



# United States Department of the Interior

BUREAU OF INDIAN AFFAIRS  
Great Plains Regional Office  
115 Fourth Avenue S.E., Suite 400  
Aberdeen, South Dakota 57401



IN REPLY REFER TO:  
DESCRM  
MC-208

AUG 16 2011

## 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, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued. The EA authorizes land use for six wells from three pads by QEP Exploration and Development Company on the Fort Berthold Indian Reservation.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files are copies of the EA Addendum, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations require that there be a public notice of availability of the FONSI (40 C.F.R. Part 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, Tribal Historic Preservation Officer (with attachment)  
Derek Enderud, BLM, Bureau of Land Management (with attachment)  
Jonathon Shelman, Corps of Engineers (with attachment)  
Jeff Hunt, Fort Berthold Agency

*Finding of No Significant Impact*

*Questar Exploration and Production Company (QEP)*

*Environmental Assessment for*

*Drilling of MHA 2-04-03H-149-91 and MHA 4-04-03H-149-91 Oil and Gas Wells on the Independence 4 Well Pad, MHA 3-06-01H-149-92 and MHA 4-06-01H-149-92 Oil and Gas Wells on the Independence 6 Well Pad, and MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91 Oil and Gas Wells on the Independence 32 Well Pad.*

*Fort Berthold Indian Reservation  
Dunn County, North Dakota*

The U.S. Bureau of Indian Affairs (BIA) has received a proposal to drill six oil and gas wells located atop a three well pads as follows:

- Independence 4 well pad, MHA 2-04-04H-149-91 and MHA 4-04-03H-149-91, located in T149N, R91W, SW¼ of Section 4, 5<sup>th</sup> P.M. (Dunn County)
- Independence 6 well pad, MHA 3-06-1H-149-92 and MHA 4-06-01H-149-92, located in T149N, R91W, NE¼ of Section 6, 5<sup>th</sup> P.M. (Dunn County)
- Independence 32 well pad, MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91, located in T150N, R91W, SW¼ of Section 32, 5<sup>th</sup> P.M. (Dunn County)

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

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

This determination is based on the following factors:

1. Agency and public involvement solicited for the preceding NEPA document was sufficient to ascertain potential environmental concerns associated with the currently proposed project.
2. Protective and prudent measures were designed to minimize impacts to air, water, soil, vegetation, wetlands, wildlife, public safety, water resources, and cultural resources. The remaining potential for impacts was disclosed for both the proposed action and the No Action alternatives.
3. Guidance from the U.S. Fish and Wildlife Service has been fully considered regarding wildlife impacts, particularly in regard to threatened or endangered species. This guidance includes the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) (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 action is designed to avoid adverse effects to historic, archaeological, cultural and traditional properties, sites and practices. Compliance with the procedures of the National Historic Preservation Act is complete.
5. Environmental justice was fully considered.

6. Cumulative effects to the environment are either mitigated or minimal.
7. No regulatory requirements have been waived or require compensatory mitigation measures.
8. The proposed project will improve the socio-economic condition of the affected Indian community.

  
Regional Director

8-16-11  
Date

# ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

Great Plains Regional Office  
Aberdeen, South Dakota



Questar Exploration and Production Company

Drilling of MHA 2-04-03H-149-91 and MHA 4-04-03H-149-91 Oil and Gas Wells on the Independence 4 Well Pad, MHA 3-06-01H-149-92 and MHA 4-06-01H-149-92 Oil and Gas Wells on the Independence 6 Well Pad, and MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91 Oil and Gas Wells on the Independence 32 Well Pad.

Fort Berthold Indian Reservation

August 2011

*For information contact:*

*Bureau of Indian Affairs, Great Plains Regional Office  
Division of Environment, Safety and Cultural Resources  
115 4th Avenue SE  
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## CHAPTERS

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<b>Chapter 1</b>	<b>Purpose and Need for Action .....</b>	<b>1</b>
1.1	Introduction.....	1
1.2	Description of the Proposed Action .....	1
1.3	Need for the Proposed Action .....	4
1.4	Purpose of the Proposed Action.....	4
1.5	Regulations that Apply to Oil and Gas Development Activities.....	4
<b>Chapter 2</b>	<b>Alternatives .....</b>	<b>5</b>
2.1	Introduction.....	5
2.2	Alternative A: No Action .....	5
2.3	Alternative B: Proposed Action .....	5
2.3.1	Independence 4 .....	7
2.3.2	Independence 6 .....	8
2.3.3	Independence 32 .....	8
2.4	Field Camps .....	8
2.5	Access Roads .....	8
2.6	Well Pads .....	9
2.7	Drilling .....	10
2.8	Casing and Cementing.....	10
2.9	Completion and Evaluation .....	10
2.10	Commercial Production .....	10
2.11	Reclamation.....	11
2.12	Potential for Future Development .....	12
<b>Chapter 3</b>	<b>Description of the Affected Environment and Impacts .....</b>	<b>13</b>
3.1	Introduction.....	13
3.2	Climate, Geologic Setting, and Land Use.....	13
3.2.1	Climate, Geologic Setting and Land Use Impacts/Mitigation .....	15
3.3	Soils.....	15
3.3.1	Soil Impacts/Mitigation .....	16
3.4	Water Resources .....	17
3.4.1	Surface Water .....	17
3.4.1.1	Surface Water Impacts/Mitigation .....	18
3.4.2	Ground Water.....	20
3.4.2.1	Ground Water Impacts/Mitigation .....	20
3.4.1	Air Quality.....	22
3.4.1.1	Air Quality Impacts/Mitigation .....	23
3.5	Threatened, Endangered, and Candidate Species.....	23
3.5.1	Threatened Species .....	23
3.5.1.2	Threatened Species Impacts/Mitigation.....	24
3.5.2	Endangered Species.....	24
3.5.2.2	Endangered Species Impacts/Mitigation .....	26
3.5.3	Candidate Species.....	27
3.5.3.2	Candidate Species Impacts/Mitigation .....	27

3.6	Eagles.....	27
3.6.1	Eagle Impacts/Mitigation.....	28
3.7	Migratory Birds and Other Wildlife .....	30
3.7.1	Migratory Birds and Other Wildlife Impacts/Mitigation.....	30
3.7.2	Vegetation .....	31
3.7.2.1	Vegetation Impacts/Mitigation.....	36
3.7.3	Wetlands.....	37
3.7.3.1	Wetland Impacts/Mitigation.....	37
3.7.4	Cultural Resources.....	37
3.7.4.1	Cultural Resources Impacts/Mitigation .....	38
3.7.5	Socioeconomic Conditions.....	38
3.7.5.1	Socioeconomic Impacts/Mitigation .....	39
3.7.6	Environmental Justice.....	39
3.7.6.1	Environmental Justice Impacts/Mitigation .....	40
3.7.7	Infrastructure and Utilities .....	41
3.7.7.1	Infrastructure and Utility Impacts/Mitigation.....	41
3.7.8	Public Health and Safety.....	42
3.7.8.1	Public Health and Safety Impacts/Mitigation .....	42
3.8	Cumulative Considerations.....	43
3.9	Past, Present, and Reasonably Foreseeable Actions .....	43
3.9.1	Cumulative Impact Assessment.....	45
3.9.1.1	Irreversible and Irretrievable Commitment of Resources .....	47
3.9.1.2	Short-term Use of the Environment Versus Long-term Productivity.....	47
3.9.1.3	Permits.....	47
3.9.1.4	Environmental Commitments/Mitigation.....	47
<b>Chapter 4</b>	<b>Preparers and Agency Coordination .....</b>	<b>49</b>
4.1	Introduction.....	49
4.2	Preparers .....	49
4.3	Agency Coordination .....	50
4.4	Public Involvement .....	50
<b>Chapter 5</b>	<b>References .....</b>	<b>51</b>
5.1	References.....	51
<b>Appendix A</b>	<b>Agency Scoping Letters .....</b>	
<b>Appendix B</b>	<b>Agency Scoping Responses .....</b>	

## FIGURES

---

Figure 1.1, Project Location Map.....	3
Figure 2.1, Location of Spacing Units.....	6
Figure 3.1, Land Use .....	14
Figure 3.2, Surface Water Resources .....	19
Figure 3.3, Aquifers and Groundwater Wells.....	21
Figure 3.4, Bald and Golden Eagle Habitat and Nest Sightings.....	29
Figure 3.5, Independence 4 Access Road Vegetation.....	32
Figure 3.6, Independence 4 Dominant Well Pad Vegetation.....	32
Figure 3.7, Independence 6 Access Road Vegetation.....	33
Figure 3.8, Independence 6 Dominant Well Pad Vegetation.....	34
Figure 3.9, Independence 32 Dominant Access Road Vegetation .....	35
Figure 3.10, Independence 32 Dominant Well Pad Vegetation.....	35
Figure 3.11, Existing and Proposed Oil and Gas Wells .....	44

## TABLES

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Table 3.1, Summary of Land Use Conversion.....	15
Table 3.2, Soils .....	16
Table 3.3, Topsoil Requirements for Future Site Reclamation .....	16
Table 3.4, Federal and State Air Quality Standards and Reported Data for Dunn Center.....	22
Table 3.5, Noxious Weed Species .....	36
Table 3.6, Employment and Income .....	40
Table 3.7, Demographic Trends.....	40
Table 3.8, Summary of Active and Proposed Wells.....	44
Table 4.1, Preparers .....	49

# CHAPTER 1 PURPOSE AND NEED FOR ACTION

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## 1.1 Introduction

This EA (Environmental Assessment) was prepared in accordance with NEPA (the National Environmental Policy Act) of 1969, as amended, and the regulations of the CEQ (Council on Environmental Quality), 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 billion 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 Questar Exploration and Production Company (QEP) to drill and complete six wells from three well pads targeting the Bakken and Three Forks Formations. The proposed action is located on the Fort Berthold Reservation and is proposed to be positioned in the following locations:

- Independence 4 well pad; T149N, R91W, SW¼ of Section 4
- Independence 6 well pad; T149N, R91W, NE¼ of Section 6
- Independence 32 well pad; T150N, R91W, SW¼ of Section 32

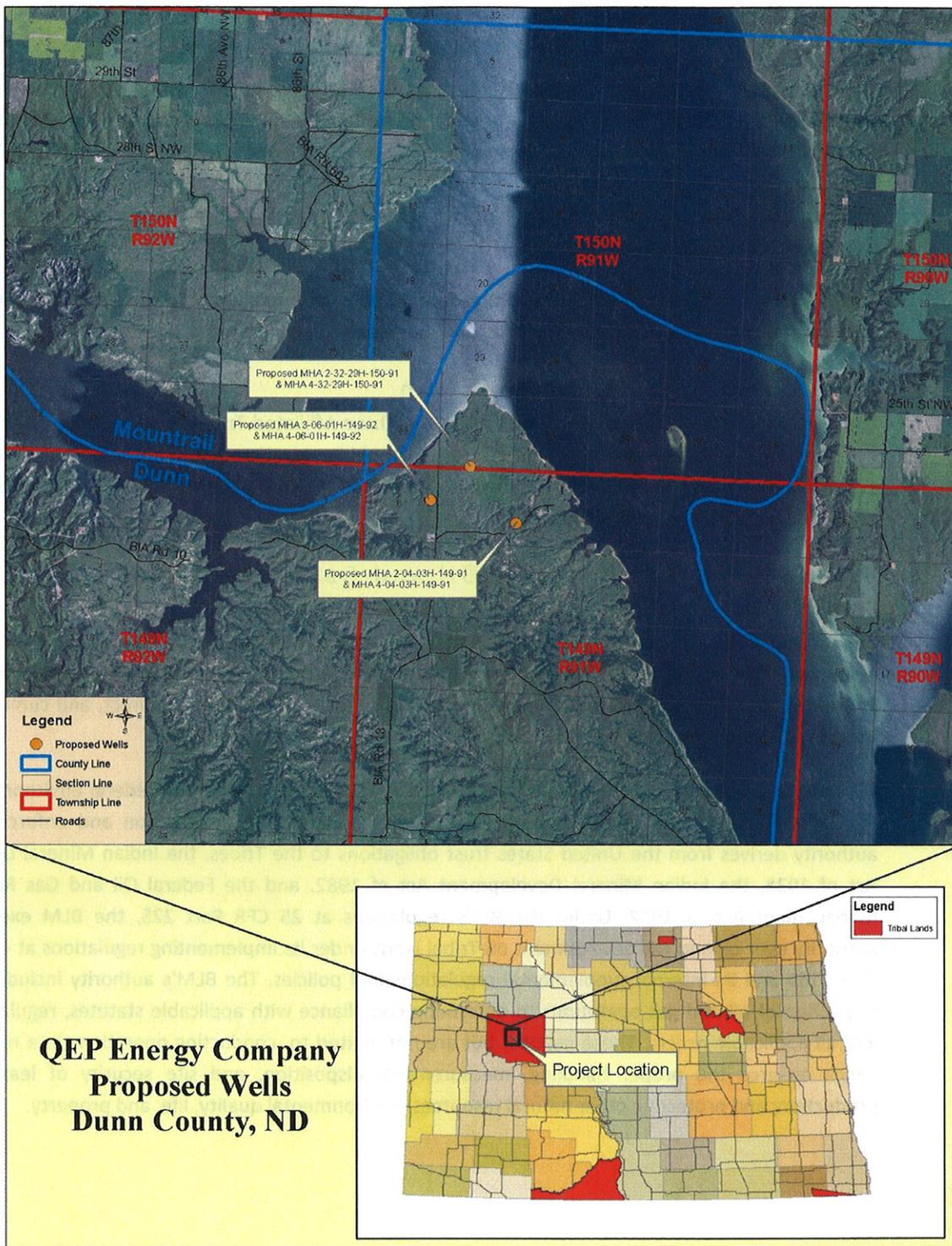
Please refer to *Figure 1.1, Project Location Map*.

The well pads would support six wells. The six wells are proposed to be paired into three groups of two wells, as shown below:

- Independence 4 — MHA 2-04-03H-149-91 and MHA 4-04-03H-149-91
- Independence 6 — MHA 3-06-01H-149-92 and MHA 4-06-01H-149-92

- Independence 32 — MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91

Each of the three pairs would have its own spacing unit in which the minerals are to be developed. Proposed completion activities include acquisition of rights-of-way, infrastructure for the proposed wells, and roadway improvements.



**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 positive recommendation to the BLM for approval of the APDs (Application Permit to Drill) to drill the six 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 access commercially recoverable oil and gas resources on the lands subject to QEP's lease areas by drilling six 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 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 proposed project.

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

## CHAPTER 2 ALTERNATIVES

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### 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.

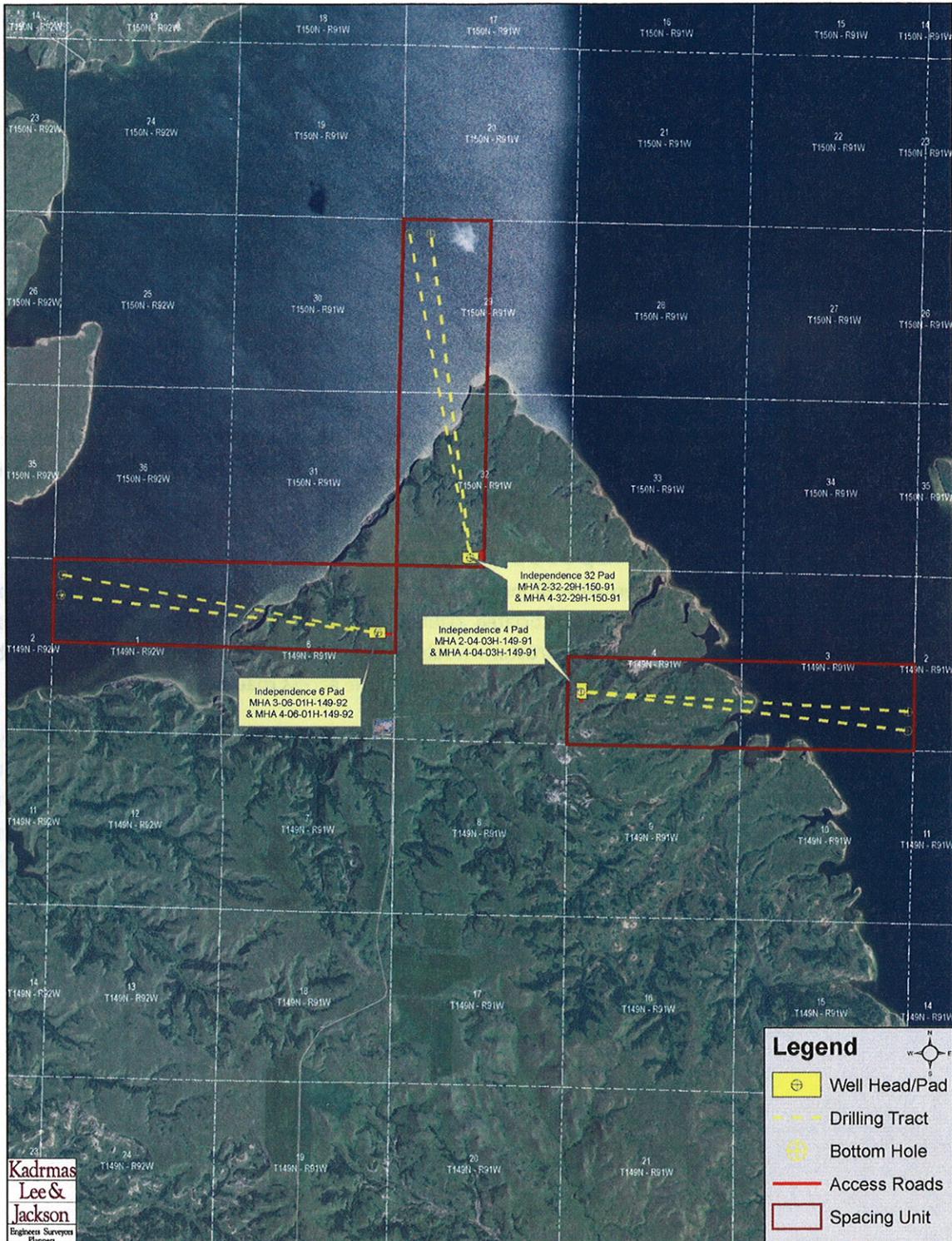
### 2.2 Alternative A: No Action

Under the no action alternative (Alternative A), the BIA and BLM would not authorize the development of the six proposed wells atop three pads, resulting in no drilling or completion of the six proposed oil and gas 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 six wells on three pads and complete the associated rights-of-way acquisition, roadway improvements, and infrastructure for the wells. Infrastructure would include oil and gas gathering pipelines and buried electrical lines, both of which would be located within the access road right-of-way.

The project would consist of three 640 acre spacing units developed by six wells, located atop three well pads with access roads and associated infrastructure. The well pad is where the actual surface disturbance caused by drilling activities would occur. The spacing unit is the location of the minerals that are to be developed. The location of the proposed well sites, access road, and proposed horizontal drilling techniques were chosen to minimize surface disturbance. *Please refer to Figure 2.1, Location of Spacing Units.*



**Figure 2.1, Location of Spacing Units**

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

An intensive, pedestrian resource survey of the proposed well pad and access road was conducted on May 5, 2011 by Kadrmas, Lee & Jackson (KL&J). The purpose of this survey was to gather site-specific data and photos with regards to botanical, biological, threatened and endangered species, bald and golden eagles, and water resources. The study area consisted of 10 acres centered on the proposed well pads center point and a 200-foot wide corridor along the proposed access roads. Resources were evaluated using visual inspection and pedestrian transects across the sites. In addition, a survey for bald and golden eagles and eagle nests within 0.5 miles of the project disturbance areas were conducted. This survey consisted of pedestrian transects focusing specifically on potential nesting sites within 0.5 miles of the project disturbance areas, including cliffs and wooded draws. Wooded draws were observed both from the upland areas overlooking the draws and from bottomlands within the actual draws.

The BIA EA on-site assessment of the well pad and access road was also conducted on May 5, 2011. The BIA Environmental Protection Specialist and representatives from QEP and KL&J were present. The site was evaluated for cultural resources clearance on May 5, 2011 with representatives from the Tribal Historic Preservation Office and KL&J. Construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. The well pad and access road locations were finalized, and the BIA gathered information needed to develop site-specific mitigation measures and Best Management Practices (BMPs) to be incorporated into the final APDs. Those present at the on-site assessment agreed that the selected location, along with the minimization measures QEP plans to implement, are positioned to minimize impacts to sensitive wildlife and botanical resources. In addition, comments received from the United States Fish and Wildlife Service (USFWS) have been considered in the development of this project.

#### 2.3.1 Independence 4

The Independence 4 site would consist of a dual well pad located in the SW¼ of Section 4, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. to access potential oil and gas resources within the spacing unit consisting of the S½ of Sections 3 and 4, Township 149 North, Range 91 West, 5<sup>th</sup> P.M.

The Independence 4 site would be accessed from a roadway directly adjacent to the proposed pad. A new access road approximately 24 feet long would be constructed to connect the Independence 4 site to 23<sup>rd</sup> Street NW and to BIA 13. BIA 13 would connect the pad to BIA 12 and BIA 12 would connect to ND Highway 22 west of Mandaree, North Dakota. 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. The access road has been situated to avoid drainages and wooded draws to the extent possible.

### 2.3.2 Independence 6

The Independence 6 site would consist of a dual well pad located in the NE¼ of Section 6, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. to access potential oil and gas resources within the spacing unit consisting of the N½ of Section 6, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. and the N½ of Section 1, Township 149 North, Range 92 West, 5<sup>th</sup> P.M.

The Independence 6 site would be accessed from the east. A new access road approximately 193 feet long would be constructed to connect the Independence 6 site to BIA 13. BIA 13 would connect the pad to BIA 12 and BIA 12 would connect to ND Highway 22 west of Mandaree, North Dakota. 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. The access road has been situated to avoid drainages and wooded draws to the extent possible.

### 2.3.3 Independence 32

The Independence 32 site would consist of a dual well pad located in the SW¼ of Section 32, Township 150 North, Range 91 West, 5<sup>th</sup> P.M. to access potential oil and gas resources within the spacing unit consisting of the W½ of Sections 29 and 32, Township 150 North, Range 91 West, 5<sup>th</sup> P.M.

The Independence 32 site would be accessed from the east. A new access road approximately 530 feet long would be constructed to connect the Independence 32 site to 24<sup>th</sup> Street NW. 24<sup>th</sup> Street NW extends approximately 0.5 miles to BIA 13 and BIA 13 would connect the pad to BIA 12 and BIA 12 would connect to ND Highway 22 west of Mandaree, North Dakota. 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. The access road has been situated to avoid drainages and wooded draws to the extent possible.

## 2.4 Field Camps

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

## 2.5 Access Roads

Existing roadways and two track trails would be used to the extent possible to access the proposed wells; however, the construction of new access roads would also be required. The running surface of the access road would be surfaced with crushed gravel or scoria from a previously approved location, and erosion control measures would be installed as necessary. A maximum right-of-way width of 90 feet would be disturbed for the Independence 4 access road and a maximum right-of-way width of 66 feet would be disturbed for the Independence 6 and 32 access roads. The right-of-way would consist of a 20 to 28-foot wide roadway with the remainder of the disturbed area due to borrow ditches and construction slopes, gathering pipelines, and electrical infrastructure. The outslope portions of the constructed access road 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.

It is anticipated that construction of the proposed project would take place after July 15 and would therefore avoid the migratory bird nesting and breeding season (between February 1 and July 15). In the event that construction is delayed and should occur during future migratory bird nesting and breeding seasons, QEP would have a qualified biologist conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to USFWS. In addition, if any migratory bird is found onsite during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

## 2.6 Well Pads

Each proposed well pad would consist of a leveled area surfaced with several inches of gravel or crushed scoria. The pads would be used for the drilling rig and related equipment, as well as an excavated, reinforced lined<sup>1</sup> pit to store drill cuttings. The drill cuttings pit would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon finishing completion operations. The level well pads required for drilling and completing operations (including cuttings pits) would include an area approximately 260x482 feet. The additional disturbance from cut and fill slopes areas would require a total pad disturbance area approximately 5.7 acres for the Independence 4 pad, 4.4 acres from the Independence 6 pad and 4.6 acres from the Independence 32 pad. The total quantity of land within each well pad fence would include 6.7 acres for the Independence 4 pad, 5.4 acres for the Independence 6 pad and 5.4 acres for the Independence 32 pad. All fill slopes on the edge of the well pads would be designed with 3:1 slopes. All cut slopes on the edge of the well pad would be 2:1 where less than eight feet and 3:1 where eight feet or greater. The cuttings pit would be fenced and covered with netting to protect wildlife from hazardous areas. In areas where livestock are present, the entire well pad would also be fenced.

Well pad areas would be cleared of vegetation, stripped of topsoil, and graded to specifications in the APDs submitted to the BLM and would comply with the standards and guidelines prescribed in the BLM's Gold Book. Topsoil would be stockpiled and stabilized until disturbed areas are reclaimed and re-vegetated. Excavated subsoils would be used in pad construction, with the finished well 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, diversion ditches, erosion control matting/blankets, bio-logs, silt fences, and re-vegetation of disturbed areas. QEP would round the northwest corner of the Independence 4 well pad to minimize impacts to a nearby drainage.

It is anticipated that construction of the proposed project would take place after July 15 and would therefore avoid the migratory bird nesting and breeding season (between February 1 and July 15). In the event that construction is delayed and should occur during future migratory bird nesting and breeding seasons, QEP would have a qualified biologist conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to USFWS. In addition, if any migratory bird is found onsite during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

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<sup>1</sup> The lining would have a minimum thickness of 20 mil.

## 2.7 Drilling

Following the access road construction and well pad preparation, a drilling rig would be rigged up at the dual 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 9,800 feet to reach the Bakken Formation and 10,200 feet to reach the Three Forks Formation, at which it would angle to become horizontal. The laterals along the horizontal plane would extend approximately 11,200 feet. This horizontal drilling technique would minimize surface disturbance.

For the first 2,000 feet drilled at each well (commonly referred to as a "surface hole"), a fresh water based mud system with non-hazardous additives would be used to minimize contaminant concerns. Water would be obtained from a commercial source for this drilling stage. About 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 surface casing, an oil-based mud system consisting of about 80 percent diesel fuel and 20 percent saltwater would be used to drill the remainder of the vertical hole and curve. Once the seven-inch production casing is set and cemented through the curve (into the lateral), a saltwater based drilling mud would be utilized for the horizontal portion of the wellbore.

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

## 2.8 Casing and Cementing

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

## 2.9 Completion and Evaluation

Once each well is drilled and cased, approximately 30-45 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 well, and running production tubing for potential future commercial production. Fluids utilized in the completion process would be captured in tanks and would be disposed of in accordance with BLM and NDIC 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 gathering lines) would transport the product to market.

## 2.10 Commercial Production

If commercially recoverable oil and gas resources are found at the proposed site, the site would become established as a production facility. Production equipment, including well pumping units, vertical heater treaters, storage tanks (eight 400 barrel steel oil tanks and two 400 barrel fiberglass

saltwater tanks) and flare systems with associated piping would be installed. The storage tanks and heater/treater would be surrounded by an impervious dike or Sioux containment system that would act as secondary containment to guard against accidental release of fluids from the site. The containment system would be of sufficient size to hold in excess of 110% the capacity of the largest tank in the battery and 24hr record precipitation. The perimeter of the pads would be bermed to prevent run-on and run-off from the pad location. Secondary containment measures consisting of earthen berms, straw wattles or additional BMP's will be placed in adjacent drainages as needed. 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 a 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 natural 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 ceases to flow naturally, a pump jack would be installed. After production ceases, the wells would be plugged and abandoned, and the land would be fully reclaimed in accordance with BIA and BLM requirements.

QEP would avoid, minimize, and mitigate the environmental effects of the three well pads by incorporating applicable conditions, mitigation measures, and BMPs from the BLM's regulations, BLM's Gold Book (4<sup>th</sup> Edition, 2006), and applicable BLM Onshore Oil and Gas Orders, including Numbers 1, 2, and 7.

### 2.1.1 Reclamation

Any excess water would be removed from the cuttings pit and fly ash would be added to solidify drill cuttings in place. Once solidified, the pit would be buried covered with dirt. Other interim reclamation measures to be implemented upon well completion include reduction of cut and fill slopes where necessary, redistribution of stockpiled topsoil, and re-seeding of the disturbed areas. If commercial production equipment is installed, the well site would be reduced in size to accommodate the production facilities, while leaving adequate room to conduct normal well maintenance and potential recompletion operations, with the remainder of the well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating, backfill, and re-seeding with native vegetation. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and reseeded as recommended by the BIA.

If no commercial production were developed from the three proposed well pads, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. As part of the final reclamation process, all well facilities would be removed, well bores would be plugged with

cement, and dry hole markers would be set in accordance with NDIC and BLM requirements. The access road and well pad area would be re-contoured to match topography of the original landscape and reseeded with a native grass seed mixture that is consistent with surrounding native species to ensure a healthy and diverse vegetative community that is free of noxious weeds. Erosion control measures would be installed as appropriate. Maintenance of the grass seeding would continue until such time that the productivity of the stand is consistent with surrounding undisturbed vegetation and is free of noxious weeds. An exception to these reclamation measures may occur if the BIA approves assignment of the access road either to the BIA roads inventory or to concurring surface allottees.

#### 2.12 Potential for Future Development

Development beyond the three well pads, access roads and associated infrastructure discussed in this document 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

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### 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 alternatives, and avoidance, minimization, and/or mitigation measures for adverse impacts is included.

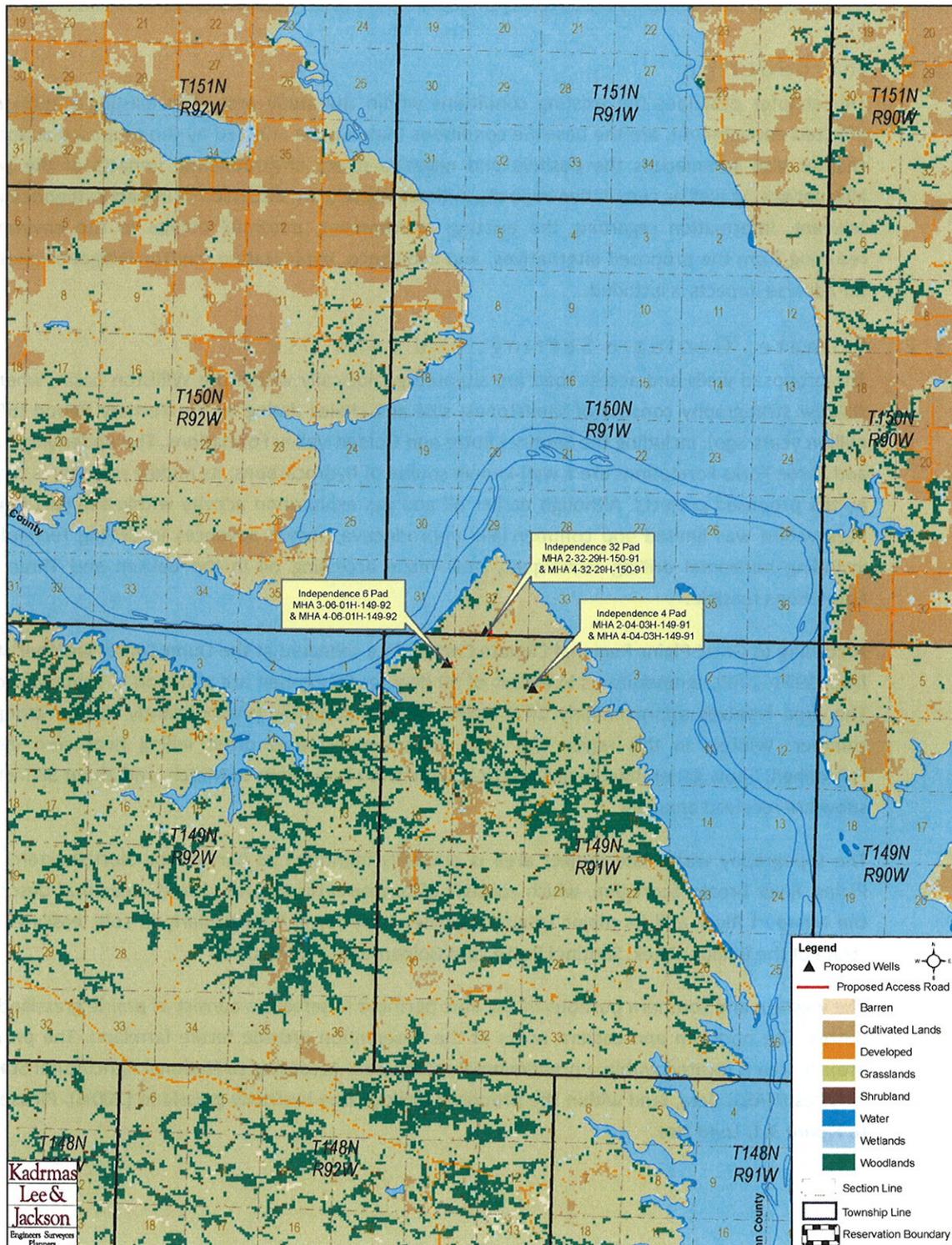
### 3.2 Climate, Geologic Setting, and Land Use

The proposed wells and access road are situated geologically within the Williston basin, where the shallow stratigraphy consists of sandstones, silts and shales dating to the Tertiary Period (65 to 2 million years ago), including the Sentinel Butte and Golden Valley Formations. The underlying Bakken and Three Forks Formations are a well-known source of hydrocarbons; its middle member is targeted by the proposed projects. Although earlier oil and gas exploration activity within the Fort Berthold Reservation was limited and commercially unproductive, recent advances in drilling technologies, including horizontal drilling techniques, now make accessing oil in the Bakken and Three Forks 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 14.0 inches of rain annually, predominantly during spring and summer. Winters in this region are cold, with temperatures often falling near zero degrees Fahrenheit. Snow generally remains on the ground from November to March, and about 38 inches of snow are received annually.

The topography within the project area is primarily identified as part of the Northwestern Great Plains, River Breaks Ecoregion, which consists of broken terraces and upland areas that descend to the Missouri River and its major tributaries. They have formed particularly in soft, easily erodible strata of the Bullion Creek, Sentinel Butte, and Golden Valley formations.

The western and southern portions of the Fort Berthold Reservation consist of prairie grasslands and buttes. The northern and eastern areas of the Reservation provide fertile farmland. The proposed project area is located within a predominately rural area. According to National Agricultural Statistics Services (NASS) data, land within the proposed project area is strictly grassland (100%). Please refer to *Figure 3.1, Land Use*.



**Figure 3.1, Land Use**

### 3.2.1 Climate, Geologic Setting and Land Use Impacts/Mitigation

Alternative A (No Action) – Alternative A would not impact land use, climatic conditions, or geological setting.

Alternative B (Proposed Action) – Alternative B would result in the conversion of approximately 18.61 acres of land from present use, grasslands, to part of an oil and gas network. Of this, 17.47 acres would be as a result of well pad construction and 1.14 acres would be from access road construction. *Please Refer to Table 3.1, Summary of Land Use Conversion.*

*Table 3.1, Summary of Land Use Conversion*

WELL PAD NAME	WELL PAD AREA INSIDE FENCE	ACCESS ROAD ACRES	TOTAL ACRES
Independence 4	6.67	0.05	6.72
Independence 6	5.40	0.29	5.69
Independence 32	5.40	0.80	6.20
<b>Total</b>			<b>18.61</b>

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

### 3.3 Soils

The NRCS (Natural Resource Conservation Service) Soil Survey of Dunn County dates from 1982, with updated information available online through the NRCS Web Soil Survey. There are five soil types identified within the project impact area. Location and characteristics of these soils are identified in **Error! Reference source not found..**

**Table 3.2, Soils**

MAP UNIT SYMBOL	SOIL NAME	PERCENT SLOPE	COMPOSITION (IN UPPER 60 INCHES)			EROSION FACTOR		HYDROLOGIC SOIL GROUP
			% sand	% silt	% clay	T	Kf	
48B	Temvik silt loam	3 to 6	19.1	53.0	27.9	5	.43	B
88C	Williams loam	6 to 9	34.8	35.2	30.0	5	.37	B
93D	Zahl-Williams loams	9 to 15	35.0	35.0	30.0	5	.37	B

These soils listed have moderate susceptibility to sheet and rill erosion. In addition, all of the soils can tolerate high to moderate levels of erosion without loss of productivity. Each of these soils is well drained, and depth to the water table is generally recorded at greater than six feet. 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 site and access road would result in soil disturbances, though impacts to soils are not anticipated to be significant. Stockpile quantities for the location were calculated using an assumed 6 inches of existing topsoil. Topsoil requirements for each site are identified in **Table 3.3, Topsoil Requirements for Future Site Reclamation**.

**Table 3.3, Topsoil Requirements for Future Site Reclamation**

WELL PAD NAME	CUBIC YARDS OF TOPSOIL	CUBIC YARDS OF SUB-SOIL MATERIAL
Independence 4	4,590	2,870
Independence 6	3,530	3,035
Independence 32	3,675	4,300

Topsoil depths taken during the onsite surveys were determined to be six to eight inches at the well sites. The topsoil stockpiles would be positioned to assist in diverting runoff away from the disturbed area, thus minimizing erosion, and to allow for interim reclamation soon after the well is put into production. The topsoil stockpile would be located on the south side of the Independence 4 well pad, the east side of the Independence 6 well pad and the west side of the Independence 32 well pad.

<sup>2</sup> 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.

<sup>3</sup> 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).

Soil impacts would be localized, and BMPs would be implemented to minimize these impacts. Surface disturbance caused by well development, road improvements, and facilities construction would result in the removal of vegetation from the soil surface. This can damage soil crusts and destabilize the soil. As a result, the soil surface could become more prone to accelerated erosion by wind and water. BMPs used at the site to reduce these impacts would include erosion and sediment control measures during and after construction, segregating topsoil from subsurface material for future reclamation, chipping any woody vegetation that is removed on-site and incorporating it into topsoil stockpiles or removing woody vegetation to an approved site, re-seeding of disturbed areas immediately after construction activities are completed, 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 immediately reported to the BLM, the NDIC, and where appropriate the North Dakota Department of Health and the procedures of the surface management agency shall be followed to contain spills and leaks.

### 3.4 Water Resources

The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, provides the authority to 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. The EPA also has the authority to protect the quality of drinking water under the SDWA (Safe Drinking Water Act) of 1974. As amended in 1986 and 1996, the SDWA requires many actions to protect drinking water and its sources: rivers, lakes reservoirs, springs, and ground water wells<sup>4</sup>. The Energy Policy Act of 2005 excludes hydraulic fracturing operations related to oil, gas, or geothermal production activities from EPA regulation under the SDWA<sup>5</sup>.

#### 3.4.1 Surface Water

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

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<sup>4</sup> The SDWA does not regulate private wells that serve fewer than 25 individuals.

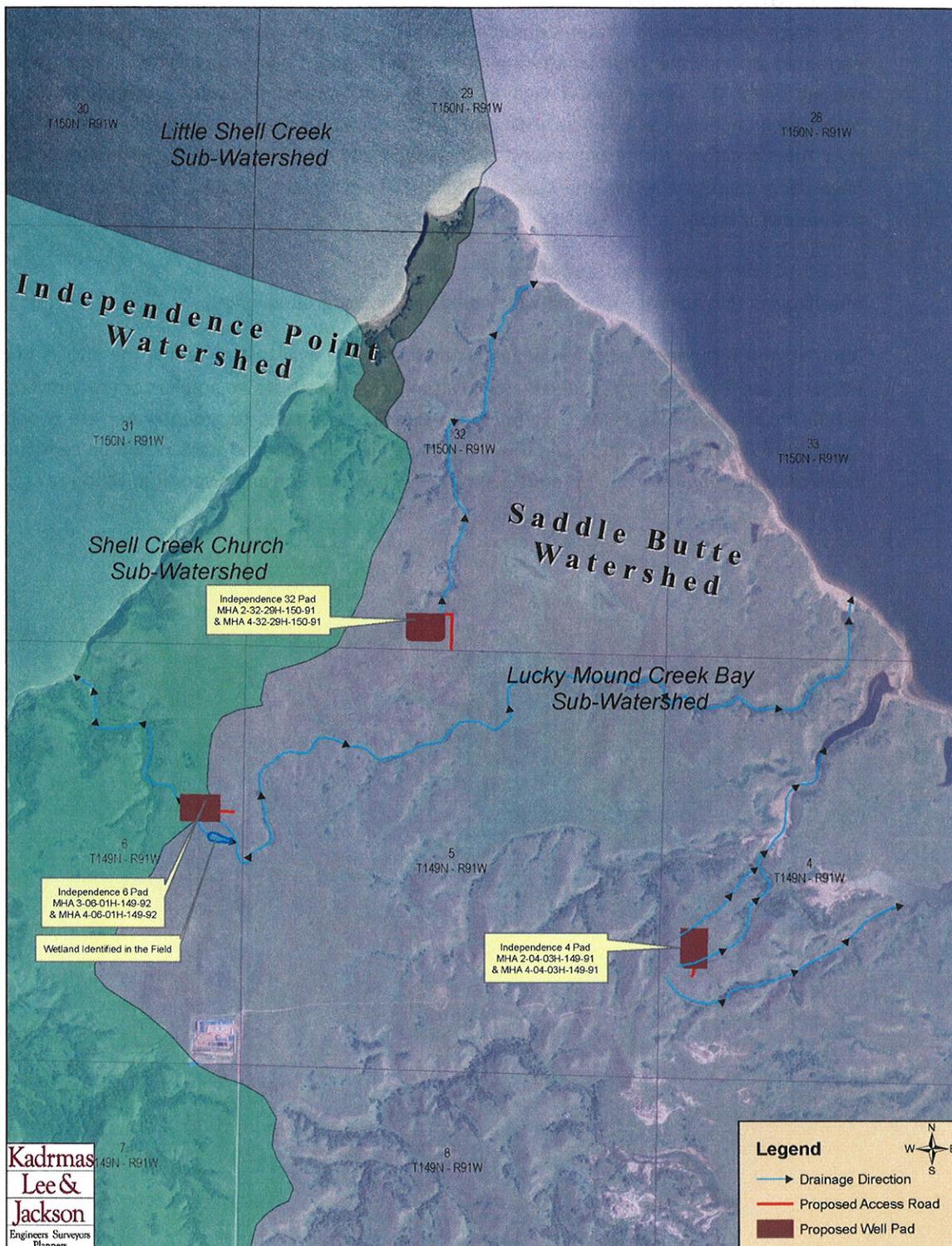
<sup>5</sup> The use of diesel fuel during hydraulic fracturing is still regulated under the SDWA.

The proposed well sites are located in the Lake Sakakawea basin, meaning surface waters within this basin drain to Lake Sakakawea. In addition, the proposed well sites are located in the Independence Point Watershed (Shell Creek Church Sub-Watershed) and the Saddle Butte Watershed (Lucky Mound Creek Bay Sub-Watershed). Please refer to *Figure 3.2, Surface Water Resources*. Runoff throughout the study areas are by sheet flow until collected by ephemeral and perennial streams draining to Lake Sakakawea. Runoff from the proposed Independence 4 well pad would flow to the east approximately 600 feet before entering a wooded draw. The runoff would then flow to the east approximately 0.55 miles into Lake Sakakawea. The proposed Independence 6 well pad partially drains to the west approximately 500 feet before entering a wooded draw. The runoff to the west would then flow to the northwest approximately 0.55 miles into Lake Sakakawea. The remaining eastern portion of the pad drains to the south and east where it eventually flows into Lake Sakakawea after approximately 1.5 miles. The proposed Independence 32 well pad drains to the north approximately 280 feet before entering a wooded draw. The runoff would then flow to the north approximately 0.95 miles before flowing into Lake Sakakawea.

#### *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 well sites 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. Culverts would be implemented as needed. Roadway engineering and the implementation of BMPs to control erosion would minimize runoff of sediment downhill or downstream. The northwest corner of the Independence 4 well pad would be rounded to minimize disturbances to a wooded drainage. The Independence 6 well pad was adjusted to allow for a 75-foot buffer to an adjacent wetland. Specific measures to mitigate the impacts to surface waters and to minimize the disruption of drainage patterns may also include, but are not limited to, installation of earthen berms around the pad boundary and implementation of silt fences, straw wattles or earthen berms in drainages to act as secondary containment. Alternative B is not anticipated to result in measurable increases in runoff or impacts to surface waters.



**Figure 3.2, Surface Water Resources**

### 3.4.2 Ground Water

The North Dakota State Water Commission's electronic records reveal that there are active or permitted groundwater wells within one-mile of the proposed oil and gas well pads, access roads, or spacing units. The closest water well to the site was approximately 0.4 miles southwest of the proposed Independence 4 pad location. The White Shield Aquifer is located east-northeast and the New Town Aquifer is located northwest of the proposed well sites; however, 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) – Limited scientific data is available regarding the effects of hydrofracturing (or “fracking”) on ground water<sup>6</sup>. As such, since there are no aquifers or groundwater wells within the spacing units being developed, 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.

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<sup>6</sup>The EPA is currently scoping a study on fracking, which will address potential impacts to ground water. The study is anticipated to be completed in 2014.

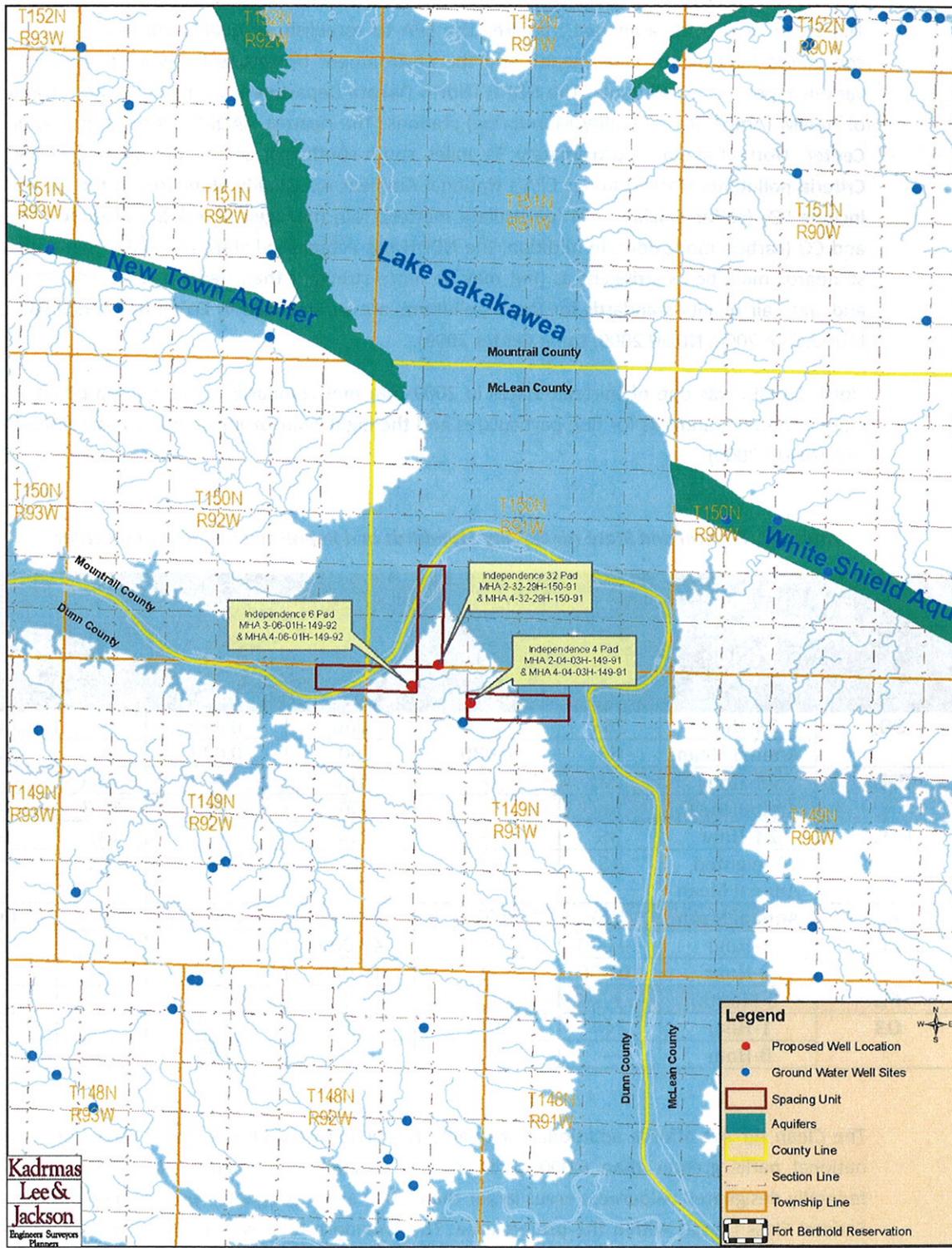


Figure 3.3, Aquifers and Groundwater Wells

### 3.4.1 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 nearest AAQM station is located in Dunn Center, North Dakota, approximately 31 miles south-southwest of the proposed well pad sites. Criteria pollutants tracked under EPA's National Ambient Air Quality Standards in the Clean Air Act include SO<sub>2</sub> (sulfur dioxide), PM (particulate matter), NO<sub>2</sub> (nitrogen dioxide), O<sub>3</sub> (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 **Error! Reference source not found.**(EPA 2006, NDDH 2009, Dunn Center 2009).

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

**Table 3.4, Federal and State Air Quality Standards and Reported Data for Dunn Center**

POLLUTANT	AVERAGING PERIOD	EPA AIR QUALITY STANDARD		NDDH AIR QUALITY STANDARD		DUNN CENTER 2009 REPORTED DATA	
		µg/m <sup>3</sup>	parts per million	µg/m <sup>3</sup>	parts per million	µg/m <sup>3</sup>	parts per million
SO <sub>2</sub>	24-Hour	365	0.14	260	0.099	—	.0030
	Annual Mean	80	0.030	60	0.023	—	.0003
PM <sub>10</sub>	24-Hour	150	—	150	—	44.5	—
	Annual Mean	50	—	50	—	11.3	—
PM <sub>2.5</sub>	24-Hour	35	—	35	—	14.2	—
	Weighted Annual Mean	15	—	15	—	3.4	—
NO <sub>2</sub>	Annual Mean	100	0.053	100	0.053	—	.0050
CO	1-Hour	40,000	35	40,000	35	—	100.3
	8-Hour	10,000	9	10,000	9	—	50.0
Pb	3-Month	1.5	—	1.5	—	—	—
O <sub>3</sub>	1-Hour	240	0.12	235	0.12	—	.063
	8-Hour	—	0.08	—	0.08	—	.057

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 42.0 miles west southwest of the proposed Independence 6 well pad site.

#### 3.4.1.1 Air Quality Impacts/Mitigation

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

Alternative B (Proposed Action) – The Fort Berthold Reservation complies with North Dakota National Ambient Air Quality Standards and visibility protection. In addition, the Dunn Center AAQM Station reported air quality data well below the state and federal standards. Alternative B would not include any major sources of air pollutants. Construction activities would temporarily generate minor amounts of dust and gaseous emissions of PM, SO<sub>2</sub>, NO<sub>2</sub>, 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.

### 3.5 Threatened, Endangered, and Candidate Species

In accordance with Section 7 of the ESA (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 ESA, it is within the spirit of the ESA to consider these species as having significant value and worth protecting.

The proposed action area was evaluated to determine the potential for occurrences of federally-listed threatened, endangered, and candidate species. The USFWS March 2011 Endangered, Threatened, and Candidate Species and Designated Critical Habitat in North Dakota county list identified the black-footed ferret, gray wolf, interior least tern, pallid sturgeon, and whooping crane as endangered species that may be found within Dunn County. The piping plover is listed as a threatened species and the Dakota Skipper and Sprague's pipit are listed as candidate species. In addition, Dunn County contains designated critical habitat for the piping plover adjacent to Lake Sakakawea. None of these species were observed in the field. Habitat requirements, the potential for suitable habitat within the project area, and other information regarding listed species for Dunn County are as follows:

#### 3.5.1 Threatened Species

##### Piping Plover (*Charadrius melodus*)

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

habitat includes reservoir reaches composed of sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with water bodies.

There is no existing or potential habitat within the project area. According to USFWS data, critical habitat occurs throughout the entire shoreline of Lake Sakakawea. Lake Sakakawea is located approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point.

#### 3.5.1.2 Threatened Species Impacts/Mitigation

Alternative A (No Action)—Alternative A would have no effect to the piping plover or its critical habitat.

Alternative B (Proposed Action)—Similar to the interior least tern, suitable habitat for the piping plover is largely associated with Lake Sakakawea and its shoreline. Potential habitat for the piping plover exists approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point. The well pads and access roads are located on upland bluffs of grassland, with Lake Sakakawea and its shoreline located below the bluffs. The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers for shoreline-nesting birds.

Storage tanks and heater/treaters would be surrounded by an impervious dike or Sioux containment system that would act as secondary containment to guard against accidental release of fluids from the site. The containment system would be of sufficient size to hold in excess of 110% the capacity of the largest tank in the battery and 24hr record precipitation. In addition, stabilization of drill cuttings before placement in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Additionally, if electrical lines are installed, they would be buried to prevent the potential for bird strikes. However, due to the proximity of the proposed project to Lake Sakakawea (0.5 miles at the nearest point), the proposed project may affect but is not likely to adversely affect the piping plover. The proposed project is not likely to destroy or adversely modify designated piping plover critical habitat.

#### 3.5.2 Endangered Species

##### Black-footed Ferret (*Mustela nigripes*)

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

##### Gray Wolf (*Canis lupus*)

The gray wolf is the largest wild canine species in North America. It is found throughout northern Canada, Alaska, and the forested areas of Northern Michigan, Minnesota, and Wisconsin and has

been re-introduced to Yellowstone National Park in Wyoming. While the gray wolf is not common in North Dakota, occasionally individual wolves do pass through the state. Historically, its preferred habitat includes biomes such as boreal forest, temperate deciduous forest, and temperate grassland. Gray wolves live in packs of up to 21 members, although some individuals will roam alone. The project area is located far from other known wolf populations.

#### Interior Least Tern (*Sterna antillarum*)

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

There is no existing or potential habitat within the project area. Potential habitat in the form of sandy/gravelly Lake Sakakawea shoreline may exist approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point.

#### 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.

Potential habitat for pallid sturgeon can be found in Lake Sakakawea approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point.

#### Whooping Crane (*Grus americana*)

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

One shallow, emergent wetland was noted to the south of the Independence 6 site and the proposed project is located in the Central Flyway where 75 percent of confirmed whooping crane sightings have occurred. Lake Sakakawea, which provides potential stopover habitat for whooping crane migration, is approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5

miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point.

#### 3.5.2.2 *Endangered Species Impacts/Mitigation*

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

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

Suitable habitat for the interior least tern and pallid sturgeon is largely associated with Lake Sakakawea and its shoreline. Potential habitat for these species exists approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest point. The well pads and access roads are located on upland bluffs composed of grassland, with Lake Sakakawea and its shoreline located below the bluffs. The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers for shoreline-nesting birds.

Storage tanks and heater/treaters would be surrounded by an impervious dike or Sioux containment system that would act as secondary containment to guard against accidental release of fluids from the site. The containment system would be of sufficient size to hold in excess of 110% the capacity of the largest tank in the battery and 24hr record precipitation. In addition, stabilization of drill cuttings before placement in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely. Additionally, if electrical lines are installed, they would be buried to prevent the potential for bird strikes. However, due to the proximity of the proposed project to Lake Sakakawea (0.5 miles at the nearest point), the proposed project may affect but is not likely to adversely affect the interior least tern and/or pallid sturgeon.

The proposed project is located within the Central Flyway where approximately 75 percent of the confirmed whooping crane sightings have occurred. In addition, shallow wetlands to provide roosting habitat found within the vicinity of the Independence 6 Site. Due to the location of the project within the Central Flyway and available stopover habitat, the proposed project may affect but is not likely to adversely affect whooping cranes. To minimize the potential of direct whooping crane impacts, if electrical lines are installed the lines would be buried to prevent bird strikes. Per USFWS recommendations, if a whooping crane is sighted within one-mile of a well site or associated facilities while under construction, then all work would cease within one-mile of that part of the project and the USFWS would be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.

#### 3.5.3 Candidate Species

##### Dakota Skipper (*Hesperia dacotae*)

The Dakota skipper is a small butterfly with a one-inch wing span. These butterflies historically ranged from southern Saskatchewan, across the Dakotas and Minnesota, to Iowa and Illinois. The preferred

habitat for the Dakota skipper consists of flat, moist bluestem prairies and upland prairies with an abundance of wildflowers. Dakota skippers are visible in their butterfly stage from mid-June to early July.

The proposed sites are located on moderately grazed rangeland that does not contain bluestem prairies with abundant wildflowers. Although grazing is evident, it is moderate in nature; therefore, the project site does contain suitable habitat for the Dakota skipper. No Dakota skippers were observed during the field visits; however, the visit likely occurred after the Dakota Skipper butterfly stage. Due to the presence of potential habitat for the Dakota skipper within the project area, the proposed project may impact individuals or habitat. An “effect determination” under Section 7 of the ESA has not been made due to the current unlisted status of the species.

#### Sprague’s pipit (*Anthus spragueii*)

The Sprague’s pipit is a small songbird found in prairie areas throughout the Northern Great Plains. Preferred habitat includes rolling, upland mixed-grass prairie habitat with high plant species diversity. The Sprague’s pipit breeds in habitat with minimal human disturbance. The proposed project areas consist of moderately grazed rangeland which may provide potential habitat for the Sprague’s pipit. No Sprague’s pipit were observed during the field surveys. Due to the presence of potential habitat for the Sprague’s pipit within the project area, the proposed project may impact individuals or habitat. An “effect determination” under Section 7 of the ESA has not been made due to the current unlisted status of the species.

#### 3.5.3.2 Candidate Species Impacts/Mitigation

Alternative A (No Action)—Alternative A would not adversely impact candidate species.

Alternative B (Proposed Action)—Due to the presence of potential habitat for the Dakota skipper and Sprague’s pipit within the project areas, the proposed action may impact individuals of these species or their habitat, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population of species. An “effect determination” under Section 7 of the ESA has not been made due to the current unlisted status of these species.

### 3.6 Eagles

Protection is provided for the bald and golden eagles through the BGEPA (Bald and Golden Eagle Protection Act). The BGEPA of 1940, 16 U.S.C. 668–668d, as amended, was written with the intent to protect and preserve bald and golden eagles, both of which are treated as species of concern within the Department of the Interior. The BGEPA prohibits, except under certain specified conditions, the taking, possession, or commerce of bald and golden eagles. Under the BGEPA, to “take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb, wherein “disturb” means to agitate or bother a bald or golden eagle to the degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment.

The bald eagle (*Haliaeetus leucocephalus*) is sighted in North Dakota along the Missouri River during spring and fall migration periods and periodically in other places in the state such as the Devils Lake and Red River areas. 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. Preferred habitat for the bald eagle includes open areas, forests, rivers, and large lakes. Bald eagles tend to use the same nest

year after year, building atop the previous year's nest. No bald eagles or nests were observed within 0.5 miles of proposed project disturbance areas during the field survey conducted on May 5, 2011

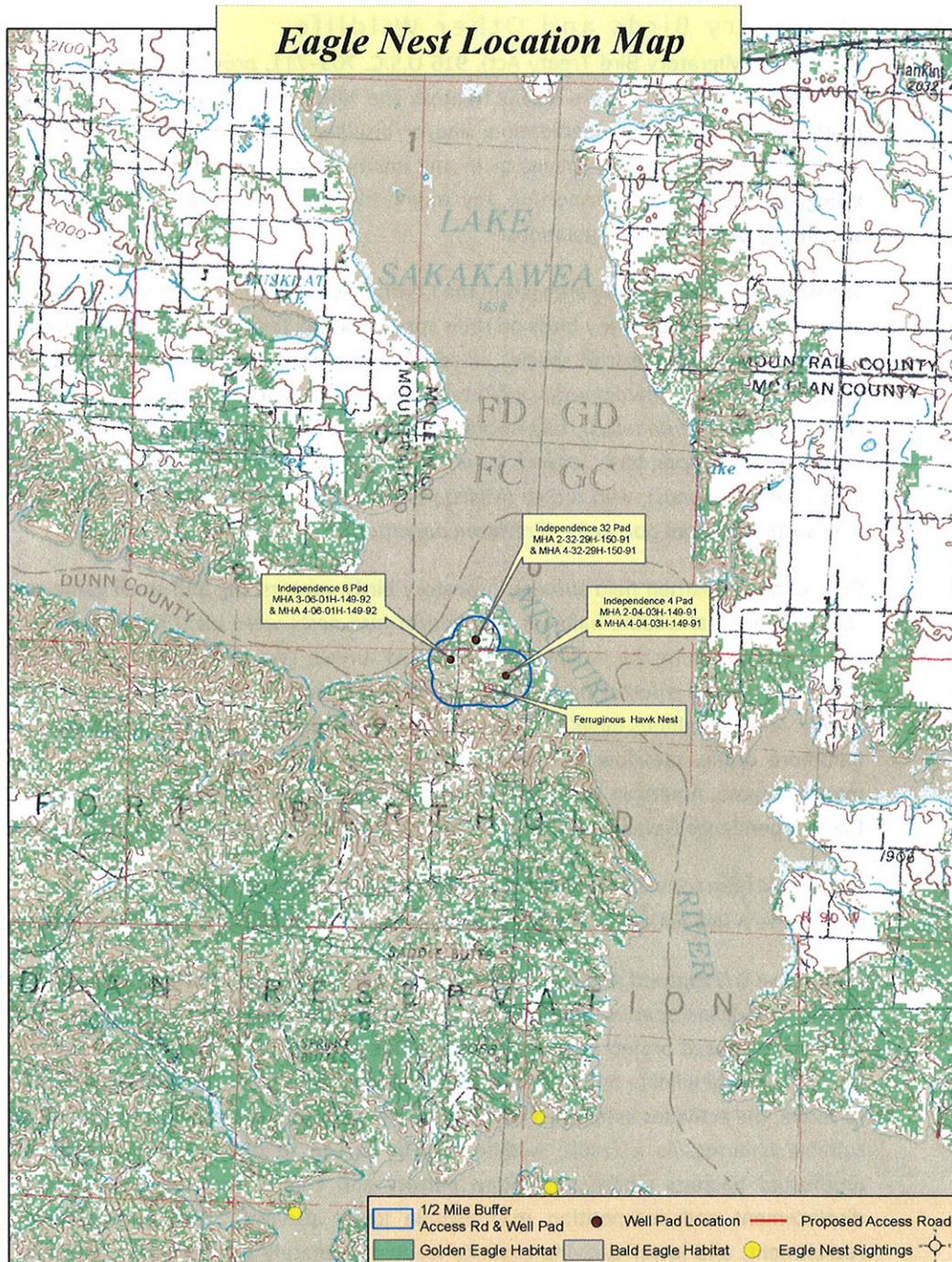
The golden eagle (*Aquila chrysaetos*) can be spotted in North Dakota throughout the badlands and along the upper reaches of the Missouri River in the western part of the state. Golden eagle pairs maintain territories that can be as large as 60 square miles and nest in high places including cliffs, trees, 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 eagle nests were observed within 0.5 miles of proposed project disturbance areas during the field survey conducted on May 5, 2011.

The United States Geological Survey (USGS) Northern Prairie Wildlife Research Center maintains information on bald eagle and golden eagle habitat within the state of North Dakota. According to the USGS data, the 0.5 mile buffered survey area for the proposed well pad sites contain recorded habitat for both the bald eagle and the golden eagle. In addition, Dr. Anne Marguerite Coyle of Dickinson State University has completed focused research on golden eagles and maintains a database of golden eagle nest sightings. According to Dr. Coyle's information, the closest recorded golden eagle nest is located approximately 9.3 miles south of the proposed Independence 4 well pad site. Please refer to **Error! Reference source not found.**

#### 3.6.1 Eagle Impacts/Mitigation

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

Alternative B (Proposed Action) –No evidence of eagle nests was found within 0.5 miles of the project area. Therefore, no impacts to bald or golden eagles are anticipated to result from the proposed project. If a bald or golden eagle or eagle nest is sighted within 0.5 miles of the project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.



**Figure 3.4, Bald and Golden Eagle Habitat and Nest Sightings**

### 3.7 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 proposed project study area lies in the Central Flyway of North America. As such, this area is used as resting grounds for many birds on their spring and fall migrations, as well as nesting and breeding grounds for many waterfowl species. In addition, the project areas contain suitable habitat for mule deer (*Odocoileus hemionus*), whitetail deer (*Odocoileus virginianus*), sharp-tailed grouse (*Tympanuchus phasianellus*), ring-necked pheasant (*Phasianus colchicas*), raptors, American badger (*Taxidea taxus*), song birds, coyote (*Canis latrans*), red fox (*Vulpes vulpes*), Eastern cottontail rabbit (*Sylvilagus floridanus*), wild turkey (*Meleagris gallopavo*), white-tailed jackrabbit (*Lepus townsendii*), and North American porcupine (*Erethizon dorsatum*).

During the pedestrian field surveys, migratory birds, raptors, big and small game species, non-game species, potential wildlife habitats, and and/or bird nests were identified if present. A field sparrow was observed during the Independence 32 field survey. Two sharp-tailed grouse, field sparrow, owl, meadow lark and a ferruginous hawk and its nest were observed during the Independence 4 field survey. The ferruginous hawk nest was located approximately 0.4 miles southwest of the well pad. A Baltimore oriole, meadow lark, field sparrow, two mallard ducks, two robins, leopard frog, field mouse, coyote, American kestrel, six sharp-tailed grouse and a Franklin’s gull were observed during the Independence 6 well pad survey. No additional wildlife were observed during the surveys.

#### 3.7.1 Migratory Birds and Other Wildlife Impacts/Mitigation

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

Alternative B (Proposed Action) – Due to the presence of suitable habitat at the project site for many wildlife and avian species, ground clearing, drilling, and long-term production activities associated with the proposed project may impact individuals by displacing animals from suitable habitat. While many species of wildlife may continue to use the project area for breeding and feeding and continue to thrive, the activities associated with oil and gas development may displace animals from otherwise suitable habitats. As a result, wildlife may be forced to utilize marginal habitats or relocate to unaffected habitats where population density and competition increase. Consequences of such displacement and competition may include lower survival, lower reproductive success, lower recruitment, and lower carrying capacity leading ultimately to population-level impacts. Therefore, the proposed project may affect individuals and populations within these wildlife species, but is not likely to result in a trend towards listing of any of the species identified. As no grouse leks were observed in the project area, additional timing restrictions for construction are not required.

The proposed well pads and access roads are located on upland bluffs composed of grassland, with Lake Sakakawea and its shoreline located below the bluffs. Additionally, the distance to Lake Sakakawea is approximately 0.5 miles at the nearest point. The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers for shoreline-nesting birds.

In addition, design considerations will be implemented to further protect against potential habitat degradation. The northwest corner of the Independence 4 well pad will be rounded to minimize disturbance to a wooded drainage. A minimum of an 18-inch high berm would be constructed along the top of all fill slopes and all areas not providing a minimum of 18 inches of containment at the well pads to control runoff. The storage tanks and heater/treater would be surrounded by an impervious dike or Sioux containment system that would act as secondary containment to guard against accidental release of fluids from the site. The containment system would be of sufficient size to hold in excess of 110% the capacity of the largest tank in the battery and 24hr record precipitation. BMPs to minimize wind and water erosion of soil resources, as well as implementation of a semi-closed loop system with an on-site cuttings pit during drilling, would also be put into practice. Secondary containment measures consisting of earthen berms, straw wattles or other BMP's would be installed in adjacent drainages to the well pads and access roads.

All efforts will be made for construction activities to begin after July 15 and end prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that a construction activity needs to take place within the nesting and breeding season, pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of construction activities; or mowing of the site prior to nesting/breeding season may be completed in lieu of the pre-construction survey.

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

### 3.7.2 Vegetation

Botanical resources were evaluated using visual inspection. The project area was also investigated for the presence of invasive plant species.

The Independence 4 well pad and access road consisted of moderately grazed upland grasses and are surrounded by wooded draws. The well pad and access road were dominated by little bluestem (*Andropogon scoparius*), fringed sagewort (*Artemisia frigida*), green needlegrass (*Stipa viridula*), western wheatgrass (*Agropyron smithii*), purple coneflower (*Echinacea angustifolia*), silver buffalo berry (*Shepherdia argentea*), and western snowberry (*symphoricarpos occidentalis*). Green ash (*Fraxinus pennsylvanica*), American Elm (*Ulmus Americana*), and silver buffalo berry were observed growing in the drainages surrounding the well pad and access road. Please refer to **Figure 3.5 Independence 4 Access Road Vegetation** and **Figure 3.6, Independence 4 Dominant Well Pad Vegetation**.



**Figure 3.5, Independence 4 Access Road Vegetation**



**Figure 3.6, Independence 4 Dominant Well Pad Vegetation**

The Independence 6 well pad and access road consisted of moderately grazed upland grasses and is bordered by wooded draws to the west, a wetland to the south, and gently rolling topography. The well pad and access road were dominated by Kentucky bluegrass (*Poa pratensis*), fringed sagewort, green needlegrass, western wheatgrass, purple coneflower, blue grama (*Boutelous gracilis*), silver buffalo berry, and western snowberry. Green ash, wild plum (*Prunus americana*), and silver buffalo berry were observed growing in the drainages west of the well pad and access road. Please refer to **Figure 3.7 Independence 6 Access Road Vegetation** and **Figure 3.8, Independence 6 Dominant Well Pad Vegetation**.



**Figure 3.7, Independence 6 Access Road Vegetation**



**Figure 3.8, Independence 6 Dominant Well Pad Vegetation**

The Independence 32 well pad and access road consisted of moderately grazed upland grasses and is bordered to the north by a wooded draw and to the south, east and west by gently rolling topography. The well pad and access road were dominated by smooth brome (*Bromus inermis*) Kentucky bluegrass, fringed sagewort, purple coneflower, crested wheatgrass (*Agropyron cristatum*), sideoats grama (*Boutelous curtipendula*), silver buffalo berry, and western snowberry. Green ash, and silver buffalo berry were observed growing in the drainages west of the well pad and access road. Please refer to **Figure 3.9 Independence 32 Access Road Vegetation** and **Figure 3.10, Independence 32 Dominant Well Pad Vegetation**.



**Figure 3.9, Independence 32 Dominant Access Road Vegetation**



**Figure 3.10, Independence 32 Dominant Well Pad Vegetation**

In addition, the project area was surveyed for the presence of noxious weeds. Of the eleven species declared noxious under the North Dakota Century Code (Chapter 63-01.0), three are known to occur in Dunn County. Please refer to **Error! Reference source not found.** In addition, counties and cities have the option to add species to the list to be enforced within their jurisdictions. There are no additional noxious weeds listed for Dunn County. Canada thistle (*Cirsium arvense (L.) Scop*) was observed north of the Independence 6 well pad during the May 5, 2011 on-site survey.

**Table 3.5, Noxious Weed Species**

COMMON NAME	SCIENTIFIC NAME	2010 DUNN COUNTY REPORTED ACRES
Absinth wormwood	<i>Artemisia absinthium L.</i>	43,800
Canada thistle	<i>Cirsium arvense (L.) Scop</i>	39,300
Dalmation toadflax	<i>Linaria genistifolia ssp. Dalmatica</i>	—
Diffuse knapweed	<i>Centaurea diffusa Lam</i>	—
Leafy spurge	<i>Euphorbia esula L.</i>	6,200
Musk thistle	<i>Carduus nutans L.</i>	—
Purple loosestrife	<i>Lythrum salicaria</i>	—
Russian knapweed	<i>Acrotilon repens (L) DC.</i>	—
Saltcedar (tamarisk)	<i>Tamarix ramosissima</i>	—
Spotted knapweed	<i>Centaurea maculosa Lam.</i>	—
Yellow Toadflax	<i>Linaria vulgaris</i>	—

3.7.2.1 Vegetation Impacts/Mitigation

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

Alternative B (Proposed Action) – Ground clearing activities associated with construction of the proposed well pads and access roads would result in vegetation disturbance; however, the areas of proposed surface disturbances are minimal in the context of the setting, and these impacts would be further minimized in accord with the BLM Gold Book standards for well reclamation. Following construction, interim reclamation measures to be implemented include reduction of cut and fill slopes, redistribution of stockpiled topsoil, and re-seeding of disturbed areas with a native grass seed mixture consistent with surrounding vegetation. If commercial production equipment is installed, the well site would be reduced in size to accommodate the production facilities, while leaving adequate room to conduct normal well maintenance and potential recompletion operations, with the remainder of the well pad reclaimed. Reclamation activities would include leveling, re-contouring, treating, 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 re-seeded as recommended by the BIA.

If no commercial production is developed from the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. The access roads and well pad areas would be re-contoured to match topography of the original landscape as closely as possible and re-seeded with vegetation consistent with surrounding native species to ensure a healthy and diverse mix free of noxious weeds. Seed would be obtained from a BIA/BLM-approved source. Re-vegetation of the site would be consistent with the BLM Gold Book standards. QEP would use certified weed-free seed mixtures for re-vegetation. Vehicles accessing the site would be pressure

washed prior to being used on-site. Erosion control measures would be installed as appropriate in a manner that is consistent with the BLM Gold Book standards. Maintenance of the re-vegetated site would continue until such time that the stand was consistent with the surrounding undisturbed vegetation and the site free of noxious weeds. The surface management agency would provide final inspection of the site to deem the reclamation effort complete.

### 3.7.3 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 (USACE, 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.

One wetland area was identified within the proposed Independence 6 well pad area during the field survey. The well pad and access road locations were adjusted to avoid disturbance of the wetland.

#### 3.7.3.1 Wetland Impacts/Mitigation

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

Alternative B (Proposed Action) – Due to the Independence 6 well pad and access road locations being adjusted, Alternative B would not impact wetlands.

### 3.7.4 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, requires that projects needing federal approval and/or federal permits be evaluated for the effects on historic and cultural properties included or eligible for listing on the NRHP (National Register of Historic Places). The Archaeological and Historic Preservation Act of 1974 provides for the survey, recovery, and preservation of significant scientific, prehistoric, archaeological, or paleontological data when such data may be destroyed or irreparably lost due to a Federal, federally licensed, or federally funded project.

The NAGPRA (Native American Graves Protection and Repatriation Act) of 1990 is triggered by the possession of human remains or cultural items by a Federally-funded repository or by the discovery of human remains or cultural items on Federal or Tribal lands and provides for the inventory, protection, and return of cultural items to affiliated Native American groups. Permits are required for intentional excavation and removal of Native American cultural items from Federal or Tribal lands.

The American Indian Religious Freedom Act of 1978 requires consultation with Native American groups concerning proposed actions on sacred sites on Federal land or affecting access to sacred sites. It establishes Federal policy to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians the right to free exercise of their religion in the form of site access, use and possession of sacred objects, as well as the freedom to worship through ceremonial and traditional rites. The Act requires Federal agencies to consider the impacts of their actions on religious sites and objects important to these peoples, regardless of eligibility for listing on the NRHP.

In accordance with 16 U.S.C. 470hh(a), information concerning the nature and location of archaeological resources and traditional cultural properties, and detailed information regarding archaeological and cultural resources, is confidential. Such information is exempt from the Freedom of Information Act and is not included in this EA.

A Class I Literature Review for the proposed site was conducted by KL&J on March 17, 2011 for the Independence 6 and Independence 32 well sites and April 8, 2011 for the Independence 4 well site. Class III Cultural Resources Surveys were conducted by KL&J on May 5, 2011 with tribal monitors from the Three Affiliated Tribes THPO simultaneously conducting Traditional Cultural Property Surveys. The Area of Potential Effect (APE) for each location consisted of a 10-acre block around the well pad, as well as the associated access road areas. No new cultural resources were identified within the final project APE.

Cultural resource inventories of these well pads and access roads were conducted on May 5, 2011 by personnel of Kadrmas, Lee & Jackson, Inc., using an intensive pedestrian methodology. For the MHA 2-04-03H-149-91/MHA 4-04-03H-149-91 project approximately 32.4 acres were inventoried (Ó Donnchadha 2011a), for the MHA 2-32-29H-150-91/MHA 4-32-29H-150-91 project approximately 10 acres were inventoried (Ó Donnchadha 2011b) and for the MHA 3-06-01H-149-92/MHA 4-06-01H-149-92 project approximately 10 acres were inventoried (Ó Donnchadha 2011c). 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 these undertakings. This determination was communicated to the THPO on July 11, 2011; however, the THPO did not respond within the allotted 30 day comment period.

#### *3.7.4.1 Cultural Resources Impacts/Mitigation*

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

Alternative B (Proposed Action) – No cultural resources sites were identified within the APE. As such, cultural resources impacts are not anticipated. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site secured, and BIA and THPO notified. In the event of a discovery, work shall not resume until written authorization to proceed has been received from the BIA. All project workers are prohibited from collecting artifacts or disturbing cultural resources in any area under any circumstances.

#### **3.7.5 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. 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 Enterprises, Inc., 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.

#### *3.7.5.1 Socioeconomic Impacts/Mitigation*

Alternative A (No Action) – Alternative A would not impact the socioeconomic conditions in the project area. 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 congested traffic conditions for residents. QEP will follow Dunn County, BIA, and North Dakota Department of Transportation rules and regulations regarding rig moves and oversize/overweight loads on state and county roads used as haul roads in order to maintain safe driving conditions.

#### **3.7.6 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.

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

According to 2005-2009 U.S. Census Bureau data, the Fort Berthold Reservation has lower than statewide averages of per capita income and median household income, whereas Dunn County has a higher per capita income and median household income than the statewide average. In addition,

Dunn County has slightly lower rates of unemployment than the state average, while Fort Berthold's rate of unemployment was substantially greater.<sup>7</sup> Please refer to **Error! Reference source not found.**

Table 3.6, Employment and Income

LOCATION	PER CAPITA INCOME	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	INDIVIDUALS LIVING BELOW POVERTY LEVEL
Dunn County	\$25,006	\$45,270	2.0%	8.9%
Fort Berthold Reservation	\$15,945	\$40,603	7.8%	25.2%
Statewide	\$24,978	\$45,140	2.4%	12.3%

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

Population decline in rural areas of North Dakota has been a growing trend as individuals move toward metropolitan areas of the state, such as Bismarck and Fargo. While Dunn County's population has been slowly declining, the Fort Berthold Reservation has witnessed a steady increase in population. American Indians are the majority population on the Fort Berthold Reservation but are the minority population in Dunn County and the state of North Dakota. *Please refer to Table 3.7, Demographic Trends.*

Table 3.7, Demographic Trends

LOCATION	POPULATION IN 2009	% OF STATE POPULATION	% CHANGE 1990-2000	PREDOMINANT RACE	PREDOMINANT MINORITY
Dunn County	3,318	0.52%	-7.8%	White	American Indian (10.9%)
Fort Berthold Reservation	6,094	0.95%	+3.0%	American Indian <sup>8</sup>	White (28.8%)
Statewide	639,725	—	-0.4%	White	American Indian (5.0%)

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

3.7.6.1 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

<sup>7</sup>While more current data reflecting income, unemployment, and poverty levels within the Fort Berthold Reservation are not available, it is anticipated that 2010 numbers may show different trends. The exploration and production of oil and gas resources on the Reservation since 2006 have created employment opportunities and have likely affected these economic indicators. However, this assessment uses the best available data.

<sup>8</sup> According to the North Dakota Tourism Division, there are 10,400 enrolled members of the Three Affiliated Tribes.

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.

### 3.7.7 Infrastructure and Utilities

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

Known utilities and infrastructure within the vicinity of the proposed project includes paved and gravel roadways. There are no known water pipelines in the vicinity of the proposed project. The Bureau of Reclamation manages the Fort Berthold Rural Water System.

#### 3.7.7.1 Infrastructure and Utility Impacts/Mitigation

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

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

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

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

Safety hazards posed from increased traffic during the drilling phase are anticipated to be short-term and minimal for the proposed site. It is anticipated that approximately 30 to 40 trips, over the course of several days, would be required to transport the drilling rig and associated equipment to the

proposed well site. If commercial operations are established at the proposed well sites following drilling activities, the pump would be checked daily and oil and water hauling activities would commence. Oil would be hauled using a semi tanker trailer, typically capable of hauling 140 barrels of oil per load. Traffic to and from the well site would depend upon the productivity of the well. A 1,000 barrel per day well would require approximately seven tanker visits per day, while a 300 barrel per day well would require approximately two visits per day<sup>9</sup> temporarily until the wells 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<sup>10</sup>. Established load restrictions for state and BIA roadways would be followed and haul permits would be acquired as appropriate.

### 3.7.8 Public Health and Safety

Health and safety concerns associated with this type of development include hydrogen sulfide (H<sub>2</sub>S) gas<sup>11</sup> and hazardous materials used or generated during well installation or production.

#### 3.7.8.1 Public Health and Safety Impacts/Mitigation

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

Alternative B (Proposed Action) – Project design and operational precautions would minimize the likelihood of impacts from H<sub>2</sub>S gases and hazardous materials as described below.

**H<sub>2</sub>S Gases.** It is unlikely that the proposed action would result in release of H<sub>2</sub>S in dangerous concentrations; however, QEP will submit H<sub>2</sub>S Contingency Plans to the BLM as part of the site APDs. These plans establish safety measures to be implemented throughout the drilling process to prevent accidental release of H<sub>2</sub>S into the atmosphere. The Contingency Plans are designed to protect persons living and/or working within 3,000 feet (0.57 miles) of each well location and include emergency response procedures and safety precautions to minimize the potential for an H<sub>2</sub>S gas leak during drilling activities. Satellite imagery revealed that there are no residences/buildings within 3,000 feet of the proposed site.

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

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

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<sup>9</sup>A typical Bakken oil well initially produces at a high rate and then declines rapidly over the next several months to a more moderate rate. In the vicinity of the proposed project areas, initial rates of 500 to 1,000 BOPD (barrels of oil per day) could be expected, dropping to 200 to 400 BOPD after several months.

<sup>10</sup>A typical Bakken oil well initially produces water at 200 bbls per day and then declines rapidly over the next several months to a more moderate rate. In the vicinity of the proposed project areas, initial rates of 200 BWPD (barrels of water per day) could be expected, dropping to 30 to 70 BWPD after several months.

<sup>11</sup>H<sub>2</sub>S is extremely toxic in concentrations above 500 parts per million. H<sub>2</sub>S has not been found in measurable quantities in the Bakken Formation. However, before reaching the Bakken, drilling would penetrate the Mission Canyon Formation, which is known to contain varying concentrations of H<sub>2</sub>S.

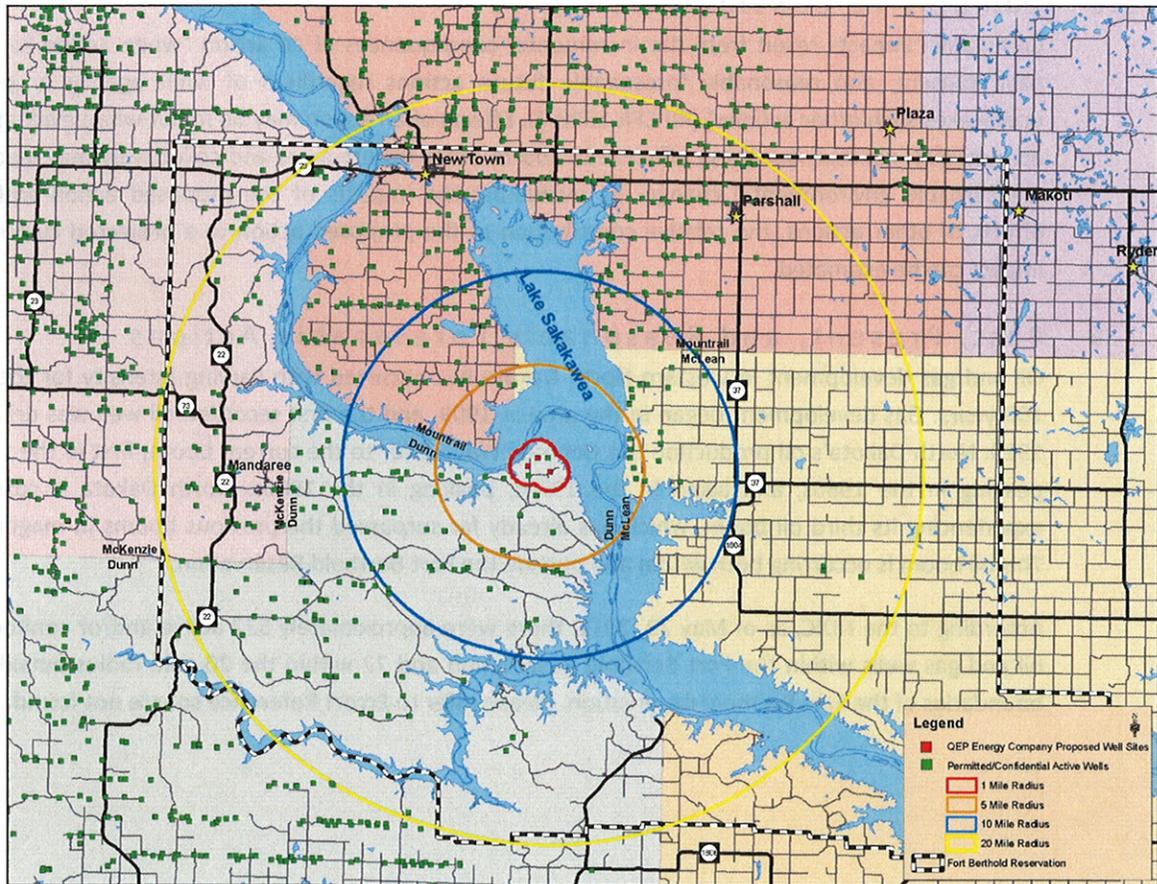
### 3.8 Cumulative Considerations

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

### 3.9 Past, Present, and Reasonably Foreseeable Actions

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

According to the NDIC, as of May 23, 2011, there were approximately 522 active and/or confidential oil and gas wells within the Fort Berthold Reservation and 72 within the 20-mile radius outside the boundaries of the Fort Berthold Reservation. Please refer to **Error! Reference source not found..**



**Figure 3.11, Existing and Proposed Oil and Gas Wells**

There are six known oil and gas wells within one-mile of the proposed project. Please refer to **Error!** Reference source not found..

**Table 3.8, Summary of Active and Proposed Wells**

DISTANCE FROM SITE	NUMBER OF ACTIVE OR PROPOSED WELLS
1 mile radius	6
5 mile radius	25
10 mile radius	140
20 mile radius	572

As mentioned previously in this EA, the Bakken Formation (the primary target of the proposed action) covers approximately 25,000 square miles beneath North Dakota, Montana, Saskatchewan, and Manitoba, with approximately two-thirds of the acreage beneath North Dakota. The Three Forks Formation (the secondary target of the proposed action) 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 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 resources 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, and some small systems have been approved.

### 3.9.1 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.

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

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

**Threatened and Endangered Species** — The potential for cumulative impacts to threatened and endangered species comes to those listed species that may be affected by the proposed project or candidate species that may be impacted by the proposed project. The proposed project occurs within the central flyway through which whooping cranes migrate. Continual development (e.g., agriculture, oil and gas, and wind) within the central flyway has compromised whooping crane habitat both through direct impacts via conversion of potential habitat to other uses and indirect impacts due to disrupting the use of potential stopover habitat, as whooping cranes prefer isolated areas and are

known to avoid large-scale development. However, the proposed action, when added to other development directly and indirectly impacting whooping cranes and their habitat, is not anticipated to significantly contribute to cumulative impacts occurring to the whooping crane population.

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

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

**Wetlands, Wildlife, and Vegetation** — The proposed project, when added to previously constructed and reasonably foreseeable oil and gas wells, would contribute to habitat loss and fragmentation associated with construction of well pads, access roads, and associated development. By placing two wells at each location, habitat loss has been minimized. 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. While many species of wildlife may continue to use the project area for breeding and feeding and continue to thrive, the activities associated with oil and gas development may displace animals from otherwise suitable habitats. As a result, wildlife may be forced to utilize marginal habitats or relocate to unaffected habitats where population density and competition increase. Consequences of such displacement and competition may include lower survival, lower reproductive success, lower recruitment, and lower carrying capacity leading ultimately to population-level impacts.

However, the proposed action and other similar actions are carefully planned to avoid or minimize these impacts. Multiple components of the process used by the BIA to evaluate and approve such actions, including biological and botanical surveys, on-site assessments with representatives from multiple agencies and entities, public and agency comment periods on this EA, and the use of BMPs and site-specific environmental commitments are in place to ensure that environmental impacts associated with oil and gas development are minimized. The practice of utilizing existing roadways to the greatest extent practicable further minimizes impacts to wildlife habitats and prairie ecosystems. The proposed wells have been sited to avoid sensitive areas such as surface water, wetlands, and riparian areas. Reclamation activities are anticipated to minimize and mitigate disturbed habitat.

**Infrastructure and Utilities** — The proposed 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. The well pad has been positioned in close proximity to existing roadways to minimize the extent of access road impacts in the immediate area. Additionally, existing two-track roadways have been utilized wherever possible to minimize impacts to the surrounding landscape. The contribution of the proposed project and other projects to stress on local roadways used for hauling materials may result in a cumulative impact to local roadways. However, abiding by permitting requirements and roadway restrictions with the jurisdictional entities are anticipated to offset any cumulative impact that may result from the proposed project and other past, present, or future projects. BMPs would be implemented to minimize impacts of the proposed project.

The proposed action has been planned to avoid impacts to resources such as 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.

#### *3.9.1.1 Irreversible and Irretrievable Commitment of Resources*

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

#### *3.9.1.2 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 Formations, which is the purpose of this project.

#### *3.9.1.3 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* – North Dakota Industrial Commission

#### *3.9.1.4 Environmental Commitments/Mitigation*

The following commitments have been made by QEP:

- A semi-closed loop system would be used during drilling. Drill cuttings would be placed in the reinforced lined cuttings pit. The reinforced lining of the cuttings pit would have a minimum thickness of 20 mils to prevent seepage and contamination of underlying soil. Any minimal fluids remaining in the drill cuttings pit would be removed and disposed of in accordance with BLM and NDIC rules and regulations. All liquids from drilling would be transported off-site. The drill cuttings pit would be reclaimed to BLM and NDIC standards immediately upon finishing completion operations.
- Prior to its use, the cuttings pit would be fenced on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.
- It is anticipated that construction of the proposed project would take place after July 15 and would therefore avoid the migratory bird nesting and breeding season (between February 1 and July 15). In the event that construction is delayed and should occur during future migratory bird nesting and breeding seasons, QEP would have a qualified biologist conduct pre-construction surveys for migratory birds or their nests within five days prior to the initiation of all construction activities. The findings of these surveys would be reported to USFWS. In addition, if any migratory bird is found onsite during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.
- Measures implemented during construction to avoid the taking of migratory bird species will include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.
- If a whooping crane is sighted within one-mile of a well site or associated facilities while under construction, all work will cease within one-mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- The storage tanks and heater/treater will be surrounded by an impervious dike or Sioux containment system that would act as secondary containment to guard against accidental release of fluids from the site. The containment system would be of sufficient size to hold in excess of 110% the capacity of the largest tank in the battery and 24hr record precipitation. BMPs would be implemented to minimize wind and water erosion of soil resources and a semi-closed loop system would be used during drilling.
- The northwest corner of the Independence 4 well pad will be rounded to avoid a wooded drainage.
- A minimum of an 18-inch berm would be constructed around the entire pad to protect against runoff and contaminants from leaving the pad
- Secondary containment measures consisting of earthen berms, straw wattles or additional BMP's will be placed in adjacent drainages as needed.

## CHAPTER 4 PREPARERS AND AGENCY COORDINATION

### 4.1 Introduction

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

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

### 4.2 Preparers

Kadrmass, Lee & Jackson prepared this EA under a contractual agreement between Questar Exploration and Production Company and Kadrmass, Lee & Jackson, Inc. A list of individuals with the primary responsibility for conducting this study, preparing the documentation, and providing technical reviews is contained in **Table 4.1, Preparers**.

**Table 4.1, Preparers**

AFFILIATION	NAME	TITLE	PROJECT ROLE
<b>Bureau of Indian Affairs</b>	Marilyn Bercier	Regional Environmental Scientist	Review of Draft EA and recommendation to Regional Director regarding FONSI or EIS
	Mark Herman	Environmental Engineer	
<b>Questar Exploration and Production Company</b>	Debbie Stanberry	Supervisor Regulatory Affairs	Project development, alternatives, document review
	Tracy Opp	Operations Specialist	Project development, alternatives, document review
<b>Kadrmass, Lee &amp; Jackson, Inc.</b>	Nick Anderson	Environmental Planner	Field resources surveys, impact assessment
	Jennifer Turnbow	Environmental Planner	QC/QA
	Steve Czczok	Environmental Planner	Exhibit creation
	Quentin Obrigewitsch	Surveyor	Site Plats
	Brian O'Donnchadha	Archaeologist	Cultural resources surveys
	Jerry Reinisch	Environmental Planner/Biologist	Field resources surveys
	Grady Wolf	Environmental Planner	Project Manager, QC/QA

#### 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 May 13, 2011. This scoping package included a brief description of the proposed project, as well as a location map. Pursuant to Section 102(2) (D) (IV) of NEPA, a solicitation of views was requested to ensure that social, economic, and environmental effects were considered in the development of this project.

At the conclusion of the 30-day comment period, eight 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 A contains Scoping Materials.***

#### 4.4 Public Involvement

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

## CHAPTER 5 REFERENCES

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# Appendix A

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## Agency Scoping Letters

May 13, 2011

Mr. Scott Davis  
Indian Affairs Commission  
600 E. Blvd. Ave. 1st Floor, Judicial Wing, Rm 117  
Bismarck, ND 58505-0300

**RE: QEP Energy Company  
Independence 4, 6 and 32 well pads  
Fort Berthold Reservation  
Dunn County, North Dakota**

Dear Mr. Davis,

On behalf of QEP Energy Company (QEP), Kadrmas, Lee & Jackson, Inc. (KL&J) is preparing an EA (Environmental Assessment) under NEPA (the National Environmental Policy Act) for the BIA (Bureau of Indian Affairs) and BLM (Bureau of Land Management). The proposed action includes approval by the BIA and BLM for the development, drilling, and completion of six wells on three well pads on the Fort Berthold Reservation. Each pad location would consist of two wells.

The *Independence 4* well pad would be located in the SW $\frac{1}{4}$  of Section 4, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. The *Independence 6* well pad would be located in the NE  $\frac{1}{4}$  of Section 6, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. The *Independence 32* well pad would be located in the SW  $\frac{1}{4}$  of Section 32, Township 150 North, Range 91 West, 5<sup>th</sup> P.M. ***Please refer to the enclosed project location map.*** The well pads have been positioned to utilize existing roadways for access to the greatest extent possible. Construction of the proposed well pads and access road is scheduled to begin in 2011.

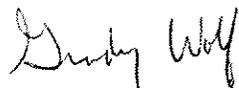
To ensure that social, economic, and environmental effects are analyzed accurately, we solicit your views and comments on the proposed action. We are interested in existing or proposed developments you may have that should be considered in connection with the proposed project. We also ask your assistance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

Please provide your comments by **June 13, 2011**. We request your comments by that date to ensure that we will have ample time to review them and incorporate them into the EA.

If you would like further information regarding this project, please contact me at (701) 355-8726. Thank you for your cooperation.

Sincerely,

**Kadrmas, Lee & Jackson, Inc.**



Grady Wolf  
Environmental Scientist  
Enclosure (Project Location Map)

SOV MASTER LIST

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

C Title	First	Last	Title	Department	Agency	Address	City	State	Zip
Mr.	Weldon	Louderemilk	Regional Director		Bureau of Indian Affairs	115 4th Ave. SE	Aberdeen	SD	57401
Mr.	Jeffrey	Desjarlais	Environmental Protection Specialist		Bureau of Indian Affairs	202 Main Street	New Town	SD	58763
Mr.	Darryl	Turcotte	Environmental Protection Specialist		Bureau of Indian Affairs	202 Main Street	New Town	SD	58763
Mr.	Richard	Nelson	Chief, Resource Management		Bureau of Reclamation	PO Box 1017	Bismarck	ND	58502-1017
Mr.	Tom	Schauber	Manager		Federal Aviation Administration	2301 University Drive, Bldg 23B	Bismarck	ND	58504
Mr.	Dan	Cimarosti	Manager		US Army Corps of Engineers	1513 S. 12th St.	Bismarck	ND	58504
Mr.	Charles	Sorensen	Natural Resource Specialist		US Army Corps of Engineers	PO Box 527	Riverdale	ND	58565
Ms.	Candace	Gorton	Chief, Env., Economics, & Cultural Resource Section		US Army Corps of Engineers	105 S. 15th St.	Omaha	NE	68102-1618
Mr.	Gerald	Paulson	Director, Transmission Line Substations		US Department of Energy	PO Box 1173	Bismarck	ND	58602-1173
Mr.	Larry	Svoboda	Director		Western Area Power Admtn.	1595 Wynkoop Street	Denver	CO	80202-1129
Mr.	Richard	Clark	Wellands Coordinator		US Environment Protection Agency	1595 Wynkoop Street	Denver	CO	80202-1129
Mr.	Jeffrey	Towner	Field Supervisor		US Environment Protection Agency	3425 Miriam Ave.	Bismarck	ND	58501
Mr.	Jwlin	Russell	Acting State Conservationist		US Fish & Wildlife Service	PO Box 1458	Bismarck	ND	58502-1458
Mr.	Scott	Davis	Executive Director		Natural Resources Conservation Service	800 E. Blvd. Ave.	Bismarck	ND	58502-0300
Mr.	Greg	Wiche	Director		Indian Affairs Commission	1st Floor, Judicial Wing, Rm. 117	Bismarck	ND	58501
Mr.	L. David	Glat	Chief		US Geological Survey	921 E. Interstate Ave.	Bismarck	ND	58501-1947
Mr.	Terry	Steinwand	Director		ND Department of Health	100 Bismarck Expressway	Bismarck	ND	58501-5935
Mr.	Ed	Murphy	State Geologist		ND Game & Fish Department	600 E. Blvd. Avenue	Bismarck	ND	58505-0840
Mr.	Mark	Zimmerman	Director		ND Geological Survey	1600 E. Century Ave., Suite 3	Bismarck	ND	58503-0649
Mr.	Dale	Frank	State Engineer		ND Parks & Recreation Dept.	900 E. Blvd. Ave.	Bismarck	ND	58505-0850
Mr.	Scott	Hochhalter	Soil Conservation Specialist		ND State Water Commission	2718 Gateway Ave., #104	Bismarck	ND	58503
Mr.	Bill	Boyd	Construction Manager		Soil Conservation Committee	719 Memorial Hwy	Bismarck	ND	58501
Mr.	Doug	Dixon	General Manager		Midcontinent Cable Company	PO Box 1406	Williston	ND	58802-1406
Mr.	John	Skurupcy	General Manager		Montana Dakota Utilities	PO Box 649	Watford City	ND	58854-0649
Mr.	Ken	Miller	General Manager		McKenzie Electric Cooperative	13710 FNB Parkway	Omaha	NE	68154-5200
Mr.	Ray	Christenson	Manager/CEO		Northern Border Pipeline Company	4665 2nd St. W.	Dickinson	ND	58601
Mr.	David C.	Scheikoph	CEO		Southwest Water Authority	PO Box 1038	Dickinson	ND	58602-1038
Sr			Manager		West Plains Electric Coop., Inc.	PO Box 2747	Fargo	ND	58108-2747
Sr			District Engineer		Xcel Energy	1700 3rd Ave W, Suite 101	Dickinson	ND	58601-3009
Mr.	Lonny	Bagley	Field Office Manager		ND Department of Transportation	99 23rd Ave W, Suite A	Dickinson	ND	58601
Mr.	Mike	Nash	Assistant Field Office Manager		Bureau of Land Management	99 23rd Ave W, Suite A	Dickinson	ND	58601
Ms.	Michael	Savage	Tribal Chairman		Bureau of Land Management	PO Box 509	Sisseton	SD	57262-0267
Mr.	Charles	Murphy	Tribal Chairman		Sisseton-Wapeton Sioux Tribe	PO Box 359	Ft. Totten	ND	58525
Mr.	Eilon	Spotted Horse	Environmental Division Director		Spirit Lake Sioux Tribe	PO Box 0	Fort Yates	ND	58538
Mr.	Eigin	Crows Breast	Tribal Historic Preservation Officer		Standing Rock Sioux Tribe	404 Frontage Road	New Town	ND	58763
Mr.	Tex	Hall	Tribal Chairman		Three Affiliated Tribes	HC3 Box 2	New Town	ND	58763
Mr.	Merle	St. Claire	Tribal Attorney		Three Affiliated Tribes	HC3 Box 2	New Town	ND	58763
Mr.	Dannon	Williams	Tribal Attorney		Three Affiliated Tribes	PO Box 900	Belcourt	ND	58316-9000
Mr.	Fred	Fox	Director		Turtle Mountain Chippewa	404 Frontage Road	New Town	ND	58763
Ms.	V. Judy	Bugh	Representative		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Arnold	Stras	Representative		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Scott	Eagle	Representative		Three Affiliated Tribes	PO Box 665	Manotaree	ND	58757
Mr.	Mervin	Packineau	Representative		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Frank	Whitelarf	Representative		Three Affiliated Tribes	PO Box 468	Parshall	ND	58770
Mr.	Barry	Benson	Representative		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Fred	Poitra	Representative		Three Affiliated Tribes	70879 E Ave NW	Halliday	ND	58636
Mr.	Lesler	Crowsheart	Director		Three Affiliated Tribes	404 Frontage Road	New Town	ND	58763
Mr.	Roger	Hovda	Operations Manager		Three Affiliated Tribes	308 Four Bears Complex	New Town	ND	58763
Mr.	Reinhard	Hauck	Auditor		Reservation Telephone Cooperative	PO Box 68	Parshall	ND	58770-0068
Ms.	Tim	Steffan	Chairman		Dunn County	PO Box 105	Manning	ND	58542
			County Commission		Dunn County	1740 Highway 22	Manning	ND	58642

May 13, 2011

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

**Re: QEP Energy Company  
Independence 4, 6 and 32 well pads  
Fort Berthold Reservation  
Dunn County, North Dakota**

Dear Mr. Towner,

On behalf of QEP Energy Company (QEP), Kadmas, Lee & Jackson, Inc. (KL&J) is preparing an EA (Environmental Assessment) under NEPA (the National Environmental Policy Act) for the BIA (Bureau of Indian Affairs) and BLM (Bureau of Land Management). The proposed action includes approval by the BIA and BLM for the development, drilling, and completion of six wells on three well pads and three access roads on the Fort Berthold Reservation. Each pad location would consist of two wells. The well pads are proposed to be positioned in the following locations:

- Independence 4 well pad; T149N, R91W, SW¼ of Section 4
- Independence 6 well pad; T149N, R91W, NE¼ of Section 6
- Independence 32 well pad; T150N, R91W, SW¼ of Section 32

***Please refer to the enclosed project location map.***

The proposed action would advance the exploration and production of oil from the Bakken and Three Forks Pools. The well pads have been positioned to utilize existing roadways for access to the greatest extent possible. Construction of the proposed well pads and access roads is scheduled to begin in 2011.

An intensive, pedestrian resource survey of the proposed well pads and access roads was conducted on May 5, 2011 by KL&J. The purpose of these surveys was to gather site-specific data and photos with regards to botanical, biological, threatened and endangered species, eagles, and water resources. A study area of 10 acres centered on the well pad center point and a 200-foot wide access road corridor was evaluated for the sites. In addition, a 0.50 mile wide buffer around all areas of project disturbance was used to evaluate the presence of eagles and eagle nests. Resources were evaluated using visual inspection and pedestrian transects across the sites.

A BIA-facilitated EA on-site assessment of the well pads and access roads was also conducted on May 5, 2011. The BIA Environmental Protection Specialist, as well as representatives from the Tribal Historic Preservation Office (THPO), QEP, and KL&J were present. During the assessment, construction suitability with respect to

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

topography, stockpiling, drainage, erosion control, and other surface issues were considered. Well pad and access road locations were adjusted as appropriate, to avoid conflicts with identified environmental areas of concern. Those present at the on-site assessments agreed that the chosen locations, along with the minimization measures QEP plans to implement, are positioned in areas which would minimize impacts to sensitive wildlife and botanical resources. BMPs and other commitments QEP has made to avoid, minimize, or mitigate impacts are listed at the end of this letter.

**Threatened and Endangered Species:** The proposed well sites occur in Dunn County. In Dunn County, the interior least tern, whooping crane, black-footed ferret, pallid sturgeon, and gray wolf are all listed as endangered species. The piping plover is listed as a threatened species, and the Dakota skipper and Sprague's pipit are listed as a candidate species. Dunn County also contains designated critical habitat for the piping plover. None of these species were observed during the field surveys and on-site assessments.

Whooping cranes use shallow, seasonally and semi-permanently flooded palustrine (marshy) wetlands for roosting, and various cropland and emergent wetlands for feeding. The proposed projects are located in the Central Flyway where 75 percent of confirmed whooping crane sightings have occurred. Due to the presence of a wetland near the Independence 6 well pad and the sites occurring in the 75 percent of confirmed sightings corridor, the sites may be used as potential stopover habitat. The proposed projects may affect but are not likely to adversely affect whooping cranes or whooping crane habitat. If a whooping crane is sighted within one-mile of a well site or associated facilities while under construction, all work will cease within one-mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.

Suitable habitat for the interior least tern, pallid sturgeon, and piping plover is largely associated with Lake Sakakawea and its shoreline. Potential habitat for these species exists approximately 0.5 miles northeast of the proposed Independence 4 well pad, approximately 0.5 miles northwest of the proposed Independence 6 well pad and approximately 0.6 miles northwest of the proposed Independence 32 well pad at the nearest points. The well pads and access roads are located on upland bluffs composed of grassland, with Lake Sakakawea and its shoreline located below the bluffs. The topographic features of the area and distance from the shoreline should assist in providing sight and sound buffers/barriers for shoreline-nesting birds. USFWS determined Lake Sakakawea's shoreline to be critical habitat for the piping plover. With the present lake level, the shoreline in the vicinity of the project area doesn't presently provide suitable habitat for nesting species. But due to fluctuating Lake levels, potential habitat may exist there in the future.

At each site, storage tanks and the heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

accidental release of fluids from the site. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. A minimum of an 18-inch high berm would be constructed along the top of the fill slopes and any other areas not contained with at least 18-inches of containment to control runoff. Secondary containment measures consisting of earthen berms, fiber rolls or additional bmp's will be placed in all drainages in close proximity to the proposed pads. In addition, solidification of drill cuttings before placement in the pit and the reinforced lining of the cuttings pit would diminish the potential for pit leaching. Due to the implementation of secondary containment measures and the cuttings pit parameters, the transfer of accidentally released fluids to Lake Sakakawea and its associated habitats is unlikely; however, due to the proximity of the proposed projects to Lake Sakakawea (approximately 0.5 miles at the nearest point) the proposed projects may affect but are not likely to adversely affect the interior least tern, pallid sturgeon, and piping plover or their associated habitats.

The black-footed ferret historically could be found throughout the Rocky Mountains and Great Plains. In North Dakota, the black-footed ferret may potentially be present within prairie dog towns; however, they have not been confirmed in North Dakota for over 20 years and are presumed extirpated. Its preferred habitat includes areas around prairie dog towns, as it relies on prairie dogs for food and lives in prairie dog burrows. Black-footed ferrets require at least an 80-acre prairie dog town to survive. Due to a lack of suitable habitat and known populations, the proposed projects are anticipated to have no effect to the black-footed ferret.

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

Preferred habitat for the Dakota skipper consists of undisturbed, flat, moist bluestem prairies and upland prairies with an abundance of wildflowers. The proposed sites are located on actively grazed rangeland that does contain bluestem prairies with abundant wildflowers. Although grazing is evident, it is moderate in nature; therefore, the project site does contain suitable habitat for the Dakota skipper. Due to the presence of preferred habitat characteristics, the proposed projects may affect, but are not likely to adversely affect, the Dakota skipper.

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

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

grazed rangeland which may provide potential habitat for the Sprague's pipit. No Sprague's pipit were observed during the field surveys. Due to the presence of preferred habitat characteristics, the proposed projects may affect, but are not likely to adversely affect, the Sprague's pipit. Additionally, all efforts will be made for construction activities to begin after July 15 and end prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that construction activity needs to take place within the nesting and breeding season, pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of construction activities; or mowing of the site prior to the nesting/breeding season would be completed.

**Botanical Resources:** The Independence 4, Independence 6 and Independence 32 proposed well sites consist of moderately grazed upland grasses. The Independence 4 well pad and access road is surrounded by wooded draws. The Independence 6 well pad and access road are bordered to the west by a deep wooded draw, to the south by a wetland, and to the north and east by gently rolling topography. The Independence 32 well pad and access road are bordered to the north by a wooded draw and to the south, east and west by gently rolling topography. The well pads and access roads were mostly dominated by blue grama (*Bouteloua gracilis*), needle & thread (*Stipa comata*), prairie junegrass (*Koeleria pyramidata*) Kentucky bluegrass (*Poa pratensis*), green needlegrass (*Stipa viridula*), sideoats grama (*Bouteloua curtipendula*), western wheatgrass (*Agropyron smithii*), little bluestem (*Andropogon scoparius*), and western snowberry (*Symphoricarpos occidentalis*). Green ash (*Fraxinus pennsylvanica*), Juniper (*Juniperus communix*), American Elm, (*Ulmus americana*) wild plum (*Prunus americana*), and silver buffalo berry (*Shepherdia argentea*) were observed growing in the drainages surrounding the well pads and access roads. Two Canada thistle (*Cirsium arvense*) plants were observed north of the Independence 6 well pad. There are no threatened or endangered plant species listed for Dunn County.

**Biological Resources:** The project area contains suitable habitat for mule deer, whitetail deer, sharp-tailed grouse, ring-necked pheasant, raptors, badger, song birds, coyote, red fox, cottontail rabbit, wild turkey, jackrabbit, and North American porcupine. A field sparrow was observed during the Independence 32 field survey. Two sharp-tailed grouse, field sparrow, owl, meadow lark and a ferruginous hawk and its nest were observed during the Independence 4 field survey. The ferruginous hawk nest was located approximately 600 feet south of the proposed Independence 4 well pad access road in a wooded draw. A Baltimore oriole, meadow lark, field sparrow, two mallard ducks, two robins, leopard frog, field mouse, coyote, American kestrel, six sharp-tailed grouse and a Franklin's gull were observed during the Independence 6 well pad survey. No additional wildlife were observed during the surveys.

During drilling activities, the noise, movements, and lights associated with having a drilling rig on-site are expected to deter wildlife from entering the area. In addition,

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

the cuttings pit would only be used for solid material storage, and it is expected that very minimal free fluid will be present in the pit. The absence of exposed liquids in the pit would minimize their attractiveness to wildlife. Immediately after the drilling rig leaves the location, reserve pits would be netted with State and Federal approved nets. These would remain in place with proper maintenance until the closure of the reserve pits.

In addition, design considerations will be implemented to further protect against potential habitat degradation. The northwest corner of the Independence 4 well pad will be rounded to minimize disturbance to a wooded drainage. A minimum of an 18-inch high berm would be constructed along the top of all fill slopes and all areas not providing a minimum of 18 inches of containment at the well pads to control runoff. The storage tanks and heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. BMPs to minimize wind and water erosion of soil resources, as well as implementation of a semi-closed loop system with an on-site cuttings pit during drilling, would also be put into practice. Secondary containment measures consisting of earthen berms, straw wattles or other BMP's would be installed in adjacent drainages to the well pads and access roads.

All efforts will be made for construction activities to begin after July 15 and end prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that a construction activity needs to take place within the nesting and breeding season, pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of construction activities; or mowing of the site prior to nesting/breeding season may be completed in lieu of the pre-construction survey.

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

**Eagles:** A survey for eagle nests was conducted on May 5, 2011. The proposed project sites were thoroughly searched and no eagles or eagle nests were observed. Dr. Anne Marguerite Coyle of Dickinson State University has completed focused research on golden eagles and maintains a database of golden eagle nest sightings. According to Dr. Coyle's information, the closest recorded golden eagle nest is located approximately 10 miles south of the proposed well pads at the closest location. If a bald or golden eagle or eagle nest is sighted within 0.5 miles of the

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

**Water Resources:** The proposed Independence 4 well pad drains to the northeast approximately 600 feet before entering a wooded draw. The runoff would then flow to the northeast approximately 0.55 miles into Lake Sakakawea. The proposed Independence 6 well pad partially drains to the northwest approximately 500 feet before entering a wooded draw. The runoff to the northwest would continue to flow to the northwest approximately 0.55 miles into Lake Sakakawea. The remaining eastern portion of the pad drains to the south and east where it eventually flows into Lake Sakakawea after approximately 1.5 miles. The proposed Independence 32 well pad drains to the north approximately 280 feet before entering a wooded draw. The runoff would then flow to the north approximately 0.95 miles before flowing into Lake Sakakawea.

A minimum of an 18-inch high berm would be constructed along the top of all fill slopes and all areas not providing a minimum of 18 inches of containment at the well pads to control runoff. Secondary containment measures consisting of earthen berms, straw wattles or additional BMP's will be placed in adjacent drainages as needed.

**Best Management Practices:** BMPs for soil and wind erosion would be implemented as needed to include seeding of cut areas and spoil piles as well as the use of diversion ditches, silt fences, straw wattles and/or mats. Any woody vegetation removed during site construction would be chipped and incorporated into topsoil stockpiles. The alteration of drainages near the proposed well pad would be avoided. Culverts to maintain drainage along the access roads would also be installed where needed. The northwest corner of the Independence 4 well pad would be rounded to minimize impacts to a nearby drainage. The Independence 6 well pad was adjusted during the on-site survey to allow for a 75-foot buffer to an adjacent wetland. Upon completion of the wells, a portion of the well pads would be reclaimed to further avoid environmental areas of concern.

**Summary of Commitments to Avoid or Minimize Impacts:** In an effort to minimize the potential environmental effects associated with the proposed project, QEP will also implement the following measures into the development of these sites:

- A semi-closed loop system would be used during drilling. Drill cuttings would be solidified before being placed in the reinforced lined cuttings pit. The reinforced lining of the cuttings pit would have a minimum thickness of 20 mils to prevent seepage and contamination of underlying soil. Any minimal fluids remaining in the drill cuttings pit would be removed and disposed of in accordance with BLM and NDIC rules and regulations. All liquids from drilling would be transported off-site. The drill cuttings pit would be reclaimed to BLM

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

and North Dakota Industrial Commission (NDIC) standards immediately upon finishing completion operations.

- Prior to its use, the cuttings pit would be fenced on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.
- All efforts will be made for construction activities to begin after July 15 and end prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that a construction activity needs to take place within the nesting and breeding season, pre-construction surveys for migratory birds or their nests would be conducted within five days prior to the initiation of construction activities. Mowing the sites prior to the nesting/breeding season is also an option that would prevent birds from nesting at the site.
- Measures implemented during construction to avoid the taking of migratory bird species will include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.
- If a whooping crane is sighted within one-mile of a well site or associated facilities while under construction, all work will cease within one-mile of that part of the project and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- The storage tanks and heater/treater will be surrounded by an impermeable berm that will act as secondary containment to guard against possible spills. The berm will be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. BMPs would be implemented to minimize wind and water erosion of soil resources and a semi-closed loop system would be used during drilling.
- The northwest corner of the Independence 4 well pad will be rounded to avoid a wooded drainage.
- A minimum of an 18-inch high berm would be constructed along the top of all fill slopes and all areas not providing a minimum of 18 inches of containment at the well pads to control runoff
- Secondary containment measures consisting of earthen berms, straw wattles or additional BMP's will be placed in adjacent drainages as needed.

To ensure that social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed development of this project, pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended. We are particularly interested in any property that your department may own, or have an interest in, located within the project area. We would also appreciate being made aware of any

Independence 4, 6 & 32 well pads  
QEP  
Fort Berthold Reservation

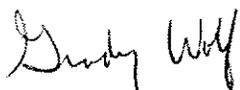
proposed development your department may be contemplating in the area of the proposed project. Any information that might help us in our study would be appreciated.

It is requested that any comments or information be forwarded to our office on or before **June 12, 2011**. We request your comments by that date to ensure that we will have ample time to review and incorporate them into the necessary environmental documentation.

If you would like further information regarding this project, please contact me at (701) 355-8726. Thank you for your cooperation.

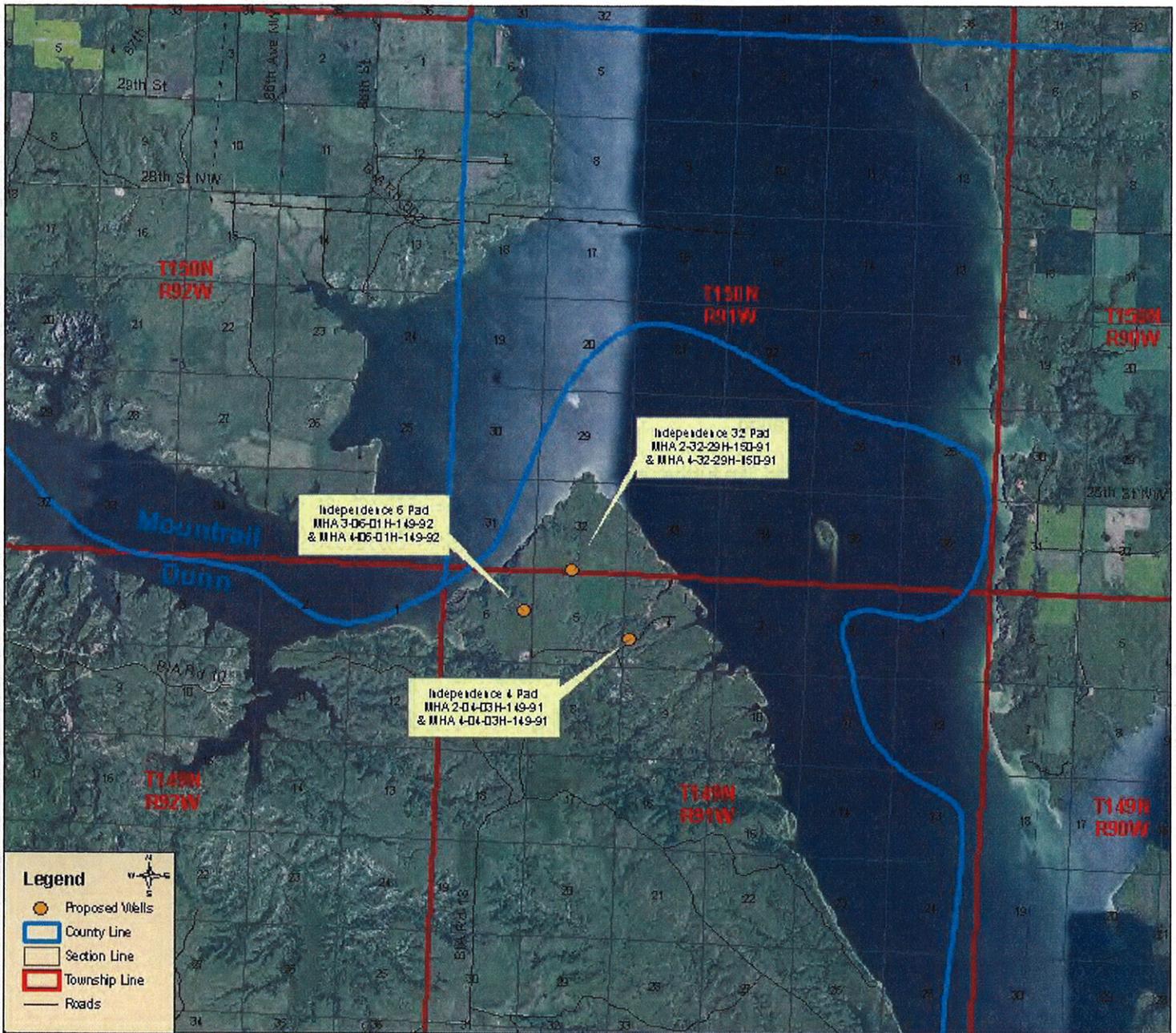
Sincerely,

**Kadmas, Lee & Jackson, Inc.**

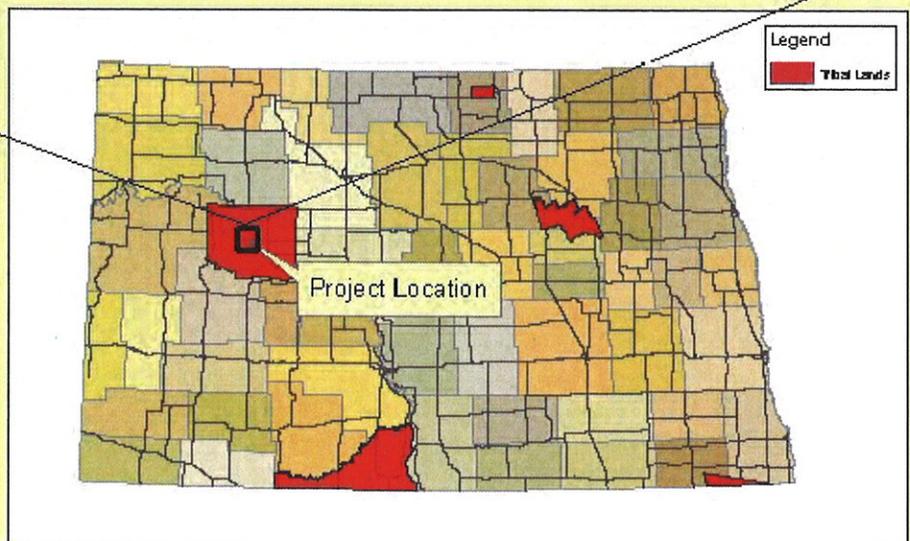
A handwritten signature in cursive script that reads "Grady Wolf".

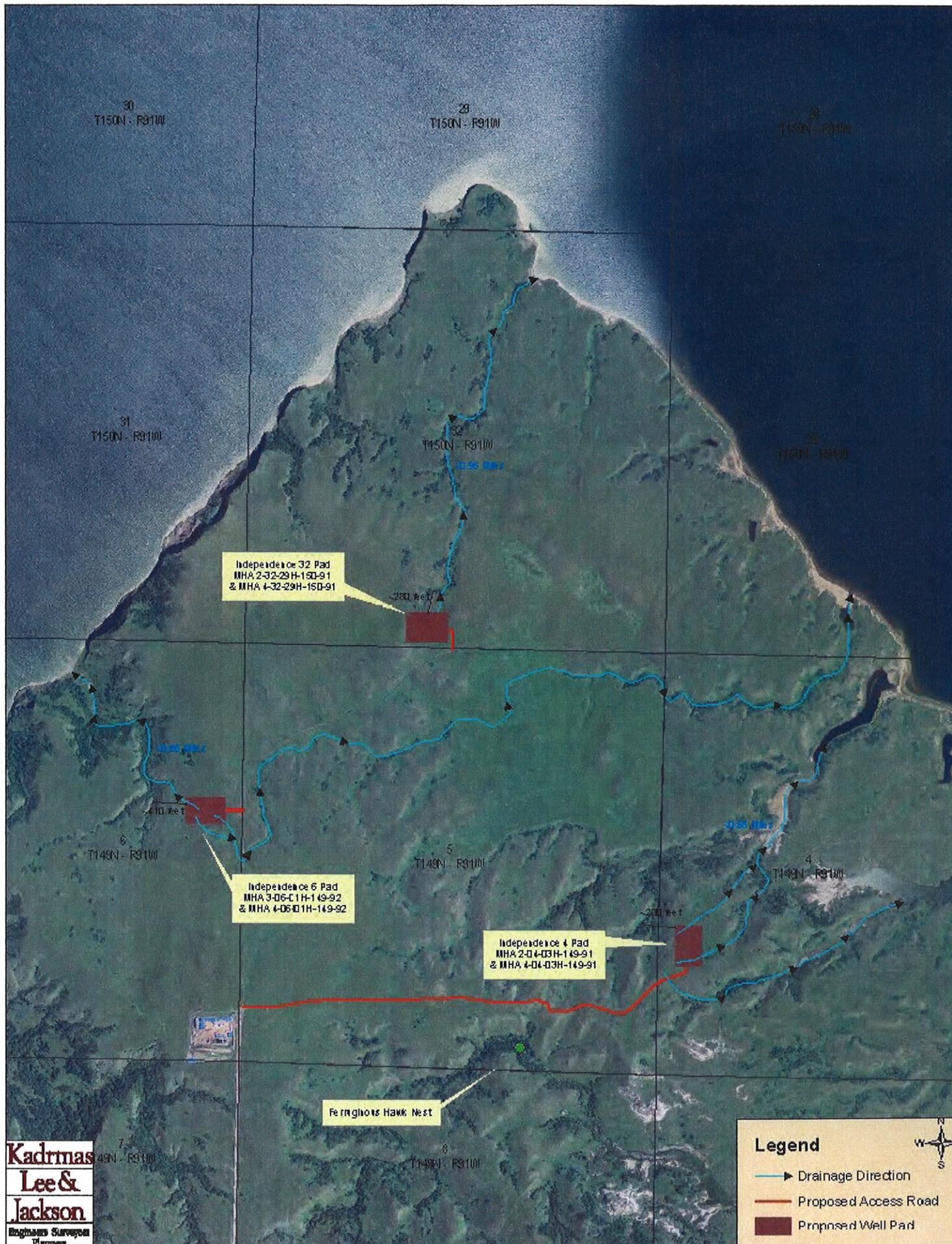
Grady Wolf  
Environmental Planner

Enclosures (Maps)



**QEP Energy Company  
Proposed Wells  
Dunn County, ND**





Independence 32 Pad  
 MHA 2-32-29H-150-91  
 & MHA 4-32-29H-150-91

Independence 6 Pad  
 MHA 3-06-E1H-149-92  
 & MHA 4-06-D1H-149-92

Independence 4 Pad  
 MHA 2-04-03H-149-91  
 & MHA 4-04-03H-149-91

Ferrigno's Hawk Nest

**Legend**

-  Drainage Direction
-  Proposed Access Road
-  Proposed Well Pad

W N  
S E

**Kadmas**  
**Lee &**  
**Jackson**  
 Engineers Surveyors  
 Planners

# Appendix B

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## Agency Scoping Responses



REPLY TO  
ATTENTION OF

North Dakota Regulatory Office

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

June 17, 2011

Kadrmass, Lee & Jackson  
ATTN: Grady Wolf, Environmental Scientist  
PO Box 1157  
Bismarck, North Dakota 58502-1157

Dear Mr. Wolf:

This is in response to your request for comments received May 26, 2011 concerning an Environmental Assessment your firm is preparing for the Bureau of Indian Affairs and the Bureau of Land Management for **QEP Energy Company's** proposal to construct three exploratory oil and gas wells on the Fort Berthold Reservation. For your reference, this letter addresses wells referred to as Independence 4, which would be located in the SW $\frac{1}{4}$  of Section 4 and Independence 6, which would be located in the NE $\frac{1}{4}$  of Section 6, both in Township 149 North, Range 91 West and Independence 32, which would be located in the SW $\frac{1}{4}$  of Section 32, Township 150 North, Range 91 West, all in Dunn County, North Dakota..

The Corps of Engineers regulates work affecting navigable waterways under Section 10 of the Rivers and Harbors Act and the discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act. Navigable waterways regulated under Section 10 in North Dakota are: the entire Missouri River system, including Lake Sakakawea and Lake Oahe; the Yellowstone River from the North Dakota/Montana border to its mouth; Upper Des Lacs Lake; Red River of the North; Bois De Sioux; and James River from Jamestown south to the North Dakota/South Dakota border. 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.

If during project design, impacts to waters of the United States cannot be avoided, permits would be required prior to commencement of construction. For your information, regulations found at 33 CFR 322.3(a) state, in part: "For the purposes of a section 10 permit, a tunnel or other structure or work under or over a navigable waters of the United States is considered to have an impact on the navigable capacity of the waterbody". A DA permit application is enclosed for your convenience. If there is a question on whether or not permits would be required, the application and design specifications of the project should be forwarded our office for review and authorization prior to commencement of construction. It is essential to identify impacts to waters of the United States resulting from the project.

If you have any questions regarding this letter or our program, please do not hesitate to write me at the above address, or call this office at (701) 255-0015.

Sincerely,



Toni R. Erhardt  
Project Manager  
North Dakota Regulatory Office

Enclosure

**Instructions for Preparing a  
Department of the Army Permit Application**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## **DRAWINGS AND ILLUSTRATIONS**

### **General Information.**

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

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

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

<b>APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT</b> <i>(33 CFR 325)</i>			<b>OMB APPROVAL NO. 0710-0003</b> <b>EXPIRES: 31 August 2012</b>		
Public reporting burden for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.					
<b>PRIVACY ACT STATEMENT</b>					
Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This Information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.					
<b>(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)</b>					
1. APPLICATION NO		2. FIELD OFFICE CODE		3. DATE RECEIVED	
				4. DATE APPLICATION COMPLETE	
<b>(ITEMS BELOW TO BE FILLED BY APPLICANT)</b>					
5. APPLICANT'S NAME: First -                      Middle -                      Last - Company -- E-mail Address --			8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) First -                      Middle -                      Last - Company -- E-mail Address --		
6. APPLICANT'S ADDRESS. Address - City --                      State --                      Zip --                      Country --			9. AGENT'S ADDRESS Address - City --                      State --                      Zip --                      Country --		
7. APPLICANT'S PHONE NOS. W/AREA CODE. a. Residence                      b. Business                      c. Fax			10. AGENT'S PHONE NOS. W/AREA CODE a. Residence                      b. Business                      c. Fax		
<b>STATEMENT OF AUTHORIZATION</b>					
11 I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.					
_____ APPLICANT'S SIGNATURE			_____ DATE		
<b>NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY</b>					
12 PROJECT NAME OR TITLE (see instructions)					
13. NAME OF WATERBODY, IF KNOWN (if applicable)			14. PROJECT STREET ADDRESS (if applicable)		
15 LOCATION OF PROJECT Latitude: °N Longitude: °W			Address  City -                      State --                      Zip -		
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID                      Municipality Section --                      Township --                      Range --					
17 DIRECTIONS TO THE SITE					

18. Nature of Activity (Description of project, include all features)					
19. Project Purpose (Describe the reason or purpose of the project, see instructions)					
<b>USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED</b>					
20. Reason(s) for Discharge					
21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:					
Type Amount in Cubic Yards		Type Amount in Cubic Yards		Type Amount in Cubic Yards	
22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)					
Acres					
Or					
Liner Feet					
23. Description of Avoidance, Minimization, and Compensation (see instructions)					
24. Is Any Portion of the Work Already Complete? Yes <input type="checkbox"/> No <input type="checkbox"/> IF YES, DESCRIBE THE COMPLETED WORK					
25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).					
Address --					
City --		State --		Zip --	
26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.					
AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
* Would include but is not restricted to zoning, building, and flood plain permits					
27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.					
_____ SIGNATURE OF APPLICANT		_____ DATE		_____ SIGNATURE OF AGENT	
_____ SIGNATURE OF APPLICANT		_____ DATE		_____ DATE	
The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.					
18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.					



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



JUN 17 2011

Mr. Grady Wolf  
Environmental Planner  
Kadmas, Lee & Jackson, Inc.  
128 Soo Line Drive  
P.O. Box 1157  
Bismarck, North Dakota 58502-1157

RECEIVED  
JUN 20 2011

Re: QEP Energy Company Independence  
4, 6, and 32 Well Pads, Fort Berthold  
Reservation, Dunn County, N. Dakota

Dear Mr. Wolf:

This is in response to your May 13, 2011, letter requesting comments to assist in your preparation of an Environmental Assessment (EA) and federally-listed threatened and endangered species effects determinations, on behalf of the Bureau of Indian Affairs (BIA) and the Bureau of Land Management (BLM). QEP Energy has proposed three well pads that would support two exploratory oil and gas wells per pad, and associated access roads on the Fort Berthold Reservation, Dunn County, North Dakota.

Specific locations are:

Independence 4 well pad; T. 149 N., R. 91 W., SW ¼ of Section 4  
Independence 6 well pad; T. 149 N., R. 91 W., NE ¼ of Section 6  
Independence 32 well pad; T. 150 N., R. 91 W., SW ¼ of Section 32

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), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", 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), and the Endangered Species Act (16 U.S.C. 1531 et seq.) (ESA).

In an e-mail dated October 13, 2009, the BIA designated Kadmas, Lee and Jackson (KLJ) to represent the BIA for informal Section 7 consultation under the ESA. Therefore, the U.S. Fish and Wildlife Service (Service) is responding to you as the designated non-Federal representative.

### Threatened, Endangered, and Candidate Species

KLJ has made “may affect, not likely to adversely affect” determinations for the whooping crane, interior least tern, pallid sturgeon, and piping plover. These determinations were based on several commitments by QEP, the following of which the Service considers to be relevant to threatened and endangered species effects:

- Semi-closed loop systems would be used during drilling. Drill cuttings would be solidified before being placed in the reinforced lined cuttings pit. The reinforced lining of the cuttings pit would have a minimum thickness of 20 mils to prevent seepage and contamination of underlying soil. Any minimal fluids remaining in the drill cuttings pit would be removed and disposed of in accordance with BLM and NDIC rules and regulations. All liquids from drilling would be transported off-site. The drill cuttings pit would be reclaimed to BLM and NDIC standards immediately upon finishing completion operations.
- If a whooping crane is sighted within 1 mile of a well site or associated facilities while under construction, all work will cease within 1 mile of that part of the project and the USFWS will be contacted immediately. In coordination with the USFWS, work may resume after the bird(s) leave the area.
- The storage tanks and heater/treater will be surrounded by an impermeable berm that will act as secondary containment to guard against possible spills. The berm will be sized to hold 100% of the capacity of the largest storage tank, plus one full day’s production. BMPs would be implemented to minimize wind and water erosion of soil resources and a semi-closed loop system would be used during drilling.
- A minimum of an 18-inch high berm would be constructed along the top of all fill slopes and all areas not providing a minimum of 18 inches of containment at the well pads to control runoff.
- Secondary containment measures consisting of earthen berms, straw wattles or additional BMPs will be placed in adjacent drainages as needed.

The Service concurs with the “may affect, not likely to adversely affect” determinations for the whooping crane, interior least tern, pallid sturgeon, and piping plover for the proposed QEP Energy Independence 4, 6, and 32 well pads and associated roads and facilities.

As a matter of policy, the Service does not concur with “no effect” determinations. However, we acknowledge your “no effect” determinations for the gray wolf and black-footed ferret.

KLJ made “may affect, not likely to adversely affect” determinations for the Dakota skipper and Sprague’s pipit. No legal requirement exists to protect candidate species.

Since these species are candidates, effects determinations are not required; however, Federal agencies may consider candidates as proposed for listing. BIA has previously indicated to the Service that they do not wish to consider candidate species as proposed, but BLM does. Since the surface impacts are regulated by BIA, we will assume that no effects determinations for these two candidates will be required by BIA. Measures indicated in your letter designed to avoid take of migratory birds will also help avoid direct take of Sprague's pipit.

### **Migratory Birds**

The EA states that migratory birds observed during field surveys for the three well pad sites included field sparrow, an unidentified owl, meadow lark, Baltimore oriole, mallard, American robin, American kestrel, Franklin's gull, and a ferruginous hawk and its nest. In addition to the QEP commitments mentioned above, the following commitments are also relevant to compliance with the MBTA and E.O. 13186:

- All efforts will be made for construction activities to begin after July 15 and end prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that a construction activity needs to take place within the nesting and breeding season, pre-construction surveys for migratory birds or their nests would be conducted within 5 days prior to the initiation of construction activities. Mowing the sites prior to the nesting/breeding season is also an option that would prevent birds from nesting at the site.
- Measures implemented during construction to avoid the taking of migratory bird species will include: the use of suitable mufflers on all internal combustion engines; certain compressor components to mitigate noise; only utilizing approved roadways; placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil; maintaining open pits and ponds that are free from oil, and netting cuttings pits with netting that has a maximum mesh size of 1.5 inches.
- Prior to its use, the cuttings pit would be fenced on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.
- The northwest corner of the Independence 4 well pad will be rounded to avoid a wooded drainage.

### **Bald and Golden Eagles**

Your letter stated a ground survey for eagle nests was conducted on May 5, 2011. No eagle nests or eagles were observed. The nearest nest site that has been documented is approximately 10 miles south of the proposed well pads at the closest location. A commitment was made that if a bald or golden eagle or eagle nest is sighted within 0.5

mile of the project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

The Service believes that with the inclusion of the stated commitments, QEP's proposed projects are in compliance with the MBTA, E.O. 13186, and BGEPA.

### **Cumulative Impact Assessment**

The Service encourages the action agencies to include a comprehensive cumulative impact analysis in the EA. The EA should evaluate the existing wells, associated facilities and other activities in a NEPA analysis area, consider the proposed wells and associated facilities in this context, and include an analysis of the cumulative impacts that could affect similar resources in the foreseeable future.

Thank you for the opportunity to comment on this EA and federally-listed and candidate species, and for QEP's cooperation in addressing our recommendations. If you require further information or the project plans change, please contact me at (701) 250-4481 or at the letterhead address.

Sincerely,



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



June 8, 2011

Mr. Grady Wolf  
Environmental Scientist  
Kadmas, Lee & Jackson, Inc.  
P.O. Box 1157  
Bismarck, ND 58502-1157

Re: Six Proposed Oil & Gas Wells by QEP Energy Company  
On the Independence 4, 6 and 32 Well Pads  
On the Fort Berthold Reservation, Dunn County

Dear Mr. Wolf:

This department has reviewed the information concerning the above-referenced project submitted under date of May 13, 2011 with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Development of the production facilities and any access roads, well pads or pipelines 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. Detailed guidance is available at [www.ndhealth.gov/AQ/OilandGasWells.htm](http://www.ndhealth.gov/AQ/OilandGasWells.htm).

Any questions about air pollution control or permitting requirements should be addressed to Ms. Kathleen Paser at the U.S. Environmental Protection Agency, Region 8. She may be reached at (303) 312-6526 or [Paser.Kathleen@epa.gov](mailto:Paser.Kathleen@epa.gov).

2. Aggregate to be used for road construction should not contain any erionite. Aggregate sources should be tested for erionite following guidelines found at [www.ndhealth.gov/EHS/Erionite](http://www.ndhealth.gov/EHS/Erionite). For questions regarding erionite testing, please call Mark Dihle at 701-328-5188.
3. 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

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

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.

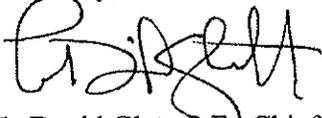
4. Oil and gas related construction activities located within tribal boundaries in North Dakota may be required to obtain a permit to discharge storm water runoff from the U.S. Environmental Protection Agency. Further information may be obtained from the U.S. EPA's website or by calling the U.S. EPA – Region 8 at (303) 312-6312. Also, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,



L. David Glatt, P.E., Chief  
Environmental Health Section

LDG:cc

Attach.

cc: Mark Dihle, Division of Air Quality



**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.



REPLY TO  
ATTENTION OF

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

RECEIVED  
JUN 07 2011

June 2, 2011

Planning, Programs, and Project Management Division

Kadrmass, Lee and Jackson  
Attention: Grady Wolf  
P.O. Box 1157  
Bismarck, North Dakota 58502

Dear Mr. Wolf:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated May 13, 2011, regarding the proposed development, drilling and completion of six wells on three well pads on the Fort Berthold Reservation in Dunn County, North Dakota. The Corps offers the following comments:

The Corps is aware of recent reports that describe environmental impacts associated with the use of oil waste pits in North Dakota. Oil waste pits may be susceptible to flooding, which may threaten drinking water supplies, wildlife, soil and other water resources. Due to the proximity of the proposed wells to Lake Sakakawea, a significant drinking water resource, the Corps requests the applicant consider use of a closed loop drilling system. A closed loop drilling system may reduce or eliminate the discharge of toxic drilling wastes and their potential negative impacts to the environment.

Since the proposed project does not appear to be located within Corps owned or operated lands, we are providing no floodplain or flood risk information. To determine if the proposed project may impact areas designated as a Federal Emergency Management Agency special flood hazard area, please consult the following floodplain management office:

North Dakota State Water Commission  
Attention: Jeff Klein  
900 East Boulevard Avenue  
Bismarck, North Dakota 58505-0850  
jjkein@nd.gov  
T-701-328-4898  
F-701-328-3747

Your plans should be coordinated with the U.S. Environmental Protection Agency, which is currently involved in a program to protect groundwater resources. If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the North Dakota Game and Fish Department regarding fish and wildlife resources. In addition, the North Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (<https://www.nwo.usace.army.mil/html/od-r/district.htm>) to determine if this project requires a 404 permit. For a detailed review of permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers  
Bismarck Regulatory Office  
Attention: CENWO-OD-R-ND/Cimarosti  
1513 South 12th Street  
Bismarck, North Dakota 58504

In addition, please update your records with our current mailing address:

U.S. Army Corps of Engineers, Omaha District  
Planning Branch  
Attention: CENWO-PM-AC  
1616 Capitol Ave.  
Omaha, Nebraska 68102-4901

If you have any questions, please contact Mr. John Shelman of my staff at (402) 995-2708.

Sincerely,



*BT* Brad Thompson  
Chief, Environmental Resources and Missouri  
River Recovery Program Plan Formulation Section

RECEIVED  
JUN 07 2011



"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

June 6, 2011

Grady Wolf  
Environmental Scientist  
Kadrmass, Lee & Jackson, Inc.  
PO Box 1157  
Bismarck, ND 58502-1157

Dear Mr. Wolf:

RE: Independence 4, 6 & 32 Well Pads

QEP Energy Company is proposing six wells on three well pads on the Fort Berthold Reservation in Dunn County, North Dakota.

Our primary concern with oil and gas development is the fragmentation and loss of wildlife habitat associated with construction of the well pads and access roads. We recommend that construction be avoided to the extent possible within native prairie, wooded draws, riparian corridors, and wetland areas.

We also suggest that botanical surveys be completed during the appropriate season and aerial surveys be conducted for raptor nests before construction begins.

Sincerely,

Paul Schadewald  
Chief  
Conservation & Communication Division

js



Jack Dalrymple, Governor  
Mark A. Zimmerman, Director  
1600 East Century Avenue, Suite 3  
Bismarck, ND 58503-0649  
Phone 701-328-5357  
Fax 701-328-5363  
E-mail [parkrec@nd.gov](mailto:parkrec@nd.gov)  
[www.parkrec.nd.gov](http://www.parkrec.nd.gov)

June 1, 2011

Grady Wolf  
Kadmas Lee and Jackson  
128 Soo Line Drive  
PO Box 1157  
Bismarck, ND 58502-1157

Re: QEP Energy County, Independence 4,6, and 32 well pads, Fort Berthold Reservation

Dear Mr. Wolf:

The North Dakota Parks and Recreation Department has reviewed the above referenced project proposal for the development, drilling, and completion of 6 wells on three pads on the Fort Berthold Reservation, Dunn County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has once again reviewed the project to determine if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within and within an approximate one-mile radius of the project area. Based on this review, we have a record for the occurrence of *Charadrius melodus* (piping plover) in 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. Avoid noise and disturbance during the nesting season. Seasonally restrict work that might disturb piping plovers during the nesting season. Please see the attached spreadsheet and map for more information on these occurrences. 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 me at (701-328-5370 or [kgduttonhefner@nd.gov](mailto:kgduttonhefner@nd.gov)) if additional information is needed.

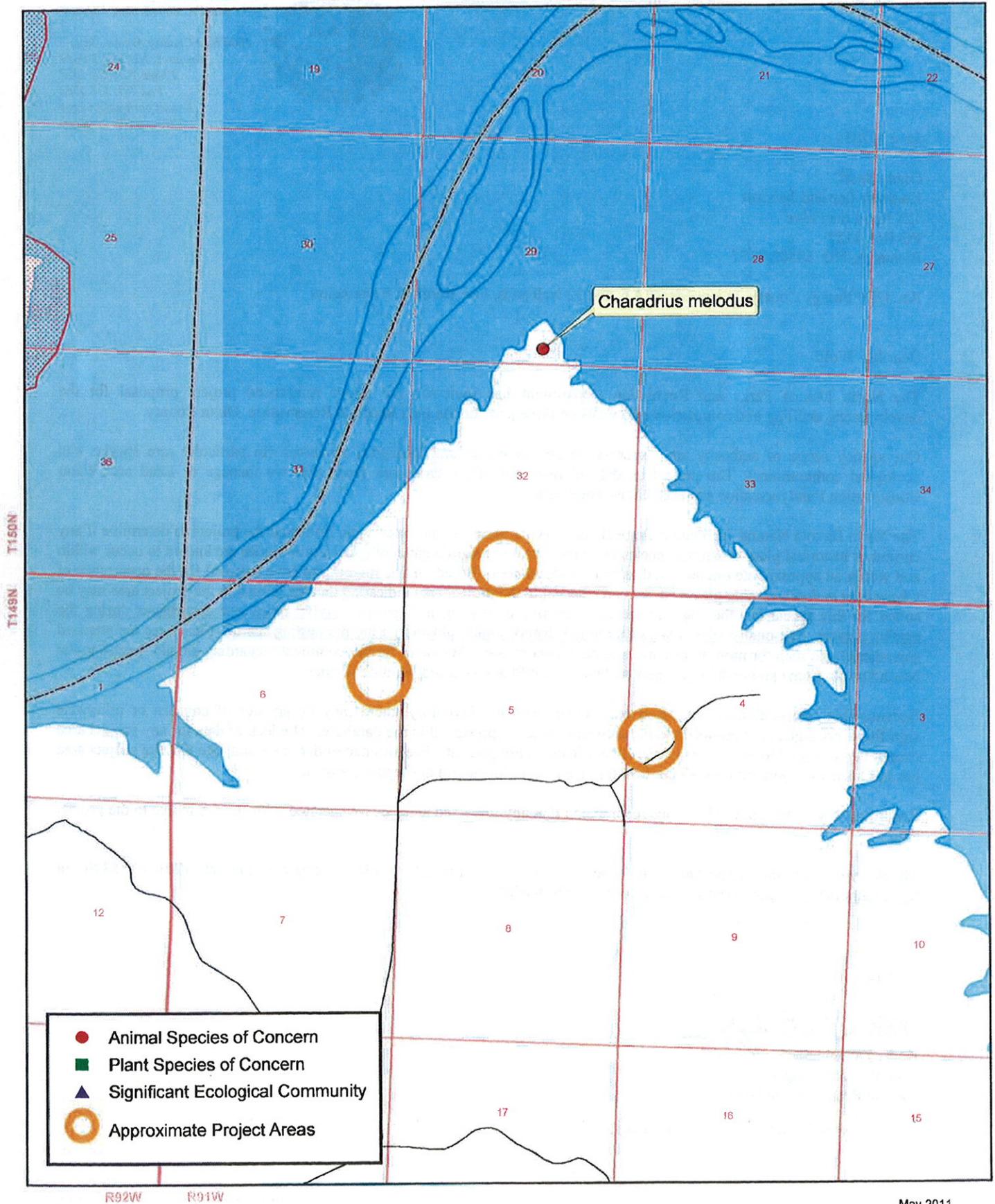
Sincerely,

Kathy Duttonhefner  
Coordinator/Biologist  
Natural Resources Division

R.USNDNHI\*2011-0118KD/6\_1\_2011/DL6\_13\_2011

.....  
*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
<i>Charadrius melodus</i>	Piping Plover	S1S2	G3	LE, LT	150N091W - 29; 150N091W - 32	Dunn	1996	Medium	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 mappable to map or place name precision only; 8 km from centerpoint

U - Unmappable

## Grady Wolf

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**From:** Sorensen, Charles G NWO [Charles.G.Sorensen@usace.army.mil]  
**Sent:** Wednesday, May 25, 2011 11:02 AM  
**To:** grady.wolf@kljeng.com  
**Cc:** charles.g.sorensen@usace.army.mil  
**Subject:** Comments on QEP Energy Company Independence Point Wells

Grady

Thank you for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project comment on QEP Energy Company proposed Independence Point Oil Well pads and access road.

At this time the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project request that consideration and if possible implement the following management practices during the exploration phase of those wells listed in the request letter

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 impervious lined 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.

Prior to the drilling rig and associated equipment being moved/ placed that all equipment be either pressure washed or air blasted off Tribal lands to prevent the possible transportation of noxious or undesirable vegetation onto Tribal lands as well as USACE managed lands.

That no surface occupancy be allowed within ½ mile of any known Threatened or Endangered Species critical habitat.

If possible, all construction activities should occur between August 15th and April 1st.

If trees are present, the appropriate dates are August 15th – February 1st. By constructing during these dates, disruptions to wildlife during the breeding season may be kept to a minimum.

Cumulative impacts are often overlooked, in the completion of NEPA compliance. To adequately assess cumulative impacts, the following activities should consider.

- a. Has the project area already been degraded, and if so, to what extent?
  - b. Are other ongoing activities in the area causing impacts, and if so, to what extent?
  - c. What is the likelihood that this project will lead to a number of associated projects?
- d. What are the trends for activities and impacts in the area?

If you have any questions regarding the above recommendations please feel free to contact me

Charles Sorensen

Natural Resource Specialist

U.S. Army Corps of Engineers

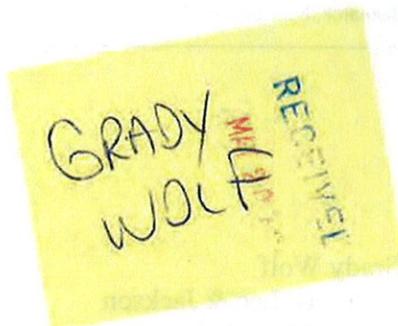
Garrison Dam/Lake Sakakawea Project

**Kadrmass**  
**Lee &**  
**Jackson**  
Engineers Surveyors  
Planners

May 13, 2011

Mr. Tom Schauer  
Manager  
Federal Aviation Administration  
2301 University Drive, Bldg 23B  
Bismarck, ND 58504

**RE: QEP Energy Company**  
**Independence 4, 6 and 32 well pads**  
**Fort Berthold Reservation**  
**Dunn County, North Dakota**



Dear Tom Schauer,

On behalf of QEP Energy Company (QEP), Kadrmass, Lee & Jackson, Inc. (KL&J) is preparing an EA (Environmental Assessment) under NEPA (the National Environmental Policy Act) for the BIA (Bureau of Indian Affairs) and BLM (Bureau of Land Management). The proposed action includes approval by the BIA and BLM for the development, drilling, and completion of six wells on three well pads on the Fort Berthold Reservation. Each pad location would consist of two wells.

The *Independence 4* well pad would be located in the SW¼ of Section 4, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. The *Independence 6* well pad would be located in the NE ¼ of Section 6, Township 149 North, Range 91 West, 5<sup>th</sup> P.M. The *Independence 32* well pad would be located in the SW ¼ of Section 32, Township 150 North, Range 91 West, 5<sup>th</sup> P.M. **Please refer to the enclosed project location map.** The well pads have been positioned to utilize existing roadways for access to the greatest extent possible. Construction of the proposed well pads and access road is scheduled to begin in 2011.

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

Please provide your comments by **June 13, 2011**. We request your comments by that date to ensure that we will have ample time to review them and incorporate them into the EA.

If you would like further information regarding this project, please contact me at (701) 355-8726. Thank you for your cooperation.

Sincerely,

**Kadrmass, Lee & Jackson, Inc.**

Grady Wolf  
Environmental Scientist  
Enclosure (Project Location Map)

US Department of Transportation  
Federal Aviation Administration  
Date 5/16/2011

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 77.9. 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  
Fax 701 355 8781  
kljeng.com  
Kadrmass, Lee & Jackson, Inc.

United States Department of Agriculture



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

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June 28, 2011

Grady Wolf  
Kadrmass, Lee & Jackson  
128 Soo Line Drive  
PO Box 1157  
Bismarck, ND 58502-1157

RE: QEP Energy Company  
Independence 4, 6 and 32 well pads  
Fort Berthold Reservation  
Dunn County, ND

Dear Mr. Wolf:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated May 13, 2011, regarding the Independence 4, 6, and 32 well pads on the Fort Berthold Reservation in Dunn County, North Dakota.

*Important Farmlands* - NRCS has a major responsibility with Farmland Policy Protection 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, no further action is required.

*Wetlands* – The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

*Helping People Help the Land*

An Equal Opportunity Provider and Employer

Mr. Wolf  
Page 2

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

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Jerome Schaar".

JEROME SCHAAR  
State Soil Scientist/MO Leader



# United States Department of the Interior

BUREAU OF INDIAN AFFAIRS  
Great Plains Regional Office  
115 Fourth Avenue S.E., Suite 400  
Aberdeen, South Dakota 57401



IN REPLY REFER TO:  
DESCRM  
MC-208

JUL 11 2011

Elgin Crows Breast, THPO  
Mandan, Hidatsa and Arikara Nation  
404 Frontage Road  
New Town, North Dakota 58763

Dear Mr. Crows Breast:

We have considered the potential effects on cultural resources of three proposed oil well pad projects in Dunn County, North Dakota. Approximately 52.4 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-1909/FB/11**, the proposed undertakings, locations, and project dimensions are described in the following reports:

Ó Donnchadha, Brian

- (2011a) MHA 2-04-03H-149-91 & MHA 4-04-03H-149-91 Well Pad and Access Road: A Class III Cultural Resource Inventory, Dunn County, North Dakota. KLJ Cultural Resources for QEP, Denver.
- (2011b) MHA 2-32-29H-150-91 & MHA 4-32-29H-150-91 Well Pad and Access Road: A Class III Cultural Resource Inventory, Dunn County, North Dakota. KLJ Cultural Resources for QEP, Denver.
- (2011c) MHA 3-06-01H-149-92 & MHA 4-06-01H-149-92 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. We will adhere to the Standard Conditions of Compliance.

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

Sincerely,

Regional Director

Enclosures

# **Notice of Availability and Appeal Rights**

Questar: MHA 2-04-03H-149-91 and MHA 4-04-03H-149-91 Oil and Gas Wells on the Independence 4 Well Pad, MHA 3-06-01H-149-92 and MHA 4-06-01H-149-92 Oil and Gas Wells on the Independence 6 Well Pad, and MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91 Oil and Gas Wells on the Independence 32 Well Pad

**The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to an Environmental Assessment to Authorize Land Use for a Drilling of MHA 2-04-03H-149-91 and MHA 4-04-03H-149-91 Oil and Gas Wells on the Independence 4 Well Pad, MHA 3-06-01H-149-92 and MHA 4-06-01H-149-92 Oil and Gas Wells on the Independence 6 Well Pad, and MHA 2-32-29H-150-91 and MHA 4-32-29H-150-91 Oil and Gas Wells on the Independence 32 Well Pad as shown on the attached map. Construction by QEP is expected to begin in 2011.**

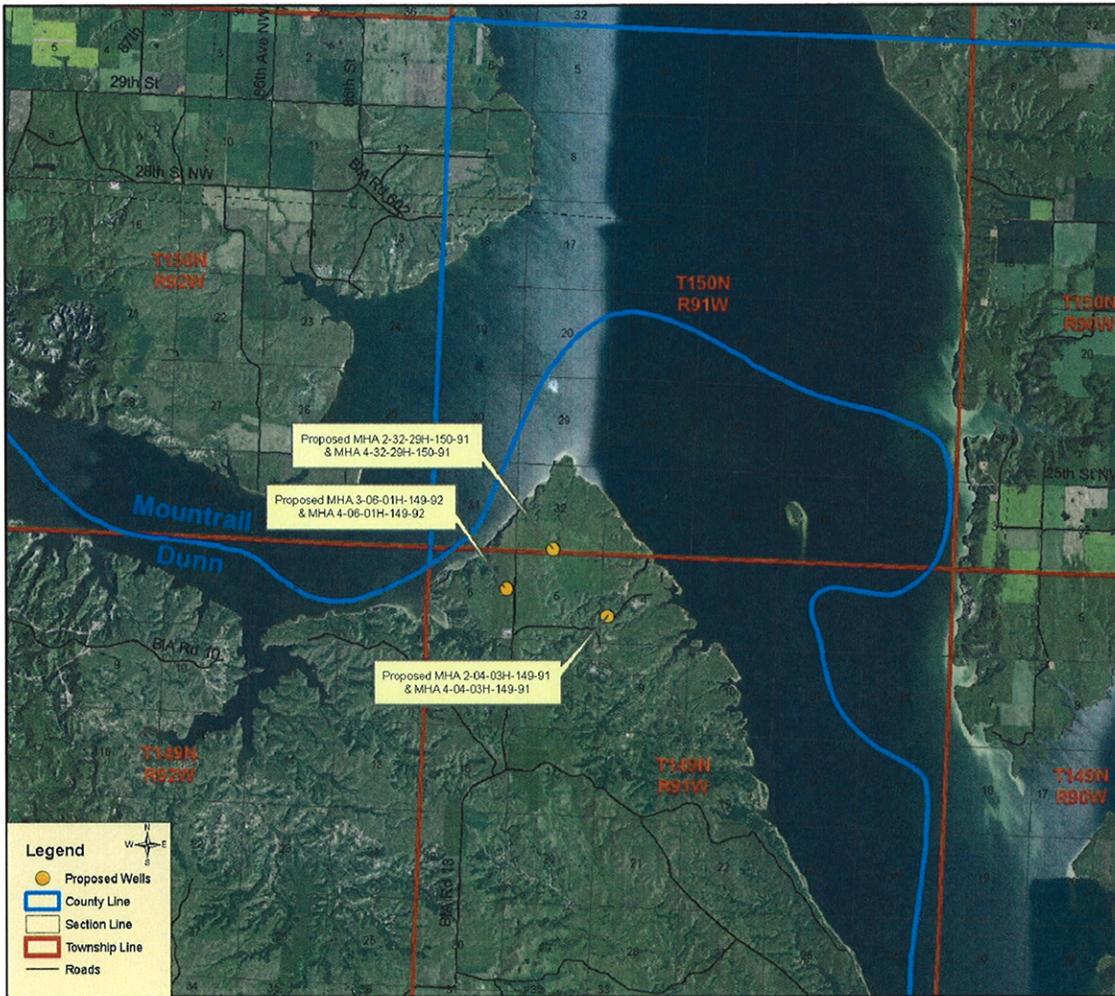
**An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Earl Silk, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant 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 September 14, 2011, by contacting:**

**United States Department of the Interior  
Office of Hearings and Appeals  
Interior Board of Indian Appeals  
801 N. Quincy Street, Suite 300, Arlington, Va 22203.**

**Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.**

**Project locations.**



**QEP Energy Company  
Proposed Wells  
Dunn County, ND**

