

**USDA FOREST SERVICE
Huron-Manistee National Forests**



**Decision Notice and
Finding of No Significant Impact
For the
USA & State South Branch 1-8 Well Project**

**Crawford County, Michigan
Township 25 North, Range 1 West, Sections 7, 8, & 9**

This notice documents my decision and Finding of No Significant Impact (FONSI) for the USA & State South Branch 1-8 Well Project on the Mio Ranger District of the Huron-Manistee National Forests.

I. Decision

I have decided to implement Alternative 2. A detailed description and map of Alternative 2 are located in the Appendix to this Decision Notice (DN) and Finding of No Significant Impact (FONSI).

Decision Summary

Alternative 2 approves, subject to specific mitigation measures as outlined in the appendix to this DN/FONSI, the Surface Use Plan of Operations (SUPO) for development of the well and construction and operation of the flowline/pipeline and production facilities for the USA and State South Branch 1-8 project. The SUPO being approved was submitted by Savoy Energy, LP.

II. Purpose and Need for Action

The Huron-Manistee National Forests Land and Resource Management Plan (Forest Plan), Final Environmental Impact Statement (EIS) and Record of Decision provide overall direction for Forest Management. The Forest Plan has a

wide variety of goals and objectives to achieve a balanced use of the Huron Manistee National Forests. Part of this balanced use includes mineral exploration and development. Specifically, the Forest Plan states:

Allow mineral exploration and development on a case-by-case basis following a site-specific environmental analysis. Permit surface-disturbing exploration in most areas, with stipulations for protection of other resources. (*Forest Plan, Standards and Guidelines, page IV-78, 2800 Minerals and Geology*),

The specific purpose of this project is to respond, pursuant to 36 CFR 228.107 and direction in the Forest Plan, to a request and submittal from Savoy Energy LP (Savoy), to conduct exploratory drilling and related operations including possible commercial development of oil and gas from subsurface mineral leases.

Savoy has lawful oil and gas rights to three state and three federal leases in a 640 acre drilling unit. The responsibility of the Forest Service is to evaluate surface activities in relation to the terms and stipulations of federal mineral leases, the required submittals, and identify any additional conditions needed to protect the resources. Federal leases grant the lessee the:

“exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described.....together with the right to build and maintain necessary improvements thereupon for the term indicated” subject to applicable laws and regulations.

In addition, 43 CFR Section 3101.1-2, Surface Rights states,

“At a minimum, measures shall be deemed consistent with lease rights granted provided that they do not: require relocation of proposed operations by more than 200 meters; require that operations be sited off the leasehold;”

Savoy submitted an Application for Permit to Drill (APD) to the Bureau of Land Management (BLM). The request is to drill a directional well with the bottom hole located in Federal mineral lease, MIES 50521. As part of the APD package, Savoy submitted a Surface Use Plan of Operation (SUPO) that was forwarded by BLM to the Forest Service, the surface management agency. Savoy has obtained a permit to drill this exploratory well and approval of the drilling unit from the Michigan Department of Environmental Quality (MDEQ) (Permit 55956, issued November 26, 2003).

III. Summary of Alternatives Considered

In deciding which management practices to implement, I considered two “action” alternatives (the original Proposed Action and Alternative 2) and the “no action” Alternative. These three alternatives provided a range of alternatives to consider

which sharply defined the issues. In addition, three alternatives were considered but not studied in detail (EA, pages 17-18). The following discussion summarizes the alternatives considered in detail. Pages 10-17 of the EA contain a complete description of the alternatives and process used to identify them.

Alternative 1 - Do Not Permit (No Action):

Under the No Action alternative, the Forest Service would not approve the SUPO. Current direction would continue to guide management of the project area. No exploratory wells would be drilled, no flow lines installed, and no production facility would be constructed to accomplish project goals. This alternative would not comply with the laws, regulations, policies and Forest Plan direction guiding mineral development on National Forest System (NFS) lands.

- **Public vehicle access** – Forest Service Roads (FSR) 4209 and 4208 would remain open to allow access to the Chapel and the Mason Tract.
- **Road maintenance** – Normal and emergency road maintenance would continue on all existing roads by the Forest Service, the Michigan Department of Natural Resources (MDNR) and Crawford County.
- **Fire suppression** – Human-caused and naturally occurring wildfires would be suppressed.
- **Hunting and trapping** – Hunting and trapping would continue under the rules of the MDNR.
- **Camping** – Dispersed camping would continue under the management rules of the Huron-Manistee National Forests and MDNR.
- **Recreation** – Fishing, hiking, biking, canoeing, rafting, kayaking, horseback riding, berry and mushroom picking for personal use would continue under the Huron-Manistee National Forests management and MDNR.
- **Well and Pipeline maintenance** – Maintenance of the existing natural gas well in SWSEW, Section 19, T25N, R1W, and the pipeline along River Lake Road (aka Hickey Creek Road), would continue under the existing Huron-Manistee National Forest's leases and special use permits.

Proposed Action (Savoy's Proposal as submitted in SUPO):

FS approves SUPO subject to standard conditions of approval and mitigation. Under this alternative Savoy would:

1. Drill a single directional well to explore oil and gas potential on a 640 acre drilling unit, E ½, Section 7 and W ½, Section 8, T 25 N R 1W, as shown on the project area and location Map 3 in the environmental assessment (EA). The bottomhole location would be approximately 2,200 feet northwest of the surface hole.
2. Drilling and well completion would be expected to take 45 days in late fall / winter, 2005-6 (MDEQ permitted drilling from December 1 – April 15). The well pad would be approximately 3.5 acres.
3. Standard and accepted drilling techniques and practices using a rotary rig would be used (photos of standard operations are located in the project file). This includes a casing program, pressure control equipment, hydrogen sulfide contingency plan, and proposed drilling fluids program.
4. At the end of drilling, the contents of the reserve pit would be removed and disposed of by a licensed waste hauler. Hazardous materials, including stimulation and completion fluids, would be contained in steel tanks and disposed of by a licensed waste hauler. Hospital type mufflers (required by MDEQ) would be used to minimize the sound in the area.
5. Cut and fill the well pad area (approximately 3.5 acres) using a bull dozer, to level the surface for well drilling rig, equipment, and reserve pit.
6. Use and maintain existing roads for year-round access including snow plowing, as necessary, along: River Lake Road, FSR 4209 (Mason Chapel Road), and FSR 4208, to access the well site.
7. Construct and maintain 50 feet of new road across NFS land, 20 feet wide (approximately 0.05 acre) to access the well pad from FSR 4208.
8. Drill a water well at the well pad site to provide water for drilling and salt control during the life of the oil and gas well.

Activities # 5 through #8 would occur prior to drilling the well.

Additional actions proposed if the well is productive include:

9. Production facility, SE, Section 9, T25N, R1W, (approximately 1.5 miles from the well pad) construction on approximately 2.0 acres located as shown on Map 3 in the EA, including a gas/water separator, oil and brine tanks, dehydrator, compressor, volume bottle, and various meters for gas and oil monitoring.
10. Flowlines installed from the well site to the production facility site, buried along side the road bed and pipeline installed connecting to the Michigan Consolidated Gas transmission line, totaling approximately 1.7 miles.
11. Reclamation of the well pad leaving only 1/3 acre used for well operations.

If the well is productive it is expected that the lease holder would apply for additional drilling permits for up to three additional wells in this formation. It is expected these wells would be located outside the semiprimitive nonmotorized (SPNM) area to the south and east of Hickey Creek Road and further from the Mason Tract. Any proposed future development would require additional environmental analysis. It is expected that the life of these wells could be 20-25 years.

More detailed information is found in the EA pages 20-25.

Alternative 2 (original SUPO with *additional* conditions for mitigation):

This alternative is the same as the original Proposed Action as outlined above, with additional conditions of approval to the SUPO based on mitigation measures developed to address the issues. Please refer to the EA pages 23-27 and the appendix to this DN/FONSI for a detailed description of Alternative 2.

IV. Rationale for The Decision

My decision is based upon three principal criteria:

Consistency with the Forest Plan goals, objectives, and standards. The Forest Plan, and the process used to develop it, represents agreements on the management and uses of the Huron Manistee National Forests among a wide variety of publics, agencies, American Indian tribes, organizations and individuals. It is a negotiated understanding with the public. I viewed the achievement of the standards and guides and overall goals and objectives of the Forest Plan for this project area as a decision goal.

The relationship to environmental issues and public comments.

Organizations, agencies, and the general public submitted comments that provided insight on the issues associated with this project. As a result, I took a hard look at the issues and how they were addressed by each alternative. In a number of cases, public and agency comments helped me identify a reasonable range of alternatives and necessary mitigation requirements. Overall, public comments provided me the necessary framework to base my decision.

Compatibility with other agency and American Indian Tribe goals was another important factor that drove my decision making process. Consultation with the Bureau of Land Management, Michigan Department of Natural Resources and Michigan Department of Environmental Quality were considered in making my decision.

A. CONSISTENCY WITH FOREST PLAN GOALS, OBJECTIVES, AND STANDARDS

I evaluated the alternatives considered and compared them to Forest Plan goals, objectives and standards for the decision area. Specifically, the Forest Plan states:

- "...to manage the National Forests in a manner which complies with Federal laws and regulations" (Management Direction, Minerals and Geology, pg. IV-1).

- “...Such (mineral) developments are designed to satisfy national and local needs and provide for economically and environmentally sound exploration, extraction, and reclamation practices.” (Management Direction, Minerals and Geology, pg. IV-13).
- “The Forest Service will protect the rights of the Federal Government, encourage inventory and development of Federal minerals, respect private mineral rights, and ensure operators take reasonable and prudent measures to prevent unnecessary disturbance to the surface.” (Management Direction, Minerals and Geology, pg. IV-65).

Furthermore, Forest Plan, Standards and Guidelines, page IV-78, 2800 Minerals and Geology, states,

- I. Allow mineral exploration and development on a case-by-case basis following a site-specific environmental analysis. Permit surface-disturbing exploration in most areas, with stipulations for protection of other resources.
- II. USDA consent to mineral extraction plans will be determined on an individual and continuing basis or determined by the environmental protection guidelines and consistency with the Recreation Opportunity Spectrum (ROS) class. The Forest Plan states that “within Management Area 6.1 opportunities for mineral exploration and development are provided consistent with the semiprimitive experience designation”. The Forest Plan also lists the following oil and gas development conditions for the semiprimitive area: “Federal oil and gas leases will contain a controlled surface use stipulation with a maximum surface development density of 1 location per 640 acres; production facilities are outside the area when practical; flowlines follow the access road when practical; and needed pumps are run by electric motors or equipped to minimize noise.”

After considering the alternatives and direction in the Forest Plan, as outlined above, and the mineral resources policy of the Federal government and the agency, I determined that the management actions in both the Proposed Action and Alternative 2 are consistent with the Standards and Guidelines that apply to all Management Prescription Areas (MPA) of the Forest Plan as amended, (Forest Plan pages IV-34 through IV-63), as well as the Standards and Guidelines for MPA 4.5 (Forest Plan pages IV-139 through IV-144) and MPA 6.1 (Forest Plan pages IV-188 through IV-196). I determined that it was inappropriate to select Alternative 1, No Action, for implementation since it does not respond to the Need for Action, and overall would not move toward achieving Forest Plan goals and objectives.

B. THE RELATIONSHIP TO ENVIRONMENTAL ISSUES AND PUBLIC COMMENTS.

One of the reasons I chose to implement Alternative 2 is because it best responds to the issues and public comments. All action alternatives analyzed within the decision area varied in response to issues. Public comments were received during the scoping process, during preparation of the EA, and in response to the EA. Scoping comments were used to identify the issues detailed on page 11 of the EA. An alternative was considered in detail in the EA to address these issues, in addition to the no action alternative and original Proposed Action. Comments received on the EA were incorporated to the extent possible into Alternative 2. Detailed responses to comments on the EA have been prepared and are included as an appendix to the EA.

The following summary describes how the selected alternative, Alternative 2, responds to the major issue described in the EA and comments received on the EA.

Issue: The project's effect on the recreational experience: The proposed drilling and associated road widening, flowline/pipeline burying, and constructed facilities (if needed) would reduce the quality of the recreational experience of visitors to the Mason Tract, South Branch of the Au Sable River, Mason Chapel and the Semiprimitive Nonmotorized (SPNM) area. Specifically there are concerns related to noise, odor, and visual quality.

Alternative 2 incorporates design and mitigation measures to address the concerns with the recreational experience in the Mason Tract and the semiprimitive nonmotorized area (SPNM). The permit application accepted by the MDEQ states that the new surface hole is located at the limit of feasible distance based on safety issues and technological limitations for testing the formation. Co-locating the surface hole with the new production facility location was considered impractical because it represented an unacceptable risk to the environment, public health, and safety.

The production facility location is approximately 200 feet from the semiprimitive nonmotorized area boundary. With the production facility located on the edge of the semiprimitive nonmotorized area, and the well site on a spur-road off of FSR 4209, it is expected that most visitors to the SPNM area and the Mason tract would not see the oil and gas operations under Alternative 2, once the initial drilling phase is completed (approximately 45 days between December 1 and April 15). With implementation of Alternative 2 an intermittent odor, from diesel engines and occasional flaring of gas, while drilling could be present up to 200 feet in the down wind area of the drilling pad. This intermittent odor would occur only in the short term (1-2 weeks during the initial drilling phase (December 1 to

April 15)) and therefore is not expected to have a negative impact on the quality of the recreational experience.

Overall, Alternative 2 will allow mineral exploration with more conditions of approval for the protection of other resources than the Proposed Action. In addition to existing state regulatory controls and permit conditions, Alternative 2 provides mitigating measures specific to noise, water quality, and visual quality. The measures for visual quality include treatment of stumps and logging slash as well as seeding. For water quality the dike around the brine and oil tanks will be required to be 150% the capacity of the tanks to ensure no spill could escape into the environment. The measures for noise include technical specifications for the production facility to reduce sound emissions (Noise Impact Assessment for Proposed Production Facility Associated with USA and State South Branch 1-8 which can be found in the project file). With these measures it is expected that most visitors to the Mason Tract, the South Branch of the Au Sable, the Mason Chapel, and the Semiprimitive Nonmotorized area will not see, hear or smell the oil and gas operation, once the initial drilling phase is completed.

Furthermore, in response to this issue and overall concerns raised, I took a hard look at existing operations and any potential impacts that have resulted to the quality of recreational experience within the area of consideration (e.g Mason Tract, the South Branch of the Au Sable, the Mason Chapel, and the Semiprimitive Nonmotorized area).

There has been a gas production facility (State South Branch 1-19), which is similar to the proposed facility, in production within the area for 13 years. This facility is actually approximately 1.4 miles closer to the South Branch of the Au Sable and 1.25 miles closer to the Mason Tract area than what is proposed in Alternative 2. Yet, even with this closer proximity, over the last 13 years, visitors have continued to perceive the recreational experience as “pristine”. In fact, most of the concerns raised were first couched with the visitors experience over the years and their concerns that it would be changed. During this time, the existing facility has continued to operate with no known complaints.

Based on this known experience and knowledge, analysis disclosed in the EA, BE/BA and project file, and overall design of Alternative 2, I have determined that Alternative 2 best addresses the issue and concerns expressed. I determined that the original Proposed Action did not include the additional conditions and mitigation measures to address the issue and concerns to the extent desirable and therefore it would be inappropriate to move forward with implementation of the original Proposed Action.

C. COMPATIBILITY WITH OTHER AGENCY AND AMERICAN INDIAN TRIBE GOALS

Several State and Federal agencies were notified of this project during project scoping. The letters and responses are located in the project file. In addition, the following tribes were contacted: Little River Band of Ottawa Indians; Little Traverse Bay Band of Odawa and Chippewa Indians; Grand Traverse Band Ottawa and Chippewa Indians; Bay Mills Indian Community; Notawaseppi Huron Band Potawatomi Indians; and Saginaw Chippewa Indian Tribe. The Great Lakes Indian Fish and Wildlife Community and Inter-Tribal Council of Michigan, Inc. Field Officer were also contacted.

Alternative 2 was specifically designed to include mitigation measures to meet concerns raised by Michigan Department of Natural Resources. The US Fish and Wildlife Service were consulted and concurred with the “no effect” determination on threatened and endangered species (See letter dated 8/30/04 in project file). No specific concerns or comments were raised by any of the American Indian Tribes.

V. SUMMARY OF RATIONALE

After careful review of the analysis disclosed in the EA, Biological Assessment and Evaluation, project file and public comments and concerns, I chose Alternative 2 because I have determined that it best achieves the Purpose and Need while addressing the issues and concerns. Although the original Proposed Action also meets the purpose and need, it does not address the issues and concerns raised by members of the public and other agencies. I have determined that Alternative 2 provides the best balance of resource management while adhering to all laws, regulations and policies.

VI. FINDING OF NO SIGNIFICANT IMPACT (FONSI):

My review of the analysis prepared by the Interdisciplinary Team indicates Alternative 2 responds to public comments and is consistent with management direction in the Forest Plan. Provisions of 40 CFR 1508.27(b) indicate project significance must be judged in terms of the project context and intensity. Based on a review of these provisions, I have determined it is not necessary to prepare an environmental impact statement for this project. My rationale includes:

Context: The effects of the proposed project are localized with implications for only the immediate area. Cumulative effects of past management, combined with the current proposal, and reasonably foreseeable future actions are displayed in the EA for each resource. These effects were considered in my determination. The selected alternative, Alternative 2, is consistent with management direction,

standards, and guidelines outlined in the Huron Manistee Forest Plan, as amended.

Intensity: The intensity of activities in the selected alternative, Alternative 2, are outlined below:

- Consideration of both beneficial and adverse impacts. I considered both beneficial and adverse effects associated with the alternatives as presented in the EA. Alternative 2 will adhere to the terms of the existing leases, and the Mining and Mineral Policy Act of 1970 by permitting the development of domestic resources, and will not have a significant effect on the quality of the environment (EA pages, 29-63). The Michigan Department of Environmental Quality has issued a State drilling permit for this well indicating that Savoy has met all State regulatory requirements. The Michigan Department of Natural Resources has concurred with the selection of Alternative 2 (please refer to letter in project file).

With the mitigation under Alternative 2, the Biologist made a “no effect” finding for threatened and endangered species in the Biological Assessment, and found that no species are expected to be lost from the project area. The US Fish and Wildlife Service concurred with these determinations in a letter dated 8/30/04 (located in project file).

Water quality is protected. The South Branch of the Au Sable River is the closest perennial stream to the well site at 2,900 feet. This issue was addressed in Appendix A, number 1, page 68 of the EA. No riparian areas, floodplains, wetlands, or open water would be affected by this project. Also, MDEQ’s drilling permit requires automatic shut down valves at the wellhead and flow lines in case of leakage or change in pressure and requires excavation, and removal of all reserve pit materials and liner. The steel pipe (surface casing) cemented in the hole prevents hydrocarbons from moving into the groundwater and the groundwater moving into the well. Savoy’s application for drilling has been reviewed and evaluated for effects to groundwater by BLM and MDEQ geologists and engineers. This review ensures compliance with existing state and federal regulations for ground and surface water protection (Onshore Order #2 and MDEQ regulations).

- Consideration of the effects on public health and safety. Alternative 2 will not significantly affect public health and safety.

All state and federal regulations, including those for hydrogen sulfide (H₂S) operations, are designed to protect public health and safety. This project will comply with those regulations. Assuming the well is drilled and is productive, it is not expected to produce H₂S, or sour gas. This is based on knowledge of other Prairie du Chien operations in this

part of Michigan. None of the current 118 Prairie du Chien wells in the State of Michigan are classified as H₂S wells. It is acknowledged that there is always a possibility that sour gas may be encountered during drilling operations. Should this occur, the operator has an H₂S contingency plan on file as part of their drilling permit application. This plan is required by BLM and State regulations. The operator must comply with the BLM Onshore Order #6, Hydrogen Sulfide Operations and State of Michigan regulations. These regulations outline the operator's responsibility and requirements for drilling under potential sour gas conditions and are designed for the safety and health of the drill rig workers as well as the public. If excess gas is encountered during drilling operations, this gas may be flared. The design of the wellsite ensures a safe distance between nearby fuel sources (i.e. trees/grasses/shrubs) and the point at which these gases are released. During well testing, there could be a visible flame seen at times as it is the standard practice to burn off excessive gases during the well drilling and testing phases. State and/or Federal personnel would be on-site to monitor the testing. Drilling is limited to December 1 through April 15. Fire danger during this time would be monitored and is typically low. Contingency plans submitted by Savoy include items to reduce the potential risk of a wildfire occurring as part of the industry standard and government requirements used to insure the safety of the workers and the public.

It is expected that all laws, regulations and policies will be followed. According to Rick Henderson, District Supervisor, Cadillac District, Michigan Department of Environmental Quality, Savoy has no reportable violations at any of the production and/or wellsite facilities currently in operation and thus, noncompliance is not expected to be a concern. (10/7/04 documentation located in the project file)

- *The degree to which the effects on the quality of the human environment are likely to be highly controversial.* The effects on the quality of the environment are not likely to be scientifically controversial based on the documentation disclosed in the EA, and project file. During the initial 45-day drilling phase (December 1 to April 15), some intermittent odor may be noticed by some visitors within two hundred feet in the down wind area of the drilling pad. This intermittent odor would be short term (45 days during the initial drilling phase). Also during the initial drilling phase, visitors to the Mason Tract and the semiprimitive nonmotorized area would likely hear drilling activity during the first 45 days. Following the initial drilling phase, most visitors to the Mason Tract and South Branch of the Au Sable are not expected to see, hear or smell the well head or production facilities as proposed under Alternative 2 (EA pages 34-52). The existing State South Branch 1-19 well's production facility is approximately 1.4 mile

closer to the South Branch of the Au Sable and 1.25 miles closer to the Mason Tract than that proposed in Alternative 2, and has no special sound mitigation. Despite the State South Branch 1-19 well's production facilities presence over the last 13 years, many people perceive the recreational experience of the Mason Tract and the South Branch of the Au Sable as "pristine". There are 12 gas wells drilled into Prairie du Chien gas formations on the Mio District. None of these wells produce a detectable odor. Based on this knowledge and experience, no significant impacts are expected with implementation of Alternative 2.

Furthermore, there are over 280 oil and gas wells in Crawford County. No effects on local property values are expected from the USA and State South Branch 1-8. The nearest private property is approximately ½ mile away from the wellhead location. The nearest private property is over a mile from the production facility. In discussions between members of the interdisciplinary team and Crawford, Roscommon, and Ogemaw Counties' Equalization Directors, they stated that no value adjustments are made in sales of private vacant land near or next to oil and gas facilities, or wells, including sour gas in their respective counties. Adjustments in value are made if a property is contaminated for any reason, does not have access, has wetlands, or requires buried utility lines. If contaminant remediation of the property is completed, it does not affect the value. Adjustments may or may not occur depending on why the property was purchased. (5/29/04 documentation located in the project file)

I am fully aware that my decision to implement Alternative 2 will meet with opposition. Several comments expressing concerns were raised during the planning process. I have carefully considered these comments and concerns and have determined that Alternative 2 best addresses the concerns raised. In addition, it is important to note that opposition/dislike of a proposal and subsequent decision does not render it "highly controversial" within the meaning of NEPA regulations. A project's effects are likely to be highly controversial only if there is a substantial dispute as to the size, nature, or effect of a major federal action. NEPA does not require unanimity of expert opinion regarding environmental consequences. There is no evidence of a substantial scientific dispute regarding the size, nature, or effects of Alternative 2. Questions raised concerning effects and the Forest's response are found in the response to comments appendix to the Environmental Assessment.

- Consideration to the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. This decision does not set a precedent for future actions with significant effects or represent a decision in principal about a

future consideration. Among the 280+ wells in Crawford County, there is an oil and gas well and production facility (State South Branch 1-19) approximately one mile from the South Branch of the Au Sable and more than ½ mile from the Mason Tract. Despite its presence for the last 13 years many people perceive the Mason Tract, and the South Branch of the Au Sable as “pristine”. The proposed USA and State South Branch 1-8 well would be located approximately .3 miles from the Mason Tract and .6 miles from the South Branch of the Au Sable River and the proposed production facility would be located approximately 1.9 miles from the Mason Tract and 2.3 miles from the South Branch of the Au Sable.

If the well is productive it is expected that the lease holder would apply for additional drilling permits for up to three additional wells in this formation. It is expected these wells would be located outside the SPNM area to the south and east of Hickey Creek Road and further from the Mason Tract. Any proposed future development would require additional environmental analysis. It is expected that the life of these wells could be 20-25 years.

The State of Michigan has reviewed the Environmental Assessment and concurs with the selection of Alternative 2 (documentation located in project file).

- *Consideration of the unique characteristics of the geographic area.* Alternative 2 will not affect any unique characteristics of the geographical area (i.e. Heritage resources, wetlands, floodplains, wild and scenic rivers, or wilderness) (EA, page 29-63 and Appendix A). The project area is approximately 18 miles from the portion of the Au Sable River that has been designated a Scenic River, which begins on the other side of the Mio Dam.

Following the initial drilling phase, most visitors to the Mason Tract and South Branch of the Au Sable are not expected to see, hear or smell the well head or production facilities as proposed under Alternative 2. (EA pages 34-52). The existing State South Branch 1-19 well's production facility is approximately 1 mile closer to the Mason Tract and the South Branch of the Au Sable than the proposed USA and State South Branch 1-8 well's production facility, and has no special sound mitigation. Despite the State South Branch 1-19 well's production facilities presence over the last 13 years in the SPNM area, many people perceive the recreational experience of the Mason Tract and the South Branch of the Au Sable as “pristine”. There are 12 gas wells drilled into Prairie du Chien gas formations on the Mio District. None of these wells produce a detectable odor.

Alternative 2 includes mitigation to limit effects on noise, visual quality, and water quality (see details in appendix to this DN/FONSI).

- Consideration of the action in relation to other actions with individually insignificant but cumulative significant effects. There are no known significant cumulative effects between this project and other ongoing or planned projects in or adjacent to the project area.

Future oil and gas development and timber sales were considered. If the well is productive it is expected that the lease holder would apply for additional drilling permits for up to three additional wells in this formation. It is expected these wells would be located outside the SPNM area to the south and east of Hickey Creek Road and further from the Mason Tract. The proposed production facility would be used by all of these wells. When considering the effects of the production facility it was assumed that the production facility would be servicing multiple wells. The Michigan DNR has several timber sales planned in the Mason Tract. The effects of other foreseeable future actions as well as past actions and ongoing actions were included in the analysis (EA, pages 29-63) with no significant adverse impacts noted.

- Consideration of the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. Alternative 2 does not involve highly uncertain, unique, or unknown environmental risks. There are currently 118 producing Prairie du Chien wells in the state of Michigan. The Mio Ranger District has successfully carried out all prescribed activities in many similar projects including a gas well (State South Branch 1-19) in the semiprimitive nonmotorized area, and is using the best available science. The MDEQ has issued a permit, and the MDNR concurs with the selection of the preferred Alternative (letter dated 9/13/04 located in project file). BLM, as a cooperating agency, has participated in the review of this proposal. The proposed drilling program is typical for Prairie du Chien wells.
- Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. None of the actions in Alternative 2 threatens to lead to violation of federal, state, or local environmental laws or requirements imposed for the protection of the environment (EA pages, 29-63). The MDEQ has issued a permit, and the MDNR concurs with the selection of the preferred Alternative (letter dated 9/13/04 located in project file). The BLM oil and gas operating regulations will be applied to ensure protection of resources. The U.S. Fish and Wildlife Service has concurred with the findings of the Biological Assessment that there will be no impacts to threatened or endangered species (see 8/30/04 letter of concurrence in project file).

- Consideration of the degree to which the action may adversely affect listed or eligible historic sites. Alternative 2 meets federal, state and local laws for protection of historic places. As described in the EA, no known historic sites are located within activity areas. Surveys were completed and a determination of “no effect” made (EA page 13). Mitigation measures were incorporated as part of the design of Alternative 2, should a new site be discovered, to ensure protection (see Alternative 2 detailed description included in the appendix to this DN/FONSI).
- Consideration of the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. Alternative 2 will have no adverse effects on any endangered or threatened species or habitat that has been determined to be critical for these species under the Endangered Species Act (EA, pages 53 & 53a). The Biologist made a “No Effect” finding for Threatened and Endangered Species in the Biological Assessment. The USFWS has concurred with this finding (see project file letter dated 8/30/04).

VII. FINDINGS REQUIRED BY LAW, REGULATION, AND AGENCY POLICY

Numerous laws, regulations, and agency directives require that my decision be consistent with their provisions. I have determined that my decision is consistent with all laws, regulations, and agency policy. The EA, pages 11-14 describes in detail applicable regulatory requirements. I have determined, based on my review of the EA, BA, BE, project record and pertinent information that my decision is consistent with these regulatory requirements. The following summarizes findings required by major environmental laws:

- The management actions in this decision are consistent with the Standards and Guidelines that apply to all Management Prescription Areas (MPA) of the Forest Plan, (Forest Plan pages IV-34 through IV-63), as well as the Standards and Guidelines for MPA 4.5 (Forest Plan pages IV-139 through IV-144) and MPA 6.1 (Forest Plan pages IV-188 through IV-196).
- This decision is compliant with Executive Order 13212 of May 18, 2001 which states, “agencies shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.”
- Alternative 2 includes measures to avoid or mitigate adverse impacts (40 CFR 1505.2 (c)) (EA pages 23 through 27).

- The prescribed actions, which alter vegetation, comply with the National Forest Management Act of 1976 by following standards, guidelines and mitigating measures included in the Forest Plan. In addition, Alternative 2 includes implementation of site-specific mitigation measures as described in the appendices to this document to ensure compliance.
- The prescribed actions are best suited to the multiple-use goals established for the project area in the Forest Plan (EA, page 4). Potential environmental (EA, pages 29-51), biological (EA, pages 52-62), heritage resources (EA, page 62), visual (EA, pages 33-42), engineering (EA, page 23 -26), and economic impacts (EA, pages 69-71), were considered in this determination (please refer to FONSI) and in accordance with the Multiple Use Sustained Yield Act (MUSYA).
- The actions in Alternative 2 were not chosen primarily because they will give the greatest dollar return. See the effects section of the EA pages 29 – 63 and the Rationale for Choosing Alternative 2 in this document.
- The actions in Alternative 2, which included mitigation measures, avoid impairment of site productivity and ensure conservation of soil and water resources (EA pages, 23 & 24) and EA appendix A.
- The actions in Alternative 2, with its mitigation, are expected to allow the development of mineral resources while protecting water quantity and quality, wildlife and fish habitat, regeneration of desired species, recreation, aesthetic values, and other resources (EA pages, 29-70).
- Alternative 2 will meet lease obligations which grant exclusive right to drill, extract, and dispose of all oil and gas together with the right to build and maintain necessary improvements there upon.
- I have considered the effects of this project on low income and minority populations and concluded that this project is consistent with the intent of the 1994 Executive Order on Environmental Justice (EO 12898). Representatives from low income and minority populations were notified of this project through the public participation process. This project was designed to contribute to the economic well-being of local communities. Resource analysis disclosed no disproportionate effects to low income or minority populations.

Compliance with other laws, regulations and policies are listed in various sections of the EA, the Project File and the Forest Plan.

VIII. APPEAL INFORMATION:

This decision is subject to appeal pursuant to 36 CFR 215.11 by those who supplied substantive comments on this proposal during either of the 30-day comment periods. Written notice of appeal of this decision must be fully consistent with 36 CFR 215.14 "Appeal Content":

a) It is the appellant's responsibility to provide sufficient project- or activity-specific evidence and rationale, focusing on the decision, to show why the Responsible Official's decision should be reversed.

b) The appeal must be filed with the Appeal Deciding Officer in writing. At a minimum, an appeal must include the following:

1. Appellant's name and address (215.2), with a telephone number if available;
2. Signature or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal);
3. When multiple names are listed on an appeal, identification of the lead appellant (215.2), and verification of the identity of the lead appellant upon request;
4. The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;
5. The regulation under which the appeal is being filed, when there is an option to appeal under either this part or 251, subpart C (215.11(d));
6. Any specific change(s) in the decision that the appellant seeks and rationale for those changes;
7. Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;
8. Why the appellant believes the Responsible Official's decision failed to consider the substantive comments; and

9. How the appellant believes the decision specifically violates law, regulation, or policy.
- c). The Appeal Deciding Officer shall not process an appeal when one or more of the following applies;
1. An appellant's identity is not clearly provided or cannot be determined from the signature (written or electronically scanned) and a reasonable means of contact is not provided.
 2. The appellant has not provided a reasonable means of contact.
 3. The decision cannot be identified
 4. The appeal is illegible for any reason, including those submitted electronically in a format different from that specified in the legal notice.

The written notice of appeal including attachments, must be postmarked and submitted to: **USDA Forest Service, Eastern Region, attention: Appeals Deciding Officer, 626 East Wisconsin Ave., Milwaukee, WI 53202**. Appeals may be hand-delivered to the office between the hours of 7:30 a.m. and 4:00 p.m. Central Time. Appeals may be faxed to the following number (414) 297-3808; or electronically mailed to: appeals-eastern-regional-office@fs.fed.us. Acceptable format for electronic appeals are TXT, HTML or Adobe Portable Document format, or formats viewable with Microsoft Office applications. Appeals must be received within 45 days of the date of public notification of this decision in the Cadillac News.

This decision will not be implemented until at least 5 business days after the close of the 45-day appeal period, or 15 days after the disposition of appeal, whichever is later.

For further information on this decision or the Forest Service appeal process, contact Steve Goldman, District Ranger, Mio Ranger District, at 989-826-3252.

/s/ Leanne M. Marten

01/27/2005

LEANNE M. MARTEN
Forest Supervisor
Huron-Manistee National Forests

Date

APPENDIX 1

Alternative 2 (Modified Proposed Action with Conditions of Approval):

Alternative 2 would be the same as the Proposed Action except with additional conditions of approval to the Surface Use Plan of Operations (SUPO) based on mitigation measures developed to address the issues. The modified Proposed Action includes:

1. Drill a single directional well to explore oil and gas potential on a 640 acre drilling unit, E ½, Section 7 and W ½, Section 8, T 25 N R 1W, as shown on the project area and location Map 3 in the environmental assessment (EA) page 22. The bottomhole location would be approximately 2,200 feet NW of the surface hole.
2. Drilling and well completion would expect to take 45 days in late fall / winter, 2005-6 (Michigan's Department of Environmental Quality (MDEQ) permitted drilling from December 1 – April 15). The well pad would be approximately 3.5 acres.
3. Standard and accepted drilling techniques and practices using a rotary rig would be used. (photos of standard operations are located in the project file). This includes a casing program, pressure control equipment, hydrogen sulfide contingency plan, and proposed drilling fluids program.
4. At the end of drilling, the contents of the reserve pit would be removed and disposed of by a licensed waste hauler. Hazardous materials, including stimulation and completion fluids, would be contained in steel tanks and disposed of by a licensed waste hauler. Hospital type mufflers (required by MDEQ) would be used to minimize the sound in the area.
5. Cut and fill the well pad area (approximately 3.5 acres) using a bull dozer, to level the surface for well drilling rig, equipment, and reserve pit.
6. Use and maintain existing roads for year-round access including snow plowing, as necessary, along: River Lake Road, FSR 4209 (Mason Chapel Road), and FSR 4208, to access the well site.
7. Construct and maintain 50 feet of new road across NFS land, 20 feet wide (approximately 0.05 acre) to access the well pad from FSR 4208.
8. Drill a water well at the well pad site to provide water for drilling and salt control during the life of the oil and gas well.

Activities #5 through #8 will occur prior to drilling the well.

Additional actions, that will occur if the well is productive include:

9. Production facility, SE, Section 9, T25N, R1W, (approximately 1.5 miles from the well pad) construction on approximately 2.0 acres located as shown on Map 3 in the EA page 22, including a gas/water separator, oil

- and brine tanks, dehydrator, compressor, volume bottle, and various meters for gas and oil monitoring.
10. Flowlines installed from the well site to the production facility site, buried along side the road bed and pipeline installed connecting to the Michigan Consolidated Gas transmission line, totaling approximately 1.7 miles.
 11. Reclamation of the well pad leaving only 1/3 acre used for well operations.

If the well is productive it is expected that the lease holder would apply for additional drilling permits for up to three additional wells in this formation. It is expected these wells would be located outside the SPNM area to the south and east of Hickey Creek Road and further from the area known as the Mason Tract. It is important to note, however, that any proposed future development would require additional environmental analysis. It is expected that the life of these wells could be 20-25 years.

The following mitigation measures and/or regulatory controls will apply to Alternative 2.

Access Roads and Flowlines/Pipelines

To protect water quality:

- Michigan Department of Natural Resources' *Water Quality Management Practices on Forest Land* will be used to manage the roads.
- Roads will be crowned or outsloped, whichever is appropriate, for drainage during construction and/or maintenance.
- Soil disturbed with the placement of the flowline/pipeline will be seeded with mix found in the reclamation section below.
- Slash created by flowline/pipeline placement will be placed on the disturbed areas after seeding.
- Slash from the flowline location will be lopped and scattered to lie within 12 inches of the ground.
- Prior to reconstructing FSR 4209, approximately 150 feet of silt fence will be placed adjacent to the south side of the road for wetland protection.
- The operator will maintain a dike around the oil and brine tanks of sufficient size and height so as to contain 150% of the total capacity of the tanks.

To protect the primitive nature of the area:

- The width of the road will not exceed 14 feet. An additional 3 feet of clearing can be done on each side of the road. Clearing width will not exceed 20 feet, the minimum needed for heavy equipment access.

To protect Public Health and Safety:

- Roads into the well pad and production facility will be gated and locked.
- Comply with the *Manual on Uniform Traffic Control Devices* for placement of warning and work zone signs to control traffic during construction.

To Protect Visual Quality:

- Leave a strip of undisturbed vegetation approximately 150 feet between River Lake Road and the production facility. This distance is based on experience with similar operations in this vegetation type.
- In line with common practice for visually sensitive areas on this Forest, the access road to the production facility will be curved to reduce visibility of the opening from the road.
- Stumps will be placed out of view of FSR 4209 and FSR 4208. They can be placed at the well pad or other location approved by Forest Service representative.
- Slash will be chipped or lopped and scattered to lie within 12 inches of the ground in accordance with the Forest Plan.
- Seed mix will be applied to disturbed areas after flowline/pipeline placement.

To Control Odor:

- Each sales tank (contains commercial product) shall be equipped with a pressure-vacuum thief hatch and/or vent-line valve. (BLM Onshore Order #4)
- Michigan's Oil and Gas Regulations for odor shall be followed: "A person shall not cause a nuisance odor in the exploration for, or in the development, production, handling, or use of, oil, gas brine or in the handling of any product associated with the exploration, development, production, or use of oil, gas, or brine."

To Limit Noise:

MDEQ Rule 324.1015 will be applied. Nuisance noise stipulates that:

- A person shall not cause a nuisance noise in the production, handling, or use of oil, gas, or brine or in the handling of any product associated with the production or use of oil, gas or brine. As stipulated in the rule, "nuisance noise" means any noise from a well or its associated surface facilities that causes injurious effects to human health or safety or the unreasonable interference with the comfortable enjoyment of life or property.
- The noise attributable to a surface facility must not exceed 45 dBA at a distance of 1,320 feet from the facility.
- The State of Michigan Supervisor of Wells is also authorized to use administrative controls to require the surface facility permittee measure sound levels at nearby noise-sensitive areas and at a distance of 1,320 feet, if the Supervisor of Wells receives 1 or more complaints of noise.
- The State of Michigan Supervisor of Wells is also authorized to require appropriate noise control measures for a surface facility permittee after all applicable information is considered and even if the 45 dBA noise level at 1,320 feet from the facility is not exceeded.

- Rule 324.1016 stipulates minimum construction standards for noise abatement at surface facilities.

In addition, U.S. Forest Service mitigation measures will be applied:

The most restrictive mitigation measure will be applied when there are conflicts between agencies' standards. These measures would ensure that most visitors to the Mason Tract and Mason Chapel would not hear these oil and gas production activities. The following mitigation measures for noise are the recommendations from the Noise Impact Assessment for Proposed Production Facility Associated with USA and State South Branch 1-8 (in project file). This report was prepared by a consultant hired to evaluate potential effects of noise. Hoover and Keith, Inc. has had experience conducting noise abatement studies for similar oil and gas production equipment. The report recommendations were designed to eliminate sounds above ambient levels on the Mason Tract under most conditions.

- The total sound level for the production facility shall not exceed **36 dBA** at 1,320 feet if more than one well is being processed. When the production facility is processing gas from one well the sound level shall not exceed **33 dBA** at 1,320 feet.
- If the District Ranger determines that the sound standards identified above are not being met, the operator will perform a sound survey within 60 days of notification by the Forest Service. A copy of the sound survey will be submitted to the Forest Service for approval. Remedial actions will be taken as necessary.
- Notify the Forest Service and BLM 30 days prior to any equipment changes or modifications at the production facility.
- Only high speed compressor units shall be utilized for the production facility. The exhaust system for each compressor unit engine will include a new muffler system that provides the following dynamic sound insertion loss values at the rated engine operating conditions:

○ **DIL Values in dB per Octave-Band Center Frequency (in Hz)**

31.5	63	125	250	500	1000	2000	4000	8000
22	33	40	50	50	45	45	40	35

- The exhaust piping located outside the building (i.e., between building and muffler) will be covered with an acoustical lagging consisting of a heavy-gauge steel jacketing (minimum 20-ga.) along with a 3-inch thick layer of 6-8 pounds per cubic foot (pcf) insulation.
- Any compressor unit utilized at the production facility will be located inside a building. The building (and compressor unit) will be designed to permit compressor unit operations at all outside ambient temperatures with the

- equipment doors closed. The building roof, wall and bearing exterior panels shall be 22 gage steel. The interior building insulation for the roof can be the typically utilized 3" white metalized polypropylene building insulation. The building wall interior surfaces (including the bearing inlet air plenums) shall have a layer of 6 inch thick unfaced mineral wool insulation (6-8 pcf uniform density) that is covered with a 26 gage perforated metal liner. Thermal insulation such as "R-13", "R-19", etc. is not acceptable, as this insulation has a density of approximately 0.6 pcf.
- The building housing the compressor shall use an overhead sectional roll-up door for equipment access. The door sections will have a 24 gage exterior and back skin with an insulation core.
 - For vertical engine driven coolers with fan tip speeds over 8,000 fpm, the vertical engine driven cooler exhaust plenum shall be constructed with 22 gage metal panels inside and outside of the building, and with a 26 gage perforated metal panels inside the plenum. Eighteen (18) inches of unfaced fiberglass insulation (1 pcf density) shall be placed between the perforated and solid metal panels (on the 2 long sides), and the plenum shall have a minimum length of 8 feet. Note that the 26 gage perforated metal panel is on the inside of the plenum, and the 22 gage solid metal panel will be visible from inside the compressor building.
 - For vertical engine driven coolers with fan tip speeds of 8,000 fpm or less, the vertical engine driven cooler exhaust plenum shall be constructed similar to the building walls. In this instance, the 26 gage metal perforated liner will be visible from inside the compressor building, and the 22 gage metal panel wall will be inside the plenum. The plenum does not have a minimum length requirement, and 6-8 pcf mineral wool insulation shall be placed between the solid and perforated metal panels.
 - Noise during venting or blow down events will not exceed 60 dBA at 300 feet.

Reclamation - Well Pad and Production Facility:

- Woody debris (slash and stumps) associated with clearing the site will be stock piled along the edge of the site.
- Following the Forests' standard practices, topsoil generated during site leveling will be stock piled along the edge of the site.
- During restoration, the top soil will be spread evenly over the site except the road.
- Stock piled woody debris will be spread over the site but not violate Michigan's Oil and Gas Regulations, which states "...the area around the well and surface facilities is kept clear of flammable and combustible material stored within a radius of 75 feet..., using the well or dike wall as the point of measurement."
- Following district botanist recommendations, the site will be seeded with the following mix:

Common Name	Scientific Name	Pounds per Acre
Big Bluestem	<i>Andropogon gerardii</i>	3.8
Junegrass	<i>Koeleria macrantha</i>	1.1
Little Bluestem	<i>Schizachyrium scoparium</i>	3.6
Smooth Blue Aster	<i>Aster laevis</i>	0.1
Western Sunflower	<i>Helianthus occidentalis</i>	0.4
Cylindrical Blazing Star	<i>Liatris cylindracea</i>	0.4
Wild Bergamot	<i>Monarda fistulosa</i>	0.1
Gray Goldenrod	<i>Solidago nemoralis</i>	0.1
Oats	<i>Avena sativa</i>	14.0
Canada Wild Rye	<i>Elymus canadensis</i>	11.0

To Limit the Introduction of Invasive Plants and Protect Sensitive Plants:

- Following agency policies, off-road equipment will be inspected by a Forest Service representative and if necessary washed to prevent introduction of non-native invasive plants that are not already present in the project area.
- Any new sensitive plants that are discovered will be evaluated and mitigation measures will be added if needed as disclosed in the Biological Evaluation (located in the project file).

To Protect Wildlife, Threatened and Endangered Species the recommendations from the Biological Assessment and Evaluation will be adhered to:

- Regional Forester’s Sensitive Species will be protected. New sensitive species locations that are discovered will be evaluated.
- If drilling has not begun by March 1st, all activity in Section 8, T25N, R1W, will be delayed until after August 31st to protect nesting northern goshawks.
- If the well is productive, normal well-associated activities such as driving roads, checking the well, etc. will be permitted in T25N, R1W, Section 8 year-round.
- After project-associated actions are completed in T25N, R1W, Section 8, the March 1 – August 31 timing restriction for northern goshawks will apply to maintenance activities in Section 8 that result in a high-level of ground disturbance and/or human presence, such as access road reconstruction, extensive grading and/or other similar activities. Prior to these actions, the Mio Ranger District will be notified to allow the district’s wildlife biologist to determine whether the activity would have potential adverse impact(s) on northern goshawks within the area. (An exception to this timing stipulation will apply only to hazards such as a broken or leaking flowline/pipeline where immediate action would be required to prevent economic loss and environmental damage, and for human health concerns.) If the Forest Service determines that the action would not adversely impact the species, the timing restriction will not apply. However, any waivers to the

timing restriction could not be applied universally to other similar actions that may arise in the future (i.e., each action – other than the previously mentioned flowline/pipeline exception - requires a separate determination). If the Forest Service determines that the action would adversely impact the species, then the activity will not be permitted during the goshawk timing restriction mentioned above.

- All open-vent exhaust stacks on production equipment (e.g. heater-treaters, separators, dehydrators, in-line units, etc.) will be constructed, modified, and/or otherwise equipped to prevent birds and bats from entering and to the extent practical, to discourage perching and nesting.

To Protect Heritage Resources

- Cultural resources that may be identified from earth-disturbing activities will be protected. If during implementation of project activities additional cultural or historical sites were encountered, the project will be stopped. The site will be surveyed and evaluated by a professional archeologist, and the State Historic Preservation Office (SHPO) will be provided the report for review. The site area will be excluded from disturbance until this review is completed. After evaluation of the site and review by SHPO the site will be permanently excluded from disturbance, activities will be modified, or the project will proceed under the mitigation provided for in the report.

Monitoring

- In accordance with the Biological Evaluation, the Forest Service will monitor the known northern goshawk nest in the area and if not active, attempt to determine the location of the new nest.
- The Forest Service, the BLM, and MDEQ will coordinate inspections to ensure close monitoring.

