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

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IN REPLY REFER TO:
DESCRM
MC-208

AUG 1 1 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 seven proposed oil and gas wells atop three pads by Marathon Oil on the Fort Berthold Reservation.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files are copies of the EA, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations require that there be a public notice of availability of the FONSI (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, THPO (with attachment)
Derek Enderud, BLM, Dickinson, ND (with attachment)
John Shelman, US Army Corps of Engineers
Jeffrey Hunt, Fort Berthold Agency

Finding of No Significant Impact

Marathon Oil Company (Marathon)

Environmental Assessment for

One Feather USA 31-17H and Sitting Owl USA 34-8H Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H Mink USA 11-15H and Many Woman USA 14-10H

Exploratory Wells

Fort Berthold Indian Reservation
McLean County, North Dakota

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

I. One Feather USA 31-17H and Sitting Owl USA 34-8H, located in Section 17, T150N, R90W, 5th P.M. (McLean County).
II. Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H, located in Section 9, T150N, R90W, 5th P.M. (McLean County).
III. Mink USA 11-15H and Many Woman USA 14-10H, located in Section 15, T150N, R90W, 5th P.M. (McLean County).

Associated federal actions by BIA include determinations of effect regarding environmental resources and positive recommendations to the Bureau of Land Management (BLM) regarding the Applications for Permit to Drill and Rights of Way associated with the proposed project.

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

This determination is based on the following factors:

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

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.

Guidance from the United States 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 United States Code [U.S.C.] 703 et seq.), the NEPA of 1969, as amended (42 U.S.C. 4321 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.).

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.

Environmental Justice was fully considered.

Cumulative effects to the environment are either mitigated or minimal.

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

The proposed project will improve the socioeconomic condition of the affected Indian community.

Regional Director

8-10-11
Date

ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

Great Plains Regional Office
Aberdeen, South Dakota

Marathon Oil Company

Exploratory Wells

One Feather USA 31-17H and Sitting Owl USA 34-8H

Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H

Mink USA 11-15H and Many Woman USA 14-10H

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
Aberdeen, South Dakota 57401
605-226-7656

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CHAPTER 1 PURPOSE AND NEED FOR ACTION

1.1 Introduction

This Environmental Assessment (EA) is prepared to inform decision-makers and the public of the potential environmental consequences of the Proposed Action and the No Action Alternative. This EA is prepared in accordance with National Environmental Policy Act (NEPA) of 1969, as amended, and the regulations of the Council on Environmental Quality (CEQ), 40 Code of Federal Regulations (CFR) parts 1500 through 1508. The Bureau of Indian Affairs (BIA) has trust responsibilities to administer the surface natural resources for land held in trust by the United States (U.S.) government within the Fort Berthold Indian Reservation (FBIR) and the Bureau of Land Management (BLM) has the responsibility for managing the mineral resources.

1.2 Description of the Proposed Action

The FBIR encompasses 988,000 acres (ac), 457,837 of which are in tribal ownership by the Three Affiliated Tribes (Mandan, Hidatsa, and Arikara, also referred to as "the Tribes") and individual Indian ownership by its members. The FBIR is located in west-central North Dakota and is split into three areas by Lake Sakakawea, which traverses the center of the FBIR. The FBIR occupies portions of six counties: Dunn, McKenzie, McLean, Mercer, Mountrail, and Ward.

The target formation is the Bakken Formation (Bakken) within the Williston Basin, which is rich in oil and gas deposits. The Bakken underlies approximately 25,000 square miles (mi^2) of North Dakota and Montana in the U.S. and Saskatchewan and Manitoba in Canada. Approximately two-thirds of the acreage is beneath North Dakota. It has been estimated by the U.S. Geological Survey that there are approximately 3.0 to 4.3 billion barrels of undiscovered, technically recoverable oil in the Bakken Formation (USGS 2008).

Marathon Oil Company (Marathon) is proposing to drill seven oil and gas wells on three multi-well pads on the FBIR in McLean County, North Dakota (Figure 1-1). The seven oil and gas wells are on three multi-well pads and are designated as:

- One Feather USA 31-17H and Sitting Owl USA 34-8H—The wells would be located in Section 17, T 150 N, R 90 W, 5th P.M. The bottom hole of the One Feather USA 31-17H well would be in Section 20, T 150 N, R 90 W, 5th P.M. and the bottom hole for the Sitting Owl USA 34-8H well would be in Section 5, T 150 N, R 90 W, 5th P.M.
- Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H—The wells would be located in Section 9, T 150 N, R 90 W, 5th P.M. The bottom holes for the Driver USA 34-9H and Driver USA 44-9H wells would be in Section 4, T 150 N, R 90 W, 5th P.M.; and the bottom hole for the Black Hawk USA 31-16H well would be in Section 21, T 150 N, R 90 W, 5th P.M.
- Mink USA 11-15H and Many Woman USA 14-10H—The wells would be located in Section 15, T 150 N, R 90 W, 5th P.M. The bottom hole for the Mink USA 11-15H well would be in Section 22, T 150 N, R 90 W, 5th P.M. and the bottom hole for the Many Woman USA 14-10H well would be in Section 3, T 150 N, R 90 W, 5th P.M.

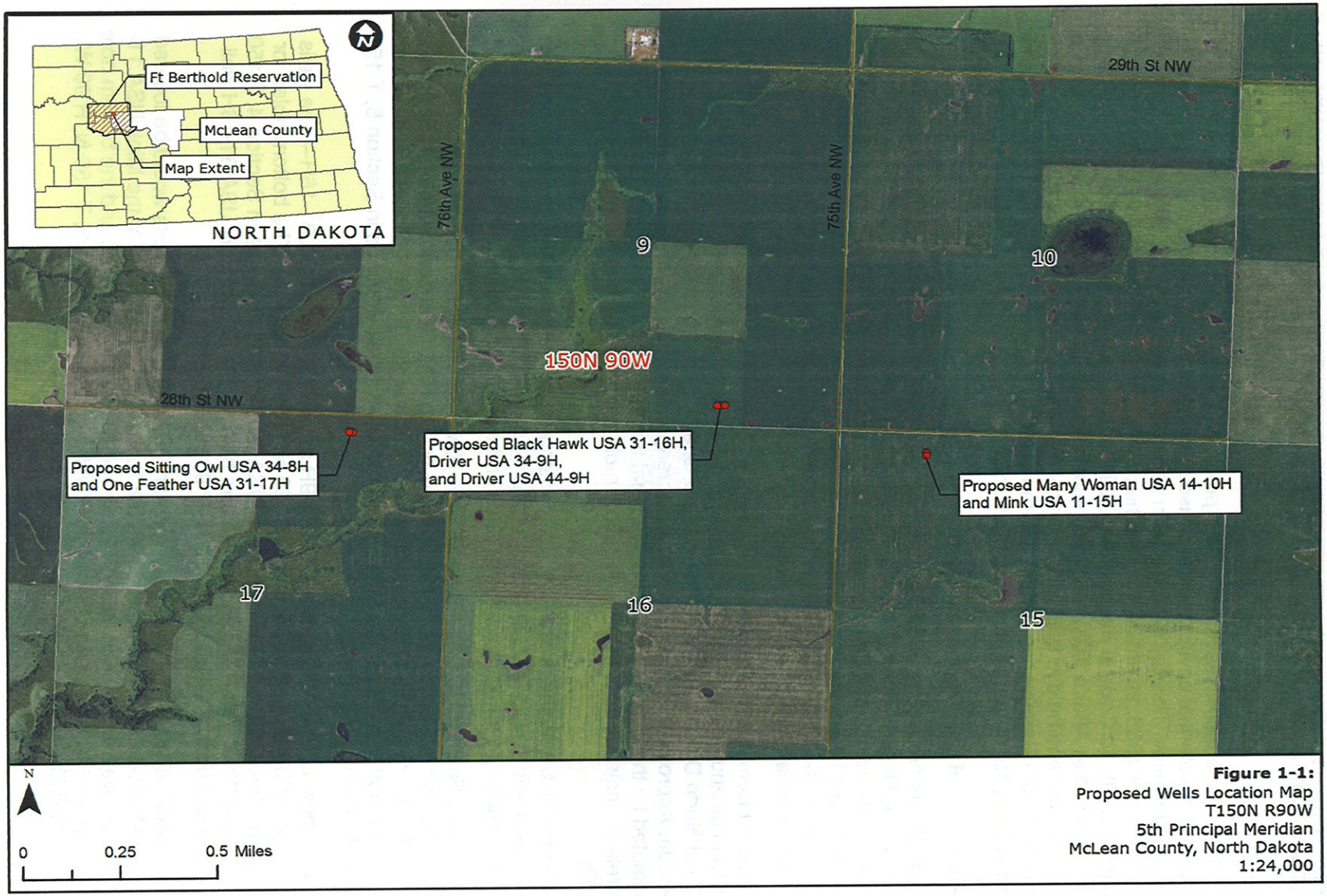

Figure 1-1:
Proposed Wells Location Map
T150N R90W
5th Principal Meridian
McLean County, North Dakota
1:24,000

The Proposed Action consists of constructing three well pads large enough to accommodate drilling the oil and gas wells on each, construction of access roads to each pad, and construction of associated infrastructure to include buried pipeline and utility lines for each pad.

Proposed activities also include acquisition of rights-of-ways (ROWs), infrastructure for the proposed wells, and roadway improvements.

The mineral rights are held in trust for the Three Affiliated Tribes and its members by the BIA. The Applications for Permit to Drill (APDs) would be submitted to the BLM for review. Approval for drilling operations is then authorized by the BIA and the BLM.

1.3 Need for the Proposed Action

The Tribes own their mineral resources, which are held in trust by the U.S. government through the BIA. The BIA's approval to drill wells would provide important benefits to the Tribes, including revenue that could contribute to tribal budgets, satisfy tribal obligations, and fund land purchase programs to stabilize their land base. Development of the mineral resources would also provide individual members of the Tribes with needed employment and income. Furthermore, the Proposed Action gives the U.S. the 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 Tribes to develop their oil and gas resources on the identified lands within the FBIR. Additionally, the purpose is to determine if there are commercially recoverable oil and gas resources on the lands leased to Marathon by drilling the 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 APD. Therefore, an EA for the proposed wells is necessary to analyze the direct, indirect, and cumulative impacts of the proposed projects.

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 U.S. trust obligations to the Tribes, the Indian Mineral Leasing Act (MLA) 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 in 25 CFR Part 225, the BLM exercises authority over oil and gas development on Tribal lands under its implementing regulations in 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 that ensures the proper handling, measurement, disposition, and site security of leasehold production; and protecting other natural resources, environmental quality, life, and property.

CHAPTER 2 ALTERNATIVES

2.1 Introduction

This chapter provides information on the development and evaluation of project alternatives. The development of alternatives is directly related to the purpose and need for the project. The criteria used for determining viable alternatives for consideration in this EA include:

- Minimizing adverse impacts to land, water, air and other natural resources;
- Avoiding impacts to threatened and endangered plant and animal species;
- Minimizing adverse impacts to tribal members and their cultural resources;
- Providing economic benefits to the Three Affiliated Tribes; and
- Complying with existing tribal, federal, and state laws and regulations.

This EA analyzes the potential impacts on humans and the environment from the construction of three multi-well drill pads, drilling, well completion, and oil and gas production. Potential impacts of construction and operation of access roads and associated facilities are also analyzed. Two alternatives are being considered for this project: a No Action Alternative and the Proposed Action.

2.2 Alternative A No Action

Under the No Action Alternative (Alternative A) the BIA and BLM would not authorize construction of the multi-well pads or related activities at the locations under consideration. Existing environmental conditions and current trends at the locations would remain. However, the potential recovery and commercial production of oil and gas resources that have been targeted for domestic use would not occur, and the Tribes would not receive potential royalties on production or other economic benefits from oil and gas development at these locations.

2.3 Alternative B Proposed Action

Under the Proposed Action (Alternative B), the BIA and BLM would authorize the construction of three multi-well pads, the drilling and completion a total of seven oil and gas wells on the pads, and construction of new access roads and other necessary infrastructure. Infrastructure would include oil and gas gathering pipelines and buried electrical lines, both of which would be located within the access ROWs. The objective of drilling is to tap oil and gas resources within the Bakken Formation approximately 10,000 ft below the surface. The Tribes hold both the surface and mineral rights for the proposed wells. The BIA holds the surface lands in trust for the Tribes and the BLM regulates development of the underlying minerals.

Biological, botanical, soil, and water resources surveys at each of the proposed well pads were conducted by TEC Inc. (TEC) on May 9 - 11, 2011. The purpose of these surveys was to gather site-specific data and photos with regard to natural resources in the project area. An intensive, pedestrian cultural resource survey of the proposed well pads and access roads was conducted on May 9, 2011 by Kadrmas Lee & Jackson (KL&J) to determine if cultural resources were present. The survey areas for each of the well pads consisted of 10 acres (ac) centered on the each proposed well pad's center

point and a 200 ft wide corridor along the proposed access roads. Cultural, biological, and water resources were evaluated using visual inspection and pedestrian transects across the site. Soil resources were evaluated through excavation of several probes at each location using a soil auger with an 8 inch (in) bucket. In addition, a survey for raptors and raptor nests was conducted within 0.5 mi of the project area. The raptor survey consisted of pedestrian transects focusing specifically on potential nesting sites at a wooded draw less than 600 feet (ft) south of the One Feather USA 31-17H /Sitting Owl USA 34-8H multi-well pad site. The wooded draw was observed both from the upland areas overlooking the draw and from bottomlands within the actual draw. There were no draws near the other multi-well pad sites that required investigation.

The BIA on-site inspections for the well pads and access roads were conducted on May 9, 2011. The BIA Environmental Protection Specialist and representatives from Marathon, TEC, William H. Smith Surveying Consultants, and KL&J participated in the on-sites. Construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were evaluated. The well pads 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 agreed that the selected locations, along with the design features to be implemented by Marathon, would effectively reduce impacts to sensitive wildlife and botanical resources. In addition, comments received from the U.S. Fish and Wildlife Service (USFWS) have been considered in the development of this EA.

Surface disturbance for each multi-well pad would be restricted to the well pads and the access ROWs (which would include the roads and buried pipelines and electrical lines).

2.3.1 One Feather USA 31-17H and Sitting Owl USA 34-8H

This proposed multi-well pad would be located approximately 14 miles (mi) southwest of the town of Parshall, North Dakota in Section 17, T150N, R90W, 5th P.M., McLean County, North Dakota. The surface hole of the One Feather USA 31-17H (One Feather) well would be 265 ft from the north line (FNL) and 1,337 ft from the east line (FEL) of Section 17, T150N, R90W, 5th P.M. and the bottom hole of the well would be 250 ft from the south line (FSL) and 1,320 ft FEL of Section 20, T150N, R90W, 5th P.M.

The surface hole of the Sitting Owl USA 34-8H (Sitting Owl) well would be 262 ft FNL and 1387 ft FEL of Section 17, T150N, R90W, 5th P.M. and the bottom hole location for the well would be 250 ft FNL and 1,320 ft FEL of Section 5, T150N, R90W, 5th P.M.

The wells would be horizontally drilled approximately 50 ft apart on a single multi-well pad within a 1,280 ac spacing unit. A new, 441 ft-long access road would meet the multi-well pad on the east side off of 28th Street North West (NW) 0.1 mile west of 76th Ave. NW (Figure 2-2).

Initial disturbance from construction of the One Feather/Sitting Owl well pad would be 5.66 ac and the access road disturbance area would be approximately 1.01 ac for a total disturbance area of 6.67 ac. The total fenced acreage would be 6.44 ac around the well pad (Figure 2-2). The amount of disturbed acreage would be reduced upon completion of the wells through interim reclamation measures approved by the BIA and BLM. Final reclamation of all disturbed areas would be in accordance with BIA requirements and BLM specifications identified in the APD.

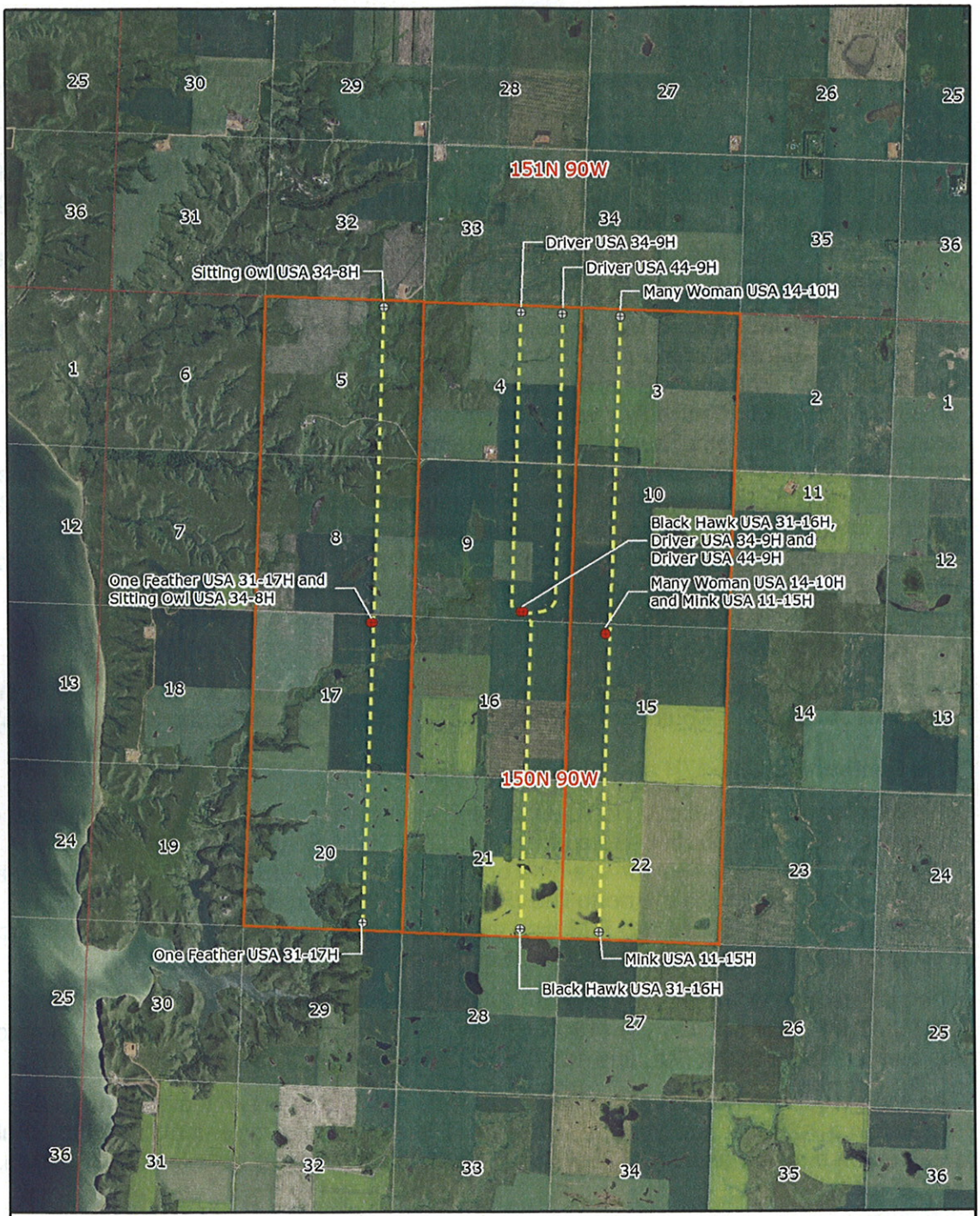

Figure 2-1:
Proposed Drilling Plan
T150N R90W
5th Principal Meridian
McLean County, North Dakota
1:60,000

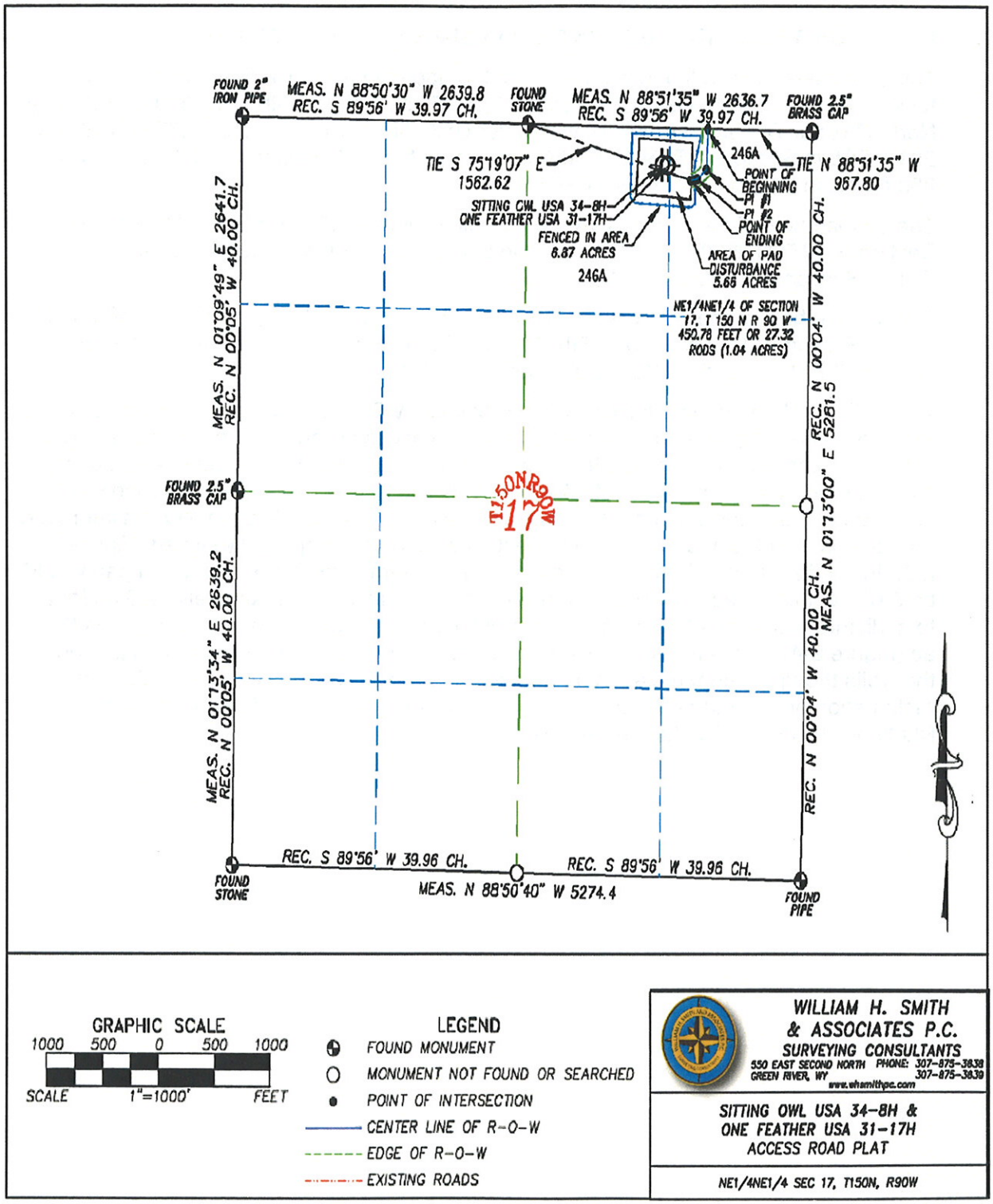

Figure 2-2. Disturbance Area of the Sitting Owl USA 34-8H/One Feather USA 31-17H Well Pad.

2.3.2 Driver USA 34-9H, Driver USA 44-9H, and Black Hawk USA 31-16H

This proposed multi-well pad would be located approximately 13 mi southwest of the town of Parshall, North Dakota in Section 9, T 150 N, R 90 W, 5th P.M., McLean County, North Dakota. The surface hole of the Driver USA 34-9H well would be 1,675 ft FEL and 291 ft FSL in Section 9, T150N, R90W and the bottom hole would be 2,000 ft FEL and 250 ft FNL in Section 4, T150N, R90W.

The surface hole of the Driver USA 44-9H well would be 1,575 ft FEL and 294 ft FSL in Section 9, T150N, R90W, 5th P.M and the bottom hole would be 600 ft FEL and 250 ft FNL in Section 4, T150N, R90W, 5th P.M.

The surface hole of the Black Hawk USA 31-16H well would be 1,625 ft FEL and 292 ft FSL in Section 9, T150N, R90W, 5th P.M and the bottom hole would be 1,320 ft FEL and 250 ft FSL in Section 21, T150N, R90W, 5th P.M.

The wells would be horizontally drilled approximately 50 ft part on a single multi-well pad within a 1,280 ac spacing unit with an associated access road and infrastructure (Figure 2-1). The access road to the multi-well pad would be a 2,413 ft extension of an existing 1,050 ft road that connects to 76th Avenue NW. The new portion of access road would go around an existing well pad (Waldock USA 21-16H) to 76th Avenue NW, an improved road that is oriented in a north-south direction west of the proposed well pad (Figure 2.3). Initial disturbance from construction of the Driver/Driver/Black Hawk well pad would be 5.62 ac and the access road disturbance area would be approximately 5.53 ac for a total disturbance area of 11.15 ac. The total fenced acreage around the well pad is 6.5 ac (Figure 2-4). The amount of disturbed acreage would be reduced upon completion of the wells though interim reclamation measures approved by the BIA and BLM. Final reclamation of all disturbed areas would be in accordance with BIA requirements and BLM specifications identified in the APD.

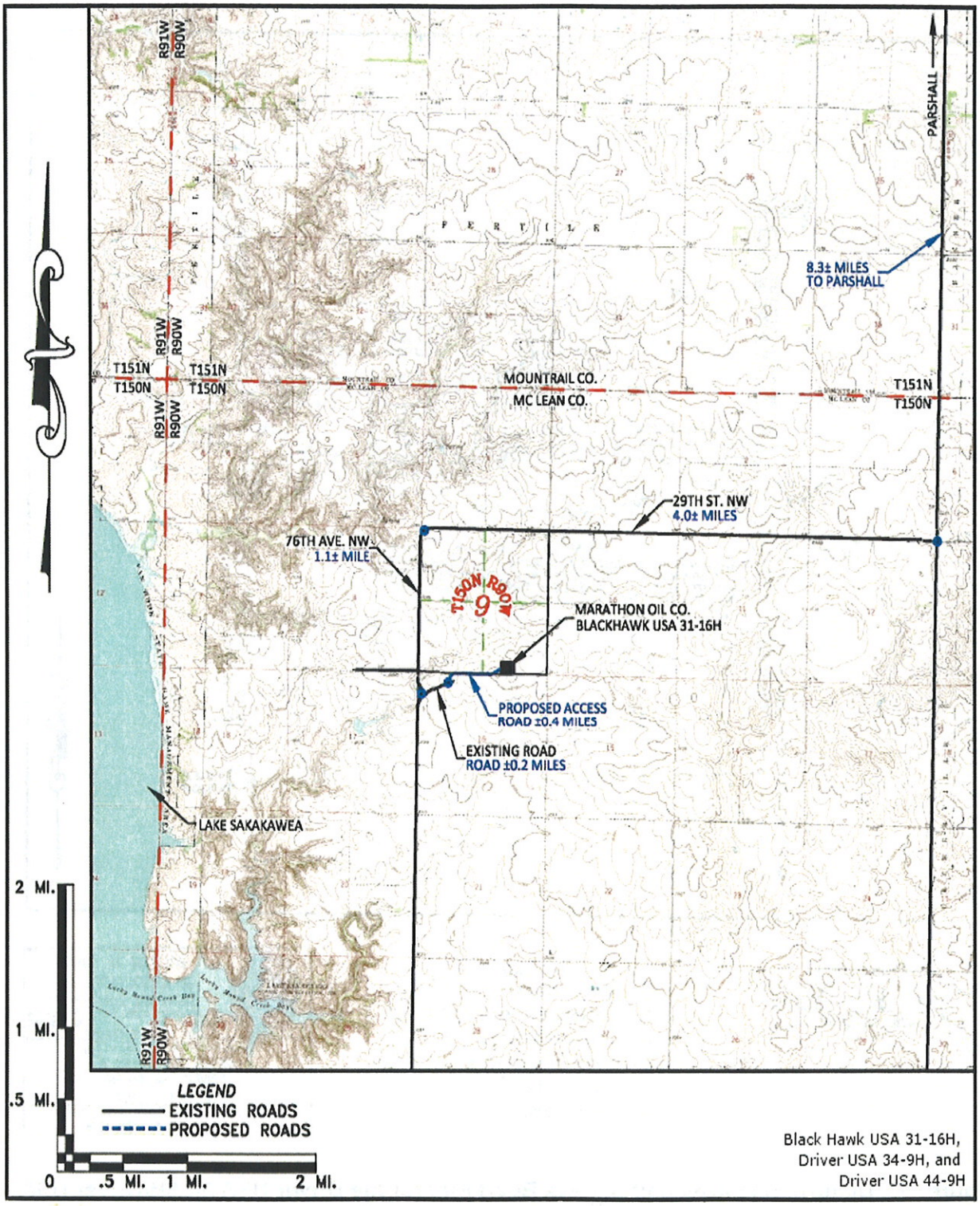

Figure 2-3. Proposed Access Road to the Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H Well Pad from an Improved Existing Road off 76th Avenue.

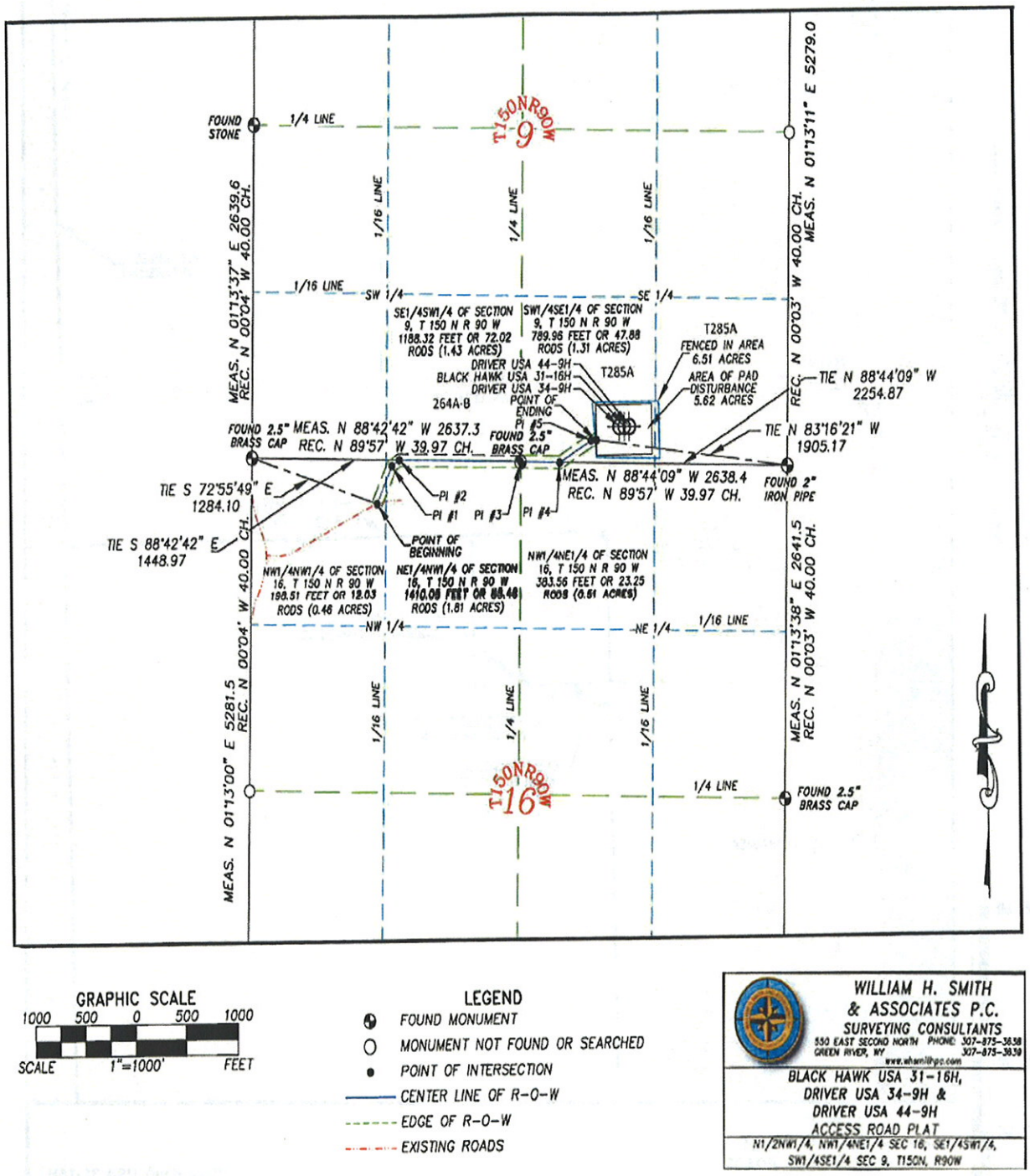

Figure 2-4. Disturbance Area and Access Road Plat for the Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H Multi-well Pad.

2.3.3 Mink USA 11-15H and Many Woman USA 14-10H

This proposed multi-well pad would be located approximately 13.5 mi southwest of Parshall, North Dakota in Section 15, T 150 N, R 90 W, 5th P.M., McLean County, North Dakota. The surface hole of the Mink USA 11-15H (Mink) well would be 1,199 ft FWL and 355 ft FNL in Section 15, T150N, R90W, 5th P.M and the bottom hole would be 1,320 ft FWL and 250 ft FSL in Section 22, T150N, R90W, 5th P.M.

The surface hole of the Many Woman USA 14-10H (Many Woman) well would be 1,193 ft FWL and 305 ft FNL in Section15, T150N, R90W, 5th P.M and the bottom hole would be 1,320 ft FWL and 250 ft FNL in Section 3, T150N, R90W, 5th P.M.

The wells would be horizontally drilled approximately 50 ft apart on a single multi-well pad within a 1,280 ac spacing unit. An associated access road and infrastructure would also be included (Figure 2-1). Access to the Mink/Many Woman well pad would be accomplished by extending the Driver/Driver/Black Hawk well road from 76th Ave. NW 1.1 mi past the Waldock pad to the west side of the Mink/Many Woman well pad. An alternate access road was previously considered along 75th Avenue but access will be from 76th Avenue. Initial disturbance from construction of this well pad would be 5.69 ac and the access road and disturbance area would be approximately 3.04 ac for a total disturbance area of 8.73 ac. The total fenced acreage around the well pad would be 6.99 ac (Figure 2-5). The amount of disturbed acreage would be reduced upon completion of the wells though interim reclamation measures approved by the BIA and BLM. Final reclamation of all disturbed areas would be in accordance with BIA requirements and BLM specifications identified in the APD.

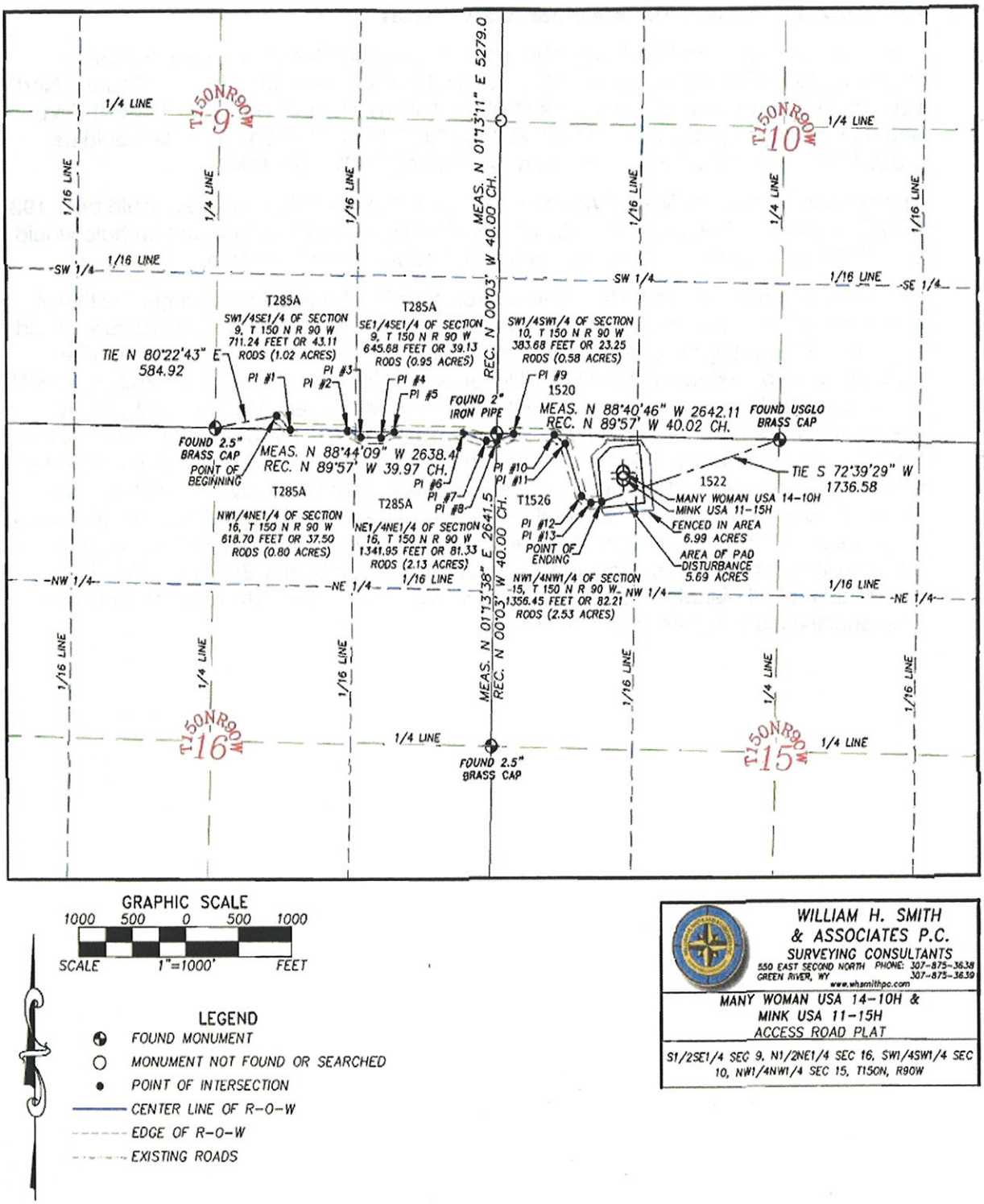

Figure 2-4. Disturbance Area and Access Road Plat for the Many Woman 14-10H/Mink USA 11-15H Well Pad.

2.4 Activities that Apply to Development of All Wells

Following is a discussion of items that would be consistent for all wells and associated construction.

2.4.1 Multi-Well Pads

Under the Proposed Action, Marathon proposes to utilize a balanced cut and fill design using native materials. The proposed multi-well pads would be kept to a minimum size needed to accommodate drilling and completion and would occupy approximately 5.6 ac, including cut and fill areas. Each pad would be graded to a prevailing elevation and would contain all equipment and facilities necessary to drill and complete all wells on a pad. All cut/fill slopes greater than 8' would be constructed with 3:1 slopes, those less would be constructed with 2:1 slopes. Vegetation would be cleared from the pads, and the topsoil would be stripped and stockpiled on site for future reclamation. Testing of the topsoil on the pads indicates that at least 6-8 in of topsoil are available for salvage and reclamation. Excavated subsoil would be used in the construction of the well pads, which would be graded to drain water away from the drill site. BMPs would be implemented to minimize wind and water erosion of the topsoil. They may include, but not be limited to, water bars, silt fences, erosion mats, and biologs. Berms would be constructed on all cut sides of the well pads to prevent run-on. Additional berms would be constructed if the BIA/BLM determines it is necessary. Soil stockpiles from the pad and pit excavations would also be positioned at the cut corner of the well pads to help divert runoff around the well pads. The pads would be covered with approximately 6 in of crushed scoria and later by gravel if so requested by the BIA. The proposed access road would also be covered with gravel. The pads and topsoil stock piles would be contained within a barbed wire fence to prevent wildlife and domestic livestock from entering. The total area within the fencing would be approximately 6.44 ac for One Feather/Sitting Owl, 6.5 ac for Driver/Driver/Black Hawk, and 6.99 ac for Mink/Many Woman. Construction of the well pads is expected to take 7-10 days and would be carried out using standard heavy equipment, such as earthmover and bulldozer.

Cuttings pits to contain drill cuttings from the wells would be excavated in the cut portion of each multi-well pad, away from shallow ground water sources. The cuttings pits would be approximately 140 ft x 60 ft and approximately 14 ft deep, but would be slightly smaller if wells are not drilled back-to-back. The cuttings pits would be lined with a reinforced synthetic liner with a minimum thickness of 20 mil to prevent leakage of cuttings fluid into shallow ground water. The cuttings pits would be netted when not actively being used to prevent wildlife from entering. The netting would have a maximum mesh size of 1.5 in to keep out birds and other small animals.

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

All efforts would be made to avoid well pad construction during migration, breeding, and nesting season for migratory birds in the area, which generally occurs between February 1 and July 15. A survey for migratory birds and their nests would be required at least five days prior to the initiation of construction if it was going to occur during migration and nesting season. However, because the current land use is cultivated cropland and because of a lack of trees in the area that could provide breeding or nesting habitat for

migratory birds, no pre-construction survey would be required (USFWS 2010b). If any migratory bird nests are found at the site during construction, all construction activities would cease and the USFWS would be contacted for advice on how to proceed. If during construction a whooping crane is sighted within one (1) mi of the well pads or its associated facilities, all work would cease and the USFWS would be contacted immediately. Work would not be allowed to resume until the bird has left the area.

2.4.2 Access Roads

Access roads and associated infrastructure (buried power lines) would be constructed from the existing improved roads to the wells. Access road construction would follow road design standards outlined in the BLM's Gold Book. The running surface of the access roads would be covered with crushed gravel or scoria, and erosion control measures would be installed as necessary. A cattle guard would be installed in the access road at the entrance to the well pads to prevent livestock from entering. The access roads to the multi-well pads would have a maximum ROW width of 100 ft, consisting of a 20 ft wide road top, with the remainder utilized for borrow ditches and construction slopes, gathering pipelines, electrical infrastructure, and when necessary, for snow removal storage. Approximately 1.01 ac would be disturbed by construction for an access road connecting the One Feather/Sitting Owl multi-well pad to the existing road on the north section line of Section 17; approximately 4.64 ac would be disturbed by construction for an access road connecting the Driver/Driver/Black Hawk multi-well pad to the existing Waldock USA 31-16H/Waldock USA 21-16H multi-well pad access road that is, in turn, connected by a 0.25 mile access road to 76th Avenue NW (assuming access from the west); and, approximately 2.38 ac would be disturbed by construction for an access road connecting the Mink/Many Woman to 75th Avenue NW. Construction of the access roads is expected to take less than one week and would be carried out using standard heavy equipment, such as earthmover and bulldozer.

Oil and gas gathering pipelines and an electrical utility line would be constructed from the well locations to tie-ins with existing buried oil and gas pipelines and electrical utility lines located within previously approved ROWs on either side of the existing improved road. A majority of the corridors would be located within the 100 ft wide ROW of the access roads that extend from the edge of the well pads to the edge of the existing improved roads. The proposed pipeline/electrical utility line corridor would then extend an additional short distance to existing pipelines and McLean County Electric Coop electric utility lines extending along the existing improved roads.

2.4.3 Drilling

Drilling operations would commence after construction of the multi-well pads and access roads and would consist of three phases: set up, drilling of the wells, and tear down. During the set-up phase, several truckloads of equipment would be brought to each location, including the drill rig, drill pipe, drilling mud, and related support equipment. An estimated 90 truckloads would be needed to bring the necessary equipment to each location. Additional vehicle traffic would occur from transport of personnel and expendable supplies such as fuel, drilling fluid additives, and water to the locations. Vehicles would access the locations several times a day to bring this equipment and personnel to the locations and remove them at the end of the drilling operations. All local, county, tribal, and state regulations and ordinances regarding rig moves, oversize/overweight equipment, and frost law restrictions would be adhered to during all phases of the drilling operations. Established load restrictions for state and BIA

roadways would be observed, and haul permits would be acquired as appropriate. Suitable mufflers would be installed on all internal combustion engines and certain compressor components to minimize noise levels. It is expected to take approximately 40 days to set up the rig, drill each well, and tear the rig down.

The wells would first be drilled vertically to a depth of approximately 9,200 ft, at which point they would angle horizontally and be drilled for another 10,000 ft to the target bottom hole locations. Drilling would target the Middle Bakken dolomite member.

A freshwater-based mud system would be used for the first 2,000 ft drilled for each well. Fresh water would be obtained from private sources near New Town. After setting and cementing the surface casing, an oil-based mud system would be used to drill the remainder of the vertical holes and curves. Once the 7 in production casings are set and cemented through the curve, a saltwater-based drilling mud would be utilized for the horizontal portion of the wellbore. Oil-based mud and saltwater would be transported to the location from various local sources.

Marathon would use a semi-closed loop drilling system at each location. This would include the use of a closed circulation drilling mud system, whereby drilling fluid is circulated from the well into steel mud tanks, and the drill cuttings are separated from the drilling fluid, stabilized, and placed in the lined cuttings pit on-site. Any free fluid remaining in the cuttings pit would be removed and disposed in accordance with BLM and North Dakota Industrial Commission (NDIC) regulations. The stabilization process would take place within 30 days after well completion. The cuttings pits would then be reclaimed and covered with at least 4 ft of backfill and surface sloped, when practicable, to promote surface drainage away from the reclaimed area.

2.4.4 Casing and Cementing

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

2.4.5 Completion and Testing

Completion and evaluation operations would commence after each well is drilled. Completion and evaluation activities include cleaning out the well bore, perforating and fracturing to stimulate the horizontal portion of the well, pressure testing the casing, and running production tubing for potential future commercial production. Fracturing of the production zone would be done with hydraulic fluids consisting of water, sand, and minor amounts of additives. Water would be trucked to the location and stored in onsite flat tanks prior to completion and testing. Fluids used in the completion process would be stored in tanks and would be disposed in accordance with BLM and NDIC rules and regulations.

Approximately 30-45 additional days would be needed to complete, fracture, and test the well after each well is drilled and cased. A workover rig, flowback crew, and several pump trucks would be utilized in the operation. Hydraulic fracturing would take approximately 3-4 days. Vehicle traffic would increase during hydraulic fracturing operations to deliver personnel, equipment, and materials (including water) utilized during the process to the location. Site activity and vehicle traffic would decrease when each of multi-wells is completed.

2.4.6 Water Usage

The drilling, fracture stimulating and dust suppression associated with completing each well will require approximately 65,000 barrels of water. Drilling each well is anticipated to use 40,000 barrels of water, much of which can be reused and recycled. Completing each well is anticipated to use 25,000 barrels of water. Dust suppression will be based on time of year and climactic conditions but will consist of freshwater utilized to keep dust to a minimum during these operations.

2.4.7 Oil Production

If commercially recoverable oil and gas resources are found, a production well(s) would be established. It is expected that the wells would flow naturally, eventually needing artificial lift to maintain production, therefore a pumping unit (pumpjack) would be installed. Both oil and natural gas pipelines from the well location are expected to be tied in with existing nearby pipelines located in the vicinity of the proposed project area. Short term trucking of oil to regional terminals off the Fort Berthold Reservation may occur while the tie in is completed.

Production equipment including vertical heater/treater, storage tanks (typically four 400 barrel steel tanks for oil and one 400 barrel fiberglass tank for saltwater, per well), and a combustor and flare stack pit with associated piping would be installed at the site. Secondary containment vessels with wire mesh or grate covers would be placed under load out lines and valves to collect dripped oil. The heater/treater and storage tanks would be surrounded by an impermeable berm 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. Oil would be collected in the storage tanks and periodically shipped via adjacent pipeline or trucked to an existing oil terminal off the FBIR to be sold. Produced water would also be collected in storage tanks and periodically trucked to an approved disposal site. The frequency of trucking activities for both liquid resources would be dependent upon the volumes and rates of production. Approval of all haul routes would be obtained from local governing tribes, township, county, and/or state entities for the type of transportation use. The operator would obtain all applicable permits to be in compliance with all regulations.

Large volumes of gas are not expected at these locations. In the event the proposed gas pipeline is not tied into nearby existing infrastructure when the wells go into production, the expected small volumes of gas would be flared on site in accordance with the BIA's Notice to Lessees 4A and NDIC regulations which prohibit flaring for more than one year of operation.

Any future oil, gas, or saltwater pipelines would be constructed within the existing access road ROW, would necessitate additional NEPA analysis and approval from the BIA. Maintenance operations would occur on a year-round basis for the life of the wells and would be conducted in accordance with industry standards for safe and efficient operations. Access road(s) would be maintained by Marathon in accordance with BIA/BLM standards and would allow year-round access. All permanent above ground production facilities would be painted to blend with the surrounding landscape, as determined by the BIA, based on standard colors recommended by the BLM.

After production ceases, the wells would be plugged and abandoned, and the land would be fully reclaimed in accordance with BIA, BLM and NDIC plugging, abandonment and reclamation requirements. Marathon would secure the bonding required during the APD

permitting process to ensure reclamation requirements are met. Marathon would mitigate the effects of the seven wells by incorporating applicable conditions, mitigation measures, and BMPs from the BLM's regulations, BLM Gold Book (4th Edition), and applicable BLM Onshore Oil and Gas Orders, including Numbers 1, 2, and 7.

2.4.8 Reclamation

Interim and final reclamation would be conducted on all disturbed land in compliance with the BIA, Three Affiliated Tribes, and BLM reclamation requirements. The goal of interim reclamation would be to reduce and stabilize disturbed areas as rapidly as possible. Interim reclamation would commence upon completion of drilling and completion operations. The goal of final reclamation would be to return the land to conditions approximately equal to those that existed prior to surface disturbance. Final reclamation would commence after the wells are plugged and abandoned.

If one or all well(s) are determined to be commercially viable, production equipment would be installed and the well pads would be reduced in size to accommodate the production facilities, leaving adequate room to conduct normal well maintenance and potential recompletion operations. Interim reclamation activities would include leveling, contouring, backfilling, and re-seeding. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and re-seeded as necessary. Re-seeding would be done with native vegetation. A noxious weed management plan would be implemented to prevent and control noxious weeds.

All disturbed areas would be reclaimed if no commercial production results from the proposed wells on a well pad or after final plugging and abandonment of the wells. 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 roads and well pads area would be contoured to match topography of the original landscape and reseeded with a native grass seed mixture consistent with surrounding native species to ensure a healthy and diverse vegetative community that is free of noxious weeds. Re-vegetation would occur at the first seasonal opportunity, generally after October 15 until the ground is frozen, or before May 15. Erosion control measures would be installed as appropriate. Grass seeding would continue until such time as productivity of the stand is consistent with surrounding undisturbed vegetation and the BIA has determined that reclamation is successful. Access roads would be reclaimed unless the BIA or landowner requests that the road remain in place.

2.4.9 Potential for Future Development

Development beyond the seven wells is not proposed at this time. If future development is proposed, it 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 it would be subject to further NEPA review.

CHAPTER 3 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND IMPACTS

3.1 Introduction

This section describes the affected environment at the One Feather USA 31-17H/Sitting Owl USA 34-8H (One Feather/Sitting Owl), Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H (Driver/Driver/Black Hawk) and the Mink USA 11-15H/Many Woman USA 14-10H (Mink/Many Woman) multi-well pads. This section also addresses the environmental consequences, cumulative impacts, and mitigation measures for adversely affected resources. Affected environment refers to the baseline environmental conditions currently present in the project area. Environmental consequences refer to the direct and indirect effects of the Proposed Action on the affected environment. Cumulative impacts refer to the impacts of the Proposed Action on the affected environment when combined with other foreseeable actions. The mitigation measures refer to methods and procedures that will be followed to reduce environmental impacts to less than significant levels for those resources that would be impacted by the Proposed Action.

3.2 Climate, Geologic Setting, and Land Use

The climate of North Dakota varies widely on a seasonal basis. Summers are generally warm with extremes in excess of 80 degrees Fahrenheit (^{0}F) common. Winters are cold with temperatures frequently falling below 0^{0}F. Based on climate data from the Parshall climate station between 1971 and 2000, the average daily temperature varied from less than 10^{0}F in January to approximately 70^{0}F in July, (U.S. Department of Commerce [USDC] 2010). The average daily maximum during the same time period varied from 16.5^{0}F in January to 83.2^{0}F in July while the average daily minimum during the same period varied from -4.4^{0}F in January to 53.9^{0}F in July (USDC 2010). North Dakota receives approximately 16 in of rain annually, primarily during the summer months, and approximately 32 in of snow annually primarily between the months of November and March. Based on climate data from the Parshall station between 1971 and 2000, the average total monthly precipitation varied from a low of 0.32 in in January to a high of 3.62 in in June. The annual average precipitation was 17.01 in (USDC 2010). The average total monthly snowfall at the Parshall station between 1916 and 1979 varied from a low of 0.3 in in June and September to 3.9 in in January. The annual average snowfall over the same period was 22.1 in (USDC 2010).

Geologically, the project's target formation lies within the Williston Basin that is roughly 300,000 mi^2 in extent and underlies much of western North Dakota and portions of eastern Montana, northern South Dakota, and southern parts of the Canadian Provinces of Saskatchewan and Manitoba. The deepest part of the basin is roughly located beneath Williston, North Dakota. The Williston Basin has undergone periods of subsidence and uplifting throughout its history, and ancient seas advanced and retreated during the whole time the basin was forming. The whole region is underlain by a Precambrian basement that is greater than 542 million years old. These basement rocks are overlain by Paleozoic Era rocks that range from roughly 542 million years ago (mya) to 251 mya. At the end of the Cambrian Period (488 mya), regional basin subsidence began and organic rich carbonates, evaporites and shales were deposited. The shale units associated with the Upper Devonian-Lower Mississippian Period,

including the Three Forks and Bakken Formations, are well known sources for oil and gas resources (hydrocarbons) within the Williston Basin. Sandstones, siltstones, and shale were deposited during the Mesozoic Era (250 to 65 mya) but are not as rich petroleum source rocks as the deeper Paleozoic rocks in the Williston Basin. Mesozoic Era rocks were, in turn, overlain by Cenozoic Era (65 mya to Recent) rocks. The near surface stratigraphy in the project area, includes Tertiary aged rocks of the Sentinel Butte Formation (60 mya – 56 mya). This strata are generally overlain by a thin deposit of Pleistocene aged (<2 mya) glacial till which influences the landforms (flat with scattered pothole wetlands) in the immediate project area.

The primary land use in this upland area is for crops (Figure 3-1). In the rugged area close to Lake Sakakawea, the Sentinel Butte Formation is highly eroded, forming terraces and draws informally called "the breaks". The breaks are primarily used for livestock grazing. Other land uses in the area include road corridors that provide access to residential, recreational and wildlife areas around Lake Sakakawea and to the numerous oil and gas facilities in the area. In order to maintain the integrity of the small wetland features within the upland area that dot the cropland, measures would be taken to avoid them when roads to the multi-well sites are constructed or improved and when pads are constructed.

3.2.1 Climate, Geologic Setting and Land Use Impacts/Mitigation

Alternative A (No Action) – The No Action alternative would have no impact on land use, climatic conditions, or geological conditions. The existing environmental conditions and current trends would continue.

Alternative B (Proposed Action) – The climate of the project area would not be impacted by the Proposed Action.

The geology of the area would not be impacted by the Proposed Action, but the oil and gas resources would be depleted. The depletion of the oil and gas resources would be considered an irreversible impact.

The Proposed Action would convert approximately 25.55 ac of land from its present use as cropland to oil and gas production. Of this, 15.97 ac would be as a result of well pad construction and 9.58 ac would be result of access road and pipeline/utility line construction. Much of each well pad will be reclaimed if the wells go into production and everything will be reclaimed if the wells prove to be "dry" holes.

3.3 Soils

The Natural Resource Conservation Service (NRCS) Web Soil Survey indicates that the soils on the proposed pads consist of Williams-Bowbells (WoB) Loams at the One Feather/ Sitting Owl and the Driver/Driver/Black Hawk multi-well pads and Williams-Bowbells (WoC) Loams at the Mink/Many Woman multi-well pad (U.S. Department of Agriculture [USDA] 2010)(Table 3-1).

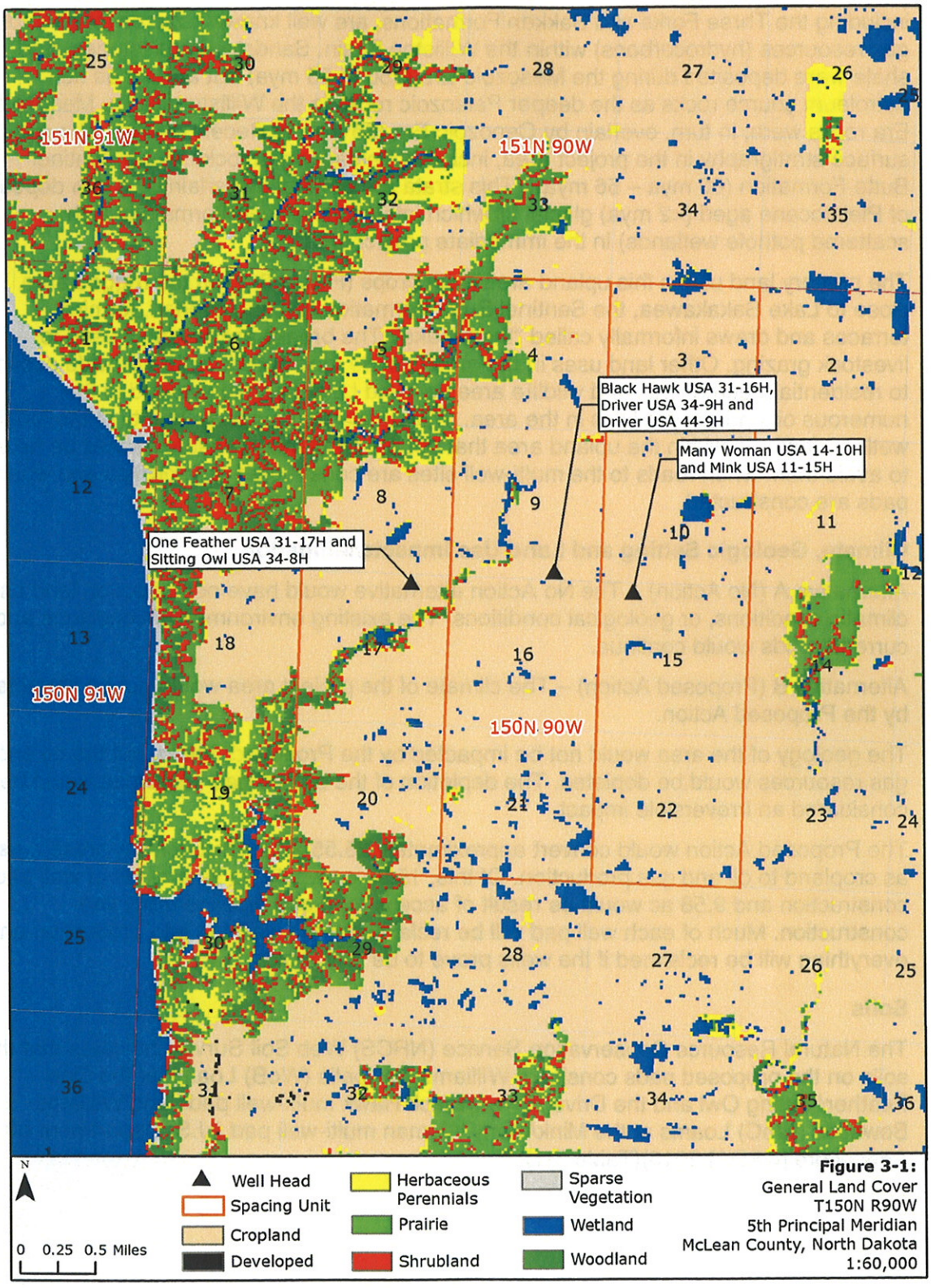

Figure 3-1:
General Land Cover
T150N R90W
5th Principal Meridian
McLean County, North Dakota
1:60,000

Table 3-1: General Soil Characteristics									
				Composition (in upper 60 in)			Erosion Factor		
Well Pad	Map Unit Symbol	Well Pad Acres	Slope	Williams Loam %	Bowbells Loam %	Other Minor Minerals	Tf	Kf	Hydrologic Soil Group
One Feather/ Sitting Owl	WoB	Williams-Bowbells Loams	3% to 6%	60	30	10	5	0.28	B
Driver/ Black Hawk	WoB	Williams-Bowbells Loams	3% to 6%	60	30	10	5	0.28	B
Mink/Many Woman	WoC	Bowbells Loams	6% to 9%	60	30	10	5	0.28	B

Both Williams-Bowbells (WoB and WoC) Loams associations are deep, well-drained moderately textured soils that were formed from glacial till and may be more than 80 in thick (USDA 2010). The loams have slow to medium runoff and moderate permeability.

The K Factor is a measure of the susceptibility of a soil to sheet and rill erosion by water. Values of K may range from 0.02 to 0.069. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (USDA 2010). The loams both have a K value of 0.28 indicating a moderate susceptibility to sheet and rill erosion (USDA 2010). The T Factor estimates the maximum average annual rates of erosion by wind and water that will not affect crop productivity. Values are given in tons/acre/year and range from 1 for shallow soils to 5 for deep soils. Soils with higher T values can tolerate higher rates of erosion without loss of productivity (USDA 2010). The loams have a T Factor of 5 because of its depth.

Hydrological groups are based on estimates of the runoff potential which is a function of water infiltration. Soils are assigned to one of four groups according to the rate of water infiltration when they are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms (USDA 2010). The rate of infiltration decreases for Group A (high infiltration, low runoff) to Group D (low infiltration, high runoff). The Williams-Bowbells Loams are in Group B indicating a moderate rate of infiltration and a moderate rate of water transmission.

Soil tests at the sites with an 8 in bucket auger indicate that the soils are more than 40 in thick with more than 6 in of top soil present. A description of the profile is presented (Table 3-2).

Table 3-2: Soils Characteristics at the Well Pad Sites	
Depth (inches)	Description
0-18	Dark brown to black (dry); loam; very friable; slightly sticky; slightly plastic; no gravel; no carbonates or gypsum visible; fine roots to 4 in; hard (compacted) at top
18-48	Brown (dry); sandy loam; very friable; slightly sticky; non-plastic; sparse pebbles 3-5 cm in size; carbonates coating grains; no gypsum visible; heavy gravels at 48 in

3.3.1 Soil Impacts/Mitigation

Alternative A (No Action) - Alternative A would not impact soils. The existing environmental conditions and current trends would continue.

Alternative B (Proposed Action) – Construction of the well pads and access roads would disturb soils present on the sites. The impacts would not be significant, and reclamation would restore the soils to their present condition. Stock pile quantities were calculated using an assumed 8 in of topsoil, for a minimum of 6,152 cubic yards (yd^3) of material stockpiled at the west and south west corners of the Mink/Many Woman well pad; 5,905 yd^3 of material stockpiled around the southwest corner of the One Feather/Sitting Owl well pad; and 6,073 yd^3 of top soil on the north side and northeast corner of the Driver/Driver/Black Hawk well pad. Soil testing at the location indicates that more than 8 in of topsoil is present at the site which would yield sufficient quantities for reclamation purposes. Soil stockpiles would be positioned to assist in diverting runoff away from the disturbed area to minimize erosion and to allow for expedient interim reclamation.

Soil impacts would be localized. Construction of the well pads and access roads would remove vegetation and disturb the underlying soils. The loss of vegetation cover would destabilize the soil and make it more prone to erosion from wind and water. BMPs would be used at the site to reduce impacts and would include erosion and sediment control during and after construction, segregating topsoil from subsurface material for future reclamation, re-seeding of disturbed areas immediately after construction activities are complete, use of construction equipment appropriate for the size and scale of the project, ensuring the road gradient fits closely with the natural terrain, and maintaining proper drainage. As part of the reclamation process, all disturbed areas would be re-contoured as close as possible to their original elevations. BMPs would be used to minimize wind and water erosion and may include, but will not be limited to, seeding, erosion mats, and biologs.

Soil compaction may occur as a result of the use of heavy machinery during well pad construction. Compacting of soils decreases permeability and increases runoff, especially in silt and clay soils. Soil compaction would also mix the soil horizons. The soil tests performed at the sites were not conclusive due to the high moisture content at the time of the inspection but NRCS tests indicate that the soils have a low to moderate potential for runoff. Soil compacting and the mixing of soil horizons would be minimized by topsoil segregation.

Soil contamination from various chemicals or other pollutants is unlikely to occur given the precautions that would be taken (i.e., berms around storage tanks). In the rare event that such contamination would occur, the event would immediately be reported to the BLM, BIA, the NDIC, and where appropriate, the North Dakota Department of Health (NDDoH). BLM and BIA procedures would be followed to contain any leaks and spills.

3.4 Water Resources

The Safe Drinking Water Act (SDWA) was established in 1974 to protect the quality of drinking water in the U.S. This law is administrated by the Environmental Protection Agency's (EPA) for the purpose of protecting water that is actually or potentially used for drinking, whether it is surface water or ground water. The SDWA authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with health-related standards. The Act requires EPA to consider a detailed risk analysis, cost assessment, and best available peer-reviewed

science when developing these standards. Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids through the Underground Injection Control Program and the Ground Water Rule. Protection of drinking water is overseen by the Office of Ground Water and Drinking Water along with EPA's ten regional programs, and the support of states, tribes, and numerous partners.

Congress enacted the Clean Water Act (CWA) in 1977, which amended the Federal Water Pollution Act of 1972. The CWA is the cornerstone for protection of surface water in the U.S. The Act gives authority to the EPA and other federal agencies (i.e., the U.S. Army Corps of Engineers [USACE]) to employ a variety of regulatory and non-regulatory tools to develop waste treatment plans, finance municipal wastewater treatment facilities, and manage polluted runoff by controlling direct discharges into waterways. EPA has also set water quality standards for all contaminants in surface waters.

3.4.1 Surface Water

The proposed project area is located within the Lake Sakakawea sub-basin, with individual wells located approximately 1.8 mi (One Feather/Sitting Owl), 2.8 mi (Driver/Driver/Black Hawk), and 3.3 mi (Many Woman/Mink) east of Lake Sakakawea itself. The well pads are all located within the Lucky Mound Creek Bay sub-watershed in the Saddle Butte watershed. According to the North Dakota State Water Commission, three intermittent drainages are located in proximity to the well pads, one approximately 1000 ft to the east and south of the One Feather/Sitting Owl well pad, one approximately 1,800 ft to the west of the Driver/Driver/Black Hawk well pad, and one approximately 1,700 ft to the south of the Many Woman/Mink well pad (Figure 3-2).

Drainage in the immediate vicinity of the One Feather/Sitting Owl well pad is south directly toward the intermittent stream located 1,000 ft to the south. This drainage flows into a 7 ac pond that is a semi-permanently flooded palustrine system with an aquatic bed, located approximately 1,300 ft to the south of One Feather/Sitting Owl. The drainage in the immediate vicinity of the Driver/Driver/Black Hawk well pad is to the west and north toward the intermittent stream 1,800 ft to the west. This drainage flows approximately 1.3 mi to the west into the above mentioned pond. The drainage then flows from the pond to the southwest into Lucky Mound Creek Bay of Lake Sakakawea, a distance of approximately 2.4 mi. The drainage in the immediate vicinity of the Many Woman/Mink well pad is to the southeast to the intermittent stream 1,700 ft to the south of the well pad. This drainage then flows to the southwest into Lucky Mound Creek Bay of Lake Sakakawea, a distance of approximately 4.2 mi. All water features of the above intermittent drainages are within the Lucky Mound Creek Bay sub-watershed.

3.4.1.1 Surface Water Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, the Proposed Action would not be authorized and no construction and drilling would take place. Therefore, there would be no impacts to surface water.

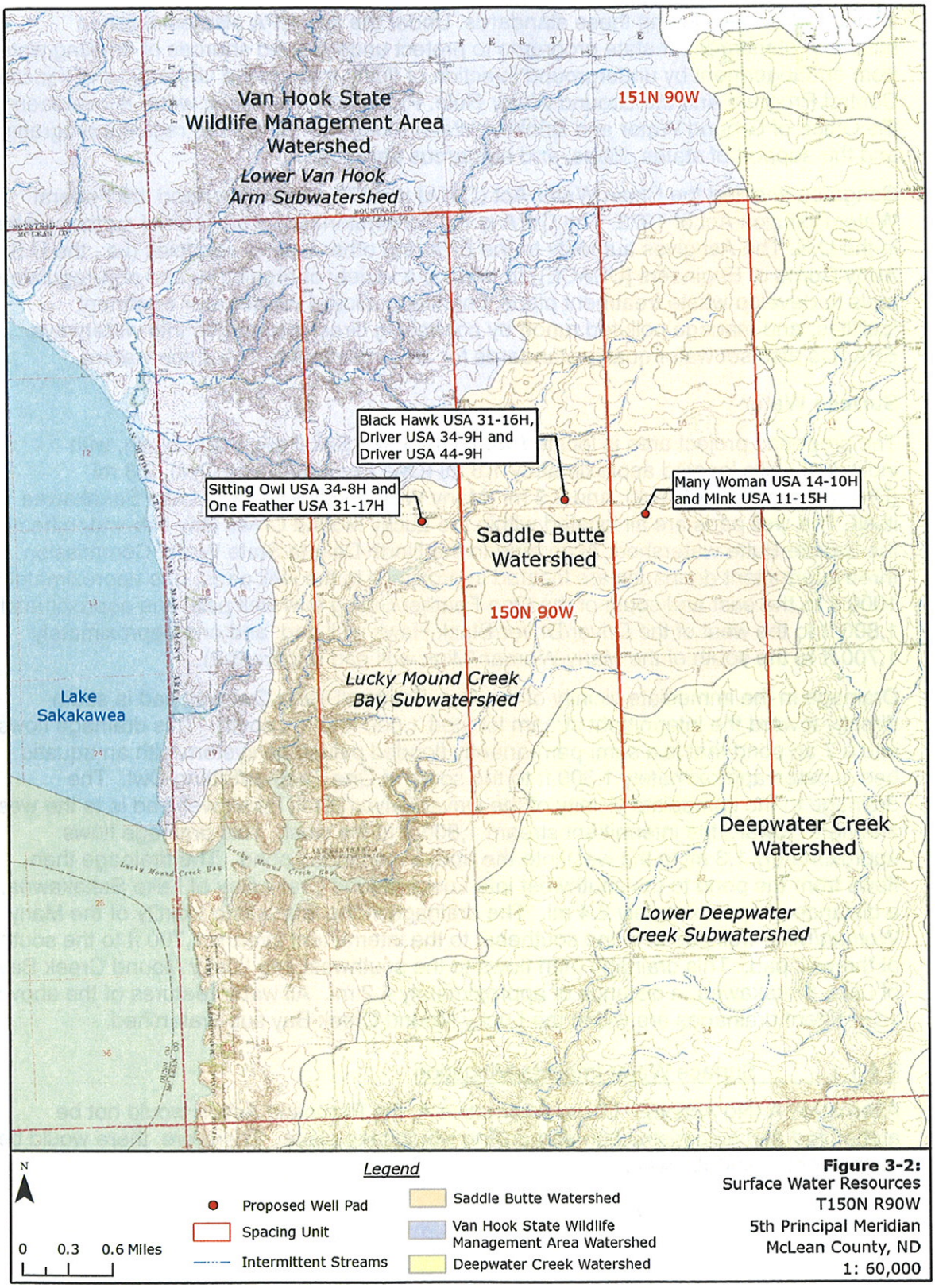

Figure 3-2:
Surface Water Resources
T150N R90W
5th Principal Meridian
McLean County, ND
1: 60,000

Alternative B (Proposed Action) – No significant impacts to surface water are expected to result from the Proposed Action. The proposed wells have been sited to reduce direct impacts to surface water and to minimize disruption of drainage patterns across the landscape. To avoid pooling at the well pads, rain or snow-melt would be diverted around the construction sites by a berm of topsoil on the cut sides (north and east) of the pads. If necessary, culverts would be implemented as needed. Erosion on the fill sides would be minimized by implementation of proper engineering, waddles or straw barriers, and other BMPs to inhibit sediment bearing runoff from the pads.

3.4.2 Ground Water

The nearest active ground water well is located approximately 1 mile south-southeast of the One Feather/Sitting Owl well pad (North Dakota State Water Commission 2010). The White Shield aquifer is located approximately 0.7 mi south of the One Feather/Sitting Owl well pad (Figure 3-3). Currently there is no sole source aquifer designated for North Dakota and no pending petition for one. There are no ground water well pipelines or water pipelines on the east side of Lake Sakakawea near the proposed well sites.

3.4.2.1 Ground Water Impacts/Mitigation

Alternative A (No Action) – Alternative A would not result in any impacts to ground water.

Alternative B (Proposed Action) – No significant impacts to ground water are expected to result from Alternative B. The proposed oil and gas wells would be cased and cemented as required by applicable law. This would isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.

3.5 Air Quality

Congress passed the Clean Air Act (CAA) in 1970, and created the EPA, giving the federal government the authority to enforce the provisions of the CAA. The CAA was amended in 1977, 1990, and 2008. One of the many revisions in the 1990 amendments recognizes that Indian Tribes have the authority to implement and enforce air pollution control programs and rules they feel are appropriate for Indian Country.

The NDDoH operates and maintains a network of Ambient Air Quality Monitoring (AAQM) stations in North Dakota. No such stations are on the FBIR, but a station nearest to the proposed well pads is located 37.5 mi to the south-southwest of the Mink/Many Woman at Dunn Center, North Dakota. This station (380250003) tracks criteria pollutants listed in the National Ambient Air Quality Standards (NAAQS). The criteria pollutants tracked at this station are: sulfur dioxide (SO_2), particulate matter (PM), nitrogen dioxide (NO_2), ozone (O_3), lead (Pb), and carbon monoxide (CO) (NDDoH, 2010). Sulfur dioxide is a colorless gas with a strong suffocating odor produced near large industrial sites that burn coal, fuel oil and diesel fuel. Particulate matter is a class of compounds that, depending on size, can cause adverse health problems by lodging deep in the lungs. Nitrogen dioxide is an irritating gas that will constrict airways and increase susceptibility to infections. Ozone is a colorless, pungent gas produced by a reaction of hydrocarbons with nitrogen oxides in the presence of sunlight. Ozone can cause loss of lung function and is an irritant to eyes, nose and throat. Carbon monoxide is a byproduct of incomplete combustion that decreases the ability of blood to carry oxygen, leading to health risks.

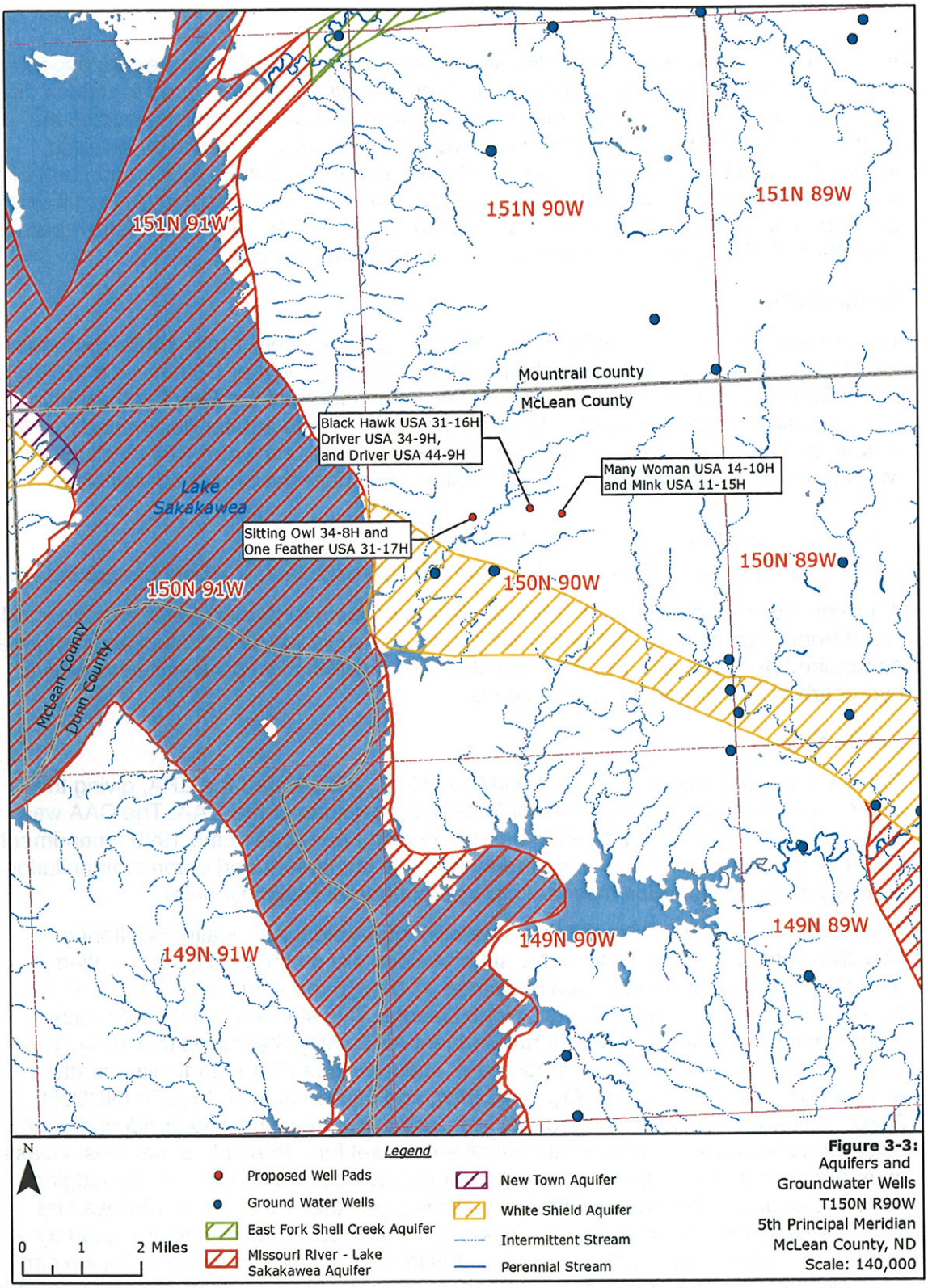

Figure 3-3:
Aquifers and
Groundwater Wells
T150N R90W
5th Principal Meridian
McLean County, ND
Scale: 140,000

A state may develop standards for pollutants that may be more stringent than federal requirements but not less stringent. North Dakota has adopted requirements for two criteria pollutants (SO_2 and O_3) that are more stringent than the federal requirements. In 2009, North Dakota was one of 13 states that was in attainment for all criteria pollutants and was also designated in attainment for both the 2.5 particulates and the 8-hour ozone standards (Table 3-3) (NDDoH, 2010). The NDDoH is in the process of updating the 2010 report and will have it completed late in the summer of 2011.

The CAA, as amended in 1990, provided air quality and visual protections to Class I areas that include national parks over 6,000 ac and wilderness lands over 5,000 ac. There are two Class I areas in North Dakota: Theodore Roosevelt National Park (>6,000 ac) and Lostwood National Wildlife Refuge (26,904 ac) which contains the Lostwood National Wilderness Area (5,577 ac) (http://lostwood.fws.gov). The Lostwood monitoring station is about 57 mi from the nearest proposed well pad, and the Theodore Roosevelt National Park monitoring station is about 54 mi from the One Feather/Sitting Owl well site. The Fort Berthold Reservation is in compliance with the North Dakota state ambient air quality standards, NAAQS and visibility.

Table 3-3:
Federal and State Air Quality Standards and Reported Data for Dunn Center

Pollutant	Averaging Period	EPA Air Quality Standard (EPA, 2006)		NDDoH Air Quality Standard (NDDoH, 2009)		2009 Dunn Center		2010 Avg. Quarter 1 & 2 at Dunn Center	
		µg/m³	Parts per million	µg/m³	Parts per million	µg/m³	Parts per million	µg/m³	Parts per million
SO_2	24-Hour	365	0.14	260	0.099	--	0.005	--	0.035
	Annual Mean	80	0.030	60	0.023	--	0.0005	--	0.0007
PM_{10}	24-Hour	150	--	150	--	44.5	--	31.0	--
	Annual Mean	50	--	50	--	11.3	--	9.7	--
$PM_{2.5}$	24-Hour	35	--	35	--	14.2	--	--	--
	Annual Mean	15	--	15	--	3.4	--	--	--
NO_2	Annual Mean	100	0.053	100	0.053	--	0.0015	--	0.0016
CO	1-Hour	40,000	35	40,000	35	--	--	--	--
	8-Hour	10,000	9	10,000	9	--	--	--	--
Pb	3-Month	1.5	--	1.5	--	--	--	--	--
O_3	1-Hour	240	0.12	235	0.12	--	0.064	--	0.063
	8-Hour	--	0.08	--	0.08	--	0.055	--	0.058

3.5.1 Hazardous Air Pollutants

Hazardous air pollutants (HAPs), also known as toxic air pollutants or air toxics, are those pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects (EPA 2011). Major sources of HAPs are industrial processes, commercial sources (gasoline), internal combustion (motor vehicles) and external combustion (furnaces, boilers, and flairs). HAPs released during oil field development include benzene, toluene, xylene and formaldehyde.

3.5.2 Greenhouse Gases (GHG)

Greenhouse gases are gases that trap heat in the earth's atmosphere. Gases of concern are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), and fluorinated gases. Carbon dioxide occurs naturally from respiration, volcanoes, ocean surfaces and from human activities including burning solid waste, burning fossil fuels and burning other carbon based materials (wood, plants). Other sources of CO_2 are from chemical manufacturing, oil and gas production, and human produced chemical reactions such as cement manufacturing. Carbon dioxide is captured (sequestered) by plants and other organisms (i.e. clams, corals, etc.) as part of the carbon cycle. Methane and nitrous oxide emissions occur during human activities such as production and transport of coal, natural gas, and oil and combustion of organic materials. Fluorinated gases are synthetic, powerful greenhouse gases including hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These GHGs are solely the result of human activities and are emitted from a variety of industrial processes.

Oil field GHG and HAP emissions include combustion emissions, fugitive emissions, and venting emissions. The oil and gas activities that release emissions are production/processing and transfer/storage. Production/processing emissions of GHG and HAPs include CO, CH_4, SO_2 from wells, internal combustion (IC) engines, compressors, flare gas, and completion activities. Fugitive emissions of GHG and HAPs include dust and mechanical leaks from equipment, heater/treaters, separators, pump stations, and pipelines. During transfer and storage, venting emissions can be from leaking valves, flanges, dehydrator vents and connections on pumps, and pipelines (EPA 2011).

The NDDoH rules state that it is the responsibility of each owner/operator to determine the applicability of GHG emissions inventory reporting and permitting rules to their facilities and to comply with the rules. If multiple wells are drilled from a single pad, GHG emissions from all wells would be aggregated (NDDoH 2011).

3.5.3 Air Quality Impacts/Mitigation

Air emissions from the proposed projects would have a negligible cumulative impact. Air quality in Mclean County is well below the ambient air quality standards listed by the NAAQS. It is anticipated that toxic air pollutants emitted from mobile sources and gas flaring would be minor and, therefore, the total contribution of toxic emissions to ambient air quality in the county would be insignificant.

3.5.3.1 Best Management Practices (BMP)

- Reduce the amount of dust and vehicle emissions.
- Use centralized water storage for hydraulic fracturing to cut down water hauling activities.
- Use remote monitoring through telemetry where possible.
- Use water or dust suppressants on roads.
- Reduce speeds when near occupied facilities.

3.5.3.2 Drilling and Production BMP

- Drill wells from multi-well pads using directional drilling.

- Use clean diesel fuel or natural gas (CH_4) in IC engines and compressors.
- Reduce fugitive GHG.
- Avoid venting GHG.
- If gas pipelines are not available, burn flare gas at high temperatures.
- Use vapor recovery units on storage tanks and use closed systems when possible.
- Proper maintenance of hatches, seals, and valves on all drilling and transfer equipment.
- Reduce usage of high-bleed and low-bleed compressors to reduce emissions.

3.6 Threatened and Endangered Species

In accordance with Section 7 of the ESA of 1970, each federal agency is required to ensure the following two criteria. First, any action funded or carried out by an agency must not be likely to jeopardize the continued existence of any federally listed endangered or threatened species. Second, no action can result in the destruction or adverse modification of designated critical habitat for a listed species. An endangered species is one that is in danger of becoming extinct 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 threatened or endangered under the ESA, but for which listing 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 be worth protecting.

The areas around the proposed One Feather USA 31-17H/Sitting Owl USA 34-8H, Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H, and Many Woman USA 14-10H/Mink USA 11-15H well pads were surveyed to determine the potential for occurrences of federally listed threatened, endangered, and candidate species during the site visits on May 9-11, 2011. The survey area consisted of 10 ac centered on the proposed well pad center point and a 200 ft wide corridor along the access roads. Listed species potentially present in McLean County are provided (Table 3-4) (USFWS 2010).

Table 3-4: Federally Listed Species Potentially Present in McLean County, ND		
Common Name	**Scientific Name**	**Status**
Dakota skipper	*Hesperia dacotae*	Candidate
Gray wolf	*Canis lupus*	Endangered
Interior least tern	*Sternula antillarum*	Endangered
Pallid sturgeon	*Scaphirhynchus albus*	Endangered
Piping plover[1]	*Charadrius melodus*	Threatened
Sprague's pipit	*Anthus spragueii*	Candidate
Whooping crane	*Grus americana*	Endangered

1. Designated critical habitat is present in McLean County.

None of the listed species were observed during the site surveys. Habitat requirements, the potential for suitable habitat within the project area, and other information regarding listed species are described as follows.

Dakota Skipper

The Dakota skipper is a small (1 in wingspan) butterfly that historically ranged from southern Saskatchewan, across the Dakota's and Minnesota to Iowa and Illinois. This species is found in high quality native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: low or wet prairie dominated by bluestem grasses, wood lily, harebell and smooth camas; and upland prairie dominated by bluestem grasses, needlegrass, pale purple and upright coneflowers and blanketflower. Due to loss of habitat throughout its historical range, this species is thought to be extirpated from Iowa and Illinois (USFWS 2011a).

The proposed well pads are currently used as cropland and lack the presence of wildflowers necessary to support Dakota skippers. Due to the lack of suitable habitat, this species is not thought to occur in the project area and no individuals were observed during site surveys. The nearest potential habitat exists approximately 0.3 mile northwest of the Driver USA 34-9H/Driver 44-9H/Black Hawk 31-16H well pad in existing prairie habitat, although this area is a small strip of native grassland along an unnamed drainage.

Gray Wolf

The gray wolf is the largest canid species in North America. Its range once included nearly all of North America but due to extensive eradication effort, it now occurs primarily in Alaska, Minnesota, Wisconsin, Michigan, Montana, Wyoming, Idaho, and Washington. While not common, gray wolves have been sighted in North Dakota since 1990. These sightings are sporadic and likely consist of dispersing individuals from Minnesota and Canada. Habitat for gray wolves is primarily the forested areas in north central and north east North Dakota, though they may occur anywhere (USFWS 2011b).

Suitable habitat is lacking for gray wolves in the project area since the well pads are in cultivated cropland. Various wooded draws exist in the general vicinity of the project area, although these areas are scattered and likely too small to support wolves.

Interior Least Tern

The interior least term is an endangered species that nests along sparsely vegetated sandbars on the Missouri and Yellowstone Rivers. In North Dakota, there are an estimated 100 breeding pairs. The primary threat to this species is from the loss of nesting habitat from dam construction and river channelization that removes shoreline

habitat. This species is often found with the piping plover, as they share the same habitats (USFWS 2011c).

The proposed well pads contain no existing or potential habitat for the interior least tern. The nearest habitat is approximately 1.7 mile west of the One Feather USA 31-17H/Sitting Owl USA 34-8H well pad, along the shore of Lake Sakakawea. The other well pads and access roads are all farther away from Lake Sakakawea.

Pallid Sturgeon

The pallid sturgeon is a large fish (up to 80 pounds) that has a flattened snout and is armored with five bony plates along the body. It was once found in the Missouri, Mississippi, Yellowstone, Platte, Kansas, Ohio, Arkansas, Red, and Sunflower Rivers in areas of high turbidity and natural flows. Currently their range is fragmented by dams on the Missouri and Yellowstone Rivers. Reasons for its decline include habitat loss and modification from the construction of dams and channelization of rivers (USFWS 2011d).

No habitat for the pallid sturgeon exists in the project area. The nearest potential habitat is Lake Sakakawea, approximately 1.7 mi west of the One Feather USA 31-17H/Sitting Owl USA 34-8H well pad along the shore of Lake Sakakawea. The other well pads and access roads are all farther away from Lake Sakakawea.

Piping Plover

The piping plover is a small, stocky shorebird that inhabits barren sand and gravel shores of rivers and lakes. Piping plovers tend to avoid areas of dense vegetation. Nearly all of the lakes used by piping plovers in North Dakota are alkaline in nature and have salt-encrusted, white beaches. Typically, the beaches used by piping plovers are 30 to 120 ft wide. In North Dakota, this species is found in 20 counties, and an estimated 399 breeding pairs existed in 1996 (USFWS 2011e). Critical habitat for this species has been designated by the USFWS and includes the Missouri River and all of Lake Sakakawea.

Existing or potential habitat for the piping plover does not exist in the project area. The nearest potential habitat is along the banks of Lake Sakakawea, approximately 1.7 miles west of the One Feather USA 31-17H/Sitting Owl USA 34-8H well pad along the shore of Lake Sakakawea. The other well pads and access roads are all farther away from Lake Sakakawea.

Sprague's Pipit

The Sprague's pipit is an endemic grassland bird found primarily in native, medium to intermediate height prairie habitats. Nests are found on the ground in areas with a high diversity of native grasses. This species may be area sensitive, requiring relatively large areas of appropriate habitat with little human disturbance. Spring migration occurs in April and May, and fall migration is from late September through early November (Jones 2010; NatureServe 2011).

The project area consists of cultivated cropland and therefore does not contain any suitable habitat for the Sprague's pipit. The nearest potential habitat is approximately 0.3 mi northwest of the Driver USA 34-9H/Driver 44-9H/Black Hawk 31-16H well pad in existing prairie habitat, though this area is a small strip of native grassland along an unnamed drainage. No Sprague's pipits were observed during the site survey.

Whooping Crane

The whooping crane is North America's tallest bird, standing 5 ft tall and with a wingspan of 7 ft. Currently, approximately 264 wild whooping cranes exist, most within the Aransas-Wood Buffalo flock. This flock winters along the coast of Texas and breeds in the Wood Buffalo National Park in Canada. Whooping cranes may be seen in North Dakota during migration between these two areas. Habitat consists of shallow wetlands that are characterized by cattails, bulrushes and sedges. They may also be found in upland areas, especially during migration (USFWS 2011f).

The proposed project area is within the Central Flyway where 75 percent of confirmed whooping crane sightings have occurred. While the three well pads and access roads do not contain any wetlands, numerous wetlands exist near the sites and may be used by whooping cranes during migration. The project area consists of cultivated cropland which may also be used by whooping cranes as foraging sites during migration.

3.6.1 Threatened and Endangered Species Impacts and Mitigation

Alternative A (No Action) – Under Alternative A, the Proposed Action would not be authorized and no construction and drilling would take place. Therefore, there would be no impacts to threatened or endangered species or designated critical habitat.

Alternative B (Proposed Action) - Due to the lack of native prairie vegetation within the project area, the Proposed Action would not adversely impact Dakota skippers nor contribute to the future listing of Dakota skippers under the ESA.

Suitable habitat for the gray wolf does not exist within the project area, but gray wolves have large ranges and may occur in the vicinity of the project area. Construction at the well pads would result in increased noise and disturbance which would likely discourage any wolves from using the area. Vehicle traffic leading to the project area would also increase the potential for mortality of wolves from vehicle collisions. Additionally, big game species (e.g. white-tailed deer), that are wolves' primary prey, would be displaced from the project area and vicinity, which would indirectly impact any wolves in the area. Due to limited habitat available and the lack of sightings within the vicinity, the Proposed Action would have **no effect** on gray wolves.

Lake Sakakawea and its shoreline provide suitable habitat for the pallid sturgeon, interior least tern, and piping plover. This potential habitat is approximately 1.7 mi west of the One Feather USA 31-17H/Sitting Owl 44-8H well pad and approximately 183 ft lower in elevation. The horizontal and vertical distance of the project area to suitable habitat would reduce disturbance to the pallid sturgeon, interior least tern and piping plover. The other well pads and access roads are all farther away from Lake Sakakawea.

Secondary containment measures and the cuttings pit parameters would minimize the potential for transfer of accidentally released fluids to Lake Sakakawea and associated habitats. Given the distance from the lake, construction methodologies, and the level of containment measures, the Proposed Action would have **no effect** on the pallid sturgeon, interior least tern, and piping plover. Additionally, the Proposed Action would not jeopardize the continued existence of these species, nor is it likely to remove or adversely modify designated critical habitat for the piping plover.

While there is no suitable habitat for Sprague's pipit within the project area, native prairie habitat that could potential support this species is found approximately 0.3 mile northwest of the Driver USA 34-9H/Driver 44-9H/Black Hawk 31-16H well pad, though

this area is a small strip of native grassland along an unnamed drainage. The nearest large area of native grassland that may potentially support Sprague's pipits is approximately 0.75 mile northwest of the One Feather USA 11-17H/Sitting Owl USA 44-8H site. Construction of the well pads and access roads is scheduled to begin after August 1, 2011, outside the breeding season for this species. If a Sprague's pipit is found within the project area during construction, all activities shall cease and the USFWS shall be contacted for advice on how to proceed. Due to a lack of habitat within the project area, the Proposed Action would not affect the Sprague's pipit or contribute to the future listing of this species under the ESA.

The project area is located within the Central Flyway and suitable cropland food sources are found on and surrounding the project area in the form of small grain crops. Numerous wetlands are near the three well pads and access roads, although none would be directly impacted. Per USFWS recommendations, if a whooping crane were found within one mile of the project area, all work would cease and the USFWS would be contacted immediately. In coordination with the USFWS, work could resume after the bird(s) have left the area. The Proposed Action **may affect, but is unlikely to adversely affect** whooping cranes, nor would the Proposed Action jeopardize the continued existence of the whooping crane.

3.7 Wetlands, Eagles, Migratory Birds and Other Wildlife, and Vegetation

An intensive pedestrian survey of the project area was conducted on May 9-11, 2011 by TEC. The purpose of this survey was to collect baseline information on vegetation and wildlife at the three well pads and access roads. The surveyed area consisted of 10 ac centered on each proposed well pad center-point and a 200 ft wide corridor along the proposed access road. In addition, a survey for raptors and raptor nests was conducted within 0.5 mile of the proposed well pad center point. This survey consisted of pedestrian transects focusing on potential nest sites including cliffs and wooded draws. Wooded draws were observed from both the upland areas overlooking the draws and from bottomlands within the actual draws. Resources were evaluated using visual inspection and pedestrian transects across the site.

A BIA-facilitated on-site assessment of the well pads was conducted on May 9, 2011. A BIA Environmental Protection Specialist, a representative from Marathon, and TEC personnel were present. During the on-site, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were considered. Those present at the on-site agreed that the project locations, with the implementation of minimization measures, would minimize impacts to sensitive wildlife and vegetation resources compared to other nearby potential sites.

3.7.1 Wetlands

Wetlands are defined in both the 1977 Executive Order 11990, *Protection of Wetlands*, and in Section 404 of the CWA, 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.

No wetlands were identified within the proposed well pad locations. However, several wetlands exist in surrounding areas. Based on USFWS National Wetland Inventory data, the nearest wetland to the One Feather USA 11-17H/Sitting Owl USA 44-8H is approximately 450 ft north of the well pad. Wetlands exist approximately 125 ft from the southeast corner and 225 ft from the southwest corner of the Driver USA 34-9H/Driver 44-9H/Black Hawk 31-16H well pad. The access road leading to this pad and the Mink USA 11-15H/Many Woman USA14-10H well pad would be re-routed around these wetlands and others to prevent any impacts. The nearest mapped wetland to the Mink USA 11-15H/Many Woman USA14-10H well pad is approximately 635 ft southeast. All of the mapped wetlands near the well pads and access roads are classified as freshwater emergent wetlands. Additionally, all of the wetlands contained water during the field surveys.

3.7.1.1 Wetland Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, no construction would take place. Therefore, there would be no impacts to wetlands.

Alternative B (Proposed Action) – Marathon has committed to relocating all well pads and access roads 100 ft from any mapped wetlands. Since there are no wetlands within the disturbance area of the proposed well pads or access roads, there would not be any direct impacts to wetlands. Indirect impacts could result from erosion or an oil spill. BMPs designed to minimize erosion include use of water bars, silt fences, seeding, erosion mats, and biologs. The cuttings pit would be lined with a minimum 20-mil liner to prevent leakage of oil into surrounding soils. Additionally, the storage tanks and heater/treater would be surrounded with an impermeable berm that would act as secondary containment to guard against possible spills.

3.7.2 Bald and Golden Eagles

Protection for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) is provided through the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). The BGEPA was written to protect and preserve bald and golden eagles, both of which are treated as species of concern by the Department of the Interior (DOI). 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, or disturb bald or golden eagles. The BGEPA defines "disturb" as to agitate or bother a bald or golden eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment.

Bald eagles are found throughout North Dakota, but they primarily nest along the Missouri River, Devils Lake, and the Red River areas. Preferred habitat for bald eagles includes large rivers and lakes bordered with mature stands or old-growth trees. Breeding habitat often will include some type of edge and a relatively open canopy with nests typically constructed close to water (less than 1.2 mi) (Hagen et al 2005). No bald eagles or bald eagle nests were observed within 0.5 mile of the three proposed well pads and access roads during the field survey conducted on May 9-11, 2011. Aerial surveys for bald and golden eagle nests were not conducted because the proposed construction of the three wells would occur outside the breeding period for these

species. Additionally, the surveys could not be performed within the recommended survey window of March 1 to May 15, before leaf-out.

Golden eagles are found in the rugged portions of badlands, buttes overlooking native prairie, and large trees, and are often associated with prairie dog towns. In North Dakota, golden eagles are found in the badlands, Killdeer Mountains, and upper reaches of the Missouri River in the western portions of the state. Golden eagles will nest on cliffs and trees such as cottonwoods and green ash, or even near or on the ground. Nests are often reused in subsequent years (Hagen et al 2005). No golden eagles or nests were observed within 0.5 mile of the proposed well pads and access roads during the field survey conducted on May 9-11, 2011.

The Gap Analysis Project (GAP) for North Dakota modeled bald and golden eagle habitat throughout the state. According to the GAP data, habitat for bald and golden eagles does not exist in the project area itself, though habitat is found in the wooded draw to the south of the site (Figure 3-4) (USGS 2005). In addition to mapped eagle habitat, the North Dakota Game and Fish Department (NDGFD) maintains a database of all known eagle nest locations. This database indicates that there are no known nests within a 10 mile radius of the project area (S. Johnson, personal communication, NDGFD, May 9, 2011).

3.7.2.1 Bald and Golden Eagle Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, no construction would take place. Therefore, there would be no impacts to bald and golden eagles.

Alternative B (Proposed Action) – No bald or golden eagles were observed during site surveys and no eagle nests were found within 0.5 mi of the project area. Therefore, no impacts to bald or golden eagles are anticipated to occur from implementation of the Proposed Action. Should any bald or golden eagle nests be subsequently found within 0.5 mile, all construction activities would cease and the USFWS would be contacted for advice on how to proceed.

3.7.3 Migratory Birds and Other Wildlife

The MBTA provides protection for nearly all bird species in the U.S., with the exception of introduced or nonnative species. The MBTA regulates impacts to these species such as mortality, habitat degradation, and displacement of individual birds. The MBTA defines "take" to include any means or in any manner, hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof, except when specifically permitted by regulations. Under the MBTA, active nests are also protected.

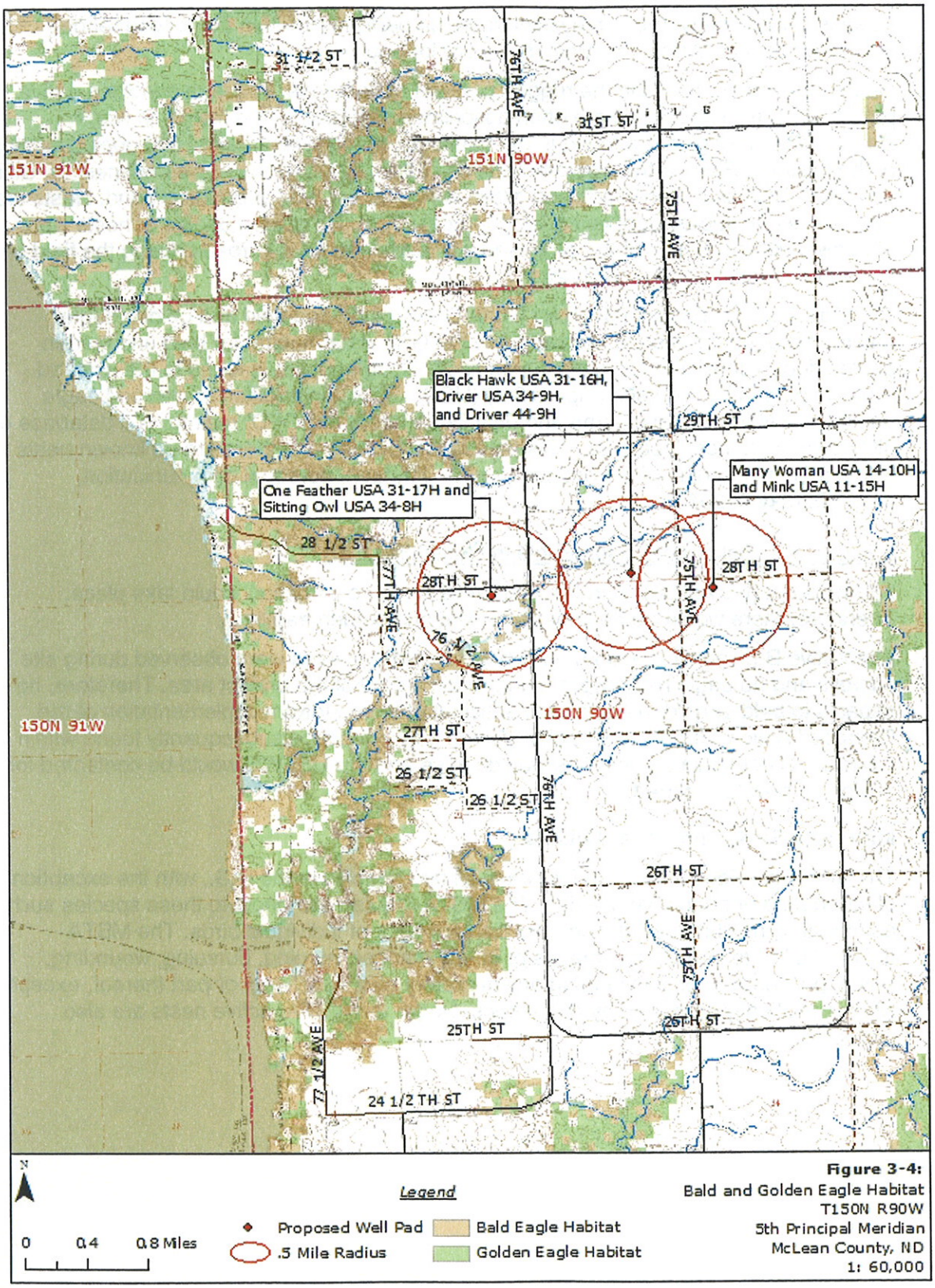

Figure 3-4:
Bald and Golden Eagle Habitat
T150N R90W
5th Principal Meridian
McLean County, ND
1: 60,000

The project area lies within the Central Flyway of North America and as such, this area is used by many migrating birds during their spring and fall migrations. Many birds also breed and nest in the area. The nearby Audubon National Wildlife Refuge system has recorded 246 species of birds occurring in the area, with 98 species breeding in the vicinity (USFWS 2007). However, because the three well pads are currently used as a cultivated crop field and no trees exist there, the sites are marginal as habitat for nesting birds. However, during site surveys, a killdeer (*Charadrius vociferus*) nest was located near the center of the Mink USA 11-15H/Many Woman USA 14-10H well pad. A northern harrier (*Circus cyaneus*) nest with one egg was located in an unnamed drainage, approximately 1,500 ft southwest of the One Feather USA 31-17H/Sitting Owl USA 34-8H well pad. A review of the NDGFD database does not show any known raptor nests within a 10-mile radius of the project area.

Numerous other wildlife species have the potential to occur in the project area. Common species include mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), sharp-tailed grouse (*Tympanuchus phasianellus*), badger (*Taxidea taxus*), song birds, coyote (*Canis latrans*), red fox (*Vulpes vulpes*), cottontail rabbit (*Sylvilagus* spp.), jackrabbit (*Lepus* spp.), and common porcupine (*Erethizon dorsatum*) (USFWS 2007). Table 3-5 identifies the wildlife species observed at each well pad during site surveys.

Table 3-5:
Observed Wildlife Species

Well Name	Species observed
One Feather USA 31-17H/Sitting Owl USA 34-8H	Grasshopper sparrows (*Ammodramus savannarum*), horned lark (*Eremophila alpestris*), coyote scat.
Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H	Red-wing blackbirds (*Agelaius phoeniceus*), northern harrier, and rodent burrows.
Many Woman USA 14-10H/Mink USA 11-15H	Western meadowlark (*Sturnella neglecta*), northern harrier, red-wing blackbirds, killdeer, rodent burrows.

3.7.3.1 Migratory Birds and Other Wildlife Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, the Proposed Action would not be authorized and no construction would take place. Therefore, there would be no impacts to migratory birds and other wildlife.

Alternative B (Proposed Action) – The proposed well pads are located within cultivated fields, which provides habitat for some wildlife species. Therefore, ground clearing, drilling, and long-term production activities associated with the Proposed Action could potentially impact individuals by displacing them from suitable habitat. A lack of trees and other topographic relief in the project area limits nesting use in the project area to ground nesting species. Due to the current land use of the project area as cultivated cropland and the lack of trees in the area, there is little breeding or nesting habitat for migratory birds. The existing killdeer nest located in the Mink USA 11-15H/Many Woman USA 14-10H would be abandoned by the time construction is slated to begin (after August 1). Since all construction is anticipated to begin after August 1, no pre-construction surveys for migratory bird nests would be required. If any migratory bird nest is subsequently found on-site during construction, construction activities would cease and the USFWS will be notified for advice on how to proceed.

The three well pads and access roads are located within an upland area, and the closest well pad is approximately 1.7 mi east and 183 ft higher than the nearest perennial

source of water, Lake Sakakawea. This horizontal and vertical distance, along with shielding vegetation between the lake and project area, would minimize impacts to any shoreline nesting migratory birds by masking visual and noise disturbance resulting from the Proposed Action.

Additionally, all reasonable, prudent, and effective measures to avoid the taking of migratory bird species would be implemented during construction and operation of the wells. These measures include the use of suitable mufflers on all internal combustion engines, compressor components that would reduce noise, travel restricted to approved roadways, placing wire mesh or grate covers over barrels or buckets placed under valves and spigots to collect dripped oil, maintaining open cuttings pits and ponds that are free of oil, and covering cuttings pits with netting that has a maximum mesh size of 1.5 in or less.

Impacts to other wildlife would occur primarily through the displacement of individuals. As a result, wildlife may utilize marginal habitat where population density and competition would increase. Consequences of such displacement and competition may include lower survival, lower reproductive success, and lower recruitment leading to population impacts. These impacts would vary according to species; however, impacts would be greatest during the construction phase when human presence, noise, and vehicle use in and near the project area is highest. If the wells go into production, the amount of human activity would decrease, and impacts to wildlife would also decrease.

Another potential impact to wildlife would occur from increased mortality. Mortality of wildlife species may occur from vehicle strikes, ingesting toxic chemicals, or oil spills that contaminate individuals and habitat. To minimize these potential impacts, vehicles would observe all speed limits in and leading to the project area.

During drilling activities, the noise, movements, and lights associated with construction activities would deter wildlife from entering the area. The cuttings produced would be stabilized before being placed in a lined cuttings pit. This pit would be fenced on the non-working sides. After drilling and completion operations, the access side would be fenced and the pit would be netted to prevent access by wildlife. The cuttings pit itself would be lined with a minimum thickness of 20-mil synthetic liner to prevent seepage and contamination of the area. Any fluids that remain in the cuttings pit would be removed and disposed in accordance with BLM and NDIC rules and regulations. The storage tanks and heater/treater would be surrounded with an impermeable berm that would act as secondary containment to guard against possible spills. This berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. Other BMPs would be implemented to minimize wind and water erosion of soil and a semi-closed loop system would be used during drilling.

3.7.4 Vegetation

Vegetation resources in the project area were evaluated during the site surveys on May 9-11, 2011 by TEC. The project area was also investigated for the presence of native prairie plant species and invasive plant species. The State of North Dakota has declared 11 species as noxious under the North Dakota Century Code. Of these species, five have been reported in McLean County (Table 3-6), though none were observed in the project area, except for the minimal presence of leafy spurge (*Euphorbia esula*) observed only at the One Feather/Sitting Owl site. No threatened or endangered plant species are listed for McLean County.

Table 3-6: Noxious Weed Species in McLean County, ND		
Common Name	**Scientific Name**	**2010 McLean County Reported Acres**
Absinth wormwood	*Artemisia absinthium*	900
Canada thistle	*Cirsium arvense*	3500
Dalmatian toadflax	*Linaria genistifolia*	0
Diffuse Knapweed	*Centaurea diffusa*	0
Leafy spurge	*Euphorbia esula*	625
Musk thistle	*Carduus nutans*	320
Purple loosestrife	*Lythrum salicaria*	0
Russian knapweed	*Centaurea repens*	0
Saltcedar	*Tamarix ramosissima*	0
Spotted knapweed	*Centaurea maculosa*	50
Yellow Toadflax	*Linaria vulgaris*	0

Source: North Dakota Department of Agriculture 2010.

The **One Feather USA 31-17H/Sitting Owl USA 34-8H** well pad and access road are located within cultivated wheat cropland. No native vegetation is present within the well pad (5.7 ac), fenced area (6.9 ac), or the access road (441 ft). Minimal amounts of noxious weeds are present consisting primarily of small, scattered clusters of leafy spurge and other non-native vegetation including wild mustard (*Sinapis arvensis*). Outside the proposed well pad boundary, cultivated cropland extends in all directions, with an unnamed ephemeral drainage located approximately 550 ft south of the well pad location. This drainage contains shrubs and trees at the bottom and along its sides, with several species of native vegetation present. This area is classified by the North Dakota GAP program as green ash woodland, mixed deciduous and conifer woodland, and upland deciduous shrubland. The GAP also classifies the area as a mix of grasslands, including needlegrass prairie, sand prairie, and little bluestem bunchgrass prairie. Characteristic species in these areas include western wheatgrass (*Pascopyrum smithii*), green needlegrass (*Nassella viriula*), little bluestem (*Schizachyrium scoparium*), and junegrass (*Koeleria macrantha*) (USGS 2005). Species observed in these areas include western snowberry (*Symphoricarpos occidentalis*), hawthorn (*Crataegus L.*), prairie rose (*Rosa arkansana*), silver buffaloberry (*Shepherdia argentea*), prairie crocus (*Anemone patens*), and purple coneflower (*Echinacea angusifolia*) (Grondahl and Evelsizer 2002; USDA 2011). Figure 3-5 depicts wheat vegetation within the One Feather/Sitting Owl well pad and Figure 3-6 depicts the drainage prairie area south of the site.

Figure 3-5. Cultivated Cropland on One Feather/Sitting Owl Site

Figure 3-6. Drainage and Native Prairie South of One Feather/Sitting Owl Site

The **Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H** well pad and access road are located within a cultivated wheat field. No native vegetation is present within the well pad (5.6 ac), fenced area (6.5 ac), or the access road (2,025 ft). Within these areas, some wild mustard occurs. The nearest grassland habitat that may contain native vegetation is located approximately 0.3 mile northwest of the site and consists of a very small unnamed ephemeral drainage. Figure 3-7 depicts cultivated wheat vegetation within the Driver/Driver/Black Hawk well pad.

The **Mink USA 11-15H/Many Woman USA 14-10H** well pad and access road are located within a cultivated wheat field. No native vegetation is present within the well pad (5.7 ac), fenced area (7.0 ac), or the access road (1,328 ft). Within these areas some wild mustard occurs. The nearest grassland habitat that may contain native vegetation is located approximately 0.9 mile northwest and 1.0 mile east of the site. Figure 3-8 depicts cultivated wheat vegetation within the Mink/Many Woman well pad.

Figure 3-7. Cultivated Cropland on Driver/Driver/Black Hawk Site

Figure 3-8. Cultivated Cropland South of Mink/Many Woman Site

3.7.4.1 Vegetation Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, the Proposed Action would not be authorized and no construction would take place. Therefore, there would be no impacts to vegetation.

Alternative B (Proposed Action) – Under the Proposed Action, construction of the well pads and access roads would take place on minimal acreage within cultivated cropland, so there would be no direct impact to native vegetation. Indirect impacts to native vegetation, such as erosion, near the site would be minimized through the use of water bars, seeding, erosion mats, and biologs.

Following initial construction and drilling, interim reclamation measures would be implemented and include reduction of all cut and fill slopes, redistribution of stockpiled topsoil, and re-seeding of disturbed areas of native vegetation with a native grass seed mixture consistent with surrounding vegetation. If commercial production equipment is installed, the well sites would be reduced in size to accommodate the production facilities, leaving adequate room to conduct normal well maintenance and potential recompletion operations. The remainder of the well pads would be reclaimed. Reclamation activities would include leveling, contouring, backfill and re-seeding. Erosion control measures would be installed as appropriate. Stockpiled topsoil would be redistributed and reseeded as recommended by the BIA, utilizing native vegetation in non-crop lands. A noxious weed plan would be implemented to reduce the potential for noxious weeds to become established at all sites

If commercial production is not established at one or more of the proposed wells, or upon final abandonment of commercial operations, all disturbed areas would be promptly reclaimed. The access roads and well pads would be re-contoured to match topography of the original landscape, and reseeded with a native grass mixture that is consistent with surrounding native species to ensure a healthy and diverse vegetative community that is free of noxious weeds in non-croplands. Re-vegetation would take place at the first seasonal opportunity, generally before May 15 or after October 15. 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 vegetation and is free of noxious weeds.

3.8 Cultural Resources

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

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

The Native American Graves Protection and Repatriation Act (NAGPRA) 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. This Act requires federal

agencies to consider the impacts of their actions on the 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 (TCPs), 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.

Whatever the nature of the cultural resource addressed by a particular statute or tradition, implementing procedures invariably include consultation requirements at various stages of a federal undertaking. The MHA Nation has designated a Tribal Historic Preservation Officer (THPO) by Tribal Council resolution, whose office and functions are certified by the National Park Service. The THPO operates with the same authority exercised in most of the rest of North Dakota by the State Historic Preservation Officer (SHPO). Thus, BIA consults and corresponds with the THPO regarding cultural resources on all projects proposed within the exterior boundaries of the Fort Berthold Reservation.

Cultural resource inventories of these well pads and access roads were conducted on May 9, 2011 by personnel of Kadrmas, Lee & Jackson, Inc., using an intensive pedestrian methodology. For the Mink USA 11-15H/Many Woman USA 14-10H project approximately 64.5 acres were inventoried (Macy 2011a). No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. As the lead federal agency, and as provided for in 36 CFR 800.5, on the basis of the information provided, BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on June 20, 2011; however, the THPO did not respond within the allotted 30 day comment period. For the Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H project approximately 41.5 acres were inventoried (Macy 2011b) and for the One Feather USA 31-17H/Sitting Owl USA 34-8H project approximately 12 acres were inventoried (Macy 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. 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 1, 2011 (Appendix D); however, the THPO did not respond within the allotted 30 day comment period.

3.8.1 Cultural Resources Impacts/ Mitigation

Alternative A (No Action) – Under Alternative A (No Action), the proposed project would not occur and existing conditions would continue. Alternative A would have no direct or indirect impacts on cultural resources.

Alternative B (Proposed Action) – Alternative B is unlikely to impact cultural resources, as no cultural resource sites or TCPs were identified and recorded within the project area during the Class III cultural resources inventory and TCP survey. In the event of an inadvertent discovery, Marathon would immediately cease surface disturbance activities and notify the THPO and the BIA. The cultural property would be secured, the site(s) would be evaluated, and a determination made by the THPO and BIA regarding the implementation of mitigation measures for the site(s). Additional ground disturbance by

Marathon at the site(s) would not occur until written authorization to proceed has been obtained from the BIA. The collection of artifacts or disturbance of cultural resources by project personnel is wholly prohibited.

3.9 Socioeconomic Conditions

Socioeconomic conditions are based on the social characteristics and economic status of the people living within and in the vicinity of the project area, as well as the composition of local and regional businesses employment, transportation, etc. Other factors that influence the socioeconomic characteristics of a particular area include the geography, geology, and climate of the area.

Six major communities are located within the Fort Berthold Reservation: 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 major shopping centers typically found in larger cities of the region such as Minot and Bismarck. According to 2000 U.S. Census data, educational/health/social services is the largest industry on the Reservation, followed by the entertainment/recreation/accommodation/food industry[1]. The Four Bears Casino, Convenience Store, and Recreation Park are also major employers with over 320 employees, 90% of whom are tribal members. In addition, several industries are located on the Reservation, including Northrop Manufacturing, Mandaree Electrical Cooperative, Three Affiliated Tribes Lumber Construction Manufacturing Corporation, and Uniband.

Several paved state highways provide access to the Reservation including ND Highways 22 and 23 and Highway 1804. These highways provide access to larger communities such as Bismarck, Minot and Williston. Paved and gravel BIA roads serve as primary connector routes within the Reservation. In addition, networks of rural gravel roadways are located throughout the 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.

In July 2011, the Three Affiliated Tribes and allottees on the Reservation received $15 million in royalties associated with oil development.

3.9.1 Socioeconomic Impacts/Mitigation

Alternative A (No Action) – The No Action alternative would not impact socioeconomic conditions in the project area. However, it also would not allow for the development of oil and gas resources included under the Proposed Action, and therefore would preclude positive effects on employment and income through the creation of new jobs and payment of leases, fees/bonus, easement, and/or royalties to Tribal members.

Alternative B (Proposed Action) – The Proposed Action would have a substantial effect on socioeconomic conditions in the project area, generating significant, beneficial

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[1] It should be noted that the most recent U.S. Census data dates from 2000. Since 2000, there has been an increasing focus on oil and gas development on the Fort Berthold Reservation. As such, it is anticipated that these trends have likely shifted; however, new data from the 2010 U.S. Census is not yet available.

impacts on tribal employment and income. Qualified individual tribal members may find employment and associated income as a result of the proposed oil and gas development in addition to royalties paid to the Three Affiliated Tribes and individual allottees. The Proposed Action may also result in indirect (secondary) economic benefits to tribal and other area business owners due to project expenditures on equipment and supplies (e.g., fuel) and from worker expenditures food, lodging, and other necessities.

Project-related vehicle trips during construction, drilling, and operations would increase traffic on area roadways, although these increases would be minor overall, with construction and drilling traffic being temporary. Operations-related traffic would be long-term, lasting for the duration of the project, but would likely be negligible. Marathon will follow McLean County, BIA, and North Dakota Department of Transportation rules and regulations regarding rig moves and oversize/overweight loads on state and county roads to maintain safe driving conditions.

3.10 Environmental Justice

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

Generally, the Three Affiliated Tribes qualify for environmental justice consideration as both a minority population and a low-income population. The population of North Dakota is predominantly White. Tribal members compromise 5.0% of North Dakota's population but 6.0% of the population of McLean County.

In 2000, both the Fort Berthold Reservation and McLean County had per capita and median household incomes that were lower than statewide averages. McLean County has slightly lower unemployment rate than the state average, while Fort Berthold's unemployment rate was substantially greater[2] (Table 3-7).

Table 3-7: Employment and Income

Location	Per Capita Income	Median Household Income	Unemployment Rate	Individuals Living Below Poverty Level
McLean County	$16,220	$32,337	3.2%	13.5%
Fort Berthold Reservation	$10,291	$26,274	11.1%	28.1%
Statewide	**$17,769**	**$34,604**	**4.6%**	**11.9%**

Source: U.S. Census Bureau of the Census, Census 2000.

Population decline in rural areas of North Dakota has been a trend as individuals move toward metropolitan areas of the state, such as Bismarck and Fargo. While McLean County's population has been slowly declining, the Fort Berthold Reservation has

[2] 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 that have likely affected these economic indicators. However, this assessment uses the best available data.

witnessed a steady increase in population. American Indians are the majority population on the Fort Berthold Reservation but are the minority population in McLean County and the state of North Dakota.

Table 3-8: Demographic Trends

Location	Population in 2000	% of State Population	% Change 1990–2000	Predominant Race	Predominant Minority
McLean County	9,311	1.4%	-10.9%	White	American Indian (6.0%)
Fort Berthold Reservation	5,915	0.92%	+9.8%	American Indian[3]	White (26.9%)
Statewide	**642,200**	**--**	**+0.5%**	**White**	**American Indian (5.0%)**

Source: U.S. Census Bureau of the Census. Census 2000.

3.10.1 Environmental Justice Impacts/Mitigation

Alternative A (No Action) – The No Action alternative would not result in environmental justice impacts. However, it would also preclude potential beneficial impacts such as job creation that could benefit environmental justice populations. Additionally all royalties paid to the Three Affiliated Tribes and individual allottees would remain at their current rate.

Alternative B (Proposed Action) – The Proposed Action would not require relocation of homes or businesses, cause community disruptions, or cause disproportionately adverse impacts to members of the Three Affiliated Tribes. The Proposed Action 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. As such the Proposed Action is not anticipated to result in disproportionately adverse impacts to minority or low-income populations. Oil and gas development of the Bakken Formation is occurring both on and off the Fort Berthold Reservation. Employment opportunities related to oil and gas development may lower the unemployment rate and increase the income levels on the Fort Berthold Reservation. In addition, the Three Affiliated Tribes and allotted owners of mineral interests may receive income from oil and gas development on the Fort Berthold Reservation in the form of royalties, if drilling and production are successful, as well as from Tribal Employee Rights Office (TERO) taxes on construction of drilling facilities. As such, the Proposed Action would potentially result in significant, beneficial impacts to environmental justice populations associated with the Reservation and McLean County.

3.11 Infrastructure and Utilities

The infrastructure of the FBIR includes roads, utilities, bridges, and facilities for water, wastewater, and solid waste. Paved and gravel roadways and electrical utility lines comprise the known existing infrastructure and utilities in the vicinity of the project area.

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

Proposed infrastructure and utilities in the vicinity of the project area include short extension and tie-ins to existing QEP pipelines and electrical utility lines which run adjacent to the existing improved gravel road to the south of the proposed project area.

3.11.1 Infrastructure and Utility Impacts/Mitigation

Alternative A (No Action) – Under Alternative A, the proposed project would not occur and existing conditions would continue. Alternative A (No Action) would have no impacts on infrastructure and utilities.

Alternative B (Proposed Action) – Selection of Alternative B would result in the construction of a total of 6,092 ft of access road. The access road would be maintained by Marathon in accordance with BIA/BLM standards and would allow year-round access.

Alternative B would also result in an increase in vehicle traffic on local roadways. Project related vehicle trips during construction, drilling, and operations would increase traffic on area roadways, particularly on County Road 76th Avenue NW. These increases would be minor overall, with construction and drilling traffic being temporary. Operations-related traffic would be long-term, lasting for the duration of the project, but would likely be negligible.

Measures to minimize impacts on local roadways would include the utilization of private roads and/or the utilization of roads approved for usage as haul routes by applicable tribal, township, county, and/or state governing bodies. Additionally, all local, county, tribal, and state regulations and ordinances regarding rig moves, oversize/overweight equipment, and frost law restrictions would be adhered to during all phases of drilling. Established load restrictions for state and BIA roadways would be observed and haul permits would be acquired as appropriate.

In April 2010, as a result of prohibitive costs, the McLean County Commission opted to discontinue maintenance of roads severely impacted by oil operations. Signage on the affected roads will include "No Maintenance" and "Soft Grades." Additionally, a request has been made by the McLean County Road Superintendent that oil-related traffic avoid using roads to Deep Water Bay.

Additional infrastructure and utilities resulting from Alternative B include the construction of oil and gas gathering pipelines and a buried electrical line from the well pads to tie-ins with existing QEP pipelines and McLean Electric Cooperative's electric utility lines extending east-west along 28th Street NW and 29th Street NW and north-south along 76th Avenue NW. The pipeline/electrical utility corridor would be located within the new access ROW from the well pads to the edge of the existing road ROW, a distance of 6,092 ft. Pipelines would tie in with existing pipelines on the north side of the existing improved road. Electrical lines would also connect with existing utilities on the south side of the existing improved road. Any future additional oil, gas, or salt water pipelines would be constructed within the existing access road ROW, or additional NEPA analysis and approval from the BIA would be undertaken.

Any produced water generated by the proposed wells would be collected in storage tanks on-site and periodically trucked to an approved disposal site. The frequency of trucking activities would be dependent upon the volumes and rates of production.

All permanent above ground production facilities would be painted to blend with the surrounding landscape, as determined by the BIA, based on standard colors recommended by the BLM.

3.12 Public Health and Safety

Issues of concern which may contribute to public health and safety include hydrogen sulfide (H_2S) gas[4], hazardous materials which may be used or produced in association with well construction and production, and traffic hazards related to increased traffic and heavy equipment.

3.12.1 Public Health and Safety Impacts/Mitigation

Alternative A (No Action) – Under Alternative A (No Action), the proposed project would not occur and existing conditions would continue. Alternative A (No Action) would have no direct or indirect impacts on public health and safety.

Alternative B (Proposed Action) – Impacts to public health and safety from H_2S gas, hazardous materials, and traffic are unlikely and would be minimized by project design and environmental mitigation measures as described below.

3.12.1.1 H_2S Gases

Alternative B is unlikely to result in the release of toxic levels of H_2S gas. Marathon has in place an H_2S Contingency Plan, which serves as a blanket plan for all sites. The H_2S Contingency Plan is required by the BLM and provides safety measures and response procedures to prevent accidental releases of H_2S and protect individuals living in the vicinity of well sites. In the case of the proposed One Feather/Sitting Owl, Driver/Driver/Black Hawk, and Mink/Many Woman well pads, several inhabited dwellings are located within a two mile radius of the project area.

3.12.1.2 Hazardous Materials

Hazardous materials regulations applicable to the Proposed Action include the Superfund Amendments and Reauthorization Act of 1986 as amended, which establishes EPA chemical reporting requirements, and the EPA's list of extremely hazardous substances (40 CFR 355). Marathon would not use any extremely hazardous materials as defined by the Superfund or EPA lists during construction, drilling, or production operations.

The Spill Prevention, Control, and Countermeasure (SPCC) rule establishes requirements for spill prevention, preparedness, and response. The purpose of the SPCC rule is to prevent oil spills from reaching navigable waters and adjoining shorelines. Marathon establishes and implements an SPCC plan for each of its well pads on the Reservation, as would be the case for the proposed One Feather/Sitting Owl; Driver/Driver/Black Hawk; and Mink/Many Woman wells.

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[4] H_2S is extremely toxic in concentrations exceeding 500 parts per million (ppm). High concentrations of H_2S have not been encountered in the Bakken Formation; however, in order to reach the targeted formation, drilling operations would have to break through other formations in which H_2S is known to occur in various concentrations.

Marathon will take preventative measures with regard to impacts that could result from potential spills of oil and other hazardous materials, as the proposed well pads are located between approximately 1.75 and 2.75 mi from the western shore of Lake Sakakawea. These measures would include:

- A semi-closed loop drilling system would be utilized whereby drilling fluid is circulated from the wells into steel mud tanks and the drill cuttings are separated from the drilling fluid, stabilized, and placed in lined cuttings pits on site. Each drill cuttings pit would be lined with a reinforced synthetic liner with a minimum thickness of 20 mil to prevent leakage of cuttings into the surrounding soil. Any free fluid remaining in the cuttings pit would be removed and disposed of in accordance with BLM and NDIC regulations. The stabilization process would take place within 30 days after well completion. Cuttings pits would then be reclaimed and covered with at least 4 ft of backfill and surface sloped, when practicable, to promote surface drainage away from the reclaimed area.
- Production equipment would be installed at each site, including vertical heater/treaters, and storage tanks (typically four 400 barrel steel tanks for oil and one 400 barrel fiberglass tank for saltwater, per well). The heater/treaters and storage tanks would be surrounded by impermeable berms to guard against possible spills. The berms would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production.

3.12.1.3 Traffic

Traffic-related impacts to public health and safety would likely be short-term and minimal. Adherence to traffic measures for the project would minimize safety concerns associated with the project.

3.13 Cumulative Considerations

The NEPA and the CEQ regulations require consideration of the cumulative impacts of a proposed action. Cumulative impacts are the impacts on the environment which results from the incremental impacts from a proposed 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). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (CEQ Regulations 40 CFR Part 1508.7).

3.13.1 Past, Present, and Reasonably Foreseeable Actions

The environment of western North Dakota has been impacted by oil and gas development for approximately the past 100 years. Natural gas was first utilized to light and heat homes in Bottineau County prior to 1910, and the first productive oil well was drilled in Williams County in1951 (Blumle 2000:108-109). Two oil booms, of varying intensity, have occurred since that time including one in the 1950s and one in the 1970s after the Arab Oil Embargo that continued into the 1980s (Blumle 2000:109). The current oil boom began in the late 1990s.

As of March 2011, more than 5,400 producing oil wells existed in North Dakota, producing more than 10 million barrels of oil per month. Of this total, approximately 40,000 barrels of oil per month were being produced in McLean County (NDIC, Oil and Gas Division, Oil Production Statistics). According to the North Dakota Department of

Mineral Resources, more than 320 active wells are within a 20 mile radius of the proposed well pads (Figures 3-9a, 3-9b, and 3-9c), and no active wells are within 1 mile of the project area (Tables 3-9a, 3-9b, and 3-9c).

Table 3-9a: Summary of Active Wells from Proposed One Feather USA 31-17H/Sitting Owl USA 31-17H

Distance from Site	Number of Active Wells
1 mile radius	0
5 mile radius	18
10 mile radius	66
20 mile radius	344

Table 3-9b: Summary of Active Wells from Proposed Black Hawk USA 31-16H/Driver USA 34-9H/Driver USA 44-9H

Distance from Site	Number of Active Wells
1 mile radius	0
5 mile radius	17
10 mile radius	64
20 mile radius	338

Table 3-9c: Summary of Active Wells from Proposed Many Woman USA 14-10H/Mink USA 11-15H

Distance from Site	Number of Active Wells
1 mile radius	0
5 mile radius	15
10 mile radius	58
20 mile radius	324

Source: North Dakota Department of Minerals

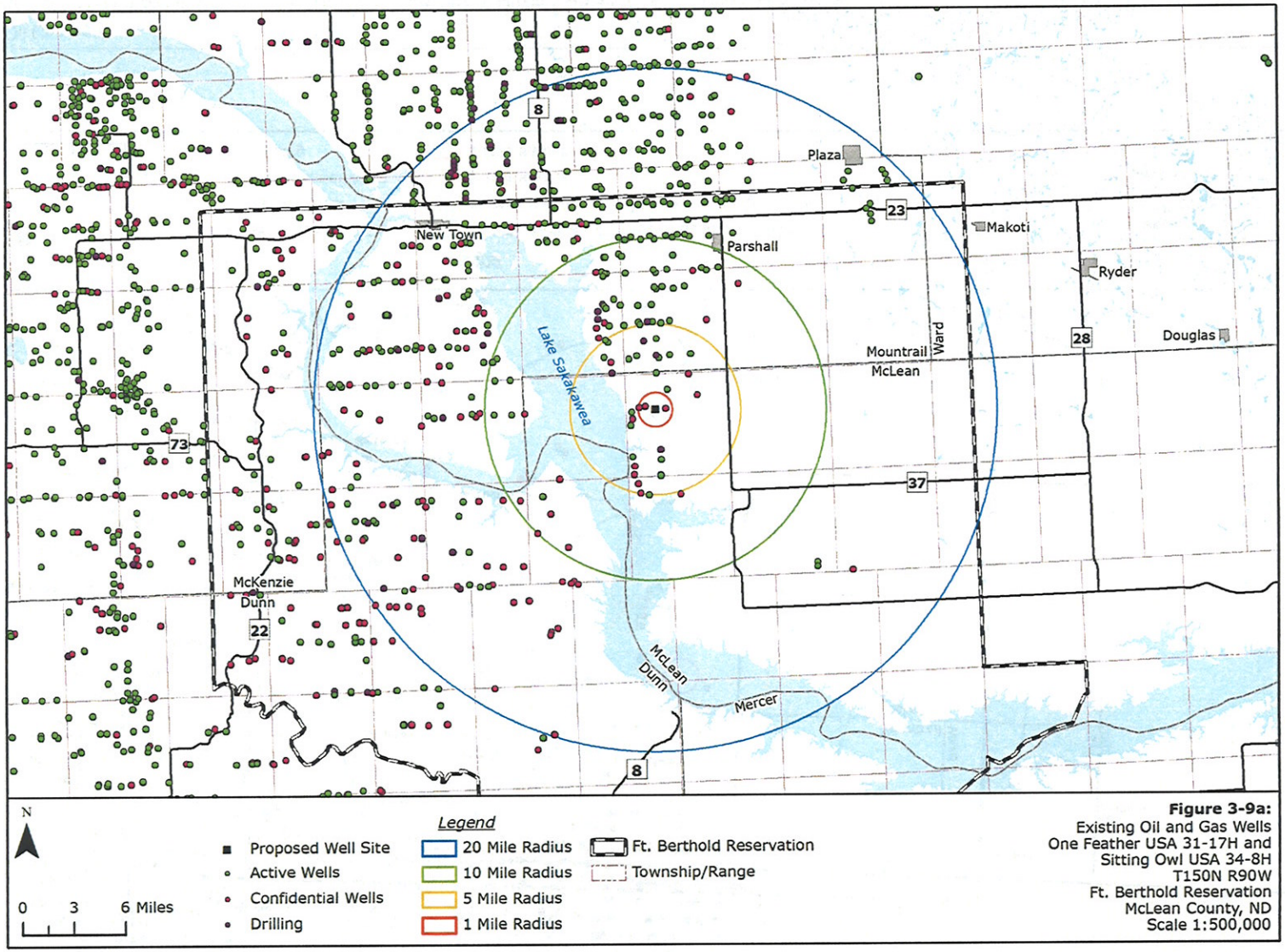

Figure 3-9a:
Existing Oil and Gas Wells
One Feather USA 31-17H and
Sitting Owl USA 34-8H
T150N R90W
Ft. Berthold Reservation
McLean County, ND
Scale 1:500,000

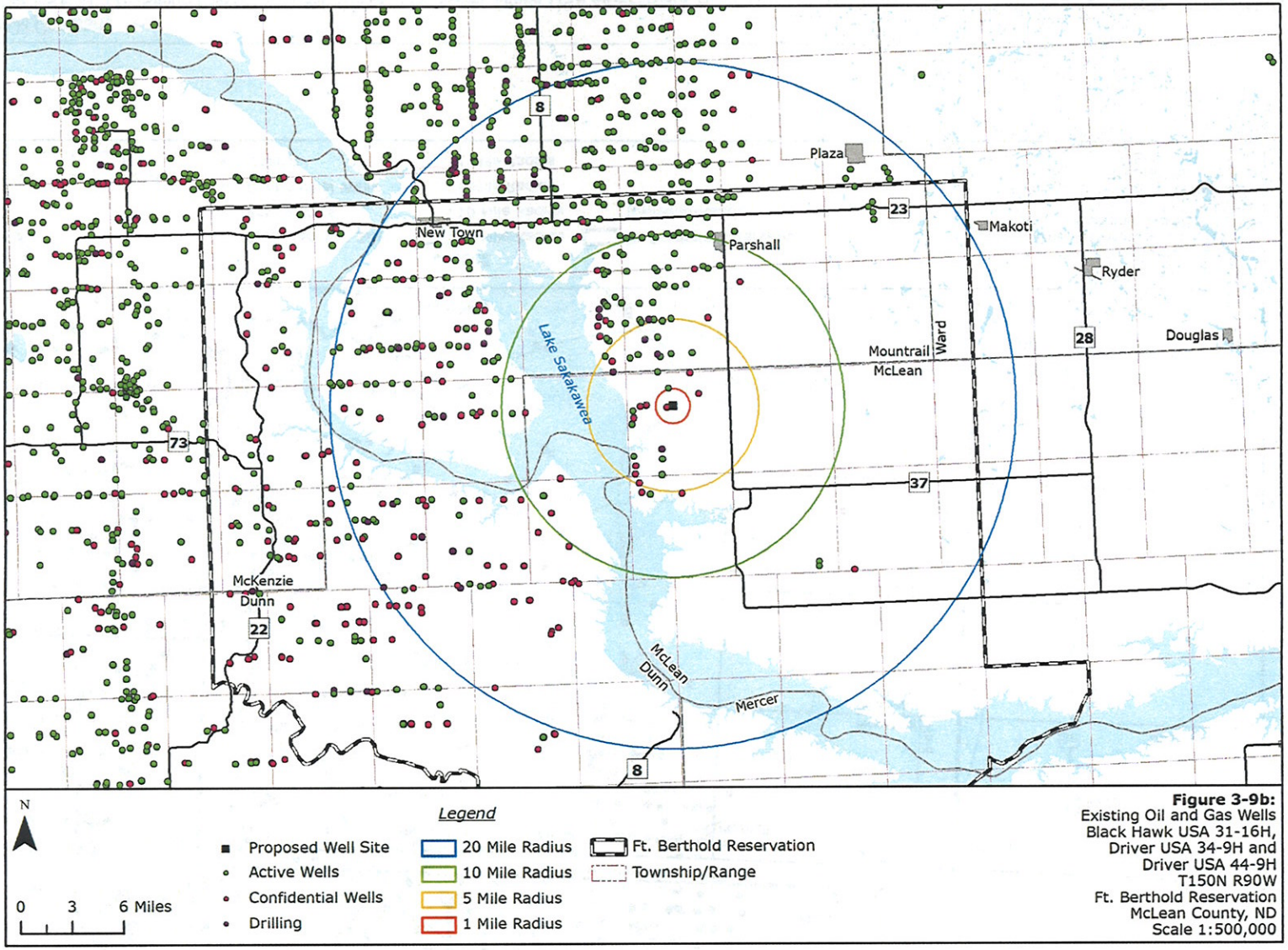

Figure 3-9b:
Existing Oil and Gas Wells
Black Hawk USA 31-16H,
Driver USA 34-9H and
Driver USA 44-9H
T150N R90W
Ft. Berthold Reservation
McLean County, ND
Scale 1:500,000

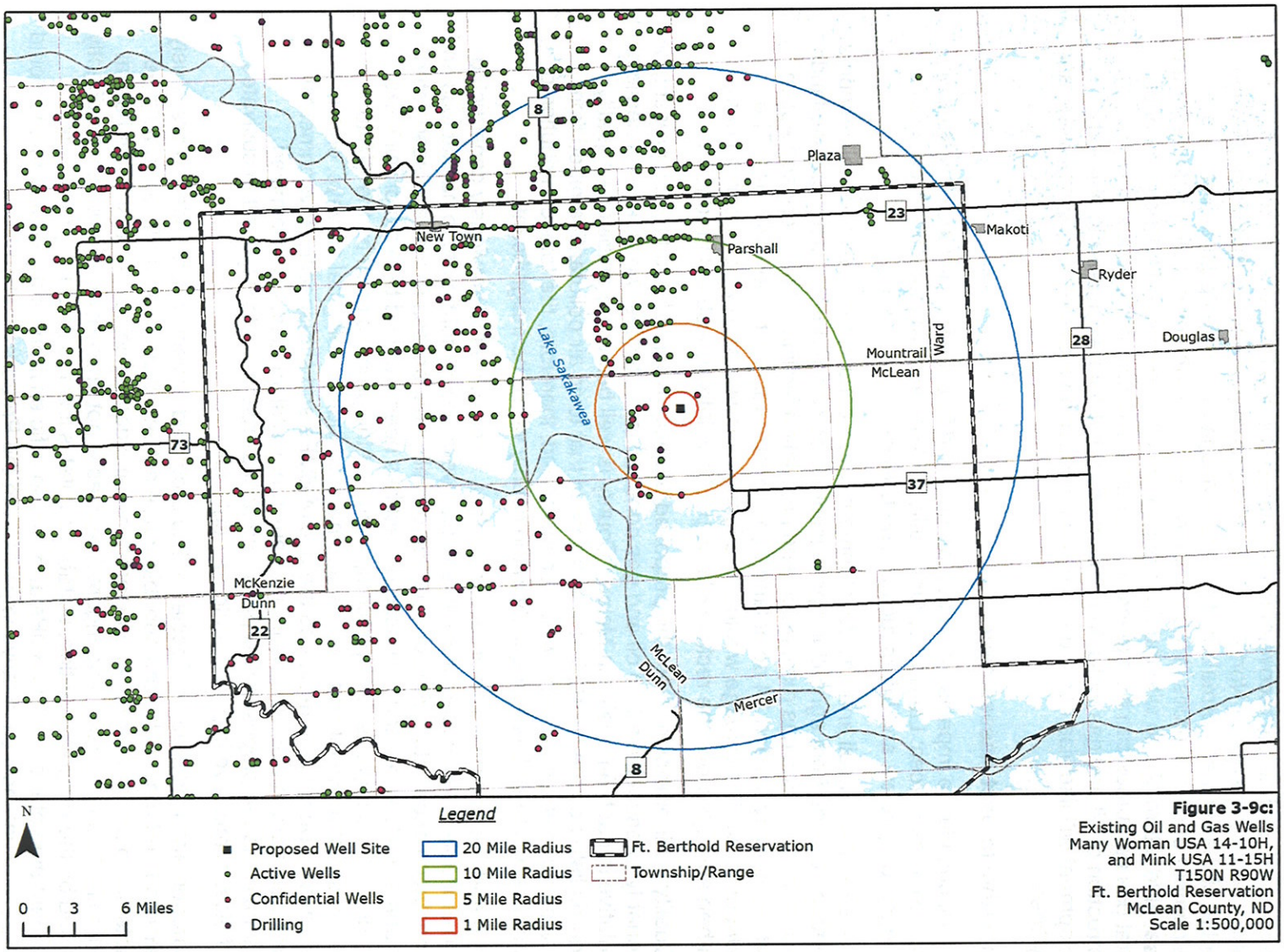

Figure 3-9c:
Existing Oil and Gas Wells
Many Woman USA 14-10H,
and Mink USA 11-15H
T150N R90W
Ft. Berthold Reservation
McLean County, ND
Scale 1:500,000

The Bakken Formation covers approximately 25,000 mi^2 underneath Montana, North Dakota, Saskatchewan, and Manitoba with roughly two-thirds of it beneath North Dakota. The USGS has estimated that there are 3.0 to 4.3 billion barrels of undiscovered, technically recoverable oil resources in the Bakken Formation within the Williston Basin Province of North Dakota and Montana (USGS 2008). Given the huge potential of the Bakken Formation, it can be reasonably anticipated that intensive development of oil resources in the Williston Basin of North Dakota will continue for the foreseeable future. Along with the development of oil resources, the development of natural gas resources can be expected to continue as well. In addition to the construction of oil and gas wells, the construction of the infrastructure to support development will likewise continue to include processing facilities, roads, pipelines, and utility lines.

3.13.2 Cumulative Impact Assessment

Potential cumulative impacts from past, present and foreseeable actions may occur to the following resources: Land Use, Air Quality, Wildlife and Vegetation, Threatened and Endangered Species, and Infrastructure and Utilities.

Land Use – Ongoing oil and gas development would continue to convert small amounts of surface acreage from agricultural production (crop fields) and livestock grazing lands (grasslands) to oil and gas exploration and production facilities. The Proposed Action would temporarily convert 34 ac of land from agricultural use to industrial use. The amount of converted acreage would be reduced over time as at least a portion of the disturbed acreage would be reclaimed and put back into agricultural production.

Air Quality – Air emissions from the proposed projects, when related to past, present, or reasonably foreseeable future oil and gas construction activities, would have a negligible cumulative impact. Air quality in Mclean County is well below the ambient air quality standards listed by the NAAQS. It is anticipated that toxic air pollutants emitted from mobile sources and gas flaring would be minor and, therefore, the total contribution of toxic emissions to ambient air quality in the county would be insignificant.

Wildlife and Vegetation – The proposed project, when added to previously constructed and reasonably foreseeable future oil and gas wells, would contribute to habitat loss and fragmentation associated with construction of well pads, access roads, and associated development. However, the proposed project has been planned to avoid or minimize these cumulative impacts. Multiple components of the process used by the BIA to evaluate and approve oil and gas development, including biological surveys, on-site assessments, public comment, and the use of BMPs and site-specific environmental commitments are in place to ensure that environmental impacts are minimized. Additionally, as the proposed well pads and access roads are located within cultivated crop fields, cumulative impacts would be negligible.

Threatened and Endangered Species – The proposed project, when added to previously constructed and reasonably foreseeable future actions, would contribute to cumulative impacts on some threatened, endangered, or candidate species. While suitable habitat for potential threatened and endangered species is not present and would not be directly impacted by the Proposed Action, suitable habitat is located near the project site. Implementation of the various BMPs and site-specific environmental commitments would minimize any potential cumulative impacts from the Proposed Action.

Infrastructure and Utilities – The proposed project, in conjunction with other oil and gas development projects in the region, may result in cumulative impacts to infrastructure and utilities. Oil and gas development projects often require utilization of existing infrastructure and utilities, as well as construction of new infrastructure. Infrastructure and utilities frequently required for oil and gas exploration and production operations can include roadways (access and haul roads), pipelines (oil, gas, and water), and electrical lines. In some cases construction and/or expansion of infrastructure and utilities can be limited through use of existing systems and networks; in other cases, new infrastructure and utilities must be developed. Oil and gas exploration and production operations in the region can often be located in a manner that minimizes the impact on the region's infrastructure and utilities.

The greatest cumulative impact to infrastructure and utilities in the region from oil and gas activities is on roads. While use of existing roads is implemented to the extent possible (often by improving existing side roads and/or two-tracks, thus avoiding the development of new roads), access roads between well pads and main thoroughfares or existing improved side roads must often be constructed in previously undeveloped areas. Additionally, increased traffic from oil and gas activities in the region may also result in a cumulative impact by placing stress on the capacity of local road systems. Cumulative impacts to road systems and traffic in the region can be minimized through the implementation of BMPs by individual oil and gas companies, and adherence to applicable tribal, township, county, state, and/or BIA regulations and ordinances regarding permitting, rig moves, oversize/overweight equipment, frost law restrictions, and load restrictions.

The Proposed Action has been planned to avoid impacts to waterways, cultural resources, and wetlands. Unavoidable impacts to these or other resources would be minimized and/or mitigated in accordance with applicable regulations.

3.14 Irreversible and Irretrievable Commitment of Resources

The removal and consumption of oil or gas from the Bakken Formation would be an irreversible and irretrievable commitment of resources. Water used for drilling, fracing, and dust suppression would also be a commitment of resources. Other potential resource commitments include acreage devoted to the disposal of cuttings, the loss of soil through wind and water erosion, cultural resources inadvertently destroyed, wildlife and domestic stock killed or injured during earthmoving operations or in collisions with vehicles, and energy expended during construction and operation.

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

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

3.16 Permits

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

- APD – BLM
- APD – NDIC

3.17 Environmental Commitments/Mitigation

The following commitments have been made by Marathon:

- Topsoil will be segregated and stored on-site to be used in the reclamation process. All disturbed areas will be re-contoured as close as possible to original elevations as part of the reclamation process.
- BMPs (which may include, but are not limited to, water bars, silt fences, seeding, erosion mats and biologs) will be implemented to minimize wind and water erosion of soil resources. Soil stockpiles and berms will be positioned to help divert runoff around the well pads.
- The proposed well pads and access roads will avoid surface waters. The proposed project will not alter stream channels or change drainage patterns.
- The drill cuttings pits will be located on the cut side of the locations and away from areas of shallow ground water and have a reinforced synthetic liner to prevent potential leaks. All spills or leaks of chemicals and other pollutants will be reported to the BLM and NDIC. The procedures of the surface management agency shall be followed to contain leaks or spills.
- All proposed wells will be cemented and cased to isolate aquifers from potentially productive hydrocarbon and disposal/injection zones.
- Wetlands and riparian areas will be avoided.
- Disturbed vegetation will be re-seeded in kind upon completion of the project, and a noxious weed management plan would be implemented. The re-seeded sites would be maintained until such time that the vegetation is consistent with surrounding undisturbed areas and the sites are free of noxious weeds. Seed will be obtained from a BIA/BLM approved source.
- The proposed well pads and access roads will avoid impacts to cultural resources. If cultural resources are discovered during construction or operation, work shall immediately be stopped, the affected site secured, and BIA and THPO notified. In the event of a discovery, work shall not resume until written authorization to proceed has been received from the BIA.
- The access roads will be located at least 75 ft away from identified cultural resources. The boundaries of these 75 ft "exclusion zones" would be pin-flagged as an extra measure to ensure that inadvertent impacts to cultural resources are avoided.
- All project workers are prohibited from collecting artifacts or disturbing cultural resources in any area under any circumstances.

- Marathon will ensure all contractors working for the company will adhere to all local, county, tribal, and state regulations and ordinances regarding rig moves, oversize/overweight loads, and frost law restrictions.
- Utility modifications will be identified during design and coordinated with the appropriate utility company.
- All utility lines will be buried to the depth, and manner specified by the utility company.
- An H_2S Contingency Plan will be submitted to the BLM as part of the APD.
- Established load restrictions for state and BIA roadways will be followed and haul permits would be acquired as appropriate.
- Suitable mufflers will be put on all internal combustion engines and certain compressor components to mitigate noise levels.
- Well sites and associated facilities will be painted in earth tones, based on standard colors recommended by the BLM, to allow them to better blend in with the natural background color of the surrounding landscape.
- BMPs will be used during construction to ensure contaminants do not move off site.
- The cuttings pits will be netted while not actively being used.
- A semi-closed loop drilling system will be utilized. As part of this, Marathon would implement a closed circulation drilling mud system, whereby drilling fluid is circulated from the well into steel mud tanks and the drill cuttings are separated from the drilling fluid. The cuttings would then be solidified, and placed in a cuttings pit on-site. The reinforced lining of the cuttings pit would have a minimum thickness of 20 mil to prevent seepage and contamination of underlying soil. Any minimal free fluid left in the cuttings pit would be removed and disposed of in accordance with BLM and NDIC 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.
- The well pads will be fenced in order to prevent wildlife and livestock from accessing the cuttings pit. A cattle guard will be placed in the access road.
- If a whooping crane is sighted within 1 mile of a well site or associated facilities while it is under construction, all work will cease within 1 mile of that portion of the project area and the USFWS will be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- All efforts will be made for construction activities to begin prior to February 1, in order to avoid impacts to migratory birds during the breeding/nesting season. However, because the well location is in a fallow cultivation field and there are no trees present to provide suitable habitat for migratory birds or their nests, a pre-construction survey for migratory birds and their nests would be unnecessary should construction occur during breeding/nesting season (USFWS 2010b). If any migratory bird is found on-site during construction, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.

- If a bald or golden eagle or eagle nest is sighted within 0.5 mi of the project construction area, construction activities shall cease and the USFWS shall be notified for advice on how to proceed.
- Wire mesh or grate covers will be placed over barrels or buckets placed under load line valves and spigots to collect dripped oil.
- Netting, with a maximum mesh size of 1.5 in, will be used to keep birds and other small animals out of open cuttings pits.
- All storage tanks and heater/treaters will be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production.
- Re-seeding of native species shall occur as needed on stockpile areas and slope areas during reclamation.
- Fugitive emissions will be kept at a minimum through BMPs.

CHAPTER 4 PREPARERS AND AGENCY COORDINATION

4.1 Introduction

This chapter is presented in accordance with Part 1502.6 of the CEQ regulations for implementing the National Environmental Policy Act (NEPA) that requires an interdisciplinary team of experts and technicians versed in natural and social sciences and "environmental arts" (http://ceq.hss.doe.gov/nepa/regs/ceq/1502.htm#1502.19). This will insure an integrated approach to the scope of the problem identified in the scoping process. The chapter also discusses agency coordination and public involvement efforts throughout the EA development.

4.2 Preparers

TEC prepared this EA under a contractual agreement between Marathon and TEC Inc. Preparers were from the BIA, Marathon, Kadrmas, Lee & Jackson (KL&J), and TEC (Table 4-1).

Table 4-1: Preparers

Affiliation	Name	Title	Project Role
BIA	Marilyn Bercier	Regional Environmental Scientist	Review Draft EA and recommendation to Regional Director regarding FONSI or EIS
	Mark Herman	Environmental Engineer	
Marathon	Darrell Nodland	Operations Specialist	Project development, alternatives, document review
	Luke Franklin	Senior HES Professional	Project development, alternatives, document review
TEC Inc.	Ken Brinster	Project Manager/ Natural Resource Specialist	Client and agency coordination; senior review; co-author
	Neil Lynn	Wildlife Biologist	Wildlife and vegetation surveys; co-author
	Dulaney Barclay	Deputy Project Manager, Natural/Cultural Resource Specialist	Project management; co-author
	Ned Turner	Climate, Water	Ground water, surface water, climate, co-author
	Allison Parrish	Cultural Resource, Public Health Specialist, Commitments/Mitigation	Co-author
	Melissa Johnson	GIS Specialist	Maps and figures
	Carlos Jallo	Socio-Economic Specialist	Co-author; document review
	Rick Stefanic	Senior Regional Environmental Specialist	Senior review
	Sharon Simpson	Administrative Assistant	Document production
Kadrmas, Lee and Jackson, Inc.	Jennifer Macy	Archaeologist	Cultural resource surveys
	Mary Mitchell	Archaeologist	Cultural resource surveys
	Bridget Brady	Archaeologist	Cultural resource surveys
MHA Nation THPO	Sheldon Knight	Tribal Monitor	Cultural resource surveys

4.3 Agency Coordination

A scoping package that included a brief description of the proposed One Feather USA 31-17H/Sitting Owl USA 34-8H, Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H and Many Woman USA 14-10H/Mink USA 11-15H multi-well projects and a location map was sent to tribal, federal, state and local agencies and other interested parties in accordance with Section 102(2) (D) (iv) of NEPA (1969, as amended) (http://ceq.hss.doe.gov/nepa/regs/nepa/nepaeqia.htm) (Appendix A). The solicitation of views was distributed by registered mail May 12, 2011 and allowed for a 30 day comment period.

Nine responses were received for consideration and provided insight into the potential impacts the Proposed Action will have on the environment. The comments were addressed, incorporated into the EA when required and referenced (Appendix B).

4.4 Public Involvement

If this document is approved by the BIA and the BIA determines that no significant environmental impacts would result from the Proposed Action, a Finding of No Significant Impact (FONSI) will be issued followed by a 30-day public appeal period. The BIA will advertise that the FONSI will be placed at accessible locations on FBIR for examination by the public. Construction activities will be curtailed until the 30-day public appeal has expired.

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Acronyms

AAQM	Ambient Air Quality Monitoring
ac	acres
APD	Application for Permit to Drill
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CWA	Clean Water Act
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
°F	degrees Fahrenheit
FBIR	Fort Berthold Indian Reservations
FEL	from the east line
FONSI	Finding of Significant Impact
FNL	from the north line
FSL	from the south line
ft	foot (feet)
GAP	Gap Analysis Project
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutants
H_2S	hydrogen sulfide
in	inch(es)
IC	internal combustion
KL&J	Kadrmas Lee & Jackson
Marathon	Marathon Oil Company
MBTA	Migratory Bird Treaty Act
mi	miles
mi^2	square miles
MLA	Mineral Leasing Act
mya	million years ago
NAAQS	National Ambient Air Quality Standards
ND	North Dakota
NDDoH	North Dakota Department of Health
NDGFD	North Dakota Game and Fish Department
NDIC	North Dakota Industrial Commission
NE	North East
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places

NW	North West
O_3	ozone
Pb	lead
PM	particulate matter
ppm	parts per million
QEP	QEP Resources, Inc.
ROWs	right-of-ways
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
TCPs	Traditional Cultural Properties
TERO	Tribal Employee Rights Office
THPO	Tribal Historic Preservation Office
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDC	United States Department of Commerce
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WoB	Williams-Bowbells
WoC	Williams-Bowbells
yd^3	cubic yards

APPENDIX A

SCOPING MATERIALS

12 S. Main Street, Suite 6
Minot, North Dakota 58701
(701) 852-2293
Internet: www.tecinc.com

May 12, 2011

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

RE: One Feather USA 31-17H and Sitting Owl USA 34-8H
Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H
Mink USA 11-15H and Many Woman USA 14-10H
McLean County, ND
Fort Berthold Reservation

Dear<<NAME>>:

On behalf of Marathon Oil Company TEC Inc. is preparing an Environmental Assessment (EA) under the National Environmental Policy Act for the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM). The Proposed Action includes approval by the BIA and BLM of the development of three multi-well pads, resulting in the drilling and completion of seven exploratory oil and gas wells referred to above on the Fort Berthold Reservation, McLean County, North Dakota.

The surface well pad for the **One Feather USA 31-17H** and **Sitting Owl USA 34-8H** wells would be located in Section 17, T 150 N, R 90 W, 5th P.M. The bottom of the hole for the One Feather USA 31-17H well would be in Section 20, T 150 N, R 90 W, 5th P.M.

and the bottom of the hole for the Sitting Owl USA 34-8H well would be in Section 5, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

The surface well pad for the **Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H** wells would be located in Section 9, T 150 N, R 90 W, 5th P.M. The bottom of the holes for the Driver USA 34-9H and Driver USA 44-9H wells would be in Section 4, T 150 N, R 90 W, 5th P.M.; and the bottom of the hole for the Black Hawk USA 31-16H well would be in Section 21, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

The surface well pad for the **Mink USA 11-15H** and **Many Woman USA 14-10H** wells would be located in Section 15, T 150 N, R 90 W, 5th P.M. The bottom of the hole for the Mink USA 11-15H well would be in Section 22, T 150 N, R 90 W, 5th P.M. and the bottom of the hole for the Many Woman USA 14-10H well would be in Section 3, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

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

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 appreciate being made aware of any proposed development your department may be contemplating in the area of 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. Any information that might help us in our study would be appreciated.

Please provide your comments by **June 17, 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) 852-2293. Thank you for your cooperation.

Sincerely,

TEC Inc.

Ken Brinster

Ken Brinster
Project Manager

Enclosure (1)

Proposed Wells and Access
Marathon Oil Company
T150N R90W
5th Principal Meridian
Fort Berthold Indian Reservation
McLean County, North Dakota
N
0
0.5
1 Miles
Many Woman USA 14-10H and Mink USA 11-15H
Driver USA 34-9H, Black Hawk USA 31-16H and Driver USA 44-9H
Sitting Owl USA 34-8H and One Feather USA 31-17H
29th St NW
28th St NW
75th Ave NW
76th Ave NW
150N 90W
150N 91W

1658 Cole Blvd.; Suite 190
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Internet: www.tecinc.com

May 16, 2011

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

RE: **Marathon Oil Company**
Seven Oil and Gas Exploratory Wells on Three Pads
Fort Berthold Indian Reservation
McLean County, North Dakota

Dear Mr. Towner,

On behalf of Marathon Oil Company (Marathon), TEC Inc., an environmental consulting firm, is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) for the Bureau of Indian Affairs (BIA) and the Bureau of Land Management (BLM). The proposed action includes the construction of three well pads, and the drilling and completion of seven oil and gas wells on the Fort Berthold Indian Reservation. These well pads are proposed to be placed in the following locations:

- One Feather USA 31-17H and Sitting Owl USA 34-8H located in T150N, R90W, NWNE ¼ Section 17 (McLean County)
- Driver USA 34-9H, Driver USA 44-9H, and Black Hawk USA 31-16H located in T150N, R90W, SWSE ¼ Section 9 (McLean County)
- Many Woman USA 14-10H and Mink USA 11-15H located in T150N, R90W, NWNW ¼ Section 15 (McLean County).
- Alternate access route located in T150N, R90W, between Sections 9 and 10.

Please refer to the enclosed project location map.

The proposed action would explore for oil from the Bakken Pool. The well pads have been positioned to utilize existing roadways for access to the extent possible. Construction of the proposed well pads and access roads is scheduled to begin in late summer or early fall 2011.

An intensive pedestrian resources survey of the well pads and access roads was conducted on May 9-11, 2011 by TEC Inc. The purpose of the survey was to gather site-specific data and photos of vegetation, wildlife, threatened and endangered species, and raptors. The study area consists of a 10-acre block centered on each proposed well pad, as well as a 0.5 mile buffer zone for bald or golden eagle nests. Access roads were surveyed with a 200-foot buffer (100 feet on either side of the centerline). Resources were evaluated using visual inspection and pedestrian transects across the site.

A BIA-facilitated on-site assessment of the well pads was also conducted on May 9, 2011. A BIA Environmental Protection Specialist, a representative from Marathon, and TEC personnel were present. During the on-site, the sites were evaluated for cultural resources clearance by representatives of the Tribal Historic Preservation Office and Kadrmas, Lee & Jackson Inc. During these assessments, construction suitability with respect to topography, stockpiling, drainage, erosion control, and other surface issues were evaluated. Those present at the on-site assessment agreed that the chosen location, with the implementation of minimization measures, would minimize impacts to sensitive wildlife and vegetation resources. Marathon has proposed BMPs and made other commitments listed at the end of this letter to avoid, minimize, or mitigate impacts.

Threatened and Endangered Species: The proposed well sites are located in McLean County. In this county, the gray wolf (*Canis lupus*), interior least tern (*Sternula antillarum*), pallid sturgeon (*Scaphirhynchus albus*), and whooping crane (*Grus americana*) are listed as endangered. The piping plover (*Charadrius melodus*) is listed as threatened, and the Dakota skipper (*Hesperia dacotiae*) and Sprague's pipit (*Anthus spragueii*) are listed as candidate species. Candidate species are reviewed annually to determine if they should be listed as threatened or endangered, removed from the candidate list, or remain on the candidate list. Effects determinations under Section 7 of the Endangered Species Act are not made for candidate species. McLean County also contains critical habitat for the piping plover. None of these species were observed during the field survey or on-site at the project location.

Whooping cranes use shallow, seasonally and semi-permanently flooded palustrine (marshy) wetlands for roosting during migration, and various cropland and emergent wetlands for feeding. Lake Sakakawea and its shoreline provide suitable habitat for the pallid sturgeon and the interior least tern and piping plover. Historically, the gray wolf's preferred habitat includes 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 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 pipit breeds in habitat with minimal human disturbance. The preferred habitat for the Dakota skipper consists of flat, moist bluestem prairies and upland prairies with an abundance of wildflowers.

Biological Resources: The proposed project sites and surrounding area contains suitable habitat for mule deer (*Odocoileus hemionus*), whitetail deer (*Odocoileus virginianus*), sharp-tailed grouse (*Tympanuchus phasianellus*), ring-necked pheasant (*Phasianus colchicus*), golden eagle (*Aquila chrysaetos*), red tail hawk (*Buteo jamaicensis*), bald eagle (*Haliaeetus leucocephalus*), badger (*Taxidea taxus*), song birds, coyote (*Canis latrans*), red fox (*Vulpes vulpes*), cottontail rabbit (*Sylvilagus* spp.), jackrabbit (*Lepus* spp.), and common porcupine (*Erethizon dorsatum*).

During drilling activities, noise, movements, and lights associated with a drilling rig on-site are expected to deter wildlife from entering the area. In addition, the cuttings pit would only be used for solid material

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

Design considerations would be implemented to further protect against potential habitat degradation. The storage tanks and heater/treater would be surrounded by an impermeable berm that would act as secondary containment to guard against possible spills. The berm would be sized to hold 100% of the capacity of the largest storage tank plus one full day's production. BMPs to minimize wind and water erosion of soil resources, as well as implementation of a semi-closed drilling mud system with an on-site cuttings pit during drilling, would also be put into practice.

All construction activities are expected to be completed outside the migratory bird nesting season, which is from February 1 through July 31, in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that construction needs to take place during the migratory bird nesting season, an alternative to mowing the site to prevent birds from nesting on the pad would be to 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. In addition, if any migratory bird nests are found on-site during construction, construction activities would cease and the USFWS would be notified for advice on how to proceed.

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

One Feather USA 31-17H/Sitting Owl USA 34-8H

Botanical Resources: The One Feather/Sitting Owl well pad and access road site are located within a cultivated wheat field. No native vegetation is present either within the well pad (5.7 acres) or the total fenced area (6.9 acres) or the access road. Very few noxious weeds were present and consisted mainly of scattered individuals of wild mustard (*Brassica kaber*) and leafy spurge (*Euphorbia esula*).

Biological Resources: As Lake Sakakawea is located approximately 1.7 miles west of the project site, the site does not contain suitable habitat for the interior least tern, pallid sturgeon, or piping plover and no indicators of these species were observed during the field survey. Similarly, suitable habitat for the gray wolf, Dakota skipper, or Sprague's pipit was not observed as this site is primarily a cultivated crop field. The nearest native grassland habitat that may contain these species is approximately 0.8 mile northwest of the site. Although no whooping cranes were observed during the field survey, the small grain crop field could potentially be used as a stopover food source during migration.

During the survey, a 0.5 mile buffer surround the well pad was surveyed for bald and golden eagles. No nesting substrate (e.g. trees) was identified within this buffer area and no individuals were observed. The nearest potential nesting habitat is located in several wooded draws, approximately 0.7 miles northwest of the pad location. If a bald or golden eagle or eagle nest is sighted within 0.5 mile of the project construction area, construction activities would cease and the USFWS would be notified for advice on how to proceed.

The only species observed during the site visit include grasshopper sparrows (*Ammodramus savannarum*), horned lark (*Eremophila alpestris*), and coyote (*Canis latrans*) scat. Approximately 1,500 feet southeast of the pad in the unnamed drainage, a northern harrier (*Circus cyaneus*) nest was found with one egg (Photo 5).

Water Resources: The site slopes gently to the south and leads to an unnamed drainage approximately 550 feet away, which ultimately drains into Lake Sakakawea. No wetlands exist in the site itself, and the nearest National Wetland Inventory (NWI) mapped wetland is approximately 640 feet north of the site. As this well pad is down slope from the nearest wetland, there would be no runoff into the wetland area.

Driver USA 34-9H/Driver USA 44-9H/Black Hawk USA 31-16H

Botanical Resources: This well pad and access road site are located within a cultivated wheat field. No native vegetation is present within the disturbance area (5.6 acres) or within the total fenced area (6.5 acres). Very few weeds were present within the area and consisted primarily of wild mustard.

Biological Resources: As Lake Sakakawea is located approximately 2.7 miles west of the project site, the site does not contain suitable habitat for the interior least tern, pallid sturgeon, or piping plover and no individuals of these species were observed during the field survey. Similarly, suitable habitat for the gray wolf, Dakota skipper, or Sprague's pipit was not observed as this site is a cultivated crop field. The nearest native grassland habitat that may contain these species is approximately 0.3 mile northwest of the site in a narrow strip along a small unnamed drainage. Although no whooping cranes were observed during the field survey, the small grain crop field could potentially be used as a stopover food source during migration.

During the survey, a 0.5 mile buffer surround the well pad was surveyed for bald and golden eagles. No nesting substrate (e.g. trees) was identified within this buffer area and no individuals were observed. The nearest potential nesting habitat is located in several wooded draws, approximately 1.3 miles northwest of the pad location. If a bald or golden eagle or eagle nest is sighted within 0.5 mile of the project construction area, construction activities would cease and the USFWS would be notified for advice on how to proceed.

The only species observed during the site visit include several red-wing blackbirds (*Agelaius phoeniceus*), a northern harrier, and various rodent burrows.

Water Resources: The site slopes gently to the west and eventually leads to an unnamed drainage approximately 3,400 feet away, which ultimately drains into Lake Sakakawea. No wetlands exist in the site itself, and the nearest National Wetland Inventory (NWI) mapped wetland is approximately 440 feet east of the site. The corner of the pad closest to this wetland would be bermed and would therefore prevent any runoff from occurring. The proposed access road leading to this well pad would pass near a mapped wetland. Marathon has committed to re-routing the road to completely avoid the area.

Many Woman USA 14-10H/Mink USA 11-15H

Botanical Resources: This well pad and access road are located within a cultivated wheat field. No native vegetation was present within the pad area (5.7 acres) or within the total fenced area (7.0 acres). Very few weeds are present within the Project Area, and consist primarily of wild mustard.

Biological Resources: As Lake Sakakawea is located approximately 3.3 miles west of the project site, the site does not contain suitable habitat for the interior least tern, pallid sturgeon, or piping plover and no indicators of these species were observed during the field survey. Similarly, suitable habitat for the gray wolf, Dakota skipper, or Sprague's pipit was not observed as this site is a cultivated crop field. The nearest native grassland habitat that may contain these species is approximately 0.9 mile northwest of the

site and 1.0 mile east of the site. Although no whooping cranes were observed during the field survey, the small grain crop field could potentially be used as a stopover food source during migration.

During the survey, a 0.5 mile buffer surround the well pad was surveyed for bald and golden eagles. No nesting substrate (e.g. trees) was identified within this buffer area and no individuals were observed. The nearest potential nesting habitat is located in several wooded draws, approximately 1.9 miles northwest of the well pad location. If a bald or golden eagle or eagle nest is sighted within 0.5 mile of the project construction area, construction activities would cease and the USFWS would be notified for advice on how to proceed.

The only species observed during the site visit include western meadowlark (*Sturnella neglecta*), northern harrier, red-wing blackbirds and various rodent burrows. Additionally, a killdeer (*Charadrius* vociferus) nest with three young was found approximately 50 feet northwest of the center of the pad.

Water Resources:

The site slopes gently to the south and eventually leads to an unnamed, ephemeral drainage, approximately 1,700 feet away, which ultimately drains into Lake Sakakawea. No wetlands exist at the site itself, and the nearest NWI mapped wetland is approximately 635 feet from the southwest corner of the well pad. The proposed access road leading to this well pad would pass through designated wetlands. However, Marathon has committed to re-routing the access road to completely avoid all wetlands.

Alternate Access Road

Botanical Resources

This alternate access route occurs primarily within a cultivated wheat field. The only location of any native vegetation is at the northern terminus of the road where it would connect to 29th St NW. The last 50 feet of the proposed route passes through a heavily impacted portion of grassland.

Biological Resources

As the closest portion of the proposed alternate access route is approximately 3.0 miles from Lake Sakakawea, the site does not contain suitable habitat for the interior least tern, pallid sturgeon, or piping plover and no indicators of these species were observed during the field survey. Similarly, suitable habitat for the gray wolf, Dakota skipper, or Sprague's pipit was not observed as this route is a cultivated crop field. Although no whooping cranes were observed during the field survey, the small grain crop field could potentially be used as a stopover food source during migration.

The only suitable nesting habitat for bald and golden eagles is approximately 700 feet north of the northern terminus of the proposed route in a line of planted trees. No nests or individuals were observed during the survey. If a bald or golden eagle or eagle nest is sighted within 0.5 mile of the project construction area, construction activities would cease and the USFWS would be notified for advice on how to proceed.

The only species observed during this survey include red-wing blackbirds, rodent burrows, coyote scat, and song sparrows (*Melospiza melodia*).

Water Resources

The proposed alternate access route varies on which direction it drains, but is generally to the north or south. A small drainage occurs approximately 2,400 feet from the northern end; however, this drainage has previously been planted with wheat. Six small wetlands occur near the proposed route, four near the southern terminus, and two on the west side of the route in the southern half. Marathon has committed to re-routing the proposed alternate access route to completely avoid these areas.

Best Management Practices: BMPs for soil and wind erosion would be implemented at the project location as needed to include over-seeding of cut areas and spoil piles via seeding with native vegetation approved by the BIA, and the use of silt fences and/or mats. No woody vegetation is anticipated to be removed and no changes to drainages would occur. Upon well completion, portions of the well pad would be reclaimed to reduce the well pad footprint and further avoid drainages. Additionally, culverts to maintain drainage along the access road would also be installed, where needed.

Summary of Commitments to Avoid or Minimize Impacts: In an effort to minimize the potential environmental effects associated with the proposed project, Marathon would also implement the following mitigation measures at the project site:

- A semi-closed mud system with an on-site cuttings pit would be used during drilling. Drill cuttings would be stabilized before being placed in a reinforced lined cuttings pit. The reinforced lining of the cuttings pit would have a minimum thickness of 20-mil 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 to an approved off-site disposal location. The cuttings pit would be reclaimed to BLM and North Dakota Industrial Commission (NDIC) standards immediately upon finishing completion operations.
- Prior to its use, the cuttings pit would be fenced on the non-working sides. The access side would be fenced and netted immediately following drilling and completion operations in order to prevent wildlife and livestock from accessing the pit.
- Berming would be utilized around the cut slopes to prevent run-on. The cuttings pit and soil stockpiles will be placed as to divert any drainage outside of the fill slopes on the pad.
- All construction activities at the three well pads and access road would be completed outside the migratory bird nesting season (February 1 through July 15) in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that construction would need to take place during the migratory bird nesting season, an alternative to mowing the site would be to 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. In addition, if any migratory bird nest is found on-site during construction, construction activities would cease and the USFWS would be notified for advice on how to proceed. The requirement to perform a pre-construction survey may be waived after consultation with the USFWS due to the lack of suitable nesting sites at the three locations
- Measures implemented during construction to avoid the taking of migratory bird species would include: the use of suitable mufflers on all internal combustion engines; installing compressor equipment to mitigate noise; 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 covering 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 would cease within one-mile of that part of the project area and the USFWS would be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area.
- 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 constructed 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 mud system would be used during drilling.

Conclusion: Given the distances of the three proposed well pads and access routes to Lake Sakakawea, the proposed project would have **no effect** on the pallid sturgeon, the interior least tern, and the piping plover. The proposed project is not likely to destroy or adversely modify designated critical habitat of the piping plover. Due to a lack of preferred habitat characteristics and known populations, the proposed project will have **no effect** on the gray wolf. As the proposed well pads and access roads occur within the central flyway where 75% of the whooping crane sightings have occurred, and the presence of numerous wetlands and cropland, the proposed action **may affect, but is not likely to adversely affect** whooping cranes. If, during construction, a whooping crane is sighted within one-mile of a well site or associated facilities, all work would cease at that part of the project area and the USFWS would be contacted immediately. In coordination with USFWS, work may resume after the bird(s) leave the area. Due to the lack of native grasslands in or near the three well pads and access road, the proposed project would not contribute to the future listing of either the Sprague's pipit or the Dakota skipper.

To ensure that social, economic, and environmental effects are considered in the development of the project, we are soliciting your 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 areas. We would also appreciate being made aware of any proposed development your Department may be contemplating in the vicinity of the proposed project. Any information that might help us in the preparation of the EA would be appreciated.

It is requested that any comments or information be forwarded to our office on or before June 17, 2011 at the address listed above and addressed to myself. We request your comments by that date to ensure that we have ample time to review them and incorporate them into the necessary environmental documentation. A copy of the draft EA would be provided to your office once completed.

If you would like further information regarding this project, please contact me at (303) 273-0231. Thank you for your cooperation.

Sincerely,

Neil Lynn
TEC Inc.
Wildlife Biologist

Cc: Marilyn Bercier, Regional Environmental Scientist, BIA

Jeffrey Desjarlais, Environmental Protection Specialist, Fort Berthold Agency-BIA

Photo 1. Center of One Feather USA 31-17H and Sitting Owl USA 34-8H Proposed Well Pad.

Photo 2. Center of Driver USA 34-9H, Driver USA 44-9H, and Blackhawk 31-16H Proposed Well Pad.

Photo 3. Center of Many Woman USA 14-10H and Mink USA 11-15H Proposed Well Pad.

Photo 4. Center of Proposed Alternate Access Route Looking South.

Photo 5. Northern Harrier Nest Located in Unnamed Drainage

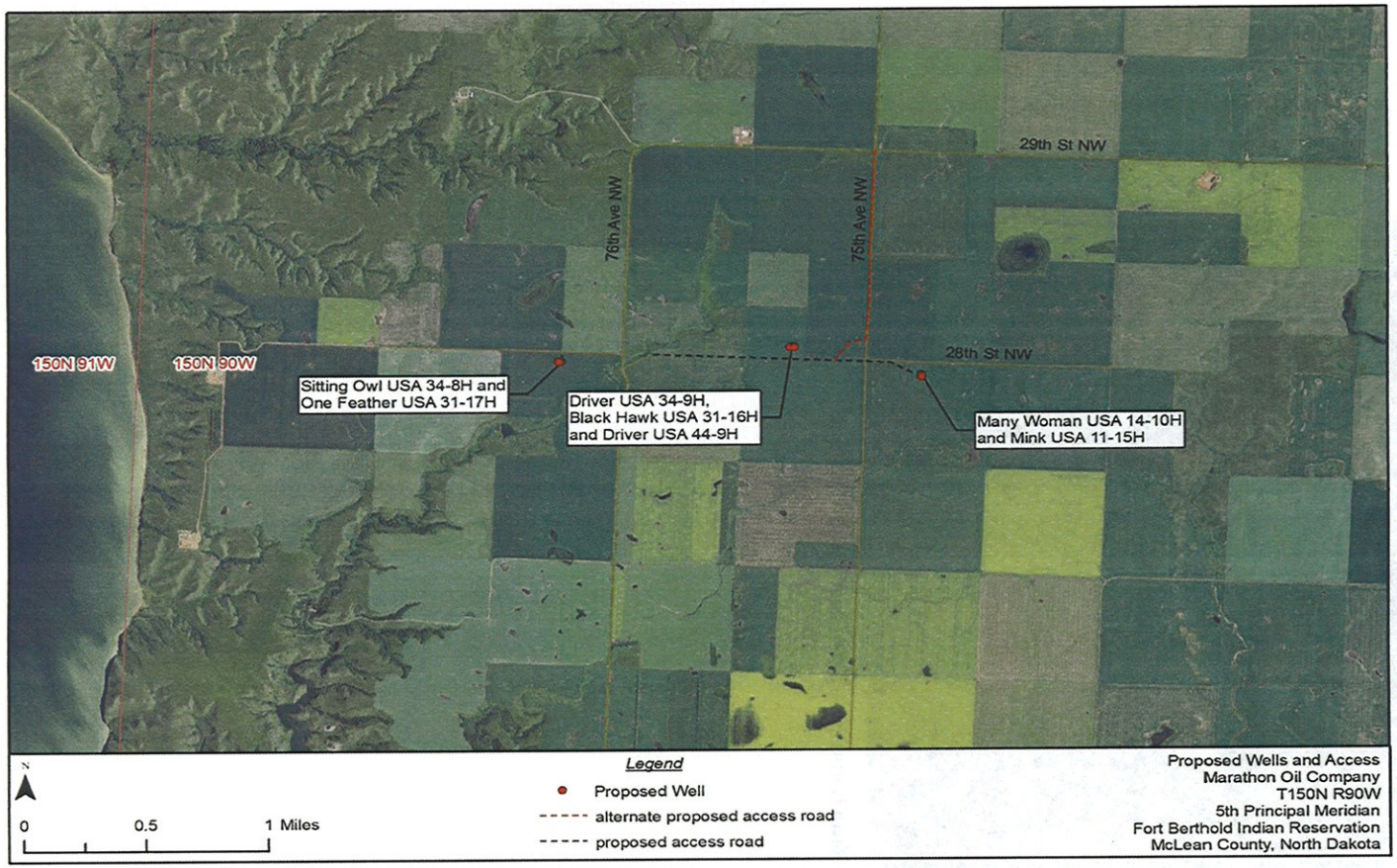


Figure 1. Location of the proposed well pads and access roads.

APPENDIX B

AGENCY SCOPING COMMENTS

United States Department of the Interior
BUREAU OF RECLAMATION
Dakotas Area Office
P.O. Box 1017
Bismarck, North Dakota 58502

TAKE PRIDE IN AMERICA

DK-5000
ENV-6.00

JUN 10 2011

Mr. Ken Brinster
TEC, Inc.
12 South Main Street - Suite 6
Minot, ND 58701

Subject: Solicitation for an Environmental Assessment for the Proposed Construction Of Up Eight Exploratory Oil and Gas Wells With 3 Well Pads On the Fort Berthold Indian Reservation in Dunn County, North Dakota

Dear Mr. Brinster:

This letter is written to inform you that we received your May 12, 2011, letter and the information and map regarding the seven wells and three well pads have been reviewed by Bureau of Reclamation staff.

The proposed well pads located in McLean County appear to be in the vicinity of Reclamation facilities, in this case the rural water pipelines of the Fort Berthold Rural Water System. We have provided a map of the general area of your proposed well projects:

One Feather USA 31-17H and Sitting Owl USA 34-8H: NW¼, Section 17, T150N, R90W, PM 5 – surface well pad for three wells

Driver USA 34-9H and Driver USA 44-9H and Blackhawk USA 31-16H: SW¼, Section 9, T150N, R90W, PM 5 surface well pad for three wells

Mink USA 11-15H and Many Woman USA 14-10H: Section 15, T150N, R90W PM 5 surface well pad for two wells

The map is provided to aid you in identification of potential for adverse effect to or crossings of Federal facilities. Should you have need to cross a Fort Berthold Rural Water System pipeline while accessing your proposed project, please refer to the enclosures for pipeline crossing specifications and contact our engineer Colin Nygaard, as below. Since Reclamation is the lead federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Lester Crows Heart, Fort Berthold Rural Water Director, Three Affiliated Tribes, 308 4 Bears Complex, New Town, North Dakota 58763.

Thank you for providing the information and opportunity to comment. If you have any further environmental questions, please contact me at 701-221-1287 or for engineering questions, Colin Nygaard, Civil Engineer, at 701-221-1260.

Sincerely,

Kelly B. McPhillips
Environmental Specialist

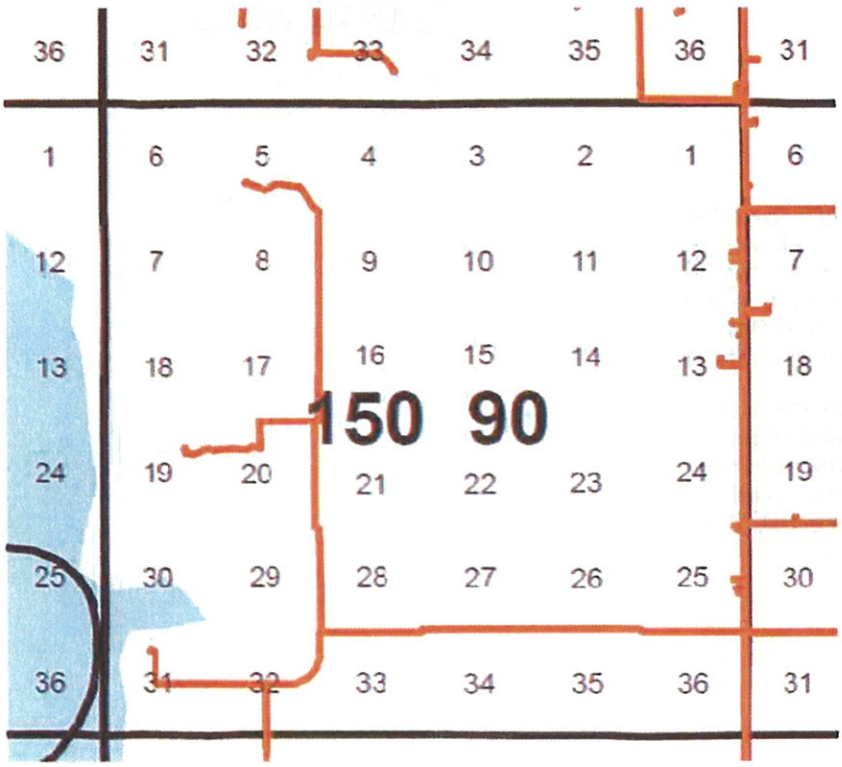
Enclosures - 2

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

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

Subject: Solicitation for an Environmental Assessment for the Proposed Construction Of Up Eight Exploratory Oil and Gas Wells With Three Well Pads On the Fort Berthold Indian Reservation in Dunn County, North Dakota

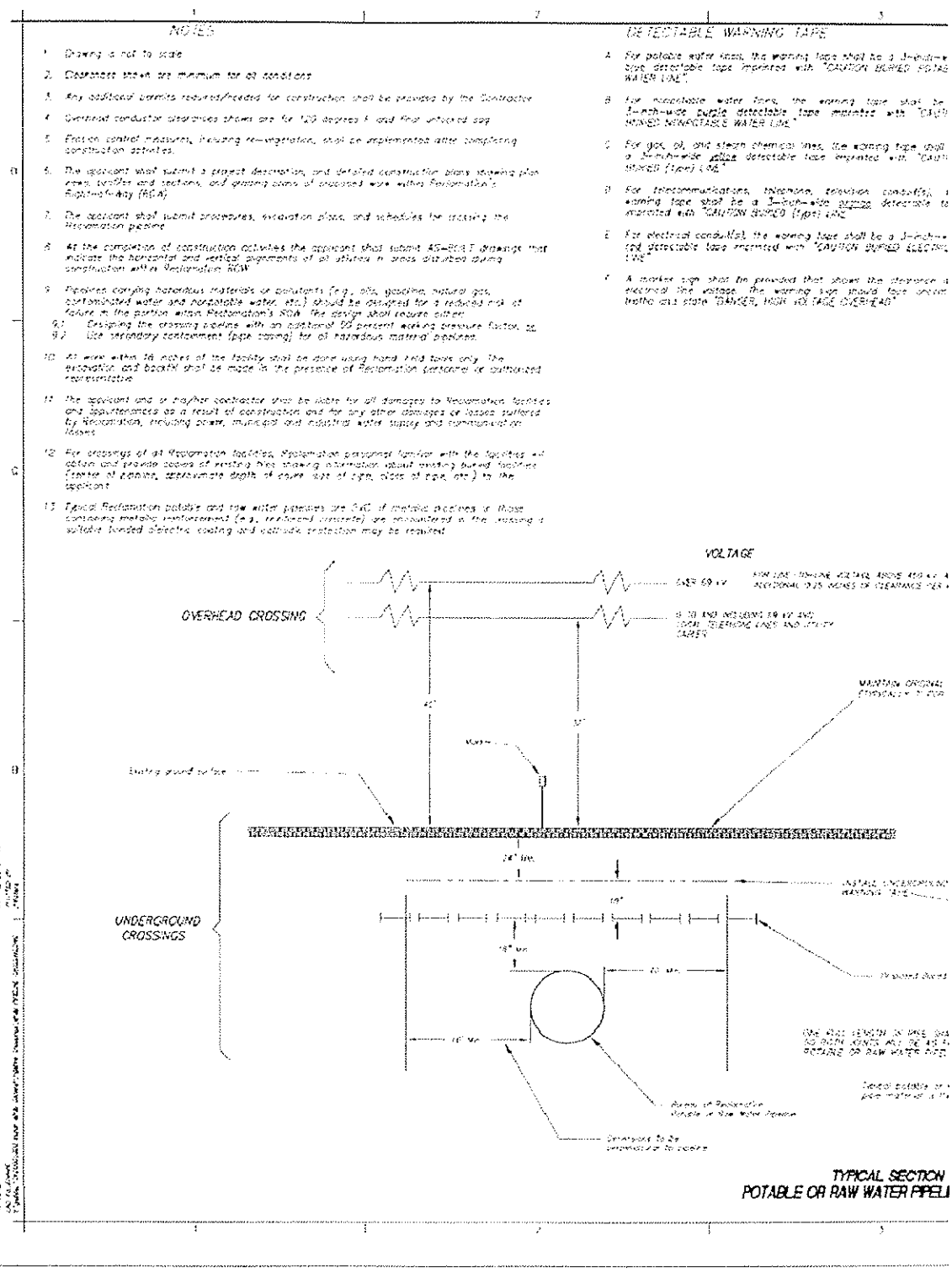
Orange solid lines represent rural water lines.

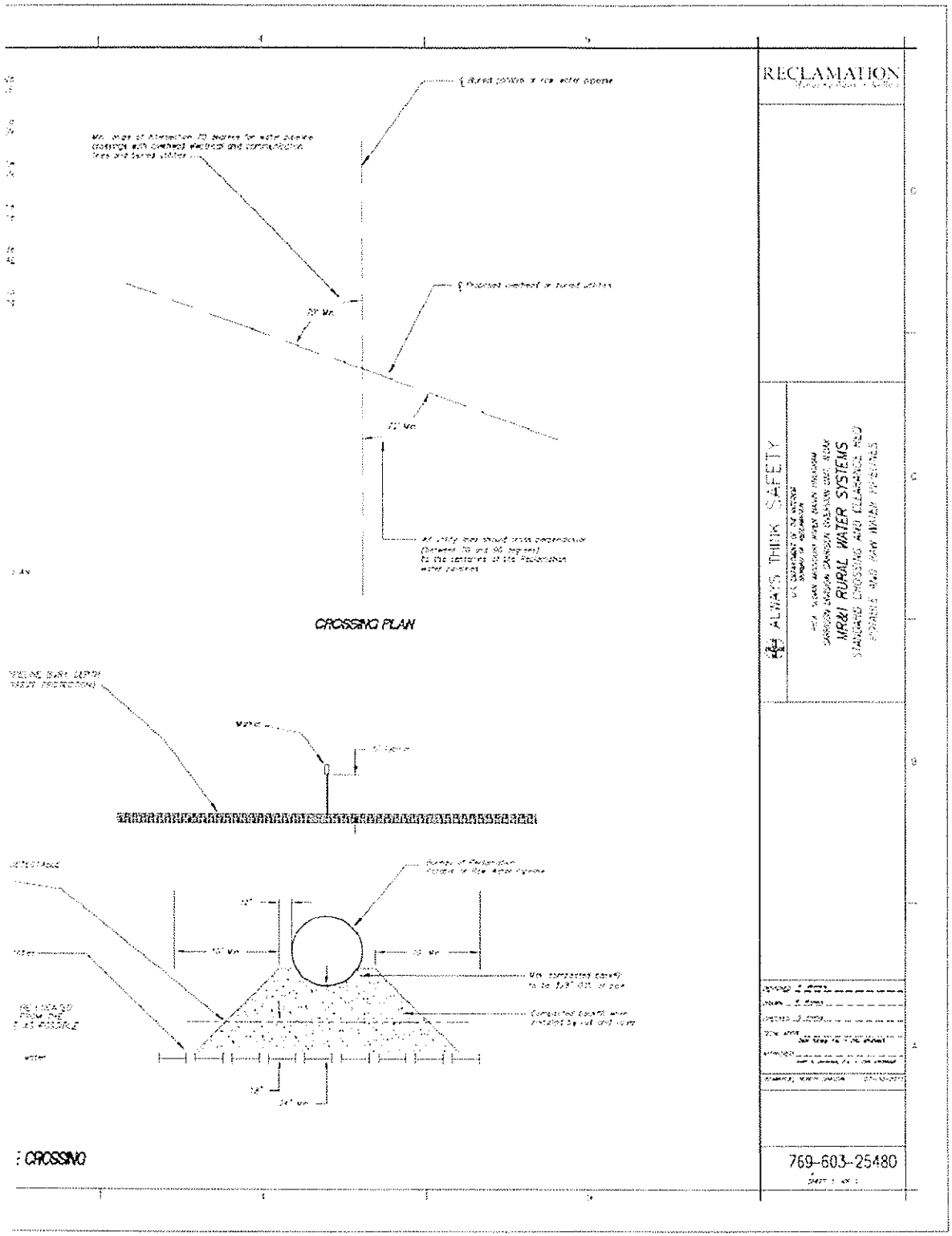


One Feather USA 31-17H and Sitting Owl USA 34-8H: NW¼, Section 17, T150N, R90W, PM 5 – surface well pad for three wells

Driver USA 34-9H and Driver USA 44-9H and Blackhawk USA 31-16H: SW¼, Section9, T150N, R90W, PM 5 surface well pad for three wells

Mink USA 11-15H and Many Woman USA 14-10H: Section 15, T150N, R90W PM 5 surface well pad for two wells


NOTES
1. Drawing is not to scale.
2. Clearances shown are minimum for all conditions.
3. Any additional permits required/needed for construction shall be provided by the Contractor.
4. Overhead conductor clearances shown are for 120 degrees F and final unloaded sag.
5. Erosion control measures, including re-vegetation, shall be implemented after completing construction activities.
6. The applicant shall submit a project description, and detailed construction plans showing plan views, profiles and sections, and grading plans of crossings work within Reclamation's Right-of-Way (ROW).
7. The applicant shall submit procedures, excavation plans, and schedules for crossing the Reclamation pipeline.
8. At the completion of construction activities the applicant shall submit AS-BUILT drawings that indicate the horizontal and vertical alignments of all utilities in areas disturbed during construction within Reclamation ROW.
9. Pipelines carrying hazardous materials or pollutants (e.g., oils, gasoline, natural gas, contaminated water and non-potable water, etc.) should be designed for a reduced risk of failure in the portion within Reclamation's ROW. The design shall require either:
9.1 Designing the crossing pipeline with an additional 25 percent working pressure factor, or,
9.2 Use secondary containment (pipe casing) for all hazardous material pipelines.
10. All work within 10 miles of the facility shall be done using hand held tools only. The excavation and backfill shall be made in the presence of Reclamation personnel or authorized representative.
11. The applicant and or his/her contractor shall be liable for all damages to Reclamation facilities and appurtenances as a result of construction and for any other damages or losses suffered by Reclamation, including power, municipal and industrial water supply and communication losses.
12. For crossings of all Reclamation facilities, Reclamation personnel familiar with the facilities will obtain and provide copies of existing files showing information about existing buried facilities (center of pipeline, approximate depth of cover, size of pipe, class of pipe, etc.) to the applicant.
13. Typical Reclamation potable and raw water pipelines are CMC. If metallic appurtenances or those containing metallic reinforcement (e.g., reinforced concrete) are encountered in the crossing a suitable bonded dielectric coating and cathodic protection may be required.
DETECTABLE WARNING TAPE
A. For potable water lines, the warning tape shall be a 3-inch-wide blue detectable tape imprinted with "CAUTION BURIED POTABLE WATER LINE".
B. For non-potable water lines, the warning tape shall be a 3-inch-wide purple detectable tape imprinted with "CAUTION BURIED NONPOTABLE WATER LINE".
C. For gas, oil, and steam chemical lines, the warning tape shall be a 3-inch-wide yellow detectable tape imprinted with "CAUTION BURIED (type) LINE".
D. For telecommunications, telephone, television conduit(s), a warning tape shall be a 3-inch-wide orange detectable tape imprinted with "CAUTION BURIED (type) LINE".
E. For electrical conduit(s), the warning tape shall be a 3-inch-wide detectable tape imprinted with "CAUTION BURIED ELECTRIC LINE".
F. A marker sign shall be provided that shows the clearance of electrical line voltage. The warning sign should face oncoming traffic and state "DANGER, HIGH VOLTAGE OVERHEAD".
VOLTAGE
OVERHEAD CROSSING
UNDERGROUND CROSSINGS
Existing ground surface
Bureau of Reclamation potable or raw water pipeline
Centerline to be determined by locator
TYPICAL SECTION
POTABLE OR RAW WATER PIPELI


RECLAMATION
ALWAYS THINK SAFETY
M&I RURAL WATER SYSTEMS
769-603-25480
CROSSING PLAN
CROSSING

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

REPLY TO
ATTENTION OF

June 2, 2011

Planning, Programs, and Project Management Division

TEC Inc.
Attn: Ken Brinster
12 S. Main Street, Suite 6
Minot, North Dakota 58701

Dear Mr. Brinster:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated May 12, 2011, regarding the proposed development, drilling and completion of seven wells on three well pads on the Fort Berthold Reservation in McLean 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,

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

12 S. Main Street, Suite 6
Minot, North Dakota 58701
(701) 852-2293
Internet: www.tecinc.com

May 12, 2011

U.S. Department of Transportation
Federal Aviation Administration

Date 5/23/11

No objection provided the Federal Aviation Administration is notified of construction or alterations as required by Federal Aviation Regulations, Part 77, Objects Affecting Navigable Airspace, Paragraph 77.9. Notice may be filed on-line at https://oeaaa.faa.gov

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

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

RE: One Feather USA 31-17H and Sitting Owl USA 34-8H
Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H
Mink USA 11-15H and Many Woman USA 14-10H
McLean County, ND
Fort Berthold Reservation

Dear Mr. Obenauer:

On behalf of Marathon Oil Company TEC Inc. is preparing an Environmental Assessment (EA) under the National Environmental Policy Act for the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM). The proposed action includes approval by the BIA and BLM of the development of three multi-well pads, resulting in the drilling and completion of seven exploratory oil and gas wells referred to above on the Fort Berthold Reservation, McLean County, North Dakota.

The surface well pad for the **One Feather USA 31-17H** and **Sitting Owl USA 34-8H** wells would be located in Section 17, T 150 N, R 90 W, 5th P.M. The bottom of the hole for the One Feather USA 31-17H well would be in Section 20, T 150 N, R 90 W, 5th P.M. and the bottom of

the hole for the Sitting Owl USA 34-8H well would be in Section 5, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

The surface well pad for the **Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H** wells would be located in Section 9, T 150 N, R 90 W, 5th P.M. The bottom of the holes for the Driver USA 34-9H and Driver USA 44-9H wells would be in Section 4, T 150 N, R 90 W, 5th P.M.; and the bottom of the hole for the Blackhawk USA 31-16H well would be in Section 21, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

The surface well pad for the **Mink USA 11-15H** and **Many Woman USA 14-10H** wells would be located in Section 15, T 150 N, R 90 W, 5th P.M. The bottom of the hole for the Mink USA 11-15H well would be in Section 22, T 150 N, R 90 W, 5th P.M. and the bottom of the hole for the Many Woman USA 14-10H well would be in Section 3, T 150 N, R 90 W, 5th P.M. ***See the enclosed Project Location Map.***

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

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 appreciate being made aware of any proposed development your department may be contemplating in the area of 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. Any information that might help us in our study would be appreciated.

Please provide your comments by **June 17, 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) 852-2293. Thank you for your cooperation.

Sincerely,

TEC Inc.

Ken Brinster

Ken Brinster
Project Manager

Enclosure (1)

United States Department of the Interior

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

JUN - 6 2011

Mr. Ken Brinster
Project Manager
TEC Inc. 12 S. Main Street, Suite 6
Minot, North Dakota 58701

Re: One Feather USA 31-17H and Sitting Owl USA 34-8H, Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H, Mink USA 11-15H and Many Woman USA 14-10H
McLean County, ND
Fort Berthold Reservation

Dear Mr. Brinster:

This is in response to your May 12, 2011, letter regarding the proposed approval by the Bureau of Indian Affairs (BIA) and Bureau of Land Management (BLM) for three multi-well drill pads, resulting in drilling and completion of seven proposed exploratory oil and gas wells on the Fort Berthold Reservation, McLean County, North Dakota.

The surface well pad for the One Feather USA 31-17H and Sitting Owl USA 34-8H wells would be located in Section 17, T. 150 N., R. 90 W., 5th P.M. The bottom of the hole for the One Feather USA 31-17H well would be in Section 20, T. 150 N., R. 90 W., 5th P.M., and the bottom of the hole for the Sitting Owl USA 34-8H well would be in Section 5, T. 150 N., R. 90 W., 5th P.M. The surface well pad for the Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H wells would be located in Section 9, T. 150 N., R. 90 W., 5th P.M. The bottom of the holes for the Driver USA 34-9H and Driver USA 44-9h wells would be in Section 4, T. 150 N., R. 90 W., 5th P.M., and the bottom of the hole for the Blackhawk USA 31-16H well would be in Section 21, T. 150 N., R. 90 W. 5th P.M. The surface well pad for the Mink USA 11-15h AND Many Woman USA 14-10H wells would be located in Section 15, T. 150 N., R. 90 W., 5th P.M. The bottom of the hole for the Mink USA 11-15H well would be in Section 22, T. 150 N., R. 90 W., 5th P.M., and the bottom of the hole for the Many Woman USA 14-10H well would be in Section 3, T. 150 N., R. 90 W., 5th P.M.

We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) (MBTA), the National Environmental

Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.) (NEPA), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250) (BGEPA), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.) (ESA).

Threatened and Endangered Species

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its designated agent, is required to evaluate whether the action "may affect" listed species. If the Federal agency determines the action "may affect, is likely to adversely affect" listed species, then the responsible Federal agency shall request formal section 7 consultation with this office, or work with this office to remove the likely adverse effects before proceeding. If the evaluation shows a "no effect" determination on listed species, further consultation is not necessary. If a non-Federal entity receives Federal funding for an activity, or if a Federal permit or license is required, the Federal funding, licensing, or permitting agency may designate the fund recipient or permittee as its agent for purposes of informal section 7 consultation. The funding, permitting, or licensing Federal agency is responsible to ensure that its actions comply with the ESA, including obtaining concurrence from the Service for any action that may affect a threatened or endangered species or designated critical habitat prior to carrying out the activity.

In an e-mail dated November 3, 2010, the BIA designated TEC Inc to represent the BIA for informal Section 7 consultation under the ESA. Therefore, the U.S. Fish and Wildlife Service (Service) is responding to you as the designated non-Federal representative for the purposes of ESA, and under our other authorities as the entity preparing the NEPA document for adoption by the BIA.

A list of federally endangered and threatened species that may be present within the proposed project's action area is enclosed. This list fulfills requirements of the Service under Section 7 of the ESA. This list remains valid for 90 days. The BIA or designated non-Federal agent should make a determination of the proposed projects' effects on listed species, including adverse effects to designated critical habitat. It should state whether or not the BIA plans to incorporate the Service's recommendations to avoid and minimize any adverse effects. If the BIA does not plan to take the recommended measures, the document should explain why not.

The Aransas Wood Buffalo Population (AWBP) of endangered whooping cranes is the only self-sustaining migratory population of whooping cranes remaining in the wild. These birds breed in the wetlands of Wood Buffalo National Park in Alberta and the Northwest Territories of northern Canada, and overwinter on the Texas coast. Whooping cranes in the AWBP annually migrate through North Dakota during their spring and fall migrations. They make numerous stops along their migration route to feed and roost before moving on. The proposed project lies within a 90 mile corridor that includes approximately 75 percent of all reported whooping crane sightings in the State

Whooping cranes are unlikely to spend more than a few days in any one spot during migration. The Service suggests that the Environmental Assessment (EA) include a requirement that if a whooping crane is sighted within 1 mile of a well site or associated facilities while it is under construction, that all work cease within 1 mile of that part of the project and the Service be contacted immediately. In coordination with the Service, work may resume after the bird(s) leave the area.

Potential habitat for the Dakota skipper exists on the Fort Berthold Reservation. In 1995, the Dakota skipper was determined to be a candidate species under the ESA. No legal requirement exists to protect candidate species; however, it is within the spirit of the ESA to consider these species as having significant value and worth protecting.

The Dakota skipper is a small to medium-sized hesperiine butterfly associated with high-quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. The first type of habitat is relatively flat and moist native bluestem prairie. Three species of wildflowers are usually present: wood lily (*Lilium philadelphicum*), harebell (*Campanula rotundifolia*), and smooth camas (*Zygadenus elegans*). The second habitat type is upland (dry) prairie that is often on ridges and hillsides. Bluestem grasses and needlegrasses dominate these habitats. On this habitat type, three wildflowers are typically present in high-quality sites that are suitable for Dakota skipper: pale purple (*Echinacea pallida*) and upright (*E. angustifolia*) coneflowers and blanketflower (*Gaillardia sp.*). Because of the difficulty of surveying for Dakota skippers and a short survey window, we recommend that the project avoid any impacts to potential Dakota skipper habitat. If Dakota skipper habitat is present near the proposed project, and you intend to take precautions to avoid impacts to skipper habitat, please notify the Service for further direction.

In 2010, the Sprague's pipit was added to the candidate species list. Migratory bird species, such as the Sprague's pipit, that are candidates are still protected under the MBTA. Sprague's pipits require large patches of grassland habitat for breeding, with preferred grass height between 4 and 12 inches. The species prefers to breed in well-drained, open grasslands and avoids grasslands with excessive shrubs. They can be found in lightly-to-heavily grazed areas. They avoid intrusive human features on the landscape, so the impact of a development can be much larger than the actual footprint of the feature. If Sprague's pipit habitat is present within or adjacent to the proposed project area, the Service requests that you document any steps taken to avoid and minimize disturbance of this habitat.

The Dakota skipper and Sprague's pipit are candidate species for listing under the ESA; therefore, an effects determination is not necessary for these species. No legal requirement exists to protect candidate species; however, it is within the spirit of the ESA to consider these species as having significant value and worth protecting. Although not required, Federal action agencies such as the BIA have the option of requesting a conference on any proposed action that may jeopardize candidate species such as the Dakota skipper and Sprague's pipit.

Migratory Birds

The Migratory Bird Treaty Act prohibits the taking, killing, possession, and transportation (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the MBTA has no provision for allowing unauthorized take, the USFWS realizes that some birds may be killed during well construction even if all known reasonable and effective measures to protect birds are used. The USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and agencies that have taken effective steps to avoid take of migratory birds, and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve individuals, companies, or agencies from liability even if they implement bird mortality avoidance or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and prosecuting individuals, companies, and agencies that take migratory birds without identifying and implementing all reasonable, prudent and effective measures to avoid that take. Companies are encouraged to work closely with Service biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

To avoid take and minimize disturbance to fish and wildlife resources in the project area the Service provides the following recommendations:

- To the extent practicable, schedule construction for late summer or fall/early winter so as not to disrupt waterfowl or other wildlife during the breeding season (February 1 to July 15). If work is proposed to take place during the breeding season or at any other time which may result in the take of bald or golden eagles or other migratory birds, their eggs, or active nests, the Service recommends that the project proponent implement all practicable measures to avoid all take, such as suspending construction where necessary and/or maintaining adequate buffers to protect the birds until the young have fledged. The Service further recommends that if you choose to conduct field surveys for nesting birds, including eagles, with the intent of avoiding take, that you maintain any documentation of the presence of eagles or other migratory birds, eggs, and active nests, along with information regarding the qualifications of the biologist(s) performing the survey(s), and any avoidance measures implemented at the project site. Should surveys or other available information indicate a potential for take of eagles or other migratory birds, their eggs, or active nests, the Service requests that you contact this office for further coordination on the extent of the impact and the long-term implications of the intended use of the project on eagles or other migratory bird populations.

The Service estimates that 500,000 to 1 million birds are killed nationwide every year from exposed oil at oil drilling and/or production sites. The unauthorized take of

migratory birds at oil production facilities can be prevented with a minimum of expense and effort. Wildlife mortalities in North Dakota are most often observed in association with drilling reserve pits, flare pits, and/or drip buckets and barrels. The Service strongly recommends that the pads be constructed as closed-loop systems, without a reserve pit. Regardless of whether the pads are built with reserve pits, we recommend that the BIA include the following measures in the EA so as to ensure compliance with the MBTA.

- **Keep Oil Off Open Pits or Ponds.** Immediate clean up of oil in open pits is critical to prevent wildlife mortalities.

- **Place Covers on Drip Buckets/Barrels Located Under Valves and Spigots.** Bird entrapments are common within the small (55 gallon or less) barrels placed under valves and spigots to collect dripped oil. Placing a wire mesh or grate over the top of these barrels is a very practical way of preventing access for wildlife.

- **Use Effective and Proven Exclusionary Devices.** Netting is the most effective method of keeping birds from entering open pits (reserve and flare pits). Flagging, reflectors, and strobe lights are not effective. Published scientific studies, as well as field inspections by Service personnel, have documented bird mortalities at oil pits with flagging, reflectors, and strobe lights (e.g. Esmoil 1995). The effectiveness of netting pits to exclude birds and other wildlife depends on its installation. Effective installation requires a design allowing for snow-loading and one that also prevents ground entry by small mammals and birds. A maximum mesh size of 1.5 inches will allow for snow-loading and will exclude most birds. Nets or wire mesh over flare pits can be implemented if the flare tube is high enough to keep flame away from the net. Some examples of both effective and ineffective netting techniques can be found on the Service's website at http://www.fws.gov/mountain%2Dprairie/contaminants/contaminants1c.html.

Bald and Golden Eagles

The BGEPA prohibits anyone without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The Act provides criminal and civil penalties for persons who take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof. The Act defines take as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagles return, such alterations agitate or bother an eagle to a degree that injures an eagle or

substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

Bald and/or golden eagles may use the project area where the proposed wells will be located. Golden eagles inhabit a wide variety of habitat types, including open grassland areas. They are known to nest on cliffs, in trees, manmade structures, and on the ground (Kochert et al. 2002). There are numerous records of golden eagle nests on Fort Berthold reservation. While the bald eagle tends to be more closely associated with forested areas near water (Buehler 2000), they have been found nesting in single trees several miles from the nearest water body. Therefore, there may also be potential habitat for the bald eagle at the proposed project sites. Especially early in the nesting season, eagles can be very sensitive to disturbance near the nest site and may abandon their nest as a result of low disturbance levels, even from foot traffic. A buffer of at least 1/2 mile should be maintained for golden and bald eagle nests. A permit is required for any take of bald or golden eagles or their nests. Permits to take golden eagles or their nests are available only for legitimate emergencies and as part of a program to protect golden eagles.

The Service recommends that aerial raptor surveys be conducted prior to any on-the-ground activities. The Service recommends that an aerial nest survey (preferably by helicopter) be conducted within 1 mile of any proposed ground disturbances to identify active and inactive nest sites near the proposed well pad and associated facilities, including proposed new roads. Aerial surveys should be conducted between March 1 and May 15, before leaf-out so that nests are visible.

Aerial surveys should include the following:

1. Due to the ability to hover and facilitate observations of the ground, helicopters are preferred over fixed wing aircraft, although small aircraft may also be used for the raptor surveys. Whenever possible, two observers should be used to conduct the surveys. Even experienced observers only find approximately 50 percent of nests on a flight (Pers. Comm. Anne Marguerite Coyle, Dickinson State University), so we recommend that two flights be performed prior to any on-the-ground work, including other biological surveys or other work.

2. Observations of raptors and nest sites should be recorded using GPS. The date, location, nest condition, activity status, raptor species, and habitat should be recorded for each sighting.

3. We request that you share the qualifications of the biologist(s) conducting the survey, method of survey, and results of the survey with the Service.

High Value Habitat Avoidance

To minimize disturbance to fish and wildlife habitat in the project area, the Service provides the following recommendations:

- Make no stream channel alterations or changes in drainage patterns.

- Install and maintain appropriate erosion control measures to reduce sediment transport to adjacent wetlands and stream channels.

- Avoid construction in native prairie, if possible, and reseed disturbed native prairie with a comparable native grass/forb seed mixture immediately after construction to reduce erosion. Seed stock should preferably be collected from the adjacent native prairie. If this is not possible, the seed stock should be obtained from sources no farther than 250 miles away to ensure the particular cultivars are well adapted to the local climate.

Cumulative Effects Analysis

A large number of wells and appurtenant facilities are being constructed in the western portion of North Dakota. The Service is concerned that these wells and associated roads are not being reviewed for cumulative impacts, as required by NEPA. It would be appropriate for the EA to include a cumulative effects analysis of the existing and proposed pads, roads, electrical transmission lines, and pipelines to transport the products, as well as any other activities in the analysis that impact fish and wildlife resources.

Habitat Fragmentation

Prairie habitat is increasingly being lost or fragmented because of the large number of wells and associated roads that are being constructed in areas of the State that were formerly relatively undeveloped. Only about 30 percent of native prairie in North Dakota remains from pre-settlement times (Strong et al. 2005), with nearly all native tallgrass prairie converted nationwide (Ricketts et al. 1999). Oil pads, associated roadways, and vehicle traffic can cause fragmentation of the landscape, disrupting wildlife patterns and making it more likely that non-native plant species may invade an area. The Service recommends placing as few well pads as possible on the landscape and locating pads so as to avoid or minimize the construction of new roads. Many prairie species require large, contiguous blocks of grasslands for their biological needs and may either avoid patchy habitat or experience reduced reproductive success.

- The Service recommends that impacts to native prairie be avoided or minimized. If native prairie cannot be avoided, the Service recommends outlining stringent reclamation requirements, including a bond sufficient to cover the cost of reclamation, as described in the "Post-production Phase - Reclamation" section below.

- The Service recommends that oil wells use existing roads and trails to the greatest extent possible, minimizing all new road construction.

- If a new road is necessary, the Service recommends avoiding native prairie to the greatest extent possible.

- If new roads are constructed, the Service recommends that the disturbed areas along the road be reseeded immediately with a native prairie mix to reduce erosion and prevent invasion by non-native species. Disturbed areas should be monitored regularly throughout the life of the project, and treated with herbicide as necessary to ensure that exotic species are not infesting disturbed areas.

- If multiple companies are developing well pads in the same general area, roads should be shared to the greatest extent possible to minimize disturbance.

- Install and maintain appropriate erosion control measures to reduce sedimentation and water quality degradation of wetlands and streams near the project area.

Post-production Phase – Reclamation

Each project should include a plan to restore the landscape following project completion, including a bond sufficient to reclaim the area in full. Within 1 year of a well's closure, the well pads, roads, and associated facilities should be completely removed from the landscape, the land recontoured back to its original profile, and the area reseeded with a native prairie mix. Since native prairie species take some time to establish, intensive management may be required for several years to ensure that weeds do not infest the area.

For prairie areas, the Service recommends planting a diverse mixture of native cool and warm season grasses and forbs. Recent research has suggested that a more diverse mix, including numerous forb species, is not only ecologically beneficial, but is also more weed resistant, allowing for less intensive management and chemical use. In essence, the more species included in a mixture, the higher the probability of providing competition to resist invasion by non-native plants. The seed source should be as local as possible, preferably collected from the nearby native prairie.

Thank you for the opportunity to comment on this project. If you require further information or the project plans change, please contact me or Ms. Heidi Riddle of my staff at (701) 250-4481 or at the letterhead address.

Sincerely,

Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosure

9

cc: Bureau of Indian Affairs, Aberdeen
(Attn: Marilyn Bereier)
Bureau of Land Management, Dickinson
(Attn: Lonny Bagley)
ND Game & Fish Department, Bismarck

FEDERAL THREATENED, ENDANGERED, AND CANDIDATE SPECIES
AND DESIGNATED CRITICAL HABITAT FOUND IN
MCLEAN COUNTY, NORTH DAKOTA

ENDANGERED SPECIES

Birds

Interior least tern (Sterna antillarum): Nests along midstream sandbars of the Missouri and Yellowstone Rivers.

Whooping crane (Grus Americana): Aransas-Wood Buffalo Population (264 birds) occurs in North Dakota counties during spring and fall migration between breeding and wintering areas. Whooping cranes prefer to roost overnight in shallow open water wetland habitat with good visibility during migration stopovers.

Fish

Pallid sturgeon (Scaphirhynchus albus): Known only from the Missouri and Yellowstone Rivers. No reproduction has been documented in 15 years.

Mammals

Gray wolf (Canis lupus): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.

THREATENED SPECIES

Birds

Piping plover (Charadrius melodus): Nests on midstream sandbars of the Missouri and Yellowstone Rivers and along shorelines of saline wetlands. More nest in North Dakota than any other state.

CANDIDATE SPECIES

Birds

Sprague's Pipit (Anthus spragueii): Nests in native and planted grassland. Prefers patches of grassland at least 72 acres (29 hectares).

Invertebrates

Dakota skipper (Hesperia dacotae): Found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple and upright coneflowers and blanketflower.

DESIGNATED CRITICAL HABITAT

Birds

Piping Plover - Alkali Lakes and Wetlands - Critical habitat includes: (1) shallow, seasonally to permanently flooded, mixosaline to hypersaline wetlands with sandy to gravelly, sparsely vegetated beaches, salt-encrusted mud flats, and/or gravelly salt flats; (2) springs and fens along edges of alkali lakes and wetlands; and (3) adjacent uplands 200 feet (61 meters) above the high water mark of the alkali lake or wetland.

Piping Plover - Missouri River - Critical habitat includes sparsely vegetated channel sandbars, sand and gravel beaches on islands, temporary pools on sandbars and islands, and the interface with the river.

Piping Plover - Lake Sakakawea and Oahe - Critical habitat includes sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies.

United States Department of the Interior

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

JUN 27 2011

Mr. Neil Lynn
Wildlife Biologist
TEC Inc.
1658 Cole Blvd, Suite 190
Golden, Colorado 80401

Re: Marathon Oil Company
Seven Oil & Gas Exploratory Wells on
Three Pads
Fort Berthold Indian Reservation
McLean County, N. Dakota

Dear Mr. Lynn:

This is in response to your May 17, 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). Marathon Oil Company (Marathon) has proposed the construction of three well pads that would support the drilling and completion of seven oil and gas wells and access roads on the Fort Berthold Reservation, McLean County, North Dakota.

Specific locations are:

- One Feather USA 31-17H and Sitting Owl USA 34-8H located on T. 150 N., R. 90 W., NWNE ¼ Section 17 (McLean County)
- Driver USA 34-9H, Driver USA 44-9H, and Black Hawk USA 31-16H located in T. 150 N., R. 90 W., SWSE ¼ Section 9 (McLean County)
- Many Woman USA 14-10H and Mink USA 11-15H located in T. 150 N, R. 90 W., NWNW ¼ Section 15 (McLean County)
- Alternate access route located in T. 150 N., R. 90 W., between Sections 9 and 10

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).

The BIA has designated TEC Inc. 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 agent.

Threatened, Endangered, and Candidate Species

TEC Inc. has made "no effect" determinations for the three well pad sites and access roads for the interior least tern, pallid sturgeon, gray wolf, and piping plover. By policy, the Service does not concur or non-concur with "no effect" determinations, however, we acknowledge your determinations. TEC Inc. has made a "may affect, not likely to adversely affect" determination for the whooping crane. The Service concurs with this determination, based on the following commitment by Marathon:

- 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.

Marathon has also made the following commitments:

- A semi-closed mud system with an on-site cuttings pit would be used during drilling. Drill cuttings would be stabilized before being placed in a 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 to an approved off-site disposal location. 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.
- Berming would be utilized around the cut slopes to prevent run-on. The cuttings pit and soil stockpiles will be placed as to divert any drainage outside of the fill slopes on the pad.
- All construction activities at the three well pads and access road would be completed outside the migratory bird nesting season (February 1 through July 15) in order to avoid impacts to migratory birds during the breeding/nesting season. In the event that construction would need to take place during the migratory bird nesting season, an alternative to mowing the site would be to have a qualified biologist conduct pre-construction surveys for migratory birds or their nests within 5 days prior to the initiation of all construction activities. In addition, if

any migratory bird nest is found on-site during construction, construction activities would cease and the USFWS would be notified for advice on how to proceed. The requirement to perform a pre-construction survey may be waived after consultation with the USFWS due to the lack of suitable nesting sites at the three locations.

- Measures implemented during construction to avoid the taking of migratory bird species will include: the use of suitable mufflers on all internal combustion engines; installing compressor equipment to mitigate noise; 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.
- 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 constructed to hold in excess of 100% of the capacity of the largest tank plus on full day's production. BMPs would be implemented to minimize wind and water erosion of soil resources and a semi-closed loop mud system would be used during drilling.

Bald and Golden Eagles

Your letter stated the only suitable nesting habitat for bald and golden eagles is approximately 700 feet north of the northern terminus of the proposed route in a line of planted trees. No nests or individuals were observed during surveys conducted on May 9-11, 2011. The nearest nest site that has been documented is approximately 3.5 miles south of the proposed well pads. 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 would cease and the USFWS would be notified for advice on how to proceed.

The Service believes that with the inclusion of the stated commitments, Marathon'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. We do not need a copy of the draft EA, but would appreciate receiving a copy of the final EA and FONSI.

Thank you for the opportunity to comment on this EA and federally-listed and candidate species, and for Marathon'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

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 1, 2011

Mr. Ken Brinster
TEC, Inc.
12 S. Main St., Suite 6
Minot, ND 58701

Re: Seven Exploratory Oil and Gas Wells on Three Well Pads
By Marathon Oil Company, On the Fort Berthold Reservation, McLean County

Dear Mr. Brinster:

This department has reviewed the information concerning the above-referenced project submitted under date of May 12, 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.

   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 can be reached at (303) 312-6526 or Paser.Kathleen@epa.gov.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Oil and gas related construction activities located within tribal boundaries within North Dakota may be required to obtain a permit to discharge storm water runoff from the U.S.

Environmental Protection Agency. Further information may be obtained from the U.S. EPA's website or by calling the U.S. EPA – Region 8 at (303) 312-6312. Also, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

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

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

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

Sincerely,

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

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
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www.ndhealth.gov

Construction and Environmental Disturbance Requirements

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

Soils

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

Surface Waters

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

Fill Material

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

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

"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 8, 2011

Ken Brinster
Project Manager
TEC Inc.
12 S. Main Street, Suite 6
Minot, ND 58701

Dear Mr. Brinster:

RE: One Feather USA 31-17H & Sitting Owl USA 34-8H
Driver USA 34-9H, Driver USA 44-9H & Blackhawk USA 31-16H
Mink USA 11-15H & Many Woman USA 14-10H

Marathon Oil Company is proposing seven exploratory oil and gas wells on three multi-well pads on the Fort Berthold Reservation in McLean County, North Dakota.

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

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

Sincerely,

Paul Schadewald

Paul Schadewald
Chief
Conservation & Communication Division

js

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

REPLY TO
ATTENTION OF
North Dakota Regulatory Office

June 17, 2011

TEC, Inc.
ATTN: Ken Brinster, Project Manager
12 South Main Street, Suite 6
Minot, North Dakota 58701

Dear Mr. Brinster:

This is in response to your request for comments received May 20, 2011 concerning an Environmental Assessment your firm is preparing for the Bureau of Indian Affairs and the Bureau of Land Management for **Marathon Oil Company's** proposal to construct three multi-wells resulting in drilling and completion of seven (7) exploratory oil and gas wells on the Fort Berthold Reservation. For your reference, this letter addresses wells referred to as One Feather USA 31-17H and Sitting Owl USA 34-8H, which would be located in Section 17; Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H, which would be located in Section 9; and Mink USA 11-15H and Many Woman USA 14-10H, which would be located in Section 15, all in Township 150 North, Range 90 West, McLean 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.

Printed on Recycled Paper

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.**

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT *(33 CFR 325)*	OMB APPROVAL NO. 0710-0003 EXPIRES: 31 August 2012

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.

PRIVACY ACT STATEMENT

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

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

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

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required)
First - Middle - Last - Company - E-mail Address -	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

STATEMENT OF AUTHORIZATION

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

_____ _____
APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

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

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

17. DIRECTIONS TO THE SITE

ENG FORM 4345, SEPT 2009 EDITION OF OCT 2004 IS OBSOLETE Proponent: CECW-CO

19. Nature of Activity (Description of project, include all features)

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

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

21. Reason(s) for Discharge

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

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

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

Acres

Or

Linear Feet

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

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

26. 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 -

27. 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

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

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

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

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

ENG FORM 4345, SEPT 2009

United States Department of Agriculture

NRCS

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

June 28, 2011

Ken Brinster
TEC Inc
12 S Main Street, Suite 6
Minot, ND 58701

RE: One Feather USA 31-17H and Sitting Owl USA 34-8H
Driver USA 34-9H, Driver USA 44-9H and Blackhawk USA 31-16H
Mink USA 11-15H and Many Woman USA 14-10H
McLean County, ND
Fort Berthold Reservation
Dunn County, ND

Dear Mr. Brinster:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated May 12, 2011, regarding wells and pads in McLean 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

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

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

Sincerely,

JEROME SCHAAR
State Soil Scientist/MO Leader

Lynn, Neil P.

From:	Sorensen, Charles G NWO <Charles.G.Sorensen@usace.army.mil>
Sent:	Wednesday, May 25, 2011 11:05 AM
To:	Brinster, Kenneth F.
Cc:	charles.g.sorensen@usace.army.mil
Subject:	Comments on Marathon Oil One Feather, Sitting Owl, Driver, Blackhawk, Mink, and Many Women Wells

Mr. Brinster

Thank you for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project comment on Marathon Oil's proposed One Feather, Sitting Owl, Driver, Blackhawk, Mink, and Many Women Oil Well pads .

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 Marathon Oil 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.

1

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

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

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

a. Has the project area already been degraded, and if so, to what extent?

b. Are other ongoing activities in the area causing impacts, and if so, to what extent?

c. What is the likelihood that this project will lead to a number of associated projects?

d. What are the trends for activities and impacts in the area?

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

Charles Sorensen
Natural Resource Specialist
U.S. Army Corps of Engineers
Garrison Dam/Lake Sakakawea Project

Riverdale, North Dakota Office
(701) 654 7411 ext 232

MWEC Mountrail - Williams Electric Cooperative

Internet: www.mwec.com
Service Area
Toll Free: 1-800-279-2667

PO Box 1346
Williston, ND 58802-1346
(701) 577-3765

PO Box 129
Stanley, ND 58784-0129
(701) 628-2242

PO Box 59
New Town, ND 58763-0059
(701) 627-3550

June 13, 2011

Ken Brinster
Project Manager, TEC Inc.
12 S. Main Street, Suite 6
Minot, North Dakota 58701

RE: One Feather USA 31-17H, Sitting Owl USA 34-8H; Driver USA 34-9H, Driver USA 44-9H, Blackhawk 31-16H; Mink USA 11-15H, Many Woman USA 14-10H

Dear Mr. Brinster,

Mountrail-Williams Electric Cooperative owns, operates, and maintains several electrical lines in the general vicinity of your project. We have enclosed maps to show the *approximate* routes. Please contact us with any questions you may have regarding our lines.

Sincerely,

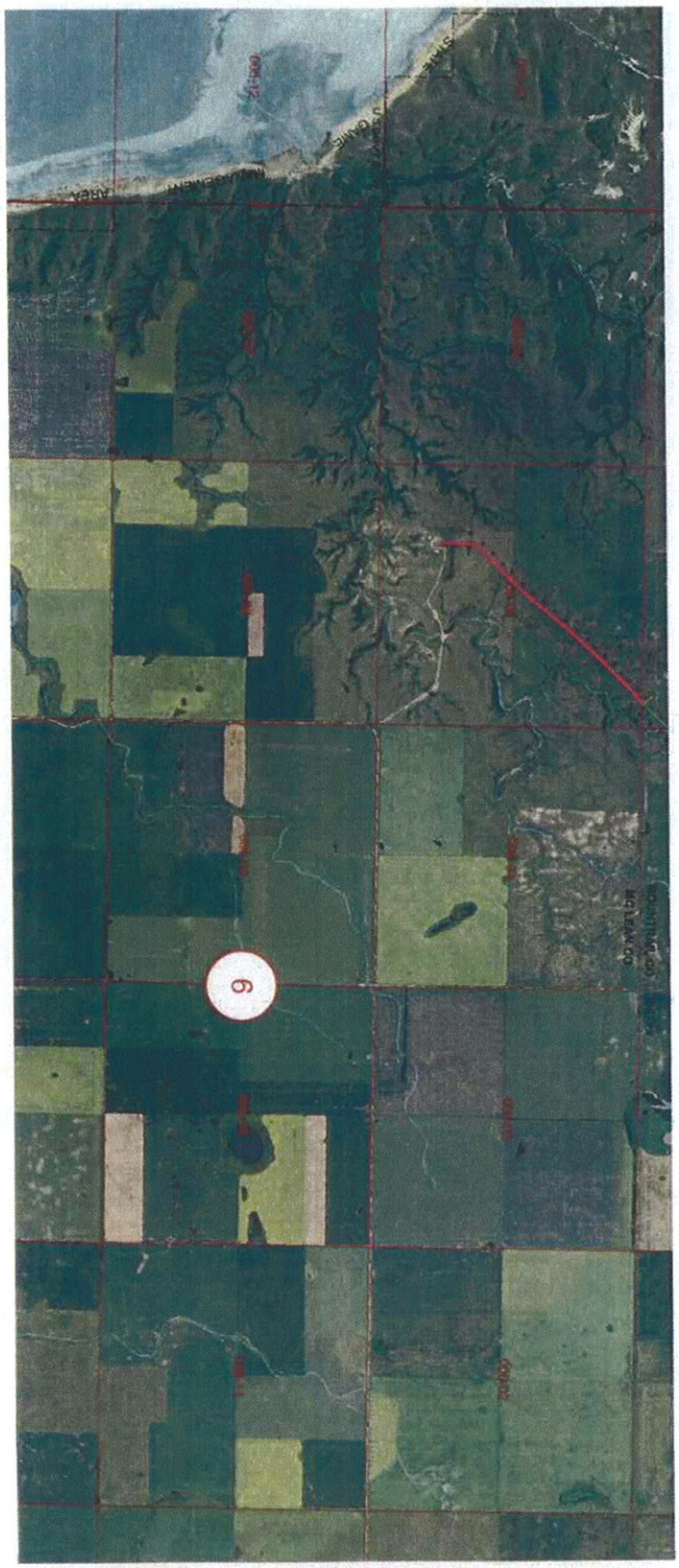
Dale L. Haugen

Dale L. Haugen

Enclosures

lje/dlh

Your Touchstone Energy® Cooperative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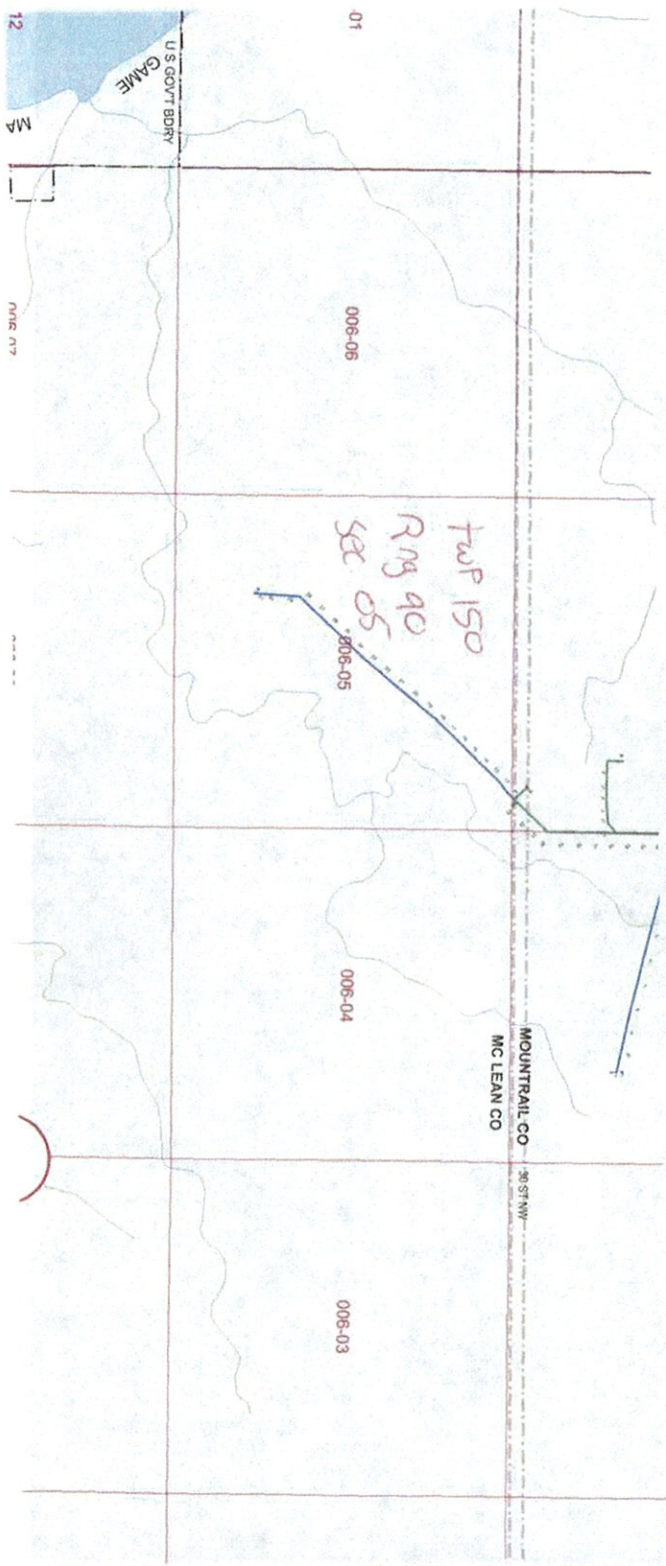
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01
U.S. GOVT BDRY
GAME
006-06
006-05
006-04
006-03
TWP 150
RNG 90
SEC 05
MOUNTRAIL CO
MC LEAN CO
36 ST NW

APPENDIX C

RESPONSES TO SCOPING COMMENTS

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
1			**Patricia Dressler Environmental Protection Specialist FAA/Bismarck Airports District Office**	
	1	General	No objections, provided the FAA is notified of construction or alterations, as required.	Thank you for your comment. If any alterations to the proposed action are made, the FAA will be notified.
2			**Kelly B McPhillips Environmental Specialist Bureau of Reclamation – Dakotas Area Office**	
	1	Water	Since the three well pads appear to be in the vicinity of Reclamation facilities (rural water pipelines of the Fort Berthold Rural Water System) we have provided a map of these facilities. If you need to cross a pipeline, please refer to the attached specifications and contact Colin Nygaard.	Thank you for the information. Should any of the Reclamation facilities need to be crossed, Mr. Nygaard will be contacted.
	2	Water	Since the BOR is the lead federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Lester Crows Heart.	Several members from the Tribal Environmental Office have been informed of the proposed project.
3			**Brad Thompson Chief, Environmental Resources and Missouri River Recovery Program Plan Formulation Section Corps of Engineers – Omaha District**	
	1	Water	Due to the proximity of the proposed wells to Lake Sakakawea, a significant drinking water resource, the Corps requests that	The proposed drilling systems will include a semi-closed loop with a closed circulation mud system.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			the applicant consider the use of closed loop drilling system which may reduce or eliminate the discharge of toxic drilling wastes and their potential negative impacts to the environment.	
	2	Floodplains	To determine if the proposed project may impact areas designated as a Federal Emergency Management Agency special flood hazard area, please consult with the North Dakota State Water Commission.	The ND State Water Commission, EPA, USFWS, and SHPO have been contacted as part of the scoping process.
	3	Consultation	Plans should be coordinated with the US EPA, USFWS, and North Dakota SHPO.	Marathon's plans will be coordinated with the USFWS, USEPA, and North Dakota SHPO.
	4	Water	Any placement of dredged or fill material into waters of the United Sates (including jurisdictional wetlands) require Department of the Army authorization under Section 404 of the Clean Water Act.	No fill or dredging is anticipated from the proposed action.
4			**Charles Sorenson Natural Resources Specialist Corps of Engineers – Garrison Dam/Lake Sakakawea Project**	
	1	Water	Consider the construction/establishment of an impervious lined catch trench located on the down sloping side of the well pad to help in containing any hazardous wastes from the pad. Those fluids that accumulate in the trench should be pumped out and disposed of	Numerous measures to prevent the contamination of surface water are include in the EA. Other measures, as deemed appropriate by the BIA/BLM, may be included.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			properly.	
	2	Water	To prevent hazardous wastes from entering the Missouri River/Lake Sakakawea, the Corps strongly recommends that a closed loop drilling system be used.	The proposed drilling systems will include a semi-closed loop with a closed circulation mud system.
	3	Hazardous Materials	Should any living quarters be established on site, all sewage systems should be of a closed design and are either a double walled construction or contained in a secondary containment system. All sewage wastes removed from the well site should be disposed of properly.	All sanitary sewage from the temporary on-site housing would be collected in standard portable chemical latrines and disposed of properly.
	4	Weeds	Additional fill material should be obtained from a private supplier that is certified as being free of all noxious weeds.	All additional fill materials will be from a certified weed free source.
	5	Weeds	Prior to the rig and associated equipment being moved/placed at the site, all equipment should be either pressure washed or air blasted off of Tribal Lands to prevent the possible transportation of noxious or undesirable vegetation onto Tribal lands as well as Corp lands.	This will be included in the weed management plan.
	6	Threatened/Endangered Species	No surface occupancy within ½ mile of any known threatened or endangered species critical habitat.	No critical habitat occurs with a 0.5 mile radius of the proposed project site.
	7	Construction	If possible, all construction activities should occur between August 15th and April 1st.	Construction on all sites is anticipated to begin in the Fall 2011.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
	8	Wildlife	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.	Construction on all sites is anticipated to begin in the Fall 2011.
	9	Cumulative impacts	To adequately consider cumulative impacts, please consider: • Has the project area already been degraded, and if so, to what extent? • Are other ongoing activities in the area causing impacts, and if so, to what extent? • What is the likelihood that this project will lead to a number of associated projects? • What are the trends for activities and impacts in the area?	The cumulative impacts section of the EA will cover this information.
5			**Jeffery Towner** **Field Supervisor** **US Fish and Wildlife Service – North Dakota Field Office**	
	1	Consultation	The BIA or designated non-federal agency should make a determination of the proposed project's effects on listed species, including adverse effects to designated critical habitat. It should state whether or not the BIA plans to	The determination of effect on listed and candidate species was made in the report sent to the USFWS on May 19, 2011. This report included the measures that would be taken to protect these species.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			incorporate the Service's recommendation to avoid and minimize any adverse impacts.	
	2	T/E Species	If a whooping crane is sighted within 1 mile of the well site or associated facilities, all work should cease and the Service should be contacted immediately.	This stipulation will be included in the EA.
	3	T/E Species	Recommend that the project avoid any impacts to potential Dakota skipper habitat. If Dakota skipper habitat is present near the proposed project, and you intend to take precautions to avoid impacts to skipper habitat, please notify the Service for further consultation.	All parts of the proposed action will take place in cultivated cropland and not impact Dakota skipper habitat.
	4	T/E Species	If Sprague's pipit habitat is present within or adjacent to the proposed project area, the Service requests that operator document any steps taken to avoid and minimize disturbance of habitat.	All parts of the proposed action will take place in cultivated cropland and will not impact Sprague's pipit habitat.
	5	Wildlife	To the extent practicable, schedule construction for late fall/early winter so that waterfowl and other wildlife are not disrupted during the breeding season. If work is proposed to take place within the breeding season, all practicable measure to avoid all take should be implemented.	Construction on all sites is anticipated to begin in the Fall 2011.
	6	Wildlife	If field surveys for nesting birds, including eagles, are conducted, with the intent of avoiding take, the operator should maintain any documentation of the	Field surveys were conducted in May 2011. The results of those surveys include information on the presence or absence of nesting birds.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			presence of eagles or migratory birds, eggs, and active nests along with the information regarding the qualifications of the biologists performing the survey, and any avoidance measures implemented at the project site.	
	7	Wildlife	The Service strongly recommends the use of closed-loop drilling systems to eliminate the use of reserve pits. Regardless, the following measures should be implemented: • Keep oil off open pits or ponds. • Place covers on drip buckets/barrels located under valves and spigots. • Use effective and proven exclusionary devices	The proposed drilling systems will include a semi-closed loop with a closed circulation mud system. The provided measures will be included in the document.
	8	Eagles	A buffer of at least 0.5 mile should be maintained for bald and golden eagle nests. A permit is required for take of bald or golden eagles and their nests.	Based on the results of the field survey, no bald or golden eagle nests occur within a 0.5-mile radius of the project site(s).
	9	Eagles	The Service recommends that aerial raptor surveys be conducted prior to any on the ground disturbance. These surveys should be conducted within 1 mile of disturbance and be conducted between March 1 and May 15.	Aerial surveys for nests were not conducted because the surveys occurred near the end of the aerial survey window. Additionally, the project is expected to occur outside of the raptor nesting period.
	10	Wildlife	To minimize disturbance of habitat in the project area, the Service recommends the following:	• No stream channel alterations will occur.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			• Make no stream channel alterations or changes in drainage patterns; • Install and maintain appropriate erosion control measures to reduce sediment transport; and • Avoid construction in native prairie, if possible, and reseed native disturbed prairie with comparable native grass/forb mixture.	• Several erosion control measures are included in the EA. • No construction will take place in native prairie habitat.
	11	Cumulative Impacts	It would be appropriate for the EA to include a cumulative effect analysis of the existing and proposed roads, pads, electrical transmission lines, and pipelines to transport the products, as well as any other activities in the analysis that impact fish and wildlife resources.	The cumulative impacts section of the EA will include this information.
	12	Wildlife	The Service recommends placing as few pads as possible on the landscape and locating the pads to avoid or minimize the construction new roads.	Marathon is committed to using multi-well pads in order to reduce surface disturbance.
	13	Wildlife	The Service recommends that impacts to native prairie be avoided or minimize. If it cannot be avoided, recommend outlining stringent reclamation requirements, including a bond sufficient to cover the cost of reclamation.	No construction will occur in native prairie habitat.
	14	Wildlife	Oil wells should use existing roads and	Marathon will minimize the construction

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			trails to the greatest extent possible, minimizing all new road construction.	of new roads. Additionally, all construction would take place in existing cropland.
	15	Wildlife	If a new road is necessary, avoid native prairie habitat to the greatest extent possible.	No construction will occur in native prairie.
	16	Wildlife	If new roads are constructed, the disturbed areas along the road should be reseeded immediately with a native prairie mix to reduce erosion and prevent invasion of non-native species.	As all new roads would be constructed in existing cropland, the landowners would likely re-plant crops up to the edge of the Rights-of Way and roads.
	17	Wildlife	If multiple companies are developing well pads in the same general area, roads should be shared to the greatest extent possible to minimize disturbance.	Roads will be shared to the extent possible.
	18	Wildlife	Install and maintain appropriate erosion control measures to reduce sedimentation and water quality degradation of wetlands and streams near the project area.	The EA will contain all the measures that may be used to control erosion and reduce sedimentation as deemed applicable by the BIA and BLM.
	19	Reclamation	Within one year of the well's closure, the pad, roads, and facilities should be completely removed from the landscape, and the land re-contoured back to its original profile, and reseeded with a native prairie mix.	The final reclamation proposed in the EA will contained these measures. Ass the area is currently used as cropland, following the final abandonment of the site, the land would go back to agricultural use.
	20	Reclamation	For prairie areas, a diverse mixture of cool and warm season grasses and forbs should be used for reseeding. The seed source should be as local as possible, preferably collected from the nearby	No disturbance of native prairie would occur as all parts of the proposed action would take place in existing cropland.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			native prairie.	
6			**Paul Schadewald Chief, Conservation and Communication Division North Dakota Game and Fish Department**	
	1	Wildlife	Construction should avoid native prairie, wooded draws, riparian corridors, and wetlands areas to the extent practicable.	Construction would be avoided these areas.
	2	Wildlife/Vegetation	Recommend botanical surveys be completed during the appropriate season and aerial surveys be conducted for raptor nests before construction begins.	Surveys were completed in May, 2011. Aerial surveys were not completed because the construction is anticipated to occur outside of the raptor nesting period.
7			**L. David Glatt. Chief, Environmental Health Section North Dakota Department of Health**	
	1	Air Quality	Encourage the development and operation of the wells in a manner that is consistent with good air pollution control practices for minimizing emissions.	The EA will contain information on air quality mitigation.
	2	Water	Care should be taken during construction activity near any waters 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 replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to	No direct impacts to water bodies are anticipated due to the distance to existing sources of water from the proposed construction. Several mitigation measures will be included to minimize erosion and run-off.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			prevent spills of oil and grease that may reach the receiving water during equipment maintenance, and/or the handling of fuels on the site.	
	3	Water	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. EPA.	All required permits will be obtained prior to the start of construction.
	4	General	The ND Department of Health 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.	Thank you for the information.
	5	Soils	Prevent the erosion of exposed soil surfaces and trap sediments from 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 in disturbed areas after construction is completed. Fragile and sensitive areas, such as wetlands, riparian areas, sensitive flora, or land resources should be protected from compaction,	Several measures to prevent erosion will be included in the EA, including placement of berms, trenches, straw bales, and others as determined necessary by the BIA and BLM.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			vegetation loss, and unnecessary damage.	
	6	Water	All construction which directly or indirectly impacts aquatic systems should be managed to minimize impacts. All attempts should be made to prevent the contamination of water at construction sites from spills of fuel, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances should 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 water bodies is forbidden without approval from this Department.	The EA will contain the mitigation measures that would be implemented in order to minimize impacts to water bodies. No disturbance to stream beds or banks is anticipated.
	7	Water	Any fill material placed below the high water mark must be free of topsoil, 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 fill material must be removed. Debris and solid wastes should be removed from the site and the impacted areas restored as close as possible to the	No fill material is anticipated from the proposed project. All debris and waste will be removed and the area re-contoured to match the original landscape.

Letter Number	Comment Number	Topic	COMMENT SUMMARY	Response
			original condition.	
8			**Toni R. Ernhardt Project Manager North Dakota Regulatory Office Corps of Engineers – Omaha District**	
	1	Water	If during project design, impacts to waters of the United States cannot be avoided, permits would be required prior to commencement of construction. If there is a question on whether or not permits would be required, the application and design specification of the project should be forwarded to our office for review and authorization. It is essential to identify impacts to waters of the U.S. resulting from the project.	Any potential impacts to waters of the United States will be discussed in the EA. All required permits and authorizations will be acquired prior to construction.
9			**Dale Haugen Mountrail-Williams Electric Cooperative**	
	1	Utilities	Mountrail-Williams Electric Cooperative owns, operates, and maintains several electrical lines in the general vicinity of the project area. Please see the enclosed maps that show the approximate locations. Please contact us with any questions you may have regarding our lines	Thank you for the information. Should Marathon have any questions regarding your utility lines, they will contact you.

APPENDIX D

LETTERS TO THPO

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

TAKE PRIDE IN AMERICA

JUN 20 2011

IN REPLY REFER TO:
DESCRM
MC-208

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 two oil well pad projects in Mountrail County, North Dakota. Approximately 79 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 which 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-1924/FB/11**, the proposed undertakings, locations, and project dimensions are described in the following reports:

Macy, Jennifer N.
(2011a) Mink USA 11-15H and Many Woman USA 14-10H Dual Well Pads and Access Road: A Class III Cultural Resource Inventory, Mountrail County, North Dakota. KLJ Cultural Resources for Marathon Oil and Gas Company, Dickinson, ND.

(2011b) Bangen SWD #1 Well Pad and Access Road: A Class III Cultural Resource Inventory, Mountrail County, North Dakota. KLJ Cultural Resources for Marathon Oil and Gas Company, Dickinson, ND.

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,

ACTING Regional Director

Enclosures

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

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
DESCRM
MC-208

JUL 0 1 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 two oil well pad projects in McLean County, North Dakota. Approximately 53.5 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 which 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-1924/FB/11**, the proposed undertakings, locations, and project dimensions are described in the following reports:

Macy, Jennifer N.
(2011a) Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H Triple Well Pads and Access Road: A Class III Cultural Resource Inventory, McLean County, North Dakota. KLJ Cultural Resources for Marathon Oil and Gas Company, Dickinson, ND.

(2011b) Sitting Owl USA 34-8H and One Feather USA 31-17H Dual Well Pads and Access Road: A Class III Cultural Resource Inventory, McLean County, North Dakota. KLJ Cultural Resources for Marathon Oil and Gas Company, Dickinson, ND.

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,

Acting Regional Director

Enclosures

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

Notice of Availability and Appeal Rights

Marathon: One Feather USA 31-17H and Sitting Owl USA 34-8H,
Driver USA 34-9H, Driver USA 44-9H and Black Hawk USA 31-16H,
Mink USA 11-15H and Many Woman USA 14-10H

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals related to installation of seven oil and gas wells atop three well pads as shown on the attached map. Construction by Marathon is expected to begin 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 9, 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.

Figure 1-1:
Proposed Wells Location Map
T150N R90W
5th Principal Meridian
McLean County, North Dakota
1:24,000