

THREATENED, ENDANGERED, SENSITIVE SPECIES & WILDLIFE

INTRODUCTION

Oil and gas leasing on the Beaverhead National Forest has the potential to affect wildlife resources in two primary ways: 1) habitat alteration; and 2) disturbance (from project activities and post-oil and gas activity public access). Disturbance from associated oil and gas activity may displace wildlife out of preferred habitats and place them under undue stress. This is of particular importance during winter (wintering, trapping), spring (birthing, nesting) and fall (hunting) seasons. Increased public access may increase the vulnerability of those species that are hunted and trapped and may cause shifts in traditional use patterns.

The most prevalent effect of habitat alteration is the potential for a reduction in carrying capacity. Carrying capacity may potentially be reduced by placing drill pads and/or roads in or near seasonal use areas such as birthing/nursery areas and winter ranges.

RECOMMENDED MITIGATION AND MONITORING

1. Obliterate all new access roads to exploratory wells to a condition that is more obstructive than the surrounding terrain.
2. Coordinate drilling activities so adjacent wells are not active during the same time (wildlife biologist to determine adjacent status).
3. Limit new access roads to exploratory well sites to oil and gas traffic only. Keep roads which are in use during oil and gas exploration and development activity closed to unauthorized use. Place locked gates and/or road guards at strategic locations to deter unauthorized use when activities are occurring on seasonal use areas.
4. Insert "dog-legs" or visual barriers on pipelines and roads built through dense vegetative cover areas to prevent straight corridors exceeding ¼ mile where vegetation has been removed (Stubbs and Markham 1979).
5. Bus crews to and from drill sites to reduce activity levels on roads. Shift changes should be scheduled to avoid morning and evening wildlife feeding periods (USDI 1987).

6. Keep noise levels at a minimum by muffling such things as engines, generators and energy production facilities (USDI 1987).

7. Prohibit dogs during work periods (USDI 1987).

8. Prohibit firearms during work periods or in vehicles traveling to and from work locations (USDI 1987).

Effectiveness of Above-listed Mitigation

Discussion with biologists on the Rocky Mountain Front indicated the above-listed mitigation would be/can be very effective in limiting the disturbance of wildlife from oil and gas activity. This depends on the exact locations of sites. Biologists must match the mitigation needs with the specific needs of the various sites. Not all mitigation measures are needed under all circumstances. Discussion with the Rocky Mountain Front biologists pointed out the need for using a cautious approach to assigning mitigation.

CONSISTENCY WITH FOREST PLAN STANDARDS

The Forest Plan Standards for Threatened, Endangered, Sensitive and other wildlife species would be met by all alternatives.

EFFECTS COMMON TO ALL ACTION ALTERNATIVES

Exploratory (Wildcat) Wells

These would involve approximately 2-8 acre drill pads with their associated activity, and usually some new roads. Disturbance during exploration would usually last for approximately one year (short-term). Oil and gas activity during sensitive seasons of use (birthing, nesting, wintering, etc.) would be of more concern than less sensitive times (summer).

Field Development

Field development would involve long-term effects (20-40 years) rather than the short-term effects of drilling a wildcat well (1 year). Though the level of human activity would decrease once production began, there would still be year-long disturbance associated with required monitoring of wells and removal of products.

There would be a direct reduction in habitat due to the acres dedicated to siting of facilities and for road access. The effects would last through the productive life of a field. Based on the BLM's projection of a

modeled field in the Reasonably Foreseeable Development Scenario (Appendix B), this would be approximately 20-40 years. Wildlife (mule deer) have shown no obvious avoidance and no long-term change in home ranges in the vicinity of active well sites (USDI 1987).

Oil and Gas Lease Stipulations

The effects of the following oil and gas lease stipulations would be realized anywhere they were applied within the analysis area.

Standard Terms

Standard Terms allow for a sixty day delay or hiatus per year and/or the movement of operations up to 200 meters. In some cases a sixty day delay in start-up time would minimize impacts to seasonally important wildlife areas (i.e., hunting season security October 15 through December 1). However, most seasonally important areas are used longer than sixty days. Winter range, for example, is used from December 1 through May 15. Some protection might be gained prior to start-up, but the activity could still take place during some portion of the seasonal use. The activity could be allowed to continue until finished, which might cycle it through to the next year's season of use by a particular wildlife species. The use of the 60 day hiatus could reduce this effect during the second season but would probably not eliminate the impacts.

A 200 meter movement, again in some cases, offers some protection. However, most species affected by activity have larger "no activity zones". Most species would not be given total protection by the 200 meter movement allowed under Standard Terms, unless they had a home range smaller than 40 acres.

Disturbance from oil and gas activity allowed under Standard Terms might displace wildlife species to areas of less security and suitability. This would only be a major impact if they were displaced out of a limiting habitat (for example, displacing bighorn sheep from their winter range).

Timing Limitation

A restriction is placed on activity during a set time period yearly. This provides protection to wildlife species during seasonally important times by not allowing oil and gas activity during those times (for example, no oil and gas activity on winter range from December 1 through May 15). This would allow wild-

life to use seasonally important areas undisturbed by oil and gas activity.

No Surface Occupancy (except Alternative 1)

This prohibits oil and gas activity on the surface of areas designated NSO. Wildlife would not be impacted with the No Surface Occupancy stipulation. No Surface Occupancy would be essentially the same as No Lease.

No Surface Occupancy (Alternative 1)

Only drill pads are prohibited on lands stipulated NSO. Roads, powerlines, pipelines, and similar linear features are allowed to cross NSO lands. In Table II-5, this stipulation is abbreviated "FPNSO", meaning NSO as defined in the Forest Plan.

No Lease

No oil and gas wells would be allowed on areas that are not leased. There would be no impact to wildlife with No Leasing.

Threatened, Endangered, and Sensitive Wildlife Species

Impact on those areas or habitats "critical" to the survival of any threatened, endangered, or sensitive wildlife species would be of the most concern. All Federal undertakings are required to comply with the Endangered Species Act. Compliance requires that any activity not jeopardize the recovery of any threatened or endangered species.

Forest Service manual direction for sensitive species is to develop and implement management practices to insure species do not become threatened or endangered because of Forest Service actions. Therefore, Regional direction has been to treat sensitive species with the same concern as threatened or endangered.

Oil and gas activity would be not likely to adversely affect any of the threatened, endangered, or sensitive species found on the Beaverhead National Forest. There would be no oil and gas activity allowed within the Management Situation II Grizzly Bear Recovery Area located in the Lee Metcalf Wilderness. There is a 2,550 acre block of Situation II habitat outside the wilderness in McAtee Basin in the Madison Range, which is treated differently under the different alternatives. No other portion of the forest is in a Recovery Area or recognized as "Critical" for any of the other

threatened, endangered, or sensitive species found on the forest.

Existing bald eagle and peregrine falcon nests would be protected by No Surface Occupancy (NSO) for ½ mile around the nest site and a Timing Limitation (TL) from February 1 through September 1 for an additional ½ mile beyond the NSO. Nesting trumpeter swans and ferruginous hawks would be protected by an April 1 through September 1 TL for ½ mile around the nest site. Due to the nature of the other sensitive species, their habitat use and the low potential for impact from oil and gas activity, no other limitations are needed (a complete discussion appears in the Biological Assessment included as Appendix C to this EIS).

Because these species are highly mobile and can be unpredictable, a Lease Notice would be included to help insure the protection of threatened, endangered, and sensitive wildlife species and to remind lessees that occupancy could be denied to comply with the 1973 Endangered Species Act (as amended).

Elk

Oil and gas activity may displace elk from important seasonal use areas. These areas would be winter range (December 1 through May 15), calving (May 15 through July 1) and security areas during hunting season (October 15 through December 1). These seasonal areas show historical use by elk herds. Location of a drill pad may alter the habitat as well as displace elk from these seasonal use areas into less suitable areas. The activity (working noise, traffic, etc.) associated with oil and gas development may displace elk into less suitable areas as well. Less suitable habitats may add to the stress elk are under during certain seasons of the year (i.e. winter range, calving, nursing). This stress may cause the elk to be in a weakened condition decreasing their ability to breed, raise young and escape predators (Thomas & Towell 1982).

In general, oil and gas activity during summer would have little impact as the majority of the Beaverhead National Forest provides suitable summer range. Therefore, summer range would not be limiting to elk and any disturbance from oil and gas activity would have very little effect.

Sage Grouse

Due to their dependence upon sagebrush-grassland habitat for food and cover, sage grouse are limited to

the range types dominated by sagebrush, principally big sagebrush *Artemisia tridentata*, but also its related species (Klebenow 1972). Strutting (breeding area) grounds and wintering areas would be important seasonal use areas. These areas receive historical use by sage grouse. Strutting occurs during April and May while wintering areas may be used from November through March. Oil and gas activity during these seasons of use may displace sage grouse to less suitable areas. The Beaverhead National Forest contains no known strutting or wintering areas, so the likelihood of impacting such areas is very low.

In general, oil and gas activity during summer would have little impact as the majority of the sagebrush areas on the forest would provide suitable brooding (raising of young) and summer habitat. Therefore, brooding and summer habitat would not be limiting to sage grouse and any oil and gas activity would have very little effect.

Pine Marten

In southwestern Montana, the marten is a forest dweller requiring forested habitats and is vulnerable to fur-trapping. Marten may be found in all forested habitats, but show a preference for mesic (wet) habitats. In most cases they avoid open areas (Fager 1991). Vulnerability is most likely influenced by the fur market and access to habitat by trappers. The majority of mesic habitats are protected from oil and gas activity by having a 200 meter buffer on all riparian habitat. Due to the limited impact to habitat (2-8 acres for a drill pad) from oil and gas activity and the fact no forest habitat appears to be limiting to pine marten, oil and gas activity would have very little effect.

Goshawk

In the Rocky Mountain area, nests are frequently found in mature dense stands of lodgepole, fir, and quaking aspen. Foraging areas include dense woodlands, clearings, and open fields. The important season of use for goshawks is nesting (April 1 through September 1), while the birds are hatching and then caring for their young. An April 1 through September 1 TL is in place for ½ mile around goshawk nest sites to provide an undisturbed setting. The nest tree would be protected by Standard Terms allowing the movement of a drill pad 200 meters during times outside of the TL. This would insure the nest tree and alternate nest sites would not be impacted.

Oil and gas activity would have very little impact on goshawk foraging areas, which are not limiting on the forest. This is due to the small size of the expected

disturbed areas compared to the large amount of foraging area available to goshawks.

Road Densities

The placing of roads into "new" areas would be the greatest impact the oil and gas activity would have on wildlife (Stubbs and Markham 1979). These roads would allow disturbance (increased human activity) into areas not usually having activity. This disturbance could displace wildlife from suitable habitat into less suitable areas, increasing stress (Rost and Baily 1979) and vulnerability. Vulnerability would be increased due to the increased disturbance from predators, hunters, and trappers. Roads might also prove to be barriers to the migration of small mammals (reluctance to move across openings because of exposure to avian predators), and in some cases, to big game (poor design might make for very difficult wildlife passage).

Restricting these new roads to oil and gas activity only would help to limit the impact on wildlife by keeping disturbance to the oil and gas activities and not combining it with other uses (i.e., hunters, trappers). Obliteration of these roads once oil and gas activity was finished would help to limit the impact on wildlife. However, in most cases, obliterated roads still offer an ease in access to hikers and horse users. This might lead to some disturbance of wildlife and an increase in vulnerability, even though it would be slight.

FOREST-WIDE CUMULATIVE EFFECTS

Forest-wide cumulative effects would be negligible due to the geographic separation of the areas that could be involved and small amount of total disturbance from potential oil and gas activity. Each landscape area could be impacted to a greater degree (see cumulative effects by planning unit/area). Oil and gas activities would only impact local areas, however, and would have little effect on the forest as a whole.

EFFECTS ON INDIVIDUAL WELL SITES

The lease terms and stipulations which apply to each alternative are displayed in Table II-4, page II-16.

In Alternatives 1, 2, 4, 5, and 7, existing bald eagle and peregrine falcon nests are protected by No Surface Occupancy (NSO) for ½ mile around the nest site and a Timing Limitation (TL) from February 1 through September 1 for an additional ½ mile beyond the NSO. Nesting trumpeter swans and ferruginous

hawks would be protected by an April 1 through September 1 TL for ½ mile around the nest site. Nothing is leased in Alternative 3, and areas around these nests are considered No Lease in Alternative 6.

ALTERNATIVE 1

In addition to the nest limitations common to all alternatives, Alternative 1 contains a Timing Limitation between December 1 and May 15 on elk, mule deer, bighorn sheep, and moose winter range.

GRAVELLY PLANNING UNIT

1. Crockett Lake Well Site

Direct and Indirect Effects

An exploratory well and associated 0.30 mile of temporary road would disturb no more than 8.5 acres of grassland habitat. This site is not within a sensitive seasonal use area for any species, so there would be no short-term loss of seasonal habitat. During the life of the well, from July 1 through April 1, the 0.30 mile of temporary road would increase road density in the TCSE Habitat Analysis Unit (HAU) from 0.77 to 0.79 mi./sq.mi. If a Travel Permit allowed travel during the spring, from April 1 through July 1, the road density would increase from 0.51 to 0.53 mi./sq.mi. This increase would have little effect on wildlife, as the entire road would be near an existing road and not increase or ease access to a new area after the road was obliterated.

2. Ledford Well Site

Direct and Indirect Effects

An exploratory well and associated 0.50 mile of temporary road would disturb no more than 9 acres of grassland habitat. This site is within elk winter range, so 9 acres of winter forage would not be available in the short term. Timing Limitation stipulations would restrict activity during the period of December 1 through May 15, so wintering elk would not be affected. During the life of the well, from July 1 through April 1, the 0.50 mile of temporary road would increase road density in the NW Habitat Analysis Unit (HAU) from 0.10 to 0.13 mi./sq.mi. If a Travel Permit allowed travel during the spring, from April 1 through July 1 the road density would increase from 0.00 to 0.03 mi./sq.mi. This increase would have little effect on wildlife as the entire road would be on an open ridge and would not increase or ease access into the area after the road was obliterated.

3. Cliff Lake Well Site

Direct and Indirect Effects

An exploratory well and associated 0.70 mile of temporary road would disturb no more than 9.2 acres of lodgepole pine regeneration and grassland habitat. This site is located near bald eagle and peregrine falcon nest sites. No Surface Occupancy around the nest sites and a Timing Limitation from February 1 through September 1 at the well site would insure nesting activity is not disturbed. During the life of the well, from September 1 through February 1, the 0.70 mile of temporary road would increase open road density in the H HAU from 1.20 to 1.27 mi./sq.mi. From February 1 through September 1, road density would remain 0.80 mi./sq.mi. because no activity would be allowed during the Timing Limitation. The September through February increase would have little effect on wildlife. The new road passes through an existing timber harvest unit and open plateau and would not increase or ease access into the area after it was obliterated.

4. West Fork Well Sites

Direct and Indirect Effects

An exploratory well, development wells and 3.70 miles of road would disturb no more than 30.3 acres of grassland/sagebrush and Douglas-fir/lodgepole pine habitat. These sites are not within a sensitive seasonal use area for any species, so there would be no loss of seasonal habitat. During the life of the field, the 3.70 miles of road would increase road density in the Q, R, and EB Habitat Analysis Units. From July 1 through April 1 road density would increase from 0.18 to 0.23 mi./sq.mi. in the Q HAU, from 1.10 to 1.15 mi./sq.mi. in the R HAU and from 0.58 to 0.75 mi./sq.mi. in the EB HAU. From April 1 through July 1 road density would increase from 0.02 to 0.07 mi./sq.mi. in the Q HAU, from 0.00 to 0.05 mi./sq.mi. in the R HAU and from 0.16 to 0.33 mi./sq.mi. in the EB HAU. This increase in road density might increase the vulnerability of wildlife due to the ease in access associated with the oil and gas company's need to monitor wells and remove petroleum products throughout the year. Disturbance and displacement would be greatest during the first 3 years of the initial drilling activity. Approximately 4 square miles would be affected by oil and gas activity, primarily by displacing wildlife. Disturbance and displacement would lessen as the wells were developed (see Effects Common for further discussion).

5. Antone Well Site

Direct and Indirect Effects

Alternative 1 stipulates No Surface Occupancy for this well site and access road. There would be no surface disturbance, therefore, no effects on wildlife.

Cumulative Effects for the Gravelly Planning Unit - Alternative 1

Introduction

The analysis area for cumulative effects is the Gravelly Planning Unit.

Past, present, and reasonably foreseeable activities in the Gravelly Planning Unit might have little individual impact on wildlife species. When considered together, the effects might have a large cumulative impact to the wildlife in the area.

Past and present activities are described in Chapter III, in the section on Threatened, Endangered, and Sensitive Species and Wildlife, Descriptions of Individual Well Sites, Gravelly Planning Unit. Reasonably foreseeable activities are described at the beginning of this chapter.

Effects

Current trends in range management are for an improvement in riparian condition. Allotment Management Plan updates will be designed to improve riparian areas and maintain or improve upland conditions. This will result in the same or fewer numbers of livestock and maintaining or shortening the current season of use. This would have a beneficial effect on wildlife.

Timber salvage operations on National Forest Lands are designed to remove deadwood with little impact to standing green trees, and to use temporary roads. This would limit the effect on hiding cover and vulnerability by leaving saplings to grow and by restricting the use of obliterated temporary roads. Vulnerability should show little change as a result. State and BLM sales could have an increased effect on vulnerability if road restrictions are not implemented. A general trend of not clearcutting timber stands will also help limit effects on vulnerability.

Low potential for development of minerals would mean a minimal impact to wildlife from this type of activity. Activity is dependent on favorable economic conditions, which currently do not favor exploration