE1995-2016	1/18/2018	40,000	Agriculture	
B20-2	48.801371°	-101.474364°	SWNW S5 T161N R83W	GE1995-2016	1/18/2018	10,000	Natural Grassland	
B20-3	48.806189°	-101.465476°	NENW S5 T161N R83W	GE1995-2016	1/18/2018	100	Natural Grassland	
B20-4	48.794312°	-101.482230°	SWSE S6 T161N R83W	GE1995-2016	1/18/2018	15,000	Agriculture	
B21-1	48.766050°	-101.255163°	SWSW S13 T161N R82W	SWC 1961	2/2/2018	1,500	Natural Grassland	
B21-2	48.764622°	-101.243038°	SWSE S13 T161N R82W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B21-3	48.768767°	-101.258205°	NESE S14 T161N R82W	SWC 1961	2/2/2018	1,500	Natural Grassland	
B21-4	48.760395°	-101.268699°	NENW S23 T161N R82W	SWC 1961	2/2/2018	5,000	Natural Grassland	
B21-5	48.753658°	-101.269553°	NESW S23 T161N R82W	SWC 1961	2/2/2018	80,000	Natural Grassland	
B21-6	48.754010°	-101.257797°	NESE S23 T161N R82W	SWC 1961	2/2/2018	400	Natural Grassland	
B21-7	48.750665°	-101.264484°	SWSE S23 T161N R82W	SWC 1961	2/2/2018	2,500	Agriculture	
B21-8	48.750707°	-101.241917°	SWSE S24 T161N R82W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B21-9	48.749646°	-101.240286°	SESE S24 T161N R82W	SWC 1961	2/2/2018	160,000	Natural Grassland	
B21-10	48.761430°	-101.247241°	NENW S24 T161N R82W	SWC 1961	2/2/2018	40,000	Natural Grassland	
B21-11	48.758272°	-101.241650°	SWNE S24 T161N R82W	SWC 1961	2/2/2018	3,000	Agriculture	
B21-12	48.753811°	-101.237459°	SESE S24 T161N R82W	SWC 1961	2/2/2018	No visual impacts	Private	
B21-13	48.746601°	-101.256851°	NENE S26 T161N R82W	SWC 1961	2/2/2018	250,000	Oil & Gas	
B21-14	48.747227°	-101.247272°	NENW S25 T161N R82W	SWC 1961	2/2/2018	5,000	Natural Grassland	
B21-15	48.744213°	-101.253771°	NWSW S25 T161N R82W	SWC 1961	2/2/2018	11,625	Natural Grassland	
B21-16	48.743379°	-101.253241°	SWSW S25 T161N R82W	SWC 1961	2/2/2018	1,125	Natural Grassland	
B21-17	48.744961°	-101.257914°	NENE S26 T161N R82W	SWC 1961	2/2/2018	1,000	Agriculture	
B21-18	48.740247°	-101.236588°	NESE S25 T161N R82W	SWC 1961	2/2/2018	40,000	Natural Grassland	
B21-19	48.739618°	-101.236110°	NESE S25 T161N R82W	SWC 1961	2/2/2018	187,500	Natural Grassland	
B21-20	48.739681°	-101.291556°	SWSW S23 T161N R82W	SWC 1961	2/2/2018	50,000	Oil & Gas	
B21-21	48.750527°	-101.275177°	SWNE S23 T161N R82W	SWC 1961	2/2/2018	30,000	Natural Grassland	

Table 1
Bottineau County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude¹</i>	<i>Longitude¹</i>	<i>PLSS Description²</i>	<i>Most Visible Imagery³</i>	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
B21-22	48.736031°	-101.242668°	SWSE S25 T161N R82W	SWC 1961	2/2/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
B21-23	48.740177°	-101.247356°	NESW S25 T161N R82W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B21-24	48.746033°	-101.236260°	NENE S25 T161N R82W	SWC 1961	2/2/2018	6,250	Natural Grassland	
B21-25	48.747019°	-101.236871°	NENE S25 T161N R82W	SWC 1961	2/2/2018	1,200	Oil & Gas	
B22-1	48.750239°	-101.232119°	SWSW S19 T161N R81W	SWC 1961	2/2/2018	325	Agriculture	
B22-2	48.749679°	-101.221134°	SESE S19 T161N R81W	SWC 1961	2/2/2018	400	Natural Grassland	
B22-3	48.746171°	-101.215610°	NENE S30 T161N R81W	SWC 1961	2/2/2018	50,000	Agriculture	
B22-4	48.743339°	-101.222061°	NWSW S30 T161N R81W	SWC 1961	2/2/2018	1,000	Natural Grassland	
B22-5	48.742892°	-101.232856°	SWNW S30 T161N R81W	SWC 1961	2/2/2018	10,000	Natural Grassland	
B22-6	48.739865°	-101.227654°	NESW S30 T161N R81W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B22-7	48.739334°	-101.227025°	NESW S30 T161N R81W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B22-8	48.739349°	-101.215676°	NESE S30 T161N R81W	SWC 1961	2/2/2018	1,000	Oil & Gas	
B22-9	48.736216°	-101.232908°	SWSW S30 T161N R81W	SWC 1961	2/2/2018	7,500	Agriculture	
B22-10	48.735924°	-101.232158°	SWSW S30 T161N R81W	SWC 1961	2/2/2018	No site access	Agriculture	Site Access Limitations
B22-11	48.737914°	-101.231883°	NWSW S30 T161N R81W	SWC 1961	2/2/2018	1,000	Agriculture	
B22-12	48.732013°	-101.214781°	NWSW S31 T161N R81W	SWC 1961	2/2/2018	No visual impacts	Agriculture	
B22-13	48.732959°	-101.202999°	NENW S32 T161N R81W	SWC 1961	2/2/2018	10,400	Natural Grassland	
B22-14	48.735435°	-101.198461°	SWSE S29 T161N R81W	SWC 1961	2/2/2018	60,000	Agriculture	
B22-15	48.736278°	-101.210857°	SWSW S29 T161N R81W	SWC 1961	2/2/2018	No visual impacts	Natural Grassland	
B22-16	48.738502°	-101.203743°	NESW S29 T161N R81W	SWC 1961	2/2/2018	20,000	Oil & Gas	
B22-17	48.743265°	-101.209503°	SWNW NESW S29 T161N R81W	SWC 1961	2/2/2018	100	Agriculture	
B22-18	48.733198°	-101.211381°	NWNW S32 T161N R81W	SWC 1961	2/2/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
B22-19	48.733039°	-101.206875°	NWNW S32 T161N R81W	SWC 1961	2/2/2018	No visual impacts	Agriculture	
B23-1	48.79605°	-100.975356°	NESE S1 T161N R80W	SWC 1961	2/8/2018	No visual impacts from a distance	Private	Site Access Limitations
B24-1	48.800875	-100.963146	SENW S6 T161 R79W	SWC 1961	2/8/2018	No visual impacts	Agriculture	
B24-2	48.783676	-100.927753	NWSE S9 T161 R79W	SWC 1961	2/8/2018	10,000	Oil & Gas	
B24-3	48.77878	-100.919317	SESW S9 T161 R79W	SWC 1961	2/8/2018	11,525	Agriculture	
B24-4	48.75376	-100.902169	NWSW S22 T161 R79W	SWC 1961	2/8/2018	1,600	Agriculture	
B24-5	48.750446	-100.909563	SESE S21 T161 R79W	SWC 1961	2/8/2018	6,000	Agriculture	
B24-6	48.75011	-100.919279	SESW S21 T161 R79W	SWC 1961	2/8/2018	10,000	Oil & Gas	
B24-7	48.742976	-100.920753	SENW S28 T161 R79W	SWC 1961	2/8/2018	No visual impacts	Agriculture	
B24-8	48.742827	-100.907443	SENE S28 T161 R79W	SWC 1961	2/8/2018	1,500	Agriculture	
B24-9	48.769509	-100.922962	NESW S16 T161 R79W	SWC 1961	2/8/2018	9,500	Agriculture	
B25-1	48.767522°	-100.821681°	NESE S18 T161N R78W	SWC 1961	2/8/2018	1,100	Reclaimed	
B25-2	48.761578°	-100.809808°	NENW S20 T161N R78W	SWC 1961	2/8/2018	400	Agriculture	
B25-3	48.756589°	-100.806047°	SWNE S20 T161N R78W	SWC 1961	2/8/2018	300	Agriculture	
B25-4	48.75415°	-100.8111°	NESW S20 T161N R78W	SWC 1961	2/8/2018	1,250	Agriculture	
B25-5	48.753339°	-100.799056°	NESE S20 T161N R78W	SWC 1961	2/8/2018	40,000	Agriculture	
B25-6	48.750758°	-100.793311°	SWSW S21 T161N R78W	SWC 1961	2/8/2018	100,000	Agriculture	
B25-7	48.724092°	-100.754067°	NESE S34 T161N R78W	SWC 1961	2/8/2018	1,200	Agriculture	

Table 1
Bottineau County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude</i> ¹	<i>Longitude</i> ¹	<i>PLSS Description</i> ²	<i>Most Visible Imagery</i> ³	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
B41-1	48.553866°	-101.197763°	SENE S36 T159N R82W	SWC1961	1/11/2018	25,000	Agriculture	
B41-2	48.548492°	-101.199216°	NWSE S36 T159N R82W	SWC 1961	1/11/2018	500	Agriculture	
B41-3	48.558014°	-101.203210°	NENW S36 T159N R82W	SWC1961	1/11/2018	No site access	Agriculture	Site Access Limitations
B42-1	48.554618°	-101.186746°	SWNW S31 T159N R81W	SWC 1961	1/10/2018	225	Agriculture	
B42-2	48.561495°	-101.186533°	SWSW S30 T159N R81W	SWC 1961	1/10/2018	400	Agriculture	
Total						1,692,150		

- Notes:
- 1: Datum - NAD 1983 State Plane Coordinate System
 - 2: Shown as Quarter Quarter, Section, Township, Range
 - 3: Publicly available imagery in which the identified brine pond is most apparent
 - 4: GE - Google Earth
 - 5: NHAP - National High Altitude Photography
 - 6: PLSS - Public Land Survey System
 - 7: SWC - North Dakota State Water Commission
 - 8: sq ft - Square Feet

Table 2
Renville County Brine Ponds

Brine Pond ID	Latitude ¹	Longitude ¹	PLSS Description ²	Most Visible Imagery ³	Date Identified	Estimated Area of Impacts (sq ft)	Current Land Usage	Site Access
R1-1	48.964078°	-101.908493°	NWNW S12 T163N R87W	NHAP 1984	3/5/2018	37,500	Agriculture	
R3-1	48.967205°	-101.685369°	SESW S3 T163N R85W	GE 2009	1/12/2018	225	Agriculture	
R3-2	48.974415°	-101.686069°	SESW S3 T163N R85W	SWC 1961	1/12/2018	No visual impacts	Agriculture	
R3-3	48.971184°	-101.669907°	NWSW S2 T163N R85W	SWC 1961	1/12/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
R3-4	48.981339°	-101.684042°	SESW S34 T164N R85W	SWC 1961	1/12/2018	No visual impacts	Private	
R3-5	48.981293°	-101.674091°	SESE S34 T164N R85W	SWC 1961	1/12/2018	No visual impacts	Oil & Gas	
R3-6	48.977902°	-101.664090°	NENW S2 T163N R85W	SWC 1961	1/12/2018	No visual impacts	Oil & Gas	
R3-7	48.977830°	-101.654025°	NENE S2 T163N R85W	SWC 1961	1/12/2018	22,500	Agriculture	
R3-8	48.994566°	-101.645066°	NWNW S36 T164N R85W	GE 1995	1/12/2018	1,000	Agriculture	
R3-9	48.996668°	-101.630800°	SESE S25 T164N R85W	GE 2013	1/12/2018	15,000	Oil & Gas	
R3-10	48.983823°	-101.652687°	SESE S35 T164N R85W	SWC 1961, GE 2007	1/12/2018	2,500	Agriculture	
R3-11	48.989873°	-101.664786°	SESW S35 T164N R85W	SWC 1961, GE 2013	1/12/2018	2,000	Oil & Gas	
R3-12	48.896079°	-101.673160°	SESE S34 T163N R85W	NHAP 1984	3/5/2018	15,000	Natural Grassland	
R4-1	48.997327°	-101.569315°	SWSE S28 T164N R84W	SWC 1961	1/12/2018	11,250	Natural Grassland	
R4-2	48.993508°	-101.564249°	NENE S33 T164N R84W	SWC 1961	1/12/2018	20,000	Natural Grassland	
R4-3	48.994419°	-101.626619°	NWNW S31 T164N R84W	NHAP 1984	3/5/2018	400	Agriculture	
R6-1	48.870120°	-101.805373°	NESE S10 T162N R86W	SWC 1979	1/15/2018	200	Natural Grassland	
R6-2	48.880798°	-101.799949°	SWSW S2 T162N R86W	GE 1995	1/15/2018	No site access	Agriculture	Site Access Limitations
R7-1	48.837019°	-101.750496°	SESW S19 T162N R85W	SWC 1979, GE 2003	1/16/2018	10,000	Agriculture	
R7-2	48.828013°	-101.750650°	NESW S30 T162N R85W	SWC 1979	1/16/2018	40,000	Agriculture	
R7-3	48.820206°	-100.990449°	NENW S32 T162N R85W	GE 1995	1/16/2018	2,000	Natural Grassland	
R7-4	48.812102°	-101.717165°	NESE S32 T162N R85W	SWC 1979	1/16/2018	600	Oil & Gas	
R7-5	48.808559°	-101.724776°	SWSE S32 T162N R85W	SWC 1979, GE 2009	1/16/2018	No visual impacts	Agriculture	
R8-1	48.848278°	-101.526739°	NWNE S23 T162N R84W	GE 1995	1/16/2018	40,000	Natural Grassland	
R8-2	48.812271°	-101.499256°	NESE S36 T162N R84W	GE 2007	1/16/2018	No visual impacts from a distance	Natural Grassland	Site Access Limitations
R10-1	48.787063°	-101.832836°	SWNE S9 T161N R86W	GE1995, 2010	1/15/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
R10-2	48.783600°	-101.833589°	NWSE S9 T161N R86W	GE1995, 2015	1/15/2018	No visual impacts	Agriculture	
R10-3	48.782567°	-101.843433°	NWSW S9 T161N R86W	NHAP 1984	3/6/2018	200	Natural Grassland	
R10-4	48.780490°	-101.849120°	SESE S8 T161N R86W	NHAP 1984	3/6/2018	No visual impacts	Agriculture	
R11-1	48.761757°	-101.663201°	NENW S23 T161N R85W	NHAP 1984	1/16/2018	1,200	Agriculture	
R14-1	48.656564°	-101.627871°	SENE S27 T160N R85W	GE 1995	1/12/2018	No visual impacts	Agriculture	
R14-2	48.650320°	-101.625874°	SESE S27 T160N R85W	GE 1995	1/12/2018	No visual impacts	Natural Grassland	
R14-3	48.707297°	-101.687688°	SWSW S5 T160N R85W	NHAP 1984	3/6/2018	No visual impacts	Agriculture	
R15-1	48.660164°	-101.569648°	NWNE S30 T160N R84W	NHAP 1984	1/17/2018	4,000	Agriculture	
R15-2	48.663415°	-101.563883°	SESE S19 T160N R84W	NHAP 1984	1/17/2018	200	Agriculture	
R15-3	48.652935°	-101.507883°	NESW S27 T160N R84W	NHAP 1984	3/6/2018	4,900	Agriculture	
R17-1	48.574788°	-101.640125°	NENW S27 T159N R85W	SWC 1961	3/6/2018	10,000	Agriculture	
R17-2	48.574939°	-101.648721°	NENE S28 T159N R85W	SWC 1961	3/6/2018	5,000	Natural Grassland	
R17-3	48.573280°	-101.650414°	NENE S28 T159N R85W	SWC 1961	3/6/2018	1,200	Agriculture	
R17-4	48.575861°	-101.635747°	SWSE S22 T159N R85W	GE 1995	3/6/2018	400	Agriculture	
R17-5	48.546755°	-101.611353°	SWSE S35 T159N R85W	GE 1995	3/6/2018	No visual impacts	Pasture	
R17-6	48.574954°	-101.662437°	NENW S28 T159N R85W	GE 1995	3/6/2018	6,000	Agriculture	
R18-1	48.619626°	-101.542414°	SWSE S5 T159N R84W	GE 1995	1/17/2018	45,000	Agriculture	
R18-2	48.619806°	-101.546251°	SESE S5 T159N R84W	GE 1995	1/17/2018	No visual impacts from a distance	Agriculture	Site Access Limitations
R18-3	48.584046°	-101.515013°	SWNW S22 T159N R84W	GE 1995	1/17/2018	No site access	Agriculture	Site Access Limitations
R19-1	48.478473°	-101.785925°	NWESW S28 T158N R86W	GE 2010	1/9/2018	No site access	Private	Site Access Limitations
R20-1	48.542877°	-101.609791°	NWNE S2 T158N R85W	GE 1991	3/6/2018	No visual impacts	Pasture	
R20-2	48.539461°	-101.616118°	SESW S2 T158N R85W	GE 1991	3/6/2018	400	Natural Grassland	
R20-3	48.536750°	-101.609766°	NWSE S2 T158N R85W	GE 1991	3/6/2018	8,100	Natural Grassland	
R20-4	48.531010°	-101.627552°	NENE S10 T158N R85W	GE 1991	3/6/2018	10,000	Agriculture	
R23-1	48.544175°	-101.204404°	NENW S1 T158N R82W	NHAP 1984	3/6/2018	1,000	Agriculture	
R23-2	48.533224°	-101.197740°	SWSE S1 T158N R82W	NHAP 1984	3/6/2018	No visual impacts	Private	
R23-3	48.529609°	-101.195094°	NENE S12 T158N R82W	NHAP 1984	3/6/2018	10,000	Natural Grassland	

Table 2
Renville County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude</i> ¹	<i>Longitude</i> ¹	<i>PLSS Description</i> ²	<i>Most Visible Imagery</i> ³	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
R23-4	48.529283°	-101.226363°	NENW S11 T158N R82W	NHAP 1984	3/6/2018	No visual impacts	Reclaimed	
R23-5	48.526118°	-101.219936°	SWNE S11 T158N R82W	NHAP 1984	3/6/2018	2,500	Agriculture	
R23-6	48.521201°	-101.233100°	NWSW S11 T158N R82W	NHAP 1984	3/6/2018	1,500	Agriculture	
R23-7	48.518074°	-101.230741°	SWSW S11 T158N R82W	NHAP 1984	3/6/2018	400	Agriculture	
R23-8	48.510920°	-101.232832°	SWNW S14 T158N R82	NHAP 1984	3/6/2018	30,000	Agriculture	
R23-9	48.500328°	-101.236738°	NENE S22 T158N R82W	NHAP 1984	3/6/2018	5,000	Oil & Gas	
R24-1	48.544808°	-101.183395°	NENW S6 T158N R81W	SWC 1961	3/6/2018	1,300	Natural Grassland	
R24-2	48.539852°	-101.188780°	SWNW S6 T158N R81W	SWC 1961	3/6/2018	No visual impacts	Private	
R24-3	48.533350°	-101.188099°	SWSW S6 T158N R81W	SWC 1961	3/6/2018	900	Natural Grassland	
R24-4	48.535696°	-101.183493°	NESW S6 T158N R81W	SWC 1961	3/6/2018	No visual impacts	Natural Grassland	
R24-5	48.522396°	-101.182705°	NESW S7 T158N R81W	SWC 1961	3/6/2018	1,500	Oil & Gas	
R24-6	48.517808°	-101.178616°	SWSE S7 T158N R81W	SWC 1961	3/6/2018	15,000	Oil & Gas	
R24-7	48.517515°	-101.167904°	SWSW S8 T158N R81W	SWC 1961	3/6/2018	33,750	Private	
R24-8	48.515722°	-101.181875°	NENW S18 T158N R81W	SWC 1961	3/6/2018	60,000	Agriculture	
R24-9	48.511321°	-101.167872°	SWNW S17 T158N R81W	SWC 1961	3/6/2018	9,000	Private	
R24-10	48.507878°	-101.170486°	NESE S18 T158N R81W	SWC 1961	3/6/2018	12,500	Agriculture	
R24-11	48.510505°	-101.189010°	SWNW S18 T158N R81W	SWC 1961	3/6/2018	7,500	Agriculture	
R24-12	48.503381°	-101.167602°	SWSW S17 T158N R81W	SWC 1961	3/6/2018	1,575	Agriculture	Site Access Limitations
Total						530,000		

- Notes:
- 1: Datum - NAD 1983 State Plane Coordinate System
 - 2: Shown as Quarter Quarter, Section, Township, Range
 - 3: Publicly available imagery in which the identified brine pond is most apparent
 - 4: GE - Google Earth
 - 5: NHAP - National High Altitude Photography
 - 6: PLSS - Public Land Survey System
 - 7: SWC - North Dakota State Water Commission
 - 8: sq ft - Square Feet

Table 3
Ward County Brine Ponds

<i>Brine Pond ID</i>	<i>Latitude¹</i>	<i>Longitude¹</i>	<i>PLSS Description²</i>	<i>Most Visible Imagery³</i>	<i>Date Identified</i>	<i>Estimated Area of Impacts (sq ft)</i>	<i>Current Land Usage</i>	<i>Site Access</i>
Ward-1	48.284676°	-101.707267°	SESE S34 T156N R86W	NHAP 1984	2/26/2018	25,000	Oil & Gas	
Ward-2	48.291965°	-101.707192°	SENE S34 T156N R86W	GE 1995	2/26/2018	5,000	Agriculture	
Total						30,000		

Notes:

- 1: Datum - NAD 1983 State Plane Coordinate System
- 2: Shown as Quarter Quarter, Section, Township, Range
- 3: Publicly available imagery in which the identified brine pond is most apparent
- 4: GE - Google Earth
- 5: NHAP - National High Altitude Photography
- 6: PLSS - Public Land Survey System
- 7: SWC - North Dakota State Water Commission
- 8: sq ft - Square Feet



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