

Master Leasing Plan Assessment
Montana State Office
11/5/10

Introduction

As required by the email from Mike Nedd, Assistant Director, Minerals and Realty Management, attached are the assessments of potential Master Leasing Plans (MLPs) for the Montana State Office. Attached are the assessments for nine internally generated MLP analysis areas and two externally nominated MLP analysis areas.

The following process was used to identify potential MLP areas within Montana:

Since Montana is such a large state, it was overwhelming to try to review the entire state at one time or to attempt to focus in on areas. To make the initial process more manageable and systematic, we began our analysis by looking at each individual county where there is currently oil and gas activity. A GIS map was created of each county and the acreage of the county was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the county was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent reasonable foreseeable development (RFD) scenario from either existing or ongoing Resource Management Plans (RMPs). The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries. One of the main resource conflicts identified on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. Based on the calculations and a visual interpretation of each county, potential MLP analysis areas were identified. A GIS map was then developed focusing in on the potential area with the same layers as described above being shown. (Note – although the initial look was on a county basis, county lines were ignored when focusing in on a particular area). A logical boundary was then drawn for each area. Using this technique, five MLP analysis areas were identified. Each of the Field Offices were also asked to review their areas and determine if there were any areas that may to be evaluated as potential MLP analysis areas. The HiLine District identified four additional areas. The nine areas are shown on the attached map (MLP Analysis Areas).

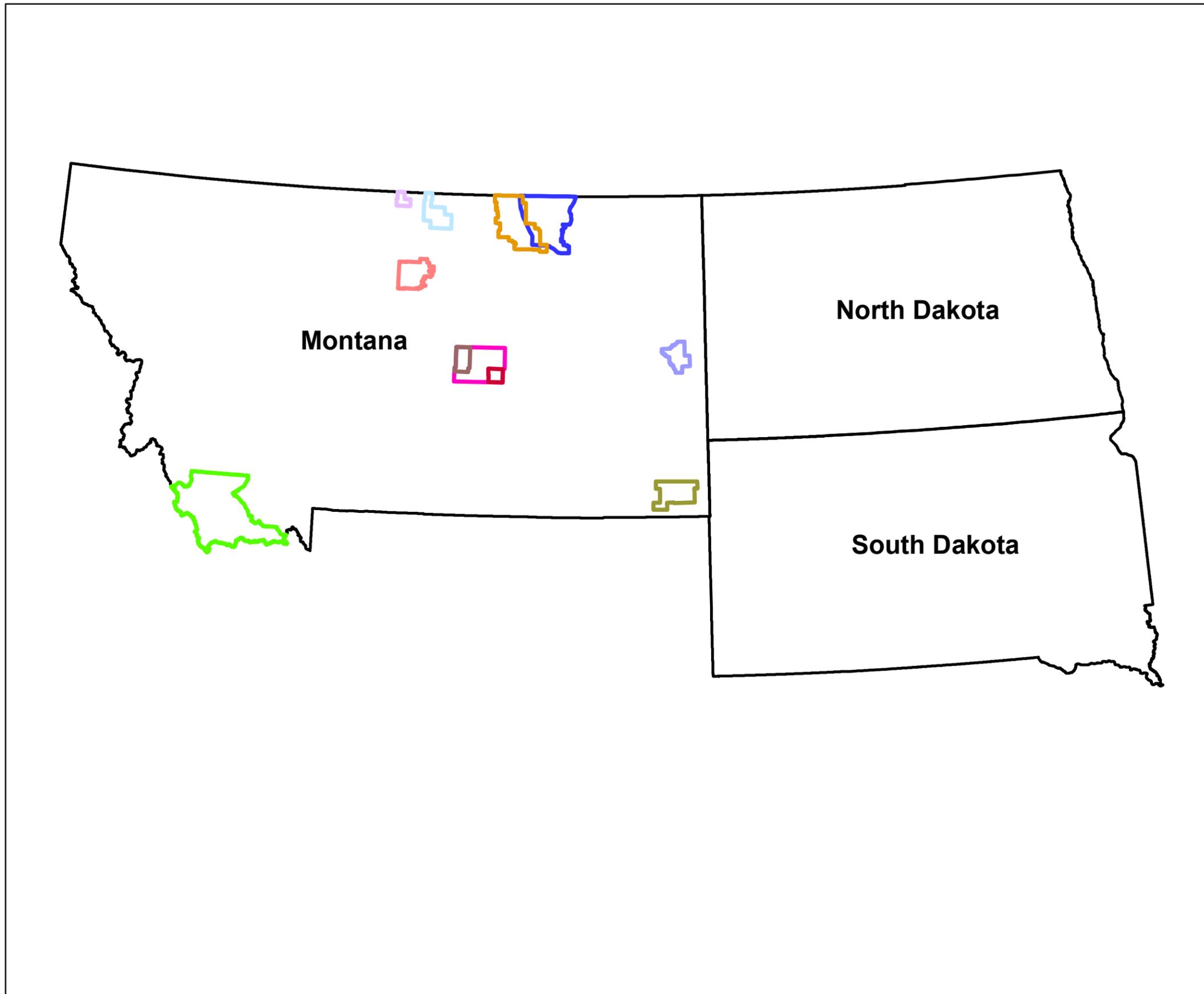
A slightly different approach was taken for North Dakota and South Dakota. Most of the Federal oil and gas mineral estate is located in the western quarter of each state. This area was isolated, and GIS layers were added. The layers include the mineral ownership and the existing leases. Much of the western quarter of each state is managed by the US Forest Service. Therefore, the lands managed by the Forest Service were added to the map. Based on a visual inspection of each state, there were no potential MLP areas identified. No areas were identified by the Field Offices.

Montana received two external MLP proposals; Bitter Creek/Frenchman Breaks and Centennial Valley/Beaverhead Headwaters (see attached map). The Bitter Creek/Frenchman Breaks area was proposed by The Wilderness Society. The Centennial Valley/Beaverhead Headwaters was

proposed jointly by The Wilderness Society, Greater Yellowstone Coalition, Montana Trout Unlimited, National Wildlife Federation, and Theodore Roosevelt Conservation Partnership.

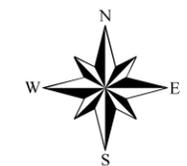
Based on the attached analyses, only one area currently warrants development of an MLP. This is the Carter MLP which will be incorporated into the ongoing Miles City RMP.

MLP Analysis Areas



Legend

- Dawson SE
- Carter
- Rosebud NW
- Heath
- Central MT
- Bowdoin
- North Blaine
- Bears Paw South
- Creedman Coulee
- Bitter Creek / Frenchman Breaks
- Centennial-Beaverhead



Master Leasing Plan (MLP) Assessment

State Office: Montana
Field Office: Miles City
Date: November 4, 2010

Name and Location of MLP Area: Dawson Southeast (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a majority of Federal mineral estate within the area; only 27% of the area is Federal mineral estate. There is substantial portion of the Federal mineral estate that is not currently leased (78%). The majority of the area is moderate development potential with the remainder being high development potential. There is significant production to the west of the area on the Cedar Creek Anticline. However, this area is off of the anticlinal feature. There have been several dry holes drilled in the area. There is currently only one producing well within the area. It was drilled in 2004 and has been a marginal well. It currently produces around 7 barrels of oil per day. There are current expressions of interest on much of the unleased Federal mineral estate.

Since the area only contains 27% Federal mineral estate, and there have been several dry holes drilled within the area, an MLP is not warranted.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map)

The area was identified as described in the introduction. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased** A substantial portion of the area is not currently leased. The area contains 62,809 acres of Federal oil and gas mineral estate of which 48,699 acres (78%) is currently unleased.

2. **There is a majority of Federal mineral estate**

There is not a majority Federal oil and gas mineral estate in the area. The area contains 229,673 acres of which 62,809 acres (27%) are Federal oil and gas mineral estate. Of the 62,809 acres of Federal oil and gas mineral estate, 25,195 acres (40%) is non-BLM managed surface.

3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**

The oil and gas industry has expressed an interest in leasing in the area. Industry has submitted Expressions of Interest (EOIs) for much of the unleased land as shown in red on the attached map. The majority of the area is moderate development potential with the remainder being high development potential (see attached map). There is significant production to the west of the area on the Cedar Creek Anticline. However, this area is off of the anticlinal feature. There have been several dry holes drilled in the area. There is currently only one producing well within the area. It was drilled in 2004 and has been a marginal well. It currently produces around 7 barrels of oil per day. There are no new discoveries within the area.

4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**

- **multiple-use or natural/cultural resource conflicts;**

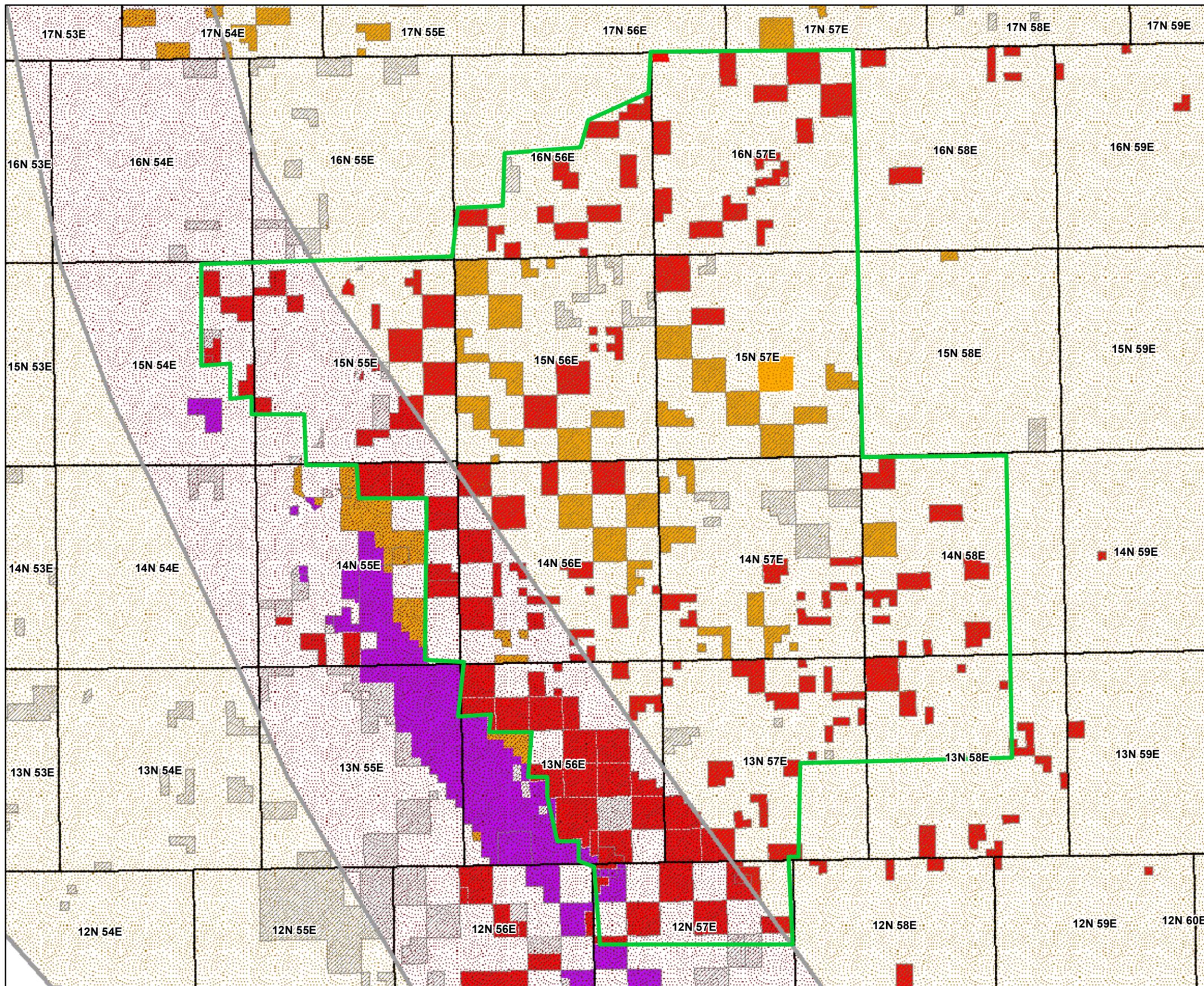
Resources within this area include an impaired water quality stream, sharp-tailed grouse, Draft Miles City Field Office Sage Grouse Restoration Management Area, antelope/mule deer winter range, dispersed recreational uses, OHV recreational area, potential fossil yield classifications of 4 and 5 within the Hell Creek Formation, and potential Sprague's pipit habitat. The area is also directly adjacent to the boundary of a developed oil and gas field. Due to the small percentage of Federal mineral estate and the presence of several dry holes within the area, an increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.

- **impacts to air quality;** None.

- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

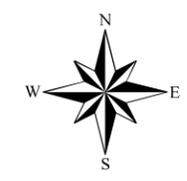
Dawson SE

Location Map

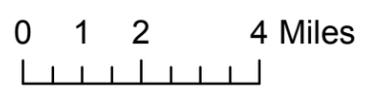


Legend

- Dawson SE
- High Dev Potential
- Medium Dev Potential
- Oil/Gas Federal Minerals
- EOIs
- Leased - HBP
- Leased - Nonproducing



Montana State Office
11/4/10



Master Leasing Plan (MLP) Assessment

State Office: Montana
Field Office: Miles City
Date: November 4, 2010

Name and Location of MLP Area: Carter (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? Yes – There is a majority of Federal mineral estate within the area; 70% of the area is Federal mineral estate. There is substantial portion of the Federal mineral estate that is not currently leased (97%). Some of the area has high development potential. There is natural gas production in the southern portion of the area and to the south of the area. There is oil production on the western edge of the area and to the west of the area. There have been over 100 dry holes drilled within the area. Most of them were drilled in the 60s and 70s. There has not been any recent drilling and no new discovery. There are current expressions of interest for almost all of the unleased minerals within the area. Almost all of the area is considered core sage grouse habitat which will require special protection.

Because of the interest from industry and the resource conflicts with sage grouse habitat, an MLP analysis is warranted and will be incorporated into the ongoing Miles City Resource Management Plan.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

The MLP will be incorporated into the ongoing Miles City Resource Management Plan. The draft RMP is scheduled to be released in the fall of 2011.

Describe the process used for review: (See attached maps)

The area was identified as described in the introduction. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). One of the main resource conflicts identified on a statewide basis is sage grouse core

habitat. Therefore, the core sage grouse habitat area was also added to the map (see map Carter2). The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased** A substantial portion of the area is not currently leased. The area contains 294,162 acres of Federal oil and gas mineral estate of which 286,670 acres (97%) is currently unleased.
2. **There is a majority of Federal mineral estate**
There is a majority Federal oil and gas mineral estate in the area. The area contains 420,114 acres of which 294,162 acres (70%) are Federal oil and gas mineral estate. Of the 294,162 acres of Federal oil and gas mineral estate, 152,237 acres (52%) is non-BLM managed surface.
3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
The oil and gas industry has expressed an interest in leasing in the area. Industry has submitted Expressions of Interest (EOIs) for almost all of the unleased land as shown in red on the attached map. Some of the area has high development potential. There is natural gas production in the southern portion of the area and to the south of the area. There is oil production on the western edge of the area and to the west of the area. There have been over 100 dry holes drilled within the area. Most of them were drilled in the 60s and 70s. There has not been any recent drilling and no new discoveries within the area.
4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**
 - **multiple-use or natural/cultural resource conflicts;**
Resources within this area include Montana Fish Wildlife and Parks Core Sage Grouse Area (see map 2), Miles City Field Office Draft RMP Priority Sage Grouse Protection area, Hay Draw Special Travel Management Area, potential fossil yield classifications of 4 and 5 within the Hell Creek Formation, and antelope/mule deer winter range, dispersed recreational uses, large intact landscapes, and potential Sprague's pipit habitat.

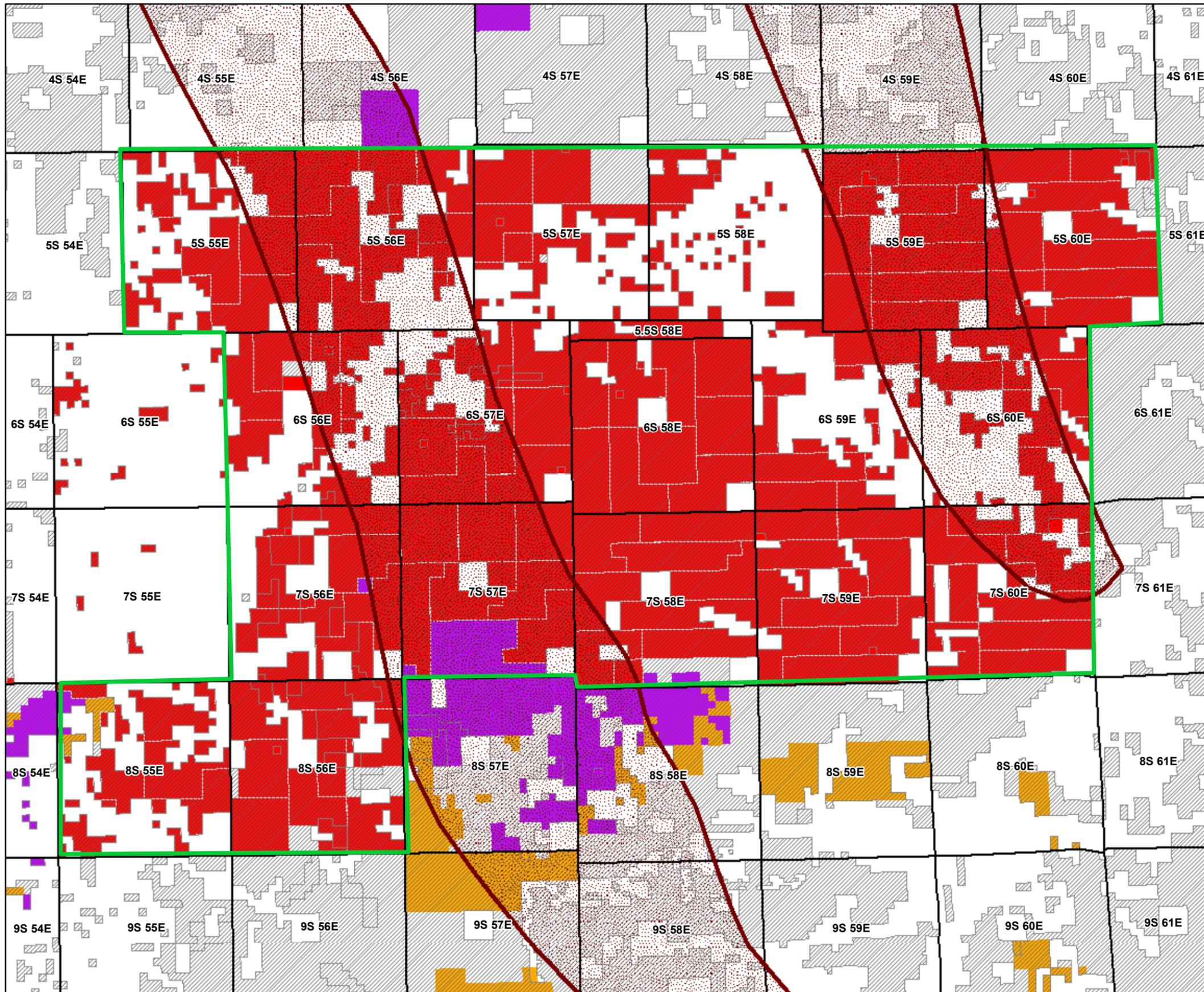
While working on the Draft Miles City Field Office Resource Management Plan the Field Office completed an exercise to evaluate multiple resource values and resource uses within the planning area. This exercise provided an unbiased, weighted GIS analysis to indicate where high resource values may be in conflict

with other resource uses, including oil and gas development. This area was identified as an area with potential resource conflicts with potential resource uses. Due to the potential conflicts, an MLP analysis is warranted and will be incorporated into the ongoing Miles City Resource Management Plan.

- **impacts to air quality;** None.
- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

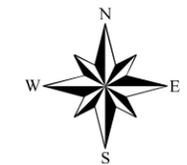
Carter

Location Map



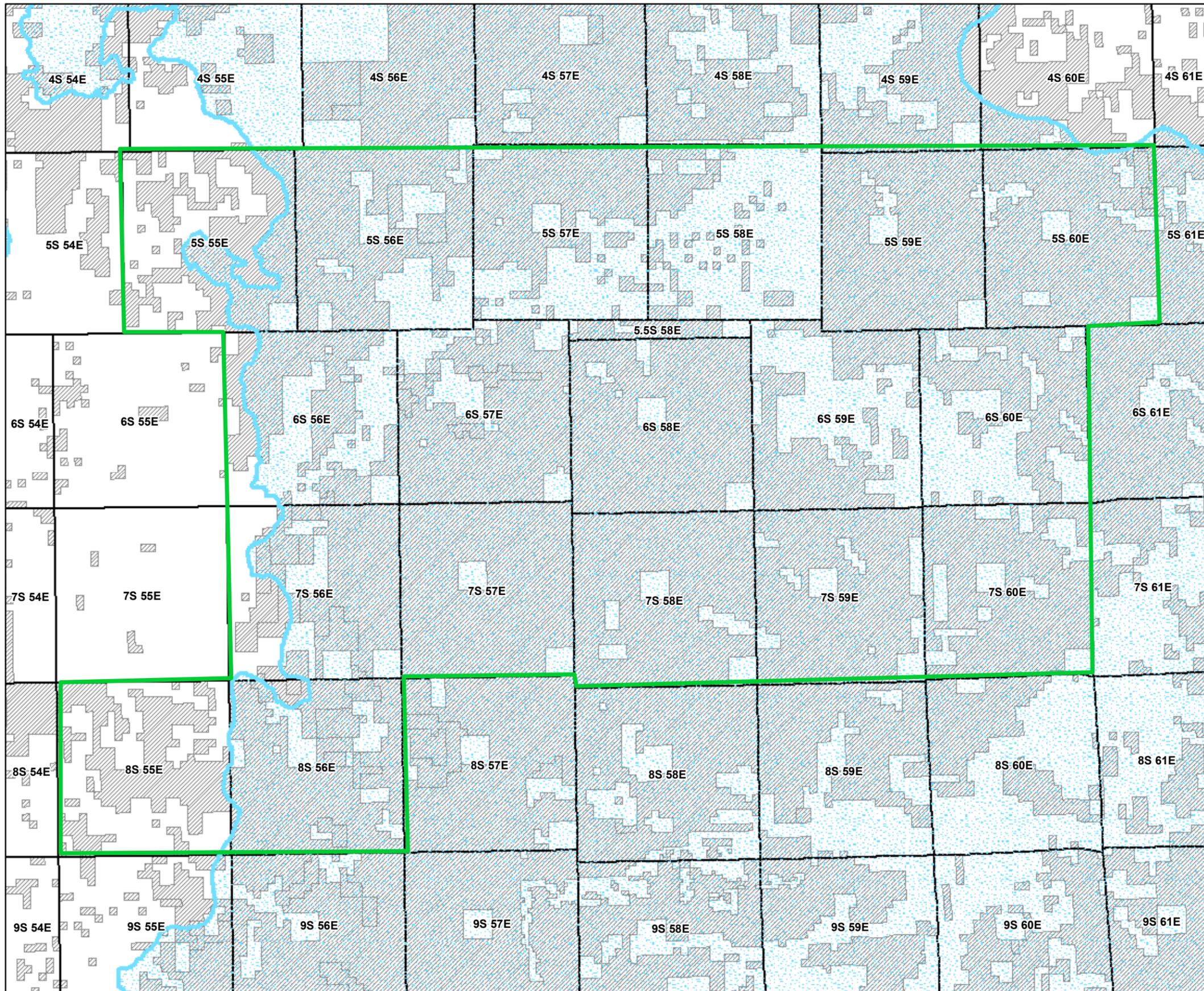
Legend

- Carter
- High Dev Potential
- Medium Dev Potential
- Oil/Gas Federal Minerals
- EOIs
- Leased - HBP
- Leased - Nonproducing



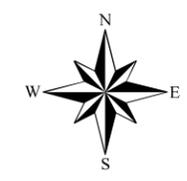
Carter

Location Map

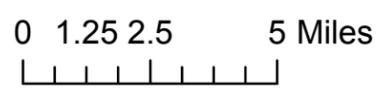


Legend

- Carter
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals



Montana State Office
11/4/10



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Miles City, Lewistown, Billings

Date: November 4, 2010

Name and Location of MLP Area: Rosebud NW (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a majority of Federal mineral estate within the area; only 19% of the area is Federal mineral estate. There is not a substantial portion of the Federal mineral estate that is not currently leased (40%). Much of the area has either high or moderate development potential. There is scattered oil production throughout the southern half of the area. This production is in older fields with all of the wells being drilled prior to 2000. There have been 2 dry holes drilled since 2000. There are older expressions of interest within the area that have been deferred pending completion of the Lewistown RMP. There are 5 new wells proposed within the area. The wells are proposed to test the use of horizontal drilling. Much of the area is core sage grouse habitat area.

Since the area only contains 19% Federal mineral estate and only 40% of the Federal mineral estate is unleased, and since there is no new discover, an MLP analysis is not warranted at this time. However, with new wells being proposed in the area, we will monitor the wells. If a new discovery is completed, we will again consider the need for an MLP analysis in the area.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:

(Standalone, ongoing plan, etc.)

If it is determined in the future that an MLP analysis is warranted, it will likely be incorporated into the Lewistown RMP which is scheduled to commence in 2013.

Describe the process used for review: (See attached map)

The area was identified as described in the introduction. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – all of the wells are not shown on the map submitted, however the proposed test wells are shown and circled in red). One of the main

resource conflicts identified on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased**
The area contains 16,955 acres of Federal oil and gas mineral estate of which 6,751 acres (40%) is currently unleased. Therefore, this area does not meet the criteria that a substantial portion is not currently leased.

2. **There is a majority of Federal mineral estate**
There is not a majority Federal oil and gas mineral estate in the area. The area contains 91,553 acres of which 16,955 acres (19%) are Federal oil and gas mineral estate. Of the 16,955 acres of Federal oil and gas mineral estate, 10,343 acres (61%) is non-BLM managed surface.

3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
The oil and gas industry has expressed an interest in leasing in the area; however, most of these EOIs have been deferred pending completion of the Lewistown RMP. Much of the area has either high or moderate development potential. Industry has permitted 5 test wells on private land. The wells will be horizontally drilled in the Heath Formation. There has not been yet been a successful test of horizontal drilling in the Heath formation. We will monitor the success of these tests to determine if there are any new discoveries.

4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**

- **multiple-use or natural/cultural resource conflicts;**
East of the Musselshell River: Resources within this area include the Montana Fish, Wildlife, and Parks Sage Grouse Core Area within the southeast area, mule deer/antelope winter ranges, potential fossil yield classifications of 4 and 5 within the Hell Creek Formation, and a small area of Sprague's pipit potential habitat. Although this area contains these resources, the potential for oil and gas issues on a landscape scale are very limited.

Potential oil and gas development issues are limited on a landscape management scale due to limited BLM surface or subsurface control. While working on the Draft Miles City Field Office Resource Management Plan the Field Office completed an exercise to evaluate multiple resource values and resource uses

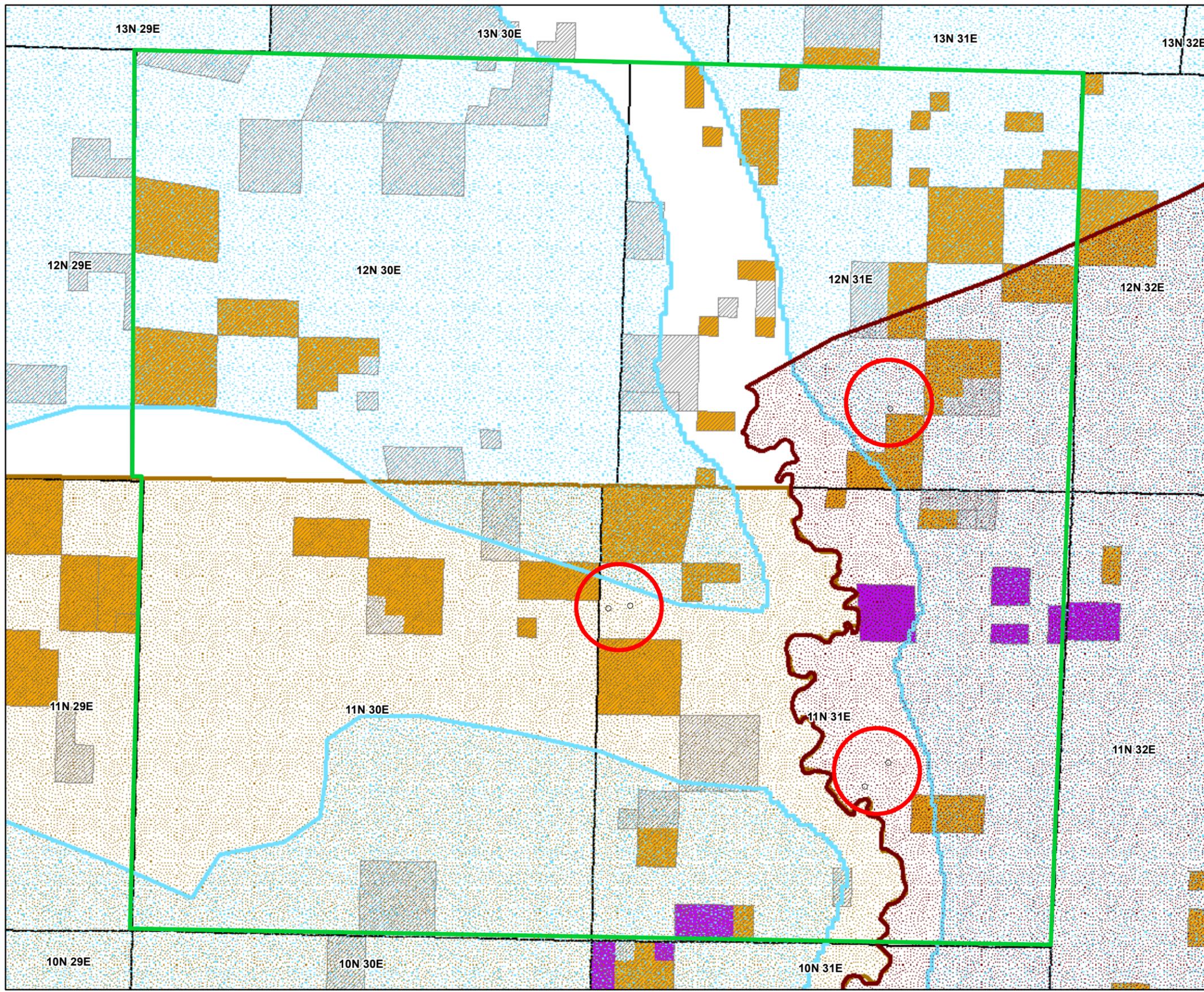
within the planning area. This exercise provided an unbiased, weighted GIS analysis to indicate where high resource values may be in conflict with other resource uses, including oil and gas development. The Rosebud NW Area was not identified as an area with potential resource conflicts with potential resource uses.

West of the Musselshell River: Resources within this area include Montana Fish, Wildlife, and Parks Sage Grouse Core Area, steep slopes with erodible soils in the Musselshell Breaks, potential Sprague's pipit habitat, and mule deer/antelope winter ranges. Potential resource conflicts are minimal due to the very small percentage of BLM surface ownership (7%) within the area. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.

- **impacts to air quality;** None.
- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

Rosebud NW

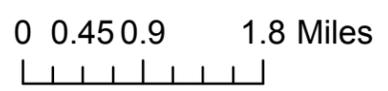
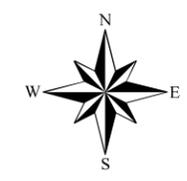
Location Map



Legend

- Rosebud NW
- High Dev Potential
- Medium Dev Potential
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals
- EOIs
- Leased - HBP
- Leased - Nonproducing

New well location(s)



Master Leasing Plan (MLP) Assessment

State Office: Montana
Field Office: Lewistown
Date: November 4, 2010

Name and Location of MLP Area: Heath (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a majority of Federal mineral estate within the area; only 37% of the area is Federal mineral estate. There is a substantial portion of the Federal mineral estate that is not currently leased (88%). The area is considered to have moderate occurrence potential based on an old assessment; however a new Reasonable Foreseeable Development scenario will be completed for the Lewiston RMP. There is no current production within the area. There are older expressions of interest within the area that have been deferred pending completion of the Lewistown RMP. There are 4 new wells proposed within the area. The wells are proposed to test the use of horizontal drilling. Much of the area is core sage grouse habitat area.

Since the area only contains 37% Federal mineral estate, and since there is no new discover, an MLP analysis is not warranted at this time. However, with new wells being proposed in the area, we will monitor the wells. If a new discovery is completed, we will again consider the need for an MLP analysis in the area.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

If it is determined in the future that an MLP analysis is warranted, it will be incorporated into the Lewistown RMP which is scheduled to commence in 2013.

Describe the process used for review: (See attached map)

The area was identified as described in the introduction. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – all of the wells are not shown on the map submitted, however the proposed test wells are shown and circled in red). One of the main resource conflicts identified

on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. A substantial portion of the area to be analyzed in the MLP is not currently leased

A substantial portion of the area is not currently leased. The area contains 61,110 acres of Federal oil and gas mineral estate of which 53,980 acres (88%) is currently unleased.

2. There is a majority of Federal mineral estate

There is not a majority Federal oil and gas mineral estate in the area. The area contains 163,060 acres of which 61,110 acres (37%) are Federal oil and gas mineral estate. Of the 61,110 acres of Federal oil and gas mineral estate, 5,632 acres (9%) is non-BLM managed surface.

3. The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.

The oil and gas industry has expressed an interest in leasing in the area; however, most of these EOIs have been deferred pending completion of the Lewistown RMP. The area is considered to have moderate occurrence potential based on an old assessment; however a new Reasonable Foreseeable Development scenario will be completed for the Lewiston RMP. There is no current production within the area. Industry has permitted 4 test wells on private land. The wells will be horizontally drilled in the Heath Formation. There has not been yet been a successful test of horizontal drilling in the Heath formation. We will monitor the success of these tests to determine if there are any new discoveries.

4. Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:

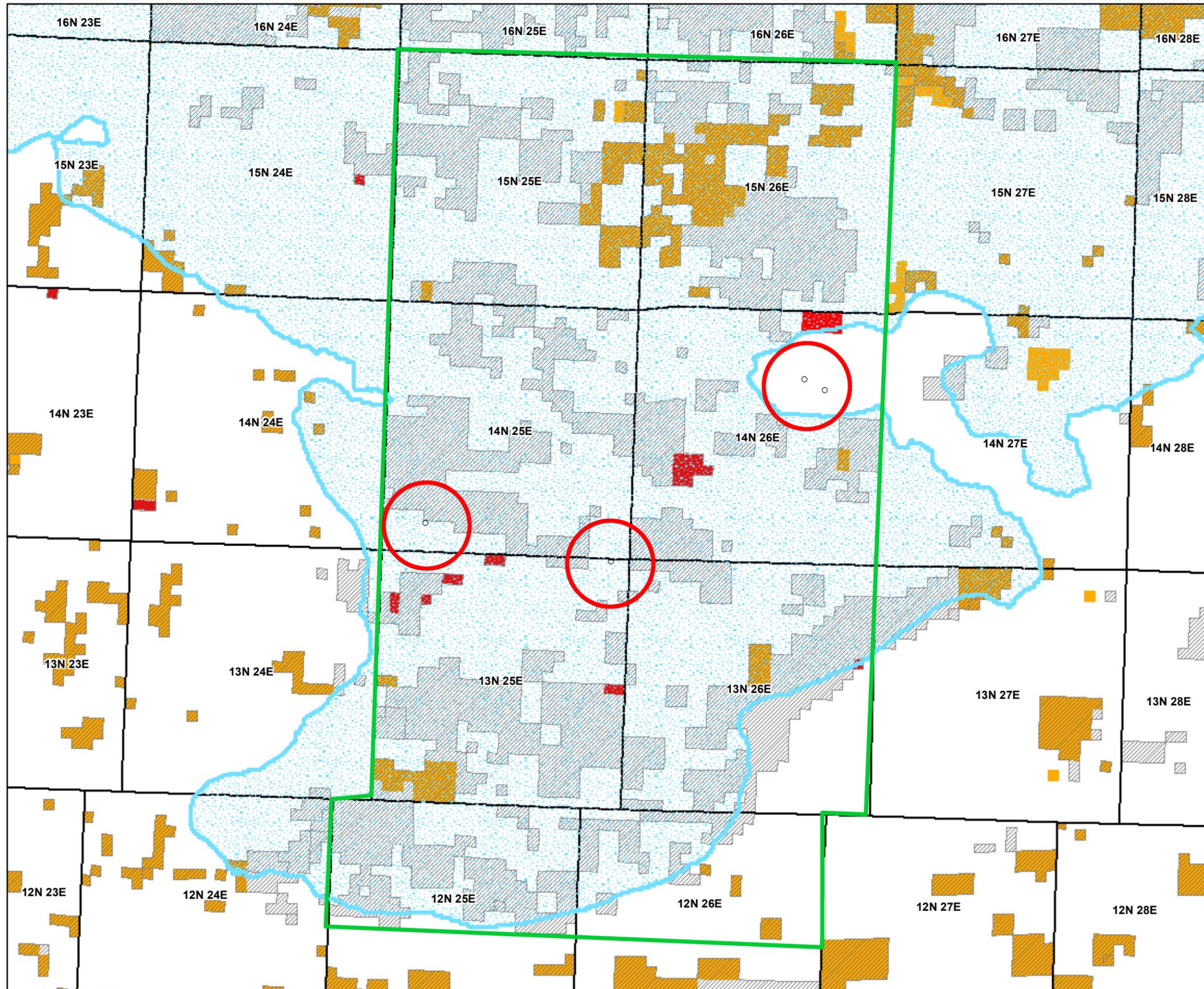
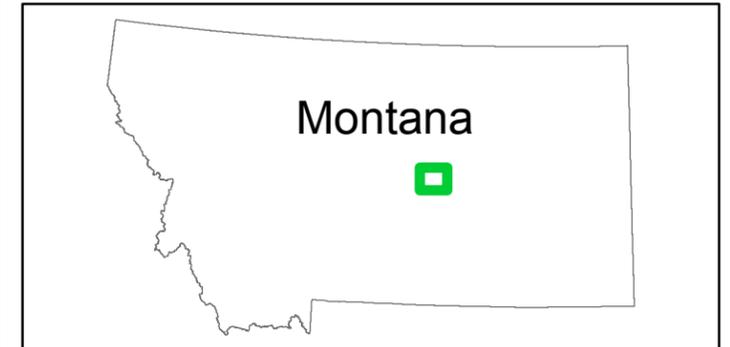
• **multiple-use or natural/cultural resource conflicts;**

The Heath area is located within, and along the western boundary of the Central MT MLP area. Resources include a Montana Fish, Wildlife, and Parks Sage Grouse Core Area known as the Yellowwater triangle. Specifically, the Yellowwater triangle contains a large concentration of active sage-grouse leks and has been intensively inventoried and monitored by BLM and MT FWP. Other resources include publicly accessible lands with moderate recreational uses, potential Sprague's pipit habitat, large intact landscapes, and mule deer/antelope winter ranges. Historically, resource conflicts have been minimal due in part to a low level of oil and gas interest. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.

- **impacts to air quality;** None.
- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

Heath

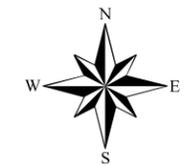
Location Map



Legend

- Heath
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals
- EOIs
- Leased - HBP
- Leased - Nonproducing

New well location(s)



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Lewistown, Billings, and Miles City

Date: November 4, 2010

Name and Location of MLP Area: Central MT (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a majority of Federal mineral estate within the area; only 23% of the area is Federal mineral estate. There is a substantial portion of the Federal mineral estate that is not currently leased (57%). The area is considered to have mostly moderate and some high occurrence potential based on an old assessment; however a new Reasonable Foreseeable Development scenario will be completed for the Lewistown RMP. There is scattered oil production throughout the southern portion of the area as well as some production in the northeast corner of the area and from a small field in the middle of the area. This production is in older fields with all of the wells being drilled prior to 2000. There are older expressions of interest within the area that have been deferred pending completion of the Lewistown RMP. There are 10 new wells proposed within the area. The wells are proposed to test the use of horizontal drilling. Approximately half of the area is core sage grouse habitat area.

Since the area only contains 23% Federal mineral estate, and since there is no new discovery, an MLP analysis is not warranted at this time. However, with new wells being proposed in the area, we will monitor the wells. If a new discovery is completed, we will again consider the need for an MLP analysis in the area.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

If it is determined in the future that an MLP analysis is warranted, it will be incorporated into the Lewistown RMP which is scheduled to commence in 2013.

Describe the process used for review: (See attached map)

This area is a combination of two smaller areas previously identified; Rosebud NW and Heath. Since these two areas are in relatively close proximity to each other, and both have similar wells proposed within them, it was a logical step to consider a larger area combining the two smaller areas. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by

production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – all of the wells are not shown on the map submitted, however the proposed test wells are shown and circled in red). One of the main resource conflicts identified on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. A substantial portion of the area to be analyzed in the MLP is not currently leased

A substantial portion of the area is not currently leased. The area contains 182,410 acres of Federal oil and gas mineral estate of which 103,290 acres (57%) is currently unleased.

2. There is a majority of Federal mineral estate

There is not a majority Federal oil and gas mineral estate in the area. The area contains 802,338 acres of which 182,410 acres (23%) are Federal oil and gas mineral estate. Of the 182,410 acres of Federal oil and gas mineral estate, 53,701 acres (29%) is non-BLM managed surface.

3. The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.

The oil and gas industry has expressed an interest in leasing in the area; however, most of these EOIs have been deferred pending completion of the Lewistown RMP. The area is considered to have mostly moderate and some high occurrence potential based on an old assessment; however a new Reasonable Foreseeable Development scenario will be completed for the Lewiston RMP. There is scattered oil production throughout the southern portion of the area as well as some production in the northeast corner of the area and from a small field in the middle of the area. This production is in older fields with all of the wells being drilled prior to 2000. Industry has permitted 10 test wells on private land. The wells will be horizontally drilled in the Heath Formation. There has not been yet been a successful test of horizontal drilling in the Heath formation. We will monitor the success of these tests to determine if there are any new discoveries.

4. Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:

- **multiple-use or natural/cultural resource conflicts;**

East of the Musselshell River: Resources within this area include the Musselshell Breaks Wilderness Study Area (WSA), Montana Fish, Wildlife, and Parks Sage Grouse Core Area within the south area, publicly accessible lands with high

recreational uses, steep slopes with erodible soils on the north portion, potential fossil yield classifications of 4 and 5 within the Hell Creek Formation, and mule deer/antelope winter ranges. Potential oil and gas development conflicts are limited due to:

- The WSA is protected from oil and gas development through the application of the interim management plan and current stipulations.
- The area containing the sage-grouse core area and associated sage-grouse leks are within an area of very limited BLM surface or subsurface control.
- The current stipulations provide for management of steep slopes and erosive soils and are addressed with reclamation COAs.
- High recreational use areas are within or adjacent to the WSA and precluded from oil and gas development.

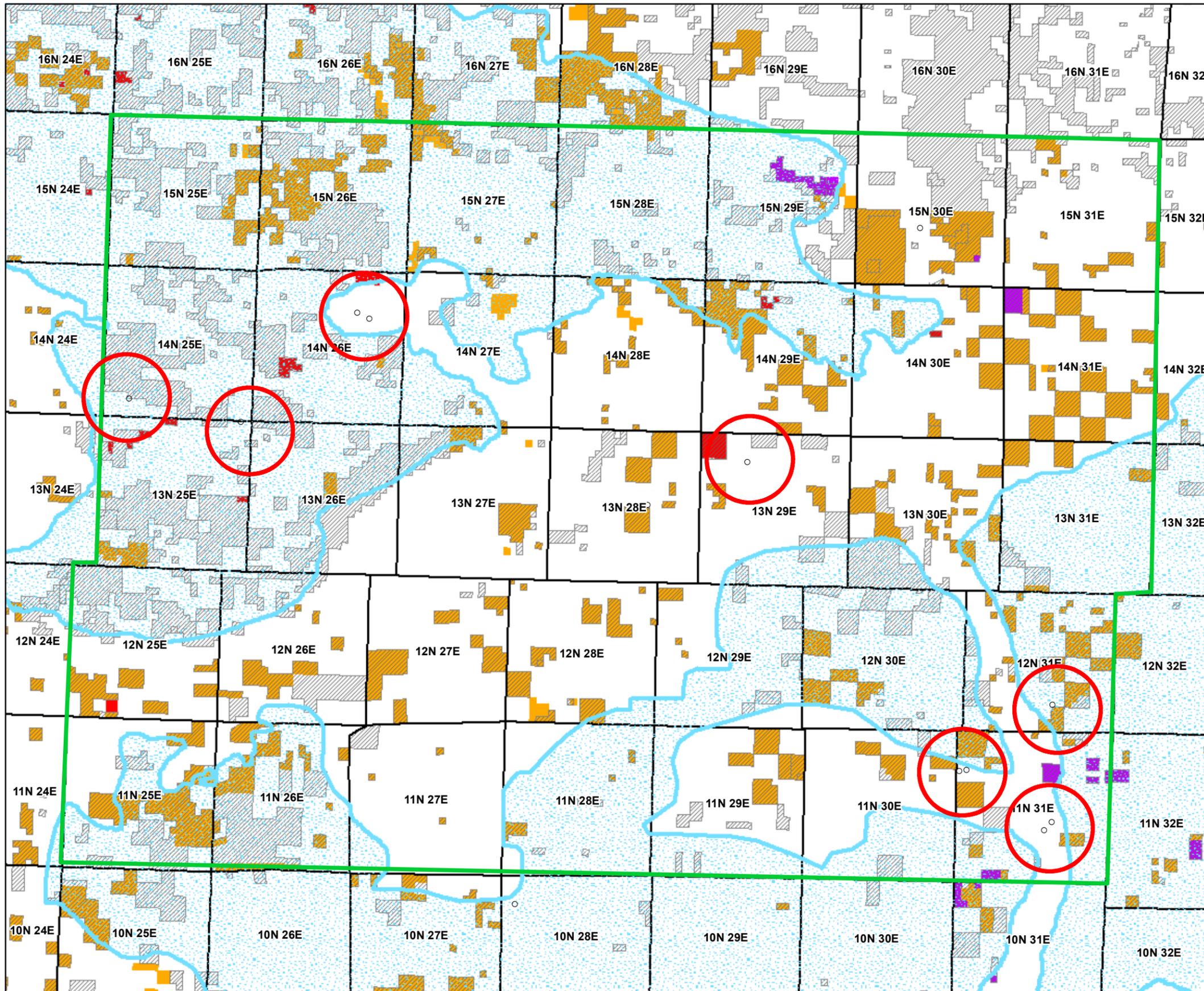
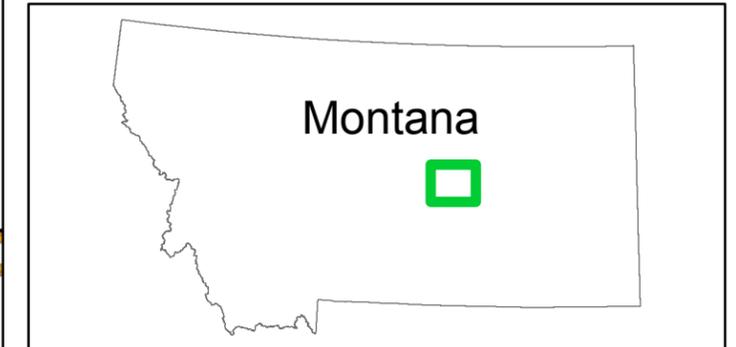
While working on the Draft Miles City Field Office Resource Management Plan the Field Office completed an exercise to evaluate multiple resource values and resource uses within the planning area. This exercise provided an unbiased, weighted GIS analysis to indicate where high resource values may be in conflict with other resource uses, including oil and gas development. The Central MT MLP area east of the Musselshell River was not identified as an area with potential resource conflicts.

West of the Musselshell River: Resources within this area include Montana Fish, Wildlife, and Parks Sage Grouse Core Area, publicly accessible lands with moderate recreational uses, steep slopes with erodible soils on the north portion, potential Sprague's pipit habitat, large intact landscapes, and mule deer/antelope winter ranges. Potential resource conflicts are minimized through employment of applicable stipulations, conditions of approval, and implementation of adequate mitigation and reclamation measures. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.

- **impacts to air quality;** None.
- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

Central MT

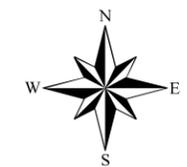
Location Map



Legend

- Central MT
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals
- EOIs
- Leased - HBP
- Leased - Nonproducing

 New well location(s)



Montana State Office

11/4/10

0 1 2 4 Miles



Master Leasing Plan (MLP) Assessment

State Office: Montana
Field Office: Malta and Glasgow
Date: November 4, 2010

Name and Location of MLP Area: Bowdoin (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a substantial portion of the Federal mineral estate that is not currently leased (22%). Most of the unleased Federal mineral estate is located along the southern portion of the area. Much of this unleased area was previously leased, but the leases expired due to lack of production. Most of the area has moderate development potential as defined by the RFD for the ongoing RMP. The area encompasses the Bowdoin gas field which is one of the top producing gas fields in Montana. There is not any current interest in the unleased areas which are generally outside of the established field.

Since there is only 22% of the Federal mineral estate that is not currently leased and the potential resource conflicts were identified and analyzed in the Bowdoin EA which was completed in December of 2008, an MLP is not warranted for this area.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map)

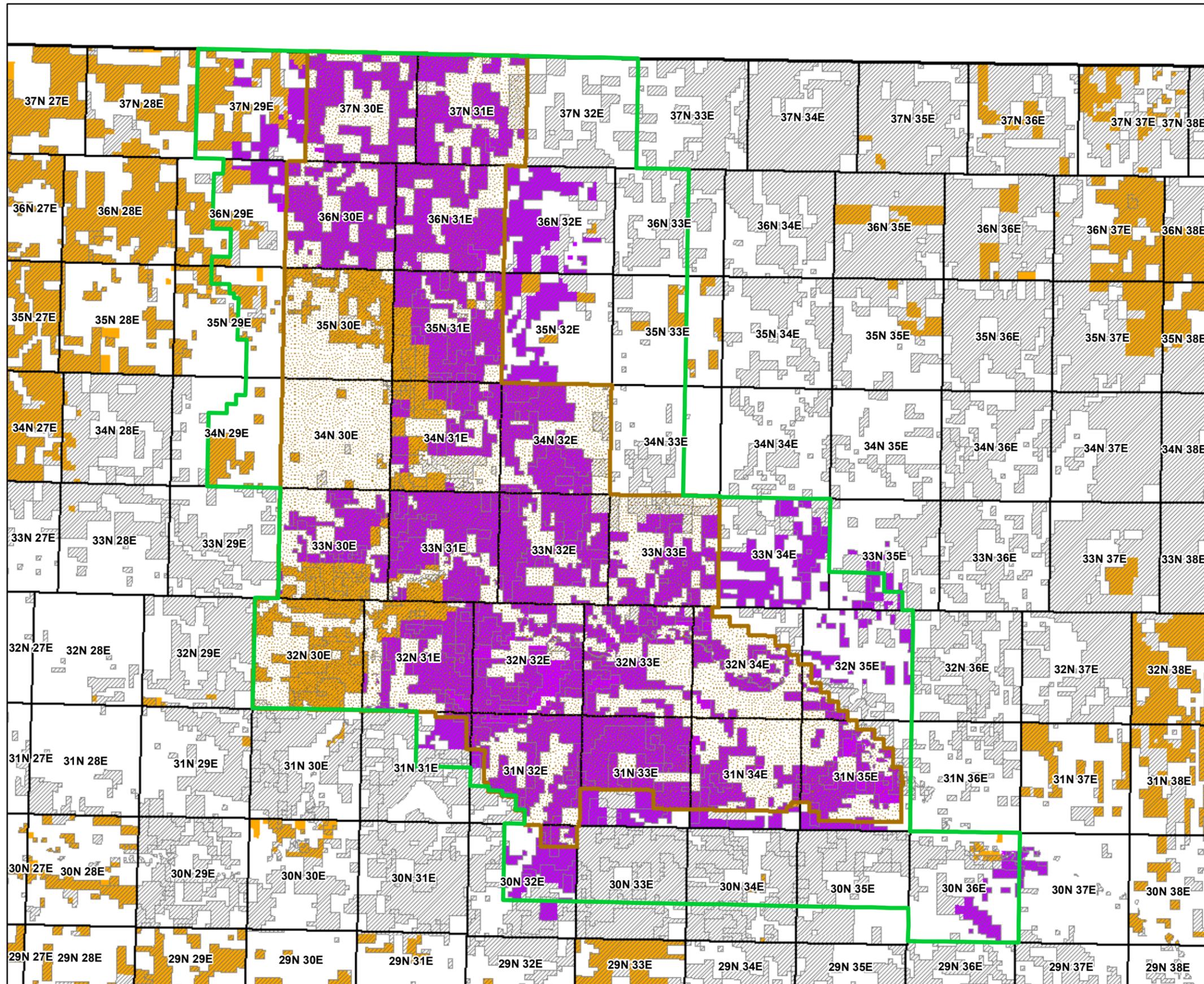
The area was identified by the HiLine RMP Team as the RMP was being developed. The area was considered since it surrounds and encompasses the Bowdoin gas field. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based

on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

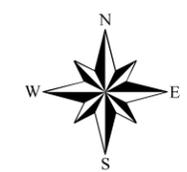
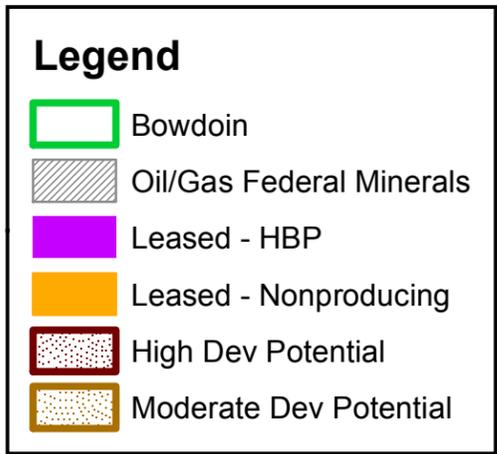
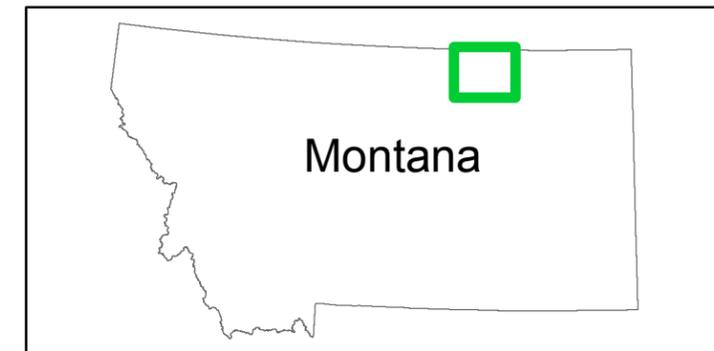
Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased**
The area contains 449,563 acres of Federal oil and gas mineral estate of which 96,657 acres (22%) is currently unleased. Therefore, this area does not meet the criteria that a substantial portion is not currently leased. Most of the unleased Federal mineral estate is located along the southern portion of the area. Much of this unleased area was previously leased, but the leases expired due to lack of production.
2. **There is a majority of Federal mineral estate**
There is a majority Federal oil and gas mineral estate in the area. The area contains 814,065 acres of which 449,563 acres (55%) are Federal oil and gas mineral estate. Of the 449,563 acres of Federal oil and gas mineral estate, 224,006 acres (50%) is non-BLM managed surface.
3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
The oil and gas industry has expressed an interest in leasing in the area in the past as indicated by 352,906 acres that are currently leased. Most of the area has moderate development potential as defined by the RFD for the ongoing RMP. The area encompasses the Bowdoin gas field which is one of the top producing gas fields in Montana. The Bowdoin gas field is an old established field. Recent interest in the area has consisted of step-out wells, infill wells, and replacement wells. Because of this recent interest, a field development Environmental Assessment was completed in December of 2008.
4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**
 - **multiple-use or natural/cultural resource conflicts;**
The Bowdoin MLP area is within an established, producing natural gas field, and the majority of Federal mineral interest has been leased. Resources and potential resource conflicts have been fully analyzed in the Bowdoin field development EA completed in December, 2008. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.
 - **impacts to air quality;** None.
 - **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

Bowdoin



Location Map



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Havre

Date: November 4, 2010

Name and Location of MLP Area: North Blaine (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – This area was considered because there have been proposals in the past for an expansion of the existing gas production. However, as test wells were drilled, the production was not as anticipated, and additional water production impacted the economics of the wells. The interest from industry subsided after the test wells were drilled. There is not a majority of Federal mineral estate within the area; only 30% of the area is Federal mineral estate. There is not a substantial portion of the Federal mineral estate that is not currently leased (39%). A portion of the area has moderate development potential. There is substantial gas production throughout the area. There is some oil production within the area as well.

Since the area only contains 30% Federal mineral estate, and only 39% of the Federal mineral estate is unleased, an MLP is not warranted. There is currently little interest in new leasing within the area.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map)

The area was identified by the HiLine RMP Team as the RMP was being developed. This area was considered because there have been proposals in the past for an expansion of the existing gas production. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). The map was then provided to resources specialists in the Field Office to determine if there were additional resource

concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. A substantial portion of the area to be analyzed in the MLP is not currently leased

The area contains 82,822 acres of Federal oil and gas mineral estate of which 32,169 acres (39%) is currently unleased. Therefore, this area does not meet the criteria that a substantial portion is not currently leased.

2. There is a majority of Federal mineral estate

There is not a majority Federal oil and gas mineral estate in the area. The area contains 276,364 acres of which 82,822 acres (30%) are Federal oil and gas mineral estate. Of the 82,822 acres of Federal oil and gas mineral estate, 8,027 acres (10%) is non-BLM managed surface.

3. The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.

The oil and gas industry has expressed very little interest in leasing the unleased lands in the area. The majority of the leased lands are held by production. A portion of the area has moderate development potential. (see attached map). There is substantial gas production throughout the area and there will continue to be some new wells drilled on existing leases. There is some oil production within the area as well.

4. Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:

- **multiple-use or natural/cultural resource conflicts;**

Resources within the North Blaine MLP area include active sage-grouse leks, sage-grouse winter range and nesting habitat, pronghorn winter range, mule deer winter range, and numerous raptor nests. Dispersed recreation use is low to moderate, primarily due to the remoteness of the area.

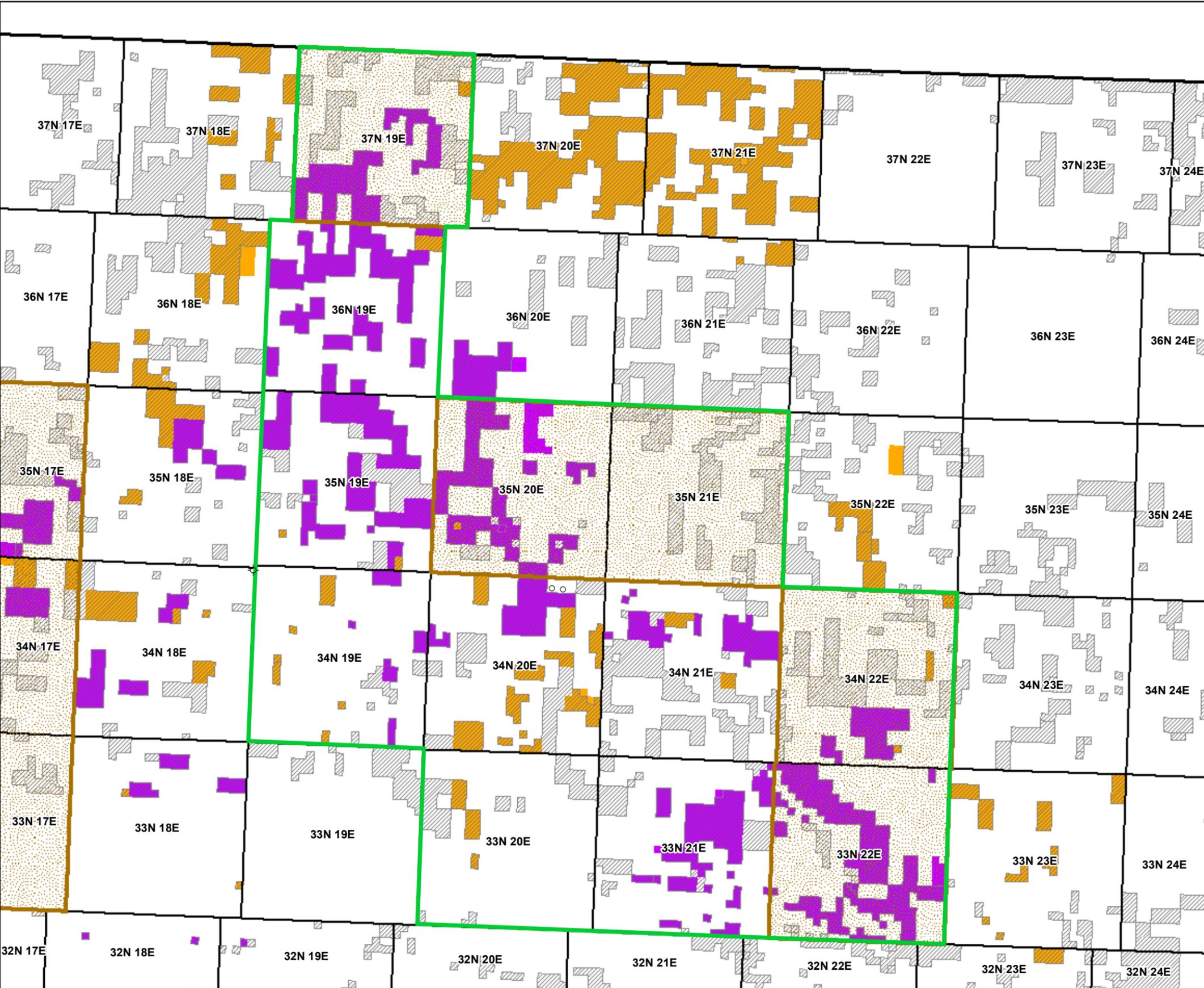
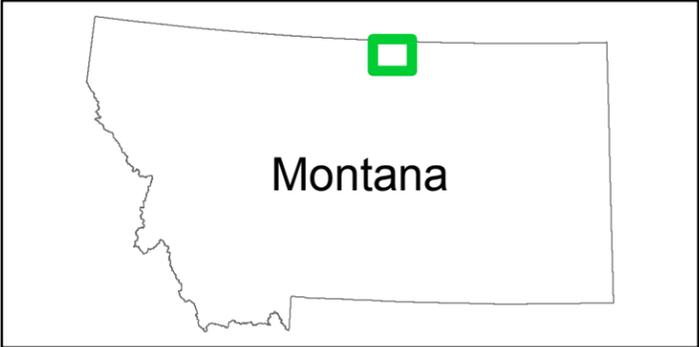
The North Blaine MLP area does contain a developed gas field. Resource conflicts have been minimized through the use of stipulations, conditions of approval, and the implementation of adequate mitigation and reclamation procedures. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.

- **impacts to air quality;** None.

- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** None.

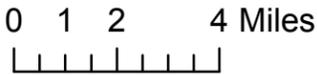
North Blaine

Location Map



Legend

- North Blaine
- Oil/Gas Federal Minerals
- Leased - HBP
- Leased - Nonproducing
- High Dev Potential
- Moderate Dev Potential



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Havre

Date: November 4, 2010

Name and Location of MLP Area: Bears Paw South (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – This area was considered because of the resource conflicts between continued gas development and wildlife. However, the increased activity is mainly being proposed on existing leases, with some interest in the unleased lands. There is not a majority of Federal mineral estate within the area; 47% of the area is Federal mineral estate. There is not a substantial portion of the Federal mineral estate that is not currently leased (22%). Most of the area has high development potential. There is substantial gas production throughout the area and there will continue to be new wells drilled potentially on increased density.

Since the area only contains 47% Federal mineral estate, and only 22% of the Federal mineral estate is unleased, an MLP is not warranted. Additional criteria are being developed in the ongoing HiLine RMP to address the impacts caused by the increased density proposals.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map)

The area was identified by the HiLine RMP Team as the RMP was being developed. The area is adjacent to the Upper Missouri River Breaks National Monument (UMRBNM). The southeastern boundary of the area follows the UMRBNM boundary. New leasing is not allowed within the UMRBNM, so the unleased lands within the UMRBNM were not included within the study area. The area encompasses the area identified as having high development potential. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note –

the wells are not shown on the map submitted). The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

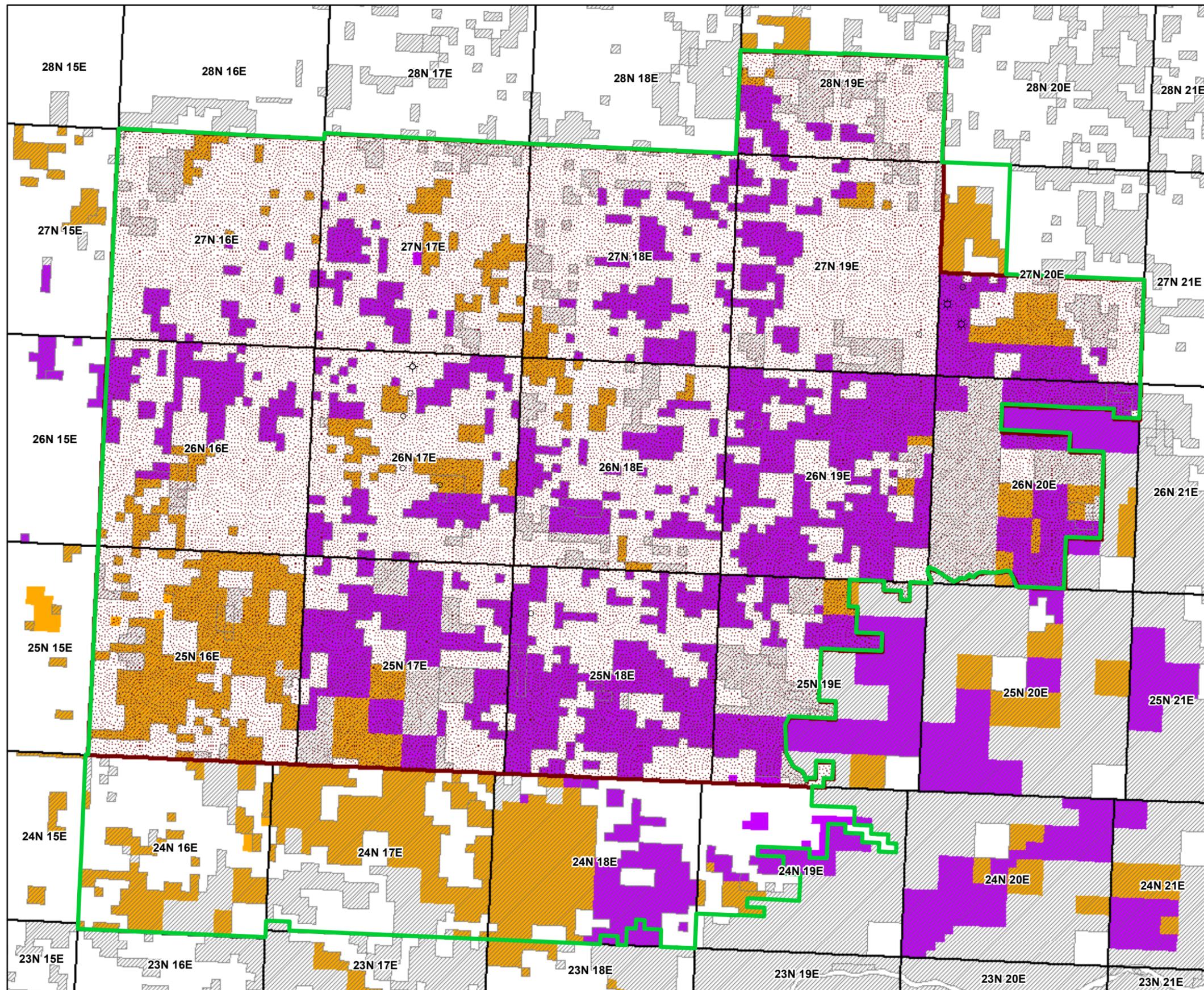
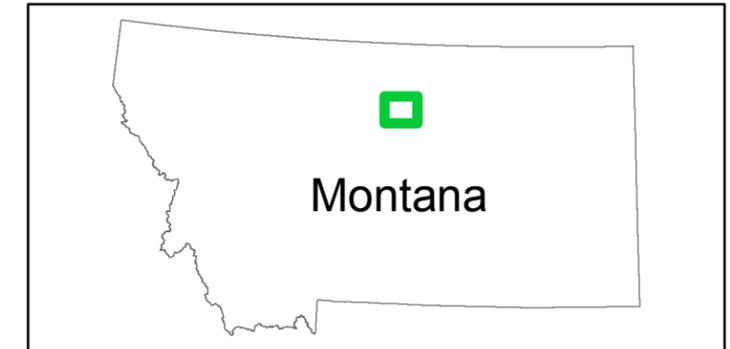
Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased**
The area contains 177,127 acres of Federal oil and gas mineral estate of which 38,400 acres (22%) are currently unleased. Therefore, this area does not meet the criteria that a substantial portion is not currently leased.
2. **There is a majority of Federal mineral estate**
There is not a majority Federal oil and gas mineral estate in the area. The area contains 374,523 acres of which 177,127 acres (47%) are Federal oil and gas mineral estate. Of the 177,127 acres of Federal oil and gas mineral estate, 108,474 acres (61%) is non-BLM managed surface.
3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
The oil and gas industry has expressed some interest in leasing the unleased lands in the area. The majority of the leased lands are held by production. Most of the area has high development potential. (see attached map). There is substantial gas production throughout the area and there will continue to be new wells drilled on existing leases potentially on increased density.
4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**
 - **multiple-use or natural/cultural resource conflicts;**
The Bear Paw South MLP area is located adjacent to the northwest segment of the Upper Missouri River Breaks National Monument (UMRBNM); public land is concentrated within the south central and northeast sections of the MLP area. Resources include sage-grouse winter range and nesting habitat, elk winter range, pronghorn winter range, and mule deer winter range. BLM lands in the southern and eastern portions of the MLP area contain steep slopes with highly erodible soils. Dispersed recreation use is moderate, primarily due to the remoteness of the area. Resource conflicts within the developed gas field have been minimized through the use of stipulations, conditions of approval, and the implementation of adequate mitigation and reclamation procedures. An increase in natural/cultural resource conflicts due to oil and gas development is not anticipated, and additional analysis is not required.
 - **impacts to air quality;** None.
 - **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined**

after consultation or coordination with the NPS, the FWS, or the FS; or impacts. None.

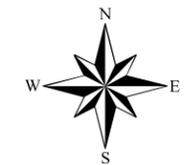
Bears Paw South

Location Map



Legend

- Bears Paw South
- Oil/Gas Federal Minerals
- Leased - HBP
- Leased - Nonproducing
- High Dev Potential
- Moderate Dev Potential



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Havre

Date: November 4, 2010

Name and Location of MLP Area: Creedman Coulee (See attached map)

Internal or External Proposal? Internal

Does the area meet the criteria and qualify for MLP analysis? No – There is not a majority of Federal mineral estate within the area; only 8% of the area is Federal mineral estate. There is not a substantial portion of the Federal mineral estate that is not currently leased (21%). Also, only 2% of the Federal mineral estate is BLM managed surface. The entire area is identified as having high development potential and there is established gas production throughout the area. The area was considered because it is identified as having high development potential in the Reasonable Foreseeable Development scenario for the ongoing HiLine RMP. The area was also considered because of past leasing issues dealing with a Fish and Wildlife Service Refuge within the area and State of Montana spacing units that excluded Federal mineral estate

Since the area only contains 8% Federal mineral estate, and only 21% of the Federal mineral estate is unleased, an MLP is not warranted.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map)

The area was identified by the HiLine RMP Team as the RMP was being developed. The area was considered because it is identified as having high development potential in the Reasonable Foreseeable Development scenario for the ongoing HiLine RMP. The area was also considered because of past leasing issues dealing with a Fish and Wildlife Service Refuge within the area and State of Montana spacing units that excluded Federal mineral estate. Once the area was identified the following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not

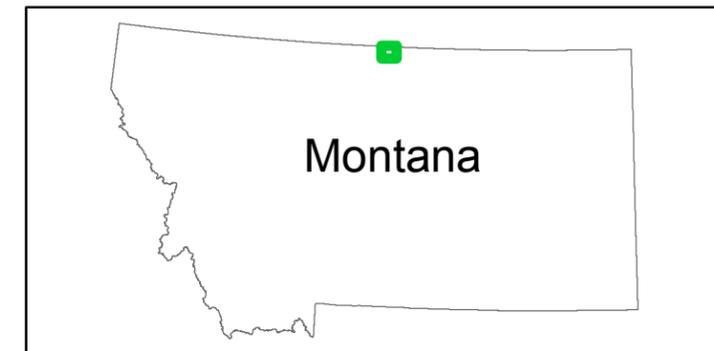
shown on the map submitted). The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. **A substantial portion of the area to be analyzed in the MLP is not currently leased**
The area contains 5,446 acres of Federal oil and gas mineral estate of which 1,163 acres (21%) are currently unleased. Therefore, this area does not meet the criteria that a substantial portion is not currently leased.
2. **There is a majority of Federal mineral estate**
There is not a majority Federal oil and gas mineral estate in the area. The area contains 68,040 acres of which 5,466 acres (8%) are Federal oil and gas mineral estate. Of the 5,446 acres of Federal oil and gas mineral estate, 5,325 acres (98%) is non-BLM managed surface.
3. **The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
The oil and gas industry has expressed very little interest in leasing the unleased lands in the area. The majority of the leased lands are held by production. All of the area is identified as having high development potential. (see attached map). There is substantial gas production throughout the area and there will continue to be some new wells drilled on existing leases.
4. **Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:**
 - **multiple-use or natural/cultural resource conflicts;**
The Creedman Coulee MLP area is 98% fee surface. The area contains no wildlife winter range, no wildlife migration corridors, and no sage-grouse habitat or known leks. A small, 80 acre wildlife refuge is located within the boundary of the MLP area. Potential resource or cumulative impacts have not been identified, and additional analysis is not required.
 - **impacts to air quality;** None.
 - **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.** A small wildlife refuge is located within the boundary of the MLP area. The Creedman Coulee National Wildlife Refuge is comprised of 80 acres of Federal surface, and 2,648 acres of fee surface under conservation easement. Resource conflicts due to increased oil and gas development would be minimal due to NSO stipulations, and additional analysis or information is not required.

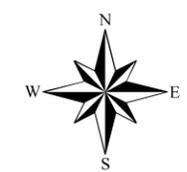
Creedman Coulee

Location Map



Legend

- CreedmanCoulee
- Oil/Gas Federal Minerals
- Leased - HBP
- Leased - Nonproducing
- High Dev Potential
- Moderate Dev Potential



Master Leasing Plan (MLP) Assessment

State Office: Montana
Field Office: Glasgow and Malta
Date: November 4, 2010

Name and Location of MLP Area: Bitter Creek – Frenchman Breaks (See attached map 1)

Internal or External Proposal? External proposal submitted by The Wilderness Society

Does the area meet the criteria and qualify for MLP analysis? No – There is only a small amount of the area (2%) that has moderate development potential, and this area is within the existing Bowdoin gas field. The remainder of the area has low to very low development potential. There is existing production within the Bowdoin gas field; however, there is no production in the remainder of the area. Eight dry holes have been drilled in the remainder of the area in the last 10 years. Thus, there is not a discovery outside of the Bowdoin gas field. Potential resource conflicts have been analyzed in the ongoing HiLine RMP (draft RMP is scheduled for Washington Office review in mid-November). Potential impacts from oil and gas development within the area were analyzed under the various alternatives in the ongoing RMP

FOIA exemption (b)(5)

Based on the alternative analysis, lease stipulations proposed within the RMP provide the necessary protection of the public resources within the proposed area. Preliminary numbers for the Preferred Alternative in the Draft RMP/EIS reveal approximately [redacted] acres of Federal minerals proposed with a No Surface Occupancy stipulation. This amounts to [redacted] of the analysis area being proposed with major constraints to oil and gas development. A large majority of the NSO acres are within the Frenchman Creek area which is contained within the analysis area. No new resource conflicts were raised in the proposal that have not already been considered in the RMP.

Since the area outside of the Bowdoin gas field has low to very low development potential and there is not a discovery, and the area was thoroughly analyzed in the ongoing HiLine RMP, an MLP is not warranted.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map 1)

The area was proposed by The Wilderness Society. The following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is

unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). One of the main resource conflicts identified on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

1. A substantial portion of the area to be analyzed in the MLP is not currently leased

The area contains 582,157 acres of Federal oil and gas mineral estate of which 441,748 acres (76%) are currently unleased. Therefore, this area does meet the criteria that a substantial portion is not currently leased. However, 60,700 acres are within the Bitter Creek Wilderness Study Area and are unavailable for leasing.

2. There is a majority of Federal mineral estate

There is a majority Federal oil and gas mineral estate in the area. The area contains 1,045,915 acres of which 582,157 acres (56%) are Federal oil and gas mineral estate. Of the 582,157 acres of Federal oil and gas mineral estate, 112,545 acres (19%) is non-BLM managed surface.

3. The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.

The oil and gas industry has expressed some interest in the past in leasing in the area. Some leasing has been deferred in the area pending completion of the HiLine RMP. None of the area is considered to have high development potential as defined in the Reasonable Foreseeable Development scenario recently completed for the ongoing HiLine RMP. About 2% of the area is considered to have moderate development potential. The remainder of the area is considered to have low to very low development potential. The southwestern portion of the area is within the Bowdoin gas field which was established in 1954. In the last 10 years, there have been 47 wells drilled within the area of which 39 were drilled within the Bowdoin gas field. All 39 were completed as producing gas wells. The other 8 wells were drilled outside of the Bowdoin gas field, and all 8 were dry holes. Therefore, there is not a discovery outside of the Bowdoin gas field.

4. Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:

Additional analysis or information is not needed. However some of the resources considered are as follows:

- **multiple-use or natural/cultural resource conflicts;**

Large blocks of native vegetation in the Bitter Creek/Frenchman Breaks area in northern Valley County have been noted by conservation organizations and others as providing some of the best remaining prairie in the northern Great Plains (Licht 1997, Sieg 1999, The Nature Conservancy 1999, Cooper et al. 2001, Predator Conservation Alliance 2005).

These assessments note that, in addition to the large blocks of native habitat, these areas also possess relatively large populations of native prairie wildlife including some of the largest populations of grassland associated birds in the region (Hendricks et al. 2007, 2008). These species include willet, long-billed curlew, marbled godwit, Wilson's phalarope, Sprague's pipit, Brewer's sparrow, Baird's sparrow, McCown's longspur, and chestnut-collared longspur. This suite of species has exhibited a steep decline in numbers throughout their range (Knopf 1994). Recent studies have demonstrated that these declining species are some of the most common birds in this area and the remaining grasslands are highly important for these species (Hendricks et al 2007, 2008). In particular, the Sprague's pipit, recently classified as "Warranted but Precluded" by the USFWS under the Endangered Species Act, is one of the most common birds in the area (Hendricks et al. 2008). Grasslands in northern Valley County have been identified as a Globally Important Bird Area (Audubon 2007) because of the density and number of grassland bird sensitive species **FOIA exemption (b)(5)**

Reintroduction efforts for swift fox (*Vulpes velox*) in southern Canada have resulted in the re-establishment of swift fox throughout much of this area and populations appear to be expanding (Moehrensclager and Moehrensclager 2006).

Portions of the area also support a migratory population of greater sage-grouse (*Centrocercus urophasianus*) that summer in southern Saskatchewan and northern Valley County and then migrate south across the Milk River for the winter. This area is, in part, a Montana Fish, Wildlife and Parks Greater Sage-Grouse Core Area.

Mule deer (*Odocoileus hemionus*) occupy much of the area in the summer, but spend their winter in distinct portions. Two of these important winter range areas are the Frenchman Creek area and the Bittercreek WSA. Some Pronghorn (*Antilocapra americana*) also spend the summer in the area, and other pronghorn migrate into the area from Canada to spend the winter.

- **impacts to air quality;**

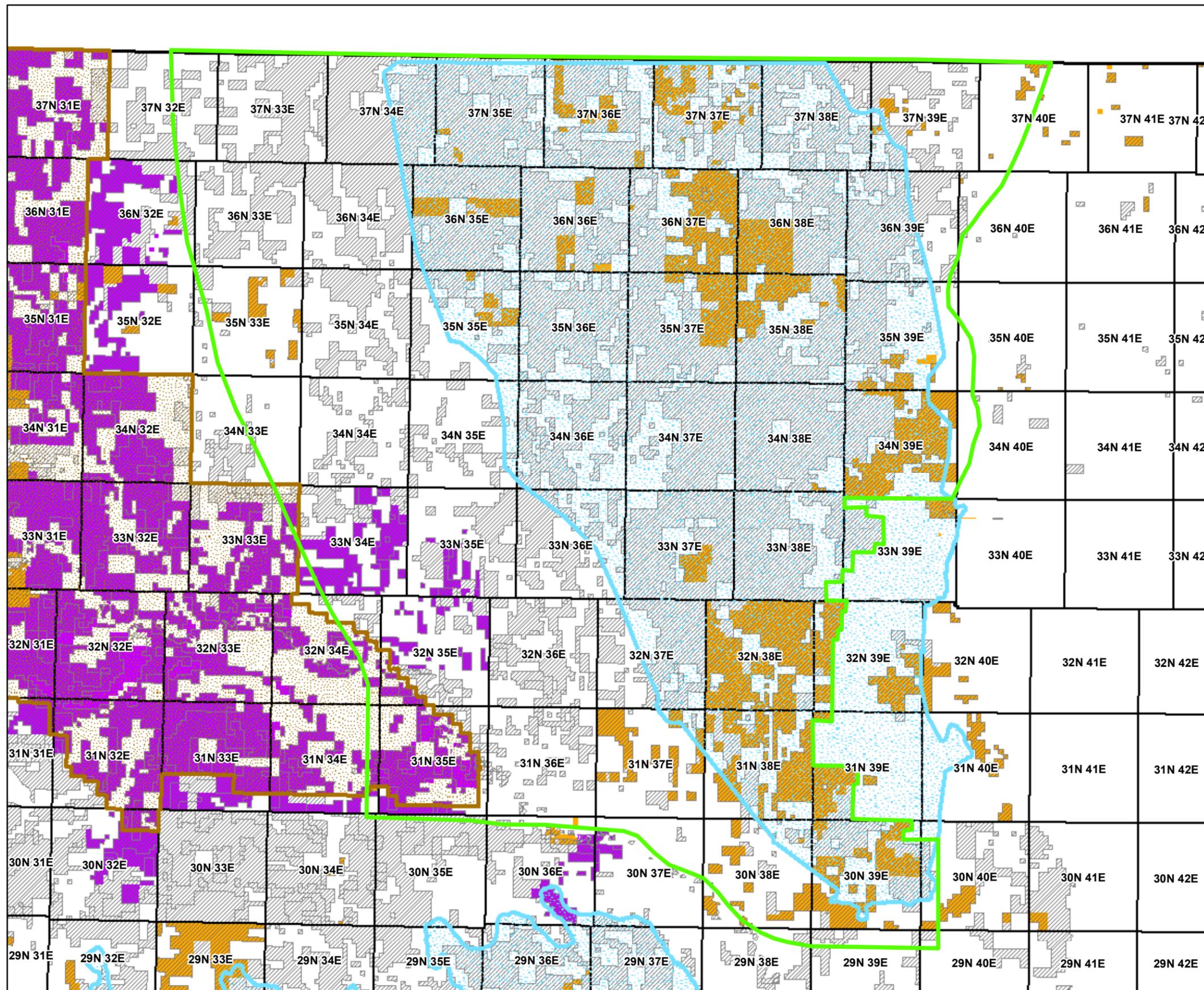
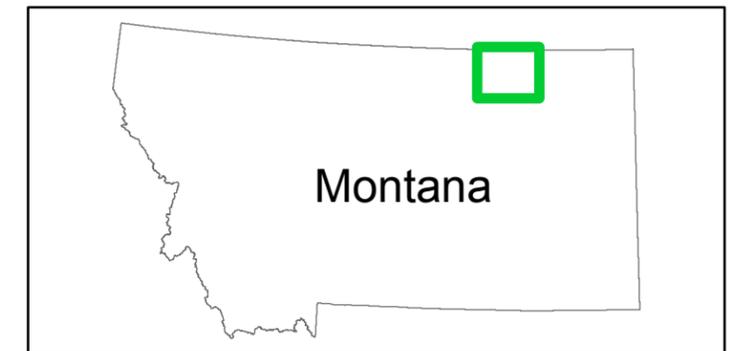
None

- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.**

None

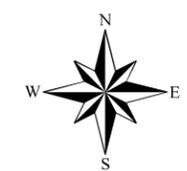
Bitter Creek Frenchman Breaks

Location Map



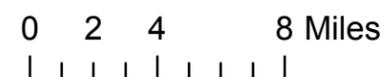
Legend

- Bitter Creek / Frenchman Breaks
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals
- Leased - HBP
- Leased - Nonproducing
- High Dev Potential
- Moderate Dev Potential



Montana State Office

11/4/10



Master Leasing Plan (MLP) Assessment

State Office: Montana

Field Office: Dillon

Date: November 4, 2010

Name and Location of MLP Area: Centennial Valley/Beaverhead Headwaters (See attached map 1)

Internal or External Proposal? External proposal submitted by The Wilderness Society, Greater Yellowstone Coalition, Montana Trout Unlimited, National Wildlife Federation, and Theodore Roosevelt Conservation Partnership. The MLP proposal is to withdraw from oil and gas leasing the Centennial Valley watershed and place more protective stipulations for sage grouse and westslope cutthroat trout on oil and gas leases in the upper Beaverhead River watershed.

Does the area meet the criteria and qualify for MLP analysis? No – There is only a small amount of the area (18%) that has moderate development potential. The remainder of the area has low to very low development potential. There are no discoveries within the analysis area. The reasonable foreseeable development (RFD) scenario for the Dillon RMP predicted six wildcat wells on all ownerships within Madison and Beaverhead Counties (an area much larger than the area nominated for an MLP) drilled within next 10 to 15 years. Two of the wildcats would be producers. The other four would be dry holes. One of the producing wildcats would be Federal; either BLM or FS ownership within the nominated MLP area. The two producing wells would lead to step-out development wells (two each). Potential impacts from oil and gas development within the area were analyzed under the various alternatives in the Dillon RMP (2006) (map 2 shows Alternative C or restrictive alternative and map 3 shows Alternative B which was the preferred alternative). Alternative C considered placing 1,086,596 areas or 80% of the planning area not available for oil and gas leasing. Among other areas, this alternative considered placing all sage grouse winter/spring range as well as lands within ½ mile of sage grouse leks and lands within 1 mile of 99-100 percent pure westslope cutthroat trout habitats as not available to oil and gas leasing. It was determined that due to the low level of development potential and RFD for the planning area this was unnecessary to adequately protect these and other resources, and that resource protection could be achieved through Oil and Gas Lease Terms and Stipulations. The Dillon RMP (2006) contains 47 Oil and Gas Lease Terms and Stipulations, many overlapping. Alternative (B) was selected because it proposed management that will improve and sustain properly functioning resource conditions while considering the needs and demands for existing or potential resource commodities and values.

Since the area has very limited development potential based on the RFD, there is not a discovery within the area, and the area was thoroughly analyzed in the Dillon RMP, an MLP is not warranted.

If MLP analysis is warranted, describe how and when MLP analysis will likely occur:
(Standalone, ongoing plan, etc.)

NA

Describe the process used for review: (See attached map 1)

The area was proposed by The Wilderness Society, Greater Yellowstone Coalition, Montana Trout Unlimited, National Wildlife Federation, and Theodore Roosevelt Conservation Partnership. The following process was used for analysis. A GIS map was created of the area and the acreage of the area was calculated. The mineral ownership layer was added, and the amount of Federal oil and gas mineral estate within the area was determined. Another layer showing the current leases (leases that are held by production and nonproducing leases) was added to determine the amount of Federal mineral estate that is unleased and to help determine where there is existing production as indicated by the leases that are held by production. The recent expressions of interest were added to indicate interest by the oil and gas industry. The oil and gas development potential was then added using the most recent Reasonable Foreseeable Development scenario from the ongoing RMP. The existing wells were then added to help determine areas of interest, producing wells, and any new discoveries (Note – the wells are not shown on the map submitted). One of the main resource conflicts identified on a statewide basis is sage grouse core habitat. Therefore, the core sage grouse habitat area was also added to the map. The map was then provided to resources specialists in the Field Office to determine if there were additional resource concerns or conflicts within the area. Based on all of the preceding information, a determination was made as to whether or not the area meets the criteria and qualifies for MLP analysis.

Describe how and why each of the following criteria are met or not met: (Describe in detail)

- 1. A substantial portion of the area to be analyzed in the MLP is not currently leased**
The area contains 1,338,108 acres of Federal oil and gas mineral estate of which 1,256,379 acres (94%) are currently unleased. Therefore, this area does meet the criteria that a substantial portion is not currently leased.
- 2. There is a majority of Federal mineral estate**
There is a majority Federal oil and gas mineral estate in the area. The area contains 2,263,590 acres of which 1,338,108 acres (59%) are Federal oil and gas mineral estate. Of the 1,338,108 acres of Federal oil and gas mineral estate, 729,369 acres (55%) is non-BLM managed surface, most of which is managed by the US Forest Service.
- 3. The oil and gas industry has expressed a specific interest in leasing, and there is a moderate or high potential for oil and gas confirmed by the discovery of oil and gas in the general area.**
This criterion is not met. In the MLP nomination area, the highest development potential is moderate with 412,411 acres or 18% of the area, the remainder has low and very low development potential. There are no areas of high development potential. There are no producing leases in the MLP nomination area. There have been no discoveries of oil or gas in the MLP nomination area or in Beaverhead and Madison Counties. A total of 27

wells have been drilled in the area including eight federal wells. Only 11 of these wells were deeper than 5,000 feet which is considered the minimum depth to test for oil and gas in southwest Montana. Only 6% of the federal minerals have been leased. Leasing bids were generally the minimum of \$2.00/acre. There was a two dimensional geophysical exploration project conducted in the MLP area in 2008.

4. Additional analysis or information is needed to address likely resource or cumulative impacts if oil and gas development were to occur where there are:

- **multiple-use or natural/cultural resource conflicts;**

Additional analysis or information is not needed to address likely resource or cumulative impacts if oil and gas occur due to the low potential for development and the recent (Dillon RMP 2006) impacts analyzed to resources in this area. The reasonable foreseeable development (RFD) scenario for the Dillon RMP was six wildcat wells on all ownerships within Madison and Beaverhead Counties (an area much larger than the area nominated for a MLP) drilled within next 10 to 15 years. Two of the wildcats would be producers. The other four would be dry holes. One of the producing wildcats would be Federal; either BLM or FS ownership within the nominated MLP area. The two producing wells would lead to step-out development wells (two each). The result is predicted to be a three well gas field covering approximately 2,000 acres. Under the RFD, the maximum predicted surface disturbance, over the life of the RMP, is 523 acres from all associated activities, well pads, access roads and pipelines.

Spacing on wells due to target depths are greater than 1 mile per square mile. Based on this spacing there would be no impacts to sage grouse given the current stipulations in the Dillon RMP (personal communication by Dr. Naugle at local Sage Grouse Working Group 2008. Sage Grouse Core area delineation by BLM and Montana Department of Fish, Wildlife and Parks has been completed for the area (see GIS Maps). There have been 44 test wells in the Dillon Field Office. There have been no wells drilled in Beaverhead County since the mid 1980's. The Dillon RMP (2006) analyzed an alternative, (C) that considered placing 1,086,596 acres or 80% of the planning area not available for oil and gas leasing. Among other areas, this alternative considered placing all sage grouse winter/spring range as well as lands within ½ mile of sage grouse leks and lands within 1 mile of 99-100 percent pure westslope cutthroat trout habitats as not available to oil and gas leasing. It was determined that due to the low level of development potential and RFD for the planning area this was unnecessary to adequately protect these and other resources, and that resource protection could be achieved through Oil and Gas Lease Terms and Stipulations. The Dillon RMP (2006) contains 47 Oil and Gas Lease Terms and Stipulations, many overlapping. Another alternative (B) was selected because it proposed management that will improve and sustain properly functioning resource conditions while considering the needs and demands for existing or potential resource commodities and values.

The Centennial Valley watershed and much of the upper Beaverhead River watershed is core sage grouse area. There are also 15, 99%-100% pure westslope

cutthroat trout streams in these two areas. The Centennial Valley watershed contains key grizzly bear habitat and the upper Beaverhead and Centennial Valley watersheds are high priority wildlife dispersal/migration corridors. Over thirty million dollars has been used to purchase conservation easements in the Centennial Valley over the last 15 years.

- **impacts to air quality;**

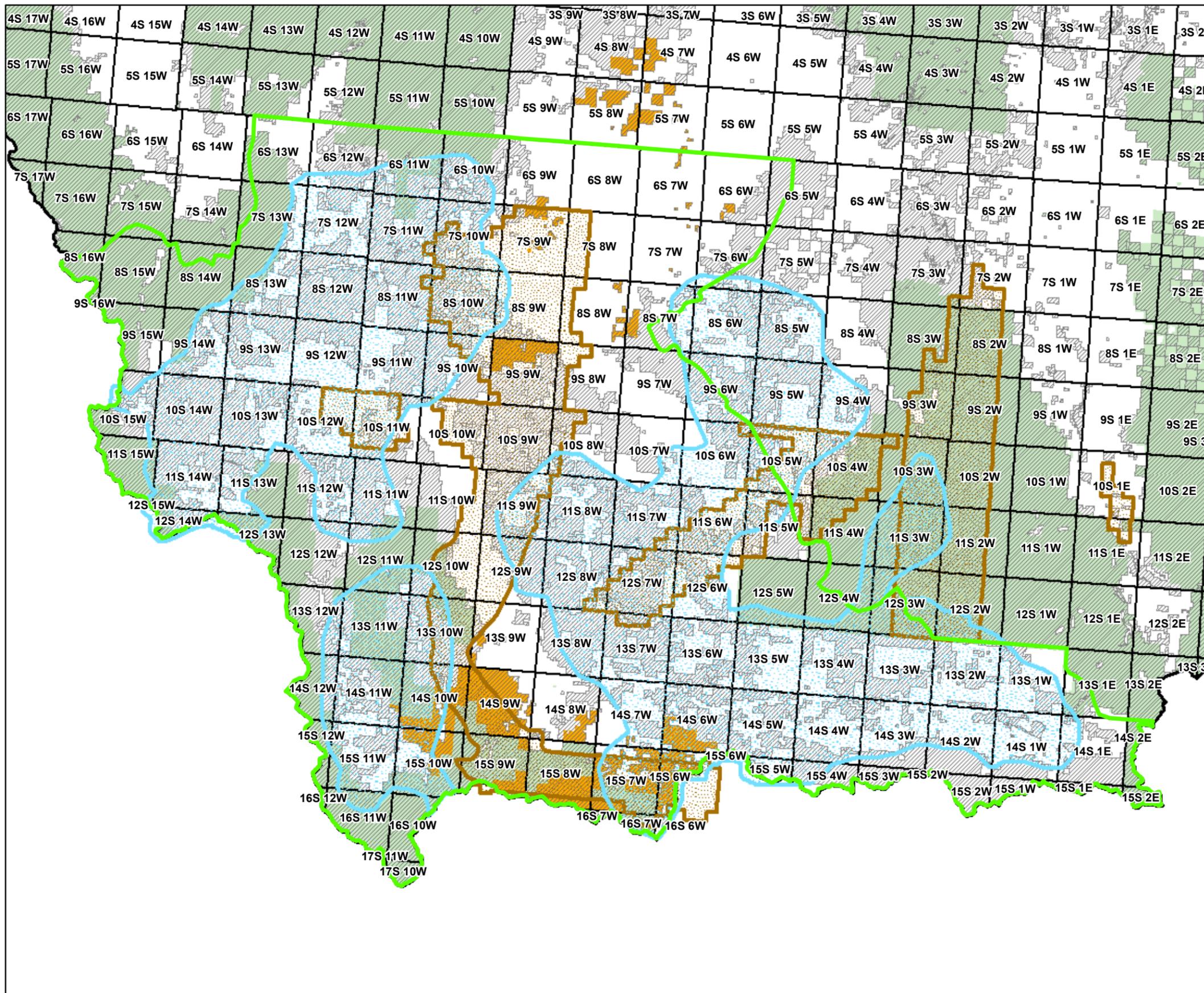
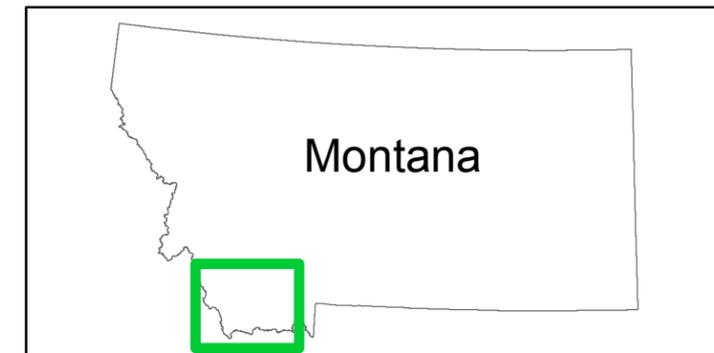
None - A recent (2010) environmental assessment for this area analyzing the air quality impacts from 7 oil and gas leases, found no impacts to air quality.

- **impacts on the resources or values of any unit of the National Park System, national wildlife refuge, or National Forest wilderness area, as determined after consultation or coordination with the NPS, the FWS, or the FS; or impacts.**

None - The FWS (Red Rocks National Wildlife Refuge) nor the FS (Beaverhead/Deerlodge) have been consulted at this time, due to the extremely low RFD.

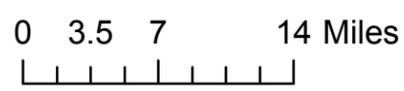
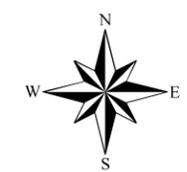
Centennial Valley Beaverhead Headwaters

Location Map



Legend

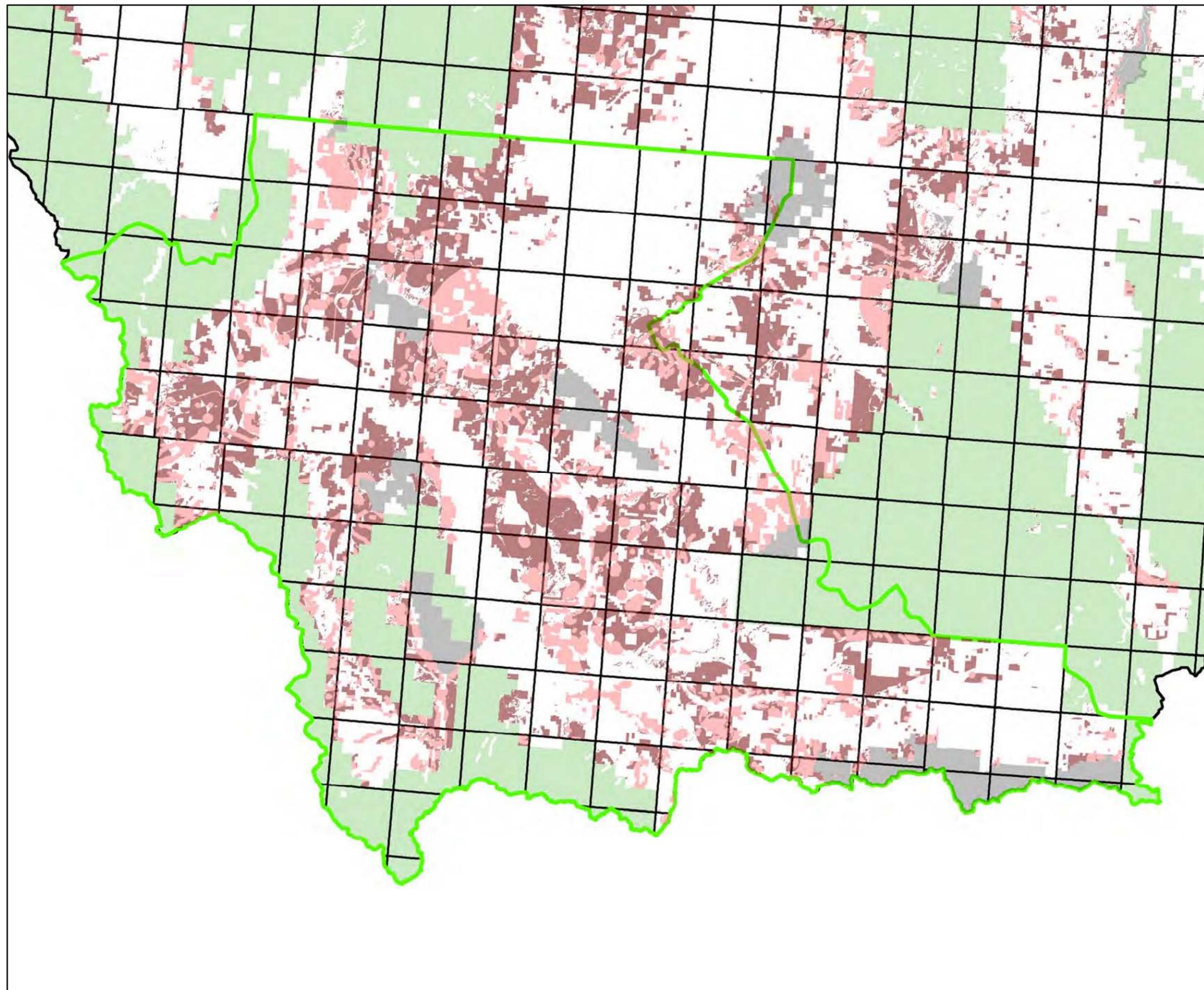
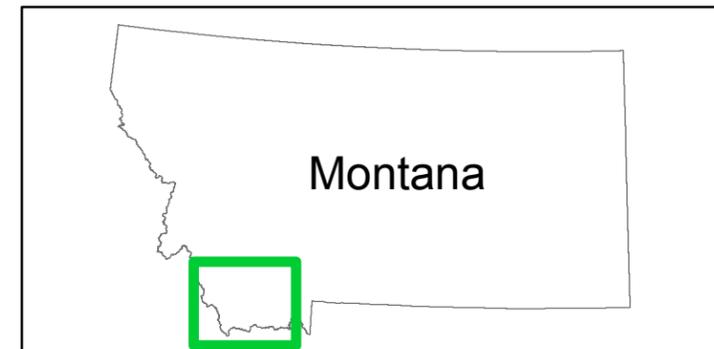
- Centennial-Beaverhead
- Montana FWP Sage Grouse Core Areas
- Oil/Gas Federal Minerals
- Leased - HBP
- Leased - Nonproducing
- High Dev Potential
- Moderate Dev Potential
- US Forest Service



Centennial Valley Beaverhead Headwaters

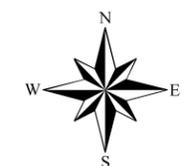
Alternative B (Dillon RMP 2006)

Location Map



Legend

- Centennial-Beaverhead
- US Forest Service
- No Lease - Unavailable
- No Surface Occupancy
- Timing Limits - Controlled Surface Use



Montana State Office

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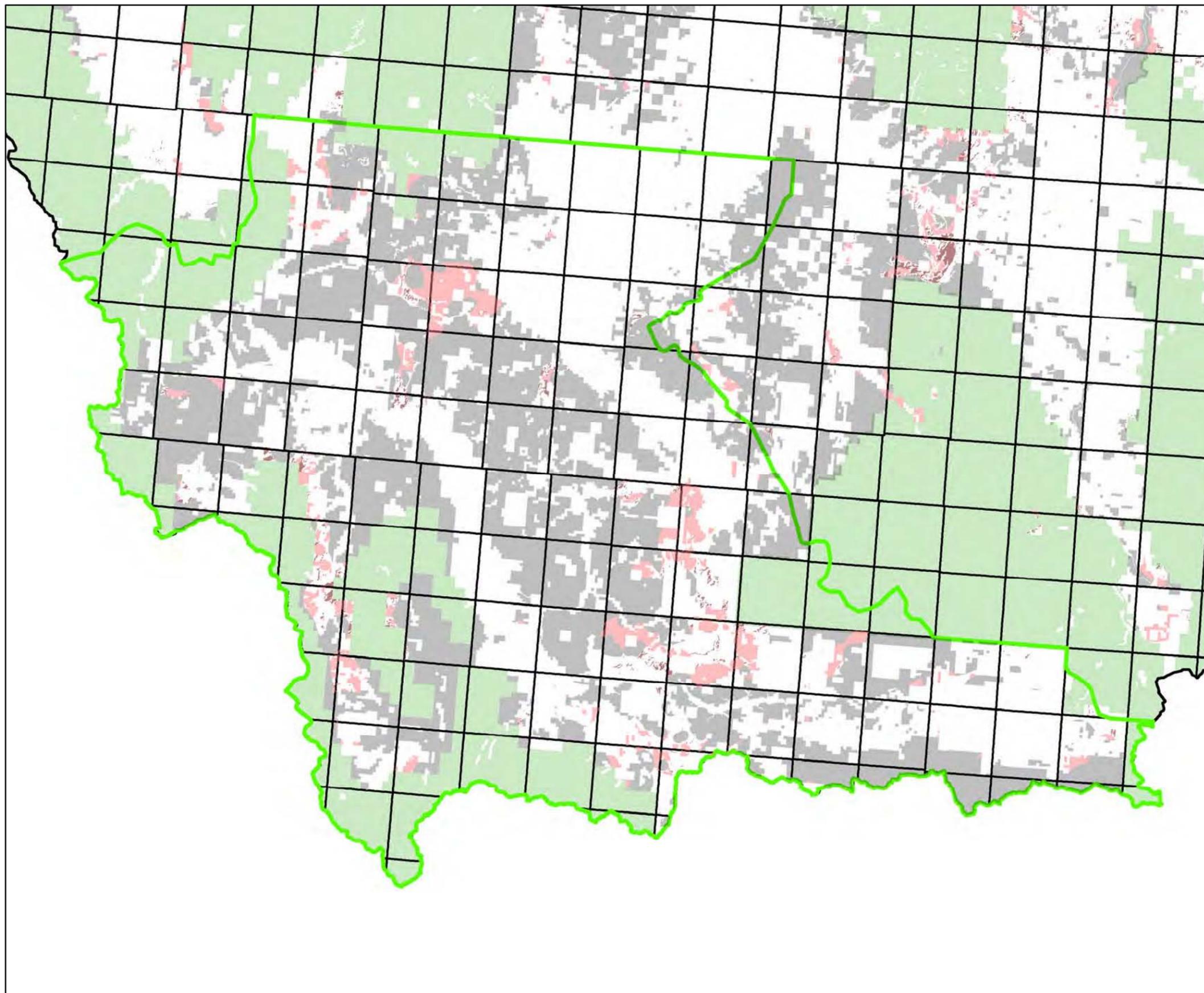
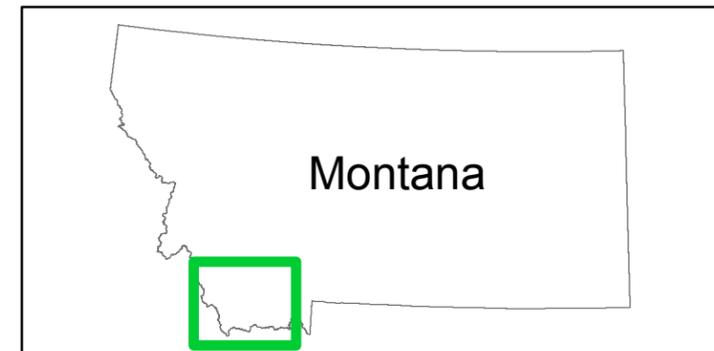
0 3.5 7 14 Miles



Centennial Valley Beaverhead Headwaters

Alternative C (Dillon RMP 2006)

Location Map



Legend

-  Centennial-Beaverhead
-  US Forest Service
-  No Lease - Unavailable
-  No Surface Occupancy
-  Timing Limits - Controlled Surface Use

