



# United States Department of the Interior

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



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MC-208

NOV 13 2008

## MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: Acting Chief, Division of Environment, Safety and Cultural Resources, Great Plains

SUBJECT: Marathon Oil Company, Myrmidon #1-2H Pipelines and Tank Battery

I have attached two copies of the completed Supplemental Environmental Assessment (S-EA) for the Marathon Oil Company, Myrmidon #1-2H Pipelines and Tank Battery. One copy is for your files; please send the other to Mike Nash of the Bureau of Land Management at 99 23<sup>rd</sup> Avenue, Dickinson, North Dakota, 58601. The signed Finding of No Significant Impact can be found on the inside cover.

The original S-EA will remain on file in our office. The Notice of Availability should be posted locally, after which thirty days must pass before any actions considered in the S-EA can take place. Please call me with any questions or comments at (605) 226-7656.

cc: Realty Officer, Great Plains Region  
Marathon Oil Company

# **Supplemental Environmental Assessment**

**United States Bureau of Indian Affairs**

**Great Plains Regional Office  
Aberdeen, South Dakota**



**Marathon Oil Company**

**Myrmidon #1-2H Pipelines and Tank Battery**

**Fort Berthold Indian Reservation**

**November 2008**

For information contact:  
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115 4th Avenue SE  
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## Finding of No Significant Impact

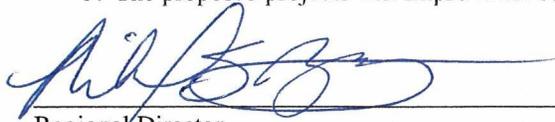
### Marathon Oil Company

### Myrmidon 1-2H Pipeline

The U.S. Bureau of Indian Affairs (BIA) received a proposal for short pipelines and electrical service on the Fort Berthold Indian Reservation, in Section 2, T151N-R94W and Sections 26 and 35, in T151N-R94W, McKenzie County, North Dakota. Proposed projects would service the Myrmidon #1-2H oil and gas well, an operating oil well previously analysed and approved by the BIA.

Associated federal actions by BIA include determinations of effect regarding cultural resources and approval of rights-of-way. Potential of the proposed actions to impact the human environment is analyzed in the attached Supplemental Environmental Assessment (S-EA), as required by the National Environmental Policy Act. Based on the recently completed S-EA, I have determined that proposed projects will not significantly affect the quality of the human environment. No Environmental Impact Statement is required for any portion of the proposed activities. This determination is based on the following factors:

1. The need for pipelines and electrical service was identified in the Environmental Assessment (EA) for the Myrmidon #1-2H well and access road.
2. Agency and public involvement was solicited for the original EA and environmental issues related to the proposal were identified.
3. 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 alternative.
4. Guidance from the U.S. Fish and Wildlife Service was fully considered.
5. Proposed actions are designed to avoid adverse effects to historic, archeological, cultural and traditional properties, sites and practices. All requirements related to cultural resources have been satisfied.
6. Environmental justice was fully considered.
7. Cumulative effects to the environment are either mitigated, minimal, or lessened as a result of replacing tanker traffic with pipelines.
8. No regulatory requirements have been waived or require compensatory mitigation measures.
9. The proposed projects will improve the socio-economic condition of the affected Indian community.

  
Regional Director

11/6/08  
Date

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## **1. Proposed Supplemental Action**

In connection with a previously approved and currently operational oil and gas well on the Fort Berthold Indian Reservation, Marathon Oil Company (Marathon) has proposed construction of flowlines, electric power transmission lines, a tank battery and a production equipment pad. As shown in Figure 1, pipelines for oil, gas and produced water would be installed within a new right-of-way (ROW) from the Myrmidon 1-2H well to the proposed tank site. An electric power transmission line would be installed either within the proposed ROW or within the existing access road ROW for the well. These pipelines and powerlines would be about one mile long. Marathon has also proposed construction of about 1 ½ miles of natural gas pipeline west and north from the tank site, connecting to an existing natural gas pipeline operated by Bear Paw Energy.

Proposed pipelines and pads are located in Sections 2, 26 and 35, all in T151N-R94W, McKenzie County, North Dakota. About 3402 feet of the ROW would be on allotted land owned by one surface owner. Written consent for the ROW has been obtained from affected surface owners. The rest of the project would be on fee surface, for which leases or surface use agreements are also in place. Figure 1 shows two possible routes in the southwest corner of section 26. The northwest diagonal route shortens overall pipeline length and stays farther away from a residence in the southeast corner of section 27.

## **2. Relation to Original Environmental Assessment**

Myrmidon 1-2H is the commitment well stipulated under an agreement negotiated under the Indian Minerals Development Act (IMDA). The Environmental Assessment prepared prior to BIA approval of that agreement (October 2006) mentions repeatedly the need or possibility of additional infrastructure, such as pipelines. That assessment did not, however, include sufficient detail or describe potential impacts adequately to include the present proposal within BIA's Finding of No Significant Impact for the agreement and commitment well. This Supplemental Environmental Assessment addresses these shortcomings.

## **3. Construction Details**

Flowlines would be no more than six inches in diameter and would be buried about four feet deep. The working ROW width for construction of the pipelines will be 150 feet to allow for equipment and the necessary construction activities. The final operational ROW would be 50 feet for the pipelines.

Temporary ground disturbance will occur within the ROW during construction. Topsoil would be stripped where appropriate and windrowed to the non-working side of the ROW. Trenching will be to a depth of four feet to allow for burial of the flowlines with the ditch spoil pile (excavated materials) separated from topsoil windrow. The pipe will be positioned on the side of the excavated trench to make the necessary connections and then lowered into the trench. Trenches would be backfilled with stockpiled soils and the necessary tracer wires, marking tapes and flowline risers would be installed. The pipeline would be pressure-tested to confirm integrity.

The equipment pad would be about 350 feet E-W x 300 feet N-S (2.4 acres) and be located about 200 feet south of the existing blacktop road. The pad and access road would disturb less than three acres. Topsoil removed during construction would be stockpiled between the pad and the BIA road to the north. The pad will support up to 12 400-barrel storage tanks, three fiberglass tanks for produced water and nine steel crude oil storage tanks. The site would include truck loading stations and up to three 6'x20' vertical heater-treaters with energy ratings of 500,000 Btu/hr. As shown in Figure 2,

**FIGURE 1 - SURVEY PLAT**

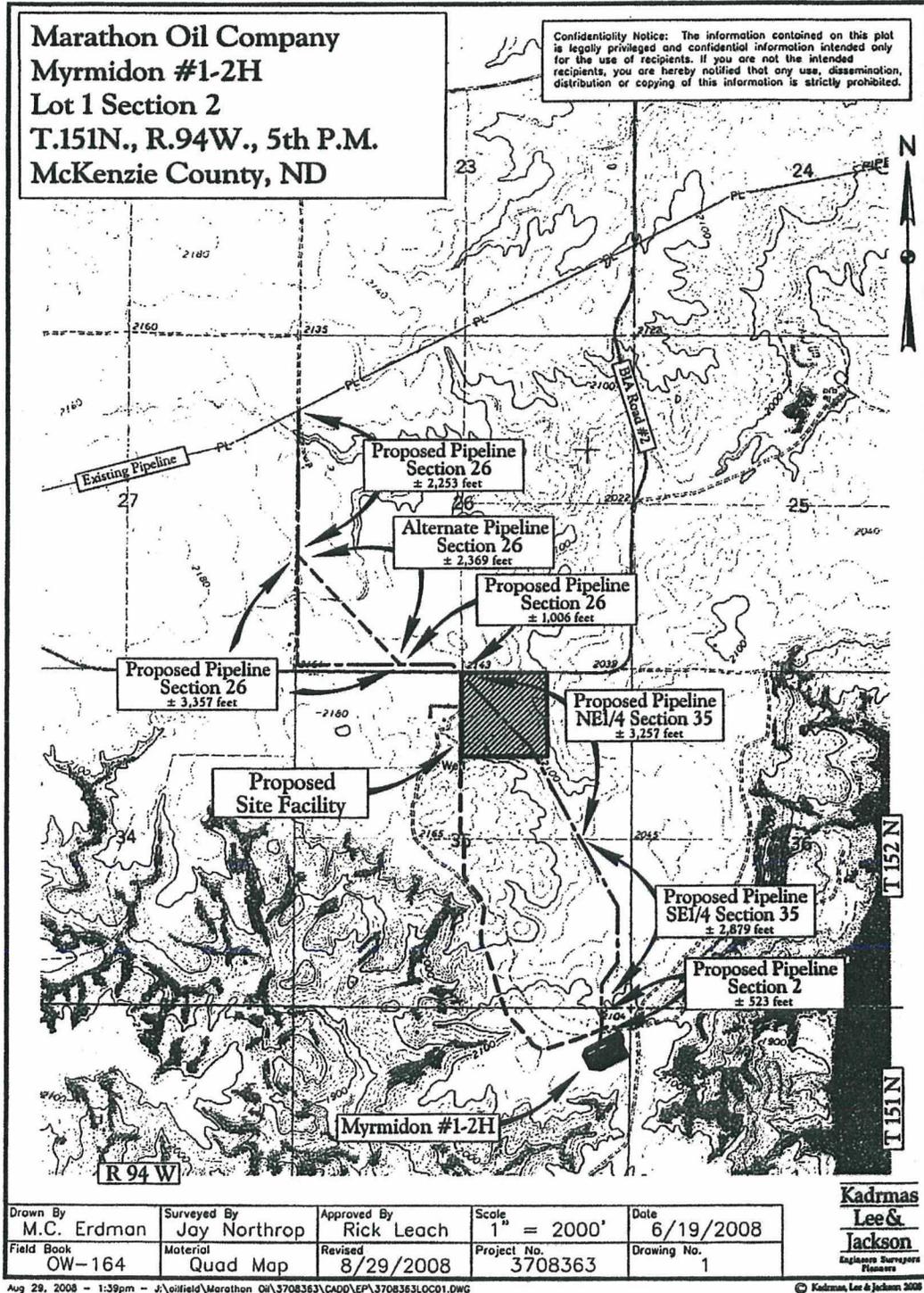


Figure 1: Project location

other installations would include a gas-flaring system, gas sales point, control and monitoring equipment, and recycle pumps. Another tank battery considered during early planning has since been eliminated from the proposal.

The minimum distance between any flowline and any electric transmission line would be 65 feet. The electric service would consist of a 3-phase 75 KVA line rated at 7.2 KV (277/480 volts). An electric power transmission line may be constructed within a proposed cross-country ROW or within the existing access road ROW leading to the Myrmidon 1-2H well. The exact route would be selected in negotiations with BIA and the electric service provider. Electric line construction would increase the final operational ROW up to 150 feet.

Overhead electric service is most likely if service follows the existing access road. Poles will be set to comply with state electric codes for height and spacing. The typical spacing for pole placement is 250 feet, but may vary due to topography with a spacing range from 150-350 feet. The line height will be a minimum of 18.5 feet with 20 feet being an average. The height over roadways is typically 25 feet.

Buried electrical service is most likely if service follows the proposed cross-country route. Burial 30-48" below ground surface poses fewer long-term impacts to agricultural productivity than aboveground construction and maintenance. Impacts to existing BIA roads will be avoided in any case by use of directional drilling for pipeline and utilities construction.

## 4. Reclamation

After construction, the disturbed area will be prepared for seeding with rock removal and replacement of the stockpiled topsoil. As shown in Table 4, the area will then be reseeded with a native grass mix with an oat cover crop specified by BIA. All seed will be certified weed-free.

**Table 4: Reseeding specifications (typical, subject to BIA approval)**

| Species                   | Pounds of PLS/Acre | Percentage of mix |
|---------------------------|--------------------|-------------------|
| Western Wheatgrass        | 8                  | 42%               |
| Slender Wheatgrass        | 5                  | 26%               |
| Green Needlegrass         | 4                  | 21%               |
| Side oats Grama           | 2                  | 11%               |
| *Oats (annual cover crop) | 10                 | n/a               |

Impacts to soils associated with the proposed project are not expected to be significant. Soils impacts would be localized and best management practices to control erosion and sedimentation will be utilized in all disturbed areas until vegetation cover is reestablished. Failure to exclude invasive species or to successfully establish native species will require removal of vegetation and replanting. Periodic monitoring will be required over the initial five years after disturbance to document successful reclamation.

The working part of the pad and the running surface of access roads would be surfaced with scoria or crushed rock from a previously approved location. Outslope portions of roads would be covered with stockpiled topsoil and re-seeded with a seed mixture determined by BIA, repairing all other access-related disturbance. Other interim reclamation measures to be accomplished within the first year include reduction of cut and fill slopes and installation of erosion controls.

Final reclamation would occur either in the very short term if the serviced well(s) are not commercially productive, or later upon final abandonment of commercial operations. All disturbed areas would be thoroughly reclaimed, reflecting the BIA view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed, well bores would be plugged with cement

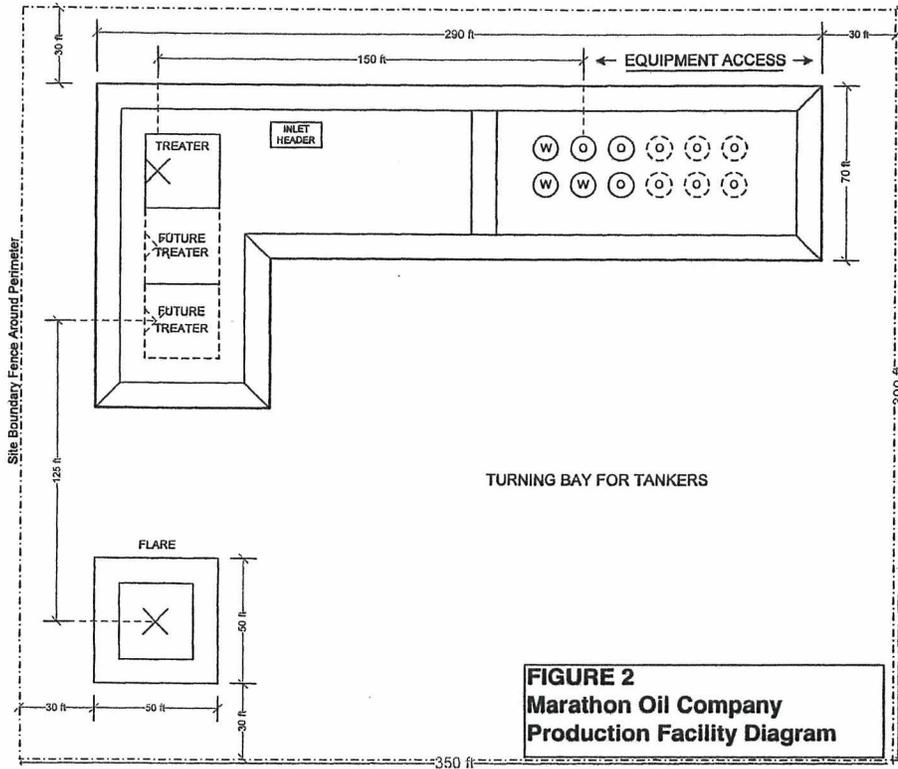


Figure 2: Pad details

and dry hole markers would be set beneath the surface. Access roads, pads and work areas would be scarified, then re-contoured and re-seeded to original conditions. Exceptions to reclamation might occur if 1) the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees; or 2) BIA approves a plan to leave pipelines in place. The Surface Use Plan within the approved APD for the Myrmidon 1-2H well contains additional detail regarding both interim and final reclamation measures that apply in full measure to this supplemental proposal.

## 5. Cultural Resources

*Cultural resources* is a broad term encompassing sites, objects, or practices of archeological, historical, cultural or religious significance. Cultural resources on federal or tribal lands are protected by many laws, regulations, and agreements. The *National Historic Preservation Act* of 1966 requires a cultural resources survey of the Area of Potential Effect (APE) prior to undertaking a federal action. Resources identified are evaluated for eligibility as historic properties on the National Register of Historic Places (NRHP). Eligibility criteria (36 CFR 60.4) include association with important events or people, distinctive construction or artistic characteristics, and either a record of yielding or a potential to yield at least locally important information. Properties are generally not eligible for listing on the NRHP if they lack diagnostic artifacts, subsurface remains, or structural features, but those considered eligible are treated as though they were listed on the NRHP, even when no formal nomination has been filed.

The 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* of 1990 (NAGPRA, 25 USC 3001, *et seq.*).

Traditional cultural properties (TCPs) of the Mandan, Hidatsa and Arikara Nation (MHA Nation) can take the form of earthlodge villages, eagle trapping pits, natural springs, or sites used for hunting/gathering, gardens, fasting, prayer, human burial, or other ceremonial purposes. Landforms—such as buttes, ridges, valleys, and hills—can constitute TCPs with specific purposes for the MHA Nation, as can whole landscapes where boulders placed on hilltops or hillsides serve as trailmarkers to sacred and cultural places. Various rock constructions—including cairns, circles, lines, alignments, and effigies—are also critical to the continuity and revitalization of spiritual and cultural lifeways. Hundreds of such places are woven into origin stories, oral histories, and continuing practices. BIA relies upon tribal elders and TCP practitioners for advice on the presence of TCPs and proper avoidance or buffer zones. Depending on the nature of the site, identified TCPs may be protected under several regulations, conventions, and traditions.

Whatever the nature of a 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. Within the exterior boundaries of the reservation, the THPO operates with the same authority exercised in most of the rest of North Dakota by the State Historic Preservation Officer (SHPO). As a result, BIA consults and corresponds with the THPO on all projects proposed within the Fort Berthold Reservation. The SHPO may have useful information, but has no official role regarding proposed federal actions on trust land. The MHA Nation has designated responsible parties for consultations and actions under NAGPRA and cultural resources generally.

As shown in Table 5, no effects to cultural resources are expected from proposed projects. For each location, a Class I literature search reviewed earlier fieldwork and previously recorded sites within one mile. Class III surface inspections followed that examined about 111 acres around tentative pad and pipeline locations. Ground surface visibility was good (20-90%). No subsurface testing was conducted. No historic properties were identified or are likely to be affected, according to reports filed with the BIA. TCP practitioners also reported no resources at risk. After reviewing both reports, BIA determined that no historic properties would be affected, in official correspondence mailed to the THPO on August 18, 2008. The THPO did not respond within the 30-day regulatory window, resulting in tacit concurrence with BIA's determination.

**Table 5: Culture resource findings**

| Location                      | Previous Surveys | Previously Recorded Sites within 1 mile | Current Project Finding |                                 |
|-------------------------------|------------------|---|-------------------------|---------------------------------|
|                               |                  |   | Historic Properties     | Traditional Cultural Properties |
| Mymidon 1-2H pipeline and pad | 6                | 6                                       | No effect               | No effect                       |

No cultural resources are known to be present within the APE. If cultural resources are discovered during construction or operation, the operator must immediately stop work, secure the affected site, and notify both BIA and THPO. Unexpected or inadvertent discoveries of cultural resources or human remains trigger mandatory federal procedures that include work stoppage and BIA consultation with all appropriate parties. Following any such discovery, the operator would not resume construction or operations until written authorization to proceed was received from the BIA. **Project personnel are prohibited from collecting artifacts or disturbing cultural resources or practices under any circumstances.** No laws, rules, regulations, or other requirements have been waived; no compensatory mitigation measures are required. The presence of qualified cultural resource monitors during construction activities is encouraged.

## **6. Other Consultation Requirements**

The rural water department of the Mandan, Hidatsa and Arikara Nation will be consulted prior to final design or construction, to ensure the the proposed project does not interfere with existing or planned water supply lines. Upon completion of project construction, Marathon will provide a complete set of as-built survey drawings to the BIA and to the MHA Nation's water managers.

## **7. Alternatives**

Marathon has proposed an electrical powerline that would either be overhead along the recently constructed 1-2H access road or buried along a cross-country route away from the road. Marathon has also proposed burying pipelines following the cross-country route. Construction of pipelines within the Myrmidon 1-2H access road ROW is not considered feasible for several reasons:

- Flow control would be jeopardized by following the hilly road, possibly leading to facilities upset;
- Trenching and construction in outslope areas might undermine the road;
- Construction in a road bed must be at least eight feet deep to protect the line from freezing and damage by heavy equipment. Excavations of this depth introduce additional safety issues.

## **8. The Affected Environment and Potential Impacts**

Actions are proposed on lands currently used as pasture and plowed fields. The general setting conforms to the description in Chapter 3 of the original Environmental Assessment for the Myrmidon #1-2H well, dated October 2006. Environmental consequences of additional construction were anticipated very generally under the original EA and were not found to be significant. The project has been designed and sited to avoid impacts to cultural resources, wetlands, floodplains, surface water and threatened and endangered species. Unavoidable impacts to other resources, including agricultural lands and visual setting, have been minimized.

The proposed action has been proposed in favor of continued trucking of products and waste, thereby lessening public safety concerns and impacts to roads. Impacts to landowners from traffic, dust and noise will decrease with dependence on heavy truck and tanker traffic. Pipelines present smaller risk of accidents and releases due to weather, human error, driver fatigue, or other driving conditions. Two households would benefit from reduced truck traffic to the 1-2H well. One homesite is just off the well's access road and the other is less than ½ mile from the lease road entrance at BIA Route 2. Overall, pipelines are expected to decrease the extent and significance of already approved impacts analysed in the earlier NEPA assessment. The current, more detailed proposal and analysis are therefore consistent with the original Environmental Assessment and FONSI.

## **9. List of Preparers**

- Paul Hofmann, Chief—Division of Environment, Safety and Cultural Resources, BIA Great Plains Regional Office, Aberdeen, South Dakota.
- Luke Franklin, Senior HES Professional, Marathon Oil Company.

