United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
DESCRM
MC-208

APR 05 2011

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: Acting Regional Director, Great Plains Region

SUBJECT: Environmental Assessment and Finding of No Significant Impact

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, for a proposal to drill 16 oil and gas wells from five well pads, by Kodiak on the Fort Berthold Reservation, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the EA, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations require that there be a public notice of availability of the FONSI (1506.6(b)). Please post the attached notice of availability at the Agency and Tribal buildings for 30 days.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Tex Hall, Chairman, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, THPO (with attachment)
Derek Enderud, BLM, Dickinson, ND (with attachment)
John Shelman, US Army Corps of Engineers
Jeffrey Hunt, Virtual One Stop Shop

Finding of No Significant Impact

Kodiak Oil & Gas (USA), Inc.

Environmental Assessment for Drilling of Oil & Gas Wells
Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, Skunk Creek #16-23-14-1H, Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, Two Shields Butte #14-19-18-2H3, Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, Two Shields Butte #13-22-33-16H, Skunk Creek # 13-18-7-4H, Skunk Creek #13-18-7-4H3, Skunk Creek #13-18-7-3H, Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, Skunk Creek #16-18-7-2H.
Oil & Gas Wells

Fort Berthold Indian Reservation
Dunn County, North Dakota

The U.S. Bureau of Indian Affairs (BIA) has received a proposal to drill up to 16 wells from five well pad locations as follows:

- Skunk Creek #16-23 well pad located in the SE¼ of T149N, R93W, Section 23 and containing the following wells: Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H.
- Two Shields Butte #14-19 well pad located in the SW¼ of T149N, R92W, Section 19 and containing the following wells: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3.
- Two Shields Butte #13-22 well pad located in the SW¼ of T149N, R92W, Section 22 and containing the following wells: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H.
- Skunk Creek #13-18 well pad located in the SW¼ of T148N, R92W, Section 18 and containing the following wells: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H.
- Skunk Creek #16-18 well pad located in the SE¼ of T148N, R92W, Section 18 and containing the following wells: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H.

Associated federal actions by BIA include determinations of effect regarding environmental resources and positive recommendations to the Bureau of Land Management regarding the Applications for Permit to Drill.

The potential of the proposed action to impact the human environment is analyzed in the following Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the EA, I have determined that the proposed project will not significantly affect the quality of the human or natural environment. No Environmental Impact Statement is required for any portion of the proposed activities.

This determination is based on the following factors:

1. Agency and public involvement solicited for the preceding NEPA document was sufficient to ascertain potential environmental concerns associated with the currently proposed project.

2. Protective and prudent measures were designed to minimize impacts to air, water, soil, vegetation, wetlands, wildlife, public safety, water resources, and cultural resources. The remaining potential for impacts was disclosed for both the proposed action and the no action alternatives.

3. Guidance from the U.S. Fish and Wildlife Service has been fully considered regarding wildlife impacts, particularly in regard to threatened or endangered species. This guidance includes the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.).

4. The proposed action is designed to avoid adverse effects to historic, archaeological, cultural and traditional properties, sites and practices. Compliance with the procedures of the National Historic Preservation Act is complete.

5. Environmental justice was fully considered.

6. Cumulative effects to the environment are either mitigated or minimal.

7. No regulatory requirements have been waived or require compensatory mitigation measures.

8. The proposed project will improve the socio-economic condition of the affected Indian community.

Tim LaPointe

Acting Regional Director

4-5-11

Date

ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

Great Plains Regional Office
Aberdeen, South Dakota

Kodiak Oil & Gas (USA), Inc.

Drilling of Oil & Gas Wells:
Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, Skunk Creek #16-23-14-1H, Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, Two Shields Butte #14-19-18-2H3, Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, Two Shields Butte #13-22-33-16H, Skunk Creek # 13-18-7-4H, Skunk Creek #13-18-7-4H3, Skunk Creek #13-18-7-3H, Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, Skunk Creek #16-18-7-2H

Fort Berthold Indian Reservation

March 2011

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources
115 4th Avenue SE
Aberdeen, South Dakota 57401
605-226-7656

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Chapter 1 Purpose and Need for Action

1.1 Introduction

This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, and the regulations of the Council on Environmental Quality (CEQ), 40 CFR parts 1500 through 1508. An EA is an informational document intended for use by both decision-makers and the public. It discloses relevant environmental information concerning the proposed action and the no action alternative.

1.2 Description of the Proposed Action

The Fort Berthold Reservation encompasses 988,000 acres, 457, 837 of which are in tribal and individual Indian ownership by the Three Affiliated Tribes (Mandan, Hidatsa, and Arikara) and its members. The reservation is located in west central North Dakota and is split into three areas by Lake Sakakawea, which traverses the center of the reservation. It occupies sections of six counties: Dunn, McKenzie, McLean, Mercer, Mountrail, and Ward.

The Fort Berthold Reservation lies atop the Bakken Formation, a geologic formation rich in oil and gas deposits that extends approximately 25,000 square miles beneath North Dakota and Montana, United States and Saskatchewan and Manitoba, Canada. Approximately two-thirds of the Bakken Formation is beneath North Dakota. The Three Forks Formation lies beneath the Bakken. The North Dakota Department of Mineral Resources estimates that there are approximately two billion barrels of recoverable oil in each of these formations[1]. The Department's director estimates that there are 30 to 40 remaining years of production, or more if technology improves.

The proposed action includes approval by the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM) for Kodiak Oil & Gas (USA), Inc. (Kodiak) to drill and complete 16 wells, on five individual well pads, on the Fort Berthold Reservation. These sites are proposed to be positioned in the following locations and as shown on ***Figure 1-1, Project Location Map:***

- Skunk Creek #16-23 well pad located in the SE¼ of T149N, R93W, Section 23 and containing the following wells: Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H.
- Two Shields Butte #14-19 well pad located in the SW¼ of T149N, R92W, Section 19 and containing the following wells: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3.
- Two Shields Butte #13-22 well pad located in the SW¼ of T149N, R92W, Section 22 and containing the following wells: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H.

[1] The Bakken contains about 169 billion barrels of oil and the Three Forks contains about 20 billion barrels; however, most of this is not expected to be developed.

- Skunk Creek #13-18 well pad located in the SW¼ of T148N, R92W, Section 18 and containing the following wells: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H.
- Skunk Creek #16-18 well pad located in the SE¼ of T148N, R92W, Section 18 and containing the following wells: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H.

Each well would have an associated drilling unit in which the minerals to be developed by that well are located. Proposed completion activities include acquisition of rights-of-way, infrastructure (including subsurface gathering lines and buried electric lines) for the proposed wells, and roadway improvements.

1.3 Need for the Proposed Action

The Tribes own their mineral resources, which are held in trust by the United States government through the BIA. The BIA's positive recommendation to the BLM for approval of the Applications for Permit to Drill (APDs) of the 16 wells would provide important benefits to the Three Affiliated Tribes, including revenue that could contribute to the Tribal budgets, satisfy Tribal obligations, and fund land purchase programs to stabilize its land base. It would also provide individual members of the Tribes with needed employment and income. Furthermore, the proposed action gives the United States an opportunity to reduce its dependence on foreign oil and gas by the development of domestic sources of oil and gas.

1.4 Purpose of the Proposed Action

The purpose of the proposed action is to allow the Three Affiliated Tribes to provide for oil and gas development on the identified lands on the Fort Berthold Reservation. Additionally, the purpose is to access commercially recoverable oil and gas resources on the lands subject to Kodiak's lease areas by drilling 16 wells at the identified locations.

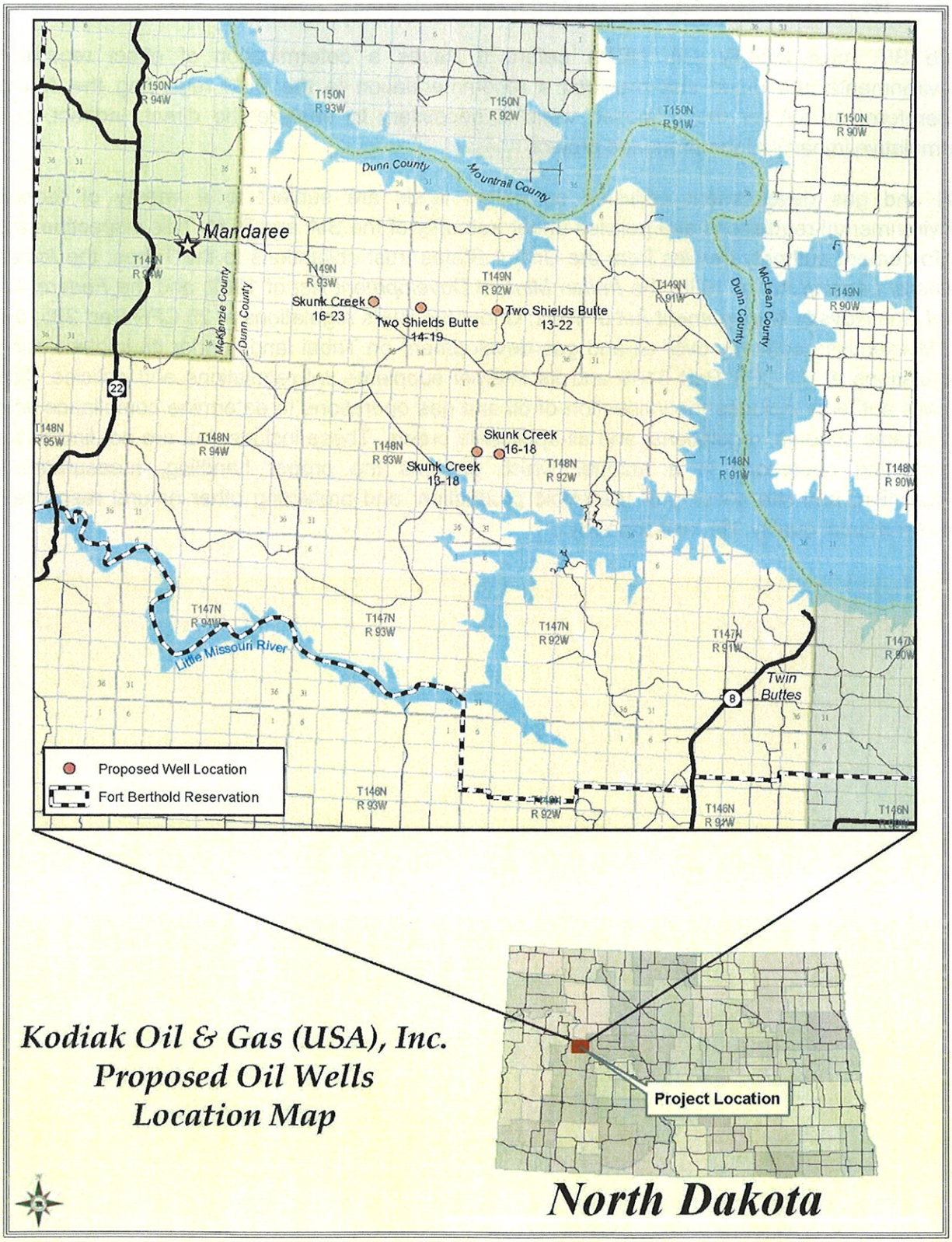

Figure 1-1, Project Location Map

1.5 Regulations that Apply to Oil and Gas Development Activities

The BIA must comply with NEPA before it issues a determination of effect regarding environmental resources and provides a recommendation to the BLM regarding the APDs. Therefore, an EA for the proposed wells is necessary to analyze the direct, indirect, and cumulative impacts of the proposed project.

Oil and gas development activities on Indian lands are subject to a variety of federal environmental regulations and policies under authority of the BIA and BLM. This inspection and enforcement authority derives from the United States trust obligations to the Tribes, the *Indian Mineral Leasing Act* of 1938, the *Indian Mineral Development Act* of 1982, and the *Federal Oil and Gas Royalty Management Act* of 1982. Under the BIA's regulations at 25 CFR Part 225, the BLM exercises authority over oil and gas development on Tribal lands under its implementing regulations at 43 CFR Part 3160 and its internal supplemental regulations and policies. The BLM's authority includes the inspection of oil and gas operations to determine compliance with applicable statutes, regulations, and all applicable orders. These include, but are not limited to, conducting operations in a manner which ensures the proper handling, measurement, disposition, and site security of leasehold production; and protecting other natural resources, environmental quality, life, and property.

Chapter 2 Alternatives

2.1 Introduction

This chapter provides information on the development and evaluation of project alternatives. The development of alternatives is directly related to the purpose and need for the project. Two alternatives are being considered for this project: a no action alternative and a proposed action alternative.

2.2 Alternative A: No Action

Under the no action alternative (Alternative A), the BIA and BLM would not authorize the drilling of 16 oil and gas wells atop five well pads. There would be no environmental impacts associated with Alternative A. However, the Three Affiliated Tribes would not receive potential royalties on production or other economic benefits from oil and gas development on the reservation. Further, the oil and gas resources targeted by the proposed action would not be recovered and made available for domestic energy use.

2.3 Alternative B: Proposed Action

The proposed action (Alternative B) includes a positive recommendation by the BIA and authorization by BLM to construct and drill 16 oil and gas wells atop five individual pads, as well as associated rights-of-way acquisition, roadway improvements, and infrastructure for the wells. Infrastructure may include subsurface gathering pipelines and buried electrical lines, both of which would be located entirely within the access road rights-of-way.

Each well site would consist of a well pad containing three to four well heads, an access road (one access road per well pad), associated infrastructure, and a spacing unit. The well pad is where the actual surface disturbance caused by drilling activities would occur. The spacing unit is the location of the minerals that are to be developed. The location of the proposed well pads, access roads, and proposed drilling techniques were specifically selected to minimize surface disturbance.

Each well pad would require new right-of-way for access points, supporting buried electrical lines, and gathering lines associated with oil and gas production. Rights-of-way would be located to avoid sensitive surface resources and any cultural resources identified in site surveys. Access roads would be improved as necessary to eliminate overly steep grades, maintain current drainage patterns, and provide all-weather driving surfaces.

An intensive, pedestrian resource survey of each proposed well pad and access road was conducted on the following dates by Kadrmas, Lee & Jackson (KL&J) resource specialists:

- Skunk Creek #16-23 on June 29, 2010 and September 1, 2010
- Two Shields Butte #14-19 on November 10, 2010
- Two Shields Butte #13-22 on August 5, 2010
- Skunk Creek #13-18 on November 10, 2010
- Skunk Creek #16-18 on November 10, 2010

The purpose of these surveys was to gather site-specific data and photos with regard to botanical, biological, threatened and endangered species, eagles, migratory birds, and water resources. A study area of 10 acres centered on each of the well pad center points and a 200-foot wide access road corridor were evaluated for each site. Resources were evaluated using visual inspection and pedestrian transects across the sites. In addition, a survey for eagles and eagle nests within 0.5 miles of all project disturbance areas was conducted. These surveys consisted of pedestrian transects focusing specifically on potential nesting sites within 0.5 miles of project disturbance areas, including cliffs and wooded draws. Wooded draws were observed both from the upland areas overlooking the draws and from the bottomlands within the actual draws.

The BIA EA on-site assessments of the proposed well pads and access road sites were conducted concurrent to the resource surveys. The BIA Environmental Protection Specialist, representatives from the Tribal Historic Preservation Office (THPO), Kodiak, and KL&J participated in these assessments. During these assessments, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. The well pad and access road locations were finalized, and the BIA gathered information needed to develop site-specific mitigation measures and best management practices (BMPs) to be incorporated into the final APDs. Those present at the EA on-site assessments agreed that the selected locations, along with the minimization/mitigation measures Kodiak plans to implement, are positioned to minimize impacts to sensitive wildlife and botanical resources. Comments received from the United States Fish and Wildlife Service (USFWS) on previous Kodiak projects of a similar nature in the vicinity have been considered in the development of this project.

In addition, cultural resources surveys were completed in early October and November 2010 by Juniper Archaeological Services for access road re-routes.

2.3.1 Skunk Creek #16-23 Site

The Skunk Creek #16-23 well pad would be located in the SE¼SE1/4 of Section 23, Township 149 North, Range 93 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 14 and 23, Township 149 North, Range 93 West, 5th P.M. The following three wells would be drilled atop the Skunk Creek #16-23 well pad: Skunk Creek #16-23-14-2H,

Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H. ***Please refer to Figure 2-1, Skunk Creek #16-23 Site Overview.***

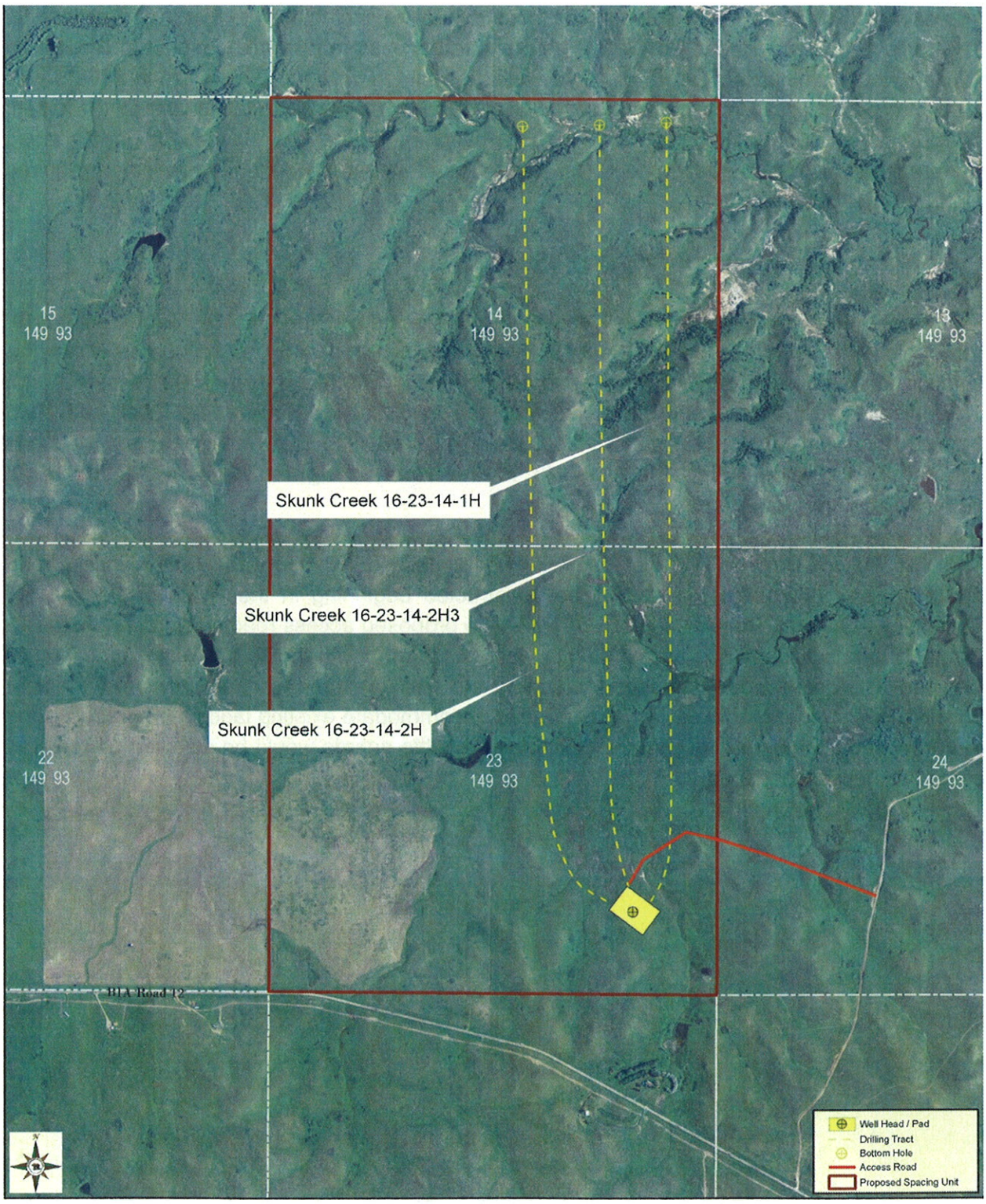

Figure 2-1, Skunk Creek #16-23 Site Overview

The Skunk Creek #16-23 well pad would be accessed from the northeast. A new access road approximately 0.63 miles long would be constructed beginning in the SW¼ of Section 24, Township 149 North, Range 93 West. The proposed access road would connect to BIA Route 12 and would provide access to all three wells associated with the Skunk Creek #16-23 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

2.3.2 Two Shields Butte #14-19 Site

The Two Shields Butte #14-19 well pad would be located in the SE¼SW¼ of Section 19, Township 149 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 18 and 19, Township 149 North, Range 92 West, 5th P.M. The following four wells would be drilled atop the Two Shields Butte #14-19 well pad: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3. ***Please refer to Figure 2-2, Two Shields Butte #14-19 Site Overview.***

The Two Shields Butte #14-19 well pad would be accessed from the west. A new access road approximately 1.52 miles long would be constructed beginning in the NW¼ of Section 25, Township 149 North, Range 93 West, 5th P.M. The proposed access road would connect to BIA Route 12 and would provide access to four wells associated with the Two Shields Butte #14-19 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

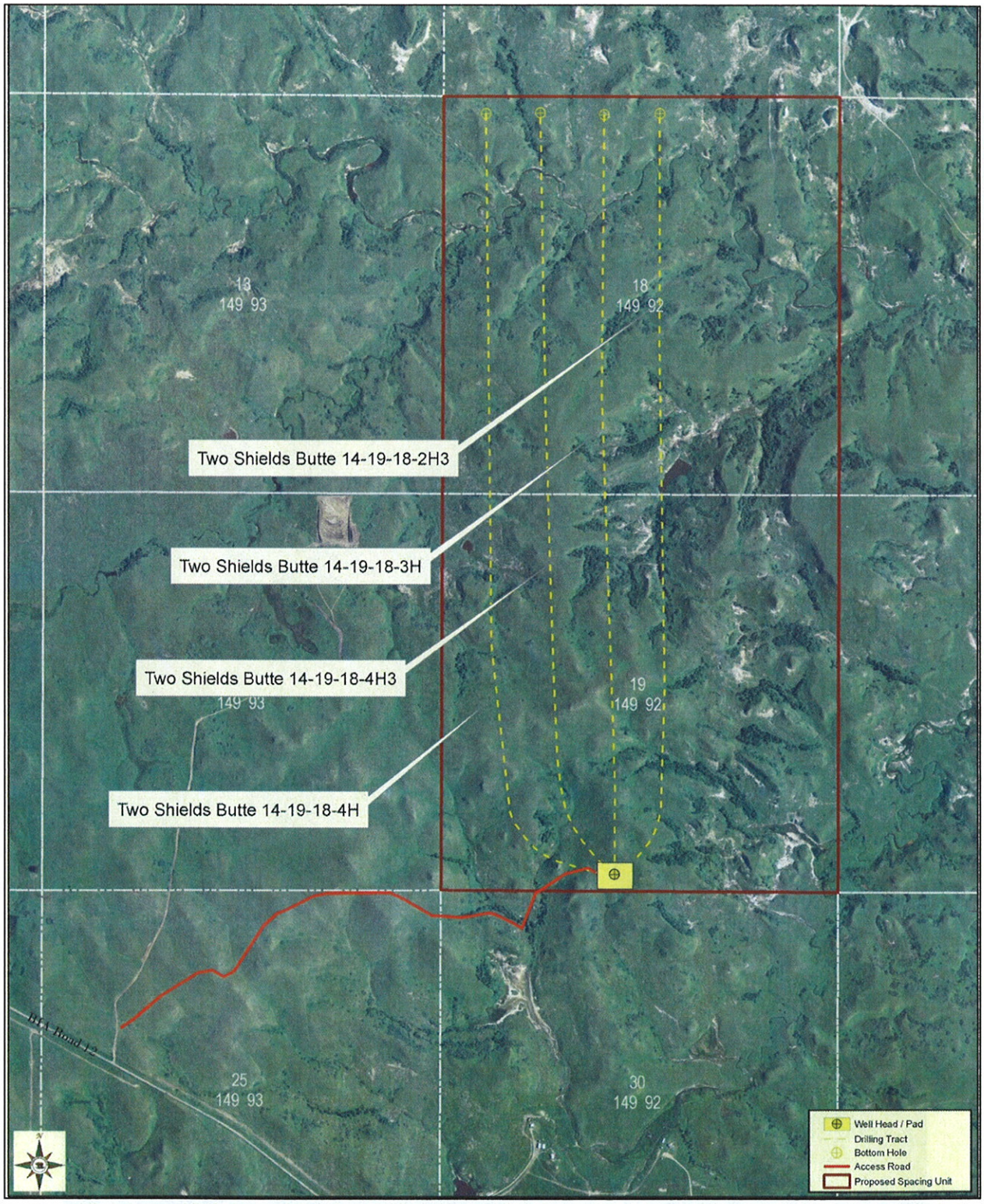

Figure 2-2, Two Shields Butte #14-19 Site Overview

2.3.3 Two Shields Butte #13-22 Site

The Two Shields Butte #13-22 well pad would be located in the SW¼SW¼ of Section 22, Township 149 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 16, 21, 28, and 33, Township 149 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Two Shields Butte #13-22 well pad: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H. ***Please refer to Figure 2-3, Two Shields Butte #13-22 Site Overview.***

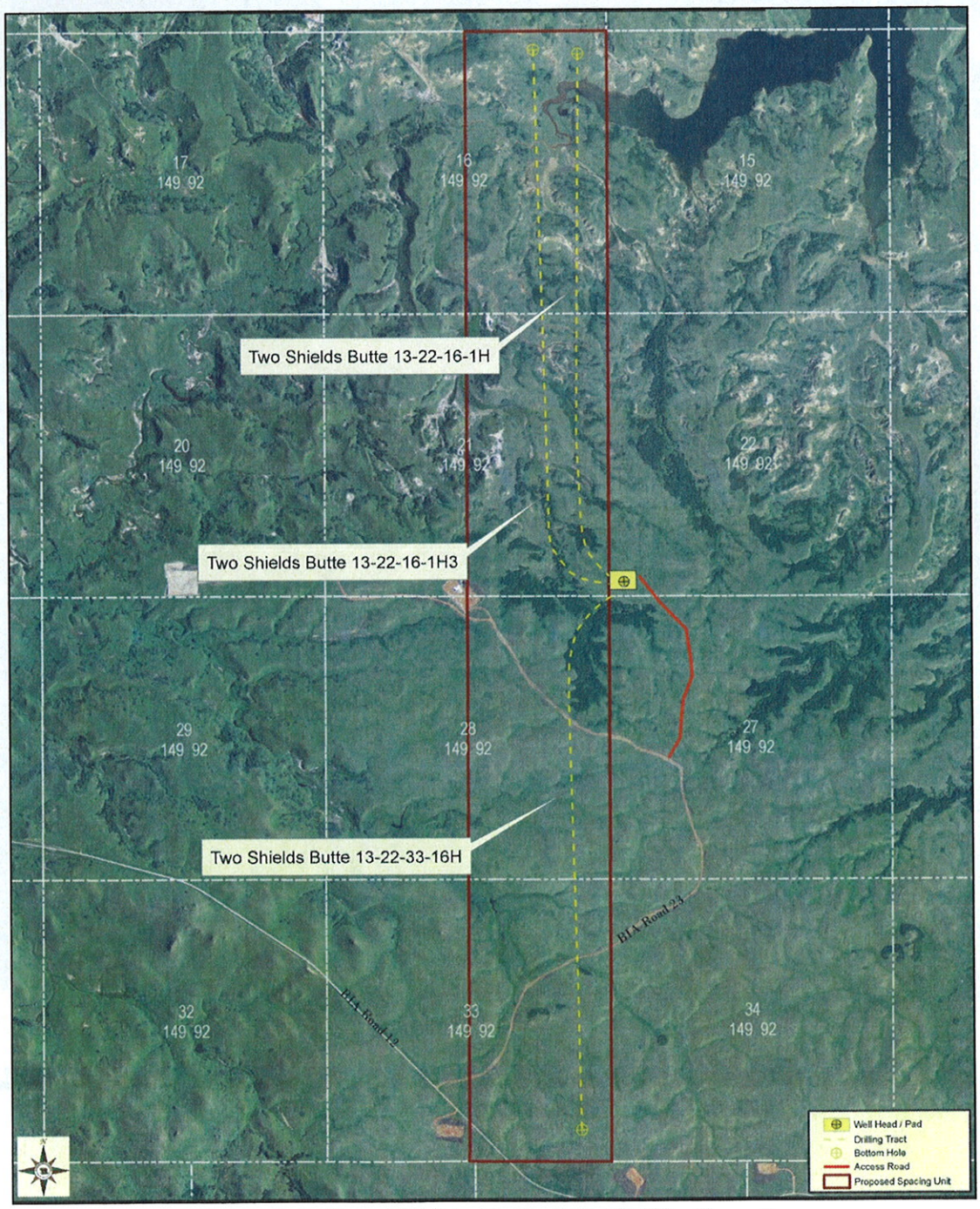

Figure 2-3, Two Shields Butte #13-22 Site Overview

The Two Shields Butte #13-22 well pad would be accessed from the southeast. A new access road approximately 0.74 miles long would be constructed beginning in the SW¼ of Section 27, Township 149 North, Range 92 West, 5th P.M. The proposed access road would connect to BIA Route 23 and would provide access to all three wells associated with the Two Shields Butte #13-22 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

2.3.4 Skunk Creek #13-18 Site

The Skunk Creek #13-18 well pad would be located in the SW¼SW¼ of Section 18, Township 148 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 7 and 18, Township 148 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Skunk Creek #13-18 well pad: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H. ***Please refer to Figure 2-4, Skunk Creek #13-18 Site Overview.***

The Skunk Creek #13-18 well pad would be accessed from the north and would share an access road with the Skunk Creek #16-18 well site. The shared portion of the access road would be approximately 3.23 miles long and constructed beginning in the SW¼ of Section 33, Township 149 North, 92 West, 5th P.M. The Skunk Creek #13-28-specific access road would be approximately 1.05 miles long and constructed beginning in the NW¼ of Section 18, Township 148 North, Range 92 Wet, 5th P.M. The proposed access road would connect to BIA Route 12 and would provide access to all three wells associated with the Skunk Creek #13-18 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to acommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

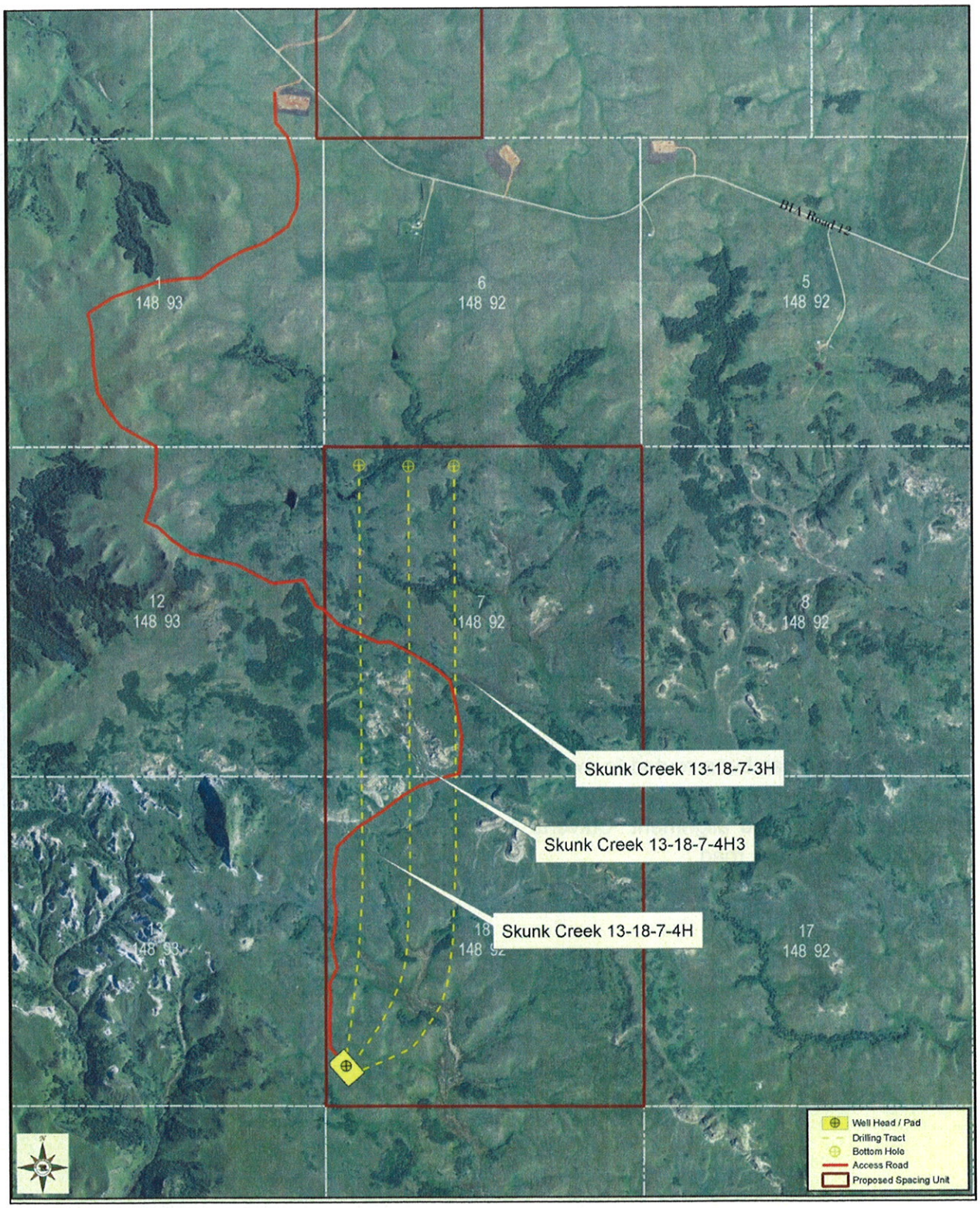

Figure 2-4, Skunk Creek #13-18 Site Overview

2.3.5 Skunk Creek #16-18 Site

The Skunk Creek #16-18 well pad located in the SE¼SE¼ of Section 18, Township 148 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 7 and 18, Township 148 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Skunk creek #16-18 well pad: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H. ***Please refer to Figure 2-5, Skunk Creek #16-18 Site Overview.***

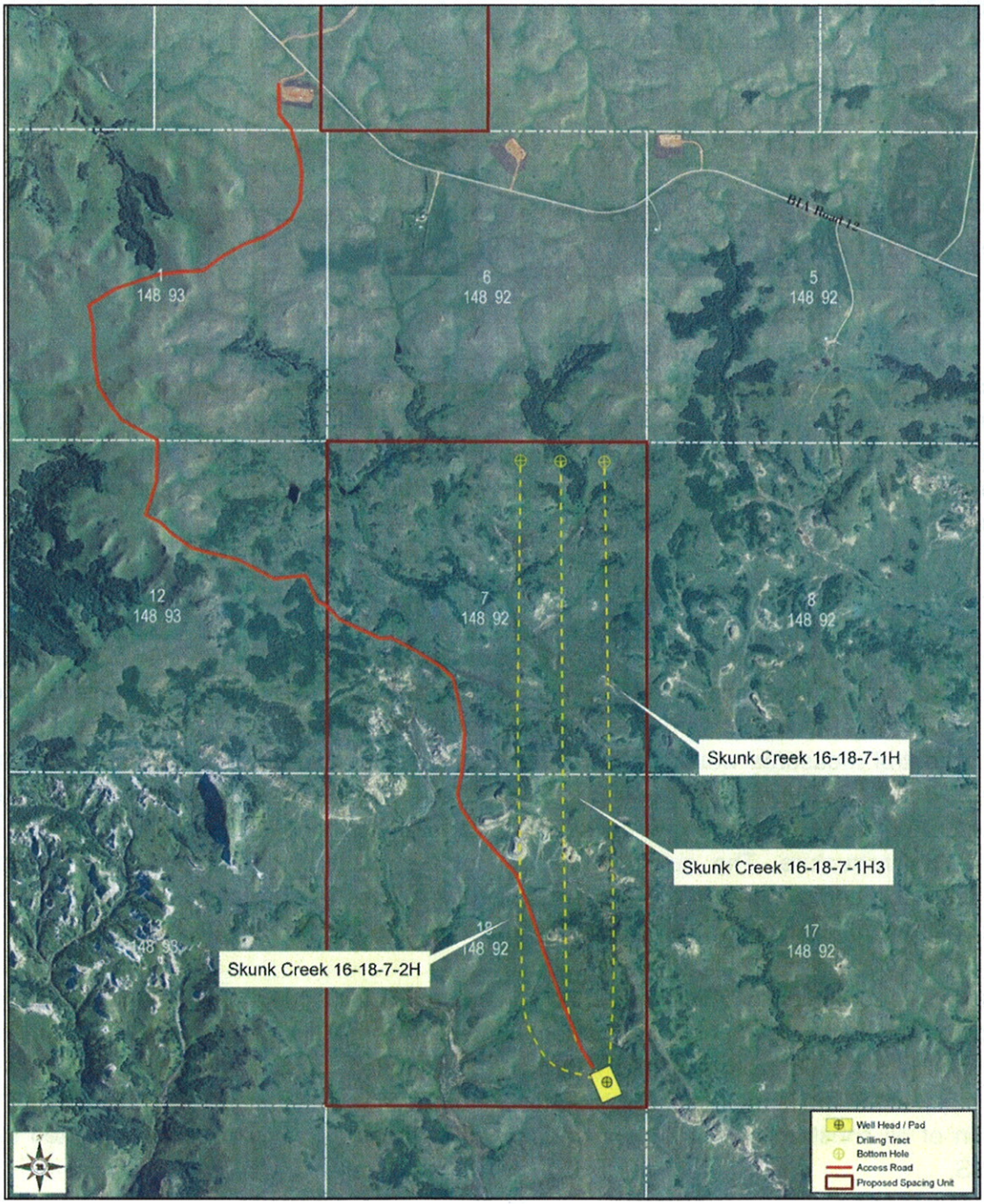

Figure 2-5, Skunk Creek #16-18 Site Overview

The Skunk Creek #16-18 well pad would be accessed from the northwest and would share an access road with the Skunk Creek #13-18 well pad. The shared access road would be approximately 3.23 miles long and constructed beginning in the SW¼ of Section 33, Township 149 North, 92 West, 5th P.M. The Skink Creek #16-18-specific access road would be approximately 1.00 mile long and would be constructed beginning in the NW¼ of Section 18, Township 148 North, Range 92 West, 5th P.M. The proposed access road would connect to BIA Route 12 and would provide access to all three wells associated with the Skunk Creek #16-18 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

2.3.6 Activities that Apply to Development of All Wells

The following includes a discussion of items that would be consistent for construction of all proposed well locations:

2.3.6.1 Field Camps

Self-contained trailers may temporarily house key personnel on-site during drilling operations. No long-term residential camps are proposed. Sewage would be collected in standard portable chemical toilets or service trailers on-site and then transported off-site to a State-approved wastewater treatment facility. Other solid waste would be collected in enclosed containers and disposed of at a State-approved facility.

2.3.6.2 Access Roads

Existing roadways would be used to the extent possible to access the proposed wells; however, the construction of new access roads would also be required. The running surface of access roads would be surfaced with crushed gravel or scoria from a previously approved source, and erosion control measures would be installed as necessary. A maximum right-of-way width of 100 feet would be disturbed, consisting of a 20 to 28-foot wide roadway with the remainder of the disturbed area due to borrow ditches and construction slopes, gathering pipelines, and electrical infrastructure. The outslope portions of the constructed access roads would be reseeded upon completion of construction to reduce access road related disturbance. Access road construction shall follow road design standards outlined in the BLM's Gold Book.

As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February1 and July 15). To minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.

2.3.6.3 Well Pads

Each proposed well pad would consist of a leveled area surfaced with several inches of crushed gravel or scoria. The pads would be used for the drilling rig and related equipment, as well as an excavated, reinforced lined[1] pit to store drill cuttings. An 18-inch tall ring dike would also be constructed around the perimeter of the drilling site. A semi-closed loop system would be used during drilling. All drill cuttings pits would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon termination of completion operations. The level well pads, plus cut and fill slope areas, required for drilling and completing operations (including a pit for drill cuttings) for all wells would be approximately 350x500 feet (approximately 4.0 acres), however, the Two Shields Butte #14-19 well would be slightly smaller at 350x470 feet (approximately 3.8 acres). Cut and fill slopes on the edge of the well pads would be determined on a site-specific basis. The cuttings pits would be fenced and covered with netting to protect wildlife from hazardous areas. In areas where livestock are present, the entire well pad would also be fenced. Pad corners would be rounded, as necessary, to protect drainageways and wooded draws.

Well pad areas would be cleared of vegetation, stripped of topsoil, and graded to specifications in the APDs submitted to the BLM. Construction would comply with the standards and guidelines prescribed in the BLM's Gold Book. Topsoil would be stockpiled and stabilized until disturbed areas are reclaimed and re-vegetated. Excavated subsoils would be used in pad construction, with the finished well pads graded to ensure that water drains away from the drill site. Erosion control at the sites would be maintained through the use of BMPs, which may include, but are not limited to, water bars, bar ditches, diversion ditches, bio-logs, silt fences, and re-vegetation via hydro-seeding or matting of disturbed areas. An 18-inch tall ring dike would also be constructed around the perimeter of the drilling site.

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2.3.6.4 Drilling

Following the access road construction and well pad preparation, a drilling rig would be rigged up at each well site. The time for rigging up, drilling the well, and rigging down the well is anticipated to be about 60 days. During this phase, vehicles and equipment would access the site several times a day.

Initial drilling would be vertical to a depth of approximately 10,200 feet, at which point it would angle to become horizontal at 11,200 feet and then drill horizontally to an approximate

[1] The lining would have a minimum thickness of 20 mils.

measured depth of about 20,000 feet, targeting the Middle Bakken Member target. This horizontal drilling technique would minimize surface disturbance.

For the first 2,500 feet drilled at each well (commonly referred to as a "surface hole"), a fresh water based mud system with non-hazardous additives would be used to minimize contaminant concerns. Water would be obtained from a commercial source for this drilling stage. About eight gallons of water would be used per foot of hole drilled, for a total of about 40,000 gallons (20,000 gallons in the hole and 20,000 gallons as working volume at the surface). After setting and cementing the surface casing, and oil-based mud system consisting of about 80% diesel fuel and 20% water would be used to drill the remainder of the vertical hole and curve. Seven-inch production casing would be set and cemented through the curve and into the lateral. An oil based drilling mud would be utilized for the horizontal portion of the wellbore.

Drilling fluids would be separated from cuttings and contained in steel tanks placed on liners until they are ready for re-use. Any minimal fluids remaining in the drill cuttings pit would be removed and disposed in accordance with BLM and NDIC rules and regulations. Cuttings generated from drilling would be deposited in the cuttings pit on the well pads. The pit would be lined to prevent seepage and contamination of underlying soil. Prior to its use, the pit would be fence on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations to prevent wildlife and livestock from accessing the pit. In accordance with NDIC and BLM regulations and guidelines, drill cuttings would be solidified into an inert, solid mass by chemical means.

2.3.6.5 Casing and Cementing

Casing and Cementing methods would be used to isolate all near-surface aquifers and hydrocarbon zones encountered during drilling.

2.3.6.6 Completion and Evaluation

Once each well is drilled and cased, approximately 45 additional days (depending on availability of services) would be required to complete and evaluate. Completion and evaluation activities include cleaning out the well bore, pressure testing the casing, perforating and fracturing to stimulate the horizontal portion of the well, and running production tubing for potential future commercial production. Fluids utilized in the completion process would be captured in tanks and would be disposed in accordance with BLM and NDIC rules and regulations. Once the wells are completed, site activity and vehicle access would be reduced. If a well or wells are determined to be successful, tank trucks (and, if appropriate, natural gas gathering lines) would transport the product to market.

2.3.6.7 Commercial Production

If commercially recoverable oil and gas resources are found at any of the proposed sites, the site would become established as a production facility. Production equipment, including a well

pumping unit, vertical heater/treater, storage tanks (typically four 400 barrel steel oil tanks and one 400 barrel fiberglass saltwater tank per well) and a flare with associated piping would be installed. The storage tanks and heaters/treaters would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. All permanent above ground production facilities would be painted to blend into the surrounding landscape, as determined by the BIA, based on standard colors recommended by the BLM.

Oil would be collected in the storage tanks and periodically trucked to an existing oil terminal to be sold. Produced water would also be captured in storage tanks and periodically trucked to an approved disposal site. The frequency of trucking activities for both oil resources and produced water would be dependent upon volumes and rates of production. It is expected that oil would be trucked via existing oil field, BIA, and/or county roads to Highway 22 near Mandaree and then south approximately four miles (off the Fort Berthold Reservation) to a regional oil terminal. All haul routes used would be either private roads or roads that are approved for this type of transportation use by the local governing tribal, township, county, and/or state entities. All associated applicable permits would be obtained and compliance with restrictions enforced. Should regional oil, gas, and/or saltwater pipelines be installed, every attempt to tie production facilities at the proposed sites to these pipelines would be made, thereby minimizing truck traffic. Any future oil, gas, or saltwater transportation pipelines would be constructed within the existing rights-of-way or additional NEPA analysis and approval from the BIA would be undertaken.

When any of the proposed wells cease to flow naturally, a pump jack would be installed. After production ceases, the well would be plugged and abandoned, and the land would be fully reclaimed in accordance with BIA and BLM requirements.

Kodiak would mitigate the effects of these five well pads by incorporating applicable conditions, mitigation measures, and BMPs from the BLM's regulations, BLM's Gold Book (4th Edition, 2006), and applicable BLM Onshore Oil and Gas Orders, including Numbers 1, 2, and 7.

2.3.6.8 Reclamation

The drill cuttings would be dried during drilling operations and placed into a lined cuttings pit at each site. Additional treatment of the cuttings, including stabilization, would be completed, and the pit would be backfilled and buried as soon as possible upon well completion. Other interim reclamation measures to be implemented upon well completion include reduction of cut and fill slopes where possible, redistribution of stockpiled topsoil, and re-seeding of the disturbed areas via hydro-seeding or matting. Per recommendations made at the BIA EA on-site, small trees or saplings impacted by the project shall be ground up and incorporated into topsoil piles to help stabilize the soil. If commercial production equipment is installed, the well pads would be reduced in size to accommodate the production facilities, while leaving adequate room to conduct normal well maintenance and potential recompletion operations, with the remainder of the well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating,

backfilling, and re-seeding with native vegetation. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and re-seeded as recommended by the BIA.

If no commercial production were developed from one or any of the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. As part of the final reclamation process, all well facilities would be removed, well bores would be plugged with cement, and dry hole markers would be set in accordance with NDIC and BLM requirements. The access road and well pad areas would be re-contoured to match topography of the original landscape, and re-seeded with a native grass seed mixture that is consistent with surrounding native species to ensure a healthy and diverse vegetative community that is free of noxious weeds. Erosion control measures would be installed as appropriate. Maintenance of the grass seeding would continue until such time that the productivity of the stand is consistent with surrounding undisturbed vegetation and is free of noxious weeds. An exception to these reclamation measures may occur if the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees.

2.3.6.9 Potential for Future Development

Development beyond the drilling of the following wells, as described in this document, is not included with this proposal:

- Skunk Creek #16-23 well pad containing the following wells: Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H.
- Two Shields Butte #14-19 well pad containing the following wells: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3.
- Two Shields Butte #13-22 well pad containing the following wells: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H.
- Skunk Creek #13-18 well pad containing the following wells: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H.
- Skunk Creek #16-18 well pad containing the following wells: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H

Further development would be subject to applicable regulations, including 43 CFR Part 3160, and the BLM's Onshore Oil and Gas Order No. 1 – Approval of Operations on Onshore Federal and Indian Oil and Gas Leases, and would be subject to review under NEPA, as appropriate.

Chapter 2 Alternatives

2.1 Introduction

This chapter provides information on the development and evaluation of project alternatives. The development of alternatives is directly related to the purpose and need for the project. Two alternatives are being considered for this project: a no action alternative and a proposed action alternative.

2.2 Alternative A: No Action

Under the no action alternative (Alternative A), the BIA and BLM would not authorize the drilling of 16 oil and gas wells atop five well pads. There would be no environmental impacts associated with Alternative A. However, the Three Affiliated Tribes would not receive potential royalties on production or other economic benefits from oil and gas development on the reservation. Further, the oil and gas resources targeted by the proposed action would not be recovered and made available for domestic energy use.

2.3 Alternative B: Proposed Action

The proposed action (Alternative B) includes a positive recommendation by the BIA and authorization by BLM to construct and drill 16 oil and gas wells atop five individual pads, as well as associated rights-of-way acquisition, roadway improvements, and infrastructure for the wells. Infrastructure may include subsurface gathering pipelines and buried electrical lines, both of which would be located entirely within the access road rights-of-way.

Each well site would consist of a well pad containing three to four well heads, an access road (one access road per well pad), associated infrastructure, and a spacing unit. The well pad is where the actual surface disturbance caused by drilling activities would occur. The spacing unit is the location of the minerals that are to be developed. The location of the proposed well pads, access roads, and proposed drilling techniques were specifically selected to minimize surface disturbance.

Each well pad would require new right-of-way for access points, supporting buried electrical lines, and gathering lines associated with oil and gas production. Rights-of-way would be located to avoid sensitive surface resources and any cultural resources identified in site surveys. Access roads would be improved as necessary to eliminate overly steep grades, maintain current drainage patterns, and provide all-weather driving surfaces.

An intensive, pedestrian resource survey of each proposed well pad and access road was conducted on the following dates by Kadrmas, Lee & Jackson (KL&J) resource specialists:

- Skunk Creek #16-23 on June 29, 2010 and September 1, 2010
- Two Shields Butte #14-19 on November 10, 2010
- Two Shields Butte #13-22 on August 5, 2010
- Skunk Creek #13-18 on November 10, 2010
- Skunk Creek #16-18 on November 10, 2010

The purpose of these surveys was to gather site-specific data and photos with regard to botanical, biological, threatened and endangered species, eagles, migratory birds, and water resources. A study area of 10 acres centered on each of the well pad center points and a 200-foot wide access road corridor were evaluated for each site. Resources were evaluated using visual inspection and pedestrian transects across the sites. In addition, a survey for eagles and eagle nests within 0.5 miles of all project disturbance areas was conducted. These surveys consisted of pedestrian transects focusing specifically on potential nesting sites within 0.5 miles of project disturbance areas, including cliffs and wooded draws. Wooded draws were observed both from the upland areas overlooking the draws and from the bottomlands within the actual draws.

The BIA EA on-site assessments of the proposed well pads and access road sites were conducted concurrent to the resource surveys. The BIA Environmental Protection Specialist, representatives from the Tribal Historic Preservation Office (THPO), Kodiak, and KL&J participated in these assessments. During these assessments, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. The well pad and access road locations were finalized, and the BIA gathered information needed to develop site-specific mitigation measures and best management practices (BMPs) to be incorporated into the final APDs. Those present at the EA on-site assessments agreed that the selected locations, along with the minimization/mitigation measures Kodiak plans to implement, are positioned to minimize impacts to sensitive wildlife and botanical resources. Comments received from the United States Fish and Wildlife Service (USFWS) on previous Kodiak projects of a similar nature in the vicinity have been considered in the development of this project.

In addition, cultural resources surveys were completed in early October and November 2010 by Juniper Archaeological Services for access road re-routes.

2.3.1 Skunk Creek #16-23 Site

The Skunk Creek #16-23 well pad would be located in the SE¼SE1/4 of Section 23, Township 149 North, Range 93 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 14 and 23, Township 149 North, Range 93 West, 5th P.M. The following three wells would be drilled atop the Skunk Creek #16-23 well pad: Skunk Creek #16-23-14-2H,

Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H. ***Please refer to Figure 2-1, Skunk Creek #16-23 Site Overview.***

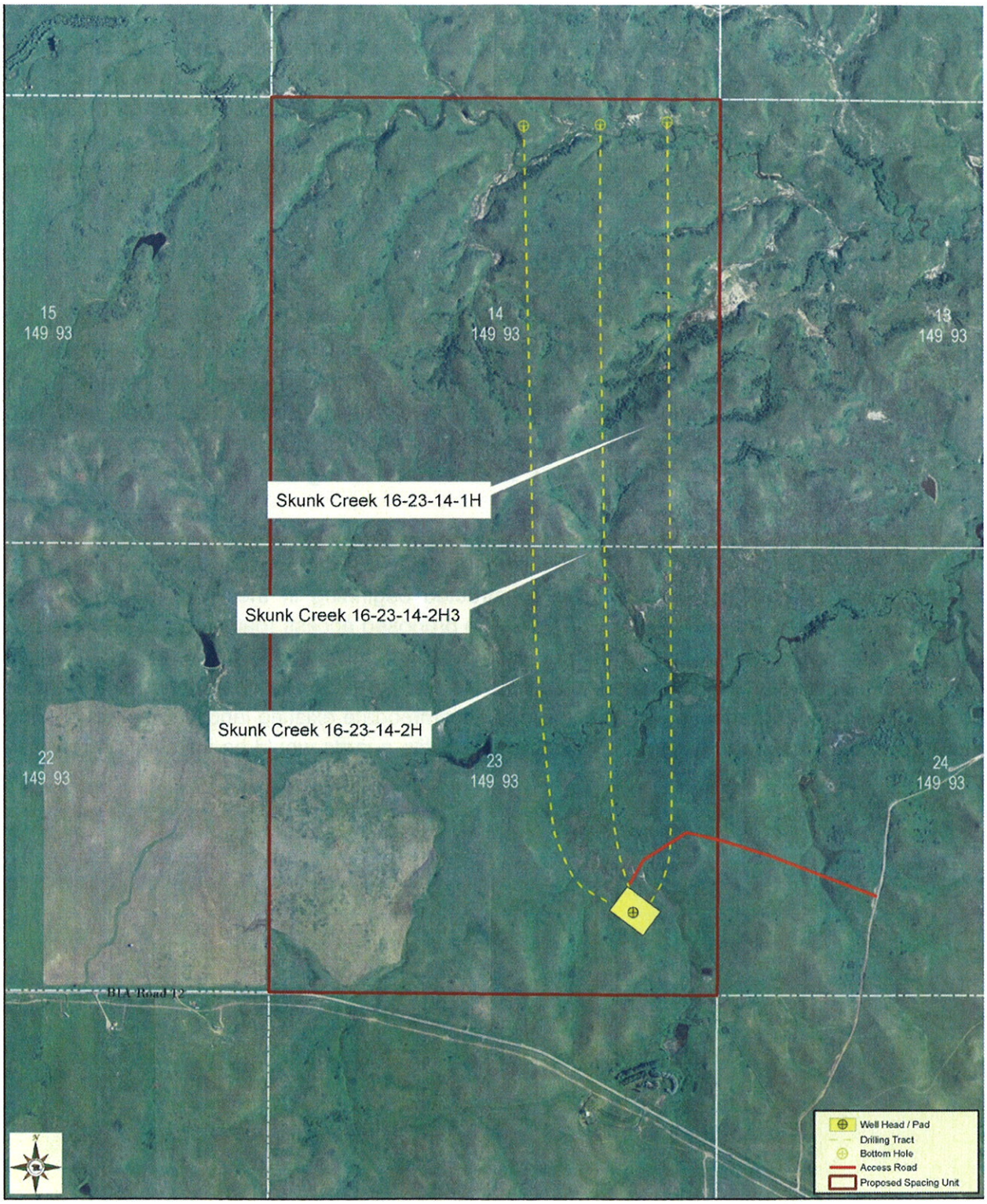

Figure 2-1, Skunk Creek #16-23 Site Overview

The Skunk Creek #16-23 well pad would be accessed from the northeast. A new access road approximately 0.63 miles long would be constructed beginning in the SW¼ of Section 24, Township 149 North, Range 93 West. The proposed access road would connect to BIA Route 12 and would provide access to all three wells associated with the Skunk Creek #16-23 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

2.3.2 Two Shields Butte #14-19 Site

The Two Shields Butte #14-19 well pad would be located in the SE¼SW¼ of Section 19, Township 149 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 18 and 19, Township 149 North, Range 92 West, 5th P.M. The following four wells would be drilled atop the Two Shields Butte #14-19 well pad: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3. ***Please refer to Figure 2-2, Two Shields Butte #14-19 Site Overview.***

The Two Shields Butte #14-19 well pad would be accessed from the west. A new access road approximately 1.52 miles long would be constructed beginning in the NW¼ of Section 25, Township 149 North, Range 93 West, 5th P.M. The proposed access road would connect to BIA Route 12 and would provide access to four wells associated with the Two Shields Butte #14-19 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

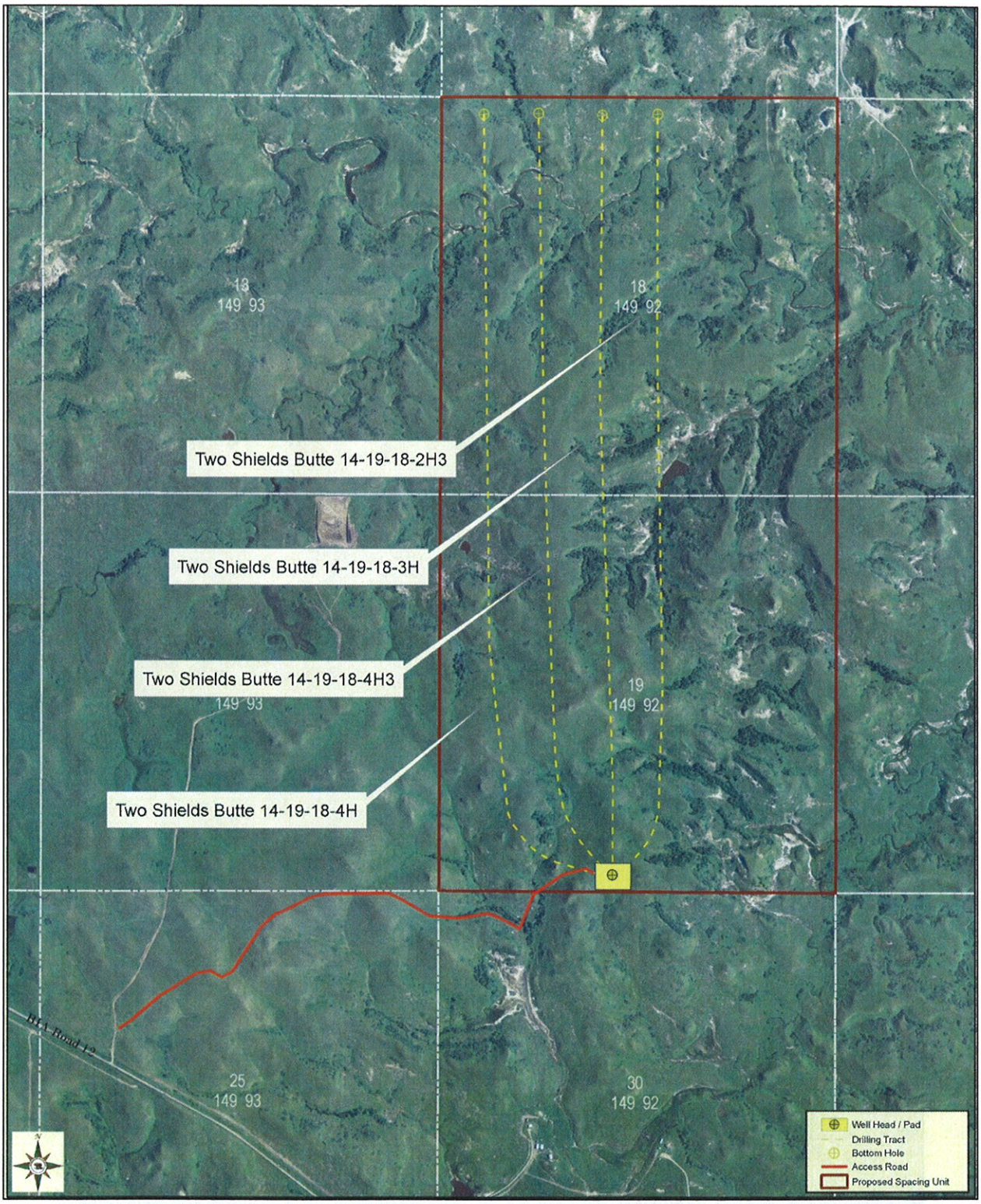

Figure 2-2, Two Shields Butte #14-19 Site Overview

2.3.3 Two Shields Butte #13-22 Site

The Two Shields Butte #13-22 well pad would be located in the SW¼SW¼ of Section 22, Township 149 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 16, 21, 28, and 33, Township 149 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Two Shields Butte #13-22 well pad: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H. ***Please refer to Figure 2-3, Two Shields Butte #13-22 Site Overview.***

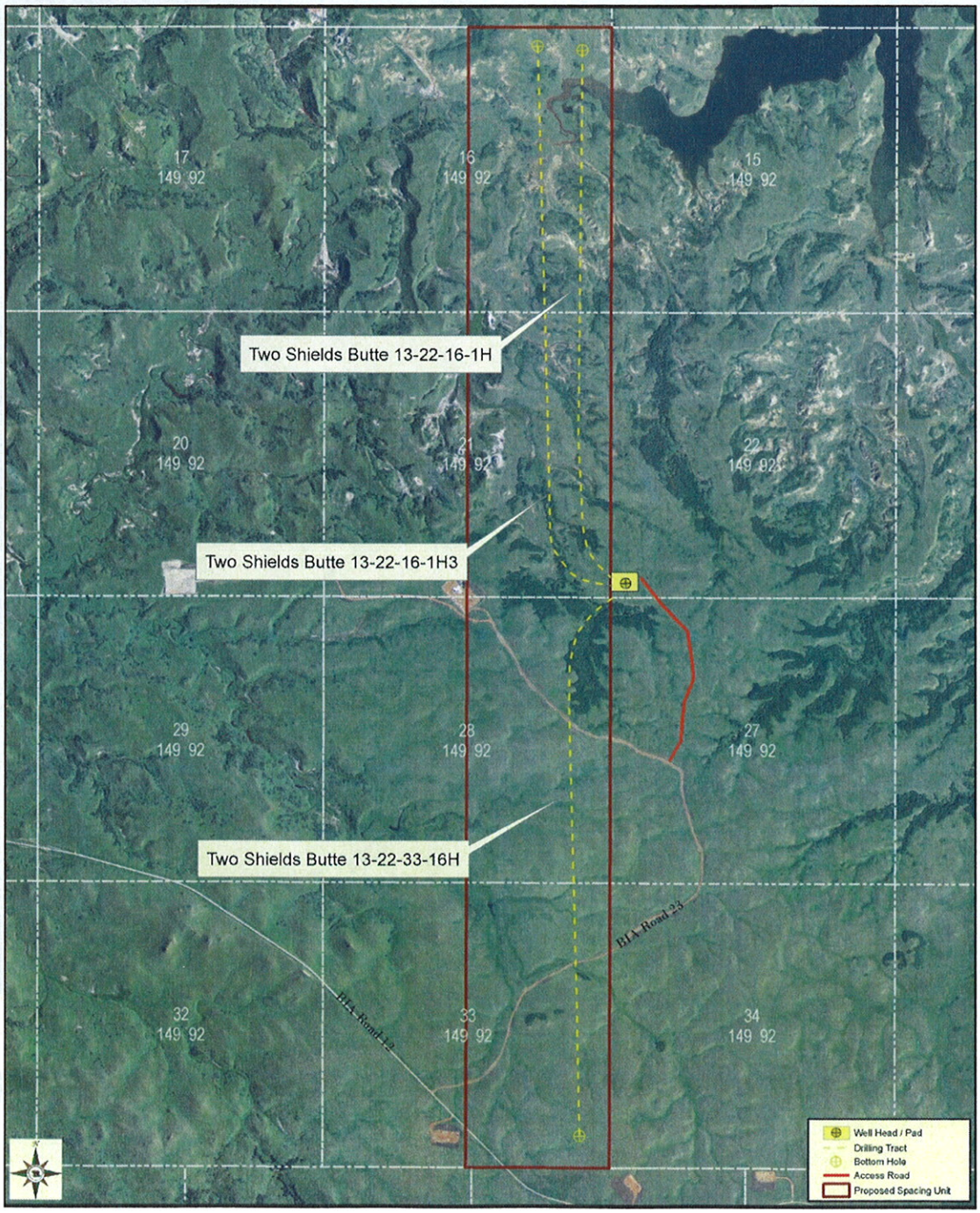

Figure 2-3, Two Shields Butte #13-22 Site Overview

The Two Shields Butte #13-22 well pad would be accessed from the southeast. A new access road approximately 0.74 miles long would be constructed beginning in the SW¼ of Section 27, Township 149 North, Range 92 West, 5th P.M. The proposed access road would connect to BIA Route 23 and would provide access to all three wells associated with the Two Shields Butte #13-22 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to accommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

2.3.4 Skunk Creek #13-18 Site

The Skunk Creek #13-18 well pad would be located in the SW¼SW¼ of Section 18, Township 148 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 7 and 18, Township 148 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Skunk Creek #13-18 well pad: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H. ***Please refer to Figure 2-4, Skunk Creek #13-18 Site Overview.***

The Skunk Creek #13-18 well pad would be accessed from the north and would share an access road with the Skunk Creek #16-18 well site. The shared portion of the access road would be approximately 3.23 miles long and constructed beginning in the SW¼ of Section 33, Township 149 North, 92 West, 5th P.M. The Skunk Creek #13-28-specific access road would be approximately 1.05 miles long and constructed beginning in the NW¼ of Section 18, Township 148 North, Range 92 Wet, 5th P.M. The proposed access road would connect to BIA Route 12 and would provide access to all three wells associated with the Skunk Creek #13-18 well pad. The access road has been routed to avoid drainages and wooded draws to the extent possible. Minor spot grading may be required to acommodate existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as required along this new access road.

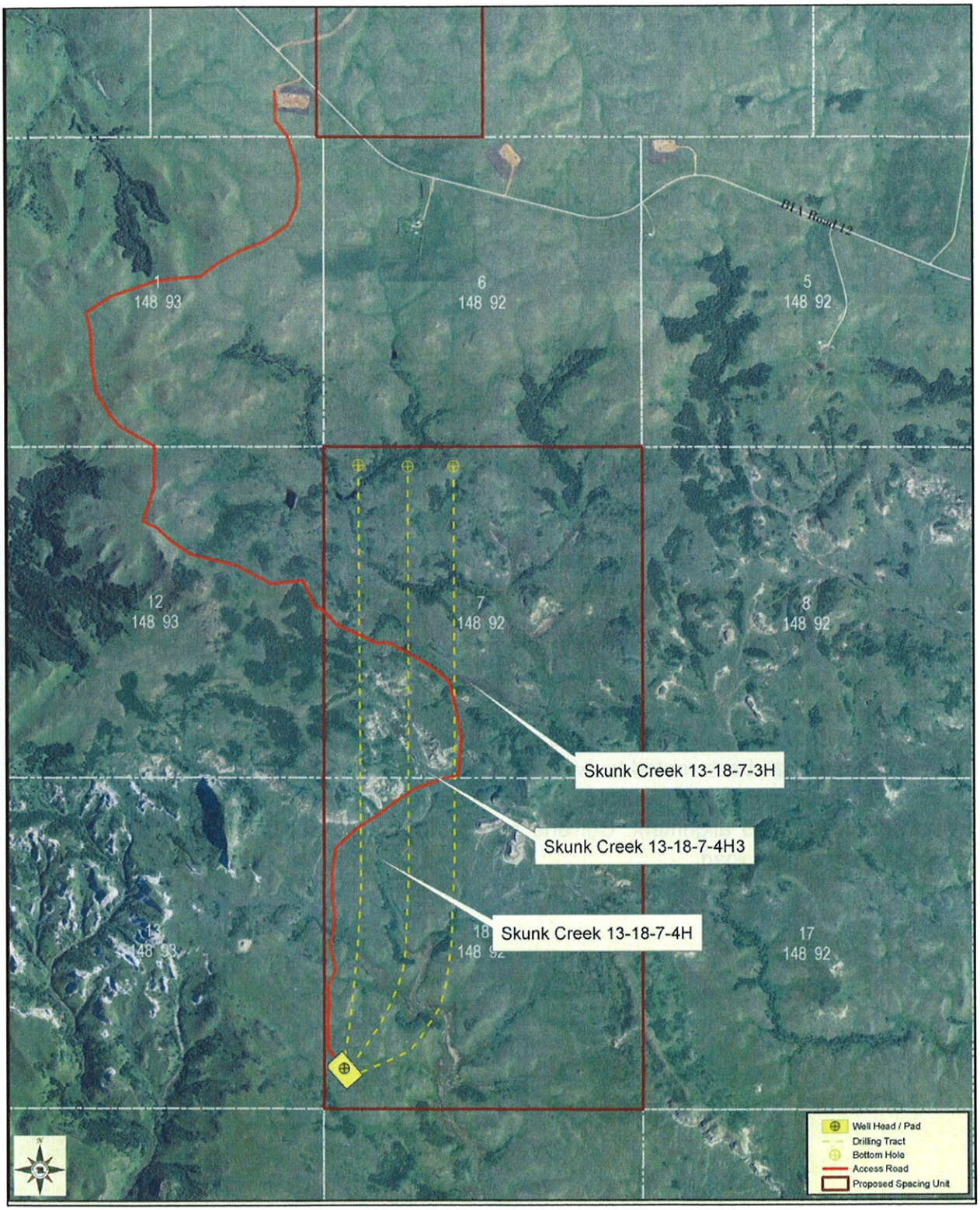

Figure 2-4, Skunk Creek #13-18 Site Overview

2.3.5 Skunk Creek #16-18 Site

The Skunk Creek #16-18 well pad located in the SE¼SE¼ of Section 18, Township 148 North, Range 92 West, 5th P.M. to access oil and gas resources within the spacing unit consisting of Sections 7 and 18, Township 148 North, Range 92 West, 5th P.M. The following three wells would be drilled atop the Skunk creek #16-18 well pad: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H. ***Please refer to Figure 2-5, Skunk Creek #16-18 Site Overview.***

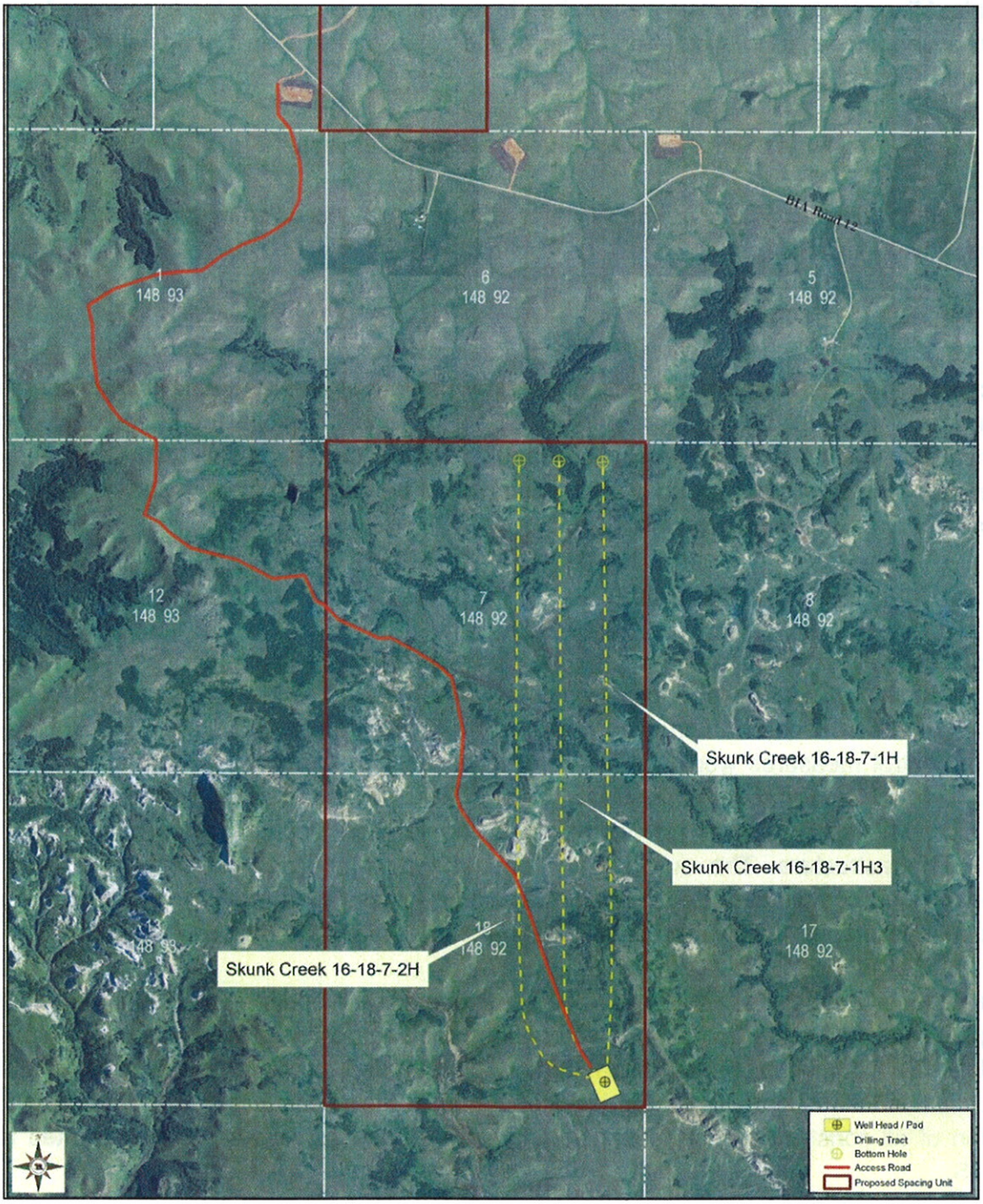

Figure 2-5, Skunk Creek #16-18 Site Overview

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As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February1 and July 15). To minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.

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Each proposed well pad would consist of a leveled area surfaced with several inches of crushed gravel or scoria. The pads would be used for the drilling rig and related equipment, as well as an excavated, reinforced lined[1] pit to store drill cuttings. An 18-inch tall ring dike would also be constructed around the perimeter of the drilling site. A semi-closed loop system would be used during drilling. All drill cuttings pits would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon termination of completion operations. The level well pads, plus cut and fill slope areas, required for drilling and completing operations (including a pit for drill cuttings) for all wells would be approximately 350x500 feet (approximately 4.0 acres), however, the Two Shields Butte #14-19 well would be slightly smaller at 350x470 feet (approximately 3.8 acres). Cut and fill slopes on the edge of the well pads would be determined on a site-specific basis. The cuttings pits would be fenced and covered with netting to protect wildlife from hazardous areas. In areas where livestock are present, the entire well pad would also be fenced. Pad corners would be rounded, as necessary, to protect drainageways and wooded draws.

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Following the access road construction and well pad preparation, a drilling rig would be rigged up at each well site. The time for rigging up, drilling the well, and rigging down the well is anticipated to be about 60 days. During this phase, vehicles and equipment would access the site several times a day.

Initial drilling would be vertical to a depth of approximately 10,200 feet, at which point it would angle to become horizontal at 11,200 feet and then drill horizontally to an approximate

[1] The lining would have a minimum thickness of 20 mils.

measured depth of about 20,000 feet, targeting the Middle Bakken Member target. This horizontal drilling technique would minimize surface disturbance.

For the first 2,500 feet drilled at each well (commonly referred to as a "surface hole"), a fresh water based mud system with non-hazardous additives would be used to minimize contaminant concerns. Water would be obtained from a commercial source for this drilling stage. About eight gallons of water would be used per foot of hole drilled, for a total of about 40,000 gallons (20,000 gallons in the hole and 20,000 gallons as working volume at the surface). After setting and cementing the surface casing, and oil-based mud system consisting of about 80% diesel fuel and 20% water would be used to drill the remainder of the vertical hole and curve. Seven-inch production casing would be set and cemented through the curve and into the lateral. An oil based drilling mud would be utilized for the horizontal portion of the wellbore.

Drilling fluids would be separated from cuttings and contained in steel tanks placed on liners until they are ready for re-use. Any minimal fluids remaining in the drill cuttings pit would be removed and disposed in accordance with BLM and NDIC rules and regulations. Cuttings generated from drilling would be deposited in the cuttings pit on the well pads. The pit would be lined to prevent seepage and contamination of underlying soil. Prior to its use, the pit would be fence on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations to prevent wildlife and livestock from accessing the pit. In accordance with NDIC and BLM regulations and guidelines, drill cuttings would be solidified into an inert, solid mass by chemical means.

2.3.6.5 Casing and Cementing

Casing and Cementing methods would be used to isolate all near-surface aquifers and hydrocarbon zones encountered during drilling.

2.3.6.6 Completion and Evaluation

Once each well is drilled and cased, approximately 45 additional days (depending on availability of services) would be required to complete and evaluate. Completion and evaluation activities include cleaning out the well bore, pressure testing the casing, perforating and fracturing to stimulate the horizontal portion of the well, and running production tubing for potential future commercial production. Fluids utilized in the completion process would be captured in tanks and would be disposed in accordance with BLM and NDIC rules and regulations. Once the wells are completed, site activity and vehicle access would be reduced. If a well or wells are determined to be successful, tank trucks (and, if appropriate, natural gas gathering lines) would transport the product to market.

2.3.6.7 Commercial Production

If commercially recoverable oil and gas resources are found at any of the proposed sites, the site would become established as a production facility. Production equipment, including a well

pumping unit, vertical heater/treater, storage tanks (typically four 400 barrel steel oil tanks and one 400 barrel fiberglass saltwater tank per well) and a flare with associated piping would be installed. The storage tanks and heaters/treaters would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. All permanent above ground production facilities would be painted to blend into the surrounding landscape, as determined by the BIA, based on standard colors recommended by the BLM.

Oil would be collected in the storage tanks and periodically trucked to an existing oil terminal to be sold. Produced water would also be captured in storage tanks and periodically trucked to an approved disposal site. The frequency of trucking activities for both oil resources and produced water would be dependent upon volumes and rates of production. It is expected that oil would be trucked via existing oil field, BIA, and/or county roads to Highway 22 near Mandaree and then south approximately four miles (off the Fort Berthold Reservation) to a regional oil terminal. All haul routes used would be either private roads or roads that are approved for this type of transportation use by the local governing tribal, township, county, and/or state entities. All associated applicable permits would be obtained and compliance with restrictions enforced. Should regional oil, gas, and/or saltwater pipelines be installed, every attempt to tie production facilities at the proposed sites to these pipelines would be made, thereby minimizing truck traffic. Any future oil, gas, or saltwater transportation pipelines would be constructed within the existing rights-of-way or additional NEPA analysis and approval from the BIA would be undertaken.

When any of the proposed wells cease to flow naturally, a pump jack would be installed. After production ceases, the well would be plugged and abandoned, and the land would be fully reclaimed in accordance with BIA and BLM requirements.

Kodiak would mitigate the effects of these five well pads by incorporating applicable conditions, mitigation measures, and BMPs from the BLM's regulations, BLM's Gold Book (4th Edition, 2006), and applicable BLM Onshore Oil and Gas Orders, including Numbers 1, 2, and 7.

2.3.6.8 Reclamation

The drill cuttings would be dried during drilling operations and placed into a lined cuttings pit at each site. Additional treatment of the cuttings, including stabilization, would be completed, and the pit would be backfilled and buried as soon as possible upon well completion. Other interim reclamation measures to be implemented upon well completion include reduction of cut and fill slopes where possible, redistribution of stockpiled topsoil, and re-seeding of the disturbed areas via hydro-seeding or matting. Per recommendations made at the BIA EA on-site, small trees or saplings impacted by the project shall be ground up and incorporated into topsoil piles to help stabilize the soil. If commercial production equipment is installed, the well pads would be reduced in size to accommodate the production facilities, while leaving adequate room to conduct normal well maintenance and potential recompletion operations, with the remainder of the well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating,

backfilling, and re-seeding with native vegetation. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and re-seeded as recommended by the BIA.

If no commercial production were developed from one or any of the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. As part of the final reclamation process, all well facilities would be removed, well bores would be plugged with cement, and dry hole markers would be set in accordance with NDIC and BLM requirements. The access road and well pad areas would be re-contoured to match topography of the original landscape, and re-seeded with a native grass seed mixture that is consistent with surrounding native species to ensure a healthy and diverse vegetative community that is free of noxious weeds. Erosion control measures would be installed as appropriate. Maintenance of the grass seeding would continue until such time that the productivity of the stand is consistent with surrounding undisturbed vegetation and is free of noxious weeds. An exception to these reclamation measures may occur if the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees.

2.3.6.9 Potential for Future Development

Development beyond the drilling of the following wells, as described in this document, is not included with this proposal:

- Skunk Creek #16-23 well pad containing the following wells: Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, and Skunk Creek #16-23-14-1H.
- Two Shields Butte #14-19 well pad containing the following wells: Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, and Two Shields Butte #14-19-18-2H3.
- Two Shields Butte #13-22 well pad containing the following wells: Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, and Two Shields Butte #13-22-33-16H.
- Skunk Creek #13-18 well pad containing the following wells: Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3, and Skunk Creek #13-18-7-3H.
- Skunk Creek #16-18 well pad containing the following wells: Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, and Skunk Creek #16-18-7-2H

Further development would be subject to applicable regulations, including 43 CFR Part 3160, and the BLM's Onshore Oil and Gas Order No. 1 – Approval of Operations on Onshore Federal and Indian Oil and Gas Leases, and would be subject to review under NEPA, as appropriate.

Chapter 3 Description of the Affected Environment and Impacts

3.1 Introduction

This chapter describes the existing conditions within the study area. The existing conditions, or affected environment, are the baseline conditions that may be affected by the proposed action. This chapter also summarizes the positive and negative direct environmental impacts of the project alternatives, as well as cumulative impacts. Indirect impacts are discussed in impact categories where relevant. Information regarding the existing environment, potential effects to the environment resulting from the proposed alternative, and avoidance, minimization, and/or mitigation measures for adverse impacts is included.

3.2 Climate, Geologic Setting, and Land Use

The proposed wells and access roads are situated geologically within the Williston basin, where the shallow stratigraphy consists of sandstones, silts, and shales dating to the Tertiary Period (65 to 2 million years ago), including the Sentinel Butte and Golden Valley Formations. The underlying Bakken Formation is a known source of hydrocarbons; its middle member is targeted by the proposed project. Although earlier oil and gas exploration activity within the Fort Berthold Reservation was limited and commercially unproductive, recent advances in drilling technologies, including horizontal drilling techniques, now make accessing oil in the Bakken Formation feasible

According to High Plains Regional Climate Center data collected at the Dunn Center weather station from 1971-2000, temperatures in excess of 80 degrees Fahrenheit are common in summer months. The area receives approximately 16.7 inches of rain annually, predominantly during spring and summer. Winters in this region are cold, with temperatures often falling near zero degrees Fahrenheit. Snow generally remains on the ground from November to March, and about 35.7 inches of snow are received annually.

The topography within the project areas is primarily identified as part of the United States Geological Survey (USGS's) River Breaks Ecoregion. According to the USGS, the River Breaks Ecoregion consists of "broken terraces and upland areas that descend to the Missouri River and its major tributaries. They have formed particularly in soft, easily erodible strata, such as Pierre shale."

The western and southern portions of the Fort Berthold Reservation consist of prairie grasslands and buttes. The northern and eastern areas of the reservation provide fertile farmland. The proposed project area is located within a predominately rural area. According to National Agricultural Statistics Services (NASS) data, the proposed project areas are predominantly grassland (93%) and woodlands (4%). ***Please refer to Figure 3-1, Land Use.***

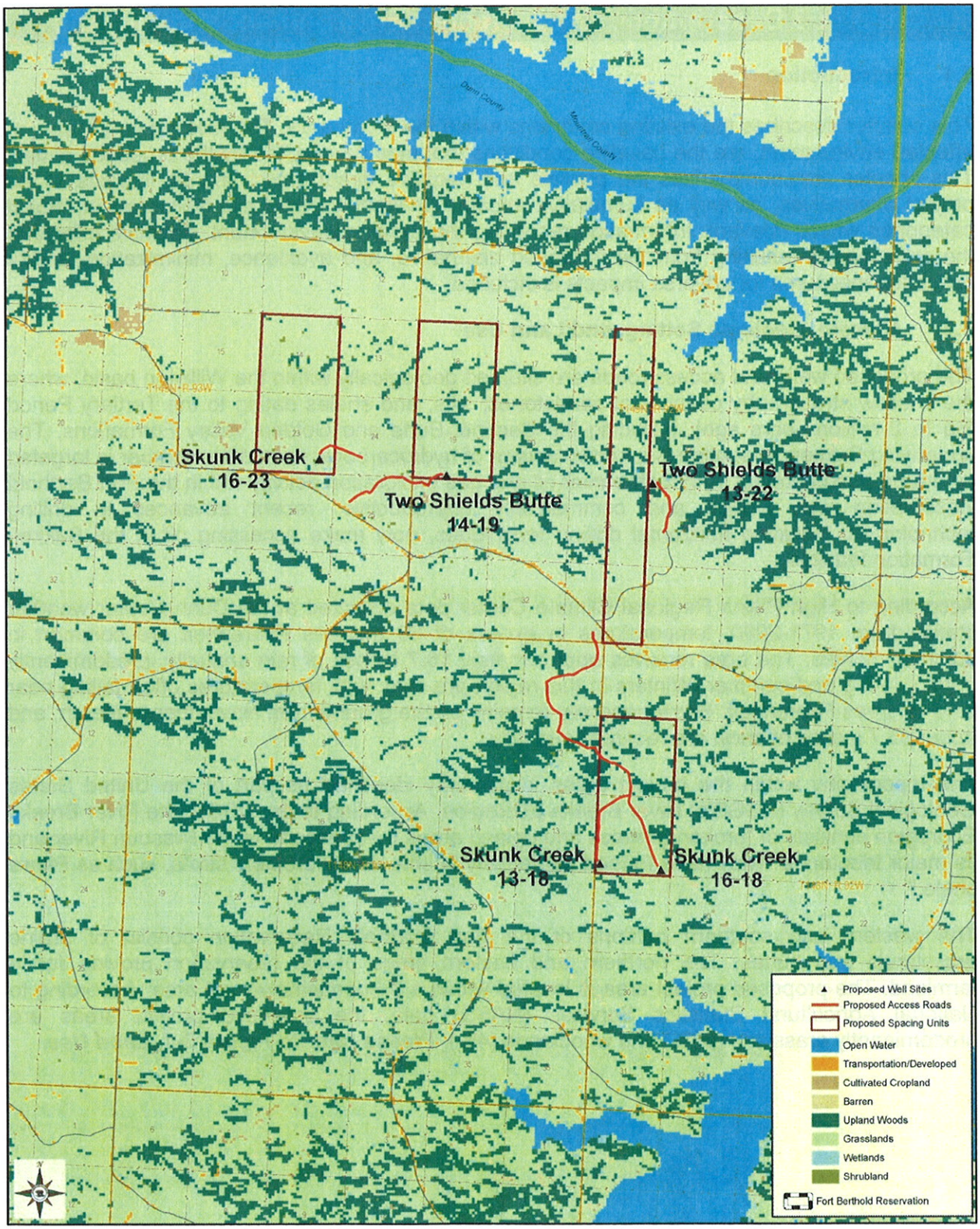

Figure 3-1, Land Use

3.2.1 Climate, Geologic Setting and Land Use Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact land use, climatic conditions, or geology within the study area.

Alternative B (Proposed Action)—Alternative B would result in the conversion of approximately 126.07 acres of land from present uses to part of an oil and gas network. Of this, 28.54 acres would be as a result of well pad construction and 97.53 acres would be from access road construction. ***Please refer to Table 3.1, Summary of Land Use Conversion.***

Table 3.1
Summary of Land Use Conversion

Well Pad Name	Well Pad Acres	Access Road Acres	Total Acres
Skunk Creek #16-23	5.27	7.58	12.85
Two Shields Butte #14-19	5.55	17.41	22.96
Two Shields Butte #13-22	5.74	8.77	14.51
Skunk Creek #13-18	5.61	12.92	18.53
Skunk Creek #16-18	6.37	12.12	18.49
Skunk Creek #13-18 and Skunk Creek #16-18 Shared Access Road	--	38.73	38.73
		Total	**126.07**

Mineral resources would be impacted through the development of oil and gas resources within the spacing units, as is the nature of this project. Impacts to the geologic setting and paleontological resources are not anticipated.

3.3 Soils

The Natural Resources Conservation Service (NRCS) Soil Survey of Dunn County dates from 1982, with updated information available online through the NRCS Web Soil Survey. There are 22 soil types identified within the project impact area. Location and characteristics of these soils are identified in ***Table 3.2, Soils.***

Table 3.2 Soils								
Map Unit Symbol	Soil Name	Percent Slope	Composition (in upper 60 inches)			Erosion Factor[1]		Hydrologic Soil Group[2]
			% sand	% silt	% clay	T	Kf	
4B	Arnegard loam	2 to 6	40.3	36.9	22.8	5	.28	B
9D	Amor-Cabba loams	9 to 15	39.9	38.5	21.6	3	.43	B
9E	Cabba loam	15 to 45	40.5	39.5	20.0	2	.43	D
11F	Cabba-Badland complex	15 to 70	40.5	39.5	20.0	2	.43	D
21C	Cherry silty clay loam	6 to 9	7.9	61.7	30.4	5	.37	B
22	Regan silt loam	0 to 1	25.7	45.0	29.3	5	.43	C/D
27B	Farland silt loam	2 to 6	10.0	64.9	25.1	5	.32	B
30E	Cohagen-Vebar fine sandy loams	9 to 25	78.5	14.0	7.5	2	.49	B
31F	Cohagen-Vebar-Rock outcrop complex	15 to 40	78.5	14.0	7.5	2	.49	D
52B	Morton-Dogtooth silt loams	0 to 6	18.5	58.2	23.3	3	.43	B
62B	Rhoades silt loam	0 to 6	11.0	50.8	38.2	2	.32	D
62D	Dogtooth-Cabba complex	9 to 15	5.1	46.6	48.3	2	.32	D
68	Vanda silty clay	0 to 2	22.1	29.8	48.1	5	.28	D
71C	Sen silt loam	6 to 9	12.8	66.0	21.2	3	.43	B
73C	Cherry-Vanda complex	2 to 9	7.9	61.7	30.4	5	.37	B
81C	Vebar-Parshall fine sandy loams	6 to 9	75.4	14.8	9.8	3	.49	B
81D	Vebar fine sandy loams	9 to 15	75.4	14.8	9.8	3	.49	B
88C	Williams loam	6 to 9	34.8	35.2	30.0	5	.37	B
93D	Zahl-Williams loams	9 to 15	35.0	35.0	30.0	5	.37	B
93E	Zahl-Williams loams	15 to 25	35.0	34.4	30.6	5	.37	B
105	Harriet silt loam	0 to 2	36.3	35.4	28.3	2	.37	D
211F	Badland-Cabba-Arikara complex	25 to 70	17.5	62.0	20.5	5	.43	D

All of the soils listed have moderate to moderately high susceptibility to sheet and rill erosion. Ten of these soil types can tolerate high levels of erosion without loss of productivity, with the remaining 12 soil types more susceptible to erosion-based loss of productivity. Most of these soils are well drained with depth to the water table is generally recorded at greater than six feet; however, soils represented by Map Unit Symbols 22, 62B, and 105, which have shallow water

[1] Erosion Factors indicate susceptibility of a soil to sheet and rill erosion by water. Kf indicates the erodibility of material less than two millimeters in size. Values of K range from 0.02 to 0.69. Higher values indicate greater susceptibility. T Factors estimate maximum average annual rates of erosion by wind and water that will not affect crop productivity. Tons/acre/year range from 1 for shallow soils to 5 for very deep soils. Soils with higher T values can tolerate higher rates of erosion without loss of productivity.

[2] Hydrologic Soil Groups (A, B, C, and D) are based on estimates of runoff potential according to the rate of water infiltration under the following conditions: soils are not protected by vegetation, soils are thoroughly wet, and soils receive precipitation from long-duration storms. The rate of infiltration decreases from Group A (high infiltration, low runoff) to D (low infiltration, high runoff).

tables and are poorly to moderately drained. These soil types exist in very small quantity within the project area.

3.3.1 Soil Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact soils.

Alternative B (Proposed Action)—Construction activities associated with the proposed well pads and associated access roads would result in soil disturbances, though impacts to soils associated with the proposed action are not anticipated to be significant. Stockpile quantities for the locations were calculated using an assumption of eight inches of existing topsoil. Topsoil requirements for each site are identified in ***Table 3.3, Topsoil Requirements for Future site Reclamation.***

Table 3.3
Topsoil Requirements for Future Site Reclamation

Well Pad Name	Cubic Yards of Topsoil	Cubic Yards of Sub-Soil Material
Skunk Creek #16-23	4,993	1,315
Two Shields Butte #14-19	5,073	3,800
Two Shields Butte #13-22	5,093	3,630
Skunk Creek #13-18	4,740	3,555
Skunk Creek #16-18	5,127	3,585

Based on NRCS soil data, topsoil exists in excess of six inches at the project sites. Topsoil depths taken during the on-site survey indicated an approximate soil depth of five to six inches at the well sites. If needed, additional topsoil to facilitate construction and reclamation activities would be acquired from an appropriate source. Topsoil and embankment stockpile locations for each proposed site are identified in ***Table 3.4, Topsoil and Embankment Stockpile Locations.***

Table 3.4
Topsoil and Embankment Stockpile Locations

Well Pad Name	Topsoil Stockpile Locations
Skunk Creek #16-23	Northwest side of pad
Two Shields Butte #14-19	East side of pad
Two Shields Butte #13-22	North and west sides of pad
Skunk Creek #13-18	East side of pad
Skunk Creek #16-18	South side of pad

Soil impacts would be localized, and BMPs would be implemented to minimize these impacts. Surface disturbance caused by well development, road improvements, and facilities construction would result in the removal of vegetation from the soil surface. This can damage soil crusts and destabilize the soil. As a result, the soil surface could become more prone to accelerated erosion by wind and water. BMPs used at all sites to reduce these impacts would include erosion and sediment control measures during and after construction, segregating

topsoil from subsurface material for future reclamation, chipping any woody vegetation that is removed on-site and incorporating it into topsoil stockpiles, re-seeding of disturbed areas via hydro-seeding, the use of construction equipment appropriately sized to the scope and scale of the project, ensuring the road gradient fits closely with the natural terrain, and maintaining proper drainage. According to discussions at the field on-site assessment and standard industry practices, BMPs identified in the BLM Gold Book shall be utilized to further minimize site erosion. Additional BMPs beyond industry standards are proposed at the following sites:

- Two Shields Butte #14-19—Matting would be installed on the fill side (south side) to control erosion. Facilities and the cuttings pit would be positioned on the north side of the well pad.
- Two Shields Butte #13-22—A two-foot tall berm would be installed along the west side of the pad to control run-on. Diversion ditches would be installed on the north, south, and east sides of the pad to divert runoff around the pad. Water bars would be placed on cut slopes during construction.
- Skunk Creek #13-18—The south edge of the pad would be matted and water bars would be installed to control erosion. Due to the length of the access road, turnouts would be installed to allow truck traffic passing areas.
- Skunk Creek #16-18—A diversion ditch would be installed on the backslope side (north side) of the pad.

Another soil resources issue is soil compaction, which can occur through use of heavy equipment. When soil is compacted, it decreases permeability and increases surface runoff. This is especially evident in silt and clay soils. In addition, soils may be impacted by mixing of soil horizons. Soil compaction and mixing of soil horizons would be minimized by the previously discussed topsoil segregation.

Contamination of soils from various chemicals and other pollutants used during oil development activities is not anticipated. In the rare event that such contamination may occur, the event shall be immediately reported to the BLM, the NDIC, and, where appropriate, the North Dakota Department of Health (NDDH). In addition, the procedures of the surface management agency shall be followed to contain spills and leaks.

3.4 Water Resources

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, provides the authority to the Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE) to establish water quality standards, control discharges into surface and ground waters, develop waste treatment management plans and practices, and issue permits for discharges (Section 402) and for dredged or fill material (Section 404). Within the Fort Berthold Reservation, the Missouri River and Lake Sakakawea are both considered navigable waters and are therefore subject to Section 10 of the Rivers and Harbors Act of 1899.

The EPA also has the authority to protect the quality of drinking water under the Safe Drinking Water Act (SDWA) of 1974. As amended in 1986 and 1996, the SDWA requires many actions to

protect drinking water and its sources: rivers, lakes reservoirs, springs, and ground water wells[3]. The Energy Policy Act of 2005 excludes hydraulic fracturing operations related to oil, gas, or geothermal production activities from EPA regulation under the SDWA[4].

3.4.1 Surface Water

The project area is situated in the Great Plains region of North Dakota that borders the Badlands to the west. This is an arid area with few isolated surface water basins. The majority of the surface waters in the region are associated with the Missouri River, Lake Sakakawea, and tributaries to these water bodies. Surface water generally flows overland until draining into these systems.

The proposed well pads are located in the Lake Sakakawea basin, meaning surface waters within this basin drain to Lake Sakakawea. Watershed and Sub-Watershed information for each site is identified in ***Table 3.5, Watersheds and Sub-Watersheds.***

Table 3.5
Watersheds and Sub-Watersheds

Name	Watershed	Sub-Watershed
Skunk Creek #16-23	Independence Point	Skunk Creek
Two Shields Butte #14-19	Independence Point	Skunk Creek
Two Shields Butte #13-22	Independence Point	Skunk Creek
Skunk Creek #13-18	Waterchief Bay	Lower Squaw Creek Bay
Skunk Creek #16-18	Waterchief Bay	Lower Squaw Creek Bay

Runoff throughout the project areas is by sheet flow until collected by ephemeral and perennial streams draining to Lake Sakakawea. ***Please refer to Figure 3-2, Surface Water Resources.*** Surface runoff for each site would typically travel to Lake Sakakawea via drainage patterns as follows:

- Skunk Creek #16-23—The proposed site drains northeast off the pad into an unnamed gully. Once there, runoff would travel 0.55 miles north to an unnamed perennial stream and then northeast 2.35 miles to Skunk Creek. Once in Skunk Creek, runoff would then travel 5.80 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 8.70 miles. The nearest wooded draw is located approximately 0.72 miles northeast of the well pad.
- Two Shields Butte #14-19—The proposed site drains south off the pad into a drainageway. Once there, runoff would travel south and east 0.66 miles to South Fork Creek. It would then travel north and east 3.60 miles to Skunk Creek. Once in Skunk Creek, runoff would travel northeast 2.22 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 6.48 miles. The nearest wooded draw is located approximately 440 feet northeast of the well pad.

[3] The SDWA does not regulate private wells that serve fewer than 25 individuals.
[4] The use of diesel fuel during hydraulic fracturing is still regulated under the SDWA.

- Two Shields Butte #13-22—The proposed site drains west off the pad into a drainageway that then travels north 1.96 miles to Skunk Creek. Once in Skunk Creek, runoff would travel east 0.68 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 2.64 miles. The nearest wooded draw is located approximately 420 feet south of the well pad.
- Skunk Creek #13-18— The proposed site drains southwest off the pad approximately 240 feet into a wooded draw and then travels south 1.70 miles into Squaw Creek Bay of Lake Sakakawea.
- Skunk Creek #16-18— The proposed site drains southwest off the pad and into a drainageway. From there, it travels 0.48 miles west to an unnamed coulee and then 1.41 miles southeast to Squaw Creek Bay of Lake Sakakawea, for a total traveled distance of 1.89 miles. The nearest wooded draw is located approximately 0.30 miles southeast of the well pad.

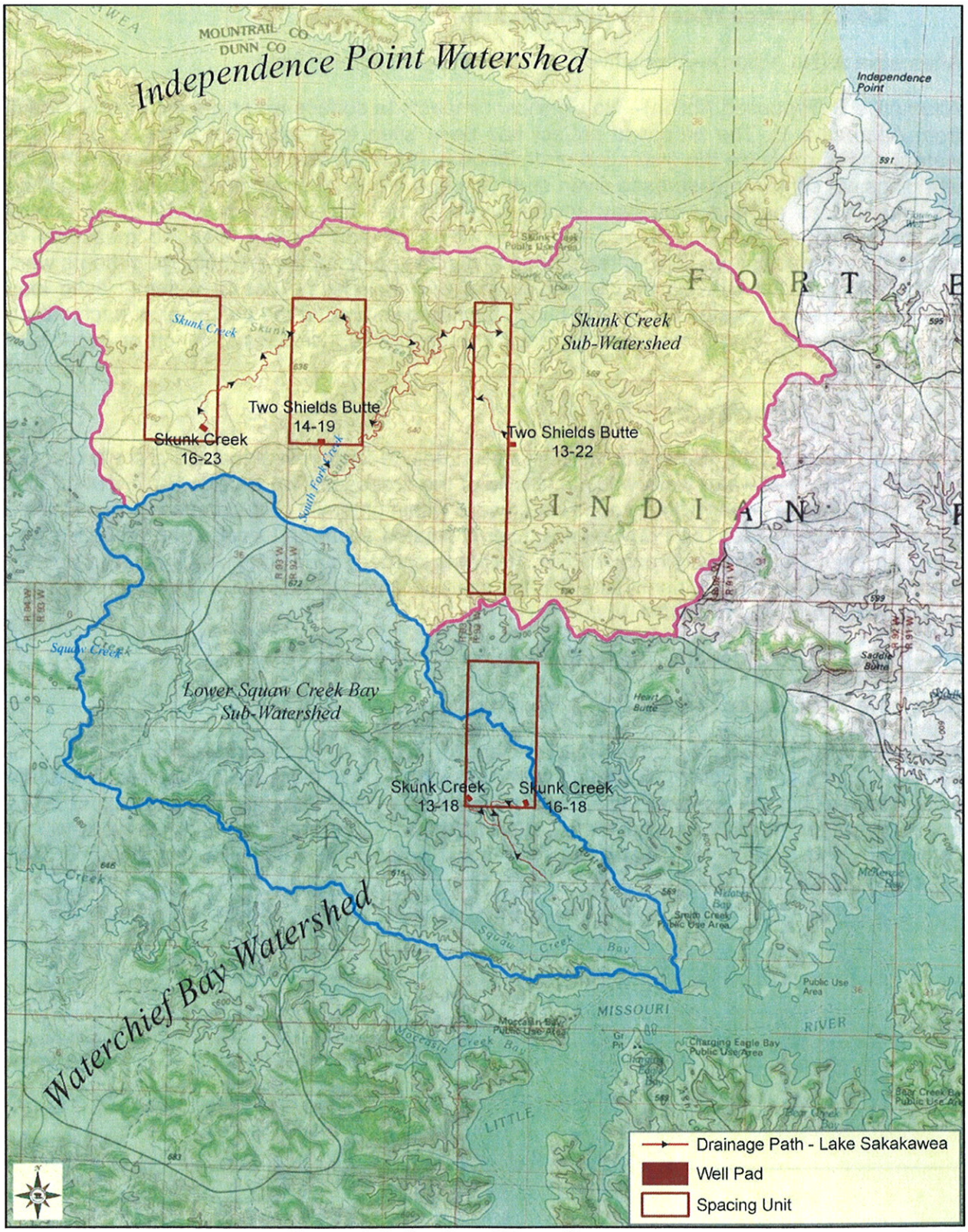

Figure 3-2, Surface Water Resources

3.4.1.1 Surface Water Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact surface water.

Alternative B (Proposed Action)—No significant impacts to surface water are expected to result from Alternative B. The proposed project has been sited to avoid direct impacts to surface waters and to minimize the disruption of drainage patterns across the landscape. Construction site plans will contain measures to divert surface runoff around the well pads. Culverts would be implemented as needed. Roadway engineering and the implementation of BMPs to control erosion would mitigate runoff of sediment downhill or downstream. Specific measures to mitigate the impacts to surface waters and to minimize the disruption of drainage patterns were agreed upon by the BIA EA on-site participants and include the use of a semi-closed loop drilling system and construction of an 18-inch tall ring dike around the perimeter of each drilling site. Alternative B is not anticipated to result in measurable increases in runoff or impacts to surface waters.

3.4.2 Ground Water

The North Dakota State Water Commission's electronic records reveal that there are two active or permitted ground water wells within one mile of the proposed Two Shields Butte #14-19 well site and two active or permitted ground water wells within one mile of the proposed Two Shields Butte #13-22 well sites. The Fort Union Aquifer is located south and west of the proposed well pads, and the Sentinel Butte-Tongue River Aquifer is located to the southeast; however, no sole source aquifers have been identified within the state of North Dakota. ***Please refer to Figure 3-3, Aquifers and Ground Water Wells.***

3.4.2.1 Ground Water Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact ground water.

Alternative B (Proposed Action)—Limited scientific data is available regarding the effects of hydrofracturing (or "fracking") on ground water[5]. As such, since there are no aquifers or ground water wells within the spacing units, no significant impacts to ground water are expected to result from Alternative B. As required by applicable law, all proposed oil and gas wells will be cemented and cased to isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.

[5] The EPA is currently conducting a study on fracking which will address potential impacts to ground water. The study is anticipated to be completed in 2012.

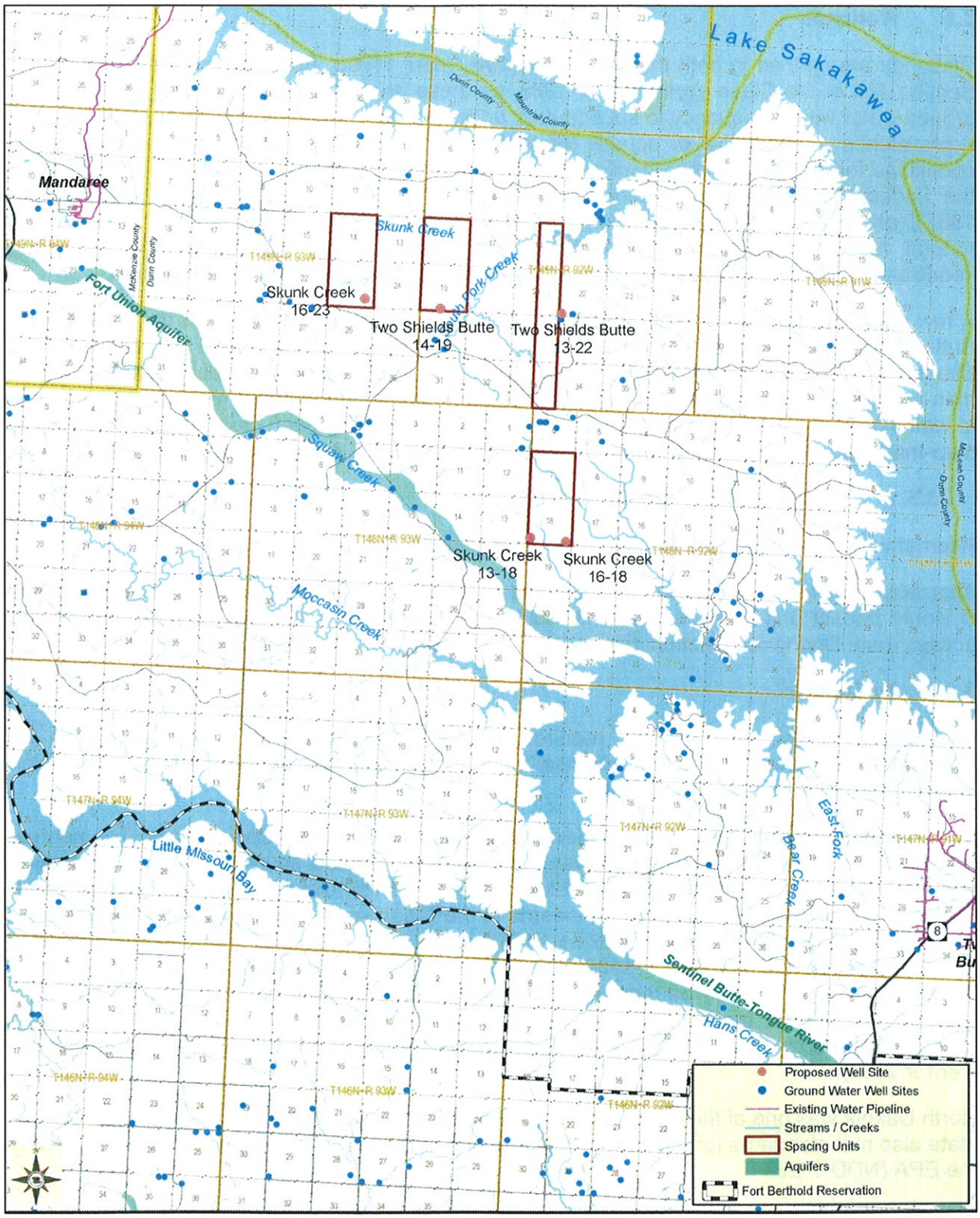

Figure 3-3, Aquifers and Ground Water Wells

3.5 Wetlands

Wetlands are defined in both the 1977 Executive Order 11990, Protection of Wetlands, and in Section 404 of the Clean Water Act of 1986, as those areas that are inundated by surface or ground water with a frequency to support and, under normal circumstances, do or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Three parameters that define a wetland, as outlined in the Federal Manual for Delineating Jurisdictional Wetlands (US Army Corps of Engineers, 1987), are hydric soils, hydrophytic vegetation, and hydrology. Wetlands are an important natural resource serving many functions, such as providing habitat for wildlife, storing floodwaters, recharging ground water, and improving water quality through purification.

A few small wetland basins were identified in a hardwood draw 420 feet from the Two Shields Butte #13-22 site; however, these wetlands are located outside of the project impact areas. The Skunk Creek #16-23 access road crosses a densely vegetated wetland located adjacent to a man-made stock dam. The access road was adjusted during the EA on-site to minimize impacts to wetlands to the extent possible. This wetland appears to have been created as a result of the man-made structure and is not under the jurisdiction of the US Army Corps of Engineers.

3.5.1 Wetland Impacts/Mitigation

Alternative A (No Acton)—Alternative A would not impact wetlands.

Alternative B (Proposed Action)—Access road construction activities associated with Alternative B would impact one wetland. Culverts would be installed to maintain drainage beneath the access road. During reclamation, the site would be restored to wetland conditions.

3.6 Air Quality

The Clean Air Act, as amended, requires the EPA to establish air quality standards for pollutants considered harmful to public health and the environment by setting limits on emission levels of various types of air pollutants.

The NDDH operates a network of Ambient Air Quality Monitoring (AAQM) stations. The nearest AAQM station is located in Dunn Center, North Dakota; located south of the proposed sites, about 20.5 miles from the nearest site (Skunk Creek #13-18). Criteria pollutants tracked under EPA's National Ambient Air Quality Standards in the Clean Air Act include sulfur dioxide (SO_2), particulate matter (PM), nitrogen dioxide (NO_2), ozone (O_3), lead (Pb), and carbon monoxide (CO). In addition, the NDDH has established state air quality standards. State standards must be as stringent as (but may be more stringent than) federal standards. The federal and state air quality standards for these pollutants are summarized in ***Table 3.6, Federal and State Air Quality Standards and Reported Data for Dunn Center (EPA 2006, NDDH 2009, Dunn Center 2009).***

North Dakota was one of thirteen states in 2009 that met standards for all criteria pollutants. The state also met standards for fine particulates and the eight-hour ozone standards established by the EPA (NDDH, 2009).

In addition, the Fort Berthold Reservation complies with the North Dakota National Ambient Air Quality Standards and visibility protection. The Clean Air Act affords additional air quality protection near Class I areas. Class I areas include national parks greater than 6,000 acres in

size, national monuments, national seashores, and federally designated wilderness areas larger than 5,000 acres designated prior to 1977. There are no Federal Class I areas[6] within the project area. The Theodore Roosevelt National Park is the nearest Class I area, located west-southwest of the proposed sites, approximately 33.7 miles from the closest site (Skunk Creek #16-23).

Table 3.6
Federal and State Air Quality Standards and Reported Data for Dunn Center

Pollutant	Averaging Period	EPA Air Quality Standard		NDDH Air Quality Standard		Dunn Center 2009 Reported Data	
		µg/m³	parts per million	µg/m³	parts per million	µg/m³	parts per million
SO_2	24-Hour	365	0.14	260	0.099	--	0.0055
	Annual Mean	80	0.030	60	0.023	--	0.0005
PM_{10}[7]	24-Hour	150	--	150	--	44.5	--
	Annual Mean	50	--	50	--	11.3	--
$PM_{2.5}$[8]	24-Hour	35	--	35	--	14.2	--
	Weighted Annual Mean	15	--	15	--	3.4	--
NO_2	Annual Mean	100	0.053	100	0.053	--	0.0015
CO	1-Hour	40,000	35	40,000	35	--	--
	8-Hour	10,000	9	10,000	9	--	--
Pb	3-Month	1.5	--	1.5	--	--	--
O_3	1-Hour	240	0.12	235	0.12	--	0.064
	8-Hour	--	0.08	--	0.08	--	0.055

3.6.1 Air Quality Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact air quality.

Alternative B (Proposed Action)—The Fort Berthold Reservation complies with North Dakota National Ambient Air Quality Standards and visibility protection. In addition, the Dunn Center AAQM station reported air quality data is well below the state and federal standards. Alternative B would not include any major sources of air pollutants. Construction activities would temporarily generate minor amounts of dust and gaseous emissions of PM, SO_2, NO_2, CO, and volatile organic compounds. Emissions would be limited to immediate project areas and are not anticipated to cause or contribute to a violation of National Ambient Air Quality Standards. No detectable or long-term impacts to air quality or visibility are expected within the airsheds of the forth Berthold Reservation, state, or Theodore Roosevelt national Park. No mitigation or monitoring measures are recommended.

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[6] Federal Class I areas are generally national parks and wilderness areas.
[7] PM_{10} refers to particulates 10 micrometers (µ) or less in size.
[8] $PM_{2.5}$ refers to particulates 2.5 micrometers (µ) or less in size.

3.7 Threatened, Endangered, and Candidate Species

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, 50 CFR Part 402, as amended, each federal agency is required to ensure the following two criteria. First, any action funded or carried out by such agency must not be likely to jeopardize the continued existence of any federally-listed endangered or threatened species or species proposed to be listed. Second, no such action can result in the destruction or adverse modification of habitat of such species that is determined to be critical by the Secretary. A threatened species is one that is likely to become endangered in the foreseeable future. An endangered species is in danger of extinction throughout all or a significant portion of its range. A candidate species is a plant or animal for which the USFWS has sufficient information on its biological status and threats to propose it as threatened or endangered under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. While candidate species are not legally protected under the ESA, it is within the spirit of the ESA to consider these species as having significant value and worth protecting.

The proposed action area was evaluated to determine the potential for occurrences of federally-listed threatened, endangered, and candidate species. The USFWS (October 2010) identified the piping plover as a threatened species for Dunn County. The black-footed ferret, gray wolf, interior least tern, pallid sturgeon, and whooping crane are listed as endangered species that may be found within Dunn County. The Dakota Skipper and Sprague's pipit are listed as candidate species. In addition, Dunn County contains designated critical habitat for the piping plover adjacent to Lake Sakakawea. None of these species were observed in the field. Habitat requirements, the potential for suitable habitat within the project areas, and other information regarding listed species for Dunn County are included in the following section.

3.7.1 Threatened Species

Piping Plover *(Charadrius melodus)*

The piping plover is a small migratory shorebird. Historically, piping plovers could be found throughout the Atlantic Coast, Northern Great Plains, and the Great Lakes. Drastically reduced, sparse populations presently occur throughout this historic range. In North Dakota, breeding and nesting sites can be found along the Missouri River. Preferred habitat for the piping plover includes riverine sandbars, gravel beaches, alkali areas of wetlands, and flat, sandy beaches with little vegetation. The USFWS has identified critical habitat for the piping plover on the Missouri River system. Critical habitat includes reservoir reaches composed of sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with water bodies.

There is no existing or potential habitat within the project areas. According to USFWS data, designated critical habitat occurs through the entire shoreline of Lake Sakakawea. Lake Sakakawea is located approximately 1.0 mile south of the proposed sites at the nearest point (Skunk Creek #16-18), or 1.70 miles following the shortest drainage pattern to the lake (Skunk Creek #13-18).

3.7.1.1 Threatened Species Impacts/Mitigation

Alternative A (No Action)—Alternative A would have no effect to the piping plover and would not destroy or adversely modify designated piping plover critical habitat.

Alternative B (Proposed Action)—Suitable habitat for the piping plover is largely associated with Lake Sakakawea and its shoreline. Potential habitat for these species exists approximately one mile south of the proposed sites at the nearest point (Skunk Creek #16-18), or 1.70 miles away following the shortest drainage pattern to the Lake (Skunk Creek #13-18). The well pads and access roads are located on upland bluffs of grassland, with small bays of Lake Sakakawea and its shoreline located below the bluffs (approximately 160 feet). The topographic features of the area and distance from the shoreline would assist in providing sight and sound buffers for shoreline-nesting birds.

The proposed project is located 1.70 miles from Lake Sakakawea (following the shortest drainage pattern), making the likelihood of accidentally released fluids reaching the lake to be minimal based on implementation of the following practices. Storage tanks and the heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against accidental release of fluids from the site. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. In addition, solidification of drill cuttings in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. An 18-inch tall ring dike will also be constructed around the perimeter of the drilling site. Where BIA determines necessary, pit and soil stockpiles will be used to divert drainage outside of the fill slopes. Additionally, if electrical lines are installed, the lines would be buried to prevent the potential for bird strikes. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Therefore, the proposed project may affect but is not likely to adversely affect the piping plover. The proposed project is not likely to impact critical habitat for the plover.

3.7.2 Endangered Species

Black-footed Ferret (*Mustela nigripes*)

The black-footed ferret historically could be found throughout the Rocky Mountains and Great Plains. In North Dakota, the black-footed ferret may potentially be present within prairie dog towns. However, this species has not been confirmed in North Dakota for nearly 30 years and is presumed to be extirpated. Its preferred habitat includes areas around prairie dog towns, as it relies on prairie dogs for food and lives in prairie dog burrows. Black-footed ferrets require at least an 80-acre prairie dog town to survive.

No prairie dog towns were observed within the proposed well pad or access road corridors to provide suitable black-footed ferret habitat.

Gray Wolf (*Canis lupus*)

The gray wolf is the largest wild canine species in North America. It is found throughout northern Canada. Alaska, and the forested areas of Northern Michigan, Minnesota, and Wisconsin and has been re-introduced to Yellowstone National Park in Wyoming. While the gray wolf is not common in North Dakota, occasionally individual wolves do pass through the state. Historically,

its preferred habitat includes biomes such as boreal forest, temperate deciduous forest, and temperate grasslands. Gray wolves live in packs of up to 21 members, although some individuals will roam alone.

The project areas are located far from other known wolf populations.

Interior Least Tern (*Sterna antillarum*)

The interior least tern nests along inland rivers. The interior least tern is found in isolated areas along the Missouri, Mississippi, Ohio, Red, and Rio Grande Rivers. In North Dakota, it is sighted along the Missouri River during the summer nesting season. The interior least tern nests in sandbars or barren beaches, preferably in the middle of a river for increased safety while nesting. These birds nest close together, using safety in numbers to minimize predation.

There is no existing or potential habitat within the project areas. Potential habitat in the form of sandy/gravely Lake Sakakawea shoreline may exist approximately 1.0 miles southeast of the nearest proposed well pad (Skunk Creek #16-18), or 1.70 miles following the shortest drainage pattern to the lake (Skunk Creek #13-18).

Pallid Sturgeon (*Scaphirhynchus albus*)

The pallid sturgeon is known to exist in the Yellowstone, Missouri, middle and lower Mississippi, and Atchafalaya Rivers, and seasonally in some tributaries. In North Dakota, the pallid sturgeon is found principally in the Missouri River and upstream of Lake Sakakawea in the Yellowstone River. Dating to prehistoric times, the pallid sturgeon has become well adapted to living close to the bottom of silty river systems. According to the USFWS, its preferred habitat includes "a diversity of water depths and velocities formed by braided river channels, sand bars, sand flats, and gravel bars" (2010, September 20). Weighing up to 80 pounds, pallid sturgeons are long lived, with individuals possibly reaching 50 years of age.

Potential habitat for pallid sturgeon can be found in Lake Sakakawea approximately 1.0 miles southeast of the nearest proposed well pad (Skunk Creek #16-18), or 1.70 miles following the shortest drainage pattern to the lake (Skunk Creek #13-18).

Whooping Crane (*Grus americana*)

The whooping crane is the tallest bird in North America. In the United States, this species ranges through the Midwest and Rocky Mountain regions from North Dakota south to Texas and east into Colorado. Whooping cranes migrate through North Dakota along a band running from the south central to the northwest parts of the state. They use shallow, seasonally and semi-permanently flooded palustrine (marshy) wetlands for roosting and various cropland and emergent wetlands for feeding. During migration, whooping cranes are often recorded in riverine habitats, including the Missouri River. Currently there are three wild populations of whooping cranes, yielding a total species population of about 383. Of these flocks, only one is self-sustaining.

According to USFWS data, the proposed project is located in the Central Flyway where 95 percent of confirmed whooping crane sightings have occurred.

The Skunk Creek #16-23 access road crosses a densely vegetated wetland located adjacent to a stock dam. This wetland is not believed to contain potential stopover habitat for the whooping crane due to the vegetation density and lack of open water present. In addition, a few small wetland basins were identified in a hardwood draw approximately 420 feet from the Two Shields Butte #13-22 site; however, they were surrounded by woody vegetation and not in an open setting. Therefore, it is not anticipated that these wetland sites provide preferred whooping crane habitat. No wetlands or suitable roosting or feeding habitat were identified at the Two Shields Butte #14-19, Skunk Creek #13-18, or Skunk Creek #16-18 sites.

3.7.2.1 Endangered Species Impacts/Mitigation

Alternative A (No Action)—Alternative A would have no effect to the gray wolf, black-footed ferret, interior least tern, pallid sturgeon, or whooping crane

Alternative B (Proposed Action)—Due to a lack of preferred habitat characteristics and/or known populations, the proposed project is anticipated to have no effect on the black-footed ferret or the gray wolf.

Suitable habitat for the interior least tern and pallid sturgeon are largely associated with Lake Sakakawea. The lake's shoreline also provides suitable habitat for the interior least tern. Potential habitat for these species exists approximately one mile south of the proposed sites at the nearest point (Skunk Creek #16-18), or 1.70 miles away following the shortest drainage pattern to the Lake (Skunk Creek #13-18). The well pads and access roads are located on upland bluffs of grassland, with small bays of Lake Sakakawea and its shoreline located below the bluffs (approximately 160 feet). The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers for shoreline-nesting birds.

The proposed project is located 1.70 miles from Lake Sakakawea (following the shortest drainage pattern), making the likelihood of accidentally released fluids reaching the lake to be minimal based on implementation of the following practices. Storage tanks and the heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against accidental release of fluids from the site. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. In addition, solidification of drill cuttings in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. An 18-inch tall ring dike will also be constructed around the perimeter of the drilling site. Where BIA determines necessary, pit and soil stockpiles will be used to divert drainage outside of the fill slopes. Additionally, if electrical lines are installed, the lines would be buried to prevent the potential for bird strikes. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Therefore, the proposed project may affect but is not likely to adversely affect the interior least tern or pallid sturgeon.

Small wetlands found within the project study area did not contain suitable whooping crane habitat. In addition, the sites also lacked nearby cropland food sources. However, the proposed project is located within the central flyway where 95 percent of confirmed whooping crane sightings have occurred. Whooping cranes traveling through the area may alter their flight and landing patterns to avoid disturbances related to oil and gas developments. However, it is believed that there are still large, undeveloped areas on the Fort Berthold Reservation in which migrating cranes would land to rest while migrating. Therefore, the proposed project may affect

but is not likely to adversely affect to the whooping crane. The proposed project is not likely to impact potential habitat. Per USFWS recommendations, if a whooping crane is sighted within one mile of a well site or associated facilities while under construction, then all work would cease within one mile of that part of the project and the USFWS would be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area. It is determined that the proposed project may affect, but is not likely to adversely affect, the whooping crane.

3.7.3 Candidate Species

Dakota Skipper (*Hesperia dacotae*)

The Dakota skipper is a small butterfly with a one-inch wing span. These butterflies historically ranged from southern Saskatchewan, across the Dakotas and Minnesota, to Iowa and Illinois. The preferred habitat for the Dakota skipper consists of flat, moist bluestem prairies and upland prairies with an abundance of wildflowers. Dakota skippers are visible in their butterfly stage from mid-June to early July.

The proposed sites are all located on upland, mixed grass prairie areas, which could contain potential habitat for the Dakota skipper. No Dakota skippers were observed during the field surveys.

Sprague's pipit (*Anthus spragueii*)

The Sprague's pipit is a small songbird found in prairie areas throughout the Northern Great Plains. Preferred habitat includes rolling, upland mixed-grass prairie habitat with high plant species diversity. The Sprague's pipit breeds in habitat with minimal human disturbance.

All of the proposed well sites occur on upland, mixed grass prairie areas, which could provide suitable habitat to the Sprague's pipit. No Sprague's pipits were observed during the field surveys.

3.7.3.1 Candidate Species Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact the Dakota skipper or Sprague's pipit.

Alternative B (Proposed Action)—The proposed well sites may contain suitable habitat for both the Dakota skipper and Sprague's pipit. Due to the presence of potential habitat for the Dakota skipper and Sprague's pipit within the project area, the proposed project may impact individuals or habitat through earthwork associated with construction activities, habitat conversion, and/or fragmentation. An "effect determination" under Section 7 of the Endangered Species Act has not been made due to the current unlisted status of the species.

3.8 Eagles

Protection is provided for the bald and golden eagle through the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA of 1940, 16 U.S.C. 668-668d, as amended, was written with the intent to protect and preserve bald and golden eagles, both of which are treated as species of concern within the Department of the Interior. The BGEPA prohibits, except under certain specified conditions, the taking, possession, or commerce of bald and golden eagles. Under the BGEPA, to "take" includes to pursue, shoot, shoot at, poison, wound, kill, capture,

trap, collect, molest, or disturb, wherein "disturb" means to agitate or bother a bald or golden eagle to the degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment.

An intensive, pedestrian resource survey of each proposed well pad and access road was conducted on the following dates by Kadrmas, Lee & Jackson (KL&J) environmental specialists:

- Skunk Creek #16-23 on June 29, 2010 and September 1, 2010
- Two Shields Butte #14-19 on November 10, 2010
- Two Shields Butte #13-22 on August 5, 2010
- Skunk Creek #13-18 on November 10, 2010
- Skunk Creek #16-18 on November 10, 2010

The purpose of these surveys was to gather site-specific data and photos with regard to botanical, biological, threatened and endangered species, eagle, and water resources. A study area of 10 acres centered on each of the well pad center points and a 200-foot wide access road corridor were evaluated for each site. Resources were evaluated using visual inspection and pedestrian transects across the sites. In addition, a survey for eagles and eagle nests within 0.5 miles of all project disturbance areas (well pad, access road, and associated rights-of-way) was conducted. These surveys consisted of pedestrian transects focusing specifically on potential nesting sites within 0.5 miles of project disturbance areas including cliffs and wooded draws. Wooded draws were observed both from the upland areas overlooking the draws and from bottomlands within the actual draws.

The BIA EA on-site assessments of the proposed well pads and access road sites were conducted concurrent to the resource surveys. The BIA Environmental Protection Specialist, representatives from the Tribal Historic Preservation Office (THPO), Kodiak, and KL&J participated in these assessments. During this assessment, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. The well pad and access road locations were finalized, and the BIA gathered information needed to develop site-specific mitigation measures and best management practices (BMPs) to be incorporated into the final APDs. Those present at the on-site assessments agreed that the selected locations, along with the minimization measures Kodiak plans to implement, are positioned to minimize impacts to sensitive wildlife and botanical resources. Comments received from the United States Fish and Wildlife Service (USFWS) on previous projects of a similar nature have been considered in the development of this project.

In addition, biological, botanical, and cultural resources surveys were completed in early October by Juniper LLC (Juniper) for access road re-routes.

The bald eagle (*Haliaeetus leucocephalus*) is sighted in North Dakota along the Missouri River during spring and fall migration periods and periodically in other places in the state such as the Devils Lake and Red River areas. In 2009, the ND Game and Fish Department estimated that 66 nests were occupied by bald eagles, though not all eagle nests were visited and verified (February 2010). Preferred habitat for the bald eagle includes open areas, forests, rivers, and large lakes. Bald eagles tend to use the same nest year after year, building atop the previous year's nest.

The golden eagle (*Aquila chrysaetos*) can be spotted in North Dakota throughout the badlands and along the upper reaches of the Missouri River in the western part of the state. Golden eagle

pairs maintain territories that can be as large as 60 square miles and nest in high places including cliffs, trees, and human-made structures. They perch on ledges and rocky outcrops and use soaring to search for prey. Golden eagle preferred habitat includes open prairie, plains, and forested areas.

No bald eagles or golden eagles were observed within 0.5 miles of the proposed project disturbance areas during field surveys, although one nest belonging to an unidentified raptor species was observed within 0.5 miles of the Skunk Creek #13-18 and Skunk Creek #16-18 well pads.

The USGS Northern Prairie Wildlife Research Center maintains information on bald eagle and golden eagle habitat within the state of North Dakota. According to the USGS data, the 0.5-mile buffered survey area for each proposed well pad and access road does contain recorded habitat for both the bald eagle and the golden eagle. In addition, Dr. Anne Marguerite Coyle of Dickinson State University has completed focused research on golden eagles and maintains a database of golden eagle nest sightings. According to Dr. Coyle's information, the closest recorded golden eagle nest is located approximately 3.4 miles south-southeast of the proposed Skunk Creek #16-18 well site. ***Please refer to Figure 3-4, Bald and Golden Eagle Habitat and Nest Sightings.***

3.8.1 Eagle Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact bald or golden eagles.

Alternative B (Proposed Action)—The proposed project is located within areas of recorded suitable bald eagle and golden eagle habitat. If electrical lines are installed, the lines would be buried to prevent the potential for the eagle to strike electrical lines. Additionally, one nest belonging to an unidentified raptor species was observed within 0.5 miles of the Skunk Creek #13-18 and Skunk Creek #16-18 well pads. An additional site visit would be conducted by a qualified biologist prior to construction to determine whether or not bald or golden eagles are using this nest. If the nest is determined to be used by a bald or golden eagle, USFWS will be contacted for advice on how to proceed. No impacts to bald or golden eagles are anticipated to result from the proposed project. If a bald or golden eagle or eagle nest is sighted within 0.5 miles of the project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

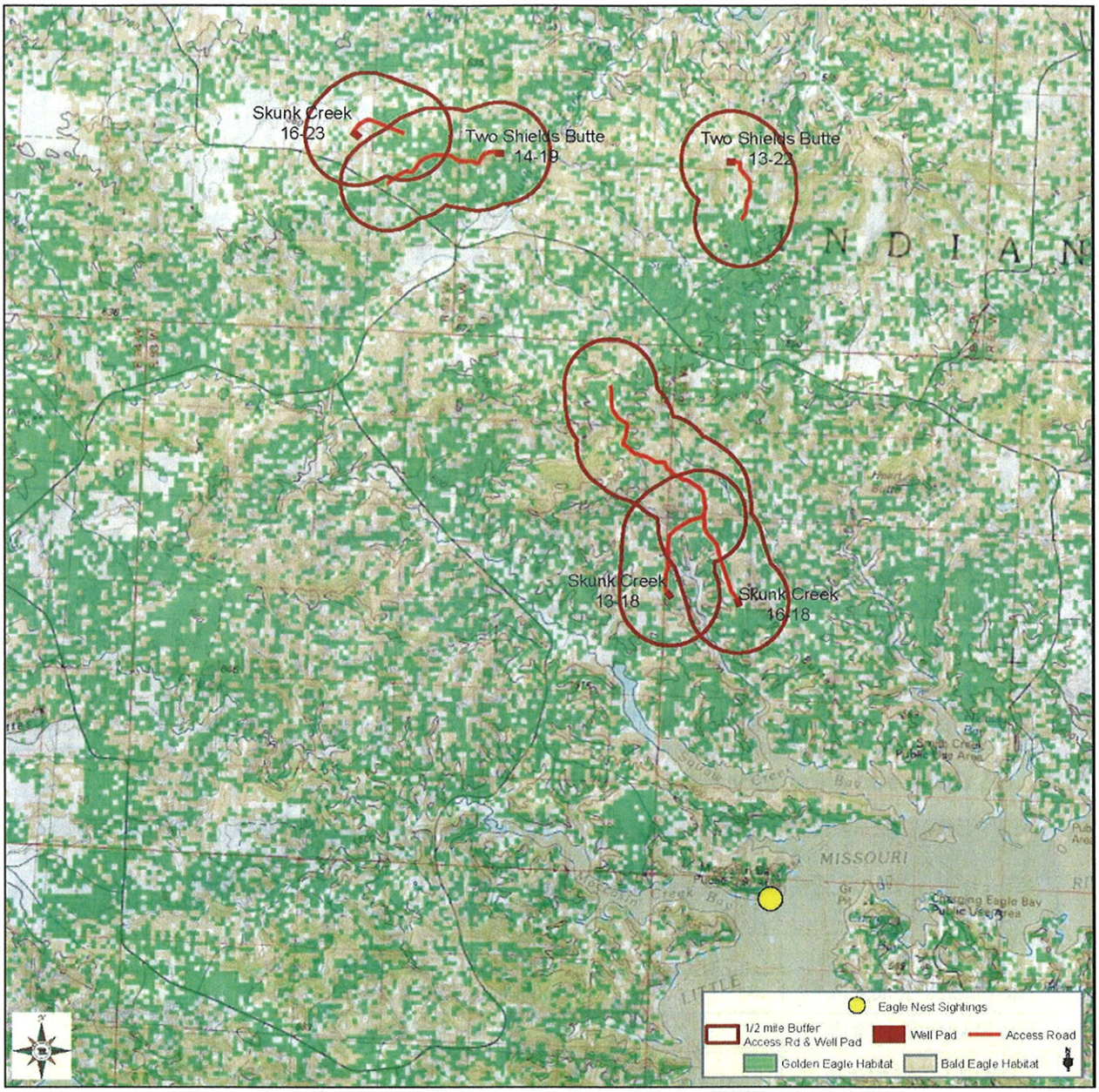

Figure 3-4, Bald and Golden Eagle Habitat and Nest Sightings

3.9 Migratory Birds, and Other Wildlife

The Migratory Bird Treaty Act (MBTA), 916 U.S.C. 703-711, provides protection for 1,007 migratory bird species, 58 of which are legally hunted. The MBTA regulates impacts to these species such as direct mortality, habitat degradation, and/or displacement of individual birds. The MBTA defines "taking" to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof, except when specifically permitted by regulations.

The proposed project study area lies in the Central Flyway of North America. As such, this area is used as resting grounds for many birds on their spring and fall migrations, as well as nesting and breeding grounds for many waterfowl species. Other non-game bird species are known to fly through and inhabit this region.

In addition, the project areas contain suitable habitat for mule deer (*Odocoileus hemionu*), whitetail deer (*Odocoileus virginianus*), sharp-tailed grouse (*Tympanuchus phasianellus*), wild turkey (*Meleagris gallopavo*), ring-necked pheasant (*Phasianus colchicas*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), North American badger (*Taxidea taxus*), song birds, coyote (*Canis latrans*), red fox (*Vulpes vulpes*), Eastern cottontail rabbit (*Sylvilagus floridanus*), white-tailed jackrabbit (*Lepus townsendii*), and North American porcupine (*Erethizon dorsatum*).

An intensive, pedestrian resource survey of each proposed well pad and access road was conducted on the following dates by Kadrmas, Lee & Jackson (KL&J):

- Skunk Creek #16-23 on June 29, 2010 and September 1, 2010
- Two Shields Butte #14-19 on November 10, 2010
- Two Shields Butte #13-22 on August 5, 2010
- Skunk Creek #13-18 on November 10, 2010
- Skunk Creek #16-18 on November 10, 2010

The purpose of this site visit was to gather site-specific data and photos with regards to biological, botanical, soil, and water resources. A study area of 10 acres centered on the well pad center points and 200-foot wide access road corridors were surveyed. The following migratory birds or other wildlife species were observed during the field surveys. ***Please refer to Table 3.7, Observed Migratory Birds and Other Wildlife.***

Table 3.7
Observed Migratory Birds and Other Wildlife

Well Pad Name	Species Observed
Skunk Creek #16-23	Northern Harrier
Two Shields Butte #14-19	Two antelope, one sharp-tailed grouse
Two Shields Butte #13-22	None observed
Skunk Creek #13-18	One hawk nest and one unidentified other raptor nest
Skunk Creek #16-18	Three whitetail deer, one hawk nest, and one unidentified other raptor nest (both nests same as those observed at Skunk Creek #13-18 site)

3.9.1 Migratory Birds and Other Wildlife Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact migratory birds or other wildlife.

Alternative B (Proposed Action)—Due to the presence of suitable habitat at the project site for many wildlife and avian species, ground clearing, drilling, and long-term production activities associated with the proposed project may impact individuals by displacing animals from suitable

habitat. While many species of wildlife may continue to use the project areas for breeding and feeding and continue to thrive, the activities associated with oil and gas development may displace animals from otherwise suitable habitats. As a result, wildlife may be forced to utilize marginal habitats or relocate to unaffected habitats where population density and competition increase. Consequences of such displacement and competition may include lower survival, lower reproductive success, lower recruitment, and lower carrying capacity leading ultimately to population-level impacts. Therefore, the proposed project may impact individuals and populations within these wildlife species, but is not likely to result in a trend towards listing of any of the species identified. As no grouse leks were observed in the project areas, additional timing restrictions for construction are not required.

The proposed well pads are located on upland areas that are at a considerably higher elevation (approximately 160 feet) than the Lake Sakakawea shoreline. Additionally, the distance to Lake Sakakawea is approximately 1.0 miles southeast of the nearest proposed well pad (Skunk Creek #16-18), or 1.70 miles following the shortest drainage pattern to the lake (Skunk Creek #13-18). This distance, along with the topographic features of the area, would assist in providing sight and sound buffers for shoreline-nesting birds

During drilling activities, the noise, movements, and lights associated with the drilling are expected to deter wildlife from entering the area. In addition, the cuttings pit would be used primarily for solid material storage, and it is expected that very minimal free fluid would be present in the pit. The absence of exposed liquids in the pit would minimize their attractiveness to wildlife. Immediately after the drilling rig leaves the location, the cuttings pit would be netted with State and Federal approved nets. These would remain in place until the closure of the cuttings pit.

In addition, design considerations would be implemented to further protect against potential habitat degradation. The storage tanks and heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. An 18-inch tall ring dike would also be constructed around the perimeter of the drilling site. BMPs to minimize wind and water erosion of soil resources, as well as implementing a semi-closed loop during drilling, would also be employed.

As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February 1 and July 15). To minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.

Additionally, all reasonable, prudent, and effective measures to avoid the taking of migratory bird species would be implemented during the construction and operation phases. If electrical lines are installed, the lines would be buried to prevent potential for bird strikes. The measures would include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.

3.10 Vegetation

An intensive resource survey of wildlife and botany species was conducted for the well pads and access road corridors, by KL&J. The purpose of this site visit was to gather site-specific data and photos with regard to biological, botanical, soil, and water resources. A study area of 10 acres centered on the well pad center points and 200-foot wide access road corridors were surveyed. Botanical resources were evaluated using visual inspection. The project study areas were also investigated for the presence of invasive plant species.

The Skunk Creek #16-23 site consisted of native and non-native upland grasses and shrubs. Prairie junegrass (*Koeleria pyrimidata*), green needlegrass (*Stipa viridula*), and Kentucky bluegrass (*Poa pratensis*) dominated the study area with smooth bromegrass (*Bromus inermis*) beginning to encroach onto the well pad. Several patches of silver buffaloberry (*Shepherdia argentea*) and Western snowberry (*Symphoricarpos occidentalis*) occurred on the well pad. The access road does cross a wetland adjacent to a man-make stock dam. Prairie cordgrass (*Spartina pectinata*) and softstem bulrush (*Scirpus validus*) were the dominant species found in the wetland. No noxious weed species were observed in the study area. The nearest wooded draw is located approximately 0.72 miles northeast of the well pad disturbance area. ***Please refer to Figure 3-5, Skunk Creek #16-23 Well Pad Vegetation, Figure 3-6, Skunk Creek #16-23 Access Road Vegetation, and Figure 3-7, Skunk Creek #16-23 Wetland Vegetation.***

Figure 3-5, Skunk Creek #16-23 Well Pad Vegetation

Figure 3-6, Skunk Creek #16-23 Access Road Vegetation

Figure 3-7, Skunk Creek #16-23 Wetland Vegetation

The Two Shields Butte #14-19 site consisted of native and non-native upland grasses and shrubs. The access road leading to the well pad was dominated by Western snowberry, Kentucky bluegrass, Western wheatgrass (*Agropyron smithii*), and prairie junegrass. Silver buffaloberry, chokecherry (*Prunus virginiana*), and green ash (*Fraxinus pennsylvanica*) were

observed growing near the access road. Dominant vegetation at the well pad consisted of Western snowberry, Kentucky bluegrass, Western wheatgrass, sand bluestem (*Andropogon halli*), and prairie bluegrass. Little bluestem (*Andropogon scoparius*) was observed as a dominant plant community on hillsides. No wetlands or noxious weeds were observed in the study area. The nearest wooded draw is located approximately 440 feet northeast of the well pad disturbance area. ***Please refer to Figure 3-8, Two Shields Butte #14-19 Well Pad Vegetation and Figure 3-9, Two Shields Butte #14-19 Access Road Vegetation.***

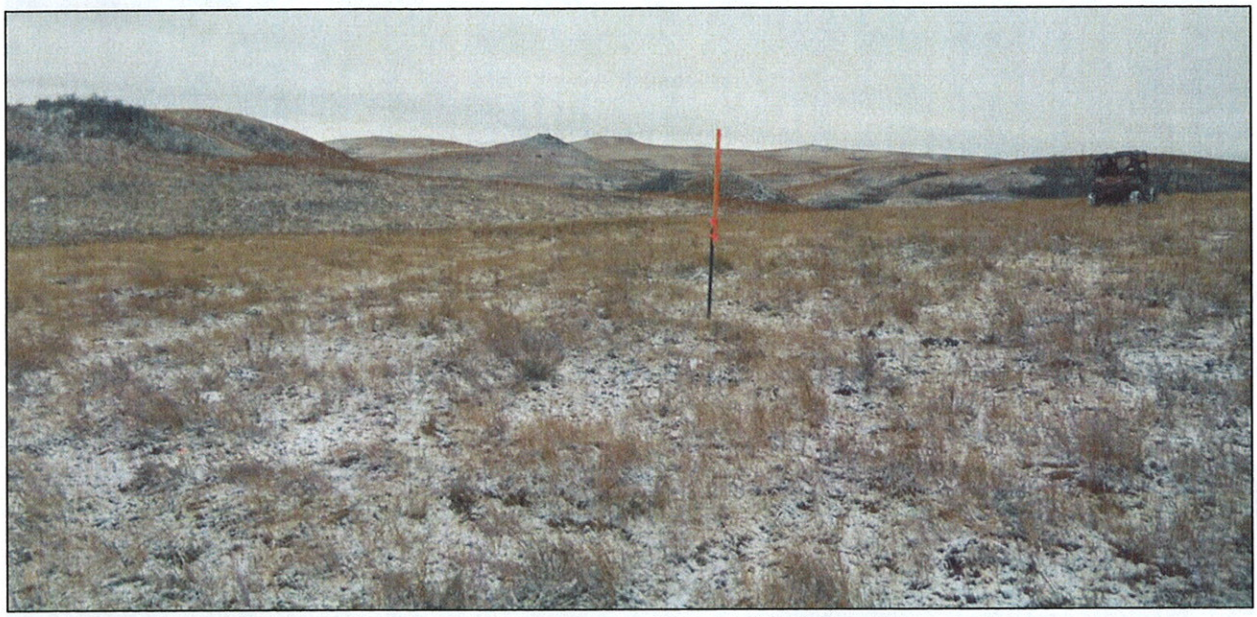

Figure 3-8, Two Shields Butte #14-19 Well Pad Vegetation

Figure 3-9, Two Shields Butte #14-19 Access Road Vegetation

The Two Shields Butte #13-22 site consisted of native and non-native upland grasses and shrubs. The well pad and access road were both dominated by Western snowberry, cudweed sagewort (*Artemisia ludoviciana*), Western wheatgrass, and Kentucky bluegrass. Silverleaf scurfpea (*Psoralea argophylla*), yarrow (*Achillea millefolium*), little bluestem, field pussytoes (*Antennaria microphylla*), wild bergamont (*Monarda fistulosa*), and green needlegrass (*Stipa viridula*) were observed in patches throughout the study area. Wooded draws in the area contained Burr oak (*Quercus macrocarpa*) and green ash (*Fraxinus pennsylvanica*). No wetlands were observed in the study area, and no wetland plant species were observed. The nearest wooded draw is located approximately 420 feet south of the well pad disturbance area. ***Please refer to Figure 3-10, Two Shields Butte #13-22 Well Pad Vegetation.***

Figure 3-10, Two Shields Butte #13-22 Well Pad Vegetation

The Skunk Creek #13-18 site consisted of native and non-native upland grasses. The access road and well pad were both dominated by Western wheatgrass, blue grama (*Bouteloua gracilis*), prairie junegrass, and Kentucky bluegrass. Hilltops and side slopes of the well pad also contained patches of little bluestem. Wooded draws located south and west of the proposed well pad contained silver buffaloberry, chokecherry, green ash, and Western snowberry. No noxious weeds or wetlands were observed. The nearest wooded draw is 240 feet southwest of the well pad. ***Please refer to Figure 3-11, Skunk Creek #13-18 Well Pad Vegetation and Figure 3-12, Wooded Draw Southwest of Skunk Creek #16-18 Well Pad.***

Figure 3-11, Skunk Creek #13-18 Well Pad Vegetation

Figure 3-12, Wooded Draw Southwest of Skunk Creek #16-18 Well Pad

The Skunk Creek #16-18 site consisted of native and non-native upland grasses. The well pad and access road were dominated by Western wheatgrass, blue grama, prairie junegrass, and Kentucky bluegrass, with patches of Western snowberry and little bluestem. Several green ash trees and patches of silver buffaloberry were noted on a hillside east of the well pad. Wooded draws near the access road contained silver buffaloberry, chokecherry, American elm (*Ulmus americana*), and green ash. No wetland or noxious weed species were observed. The nearest wooded draw is located approximately 0.30 miles southeast of the well pad disturbance area. ***Please refer to Figure 3-13, Skunk Creek #16-18 Well Pad Vegetation and Figure 3-14, Skunk Creek #16-18 Access Road Vegetation.***

Figure 3-13, Skunk Creek #16-18 Well Pad Vegetation

Figure 3-14, Skunk Creek #16-18 Access Road Vegetation

In addition, the project areas were surveyed for the presence of noxious weeds. Of the 11 species declared noxious under the North Dakota Century Code (Chapter 63-01.0), three are known to occur in Dunn County. ***Please refer to Table 3.8, Noxious Weed Species***. In addition, counties and cities have the option to add species to the list to be enforced within their jurisdictions. There are no additional noxious weeds listed for Dunn County. No noxious weeds were identified in the study area.

Table 3.8
Noxious Weed Species

Common Name	Scientific Name	2009 Dunn County Reported Acres
Absinth wormwood	*Artemesia absinthium L.*	39,300
Canada thistle	*Cirsium arvense (L.) Scop*	28,500
Dalmation toadflax	*Linaria genistifolia ssp. Dalmatica*	—
Diffuse Knapweed	*Centaurea diffusa Lam*	—
Leafy spurge	*Euphorbia esula L.*	18,300
Musk thistle	*Carduus nutans L.*	—
Purple loosestrife	*Lythrum salicaria*	—
Russian knapweed	*Acroptilon repens (L) DC.*	—
Saltcedar (tamarisk)	*Tamarix ramosissima*	—
Spotted knapweed	*Centaurea maculosa Lam.*	—
Yellow toadflax	*Linaria vulgaris*	—

3.10.1 Vegetation Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact vegetation

Alternative B (Proposed Action)—Ground clearing activities associated with construction of the proposed well pads and access roads would result in vegetation disturbance; however, the areas of proposed surface disturbances are minimal in the context of the setting, and these impacts would be further minimized in accord with the BLM Gold Book standards for well reclamation. Disturbance of vegetation in areas of noxious weed infestations may also result in redistribution of invasive grasses within the project areas. Thus, areas not currently dominated by these species would have a high potential to become infested. The spread of invasive grasses can have an adverse effect on multiple aspects of the vegetation resource ranging from the suitability of sensitive plant habitat and maintenance of native biodiversity, to forage production for livestock grazing.

Following construction, interim reclamation measures to be implemented include reduction of cut and fill slopes, redistribution of stockpiled topsoil, and re-seeding of disturbed areas with a native grass seed mixture consistent with surrounding vegetation. If commercial production equipment is installed, each well pad would be reduced in size to accommodate the production facilities, while leaving adequate room to conduct normal well maintenance and potential recompletion operations, with the remainder of the well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating, backfilling, and re-seeding with a native grass seed mixture from a BIA/BLM-approved source. Erosion control measures would be installed as

appropriate. Stockpiled topsoil would be redistributed and re-seeded as recommended by the BIA.

If no commercial production developed from any of the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. The access roads and well pad areas would be re-contoured to match topography of the original landscape as closely as possible and re-seeded with vegetation consistent with surrounding native species to ensure a healthy and diverse mix free of noxious weeds. Seed would be obtained from a BIA/BLM-approved source. Re-vegetation of the site would be consistent with the BLM Gold Book standards. Erosion control measures would be installed as appropriate in a manner that is consistent with the BLM Gold Book standards. Maintenance of the re-vegetated sites would continue until such time that the stands were consistent with the surrounding undisturbed vegetation and the sites free of noxious weeds. The surface management agency would provide final inspection of the sites to deem the reclamation effort complete.

3.11 Cultural Resources

Historic properties, or cultural resources, on federal or tribal lands are protected by many laws, regulations and agreements. The *National Historic Preservation Act of 1966* (16 USC 470 *et seq.*) at Section 106 requires, for any federal, federally assisted or federally licensed undertaking, that the federal agency take into account the effect of that undertaking on any district, site, building, structure or object that is included in the National Register of Historic Places (National Register) before the expenditure of any federal funds or the issuance of any federal license. Cultural resources is a broad term encompassing sites, objects, or practices of archaeological, historical, cultural and religious significance. Eligibility criteria (36 CFR 60.6) include association with important events or people in our history, distinctive construction or artistic characteristics, and either a record of yielding or a potential to yield information important in prehistory or history. In practice, properties are generally not eligible for listing on the National Register if they lack diagnostic artifacts, subsurface remains or structural features, but those considered eligible are treated as though they were listed on the National Register, even when no formal nomination has been filed. This process of taking into account an undertaking's effect on historic properties is known as "Section 106 review," or more commonly as a cultural resource inventory.

The area of potential effect (APE) of any federal undertaking must also be evaluated for significance to Native Americans from a cultural and religious standpoint. Sites and practices may be eligible for protection under the *American Indian Religious Freedom Act of 1978* (42 USC 1996). Sacred sites may be identified by a tribe or an authoritative individual (Executive Order 13007). Special protections are afforded to human remains, funerary objects, and objects of cultural patrimony under the *Native American Graves Protection and Repatriation Act* (NAGPRA, 25 USC 3001 *et seq.*).

Whatever the nature of the cultural resource addressed by a particular statute or tradition, implementing procedures invariably include consultation requirements at various stages of a federal undertaking. The MHA Nation has designated a Tribal Historic Preservation Officer (THPO) by Tribal Council resolution, whose office and functions are certified by the National

Park Service. The THPO operates with the same authority exercised in most of the rest of North Dakota by the State Historic Preservation Officer (SHPO). Thus, BIA consults and corresponds with the THPO regarding cultural resources on all projects proposed within the exterior boundaries of the Fort Berthold Reservation.

Cultural resource inventories of these well pads and access roads were conducted by personnel of Kadrmas, Lee & Jackson, Inc. and Juniper, LLC, using an intensive pedestrian methodology. For the Skunk Creek 16-23-14-2H, Skunk Creek 16-23-14-2H3 & Skunk Creek 16-23-14-1H (formerly Skunk Creek 16-23-14H & Skunk Creek 16-23-14H3) project approximately 23.6 acres were inventoried between May 20 and June 29, 2010 (Klinner 2010), with 15.4 acres later inventoried on October 6, 2010 for alternate access roads (Morrison 2011a). No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. As the lead federal agency, and as provided for in 36 CFR 800.5, on the basis of the information provided, BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on September 1, 2010 and the THPO concurred on September 9, 2010. For the Two Shields Butte 13-22-16-1H, Two Shields Butte 13-22-16-1H3 & Two Shields Butte 13-22-33-16H (formerly Two Shields Butte 13-22-16H & Two Shields Butte 13-22-16H3) project approximately 55.45 acres were inventoried on July 29, 2010 (Shropshire 2011). No historic properties were located and BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on February 24, 2011; however, the THPO did not respond within the allotted 30 day comment period.

For the Two Shields Butte 14-19-18-4H, Two Shields Butte 14-19-18-H3, Two Shields Butte 14-19-18-3H & Two Shields Butte 14-19-18-2H3 (formerly Two Shields Butte 14-19-18-2H) project approximately 15.8 acres were inventoried on November 13, 2010 (Morrison 2010). No historic properties were located and BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on February 24, 2011; however, the THPO did not respond within the allotted 30 day comment period. For the Skunk Creek 13-18-7-4H, Skunk Creek 13-18-7-4H3 & Skunk Creek 13-18-7-3H project and the Skunk Creek 16-18-7-2H, Skunk Creek 16-18-7-1H & Skunk Creek 16-18-7-1H3 project a total of approximately 101 acres were inventoried on November 13, 2010 (Morrison 2011b). No historic properties were located in either of these project areas and BIA reached a determination of **no historic properties affected** for these undertakings. This determination was communicated to the THPO on February 16, 2011; however, the THPO did not respond within the allotted 30 day comment period.

3.11.1 Cultural Resources Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact cultural resources

Alternative B (Proposed Action)—The well pads and access roads have been positioned to avoid cultural resources. As such, cultural resources impacts are not anticipated. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site secured, and BIA and THPO notified. In the event of a discovery, work shall not resume until written authorization to proceed has been received from the BIA. All project

workers are prohibited from collecting artifacts or disturbing cultural resources in any area under any circumstances.

3.12 Socioeconomic Conditions

Socioeconomic conditions depend on the character, habits, and economic conditions of people living within the proposed project areas. Business, employment, transportation, utilities, etc. are factors that affect the social climate of a community. Other factors that distinguish the social habits of one particular area from another include the geography, geology, and climate of the area.

The Fort Berthold Reservation is home to six major communities, consisting of New Town, White Shield, Mandaree, Four Bears, Twin Buttes, and Parshall. These communities provide small business amenities such as restaurants, grocery stores, and gas stations; however, they lack the larger shopping centers that are typically found in larger cities in the region such as Minot and Bismarck. According to 2000 US Census Data[9], educational/health/social services is the largest industry on the reservation, followed by the entertainment/recreation/accommodation /food industry. The Four Bears Casino, Convenience Store, and Recreation Park are also major employers with over 320 employees, 90% of whom are tribal members. In addition, several industries are located on the reservation, including Northrop Manufacturing, Mandaree Electrical Cooperative, Three Affiliated Tribes Lumber Construction Manufacturing Corporation, and Uniband.

Several paved state highways provide access to the reservation including ND Highways 22 and 23 and Highway 1804. These highways provide access to larger communities such as Bismarck, Minot, and Williston. Paved and gravel BIA Route roadways serve as primary connector routes within the reservation. In addition, networks of rural gravel roadways are located throughout reservation boundaries providing access to residences, oil and gas developments, and agricultural land. Major commercial air service is provided out of Bismarck and Minot, with small-scale regional air service provided out of New town and Williston.

3.12.1 Socioeconomic Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact the socioeconomic conditions in the project areas. However, Alternative A would not permit the development of oil and gas resources within the spacing units, the development of which could have positive effects on employment and income through the creation of jobs and payment of leases, easements, and/or royalties to Tribal members.

Alternative B (Proposed Action)—Alternative B is not anticipated to substantially impact the socioeconomic conditions in the project areas, but it does have the potential to yield beneficial impacts on Tribal employment and income. Qualified individual tribal members may find employment through oil and gas development and increase their individual incomes. Additionally, the proposed action may result in indirect economic benefits to tribal business owners resulting from construction workers expending money on food, lodging, and other

[9] It should be noted that the most recent US Census data dates from 2000. Since 2000, there has been an increasing focus on oil and gas development on the Fort Berthold Reservation. As such, it is anticipated that these trends have likely shifted; however, no new data is available until the 2010 US Census is published.

necessities. The increased traffic during construction may create more congested traffic conditions for residents. Kodiak will follow Dunn County, BIA, and North Dakota Department of Transportation rules and regulations regarding rig moves and oversize/overweight loads on state and county roads used as haul roads in order to maintain safe driving conditions.

3.13 Environmental Justice

Per Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, measures must be taken to avoid disproportionately high adverse impacts on minority or low-income communities.

Generally, the Three Affiliated Tribes qualify for environmental justice consideration as both a minority and low-income population. The population of North Dakota is predominantly Caucasian. Tribal members comprise 5.0% of North Dakota's population and 10.9% of the population of Dunn County.

According to 2005-2009 U.S. Census Bureau data, the Fort Berthold Reservation has lower than statewide averages of per capita income and median household income, whereas Dunn County has a higher per capita income and median household income than the statewide average. In addition, Dunn County has slightly lower rates of unemployment than the state average, while Fort Berthold's rate of unemployment was substantially greater.[10] ***Please refer to Table 3.9, Employment and Income.***

Table 3.9
Employment and Income

Location	Per Capita Income	Median Household Income	Unemployment Rate	Individuals Living Below Poverty Level
Dunn County	$25,006	$45,270	2.0%	8.9%
Fort Berthold Reservation	$15,945	$40,603	7.8%	25.2%
Statewide	**$24,978**	**$45,140**	**2.4%**	**12.3%**

Source: U.S. Census Bureau, 2005-2009 American Community Survey.

Population decline in rural areas of North Dakota has been a growing trend as individuals move toward metropolitan areas of the state, such as Bismarck and Fargo. While Dunn County's population has been slowly declining, the Fort Berthold Reservation has witnessed a steady increase in population. American Indians are the majority population on the Fort Berthold Reservation but are the minority population in Dunn County and the state of North Dakota. ***Please refer to Table 3.10, Demographic Trends.***

[10] While more current data reflecting income, unemployment, and poverty levels within the Fort Berthold Reservation are not available, it is anticipated that published 2010 Census data may show similar trends. However, assessment contained in this document uses the best available data at the present time.

Table 3.10 Demographic Trends					
Location	**Population in 2009**	**% of State Population**	**% Change 1990-2000**	**Predominant Race**	**Predominant Minority**
Dunn County	3,318	0.52%	-7.8%	White	American Indian (10.9%)
Fort Berthold Reservation	6,094	0.95%	+3.0%	American Indian[11]	White (28.8%)
Statewide	**639,725**	**--**	**-0.4%**	**White**	**American Indian (5.0%)**

Source: U.S. Census Bureau, 2005-2009 American Community Survey.

3.13.1 Environmental Justice Impacts/Mitigation

Alternative A (No Action)—Alternative A would not result in disproportionately high adverse impacts to minority or low-income populations.

Alternative B (Proposed Action)—Alternative B would not require relocation of homes or businesses, cause community disruptions, or cause disproportionately high adverse impacts to members of the Three Affiliated Tribes. The proposed project has not been found to pose significant impacts to any other critical element (public health and safety, water, wetlands, wildlife, soils, or vegetation) within the human environment. The proposed project is also not anticipated to result in disproportionately high adverse impacts to non-Tribal minority or low-income populations.

Oil and gas development of the Bakken Formation is occurring both on and off the Fort Berthold Reservation. Employment opportunities related to oil and gas development may lower the unemployment rate and increase the income levels on the Fort Berthold Reservation. In addition, the Three Affiliated Tribes and allotted owners of mineral interests may receive income from oil and gas development on the Fort Berthold Reservation in the form of royalties, if drilling and production are successful, as well as from Tribal Employee Rights Office (TERO) taxes on construction of drilling facilities.

3.14 Infrastructure and Utilities

The Fort Berthold Reservation's infrastructure consists of roads, bridges, utilities, and facilities for water, wastewater, and solid waste.

Known utilities and infrastructure within the vicinity of the proposed project includes paved (ND Highway 22) and gravel (BIA Routes 12 and 23) Roadways. At this time there are no known or proposed rural water lines located within the project survey area.

3.14.1 Infrastructure and Utility Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact infrastructure or utilities.

[11] According to the North Dakota Tourism Division, there are 10,400 enrolled members of the Three Affiliated Tribes.

Alternative B (Proposed Action)—Alternative B would require construction of several new roadways. Additionally, vehicular traffic associated with construction, operation, and maintenance of the proposed action would increase the overall traffic on the local roadway network. To minimize potential impacts to the roadway conditions and traffic patterns in the area, all haul routes used would either be private roads or roads that have been approved for this type of transportation use by the local governing tribal, township, county, and/or state entities. Kodiak would follow Dunn County, BIA, and North Dakota Department of Transportation rules and regulations regarding rig moves and oversize/overweight loads on state and county roads used as haul roads. All contractors are required to permit their oversize/overweight loads through these entities. Kodiak's contractors would be required to adhere to all local, county, tribal, and state regulations regarding rig moves, oversize/overweight loads, and frost restrictions.

The well sites may also require the installation of supporting buried electrical lines. In addition, if commercially recoverable oil and gas are discovered at the well sites, a natural gas gathering system may be required. It is expected that electric lines and other pipelines would be constructed underground within the existing right-of-way, or additional NEPA analysis and BIA approval would be completed prior to construction of these utilities. Other utility modifications would be identified during design and coordinated with the appropriate utility company.

Drilling operations at the proposed well pads may generate produced water. In accordance with the BLM Gold Book and BLM Onshore Oil and Gas Order Number 7, produced water would be disposed of via subsurface injection, or other appropriate methods that would prevent spills or seepage. Produced water may be trucked to nearby oil fields where injection wells are available.

Safety hazards posed from increased traffic during the drilling phase are anticipated to be short-term and minimal for each proposed site. It is anticipated that approximately 30 to 40 trips, over the course of several days, would be required to transport the drilling rig and associated equipment to each proposed well site. If commercial operations are established at any of the proposed sites following drilling activities, the pump would be checked daily and oil and water hauling activities would commence. Oil would be hauled using a semi tanker trailer, typically capable of hauling 140 barrels of oil per load. Traffic to and from the well site would depend upon the productivity of the well. A 1,000 barrel per day well would require approximately seven tanker visits per day, while a 300 barrel per day well would require approximately two visits per day.[12] Produced water would also be hauled from the site using a tanker, which would typically haul 110 barrels of water per load. The number of visits would be dependent upon daily water production.[13] Established load restrictions for state and BIA roadways would be followed and haul permits would be acquired as appropriate.

[12] A typical Bakken oil well initially produces at a high rate and then declines rapidly over the next several months to a more moderate rate. In the vicinity of the proposed project areas, initial rates of 500 to 1,000 barrels of oil per day (BOPD) could be expected, dropping to 200 to 400 BOPD after several months.

[13] A typical Bakken oil well initially produces water at 200 bbls per day and then declines rapidly over the next several months to a more moderate rate. In the vicinity of the proposed project areas, initial rates of 200 barrels of water per day (BWPD) could be expected, dropping to 30 to 70 BWPD after several months.

3.15 Public Health and Safety

Health and safety concerns include hydrogen sulfide (H_2S) gas[14], hazardous materials used or generated during well installation or production, and traffic hazards associated with heavy drill rigs and tankers.

3.15.1 Public Health and Safety Impacts/Mitigation

Alternative A (No Action)—Alternative A would not impact public health and safety.

Alternative B (Proposed Action)—Project design and operational precautions would minimize the likelihood of impacts from H_2S gases, hazardous materials, and traffic, as described below.

H_2S Gases. It is unlikely that the proposed action would result in release of H_2S at dangerous concentrations; however, Kodiak will submit H_2S Contingency Plans to the BLM as part of the site APDs. These plans establish safety measures to be implemented throughout the drilling process to prevent accidental release of H_2S into the atmosphere. The Contingency Plans are designed to protect persons living and/or working within 3,000 feet (0.6 miles) of each well location and include emergency response procedures and safety precautions to minimize the potential for an H_2S gas leak during drilling activities. Satellite imagery revealed that there are residences/buildings within 3,000 feet of one of the proposed well pads. Two residences/buildings were observed 0.46 miles south of the proposed Skunk Creek #16-23 well pad. No residence were observed within 3,000 of the remaining proposed well pads,

Hazardous Materials. The EPA specifies chemical reporting requirements under the Superfund Amendments and Reauthorization Act of 1986, as amended. No materials used or generated by this project for production, use, storage, transport, or disposal are on either the Superfund list or on the EPA's list of extremely hazardous substances in 40 CFR 355.

The Spill Prevention, Control, and Countermeasure (SPCC) rule includes EPA requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC plans.

3.16 Cumulative Considerations

Cumulative impacts result from the incremental consequences of an action "when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Effects of an action may be minor when evaluated in an individual context, but these effects can add to other disturbances and collectively may lead to a measureable environmental change. By evaluating the impacts of the proposed action with the effects of other actions, the relative contribution of the proposed action to a projected cumulative impact can be estimated.

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[14] H_2S is extremely toxic in concentrations above 500 parts per million. H_2S has not been found in measurable quantities in the Bakken Formation. However, before reaching the Bakken, drilling would penetrate the Mission Canyon Formation, which is known to contain varying concentrations of H_2S.

3.16.1 Past, Present, and Reasonably Foreseeable Actions

Oil and gas development in western North Dakota has occurred with varying intensity for the past 100 years. Gas development began in the area in 1909, and the first recorded oil well was drilled in 1920. North Dakota's oil production has boomed twice prior to the current boom; first in the 1950s, peaking in the 1960s, and again in the 1970s, peaking in the 1980s. North Dakota is currently experiencing its third oil boom, which has already far surpassed the previous booms in magnitude. This oil boom is occurring both within and outside the Fort Berthold Reservation.

According to the NDIC, as of January 31, 2011, there were approximately 466 active and/or confidential oil and gas wells within the Fort Berthold Reservation and 311 within the 20-mile radius outside the boundaries of the Fort Berthold Reservation. ***Please refer to Table 3.11, Existing and proposed Oil and Gas Wells and Figure 3-15, Existing and Proposed Oil and Gas Wells.***

Table 3.11
Summary of Active and Proposed Wells

Distance from Proposed Well pads	Number of Active or Proposed Wells
1 mile radius	9
5 mile radius	77
10 mile radius	169
20 mile radius	715

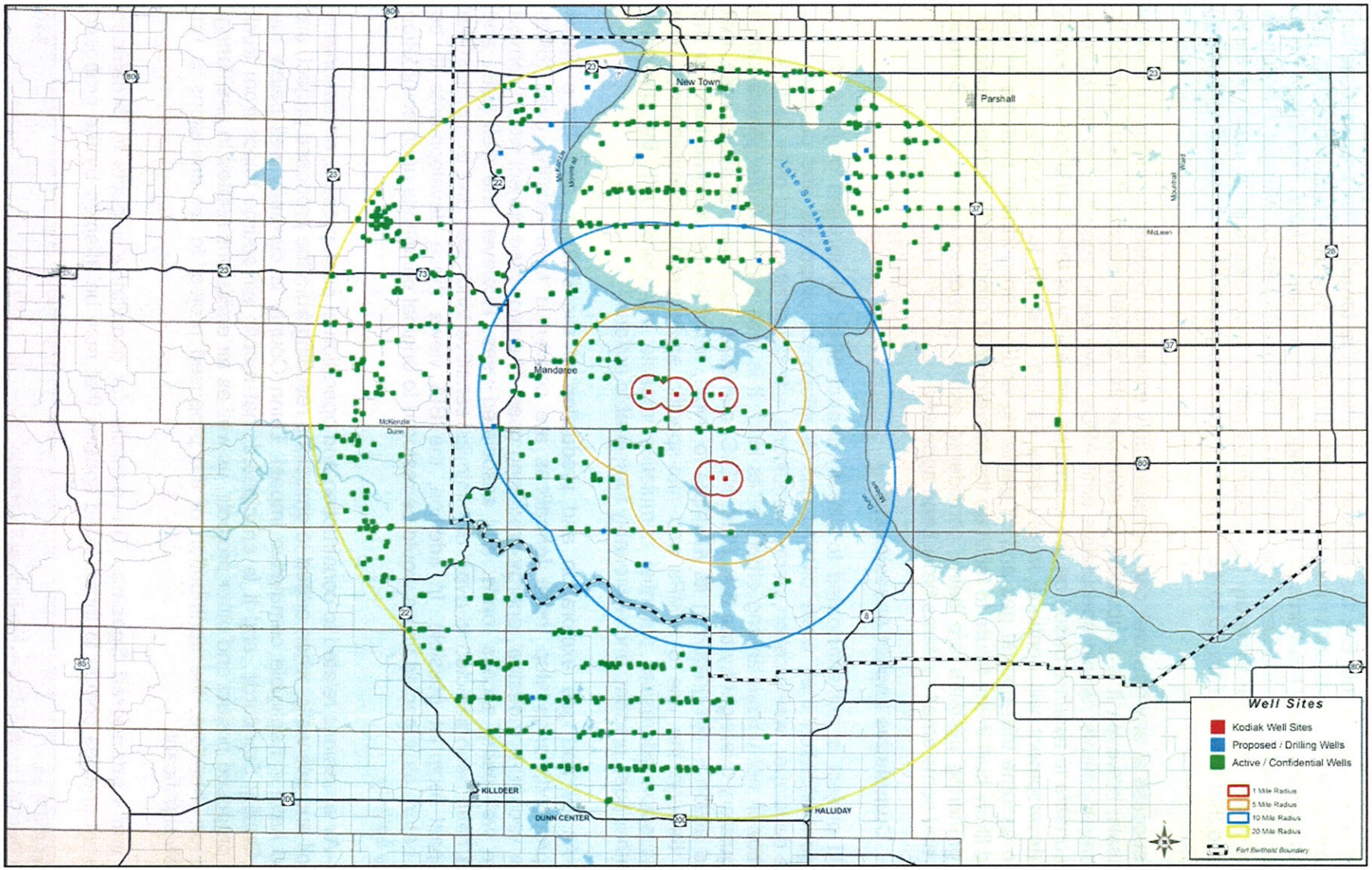


Figure 3-15, Existing and Proposed Oil and Gas Well

As mentioned previously in this EA, the Bakken Formation (the target of the proposed action) covers approximately 25,000 square miles beneath North Dakota, Montana, Saskatchewan, and Manitoba, with approximately two-thirds of the acreage beneath North Dakota. The Three Forks Formation lies beneath the Bakken. The North Dakota Department of Mineral Resources estimates that there are approximately two billion barrels of recoverable oil in each of these Formations and that there will be 30 to 40 remaining years of production, or more if technology improves.

Commercial success at any new well can be reasonably expected to result in additional nearby oil/gas proposals; however, it is speculative to anticipate the specific details of such proposals. While such developments remain speculative until APDs have been submitted to the BLM or BIA, it is reasonable to assume based on the estimated availability of the oil and gas resources that further development will continue in the area for the next 30 to 40 years. It is also reasonable to assume that natural gas and oil gathering and/or transportation systems will be proposed and likely built in the future to facilitate the movement of products to market. Currently, natural gas gathering systems are being considered and/or proposed on the Fort Berthold Reservation, and some small systems have been approved.

3.16.2 Cumulative Impact Assessment

The proposed project is not anticipated to directly impact other oil and gas projects. It is a reasonable generalization that, while oil and gas development proposals and projects vary based on the developer, well location, permit conditions, site constraints, and other factors, this proposed action is not unique among others of its kind. It is also a reasonable generalization based on regulatory oversight by the BIA, BLM, NDIC, and other agencies, as appropriate, that this proposed action is not unique in its attempts to avoid, minimize, or mitigate harm to the environment through the use of BMPs and site-specific environmental commitments. The following discussion addresses potential cumulative impacts associated with the proposed project and other past, present, and reasonably foreseeable actions.

Land Use—As oil and gas exploration and production of the Bakken and Three Forks Formations proceed, lands atop these formations are converted from existing uses (often agricultural or vacant) to industrial, energy-producing uses. The proposed project would convert grasslands to well pads, access roads, and associated uses. However, the well pads and access roads have been selected to avoid or minimize sensitive land uses and to maintain the minimum impact footprint possible. In addition, the BIA views these developments to be temporary in nature as impacted areas would be restored to original conditions upon completion of oil and gas activity.

Air Quality—Air emissions related to construction and operation of past, present, or reasonably foreseeable oil and gas wells, when added to emissions resulting from the proposed project, are anticipated to have a negligible cumulative impact. Dunn County is currently well below the Ambient Air Quality Standards, and it is anticipated that mobile air source toxics from truck traffic for the proposed project and other projects, as well as air emissions related to gas flaring, would be minor; therefore, the contribution of the proposed project to air emissions is not expected to be significant.

Threatened and Endangered Species—The potential for cumulative impacts to threatened and endangered species comes to those listed species that may be affected by the proposed

project or candidate species that may be impacted by the proposed project. The proposed project occurs within the central flyway through which whooping cranes migrate. Continual development (e.g., agriculture, oil and gas, and wind) within the central flyway has compromised whooping crane habitat both through direct impacts via conversion of potential habitat to other uses and indirect impacts due to disrupting the use of potential stopover habitat, as whooping cranes prefer isolated areas and are known to avoid large-scale development. However, the proposed action, when added to other development directly and indirectly impacting whooping cranes and their habitat, is not anticipated to significantly contribute to cumulative impacts occurring to the whooping crane population.

As previously stated, habitat for the interior least tern, pallid sturgeon, and piping plover is primarily associated with Lake Sakakawea and its shoreline. When added to other past, present, and reasonably foreseeable projects, such as oil and gas wells and water intake structures on Lake Sakakawea, the proposed project may have an indirect cumulative impact on potential habitat (Lake Sakakawea and its shoreline) for these species due to potential leaks or spills. However, due to the implementation of secondary containment measures and cuttings pit parameters for the proposed project, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Furthermore, electrical lines, if installed, would be buried to prevent the potential for electrical line strikes by the interior least tern and piping plover. Therefore, it is unlikely the project would contribute to cumulative impacts to the interior least tern, pallid sturgeon, and piping plover.

Please refer to the discussion below (Eagles, Migratory Birds, Other Wildlife, and Vegetation) for an analysis of potential cumulative impacts to candidate species (Dakota skipper and Sprague's pipit).

Eagles, Migratory Birds, Other Wildlife, and Vegetation—The proposed project, when added to previously constructed and reasonably foreseeable oil and gas wells, would contribute to habitat loss and fragmentation associated with construction of well pads, access roads, and associated development. The North Dakota Parks and Recreation Department notes that approximately 80% of the state's native prairie has been lost to agriculture, with most of the remaining areas found in the arid west; ongoing oil and gas activity has the potential to threaten remaining native prairie resources (n.d.). While many species of wildlife may continue to use the project area for breeding and feeding and continue to thrive, the activities associated with oil and gas development may displace animals from otherwise suitable habitats. As a result, wildlife may be forced to utilize marginal habitats or relocate to unaffected habitats where population density and competition increase. Consequences of such displacement and competition may include lower survival, lower reproductive success, lower recruitment, and lower carrying capacity leading ultimately to population-level impacts. In particular, species that rely on native prairie for breeding, feeding, and sheltering, such as the Dakota skipper and the Sprague's pipit, may experience population impacts due to the cumulative loss of habitat through conversion and fragmentation. The addition of oil and gas wells and roadways to existing human development may also increase an indirect cumulative impact on the Sprague's pipit due to its avoidance of non-prairie features.

However, the proposed action and other similar actions are carefully planned to avoid or minimize these impacts. Multiple components of the process used by the BIA to evaluate and approve such actions, including biological and botanical surveys, on-site assessments with representatives from multiple agencies and entities, public and agency comment periods on this

EA, and the use of BMPs and site-specific environmental commitments are in place to ensure that environmental impacts associated with oil and gas development are minimized. The practice of utilizing existing roadways to the greatest extent practicable further minimizes impacts to wildlife habitats and prairie ecosystems. The proposed wells have been sited to avoid sensitive areas such as surface water, wetlands, and riparian areas. Reclamation activities are anticipated to minimize and mitigate disturbed habitat.

Infrastructure and Utilities—The proposed actions, along with other oil and gas wells proposed and drilled in the Bakken and Three Forks Formations, requires infrastructure and utilities to provide needed resource inputs and accommodate outputs such as fresh water, power, site access, transportation for products to market, and disposal for produced water and other waste materials. As with the proposed action, many other wells currently being proposed and/or built are positioned to make the best use of existing roads and to minimize the construction of new roads; however, some length of new access roads are commonly associated with new wells. The well pads have been positioned in close proximity to existing roadways to minimize the extent of access road impacts in the immediate area. Additionally, existing two-track roadways have been utilized wherever possible to minimize impacts to the surrounding landscape. The contribution of the proposed project and other projects to stress on local roadways used for hauling materials may result in a cumulative impact to local roadways. However, abiding by permitting requirements and roadway restrictions with the jurisdictional entities are anticipated to offset any cumulative impact that may result from the proposed projects and other past, present, or future projects. BMPs would be implemented to minimize impacts of the proposed project.

The proposed action has been planned to avoid impacts to resources such as floodplains, surface water, cultural resources, and threatened and endangered species. Unavoidable impacts to these or other resources would be minimized and/or mitigate in accordance with applicable regulations.

3.17 Irreversible and Irretrievable Commitment of Resources

Removal and consumption of oil or gas from the Bakken or Three Forks Formations would be an irreversible and irretrievable commitment of resources. Other potential resource commitments include acreage devoted to disposal of cuttings, soil lost through wind and water erosion, cultural resources inadvertently destroyed, wildlife killed during earth-moving operations or in collisions with vehicles, and energy expended during construction and operation.

3.18 Short-term Use of the Environment Versus Long-term Productivity

Short-term activities would not significantly detract from long-term productivity of the project areas. The area dedicated to the access road and well pad would be unavailable for livestock grazing, wildlife habitat, or other uses. However, allottees with surface rights would be compensated for loss of productive acreage and project footprints would shrink considerably once the wells were drilled and non-working areas reclaimed and reseeded. Successful and ongoing reclamation of the landscape would reestablish the land's use for wildlife and livestock grazing, stabilize the soil, and reduce the potential for erosion and sedimentation. The primary long-term resource loss would be the extraction of oil and gas resources from the Bakken Formation, which is the purpose of this project.

3.19 Permits

Kodiak will be required to acquire the following permits prior to construction:

- *Application for Permit to Drill—Bureau of Land Management*
- *Application for Permit to Drill—North Dakota Industrial Commission*

3.20 Environmental Commitments/Mitigation

The following commitments have been made by Kodiak Oil and Gas (USA), Inc.:

- Topsoil will be segregated and stored on-site to be used in the reclamation process. All disturbed areas would be re-contoured to original elevations as close as possible as part of the reclamation process.
- Woody vegetation cleared from the site will be chipped on-site and incorporated into topsoil stockpiles.
- BMPs (may include, but are not limited to, hydro-seeding, erosion mats and biologs) will be implemented to minimize wind and water erosion of soil resources. Soil stockpiles will be positioned to help divert runoff around the well pads.
- Well sites and access roads will avoid surface waters. The proposed project will not alter stream channels or change drainage patters.
- The drill cuttings pits will be located on the cut side of the locations and away from areas of shallow ground water and have a reinforced synthetic liner of 20mil thickness to prevent potential leaks. All spills or leaks of chemicals and other pollutants will be reported to the BLM and EPA. The procedures of the surface management agency shall be followed to contain leaks or spills.
- All proposed wells will be cemented and cased to isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.
- During reclamation of the Skunk Creek #16-23 access road, the portion of the road that crosses wetland will be restored to wetland conditions.
- Riparian areas will be avoided.
- Disturbed vegetation will be re-seeded in kind upon completion of the project, and a noxious weed management plan would be implemented. The re-seeded site would be maintained until such time that the vegetation is consistent with surrounding undisturbed areas and the site is free of noxious weeds. Seed will be obtained from a BIA/BLM approved source.
- Well pads and access roads will avoid impacts to cultural resources. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site secured, and BIA and THPO notified. In the event of a discovery, work shall not resume until written authorization to proceed has been received from the BIA.
- Access roads will be located at least 75 feet away from identified cultural resources. The boundaries of these 75-foot "exclusion zones" would be marked as an extra measure to ensure that inadvertent impacts to cultural resources are avoided.

- All project workers are prohibited from collecting artifacts or disturbing cultural resources in any area under any circumstances.
- Kodiak will ensure all contractors working for the company will adhere to all local, county, tribal, and state regulations and ordinances regarding rig moves, oversize/overweight loads, and frost law restrictions.
- Utility modifications will be identified during design and coordinated with the appropriate utility company.
- Disposal areas will be properly fenced to prevent human or animal access.
- H_2S Contingency Plans for each well site will be submitted to the BLM as part of the APD.
- Established load restrictions for state and BIA roadways will be followed and haul permits would be acquired as appropriate.
- Suitable mufflers will be put on all internal combustion engines and certain compressor components to mitigate noise levels.
- Well sites and associated facilities will be painted in earth tones, based on standard colors recommended by the BLM, to allow them to better blend in with the natural background color of the surrounding landscape.
- BMPs will be used during construction to ensure contaminants do not migrate off site.
- The cuttings pit will be netted while not actively being used.
- An 18-inch tall ring dike will be constructed around the perimeter of each drilling site.
- A semi-closed loop system will be used during drilling. Liquids from drilling will be transported off site and dry cuttings will be stabilized in place.
- Prior to its use, the cuttings pit will be fenced on the non-working sides. The access side will be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.
- If a whooping crane is sighted within one mile of a site or associated facilities while it is under construction, all work will cease within one mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February 1 and July 15). To minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.
- If a bald or golden eagle or eagle nest is sighted within 0.5 miles of the project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.
- A qualified biologist will conduct a site visit to the nest belonging to an unidentified raptor species that was observed within 0.5 miles of the Skunk Creek #13-18 and Skunk Creek

#16-18 well pads. This site visit will be completed prior to construction and will determine whether or not bald or golden eagles are using this nest. If the nest is determined to be used by a bald or golden eagle, USFWS will be contacted for advice on how to proceed.

- Wire mesh or grate covers will be placed over barrels or buckets placed under valves and spigots to collect dripped oil.
- Netting, with a maximum mesh size of 1.5 inches, will be used to keep birds and other small animals out of open pits.
- All storage tanks and heater/treaters will be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm will be sized to hold 100% of the capacity of the largest storage tank plus one full day's production.
- Re-seeding of native species shall occur as needed on stockpile areas and slope areas during reclamation.
- Facilities on well pads shall be located as close together as possible.
- All sites shall include interim reclamation as soon as possible after the production phase.
- If electrical lines are installed, the lines will be buried to prevent the potential for bird strikes. If gathering lines are to be installed, they will also be buried.
- Two Shields Butte #14-19—Matting would be installed on the fill side (south side) to control erosion. Facilities and the cuttings pit would be positioned on the north side of the well pad.
- Two Shields Butte #13-22—A two-foot tall berm would be installed along the west side of the pad to control run-on. Diversion ditches would be installed on the north, south, and east sides of the pad to divert runoff around the pad. Water bars would be placed on cut slopes during construction.
- Skunk Creek #13-18—The south edge of the pad would be matted and water bars would be installed to control erosion. Due to the length of the access road, turnouts would be installed to allow truck traffic passing areas.
- Skunk Creek #16-18—A diversion ditch would be installed on the backslope side (north side) of the pad.

Chapter 4 Preparers and Agency Coordination

4.1 Introduction

This chapter identifies the names and qualifications of the principal people contributing information to this EA. In accordance with Part 1502.6 of the Council on Environmental Quality regulations for implementing NEPA, the efforts of an interdisciplinary team comprising technicians and experts in various fields were required to accomplish this study.

This chapter also provides information about consultation and coordination efforts with agencies and interested parties, which has been ongoing throughout the development of this EA.

4.2 Preparers

Kadrmas, Lee & Jackson, Inc. prepared this EA under a contractual agreement between Kodiak Oil and Gas (USA), Inc. and Kadrmas, Lee & Jackson, Inc. A list of individuals with the primary responsibility for conducting this study, preparing the documentation, and providing technical reviews is contained in ***Table 4.1, Preparers.***

Table 4.1
Preparers

Affiliation	Name	Title	Project role
Bureau of Indian Affairs	Marilyn Bercier	Regional Environmental Scientist	Review of Draft EA and recommendation to Regional Director regarding FONSI or EIS
	Mark Herman	Environmental Engineer	
Kodiak Oil and Gas (USA), Inc.	Russ Cunningham	Vice President of Exploration	Project development, alternatives, document review
	Chris Woods	Permitting Coordinator	Project development, alternatives, document review
Juniper LLC	John G. Morrison	Archaeologist	Cultural resources surveys
Kadrmas, Lee & Jackson, Inc.	Nick Anderson	Environmental Planner	Impact assessment, principal author
	Shanna Braun	Environmental Planner	Project manager, client and agency coordination, and senior review
	Steve Czeczok	Environmental Planner	Field resources surveys
	Jennifer Harty	Archaeologist	Cultural resources surveys
	Michael Shropshire	Archaeologist	Cultural resources surveys
	Skip Skattum	GIS Analyst	Impact assessment, exhibit creation
Yellowfield Biological Surveys	David Schmoller	Biologist	Field resources surveys
	Amy Schmoller	Biologist	Field resources surveys

4.3 Agency Coordination

To initiate early communication and coordination, an early notification package to tribal, federal, state, and local agencies and other interested parties was distributed on January 21, 2011. This scoping package included a brief description of the proposed project, as well as a location map. Pursuant to Section 102(2) (D) (IV) of NEPA, a solicitation of views was requested to ensure that social, economic, and environmental effects were considered in the development of this project. **Appendix A contains Scoping Materials.**

At the conclusion of the 30-day comment period, 10 responses were received. These comments provide valuable insight into the evaluation of potential environmental impacts. The comments were referenced and incorporated where appropriate within the environmental impact categories addressed in this document. **Appendix B contains Scoping Responses.**

4.4 Public Involvement

Provided the BIA approves this document and determines that no significant environmental impacts would result from the proposed action, a Finding of No Significant Impact (FONSI) will be issued. The FONSI is followed by a 30-day public appeal period. BIA will advertise the FONSI and public appeal period by posting notices in public locations throughout the Reservation. No construction activities may commence until the 30-day public appeal period has expired.

Chapter 5 References

5.1 References

Beitisch, R. (2010, April 30). Three Forks formation to yield lots of oil in North Dakota. *The Bismarck Tribune*. Retrieved from http://www.bismarcktribune.com/news/state-and-regional/article_368dcb38-53ef-11df-a6c8-001cc4c03286.html

Coyle, A.M. (2007). *Golden eagle nests* [Data file]. Retrieved from United States Forest Service — Dakota Prairie Grasslands Region.

Guadalupe-Blanco River Authority. (2009, April 29). *Major research gives insight into the needs of whooping cranes.* Retrieved from http://www.gbra.org/News/2009042901.aspx

Johnson, S. (2010, February). Nesting in numbers: active bald eagles nests up in North Dakota. *North Dakota Outdoors*, 14–17. Retrieved from http://gf.nd.gov/multimedia/ndoutdoors/issues/2010/feb/docs/nest-numbers.pdf

Morrison, J.G. (2011, February). *Skunk Creek 13-18-7-4H and 16-18-7-2H Well Pads and Access Roads: Class III Cultural Resources Inventory*. Dunn County, North Dakota: Juniper LLC

Morrison, J.G. (2011, February). *Skunk Creek 16-23-14-2H Alternate Access Roads: Class III Cultural Resource Inventory*. Dunn County, North Dakota: Juniper LLC

Morrison, J.G. (2010, December). *Two Shields Butte 14-19-18-2H Well Pad and Access Road: Class III Cultural Resource Inventory*. Dunn County, North Dakota: Juniper LLC

National Geographic. (n.d.). *Golden eagle.* Retrieved September 8, 2010, from http://animals.nationalgeographic.com/animals/birds/golden-eagle.html

North Dakota Department of Agriculture. (n.d.). *Noxious weeds team.* Retrieved January 18, 2011, from http://www.agdepartment.com/Programs/Plant/NoxiousWeeds.html

North Dakota Department of Health. (2009, June). *Annual Report: North Dakota Air Quality Monitoring Data Summary 2008*. Bismarck, ND: North Dakota Department of Health

North Dakota Parks and Recreation Department. (n.d.). *North Dakota prairie: our natural heritage.* North Dakota Parks and Recreation Department, U.S. Department of the Interior, U.S. Fish and Wildlife Service. Jamestown, ND: Northern Prairie Wildlife Research Center Online. Retrieved from http://www.npwrc.usgs.gov/resource/habitat/heritage/index.htm

North Dakota State Water Commission. (2010). *Query water permits* [Data file]. Retrieved January 21, 2011 from http://www.swc.state.nd.us/4dlink7/4dcgi/permitsearchform/Permits

North Dakota State Water Commission and U.S. Geological Survey. (2010a). *USGS digital elevation models for North Dakota* [Data file]. Retrieved from http://www.nd.gov/gis/

North Dakota State Water Commission and U.S. Geological Survey. (2010b) *USGS hydrography dataset for North Dakota* [Data file]. Retrieved from http://nhd.usgs.gov/

Shropshire, M. (2011, January). *Kodiak Two Shields Butte 13-22-16H and 13-22-16H3 Well Pads and Access Road: A Class III Cultural Resource Inventory*. Dunn County, North Dakota: Kadrmas, Lee & Jackson

Three Affiliated Tribes. (2009, August 21). Fort Berthold Reservation: Home of the Three Affiliated Tribes. *Fargo Forum*. Retrieved from http://legacy.inforum.com/specials/DyingTongues/graphics/demographics.pdf

United States. (2007, May 30). *Whooping crane recovery plan revised*. Retrieved from http://www.fws.gov/news/NewsReleases/showNews.cfm?newsId=DD912DFC-CAC2-6024-897401985ACEFFAB

U.S. Census Bureau. *2005-2009 American Community Survey 5-Year Estimates*. Retrieved February, 21 2011, from http://factfinder.census.gov/servlet/ADPGeoSearchByListServlet?ds_name=ACS_2009_5YR_G00_&_lang=en&_ts=314038316578.

U.S. Department of Agriculture. (1982). *Soil survey for Dunn County, North Dakota*. U.S. Department of Agriculture, Soil Conservation Service. U.S. Government Printing Office

U.S. Department of Agriculture. (2010). *Spatial and tabular data of the soil survey for Dunn County, North Dakota*. Retrieved from http://soildatamartnrcs.usda.gov/

U.S. Fish & Wildlife Service. (n.d.). *Piping plover*. Retrieved December 18, 2009, from http://www.fws.gov/mountainprairie/ species/birds/pipingplover/

U.S. Fish & Wildlife Service. (2007, June). *Bald eagle fact sheet: Natural history, ecology, and history of recovery*. Retrieved September 8, 2010, from http://www.fws.gov/midwest/eagle/recovery/biologue.html

U.S. Fish & Wildlife Service. (2008, December 18). *Least tern* (Sterna antillarum). Retrieved September 8, 2010, from http://www.fws.gov/northdakotafieldoffice/endspecies/species/ least_tern.htm

U.S. Fish & Wildlife Service. (2009, December 2). Press Release: Endangered Species Act Protection for the Black-tailed Prairie Dog Is Not Warranted. Retrieved January 17, 2011, from http://www.fws.gov/mountain-prairie/species/mammals/btprairiedog/PressRelease12022009.pdf

U.S. Fish & Wildlife Service. (2010, June 1). *Gray wolves in the Northern Rocky Mountains.* Retrieved September 8, 2010, from http://www.fws.gov/mountain-prairie/species/mammals/wolf/

U.S. Fish and Wildlife Service. (2010, September). *Endangered and threatened wildlife and plants; 12-month finding on a petition to list Sprague's pipit as endangered or threatened throughout its range*. Federal Register. Vol. 75, No. 178.

U.S. Fish & Wildlife Service. (2010, September 14). *Least tern (interior population).* Retrieved September 22, 2010, from http://www.fws.gov/midwest/endangered/birds/tern.html

U.S. Fish & Wildlife Service. (2010, September 22). *Fact sheet: pallid sturgeon (*Scaphiryhynchus albus*).* Retrieved September 22, 2010, from http://www.fws.gov/midwest/endangered/fishes/palld_fc.html

U.S. Fish & Wildlife Service. (2010, October 6). *County occurrence of endangered, threatened, and candidate species and designated critical habitat in North Dakota*. Retrieved January 18, 2011, from http://www.fws.gov/northdakotafieldoffice/county_list.htm

U.S. Geological Survey Northern Prairie Wildlife Research Center. (2004, 1 January). *North Dakota GAP bird potential habitat maps* [Data file]. Retrieved November 11, 2010, from http://www.nd.gov/gis/

U.S. Geological Survey Northern Prairie Wildlife Research Center. (2006a, 3 August). *The cranes status survey and conservation action plan whooping crane (*Grus americana*).* Retrieved September 8, 2010, from http://www.npwrc.usgs.gov/resource/birds/cranes/grusamer.htm

U.S. Geological Survey Northern Prairie Wildlife Research Center. (2006b, 3 August). *Hawks, eagles, and falcons of North Dakota*. Retrieved June 7, 2010, from http://www.npwrc.usgs.gov/ resource/birds/hawks/intro.htm

U.S. Geological Survey Northern Prairie Wildlife Research Center. (2006, 24 August). *Ecoregions of North Dakota and South Dakota.* Retrieved from http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/index.htm

Wyoming Game and Fish Department. (2010, March). *Recommendations for development of oil and gas resources within important wildlife habitats.* Version 5.0. Retrieved from http://gf.state.wy.us/downloads/pdf/og.pdf

Appendix A

Agency Scoping Materials

January 21, 2010

<<NAME>>
<<TITLE>>
<<AGENCY>>
<<ADDRESS>>
<<CITY>><<STATE>><<ZIP>>

RE: Kodiak Oil & Gas (USA), Inc.
Proposal to Drill Up to 16 Oil & Gas Wells on Five Pads
Dunn County, ND
Fort Berthold Reservation

Dear <<NAME>>:

On behalf of Kodiak Oil & Gas (USA), Inc. (Kodiak), Kadrmas, Lee & Jackson, Inc. is preparing an Environmental Assessment (EA) under the National Environmental Policy Act for the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM). The proposed action includes the positive recommendation by the BIA for the BLM to approve the development of up to five separate well pads targeting the Bakken Formation. Each well pad would contain three to four well heads, for a total of up to 16 wells drilled as part of this project. These sites are proposed to be positioned in the following locations:

- Skunk Creek #16-23 well pad located in the SE ¼ of T149N, R93W, Section 23 and containing the following wells:
  - Skunk Creek #16-23-14-2H
  - Skunk Creek #16-23-14-2H3
  - Skunk Creek #16-23-14-1H
- Two Shields Butte #14-19 well pad located in the SW ¼ of T149N, R92W, Section 19 and containing the following wells:
  - Two Shields Butte #14-19-18-4H
  - Two Shields Butte #14-19-18-4H3
  - Two Shields Butte #14-19-18-3H
  - Two Shields Butte #14-19-18-2H3
- Two Shields Butte #13-22 well pad located in the SW ¼ of T149N, R92W, Section 22 and containing the following wells:
  - Two Shields Butte #13-22-16-1H
  - Two Shields Butte #13-22-16-1H3
  - Two Shields Butte #13-22-33-16H
- Skunk Creek #13-18 well pad located in the SW ¼ of T148N, R92W, Section 18 and containing the following wells:
  - Skunk Creek #13-18-7-4H
  - Skunk Creek #13-18-7-4H3
  - Skunk Creek #13-18-7-3H
- Skunk Creek #16-18 well pad located in the SE ¼ of T148N, R92W, Section 18 and containing the following wells:
  - Skunk Creek #16-18-7-1H
  - Skunk Creek #16-18-7-1H3
  - Skunk Creek #16-18-7-2H

Please refer to the enclosed Project Location Map.

The well pads have been positioned to use existing roadways to the greatest extent practicable for access. Construction of the proposed project is anticipated to begin in spring 2011.

To ensure that social, economic, and environmental effects are analyzed accurately, we solicit your views and comments on the proposed action. We are interested in existing or proposed developments you may have that should be considered in connection with the proposed project. We also ask your assistance in identifying any property or resources that you own, manage, oversee, or otherwise value that might be adversely impacted.

Please provide your comments by **February 21, 2010**. We request your comments by that date to ensure that we will have ample time to review them and incorporate them into the EA.

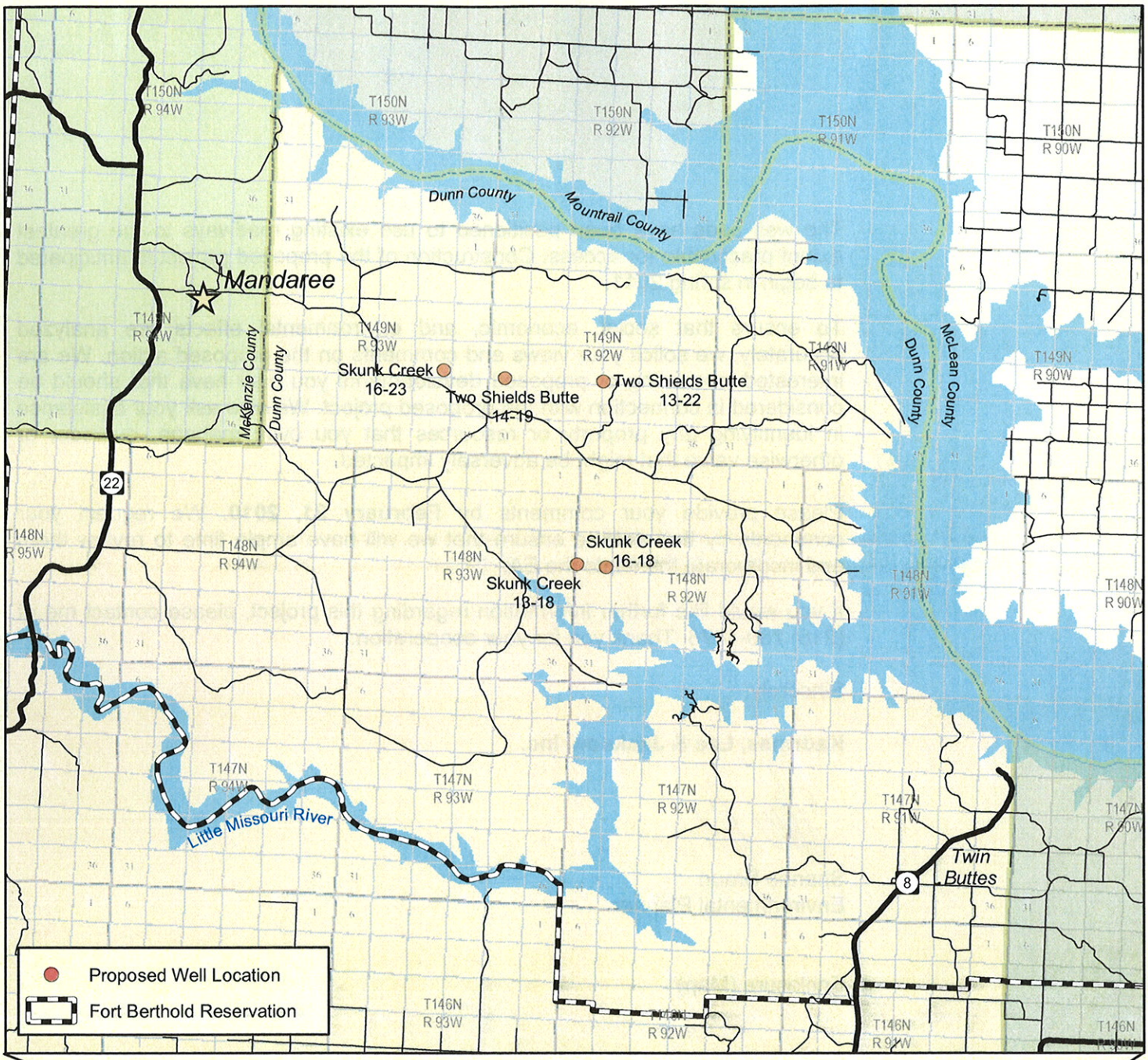
If you would like further information regarding this project, please contact me at (218) 790-4476. Thank you for your cooperation.

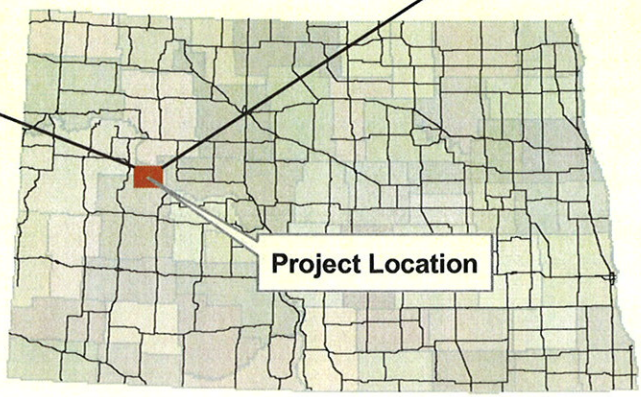
Sincerely,

Kadrmas, Lee & Jackson, Inc.

Shanna Braun
Environmental Planner

Enclosure (Map)





Kodiak Oil & Gas (USA), Inc.
Proposed Oil Wells
Location Map

North Dakota

[Project Name] SOV LIST

Save as new file for each project and edit accordingly with project specific contacts*

CTitle	First	Last	Title	Department	Agency	Address	City	State	Zip
Mr.	Michael	Selvage	Tribal Chairman		Sisseton-Wahpeton Oyate	PO Box 509	Sisseton	SD	57262-0267
Ms.	Myra	Pearson	Tribal Chairperson	Ft. Totten Tribal Business Office	Spirit Lake Dacotah Nation	PO Box 359	Ft. Totten	ND	58335
Mr.	Tex	Hall	Tribal Chairman		Three Affiliated Tribes	HC3 Box 2	New Town	ND	58763
Mr.	David	Brien	Tribal Chairman		Turtle Mountain Band of Chippewa Indians	PO Box 900	Belcourt	ND	58316-0900
Mr.	Charles	Murphy	Tribal Chairman		Standing Rock Sioux Tribe	PO Box D	Fort Yates	ND	58538
Ms.	Adrienne	Swallow	Environmental Protection Specialist		Standing Rock Sioux Tribe	PO Box D	Fort Yates	ND	58538
Mr.	Elton	Spotted Horse	Environmental Division Director	Natural Resources Department	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Damon	Williams	Tribal Attorney		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Fred	Fox	Director	Energy Department	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Ms.	V. Judy	Brugh	Representative	Four Bears Segment	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Arnold	Strahs	Representative	Mandaree Segment	Three Affiliated Tribes	PO Box 665	Mandaree	ND	58757
Mr.	Scott	Eagle	Representative	Shell Creek Segment	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Mervin	Packineau	Representative	Parshall/Lucky Mound Segment	Three Affiliated Tribes	PO Box 468	Parshall	ND	58770
Mr.	Frank	Whitecalf	Representative	White Shield Segment	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Barry	Benson	Representative	Twin Buttes Segment	Three Affiliated Tribes	70879 E Ave NW	Halliday	ND	58636
Mr.	Fred	Poitra		Game and Fish Department	Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Lester	Crowsheart	Director	Fort Berthold Rural Water	Three Affiliated Tribes	308 Four Bears Complex	New Town	ND	58763
Mr.	Roger	Hovda	Operations Manager		Reservation Telephone Cooperative	PO Box 68	Parshall	ND	58770-0068
Mr.	Silas	Ironheart, Jr.	SLT-EPA Director		Spirit Lake Dacotah Nation	P.O. Box 99	Fort Totten	ND	58335
Sir		*or Madam*	Chief Missile Engineer	91st Missile Maintenance Squadron	Cable Affairs Office	417 Bomber Blvd.	Minot AFB	ND	58705
Mr.	Weldon	Loudermilk	Regional Director		Bureau of Indian Affairs	115 4th Ave. SE	Aberdeen	SD	57401
Mr.	Richard	Nelson	Chief, Resource Management	Dakotas Area Office	Bureau of Reclamation	PO Box 1017	Bismarck	ND	58502-1017
Mr.	Lonny	Bagley	Field Office Manager	North Dakota Field Office	Bureau of Land Management	99 23rd Ave W, Suite A	Dickinson	ND	58601
Mr.	Mike	Nash	Assistant Field Office Manager	Division on Mineral Resources	Bureau of Land Management	99 23rd Ave W, Suite A	Dickinson	ND	58601
Mr.	Steve	Obenauer	Manager	Bismarck Airports District Office	Federal Aviation Administration	2301 University Drive, Bldg 23B	Bismarck	ND	58504
Sir		*or Madam*		Office of Economic Analysis	Federal Railroad Administration	400 7th St. SW	Washington	DC	20590
Mr.	Dan	Cimarosti	Manager	ND Regulatory Office	US Army Corps of Engineers	1513 S. 12th St.	Bismarck	ND	58504
Mr.	Charles	Sorenson	Natural Resource Specialist	Riverdale Field Office	US Army Corps of Engineers	PO Box 527	Riverdale	ND	58565
Mr.	Irwin	Russell	State Conservationist		US Department of Agriculture	PO Box 1458	Bismarck	ND	58502-1458
Mr.	Gerald	Paulson	Director, Transmission Lines and Substatio	Western Area Power Admin.	US Department of Energy	PO Box 1173	Bismarck	ND	58502-1173
Mr.	Larry	Svoboda	Director	NEPA Program, Region 8	US Environmental Protection Agency	1595 Wynkoop Street	Denver	CO	80202-1129
Mr.	Richard	Clark	Wetlands Coordinator	Region 8, EPR-EP	US Environmental Protection Agency	1595 Wynkoop Street	Denver	CO	80202-1129
Mr.	Jeffrey	Towner	Field Supervisor	ND Field Office	US Fish & Wildlife Service	3425 Miriam Ave.	Bismarck	ND	58501
Mr.	Greg	Wiche	Director	Water Resources Division	US Geological Survey	821 E. Interstate Ave.	Bismarck	ND	58501
Ms.	Scott	Davis	Executive Director		Indian Affairs Commission	600 E. Blvd. Ave. 1st Floor, Judicial Wing, Rm 117	Bismarck	ND	58505-0300
Mr.	L. David	Glatt	Chief	Environmental Health Section Gold Seal Center	ND Department of Health	918 E. Divide Ave., 4th floor	Bismarck	ND	58501-1947
Mr.	Terry	Steinwand	Director		ND Game & Fish Department	100 Bismarck Expressway	Bismarck	ND	58501-5095
Mr.	Ed	Murphy	State Geologist		ND Geological Survey	600 E. Blvd. Ave.	Bismarck	ND	58505-0840
Mr.	Mark	Zimmerman	Director		ND Parks & Recreation Dept.	1600 E. Century Ave., Suite 3	Bismarck	ND	58503-0649
Mr.	Dale	Frink	State Engineer		ND State Water Commission	900 E. Blvd. Ave.	Bismarck	ND	58505-0850
Mr.	Scott	Hochhalter	Soil Conservation Specialist	NDSU Extension Service	Soil Conservation Committee	2718 Gateway Ave., #104	Bismarck	ND	58503
Mr.	Reinhard	Hauck	Auditor		Dunn County	PO Box 105	Manning	ND	58642
Mr.	Tim	Steffan	Chairman	Commission	Dunn County	1740 Hwy 22	Manning	ND	58642
Mr.	Bill	Boyd	Construction Manager		Midcontinent Cable Company	719 Memorial Hwy	Bismarck	ND	58501
Mr.	Doug	Dixon	General Manager	Badlands Region	Montana Dakota Utilities	PO Box 1406	Williston	ND	58802-1406

[Project Name] SOV LIST

Save as new file for each project and edit accordingly with project specific contacts

CTitle	First	Last	Title	Department	Agency	Address	City	State	Zip
Mr.	Ken	Miller		Land Department	Northern Border Pipeline	13710 FNB Parkway	Omaha	NE	68154-5200
Mr.	Ray	Christenson	Manager/CEO		Southwest Water Authority	4665 2nd St W	Dickinson	ND	58601
Mr.	David C.	Schelkoph	CEO		West Plains Electric Coop., Inc.	PO Box 1038	Dickinson	ND	58602-1038
Sir		*or Madam*	Manager		Xcel Energy	PO Box 2747	Fargo	ND	58108-2747
Mr.	Larry	Gangl	District Engineer	Dickinson District	ND Department of Transportation	1700 3rd Ave W, Suite 101	Dickinson	ND	58601
Mr.	Les	Alpert			Consolidated Telephone Company	PO Box 1408	Dickinson	ND	58602-1408

January 21, 2010

Mr. Jeffrey Towner
U.S. Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, North Dakota 58501-7926

RE: Kodiak Oil & Gas (USA), Inc.
Proposal to Drill Up to 16 Oil & Gas Wells on Five Pads
Dunn County, ND
Fort Berthold Reservation

Dear Mr. Towner,

On behalf of Kodiak Oil & Gas (USA), Inc. (Kodiak), Kadrmas, Lee & Jackson, Inc. (KL&J) is preparing an EA (Environmental Assessment) under NEPA (the National Environmental Policy Act) for the BIA (Bureau of Indian Affairs) and BLM (Bureau of Land Management). The proposed action includes the positive recommendation by the BIA for the BLM to approve the development of up to five separate well pads targeting the Bakken Formation. Each well pad would contain three to four well heads, for a total of up to 16 wells drilled as part of this project. These sites are proposed to be positioned in the following locations:

- Skunk Creek #16-23 well pad located in the SE ¼ of T149N, R93W, Section 23 and containing the following wells:
  - Skunk Creek #16-23-14-2H
  - Skunk Creek #16-23-14-2H3
  - Skunk Creek #16-23-14-1H
- Two Shields Butte #14-19 well pad located in the SW ¼ of T149N, R92W, Section 19 and containing the following wells:
  - Two Shields Butte #14-19-18-4H
  - Two Shields Butte #14-19-18-4H3
  - Two Shields Butte #14-19-18-3H
  - Two Shields Butte #14-19-18-2H3
- Two Shields Butte #13-22 well pad located in the SW ¼ of T149N, R92W, Section 22 and containing the following wells:
  - Two Shields Butte #13-22-16-1H
  - Two Shields Butte #13-22-16-1H3
  - Two Shields Butte #13-22-33-16H
- Skunk Creek #13-18 well pad located in the SW ¼ of T148N, R92W, Section 18 and containing the following wells:
  - Skunk Creek #13-18-7-4H
  - Skunk Creek #13-18-7-4H3
  - Skunk Creek #13-18-7-3H

- Skunk Creek #16-18 well pad located in the SE ¼ of T148N, R92W, Section 18 and containing the following wells:
    - Skunk Creek #16-18-7-1H
    - Skunk Creek #16-18-7-1H3
    - Skunk Creek #16-18-7-2H

Please refer to the enclosed Project Location Map.

The proposed action would advance the exploration and production of oil from the Bakken Pool. The well pads have been positioned to use existing roadways to the greatest extent practicable for access. Construction of the proposed project is anticipated to begin in spring 2011.

An intensive, pedestrian resource survey of each proposed well pad and access road was conducted on the following dates by KL&J:

- Skunk Creek #16-23 on June 29, 2010 and September 1, 2010
- Two Shields Butte #14-19 on November 10, 2010
- Two Shields Butte #13-22 on August 5, 2010
- Skunk Creek #13-18 on November 10, 2010
- Skunk Creek #16-18 on November 10, 2010

The purpose of these surveys was to gather site-specific data and photos with regard to botanical, biological, threatened and endangered species, eagle, and water resources. A study area of 10 acres centered on the well pad center point and a 200-foot wide access road corridor were evaluated for each site. In addition, a 0.50 mile wide buffer around all areas of project disturbance was used to evaluate the presence of eagles and eagle nests. Resources were evaluated using visual inspection and pedestrian transects across the site. ***Please refer to the enclosed Study Area Map and Eagle Buffer Map.***

BIA-facilitated EA on-site assessments of the well pad and access road were conducted concurrent to the resource surveys. The BIA Environmental Protection Specialist, as well as representatives from the Tribal Historic Preservation Office, Kodiak, and KL&J were present. During these assessments, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. Well pad and access road locations were adjusted, as appropriate, to avoid conflicts with identified environmental areas of concern. Those present at the on-site assessment agreed that the chosen locations, along with the minimization measures Kodiak plans to implement, are positioned in areas which would minimize impacts to sensitive wildlife and botanical resources. BMPs and other commitments Kodiak has made to avoid, minimize, or mitigate impacts are listed at the end of this letter.

Threatened and Endangered Species

The proposed well sites occur in Dunn County. In Dunn County, the interior least tern, whooping crane, black-footed ferret, pallid sturgeon, and gray wolf are all listed as endangered species. The piping plover is listed as a threatened species, and the Dakota skipper and Sprague's pipit are listed as candidate species. Dunn County also contains designated critical habitat for the piping plover. There are no threatened or endangered plant species listed for Dunn County. None of the listed or candidate species were observed during the field surveys/on-site assessments.

Whooping cranes use shallow, seasonally and semi-permanently flooded palustrine (marshy) wetlands for roosting, and various cropland and emergent wetlands for feeding. They typically prefer wetlands that contain shallow open water and areas where their visibility is not impeded by tall vegetation or other obstructions. A few small wetland basins were identified in a hardwood draw near the Two Shields Butte #13-22 site; however, they were surrounded by woody vegetation and not in an open setting. Therefore, it is not anticipated that these wetland sites provide preferred whooping crane habitat.

The Skunk Creek #16-23 access road crosses a densely vegetated wetland located adjacent to a stock dam. This wetland is not believed to contain potential stopover habitat for the whooping crane due to the vegetation density and lack of open water present. No wetlands or suitable roosting or feeding habitat were identified at the Two Shields Butte #14-19, Skunk Creek #13-18, or Skunk Creek #16-18 sites. However, the proposed project areas are located in the Central Flyway where 95 percent of confirmed whooping crane sightings have occurred. Whooping cranes traveling through the area may alter their flight and landing patterns to avoid disturbances related to oil and gas developments. However, it is believed that there are still large, undeveloped areas on the Fort Berthold Reservation in which migrating cranes could land to rest while migrating. Therefore, the proposed project may affect but is not likely to adversely affect to the whooping crane. The proposed project is not likely to impact potential habitat. Per USFWS recommendations on previous projects of a similar nature, if a whooping crane is sighted within one-mile of the well site or associated facilities while under construction, all work will cease within one-mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.

Suitable habitat for the interior least tern and critical habitat for the piping plover are largely associated with the shoreline of Lake Sakakawea. Potential habitat for these species exists approximately one mile south of the proposed sites at the nearest point (Skunk Creek #16-18), or 1.70 miles away following the shortest drainage pattern to the Lake (Skunk Creek #13-18). The well pads and access roads are located on upland bluffs of grassland, with small bays of Lake Sakakawea and its shoreline located below the bluffs (approximately 160 feet). The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers for shoreline-nesting birds.

Suitable habitat for the pallid sturgeon is found within Lake Sakakawea, located about 1.70 miles away following the shortest drainage pattern to the Lake (Skunk Creek #13-18).

The proposed project is located 1.70 miles from Lake Sakakawea (following the shortest drainage pattern), making the potential for significant quantities of accidentally released fluids reaching the Lake reasonably feasible. Storage tanks and the heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against accidental release of fluids from the site. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. In addition, solidification of drill cuttings in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. A ring dike will also be constructed around the perimeter of the drilling site. Berming will be utilized around cut slopes to prevent runoff from entering the pad and, where BIA determines necessary, pit and soil stockpiles will be used to divert drainage outside of the fill slopes. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Therefore, the proposed project may affect but is not likely to adversely affect the interior least tern, pallid sturgeon, or piping plover. The proposed project is not likely to impact critical habitat for the plover.

The black-footed ferret historically could be found throughout the Rocky Mountains and Great Plains. Preferred habitat for the black-footed ferret includes areas around prairie dog towns, as ferrets rely on prairie dogs for food and live in prairie dog burrows. Black-footed ferrets require at least an 80-acre prairie dog town to survive. In North Dakota, the southwestern corner of the state provided suitable habitat and supported the black-footed ferret. However, this species has not been confirmed in North Dakota for over 20 years and is presumed extirpated. The proposed well pads are not located near any active prairie dog towns. Due to a lack of preferred habitat characteristics, the proposed project is anticipated to have no effect to the black-footed ferret.

Historically, the gray wolf's preferred habitat includes biomes such as boreal forest, temperate deciduous forest, and temperate grassland. While the gray wolf is not common in North Dakota, occasionally individual wolves do pass through the state. The project area is located far from other known wolf populations and is positioned on open rangeland that would not likely provide sufficient cover for gray wolves. No wolves or indications of wolves were observed during the field survey. Due to a lack of preferred habitat characteristics and known populations, the proposed project is anticipated to have no effect to the gray wolf.

The preferred habitat for the Dakota skipper consists of undisturbed, flat, moist bluestem prairies and upland prairies with an abundance of wildflowers. The proposed sites are all located on upland grasses, which could contain potential habitat. No Dakota skippers were observed during the field surveys. However, due to

the presence of potential habitat for the Dakota skipper within the project area, the proposed project may impact individuals or habitat through earthwork associated with construction activities, habitat conversion, and/or fragmentation. An "effect determination" under Section 7 of the Endangered Species Act has not been made due to the current unlisted status of the species.

The Sprague's pipit is a small songbird found in prairie areas throughout the Northern Great Plains. Preferred habitat includes rolling, upland grass habitat with high plant species diversity. The Sprague's pipit breeds in habitat with minimal human disturbance. All of the proposed well sites occur on mixed grass prairie areas, which could provide suitable habitat to the Sprague's pipit. No Sprague's pipit were observed during the field surveys. Due to the fragmentation of potential habitat for the Sprague's pipit within the project area, the proposed action may impact individuals or habitat. An "effect determination" under Section 7 of the Endangered Species Act has not been made due to the current unlisted status of the species.

Botanical Resources

The Skunk Creek #16-23 site consisted of native and non-native upland grasses and shrubs. Prairie junegrass (*Koeleria pyrimidata*), green needlegrass (*Stipa viridula*), and Kentucky bluegrass (*Poa pratensis*) dominated the study area with smooth bromegrass (*Bromus inermis*) beginning to encroach onto the well pad. Several patches of silver buffaloberry (*Shepherdia argentea*) and Western snowberry (*Symphoricarpos occidentalis*) occurred on the well pad. The access road was adjusted during the EA on-site to avoid impacts to a small groundwater seep wetland. No noxious weed species were observed.

The Two Shields Butte #14-19 site consisted of native and non-native upland grasses and shrubs. The access road leading to the well pad was dominated by Western snowberry, Kentucky bluegrass, Western wheatgrass (*Agropyron smithii*), and prairie junegrass. Silver buffaloberry, chokecherry (*Prunus virginiana*), and green ash (*Fraxinus pennsylvanica*) were observed growing near the access road. Dominant vegetation at the well pad consisted of Western snowberry, Kentucky bluegrass, Western wheatgrass, sand bluestem (*Andropogon halli*), and prairie bluegrass. Little bluestem (*Andropogon scoparius*) was observed as a dominant plant community on hillsides. No wetlands or noxious weeds were observed in the study area.

The Two Shields Butte #13-22 site consisted of native and non-native upland grasses and shrubs. The well pad and access road were both dominated by Western snowberry, cudweed sagewort (*Artemisia ludoviciana*), Western wheatgrass, and Kentucky bluegrass. Silverleaf scurfpea (*Psoralea argophylla*), yarrow (*Achillea millefolium*), little bluestem, field pussytoes (*Antennaria microphylla*), wild bergamont (*Monarda fistulosa*), and green needlegrass (*Stipa viridula*) were observed in patches throughout the study area. Wooded draws in the area contained Burr oak (*Quercus macrocarpa*) and green ash (*Fraxinus pennsylvanica*). No wetlands or noxious weeds were observed in the study area.

The Skunk Creek #13-18 site consisted of native and non-native upland grasses. The access road and well pad were both dominated by Western wheatgrass, blue grama (*Bouteloua gracilis*), prairie junegrass, and Kentucky bluegrass. Hilltops and side slopes of the well pad also contained patches of little bluestem. Wooded draws located south and west of the proposed well pad contained silver buffaloberry, chokecherry, green ash, and Western snowberry. No noxious weeds were observed.

The Skunk Creek #16-18 site consisted of native and non-native upland grasses. The well pad and access road were dominated by Western wheatgrass, blue grama, prairie junegrass, and Kentucky bluegrass, with patches of Western snowberry and little bluestem. Several green ash trees and patches of silver buffaloberry were noted on a hillside east of the well pad. Wooded draws near the access road contained silver buffaloberry, chokecherry, American elm (*Ulmus americana*), and green ash. No wetland or noxious weed species were observed.

Biological Resources

The project area contains suitable habitat for mule deer, whitetail deer, sharp-tailed grouse, turkey, ring-necked pheasant, golden eagle, red tail hawk, kestrel, North American badger, song birds, coyote, red fox, cottontail rabbit, jackrabbit, and North American porcupine. The following wildlife and migratory bird species were observed during the field surveys and on-site assessments:

- Skunk Creek #16-23 – Northern harrier
- Two Shields Butte #14-19 – Two antelope, one sharp-tailed grouse
- Two Shields Butte #13-22 – Beaver dams located southwest of the survey area
- Skunk Creek #13-18 – One hawk nest and one unidentified other raptor nest
- Skunk Creek #16-18 – Three whitetail deer, one hawk nest (same nest as Skunk Creek #13-18 site), and one unidentified other raptor nest (same nest as Skunk Creek #13-18 site)

During drilling activities, the noise, movements, and lights associated with having a drilling rig on-site are expected to deter wildlife from entering the area. In addition, the cuttings pit would only be used for solid material storage, and it is expected that very minimal free fluid will be present in the pit. The absence of exposed liquids in the pit would minimize their attractiveness to wildlife. Immediately after the drilling rig leaves the location, cuttings pits would be netted with State and Federal approved nets. These would remain in place with proper maintenance until the closure of the cuttings pits.

In addition, design considerations will be implemented to further protect against potential habitat degradation. The storage tanks and heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. A ring dike will also be constructed around the perimeter of the drilling site. Berming will be utilized around

cut slopes to prevent runoff from entering the pad and, where BIA determines necessary, pit and soil stockpiles will be used to divert drainage outside of the fill slopes. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. BMPs to minimize wind and water erosion of soil resources, as well as implementation of a semi-closed loop system during drilling, would also be put into practice.

As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February 1 and July 15). In order to minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.

Additionally, all reasonable, prudent, and effective measures to avoid the taking of migratory bird species will be implemented during the construction and operation phases. These measures will include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.

Eagles

During the field surveys, no evidence of eagles or their nests was observed within 0.5 miles of the Skunk Creek #16-23, Two Shields Butte #14-19, or Two Shields Butte #13-22 sites. One nest belonging to an unidentified raptor species was observed within 0.5 miles of the Skunk Creek #13-18 and Skunk Creek #16-18 sites. An additional site visit will be conducted by a qualified biologist prior to construction to confirm whether or not bald or golden eagles may be using this nest.

Dr. Anne Marguerite Coyle of Dickinson State University has completed focused research on golden eagles and maintains a database of golden eagle nest sightings. ***Please refer to enclosed eagle habitat and recorded nests map.*** According to Dr. Coyle's information, the closest recorded golden eagle nests from each site are as follows:

- Skunk Creek #16-23 – 7.25 miles west
- Two Shields Butte #14-19 – 9.0 miles west
- Two Shields Butte #13-22 – 8.5 miles southeast
- Skunk Creek #13-18 – 3.5 miles southeast
- Skunk Creek #16-18 – 3.25 miles south

If a bald or golden eagle or eagle nest is sighted within 0.5 miles of project construction areas, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

Water Resources

The Skunk Creek #16-23 site is situated on a gently sloping hill. The proposed site drains northeast off the pad into an unnamed gully. Once there, runoff would travel 0.55 miles north to an unnamed perennial stream and then northeast 2.35 miles to Skunk Creek. Once in Skunk Creek, runoff would then travel 5.80 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 8.70 miles. ***Please refer to enclosed drainage map.*** The nearest wooded draw is located approximately 0.72 miles northeast of the well pad disturbance area. The access road was adjusted during the EA on-site to avoid impacts to a small groundwater seep wetland. Culverts will be implemented as necessary to avoid drainage impacts.

The Two Shields Butte #14-19 site is situated on a hillside. The proposed site drains south off the pad into a drainageway. Once there, runoff would travel south and east 0.66 miles to South Fork Creek. It would then travel north and east 3.60 miles to Skunk Creek. Once in Skunk Creek, runoff would travel northeast 2.22 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 6.48 miles. The nearest wooded draw is located approximately 440 feet northeast of the well pad disturbance area. Culverts will be implemented as necessary to avoid drainage impacts.

The Two Shields Butte #13-22 site is situated on a hillside. The proposed site drains west off the pad into a drainageway that then travels north 1.96 miles to Skunk Creek. Once in Skunk Creek, runoff would travel east 0.68 miles to Skunk Creek Bay of Lake Sakakawea, for a total traveled distance of 2.64 miles. The nearest wooded draw is located approximately 420 feet south of the well pad disturbance area. Culverts will be implemented as necessary to avoid drainage impacts.

The Skunk Creek #13-18 site is situated on a hillside. The proposed site drains southwest off the pad approximately 240 feet into a wooded draw and then travels south 1.70 miles into Squaw Creek Bay of Lake Sakakawea. A few small, grassed drainageways were observed along the proposed access road. Culverts will be implemented as necessary to avoid drainage impacts.

The Skunk Creek #16-18 site is situated on a hillside. The proposed site drains southwest off the pad and into a drainageway. From there, it travels 0.48 miles west to an unnamed coulee and then 1.41 miles southeast to Squaw Creek Bay of Lake Sakakawea, for a total traveled distance of 1.89 miles. The nearest wooded draw is located approximately 0.30 miles southeast of the well pad disturbance area. Culverts will be implemented as necessary to avoid drainage impacts.

Best Management Practices

BMPs for soil and wind erosion would be implemented at all sites as needed to include over-seeding of cut areas and spoil piles via hydro-seeding, as well as the use of diversion ditches, silt fences and/or mats. Any woody vegetation removed during site construction would be chipped and incorporated into topsoil stockpiles. The alteration of drainages near the proposed well pads would be avoided. Cut

slopes would be bermed to prevent run-on from entering the pad. Pit and soil stockpiles will be used to divert drainage outside of the fill slopes. Culverts to maintain drainage along the access roads would also be installed where needed. Well pad corners would be rounded where feasible to minimize impacts. Upon well completion, a portion of each well pad would be reclaimed to further avoid environmental areas of concern.

At the Two Shields Butte #14-19 well pad, matting would be installed on the fill side (the south side) to control erosion. Facilities and the cuttings pit would be positioned on the north side of the well pad.

At the Two Shields Butte #13-22 well pad, a two-foot tall berm would be installed along the west side of the pad to control run-on. Diversion ditches would be installed on the north, south, and east sides of the pad to divert runoff around the pad. Deep water bars would be placed on cut slopes during construction.

At the Skunk Creek #13-18 well pad, the south edge of the map would be matted and water bars would be installed to control erosion. Due to the length of the access road, turnouts would be installed to allow truck traffic passing areas.

At the Skunk Creek #16-18 well pad, a diversion ditch would be installed on the backslope side (the north side) of the pad and an 18-inch berm would be constructed on the downhill (the south side) side of the pad to control runoff.

No additional measures aside from standard BMPs are proposed for the Skunk Creek #16-23 site.

Summary of Commitments to Avoid or Minimize Impacts

In an effort to minimize the potential environmental effects associated with the proposed project, Kodiak will also implement the following measures into the development of these sites:

- A semi-closed loop system would be used during drilling. Drill cuttings would be solidified before being placed in the reinforced lined cuttings pit. The reinforced lining of the cuttings pit would have a minimum thickness of 20 mils to prevent seepage and contamination of underlying soil. Any minimal fluids remaining in drill cuttings pit would be removed and disposed of in accordance with BLM and NDIC rules and regulations. All liquids from drilling would be transported off-site. The drill cuttings pit would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon finishing completion operations.
- Prior to its use, the cuttings pit would be fenced on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.

- As the proposed project is anticipated to be constructed in the spring, construction activities are anticipated to take place during the migratory bird breeding/nesting season (between February 1 and July 15). In order to minimize impacts to migratory birds during this time, a qualified biologist will conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to the USFWS.
- Measures implemented during construction to avoid the taking of migratory bird species will include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.
- A site visit will be conducted by a qualified biologist prior to construction to confirm whether or not bald or golden eagles may be using an unidentified raptor nest located within 0.5 miles of the Skunk Creek #13-18 and Skunk Creek #16-18 sites.
- Per USFWS recommendations on previous projects of a similar nature, if a whooping crane is sighted within one-mile of a well site or associated facilities while under construction, all work will cease within one-mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- The storage tanks and heater/treater will be surrounded by an impermeable berm that will act as secondary containment to guard against possible spills. The berm will be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. BMPs would be implemented to minimize wind and water erosion of soil resources and a semi-closed loop system would be used during drilling. A ring dike will also be constructed around the perimeter of the drilling site.
- At the Two Shields Butte #14-19 well pad, matting would be installed on the fill side (the south side) to control erosion. Facilities and the cuttings pit would be positioned on the north side of the well pad.
- At the Two Shields Butte #13-22 well pad, a two-foot tall berm would be installed along the west side of the pad to control run-on. Diversion ditches would be installed on the north, south, and east sides of the pad to divert runoff around the pad. Deep water bars would be placed on cut slopes during construction.
- At the Skunk Creek #13-18 well pad, the south edge of the pad would be matted and water bars would be installed to control erosion. Due to the length of the access road, turnouts would be installed to allow truck traffic passing areas.
- At the Skunk Creek #16-18 well pad, a diversion ditch would be installed on the backslope (north) side of the pad and an 18-inch berm would be constructed on the downhill (south) side of the pad to control runoff.

To ensure that social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed development of this project, pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended. We ask your assistance in identifying any property or resources that you own, manage, oversee, or otherwise value that might be adversely impacted. We are also interested in existing or proposed developments you may have that should be considered in connection with the proposed project. Any information that might help us in our study would be appreciated.

It is requested that any comments or information be forwarded to our office on or before **February 21, 2011**. We request your comments by that date to ensure that we will have ample time to review them and incorporate them into the necessary environmental documentation.

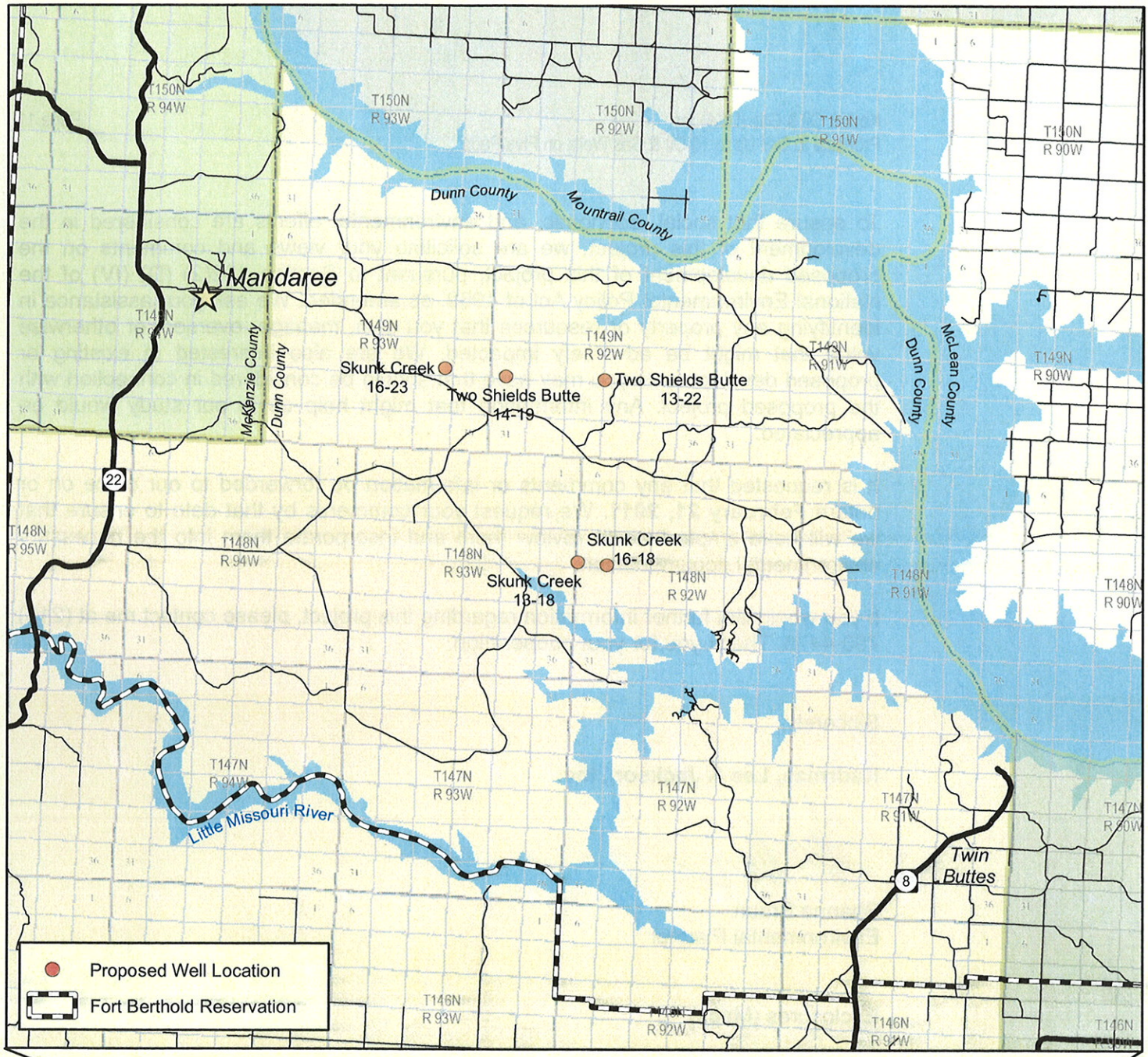
If you would like further information regarding this project, please contact me at (218) 790-4476. Thank you for your cooperation.

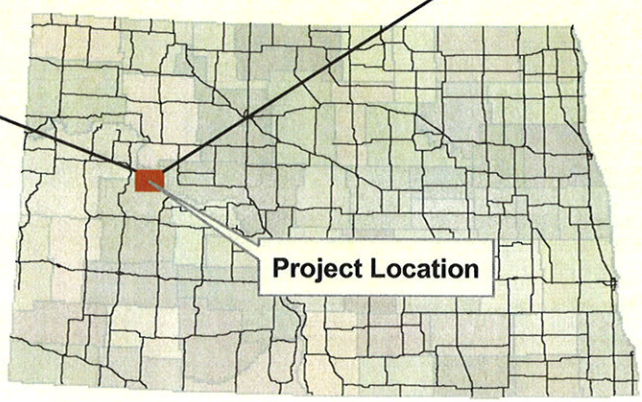
Sincerely,

Kadrmas, Lee & Jackson, Inc.

Shanna Braun
Environmental Planner

Enclosures (Maps)





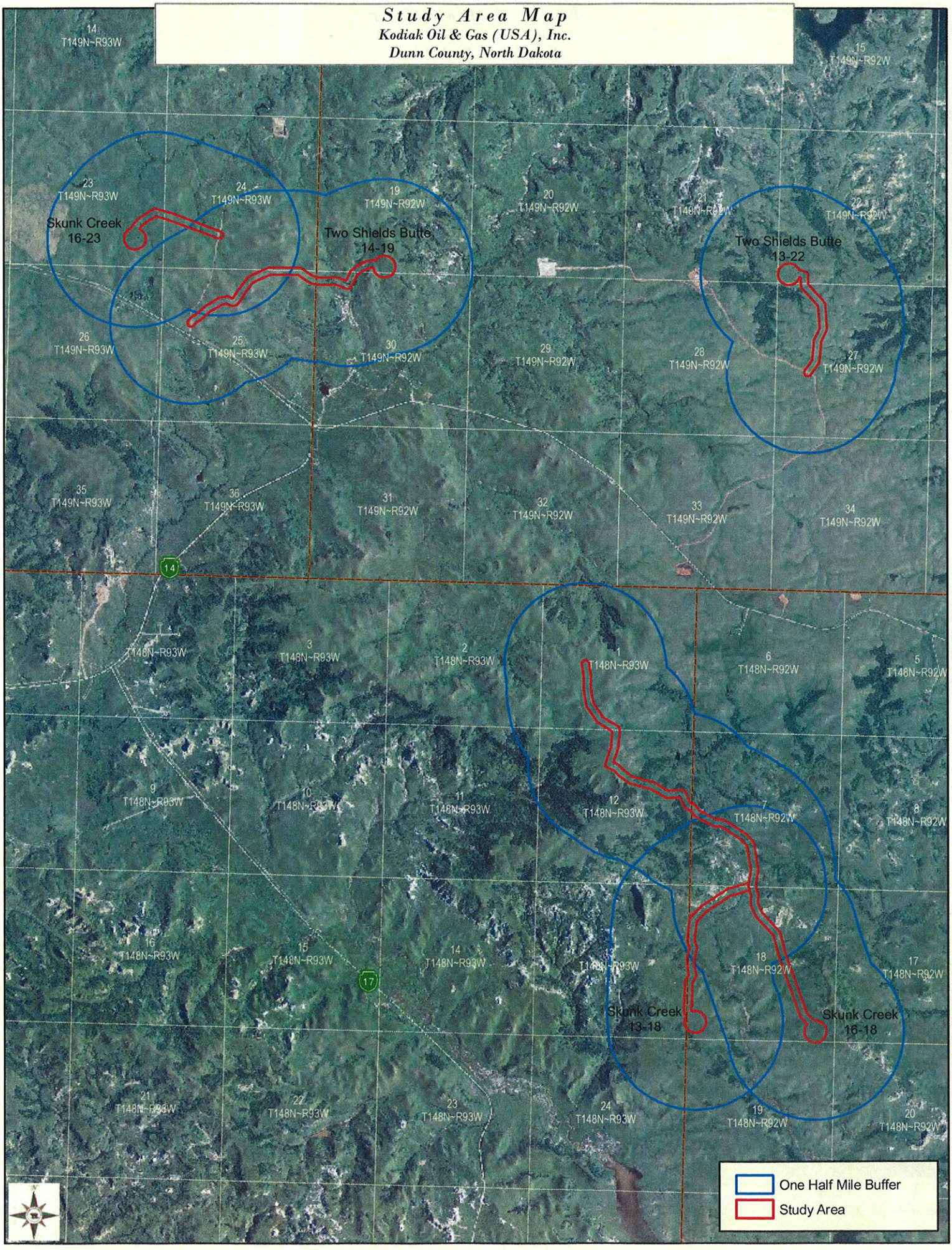
Kodiak Oil & Gas (USA), Inc.
Proposed Oil Wells
Location Map

North Dakota

Study Area Map

Kodiak Oil & Gas (USA), Inc.

Dunn County, North Dakota



Eagle Buffer Map

Kodiak Oil & Gas (USA), Inc.

Dunn County, North Dakota


Independence Point Watershed
MOUNTRAIL CO
DUNN CO
Independence Point
Skunk Creek
Skunk Creek
Sub-Watershed
Two Shields Butte
14-19
Skunk Creek
16-23
Two Shields Butte
13-22
South Fork Creek
Squaw Creek
Lower Squaw Creek Bay
Sub-Watershed
Skunk Creek
13-18
Skunk Creek
16-18
Waterchief Bay Watershed
Saddle Butte
Heart Butte
Smith Creek
Public Use Area
Public Use
Area
MISSOURI
RIVER
Charging Eagle Bay
Public Use Area
LITTLE
Drainage Path - Lake Sakakawea
Well Pad

Appendix B

Agency Scoping Responses

List of Scoping Responses

Kodiak Oil & Gas (USA), Inc.

EA for Drilling of Oil & Gas Wells:

Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, Skunk Creek #16-23-14-1H, Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, Two Shields Butte #14-19-18-2H3, Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, Two Shields Butte #13-22-33-16H, Skunk Creek # 13-18-7-4H, Skunk Creek #13-18-7-4H3, Skunk Creek #13-18-7-3H, Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, Skunk Creek #16-18-7-2H

Federal

US Department of Agriculture – Natural Resources Conservation Service

US Department of the Army – Corps of Engineers, North Dakota Regulatory Office

US Department of the Army – Corps of Engineers, Omaha District Office

US Department of the Army – Corps of Engineers, Riverdale Field Office

US Department of the Interior – Fish and Wildlife Service

US Department of Transportation – Federal Aviation Administration

State

North Dakota Department of Health

North Dakota Game and Fish Department

North Dakota Parks and Recreation Department

North Dakota State Water Commission

Local

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 1458
Bismarck, ND 58502-1458

January 31, 2011

Shanna Braun
Kadrmas, Lee & Jackson
3203 32nd Ave. S, Ste. 201
PO Box 9767
Fargo, ND 58106-9767

RE: Kodiak Oil & Gas (USA), Inc.
Proposal to drill up to 16 Oil & Gas Wells on Five Pads
Dunn County, ND

Marathon Oil Company
Proposed Boy Chief USA #11-15H Oil and Gas Well
Dunn County, ND

Dear Ms. Braun:

The Natural Resources Conservation Service (NRCS) has reviewed your letters dated January 19 and 21, 2010, regarding the proposals to drill oil and gas wells on the Fort Berthold Indian Reservation in Dunn County, North Dakota.

Important Farmlands - NRCS has a major responsibility with FPPA in documenting conversion of farmland (i.e., prime, statewide, and local importance) to non-agricultural use. It appears your proposed project is not supported by federal funding or actions; therefore, no further action is required.

Wetlands – The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and

preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

NRCS would recommend that impacts to wetlands be avoided. If the project requires passage through or disturbance of a wetland, NRCS can complete a certified wetland determination, if requested by the landowner/operator.

If you have additional questions pertaining to FPPA, please contact Steve Sieler, State Soil Liaison, at (701) 530-2019.

Sincerely,

JEROME SCHAAR
State Soil Scientist/MO 7 Leader

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
1513 SOUTH 12TH STREET
BISMARCK ND 58504-6640

January 28, 2011

REPLY TO
ATTENTION OF
North Dakota Regulatory Office

NWO-2011-0168-BIS

RECEIVED
FEB - 3 2011
BY:

Kadrmas, Lee & Jackson
ATTN: Shanna Braun, Environmental Planner
P.O. Box 9767
Fargo, North Dakota 58106-9767

Dear Ms. Braun:

This is in response to a letter received January 24, 2011 requesting Department of the Army, U.S. Army Corps of Engineers (Corps) comments regarding the proposed preparation of five (5) oil and gas wells in Dunn County, Fort Berthold Reservation, North Dakota by Kodiac Oil and Gas (USA), Inc. The oil and gas wells are listed as follows:

- **Skunk Creek #16-23 well pad site located in SE1/4 of Section 23, Township 149 North, Range 93 West containing Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3 & Skunk Creek #16-23-14-1H oil wells.**

- **Two Shields Butte #14-19 well pad site located in SW1/4 of Section19, Township 149 North, Range 92 West containing Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H & Two Shields Butte #14-19-18-2H3 oil wells.**

- **Two Shields Butte #13-22 well pad site located in SW1/4 of Section 22, Township 149 North, Range 92 West containing Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3 & Two Shields Butte #13-22-33-16H oil wells.**

- **Skunk Creek #13-18 well pad site located in SW1/4 of Section 18, Township 148 North, Range 92 West containing Skunk Creek #13-18-7-4H, Skunk Creek #13-18-7-4H3 & Skunk Creek #13-18-7-3H oil wells.**

- **Skunk Creek #16-18 well pad site located in SE1/4 of Section 18, Township 148 North, Range 92 West containing Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3 & Skunk Creek #16-18-7-2H oil wells**

Corps Regulatory Offices administer Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act regulates work in or affecting navigable waters. This would include work over, through, or under Section 10 water. Section 10 waters in North Dakota include the Missouri River (including Lake Sakakawea and Lake Oahe), Yellowstone River, James River south of Jamestown, North Dakota, Bois de Sioux River, Red River of the North, and the Upper Des Lacs Lake. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, la.kes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

For any proposed well where the well line and/or bottom hole is under or crosses under Lake Sakakawea, regardless of depth, we require that project proponent provide a DA permit application (ENG Form 4345) to the Corps.

Enclosed for your information is the fact sheet for Nationwide Permit 12, Utility Line Activities. Pipeline projects are already authorized by Nationwide Permit 12 **provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification is obtained.** Please note the pre-construction notification requirements on page 2 of the fact sheet. **If a project involves any one of the seven notification requirements, the project proponent must submit a DA application.** Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 12 and 13 of the fact sheet. [The following info is for activities on a reservation] Please be advised that the United States Environmental Protection Agency (EPA), Region 8 has denied 401 Water Quality Certification for activities in perennial drainages and wetlands. Furthermore, EPA has placed conditions on activities in ephemeral and intermittent drainages. It is recommended you contact the U.S. Environmental Protection Agency, Region 8, Attn: Brent Truskowski, 1595 Wynkoop Street, Denver, Colorado 80202-1129 to review the conditions pursuant to Section 401 of the Clean Water Act prior to any construction.

With respect to road construction and/or upgrades, find enclosed for your information is the fact sheet for Nationwide Permit 14, Linear Transportation Projects. Road crossings are already authorized by Nationwide Permit 14 **provided the discharge does not cause the loss of greater than ½ acre of waters of the United States per crossing and all other proposed construction activities are in compliance with the Nationwide's permit conditions.** Please note the pre-construction notification requirements on the front page of the fact sheet. **If a project involves (1) the loss of waters of the United States exceeding 1/10 acre per crossing; or (2) there is a discharge in a special aquatic site, including wetlands, the project proponent must submit a DA application prior to the start of construction.** Please reference General Condition 27, Pre Construction Notification on page 8 of the fact sheet. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 11 and 12 of the fact sheet. [The following is included for activities on a reservation] Enclosed is a copy of the United States Environmental Protection Agency, Region 8's; General Conditions for all Nationwide Permits and specific conditions for Nationwide Permit 14.

In the event your project requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the project impacts and comments received through the public notice may extend beyond 120 days.

This correspondence letter is neither authorization for the proposed construction nor confirmation that the proposed project complies with the Nationwide Permit(s).

If any of these projects require a Section 10 and/or Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 4345) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota 58504. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

If we can be of further assistance or should you have any questions regarding our program, please do not hesitate to contact this office by letter of phone at (701) 255-0015.

Sincerely,

Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosures
ENG Form 4345
Fact Sheet NWP 12 and 14
EPA 401 Conditions for Nationwide Permits

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-0003
EXPIRES: 31 August 2012

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME:	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS: Address -	9. AGENT'S ADDRESS Address -
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. W/AREA CODE	10. AGENT'S PHONE NOs. W/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT Latitude: °N Longitude: °W	Address City - State - Zip -

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
State Tax Parcel ID Municipality
Section - Township - Range -

17. DIRECTIONS TO THE SITE

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres

Or

Liner Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? Yes ☐ No ☐ IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

Address –

City – State – Zip –

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army Permit Application

Blocks 1 through 4. To be completed by Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the E-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by applicant, if an agent is to be employed.

Block 12. Proposed Project Name or Title. Please provide name identifying the proposed project, e.g., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

Block 13. Name of Waterbody. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Project Street Address. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15. Location of Proposed Project. Enter the latitude and longitude of where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality that the site is located in.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known

Block 18. Nature of Activity. Describe the overall activity or project. Give appropriate dimensions of structures such as wing walls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

Block 19. Proposed Project Purpose. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Block 20. Reasons for Discharge. If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Block 22. Surface Areas of Wetlands or Other Waters Filled. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Description of Avoidance, Minimization, and Compensation. Provide a brief explanation describing how impacts to waters of the United States are being avoided and minimized on the project site. Also provide a brief description of how impacts to waters of the United States will be compensated for, or a brief statement explaining why compensatory mitigation should not be required for those impacts.

Block 24. Is Any Portion of the Work Already Complete? Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identity the authorization, if possible.

Block 25. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

Block 26. Information about Approvals or Denials by Other Agencies. You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 27. Signature of Applicant or Agent. The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

FACT SHEET
NATIONWIDE PERMIT 12
(2007)

UTILITY LINE ACTIVITIES. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or

under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

General Conditions: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

1. **Navigation**. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. **Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically in North Dakota, the North Dakota Department of Health has denied certification for projects under this Nationwide Permit proposed to cross* ***all classified rivers, tributaries and lakes****; individual certification for project in these waterways must be obtained by the project proponent prior to authorization under this Nationwide Permit. For utility line crossings of all other waters, the Department of Health has issued water quality certification provided the attached Construction and Environmental Disturbance Requirements are followed.*

22. **Coastal Zone Management.** *Not Applicable.*

23. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received a NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. *See attached pages.*

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

General Condition 27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38, 45, and 47, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes: after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: https://www.nwo.usace.army.mil/html/od-rmd/ndhome.htm

NORTH DAKOTA
DEPARTMENT of HEALTH

Gold Seal Center, 918 E. Divide Ave
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

FACT SHEET
NATIONWIDE PERMIT 14
(2007)

LINEAR TRANSPORTATION PROJECTS. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be erodec by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

General Conditions: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical

habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. **Historic Properties.** (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. *Specifically for North Dakota, the North Dakota Department of Health has issued water quality certification for projects under this Nationwide Permit provided the attached Construction and Environmental Disturbance Requirements are followed.*

22. Coastal Zone Management. *Not Applicable.*

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

(Date)

26. **Compliance Certification.** Each permittee who received a NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. **Pre-Construction Notification.** *See attached pages.*

28. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

General Condition 27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

2007 NATIONWIDE PERMITS
REGIONAL CONDITIONS
STATE OF NORTH DAKOTA
OMAHA DISTRICT – CORPS OF ENGINEERS

The U.S. Army Corps of Engineers has adopted the following regional conditions for activities authorized by nationwide permits within the State of North Dakota. However, the pre-construction notification requirements defined below are not applicable to Nationwide Permit 47.

1. Wetlands Classified as Fens

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38, 45, and 47, are revoked for use in fens in North Dakota. For nationwide permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 27 (Notification) prior to initiating any regulated activity impacting fens in North Dakota.

Fens are wetlands that develop where a relatively constant supply of ground water to the plant rooting zone maintains saturated conditions most of the time. The water chemistry of fens reflects the mineralogy of the surrounding and underlying soils and geological materials. The substrate is carbon-accumulating, ranging from muck to peat to carbonates. These wetlands may be acidic to alkaline, have pH ranging from 3.5 to 8.4 and support a range of vegetation types. Fens may occur on slopes, in depressions, or on flats (i.e., in different hydrogeomorphic classes; after: Brinson 1993).

2. Waters Adjacent to Natural Springs

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

3. Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 27 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

4. Historic Properties

That the permittee and/or the permittee's contractor, or any of the employees, subcontractors or other persons working in the performance of a contract(s) to complete the work authorized herein, shall cease work and report the discovery of any previously unknown historic or archeological remains to the North Dakota Regulatory Office. Notification shall be by telephone or fax within 24 hours of the discovery and in writing within 48 hours. Work shall not resume until the permittee is notified by the North Dakota Regulatory Office.

5. Spawning Condition

That no regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July.

Additional Information

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material.

Specific verbiage on prohibited materials and the 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: https://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm

NORTH DAKOTA
DEPARTMENT of HEALTH

Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

Environmental Protection Agency, Region 8

Water Quality Certification in Accordance with Section 401 of the Clean Water Act
for the 2007 Nationwide Permits in Indian Country

May 11, 2007

These requirements apply to permitted activities occurring within "Indian country" as defined at 18 U.S.C. Section 1151, which includes lands located within formal Indian reservations as well as lands held in trust by the United States for Indian tribes and located outside the boundaries of formal Indian reservations. Please be aware that tribal trust lands located outside the boundaries of formal Indian reservations exist in Region 8.

A. SPECIFIC NATIONWIDE PERMITS CWA Section 401 CERTIFICATION DENIED

USEPA Region 8 is denying CWA Section 401 certification on all waters for the following NWPs: # 16, # 17, # 21, # 33, # 34, # 44, # 45, # 46, # 47, # 49 and # 50. On NWPs that have been "denied" the EPA will review the proposed permit activity and issue a project-specific 401 Certification decision on each permit.

B. GENERAL CONDITIONS FOR ALL NATIONWIDE PERMITS

1. Project proponent/contractor must have the following on-site:
   - a copy of the appropriate USEPA Regional 401 certification general and specific conditions contained in this certification;

   in addition, for NWP permits requiring a 401 certification application to USEPA:
   - the 401 certification application, and
   - EPA Region 8 CWA Section 401 certification document if applicable.

2. Certification is denied for any activity affecting fens and springs.
   Note: EPA adopts the definitions of these aquatic resources as defined by the 2007 Regional Conditions, as defined by the published draft conditions.

3. This certification does not authorize the placement or construction of septic/leach systems or other sewage/waste treatment plants in wetlands.

4. This certification does not authorize the construction of dams, except for stream restoration projects.

5. This certification does not authorize the construction of any portion of a facility for confined animal feeding operations, including, but not limited to, the construction of buildings, holding/detention and sewage lagoons, and/or livestock holding areas.

6. Wetland mitigation under these nationwide permits shall be completed prior to, or concurrent with, the project impacts. Wetland mitigation should be in-kind and on-site replacing native wetland plant communities lost from all project impacts. If the USACE

recommends a mitigation bank or in-lieu fee program and the permittee chooses to utilize the option of a mitigation bank or in-lieu fee program, the applicant must submit the name of the bank or program, and the number and type of credits to be purchased prior to project impacts.

7. For any general or specific nationwide permit conditions requiring notification in accordance with the Preconstruction Notification general condition #27 (72 Fed. Reg. 11092, 11195 (March 12, 2007)), "Agency Coordination" for project activities should include coordination with Native American Tribe or Tribes affected by such project activities.

8. Based on experience with invasive species, infestations of invasive plant species may result in increased erosion and/or pesticide applications, have the potential to reduce water quality, impact aquatic habitat, and impact designated water quality uses. This certification requires the use of certified weed-free hay/straw with any revegetation of project areas for activities authorized under these nationwide permits. This certification requires the use of seed that contain no noxious weed seed and meets certified seed quality. All seed must have a valid seed test within one year of the use date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts). The seed lab results shall show no more than 0.5 percent by weight of other weed seeds; and the seed lot shall contain no noxious, prohibited, or restricted weed seeds according to State seed laws in the respective State(s).

9. This certification requires monitoring for and control of invasive species during project construction if areas are disturbed and not immediately revegetated. This certificate requires monitoring for and immediate control of invasive species after project completion through at least one growing season. A maximum goal of less than 5% weed-species plants should be set, unless local, State, Tribal, or USACE rules, ordinances or permit conditions require more stringent monitoring and response.

10. Vegetation should be protected except where its removal is absolutely necessary for completion of the work. Applicant should revegetate disturbed soil in a manner that optimizes plant establishment for that specific site. Revegetation may include topsoil replacement, planting, seeding, fertilization, liming, and weed-free mulching as necessary. Applicant should use native material where appropriate and feasible. Where practical, stockpile weed-seed-free topsoil and replace it on disturbed areas. All cut and fill slopes that will not be protected with riprap should be revegetated with appropriate species to prevent erosion.

11. The following conditions apply when operating equipment or otherwise undertaking construction in a water of the U.S.

A. This certification requires all equipment to be inspected for oil, gas, diesel, anti-freeze, hydraulic fluid and other petroleum leaks. All such leaks will be properly repaired and equipment cleaned prior to being allowed on the project.

Leaks that occur after the equipment is moved to the project site will be fixed that same day or the next day or removed from the project area. The equipment is not allowed to continue operating once the leak is discovered.

B. Construction equipment should not be operated below the existing water surface except as follows:

a) Fording at one location is acceptable; however, vehicles should not push or pull material along bed or bank below the existing water level. Impacts from fording should be minimized.

b) Work below the waterline which is essential should be done in a manner to minimize impacts to the aquatic system and water quality.

C. All equipment that has been operated in waters of the US, with known invasive species infestation(s) is to be inspected and cleaned before entering waters of the U.S. for this permit. All equipment is to be inspected and cleaned after use.

12. Any temporary crossings, bridge supports, cofferdams or other structures that are necessary during the permit activity should be designed to handle high flows that can be anticipated during permit activity. All temporary structures should be completely removed from the waterbody at the conclusion of the permitted activity and the area restored to a natural appearance.

13. This certification does not authorize any unconfined discharge of liquid cement in waters of the United States. Grouting riprap must occur under dry conditions with no exposure of wet concrete to the waterbody.

14. All discharges must occur during the low flow or no flow period of the season.

C. ADDITIONAL CONDITIONS FOR SPECIFIC NATIONWIDE PERMITS

In addition to the general conditions for all Nationwide Permits, the following conditions are specific to each listed nationwide permit.

Nationwide Permit 3. Maintenance Activities

A. For the repair of low water crossings, this certification is denied for discharges of any fill or dredged material that would result in an increase in land contour height beyond the original dimensions.

B. Silt and sediment removal associated with low water crossings shall be limited to a maximum of 50 linear feet.

C. Silt and sediment removal associated with bridge crossings shall be limited to a maximum of 100 linear feet.

Nationwide Permit 4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 7. Outfall Structures and Associated Intake Structures

For construction and maintenance activities:

A. Construction of the outfall structure shall be placed at the streambed elevation and, at a minimum; the pipeline should be oversized to prevent high-pressure discharge of stormwater.

B. Certification is denied for construction of the outfall structure in wetlands.

C. Controls shall be put in place to stabilize all areas of the bed and bank around and adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively.

D. This certification does not authorize structures for drainage activities that result in a loss of waters of the U.S., such as tile systems.

Nationwide Permit 11. Temporary Recreational Structures

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 12. Utility Line Activities

A. Project proponent/contractor must have a copy of the 401 certification application and the EPA 2007 water-quality-certification-document on-site.

B. Certification is denied for activities in perennial drainages and wetlands.

C. Certification is denied for all water intake structures.

D. Activities in ephemeral and intermittent drainages are certified with the following conditions:

a) Crossings must be placed as close to perpendicular to the watercourse as possible.

b) Affected streambanks must be sloped such that the stream bottom width is not reduced and bottom elevations are restored to original elevations.

c) Disturbed stream banks must be reconfigured to mimic a stable naturally vegetated portion of the same stream within ½ mile in either direction of the project and not reduce the bottom width of the stream. If a natural/native stream reach is not available within the adjacent reach, other natural portions of the drainage can serve as a reference condition.

E. USACE General Condition 20. Mitigation, (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. A statement or other evidence that General Condition 20 has been met should be submitted.

F. Applications for this NWP water quality 401 certification must include the following detailed information at a minimum and will serve as baseline certification conditions for the project.

a) Location and Wetland Map:
- Narrative describing both the location (i.e., Section, Township Range, and decimal Latitude/Longitude) of the proposed construction project, the affected waters/wetlands, and the type of utility line.
- An aerial photograph with wetland overlays must be provided with Ordinary High Water Mark delineated.

b) Waters of the U.S. Description:
- A description of the waterbody/wetlands including the dominant plant communities present in the wetlands or riparian areas.
- On-site photographs of the site must be taken during the growing season to include a colored overlay line indicating the alignment of the pipeline across the waterbody/wetlands or other construction features.

c) Construction Description:
- A description of the methods by which the utility will be constructed on the site including (but not limited to) the trench size and depth, backfill materials (specifications), construction machinery to be used, cofferdam or road crossing specifications, and best

management practices to be implemented on-site (including invasives controls).
- Access roads must be constructed outside of waters /wetlands where alternatives are available.
- Proposed under drains (tile, french drains, etc.) must be described if proposed with the project.
- Details on pipeline corrosion protection methods must be provided.
- Where a positive gradient exits the wetlands such that drainage along the pipeline may occur, clay blocks, or another suitable method that will protect aquatic resources from inadvertent drainage, are required to prevent said wetland drainage.
- Site-specific cross-sectional drawings should be provided, including a drawing of the clay block or other method used to stop drainage.

d) Description of Impacts to Waters of the U.S.:
- A description of the amount (acreage and square feet) of disturbance/loss to waters of the U.S. (including wetlands) must be provided. Loss of waters includes both temporary and permanent impacts to wetlands resources from the construction project, including access roads.
- The length and width of the crossing and amount of impacts to the dominant plant communities must be provided.
- All unavoidable temporary sidecasting of materials (dredge or fill material) in wetlands must be placed on landscaping fabric or a weed-free hay/straw layer to mark the existing wetlands elevation.

e) Mitigation and Restoration Plan:
- Where proposed construction of the utility results in the conversion of a wetland type (i.e., forested/shrub willow type) to an herbaceous wetland type (i.e., wet meadow type), mitigation of the shrub community must be accomplished on-site to restore designated uses.
- The top six to 12 inches must be backfilled with topsoil from the trench.
- Mitigation plans (including road design specifications to minimize adverse impacts to adjacent wetlands) for unavoidable impacts resulting from access roads must be provided.

Nationwide Permit 13. Bank Stabilization

A. For this certification to be valid, the use of root wads, tree trunks, planting of live vegetation, proper bank sloping or a combination thereof will be used as bank stabilization structures. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed

shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities. Sediment control measures shall be maintained in good working order at all times.

For the purpose of this condition, "proper sloping" is defined as configuring the disturbed bank to mimic a stable portion of the same stream within ½ mile in either direction of the project and not reduce the bottom width of the stream.

B. If flow conditions dictate the use of hardened structures, only appropriately sized angular rock may be used. The use of soil cement, concrete, grouted riprap, etc. is NOT certified.

Nationwide Permit 14. Linear Transportation Projects

A. Stormwater resulting from both the construction and operation of these authorized projects (including runoff from bridge decks) must be routed into constructed runoff water quality control systems (e.g. sediment basins, wet ponds, etc.) in order to eliminate sediment and other pollutants prior to entry of stormwater into waters of the United States.

B. Affected streambanks must be sloped such that the steam bottom wicth is not reduced and bottom elevations are restored to original elevations.

C. Crossings must be placed as close to perpendicular to the watercourse as possible.

D. The upland and riparian areas adjacent to all sides of the crossing must be revegetated in all directions from the banks of the tributary with native vegetation that is common to the geographical area. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities.

Nationwide Permit 15. U.S. Coast Guard Approved Bridges

A. Stormwater resulting from both the construction and operation of these authorized projects (including runoff from bridge decks) must be routed into constructed runoff water quality control systems (e.g. sediment basins, wet ponds, etc.) in order to eliminate sediment and other pollutants prior to entry of stormwater into waters of the United States.

B. Affected streambanks must be sloped such that the steam bottom width is not reduced and bottom elevations are restored to original elevations.

C. Crossings must be placed as close to perpendicular to the watercourse as possible.

D. The upland and riparian areas adjacent to all sides of the crossing must be revegetated in all directions from the banks of the tributary with native vegetation that is common to the geographical area. Native plants shall be planted in all disturbed areas and artificial soil stabilizing material (e.g. mulch, matting, netting etc) shall be used to reduce soil erosion. These materials, to include all plants and plant seed shall be on site or scheduled for delivery prior to or upon completion of the earth moving activities.

E. Bridge decks should be designed such that they do not drain directly into the waterbody.

Nationwide Permit 16. Return Water From Upland Contained Disposal Areas.
Certification is denied.

Nationwide Permit 17. Hydropower Projects.
Certification is denied.

Nationwide Permit 19. Minor Dredging

A. Dredge or fill may **not** be placed on temporary islet, islands, sandbars, landmass or other area of sediment accumulation, within the banks of a stream, shore of lake, edge of wetland or other type of waterbody; unless the vegetation and geomorphology signify a long term stable configuration. (e.g. Areas of accumulation are not formed from temporary situations such as drought conditions or temporary upstream reservoir release conditions).

B. Dredge materials must be placed in an upland and controlled such that it cannot return to waters of the U.S.

Nationwide Permit 21. Surface Coal Mining Operations. Nationwide Permit 21. Surface Coal Mining Activities
Certification is denied.

Nationwide Permit 23. Approved Categorical Exclusions
This certification is valid only for Categorical Exclusions listed in RGL 05-07.

Nationwide Permit 27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

A. This certification does not allow conversion of one habitat type to another (e.g. wetlands to open water, woody vegetation to herbaceous).

B. This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 28. Modifications of Existing Marinas

This certification does not allow for expansion.

Nationwide Permit 29. Residential Developments

A. Certification is denied for discharges into wetlands, intermittent or perennial drainages.

B. Subdivisions not authorized under this certification.

C. USACE General Condition 20. Mitigation (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. Statement or other evidence that General Condition 20 has been met should be submitted.

Nationwide Permit 30. Moist Soil Management for Wildlife

This certification does not allow for the introduction of non-native flora or fauna.

Nationwide Permit 33. Temporary Construction, Access and Dewatering

Certification is denied.

Nationwide Permit 34. Cranberry Production Activities

Certification is denied.

Nationwide Permit 37. Emergency Watershed Protection and Rehabilitation

A. In addition to the information specified in USACE General Condition 27 Preconstruction Notification (72 Fed. Reg. 11092, 11188 (March 12, 2007)), the notification to USEPA must include documentation that the work qualifies as an "emergency" situation and that immediate action will be taken if nationwide authorization is verified. In addition, notification must include:

a) A delineation of special aquatic sites;

b) Any spoil must be placed in an upland and controlled such that it cannot return to waters of the U.S.; and

c) A delineation of riparian areas to be cleared and an analysis of alternatives to such clearing.

B. Certification is denied for discharges for which notification is submitted more than one year after the official conclusion of the emergency that caused the situation.

C. Certification is denied for channelization of streams or sloughs or for removal of silt beyond what was deposited by the emergency.

Channelization is defined, for this purpose, as the placement of excess material in a manner that modifies the bank alignment, and subsequently the channel alignment, from its present condition.

D. Certification is denied for a discharge of fill or dredged material into special aquatic sites if a practicable alternative that does not involve discharge into a special aquatic site is available. If discharge into a special aquatic site is unavoidable, discharge must be minimized.

E. The disturbing or clearing of riparian areas shall be minimized to enough space to provide equipment access.

F. Construction of temporary structures or drains for the purpose of reducing or preventing flood damage is certified if the site is returned to pre-flood condition within 60 days following the emergency.

G. Repair of permanent structures damaged by floodwaters is certified to the extent that it returns the structure to pre-flood condition.

Nationwide Permit 38. Cleanup of Hazardous and Toxic Waste

For this certification to be valid, notification to USEPA and the Tribe is required.

Nationwide Permit 39. Commercial and Institutional Developments

A. Certification is denied for discharges into wetlands, intermittent or perennial drainages.

B. Certification is denied for subdivisions

C. USACE General Condition 20. Mitigation, (72 Fed. Reg. 11092, 11193-11194 (March 12, 2007)) requires permittees to avoid and minimize adverse effects to the maximum extent practicable on the project site. Statement or other evidence that general condition 20 has been met should be submitted.

Nationwide Permit 40. Agricultural Activities

A. Certification is denied for the construction of new levees, ditches, or drainage activities.

B. Certification is denied for the construction of building pads causing the loss of greater than 1/10 acre of wetlands for both USDA program participants and non-participants.

C. Certification is denied for activities related to tile construction.

Nationwide Permit 41. Reshaping Existing Drainage Ditches

A. Clearing of riparian corridors must be limited to the minimum necessary for project construction. Clearing limits must be specified in the construction contract.

B. This certification does not authorize stream relocation projects.

Nationwide Permit 42. Recreation Facilities

A. Certification is denied for the construction of parking lots, golf course, golf course buildings, ponds and reservoirs, ski areas and ski infrastructures, race tracks, and amusement parks.

B. Certification is denied for discharges resulting in the loss of more than 100 linear feet of channel, streambank, and/or wetlands for a single and complete project.

C. Clearing of riparian corridors and wooded and scrub shrub areas must be limited to the minimum necessary for project construction. Clearing limits must be specified in the construction contract on a drawing and/or map, and in narrative format.

Nationwide Permit 43. Stormwater Management Facilities

Certification is denied for the construction of new stormwater management facilities.

Nationwide Permit 44. Mining Activities. Nationwide Permit 44. Mining Activities

Certification is denied.

Nationwide Permit 45. Repair of Uplands Damaged by Discrete Events.

Certification is denied.

Nationwide Permit 46. Discharges in Ditches

Certification is denied.

Nationwide Permit 47. Pipeline Safety Program Designated Time Sensitive Inspections and Repairs

A. Certification is denied, unless there is imminent danger to human health or the health of the environment.

B. Notification and restoration should begin immediately after inspections and repairs are completed. After the fact, notification should be done as soon as possible and include documentation that the work done qualifies as an "emergency" situation and that immediate action was necessary.

Nationwide Permit 49. Coal Remining Activities.

Certification is denied.

Nationwide Permit 50. Underground Coal Mining Activities

Certification is denied.

APPLICATION CHECKLIST FOR COMPLETENESS
401 CERTIFICATIONS for USACE NWPs

1. Application date.
2. Applicant's full identity whether individual or corporate.
3. Applicant's full mailing address or addresses.
4. Signature of the legal applicant is required.
5. Telephone number and e-mail address (and FAX, if available) at which the applicant may be reached during normal business hours.
6. If the applicant is utilizing the services of a legal agent to apply for certification, items 2, 3, 4 and 5 will be also needed for this agent.
7. Full names and addresses of all property owners of the project.
8. Full names and addresses of all adjoining property owners to the project.
9. Overall project description and range of project. (This includes all phases of work.)
10. Purpose of the project (flood control, drainage improvement, erosion control, road construction, etc.).
11. Project dimensions (length, width, height) expressed in standard, commonly-used, units of measurement.
12. Site maps and engineering drawings for more complex projects are recommended, sketches may suffice for smaller or less complex projects. Maps or aerial photographs should be clear and readable. Aerial photographs should be marked with wetlands, waterbodies or high water mark and areas of activity marked.
13. Legal description of the project location (appropriate breakdown into Section(s), Township, Range and County sufficient to locate and define on topographic maps). The notification should also include locational information in decimal degree latitude and longitude.
14. General travel directions to the site.
15. Name or identity of the water body(s) that the project is expected to impact. If the stream is not permanent flow, the applicant will need to include an evaluation by the Corps of Engineers that the water body is jurisdictional.
16. Specifically, state which NWP(s) the applicant is applying for from the USACE. Include measures of impact to waterbody (for example: acreage for surface water impacts, linear feet of bank, shoreline linear feet and acreage) for each NWP.
17. A statement of the cubic yards of material or fill proposed to be placed below the ordinary high water mark within the watercourse, in a wetland, or other waterbody and a complete description as to the source and type of material or fill to be used.
18. A complete description of all work initiated or completed prior to the application submission at this site and within the vicinity. If there has been recent work done by others, this should be noted also.
19. As unavoidable losses to the aquatic resources (including streams and wetlands) must be mitigated, a detailed mitigation plan must be submitted where such losses will be incurred.
20. Statement discussing the avoidance and minimization, a presumption of NWPs and required for individual permits.
21. Monitoring of site, including photograph of site from marked sites, photograph of site after work is complete.
22. Complete copy of USACE application or Checklist (such as the PCN Checklist available from Southern Pacific Division), with supporting material.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

REPLY TO
ATTENTION OF

January 20, 2011

Planning, Programs, and Project Management Division

Kadrmas, Lee and Jackson
Attention: Shanna Braun
P.O. Box 9767
Fargo, North Dakota 58106

Dear Ms. Shanna Braun:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated December 23, 2010, regarding the proposed drilling and completion of up to four exploratory oil and gas wells at four single pad locations on the Fort Berthold Reservation in Mountrail County, North Dakota. The Corps offers the following comments:

Since the proposed project does not appear to be located within Corps owned or operated lands, we are providing no floodplain or flood risk information. To determine if the proposed project may impact areas designated as a Federal Emergency Management Agency special flood hazard area, please consult the following floodplain management office:

North Dakota State Water Commission
Attention: Jeff Klein
900 East Boulevard Avenue
Bismarck, North Dakota 58505-0850
jjkein@nd.gov
T-701-328-4898
F-701-328-3747

Your plans should be coordinated with the U.S. Environmental Protection Agency, which is currently involved in a program to protect groundwater resources. If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the North Dakota Game and Fish Department regarding fish and wildlife resources. In addition, the North Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (https://www.nwo.usace.army.mil/html/od-r/district.htm) to determine if this project requires a 404 permit. For a detailed review of permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Bismarck Regulatory Office
Attention: CENWO-OD-R-ND/Cimarosti
1513 South 12th Street
Bismarck, North Dakota 58504

In addition, please update your records with our current mailing address:

U.S. Army Corps of Engineers, Omaha District
Planning Branch
Attention: CENWO-PM-AC
1616 Capitol Avenue
Omaha, Nebraska 68102-4901

If you have any questions, please contact Mr. John Shelman of my staff at (402) 995-2708.

Sincerely,

Randal P. Sellers
Acting Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section

From: Sorensen, Charles G NWO
To: shanna.braun@kljeng.com;
Subject: Comments on Kodiak Oil and Gas 16 wells
Date: Wednesday, January 26, 2011 2:49:17 PM

Shanna

Thanks for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project provide comments for the Environmental Assessment for Kodiak Oil and Gas proposed 16 wells in Dunn County. At this time the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project requests that Kodiak Oil and Gas take into consideration and if possible implement the following management practices during the exploration phase of the those wells listed in the request letter

Due to the close proximity of the well location to lands with drainages that transverse lands managed by the U.S. Army Corps of Engineers (USACE) there is a possibility that any storm water runoff from the well location will enter Lake Sakakawea. As such, the USACE would request that Kodiak Oil and Gas consider the following: The construction/establishment of a lined catch trench located on the down sloping side of the well pad. Said trench would help in containing any wastes from storm water run off from the well pad. Those Fluids that accumulate in the trench should be pumped and disposed of properly on a regular basis.

As previously mentioned the location of the proposed well site is located adjacent to drainages that transverse lands managed by the USACE and as previously stated the possibility for contamination of the Missouri River/Lake Sakakawea is of great concern to this agency. To aid in the prevention of hazardous wastes from entering the aforementioned bodies of water, the USACE would strongly recommend that a Closed Loop Drilling Method be used in the handling of all drilling fluids

Should living quarters be established onsite it is requested that all sewage collection systems be of a closed design and all holding tanks are to be either double walled or contained in a secondary containment system. All sewage waste removed from the well site location should be disposed of properly.

That all additional fill material required for the construction of the well pad is

obtained from a private supplier whose material has been certified as being free of all noxious weeds.

Prior to the drilling rig and associated equipment being moved/ placed that all equipment be either pressure washed or air blasted off Tribal lands to prevent the possible transportation of noxious or undesirable vegetation onto Tribal lands as well as USACE managed lands.

That no surface occupancy be allowed within ½ mile of any known Threatened or Endangered Species critical habitat.

If possible, all construction activities should occur between August 15th and April 1st.

If trees are present, the appropriate dates are August 15th – February 1st. By constructing during these dates, disruptions to wildlife during the breeding season maybe kept to a minimum.

Cumulative impacts are often overlooked, in the completion of NEPA compliance. To adequately assess cumulative impacts, the following activities should consider.

a. Has the project area already been degraded, and if so, to what extent?

b. Are other ongoing activities in the area causing impacts, and if so, to what extent?

c. What is the likelihood that this project will lead to a number of associated projects?

d. What are the trends for activities and impacts in the area?

If you have any questions regarding the above recommendations please feel free to contact me

Charles Sorensen
Natural Resource Specialist
U.S. Army Corps of Engineers
Garrison Dam/Lake Sakakawea Project

Riverdale, North Dakota Office

(701) 654 7411 ext 232

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

MAR 24 2011

Ms. Shanna Braun, Environmental Planner
Kadrmas, Lee and Jackson, Inc.
3203 32nd Avenue S, Suite 201
P.O. Box 9767
Fargo, North Dakota 58106-9767

Re: Kodiak Proposed 16 Oil and Gas Wells on Five Pads, Skunk Creek, Two Shields Butte, Fort Berthold Reservation, Dunn County, North Dakota

Dear Ms. Braun:

This is in response to your January 21, 2011, scoping letter on the proposed construction of sixteen exploratory oil and gas wells on five well pads, to be completed by Kodiak Oil & Gas USA, Inc. (Kodiak) on the Fort Berthold Reservation, Dunn County, North Dakota.

Specific locations for the proposed well pads are:

Skunk Creek #16-23: T. 149 N. , R. 93 W., Section 23
Skunk Creek #16-23-14-2H
Skunk Creek #16-23-14-2H3
Skunk Creek #16-23-14-1H

Two Shields Butte #14-19: T. 149 N., R. 92 W., Section 19
Two Shields Butte #14-19-18-4H
Two Shields Butte #14-19-18-4H3
Two Shields Butte #14-19-18-3H
Two Shields Butte #14-19-18-2H3

Two Shields Butte #13-22: T. 149 N., R. 92 W., Section 22:
Two Shields Butte #13-22-16-1H
Two Shields Butte #13-22-16-1H3
Two Shields Butte #13-22-33-16H

Skunk Creek #13-18: T. 148 N., R. 92 W., Section 18
Skunk Creek #13-18-7-4H
Skunk Creek #13-18-7-4H3
Skunk Creek #13-18-7-3H

Skunk Creek #16-18: T. 148 N., R. 92 W., Section 18
Skunk Creek #16-18-7-1H
Skunk Creek #16-18-7-1H3
Skunk Creek #16-18-7-2H

We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) (MBTA), the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.) (NEPA), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) (BGEPA), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.) (ESA).

Threatened and Endangered Species

In an e-mail dated October 13, 2009, the Bureau of Indian Affairs (BIA) designated Kadrmas, Lee and Jackson, Inc. (KLJ) to represent the BIA for informal Section 7 consultation under the ESA. Therefore, the U.S. Fish and Wildlife Service (Service) is responding to you as the designated non-Federal representative for the purposes of ESA, and under our other authorities as the entity preparing the NEPA document for adoption by the BIA.

The Service concurs with your "may affect, is not likely to adversely affect" determination for piping plover, interior least tern, and pallid sturgeon, and designated critical habitat for piping plover. The proposed locations for the well pads are approximately 8.70, 6.48, 2.64, 1.70 and 1.89 stream miles, respectively, from nesting and foraging locations and habitat on Lake Sakakawea for these species and designated critical habitat for the piping plover. Kodiak has also committed to construct an 18-inch perimeter berm around all well pads.

The Service concurs with your "may affect, is not likely to adversely affect" determination for whooping cranes. This concurrence is predicated on Kodiak's commitment to stop work on the proposed site if a whooping crane is sighted within one mile of the proposed project area and immediately contacting the Service. Work may resume in coordination with the Service once the bird(s) has(ve) left the area.

The Service acknowledges your "no effect" determination for gray wolf and black-footed ferret.

The Dakota skipper and Sprague's pipit are candidate species for listing under the ESA; therefore, an effects determination is not necessary for these species. No legal requirement exists to protect candidate species; however, it is within the spirit of the ESA

to consider these species as having significant value and worth protecting. Although not required, Federal action agencies such as the BIA, have the option of requesting a conference on any proposed action that may affect candidate species such as the Dakota skipper and Sprague's pipit.

Migratory Birds

Kodiak has committed to implementing the following measure:

Construction activities are expected to take place during the migratory breeding/ nesting season (Feb. 1 – July 15). A qualified biologist will conduct a bird/nest survey within five days prior to construction and report any findings to the Service. If any active nests are found, i.e. nests containing eggs or young, those nests will not be disturbed, and will be reported the Service for further coordination.

Bald and Golden Eagles

According to the eagle nest database maintained by the North Dakota Game and Fish Department, the nearest documented golden eagle nests are located 7.25, 9.0, 8.5, 3.5, and 3.25 miles away, respectively. Your letter states that during line of sight surveys completed on November 10, 2010, an unidentified raptor nest was sighted within 0.5 mile of the Skunk Creek #13-18 and Skunk Creek #16-18 pad sites. A site visit will be conducted by a qualified biologist prior to construction to confirm whether or not bald or golden eagles may be using this nest. The Service will be contacted with the results of this site visit prior to commencement of construction.

The Service believes that Kodiak's commitment to implement the aforementioned demonstrates that measures have been or will be taken to protect migratory birds and bald and golden eagles to the extent practicable, pursuant to the MBTA and the BGEPA.

Thank you for the opportunity to comment on this project proposal. If you require further information or the project plans change, please contact me or Heidi Riddle of my staff at (701) 250-4481 or at the letterhead address.

Sincerely,

Jeffrey K. Towner

Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

cc: Bureau of Indian Affairs, Aberdeen
(Attn: Marilyn Bercier)
Bureau of Land Management, Dickinson
ND Game & Fish Department, Bismarck

Kadrmas Lee & Jackson
Engineers Surveyors Planners

January 21, 2011

Mr. Steve Obenauer
Manager
Bismarck Airports District Office
Federal Aviation Administration
2301 University Drive, Bldg 23B
Bismarck, ND 58504

RE: Kodiak Oil & Gas (USA), Inc.
Proposal to Drill Up to 16 Oil & Gas Wells on Five Pads
Dunn County, ND
Fort Berthold Reservation

Dear Mr. Steve Obenauer:

On behalf of Kodiak Oil & Gas (USA), Inc. (Kodiak), Kadrmas, Lee & Jackson, Inc. is preparing an Environmental Assessment (EA) under the National Environmental Policy Act for the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM). The proposed action includes the positive recommendation by the BIA for the BLM to approve the development of up to five separate well pads targeting the Bakken Formation. Each well pad would contain three to four well heads, for a total of up to 16 wells drilled as part of this project. These sites are proposed to be positioned in the following locations:

- Skunk Creek #16-23 well pad located in the SE ¼ of T149N, R93W, Section 23 and containing the following wells:
  - Skunk Creek #16-23-14-2H
  - Skunk Creek #16-23-14-2H3
  - Skunk Creek #16-23-14-1H
- Two Shields Butte #14-19 well pad located in the SW ¼ of T149N, R92W, Section 19 and containing the following wells:
  - Two Shields Butte #14-19-18-4H
  - Two Shields Butte #14-19-18-4H3
  - Two Shields Butte #14-19-18-3H
  - Two Shields Butte #14-19-18-2H3
- Two Shields Butte #13-22 well pad located in the SW ¼ of T149N, R92W, Section 22 and containing the following wells:
  - Two Shields Butte #13-22-16-1H
  - Two Shields Butte #13-22-16-1H3
  - Two Shields Butte #13-22-33-16H
- Skunk Creek #13-18 well pad located in the SW ¼ of T148N, R92W, Section 18 and containing the following wells:
  - Skunk Creek #13-18-7-4H
  - Skunk Creek #13-18-7-4H3
  - Skunk Creek #13-18-7-3H
- Skunk Creek #16-18 well pad located in the SE ¼ of T148N, R92W, Section 18 and containing the following wells:
  - Skunk Creek #16-18-7-1H
  - Skunk Creek #16-18-7-1H3
  - Skunk Creek #16-18-7-2H

Please refer to the enclosed Project Location Map.

701 232 5353
3203 32nd Ave S, Ste 201
PO Box 9767
Fargo, ND 58106-9767
Fax 701 232 5354
kljeng.com
Kadrmas, Lee & Jackson, Inc.
A KLJ Solutions Company

The well pads have been positioned to use existing roadways to the greatest extent practicable for access. Construction of the proposed project is anticipated to begin in spring 2011.

To ensure that social, economic, and environmental effects are analyzed accurately, we solicit your views and comments on the proposed action. We are interested in existing or proposed developments you may have that should be considered in connection with the proposed project. We also ask your assistance in identifying any property or resources that you own, manage, oversee, or otherwise value that might be adversely impacted.

Please provide your comments by **February 21, 2011**. We request your comments by that date to ensure that we will have ample time to review them and incorporate them into the EA.

If you would like further information regarding this project, please contact me at (218) 790-4476. Thank you for your cooperation.

Sincerely,

Kadrmas, Lee & Jackson, Inc.

Shanna Braun
Environmental Planner

Enclosure (Map)

US Department of Transportation
Federal Aviation Administration

Date 1/27/11

No objection provided the Federal Aviation Administration is notified of construction or alterations as required by Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace, Paragraph 77.13. Notice may be filed on-line at https://oeaaa.faa.gov.

77.9

Patricia L. Dressler, Environmental Protection Specialist
FAA/Bismarck Airports District Office
2301 University Drive, Building 23B
Bismarck, ND 58504

Kadrmas Lee & Jackson
Engineers Surveyors Planners

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

January 31, 2011

Ms. Shanna Braun
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
P.O. Box 9767
Fargo, ND 58106-9767

Re: Kodiak Oil & Gas (USA), Inc.
Up to 16 Proposed Oil & Gas Wells on Five Pads
Fort Berthold Reservation, Dunn County

Dear Ms. Braun:

This department has reviewed the information concerning the above-referenced project submitted under date of January 21, 2011, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Development of the production facilities and any access roads or well pads should have a minimal effect on air quality provided measures are taken to minimize fugitive dust. However, operation of the wells has the potential to release air contaminants capable of causing or contributing to air pollution. We encourage the development and operation of the wells in a manner that is consistent with good air pollution control practices for minimizing emissions.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Oil and gas related construction activities located within tribal boundaries within North Dakota may be required to obtain a permit to discharge storm water runoff from the U.S. Environmental Protection Agency. Further information may be obtained from the U.S. EPA's website or by calling the U.S. EPA - Region 8 at (303) 312-6312. Also, cities or

counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

February 7, 2011

Shanna Braun
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
PO Box 96
Moorhead, MN 56561-0096

Dear Ms. Braun:

RE: Skunk Creek #16-23, #13-18 & #16-18
Two Shields Butte #14-19 & #13-22

Kodiak Oil & Gas, Inc. is proposing up to 16 oil and gas wells on five well pads on the Fort Berthold Reservation in Dunn County, North Dakota.

Our primary concern with oil and gas development is the fragmentation and loss of wildlife habitat associated with construction of the well pads and access roads. We recommend that construction be avoided to the extent possible within native prairie, wooded draws, riparian corridors, and wetland areas.

We also suggest that botanical surveys be completed during the appropriate season and aerial surveys be conducted for raptor nests before construction begins.

Sincerely,

Paul Schadewald
Chief
Conservation & Communication Division

js

Jack Dalrymple, Governor
Mark A. Zimmerman, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

January 27, 2011

Shanna Braun
KLJ
3203 32nd. Ave. S Ste. 201
PO Box 9767
Fargo, ND 58106-9767

Re: Kodiak Oil and Gas, Inc, Proposal to drill up to 10 Oil and Gas Wells on Five Pads, Dunn County

Dear Ms. Braun:

The North Dakota Parks and Recreation Department has reviewed the above referenced project proposal from Kodiak Oil and Gas to develop an oil drilling pads and production pads in Section 23, T149N, R93W, Section 19, 22, T149N, R92W, Section 18, T148N, R92W in Dunn County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any current or historic plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no known occurrences within or adjacent to the project area.

Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

Thank you for the opportunity to comment on this project. Please contact Kathy Duttenhefner (701-328-5370 or kgduttenhefner@nd.gov) of our staff if additional information is needed.

Sincerely,

Jesse Hanson

Jesse Hanson, Manager
Planning and Natural Resources Division

R.USNDNHI*2011-034 KD1-27-2011/2.21.11

Play in our backyard!

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: http://swc.nd.gov

February 9, 2011

Shanna Braun
Kadrmas, Lee and Jackson
PO Box 9767
Fargo, ND 58106

Dear Ms. Braun:

This is in response to your request for review of environmental impacts associated with the Kodiak Oil and Gas (USA), Inc., Proposal to Drill Up to 16 Oil and Gas Wells on Five Pads, Dunn County, ND on the Fort Berthold Reservation.

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

- The property is not located in an identified floodplain and it is believed the project will not affect an identified floodplain.

- It is the responsibility of the project sponsor to ensure that local, state and federal agencies are contacted for any required approvals, permits, and easements.

- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.

- No sole-source aquifers have been designated in ND.

There are no other concerns associated with this project that affect State Water Commission or State Engineer regulatory responsibilities.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 328-4969.

Sincerely,

Larry Knudtson
Research Analyst

LJK:dp/1570

Notice of Availability and Appeal Rights

Kodiak: Skunk Creek #16-23-14-2H, Skunk Creek #16-23-14-2H3, Skunk Creek #16-23-14-1H, Two Shields Butte #14-19-18-4H, Two Shields Butte #14-19-18-4H3, Two Shields Butte #14-19-18-3H, Two Shields Butte #14-19-18-2H3, Two Shields Butte #13-22-16-1H, Two Shields Butte #13-22-16-1H3, Two Shields Butte #13-22-33-16H, Skunk Creek # 13-18-7-4H, Skunk Creek #13-18-7-4H3, Skunk Creek #13-18-7-3H, Skunk Creek #16-18-7-1H, Skunk Creek #16-18-7-1H3, Skunk Creek #16-18-7-2H

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of 16 oil and gas wells from five well pads as shown on the attached map. Construction by Kodiak is expected to begin in 2011.

An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Howard Bemer, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant Impact (FONSI).

The FONSI is only a finding on environmental impacts – it is not a decision to proceed with an action and *cannot* be appealed. BIA's decision to proceed with administrative actions *can* be appealed until May 6, 2011 by contacting:

United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Indian Appeals
801 N. Quincy Street, Suite 300, Arlington, Va 22203.

Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.

Project locations.