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

DEC 16 2010

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: 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 four proposed exploratory drilling wells located atop two pads by QEP Energy 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, Dickenson, ND (with attachment)
John Shelman, US Army Corps of Engineers
Jeffrey Hunt, Virtual One Stop Shop

Finding of No Significant Impact

QEP Energy Company

Environmental Assessment for
Drilling of MHA 2-05-06H-149-90, MHA 3-05-06H-149-90, MHA 1-11-14H-149-90, and MHA 2-10-15H-149-90 Exploratory Oil and Gas Wells

Fort Berthold Indian Reservation
McLean County, North Dakota

The U.S. Bureau of Indian Affairs (BIA) has received a proposal to drill up to four exploratory oil and gas wells located atop two well pads as follows: MHA 2-05-06H-149-90 located in T149N, R90W, Section 5; MHA 3-05-06H-149-90 located in T149N, R90W, Section 5; MHA 1-11-14H-149-90 located in T149N, R90W, Section 11 and MHA 2-10-15H-149-90 located in T149N, R90W, Section 11. 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 actions to impact the human environment is analyzed in the following Environmental Assessment (EA), as required by the National Environmental Policy Act (NEPA). 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 actions and the No Action alternative.
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.) (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).
4. The proposed actions are 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 projects will improve the socio-economic condition of the affected Indian community.

Regional Director

12-16-10
Date

ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

Great Plains Regional Office
Aberdeen, South Dakota

QEP Energy Company

Drilling of MHA 2-05-06H-149-90, MHA 3-05-06H-149-90, MHA 1-11-14H-149-90, and

MHA 2-10-15H-149-90 Exploratory Oil and Gas Wells

Fort Berthold Indian Reservation

December 2010

For information contact:
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Division of Environment, Safety and Cultural Resources
115 4th Avenue SE
Aberdeen, South Dakota 57401
605-226-7656

CHAPTERS

FIGURES

TABLES

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, 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 2 billion barrels of recoverable oil in each of these Formations. (The Bakken contains about 169 barrels of oil and the Three Forks contains about 20 billion barrels; however, most of this is not expected to be recoverable.) The Department's director estimates that there are 30-40 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 QEP Energy Company (QEP) to drill and complete up to four exploratory oil and gas wells atop two well pads on the Fort Berthold Reservation. These well sites are proposed to be positioned in the following locations:

- MHA 2-05-06H-149-90 located in T149N, R90W, Section 5
- MHA 3-05-06H-149-90 located in T149N, R90W, Section 5[1]
- MHA 1-11-14H-149-90 located in T149N, R90W, Section 11
- MHA 2-10-15H-149-90 located in T149N, R90W, Section 11

Please refer to ***Figure 1.1 Project Location Map***. Each well site would include a drilling unit in which the minerals to be developed by each well are located. Completion activities include acquisition of rights-of-way, infrastructure for the proposed wells, and roadway improvements.

[1] The MHA 3-05-06H-149-90 well was renamed to follow QEP's location for drilling; this well will be drilled to the Three Forks Pool. It had been proposed as the MHA 1-04-03H-149-90 in the scoping package mailed to the agencies.

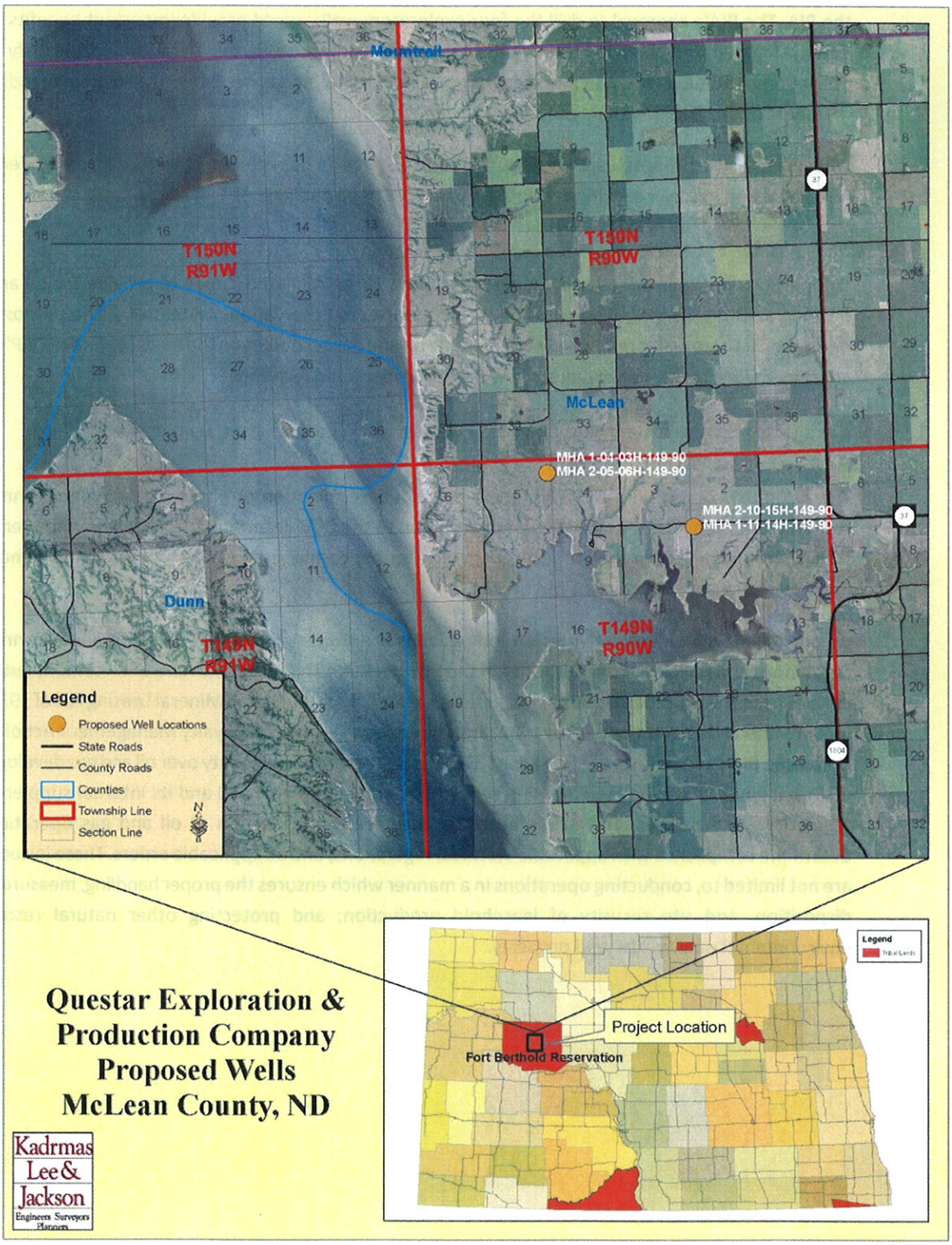

Figure 1.1 Project Location Map

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 approval to drill the four exploratory 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 exploring for 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 determine if there are commercially recoverable oil and gas resources on the lands subject to QEP's lease areas by drilling up to four exploratory wells at the identified locations.

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 positive recommendation to the BLM regarding the Application for Permit to Drill. Therefore, an EA for the proposed wells is necessary to analyze the direct, indirect, and cumulative impacts of the BIA's approval of the drilling.

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 development of the four proposed exploratory wells. 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 explored for commercial production or recovered and made available for domestic energy use.

2.3 Alternative B: Proposed Action

The proposed action (Alternative B) includes authorization by the BIA and BLM to drill up to a total of four exploratory wells atop two well pads and complete the associated right-of-way acquisitions, roadway improvements, and infrastructure for the wells.

Each exploratory well would consist of a well pad, access road, associated infrastructure, and a spacing unit. The well pad is where the actual surface disturbance caused by drilling activities would occur. QEP proposes to drill two wells on each of two well pads. The two well pads would have the wells located approximately 56 feet away from one another. The spacing unit is the location of the minerals that are to be developed. The location of the proposed well sites, access roads, and proposed horizontal drilling techniques were chosen to minimize surface disturbance.

Each well location could require new right-of-way for access points. A FONSI (Finding of No Significant Impact) has been approved for the MHA Gathering Line which would connect these wells to the EOG Resources main pipeline. The pipelines are planned to be placed in the right-of-way along the access roads and connect to the MHA Gathering Line. 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 on-site assessment and survey of the well pads and access roads were conducted on July 12, 2010. Representatives from QEP, BIA Environmental Protection, Three Affiliated Tribes Tribal Historic Preservation Office, and Kadrmas, Lee and Jackson (KL&J) were present during this visit. Information was gathered pertaining to construction suitability with respect to topography, stockpiling, drainage, erosion control and other surface issues. Well pad locations were adjusted, as appropriate; to avoid conflicts with identified environmental areas of concern. Those present at the on-site assessment agreed the chosen locations, along with the minimization measures QEP plans to implement (including placing two wells on a pad), are positioned in areas which would avoid and minimize impacts to sensitive wildlife and botanical resources. In addition to the on-site assessment, intensive cultural resources and biological surveys were conducted for each well pad and access road by KL&J staff. Site-specific data and photographs with

regards to biological, botanical, soil, and water resources were collected. A study area of 10-acres centered on the well pad center point and a 200-foot wide access road, along with wooded draws within 0.5 mile of the study area, were evaluated during these visits. In addition, comments from the United States Fish and Wildlife Service (USFWS) have been considered in the development of this project.

2.3.1 MHA 2-05-06H-149-90 and MHA 3-05-06H-149-90 Wells

The dual well pad would be located in the NE¼NE¼ of Section 5, Township 149 North, Range 90 West to access potential oil and gas resources within the 640 acre spacing unit consisting of the northern half of Sections 5 and 6, Township 149 North, Range 90 West. The MHA 2-05-06 H-149-90 well will be drilled to the Bakken Pool and the MHA 3-05-06 H-149-90 will be drilled to the Three Forks Pool. Please refer to ***Figure 2.1 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Spacing Unit Overview*** and ***Figure 2.2 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Well Pad Overview***.

The MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 well pad would be accessed from the MHA 1-32-31H-150-90 well pad in Section 32, T150N, R90W. An existing oil well access road heads south of 77th Avenue NW and connects to the MHA 1-32-31H-150-90 well pad, which is currently being drilled. An extension of this access road, approximately 1,731 feet in length, would be constructed to the south to access the proposed well pad site. Additional improvements to the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 well access road would include placement of culverts and cattle guards as needed. Minor spot grading may be needed to flatten existing landscape grades along the proposed access road alignment.

2.3.2 MHA 2-10-15H-149-90 and MHA 1-11-14H-149-90 Wells

The dual well pad would be located in the NW¼NW¼ of Section 11, Township 149 North, Range 90 West to access potential oil and gas resources within the 640 acre spacing units consisting of the eastern half of Sections 10 and 15, and the western half of Sections 11 and 14, Township 149 North, Range 90 West. Please refer to ***Figure 2.1 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Spacing Unit Overview*** and ***Figure 2.3 MHA 2-10-15H-149-90/MHA 1-11-14H-149-90 Well Pad Overview***.

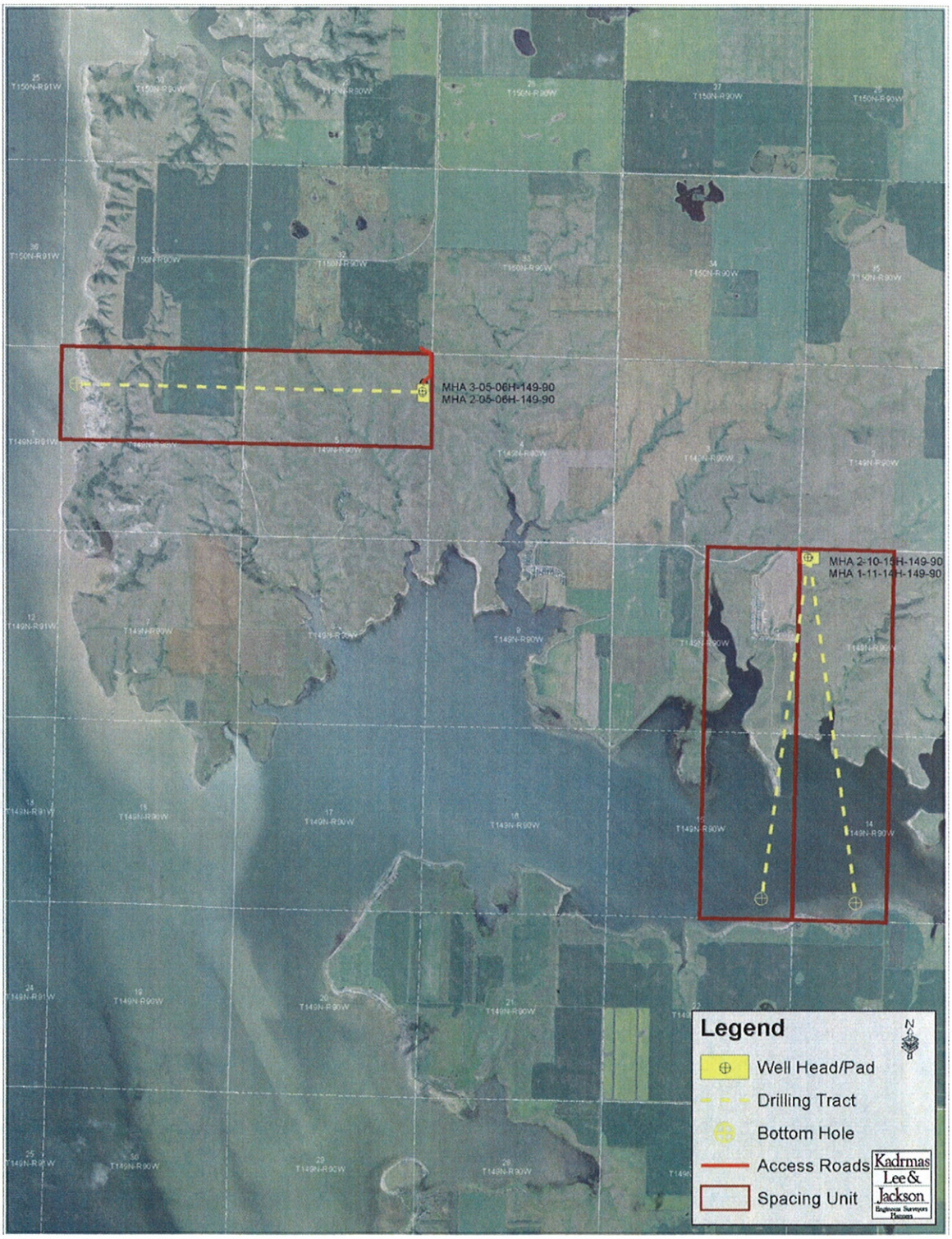

Figure 2.1 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Spacing Unit Overview

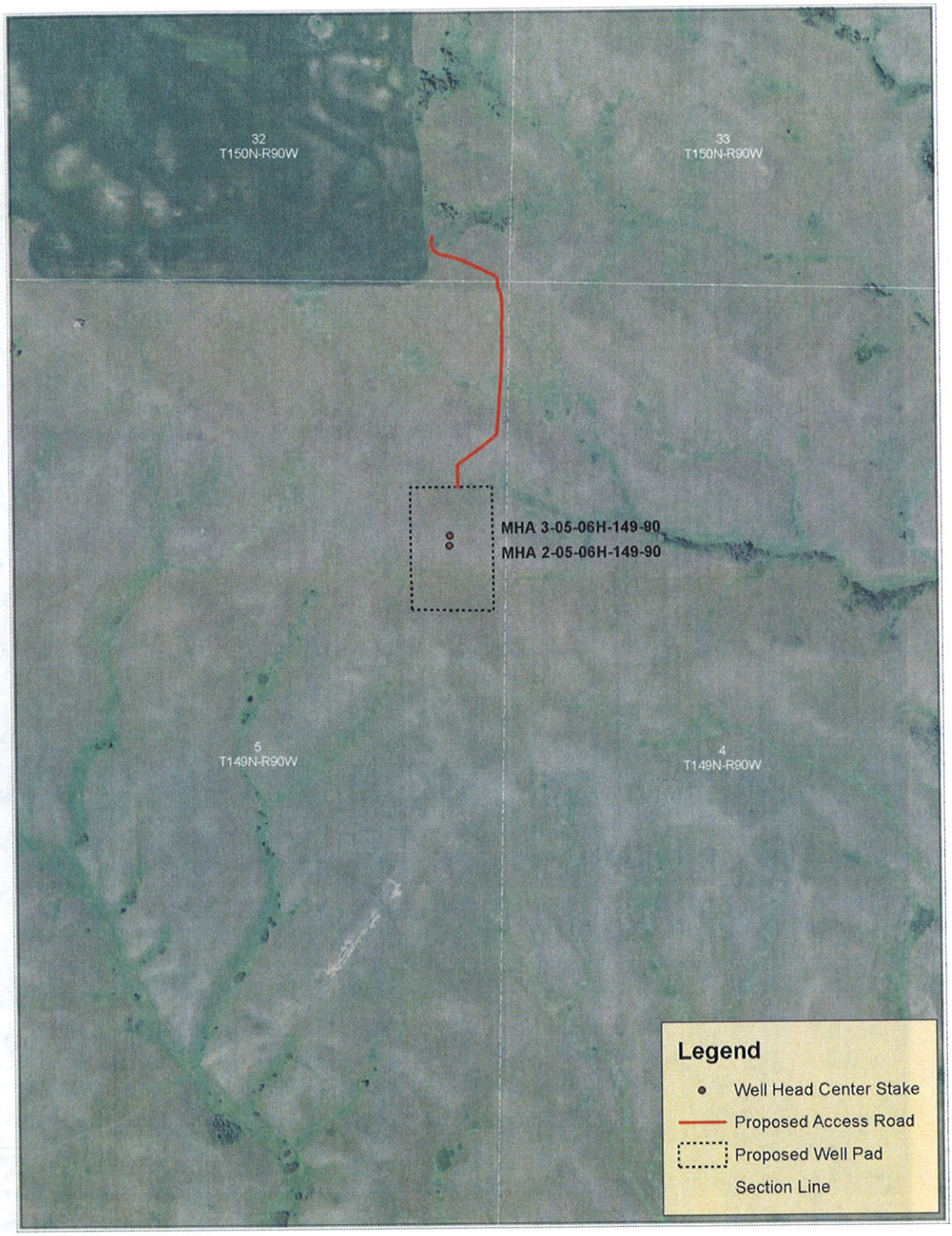

Figure 2.2 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Well Pad Overview

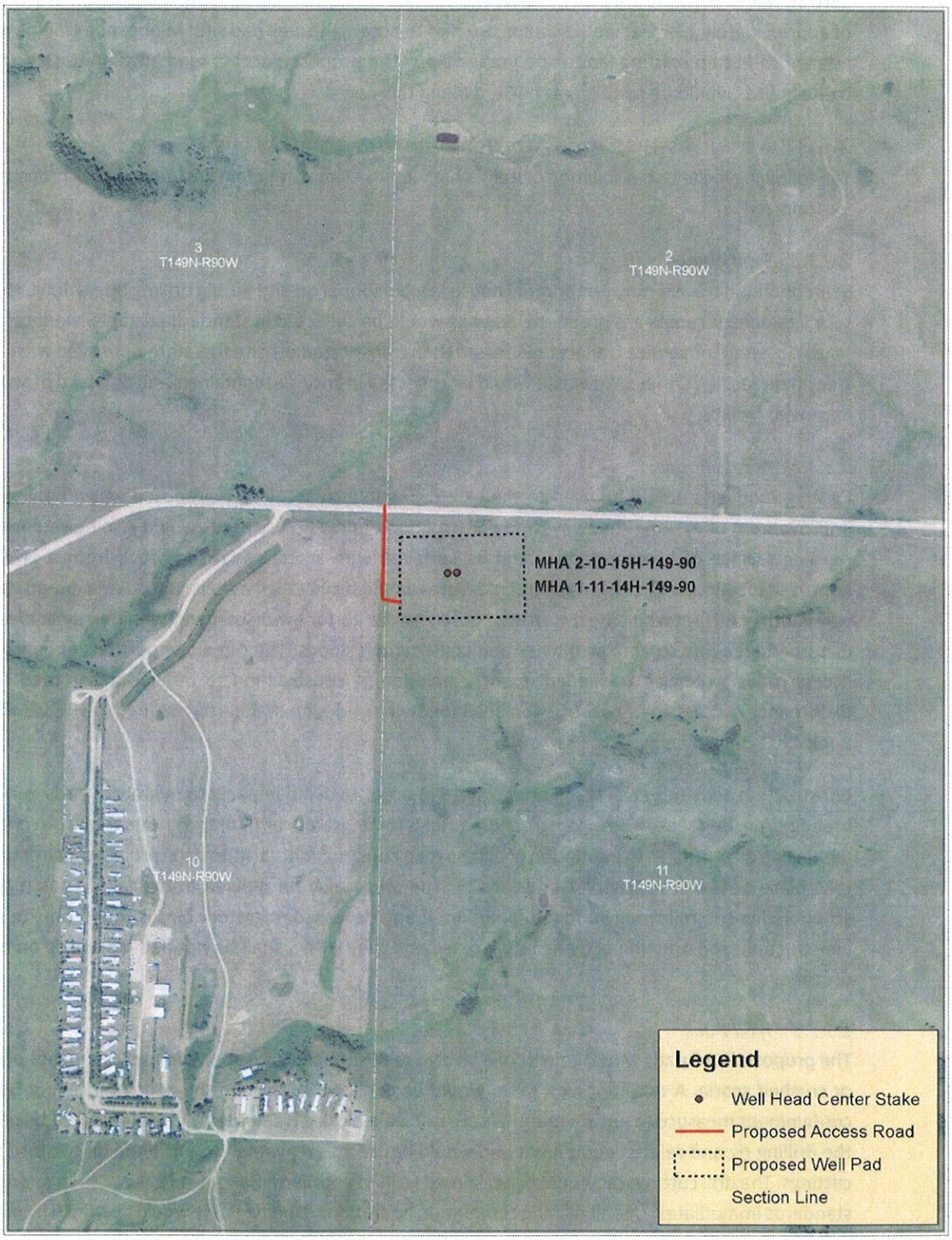

Figure 2.3 MHA 2-10-15H-149-90/MHA 1-11-14H-149-90 Well Pad Overview

The MHA 2-10-15H-149-90/ MHA 1-11-14H-149-90 dual well pad would be accessed from the north via 23rd St. NW in Section 11, T149N, R90W. The pad site would be located south of the road. An access road of approximately 429 feet would be constructed to access the well pad site. Minor spot grading may be needed to flatten existing landscape grades along the proposed access road alignment. Culverts and cattle guards would be installed as needed along this new access road.

2.3.3 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:

2.3.3.1 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 (closed system) 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.

2.3.3.2 Access Roads

Existing roadways would be used to the extent possible to access the proposed wells; however, the improvement of existing roadways and construction of new access roads would also be required. The running surface of access roads would be surfaced with scoria or crushed rock from a previously approved location, and erosion control measures would be installed as necessary. A maximum right-of-way width of 66 feet would be disturbed, consisting of a 28-foot wide roadway with the remainder of the disturbed area due to borrow ditches and construction slopes. The out-slope portions of constructed access roads would be re-seeded 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.

Construction activities shall begin after July 15 in order to avoid impacts to migratory birds during the breeding/nesting season. Pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of access road construction activities if the project construction is to take place between February 1 and July 15. The areas may be mowed in the fall if construction is scheduled in the following spring. In addition, if any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

2.3.3.3 Well Pads

The proposed well pads would consist of a leveled area surfaced with approximately six inches of gravel or crushed scoria. A two-foot high berm would be constructed around the pad exteriors for use as a containment measure to ensure materials are not leaked off the pad sites[2]. The pads would be used for the drilling rig and related equipment and would house an excavated, double lined pit to store drilled cuttings. The drill cuttings pit would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon finishing completion operations. Drilling fluids would be drawn from the pit and re-used, or disposed of properly. A semi-closed loop drilling system will be used during drilling. The level well pad areas required for drilling and completing operations (including reserve pits for dried

[2] This addresses the USACE's concern for a trench to be placed along the well pad edge closest to Lake Sakakawea.

cuttings) would each be approximately 345 X 510 feet (approximately 4.04 acres). Cut and fill slopes on the edge of the well pad would be determined on a well-by-well basis. The well pad would be fenced and

the reserve pit covered with netting to protect wildlife from hazardous areas. 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 Application for Permit to Drill (APD) submitted to the BLM. Topsoil would be stockpiled and stabilized until disturbed areas are reclaimed and re-vegetated. Excavated subsoil would be used in pad construction, with each finished well pad graded to ensure water drains away from the drill site. Erosion control at the site would be maintained through the use of best management practices (BMPs), which may include, but are not limited to, water bars, bar ditches, bio-logs, silt fences, matting and re-vegetation of disturbed areas. Sorbent booms would be placed in select locations down-gradient of the well pad in order to prevent materials from entering surface drainageways in the event of an accidental release.

Construction activities shall begin after July 15 in order to avoid impacts to migratory birds during the breeding/nesting season. Pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of well pad construction activities if the construction is scheduled for the period between February 1 and July 15. Areas will be mowed in the fall if spring construction is scheduled. In addition, if any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

2.3.3.4 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 9,088 feet, at which depth it would angle to become horizontal at approximately10,229 feet. Drilling would then be followed by lateral reaches into the Middle Bakken Dolomite Member target. This horizontal drilling technique would minimize surface disturbance. The wells being drilled to the Three Forks Pool would be advanced approximately 10,200 feet, at which depth would angle to become horizontal. The lateral horizontal distance would remain approximately 10,000 feet.

For the first 2,500 feet drilled at each well, 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 8 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 near-surface casing, an oil-based mud system or brine based drilling solution would be used to drill the remainder of the hole.

Drilling fluids would be separated from cuttings and contained in steel tanks placed on liners until they were ready for re-use. Any free fluids remaining in reserve pits would be removed and disposed of in accordance with North Dakota Industrial Commission (NDIC) rules and regulations. Cuttings generated from drilling would be deposited in reserve pits on well pads. The pits would be double lined to prevent seepage and contamination of underlying soil. Prior to their use, the entire location would be fenced in order to prevent wildlife and livestock from accessing the pit. Reserve pit cuttings would be solidified into

an inert, solid mass by chemical means. The treated material would be buried in reserve pits in accordance with NDIC rules and regulations.

2.3.3.5 Casing and Cementing

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

2.3.3.6 Completion and Evaluation

Once each well is drilled and cased, approximately 30 additional days would be required to complete and evaluate it. Completion and evaluation activities include cleaning out the well bore, pressure testing the casing, perforating and fracturing to stimulate the horizontal portion of the hole, and running production tubing for potential future commercial production. Fluids utilized in the completion process would be captured in either reserve pits or tanks and would be disposed of in accordance with NDIC and BLM rules and regulations. Once the well is completed, site activity and vehicle access would be reduced. If the well is determined to be successful, tank trucks (and, if appropriate, natural gas and/or oil gathering lines) would transport the product to market.

2.3.3.7 Commercial Production

If commercially recoverable oil and gas resources are found at any of the proposed sites, the site(s) would become established as a production site(s). Each site would be reduced to less than two acres in size and refitted as an oil and gas production facility. Additional production equipment, including a well head pumping unit, vertical heater/treater, storage tanks (typically four 400 barrel steel tanks), and a flare/production pit may be installed until the MHA Gathering Line is completed. The tanks would be connected by a pipe and valve at the top of each tank, which would allow for overflow into the next tank. The storage tanks and heater/treater would be surrounded by a four-foot berm that would 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. Sorbent booms would be placed in select locations down-gradient of the well pad in order to prevent materials from entering surface drainageways in the event of an accidental release. 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.

In the event that the MHA Gathering pipeline has not been completed when the wells go into production, 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.

Large volumes of gas are not expected to be generated from these well sites. Small volumes of gas would be flared on-site in accordance with BIA's Notice to Lessees 4A and NDIC regulations, which prohibit gas flaring for more than the initial year of operation. The installation of gas-gathering or transport equipment is not included as part of the proposed project. Installation of systems to gather and market gas produced from these wells would require additional analysis under NEPA and BIA approval.

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.

QEP would mitigate the effects of these four exploratory wells 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.

2.3.3.8 Reclamation

The reserve pit and dried cuttings would be treated, solidified, backfilled, and buried upon well completion. Other interim reclamation measures to be implemented upon well completion include reduction of cut and fill slopes, redistribution of stockpiled topsoil, and reseeding of disturbed areas. If commercial production equipment is installed, the well pads would be reduced in size to approximately 200 x 300 feet (1.4 acres), for a producing location with a single pumping unit, with the remainder of the original well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating, backfill, and re-seeding. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and reseeded as recommended by the BIA.

If no commercial production develops from one or any of the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be reclaimed within one year of the well closure. 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. Both access roads and well pad areas would be re-contoured to match topography of the original landscape and reseeded with a native grass seed mixture consistent with surrounding native species to ensure a healthy and diverse mix that is free of noxious weeds. Erosion control measures would be installed as appropriate. Maintenance and successful reclamation of the site would be consistent with the BLM Gold Book standards for well site reclamation. 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.

2.3.4 Potential for Future Development

Development beyond the four wells discussed is not included with this proposal. 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 structure consists of sandstones, silts and shales dating to the Tertiary Period (65 million to 2 million years ago), including the Sentinel Butte and Golden Valley Formations. The underlying Bakken Pool is a well-known source of hydrocarbons; its middle member is targeted by the proposed projects. Although earlier oil/gas exploration activity within the Reservation was limited and commercially unproductive, recent advances in drilling technologies, including horizontal drilling techniques, now make accessing oil in the Bakken and Three Forks (under the Bakken) Formations feasible.

According to Great 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 16.5 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 approximately 38.5 inches of snow are received annually.

The topography within the project areas is primarily identified as part of the River Breaks Ecoregion, which is unglaciated with rolling plains of silt, sandstone, and 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 areas are located within a predominately rural area. Land within the proposed project areas is predominantly grasslands (64%) and cultivated land (36%). Please refer to ***Figure 3.1 Land Use*** Additional surrounding land uses include agricultural and water.

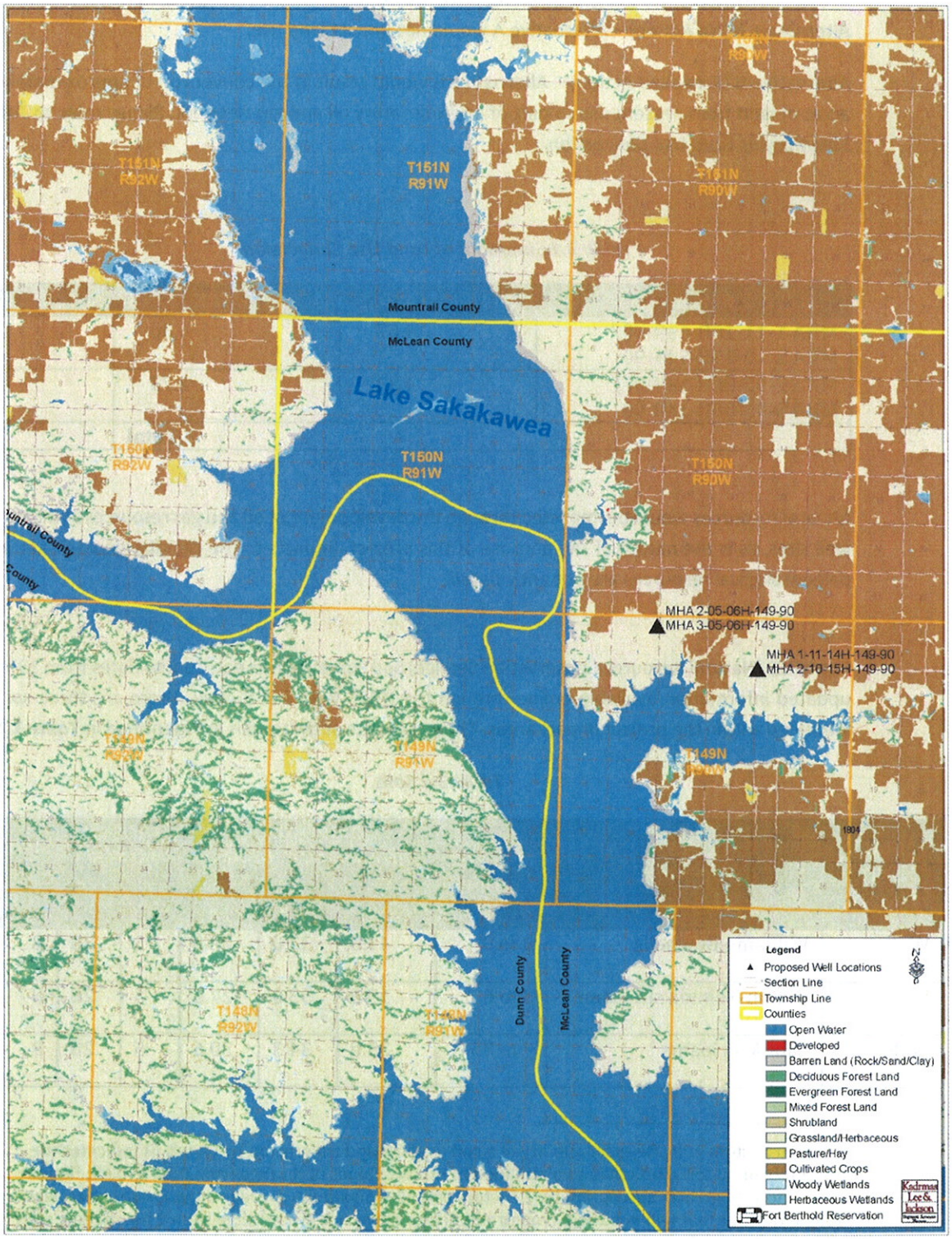

Figure 3.1 Land Use

3.2.1 Climate, Geologic Setting and Land Use Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact land use.

Alternative B (Proposed Action) – Alternative B would result in the conversion of approximately 12.09 acres of land from present use to part of an exploratory oil and gas network. Please refer to ***Table 3.1 Summary of Land Use Conversion.***

Table 3.1 Summary of Land Use Conversion

WELL SITE	WELL PAD ACRES	ACCESS ROAD ACRES	TOTAL ACRES
MHA 1-11-15H-149-90/ MHA 2-10-15H-149-90	4.67	0.36	5.03
MHA 2-05-06H-149-90/ MHA 3-05-06H-149-90	4.33	2.73	7.06
		Total	**12.09**

Mineral resources would be impacted through the development of oil and gas resources at the proposed well sites, as is the nature of the purpose of this project. Impacts to the climate, geologic setting and paleontological resources are not anticipated.

3.3 Soils

The NRCS (Natural Resource Conservation Service) Soil Survey of McLean County dates from 1979, with updated information available online through the NRCS Web Soil Survey. There are three soil types identified within the project impact areas. 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 FACTOR3		HYDROLOGIC SOIL GROUP4
			% SAND	% SILT	% CLAY	T	KF	
WoC	Williams-Bowbells	6 to 9	41.0	37.0	22.0	5	.28	B
WtB	Wilton-Temvik silt loams	3 to 6	19.6	53.0	27.5	5	.28	B
ZmE	Zahl-Max loams	9 to 35	35.0	34.3	30.6	5	.28	B

[3] 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.

[4]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).

All listed soils have low susceptibility to sheet and rill erosion and the majority can tolerate high levels of erosion without loss of productivity. These soils have medium to rapid runoff potential. Depth to the water table is recorded at greater than five feet for each of these soil types. None of the soils listed within the project impact areas are susceptible to flooding or ponding.

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 sites 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 each location were calculated using an assumed 6 inches of existing topsoil. The following identifies topsoil requirements for each site:

- MHA 2-05-06H-149-90/MHA 3-05-06H-149-90– A minimum of 3,495 cubic yards of topsoil and 19,335 cubic yards of material for future site reclamation would be stockpiled on site.
- MHA 1-11-14H-149-90/MHA 2-10-15H-149-90– A minimum of 3,770 cubic yards of topsoil and 35,085 cubic yards of material for future site reclamation would be stockpiled on site.

Based on NRCS soil profiles, topsoil likely exists in excess of 5-9 inches at each of the well sites, yielding sufficient quantity of topsoil for construction and reclamation activities. Topsoil and embankment stockpiles are proposed to be located on the west side of the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 pad and on the east side of the MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 pad. The stockpiles have been positioned to assist in diverting runoff away from the disturbed area, thus minimizing erosion. These stockpiles, as well as engineered cuts will be hydro/drill seeded to re-establish vegetative cover soon after construction.

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 to reduce these impacts would include the use of erosion and sediment control measures during and after construction, segregating topsoil from subsurface material for future reclamation, reseeding of disturbed areas, 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.

Another soil resources issue is soil compaction, which can occur by 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 reported to the BLM and the North Dakota Department of Health (NDDH), and the procedures of the surface

management agency shall be followed to contain spills and leaks until clean-up and remediation can be completed.

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 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.

3.4.1 Surface Water

The project areas are situated in the Great Plains Physiographic 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.

All of the proposed well sites are located in the Lake Sakakawea basin, meaning surface waters within this basin drain to Lake Sakakawea. The four wells are all located in the Deep Water Creek Watershed and the Lower Deep Water Creek Sub-Watershed. Please refer to ***Figure 3.2 Surface Water Resources***.

Runoff throughout the study area is by sheet flow until collected by ephemeral and perennial streams draining to Lake Sakakawea. Surface runoff for each well site would typically travel to Lake Sakakawea via drainage patterns as follows:

- MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 – Runoff from the north portion of the well pad would travel approximately 0.98 miles east and south into Deep Water Creek Bay on Lake Sakakawea. Runoff from the southern portion of the pad would travel south, and then east into Deep Water Creek Bay on Lake Sakakwea, for a total distance traveled of approximately 0.90 miles

- MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 – Runoff from the well pad would travel approximately 0.77 miles southwest into Deepwater Creek Bay on Lake Sakakawea.

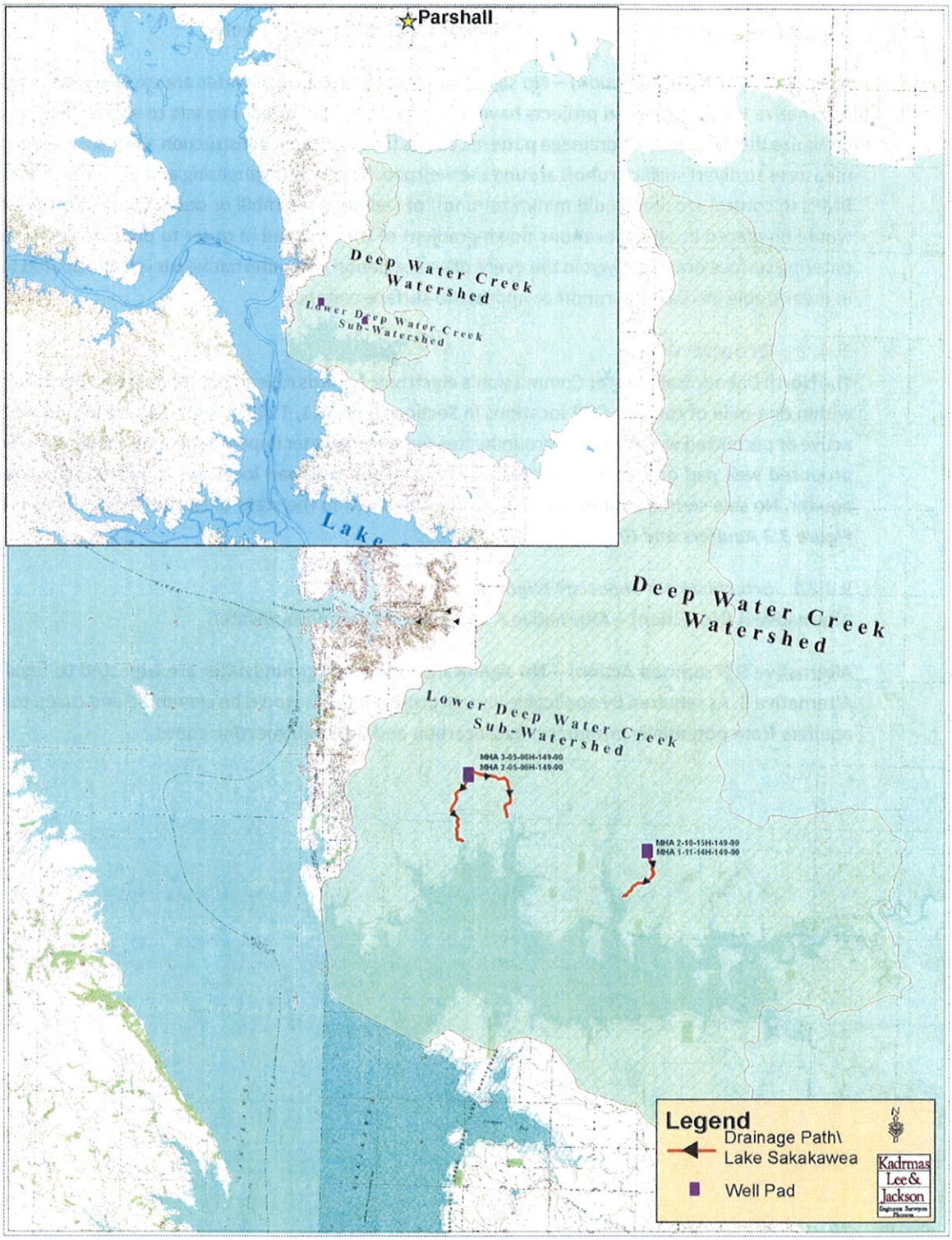

Figure 3.2 Surface Water Resources

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 projects have been sited to avoid direct impacts to surface waters and to minimize the disruption of drainage patterns across the landscape. Construction site plans should contain measures to divert surface runoff around the well pad. Roadway engineering and the implementation of BMPs to control erosion would minimize runoff of sediment downhill or downstream. Sorbent booms would be placed in select locations down-gradient of the well pad in order to prevent materials from entering surface drainageways in the event of an accidental spill. 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 no permitted wells within one-mile of the two QEP locations in Sections 5 and 11, T149N, R90W. There are no additional active or permitted water wells or groundwater-fed surface water impoundments immediately within the proposed well pad or access road areas. Neither of the well pad locations is located above a major aquifer. No sole source aquifers have been identified within the state of North Dakota. Please refer to ***Figure 3.3 Aquifers and Groundwater Wells.***

3.4.2.1 Ground Water Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact groundwater.

Alternative B (Proposed Action) – No significant impacts to groundwater are expected to result from Alternative B. As required by applicable law, all proposed wells would be cemented and cased to isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.

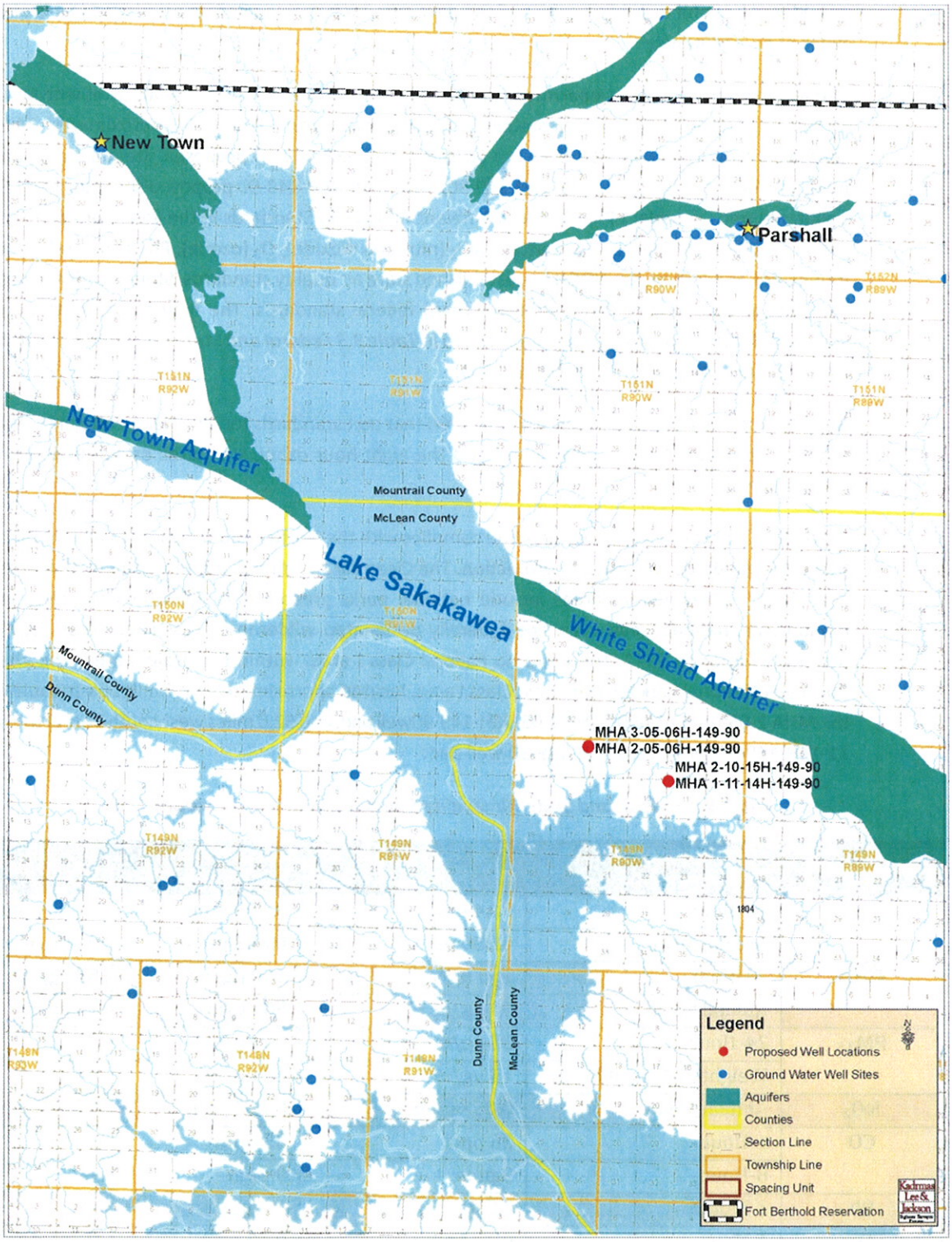

Figure 3.3 Aquifers and Groundwater Wells

3.5 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 (North Dakota Department of Health) operates a network of AAQM (Ambient Air Quality Monitoring) stations. The AAQM station in Dunn Center, North Dakota is approximately 34.8 miles southwest from the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 proposed site (dual pad) and 34.3 miles southwest of the MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 proposed site (dual pad). Criteria pollutants tracked under EPA's National Ambient Air Quality Standards in the Clean Air Act include SO_2 (sulfur dioxide), PM (particulate matter), NO_2 (nitrogen dioxide), O_3 (ozone), Pb (lead), and CO (carbon monoxide). 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 3.3 Federal and State Air Quality Standards and AAQM Station Data*** (EPA 2006, NDDH 2009).

North Dakota was one of thirteen states in 2008 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 (NDAAQ) 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 within the project area. The Theodore Roosevelt National Park is the nearest Class I area, located approximately 52.6 miles west-southwest of the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90well pad, and 52.0 miles west-southwest of the MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 well pad.

Table 3.3 Federal and State Air Quality Standards and AAQM Station Data

POLLUTANT	AVERAGING PERIOD	FEDERAL STANDARD	STATE STANDARD	AAQM DATA
SO_2	24-Hour	0.14 ppm	0.099 ppm	0.003 ppm
	Annual Mean	0.030 ppm	0.023 ppm	0.000 ppm
PM_{10}	24-Hour	150 µg/m^3	150 µg/m^3	53 µg/m^3
	Annual Mean	50 µg/m^3	50 µg/m^3	15 µg/m^3
$PM_{2.5}$	24-Hour	35 µg/m^3	35 µg/m^3	—
	Weighted Annual Mean	15 µg/m^3	15 µg/m^3	—
NO_2	Annual Mean	0.053 ppm	0.053 ppm	0.002 ppm
CO	1-Hour	35 ppm	35 ppm	—
	8-Hour	9 ppm	9 ppm	—
Pb	3-Month	1.5 µg/m^3	1.5 µg/m^3	—
O_3	1-Hour	0.12 ppm	0.12 ppm	0.065 ppm
	8-Hour	0.08 ppm	0.08 ppm	0.060 ppm

3.5.1 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. 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 the 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 Fort Berthold Reservation, State, or Theodore Roosevelt National Park. No mitigation or monitoring measures are recommended.

3.6 Threatened, Endangered, and Candidate Species

In accordance with Section 7 of the *Endangered Species Act 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. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future. 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 endangered or threatened 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 Endangered Species Act, it is within the spirit of the Endangered Species Act 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 has identified the gray wolf, interior least tern, pallid sturgeon, and whooping crane as endangered species that may be found within McLean County. McLean County also includes the potential for occurrence of the threatened piping plover, candidate Dakota skipper and candidate Sprague's pipit. In addition, McLean County contains designated critical habitat for the piping plover adjacent to Lake Sakakawea and the Missouri River. 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 McLean County are discussed for each species.

Gray Wolf (Canis lupus)

The gray wolf is the largest wild canine species in North America, and is found throughout northern Canada, Alaska, and the forested areas of Northern Michigan, Minnesota, and Wisconsin. They have 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. Given poor habitat, unreliable food supplies and the distance to known populations in Canada, Montana, Minnesota, and Wyoming, colonization of this species would be unlikely in North Dakota. Historically, its preferred habitat includes biomes such as boreal forest, temperate deciduous forest, and temperate grassland. Gray wolves live in packs of up to 21 members, although some individuals will roam alone. The proposed project areas are located far from other known wolf populations and preferred habitat.

Interior Least Tern (*Sterna antillarum*)
The interior least tern nests along inland rivers rather than along the coast. 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 on 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 scare away predators.

There is no existing or potential habitat within the project areas. Potential habitat in the form of the sandy/gravely Lake Sakakawea shoreline exists approximately 0.65 miles away at the closest point. The location of the well pads and access roads are located on an upland prairie composed of previously-grazed and native rangeland with the shoreline located below the uplands. A shoreline survey was conducted during the field studies for the MHA Gathering Line (FONSI signed). No piping plovers or least terns were sighted.

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." Weighing up to 80 pounds, pallid sturgeons are long lived, with individuals possibly reaching 50 years of age.

There is no existing or potential habitat within the project areas. Habitat where the pallid sturgeon may occur, such as Lake Sakakawea, is located approximately 0.65 miles southwest of the project area.

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 365. Of these flocks, only one is self-sustaining.

The proposed project is located in the Central Flyway where 75 percent of confirmed whooping crane sightings have occurred. Some of the proposed project sites and access roads are partially located on cropland which may be used for feeding. In addition, the well pad locations are located close to Lake Sakakawea and have nearby cultivated cropland. These areas could potentially be used by whooping cranes as stopover habitat during their migration.

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. Potential habitat in the form of the sandy/gravely Lake Sakakawea shoreline exists approximately 0.65 miles away at the closest point. The locations of the well sites are composed of previously-grazed, native pasture with the shoreline located at lower elevations. A shoreline survey was conducted during the field studies for the MHA Gathering Line. No piping plovers were sighted. Coordination with the NDP&R indicated that the piping plover was sighted approximately 1.0 mile from the proposed pad locations in 1996.

Dakota Skipper (*Hesperia dacotae*)
The Dakota skipper is a small butterfly with a 1-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 project areas consist partially of previously-grazed, native upland prairies. No Dakota skippers were observed during the field visit.

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 areas with minimal human disturbance. The proposed project area does consist of upland prairie and small clusters of shrubs, which may provide potential habitat for the Sprague's pipit, but these areas have been heavily grazed, reducing the presence of the preferred vegetation. No Sprague's pipits were observed at the proposed locations during the field visit.

3.6.2 Threatened and Endangered Species Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact threatened or endangered species or designated critical habitat.

Alternative B (Proposed Action) – Potential habitat associated with Lake Sakakawea and its shoreline is located approximately 0.65 miles away from the proposed QEP project sites at the closest point. In addition, the proposed QEP sites are located on upland prairie that is at a considerably higher elevation than the Lake Sakakawea shoreline. The topographic features of the area should assist in providing sight and sound buffers that should avoid disturbing shoreline-nesting birds. 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 destroy or adversely modify critical habitat.

The proposed project is located within the Central Flyway where 75 percent of confirmed whooping crane sightings have occurred and suitable cropland food sources can be found nearby. Per the USFWS recommendations, if a whooping crane is sighted within 1 mile of a well site or associated facilities while under construction, then all work would cease within 1 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. Therefore, the proposed project may affect, but is not likely to adversely affect, the whooping crane.

Due to a lack of preferred habitat characteristics and/or known populations, the proposed project is anticipated to have no effect to the gray wolf.

Due to the presence of potential habitat for the Dakota Skipper and Sprague's pipit within the project area, the proposed action may affect, but is not likely to adversely affect, the Dakota Skipper and Sprague's pipit.

QEP has developed avoidance and minimization measures for the proposed project. During the on-site visit, it was decided that both well pads should be moved further north to require less cut and fill to level the pad, thus minimizing the possibility of sediment moving toward the nearby wooded draws. Representatives at the on-site concurred with the locations of the two pad locations. Please refer to ***Section 3.17 Environmental Commitments/Mitigation***.

3.7 Wetlands, Eagles, Other Wildlife, and Vegetation

An on-site assessment and survey for wildlife and botany species was conducted for the well pads and access roads on July 12, 2010. Representatives from QEP, BIA Environmental Protection Office, and Three Affiliated Tribes Tribal Historic Preservation Office, and KL&J were present during this visit. Well pad and access road locations were adjusted as appropriate to best avoid impacts to environmental areas of concern including avian nests, wetlands and any additional identified sensitive wildlife or botanical concerns identified on-site. Those present at the on-site assessment agreed the chosen locations along with measures QEP was planning to implement would avoid or minimize impacts to sensitive wildlife and botany resources. Site-specific data and photos with regards to biological, botanical, soil, and water resources were collected using pedestrian transects. A study area of 10 acres centered on the well pad center point and a 200-foot wide access was surveyed.

Surveys for raptors and raptor nests within 0.5 miles of project disturbance areas were conducted by KL&J on April 29, 2010, May 18, 2010, July 12, 2010, and October 6, 2010 as part of the on-going assessment for the nearby MHA Gathering Line. 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.

3.7.1 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 groundwater 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 groundwater, and improving water quality through purification.

No wetlands or riparian areas were identified within any of the proposed well pads or access road areas during the field surveys.

3.7.1.1 Wetland Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact wetlands.

Alternative B (Proposed Action) – Due to the absence of wetlands within the proposed project areas, Alternative B would not impact wetlands. A Section 10 Permit from the USACE would be required for horizontal drilling activities under Lake Sakakawea.

3.7.2 Bald and Golden 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. Under 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.

The bald eagle (*Haliaeetus leucocephalus*) is not common in North Dakota, but is sighted 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. The ND Game and Fish Department estimated in 2009 that 66 nests were occupied by bald eagles, though not all eagle nests were visited and verified. Its preferred habitat 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. No bald eagles or nests were observed within 0.5 miles of the proposed project disturbance areas during the field surveys conducted on April 29, May 18, July 12, and October 6, 2010.

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 golden eagles or nests were observed within 0.5 miles of the proposed project disturbance areas during the field surveys conducted on April 29, May 18, July 12, and October 6, 2010.

The United States Geological Survey (USGS) Northern Prairie Wildlife Research Center maintains GAP analysis data on bald eagle and golden eagle habitat within the state of North Dakota. According to USGS data, all of the proposed 0.5 mile buffered survey areas contain recorded habitat for both the bald eagle and 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 that was classified as a reliable find is located approximately 9.5 miles southwest of the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 and MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 pad locations. Please refer to ***Figure 3.4 Bald and Golden Eagle Habitat and Nest Sightings.***

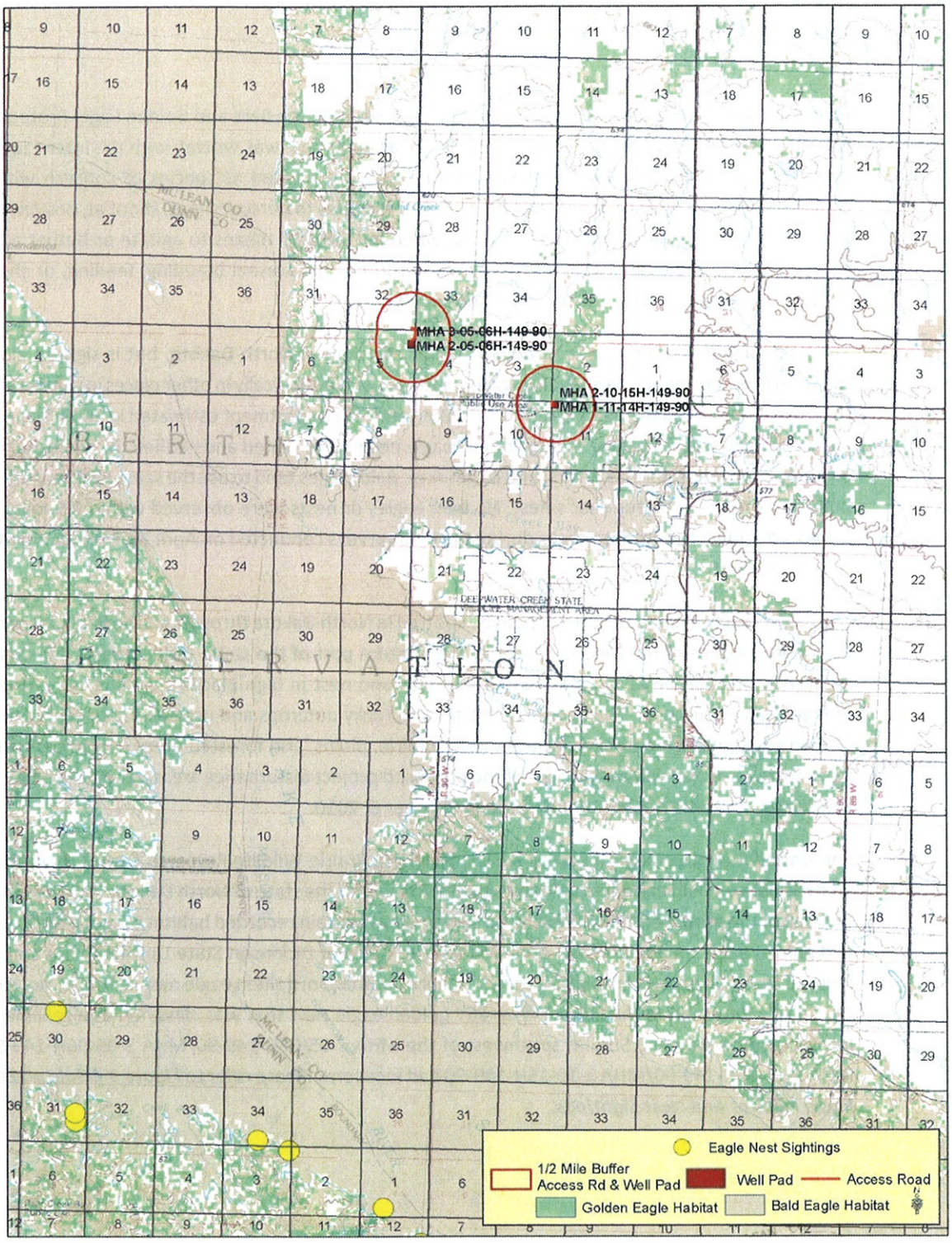

Figure 3.4 Bald and Golden Eagle Habitat and Nest Sightings.

3.7.2.1 Bald and Golden Eagle Impacts/Mitigation

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

Alternative B (Proposed Action) – There were no sightings of bald eagles or golden eagles during all four field investigations. There were also no eagle nests observed within 0.5 miles of the project areas. If a bald eagle or golden eagle nest is sighted within 0.5 miles of the project construction areas, construction shall cease and the USFWS shall be notified for advice on how to proceed.

3.7.3 Migratory Birds and Other Wildlife

The MBTA (Migratory Bird Treaty Act), 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 study area lies in the prairie pothole region of North Dakota and 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.

During the pedestrian field surveys, big and small game species, non-game species, raptors, migratory birds, as well as their potential habitats and/or their nests, were identified if present. The project areas all contain suitable habitat for antelope, mule deer, whitetail deer, cottontail rabbit, pheasant, sharp-tail grouse, turkey, coyote, fox, jack rabbit, mountain lion, porcupine, prairie dog, migratory birds, song birds, and raptors.

At the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 proposed site, a kestrel (*Falco sparverius)*, bobolink (*Dolichonyx oryzivorus*) and thirteen-striped ground squirrel (*Spermophilus tridecemlineatus)* were noted. A badger (*Traxidea taxus*) was observed at the MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 proposed site. No other wildlife species, including migratory birds or their nests, were observed during the field surveys.

3.7.3.1 Other Wildlife Impacts/Mitigation

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

Alternative B (Proposed Action) – Due to suitable habitat being present for many wildlife and avian species on the proposed sites it is determined that ground clearing activities associated with the proposed project may impact individuals or suitable habitat for the wildlife species discussed above; however, no avian nests would be impacted by the proposed construction. The proposed project may affect individuals of these wildlife species, but is not likely to adversely affect any populations, or to result in a trend towards listing of any of the species identified. As no grouse leks were observed in project areas, timing restrictions for construction are not required.

The proposed QEP sites are located on upland prairie that is at a considerably higher elevation than the Lake Sakakawea shoreline. The topographic features of the area should assist in providing sight and sound buffers that should avoid disturbing shoreline-nesting birds.

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

During the on-site visit, it was determined that the well pad corners at both locations (southeast corner) would be rounded to further this distance from hardwood draws. In addition, design considerations would include constructing a two-foot high berm around the pad exterior, and a four-foot high berm around the tank batteries as a precautionary measure against spills, implementing BMPs to minimize wind and water erosion of soil resources, as well as implementing a semi closed loop system and double reinforced lined pit during drilling.

Construction activities shall begin after July 15 in order to avoid impacts to migratory birds during the breeding/nesting season. Pre-construction surveys for migratory birds or their nests would be would be conducted within five days prior to the initiation of all construction activities if construction is anticipated between February 1 and July 15. In addition, if any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed. To avoid and minimize impacts to migratory birds, the pad locations would be mowed in the fall to eliminate nesting habitat for the migratory birds in the event that spring construction of these locations were scheduled. Further avoidance and minimization of impacts to migratory birds would be implemented by QEP by drilling multiple wells at one location.

Additionally, all reasonable, prudent, and effective measures to avoid the taking of migratory bird species would be implemented during the construction and operation phases. These 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 cutting pits with netting material that has a maximum mesh size of 1.5 inches.

3.7.4 Vegetation

Botanical resources were evaluated using visual inspection, GPS data collection, and mapping of dominant plant communities. The project areas were also investigated for the presence of invasive plant species.

The proposed MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 well pad and access road occurred on an area that is native prairie that is being used as pasture. The dominant plant species at this location were Green needlegrass (*Stipa viridula*), yellow sweet clover (*MelilotusOfficinalis*), Kentucky bluegrass (*Poa pratensis*) and fringed sagewort (*Artemesia frigid*). The proposed access road would connect to an existing scoria well pad access road. The vegetation along the proposed access road was similar to the dominant species identified on the proposed pad location. Please refer to ***Figure 3.5 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Well Pad Vegetation*** and ***Figure 3.6 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Access Road Vegetation***.

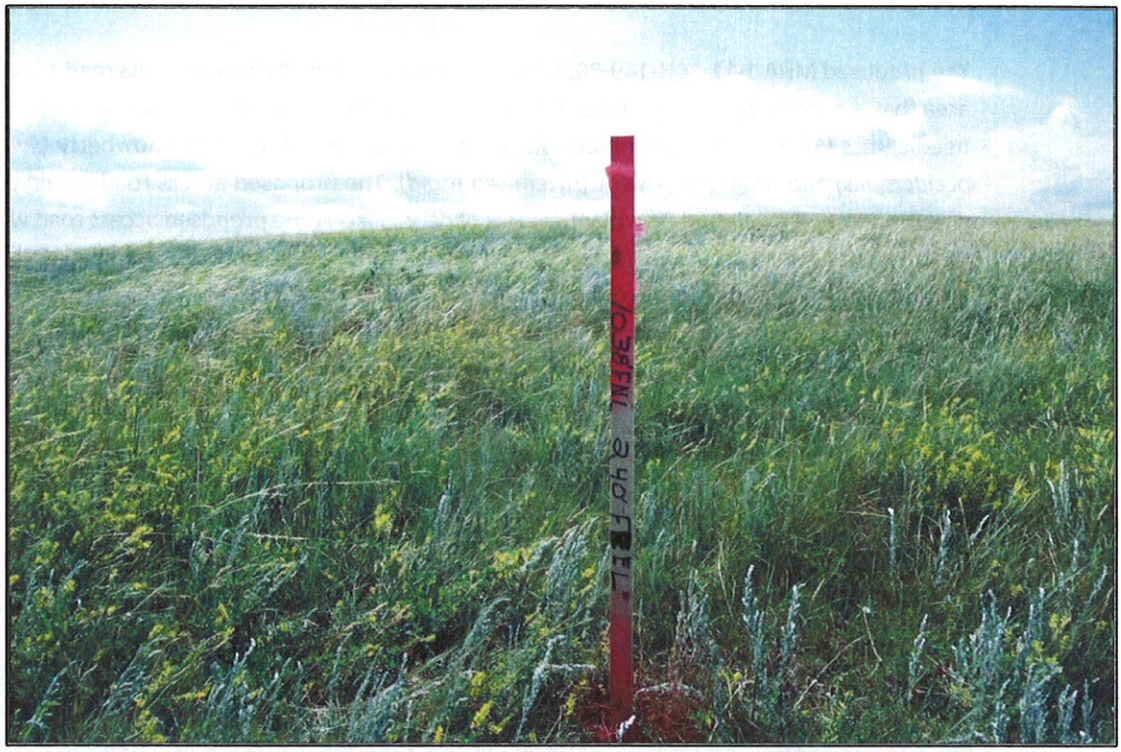

Figure 3.5 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Well Pad Vegetation

View across pad to west, note mixed prairie grasses

Figure 3.6 MHA 2-05-06H-149-90/MHA 3-05-06H-149-90 Access Road Vegetation

View northwest along proposed access road, note the MHA 1-32-31H-150-90 pad location is currently being drilled in the cropland location in the background

The proposed MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 well pad and access road are proposed in an area that is primarily grazed pastureland. The dominant plant species noted at this location were green needlegrass (*Stipa viridula*), Kentucky bluegrass (*Poa pratensis*), western snowberry (*Symphoricarpos occidentalis*) and fringed sagewort (*Artemesia frigid)*. The proposed access road would connect to an existing county gravel road. The plant species observed along the proposed access road were similar to the dominant species at the well pad location, with the addition of smooth bromegrass (*Bromus inermis)* and crested wheatgrass (*Agropyron cristatum)*. Please refer to ***Figure 3.7 MHA 1-11-14H-149-90/MHA 2-10-15H-149-90Well Pad Vegetation*** and ***Figure 3.8 MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 Access Road Vegetation***. The pad and access road were dominated by pastureland.

Figure 3.7 MHA 1-11-14H-149-90/MHA 2-10-15H-149-90Well Pad Vegetation

View west, note mixed grass prairie and mature trees

Figure 3.8 MHA 1-11-14H-149-90/MHA 2-10-15H-149-90 Access Road Vegetation

View west along access road toward section line, note section road leads to county road access

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), four are known to occur in McLean County. Please refer to ***Table 3.4 Noxious Weed Species.*** Several single plants of Canada thistle were observed at both pad locations during the field survey (***Figure 3.9***).

Table 3.4 Noxious Weed Species

COMMON NAME	SCIENTIFIC NAME	MCLEAN COUNTY ACRES	OBSERVED
Absinth wormwood	*Artemesia abinthium* L.	4,216	No
Canada thistle	*Cirsium arvense (L.) Scop*	6,581	Yes
Dalmation toadflax	*Linaria genistifolia*	0	No
Diffuse Knapweed	*Centaurea diffusa*	0	No
Field Bindweed	*Convolvulus arvensis*	14	No
Leafy spurge	*Euphorbia esula* L.	707	No
Musk thistle	*Carduus nutans* L.	126	No
Purple Loosestrife	*Lythrum salicaria*	0	No
Russian knapweed	*Acroptilon repens* (L.) DC.	0	No
Saltcedar (tamarisk)	*Tamarix ramosissima*	0	No
Spotted knapweed	*Centaurea maculosa* Lam.	0	No
Yellow toadflax	*Linara vulgaris*	0	No

Figure 3.9 Canada thistle observed during field survey

3.7.4.1 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 wells 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 accordance with the BLM Gold Book standards for well reclamation. Equipment would be washed to prevent the spread of noxious weeds. Following construction, interim reclamation measures to be implemented include reduction of cut and fill slopes, redistribution of stockpiled topsoil, and reseeding of disturbed areas and stockpiles with a native grass seed mixture consistent with surrounding vegetation. If commercial production equipment is installed, the well pads would be reduced in size to approximately 200x300 feet (1.4 acres), with the remainder of the original well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating, backfill, 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 reseeded as recommended by the BIA.

If no commercial production developed from the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. Both access roads and well pad areas would be re-contoured to match topography of the original landscape, and reseeded with vegetation consistent with surrounding native species to ensure a healthy and diverse species mix that is 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. Maintenance of the re-vegetated site would continue until such time that the stand is consistent with the surrounding undisturbed vegetation and the site is free of noxious weeds. The surface management agency would provide final inspection to deem the reclamation effort complete.

3.8 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., using an intensive pedestrian methodology. For the MHA 2-05-06H-149-90 & MHA 3-05-06H-149-90 (formerly MHA 2-05-06H-149-90 & MHA 1-04-03H-149-90) project approximately 14.5 acres were inventoried on July 13, 2010 (Leuchtmann 2010). Two archaeological sites were located that may possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register; however they are outside the Area of Potential Effect of the project. 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 August 19, 2010 and the THPO concurred on August 25, 2010. For the MHA 1-11-14H-149-90 & MHA 2-10-15H-149-90 (formerly MHA 1-11-14H-149-91 & MHA 2-10-15H-149-90) project approximately 10 acres were inventoried on July 13, 2010 (Ó Donnchadha 2010). 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 November 16, 2010; however the THPO did not respond within the allotted 30 day comment period.

3.8.1 Cultural Resources Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact cultural resources.

Alternative B (Proposed Action) –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.

3.9 Socioeconomic Conditions

Socioeconomic conditions depend on the character, habits, and economic conditions of people living within the proposed project area. 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 of the region such as Minot and Bismarck. According to 2000 US Census data, educational/health/social services is the largest industry on the Reservation, followed by the entertainment/recreation/accommodation/food industry[5]. 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.

3.9.1 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, which could have positive effects on employment and income through the creation of jobs and payment of leases, easement, 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 necessities. The increased traffic during construction may create more safety concerns for residents. QEP will follow McLean 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.

[5] 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 completed and published.

3.10 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.

With 28% of its population living below the poverty line and the majority of its population of American Indian ancestry, the Fort Berthold Reservation contains both minority and low-income communities.

The Fort Berthold Reservation and McLean County have lower than statewide averages of per capita income and median household income. In addition, they have higher rates of individuals living below poverty level than the state average. Please refer to ***Table 3.5 Employment and Income***. The Fort Berthold Reservation unemployment rate is also higher than the State average, where McLean County has a slightly lower rate.

Table 3.5 Employment and Income

LOCATION	PER CAPITA INCOME	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	INDIVIDUALS LIVING BELOW POVERTY LEVEL
McLean County	$16,220	$32,337	3.2%	13.5%
Fort Berthold Reservation	$10,291	$26,274	11.1%	28.1%
Statewide	$17,769	$34,604	4.6%	11.9%

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 McLean County population has been slowly declining, the Fort Berthold Reservation has experienced a steady increase in population. American Indians are the majority population on the Fort Berthold Reservation but are the minority population in McLean County and the state of North Dakota. Please refer to ***Table 3.6 Demographic Trends.***

Table 3.6 Demographic Trends

LOCATION	POPULATION IN 2000	% OF STATE POPULATION	% CHANGE 1999–2000	PREDOMINANT RACE	PREDOMINANT MINORITY
McLean County	9,311	1.45%	-10.9%	White	American Indian (5.9%)
Fort Berthold Reservation	5,915	0.92%	+9.8%	American Indian[6]	White (26.9%)
Statewide	642,200	—	+0.5%	White	American Indian (5%)

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

3.10.1 Environmental Justice Impacts/Mitigation

Alternative A (No Action) – Alternative A would not result in environmental justice impacts.

Alternative B (Proposed Action) – Alternative B would not require relocation of homes or businesses, cause community disruptions, or cause disproportionately 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 not anticipated to result in disproportionately adverse impacts to minority or low-income populations. Oil and gas development of the Bakken and Three Forks Formations 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 TERO (Tribal Employee Rights Office) taxes on construction of drilling facilities.

3.11 Infrastructure and Utilities

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

Known utilities and infrastructure within the vicinity of the proposed projects include both paved and gravel roadways as well as existing and proposed rural water distribution pipelines. The MHA 2-05-06H-149-90/ MHA 3-05-06H-149-90 well pad location is approximately 4 miles west of ND Highway 37, and the MHA 1-11-14H-149-90/ MHA 2-10-15H-149-90 well pad is approximately 2 miles west.

A proposed water treatment plant is currently being constructed approximately 3.5 miles northwest of the proposed MHA 2-05-06H-149-90/ MHA 3-05-06H-149-90 well pad, and 4.0 miles northwest of the MHA 1-11-14H-149-90/ MHA 2-10-15H-149-90 well pad. The Parshall Water Treatment Plant will consist of a raw water intake building, a water treatment facility and waste pond, with new gravel roads and pipelines connecting all three. In addition, the rural water authority has plans to place water distribution lines along the main county roads that provide access to the well locations.

Safety hazards posed from increased traffic during the drilling phase are anticipated to be short-term and minimal. 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 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. If the wells are determined to be productive, the site would be connected to the MHA Gathering Line. 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. Established load restrictions for state and BIA roadways would be followed and haul permits would be acquired as appropriate.

3.11.1 Infrastructure and Utility Impacts/Mitigation

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

Alternative B (Proposed Action) – Alternative B would require improvements to existing roadways, as well as construction of minor new roadway segments. QEP will follow McLean County 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. QEP's contractors will be required to adhere to all local, county, and state regulations and ordinances regarding rig moves, oversize/overweight loads, and frost restrictions. QEP would not use the Deep Water Bay cabin road as the primary access road to the proposed site locations. With the increased traffic, QEP plans to use their equipment to maintain the area roads which are also associated with the MHA Gathering Line. Once the wells have been brought into production, they are proposed to be connected to the MHA Gathering Line.

Each well site may also require the installation of supporting electrical lines. In addition, if commercially recoverable oil and gas are discovered at any of the well sites, a natural gas and/or oil gathering system will be installed (MHA Gathering Line FONSI approved). Other utility modifications would be identified during design and coordinated with the appropriate utility company.

Drilling operations at the proposed well sites 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, surface discharge, lined reserve pits, or other appropriate methods that would prevent spills or seepage. Produced water may be trucked to nearby oil fields where injection wells are available. Disposal areas would be properly fenced to prevent human or animal access.

3.12 Public Health and Safety

Health and safety concerns include hydrogen sulfide (H2S) gas, hazardous materials used or generated during well installation or production, and traffic hazards associated with heavy drill rigs and tankers.

3.12.1 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 H2S gases and hazardous materials, as described below.

H2S Gases. It is unlikely that the proposed action would result in release of H2S at dangerous concentrations; however, QEP will submit H2S Contingency Plans to the BLM as part of the APD. These plans establish safety measures to be implemented throughout the drilling process to prevent accidental release of H2S into the atmosphere. The Contingency Plans are designed to protect persons living and/or working within 3,000 feet of each well location and include emergency response procedures and safety precautions to minimize the potential for an H2S gas leak during drilling activities. Satellite imagery revealed no residences within 3,000 feet of the proposed QEP sites.

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 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. If the location is determined to be productive, an SPCC Plan would need to be submitted to the EPA.

Design considerations being implemented to contain potential spills on site include constructing a two-foot high berm around the pad exterior, and a four-foot high berm around the tank batteries as a precautionary measure against spills, implementing BMPs to minimize wind and water erosion of soil resources, as well as using a semi-closed loop system and double reinforced pit during drilling.

3.13 Cumulative Impacts

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.

3.13.1 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.

At the time this EA was written, there were approximately 352 active and/or proposed oil and gas wells within the Fort Berthold Reservation. Please refer to ***Figure 3.10 Existing and Proposed Oil and Gas Wells.***

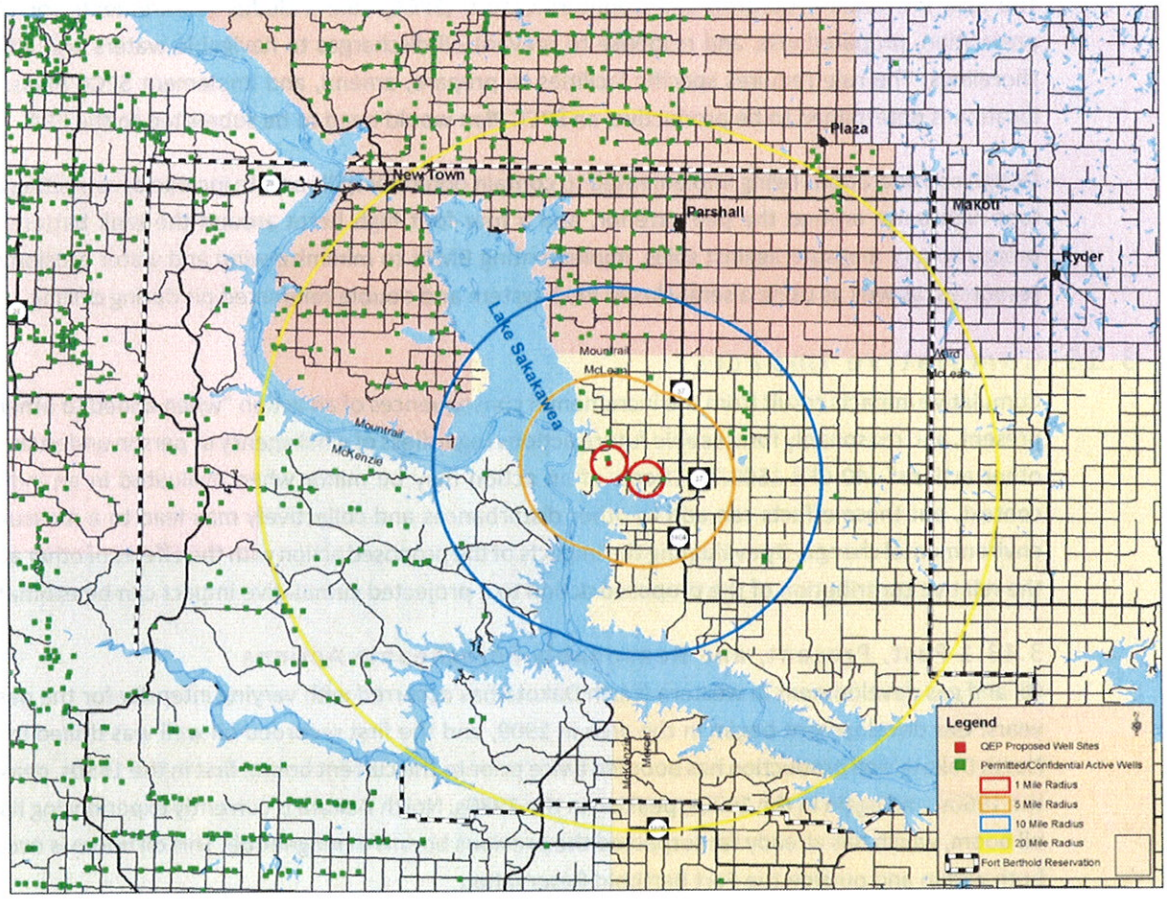

Figure 3.10 Existing and Proposed Oil and Gas Wells

There are four active or proposed oil and gas wells that exist within one mile of the MHA 2-05-06H-149-90/MHA 3-05-06H-149-90, and two active or proposed oil and gas wells that exist within 1 mile of the MHA 1-11-14H-149-90 /MHA 2-10-15H-149-90wells. Please refer to ***Table 3.7 Summary of Active and Proposed Wells.***

Table 3.7 Summary of Active and Proposed Wells

DISTANCE FROM SITES	NUMBER OF ACTIVE OR PROPOSED WELLS
1 mile radius	5
5 mile radius	9
10 mile radius	47
20 mile radius	312

As mentioned previously in this EA, the Bakken Formation 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. (As mentioned previously, the proposed project targets both the Bakken and Three Forks Formations.) The North Dakota Department of Mineral Resources estimates that there are approximately 2 billion barrels of recoverable

oil in each of these Formations and that there will be 30–40 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 exploration 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 resource that further development will continue in the area for the next 30–40 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, but as there are no approved projects, that information remains proprietary.

Current impacts from oil and gas development in the immediate vicinity of the proposed project are still fairly dispersed, and BMPs would be implemented to minimize impacts of the proposed projects. The dual nature of the two proposed well pads minimizes impacts by providing for two wells on each pad and minimizing disturbed areas associated with pad construction as well as associated facilities such as access roads, pipeline, and electrical corridors. The MHA 2-05-06H-149-90/ MHA 3-05-06H-149-90 well pad would share access roads with the MHA 1-32-31H-150-90 well pad to the north. Access to the MHA 2-10-15H-149-90/ MHA 1-11-14H-149-90 wells would be by a short proposed well access road on a section line that connects to a maintained graveled county road. Additional wells may be placed in locations where these roads could be used for access. If commercially recoverable oil and gas are discovered at any of the well sites, a natural gas and/or oil gathering system will be installed (MHA Gathering Line FONSI approved).

3.13.2 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 environmental impacts associated with the proposed project and other past, present, and reasonably foreseeable actions.

Geological Setting and Land Use— The proposed project, when added to past, present, or future oil and gas activity, would result in a cumulative impact to land use through the conversion of existing uses, such as agricultural, grazing or native prairie, into well pads and access roads. However, well pads and access roads are generally selected to avoid sensitive land uses and to maintain the minimum impact footprint possible. QEP has chosen to place multiple wells on each of the pads, which will assist in the avoidance and minimization of the well pad impacts in the areas selected. 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. When added to existing and proposed water distribution lines and/or natural gas gathering systems, no cumulative impacts are anticipated as these lines have, or would, result in a temporary disturbance and would not permanently convert existing land uses. Therefore, cumulative land use impacts are not expected to result in a significant cumulative impact.

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. The Dunn Center AAQM Station emission levels are currently well below the Ambient Air Quality Standards, and it is anticipated that mobile air source emissions 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.

Wetlands, Wildlife, and Vegetation— The proposed project, when added to previously constructed and reasonably foreseeable oil and gas wells, would result in a cumulative impact associated with habitat loss and fragmentation due to construction of well pads, access roads, and associated infrastructure. The North Dakota Parks and Recreation Department notes in its undated publication, "North Dakota Prairie: Our Natural Heritage" 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. 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, as well as sharing access roads with future developments would minimize the potential impacts. The proposed exploratory wells have also been sited to avoid sensitive areas such as surface water, wetlands, or riparian areas. In addition, the use of BMPs and continued reclamation are anticipated to minimize and mitigate disturbed habitat. Therefore, it is not anticipated that the proposed project, when added to past, present, and reasonably foreseeable oil and gas activity, would result in a significant cumulative impact.

Infrastructure and Utilities— The proposed action, 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, disposal for produced water and other waste materials. As with the proposed action, many other well sites 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. Well pads have been positioned in close proximity to existing roadways wherever possible 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 project and other past, present, or future projects.

The proposed action has been planned to avoid impacts to resources such as wetlands, floodplains, surface water, cultural resources, and threatened and endangered species. Unavoidable impacts to these or other resources would be minimized and/or mitigated in accordance with applicable regulations. No significant cumulative impacts are reasonably foreseen from existing or proposed activities.

3.14 Irreversible and Irretrievable Commitment of Resources

Removal and consumption of oil or gas from the Bakken Pool 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. None of these impacts are expected to be significant.

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

Short-term activities would not significantly detract from long-term productivity of the project area. 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 and Three Forks Pools, which is the purpose of this project.

3.16 Permits

QEP 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 – NDIC (North Dakota Industrial Commission)
- Section 10 Permit – United States Army Corps of Engineers
- Spill Prevention, Control and Countermeasure (SPCC)—The rule requires specific facilities to prepare, amend, and implement SPCC Plans. If the location is determined to be productive, an SPCC Plan would need to be submitted to the EPA.

3.17 Environmental Commitments/Mitigation

The following commitments have been made by QEP Energy Company:

- 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 part of the reclamation process.
- BMPs will be implemented to minimize wind and water erosion of soil resources. Soil stockpiles will be positioned to help divert runoff around the well pad, and seeded with a native grass mixture.
- Well sites and access roads will avoid surface waters. The proposed project will not alter stream channels or change drainage patterns.
- The reserve pit would be located away from areas of shallow ground water and have a double reinforced synthetic liner 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.

- The proposed wells will be cemented and cased to isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.

- Wetlands and riparian areas would be avoided.

- Disturbed vegetation would 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. In addition, QEP will wash equipment used on BIA projects prior to the start of construction to prevent the spread of noxious weeds.

- Well sites and access roads would 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 would be located at least fifty feet away from identified cultural resources. The boundaries of these 75-foot "exclusion zones" would be pin-flagged or fenced as an extra measure to ensure that inadvertent impacts to cultural resources are avoided.

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

- QEP will require all contractors working for the company will adhere to all local, county, and State regulations and ordinances regarding rig moves, oversize/overweight loads, and frost law restrictions.

- Prior to construction, QEP will coordinate with the Fort Berthold Water Authority Director to ensure minimization of impacts to existing water distribution pipelines.

- Utility modifications would be identified during design and coordinated with the appropriate utility company.

- Disposal areas would 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 would be followed and haul permits would be acquired as appropriate.

- Suitable mufflers would be put on all internal combustion engines and certain compressor components to mitigate noise levels.

- Well sites and associated facilities would be painted in colors to allow them to better blend in with the natural background color of the surrounding landscape.

- A two-foot high berm will be constructed around the pad exterior and a four-foot berm will be constructed around the tank batteries as a precautionary measure against spills. The berm will be sized to hold 100% of thee capacity of the largest storage tank plus one full day's production. Additional BMP's will be used during construction to ensure contaminants do not move off site.

- Well pad corners will be rounded where applicable to lessen disturbance impacts.

- The pits would be fenced while not actively being used.

- A semi closed loop system will be used during drilling. Liquids from drilling will be transported off site and dry cuttings will be solidified in place.

- If a whooping crane is sighted within one-mile of a well site or associated facilities while it is under construction, that all work cease within one-mile of that part of the project and the USFWS be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.

- All construction activities shall begin before February 1 and after July 15 in order to avoid impacts to migratory birds during the breeding/nesting season. Areas scheduled for spring construction will be mowed during the prior fall season to reduce potential nesting habitat for migratory birds. Pre-construction surveys for migratory birds or their nests would be would be conducted within five days prior to the initiation of all construction activities scheduled for spring. In addition, if any deceased migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

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

- Open pits and ponds will be immediately cleaned if oil is present.

- Wire mesh or grate covers will be placed over barrels 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 after the drilling has been completed.

- If the location is determined to be productive, an SPCC Plan would need to be submitted to the EPA.

- Well pads will be fenced with cattle guards placed at necessary locations.

- Culverts will be placed along access roads to promote the natural flow through drainageways.

- Signage for possible hazardous intersections will be placed along access roads in appropriate locations.

- Cut and fill slopes will be reseeded with a native grass mix to assist with preventing erosion and soil movement in drainageways.

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 CEQ (Council on Environmental Quality) regulations for implementing the National Environmental Policy Act, 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

KL&J prepared this EA under a contractual agreement between QEP and KL&J. 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	
QEP Energy Company	Debbie Stanberry	Supervisor Regulatory Affairs	Project development, document review
	Tracy Opp	Permit Agent-Contract	
Kadrmas, Lee & Jackson	Charlotte Brett	Environmental Planner	Quality Control/Quality Assurance
	Steve Czeczok	Environmental Planner	Impact assessment, document preparation, exhibit creation
	Rick Leach	Surveyor	Site plats
	Brian O'Donnchadha	Principal Investigator	Cultural resources surveys
	Jerry Reinisch	Environmental Planner/Biologist	Project coordination, field resources surveys, impact assessment, principal author
	Grady Wolf	Environmental Planner	Project Manager

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 July 28, 2010. 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 the National Environmental Policy Act of 1969, a solicitation of views was requested to ensure that social, economic, and environmental effects were considered in the development of this project.

APPENDIX A

At the conclusion of the 30-day comment period, which ended August 27, 2010, ten 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 ***Agency Scoping Responses***

4.4 Public Involvement

Provided the BIA approves this document and determines that no significant impacts are anticipated to result from the proposed project, a FONSI (Finding of No Significant Impact) 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 AND ACRONYMS

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ACRONYMS

AAQM	Ambient Air Quality Monitoring
APD	Application for Permit to Drill
APE	Area of Potential Effect
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CO	Carbon Monoxide
EA	Environmental Assessment
EPA	Environmental Protection Agency
FBRW	Fort Berthold Rural Water
FONSI	Finding of No Significant Impact
NAAQS	National Ambient Air Quality Standards
NDDH	North Dakota Department of Health
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NRHP	National Register of Historic Places
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter
ROW	Right-of-way
SO_2	Sulfur Dioxide
THPO	Tribal Historic Preservation Officer
USFWS	United States Fish and Wildlife Service

APPENDIX A

Scoping Materials

July 28, 2010

«CTitle»«First»«Last», «Title»
«Department»
«Agency»
«Address»
«City», «State»«Zip»

RE: QEP Energy Company
Proposed Well Sites
Fort Berthold Reservation
McLean County, ND
T149N, R90W SECTIONS 5 & 11

«GreetingLine»

On behalf of QEP, KL&J, Inc. 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 approval by the BIA and BLM of the development of four wells on 2 well pads and access roads in McLean County on the Fort Berthold Reservation.

The proposed action would advance the exploration and production of oil from the Bakken and Three Forks Pool. ***Please refer to the enclosed project location map***. The proposed wells are: MHA#2-10-15H-149-90, MHA#1-11-14H-149-90, MHA#2-05-06H-149-90, and MHA#1-04-03H-149-90. Construction of the proposed well pads and access roads is proposed to begin as early as summer 2010.

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 **August 27, 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.

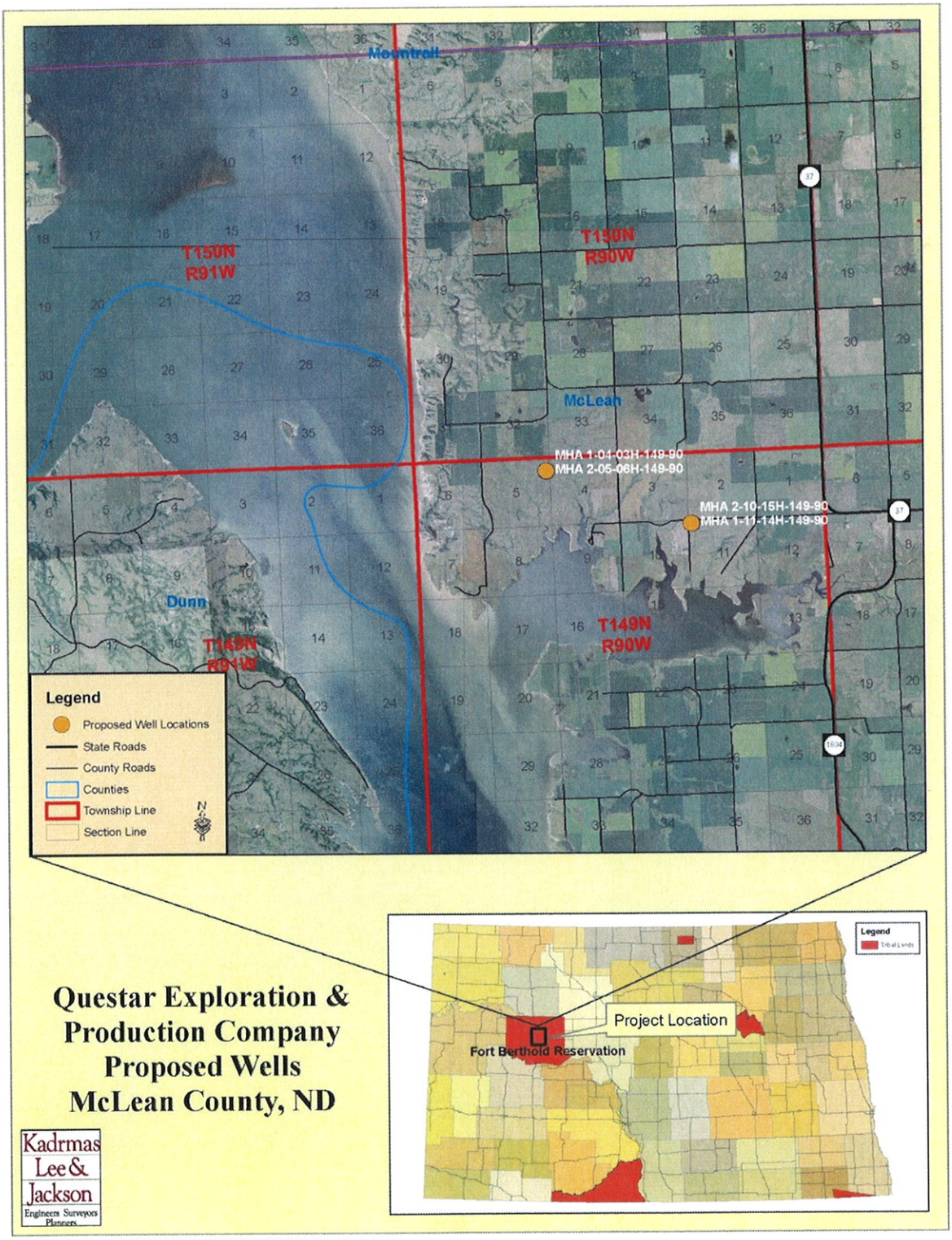
If you would like further information regarding this project, please contact me at (701) 355-8705. Thank you for your cooperation.

Sincerely,

Kadrmas, Lee & Jackson, Inc.

Jerry Reinisch
Environmental Planner

Enclosure (Project Map)


Mountrail
T150N
R91W
T150N
R90W
McLean
MHA 1-04-03H-149-90
MHA 2-05-06H-149-90
MHA 2-10-15H-149-90
MHA 1-11-14H-149-90
Dunn
T149N
R91W
T149N
R90W
Legend
Proposed Well Locations
State Roads
County Roads
Counties
Township Line
Section Line
N
Legend
Tribal Lands
Project Location
Fort Berthold Reservation
Questar Exploration & Production Company
Proposed Wells
McLean County, ND
Kadrmas Lee & Jackson
Engineers Surveyors Planners

APPENDIX B

Agency Scoping Responses

QEP Energy Company
MHA 2-05-06H-149-90, MHA 3-05-06H-149-90, MHA 1-11-14H-149-90, and MHA 1-10-15H-149-90

Fort Berthold Reservation
List of Agency Scoping Responses

Federal

Federal Aviation Administration, Bismarck Office
US Department of Agriculture-Natural Resources Conservation Service
US Department of Defense-Army Corps of Engineers, North Dakota Regulatory Office
US Department of Defense-Army Corps of Engineers, Omaha District Regulatory Office
US Department of Defense-Army Corps of Engineers, Riverdale, North Dakota
US Department of the Interior-Bureau of Reclamation
US Department of the Interior-Fish and Wildlife Service

State

North Dakota Department of Health
North Dakota Department of Transportation
North Dakota Game and Fish Department
North Dakota Parks and Recreation Department

County

McLean County Highway Superintendent

Kadrmas Lee & Jackson
Engineers Surveyors Planners

July 28, 2010

Mr. Steve Obenauer, Manager
Bismarck Airports District Office
Federal Aviation Administration
2301 University Drive, Bldg 23B
Bismarck, ND 58504

RE: QEP Energy Company
Proposed Well Sites
Fort Berthold Reservation
McLean County, ND
T149N, R90W SECTIONS 5 & 11

Dear Mr. Obenauer,

On behalf of QEP Energy Company, Kadrmas, Lee & Jackson, Inc. 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 approval by the BIA and BLM of the development of four wells on 2 well pads and access roads in McLean County on the Fort Berthold Reservation.

The proposed action would advance the exploration and production of oil from the Bakken and Three Forks Pool. ***Please refer to the enclosed project location map***. The proposed wells are: MHA#2-10-15H-149-90, MHA#1-11-14H-149-90, MHA#2-05-06H-149-90, and MHA#1-04-03H-149-90. Construction of the proposed well pads and access roads is proposed to begin as early as summer 2010.

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Please provide your comments by **August 27, 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 (701) 355-8705. Thank you for your cooperation.

Sincerely,

Kadrmas, Lee & Jackson, In

Jerry Reinisch
Environmental Planner

Enclosure (Project Map)

McLean Cty

Date 8/2/10

U.S Department of Transportation
Federal Aviation Administration

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.

Patricia L. Dressler, Environmental Protection Specialist
FAA/Bismarck Airports District Office
2301 University Drive, Building 23B
Bismarck, ND 58504

701 355 8400
128 Soo Line Drive
PO Box 1157
Bismarck, ND 58502-1157
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Kadrmas, Lee & Jackson, Inc.
A KLJ Solutions Company

United States Department of Agriculture

NRCS

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

August 2, 2010

Jerry Reinisch
Kadrmas Lee & Jackson
128 Soo Line Drive
PO Box 1157
Bismarck, ND 58502-1157

RE: QEP Energy Company
Proposed Well Sites
Fort Berthold Reservation
T149N, R90W, SECTIONS 5, 7, & 11
McLean County, ND

Dear Mr Reinisch:

The Natural Resources Conservation Service (NRCS) has reviewed your letters dated July 28, 2010, concerning approval of three well pads and access roads by Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM) on the Fort Berthold Reservation in McLean County, North Dakota.

NRCS has a major responsibility with the Farmland Protection Policy Act (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, FPPA does not apply and no further action is needed.

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. The NRCS has developed the following guidelines for the installation of permanent structures where wetlands occur. 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.

Helping People Help the Land

NRCS would recommend that impacts to wetlands be avoided. If the installment of permanent structures requires passage through 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, Liaison Soil Scientist, NRCS, Bismarck, ND at 701-530-2019.

Sincerely,

ACTING PAUL J. SWEENEY
State Conservationist

cc:
Virginia K. Mehlhoff, DC, NRCS, Garrison, ND
Stuart Blotter, ASTC (FO), NRCS, Jamestown, ND

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

REPLY TO
ATTENTION OF

August 3, 2010

North Dakota Regulatory Office

[NWO-2010-01677-BIS]

Kadrmas Lee & Jackson, Inc.
Attn: Jerry Reinisch
128 Soo Line Drive
PO Box 1157
Bismarck, North Dakota 58502-1157

Dear Mr. Reinisch:

This is in response to your solicitation letter on behalf of **QEP Energy Company (QEP)**, received on July 29, 2010 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments for the development of hour wells on two well pads and access roads within the Fort Berthold Indian Reservation. The proposed well identification numbers are **MHA 1-04-30H-149-90 and MHA 2-05-06H-149-90** located within Section 4, Township 149 North, Range 50 West, McLean County and **MHA 2-10-15H-149-90 and MHA 1-11-14H-149-90** located within Section 11, Township 149 North, Range 50 West, McLean County, North Dakota.

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, lakes, 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.

Also 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

Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

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

CF w/o encl
EPA Denver (Brent Truskowski)

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

RECEIVED
AUG 11 2010

REPLY TO
ATTENTION OF

August 6, 2010

Planning, Programs, and Project Management Division

Mr. Jerry Reinisch
Kadrmas, Lee & Jackson
128 Soo Line Drive
P.O. Box 1157
Bismarck, North Dakota 58502-1157

Dear Ms. Braun:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated July 28, 2010, regarding the proposed drilling and completion of up to four exploratory oil and gas wells at two locations on the Fort Berthold Reservation in McLean 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 web site (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,

Brad Thompson
Chief, Environmental Resources and Missouri Recovery
Program and Plan Formulation, Planning Branch
Planning, Programs and Project Management Division

Jerry Reinisch

From: Sorensen, Charles G NWO [Charles.G.Sorensen@usace.army.mil]
Sent: Tuesday, August 03, 2010 11:25 AM
To: jerryreinisch@kljeng.com
Cc: Ames, Joel O NWO
Subject: Comments on the QEP Energy Company Proposed Well Locations

August 3, 2010

Jerry

Thank you for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project comment on QEP Energy Company Oil Well locations.

At this time the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project request that consider and if at all possible implement the following management practices during the exploration phase of the MHA#1-07-18H-149-90,MHA#2-10-15H-149-90, MHA#1-11-14H-149-90,MHA#2-5-6H-149-90 and the MHA #1-4-3H-149-90.

Due to the close proximity of the well location to lands managed by the U.S. Army Corps of Engineers (USACE) there is a high risk that any storm water runoff from the well location will enter the Missouri River/Lake Sakakawea. As such the USACE would request that QEP Energy Company consider the construction/establishment of a catch trench located on the down sloping side of the well pad. Said trench would help in containing any hazardous wastes from the well pad. Those fluids that accumulate in the trench should be pumped out and disposed of properly

As previously mentioned the location of the proposed well site is extremely close to 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.

That prior to the drilling rig and associated equipment be placed that said 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 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

1

Garrison Dam/Lake Sakakawea Project

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
BUREAU OF RECLAMATION
Dakotas Area Office
P.O. Box 1017
Bismarck, North Dakota 58502

TAKE PRIDE IN AMERICA

DK-5000
ENV-6.00

AUG 2 2010

Mr. Jerry Reinisch
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
P.O. Box 1157
Bismarck, ND 58502-1157

Subject: Solicitation for an Environmental Assessment for the Proposed Development of Six Wells on Three Pads with Access Roads by QEP Energy in McLean County on the Fort Berthold Reservation in North Dakota

Dear Mr. Reinisch:

This letter is written to inform you that we received your two letters dated July 28 and the information and maps have been reviewed by Bureau of Reclamation staff.

Proposed development of wells and access roads located in McLean County could potentially affect Reclamation facilities in the form of the rural water pipelines of the Fort Berthold Rural Water System.

We are providing an index map depicting water pipeline alignments in the proposed project area and detailed maps for sections 5 and 11, T. 149 N., R. 90 W. We are also enclosing a copy of our requirements for crossing rural water lines. Since Reclamation is the lead Federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Lester Crows Heart, Fort Berthold Rural Water Director, Three Affiliated Tribes, 308 4 Bears Complex, New Town, North Dakota 58763.

Thank you for providing the information and opportunity to comment. If you have any further questions, please contact me at 701-221-1288 or Kelly McPhillips at 701-221-1287. Questions concerning water line crossings can be directed to Ryan Waters at 701-221-1262.

Sincerely,

Ronald D. Melhouse

Ronald D. Melhouse
Environmental Specialist

Enclosure

cc: See next page.

Subject: Solicitation for an Environmental Assessment for the Proposed Development of Six Wells on Three Pads with Access Roads by QEP Energy in McLean County on the Fort Berthold Reservation in North Dakota 2

cc: Bureau of Indian Affairs
Great Plains Regional Office
Attention: Ms. Marilyn Bercier
Regional Environmental Scientist
115 Fourth Avenue S.E.
Aberdeen, SD 57401

Mr. Lester Crows Heart
Fort Berthold Rural Water Director
Three Affiliated Tribes
308 4 Bears Complex
New Town, ND 58763
(w/encl)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

RECEIVED
SEP - 2 2010

SEP 1 2010

Mr. Jerry Reinisch
Kadrmas, Lee & Jackson
128 Soo Line Drive
PO Box 1157
Bismarck, North Dakota 58502-1157

Re: Up to Four Proposed Oil and Gas
Exploratory Wells on Two Pads
Fort Berthold Reservation
McLean County, North Dakota

Dear Mr. Reinisch:

This is in response to your July 28, 2010, request for concurrence and fish and wildlife resource information on QEP Energy Company's (QEP) four proposed oil and gas exploratory wells to be located on two pads on the Fort Berthold Reservation in McLean County, North Dakota. Concurrence from the U.S. Fish and Wildlife Service (Service) is predicated on the measures that QEP has committed to implementing, as expressed in this letter.

The specific well locations are:

MHA 2-10-15H-149-90: T149N, R90W, Section 11
MHA 1-11-14H-149-90: T149N, R90W, Section 11
MHA 1-04-03H-149-90: T149N, R90W, Section 5
MHA 2-05-06H-149-90: T149N, R90W, Section 5

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).

In an email 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 Service is responding to you as the designated non-Federal representative.

The Service concurs with your determination of "may affect, but not likely to adversely affect" for whooping cranes, predicated on all work stopping within one mile of a whooping crane(s) sighted from the proposed project area. In coordination with the Service, work may resume once the crane(s) has left the area.

The letter also states that "the proposed project is not likely to jeopardize the continued existence of this species and is not likely to destroy or adversely modify critical habitat." Jeopardy and adverse modification are determined by the Service through the formal consultation process and are issued in a biological opinion. These terms are not applicable to this proposal, as you have determined that the project is not likely to adversely affect the species, and designated critical habitat for whooping cranes does not exist in the project area.

The Service acknowledges your determination of "no effect" for interior least tern, piping plover and pallid sturgeon. Although no further consultation is necessary, the Service recommends looking closely at the basis for "no effect" determinations. "No effect" determinations are usually appropriate when no listed species or critical habitat occurs in a proposed action area. "Action area" is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.

Critical habitat has been designated for piping plovers along the shoreline of Lake Sakakawea on Fort Berthold; however, there is no impacts analysis for critical habitat. Section 7 of the ESA instructs Federal agencies to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat. The Service recommends including an effects determination and request for concurrence, if applicable, for designated piping plover critical habitat.

We acknowledge your "no effect" determination for the gray wolf. Since the Dakota skipper is a candidate species, no determination is required.

In previous correspondence and a June 23, 2010 field exercise, the Service made recommendations to demonstrate avoidance, minimization and mitigation measures for migratory birds, as well as recommending measures to prevent surface contamination in the event of a spill. QEP has completed and/or committed to the following measures:

- Construction activities from February 15 – July 15 would be preceded by pedestrian surveys to determine the presence of raptor and migratory bird species or nesting activity. Areas scheduled for spring construction will be mowed in the late fall to remove potential migratory bird nesting habitat. The preconstruction surveys for raptors and migratory birds or their nests would be conducted within 5 days prior to the initiation of well pad construction activities. In addition, if any raptor or migratory bird is found in the survey area during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

- Place wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintain open pits and ponds that are free from oil, net pit with mesh size no greater than 1.5 inches.
- Construct a berm around the storage tanks and heater/treater that would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production;
- A ground survey of raptor nests within 0.5 mile of all proposed areas of disturbance and a commitment to cease construction activities if bald or golden eagles or their nests are discovered within 0.5 mile of construction areas; no eagle nests were found within 0.5 mile of all proposed disturbance areas during the July 12, 2010, field surveys.

Please note that the migratory bird nesting season in North Dakota is considered to occur from February 1 – July 15, not February 15-July 15, as stated in your letter. Also, if migratory bird habitat is degraded by mowing in late fall, and maintained in a degraded state so as to discourage bird nesting, it is not necessary to conduct surveys for nesting birds prior to construction. Please make these adjustments when preparing the environmental assessment (EA) for these projects.

Thank you for the opportunity to provide scoping comments on these projects and for QEP's cooperation in addressing our recommendations. It will not be necessary for the Service to review a draft EA for this project. We would appreciate a copy of the final EA on CD. If you require further information or the project plans change, please contact me or Heidi Kuska 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

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

August 9, 2010

RECEIVED
AUG 11 2010

Mr. Jerry Reinisch
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
P.O. Box 1157
Bismarck, ND 58502-1157

Re: QEP Energy Company
Four Proposed Oil Wells on Two Well Pads
Ft. Berthold Reservation
T 149N, R 90W, Sections 5 & 11, McLean County

Dear Mr. Reinisch:

This department has reviewed the information concerning the above-referenced project submitted under date of July 28, 2010, 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

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.

Environmental Health Section Chief's Office 701.328.5150	Division of Air Quality 701.328.5188	Division of Municipal Facilities 701.328.5211	Division of Waste Management 701.328.5166	Division of Water Quality 701.328.5210

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AUG - 5 2010

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

August 2, 2010

Jerry Reinisch
Kadrmas Lee & Jackson
P.O. Box 1157
Bismarck, ND 58502-1157

QEP ENERGY COMPANY
PROPOSED WELL SITES
FORT BERTHOLD RESERVATION
MCLEAN COUNTY, ND
T149N, R90W, SECTIONS 5 & 11

The proposed well site information submitted has been reviewed.

The NDDOT does have a highway improvement projects scheduled for ND 1804 for the 2010 construction season. ND 1804 has year round axle weight restrictions.

When considering overweight truck movements, use of roadways off the state highway system is encouraged to minimize damage to the state system.

If you need additional information, please contact me.

James L Redding

JAMES L. REDDING, PE, NDDOT MINOT DISTRICT ENGINEER

1305 Highway 2 Bypass East • Minot, North Dakota 58701-7922
Information: (701) 857-6925 • FAX: (701) 857-6932 • TTY: (701) 328-4156 • www.dot.nd.gov

"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

August 16, 2010

RECEIVED
AUG 18 2010

Jerry Reinisch
Environmental Planner
Kadrmas, Lee & Jackson, Inc.
PO Box 1157
Bismarck, ND 58502-1157

Dear Mr. Reinisch:

RE: MHA 1-07-18H-149-90
MHA 2-10-15H-149-90
MHA 1-11-14H-149-90
MHA 2-05-06H-149-90
MHA 1-04-03H-149-90

QEP Energy Company is proposing up to six oil and gas wells on three pads and access roads on the Fort Berthold Reservation in McLean 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,

(for) Michael G. McKenna
Chief
Conservation & Communication Division

js

RECEIVED
AUG 11 2010

John Hoeven, 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

August 9, 2010

Jerry Reinisch
Kadrmas, Lee & Jackson
PO Box 1157
Bismarck, ND 58502-1157

Re: QEP Energy Company Proposed Well Sites
Fort Berthold Reservation

Dear Mr. Reinisch:

The North Dakota Parks and Recreation Department (NDPRD) has reviewed the above referenced project proposal to develop four wells on two pads and access roads located in Sections 4, 5, 10, and 11, T149N, R90W, McLean 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, we do have records for the occurrence of *Charadrius melodus* (piping plover) in a section adjacent to the project area indicating that the habitat in the project area may be suited for this specie or other rare, threatened, sensitive or endangered species. Please see the attached spreadsheet and map for more information on this occurrence. We defer further comments regarding animal species to the North Dakota Game and Fish Department and the United States Fish and Wildlife Service.

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,

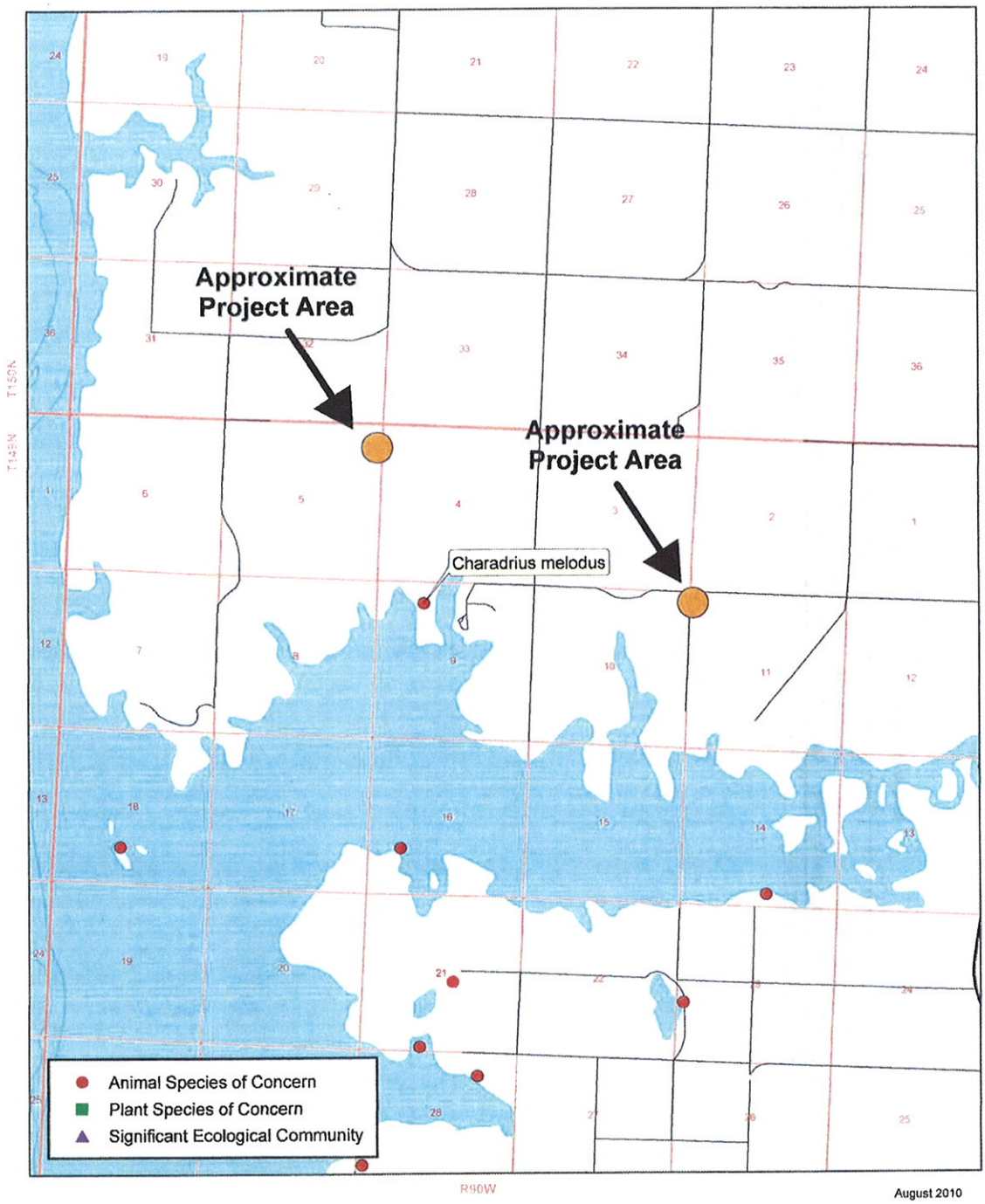
Jesse Hanson

Jesse Hanson, Manager
Planning and Natural Resources Division

R.USNDNHI*2010-213
CD/0803/DL0827

Play in our backyard!

North Dakota Parks and Recreation Department
North Dakota Natural Heritage Inventory



North Dakota Natural Heritage Inventory
Rare Animal and Plant Species and Significant Ecological Communities

State Scientific Name	State Common Name	State Rank	Global Rank	Federal Status	Township Range Section	County	Last Observation	Estimated Representation Accuracy	Precision
Charadrius melodus	Piping Plover	S1S2	G3	LE, LT	149N090W - 09	McLean	1996		S

North Dakota Natural Heritage Inventory Biological and Conservation Data Disclaimer

The quantity and quality of data collected by the North Dakota Natural Heritage Inventory are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in North Dakota have never been thoroughly surveyed, and new species are still being discovered. For these reasons, the Natural Heritage Inventory cannot provide a definite statement on the presence, absence, or condition of biological elements in any part of North Dakota. Natural Heritage data summarize the existing information known at the time of the request. Our data are continually upgraded and information is continually being added to the database. This data should never be regarded as final statements on the elements or areas that are being considered, nor should they be substituted for on-site surveys.

Estimated Representation Accuracy

Value that indicates the approximate percentage of the Element Occurrence Representation (EO Rep) that was observed to be occupied by the species or community (versus buffer area added for locational uncertainty). Use of estimated representation accuracy provides a common index for the consistent comparison of EO reps, thus helping to ensure that aggregated data are correctly analyzed and interpreted.

Very high (>95%)
High (>80%, <= 95%)
Medium (>20%, <= 80%)
Low (>0%, <= 20%)
Unknown
(null) - Not assessed

Precision

A single-letter code for the precision used to map the Element Occurrence (EO) on a U.S. Geological Survey (USGS) 7.5' (or 15') topographic quadrangle map, based on the previous Heritage methodology in which EOs were located on paper maps using dots.

S - Seconds: accuracy of locality mappable within a three-second radius; 100 meters from the centerpoint
M - Minute: accuracy of locality mappable within a one-minute radius; 2 km from the centerpoint
G - General: accuracy of locality mappalbe to map or place name precision only; 8 km from centerpoint
U - Unmappable

RECEIVED

Office of
Ronald F. Wagner
Highway Superintendent

McLean County
STATE OF NORTH DAKOTA

709 6th Ave
P.O. Box 1108
Washburn, ND 58577-1108
Phone (701) 462-8802
Fax (701) 462-3523
rfwagner@nd.gov

Mr. Reinisch

Thank you for the opportunity to give you a few comments on the oil activity in McLean County.

We have concerns with the road and conditions, road use and which roads should be used.

The roads have already been impacted and are not like they were prior to the oil activity. We have met with several oil companies and the tribe to discuss a few issues. Mainly a plan to designate a certain route for oil traffic as we mentioned which roads to use is a very important topic as we are requesting oil traffic not to use the roads to Deep Water Bay. This road is well traveled with campers and boat traffic as well as cabin owners. It is a great safety concern to us. It is in T149 R90W and runs on the south side sections 1-2-3-4.

At the present time we have load restrictions on it and we want oil traffic to use other roads. Also, in visiting with the Sheriff's Department there are law enforcement issues that could come up with permit use as well as speed limits, which leads to safety concerns again.

Sincerely,

Highway Superintendent
Ronald F. Wagner

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

NOV 16 2010

IN REPLY REFER TO:
DESCRM
MC-208

Perry 'No Tears' Brady, THPO
Mandan, Hidatsa and Arikara Nation
404 Frontage Road
New Town, North Dakota 58763

Dear Mr. Brady:

We have considered the potential effects on cultural resources of three oil well pad and access road projects in McLean and Dunn Counties, North Dakota. Approximately 21 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the areas depicted in the enclosed reports. No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places. No properties were located that appear to qualify for protection under the American Indian Religious Freedom Act (42 USC 1996).

As the surface management Agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no historic properties affected** for these undertakings. Catalogued as **BIA Case Number AAO-1883/FB/11**, the proposed undertakings, locations, and project dimensions are described in the following reports:

Ó Donnchadha, Brian
(2010a) MHA 1-11-14H-149-91 & MHA 2-10-15H-149-90 Well Pad and Access Road: A Class III Cultural Resource Inventory, Mc Lean County, North Dakota. KLJ Cultural Resources for QEP, Denver.

(2010b) MHA 1-31-36H-150-92 Well Pad and Access Road: A Class III Cultural Resource Inventory, Dunn County, North Dakota. KLJ Cultural Resources for QEP, Denver. Ó Donnchadha, Brian

(2010c) MHA 1-26-25H-149-91 Well Pad and Access Road: A Class III Cultural Resource Inventory, Dunn County, North Dakota. KLJ Cultural Resources for QEP, Denver.

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

If you have any questions, please contact Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

ACTING Regional Director

Enclosures

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency

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

AUG 19 2010

Perry 'No Tears' Brady, THPO
Mandan, Hidatsa and Arikara Nation
404 Frontage Road
New Town, North Dakota 58763

Dear Mr. Brady:

We have considered the potential effects on cultural resources of an oil well pad and access road project in McKenzie County, North Dakota. Approximately 14.5 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the area depicted in the enclosed report. Two archaeological sites (32ML1158, 32ML1159) were located which may possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places. No properties were located that appear to qualify for protection under the American Indian Religious Freedom Act (42 USC 1996).

As the surface management Agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no historic properties affected** for this undertaking, as the archaeological sites are outside the project area of potential effect. Catalogued as **BIA Case Number AAO-1764/FB/10,** the proposed undertaking, location, and project dimensions are described in the following report:

Leuchtmann, Amy
(2010) MHA 2-05-06H-149-90 and MHA 1-04-03H-149-90 Well Pads and Access Road: A Class III Cultural Resource Inventory, McLean County, North Dakota. KLJ Cultural Resources for QEP, Denver.

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

If you have any questions, please contact Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

ACTING Regional Director

Enclosure

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency

Three Affiliated Tribes
MANDAN * HIDATSA * ARIKARA

TRIBAL HISTORIC PRESERVATION
Mandan Hidatsa Arikara
Perry 'No Tears' Brady, Director
404 Frontage Road,
New Town, North Dakota 58763
Ph/701-862-2474 fax/701-862-2490

August 25, 2010

Dr. Carson Murdy
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401

RE: Recommendation and Concurrence

As Director of the Tribal Historic Preservation Office and the Tribal Historical Preservation Officer, representing the Mandan Hidatsa Arikara Nation I Concur with the following site.
BIA Case Number AAO-1764/FB/10

Leuchtmann, Amy
(2010) MHA 2-05-06H-149-90 and MHA 1-04-03H-149-90 Well Pads and Access Road: A Class III Cultural Resource Inventory, McLean County, North Dakota. KLJ Cultural Resources for QEP, Denver.

I you have any questions or need additional information, you can contact me at Office # (701) 862-2474 or Cell # (701) 421-0547

Sincerely:

Perry "No Tears) Brady
THPO Director

Cc. file

Notice of Availability and Appeal Rights

QEP: MHA 2-05-06H-149-90, MHA 3-05-06H-149-90, MHA 1-11-14H-149-90, and MHA 2-10-15H-149-90

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of four wells atop two pads as shown on the attached map. Construction by QEP is expected to begin in the Winter 2010.

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 January 16, 2010, 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.