Carlson McCain

ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

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PUBLIC SERVICE COMMISSION

December 27, 2012

Christopher Marhol
Public Utility Analyst
ND Public Service Commission
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0480

Dear Mr. Marohl:

Carlson McCain has completed the construction inspection of Hiland Operating, LLC, 5.1-mile-long, 8-inch Natural Gas Main and Lateral Pipeline Project (Project); PSC Case #PU-10-155. It appears that the Project has been constructed in accordance with the ND Public Service Commission (PSC) Findings of Fact, Conclusions of Law, and Order for the Project. However, Carlson McCain has identified some documentation that appears to be missing from the Project records (as indicated in the attached report).

Please contact me at 701-595-7001 or Ryan Krapp at 701-595-7003 if you have any questions or would like additional information.

Sincerely,

Todd Hartleben
Senior Engineer

Attachment

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Construction Inspection Report

Carlson McCain, Inc.

Todd Hartleben

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CONSTRUCTION INSPECTION REPORT

Hiland Operating, LLC
5.1-mile-long, 8-inch Natural Gas Main and
Lateral Pipeline Project
McKenzie County, North Dakota

Project #4288

Prepared for:

North Dakota Public Service Commission
Mr. Chris Marohl
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505-0408

December 27, 2012

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EXECUTIVE SUMMARY

The North Dakota Public Service Commission (PSC) retained Carlson McCain, Inc. (Carlson McCain) to complete a construction inspection of the Hiland Operating, LLC 5.1-mile-long, 8-inch Natural Gas Main and Lateral Pipeline Project (Project), PSC Case #PU-10-155. The purpose of the construction inspection was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Findings of Fact, Conclusions of Law, and Order for the Project. Prior to the construction inspection, Carlson McCain reviewed Project documents to identify those that required site verification.

The Project right-of-way (ROW) was visually inspected on December 5, 2012 by Carlson McCain, accompanied by a Hiland Operating representative. Currently there is another pipeline project (PSC Case #PU-10-554) being constructed within the same ROW; therefore, a majority of the pipeline ROW surface has been disturbed since reclamation occurred for this project.

Overall, the Project ROW was in satisfactory condition. It appeared to have been constructed as planned, with efforts taken to minimize impacts; however, there are several documentation items that may need to be submitted for the Project to be considered complete and in full compliance. Carlson McCain identified the following items needed for submission, as either they were missing or they were not able to be verified on-site:

- Documentation of landowner compensation for crop loss, if applicable;
- A tree and shrub inventory and mitigation plan;
- Documentation of pressure testing, a construction completion date, and a date the pipeline was placed into service;
- As-built documentation indicating the depth of burial, installation of cathodic protection, pipeline spatial location, etc.; and
- Maintenance and monitoring records since final ROW cleanup.

The PSC will need to decide whether these recommendations are necessary to fulfill Project obligations.

1.0 BACKGROUND

1.1 Introduction

Hiland Operating, LLC (Hiland Operating) completed the construction of the Project in June 2011. The Project consists of eight-inch steel pipe, installed to transport pipeline quality natural gas from the Hiland Operating Natural Gas Processing Plant (Highland Operating Plant) located four miles north and eight miles east of Cartwright, North Dakota, to Northern Border Pipeline Company's (Northern Border) transmission pipeline at the Hiland Operating-Northern Border Tap Site, approximately five miles north of Cartwright (Appendix A). An approximate 1,500-foot-long lateral pipeline extends off the Project main pipeline and interconnects to the Williston Basin Interstate Pipeline Company (WBI) transmission pipeline at a point approximately one-half mile from the Project main pipeline's point of termination at the Northern Border transmission pipeline. The Project is under the jurisdiction of the PSC, which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-10-555 on December 30, 2010, granting Certificate of Corridor Compatibility No. 116 and Route Permit No. 126 for the Project.

1.2 Purpose and Scope of Inspection

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the PSC to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Construction inspections ensure the project is constructed in compliance with the siting laws and rules and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order).

The PSC retained Carson McCain to complete a construction inspection of the Project. The inspection process included a review of the Siting Plan, Order, and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings. This report includes, but is not limited to, documentation of site visit observations, documentation of compliance deficiencies, and a summary of issues that should be addressed for the Project to be considered complete and in full compliance.

2.0 DOCUMENT REVIEW

2.1 Methods

Carlson McCain reviewed North Dakota siting laws and rules, the Applications for the Certificate of Corridor Compatibility and Route Permit (Application), and the Order for the Project to identify what Project-specific documentation was required for compliance. Carlson McCain then reviewed Project documents in the PSC Online Case Search (PSC, 2012) to identify those siting laws and rules and Application and Order assertions that already had written verification, those that still required documentation, and those that required physical site verification.

2.2 Findings

The following table includes a list of components of the Project that were asserted in the Application and Order, which could be documented to verify compliance with siting laws and rules, and the Order for the Project (Table 1) via either written documentation or physical site verification. If Carlson McCain found written documentation in the online PSC files for a particular Project component, this was marked in the second column of the table. If physical site verification was possible, this was marked in the third column and that particular component was verified during the site inspection (Section 3.0).

Several components of the Project were asserted in the Application but have no written documentation showing that they were indeed implemented or constructed as planned, and physical site verification is not possible. This includes items listed in Table 1 that have shaded boxes in the second column, indicating written verification is possible but is lacking from current files. The PSC should request written verification from Hiland Operating for these items, to show the Project is in full compliance.

Table 1. PU-10-555 Document Review Summary

Description of Project Component/Assertion	Written Verification in PSC Files*	Site Verification
Cultural resources avoided	X	NA
Cultural resource report submitted to SHPO with concurrence	X	NA
No effect on historic properties	X	NA
No national or state historic sites, landmarks, wilderness, parks	X	NA
No national or state preserves, refuges, management areas	X	NA
No wetlands identified from NWI (National Wetlands Inventory)	X	X
Woodlands Avoided	X	X
Not located within 500ft of residences, schools, businesses	X	X
Minimize effects to irrigated lands	X	X
Compensation for crop losses, if applicable	*	
Consultation with federal, state, and local agencies	X	NA
No endangered, threatened, or sensitive plants identified	X	X
Design, construction, and operation according to DOT regulations 49 CFR Part 195 – Transportation of Hazardous Liquids by Pipeline	X	NA
Disturbance ≤ 125 foot wide Right-of-Way	X	X
Cathodic protection system installed	*	
Proposed route amendments submitted and approved	NA	NA
Compliance with Tree and Shrub Mitigation Specifications	*	
Permits/Approvals from other agencies	X	NA
Pre-Construction conference record	X	NA
Intent to start and commencement of construction notices	X	NA
Weekly construction reports	X	NA
Construction according to Application and safety requirements	X	X
Pipeline buried to 48in (72in undeveloped section lines)	*	NA
Pipeline bored under graded roads, unless permitted to open cut	*	X
No cultural, archeological, historical resources found during construction	X	NA
Reports of presence of threatened, endangered species or bald or golden eagles, if applicable	X	X
Reclamation and clean-up continuous with construction	X	X
Restoration of pre-existing roads, lanes, temporary roads	X	X
Reclamation/reseeding according to NRCS or landowner	*	X
Repair/replace all fences and gates, if applicable	X	X
As-built drawings and GIS within 3 months after construction	*	NA
Post-construction monitoring reports	*	NA
Reclamation and maintenance throughout life of facility	*	

*Not found in record, confirmation needed

NA - not applicable

3.0 SITE INSPECTION

3.1 Methods

Chad Tucker of Carlson McCain visited the Project area on December 5, 2012. Jason Pottridge, Chief Construction Inspector, accompanied Carlson McCain staff during the site visit and assisted with navigation, pointed out problem areas, and answered questions. At the time of the visit, the Hiland Operating 6-Inch Natural Gas Liquids pipeline project (PU-12-554) was actively being constructed within the same ROW. For safety purposes, the ROW was not allowed to be traversed by vehicle or foot. The site was inspected visually along portions of the pipeline route by accessing as many points as feasible where the pipeline crossed roads. The inspection began at the east end of the project at the newly constructed Hiland Operating Plant in Section 6, T151, R102W, and proceeded to the west to the Northern Border Tap Site. The lateral pipeline to the WBI Tap Site in Section 6 of T151, R103W, was also inspected. Digital photographs taken during the inspection are found in Appendix B.

3.2 Observations & Findings

3.2.1 Engineering/Construction/Design and Soils

- *500ft Setback from Occupied Residences, Schools, Businesses.* Carlson McCain verified that there are no occupied residences within the 500ft setback from Project infrastructure as stated in the Application.

- *Pipeline Burial Depth of 48" (72" Under Undeveloped Section Lines).* The Route Application stated the pipeline would be installed at a minimum depth of 48" below ground surface and 72" under undeveloped section lines. Construction was completed in 2011 and the actual depth of the pipeline could not be verified.

- *Roads Restored to Previous Use.* There were no temporary roads constructed for the Project. Carlson McCain noted that two-track roads, county roads, and highways crossed by the Project appeared to be in good condition and properly maintained. It appeared that efforts had been made to restore the roads to their previous use.

- *Irrigated land avoidance.* One parcel of irrigated land is crossed by the route. While irrigated land is not considered an exclusion area for underground transmission facilities such as this Project, Hiland Operating has taken steps to avoid impacts to the irrigation system by placing the route along the edge of the parcel.

- *Fences/Gates Repaired/Replaced.* Carlson McCain did not observe any landowner fences or gates that would have been impacted by construction.

- *Ongoing Reclamation and Maintenance.* The Route Application for the Project described detailed ongoing maintenance for the pipeline and right-of-way. The Project area is relatively level with few areas of potential erosion and no areas of concern. Currently

there is construction taking place within the ROW. If eroded areas are found, they will be repaired during reclamation of the current pipeline project.. Hiland Operating stated they have a routine maintenance system in place (Jason Pottridge, pers. comm. 2012).

- *Topsoil Removed, Segregated, Replaced to 12" Depth or Depth of Cultivation, According to Landowners' and PSC's Requirements.* The Environmental Mitigation Plan in the Application described topsoil segregation methods and depth of stripping to a minimum of 12" in cropland, or to the maximum depth of topsoil, if less than 12". Carlson McCain observed that topsoil appeared to have been removed and replaced, although pits were not dug to confirm soil replacement depth due to the soil being frozen at the time of inspection. Cropland that was disturbed during construction appeared the same as adjacent, undisturbed cropland, and in native and tame grass (alfalfa) fields, seeding and reclamation appeared to be successful in areas inspected.

3.2.2 Natural Resources (Wildlife, Wetlands, Vegetation)

The following requirements pertaining to natural resources, including wildlife, wetlands and vegetation, were inspected at the Project site.

- *No Wetlands Identified.* The Project Application referenced a field survey in 2010 conducted to identify wetlands and stream crossings. No wetlands or stream crossings were identified during this survey. No wetlands or streams were observed by Carlson McCain along the route during the site visit.

- *Woodlands Avoided.* Carlson McCain confirmed that the chosen route effectively avoided wooded drainages to the extent possible.

- *Compliance with "Tree and Shrub Mitigation Specifications".* A tree and shrub inventory was to be conducted and submitted to the PSC. No inventory or documentation of tree/shrub replacement was found in existing Project documents. Carlson McCain suggests that the PSC require Hiland Operating to produce documents to demonstrate compliance with this requirement.

- *No Endangered, Threatened, or Sensitive Plants Identified.* According to referenced studies and consultation with the ND Parks & Recreation Department, the ND Game & Fish Department, the ND Department of Health and the US Fish & Wildlife Service, impacts of the Project will be minor. No additional wildlife sightings or concerns were noted during inspection.

3.2.3 Cultural Resources

- *Cultural Resources Avoided.* One cultural resource site was identified within the pipeline corridor during cultural resource inventories for the Project. However, it was not eligible for listing and did not require avoidance. Concurrence of this evaluation was obtained from the ND State Historic Preservation Office.

4.0 ISSUES TO RESOLVE AND RECOMMENDATIONS

4.1 Written Verification of Project Implementation

The online case search of PSC documentation did not reveal verification of the following items (see Table 1):

4.1.1 Compensation for Crop Losses

Records of compensation for crop losses (if any) to producer or landowner are not found in documentation online. It is recommended that Hiland Operating provide written confirmation of these.

4.1.2 Tree and Shrub Inventory

A tree and shrub inventory was to be conducted and submitted to the PSC. If completed, no inventory or tree/shrub replacement plans were found in documents submitted to the PSC to date. Carlson McCain suggests that the PSC require Hiland Operating to supply the tree and shrub inventory to demonstrate if trees were removed and if so, plans and records for replacement. PSC provisions require that tree and shrub replacements be inspected once a year for three years, on or about the anniversary of the plantings, and on or shortly before October 1 of each year. A report shall be submitted to the Commission documenting the condition of replacement planting and any woodland work completed. If after three years the survival rate is less than 75%, the Commission may order additional planting(s).

4.1.3 Pipeline Depth, Cathodic Protection and Operational Date

Confirmation of the pipeline burial depth and cathodic protection is not available in existing documentation. Pipeline pressure testing results and the date of pipeline was placed into service are also absent. It is recommended that Hiland Operating provide written confirmation of these.

4.1.4 As-Built Drawings

Hiland Operating has not submitted as-built drawings and GIS Files to the PSC as required within 90 days after completion of construction of the Project.

4.1.5 Monitoring Reports

Proof of appropriate reclamation of the ROW, including reseeding of grassland areas and ongoing maintenance plans and records; have not been provided to date. It is recommended that Hiland Operating provide confirmation of these activities.

4.2 On-Site Investigation

The on-site investigation did not reveal any physical issues or concerns. If any ROW cleanup was necessary or erosional issues had occurred, the current construction activity of the PU-10-554 Project within the ROW has addressed these. The ROW will be maintained and monitored under this latest project as it progresses.

5.0 SUMMARY

The Project appears to have been constructed according to available plans and permits. However, Carlson McCain has identified documentation that may need to be submitted before the Project is considered complete and in full compliance with the PSC Order. This includes: proof of landowner compensation for crop loss, tree and shrub inventory and mitigation plan, confirm buried pipeline depth, cathodic protection installed and functioning, pipeline operational date, submit as-built drawings and GIS files, and supply any maintenance and monitoring records since final ROW cleanup. These items should be reviewed by the PSC to determine what Hiland Operating should submit.

6.0 REFERENCES

North Dakota Public Service Commission (PSC). 2012. Online Case Search. Available from http://www.psc.nd.gov/database/company_case_list.php. Accessed November and December, 2012.

Pottridge, Jason. 2012. Chief Inspector, Renegade Gas Services - Hiland Operating, LLC. Personal Communication: discussion during site visit.

Figure 1. Project Route Map

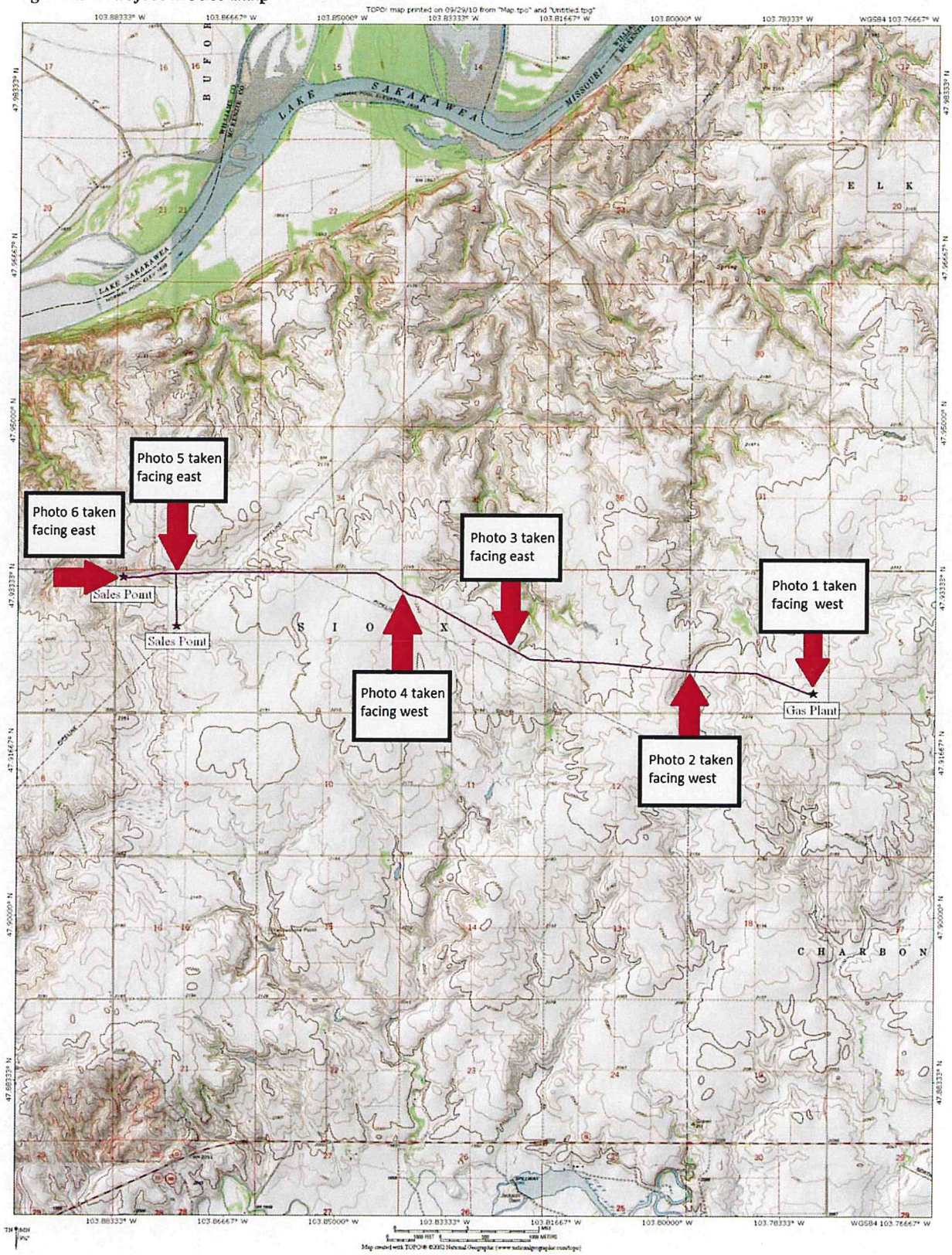

Photo 1. Taken facing west from the Hiland Operating Gas Plant. The Project pipeline crosses a wheat stubble field. The Hiland Operating 6-Inch Natural Gas Liquids pipeline (PU-12-554) project is in construction within the same ROW approximately 25' north of the existing pipeline.

Photo 2. Taken facing west from the section line between Sections 6 and 1. The ROW has been reseeded (decadent alfalfa and smooth brome) and can be seen just south of the topsoil windrow.

Photo 3. Taken on the eastern side of Section 2 facing east. The ROW crosses a plowed agriculture field. The Project pipeline is located beneath the topsoil windrow from the PU-12-554 project.

Photo 4. Taken in the northeast quarter of Section 3 facing west. The ROW crosses an alfalfa field. Successful new vegetative growth (approximately 10-15ft) can be seen to the left of the topsoil windrow in photo.

Photo 5. Taken facing east at the confluence of the main pipeline and the lateral pipeline in the northwest quarter of Section 4.

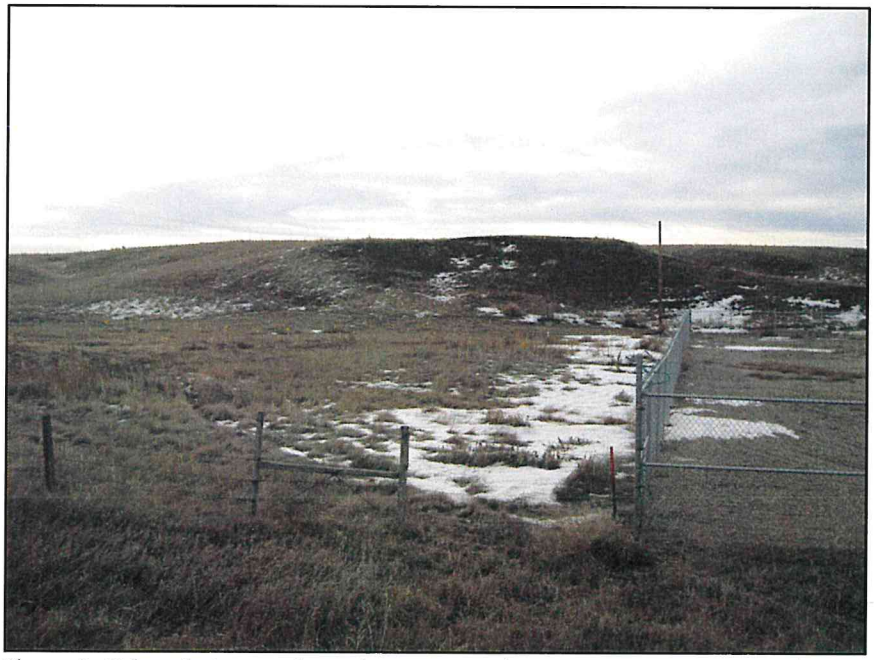

Photo 6. Taken facing south at the main pipeline termination point in the northwest quarter of Section 4. The reseeding in the native grassland appears to have been accomplished adequately.